City of San Diego

CONTRACTOR'S NAME: Dick Miller, Inc.
ADDRESS: 930 Boardwalk, Suite H, San Marcos, CA 92078
TELEPHONE NO.: 951-216-4070 **Email.: jmartinez@dmiusa.com**
CITY CONTACT: Ron McMinn Jr., Contract Specialist, Email: RMcMinn@sandiego.gov
Phone No. (619) 533-4618
D. Genova / A. Jaro / N. Alkuree

BIDDING DOCUMENTS

e - Bidding

FOR

BEYER PARK DEVELOPMENT

BID NO.:	**K-24-2170-DBB-3-A-C**
SAP NO. (WBS/IO/CC):	**S-00752**
CLIENT DEPARTMENT:	**1714**
COUNCIL DISTRICT:	**8**
PROJECT TYPE:	**GA**
CDBG #:	**1000003-2023**

THIS CONTRACT WILL BE SUBJECT TO THE FOLLOWING:

- FEDERAL EQUAL OPPORTUNITY CONTRACTING REQUIREMENTS.
- PREVAILING WAGE RATES: STATE ☒ FEDERAL ☒
- APPRENTICESHIP
- THIS IS A COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG) FUNDED CONTRACT THROUGH THE DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)

BID DUE DATE:

2:00 PM
November 30, 2023

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 Licensed Landscape Architect:

Jeff Justus	10/06/2023	Seal:
1) Licensed Landscape Architect	Date	

	10/06/2023	Seal:
2) For City Engineer	Date	

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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

FEDERAL DOCUMENTS SUBMITTAL REQUIREMENTS

ITEM	DOCUMENT TO BE SUBMITTED	WHEN DUE	FROM
1.	Bid Bond (PDF via PlanetBids)	At Time of Bid	ALL BIDDERS
2.	Contractors Certification of Pending Actions	At Time of Bid	ALL BIDDERS
3.	List of Subcontractors for Alternate Items	At Time of Bid	ALL BIDDERS
4.	Mandatory Disclosure of Business Interests	At Time of Bid	ALL BIDDERS
5.	Debarment and Suspension Certification	At Time of Bid	ALL BIDDERS
6.	Disclosure of Lobbying Activities	At Time of Bid	ALL BIDDERS
7.	Bid Bond (Original)	By 5PM, 1 Working Day After Bid Opening	ALL BIDDERS
8.	Federal Good Faith Documentation	Within 4 working days of bid opening	ALL BIDDERS
9.	Form AA61 – List of Work Made Available	Within 4 working days of bid opening with good faith effort documentation	ALL BIDDERS

ITEM	DOCUMENT TO BE SUBMITTED	WHEN DUE	FROM
10.	Form AA62 – Summary of Bids Received	Within 4 working days of bid opening with good faith effort documentation	ALL BIDDERS
11.	Form AA63 – Good Faith Effort List of Subcontractors Solicited	Within 4 working days of bid opening with good faith effort documentation	ALL BIDDERS
12.	If the Contractor is a Joint Venture: • Joint Venture Agreement • Joint Venture License	Within 10 working days of receipt by bidder of contract forms	AWARDED BIDDER
13.	Payment & Performance Bond; Certificates of Insurance & Endorsements; and Signed Contract Agreement Page	Within 10 working days of receipt by bidder of contract forms and NOI	AWARDED BIDDER
14.	Listing of "Other Than First Tier" Subcontractors	Within 10 working days of receipt by bidder of contract forms	AWARDED BIDDER
15.	Form AA64 MBE/WBE Information and Form AA65 Section 3 Outreach Methods	Shall be submitted upon award	AWARDED BIDDER

NOTICE INVITING BIDS

1. **SUMMARY OF WORK:** This is the City of San Diego's (City) solicitation process to acquire Construction services for **Beyer Park Development.** 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 **$15,840,000**.

4. **BID DUE DATE AND TIME ARE: November 30, 2023** 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.**

6.1. **ADDITIONAL LICENSE REQUIREMENTS:** See **Appendix G - Long Term Maintenance and Monitoring Agreement Option** for **C-27** requirement.

7. **SUBCONTRACTING PARTICIPATION PERCENTAGES:** Subcontracting participation percentages apply to this contract.

7.1. The City affirms that in any contract entered into pursuant to this advertisement, DBE firms will be afforded full opportunity to submit Bids in response to this invitation.

7.2. This Federally assisted project includes subcontracting participation percentages for DBE participation. DBE goal commitments and Good Faith Efforts (GFE) shall be made prior to bidding. DBE commitments and GFE made after the Bid opening will not be considered for the Award of Contract.

7.3. This project is subject to the federal equal opportunity regulations and the following requirements. The City reserves the right to audit the Contractor's compliance with the federal requirements set forth below.

7.4. Following are federally subcontracting participation percentages for this contract. For the purpose of achieving the subcontractor participation percentage, Additive or Deductive, and Type II Allowance Bid Items will not be included in the calculation.

7.5. **Department of Housing and Urban Development (HUD):**

1.	Small Disadvantaged Business (SDB):	5%
2.	Women-Owned Small Business (WoSB):	5%
3.	HUBZone Small Business (HubZone):	3%
4.	Service Disabled Veteran-owned Small Business (SDVoSB):	3%

7.6. Bid shall be **declared non-responsive** if the Bidder fails any of the following conditions:

7.6.1 Submission of GFE documentation, as specified in the Special Provisions.

7.6.2 **Submit Good Faith Effort (GFE) documentation**, saved in searchable Portable Document Format (PDF), demonstrating the Bidder made a good faith effort to conduct outreach to and include DBE Subcontractors as required in this solicitation **by 5 PM 4 Working Days after the Bid opening**.

All submittals in searchable PDF shall be submitted electronically within the prescribed time identified in the contract documents via PlanetBids by invitation to the point of contact named in the bid provided by the Contract Specialist to all bidders.

8. PRE-BID MEETING:

8.1. ENCOURAGED ONLINE PRE-BID MEETING:

Prospective Bidders are **Encouraged** to attend the Pre-Bid Meeting.

The Pre-Bid Meeting will be held on **Wednesday, November 1, 2023,** at **10:00 AM** (PDT) at:

Microsoft Teams meeting

Join on your computer, mobile app or room device
Click here to join the meeting
Meeting ID: 269 420 672 992
Passcode: pnRh7T
Download Teams | Join on the web
Or call in (audio only)
+1 323-813-7079,,674872768# United States, Los Angeles
Phone Conference ID: 674 872 768#
Find a local number | Reset PIN
Learn More | Meeting options

Please Note: You will need to join the meeting with a computer, tablet or smartphone with the **Microsoft Teams** in order to sign in via the Chat feature as attendance at the meeting will be evidenced by the Chat sign-in. The Chat feature will also be used for attendees to ask any questions.

The purpose of the meeting is to discuss the scope of the Project, submittal requirements, and any Equal Opportunity Contracting Program requirements and reporting procedures.

Upon entering the meeting, all attendees must use the chat feature to sign in with the following information: Name of firm, Attendee's name, Phone number and Email address.

9. AWARD PROCESS:

9.1. 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.

9.2. 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.

9.3. 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.

9.4. The low Bid will be determined by the Base Bid plus all the Alternates and the Long Term Maintenance and Monitoring option agreement cost.

9.5. Once the low bid has been determined, the City may, at its sole discretion, award the contract for the Base Bid alone; or for the Base Bid plus one or more alternates.

9.6 The City may, at its sole discretion, award the Optional LTMMA agreement within 365 calendar days after the award of the original contract. The approved Bidder for the project agrees to guarantee the price of the LTMMA work if the City chooses to award the LTMMA option agreement within 365 calendar days after the award of the original contract.

9.7 This contract includes a unilateral option, which the City may exercise in its sole discretion, for the Long-Term Maintenance and Monitoring Work for this project.

10. SUBMISSION OF QUESTIONS:

10.1. The Director (or Designee) of the Purchasing & Contracting 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:

RMcMinn@sandiego.gov

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

10.3. 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.

10.4. 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.

11. **OPTION AGREEMENT**: This contract includes an option, which may be exercised in the City's sole discretion, to award the Long Term Maintenance and Monitoring Work ("LTMMA Work") to contractor. The LTMMA Work will be addressed in the supplemental agreement, Long Term Maintenance and Monitoring Option Agreement attached to this contract as **Appendix G** and shall be signed by the Bidder when the Bid is submitted. City is not obligated to award the LTMMA Work at the time of award of the Base BID. CITY shall have the option, at CITY's sole discretion, to award the LTMMA Work at the price included in the Option Bid, at any time within 365 days of contract award. The signed agreements shall be accompanied by the proper bonds and insurance as specified in 1-7.2., "CONTRACT BONDS," 5-4, "INSURANCE," and 5-4.2.3 WORKERS' COMPENSATION INSURANCE (in Contract document). Bonds shall be in the amount of the total Contract Price for all Work awarded, except for the LTMMA Work. If the City chooses to exercise its option for the LTMMA Work, then Bidder shall obtain additional bonds in the amount of the total price for the LTMMA Work within 15 days of City's written notice that it will exercise its option to award the LTMMA Work.

11.1. **Partial Release of Performance Bond and Labor and Materialmen's Bond:** For information regarding partial release of bonds for this Contract, see Supplementary Special Provisions**, Appendix G.**

11.2 The City, in its sole discretion, may exercise the option for the LTMMA Work at any time within 365 days of contract award, by providing written notice to Bidder that intends to exercise the option. The City will deliver a copy of the Long Term Maintenance and Monitoring Option Agreement signed by all parties to Bidder following receipt of the required bonds. If exercising the Option will cause the obligations under this Contract to extend beyond five (5) years, the City shall have no obligation to award the LTMMA Work, or to pay for any LTMMA Work described in the Long Term Maintenance and Monitoring Option Agreement unless the San Diego City Council has approved by ordinance an extension of the contract obligations beyond five (5) years.

12. **ADDITIVE/DEDUCTIVE ALTERNATES:**

12.1. The additive/deductive alternates have been established to allow the City to compare the cost of specific portions of the Work with the Project's budget and enable the City to make a decision whether to incorporate these portions prior to award. The award will be established as described in the Bid. The City reserves the right to award the Contract for the Base Bid only or for the Base Bid plus one or more Alternates.

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 and 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, EOCP 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 Purchasing & Contracting Department, Public Works Division 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 150 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/	2021	ECPI010122-01
City of San Diego Standard Specifications for Public Works Construction ("The WHITEBOOK")* https://www.sandiego.gov/ecp/edocref/greenbook	2021	ECPI010122-02
City of San Diego Standard Drawings* https://www.sandiego.gov/ecp/edocref/standarddraw	2021	ECPI010122-03
Citywide Computer Aided Design and Drafting (CADD) Standards https://www.sandiego.gov/ecp/edocref/drawings	2018	PWPI010119-04
California Department of Transportation (CALTRANS) Standard Specifications https://dot.ca.gov/programs/design/july-2023-ccs-standard-plans-and-standard-specifications	2023	ECPD092023-05

Title	Edition	Document Number
CALTRANS Standard Plans https://dot.ca.gov/programs/design/july-2023-ccs-standard-plans-and-standard-specifications	2023	ECPD092023-06
California Manual on Uniform Traffic Control Devices Revision 7 (CA MUTCD Rev 7) https://dot.ca.gov/programs/safety-programs/camutcd	2014	ECPD081023-07
NOTE: *Available online under Engineering Documents and References at: https://www.sandiego.gov/ecp/edocref/ ******Electronic updates to the Standard Drawings may also be found in the link above		

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 150 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. Bidder further agrees that if Bidder is awarded the Contract, Bidder will guarantee the price for the LTMMA Work for 365 days from contract award in order to allow the City to exercise its option to award the LTMMA Work at a later time.

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 alternate items, bidder shall use the provided **"Subcontractors For Alternates"** form and shall indicate for each alternate subcontract whether it is an additive or deductive alternate; the subcontractor's name, location, phone number, email address, CA license number, and DIR registration number; whether the subcontractor is a designer, constructor or supplier; the type of work the subcontractor will be performing; and the dollar value of the subcontract for that alternate item. Failure to comply with this requirement may result in the bid being rejected as nonresponsive and ineligible for award.

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 Purchasing & Contracting Department, Public Works Division.

17. ONLY ONE BID PER CONTRACTOR SHALL BE ACCCEPTED: 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. By 5PM, 1 working day after the bid opening date, all 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 by 5PM, 1 working day after the bid opening date shall cause the bid to be rejected and deemed **non-responsive**.

Original Bid Bond shall be submitted to:

Purchasing & Contracting Department, Public Works Division

1200 3rd Ave., Suite 200, MS 56P

San Diego, California, 92101

To the Attention of the Contract Specialist on the Front Page of this solicitation.

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 and optional LTMM agreement 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 herein and in the Notice of Intent to 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:

Dick Miller, Inc., 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 Sixteen Million Six Hundred Forty Eight Thousand Three Hundred Ten Dollars and Zero Cents ($16,648,310.00) for the faithful performance of the annexed contract, and in the sum of Sixteen Million Six Hundred Forty Eight Thousand Three Hundred Ten Dollars and Zero Cents ($16,648,310.00), 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.

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

The Surety expressly agrees that the City of San Diego may reject any contractor or subcontractor which may be proposed by Surety in fulfillment of its obligations in the event of default by the Principal.

The Surety shall not utilize the Principal in completing the improvements and work specified in the Agreement in the event the City terminates the Principal for default.

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

THE CITY OF SAN DIEGO

By: _____

Print Name: Claudia C. Abarca
Director
Purchasing & Contracting Department

Date: March 4, 2024

APPROVED AS TO FORM

Mara W. Elliott, City Attorney

By: _____

Print Name: Dana Fairchild
Deputy City Attorney

Date: 3/20/2024

CONTRACTOR

By: _____

Print Name: Glen E. Bullock

Date: 01.09.24

PAZIL YALCIN
Notary Public - California
San Diego County
Commission # 2402126
My Comm. Expires Apr. 26, 2026

See Attachment

SURETY The Ohio Casualty Insurance Company

By: _____
Attorney-In-Fact

THE OHIO CASUALTY INSURANCE COMPANY INCORPORATED 1919 NEW HAMPSHIRE

Print Name: Bart Stewart

Date: January 3, 2024

790 The City Drive South, Suite 200
Orange, CA 92868
Local Address of Surety

(714) 634-5722
Local Phone Number of Surety

$88,254.00
Premium

024265863
Bond Number

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 01/10/2024 before me, FAZIL YALCIN, NOTARY PUBLIC
(insert name and title of the officer)

personally appeared GLEN FRANCIS BULLOCK,
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.

FAZIL YALCIN
Notary Public - California
San Diego County
Commission # 2402126
My Comm. Expires Apr 26, 2026

Signature _____ (Seal)

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.

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

Certificate No: 8206236 - 969556

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation 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, Bart Stewart

all of the city of Encinitas 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 3rd day of September, 2021.

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

By: _____
David M. Carey, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 3rd day of September, 2021 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of 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 King of Prussia, Pennsylvania, on the day and year first above written.

Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1126044
Member, Pennsylvania Association of Notaries

By: _____
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of 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 David M. Carey, 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, Renee C. Llewellyn, the undersigned, Assistant Secretary, 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 3rd day of January, 2024.

By: _____
Renee C. Llewellyn, Assistant Secretary

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT **CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of San Diego)

On January 3, 2023 before me, Genevieve Sistar, Notary Public,
Date *Here Insert Name and Title of the Officer*

personally appeared Bart Stewart,
Name(s) of Signer(s)

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

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

WITNESS my hand and official seal.

GENEVIEVE SISTAR
Notary Public - California
San Diego County
Commission # 2341051
My Comm. Expires Jan 8, 2025

Signature Genevieve Sistar
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____ Document Date: _____

Number of Pages: _____ Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

Signer's Name: _____
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

ATTACHMENTS

ATTACHMENT A

SCOPE OF WORK

SCOPE OF WORK

1. **SCOPE OF WORK:** Construct 9.22-acre phase 1 of a total new 16.24-acre park. Phase 1 of the park will include the following improvements: concrete and decomposed granite accessible walkways connecting park amenities, site fencing, storm drainage and bio-retention facilities, parking, landscape, irrigation, and landscape restoration. Amenities will be basketball court, skate park, exercise area, 2-12 children's play areas, picnic areas, security lighting, and prefabricated shade structures, as shown in the contract documents.

1.1. The Work shall be performed in accordance with:

1.1.1. The Notice Inviting Bids and Plans numbered **42356-001-D** through **42356-150-D**, inclusive.

For Plans numbered **42356-001-D** through **42356-150-D,** refer to the link below:

https://drive.google.com/drive/folders/1y1t2CQTn9buFRAXVQkK3oitVhQDfhzqC

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

2261 Enright Drive, San Diego, CA 92173.

See **Appendix E – Location Map**

3. **CONTRACT TIME:** The Contract Time for completion of the Work, including the Plant Establishment Periods, but excluding the LTMMA Option Work, shall be **350 Working Days.**

ATTACHMENT B

RESERVED

ATTACHMENT C

EQUAL OPPORTUNITY CONTRACTING PROGRAM

EQUAL OPPORTUNITY CONTRACTING PROGRAM (EOCP)

SECTION A - GENERAL REQUIREMENTS

A. INTRODUCTION.

1. This document sets forth the following specifications:
   a) The City's general EOCP requirements for all Construction Contracts.
   b) Special Provisions for Contracts subject to SLBE and ELBE requirements only.
2. Additional requirements may apply for state or federally funded projects.
3. These requirements shall be included as Contract provisions for all Subcontracts.
4. The City specified forms, instructions, and guides are available for download from the EOCP's web site at: http://www.sandiego.gov/eoc/forms/index.shtml

B. GENERAL.

1. The City of San Diego promotes equal employment and subcontracting opportunities.
2. The City is committed to ensuring that taxpayer dollars spent on public Contracts are not paid to businesses that practice discrimination in employment or subcontracting.
3. The City encourages all companies seeking to do business with the City to share this commitment.

C. DEFINITIONS.

1. For the purpose of these requirements: Terms "Bid" and "Proposal", "Bidder" and "Proposer", "Subcontractor" and "Subconsultant", "Contractor" and "Consultant", "Contractor" and "Prime Contractor", "Consultant" and "Professional Service Provider", "Suppliers" and "Vendors", "Suppliers" and "Dealers", and "Suppliers" and "Manufacturers" may have been used interchangeably.
2. The following definitions apply:
   a) **Emerging Business Enterprise (EBE)** - A for-profit business that is independently owned and operated; that is not a subsidiary or franchise of another business and whose gross annual receipts do not exceed the amount set by the City Manager and that meets all other criteria set forth in regulations implementing Municipal Code Chapter 2, Article 2, Division 36. The City Manager shall review the threshold amount for EBEs on an annual basis and adjust as necessary to reflect changes in the marketplace.
   b) **Emerging Local Business Enterprise (ELBE)** - A Local Business Enterprise that is also an Emerging Business Enterprise.

c) **Minority Business Enterprise (MBE)** - A certified business that is at least fifty-one percent (51%) owned by one or more minority individuals, or, in the case of a publicly owned business at least fifty-one percent (51%) of the stock is owned by one or more minority individuals; and (2) whose daily business operations are managed and directed by one or more minorities owners. Minorities include the groups with the following ethnic origins: African, Asian Pacific, Asian Subcontinent, Hispanic, Native Alaskan, Native American, and Native Hawaiian.

d) **Women Business Enterprise (WBE)** - A certified business that is at least fifty-one percent (51%) owned by a woman or women, or, in the case of a publicly owned business at least fifty-one percent (51%) of the stock is owned by one or more women; and (2) whose daily business operations are managed and directed by one or more women owners.

e) **Disadvantaged Business Enterprise (DBE)** - a certified business that is at least fifty-one percent (51%) owned by socially and economically disadvantaged individuals, or, in the case of a publicly owned business at least fifty-one percent (51%) of the stock is owned by one or more socially and economically disadvantaged individuals; and (2) whose daily business operations are managed and directed by one or more socially and economically disadvantaged owners.

f) **Disabled Veteran Business Enterprise (DVBE)** - A certified business that is at least fifty-one percent (51%) owned by one or more disabled veterans; and (2) business operations must be managed and controlled by one or more disabled veterans. Disabled Veteran is a veteran of the U.S. military, naval, or air service; the veteran must have a service-connected disability of at least 10% or more; and the veteran must reside in California.

g) **Other Business Enterprise (OBE)** - Any business which does not otherwise qualify as a Minority, Woman, Disadvantaged, or Disabled Veteran Business Enterprise.

h) **Small Business Enterprise (SBE)** - A for-profit business that is independently owned and operated; that is not a subsidiary or franchise of another business and whose gross annual receipts do not exceed the amount set by the City Manager and that meets all other criteria set forth in regulations implementing Municipal Code Chapter 2, Article 2, Division 36. The City Manager shall review the threshold amount for SBEs on an annual basis and adjust as necessary to reflect changes in the marketplace. A business certified as a Micro Business (MB) or a Disabled Veteran Business Enterprise (DVBE) by the State of California and that has provided proof of such certification to the City Manager shall be deemed to be an SBE.

i) **Small Local Business Enterprise (SLBE)** - A Local Business Enterprise that is also a Small Business Enterprise.

D. CITY'S EQUAL OPPORTUNITY COMMITMENT.

1. **Nondiscrimination in Contracting Ordinance.**

a) You, your Subcontractors, and Suppliers shall comply with the requirements of the City's Nondiscrimination in Contracting Ordinance, San Diego Municipal Code §§22.3501 through 22.3517.

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

You shall include the foregoing clause in all Contracts between you and your Subcontractors and Suppliers.

b) **Disclosure of Discrimination Complaints.** As part of its Bid or Proposal, you shall provide to the City a list of all instances within the past 10 years where a complaint was filed or pending against you in a legal or administrative proceeding alleging that you discriminated against your employees, Subcontractors, vendors, or suppliers, and a description of the status or resolution of that complaint, including any remedial action taken.

c) Upon the City's request, You agree to provide to the City, within 60 Calendar Days, a truthful and complete list of the names of all Subcontractors and Suppliers that you have used in the past 5 years on any of your Contracts that were undertaken within the San Diego County, including the total dollar amount paid by you for each Subcontract or supply Contract.

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

E. EQUAL EMPLOYMENT OPPORTUNITY OUTREACH PROGRAM.

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

   You shall not discriminate against any employee or applicant for employment on any basis prohibited by law. You shall provide equal opportunity in all employment practices. You shall ensure that your Subcontractors comply with this program. Nothing in this section shall be interpreted to hold you liable for any discriminatory practices of your Subcontractors.

   You shall include the foregoing clause in all Contracts between you and your Subcontractors and Suppliers.

2. If the Contract is competitively solicited, the selected Bidder shall submit a Work Force Report (Form BB05) within 10 Working Days after receipt by the Bidder to the City for approval as specified in the Notice of Intent to Award letter.

3. The selected Bidder shall submit an Equal Employment Opportunity Plan if a Work Force Report is submitted and if the City determines that there are under-representations when compared to County Labor Force Availability data.

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

   a) You shall maintain a working environment free of discrimination, harassment, intimidation, and coercion at all Sites and in all facilities at which your employees are assigned to Work.

   b) You shall review your EEO Policy annually with all on-Site supervisors involved in employment decisions.

   c) You shall disseminate and review your EEO Policy with all employees at least once a year, post the policy statement and EEO posters on all company bulletin boards and job sites, and document every dissemination, review, and posting with a written record to identify the time, place, employees present, subject matter, and disposition of meetings.

   d) You shall review, at least annually, all supervisors' adherence to and performance under the EEO Policy and maintain written documentation of these reviews.

   e) You shall discuss your EEO Policy Statement with Subcontractors with whom you anticipate doing business, including the EEO Policy Statement in your Subcontracts, and provide such documentation to the City upon request.

f) You shall document and maintain a record of all Bid solicitations and outreach efforts to and from Subcontractors, contractor associations, and other business associations.

g) You shall disseminate your EEO Policy externally through various media, including the media of people of color and women, in advertisements to recruit. Maintain files documenting these efforts and provide copies of these advertisements to the City upon request.

h) You shall disseminate your EEO Policy to union and community organizations.

i) You shall provide immediate written notification to the City when any union referral process has impeded your efforts to maintain your EEO Policy.

j) You shall maintain a current list of recruitment sources, including those outreaching to people of color and women, and provide written notification of employment opportunities to these recruitment sources with a record of the organizations' responses.

k) You shall maintain a current file of names, addresses and phone numbers of each walk-in applicant, including people of color and women, and referrals from unions, recruitment sources, or community organizations with a description of the employment action taken.

l) You shall encourage all present employees, including people of color and women employees, to recruit others.

m) You shall maintain all employment selection process information with records of all tests and other selection criteria.

n) You shall develop and maintain documentation for on-the-job training opportunities, participate in training programs, or both for all of your employees, including people of color and women, and establish apprenticeship, trainee, and upgrade programs relevant to your employment needs.

o) You shall conduct, at least annually, an inventory and evaluation of all employees for promotional opportunities and encourage all employees to seek and prepare appropriately for such opportunities.

p) You shall ensure that the company's working environment and activities are non-segregated except for providing separate or single-user toilets and necessary changing facilities to assure privacy between the sexes.

F. SUBCONTRACTING.

1. The City encourages all eligible business enterprises to participate in City contracts as a Contractor, Subcontractor, and joint venture partner with you, your Subcontractors, or your Suppliers. You are encouraged to take positive steps to diversify and expand your Subcontractor solicitation base and to offer

subcontracting opportunities to all eligible business firms including SLBEs, ELBEs, MBEs, WBEs, DBEs, DVBEs, and OBEs.

2. For Subcontractor participation level requirements, see the Contract Documents where applicable.

3. For the purposes of achieving the mandatory Subcontractor participation percentages, City percentage calculations will not account for the following:

   a) "Field Orders" and "City Contingency" Bid items.

   b) Alternate Bid items.

   c) Allowance Bid items designated as "EOC Type II".

4. Allowance Bid items designated as "EOC Type I" will be considered as part of the Base Bid and will be included in the percentage calculation.

5. Each joint venture partner shall be responsible for a clearly defined Scope of Work. In addition, an agreement shall be submitted and signed by all parties identifying the extent to which each joint venture partner shares in ownership, control, management, risk, and profits of the joint venture.

G. LISTS OF SUBCONTRACTORS AND SUPPLIERS.

1. You shall comply with the Subletting and Subcontracting Fair Practices Act, Public Contract Code §§4100 through 4113, inclusive.

2. You shall list all Subcontractors who will receive more than 0.5% of the total Bid amount or $10,000, whichever is greater on the form provided in the Contract Documents (Subcontractors list).

3. The Subcontractors list shall include the Subcontractor's name, telephone number including area code, physical address, Scope of Work, the dollar amount of the proposed Subcontract, the California contractor license number, the Public Works contractor registration number issued pursuant to Section 1725.5 of the Labor Code, and the Subcontractor's certification status with the name of the certifying agency.

4. The listed Subcontractor shall be appropriately licensed pursuant to Contractor License Laws.

5. For Design-Build Contracts, refer to the RFQ and RFP for each Project or Task Order.

H. SUBCONTRACTOR AND SUPPLIER SUBSTITUTIONS.

1. Listed Subcontractors and Suppliers shall not be substituted without the Express authorization of the City or its duly authorized agent.

2. Request for Subcontractor or Supplier substitution shall be made in writing to Purchasing & Contracting Department, Public Works Division, Attention Contract Specialist, 1200 3rd Ave., Suite 200, MS 56P, San Diego, CA 92101 with a copy to the Engineer.

3. The request shall include a thorough explanation of the reason(s) for the

substitution, including dollar amounts and a letter from each substituted Subcontractor or Supplier stating that they (the Subcontractors or Suppliers) release all interest in working on the Project and written confirmation from the new Subcontractor or Supplier stating that they agree to work on the Project along with the dollar value of the Work to be performed.

4. Written approval of the substitution request shall be received by you or from the City or its authorized officer prior to any unlisted Subcontractor or Supplier performing Work on the Project.

5. Substitution of Subcontractors and Suppliers without authorization shall subject you to those penalties set forth in Public Contract Code §4110.

6. Requests for Supplier substitution shall be made in writing at least 10 Days prior to the provision of materials, supplies, or services by the proposed Supplier and shall include proof of written notice to the originally listed Supplier of the proposed substitution.

7. A Contractor whose Bid is accepted shall not:

    a) Substitute a person as Subcontractor or Supplier in place of the Subcontractor or Supplier listed in the original bid, except that the City, or it's duly authorized officer, may consent to the substitution of another person as a Subcontractor or Supplier in any of the following situations:

        i. When the Subcontractor or Supplier listed in the Bid, after having a reasonable opportunity to do so, fails or refuses to execute a written Contract for the scope of work specified in the subcontractor's bid and at the price specified in the subcontractor's bid, when that written contract, based upon the general terms, conditions, plans, and specifications for the project involved or the terms of the subcontractor's written bid, is presented to the subcontractor by the prime contractor.

        ii. When the listed Subcontractor or Supplier becomes insolvent or the subject of an order for relief in bankruptcy.

        iii. When the listed Subcontractor or Supplier fails or refuses to perform his or her subcontract.

        iv. When the listed Subcontractor fails or refuses to meet bond requirements as set forth in Public Contract Code §4108.

        v. When you demonstrate to the City or it's duly authorized officer, subject to the provisions set forth in Public Contract Code §4107.5, that the name of the Subcontractor was listed as the result of an inadvertent clerical error.

        vi. When the listed Subcontractor is not licensed pursuant to Contractor License Law.

        vii. When the City, or it's duly authorized officer, determines that the Work performed by the listed Subcontractor or that the

materials or supplies provided by the listed Supplier are substantially unsatisfactory and not in substantial accordance with the Plans and specifications or that the Subcontractor or Supplier is substantially delaying or disrupting the progress of the Work.

viii. When the listed Subcontractor is ineligible to work on a public works project pursuant to §§1777.1 or 1777.7 of the Labor Code.

ix. When the City or its duly authorized agent determines that the listed Subcontractor is not a responsible contractor.

b) Permit a Contract to be voluntarily assigned or transferred or allow it to be performed by anyone other than the original Subcontractor, Supplier listed in the original Bid without the consent of the City, or it's duly authorized officer.

c) Other than in the performance of "Change Orders" causing changes or deviations from the Contract, sublet or subcontract any portion of the Work, or contract for materials or supplies in excess of 0.5% of your total bid or $10,000, whichever is greater, as to which his or her original Bid did not designate a Subcontractor or Supplier.

8. Following receipt of notice from you of the proposed substitution of a Subcontractor or Supplier, the listed Subcontractor or Supplier who has been so notified shall have 5 Working Days within which to submit written objections to the substitution to the Contract Specialist with a copy to the Engineer. Failure to file these written objections shall constitute the listed Subcontractor or Supplier's consent to the substitution. If written objections are filed, the City shall give notice in writing of at least 5 Working Days to the listed Subcontractor or Supplier of a hearing by the City on your request for substitution.

I. PROMPT PAYMENT.

1. You or your Subcontractors shall pay to any subcontractor, not later than 7 Calendar Days of receipt of each progress payment, unless otherwise agreed to in writing, the respective amounts allowed you on account of the Work performed by the Subcontractors, to the extent of each Subcontractor's interest therein. In cases of Subcontractor performance deficiencies, you shall make written notice of any withholding to the Subcontractor with a copy to the Contracts Specialist. Upon correction of the deficiency, you shall pay the Subcontractor the amount previously withheld within 14 Calendar Days after payment by the City.

2. Any violation of California Business and Professions Code, §7108.5 concerning prompt payment to Subcontractors shall subject the violating Contractor or Subcontractor to the penalties, sanctions, and other remedies of that section. This requirement shall not be construed to limit or impair any contractual,

administrative, or judicial remedies otherwise available to you or your Subcontractor in the event of a dispute involving late payment or nonpayment by the Prime Contractor, deficient subcontract performance, or noncompliance by a Subcontractor.

J. PROMPT PAYMENT OF FUNDS WITHHELD TO SUBCONTRACTORS.

1. The City will hold retention from you and will make prompt and regular incremental acceptances of portions, as determined by the Engineer, of the Work and pay retention to you based on these acceptances.
2. You or your Subcontractors shall return all monies withheld in retention from a Subcontractor within 30 Calendar Days after receiving payment for Work satisfactorily completed and accepted including incremental acceptances of portions of the Work by the City.
3. Federal law (49CFR26.29) requires that any delay or postponement of payment over 30 Calendar Days may take place only for good cause and with the City's prior written approval. Any violation of this provision by you or your Subcontractor shall subject you or your Subcontractor to the penalties, sanctions, and other remedies specified in §7108.5 of the Business and Professions Code.
4. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to you or your Subcontractor in the event of a dispute involving late payment or nonpayment by you, deficient subcontract performance, or noncompliance by a Subcontractor.

K. CERTIFICATION.

1. The City accepts certifications of DBE, DVBE, MBE, SMBE, SWBE, or WBE by any of the following certifying agencies:
    a) Current certification by the State of California Department of Transportation (CALTRANS) as DBE, SMBE, or SWBE.
    b) Current MBE, WBE, or DVBE certification from the California Public Utilities Commission.
    c) DVBE certification is received from the State of California's Department of General Services, Office of Small and Minority Business.
    d) Current certification by the City of Los Angles as DBE, WBE, or MBE.
    e) Subcontractors' valid proof of certification status (copies of MBE, WBE, DBE, or DVBE certifications) shall be submitted as required.

L. CONTRACT RECORDS AND REPORTS.

1. You shall maintain records of all subcontracts and invoices from your Subcontractors and Suppliers for work on this project. Records shall show name, telephone number including area code, and business address of each Subcontractor, Supplier, and joint venture partner, and the total amount actually paid to each firm. Project relevant records, regardless of tier, may be periodically reviewed by the City.

2. You shall retain all records, books, papers, and documents pertinent to the Contract for a period of not less than 5 years after Notice of Completion and allow access to said records by the City's authorized representatives.

3. You shall submit the following reports using the City's web-based contract compliance (Prism® portal):

    a. **Monthly Payment.** You shall submit Monthly Payment Reporting by the 10th day of the subsequent month. Incomplete and/or delinquent reporting may cause payment delays, non-payment of invoices, or both.

4. The records maintained under item 1, described above, shall be consolidated into a Final Summary Report, certified as correct by an authorized representative of the Contractor. The Final Summary Report shall include all subcontracting activities and be sent to the EOCP Program Manager prior to Acceptance. Failure to comply may result in assessment of liquidated damages or withholding of retention. The City will review and verify 100% of subcontract participation reported in the Final Summary Report prior to approval and release of final retention to you. In the event your Subcontractors are owed money for completed Work, the City may authorize payment to subcontractor via a joint check from the withheld retention.

ATTACHMENT D

COMMUNITY DEVELOPMENT BLOCK GRANT (CDBG)

HOUSING AND URBAN DEVELOPMENT (HUD)

FUNDING AGENCY PROVISIONS

FUNDING AGENCY PROVISIONS

IN THE EVENT THAT THESE REQUIREMENTS CONFLICT WITH THE CITY'S GENERAL EOC REQUIREMENTS, THE FUNDING AGENCY'S REQUIREMENTS WILL CONTROL.

1. NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246).

1.1. The goal and timetables for minority and female participation, expressed in percentage terms for the Contractor's aggregate workforce in each trade on all construction work in the covered area, as follows:

		Goal
1.	Minority Participation:	16.9%
2.	Female Participation:	6.9%

1.2. These goals are applicable to all the Contractor's construction work (whether or not it is Federal or federally assisted) performed in the covered area. If the Contractor performs Work in a geographical area located outside of the covered area, it shall apply the goals established for such geographical area where the Work is actually performed. With regard to this second area, the Contractor also is subject to the goals for both federally involved and non-federally involved Work.

1.3. The Contractor's compliance with the Executive Order and the regulations in 41 CFR Part 60-4 shall be based on its implementation of the Equal Opportunity Clause, specific affirmative action obligations required by the specifications set forth in 41 CFR 60-4.3(a), and its efforts to meet the goals.

1.4. The hours of minority and female employment and training shall be substantially uniform throughout the length of the Contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of meeting the Contractor's goals shall be a violation of the Contract, the Executive Order, and the regulations in 41 CFR Part 60-4. Compliance with the goals will be measured against the total work hours performed.

1.5. The Contractor shall provide written notification to the Director the Office of Federal Contract Compliance Programs within 10 Working Days of award of any Subcontract in excess of $10,000 at any tier for Work under the Contract resulting from this solicitation. The notification shall list the name, address and telephone number of the Subcontractor; employer identification number of the Subcontractor; estimated dollar amount of the Subcontract; estimated starting and completion dates of the Subcontract; and the geographical area in which the subcontract is to be performed. The "covered area" is the City of San Diego.

2. EQUAL OPPORTUNITY CLAUSES:

2.1. The following equal opportunity clauses are incorporated by reference herein:

1. The equal opportunity clause located 41 CFR 60.1.4(a), which specifies the obligations imposed under Executive Order 11246.

2. The equal opportunity clause located at 41 CFR 60-741.5, which contains the obligations imposed by Section 503 of the Rehabilitation Act of 1973.

3. The "Equal Opportunity Clause" (Resolution No. 765092) filed on December 4, 1978, in the Office of the City Clerk, San Diego, California and incorporated in the "Standard Federal Employment Opportunity Construction Contract Specifications (Executive Order 11246 - Document No. 769023, filed September 11, 1984, in the Office of the City Clerk, San Diego, California) is applicable to all non-exempt City construction contracts and subcontracts of $2,000 or more.

4. Age Discrimination Act of 1975, Pub. L. 94-135.

5. Title VI of the Civil Rights Act of 1964, Pub. L. 88-352.

6. Section 13 of the Federal Water Pollution Control Acts Amendments of 1972, Pub. L. 92-5200 (the Clean Water Act).

7. Section 504 of the Rehabilitation Act of 1973, Pub. L. 93-112 (Executive Orders 11914 and 11250).

8. Women's Minority Business Enterprises, Executive Orders 11625, 12138 and 12432.

9. Section 129 of the Small Business Administration Reauthorization and Amendment Act of 1988, Pub. L. 100-590.

3. STANDARD FEDERAL EQUAL EMPLOYMENT SPECIFICATIONS:

3.1. The Contractor is required to comply with the 15 "Standard Federal Equal Employment Specifications" in section 3.2 below and also located in 41 CFR 60-4.3 for federal and federally-assisted construction contracts in excess of $10,000.

3.2. Standard Federal Equal Employment Specifications.

1. As used in these specifications:

   a) Covered area" means the geographical area described in the solicitation from which this contract resulted;

   b) "Director" **means Director, Office of Federal Contract Compliance Programs,** United States Department of Labor, or any person to whom the Director delegates authority;

   c) "Employer identification number" means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

   d) Minority" includes:

      i. Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

ii. Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish Culture or origin, regardless of race);

iii. Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

iv. American Indian or Alaskan Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any Subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and the Notice which contains the applicable goals for minority and female participation and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the U.S. Department of Labor in the covered area either individually or through an association, its affirmative action obligations on all work in the Plan area (including goals and timetables) shall be in accordance with that Plan for those trades which have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or Subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make a good faith effort to achieve each goal under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or Subcontractors toward a goal in an approved Plan does not excuse any covered Contractor's or Subcontractor's failure to take good faith efforts to achieve the Plan goals and timetables.

4. The Contractor shall implement the specific affirmative action standards provided in item 7, paragraphs “a” through “p”, of this section below. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the Contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered Construction contractors performing construction work in geographical areas where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The Contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

5. Neither the provisions of any collective bargaining agreement, nor the failure by a union with whom the Contractor has a collective bargaining agreement, to refer either minorities or women shall excuse the Contractor's obligations under these specifications, Executive Order 11246, or the regulations promulgated pursuant thereto.

6. In order for the nonworking training hours of apprentices and trainees to be counted in meeting the goals, such apprentices and trainees must be employed by the Contractor during the training period, and the Contractor must have made a commitment to employ the apprentices and trainees at the completion of their training, subject to the availability of employment opportunities. Trainees must be trained pursuant to training programs approved by the U.S. Department of Labor.

7. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

    a) Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor, where possible, will assign two or more women to each construction project. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities

    b) Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

    c) Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

    d) Provide immediate written notification to the Director when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other

information that the union referral process has impeded the Contractor's efforts to meet its obligations.

e) Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 7b above.

f) Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g) Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with onsite supervisory personnel such as Superintendents, General Foremen, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and disposition of the subject matter.

h) Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i) Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j) Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after

school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's work force.

k) Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR part 60-3.

l) Conduct, at least annually, an inventory and evaluation at least of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m) Ensure that seniority practices, job classifications, work assignments and other personnel practices, do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n) Ensure that all facilities and company activities are nonsegregated except that separate or single-user toilet and necessary changing facilities shall be provided to assure privacy between the sexes.

o) Document and maintain a record of all solicitations of offers for subcontracts from minority and female construction contractors and suppliers, including circulation of solicitations to minority and female contractor associations and other business associations.

p) Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

8. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations (item 7, paragraphs “a” through “p”, of this section). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under item 7, paragraphs “a” through “p”, of this section that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the Contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The Contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation of the Executive Order if a

particular group is employed in a substantially disparate manner (for example, even though the Contractor has achieved its goals for women generally, the Contractor may be in violation of the Executive Order if a specific minority group of women is underutilized).

10. The Contractor shall not use the goals and timetables or affirmative action standards to discriminate against any person because of race, color, religion, sex, sexual orientation, gender identity, or national origin.

11. The Contractor shall not enter into any Subcontract with any person or firm debarred from Government contracts pursuant to Executive Order 11246.

12. The Contractor shall carry out such sanctions and penalties for violation of these specifications and of the Equal Opportunity Clause, including suspension, termination and cancellation of existing subcontracts as may be imposed or ordered pursuant to Executive Order 11246, as amended, and its implementing regulations, by the Office of Federal Contract Compliance Programs. Any Contractor who fails to carry out such sanctions and penalties shall be in violation of these specifications and Executive Order 11246, as amended.

13. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in item 7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the Contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

14. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic, apprentice trainee, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that existing records satisfy this requirement, contractors shall not be required to maintain separate records.

15. Nothing herein provided shall be construed as a limitation upon the application of other laws which establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Program).

3.3. Segregated Facilities (41 CFR 60-1.8). The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, sexual orientation, gender identity, or national origin

cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensuring that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. This obligation extends to all contracts containing the equal opportunity clause regardless of the amount of the contract. The term "facilities," as used in this section, means waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, wash rooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees; Provided, That separate or single-user restrooms and necessary dressing or sleeping areas shall be provided to assure privacy between the sexes.

4. VIOLATION OR BREACH OF REQUIREMENTS:

4.1. If at any time during the course of the Contract there is a violation of the Affirmative Action or Equal Employment Opportunity requirements by the Contractor, or the Subcontractors, the City will notify the Contractor of the breach. The City may withhold any further progress payments to the Contractor until the City is satisfied that the Contractor and Subcontractors are in full compliance with these requirements.

5. MONTHLY EMPLOYMENT UTILIZATION REPORTS:

5.1. Refer to GENERAL EQUAL OPPORTUNITY CONTRACTING PROGRAM REQUIREMENTS, CONSTRUCTION CONTRACTOR REQUIREMENTS at Equal Opportunity Contracting | City of San Diego Official Website (or See Attachment C, Equal Opportunity Contracting Program) and the following:

1. Federal and Non-Federal Work in San Diego County. Submit an updated list only if work is complete or new contracts have been awarded during the span of this project.

6. RECORDS OF PAYMENTS TO DBEs:

6.1. The Contractor shall maintain records and documents of payments to DBEs for 5 years following the NOC. These records shall be made available for inspection upon request by any authorized representative of the City, funding agency, or both. The reporting requirement shall be extended to any certified DBE Subcontractor.

7. FEDERAL WAGE REQUIREMENTS FOR FEDERALLY FUNDED PROJECTS:

7.1. The successful Bidder's work shall be required to comply with Executive Order 11246, entitled "Equal Employment Opportunity,", as amended by Executive Order 11375, and as supplemented in Department of Labor regulations (41 CFR chapter 60).

7.2. This Executive Order pertains to Equal Employment Opportunity regulations and contains significant changes to the regulations including new goals and timetables for women in construction and revised goals and time-tables for minorities in construction.

7.3. Minimum wage rates for this project have been predetermined by the Secretary of

Labor and are set forth in the Decision of the Secretary and bound into the specifications book. Should there be any difference between the state or federal wage rates, including health and welfare funds for any given craft, mechanic, or similar classifications needed to execute the Work, it shall be mandatory upon the Contractor or subcontractor to pay the higher of the two rates.

7.4. The minimum wage rate to be paid by the Contractor and the Subcontractors shall be in accordance with the Federal Labor Standards Provisions (see pages below) and Federal Wage Rates (see Wage Rates below) and General Prevailing Wage Determination made by the State of California, Director of Industrial Relations pursuant to California Labor Code Part 7, Chapter 1, Article 2, Sections 1770, 1773 and 1773.1, whichever is higher.

7.5. A Contractor having 50 or more employees and its Subcontractors having 50 or more employees and who may be awarded a contract of $50,000 or more will be required to maintain an affirmative action program, the standards for which are contained in the specifications.

7.6. To be eligible for award, each Bidder shall comply with the affirmative action requirements which are contained in the specifications.

7.7. Women will be afforded equal opportunity in all areas of employment. However, the employment of women shall not diminish the standards of requirements for the employment of minorities.

8. 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.

8.1. 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.

8.1.1. 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.

8.1.2. 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.

8.2. **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.

8.3. **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.

8.3.1. For contracts entered into on or after April 1, 2015, Contractor and their subcontractors shall furnish records specified in Labor Code section 1776 directly to the Labor Commissioner in the manner required by Labor Code section 1771.4.

8.4. **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.

8.5. **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 sections1810 through 1815.

8.6. **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.

8.7. **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."

8.8. **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.

8.9. **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.

8.9.1. 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.

8.9.2. 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.

8.10. 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.

8.11. List of all Subcontractors. The City may ask Contractor for the most current list of subcontractors (regardless of tier), along with their DIR registration numbers, utilized on this Agreement at any time during performance of this contract, and Contractor shall provide the list within ten (10) working days of the City's request. Additionally, Contractor shall provide the City with a complete list of all subcontractors utilized on this contract (regardless of tier), within ten working days of the completion of the contract, along with their DIR registration numbers. The City shall withhold final payment to Contractor until at least 30 days after this information is provided to the City.

8.12. 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:

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

8.12.2. 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).

8.12.3. 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 8.11 above. (Labor code section 1773.3).

9. WAGE RATES: This contract shall be subject to the following Davis-Bacon Wage Decisions:

"General Decision Number: CA20230001 09/08/2023

Superseded General Decision Number: CA20220001

State: California

Construction Types: Building, Heavy (Heavy and Dredging), Highway and Residential

County: San Diego County in California.

BUILDING CONSTRUCTION PROJECTS; DREDGING PROJECTS (does not include hopper dredge work); HEAVY CONSTRUCTION PROJECTS (does not include water well drilling); HIGHWAY CONSTRUCTION PROJECTS; RESIDENTIAL CONSTRUCTION PROJECTS (consisting of single family homes and apartments up to and including 4 stories)

Note: Contracts subject to the Davis-Bacon Act are generally required to pay at least the applicable minimum wage rate required under Executive Order 14026 or Executive Order 13658. Please note that these Executive Orders apply to covered contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but do not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60).

If the contract is entered into on or after January 30, 2022, or the contract is renewed or extended (e.g., an option is exercised) on or after January 30, 2022:	. Executive Order 14026 generally applies to the contract. . The contractor must pay all covered workers at least $16.20 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in 2023.
If the contract was awarded on or between January 1, 2015 and January 29, 2022, and the contract is not renewed or extended on or after January 30, 2022:	. Executive Order 13658 generally applies to the contract. . The contractor must pay all covered workers at least $12.15 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on that contract in 2023.

The applicable Executive Order minimum wage rate will be adjusted annually. If this contract is covered by one of the Executive Orders and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must still submit a conformance request.

Additional information on contractor requirements and worker protections under the Executive Orders is available at http://www.dol.gov/whd/govcontracts.

Modification Number	Publication Date
0	01/06/2023
1	01/13/2023
2	06/09/2023
3	07/14/2023
4	08/11/2023
5	08/18/2023
6	09/01/2023
7	09/08/2023

ASBE0005-002 07/04/2022

	Rates	Fringes
Asbestos Workers/Insulator (Includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems)	$ 49.58	25.27
Fire Stop Technician (Application of Firestopping Materials for wall openings and penetrations in walls, floors, ceilings and curtain walls)	$ 32.09	19.66

ASBE0005-004 07/04/2022

	Rates	Fringes
Asbestos Removal worker/hazardous material handler (Includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging and disposing of all insulation materials from mechanical systems, whether they contain asbestos or not)	$ 23.52	13.37

BOIL0092-003 01/01/2021

	Rates	Fringes
BOILERMAKER	$ 46.03	38.81

BRCA0004-008 11/01/2022

	Rates	Fringes
BRICKLAYER; MARBLE SETTER	$ 44.65	19.00

BRCA0018-004 06/01/2022

	Rates	Fringes
MARBLE FINISHER	$ 37.87	14.13
TILE FINISHER	$ 32.44	12.54
TILE LAYER	$ 45.05	18.33

BRCA0018-010 09/01/2022

	Rates	Fringes
TERRAZZO FINISHER	$ 38.37	14.13
TERRAZZO WORKER/SETTER	$ 46.49	14.66

CARP0213-003 07/01/2021

	Rates	Fringes
Drywall		
(1) Work on wood framed construction of single family residences, apartments or condominiums under four stories		
Drywall Installer/Lather	$ 32.14	16.28
Drywall Stocker/Scrapper	$ 22.16	8.62

CARP0619-002 07/01/2021

	Rates	Fringes
Drywall		
(2) All other work		
Drywall Installer/Lather	$ 42.80	16.28
Drywall Stocker/Scrapper	$ 23.07	8.62

CARP0619-003 07/01/2021

	Rates	Fringes
CARPENTER		
(1) Bridge	$ 51.53	16.28
(2) Commercial Building	$ 46.30	16.28
(3) Heavy & Highway	$ 51.40	16.28
(4) Residential Carpenter	$ 38.47	16.28
(5) Residential Insulation Installer	$ 24.16	15.76
PILEDRIVERMAN	$ 51.53	16.28

CARP0619-004 07/01/2021

	Rates	Fringes
Diver		
(1) Wet	$ 831.20	16.28
(2) Standby	$ 444.24	16.28
(3) Tender	$ 436.24	16.28
(4) Assistant Tender	$ 412.24	16.28

Amounts in ""Rates' column are per day

CARP0721-001 07/01/2021

	Rates	Fringes
Modular Furniture Installer	$ 21.85	7.15

CARP1607-004 07/01/2021

	Rates	Fringes
MILLWRIGHT	$ 51.90	16.48

ELEC0569-001 06/05/2023

	Rates	Fringes
Electricians (Tunnel Work)		
Cable Splicer	$ 60.30	17.84
Electrician	$ 59.46	17.81
Electricians: (All Other Work, Including 4 Stories Residential)		
Cable Splicer	$ 53.60	17.64
Electrician	$ 52.85	17.62

ELEC0569-004 06/01/2023

	Rates	Fringes
ELECTRICIAN (Sound & Communications Sound Technician)	$ 38.78	14.04

SCOPE OF WORK Assembly, installation, operation, service and maintenance of components or systems as used in closed circuit television, amplified master television distribution, CATV on private property, intercommunication, burglar alarm, fire alarm, life support and all security alarms, private and public telephone and related telephone interconnect, public address, paging, audio, language, electronic, background music system less than line voltage or any system acceptable for class two wiring for private, commercial, or industrial use furnished by leased wire, freuency modulation or other recording devices, electrical apparatus by means of which electricity is applied to the amplification, transmission, transference, recording or reproduction of voice, music, sound, impulses and video. Excluded from this Scope of Work - transmission, service and maintenance of background music. All of the above shall include the installation and transmission over fiber optics.

ELEC0569-005 06/01/2023

	Rates	Fringes
Sound & Communications		
Sound Technician	$ 38.78	14.04

SCOPE OF WORK Assembly, installation, operation, service and maintenance of components or systems as used in closed circuit television, amplified master television distribution, CATV on private property, intercommunication, burglar alarm, fire alarm, life support and all security alarms, private and public telephone and related telephone interconnect, public address, paging, audio, language, electronic, background music system less than line voltage or any system acceptable for class two wiring for private, commercial, or industrial use furnished by leased wire, freuency modulation or other recording devices, electrical apparatus by means of which electricity is applied to the amplification, transmission, transference, recording or reproduction of voice, music, sound, impulses and video. Excluded from this Scope of Work - transmission, service and maintenance of background music. All of the above shall include the installation and transmission over fiber optics.

SOUND TECHNICIAN: Terminating, operating and performing final check-out

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ELEC0569-006 06/06/2022

Work on street lighting; traffic signals; and underground systems and/or established easements outside of buildings

	Rates	Fringes
Traffic signal, street light and underground work		
Utility Technician #1	$ 38.67	9.11
Utility Technician #2	$ 30.10	8.85

STREET LIGHT & TRAFFIC SIGNAL WORK:

UTILITY TECHNICIAN #1: Installation of street lights and traffic signals, including electrical circuitry, programmable controller, pedestal-mounted electrical meter enclosures and laying of pre-assembled cable in ducts. The layout of electrical systems and communication installation including proper position of trench depths, and radius at duct banks, location for manholes, street lights and traffic signals.

UTILITY TECHNICIAN #2: Distribution of material at jobsite, installation of underground ducts for electrical, telephone, cable TV land communication systems. The setting, leveling, grounding and racking of precast manholes, handholes and transformer pads.

ELEC0569-008 06/05/2023

	Rates	Fringes
ELECTRICIAN (Residential, 1-3 Stories)	$ 40.50	8.18

ELEC1245-001 06/01/2022

	Rates	Fringes
LINE CONSTRUCTION		
(1) Lineman; Cable splicer	$ 64.40	22.58
(2) Equipment specialist (operates crawler tractors, commercial motor vehicles, backhoes, trenchers, cranes (50 tons and below), overhead & underground distribution line equipment)	$ 50.00	21.30
(3) Groundman	$ 38.23	20.89
(4) Powderman	$ 51.87	18.79

HOLIDAYS: New Year's Day, M.L. King Day, Memorial Day, Independence Day, Labor Day, Veterans Day, Thanksgiving Day and day after Thanksgiving, Christmas Day

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ELEV0018-001 01/01/2023

	Rates	Fringes
ELEVATOR MECHANIC	$ 63.95	37.335+a+b

FOOTNOTE:

a. PAID VACATION: Employer contributes 8% of regular hourly rate as vacation pay credit for employees with more than 5 years of service, and 6% for 6 months to 5 years of service.

b. PAID HOLIDAYS: New Year's Day, Memorial Day, Independence Day, Labor Day, Veterans' Day, Thanksgiving Day, Friday after Thanksgiving, and Christmas Day.

ENGI0012-003 07/01/2022

	Rates	Fringes
OPERATOR: Power Equipment (All Other Work)		
GROUP 1	$ 51.90	30.70
GROUP 2	$ 52.68	30.70

	Rates	Fringes
GROUP 3	$ 52.97	30.70

	Rates	Fringes
GROUP 4	$ 54.46	30.70
GROUP 5	$ 48.96	25.25
GROUP 6	$ 54.68	30.70
GROUP 8	$ 54.79	30.70
GROUP 9	$ 49.29	25.25
GROUP 10	$ 54.91	30.70
GROUP 11	$ 49.41	25.25
GROUP 12	$ 55.08	30.70
GROUP 13	$ 55.18	30.70
GROUP 14	$ 55.21	30.70
GROUP 15	$ 55.29	30.70
GROUP 16	$ 55.41	30.70
GROUP 17	$ 55.58	30.70
GROUP 18	$ 55.68	30.70
GROUP 19	$ 55.79	30.70
GROUP 20	$ 55.91	30.70
GROUP 21	$ 56.08	30.70
GROUP 22	$ 56.18	30.70
GROUP 23	$ 56.29	30.70
GROUP 24	$ 56.41	30.70
GROUP 25	$ 56.58	30.70

OPERATOR: Power Equipment
(Cranes, Piledriving &
Hoisting)

	Rates	Fringes
GROUP 1	$ 53.25	30.70
GROUP 2	$ 54.03	30.70
GROUP 3	$ 54.32	30.70
GROUP 4	$ 54.46	30.70
GROUP 5	$ 54.68	30.70
GROUP 6	$ 54.79	30.70
GROUP 7	$ 54.91	30.70
GROUP 8	$ 55.08	30.70
GROUP 9	$ 55.25	30.70
GROUP 10	$ 56.25	30.70
GROUP 11	$ 57.25	30.70
GROUP 12	$ 58.25	30.70
GROUP 13	$ 59.25	30.70

OPERATOR: Power Equipment
(Tunnel Work)

	Rates	Fringes
GROUP 1	$ 54.53	30.70
GROUP 2	$ 54.82	30.70
GROUP 3	$ 54.96	30.70
GROUP 4	$ 55.18	30.70
GROUP 5	$ 55.29	30.70
GROUP 6	$ 55.41	30.70
GROUP 7	$ 55.71	30.70

PREMIUM PAY:
$3.75 per hour shall be paid on all Power Equipment Operator work on the followng Military Bases: China Lake Naval Reserve, Vandenberg AFB, Point Arguello, Seely Naval Base, Fort Irwin, Nebo Annex Marine Base, Marine Corp Logistics Base Yermo, Edwards AFB, 29 Palms Marine Base and Camp Pendleton
Workers required to suit up and work in a hazardous material environment: $2.00 per hour additional. Combination mixer and compressor operator on gunite work shall be classified as a concrete mobile mixer operator.

SEE ZONE DEFINITIONS AFTER CLASSIFICATIONS

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

GROUP 1: Bargeman; Brakeman; Compressor operator; Ditch Witch, with seat or similar type equipment; Elevator operator-inside; Engineer Oiler; Forklift operator (includes loed, lull or similar types under 5 tons; Generator operator; Generator, pump or compressor plant operator; Pump operator; Signalman; Switchman

GROUP 2: Asphalt-rubber plant operator (nurse tank operator); Concrete mixer operator-skip type; Conveyor operator; Fireman; Forklift operator (includes loed, lull or similar types over 5 tons; Hydrostatic pump operator; oiler crusher (asphalt or concrete plant); Petromat laydown machine; PJU side dum jack; Screening and conveyor machine operator (or similar types); Skiploader (wheel type up to 3/4 yd. without attachment); Tar pot fireman; Temporary heating plant operator; Trenching machine oiler

GROUP 3: Asphalt-rubber blend operator; Bobcat or similar type (Skid steer); Equipment greaser (rack); Ford Ferguson (with dragtype attachments); Helicopter radioman (ground); Stationary pipe wrapping and cleaning machine operator

GROUP 4: Asphalt plant fireman; Backhoe operator (mini-max or similar type); Boring machine operator; Boxman or mixerman (asphalt or concrete); Chip spreading machine operator; Concrete cleaning decontamination machine operator; Concrete Pump Operator (small portable); Drilling machine operator, small auger types (Texoma super economatic or similar types - Hughes 100 or 200 or similar types - drilling depth of 30' maximum); Equipment greaser (grease truck); Guard rail post driver operator; Highline cableway signalman; Hydra-hammer-aero stomper; Micro Tunneling (above ground tunnel); Power concrete curing machine operator; Power concrete saw operator; Power-driven jumbo form setter operator; Power sweeper operator; Rock Wheel Saw/Trencher; Roller operator (compacting); Screed operator (asphalt or concrete); Trenching machine operator (up to 6 ft.); Vacuum or much truck

GROUP 5: Equipment Greaser (Grease Truck/Multi Shift).

GROUP 6: Articulating material hauler; Asphalt plant engineer; Batch plant operator; Bit sharpener; Concrete joint machine operator (canal and similar type); Concrete planer operator; Dandy digger; Deck engine operator; Derrickman (oilfield type); Drilling machine operator, bucket or auger types (Calweld 100 bucket or similar types - Watson 1000 auger or similar types - Texoma 330, 500 or 600 auger or similar types - drilling depth of 45' maximum); Drilling machine operator; Hydrographic seeder machine operator (straw, pulp or seed), Jackson track maintainer, or similar type; Kalamazoo Switch tamper, or similar type; Machine tool operator; Maginnis internal full slab vibrator, Mechanical berm, curb or gutter(concrete or asphalt); Mechanical finisher operator (concrete, Clary-Johnson-Bidwell or similar); Micro tunnel system (below ground); Pavement breaker operator (truck mounted); Road oil mixing machine operator; Roller operator (asphalt or finish), rubber-tired earth moving equipment (single engine, up to and including 25 yds. struck); Self-propelled tar pipelining machine operator; Skiploader operator (crawler and wheel type, over 3/4 yd. and up to and including 1-1/2 yds.); Slip form pump operator (power driven hydraulic lifting device for concrete forms); Tractor operator-bulldozer, tamper-scraper (single engine, up to 100 h.p. flywheel and similar types, up to and including D-5 and similar types); Tugger hoist operator (1 drum); Ultra high pressure waterjet cutting tool system operator; Vacuum blasting machine operator

GROUP 8: Asphalt or concrete spreading operator (tamping or finishing); Asphalt paving machine operator (Barber Greene or similar type); Asphalt-rubber distribution operator; Backhoe operator (up to and including 3/4 yd.), small ford, Case or similar; Cast-in-place pipe laying machine operator; Combination mixer and compressor operator (gunite work); Compactor operator (self-propelled); Concrete mixer operator (paving); Crushing plant operator; Drill Doctor; Drilling machine operator, Bucket or auger types (Calweld 150 bucket or similar types - Watson 1500, 2000 2500 auger or similar types - Texoma 700, 800 auger or similar types - drilling depth of 60' maximum); Elevating grader operator; Grade checker; Gradall operator; Grouting machine operator; Heavy-duty repairman; Heavy equipment robotics operator; Kalamazoo balliste regulator or similar type; Kolman belt loader and similar type; Le Tourneau blob compactor or similar type; Loader operator (Athey, Euclid, Sierra and similar types); Mobark Chipper or similar; Ozzie padder or similar types; P.C. slot saw; Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pumpcrete gun operator; Rock Drill or similar types; Rotary drill operator (excluding caisson type); Rubber-tired

earth-moving equipment operator (single engine, caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator (multiple engine up to and including 25 yds. struck); Rubber-tired scraper operator (self-loading paddle wheel type-John Deere, 1040 and similar single unit); Self-propelled curb and gutter machine operator; Shuttle buggy; Skiploader operator (crawler and wheel type over 1-1/2 yds. up to and including 6-1/2 yds.); Soil remediation plant operator; Surface heaters and planer operator; Tractor compressor drill combination operator; Tractor operator (any type larger than D-5 - 100 flywheel h.p. and over, or similar-bulldozer, tamper, scraper and push tractor single engine); Tractor operator (boom attachments), Traveling pipe wrapping, cleaning and bendng machine operator; Trenching machine operator (over 6 ft. depth capacity, manufacturer's rating); trenching Machine with Road Miner attachment (over 6 ft depth capacity): Ultra high pressure waterjet cutting tool system mechanic; Water pull (compaction) operator

GROUP 9: Heavy Duty Repairman

GROUP 10: Drilling machine operator, Bucket or auger types (Calweld 200 B bucket or similar types-Watson 3000 or 5000 auger or similar types-Texoma 900 auger or similar types-drilling depth of 105' maximum); Dual drum mixer, dynamic compactor LDC350 (or similar types); Monorail locomotive operator (diesel, gas or electric); Motor patrol-blade operator (single engine); Multiple engine tractor operator (Euclid and similar type-except Quad 9 cat.); Rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck); Pneumatic pipe ramming tool and similar types; Prestressed wrapping machine operator; Rubber-tired earth-moving equipment operator (single engine, over 50 yds. struck); Rubber tired earth moving equipment operator (multiple engine, Euclid, caterpillar and similar over 25 yds. and up to 50 yds. struck), Tower crane repairman; Tractor loader operator (crawler and wheel type over 6-1/2 yds.); Woods mixer operator (and similar Pugmill equipment)

GROUP 11: Heavy Duty Repairman - Welder Combination, Welder - Certified.

GROUP 12: Auto grader operator; Automatic slip form operator; Drilling machine operator, bucket or auger types (Calweld, auger 200 CA or similar types - Watson, auger 6000 or similar types - Hughes Super Duty, auger 200 or similar types - drilling depth of 175' maximum); Hoe ram or similar with compressor; Mass excavator operator less tha 750 cu. yards; Mechanical finishing machine operator; Mobile form traveler operator; Motor patrol operator (multi-engine);

Pipe mobile machine operator; Rubber-tired earth- moving equipment operator (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck); Rubber-tired self- loading scraper operator (paddle-wheel-auger type self-loading - two (2) or more units)

GROUP 13: Rubber-tired earth-moving equipment operator operating equipment with push-pull system (single engine, up to and including 25 yds. struck)

GROUP 14: Canal liner operator; Canal trimmer operator; Remote- control earth-moving equipment operator (operating a second piece of equipment: $1.00 per hour additional); Wheel excavator operator (over 750 cu. yds.)

GROUP 15: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine-up to and including 25 yds. struck)

GROUP 16: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 17: Rubber-tired earth-moving equipment operator, operating equipment with push-pull system (multiple engine, Euclid, Caterpillar and similar, over 50 cu. yds. struck); Tandem tractor operator (operating crawler type tractors in tandem - Quad 9 and similar type)

GROUP 18: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, up to and including 25 yds. struck)

GROUP 19: Rotex concrete belt operator (or similar types); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds.and up to and including 50 cu. yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, up to and including 25 yds. struck)

GROUP 20: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar

types in any combination, excluding compaction units - single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps, and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)
GROUP 21: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

GROUP 22: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, up to and including 25 yds. struck)

GROUP 23: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, Caterpillar, Euclid, Athey Wagon and similar types with any and all attachments over 25 yds. and up to and including 50 yds. struck); Rubber-tired earth-moving equipment operator, operating with the tandem push-pull system (multiple engine, up to and including 25 yds. struck)

GROUP 24: Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

GROUP 25: Concrete pump operator-truck mounted; Rubber-tired earth-moving equipment operator, operating equipment with the tandem push-pull system (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck)

CRANES, PILEDRIVING AND HOISTING EQUIPMENT CLASSIFICATIONS

GROUP 1: Engineer oiler; Fork lift operator (includes loed, lull or similar types)

GROUP 2: Truck crane oiler

GROUP 3: A-frame or winch truck operator; Ross carrier operator (jobsite)

GROUP 4: Bridge-type unloader and turntable operator; Helicopter hoist operator

GROUP 5: Hydraulic boom truck; Stinger crane (Austin-Western or similar type); Tugger hoist operator (1 drum)

GROUP 6: Bridge crane operator; Cretor crane operator; Hoist

operator (Chicago boom and similar type); Lift mobile operator; Lift slab machine operator (Vagtborg and similar types); Material hoist and/or manlift operator; Polar gantry crane operator; Self Climbing scaffold (or similar type); Shovel, backhoe, dragline, clamshell operator (over 3/4 yd. and up to 5 cu. yds. mrc); Tugger hoist operator

GROUP 7: Pedestal crane operator; Shovel, backhoe, dragline, clamshell operator (over 5 cu. yds. mrc); Tower crane repair; Tugger hoist operator (3 drum)

GROUP 8: Crane operator (up to and including 25 ton capacity); Crawler transporter operator; Derrick barge operator (up to and including 25 ton capacity); Hoist operator, stiff legs, Guy derrick or similar type (up to and including 25 ton capacity); Shovel, backhoe, dragline, clamshell operator (over 7 cu. yds., M.R.C.)

GROUP 9: Crane operator (over 25 tons and up to and including 50 tons mrc); Derrick barge operator (over 25 tons up to and including 50 tons mrc); Highline cableway operator; Hoist operator, stiff legs, Guy derrick or similar type (over 25 tons up to and including 50 tons mrc); K-crane operator; Polar crane operator; Self erecting tower crane operator maximum lifting capacity ten tons

GROUP 10: Crane operator (over 50 tons and up to and including 100 tons mrc); Derrick barge operator (over 50 tons up to and including 100 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 50 tons up to and including 100 tons mrc), Mobile tower crane operator (over 50 tons, up to and including 100 tons M.R.C.); Tower crane operator and tower gantry

GROUP 11: Crane operator (over 100 tons and up to and including 200 tons mrc); Derrick barge operator (over 100 tons up to and including 200 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 100 tons up to and including 200 tons mrc); Mobile tower crane operator (over 100 tons up to and including 200 tons mrc)

GROUP 12: Crane operator (over 200 tons up to and including 300 tons mrc); Derrick barge operator (over 200 tons up to and including 300 tons mrc); Hoist operator, stiff legs, Guy derrick or similar type (over 200 tons, up to and including 300 tons mrc); Mobile tower crane operator (over 200 tons, up to and including 300 tons mrc)

GROUP 13: Crane operator (over 300 tons); Derrick barge operator (over 300 tons); Helicopter pilot; Hoist operator, stiff legs, Guy derrick or similar type (over 300 tons); Mobile tower crane operator (over 300 tons)

TUNNEL CLASSIFICATIONS

GROUP 1: Skiploader (wheel type up to 3/4 yd. without attachment)

GROUP 2: Power-driven jumbo form setter operator

GROUP 3: Dinkey locomotive or motorperson (up to and including 10 tons)

GROUP 4: Bit sharpener; Equipment greaser (grease truck); Slip form pump operator (power-driven hydraulic lifting device for concrete forms); Tugger hoist operator (1 drum); Tunnel locomotive operator (over 10 and up to and including 30 tons)

GROUP 5: Backhoe operator (up to and including 3/4 yd.); Small Ford, Case or similar; Drill doctor; Grouting machine operator; Heading shield operator; Heavy-duty repairperson; Loader operator (Athey, Euclid, Sierra and similar types); Mucking machine operator (1/4 yd., rubber-tired, rail or track type); Pneumatic concrete placing machine operator (Hackley-Presswell or similar type); Pneumatic heading shield (tunnel); Pumpcrete gun operator; Tractor compressor drill combination operator; Tugger hoist operator (2 drum); Tunnel locomotive operator (over 30 tons)

GROUP 6: Heavy Duty Repairman

GROUP 7: Tunnel mole boring machine operator

ENGINEERS ZONES

$1.00 additional per hour for all of IMPERIAL County and the portions of KERN, RIVERSIDE & SAN BERNARDINO Counties as defined below:

That area within the following Boundary: Begin in San Bernardino County, approximately 3 miles NE of the intersection of I-15 and the California State line at that point which is the NW corner of Section 1, T17N,m R14E, San Bernardino Meridian. Continue W in a straight line to that point which is the SW corner of the northwest quarter of Section 6, T27S, R42E, Mt. Diablo Meridian. Continue North to the intersection with the Inyo County Boundary at that point which is the NE corner of the western half of the northern quarter of Section 6, T25S, R42E, MDM. Continue W along the Inyo and San Bernardino County boundary until the intersection with Kern County, as that point which is the SE corner of Section 34, T24S, R40E, MDM. Continue W along the Inyo and Kern County boundary until the intersection with Tulare County, at that point which is the SW corner of the SE quarter of Section 32, T24S, R37E, MDM. Continue W along the Kern and Tulare County boundary, until that point which is the NW corner of T25S, R32E, MDM. Continue S following R32E lines to the NW corner of T31S, R32E, MDM. Continue W to the NW corner of T31S, R31E, MDM. Continue S to the SW corner of T32S, R31E, MDM. Continue

W to SW corner of SE quarter of Section 34, T32S, R30E, MDM. Continue S to SW corner of T11N, R17W, SBM. Continue E along south boundary of T11N, SBM to SW corner of T11N, R7W, SBM. Continue S to SW corner of T9N, R7W, SBM. Continue E along south boundary of T9N, SBM to SW corner of T9N, R1E, SBM. Continue S along west boundary of R1E, SMB to Riverside County line at the SW corner of T1S, R1E, SBM. Continue E along south boundary of T1s, SBM (Riverside County Line) to SW corner of T1S, R10E, SBM. Continue S along west boundary of R10E, SBM to Imperial County line at the SW corner of T8S, R10E, SBM. Continue W along Imperial and Riverside county line to NW corner of T9S, R9E, SBM. Continue S along the boundary between Imperial and San Diego Counties, along the west edge of R9E, SBM to the south boundary of Imperial County/California state line. Follow the California state line west to Arizona state line, then north to Nevada state line, then continuing NW back to start at the point which is the NW corner of Section 1, T17N, R14E, SBM

$1.00 additional per hour for portions of SAN LUIS OBISPO, KERN, SANTA BARBARA & VENTURA as defined below:

That area within the following Boundary: Begin approximately 5 miles north of the community of Cholame, on the Monterey County and San Luis Obispo County boundary at the NW corner of T25S, R16E, Mt. Diablo Meridian. Continue south along the west side of R16E to the SW corner of T30S, R16E, MDM. Continue E to SW corner of T30S, R17E, MDM. Continue S to SW corner of T31S, R17E, MDM. Continue E to SW corner of T31S, R18E, MDM. Continue S along West side of R18E, MDM as it crosses into San Bernardino Meridian numbering area and becomes R30W. Follow the west side of R30W, SBM to the SW corner of T9N, R30W, SBM. Continue E along the south edge of T9N, SBM to the Santa Barbara County and Ventura County boundary at that point whch is the SW corner of Section 34.T9N, R24W, SBM, continue S along the Ventura County line to that point which is the SW corner of the SE quarter of Section 32, T7N, R24W, SBM. Continue E along the south edge of T7N, SBM to the SE corner to T7N, R21W, SBM. Continue N along East side of R21W, SBM to Ventura County and Kern County boundary at the NE corner of T8N, R21W. Continue W along the Ventura County and Kern County boundary to the SE corner of T9N, R21W. Continue North along the East edge of R21W, SBM to the NE corner of T12N, R21W, SBM. Continue West along the north edge of T12N, SBM to the SE corner of T32S, R21E, MDM. [T12N SBM is a think strip between T11N SBM and T32S MDM]. Continue North along the East side of R21E, MDM to the Kings County and Kern County border at the NE corner of T25S, R21E, MDM, continue West along the Kings County and Kern County Boundary until the intersection of San Luis Obispo County. Continue west along the Kings County and San Luis Obispo County boundary until the intersection with Monterey County. Continue West along the Monterey County and San Luis Obispo County boundary to the beginning point at the NW corner of T25S, R16E, MDM.

$2.00 additional per hour for INYO and MONO Counties and the Northern portion of SAN BERNARDINO County as defined below:

That area within the following Boundary: Begin at the intersection of the northern boundary of Mono County and the California state line at the point which is the center of Section 17, T10N, R22E, Mt. Diablo Meridian. Continue S then SE along the entire western boundary of Mono County, until it reaches Inyo County at the point which is the NE corner of the Western half of the NW quarter of Section 2, T8S, R29E, MDM. Continue SSE along the entire western boundary of Inyo County, until the intersection with Kern County at the point which is the SW corner of the SE 1/4 of Section 32, T24S, R37E, MDM. Continue E along the Inyo and Kern County boundary until the intersection with San Bernardino County at that point which is the SE corner of section 34, T24S, R40E, MDM. Continue E along the Inyo and San Bernardino County boundary until the point which is the NE corner of the Western half of the NW quarter of Section 6, T25S, R42E, MDM. Continue S to that point which is the SW corner of the NW quarter of Section 6, T27S, R42E, MDM. Continue E in a straight line to the California and Nevada state border at the point which is the NW corner of Section 1, T17N, R14E, San Bernardino Meridian. Then continue NW along the state line to the starting point, which is the center of Section 18, T10N, R22E, MDM.

REMAINING AREA NOT DEFINED ABOVE RECIEVES BASE RATE

ENGI0012-004 08/01/2023

	Rates	Fringes
OPERATOR: Power Equipment (DREDGING)		
(1) Leverman	$ 64.10	34.60
(2) Dredge dozer	$ 58.13	34.60
(3) Deckmate	$ 58.02	34.60
(4) Winch operator (stern winch on dredge)	$ 57.47	34.60
(5) Fireman-Oiler, Deckhand, Bargeman, Leveehand	$ 56.93	34.60
(6) Barge Mate	$ 57.54	34.60

IRON0229-001 01/01/2023

	Rates	Fringes
IRONWORKER		
Fence Erector	$ 41.28	25.66
Ornamental, Reinforcing and Structural	$ 46.20	34.30

PREMIUM PAY:

$6.00 additional per hour at the following locations:

China Lake Naval Test Station, Chocolate Mountains Naval Reserve-Niland,
Edwards AFB, Fort Irwin Military Station, Fort Irwin Training Center-Goldstone, San Clemente Island, San Nicholas Island, Susanville Federal Prison, 29 Palms - Marine Corps, U.S. Marine Base - Barstow, U.S. Naval Air Facility - Sealey, Vandenberg AFB

$4.00 additional per hour at the following locations:

Army Defense Language Institute - Monterey, Fallon Air Base, Naval Post Graduate School - Monterey, Yermo Marine Corps Logistics Center

$2.00 additional per hour at the following locations:

Port Hueneme, Port Mugu, U.S. Coast Guard Station - Two Rock

LABO0089-001 07/01/2022

	Rates	Fringes
LABORER (BUILDING and all other Residential Construction)		
Group 1	$ 37.68	22.44
Group 2	$ 38.37	22.44
Group 3	$ 39.12	22.44
Group 4	$ 39.98	22.44
Group 5	$ 41.60	22.44
LABORER (RESIDENTIAL CONSTRUCTION - See definition below)		
(1) Laborer	$ 35.58	20.77
(2) Cleanup, Landscape, Fencing (Chain Link & Wood)	$ 34.29	20.77

RESIDENTIAL DEFINITION: Wood or metal frame construction of single family residences, apartments and condominums - excluding (a) projects that exceed three stories over a garage level, (b) any utility work such as telephone, gas, water, sewer and other utilities and (c) any fine grading work, utility work or paving work in the future street and public right-of-way; but including all rough grading work at the job site behind the existing right of way

LABORER CLASSIFICATIONS

GROUP 1: Cleaning and handling of panel forms; Concrete Screeding for Rought Strike-off; Concrete, water curing;

Demolition laborer; Flagman; Gas, oil and/or water pipeline laborer; General Laborer; General clean-up laborer; Landscape laborer; Jetting laborer; Temporary water and air lines laborer; Material hoseman (walls, slabs, floors and decks); Plugging, filling of Shee-bolt holes; Dry packing of concrete; Railroad maintenance, Repair Trackman and road beds, Streetcar and railroad construction trac laborers; Slip form raisers; Slurry seal crews (mixer operator, applicator operator, squeegee man, Shuttle man, top man), filling of cracks by any method on any surface; Tarman and mortar man; Tool crib or tool house laborer; Window cleaner; Wire Mesh puling-all concrete pouring operations

GROUP 2: Asphalt Shoveler; Cement Dumper (on 1 yard or larger mixer and handling bulk cement); Cesspool digger and installer; Chucktender; Chute man, pouring concrete, the handling of the cute from ready mix trucks, such as walls, slabs, decks, floors, foundations, footings, curbs, gutters and sidewalks; Concrete curer-impervious membrane and form oiler; Cutting torch operator (demoliton); Guinea chaser; Headboard man-asphlt; Laborer,
packing rod steel and pans; membrane vapor barrier installer; Power broom sweepers (small); Riiprap, stonepaver, placing stone or wet sacked concrete; Roto scraper and tiller; Tank sealer and cleaner; Tree climber, faller, chain saw operator, Pittsburgh Chipper and similar type brush shredders; Underground laborers, including caisson bellower

GROUP 3: Buggymobile; Concrete cutting torch; Concrete cutting torch; Concrete pile cutter; Driller, jackhammer, 2 1/2 feet drill steel or longer; Dri Pak-it machine; High sealer (including drilling of same); Hydro seeder and similar type; Impact wrench, mult-plate; Kettlemen, potmen and mean applying asphalt, lay-kold, creosote, line caustic and similar type materials (applying means applying, dipping, brushing or handling of such materials for pipe wrapping and waterproofing); Operators of pneumatic, gas, electric tools, vibratring machines, pavement breakers, air blasting, come-along, and similar mechanical tools not separately classified herein; Pipelayers back up man coating, grouting, making of joints, sealing, caulking, diapering and inclduing rubber gasket joints, pointing and any and all other services; Rotary Scarifier or multiple head concrete chipping scaarifier; Steel header board man and guideline setter; Tampers, Barko, Wacker and similar type; Trenching machine, handpropelled

GROUP 4: Asphalt raker, luterman, ironer, apshalt dumpman and asphalt spreader boxes (all types); Concrete core cutter (walls, floors or ceilings), Grinder or sander; Concrete saw man; cutting walls or flat work, scoring old or new concrete; Cribber, shorer, lagging, sheeting and trench bracing, hand-guided lagging hammer; Laser beam in

connection with laborer's work; Oversize concrete vibrator operator 70 pounds and over; Pipelayer performing all services in the laying, installation and all forms of connection of pipe from the point of receiving pipe in the ditch until completion of oepration, including any and all forms of tubular material, whether pipe, metallic or non-metallic, conduit, and any other stationary type of tubular device used for the conveying of any substance or element, whether water, sewage, solid, gas, air or other product whatsoever and without regard to the nature of material from which the tubular material is fabricated; No joint pipe and stripping of same; Prefabricated manhole installer; Sandblaster (nozzleman), Porta shot-blast, water blasting

GROUP 5: Blasters Powderman-All work of loading holes, placing and blasting of all pwder and explosives of whatever type, regardless of method used for such loading and placing; Driller-all power drills, excluding jackhammer, whether core, diamond, wagon, track, multiple unit, and any and all other types of mechanical drills without regard to the form of motive power.

LABO0089-002 11/01/2020

	Rates	Fringes
LABORER (MASON TENDER)	$ 33.00	19.23

LABO0089-004 07/01/2022

HEAVY AND HIGHWAY CONSTRUCTION

	Rates	Fringes
Laborers:		
Group 1	$ 38.80	22.44
Group 2	$ 39.27	22.44
Group 3	$ 39.72	22.44
Group 4	$ 40.62	22.44
Group 5	$ 43.58	22.44

LABORER CLASSIFICATIONS

GROUP 1: Laborer: General or Construction Laborer, Landscape Laborer. Asphalt Rubber Material Loader. Boring Machine Tender (outside), Carpenter Laborer (cleaning, handling, oiling & blowing of panel forms and lumber), Concrete Laborer, Concrete Screeding for rough strike-off, Concrete water curing. Concrete Curb & Gutter laborer, Certified Confined Space Laborer, Demolition laborer & Cleaning of Brick and lumber,Expansion Joint Caulking; Environmental Remediation, Monitoring Well, Toxic waste and Geotechnical

Drill tender, Fine Grader, Fire Watcher, Limbers, Brush Loader, Pilers and Debris Handlers. flagman. Gas Oil and Water Pipeline Laborer. Material Hoseman (slabs, walls, floors, decks); Plugging, filling of shee bolt holes; Dry packing of concrete and patching; Post Holer Digger (manual); Railroad maintenance, repair trackman, road beds; Rigging & signaling; Scaler, Slip-Form Raisers, Filling cracks on any surface, tool Crib or Tool House Laborer, Traffic control (signs, barriers, barricades, delineator, cones etc.), Window Cleaner

GROUP 2: Asphalt abatement; Buggymobile; Cement dumper (on 1 yd. or larger mixers and handling bulk cement); Concrete curer, impervious membrane and form oiler; Chute man, pouring concrete; Concrete cutting torch; Concrete pile cutter; driller/Jackhammer, with drill steel 2 1/'2 feet or longer; Dry pak-it machine; Fence erector; Pipeline wrapper, gas, oil, water, pot tender & form man; Grout man; Installation of all asphalt overlay fabric and materials used for reinforcing asphalt; Irrigation laborer; Kettleman-Potman hot mop, includes applying asphalt, lay-klold, creosote, lime caustic and similar tyhpes of materials (dipping, brushing, handling) and waterproofing; Membrane vapor barrier installer; Pipelayer backup man (coating, grouting, making of joints, sealing caulkiing, diapering including rubber basket joints, pointing); Rotary scarifier, multiple head concrete chipper; Rock slinger; Roto scraper & tiller; Sandblaster pot tender; Septic tank digger/installer; Tamper/wacker operator; Tank scaler & cleaner; Tar man & mortar man; Tree climber/faller, chainb saw operator, Pittsburgh chipper & similar type brush shredders.

GROUP 3: Asphalt, installation of all frabrics; Buggy Mobile Man, Bushing hammer; Compactor (all types), Concrete Curer - Impervious membrane, Form Oiler, Concrete Cutting Torch, Concrete Pile Cutter,Driller/Jackhammer with drill steel 2 1/2 ft or longer, Dry Pak-it machine, Fence erector including manual post hole digging, Gas oil or water Pipeline Wrapper - 6 ft pipe and over, Guradrail erector, Hydro seeder, Impact Wrench man (multi plate), kettleman-Potman Hot Mop includes applying Asphalt, Lay-Kold, Creosote, lime caustic and similar types of materials (dipping, brushing or handling) and waterproofing. Laser Beam in connection with Laborer work. High Scaler, Operators of Pneumatic Gas or Electric Tools, Vibrating Machines, Pavement Breakers, Air Blasting, Come-Alongs and similar mechanical tools, Remote-Controlled Robotic Tools in connection with Laborers work. Pipelayer Backup Man (Coating, grouting,m makeing of joints, sealing, caulking, diapering including rubber gasket joints, pointing and other services). Power Post Hole Digger, Rotary Scarifier (multiple head concrete chipper scarifier), Rock Slinger, Shot Blast equipment (8 to 48

inches), Steel Headerboard Man and Guideline Setter, Tamper/Wacker operator and similar types, Trenching Machine hand propelled.

GROUP 4: Any worker exposed to raw sewage. Asphalt Raker, Luteman, Asphalt Dumpman, Asphalt Spreader Boxes, Concrete Core Cutter, Concrete Saw Man, Cribber, Shorer, Head Rock Slinger. Installation of subsurface instrumentation, monitoring wells or points, remediation system installer; Laborer, asphalt-rubber distributor bootman; Oversize concrete vibrator operators, 70 pounds or over. Pipelayer, Prfefabricated Manhole Installer, Sandblast Nozzleman (Water Balsting-Porta Shot Blast), Traffic Lane Closure.

GROUP 5: Blasters Powderman-All work of loading holes, placing and blasting of all powder and explosives of whatever type, regardless of method used for such loading and placing; Horizontal directional driller, Boring system, Electronic traking, Driller: all power drills excluding jackhammer, whether core, diamond, wagon, track, multiple unit, and all other types of mechanical drills without regard to form of motive power. Environmental remediation, Monitoring well, Toxic waste and Geotechnical driller, Toxic waste removal. Welding in connection with Laborer's work.

LABO0300-005 08/01/2022

	Rates	Fringes
Asbestos Removal Laborer.....	$ 39.23	23.28

SCOPE OF WORK: Includes site mobilization, initial site cleanup, site preparation, removal of asbestos-containing material and toxic waste, encapsulation, enclosure and disposal of asbestos- containing materials and toxic waste by hand or with equipment or machinery; scaffolding, fabrication of temporary wooden barriers and assembly of decontamination stations.

LABO0345-001 07/01/2022

	Rates	Fringes
LABORER (GUNITE)		
GROUP 1.....	$ 48.50	21.37
GROUP 2.....	$ 47.55	21.37
GROUP 3.....	$ 44.01	21.37

FOOTNOTE: GUNITE PREMIUM PAY: Workers working from a Bosn'n's Chair or suspended from a rope or cable shall receive 40 cents per hour above the foregoing applicable

classification rates. Workers doing gunite and/or shotcrete work in a tunnel shall receive 35 cents per hour above the foregoing applicable classification rates, paid on a portal-to-portal basis. Any work performed on, in or above any smoke stack, silo, storage elevator or similar type of structure, when such structure is in excess of 75'-0"" above base level and which work must be performed in whole or in part more than 75'-0"" above base level, that work performed above the 75'-0"" level shall be compensated for at 35 cents per hour above the applicable classification wage rate.

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Rodmen, Nozzlemen

GROUP 2: Gunmen

GROUP 3: Reboundmen

LABO1184-001 07/01/2022

	Rates	Fringes
Laborers: (HORIZONTAL DIRECTIONAL DRILLING)		
(1) Drilling Crew Laborer...	$ 40.69	18.25
(2) Vehicle Operator/Hauler.	$ 40.86	18.25
(3) Horizontal Directional Drill Operator.....	$ 42.71	18.25
(4) Electronic Tracking Locator.....	$ 44.71	18.25
Laborers: (STRIPING/SLURRY SEAL)		
GROUP 1.....	$ 41.90	21.32
GROUP 2.....	$ 43.20	21.32
GROUP 3.....	$ 45.21	21.32
GROUP 4.....	$ 46.95	21.32

LABORERS - STRIPING CLASSIFICATIONS

GROUP 1: Protective coating, pavement sealing, including repair and filling of cracks by any method on any surface in parking lots, game courts and playgrounds; carstops; operation of all related machinery and equipment; equipment repair technician

GROUP 2: Traffic surface abrasive blaster; pot tender - removal of all traffic lines and markings by any method (sandblasting, waterblasting, grinding, etc.) and preparation of surface for coatings. Traffic control person: controlling and directing traffic through both

conventional and moving lane closures; operation of all related machinery and equipment

GROUP 3: Traffic delineating device applicator: Layout and application of pavement markers, delineating signs, rumble and traffic bars, adhesives, guide markers, other traffic delineating devices including traffic control. This category includes all traffic related surface preparation (sandblasting, waterblasting, grinding) as part of the application process. Traffic protective delineating system installer: removes, relocates, installs, permanently affixed roadside and parking delineation barricades, fencing, cable anchor, guard rail, reference signs, monument markers; operation of all related machinery and equipment; power broom sweeper

GROUP 4: Striper: layout and application of traffic stripes and markings; hot thermo plastic; tape traffic stripes and markings, including traffic control; operation of all related machinery and equipment

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LABO1414-003 08/03/2022

	Rates	Fringes
LABORER		
PLASTER CLEAN-UP LABORER	$ 38.92	23.32
PLASTER TENDER	$ 41.47	23.32

Work on a swing stage scaffold: $1.00 per hour additional.

Work at Military Bases - $3.00 additional per hour:
Coronado Naval Amphibious Base, Fort Irwin, Marine Corps Air Station-29 Palms, Imperial Beach Naval Air Station, Marine Corps Logistics Supply Base, Marine Corps Pickle Meadows, Mountain Warfare Training Center, Naval Air Facility-Seeley, North Island Naval Air Station, Vandenberg AFB.

PAIN0036-001 07/01/2023

	Rates	Fringes
Painters: (Including Lead Abatement)		
(1) Repaint (excludes San Diego County)	$ 29.59	17.12
(2) All Other Work	$ 38.52	18.64

REPAINT of any previously painted structure. Exceptions: work involving the aerospace industry, breweries, commercial recreational facilities, hotels which operate commercial establishments as part of hotel service, and sports facilities.

PAIN0036-010 09/01/2022

	Rates	Fringes
DRYWALL FINISHER/TAPER		
(1) Building & Heavy Construction	$ 39.54	21.50
(2) Residential Construction (Wood frame apartments, single family homes and multi-duplexes up to and including four stories)	$ 32.27	14.70

PAIN0036-012 10/01/2022

	Rates	Fringes
GLAZIER	$ 47.90	20.71

PAIN0036-019 06/01/2022

	Rates	Fringes
SOFT FLOOR LAYER	$ 34.77	17.89

PLAS0200-005 08/03/2022

	Rates	Fringes
PLASTERER	$ 47.37	19.64

NORTH ISLAND NAVAL AIR STATION, COLORADO NAVAL AMPHIBIOUS BASE, IMPERIAL BEACH NAVAL AIR STATION: $3.00 additional per hour.

PLAS0500-001 07/01/2018

	Rates	Fringes
CEMENT MASON/CONCRETE FINISHER		
GROUP 1	$ 26.34	19.77
GROUP 2	$ 27.99	19.77
GROUP 3	$ 30.07	21.12

CEMENT MASONS - work inside the building line, meeting the following criteria:

GROUP 1: Residential wood frame project of any size; work classified as Type III, IV or Type V construction; interior tenant improvement work regardless the size of the project; any wood frame project of four stories or less.

GROUP 2: Work classified as type I and II construction

GROUP 3: All other work

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* PLUM0016-006 09/01/2023

	Rates	Fringes
PLUMBER, PIPEFITTER, STEAMFITTER		
Camp Pendleton; Vandenberg Air Force Base	$ 61.68	26.51
Work ONLY on new additions and remodeling of commercial buildings, bars, restaurants, and stores not to exceed 5,000 sq. ft. of floor space	$ 53.51	25.28
Work ONLY on strip malls, light commercial, tenant improvement and remodel work	$ 40.95	23.61
All other work except work on new additions and remodeling of bars, restaurant, stores and commercial buildings not to exceed 5,000 sq. ft. of floor space and work on strip malls, light commercial, tenant improvement and remodel work	$ 55.18	26.26

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* PLUM0016-011 09/01/2023

	Rates	Fringes
PLUMBER/PIPEFITTER		
Residential	$ 45.22	22.43

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* PLUM0345-001 09/01/2023

	Rates	Fringes
PLUMBER		
Landscape/Irrigation Fitter	$ 40.20	25.90
Sewer & Storm Drain Work	$ 44.29	23.28

ROOF0045-001 07/01/2023

	Rates	Fringes
ROOFER	$ 41.30	12.04

SFCA0669-001 01/01/2023

	Rates	Fringes
SPRINKLER FITTER	$ 44.99	25.72

SHEE0206-001 07/01/2020

	Rates	Fringes
SHEET METAL WORKER		
Camp Pendleton	$ 42.62	29.55
Except Camp Pendleton	$ 40.62	29.55
Sheet Metal Technician	$ 30.51	9.49

SHEET METAL TECHNICIAN - SCOPE:
a. Existing residential buildings, both single and multi-family, where each unit is heated and/or cooled by a separate system b. New single family residential buildings including tracts. c. New multi-family residential buildings, not exceeding five stories of living space in height, provided each unit is heated or cooled by a separate system. Hotels and motels are excluded. d. LIGHT COMMERCIAL WORK: Any sheet metal, heating and air conditioning work performed on a project where the total construction cost, excluding land, is under $1,000,000 e. TENANT IMPROVEMENT WORK: Any work necessary to finish interior spaces to conform to the occupants of commercial buildings, after completion of the building shell

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TEAM0166-001 07/01/2023

	Rates	Fringes
Truck drivers:		
GROUP 1	$ 30.12	25.57
GROUP 2	$ 40.71	25.57
GROUP 3	$ 40.91	25.57
GROUP 4	$ 41.11	25.57

GROUP 5	$ 41.31	25.57
GROUP 6	$ 41.80	25.57
GROUP 7	$ 43.31	25.57

FOOTNOTE: HAZMAT PAY: Work on a hazmat job, where hazmat certification is required, shall be paid, in addition to the classification working in, as follows: Levels A, B and C - +$1.00 per hour. Workers shall be paid hazmat pay in increments of four (4) and eight (8) hours.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Fuel Man, Swamper

GROUP 2: 2-axle Dump Truck, 2-axle Flat Bed,Concrete Pumping Truck, Industrial Lift Truck, Motorized Traffic Control, Pickup Truck on Jobsite

GROUP 3: 2-axle Water Truck, 3-axle Dump Truck, 3-axle Flat Bed, Erosion Control Nozzleman, Dump Crete Truck under 6.5 yd, Forklift 15,000 lbs and over, Prell Truck, Pipeline Work Truck Driver, Road Oil Spreader, Cement Distributor or Slurry Driver, Bootman, Ross Carrier

GROUP 4: Off-road Dump Truck under 35 tons 4-axles but less than 7-axles, Low-Bed Truck & Trailer, Transit Mix Trucks under 8 yd, 3-axle Water Truck, Erosion Control Driver, Grout Mixer Truck, Dump Crete 6.5yd and over, Dumpster Trucks, DW 10, DW 20 and over, Fuel Truck and Dynamite, Truck Greaser, Truck Mounted Mobile Sweeper 2-axle Winch Truck

GROUP 5: Off-road Dump Truck 35 tons and over, 7-axles or more, Transit Mix Trucks 8 yd and over, A-Frame Truck, Swedish Cranes

GROUP 6: Off-Road Special Equipment (including but not limited to Water Pull Tankers, Athey Wagons, DJB, B70 Wuclids or like Equipment)

GROUP 7: Repairman

WELDERS - Receive rate prescribed for craft performing operation to which welding is incidental.

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Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours

they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at https://www.dol.gov/agencies/whd/government-contracts.

Unlisted classifications needed for work not included within the scope of the classifications listed may be added after award only as provided in the labor standards contract clauses (29CFR 5.5 (a) (1) (ii)).

The body of each wage determination lists the classification and wage rates that have been found to be prevailing for the cited type(s) of construction in the area covered by the wage determination. The classifications are listed in alphabetical order of ""identifiers"" that indicate whether the particular rate is a union rate (current union negotiated rate for local), a survey rate (weighted average rate) or a union average rate (weighted union average rate).

Union Rate Identifiers

A four letter classification abbreviation identifier enclosed in dotted lines beginning with characters other than ""SU"" or ""UAVG"" denotes that the union classification and rate were prevailing for that classification in the survey. Example: PLUM0198-005 07/01/2014. PLUM is an abbreviation identifier of the union which prevailed in the survey for this classification, which in this example would be Plumbers. 0198 indicates the local union number or district council number where applicable, i.e., Plumbers Local 0198. The next number, 005 in the example, is an internal number used in processing the wage determination. 07/01/2014 is the effective date of the most current negotiated rate, which in this example is July 1, 2014.

Union prevailing wage rates are updated to reflect all rate changes in the collective bargaining agreement (CBA) governing this classification and rate.

Survey Rate Identifiers

Classifications listed under the ""SU"" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average

rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

Survey wage rates are not updated and remain in effect until a new survey is conducted.

Union Average Rate Identifiers

Classification(s) listed under the UAVG identifier indicate that no single majority rate prevailed for those classifications; however, 100% of the data reported for the classifications was union data. EXAMPLE: UAVG-OH-0010 08/29/2014. UAVG indicates that the rate is a weighted union average rate. OH indicates the state. The next number, 0010 in the example, is an internal number used in producing the wage determination. 08/29/2014 indicates the survey completion date for the classifications and rates under that identifier.

A UAVG rate will be updated once a year, usually in January of each year, to reflect a weighted average of the current negotiated/CBA rate of the union locals from which the rate is based.

WAGE DETERMINATION APPEALS PROCESS

1.) Has there been an initial decision in the matter? This can be:

* an existing published wage determination
* a survey underlying a wage determination
* a Wage and Hour Division letter setting forth a position on a wage determination matter
* a conformance (additional classification and rate) ruling

On survey related matters, initial contact, including requests for summaries of surveys, should be with the Wage and Hour National Office because National Office has responsibility for the Davis-Bacon survey program. If the response from this initial contact is not satisfactory, then the process described in 2.) and 3.) should be followed.

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the

Branch of Construction Wage Determinations. Write to:

Branch of Construction Wage Determinations
Wage and Hour Division
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

2.) If the answer to the question in 1.) is yes, then an interested party (those affected by the action) can request review and reconsideration from the Wage and Hour Administrator (See 29 CFR Part 1.8 and 29 CFR Part 7). Write to:

Wage and Hour Administrator
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

The request should be accompanied by a full statement of the interested party's position and by any information (wage payment data, project description, area practice material, etc.) that the requestor considers relevant to the issue.

3.) If the decision of the Administrator is not favorable, an interested party may appeal directly to the Administrative Review Board (formerly the Wage Appeals Board). Write to:

Administrative Review Board
U.S. Department of Labor
200 Constitution Avenue, N.W.
Washington, DC 20210

4.) All decisions by the Administrative Review Board are final.

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"END OF GENERAL DECISION"

10. SECTION 3 OF THE HOUSING AND URBAN DEVELOPMENT ACT OF 1968:

10.1. The work to be performed under this contract is on a project assisted under a program providing direct Federal financial assistance from the Department of Housing and Urban Development and is subject to the requirements of Section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u. Section 3 requires that to the greatest extent feasible opportunities for training and employment be given lower income residents of the project area and contracts for work in connection with the project be awarded to business concerns which are located in or owned in substantial part by persons residing in the area of the project.

10.2. The parties to this contract will comply with the provisions of said Section 3 and the regulations issued pursuant thereto by the Secretary of Housing and Urban Development set forth in 24 CFR Part 75, and all applicable rules and orders of the Department issued thereunder prior to the execution of this contract. The parties to this contract certify and agree that they are under no contractual or other disability which would prevent them from complying with these requirements.

10.3. The Contractor will send to each labor organization or representative of workers with which he has a collective bargaining agreement or other contract or understanding, if any, a notice advising the said labor organization or workers' representative of his commitments under this Section 3 clause and shall post copies of the notice in conspicuous places available to employees and applicants for employment or training.

10.4. The Contractor will include this Section 3 clause in every subcontract for work in connection with the project and will, at the direction of the applicant for or recipient of Federal financial assistance, take appropriate action pursuant to the subcontract upon a finding that the Subcontractor is in violation of regulations issued by the Secretary of Housing and Urban Development, 24 CFR Part 75. The Contractor will not subcontract with any Subcontractor where it has notice or knowledge that the latter has been found in violation of regulations under 24 CFR Part 75 and will not let any subcontract unless the Subcontractor has first provided it with a preliminary statement of ability to comply with the requirements of these regulations.

10.5. Compliance with the provisions of Section 3, the regulations set forth in 24 CFR Part 75, and all applicable rules and orders of the Department issued thereunder prior to the execution of the contract, shall be a condition of the Federal financial assistance provided to the project, binding upon the applicant or recipient for such assistance, its successors and assigns. Failure to fulfill these requirements shall subject the applicant or recipient, its Contractors and Subcontractors, its successors, and assigns to those sanctions specified by the grant or loan agreement or contract through which Federal assistance is provided, and to such sanctions as are specified by 24 CFR Part 75.

11. FEDERAL LABOR STANDARDS PROVISIONS*:

A. APPLICABILITY

The Project or Program to which the construction work covered by this Contract pertains is being assisted by the United States of America, and the following Federal Labor Standards Provisions are included in this Contract pursuant to the provisions applicable to such Federal assistance.

(1) MINIMUM WAGES

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment, computed at rates not less than those contained in the wage determination of the Secretary of Labor (which is attached hereto and made a part hereof), regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics. Contributions made or costs reasonably anticipated for bona fide fringe benefits under Section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of 29 CFR 5.5(a)(1)(iv); also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs, which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR 5.5(a)(4).

Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: Provided, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under 29 CFR 5.5(a)(1)(ii) and the Davis-Bacon poster (WH1321)) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place, where it can be easily seen by the workers.

(ii) Additional Classifications.

(A) Any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. HUD shall approve an additional classification and wage rate and fringe benefits therefor only when the following criteria have been met:

(1) The work to be performed by the classification requested is not performed by a classification in the wage determination;

(2) The classification is utilized in the area by the construction industry; and

(3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor, the laborers and mechanics to be employed in the classification (if known), or their representatives, and HUD or its designee agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), a report of the action taken shall be sent by HUD or its designee to the Administrator of the Wage and Hour Division ("Administrator"), Employment Standards Administration, U.S. Department of Labor, Washington, D.C. 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget ("OMB") under OMB control number 1235-0023.)

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, or HUD or its designee do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), HUD or its designee shall refer the questions, including the views of all interested parties and the recommendation of HUD or its designee, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise HUD or its designee or will notify HUD or its designee within the 30-day period that additional time is necessary. (Approved by the Office of Management and Budget under OMB Control Number 1235-0023.)

(D) The wage rate (including fringe benefits, where appropriate) determined pursuant to subparagraphs (1)(ii)(B) or (C) of this paragraph, shall be paid to all workers performing work in the classification under this Contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, that the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program. (Approved by the Office of Management and Budget under OMB Control Number 1235-0023.)

(2) Withholding. HUD or its designee shall, upon its own action or upon written request of an authorized representative of the U.S. Department of Labor, withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements which is held by the same prime contractor, so much of the accrued

payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee or helper, employed or working on the site of the work, all or part of the wages required by the contract, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the contractor, disburse such amounts withheld for and on account of the contractor or subcontractor to the respective employees to whom they are due. The U.S. Department of Labor shall make such disbursements in the case of direct Davis-Bacon Act contracts.

(3) Payrolls and basic records.

(i) Maintaining Payroll Records. Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification(s), hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid.

Whenever the Secretary of Labor has found, under 29 CFR 5.5(a)(1)(iv), that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits.

Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs. (Approved by the Office of Management and Budget under OMB Control Numbers 1235-0023 and 1215--0018)

(ii) Certified Payroll Reports.

(A) The contractor shall submit weekly, for each week in which any contract work is performed, a copy of all payrolls to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead, the payrolls only need to include an individually identifying number for each employee (e.g., the last four digits of the employee's social security number). The required

weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at https://www.dol.gov/agencies/whd/forms or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.

Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to HUD or its designee if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant sponsor, or owner, as the case may be, for transmission to HUD or its designee, the contractor, or the Wage and Hour Division of the U.S. Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this subparagraph for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to HUD or its designee. (Approved by the Office of Management and Budget under OMB Control Number 1235-0008.)

(B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:

(1) That the payroll for the payroll period contains the information required to be provided under 29 CFR 5.5(a)(3)(ii), the appropriate information is being maintained under 29 CFR 5.5(a)(3)(i), and that such information is correct and complete;

(2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3;

(3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract; and

(C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by subparagraph (a)(3)(ii)(b).

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under subparagraph (a)(3)(i) available for inspection, copying, or transcription by authorized representatives of HUD or its designee or the U.S. Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment,

advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

(4) Apprentices and Trainees.

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency (where appropriate), to be eligible for probationary employment as an apprentice.

The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed.

Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination.

Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program.

If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringe benefits shall be paid in accordance with that determination. In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees. Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed, unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be

greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the work actually performed.

In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(iii) Equal employment opportunity. The utilization of apprentices, trainees, and journeymen under 29 CFR Part 5 shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR Part 30.

(5) Compliance with Copeland Act requirements. The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this Contract.

(6) Subcontracts. The contractor or subcontractor will insert in any subcontracts the clauses contained in subparagraphs (1) through (11) in this paragraph (a) and such other clauses as HUD or its designee may, by appropriate instructions, require, and a copy of the applicable prevailing wage decision, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in this paragraph.

(7) Contract termination; debarment. A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) Compliance with Davis-Bacon and Related Act Requirements. All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this Contract.

(9) Disputes concerning labor standards. Disputes arising out of the labor standards provisions of this Contract shall not be subject to the general disputes clause of this Contract. Such disputes shall be resolved in accordance with the procedures of the U.S. Department of Labor set forth in 29 CFR Parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and HUD or its designee, the U.S. Department of Labor, or the employees or their representatives.

(10) Certification of Eligibility.

(i) By entering into this Contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(ii) No part of this Contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1) or to be awarded HUD contracts or participate in HUD programs pursuant to 24 CFR Part 24.

(iii) Anyone who knowingly makes, presents, or submits a false, fictitious, or fraudulent statement, representation or certification is subject to criminal, civil and/or administrative sanctions, including fines, penalties, and imprisonment (e.g., 18 U.S.C. §§ 287, 1001, 1010, 1012; 31 U.S.C. §§ 3729, 3802.

(11) Complaints, Proceedings, or Testimony by Employees. No laborer or mechanic, to whom the wage, salary, or other labor standards provisions of this Contract are applicable, shall be discharged or in any other manner discriminated against by the contractor or any subcontractor because such employee has filed any complaint or instituted or caused to be instituted any proceeding or has testified or is about to testify in any proceeding under or relating to the labor standards applicable under this Contract to his employer.

B. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The provisions of this paragraph (b) are applicable where the amount of the prime contract exceeds **$100,000**. As used in this paragraph, the terms "laborers" and "mechanics" include watchmen and guards.

(1) Overtime requirements. No contractor or subcontractor contracting for any part of the contract work, which may require or involve the employment of laborers or mechanics, shall require or permit any such laborer or mechanic in any workweek in which the individual is employed on such work to work in excess of 40 hours in such workweek, unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of 40 hours in such workweek.

(2) Violation; liability for unpaid wages; liquidated damages In the event of any violation of the clause set forth in subparagraph B(1) of this paragraph, the contractor, and any subcontractor responsible therefor, shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory) for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in subparagraph B(1) of this paragraph, **in the sum set by the U.S. Department of Labor at 29 CFR 5.5(b)(2)** for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of 40 hours without payment of the overtime wages required by the clause set forth in subparagraph B(1) of this paragraph. In accordance with the Federal Civil Penalties Inflation Adjustment Act of 1990 (28 U.S.C. § 2461 Note), the DOL adjusts this civil monetary penalty for inflation no later than January 15 each year.

(3) Withholding for unpaid wages and liquidated damages. HUD or its designee shall, upon its own action or upon written request of an authorized representative of the U.S. Department of Labor, withhold or cause to be withheld from any moneys payable on account of work performed by the contractor or subcontractor under any such contract, or any other Federal contract with the same prime contract, or any other Federally-assisted contract subject to the Contract Work Hours and Safety Standards Act which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages, as provided in the clause set forth in subparagraph B(2) of this paragraph.

(4) Subcontracts. The contractor or subcontractor shall insert in any subcontracts the clauses set forth in subparagraph B(1) through (4) of this paragraph and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in subparagraphs B(1) through (4) of this paragraph.

C. HEALTH AND SAFETY

The provisions of this paragraph (c) are applicable where the amount of the prime contract exceeds **$100,000**.

(1) No laborer or mechanic shall be required to work in surroundings or under working conditions which are unsanitary, hazardous, or dangerous to his or her health and safety, as determined under construction safety and health standards promulgated by the Secretary of Labor by regulation.

(2) The contractor shall comply with all regulations issued by the Secretary of Labor pursuant to 29 CFR Part 1926 and failure to comply may result in imposition of sanctions pursuant to the Contract Work Hours and Safety Standards Act, (Public Law 91-54, 83 Stat 96), 40 U.S.C. § 3701 et seq.

(3) The contractor shall include the provisions of this paragraph in every subcontract, so that such provisions will be binding on each subcontractor. The contractor shall take such action with respect to any subcontractor as the Secretary of Housing and Urban Development or the Secretary of Labor shall direct as a means of enforcing such provisions.

***HUD-4010 (Revision 06/2022) ref. Handbook 1344.1 (Previous editions are obsolete)**

12. AGENCY SPECIFIC PROVISIONS:

Note: Failure to comply with these specifications e.g., taking the specified steps prior to Bid opening and submitting the forms with the Bid, will lead to the Bid being declared **non-responsive** and, therefore, shall be rejected.

12.1. CDBG HUD Requirements:

12.1.1. Affirmative Good Faith Effort Steps shall include the steps listed at 2 CFR 200.321(b), set forth below:

1. Placing qualified DBE business enterprises on solicitation lists;

2. Assuring that DBE business enterprises are solicited whenever they are potential sources;

3. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by DBE business enterprises;

4. Establishing delivery schedules, where the requirement permits, which encourage participation by DBE business enterprises;

5. Using the services and assistance of the Small Business Administration and the Minority Business Development Agency of the Department of Commerce; and

6. Requiring the Subcontractors to take the affirmative steps listed in this section.

7. See "DBE Potential Resources Centers" Section in these specifications. Include a completed copy of the form AA61, "List of Work Made Available" with the GFE documentation.

13. DBE POTENTIAL RESOURCES CENTERS:

13.1. Utilization of US Small Business Administration and Minority Business Development Agency (MBDA) resources is required at no cost. These agencies offer several services, including Internet access to databases of DBEs.

13.2. For additional assistance, the recipient or contractor can telephone the local offices of both agencies in their area (SBA Minority Enterprise Development Offices and DOC MBDA Regional Centers). The Internet web sites also include names, addresses, and phone or fax numbers of local SBA and MBDA centers. Do not write to these sources

13.3. The Contractor shall provide documentation that the local SBA/MBDA offices or web sites were notified of the contracting bid opportunity at least 15 Working Days prior to Bid opening and solicitation to DBE subcontractors at least 10 Working Days prior to Bid opening. Documentation shall not only include the efforts to contact the information sources and list the Contract opportunity, but also the solicitation and response to the bid request.

13.4. Include qualified DBEs on solicitation lists and record the information on Form AA63. Solicitation shall be as broad as possible.

13.5. If DBE sources are not located, explain why and describe the efforts made.

13.6. The Contractor shall send invitations to at least 3 (or all, if less than 3) DBE vendors for each item of work referred by sources contacted. The invitations shall adequately specify the items for which bids are requested. The record of "good faith" efforts shall indicate a real desire for a positive response, such as a certified mail receipt or a documented telephone conversation.

13.7. A regular letter or an unanswered telephone call is not an adequate "good faith" effort. A list of all sub-bidders, including the bidders not selected and non DBE Subcontractors, and bid amount for each item of the Work shall be submitted on Form AA62. If a low bid was not accepted, an explanation shall be provided.

13.8. Federal Agencies (must be contacted and solicitations posted on their websites):

Name and Address	Telephone and Web Site
U.S. Small Business Administration	(415) 744-6820 Extension 0
455 Market Street, Suite 600 San Francisco, CA 94105	Dynamic Small Business Search: http://dsbs.sba.gov/dsbs/search/dsp_dsbs.cfm
	Bid Notification: https://catalog.data.gov/dataset/subcontracting-network-subnet-system
U.S. Department of Commerce	213-989-3153 or 213-353-9400
Minority Business Development Agency	Website: http://www.mbda.gov/ https://www.mbda.gov/business-center/los-angeles-mbda-business-center
1055 Wilshire Blvd Suite 900 Los Angeles, CA 91107	

13.9. State Agencies (must be contacted):

Name and Address	Telephone and Web Site
California Department of Transportation	(916) 227-9599
(CALTRANS) Business Enterprise Program[4]	DBE Database: https://dot.ca.gov/programs/civil-rights/dbe
Mailing Address: PO Box 942874 Sacramento, CA 94274-0015	
1820 Alhambra Blvd. Sacramento, CA 95816	
CA Public Utilities Commission (CPUC)[5]	
505 Van Ness Avenue San Francisco, CA 94102-3298	Directory: https://sch.thesupplierdearinghouse.com/FrontEnd/SearchCertifiedDirectory.asp

Notes:

1. The Contractor shall use the SBA's Dynamic Business Search database to search for potential subcontractors, suppliers, and/or manufacturers. Bidder **must** provide a copy of all search records for items of work made available with GFE documentation.
2. Contractor shall use SUB-Net to post subcontracting opportunities. Contractor shall post Subcontractor opportunities at least 15 Working Days prior to bid opening. Small businesses can review this web site to identify opportunities in their areas of expertise. The web site is designed primarily as a place for large businesses to post solicitations and notices. Bidder **must** provide copy of the Display Solicitation Record identifying the date solicitation notice was posted with the GFE documentation.
3. The Contractors may use MBDA web portal to post subcontracting opportunities. If utilized, the Contractor shall post subcontractor opportunities at least 30 Calendar Days prior to Bid opening. Small businesses can review this web site to identify opportunities in their areas of expertise. The web site is designed primarily as a place for large businesses to post solicitations and notices. Provide copy of the Offer Overview with the GFE documentation.
4. Based on the federal DBE program, CALTRANS maintains a database and provides directories of minority and woman-owned firms. Bidder **must** provide a copy of all search records for items of work made available with GFE documentation.
5. CPUC maintains a database of DBE-owned business enterprises and serves to inform the public. Bidder **must** provide a copy of all search records for items of work made available with GFE documentation.

14. GOOD FAITH EFFORT DOCUMENTATION SUBMITTALS:

14.1. The affirmative GFE steps documentation shall be submitted **within 4 Working Days after the Bid Opening**. If this documentation is not submitted when due, the City will declare the Bid non-responsive and reject it.

14.2. The Contractor shall maintain the records documenting compliance with requirements including documentation of its GFE and data relied upon in formulating its fair share objectives.

15. FORMS:

15.1. The Contractor shall demonstrate that efforts were made to attract DBEs on this contract. The Contractor and Subcontractors shall take the steps listed in these specifications to assure that DBEs are used whenever possible as sources of supplies, construction, equipment, or services. In addition to the specified GFE documentation, the Bidder shall submit the following forms:

15.1.1. The following forms shall be completed and submitted within **4 Working Days after the Bid Opening**. Failure to include any of the forms shall cause the Bid to be deemed **non-responsive**.

1. Form AA61 List of Work Made Available
2. Form AA62 - Summary of Bids Received
3. Form AA63 - Good Faith Effort List of Subcontractors Solicited

15.1.2. The following forms shall be submitted upon award of construction projects that include CDBG funding:

1. Form AA64 - MBE/WBE Information

2. Form AA65 - Section 3 Outreach Methods

   (Only if CDBG funding **exceeds a threshold of $200,000**.)

15.1.3. The following forms shall be submitted prior to completion of construction projects that **exceed a threshold of $200,000** of CDBG funding received.

1. Form AA66 - MBE/WBE Information – No Change Certification

2. Form AA67 - Section 3 Worker Certification

   (Only if CDBG funding **exceeds a threshold of $200,000** and there were Section 3 Workers and/or Targeted Section 3 Workers that completed labor hours for the project.)

3. Form AA68 - Section 3 Project Closeout Report

   (Only if CDBG funding **exceeds a threshold of $200,000.**)

FUNDING AGENCY PROVISIONS

FORMS

LIST OF WORK MADE AVAILABLE

List items of the Work the Bidder made available to DBE firms. Identify those items of the Work the Bidder might otherwise perform with its own forces and those items that have been broken down into economically feasible units to facilitate DBE participation. For each item listed, show the dollar amount and percentage of the Base Bid. The Bidder must demonstrate that enough work to meet the goal was made available to DBE firms.

ITEM OF WORK MADE AVAILABLE	NAICS CODE	BIDDER NORMALLY PERFORMS ITEM (Y/N)	ITEM BROKEN DOWN TO FACILITATE PARTICIPATION (Y/N)	AMOUNT	PERCENTAGE OF BASE BID

SUMMARY OF BIDS RECEIVED

Type of Job	NAICS CODES	Company Name	Selected (Y/N)	Bid Amount	DBE	Non-DBE	Explanation for not Selecting

USE ADDITIONAL FORMS AS NECESSARY

Form AA62 - Summary of Bids Received

DISADVANTAGE BUSINESS ENTERPRISE (DBE)
GOOD FAITH EFFORT LIST OF SUBCONTRACTORS SOLICITED

Contractor Name	Contractor Address	How Located	Date of Contact	Contact Method	Task Description	Response (Yes/No)

City of San Diego Community Development Division - CDBG Program
Minority Businesses and Women Business Enterprises Information Form

Organization Name: _____
Organization Address: _____
Organization Employer Identification Number: _____
Organization Contact Person (MBE/WBE Info): _____
Organization Contact Person Phone: _____
Organization Contact Person E-mail: _____

PREPARER CERTIFICATION	
I hereby certify that, to the best of my knowledge and belief, the contents in this report are true and correct.	
Full Name of Report Preparer:	Preparer's Signature:
Preparer's Job Title:	Date Signed:
Preparer's Email:	Preparer's Phone:

Please report all contracts and subcontracts paid with City of San Diego CDBG Funds.

PC or SUB	Amount of Contract or Subcontract (CDBG only)	Type of CPD Trade Code (See below)	Contractor or Subcontractor Business Owner Racial/Ethnic Code (See below)	Woman-Owned Business (Yes or No)	Prime Contractor/ Subcontractor Identification Number (Employer IRS Number)	Section 3 Contractor (Yes or No)	Contractor/Subcontractor Name and Address			
							Name	Street	City	Zip
PC										

2: Type of Trade Codes:

CPD:
1 = New Construction
2 = Education/Training
3 = Other

Housing:
1 = New Construction
2 = Substantial Rehab.
3 = Repair
4= Service
5= Projec Mgt.
6= Professional
7= Tenant Services
8= Education/Training
9= Arch./Eng. Appraisal
10= Other

3: Racial/Ethnic Codes:
1 = White Americans
2 = Black Americans
3 = Native Americans
4 = Hispanic Americans
5 = Asian/Pacific Americans
6 = Hasidic Jews

CITY DEPARTMENT CERTIFICATION	
I hereby certify that, to the best of my knowledge and belief, the contents in this report are true and correct.	
City Project Manager Signature:	Date Signed:
Preparer's Email:	Preparer's Phone:

Form AA64 -MBE/WBE Information

Affirmative Good Faith Effort Steps shall include the steps listed at 2 CFR 200.321(b), listed below. Please select one of the options or provide a description of the outreach efforts that were completed to ensure the inclusion, to the maximum extent possible, of entities owned by minorities and women.

Organization:

- ☐ Placing qualified and small minority businesses and women's business enterprises on solicitation lists.
- ☐ Assuring that small minority businessed and women's business enterprises are solicited whenever there are potential resources.
- ☐ Dividing total requirements when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority and women's business enterprises.
- ☐ Establishing delivery schedules where the requirements permit which encourage participation by small and minority businesses and women's business enterprises.
- ☐ Using the services and assistance as appropiate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Deparment of Commerce.
- ☐ Requiring the Prime Contractor, if contracts are to be let, to take the affirmative steps previously listed in the options above.
- ☐ Other efforts attempted. Please describe below.

General/Prime Contractor:

- ☐ Placing qualified and small minority businesses and women's business enterprises on solicitation lists.
- ☐ Assuring that small minority businessed and women's business enterprises are solicited whenever there are potential resources.
- ☐ Dividing total requirements when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority and women's business enterprises.
- ☐ Establishing delivery schedules where the requirements permit which encourage participation by small and minority businesses and women's business enterprises.
- ☐ Using the services and assistance as appropiate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Deparment of Commerce.
- ☐ Requiring the Prime Contractor, if contracts are to be let, to take the affirmative steps previously listed in the options above.
- ☐ Other efforts attempted. Please describe below.

The City of SAN DIEGO

SECTION 3 SUMMARY REPORT – OUTREACH METHODS

Organization/Company Name	CDBG Funding Award Date
Name of Project	Project Address
Person Completing Form (name and title)	Telephone Number

SECTION 3 – REPORTING REQUIREMENTS AND BENCHMARKS

Section 3 is a provision of the Housing and Urban Development Act of 1968. The purpose of Section 3 is to ensure that employment and other economic opportunities generated by certain HUD financial assistance shall, to the greatest extent feasible, and consistent with existing Federal, State, and local laws and regulations, be directed to low and very low-income persons.

Particularly those who are recipients of government assistance for housing, and to business concerns which provide economic opportunities to low- and very low-income persons

For construction projects awarded that exceed a threshold of $200,000 of Federal Community Development Block Grant (CDBG) funding, all contractors are required to comply with Section 3 requirements.

The Benchmarks for Section 3 labor hours are 25%, which means 20% of the total labor hours for a construction project should be completed by Section 3 workers.

The Benchmarks for Targeted Section 3 labor hours is 5%, which means 5% of the total labor hours for a construction project should be completed by Targeted Section 3 workers.

SECTION 3 – OUTREACH ATTEMPTS

Indicate the efforts made to direct the employment and other economic opportunities generated by HUD financial assistance for housing and community development programs, to the greatest extent feasible, toward low income people and Section 3 businesses. Proof of these efforts must be submitted as part of required documentation. (Check all that apply.)

☐ Engaged in efforts to generate job applicants that are Targeted Section 3 Workers.

☐ Provided training or apprenticeship opportunities.

☐ Provided technical assistance to help Section 3 Workers compete for jobs (e.g., resume assistance, coaching).

☐ Provided or connected Section 3 Workers with assistance in seeking employment including: drafting resumes, preparation for interviews, and finding job opportunities connecting residents to job placement services.

☐ Held one or more job fairs.

☐ Provided or referred Section 3 Workers to services supporting job readiness and retention (e.g., work readiness activities, interview clothing, test fees, transportation, childcare).

☐ Provided assistance to apply for/or attend community college, a four-year educational institution, or vocational technical training.

☐ Assisted Section 3 Workers to obtain financial literacy training/and or coaching.

☐ Engaged in outreach events to identify and secure bids from Section 3 business concerns.

☐ Provided technical assistance to help Section 3 business concerns understand and bid on contracts.

☐ Divided contracts into smaller jobs to facilitate participation by Section 3 business concerns.

☐ Provided bonding assistance, guaranties, or other efforts to support viable bids from Section 3 business concerns.

☐ Promoted use of business registries designed to create advantages for disadvantaged or small businesses.

☐ Outreach, engagement or referrals with the state one-stop system as defined in Section 121 (e)(2) of the Workforce Innovation and Opportunity Act.

☐ Other efforts. Please describe below.

By submitting this form, my organization/company certifies that the information provided on this form is true, complete, accurate, and meets HUD Section 3 reporting requirements in accordance with 24 CFR Part 75.

Signature Print Name and Title Date

The City of SAN DIEGO

MBE INFORMATION FORM – NO CHANGE CERTIFICATION
GENERAL CONTRACTOR

Organization Name: _____

Organization Address: _____

Project Name: _____

Project Address: _____

I certify there have been no changes to the MBE Information form previously submitted for this project.

_____ _____
Signature of Authorized Signing Official/Representative Date

_____
Print Name of Authorized Signing Official/Representative

_____
Print Title of Authorized Signing Official/Representative

_____
Print Email of Authorized Official

Section 3 Worker Certification Form

Employee Name	Project Name
Employee's Address	City, State, Zip Code

Section 3 Worker (24 CFR 75.5) Definition

(1) Any worker who currently fits at least one of the following eligibility categories listed below, as documented on file. (Select any of the options below that apply.)

- ☐ Worker is employed by a certified Section 3 business concern.
- ☐ Worker is a participant of a YouthBuild Program.
- ☐ Worker's annual income for the previous year is below 80% of the Area Median Income (AMI) limit established by HUD. Please see the table below.

HUD 2021 CDBG Income Limit	1 Person 80% of AMI
City of San Diego	$67,900

Targeted Section 3 Worker [24 CFR 75.21 (a)] Definition

(2) Any worker who currently fits at least one of the following eligibility categories listed below, as documented on file. (Select any options below that apply.)

- ☐ Worker is employed by a certified Section 3 business concern.
- ☐ Worker lives in the neighborhood or service area of the project.
- ☐ Worker is a participant of a YouthBuild Program.

By signing this document, I certify that I am a Section 3 Worker and/or Targeted Section 3 Worker based on the selection of one or more of the eligibility categories listed above.

Signature **Date**

SECTION 3 SUMMARY CLOSEOUT REPORT- PRIME CONTRACTOR/SUBCONTRACTOR

Organization/Company Name		Contract Award Date
Name of Project		Project Address
Person Completing Form (name and title)		Telephone Number
Total Dollar Amount of Construction Contracts Awarded (All funding sources) $		Total Dollar Amount of CDBG Construction Contracts Awarded (CDBG only) $
Section 3 Registered Business? ☐ Yes ☐ No	Women Business Enterprise (WBE)? ☐ Yes ☐ No	Minority Business Enterprise (MBE)? ☐ Yes ☐ No

SECTION 3 – REPORTING REQUIREMENTS AND BENCHMARKS

Section 3 is a provision of the Housing and Urban Development Act of 1968. The purpose of Section 3 is to ensure that employment and other economic opportunities generated by certain HUD financial assistance shall, to the greatest extent feasible, and consistent with existing Federal, State, and local laws and regulations, be directed to low and very low-income persons.

Particularly those who are recipients of government assistance for housing, and to business concerns which provide economic opportunities to low and very low-income persons.

For construction projects awarded that exceed a threshold of $200,000 of Federal Community Block Grant (CDBG) funding, all contractors are required to comply with Section 3 requirements.

The Benchmarks for Section 3 labor hours are 25%, which means 20% of the total labor hours for a construction project should be completed by Section 3 workers.

The Benchmarks for Targeted Section 3 labor hours is 5%, which means 5% of the total labor hours for a construction project should be completed by Targeted Section 3 workers.

In the table below list the total number of construction workers for this project. Additionally, list the number of workers hired within the year that qualify under the HUD criteria listed on Page 2.

24 CFR 75.25 – Reporting Tables

Construction Trades (i.e., Carpentry, Electrical, Drywall, Plumbing, etc.)	Total Number of Section 3 Workers	Total Number of Labor Hours Worked	Total Number of Labor Hours Worked by Section 3 Workers

Construction Trades (i.e., Carpentry, Electrical, Drywall, Plumbing, etc.)	Total Number of Targeted Section 3 Workers	Total Number of Labor Hours Worked	Total Number of Labor Hours Worked by Targeted Section 3 Workers

HUD - ELIGIBILITY CRITERIA

Section 3 Worker

- Worker is employed by a Section 3 business concern.
- Worker is a YouthBuild participant.
- The Worker's annual income for the previous calendar year is below does not exceed 80% of the Area Median Income (AMI) limit established by HUD. Please see the table below.

HUD 2021 CDBG Income Limit	1 Person 80% of AMI
City of San Diego	$67,900

Section 3 Targeted Worker

- Worker is employed by a Section 3 business concern.
- Worker lives in the neighborhood or service area of the project.
- Worker is a YouthBuild participant.

Section 3 Business Concern

- At least 51 percent of a business is owned by very low or low-income persons.
- Over 75 percent of the labor hours performed for the business over the prior three-month period are performed by Section 3 workers.
- A business at least 51 percent owned and controlled by current public housing residents or residents who currently live in Section 8-assisted housing.

By signing and submitting this form, my organization/company certifies that the information provided on this form is true, complete, accurate, and meets HUD Section 3 reporting requirements in accordance with 24 CFR Part 75.

Signature Name and Title Date

ATTACHMENT E

SUPPLEMENTARY SPECIAL PROVISIONS

SUPPLEMENTARY SPECIAL PROVISIONS

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

1) The **2021 Edition** of the Standard Specifications for Public Works Construction (The "GREENBOOK").

2) The **2021 Edition** of the City of San Diego Standard Specifications for Public Works Construction (The "WHITEBOOK"), including the following:

   1. 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",

To item 47, "Holiday", ADD the following:

Holiday	Observed On
Juneteenth	June 19

To item 55, "Normal Working Hours", DELETE in its entirety and SUBSTITUTE with the following:

Normal Working Hours - Normal Working Hour core periods shall be **7:00 AM – 5:00 PM**, **Monday through Friday**, inclusive. Saturdays, Sundays, and City Holidays are excluded. Unless otherwise specified on the Traffic Control Permits.

SECTION 2 - SCOPE OF THE WORK

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

2. The Contractor shall obtain the following permits:

   a) Building Permit No. 3112772

   b) Separate Submittal for Rock Climbing Wall

   c) Public Art Installation 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 **40%** 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, Beyer Community Park, Beyer Boulevard and Enright Drive, prepared by Geocon Incorporated, dated February 9, 2021 (Project No. G2618-11-01).

   b) Biological Resources Report for the Beyer Park Development Project, prepared by RECON Environmental Inc., dated October 14, 2019.

   c) Enhancement and Restoration of Maritime Succulent Scrub as Habitat for Western Burrowing Owl and Beach Goldenaster for the Beyer Park Development Project prepared by RECON Environmental Inc., dated August 4, 2020.

   d) Southwest Village Beyer Boulevard Alternatives-Addendum to Beyer Park Mitigation Plan prepared by RECON Environmental Inc., dated August 27, 2021.

   e) Southwest Village Beyer Boulevard Alternatives-Revised Addendum Memo to Beyer Park Mitigation Plan prepared by RECON Environmental Inc., dated March 15, 2023.

   f) Archaeological Resources Survey for the Beyer Park Development Project, prepared by RECON Environmental Inc., dated February 10, 2017.

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

   https://drive.google.com/drive/folders/1V1toh2VXwN1g8ufmGF8kgsy8gcI23fpK

3-13.1 **Completion.** To the "WHITEBOOK", ADD the following:

2. If the City elects to proceed with the option to award the 60-month LTMM Work, the 60-Month maintenance and monitoring program for restoration and enhancement areas shall commence after completion of planting, irrigation installation and successfully completing the **120 Calendar Day** Plant Establishment Period for restoration areas. The planting and irrigation installation of restoration areas shall commence once all environmental restrictions have been cleared by the Qualified Project Biologist and the City Mitigation Monitoring and Reporting Program (MMC) representative.

3-15.2 Integration of the Work with Separate Contractors. To the "WHITEBOOK", ADD the following:

2. The list of Separate Contractors includes:

   Ingram Ober & Marisol Rendon

   The contractor shall coordinate with the Artist team, Ingram Ober & Marisol Rendon for the installation of the public artwork. This section describes the requirements for coordination and installation of the public Artwork and coordination with the Artists and the Artists' subcontractors. The Contractor's Work and Responsibilities related to the Artwork includes installation of Artwork and incidental items including, but not limited to rigging, moving artwork, and storage on site as well as installation of all components of the artwork and associated improvements described below.

   The Artists and the Artists' subcontractors will transport the Artwork to the Site. The Contractor must account for time and materials necessary for coordinating with the Artist and the Artist's subcontractors on the integration of the public Artwork throughout the duration of the project.

   Submittals: Contractor must provide manufacturer's data for all products and finishes to be furnished under this section for Artist and Artists' subcontractor's approval.

   Artist and Artists' subcontractor shall provide shop drawings /submittals as specified on the Artwork structural drawings.

   Project Conditions: Contractor will coordinate with Artists, Artists' subcontractors, and City for all activities related to public Artwork installation. Contractor must include activities related to public Artwork installation on the construction schedule.

   The Contractor shall be responsible for all on-site labor, equipment and materials for installation of the Artwork including:

   1. Staging, storage, offloading of artwork elements on site;
   2. Supplying crane and any other equipment needed for installation of Art pieces.
   3. Supplying and installing electrical wiring, conduit, 208v power connection to electric sub-panels, installation and connection of light fixtures and miscellaneous hardware for a complete working and functional lighting system for the Artwork.
   4. Paving including a 9-foot wide ADA compliant vehicular rated concrete pathway matching the color and texture of the park pathways leading from the main sidewalk to the artwork's location per detail 1, LC-300 and SDG-155. A 5-foot wide ADA compliant pedestrian pathway shall be installed to wrap around the base of the artwork plinth per Detail 1, LC-300 and SDG-155.

5. A 4’ high, 12-foot diameter plinth should be cast in place architectural concrete including all base preparation, footings, formwork, surface finishing, and anchor hardware installed for attachment of the metal structure. Imperfections in the outer cast concrete surface will be smoothed with a screed float and trowel finish, and a non-sacrificial anti-graffiti coating shall be applied to the outer surface of the concrete plinth such as manufactured by Coval Molecular Coatings or approved equal. The inside surface of the plenth walls shall receive waterproofing coating and a root barrier shall be installed 4 feet deep around the planter walls.

6. Prior to installation of paving and plinth, the contractor shall install conduit, wiring, and water supply lines for the electrical system, irrigation system, and fog mister system from utility connections shown on the plans and make all necessary connections. Minimum 2” PVC utility conduits for stub outs for the electrical wiring, irrigation supply pipes and fogger supply lines tubing shall be provided to the inside of the planter walls.

7. Irrigation for the tree shall be installed per SDI-104 including all necessary piping and connections to supply irrigation to the planter.

8. Prior to planting of a 24” box tree, class A topsoil shall be installed up to 4” below the top of the plinth wall. A 24” box, Lyonothamnus floribundus ssp. aspleniifolius shall be installed per SDL-101. 3 inches of artificial bark mulch shall be installed on the surface of the plinth planting surface around the tree.

9. A 20’ tall grade 316 stainless steel metal frame structure delivered to the site by the Artist shall be installed in place using required hardware embedded into the concrete plinth structure. All fasteners and other attachment hardware shall be 316 stainless steel. This structure will be delivered in multiple pieces and shall be connected together by the contractor.

10. High pressure tubing shall be installed to the metal frame and connected to the fogger heads and to the supply manifold. A pump such as Koolfog Oasis 16 Series High Pressure Pump shall be installed with fogger system.

11. LED spot lighting shall be installed along with the installation of lighting control equipment into a utility box with the electrical sub panel and fogger controller. A separate enclosure shall be provided for the filtration system and pump for the fogger system.

12. Planting of 1-gallon, 5 gallon, and 15-gallon plants shall be installed around the area designated on the plans for public art around the plinth and paving within adjacent planting areas.

13. The Contractor will coordinate with the Artists and the Artists' subcontractors during the installation of the public Artwork to ensure accurate correspondence between public Artwork and surrounding elements.

14. The Contractor and any subcontracted artwork installer must account for the time and materials necessary for the installation of the public Artwork. The Artists shall coordinate with the Contractor and any subcontracted professional artwork installer to develop a plan regarding the delivery and installation public Artwork for review by and subject to the approval of the City Art Commission prior to the delivery of the public Artwork to the site. The Contractor and any subcontracted artwork installer will accommodate the oversight of the Artists and the Artists' subcontractors during the public Artwork delivery and installation process. The Contractor assumes responsibility for the public Artwork from the point of its delivery at the project site until filing of the Notice of Completion

15. The Contractor will coordinate with the Artist and the Artist's subcontractors through the Resident Engineer during the installation of the public Artwork to ensure optimal correspondence between lighting fixtures and the public Artwork.

16. Contractor shall take all precautions to ensure that the public Artwork is not damaged while finishing the site near the public Artwork, including but not limited to producing a temporary barrier of appropriate height to protect the public Artwork from adjacent construction activities. The Contractor will coordinate with the Artists and the Artists' subcontractors to ensure an appropriate interface between the public Artwork and the finished site. The Contractor assumes responsibility for any damages to the public Artwork that are a result of any construction activities during and after the installation of the public Artwork and prior to the transfer of the site to the City Art Commission.

17. Public Artwork Inspection: Contractor shall coordinate with City for inspections under permit for public artwork. If City inspection requires changes from approved plans, the Contractor will receive a correction notice. The Contractor shall coordinate with the Artists and Artists' subcontractor to resolve the correction notice and coordinate any additional permit review required by the City. The Artists will be responsible for any additional permit fees associated with the Artwork.

18. Upon completion of the Artwork, the Contractor, Artists, and Artists' subcontractor shall jointly request a walkthrough for final acceptance from the City Resident Engineer. City staff will prepare punchlist items for completion of the work and final acceptance. Upon completion of the punchlist and all inspections have been signed off by the City

inspectors and the Resident Engineer, the City Art Commission will prepare a letter formally accepting the artwork.

19. Contractor will coordinate and attend construction coordination meetings with Artists and Artists' subcontractors, as directed by the Resident Engineer. Contractor will cooperate with Artists and Artists' subcontractors so that delay or hindrance to their work will be avoided. Contractor will allow Artists and Artists' subcontractors' access to site as requested by the Artist through the City Resident Engineer. Contractor will ensure site is prepared to receive Artwork and will fulfill reasonable site requirements as requested by the Resident Engineer for the Artists and Artists' subcontractors' work, including, but not limited to: delivery area for Contractor to offload Artwork.

20. The Contractor shall coordinate with equipment manufacturers to provide on-site training on the operations and maintenance of all installed equipment and provide all equipment manuals to Parks and Recreation staff prior to project acceptance.

3. Payment for all work associated with the public art installation and coordination described in Section 3-15.2 shall be paid under the Bid Item **"Public Artwork materials, installation and coordination"**.

3-15.3 Coordination. To the "WHITEBOOK", ADD the following:

2. Other adjacent City projects are scheduled for construction for the same time period in the vicinity of Beyer Boulevard within Enright Drive and Delany Dr. See **Appendix F – Adjacent Projects Map** for the approximate location. Coordinate the Work with the adjacent projects as listed below:

a) Group Job 1040, Project Manager: Mehrnaz Zare Afifi, Phone No.: 619-533-4656

SECTION 4 - CONTROL OF MATERIALS

4-3.4 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 CPSI inspection

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 issuance of the Notice of Intent to Award** and on the City's Product Submittal Form available at:

https://www.sandiego.gov/ecp/edocref/

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 and defense duties set forth in the Contract.

5-4.1 Policies and Procedures.

1. You shall procure the insurance described below, at your sole cost and expense, to provide coverage against claims for loss including injuries to persons or damage to property, which may arise out of or in connection with the performance of the Work by you, your agents, representatives, officers, employees or Subcontractors.

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 as required by this Contract and at all times thereafter when you are correcting, removing, or replacing Work in accordance with this Contract. Your duties under the Contract, including your indemnity obligations, are not limited to the insurance coverage required by this Contract.

4. If you maintain broader coverage or higher limits than the minimums shown below, City requires and shall be entitled to the broader coverage or the higher limits maintained by you. Any available insurance proceeds in excess of the specified minimum limits of insurance and coverage shall be available to City.

5. Your payment for insurance shall be included in the Contract Price you bid. You are not entitled to any additional payment from the City to cover your insurance, unless the City specifically agrees to payment in writing. Do not begin any Work under this Contract or allow any Subcontractors to begin work, until you have provided, and the City has approved, all required insurance.

6. Policies of insurance shall provide that the City is entitled to 30 days advance written notice of cancellation or non-renewal of the policy or 10 days advance written notice for cancellation due to non-payment of premium. Maintenance of specified insurance coverage is a material element of the Contract. Your failure to maintain or renew coverage and 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 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:

General Annual Aggregate Limit	Limits of Liability
Other than Products/Completed Operations	$10,000,000
Products/Completed Operations Aggregate Limit	$10,000,000
Personal Injury Limit	$5,000,000
Each Occurrence	$5,000,000

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.

5-4.2.3 Workers' Compensation Insurance and Employers Liability Insurance.

1. In accordance with the provisions of California Labor Code section 3700, 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 this requirement.

2. Statutory Limits shall be provided for Workers' Compensation Insurance as required by the state of California, and Employer's Liability Insurance with limits of no less than $1,000,000 per accident for bodily injury or disease.

3. By signing and returning the Contract, you certify that you are aware of the provisions of California's Workers' Compensation laws, including Labor Code section 3700, which requires every employer to be insured against liability for workers' compensation or to undertake self-insurance, and that you will comply with these provisions before commencing the Work..

5-4.2.8 Architects and Engineers Professional Insurance (Errors and Omissions Insurance).

1. For Contracts with required engineering services, including Design-Build and preparation of engineered Traffic Control Plans (TCP) by you, you shall keep or require all of your employees and Subcontractors, who provide professional engineering services under Contract, to provide to the City proof of Professional Liability coverage with a limit of no less than **$1,000,000** per claim and **$2,000,000** aggregate per policy period of one year.

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 three years after completion of the Project or termination of the 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 here.

5-4.3 Rating Requirements. Except for the State Compensation Insurance Fund, all insurance required by this Contract 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 of California, 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 of California 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 in this Contract.

5-4.4 **Evidence of Insurance.** You shall furnish the City with original Certificates of Insurance, including all required amendatory endorsements (or copies of the applicable policy language effecting coverage required by this clause), prior to your commencement of Work under this Contract. In addition, The City reserves the right to require complete, certified copies of all required insurance policies, including endorsements, required by these specifications, at any time.

5-4.5 **Policy Endorsements.**

5-4.5.1 **Commercial General Liability Insurance.**

5-4.5.1.1 **Additional Insured.** To the fullest extent permitted by law and consistent with the limiting provisions set forth at California Civil Code section 2782, California Insurance Code section 11580.04, and any applicable successor statutes limiting indemnification of public agencies that bind the City, the policy or policies shall be endorsed to include as an Additional Insured the City and its respective elected officials, officers, employees, agents, and representatives, with respect to liability arising out of:

i. Ongoing operations performed by you or on your behalf,

ii. your products,

iii. your work, e.g., your completed operations performed by you or on your behalf, or

iv. 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 **Workers' Compensation Insurance and Employers Liability Insurance.**

5-4.5.2.1 **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.

5-4.6 **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. The

City may require you to purchase coverage with a lower retention or provide proof of ability to pay losses and related investigations, claim administration, and defense expenses within the retention. The policy language shall provide, or be endorsed to provide, that the self-insured retention may be satisfied by either the named insured or City.

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, in writing, 30 days prior to any material change to the policies of insurance provided under this Contract. This written notice is in addition to the requirements of paragraph 6 of Section 5-4.1.

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

SECTION 6 – PROSECUTION AND PROGRESS OF THE WORK

6-1.1 **Construction Schedule.** To the "WHITEBOOK", ADD the following:

3. Refer to the Sample City Invoice materials in **Appendix D – Sample City Invoice with Cash Flow Forecast** and use the format shown.

4. The **90 Calendar Days** (required for all permanently irrigated landscaping) and **120 Calendar Days (**required for the restoration area planting**)** 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".

5. A 60-month long term maintenance and monitoring agreement Option if awarded by the City will commence at the completion of the **120 Calendar Days** PEP for the Restoration and Enhancement areas and will conclude once the Restoration and Enhancement areas have met the PEP success criteria and have been accepted as complete by the QPB and the City's MMC Section.

6-1.5.2 **Excusable Non-Compensable Delays.** To the "WHITEBOOK", Item 1, ADD the following:

d) Delays due to environmental restrictions that prevent work from occurring and impact the critical path.

e) Delays in work resulting from breeding season restrictions, determined necessary in accordance with the requirements of the MMRP and as recommended by the QPB and MMC, shall be non-compensable delay days and extend the contract length by the total number of working days that no

work could be performed. The contractor is expected to adjust working areas and continue working on other areas of the project as allowed by the QPB and MMC where possible. Extra contract time shall not be granted when other work is still able to be performed and critical path has not been affected.

ADD:

6-6.1.1 Environmental Document.

1. The City of San Diego has prepared a **Notice of Determination** for **Beyer Park** (**Beyer Park SDP**), Project No. **589554,** as referenced in the Contract Appendix. You shall comply with all requirements of the **Notice of Determination** as set forth in **Appendix A.**

2. The City of San Diego has prepared a **Mitigated Negative Declaration** for **Beyer Park** (**"Mitigated Negative Declaration- Beyer Park"**), Project No. **589554 (SCH No. 2020049049)**, as referenced in the Contract Appendix. You shall comply with all requirements of the **Mitigated Negative Declaration** as set forth in **Appendix A**

3. Compliance with the City's environmental document shall be included in the Contract Price, unless separate bid items have been provided.

6-6.2.1 Archaeological and Native American Monitoring Program. To the "WHITEBOOK", ADD the following:

4. You shall retain a qualified archaeologist and Native American Monitor for this Contract. You shall coordinate your activities and Schedule with the activities and schedules of the archaeologist and Native American monitor. Notify the Engineer before noon of the Working Day before monitoring is required. See 3-5, "INSPECTION" for details.

5. Archaeological and Native American Monitoring requirements for this Contract are included attached as **Appendix A**.

6-6.2.2 Paleontological Monitoring Program. To the "WHITEBOOK", ADD the following:

3. You shall retain a qualified paleontologist for this Contract. You shall coordinate your activities and Schedule with the activities and schedules of the paleontologist monitor. Notify the Engineer before noon of the Working Day before monitoring is required. See 3-5, "INSPECTION" for details.

4. Paleontological Monitoring requirements for this Contract are included attached as **Appendix A**.

6-9 LIQUIDATED DAMAGES. To the "WHITEBOOK", Item 2, DELETE in its entirety and SUBSTITUTE with the following:

2. The execution of the Contract shall constitute agreement between you and the City that the liquidated damage amount described in the table below is the value of the damage caused by your failure to complete the Work within the allotted time. Such

sum shall not be construed as a penalty and may be deducted from your payments if such delay occurs.

Contract Value	Liquidated Damages Daily Amount
Less than $200,001	$1,000
$200,001 to $500,000	$1,500
$500,001 to $1,000,000	$2,000
$1,000,001 to $2,000,000	$2,500
$2,000,001 to $5,000,000	$3,000
$5,000,001 to $10,000,000	$5,500
$10,000,001 to $20,000,000	$6,500
Greater Than $20,000,001	$7,000

SECTION 7 – MEASUREMENT AND PAYMENT

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

4. . The Lump Sum Bid item for "**Construction of Park Improvements**" shall include all work included and as specified in the Plans, Contract Documents, and Technical provisions where a separate bid item is not included. The costs for the items "**Art Walls at Playground**" and "**Cast in Place Concrete Sedimentary Walls**" shall be included in the base bid under "**Construction of Park Improvements**". Costs for these individual deductive items shall also be provided on the bid form where requested to evaluate inclusion of these items by the City.

5. Payment for all work associated with the public art installation and coordination described in Section 3-15.2 shall be paid under the Bid Item **"Public Artwork materials, installation and coordination"**.

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 Each Field Order Work Amount
Less than 1,000,001	$10,000
1,000,001 to $5,000,000	$20,000
$5,000,001 to $10,000,000	$25,000
$10,000,001 to $30,000,000	$40,000
Greater than $30,000,000	$70,000

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:

1. 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.

2. Refer to AWWA C900-16 for all references to AWWA C905.

SECTION 300 – EARTHWORK

To the "GREENBOOK", ADD the following:

300-2.1.1 **Miscellaneous Grading Conditions.**

Site Grading. Slope grades to prevent ponding. Finish subgrades to required elevations within the following tolerances:

1. Lawn or Unpaved Areas: Plus, or minus 1 inch.
2. Walks: Plus, or minus 1 inch.
3. Pavements: Plus, or minus 1/2 inch.

300-2.1.2 Moisture Control.

Uniformly moisten or aerate subgrade and each subsequent fill or backfill layer before compaction to within 2 percent of optimum moisture content.

1. Do not place backfill or fill material on surfaces that are muddy.
2. Remove and replace, or scarify and air-dry, otherwise satisfactory soil material that exceeds optimum moisture content by 2 percent and is too wet to compact to specified dry unit weight.

300-2.1.3 Compaction of Backfill and Fills.

1. Place backfill and fill materials in layers not more than 8 inches in loose depth for material compacted by heavy compaction equipment, and not more than 4 inches in loose depth for material compacted by hand-operated tampers.
2. Place backfill and fill materials evenly on all sides of structures to required elevations, and uniformly along the full length of each structure.
3. Compact soil to the following percentages of maximum density according to ASTM D 1557:
    a. Comfort Station and Storage Building/Trash Enclosure Pad – The upper 3 feet of cut below the proposed finish grade for the planned Comfort Station should be over-excavated and replace with properly compacted fill soils due to the very dense and cemented nature of the formational materials. The bottom of the excavations should be scarified, moisture conditioned as necessary and compacted prior to placing fill. The over excavation should extend at least 5’ outside of the foundations.
    b. Skate Park Pad – The upper 2 feet of cut below the proposed finish grade for the planned skate park should be over-excavated and replace with properly compacted fill soils due to the very dense and cemented nature of the formational materials. The bottom of the excavations should be scarified, moisture conditioned as necessary and compacted prior to placing fill. The over excavation should extend at least 5’ outside of the foundations.
    c. Site Development – Remove and recompact upper 24 inches of existing material, complete removal of undocumented fill, remove and recompact the upper 5 feet of landslide debris per the soils investigation report.
    d. Landslide debris – Remove and replace upper 5 feet with properly compacted fill.
    e. Grading Limits – Remove and replace per items a-d above to 2 feet outside of improvement areas where possible.
    f. Exposed Bottoms of Remedial Grading – Scarify upper 12 inches
    g. Landscape Areas - 80% maximum compaction in all planting and landscape areas of the upper 12 inches.

300-2.1.4 **Slope Grading.** Site runoff shall not be permitted to flow over the tops of slopes. Positive drainage shall be established away from the top of slopes:

1. Permanent cut and fill slopes shall not be steeper than 2:1 (horizontal: vertical)

2. Compaction of the face of fill slopes shall be performed by backrolling at intervals of 4 feet or less in vertical slope height, or as dictated by the capability of the available equipment, whichever is less. Fill slopes shall be backrolled utilizing a conventional sheepsfoot –type roller.

SECTION 402 – UTILITIES

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

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

402-6 **COOPERATION.** To the "WHITEBOOK**",** 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 800 – MATERIALS

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

Type 9 Mulch shall be 2 or 4 inches maximum in size.

ADD:
800-1.7 **Herbicide**.

Pre-emergent herbicide shall be as determined by Contractor. The purpose of the pre-emergent herbicide is to control the growth of weeds within planter areas below the bark mulch layer. Contractor shall submit a sample label and Material Safety Data Sheet (MSDS) to the Resident Engineer for approval prior to purchase and applications.

Post-emergent herbicide shall be non-selective type for total control of undesirable vegetation, available as Roundup or approved substitution as determined by the Contractor. Contractor shall submit a sample label and Material Safety Data Sheet (MSDS) to the Resident Engineer for approval prior to purchase and applications. Application shall be in accordance with precautions and rates suggested by the manufacturer.

SECTION 801 – INSTALLATION

801-9 PAYMENT. To the "WHITEBOOK", ADD the following:

4. The payment for irrigation Work including all materials, labor, and other costs required for the installation and maintenance of the irrigation systems shall be included under the lump sum Bid items for "**Irrigation System (Park areas)**" and "**Irrigation System (Restoration and Enhancement areas)**".

SECTION 802 – NATIVE HABITAT PROTECTION, INSTALLATION, MAINTENANCE, AND MONITORING

802-2.1 Project Biologist. To the "WHITEBOOK", ADD the following:

5. You shall retain a Qualified Project Biologist to perform biological monitoring Work contained in FMND No. 589554 (SCH No. 2020049049) dated 10/12/20, mitigation plan titled, Enhancement and Restoration of Maritime Succulent Scrub as Habitat for Western Burrowing Owl and Beach Goldenaster for the Beyer Park Development Project (RECON 8/4/20), and addendum to the mitigation plan titled, Southwest Village Beyer Boulevard Alternatives-Addendum to Beyer Park Mitigation Plan (RECON 3/15/23) for this Contract. You shall coordinate your activities and Schedule with the activities and schedules of the Project Biologist.

6. The qualified Project Biologist(s) shall be retained to perform construction monitoring, required pre-construction surveys, monitoring of the restoration planting installation, **120 Calendar Days** Plant Establishment Period monitoring, and 5-year restoration and enhancement period monitoring as described in the MMRP and the associated mitigation plans described above herein referred to as the "Mitigation Plan".

7. Delays in work resulting from breeding season restrictions, determined necessary in accordance with the requirements of the MMRP and as recommended by the QPB and MMC, shall be non-compensable delay days and extend the contract length by the total number of working days that no work could be performed. The contractor is expected to adjust working areas and continue working on other areas of the project as allowed by the QPB and MMC where possible. Extra contract days shall not be granted unless critical path has been affected.

802-3.2 Licensed Re-vegetation or Restoration Contractor. To the "WHITEBOOK", ADD the following:

3. If the City Elects to Award the LTMMA Option, you shall retain a Restoration Contractor qualified to perform the long term maintenance work as specified in the construction documents and included in FMND No. 589554 (SCH No. 2020049049) dated 10/12/20, mitigation plan titled, Enhancement and Restoration of Maritime Succulent Scrub as Habitat for Western Burrowing Owl and Beach Goldenaster for the Beyer Park Development Project (RECON 8/4/20), and addendum to the mitigation plan titled, Southwest Village Beyer

Boulevard Alternatives-Addendum to Beyer Park Mitigation Plan (RECON 3/15/23) for both enhancement and restoration areas. Restoration areas generally require weed removal, decompaction, planting, seeding, irrigation, on-going vegetation maintenance and maintenance of erosion control. Enhancement areas generally require removal of non-native species, on-going weed control and maintenance of erosion control unless otherwise noted where soil decompaction, planting of cactus cuttings or seeding is required but no irrigation is proposed.

Maintenance shall be performed a minimum of weekly during the PEP. Maintenance visits during the 60-month M&M period will be conducted a minimum of twice per month for the first six months, once per month for the remainder of the first year, and quarterly thereafter." See attached capture for where this is in the document.

Metal signs shall be printed and installed on metal t-posts or similar around the perimeter of the mitigation area at 200 ft intervals by the Contractor. The signs shall be green with 1" tall white lettering with the following language in both English and Spanish:

"Restoration Area/ Preserve: DO NOT ENTER

Violators will be fined".

"Reserva ecológica en restauración. NO ENTRE.

Los infractores serán multados."

In enhancement areas identified for cactus cuttings, the project biologist shall locate suitable existing cactus patches to collect cuttings from within the project area and request concurrence from the City of San Diego MMC prior to collecting cuttings. The contractor shall supply 1-gallon rooted cactus plants from a nursery specializing in native plants within 30 miles of the project site if sufficient cactus does not exist within the project area to supply the total number of cactus cuttings required or if MMC determines that cactus stands within the site boundary are not acceptable for collecting from.

802-3.8 Installation. To the "WHITEBOOK", ADD the following:

11. Installation of plant material or other temporary erosion control acceptable to the project biologist and the City of San Diego MMC staff shall be completed within 90 Calendar Days of the completion of grading or disturbance.

12. Prior to vegetation removal or land disturbance the QPB shall survey the areas where Fish-hook cactus and Beach goldenaster are shown to occur and coordinate with the restoration contractor to salvage and collect seed for nursery propagation and subsequent installation in the restoration area.

13. Prior to vegetation removal or land disturbance, the QPB shall prepare and submit a salvage plan to the Resident Engineer for review and approval by City Mitigation Monitoring Coordination (MMC) Staff. The salvaged plan is required

to identify species present with the grading area suitable for salvage and transplanting into the mitigation site. The salvage plan shall include species, locations, numbers, timing and handling, and installation requirements for collection and transplanting salvaged cactus and Beach Golden Aster seed.

14. After installation of the irrigation system and prior to hydroseeding or plant installation, the stations located within the disturbed areas of the mitigation areas shall be run for a period of approximately 30 days. At the end of the 30-day period, all weeds would be sprayed with the appropriate herbicide. Weeds would continue to be treated with herbicide every two weeks until weed germination is no longer observed to ensure adequate suppression of the weed seed bank. This process typically requires three rounds of herbicide treatment.

15. A 10-foot-wide weed maintenance buffer from the mitigation site boundary will be established around the mitigation site and maintained throughout the M&M period. The buffer will be maintained free of Cal-IPC listed moderate or highly invasive species to prevent the encroachment into the mitigation site.

802-3.10.3 Long-Term Maintenance and Monitoring Period. To the "WHITEBOOK", ADD the following:

1. A Long-term Maintenance and Monitoring Option Agreement (LTMMA) shall be signed by Bidder and submitted with its Bid. If the City exercises its option for the LTMMA Work, City shall provide Bidder with a copy of the Long-Term Maintenance and Monitoring Option Agreement signed by all Parties prior to acceptance of the 120 Calendar Days Plant Establishment Period.

802-4 PAYMENT. To the "WHITEBOOK", item 1, DELETE in its entirety and SUBSTITUTE with the following:

1. The payment for items of Work described in 802, "NATIVE HABITAT PROTECTION, INSTALLATION, MAINTENANCE, AND MONITORING", shall be included in the following Bid items as applicable unless specified otherwise in the Special Provisions, Long-Term Maintenance and Monitoring Option Agreement (LTMMA), or both:

    a. The payment for the removal and disposal of the existing vegetation, weeds, trash, and other objects shall be included in the associated Bid items requiring the Work.

    b. The payment for the construction of temporary facilities, such as access routes and fencing, shall be included in the associated Bid items requiring the Work.

    c. The payment to complete the soil testing, topsoil preparation, conditioning, preparation of the final grade, installation, and PEP phases shall be included in the associated Bid items requiring the Work.

d. The payment for the materials, labor, and all other costs associated with the installation and **120 Calendar Days** PEP maintenance of the restoration and enhancement areas shall be included in the Bid item for "**Restoration and Enhancement Areas Materials, Installation** and **120 Days PEP Maintenance**".

e. The payment for the 60-month maintenance Work required during the maintenance period beyond the PEP in accordance with the Long Term Maintenance and Monitoring Option Agreement (LTMMA) included in the Contract Documents, furnishing the required reports, site observations, and bond(s), and shall be included in the lump sum Bid item for the "**60-Month Maintenance Program for Restoration and Enhancement Areas- LTMMA Option**", unless otherwise specified.

f. The payment for the monitoring and reporting Work required to be performed by the Project Biologist prior to and during construction including the **120 Calendar Days** PEP for restoration planting as described in the Contract Documents shall be included in the lump sum Bid item for the Biological Monitoring and Reporting.

g. The payment for the monitoring and reporting Work required to be performed by the Project Biologist during the maintenance period beyond the PEP in accordance with the Long Term Maintenance and Monitoring Option Agreement (LTMMA) included in the Contract Documents, furnishing the required reports, site observations, and bond(s), and shall be included in the lump sum Bid item for the "**60-Month Re-vegetation Biological Monitoring Program – LTMMA Option**".

SECTION 1001 – CONSTRUCTION BEST MANAGEMENT PRACTICES (BMPs)

1001-1 GENERAL. To the "WHITEBOOK", ADD the following:

8. Based on a preliminary assessment by the City, this Contract is subject to **SWPPP Risk Level 3**.

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 K - SWPPP Construction BMP Maintenance Log**.

TECHNICALS

SUPPLEMENTAL CSI SPECIFICATIONS (CSI FORMAT)

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SECTION 03 11 01
CONCRETE FORMWORK FOR SKATEBOARD PARKS

PART 1 – GENERAL

1.1 SCOPE OF WORK

A. Furnish materials, labor, transportation, services, and equipment necessary to install all concrete formwork related to the skate park as indicated on scope of work contract and shown on drawings and as specified herein.

B. Provide all formwork and accessories for construction of Portland Cement Concrete paving for the skate park.

C. Related Work:
1. Section 03 20 01 – Concrete Reinforcement for Skateboard Parks
2. Section 03 30 01 – Cast-In-Place Concrete for Skateboard Parks
3. Section 03 33 51 – Concrete Finishing for Skateboard Parks
4. Section 03 37 01 – Shotcrete for Skateboard Parks

1.2 REFERENCES

A. Comply with the applicable reference specifications as specified in the GENERAL PROVISIONS and in accordance with applicable laws, codes and regulations required by the City of San Diego, CA.

B. Comply with the current provisions of the following Codes and Standards:
1. ASTM – American Society for Testing and Materials.
2. CBC – California Building Code.
3. ACI – American Concrete Institute.
4. Standard Specifications (as specified in the General Provisions).

1.3 QUALITY ASSURANCE

A. Design Criteria: Conform to ACI 347-68, Chapter I.

B. Allowable Tolerances: Conform to ACI 117 and 347-68, 2.4.

C. CONTRACTOR Samples:
1. CONTRACTOR shall prepare 4-foot x 4-foot samples for each concrete formwork type indicated on Drawings. CONTRACTOR may pour each type as part of the finished project, and if approved by the RESIDENT ENGINEER it may remain in place as finished product. If the sample is not approved, the CONTRACTOR in charge of the specific scope of work shall remove and replace another sample for RESIDENT ENGINEER'S approval.
2. Mock-Ups shall be completed to the satisfaction of the RESIDENT ENGINEER including aggregates, texture, color, and finishes.
3. These mock-ups will become the standard of quality by which future paving samples and work will be judged.
4. Mock-ups to remain on-site and be protected during the course of construction, as a means to compare work in progress. If Mock-ups are damaged or removed, the CONTRACTOR in charge of the specific scope of work shall repair/replace in-kind immediately.

D. Concrete Manufacturer Qualifications: Manufacturer of ready-mixed concrete products complying with ASTM C 94 requirements for production facilities and equipment.

E. Safety and Performance Guidelines: Comply with all safety and performance requirements and all applicable references as specified in the ASTM F2480 Standard Guide for In-ground Skate Parks.

1.4 STORAGE OF MATERIALS

A. Store materials on and under protective sheeting.

1.5 COORDINATION

A. Notify responsible trades of schedules of concrete pours to allow time for installation and coordination.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Forms:

1. Flatwork and Bond Beam: 1" Exterior Masonite Siding for all Tangents. 7/16" Exterior Masonite Siding for all radii. Create true arc to tangent connections as per layout plan. No kinks will be accepted.

2. Vertical and Custom Work: Exterior grade Standard Douglas Fir (or equal plywood), minimum three ply, one smooth side sufficiently thick to sustain loads, or steel forms.

B. Form Oil: Non staining, paraffin-base oil having a specific gravity of between 0.8 and 0.9.

C. Form Ties: Bolts, rods, or patented devices having tensile strength of 3000 lbs., adjustable length, free of lugs which would leave a hole larger than 5/8" diameter and having a full one-inch depth of break-back.

PART 3 – EXECUTION / CONSTRUCTION

3.1 CONSTRUCTION AND ERECTION

A. Construct forms in accordance with ACI 347-68.

B. Build forms to shapes, lines and dimensions of detailed members of concrete construction. Set to line and grade, brace and secure to withstand placing of concrete and maintain their shape and position.

C. Construct forms with care to produce concrete surfaces without unsightly or objectionable form marks in exposed concrete surfaces.

D. Thoroughly clean surfaces of form material and remove nails before reuse. Do not reuse damaged or worn forms. Coat contact surfaces of forms with non-staining form oil prior to placing metal reinforcement.

E. Immediately before placing concrete, clean forms of chips, sawdust, and debris. Immediately after removal of forms, remove form ties, wires, and defects and patch.

3.2 INSERTS AND ACCESSORIES

A. Make provisions for required installation of accessories, bolts, hangers, sleeves, anchor slots and inserts cast in concrete. Obtain suitable templates or instructions for installation of items. Place expansion joints where detailed and required, also shown in the Jointing Plan in the drawings.

3.3 REMOVAL OF FORMS AND SHORING

A. Remove forms and shores in accordance with ACI 347-68.

3.4 CLEANUP

A. Upon completion of the concrete formwork, remove surplus construction materials, loose earth, trash and debris so that the job site is left in a neat and orderly condition.

END OF SECTION 03 11 01

SECTION 03 20 01
CONCRETE REINFORCEMENT FOR SKATEBOARD PARKS

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. Furnish materials, labor, transportation, services, and equipment necessary to install all concrete reinforcement related to the skate park as indicated on scope of work contract and shown on drawings and as specified herein.

B. Provide all steel reinforcement for construction of Portland Cement Concrete paving for the skate park.

C. Related Work:
1. Section 03 11 01 – Concrete Formwork for Skateboard Parks
2. Section 03 30 01 – Cast-In-Place Concrete for Skateboard Parks
3. Section 03 37 01 – Shotcrete for Skateboard Parks

1.2 REFERENCES

A. Comply with the applicable reference specifications as specified in the GENERAL PROVISIONS and in accordance with applicable laws, codes and regulations required by the City of San Diego, CA.

B. Comply with the current provisions of the following Codes and Standards:
1. ASTM - American Society for Testing and Materials.
2. Standard Specifications – Agency Specified
3. CBC – California Building Code.

C. American Concrete Institute (ACI):

1. ACI 315-80, Manual of Standard Practice for Detailing Reinforced Concrete Structures.
2. ACI 318-77, Building Code Requirements for Reinforced Concrete.

D. American Society for Testing and Materials (ASTM - latest editions):

1. ASTM A233 - Mild Steel Arc Welding Electrodes.
2. ASTM A615 - Deformed Billet-Steel Bars for Concrete Reinforcement.
3. ASTM A706 - Low-Alloy Steel Deformed Bars for Concrete Reinforcement.
4. ASTM F2480 – Standard Guide for In-ground Concrete Skate Park.

E. Concrete Reinforcing Steel Institute (CRSI): Manual of Standard Practice, latest edition.

F. American Welding Society (AWS): Reinforcing Steel Welding Code, D1.4 and D12.1-75, including latest revisions.

1.3 DELIVERY AND STORAGE

A. Store materials in dry and protected locations and protect from damage. Stack reinforcing steel in staggered tiers. Mark each length, size, shape and location. Maintain reinforcement free of dirt, mud, paint or rust.

1.4 SUBMITTALS

A. In accordance with the Contract Documents, General, and Technical Provisions.

B. Shop Drawings: Indicate complete reinforcing method for each concrete member including materials, sizes, bends, dimensions, stirrup spacing, and placing details not shown on drawings. To be reviewed by the RESIDENT ENGINEER.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Steel Reinforcement: Deformed billet steel conforming to ASTM A615, Grade 60, clean and free of rust, dirt, grease or oils. Minimum 75% Recycled Product.

B. Welded Steel Reinforcement: Deformed low-alloy steel, ASTM A706, carbon content not exceeding 0.30% and manganese content not exceeding 0.60%. Identify and tag with manufacturer's heat identification number.

C. Supports for Reinforcement: Provide supports for reinforcement including bolsters, chairs, spacers and other devices for spacing, supporting and fastening reinforcing bars in place.

2.2 FABRICATION

A. Fabricate to sizes, shapes, and lengths detailed in accordance with requirements of ACI 318-71 and ACI 315-65.

PART 3 – EXECUTION / CONSTRUCTION

3.1 INSTALLATION

A. Comply with Concrete Reinforcing Steel Institute’s recommended practice for “Placing Reinforcing Bars” for placing and supporting reinforcement.

B. Clean reinforcement of loose rust and mill scale, earth, ice, and other bond-reducing materials.

C. Arrange, space, and securely tie bars and bar supports to hold reinforcement in position during concrete placement. Maintain minimum cover over reinforcement.

D. Accurately place reinforcing steel in accordance with drawings. Rebar shall be 2” beneath concrete surfaces. Thoroughly clean reinforcement of any coating which would reduce bonding. Do not heat, cut, or bend bars without the RESIDENT ENGINEER’S approval. Do not splice reinforcement at points of maximum stress. Stagger splices in adjacent bars and provide a minimum overlap of 30-bar diameters at splices unless specifically noted otherwise on Drawings.

E. Securely saddle tie intersections with No. 18 gauge black annealed wire. Rigidly secure reinforcement in place. Provide concrete coverage as shown on Drawings.

3.2 WELDING REINFORCEMENT

A. Weld deformed steel reinforcement bars in strict accordance with AWS 12.1, using recommended pre-heat temperature and electrode for type of steel being welded.

B. Do not weld steel reinforcement bars without proper heat identification of bars.

3.3 CLEANUP

A. Upon completion of the concrete reinforcement work, remove surplus construction materials, loose earth, trash and debris so that the job site is left in a neat and orderly condition.

END OF SECTION 03 20 01

SECTION 03 30 01
CAST-IN-PLACE CONCRETE FOR SKATEBOARD PARKS

PART 1 – GENERAL

1.1 SCOPE OF WORK

A. Furnish materials, labor, transportation, services, and equipment necessary to install all Portland Cement Cast-In-Place Concrete related to the skate park as indicated on scope of work contract and shown on drawings and as specified herein.

B. Related Work:
1. Section 03 11 01 – Concrete Formwork for Skateboard Parks
2. Section 03 20 01 – Concrete Reinforcement for Skateboard Parks
3. Section 03 33 51 – Concrete Finish for Skateboard Parks
4. Section 03 37 01 – Shotcrete for Skateboard Parks
5. Section 03 39 01 – Concrete Curing for Skateboard Parks

1.2 REFERENCES

A. Comply with the applicable reference specifications as specified in the GENERAL PROVISIONS and in accordance with applicable laws, codes and regulations required by the City of San Diego, CA. Comply with the current provisions of the following Codes and Standards.

B. ASTM - American Society for Testing and Materials:
1. ASTM C33 – Concrete Aggregates.
2. ASTM C94 – Ready-Mixed Concrete.
3. ASTM C143 – Test for Slump of Portland Cement Concrete.
4. ASTM C150 – Portland Cement.
5. ASTM C260 – Air-Entraining Admixtures for Concrete.
6. ASTM C494 – Chemical Admixtures for Concrete.
7. ASTM C618 – Fly Ash and Raw or Calcined Natural Pozzalans for Use in Portland Cement Concrete
8. ASTM F2480 – Standard Guide for In-ground Concrete Skate Park.

C. ACI – American Concrete Institute:
1. ACI 211.1-81– Recommended Practice for Selecting Proportions for Normal-Weight Concrete.
2. ACI 211.3-81 – Recommended Practice for Selecting Proportions for Lightweight Concrete.
3. ACI 301-73 – Specifications for Structural Concrete for Buildings.
4. ACI 305-77 – Recommended Practice for Hot Weather Concreting.
5. ACI 306-72 – Recommended Practice for Cold Weather Concreting.
6. ACI 318-77 – Building Code Requirements for Reinforced Concrete.

D. CBC – California Building Code.

E. AWS – American Welding Society
1. AWS 3.0 – Standard Qualifications Procedure.
2. AWS D1.4 – Structural Welding Code – Reinforcement.
3. AWS D12.1 – Reinforced Concrete Construction.

F. CRSI – Concrete Reinforcing Steel Institute: MSP-1 – Manual of Standard Practice

1.3 SUBMITTALS

A. Design of Concrete Mixes:

1. CONTRACTOR shall be responsible for and pay for design of concrete mixes. Design of concrete mixes shall be performed by a Testing Laboratory selected by CONTRACTOR and reviewed and approved by the RESIDENT ENGINEER. Design methods to be in accordance with ACI 318-71.

2. Make three trial mixes using aggregate proposed.

3. Make advance tests of trial mixes with proposed materials. Test four cylinders in accordance with ASTM C39 at 7 days and 28 days. Do not place concrete on project until laboratory reports and breaks of confirmations cylinders indicate that the proposed mixes will meet the strength requirements.

4. Check mix design and revise, if necessary, wherever changes are made in aggregate or in surface water content of aggregate or workability of concrete. Slump shall be the minimum to produce workable mix. Laboratory shall prescribe minimum quantity of water.

5. If Portland Cement reducers or other additives are used, submit control mix design without reducers or additives as well as mix exactly proposed to be used. Submit W.R. Grace Co. recommendations for retarder and shrinkage compensation of slab on grade.

6. Sample of Workmanship: Provide on-site, minimum one (1) 48”x48” sample. CONTRACTOR may pour each type as part of the finished project. It shall be reviewed by the RESIDENT ENGINEER, if approved it may remain in place as finished product. If the sample is not approved, CONTRACTOR in charge of the specific scope of work shall remove and replace another sample for the RESIDENT ENGINEER’S approval.

7. Samples for Color Selection: Submit color additive manufacturer's color chart & sample chip set; indicate color additive number and required dosage rate. Samples indicate general color and may vary from concrete finished in field according to Specifications.

8. Forward two copies of design mix to the RESIDENT ENGINEER and SKATE PARK CONSULTANT.

B. Submit product data and manufacturer's instructions for:
   1. Color admixture.
   2. Expansion joint fill material.
   3. Curing compound.
   4. Dowel aligners/caps.
   5. Waterstop.
   6. Crack repair materials.
   7. Form facing materials.
   8. Proprietary cleaning agents.
   9. Plastic film for curing.
   10. Surface retarders.

C. Samples:
   1. Samples for Color Selection: Submit color additive manufacturer's color chart & sample chip set; indicate color additive number and required dosage rate. Samples indicate general color and may vary from concrete finished in field according to Specifications.
   2. Expansion Joint Fill Material: Submit one 12-inch length.

D. Test Reports: Compressive strength of concrete test cylinders taken upon delivery of concrete.

E. Delivery Documentation: Batch tags for each load of concrete, for informational purposes.

1.4 QUALITY ASSURANCE

A. Regulatory Requirements: Meet requirements of applicable laws, codes, and regulations required by authorities having jurisdiction over Work.

B. CONTRACTOR Mock-ups:
   1. CONTRACTOR shall prepare 4-foot x 4-foot samples for each cast-in-place concrete type indicated on Drawings. CONTRACTOR may pour each type as part of the finished project, and if approved by the RESIDENT ENGINEER it may remain in place as finished product. If the sample is not approved, the CONTRACTOR in charge of the specific scope of work shall remove and replace another sample for RESIDENT ENGINEER'S approval.
   2. Mock-Ups shall be completed to the satisfaction of the RESIDENT ENGINEER including aggregates, texture, color, and finishes.
   3. These mock-ups will become the standard of quality by which future paving samples and work will be judged.
   4. Mock-ups to remain on-site and be protected during the course of construction, as a means to compare work in progress. If Mock-ups are damaged or removed, the CONTRACTOR in charge of the specific scope of work shall repair/replace in-kind immediately.

C. Concrete Manufacturer Qualifications: Manufacturer of ready-mixed concrete products complying with ASTM C 94 requirements for production facilities and equipment.

D. Safety and Performance Guidelines: Comply with all safety and performance requirements and all applicable references as specified in the ASTM F2480 Standard Guide for In-ground Skate Parks.

E. ACI Requirements: Meet all requirements of ACI 301.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Store materials in dry and protected locations and protect from damage.

B. Do not change brand of cement or source of aggregate during course of Work, without prior approval from the RESIDENT ENGINEER.

1.6 SITE CONDITIONS

A. Environmental Requirements:
   1. CONTRACTOR shall submit plan to monitor wind velocity, relative humidity, temperature, and concrete temperature in order to maintain specified maximum rate of evaporation.
   2. Do not place concrete when sub base surface temperature is less than 40 degrees F, nor when surface is wet.
   3. Protect concrete against extreme cold and heat, frost, rapid drying, and damage by rain.

B. Coordination:
   1. Coordinate schedules of concrete placement to allow adequate time for installation of other related work.
   2. Verify that anchor bolts and other embedded steel items to be cast into concrete are properly placed.
   3. Coordinate size and location of mechanical and electrical equipment concrete pads.
   4. Coordinate earthwork and soils report requirements with placement requirements.
   5. Coordinate with form-work and finishes sections to provide finish floor levelness and flatness as specified herein. Slope to drains at grades and percent slope shown on contract documents.
   6. Ensure that irrigation sleeves, electrical conduit, drainage lines and other utility elements are accommodated and as-built located prior to placing concrete.

1.7 WARRANTY

A. General Description: In addition to manufacturer's warranties, warrant Work for a period of one year from the Date of Final Completion against defects in materials and workmanship.

B. Additional Items Covered: Warranty shall also cover repair of damage to other materials and workmanship resulting from defects in materials and workmanship. Also refer to Responsibilities of the Contractor in the Green Book and White Book.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Ready Mixed Concrete: Batched, mixed and transported in accordance with ASTM C94 – Specifications for Ready Mixed Concrete.

B. Portland Cement: Refer to Drawings for specific paving type and finish required and conform to ASTM C-150, Type II. Use same brand of cement from single source throughout entire project for each paving type, unless approval from the RESIDENT ENGINEER states otherwise.

C. Fine Aggregate (washed concrete sand): Clean, hard, durable, uncoated washed natural sand, free from silt, loam or clay, and conforming to ASTM C33.

D. Coarse Aggregate: Class II-Hard durable, un-coated crushed limestone meeting requirements of ASTM C-33. Unless otherwise noted in aggregate size 1" minimum, No., 56 or 57. Base rock shall conform to local code.

E. Water: Potable and free from deleterious materials such as oils, acids, and organic matter.

F. Admixture: Cement-dispersing, water-reducing compound, ASTM C 494, Type A, as made by Master Builders, Sika, or Gifford-Hill Co., or equal. Depending upon weather conditions at time of placing, ASTM C 494, Type D (water-retarding) or Type E (water-reducing, accelerating) may be used if approved by the RESIDENT ENGINEER.

G. Curing Materials:
   1. Water: Domestic Quality, clear and potable with no chemical content.
   2. Sheet Material: Comply with ASTM C171. Moisture loss maximum .055 g/cm sq. Color: White.
   3. Curing Compounds/Sealer: Curing compound shall comply with ASTM C309 and be approved by color additive manufacturer for use with colored concrete

2.2 PROPORTIONS AND MIXING

A. Proportions and Design: In accordance with approved mix design. Minimum allowable compressive strength at 28 days is 4000 psi (as marked per plan).

B. Admixture: No admixtures without approval of the Resident Engineer. Introduce admixtures in quantities and according to methods recommended by admixture manufacturer. Add air-entraining agent to concrete as scheduled.

C. Slump: Not to exceed 4"

D. Mixing: Ready mixed concrete in accordance with ASTM C-94. Do not transport or use concrete after 1-1/2 hours have elapsed from time of initial mixing. Supplier of transit-mixed concrete shall have a plant of sufficient capacity, and adequate transportation facilities to assure continuous delivery at required rate, to provide continuous concrete placement throughout a pour.

E. Grout and Dry Pack: Non-Shrink, Non-Metallic: U.S. Grout Corp or equal. “Five Star Grout” ASTM C-827, C-1107-02 Grades A, B and C, and C-1107-07, 5,000 PSI.

2.3 CURING MATERIALS

A. Water: Domestic Quality, clear and potable with no chemical content.

B. Sheet Material: ASTM C171. Moisture loss maximum .055 g/ cm sq. Color: White.

C. Curing Compounds: Ashford Formula™ Curecrete by Curecrete Distribution, Inc., Phone (800) 998-5664, or equal.

PART 3 – EXECUTION / CONSTRUCTION

3.1 INSPECTION

A. Inspect subgrade, forms, reinforcing steel, pipes, conduits, sleeves, hangers, anchors, inserts, and other work required to be built into concrete and report any discrepancies. Notify CITY at least five (5) working days in advance of scheduled placement.

B. Correct unsatisfactory work prior to placing concrete.

C. Remove rubbish from formwork immediately prior to placing concrete.

3.2 INSTALLATION

A. Placing Concrete:
1. Convey and place concrete allowing no separation of ingredients in accordance with ACI 304 and as specified below.
2. Maximum height of concrete free fall – five (5) feet.
3. Regulate rate of placement to maintain plasticity and flow into position.
4. Deposit concrete continuously until panel or section is completed.
5. Place concrete in horizontal layers 18" maximum thickness.

B. Consolidation:
1. Use mechanical vibrating equipment for consolidation.
2. Vertically insert and remove hand-held vibrators at 18" O.C. for 10 to 15 seconds.
3. Do not use vibrators to transport concrete in forms.
4. Provide vibrators with minimum speed of 8000 RPM and with amplitude to consolidate effectively.
5. Thoroughly consolidate concrete and work around reinforcement, embedded items and into corners of forms. Thoroughly consolidate layers of concrete with previous layers.

C. Construction Joints:
1. Unless otherwise shown on Drawings, each footing, wall, beam, and slab shall be considered as a single unit of operation and shall be monolithic in construction.
2. Where construction joints are absolutely unavoidable, locate joints at or near quarter points of spans where approved by RESIDENT ENGINEER and/or shown on plan.
3. Saw Cut joints, Expansion Joints and Cold Joints as detailed in contract documents.

D. Expansion Joint Fillers:
1. Refer to Drawings for Expansion Joint locations and details.
2. Finish joint material flush with concrete surface.

E. Hot Weather Placement:
   1. Prevent high temperature in fresh concrete during hot weather in accordance with ACI 305.
   2. Use water reducing set retarding admixtures in such quantities as especially recommended by manufacturer to assure that concrete remains workable and lift lines will not be visible.

F. Flatwork:
   1. Cast slabs-on-grade in alternate sections, unless permanent forms are used. Wait 48 hours between all adjacent concrete castings.
   2. Plane Surface Tolerance: Exterior- Class AX, 3/16" in 10' with no ponding.
   3. Maximum 1:500 slope from indicated plane at any point.

G. Finish:
   1. Smooth Trowel finish to match approved Mock-Up finish. If the finish is not approved, the CONTRACTOR in charge of the specific scope of work shall remove and replace another sample for RESIDENT ENGINEER'S approval.
   2. After surface water disappears and floated surfaces have sufficiently hardened, steel trowel then retrowel the surface to a smooth and consistent finish.
   3. After concrete has set enough to provide edge troweling, retrowel edges to a smooth and uniform finish.
   4. Grinding is not an approved remedy for corrective measures or complying with plans (joints, protrusions, etc.)

H. Cracking:
   1. Cracking from inadequate curing is not allowed. Sawcut joints and construction joints are shown on drawings. CONTRACTOR may, with review and approval by the RESIDENT ENGINEER, recommend and detail other joints required to prevent cracking.

3.3 REPAIRS AND PROTECTION

A. Remove and replace concrete paving that is broken, damaged, defective, or does not meet the requirements of this Section or conformance with ASTM F 2480 - Standard Guide for In-ground Skate Parks.

B. Protect concrete from damage; exclude traffic from paving for at least 28 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.

C. Maintain concrete paving free of stains, discoloration, dirt, wax, and other foreign material.

D. Skim Coats and other corrective measures for defective work or work that does not meet the finish requirements of the plans and specifications will not be permitted.

3.5 TOLERANCES

A. Minor variations in appearance of colored concrete, which are similar to natural variations in color and appearance of uncolored concrete, are acceptable but subject to approval by the RESIDENT ENGINEER.

3.4 REJECTIONS

A. Mock-Ups shall be completed to the satisfaction of the RESIDENT ENGINEER including aggregates, texture, color, and finishes. If mock-ups are rejected by the RESIDENT ENGINEER, the CONTRACTOR in charge of the specific scope of work shall remove and replace mock up for the RESIDENT ENGINEER's approval at no additional cost to the CITY.

B. If Mock-ups are damaged, removed, the CONTRACTOR in charge of the specific scope of work shall repair/replace in-kind immediately at no additional cost to the CITY.

C. Major variations in the appearance of integral colored concrete compared to manufacturer's sample chip shall be rejected by the RESIDENT ENGINEER. The CONTRACTOR in charge of the specific scope of work shall remove and replace mock up for the RESIDENT ENGINEER's approval at no additional cost to the CITY.

D. Defects in the concrete including lack of uniformity, pock markings, chips, cracks, exhibits segregation honeycombing, or lamination, or which contains any dry patches, slugs, voids, or pockets shall be rejected by the RESIDENT ENGINEER. The CONTRACTOR in charge of the specific scope of work shall remove and replace mock up for the RESIDENT ENGINEER'S approval at no additional cost to the CITY.

3.6 CLEAN UP

A. At completion of Work, remove concrete stains from adjacent work, including but not limited to dissimilar paving types, walls, columns, railing posts, light fixtures, plant materials, to satisfaction of the RESIDENT ENGINEER.

END OF SECTION 03 30 01

SECTION 03 33 51
CONCRETE FINISHING FOR SKATEBOARD PARKS

PART 1 – GENERAL

1.1 SCOPE OF WORK

A. All work contained in this Section is considered specialty Skateboard Park construction. Only those contractors that meet the minimum experience requirements contained in the QUALITY ASSURANCE Section of this specification may perform this work as specified herein.

B. This section identifies the qualifications that the Bidder and/or Subcontractors shall meet prior to award of the Contract.

C. Complete qualifications and this form must be turning in WITH THE BID.

1.2 Regulations: The work shall conform to requirements of the American Concrete Institute (ACI) and the California Building Code (CBC) for concrete finishing, as supplemented and modified on drawings or herein.

1.3 REFERENCE STANDARDS: The Concrete Finishing shall conform to requirements of the following Reference Standards or as modified and supplemented hereinafter.

A. American Concrete Institute (ACI) Specifications for Structural Concrete for Buildings, ACI 301

B. ACI Recommended Practice for Cold Weather Concreting, ACI 306

C. ACI Recommended Practice for Hot Weather Concreting, ACI 605

1.4 RELATED SECTIONS:

Section 03 11 01 - Concrete Formwork for Skateboard Parks
Section 03 20 01 - Concrete Reinforcement for Skateboard Parks
Section 03 30 01 - Cast in Place Concrete for Skateboard Parks
Section 03 37 01 - Shotcrete for Skateboard Parks

1.5 QUALITY ASSURANCE:

A. Skateboard Parks are not considered standard concrete flatwork. Where indicated to be exposed, Skateboard Park concrete is architecturally finished concrete represented in the form of complex and unique shapes. Typical Skateboard Park features will incorporate concave and convex transitioning between surfaces which require the specified finishes to sculpturally blend along compound radius curves. It is critical that Skateboard Park concrete work be completed with a high level of precision for the skate facility to function properly and safely. Special care must be taken to provide the specified finished surfaces without gravel pockets, and other defects/defacements. The Resident Engineer shall inspect concrete after removal of forms and before concrete repair work begins. Concrete that does not meet the minimum requirements of the specifications shall be rejected by the Resident Engineer and removed and replaced in its entirety by the Contractor at the Contractor' expense.

1.6
SUBMITTALS:

Refer to the following related specifications for submittal requirements:

1. Section 03 11 01 – Concrete Formwork for Skateboard Parks
2. Section 03 20 01 – Concrete Reinforcement for Skateboard Parks
3. Section 03 30 01 – Cast-In-Place Concrete for Skateboard Parks
4. Section 03 39 01 – Concrete Curing for Skateboard Parks
5. Section 05 50 01 – Metal Fabrications for Skateboard Parks

1.7 PROTECTION: Protect persons and adjacent materials and finishes from dust, dirt and other surface or physical damage during finishing operations, including materials driven by wind.

PART 2 - PRODUCTS - *Not Applicable*

PART 3 – EXECUTION

3.1 REPAIRS:

A. Immediately after the removal of forms inspect all surfaces for defects.

B. Repair or patch defects only after defects are inspected by the RESIDENT ENGINEER and then only with the RESIDENT ENGINEER'S permission. Do all cutting and repair within 48 hours after removal of forms; cure repairs same as new concrete.

3.2 FINISHES FOR FORMED SURFACES:

A. Rough Form Finish: Provide for surface of walls and footings adjacent to grade or below grade. This is the concrete surface having texture imparted by form facing material use with tie holes and defective areas repaired and patched and fins and other projections exceeding 1/4 inch in height rubbed down or chipped off.

B. Smooth Formed Finish: Provide a smooth formed finish on formed concrete surfaces exposed to view. This is an as-cast concrete surface obtained with selected form facing material, arranged in an orderly and symmetrical manner with a minimum of seams. Remove fins and other projections completely and smoothed. Repair and patch honeycombs
and defective areas as directed by the RESIDENT ENGINEER. Tie holes shall not be filled.

C. Sacked Finish:

1. On all inconsistent surfaces of the exposed concrete, provide a sacked finish by coating the concrete with sacking mortar. Sacking of patched or defective concrete surfaces may be required by the RESIDENT ENGINEER for areas not otherwise already requiring this work.

2. Repair and patch tie holes, honeycombs and defective areas and trowel to smooth finish. Remove fines and other projections completely.

3. Thoroughly wet surface to prevent absorption.

4. Coat entire surface with sacking mortar as soon as surface of concrete approaches surface dryness.

5. Thoroughly and vigorously rub mortar over area with clean burlap pads to fill all voids.

6. While mortar is still plastic but partially set (so it cannot be pulled from voids), sack-rub surface with dry mix of sacking mortar (leave out water). There should be no discernible thickness of mortar on concrete surface, except in voids; all surfaces should be uniformly textured.

7. Immediately begin a continuous moist cure for 72 hours.

D. Related Unformed Surfaces: At tops of walls, horizontal offsets, and similar unformed surfaces adjacent to formed surfaces, strike off smooth and finish with a texture matching adjacent formed surfaces. Continue final surface treatment of formed surfaces uniformly across adjacent unformed surfaces unless otherwise indicated. Provide for face surface of walls adjacent to plaza, walks and stairs.

3.3 FINISHES FOR UNFORMED SURFACES:

A. Screed all slabs, for whatever finishes, to true levels or slopes, work surfaces only to the degree required to produce the desired finish; do no finishing
in areas where water has accumulated until they have been drained and excess moisture has dried. Carefully finish all joints and edges with proper tools, unless otherwise specified.

B. Rough Screed Finish: Consolidate, level, and screed all surfaces to obtain evenness and uniformity; remove all surplus concrete after consolidation by striking off with sawing motion against guide strips.

C. Float Finish: Apply float finish to monolithic slabs to receive trowel or other finishes. After screeding, consolidating, and leveling concrete slabs, do not work surface until ready for floating. Begin floating, using floats appropriate to the surface contours only, when surface water has disappeared, or when concrete has stiffened sufficiently to permit operation of power-driven floats, or both. Consolidate surface with power driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to tolerances of F(F) 18 (floor flatness) and F(L) 15 (floor levelness) measured according to ASTM E 1155. Uniformly slope surfaces to drains. Cut down high spots and fill low spots immediately after leveling, re-float surface to a uniform, smooth, granular texture.

D Hard Trowel Finish: After floated surface is firm enough to receive steel trowels, trowel at least two complete passes, or until last stage before blackening. Leave no trowel marks discernible to the touch. Do not use excessive water, especially on last the pass.

E. Defective Work: Remove and replace when directed by the RESIDENT ENGINEER, surfaces which show inferior finish quality.

3.4 CURING:

A. Protect concrete surfaces against rapid drying. Apply Clear Spray-on cure agent after final finish is achieved. Keep sealed with cure agent for necessary amount of time to reach concrete strength and inhibit moisture loss after placing per manufacturer's recommendation.

B. Duration of Curing: In addition to the initial overnight curing, continue final curing operations until the cumulative number of days or fractions thereof (not necessarily consecutive) occurs, during which time the temperature of the air in contact with the concrete is above 50 degrees F, equals 7 days. Curing period considered done when compressive strength is reached. If high-early strength concrete has been used, continue final curing operation for 3 days total time, calculated as before. Take care to prevent rapid drying at the end of the curing period. Early removal of forms will not be approved when forms are removed during the curing period.

3.5 INSPECTION:

Contractor shall notify RESIDENT ENGINEER that they are starting concrete finish repair work at least 5 days prior to the beginning of work.

3.6 REJECTIONS:

A. Major variations in the appearance of integral colored concrete compared to manufacturer's sample chip shall be rejected by the RESIDENT ENGINEER. The CONTRACTOR in charge of the specific scope of work shall remove and replace mock up for the RESIDENT ENGINEER's approval at no additional cost to the CITY.

B. Defects in the concrete including lack of uniformity, exhibits segregation honeycombing, or lamination, or which contains any dry patches, slugs, voids, pockets or does not meet the radius requirements of the design shall be rejected by the RESIDENT ENGINEER. The CONTRACTOR in charge of the specific scope of work shall remove and replace mock up for the RESIDENT ENGINEER'S approval at no additional cost to the CITY.

3.7 CLEANING: Leave premises clean and free of residue from work in this section.

3.8 PROTECTION AND SITE SECURITY FROM VANDALISM: It shall be the contactors responsibly to protect site from theft and vandalism.

END OF SECTION 03 33 51

SECTION 03 36 00
SPECIALTY SHOTCRETE

PART 1 - GENERAL

1.1 Work Included

A. Owner selected contractor specializing in the fabrication and construction of Artificial exhibitory.

B. Work in this section shall be performed by the Owner selected Design Build Contractor, as defined in this Section, and include all labor, materials, and equipment to excavate, rough grade, finish grade and fabricate the work under this contract which includes the following features as illustrated on the drawings and the Exhibit Rockwork as shown on the drawings.

1. Gunite/Shotcrete fabrications, including, but not limited to the following:

a. artificial geology, including rock cliffs and fossils

2. Installation of concrete, and reinforcing required for footings, anchorages, and other structural work for complete and proper placement installation of and gunite structural elements.

1.2 Definitions

A. Shotcrete: Shall consist of premixed fine aggregate, color additives, cement and water pneumatically placed or applied by suitable mechanism. Texture shall be by hand carving or embossing.

1.3 Intent

A. It is intended that the work involved create a highly natural appearance of rock face, that would be consistent with the San Diego and Otay formation present at the project site.

B. The contractor will perform this work under the direction of the Owner and will be expected to cooperate fully in this process.

C. The Owner explicitly reserves the right to continuously monitor the work for aesthetic quality and functional criteria of the work performed during the gunite placement, texturing and coloring phases of the work.

1.4 Coordination

A. The prime Contractor shall fully coordinate with the other Contractors and their subcontractors and the Owner.

1.5 Samples

A. Samples shall include as many surface textures as indicated on the Drawings, but not be limited to the following:

1. San Diego Formation rock face.
2. Otay Formation rock face.

B. Sample panels shall represent finished surfaces with texturing, coloring, etching, etc.

C. Sample panels rejected by the Owner shall be re-submited for approval at no additional cost to the owner. Sample panels shall not be removed until the completion of the work.

D. At the discretion of the Owner larger sample panels may be installed in their final location and used as part of the final work, if accepted.

1.6 Submittals

A. The Contractor shall submit the following for review:

1. Layout Plan: The layout plan shall indicate and identify the following:

a. All rockwork by indicated categories.
b. Locations of all required footing and foundations required
c. Footings and foundation types and all pertinent dimensions.

2. Steel Reinforcing: Indicate signs, types, and location of all steel reinforcing involved in Work of this Section. If required, provide the seal and signature of a licensed professional Engineer (State of California) to steel reinforcement shop drawings.

3. Statement of understanding of the overall project schedule and required completion of all rockwork and artifacts.

4. Submit a detailed description of proposed fabrication and finish techniques (including materials) for artificial geology and alternate structural systems (if applicable).

5. Recommend additional cost effective alternative methods of construction prior to start of work for consideration by Owner.

1.7 Pre-Construction Conditions

A. All artificial rockwork locations shall be approved by the Owner prior to actual shotcrete or gunite application and texturing.

B. Photographs and Drawings: For the purpose of duplicating, three dimensional, the design concept and establishing the character, configuration and the amount of simulated rock to be constructed, the Contractor shall work from drawings and photographs furnished by the Owner. Photographs have been included on the plans and at the end of this section.

C. Structural Reinforcement: The Contractor shall verify all structural reinforcement for all work in this section. If required by the owner, the Contractor shall provide a structural engineers seal certifying all structural reinforcement sections at no additional cost to the owner. Alternative methods may be recommended for greater cost efficiency.

1.8 Artificial Rockwork (Gunite/Shotcrete) Materials

A. Reinforcing Materials:

1. Reinforcing Bars:ASTM A 615, Grade 60
2. Steel mesh shall conform to ASTM Designation A82 or ASTM-A185. The size shall be #14 gauge and spaced 2 inches o.c. both ways.
3. Steel lath – painted or unpainted expanded metal lath, maximum ½ inch clear apertures.

4. For shotcrete surfaces, other than those applied over inclined or horizontal surfaces, backup material shall be “truss loop” as manufactured by Bostwick Steel Lath Company, Niles, Ohio, or equal.
5. Backup material when placing over horizontal or inclined surfaces shall be steel wire fabric 2 X 2 X14 gauge Steel Tex, by Bostwick Steel Lath Company, Niles, Ohio.
6. Truss Loop backup material shall be fastened to reinforcing bars by means of special tie wires, as shown on the drawings, or by Anchor Spacers as manufactured by Cost of Wisconsin Inc., P.O. Box 320, Rockfield, Wisconsin 53077
7. Supports for Reinforcement: Provide supports for reinforcement including bolsters, chairs, spacers, and other devises for spacing supporting, and fastening reinforcing bars.

B. Concrete Materials:

1. Portland Cement: ASTM C 150, Type II. Use only one brand of cement throughout the project, unless otherwise acceptable to Owner.

2. Aggregates: ASTM C 33, and as herein specified:

   a. Fine Aggregate, including cinder fine where applicable. Sand shall be sharp, clean river sand, free of extraneous materials.
   b. Course Aggregate: Clean, uncoated processed aggregate containing no clay, mud, loam or foreign matter, as follows: crushed stone, processed from natural rock or stone; washed gravel, either natural or crushed. Use of pit or bank-run gravel is not permitted. Coarse aggregate shall be maximum 5/8 inch diameter, and shall be used only where walls are unexposed, covered, or enclosed by a final shotcrete application or are building walls.

3. Color Additives: Pure Mineral Oxides, Frank B. Davis Company, Williams or approved equal.

C. Concrete Mix Design for Gunite/Shotcrete:

1. Mix Design: Concrete for artificial rockwork (gunite/shotcrete shall have f’c=4000 p.s.i. (minimum) at 28 days, 7.5 sacks of Portland Cement per cubic yard (=94lbs.)of cement. Use air-entraining admixture. Add admixture at the manufacturer’s prescribed rate to result in concrete at the point of placement having 2% to 4% entrained air. Aggregate will be 60% sand, 40% gravel per yard.
2. Proportions: The proportion of cement to aggregate, in loose dry volumes, shall be not less than one to four and one-half.

D. Surface Texturing: Texturing of shotecrete surfaces shall cobbles and other materials necessary to simulate the texture of the soils of the Otay and San Diego Formations present at the site.

1.9 Forming Shotcrete or Gunite Structures

A. In areas where artificial rockwork is to be constructed, use the backup construction described below or provide the Owner with an alternate construction system for approval.
1. Constuct an armature of “truss loop” metal lath on the unexposed side of the shotcrete or gunite structure as the backup construction material behind the steel reinforcing bars to which the shotcrete or gunite is applied.
2. “Truss loop” shall be bent to conform approximately to the welded steel reinforcing frame and shall be held away from the nearest bars a minimum distance of one (1) inch. In order to facilitate the installation of truss loop the contractor may increase the thickness of the shotcrete to do away with matching exactly the steel reinforcing outline. However, all variances from the steel outline must be approved by the Owner.

3. Truss loop shall be fastened to the reinforcing bars by means of tie wires or anchor spacers. Ties or spaces shall be spaced not more than 10 inches on center in all directions and shall be lapped on all adjacent ends and sides a sufficient amount to stop shotcrete or gunite.

B. Wherever a flash coat is to be applied to a concrete surface, the concrete surface shall be roughened texture with minimum 2" thickness. Test cores shall be taken to verify.

C. The finish form, color and texture of the finish surface must meet with approval and be completed to the satisfaction of the Owner, which approval, when given, must be in writing. Contractor shall bear all costs of any and all work required to secure such approval.

E. Minimum Standards: The following minimal steel placement standards are supplemental to the steel reinforcement note shown on the drawings.

1. No. 3 reinforcing bars shall be placed on ten-inch (10") centers both ways as the minimum acceptable amount of bar reinforcing, and shall be continuous around corners. The spacing shall remain the same but the bar size will increase where, in the opinion of the Engineer, it is deemed necessary. A NO. 4 bar acting as a key rod shall be placed at intersections of all plan surfaces.
2. Tack-weld or wire bars where they contact or cross each other. The bars must form a rigid framework. All bars are to lap thirty (30) diameters at splices. However, a lap of four (4) inches will be allowed if one continuous fillet weld of three (3) inches in length is used to tie or weld the bars together at the splice.

F. Reinforcing bars shall be paced and bent around circles and curves, openings, corners, and angles to conform to the drawings. Bends are to be permanently shaped, not sprung into place. Particular attention shall be made to follow the outline of the stratified rock formations to eliminate excess not –reinforced rockwork outcroppings.

1. The tie bars and tie anchors which are exposed to air and which do NOT come in contact with any backfill material shall be given a protective covering of asphalt coating of at least one heavy coat or Rustoleum, or equal.
2. Tie bars and tie anchors which come in contact with backfill material shall be encased with a coating of shotcrete. Steel shall be covered by a minimum of 1" of shotcrete or gunite.
3. All reinforcing bars to be epoxy-coated.

1.10 Technical Skills

A. The Contractor performing this work shall be a craftsman for gunite and exhibitory fabrication work.

1. The Contractor shall have the qualifications and abilities to successfully construct textured artificial rockwork and creating shotcrete walls textured to look like natural rock formations artificial earth, artificial cliffs, outcropings, earthcuts.

1.11 Final Completion

A. Contractor shall repair and patch all punchlist items to the satisfaction of the Resident Engineer.

B. Contractor shall carefully inspect all construction areas to remove all debris, particularly stones, steel bars, and other materials.

SECTION 03 37 01
SHOTCRETE FOR SKATEBOARD PARKS

PART 1 – GENERAL

1.1 SCOPE OF WORK

A. Furnish materials, labor, transportation, services, and equipment necessary to install all Shotcrete related to the skate park as indicated on scope of work contract and shown on drawings and as specified herein.

1. Provide sprayed-on concrete (concrete conveyed into place by air pressure through a flexible tube or gun with controlled nozzle) referred to herein as shotcrete, complete as shown and as specified.

2. Application, cutting, and sculpting and finish work related to this Work is deemed sole source specialty work within the Contract Documents.

3. All work related to this application, cutting, sculpting, and installation shall be coordinated with the RESIDENT ENGINEER, prior to project start.

B. Refer to Drawings for specific locations of shotcrete.

C. Related Work:
1. Section 03 11 01 – Concrete Formwork for Skateboard Parks
2. Section 03 20 01 – Concrete Reinforcement for Skateboard Parks
3. Section 03 30 01 – Cast-In-Place Concrete for Skateboard Parks
4. Section 03 33 51 – Concrete Finishing for Skateboard Parks
5. Section 03 39 01 – Concrete Curing for Skateboard Parks
6. Section 05 50 01 – Metal Fabrications for Skateboard Parks

1.2 REFERENCES

A. Comply with the applicable reference specifications as specified in the GENERAL PROVISIONS and in accordance with applicable laws, codes and regulations required by the City of San Diego, CA. Comply with the current provisions of the following Codes and Standards:

B. ASTM - American Society for Testing and Materials:
1. ASTM C33 – Concrete Aggregates.
2. ASTM C39 – Test Method of Compressive Strength of Cylindrical Concrete Specimens.
3. ASTM C94 – Ready-Mixed Concrete.
4. ASTM C143 – Test for Slump of Portland Cement Concrete.
5. ASTM C150 – Portland Cement.
6. ASTM C260 – Air-Entraining Admixtures for Concrete.
7. ASTM C494 – Chemical Admixtures for Concrete.
8. ASTM C979 – Pigments for Integrally Colored Concrete.
9. ASTM C618 – Fly Ash and Raw or Calcined Natural Pozzalans for Use in Portland Cement Concrete.
10. ASTM F2480 – Standard Guide for In-ground Concrete Skate Park.

C. ACI – American Concrete Institute:
1. ACI 211.1 – Recommended Practice for Selecting Proportions for Normal-Weight Concrete.
2. ACI 211.2 – Recommended Practice for Selecting Proportions for Lightweight Concrete.
3. ACI 301 – Specifications for Structural Concrete for Buildings.
4. ACI 305 – Recommended Practice for Hot Weather Concreting.

5. ACI 306 – Recommended Practice for Cold Weather Concreting.
6. ACI 318 – Building Code Requirements for Reinforced Concrete.

D. CBC – California Building Code

E. AWS – American Welding Society
1. AWS 3.0 – Standard Qualifications Procedure.
2. AWS D1.4 – Structural Welding Code – Reinforcement.
3. AWS D12.1 – Reinforced Concrete Construction.

F. CRSI – Concrete Reinforcing Steel Institute: MSP-1 – Manual of Standard Practice

1.3 SUBMITTALS

A. Manufacturer's Data: Current printed specifications with application and installation instruction for proprietary materials including concrete admixtures.

B. Shop Drawings: Radial templates cut to exact radii shown on drawings to insure exact radii from flat bottom of Skate Park to face of coping. Template shall be fabricated from steel or ¾" Plywood.

C. Design of Concrete Mixes:
1. CONTRACTOR shall be responsible for and pay for design of concrete mixes for each type of concrete specified. Design of concrete mixes shall be performed by a Testing Laboratory selected by CONTRACTOR and approved by the RESIDENT ENGINEER. Design methods to be in accordance with ACI 318.
2. Make three trial mixes using aggregate proposed.
3. Make advance tests of trial mixes with proposed materials. Test four cylinders in accordance with ASTM C-42 at 7 days and 28 days. Do not place concrete on project until laboratory reports and breaks of confirmation cylinders indicate that proposed mixes will develop required strengths.
5. When the length of a core is less than twice the diameter, apply the correction factors given in ASTM C42 to obtain the compressive strength of individual cores. The average compressive strength of three cores taken from the structure, representing a shift or 50 cubic yards of shotcrete, must equal or exceed 0.85f'c with no individual core less than 0.75f'c.
4. Check mix design and revise, if necessary, wherever changes are made in aggregate or in surface water content of aggregate or workability of concrete. Slump shall be the minimum to produce workable mix. Laboratory shall prescribe minimum quantity of water.
5. If Portland cement reducers or other additives are used, submit control mix design without reducers or additives as well as mix exactly proposed to be used. Submit W.R. Grace Co. recommendations for retarders and shrinkage compensation of slab on grade.
6. Sample of Workmanship: Provide on-site, minimum one (1) 48"x48" sample. CONTRACTOR may pour each type as part of the finished project. It shall be reviewed by the RESIDENT ENGINEER, if approved it may remain in place as finished product. If the sample is not approved, CONTRACTOR in charge of the specific scope of work shall remove and replace another sample for the RESIDENT ENGINEER'S approval.
7. Forward two copies of design mix to the RESIDENT ENGINEER and SKATE PARK CONSULTANT.

D. Acceptance

Final acceptance of the shotcrete will be based upon the results obtained from cores. Use of data obtained from impact devices will not be permitted for final acceptance of the shotcrete. However, these data may be useful for determining uniformity of the shotcrete.

E. Submit product data and manufacturer's instructions for:
   1. Color admixture.
   2. Expansion joint fill material.
   3. Curing compound.
   4. Dowel aligners/caps.
   5. Crack repair materials.
   6. Form facing materials.
   7. Form release agents.
   8. Proprietary cleaning agents
   9. Plastic film for curing.
   10. Surface retarders.

F. Shotcrete Sample:
   1. Provide representative samples of materials for material testing, mix proportion testing, and finish.
   2. Sample of each of the following must be provided: Bowl section with pool coping and tile, outside transition hip with 2" round steel coping, stamped concrete china bank, and a standard bank. The location and type of sample is identified in the construction documents on SK-1.2 Concrete Material Plan. The shotcrete samples need to match the same height, radius, angle, curvature, finish, and reinforcement of the corresponding sections and details for inspection an approval. The sample may be part of the finished product and can remain in place as finished product if approved by the RESIDENT ENGINEER. If the sample is built in place it needs to follow the jointing outlined in the Jointing plan. If the samples are built elsewhere onsite they only need to be 6' wide with height and length corresponding to the sections.

G. Placement Schedule:
   1. CONTRACTOR to indicate on plans the locations to be shot within a day's work and not exceeding 50 cubic yards per day for quality control and inspection schedules.
   2. Schedule and sequence to be reviewed and approved the RESIDENT ENGINEER prior to starting this Work.

H. Test Reports: Compressive strength of concrete test cylinders taken upon delivery of concrete.

I. Delivery Documentation: Batch tags for each load of concrete, for informational purposes.

1.4 QUALITY ASSURANCE

A. Concrete Testing:
   1. Prepare test specimens by each application crew using the equipment, materials and mix proportions proposed for the RESIDENT ENGINEER shall observe preparation of test panels noting placement of shotcrete by applications crew.
   2. Test panel shall be at least 6'x6'x6' with the same reinforcement as in the proposed structure. A testing agency shall take at least (3) cores from the specimen and test them in accordance with ASTM C42.
   3. Secure and protect Test Panels during construction and test for compliance with Specifications.
   4. Test strength of the shotcrete as work progresses as follows:
      a. Cut cores from the structure and test in accordance with ASTM C42.
      b. A set of three (3) cores shall be taken not less than once each shift nor less than one for each 50 cubic yards of shotcrete placed through the nozzle.
      c. Cores shall be soaked in water for a minimum of 40 hours before testing.

B. Certification: Nozzleman certification shall be in accordance with ACI 506.3R

C. Regulatory Requirements: Meet requirements of applicable laws, codes, and regulations required by authorities having jurisdiction over Work.

D. Acceptance: Final acceptance of the shotcrete will be based upon the results obtained from cores. Use of data obtained from impact devices will not be permitted for final acceptance of the shotcrete. However, these data may be useful for determining uniformity of the shotcrete.

E. CONTRACTOR Mock-Ups:
   a. CONTRACTOR shall prepare a mock-up for each paving type indicated on Drawings, prior to installation.
   b. Mock-Ups shall be completed to the satisfaction of the RESIDENT ENGINEER including aggregates, texture, color, and finishes.
   c. These mock-ups will become the standard of quality by which future paving samples and work will be judged.
   d. Mock-Ups to remain on-site and be protected during the course of construction, as a means to compare work in progress. If mock-ups are damaged or removed, CONTRACTOR shall repair/replace in-kind immediately.

F. Concrete Manufacturer Qualifications: Manufacturer of ready-mixed concrete products complying with ASTM C 94 requirements for production facilities and equipment.

G. Safety and Performance Guidelines: Comply with all safety and performance requirements and all applicable references as specified in the ASTM F2480 Standard Guide for In-ground Skate Parks.

H. ACI Requirements: Meet all requirements of ACI 506, Chapter 13, Wet Method and Chapter 5, Shotcrete Crew.

1.5 DELIVERY, HANDLING, AND STORAGE

A. Properly deliver and handle materials to prevent contamination, segregation or damage to materials.

B. Store cement in weathertight enclosures to protect against dampness and contamination.

C. Prevent segregation and contamination of aggregates by proper arrangement and use of stockpiles.

D. Store admixtures properly to prevent contamination, evaporation, or other damage.

E. Do not change brand of cement or source of aggregate during course of Work.

PART 2 - PRODUCTS

2.1 CONCRETE MATERIALS

A. Portland Cement: ASTM C150, Type I or II, one brand only.

B. Normal Weight Aggregates: ASTM C33 and as herein specified. Aggregate shall comply with gradation No. 2 as shown in ACI 506R Table 2.1. If the RESIDENT ENGINEER can show satisfactory performance of an alternate grading under similar conditions of use, they may waive the requirement for gradation No. 2.

Combined gradation of coarse and fine aggregate as follows:

Sieve Size U.S. Standard Square Mesh	Percent by Weight Passing Individual Sieves
3/8 in	90-100

No. 4	70-85
No. 8	50-70
No. 16	35-55
No. 30	20-35
No. 50	8-20
No. 100	2-10

2. Batch fine coarse aggregates separately to avoid segregation.
3. Aggregates shall be free from clay, mud, loam, or other deleterious substances.
4. Dune sand, bank run sand, and manufactured sand are not acceptable for fine aggregate.
5. Coarse aggregate shall be clean, un-coated, heavy media processed aggregate of crushed stone or river washed aggregate.

2.2 ACCESSORIES

A. Water: Fresh, clean, potable, and free of deleterious acids, mixing, and curing water, as available from RESIDENT EINGEER. Transport as required.

B. Admixtures: Use only accepted admixtures meeting the following requirements:
   1. Chemical Admixtures: ASTM C494
   2. Water reducing, retarding or accelerating admixtures shall conform to ASTMC.
   3. Air-entraining Admixtures: ASTM C1141. Air entraining prior to shooting shall be 7% with a +/- 1-1/2% tolerance.
   4. The use of Calcium Chloride shall not be permitted.

C. Cold Joints: See Cast-In-Place Concrete for skateboard parks.

2.3 PROPORTIONING AND DESIGN OF CONCRETE MIXES

A. Mix: Prepare design mix to achieve an in-place 28 day compressive strength of 4,000 pounds per square inch and an air content of 4% at 28 days. Maximum aggregate size shall not exceed 3/8 inch. Unit weight of in-place shotcrete shall be 494 pounds per cubic yard. Use an independent Testing agency acceptable to the RESIDENT ENGINEER to prepare and report the proposed mix design. Testing is at the cost of the CONTRACTOR responsible for this mix.

A. Test Data: Submit for acceptance proportioning and test data from prior experience if available. If data from prior experience are not available or accepted, make and have tested specimens from three or more different mix proportions in accordance with pre-construction testing requirements of this Specification.

C. Strength: Selected mix proportions on the basis of compressive strength tests of specimens shall be cut from the shotcrete test panels not earlier than 5 days after placing. For mix acceptance purposes, average core strengths shall be least equal to f'c for cores with L/D of 2.0. For cores with L/D between 1.0 and 2.0, use correction factors given in ASTM C42.

D. Review: Mix design shall be reviewed for acceptance by the RESIDENT ENGINEER.

2.4 CONCRETE APPLICATION EQUIPMENT

A. For Wet Mix Shotcrete:
   1. Mixing Equipment: Capable of thoroughly mixing aggregate, cement and water in sufficient quantity to maintain continuous placement.

2. Ready-mixed Concrete: ASTM C94, except that it may be delivered to the site in the dry state if the equipment is capable of adding the water and mixing it satisfactorily with the dry ingredients.
3. Air Supply: Clean air adequate for maintaining sufficient nozzle velocity for parts of work, and for simultaneous operation of blow pipe for cleaning away rebound.
4. Delivery Equipment: Capable of discharging aggregate-cement-water mixture accurately, uniformly, and continuously through delivery hose.

PART 3 –EXECUTION / CONSTRUCTION

3.1 INSPECTION

A. Examination: Examine concrete formwork and verify that it is true to line and dimension, adequately braced against vibration, and constructed to permit escape of air and rebound but to prevent leakage during shotcreting. Correct deficiencies.

B. Inspection: Inspect reinforcement steel and items to be embedded in concrete. Correct any deviations.

C. Notification: Notify other trades involved in ample time to permit the proper installation of their work. Cooperate in setting such work.

D. Existing Surfaces: Examine existing concrete surfaces for unsound material. Correct deficiencies.

3.2 PREPARATION FOR INSTALLATION OF CONCRETE

A. Forms: Use a form-coating material on removable forms to prevent absorption of moisture and to prevent absorption of moisture and to prevent bond with shotcrete.

3.3 CONCRETE BATCHING AND MIXING

A. Proportions: Mix proportions shall be controlled by weight batching. CONTRACTOR'S Testing Laboratory shall maintain quality control records during shotcrete production and make those records available to the RESIDENT ENGINEER.

3.4 CONCRETE PLACEMENT

A. Placement: Use suitable delivery equipment and procedures that will result in shotcrete in place meeting the requirements of this Specification. Determine operating procedures for placement in, extended distances, and around any obstructions where placement velocities and mix consistency shall be adjusted.

B. Placement Techniques: Do not place shotcrete if drying or stiffening of the mix takes place at any time prior to delivery to the nozzle.
   1. Control thickness, method of support, air pressure, and water content of shotcrete to preclude sagging or sloughing off. Discontinue shotcreting or provide suitable means to screen the nozzle stream if wind or air currents cause separation of the nozzle stream during placement.
   2. Hold nozzle as perpendicular to surface as work will permit, to secure maximum compaction with minimum rebound.
   3. In shotcreting walls, begin application at bottom. Ensure work does not sag.
   4. Layering:
      a. Build up layers by making several passes of nozzle over work area.
      b. Broom or scarify the surface of freshly placed shotcrete to which, after hardening, additional layers of shotcrete are to be bonded. Dampen surface just prior to application of succeeding layers.
      c. Allow each layer of shotcrete to take initial set before applying succeeding layers.

d. Use radial templates to insure exact radii from flat bottom of Skate Park to face of coping. Template shall be fabricated from steel or ¾" Plywood. Check every horizontal foot when applying shotcrete for conformance of intended wall radii. Brace template and place levels at arc to tangent connections to insure no kinks will be formed. Kinks at the bottom of bowls will not be acceptable. Slumping of the shotcrete causing coping setback will not be acceptable.

5. Placement Around Reinforcement:
   a. Hold the nozzle at such distance and angle to place materials behind reinforcement before any material is allowed to accumulate on its face. In the dry-mix process, additional water may be added to the mix when encasing reinforcement to facilitate a smooth flow of material behind the bars.
   b. Test to ascertain if any void or sand pockets have developed around or behind reinforcement by probing with an awl or other pointed tool after the shotcrete has achieved its initial set, by removal of randomly selected bars, or coring or other suitable standards.

C. Access: Allow easy access to shotcrete surfaces for screening and finishing, permitting uninterrupted application.

3.5 REMOVAL OF SURFACE DEFECTS IN CONCRETE

A. General: Remove and replace shotcrete which lacks uniformity, exhibits segregation honeycombing, or lamination, or which contains any dry patches, slugs, voids, or pockets. Remove defective areas.

B. Sounding: Sound work with hammer for voids. Remove and replace damaged in-place Shotcrete.

3.6 CONCRETE FINISH

A. Finish-General: Smooth form finish shall consist of a smooth, hard, uniform texture with a minimum of seams

I. Radial Wall Finish: Float finish on radial face of wall shall consist of a smooth, hard, uniform surface of smooth steel trowel. Level to a tolerance of 1/10" inch in 10 feet when tested with a 10-foot steel straightedge placed on the surface horizontally and vertically with radial template with the appropriate radii. Grinding the surfaces will not be an acceptable means of achieving the intended radii. Concrete finish work shall match the approved sample poured on site.

3.7 CONCRETE JOINTS

A. Cleaning: The entire joint shall be thoroughly cleaned and wetted prior to the application of additional shotcrete.

B. Reinforcement: Make joints perpendicular to the main reinforcement. Continue reinforcement across joints.

3.8 CONCRETE CURING AND PROTECTION

A. Curing Agent: Apply curing agent, blankets, or plastic after final finish is achieved. CONTRACTOR to remove cure agent at end of cure period and power wash all walls prior to final acceptance.

3.9 REJECTIONS

A. Mock-Ups shall be completed to the satisfaction of the RESIDENT ENGINEER including aggregates, texture, color, and finishes. If mock-ups are rejected by the RESIDENT ENGINEER, the CONTRACTOR

in charge of the specific scope of work shall remove and replace mock up for the RESIDENT ENGINEER's approval at no additional cost to the CITY.

B. If Mock-ups are damaged, removed, the CONTRACTOR in charge of the specific scope of work shall repair/replace in-kind immediately at no additional cost to the CITY.

C. Major variations in the appearance of integral colored concrete compared to manufacturer's sample chip shall be rejected by the RESIDENT ENGINEER. The CONTRACTOR in charge of the specific scope of work shall remove and replace mock up for the RESIDENT ENGINEER's approval at no additional cost to the CITY.

D. Defects in the shotcrete including lack of uniformity, exhibits segregation honeycombing, or lamination, or which contains any dry patches, slugs, voids, or pockets shall be rejected by the RESIDENT ENGINEER. The CONTRACTOR in charge of the specific scope of work shall remove and replace mock up for the RESIDENT ENGINEER'S approval at no additional cost to the CITY.

E. Radial wall finishes shall consist of smooth, hard, uniform surface of smooth trowel with a level tolerance of 1/10" within 10 feet when tested with a 10-foot steel straightedge placed on the surface horizontally and vertically. Grinding the surfaces will not be an acceptable means of achieving the intended radii and uniformity shall be approved by the RESIDENT ENGINEER. If rejected, The CONTRACTOR in charge of the specific scope of work shall remove and replace mock up for the RESIDENT ENGINEER'S approval at no additional cost to the CITY.

3.10 CLEAN UP

A. At completion of Work, remove concrete stains from adjacent work, including but not limited to dissimilar paving types, walls, columns, railing posts, light fixtures, plant materials, to satisfaction of the RESIDENT ENGINEER.

B. Efflorescence: Remove efflorescence as soon as practical after it appears, as part of final cleaning.

C. Use least aggressive cleaning techniques possible.

D. Wear protective eye wear, gloves, and clothing suitable to work and as required by cleaner manufacturer.

E. If proprietary cleaning agents are used, pre-wet wall, test cleaning agent on a small, inconspicuous area, and check effects prior to proceeding. Begin cleaning at the top and work down. Thoroughly rinse wall afterwards with clean water. Follow cleaner manufacturer's instructions.

F. Do not use muriatic (hydrochloric) acid on colored concrete.

END OF SECTION 03 37 01

SECTION 03 39 01
CONCRETE CURING FOR SKATEBOARD PARKS

PART 1 – GENERAL

1.1 SCOPE OF WORK

A. Furnish materials, labor, transportation, services, and equipment necessary to install all Concrete Curing related to the skate park as indicated on scope of work contract and shown on drawings and as specified herein.

B. Related Work:
1. Section 03 11 01 – Concrete Formwork for Skateboard Parks
2. Section 03 30 01 – Cast-In-Place Concrete for Skateboard Parks
3. Section 03 33 51 – Concrete finish for Skateboard Parks
4. Section 03 37 01 – Shotcrete for Skateboard Parks

1.2 REFERENCES

A. Comply with the applicable reference specifications as specified in the GENERAL PROVISIONS and in accordance with applicable laws, codes and regulations required by the City of San Diego, CA. Comply with the current provisions of the following Codes and Standards:

B. ASTM - American Society for Testing and Materials:
1. ASTM C94 – Ready-Mixed Concrete.
2. ASTM C150 – Portland Cement.
3. ASTM C271 – Sheet Materials for Curing Concrete.
4. ASTM C309 – Liquid Membrane-Forming Compounds for Curing Concrete.
5. ASTM F2480 – Standard Guide for In-ground Concrete Skate Park.

C. ACI – American Concrete Institute:
1. ACI 301 – Specifications for Structural Concrete for Buildings.
2. ACI 305 – Recommended Practice for Hot Weather Concreting.
3. ACI 306 – Recommended Practice for Cold Weather Concreting.
4. ACI 318 – Building Code Requirements for Reinforced Concrete.

D. CBC – California Building Code

1.3 SUBMITTALS

A. Submit samples and detailed technical data of products proposed for curing use for the RESIDENT ENGINEER'S approval.

B. Submit certification that materials meet specification requirements.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Store materials in dry and protected locations and protect from damage.

1.5 SITE CONDITIONS

A. Environmental Requirements: Protect concrete against extreme cold and heat, frost, rapid drying, and damage by rain.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Curing Compound: ASTM C 309, non-staining, all resin type, white-pigmented, compatible with color admixture (if applicable).
B. Acceptable Product: Crystal Rez for natural gray concrete or approved equal, and Davis Integral Color compatible curing agent. Curing Compound Application Rate: 350 sq. ft./U.S. Gallon (12.5m sq./L).

PART 3 – EXECUTION / CONSTRUCTION

3.1 CURING

A. Protect concrete surfaces against rapid drying. Keep sealed with cure agent for necessary amount of time to reach concrete strength and inhibit moisture loss after placing per manufacturer's recommendation.

B. Apply to exposed surface of concrete as soon as manufacturer recommends with an airless sprayer.

C. Apply to sides of concrete paving upon removal of form boards.

D. Meet requirements of manufacturer's current printed application instructions.

E. Uniformly apply 2 coats and apply the second coat at right angle to first coat.

F. Apply compound to form a continuous, uniform, coherent film that will not check, crack, or peel.

G. Do not apply to concrete that is still bleeding, or has a visible water sheen on the surface.

H. Protect paving surfaces from foot traffic with scuff-proof paper.

I. Immediately re-coat damaged areas of curing compound.

J. Protect surface from water, adjacent shotcrete work and debris.

3.2 CLEANUP

A. CONTRACTOR to remove all cure agent from concrete surface with power washing equipment and soft brush not causing abrasion to finish work surface prior to final inspection. No Cure Agent shall be present on any surfaces for final inspection acceptance. Remove debris and trash resulting from specified work.

END OF SECTION 03 39 01

SECTION 05 50 00
METAL FABRICATIONS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Steel framing and supports for applications where framing and supports are not specified in other Sections.
2. Metal gates and supports.
3. Miscellaneous steel trim.

B. Products furnished, but not installed, under this Section:

1. Anchor bolts, steel pipe sleeves, slotted-channel inserts, and wedge-type inserts indicated to be cast into concrete or built into unit masonry.

1.2 PERFORMANCE REQUIREMENTS

A. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on exterior metal fabrications by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects.

1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

1.3 SUBMITTALS

A. Shop Drawings: Show fabrication and installation details for metal fabrications.

1. Include plans, elevations, sections, and details of metal fabrications and their connections. Show anchorage and accessory items.

1.4 INFORMATIONAL SUBMITTALS

A. Welding certificates.

1.5 QUALITY ASSURANCE

A. Welding Qualifications: Qualify procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."

1.6 PROJECT CONDITIONS

A. Field Measurements: Verify actual locations of walls and other construction contiguous with metal fabrications by field measurements before fabrication.

1.7 COORDINATION

A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written recommendations to ensure that shop primers and topcoats are compatible with one another.

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

PART 2 - PRODUCTS

2.1 METALS, GENERAL

A. Metal Surfaces, General: Provide materials with smooth, flat surfaces unless otherwise indicated. For metal fabrications exposed to view in the completed Work, provide materials without seam marks, roller marks, rolled trade names, or blemishes.

2.2 FERROUS METALS

A. Recycled Content of Steel Products: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 25 percent.

B. Steel Plates, Shapes, and Bars: ASTM A 36/A 36M.

C. Steel Tubing: ASTM A 500, cold-formed steel tubing.

D. Steel Pipe: ASTM A 53/A 53M, standard weight (Schedule 40) unless otherwise indicated.

E. Cast Iron: Either gray iron, ASTM A 48/A 48M, or malleable iron, ASTM A 47/A 47M, unless otherwise indicated.

2.3 FASTENERS

A. General: Unless otherwise indicated, provide Type 304 stainless-steel fasteners for exterior use and zinc-plated fasteners with coating complying with ASTM B 633 or ASTM F 1941, Class Fe/Zn 5, at exterior walls. Select fasteners for type, grade, and class required.

B. Steel Bolts and Nuts: Regular hexagon-head bolts, ASTM A 307, Grade A; with hex nuts, ASTM A 563; and, where indicated, flat washers.

C. Stainless-Steel Bolts and Nuts: Regular hexagon-head annealed stainless-steel bolts, ASTM F 593; with hex nuts, ASTM F 594; and, where indicated, flat washers; Alloy Group 1.

D. Anchor Bolts: ASTM F 1554, Grade 36, of dimensions indicated; with nuts, ASTM A 563; and, where indicated, flat washers.

1. Hot-dip galvanize or provide mechanically deposited, zinc coating where item being fastened is indicated to be galvanized.

E. Eyebolts: ASTM A 489.

F. Machine Screws: ASME B18.6.3.

G. Lag Screws: ASME B18.2.1.

H. Wood Screws: Flat head, ASME B18.6.1.

I. Plain Washers: Round, ASME B18.22.1.

J. Lock Washers: Helical, spring type, ASME B18.21.1.

K. Cast-in-Place Anchors in Concrete: Either threaded type or wedge type unless otherwise indicated; galvanized ferrous castings, either ASTM A 47/A 47M malleable iron or ASTM A 27/A 27M cast steel. Provide bolts, washers, and shims as needed, all hot-dip galvanized per ASTM F 2329.

L. Post-Installed Anchors: Torque-controlled expansion anchors.

1. Material for Interior Locations: Carbon-steel components zinc plated to comply with ASTM B 633 or ASTM F 1941, Class Fe/Zn 5, unless otherwise indicated.
2. Material for Exterior Locations and Where Stainless Steel is Indicated: Alloy Group 1 stainless-steel bolts, ASTM F 593, and nuts, ASTM F 594.

2.4 MISCELLANEOUS MATERIALS

A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

B. Low-Emitting Materials: Paints and coatings shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

C. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.

1. Use primer containing pigments that make it easily distinguishable from zinc-rich primer.

D. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

E. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187.

F. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107. Provide grout specifically recommended by manufacturer for interior and exterior applications.

2.5 FABRICATION, GENERAL

A. Shop Assembly: Preassemble items in the shop to greatest extent possible. Disassemble units only as necessary for shipping and handling limitations. Use connections that maintain structural value of joined pieces. Clearly mark units for reassembly and coordinated installation.

B. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

C. Form bent-metal corners to smallest radius possible without causing grain separation or otherwise impairing work.

D. Form exposed work with accurate angles and surfaces and straight edges.

E. Weld corners and seams continuously to comply with the following:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

F. Form exposed connections with hairline joints, flush and smooth, using concealed fasteners or welds where possible. Where exposed fasteners are required, use Phillips flat-head (countersunk) fasteners unless otherwise indicated. Locate joints where least conspicuous.

G. Fabricate seams and other connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate.

H. Cut, reinforce, drill, and tap metal fabrications as indicated to receive finish hardware, screws, and similar items.

I. Provide for anchorage of type indicated; coordinate with supporting structure. Space anchoring devices to secure metal fabrications rigidly in place and to support indicated loads.

1. Where units are indicated to be cast into concrete or built into masonry, equip with integrally welded steel strap anchors, 1/8 by 1-1/2 inches, with a minimum 6-inch embedment and 2-inch hook, not less than 8 inches from ends and corners of units and 24 inches o.c., unless otherwise indicated.

2.6 MISCELLANEOUS FRAMING AND SUPPORTS

A. General: Provide steel framing and supports not specified in other Sections as needed to complete the Work.

B. Fabricate units from steel shapes, plates, and bars of welded construction unless otherwise indicated. Fabricate to sizes, shapes, and profiles indicated and as necessary to receive adjacent construction.

1. Fabricate units from slotted channel framing where indicated.
2. Furnish inserts for units installed after concrete is placed.

C. Galvanize miscellaneous framing and supports where indicated.

D. Prime miscellaneous framing and supports with zinc-rich primer where indicated.

2.7 PIPE DOWNSPOUTS

A. Steel Pipe: ASTM A 53/A 53M, standard weight (Schedule 40) unless otherwise indicated.

2.8 MISCELLANEOUS STEEL TRIM

A. Unless otherwise indicated, fabricate units from steel shapes, plates, and bars of profiles shown with continuously welded joints and smooth exposed edges. Miter corners and use concealed field splices where possible.

B. Provide cutouts, fittings, and anchorages as needed to coordinate assembly and installation with other work.

C. Galvanize exterior miscellaneous steel trim.

2.9 FINISHES, GENERAL

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

B. Finish metal fabrications after assembly.

C. Finish exposed surfaces to remove tool and die marks and stretch lines, and to blend into surrounding surface.

2.10 STEEL AND IRON FINISHES

A. Galvanizing: Hot-dip galvanize items as indicated to comply with ASTM A 153/A 153M for steel and iron hardware and with ASTM A 123/A 123M for other steel and iron products.

1. Do not quench or apply post galvanizing treatments that might interfere with paint adhesion.

B. Shop prime iron and steel items not indicated to be galvanized unless they are to be embedded in concrete, sprayed-on fireproofing, or masonry, or unless otherwise indicated.

1. Shop prime with universal shop primer.

C. Preparation for Shop Priming: Prepare surfaces to comply with SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."

D. Shop Priming: Apply shop primer to comply with SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting.

1. Stripe paint corners, crevices, bolts, welds, and sharp edges.

PART 3 - EXECUTION

3.1 INSTALLATION, GENERAL

A. Cutting, Fitting, and Placement: Perform cutting, drilling, and fitting required for installing metal fabrications. Set metal fabrications accurately in location, alignment, and elevation; with edges and surfaces level, plumb, true, and free of rack; and measured from established lines and levels.

B. Fit exposed connections accurately together to form hairline joints. Weld connections that are not to be left as exposed joints but cannot be shop welded because of shipping size limitations. Do not weld, cut,

or abrade surfaces of exterior units that have been hot-dip galvanized after fabrication and are for bolted or screwed field connections.

C. Field Welding: Comply with the following requirements:

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove welding flux immediately.
4. At exposed connections, finish exposed welds and surfaces smooth and blended so no roughness shows after finishing and contour of welded surface matches that of adjacent surface.

D. Fastening to In-Place Construction: Provide anchorage devices and fasteners where metal fabrications are required to be fastened to in-place construction. Provide threaded fasteners for use with concrete and masonry inserts, toggle bolts, through bolts, lag screws, wood screws, and other connectors.

E. Provide temporary bracing or anchors in formwork for items that are to be built into concrete, masonry, or similar construction.

F. Corrosion Protection: Coat concealed surfaces of aluminum that will come into contact with grout, concrete, masonry, wood, or dissimilar metals with the following:

1. Cast Aluminum: Heavy coat of bituminous paint.
2. Extruded Aluminum: Two coats of clear lacquer.

3.2 INSTALLING MISCELLANEOUS FRAMING AND SUPPORTS

A. General: Install framing and supports to comply with requirements of items being supported, including manufacturers' written instructions and requirements indicated on Shop Drawings.

B. Anchor supports for operable partitions securely to and rigidly brace from building structure.

C. Support steel girders on solid grouted masonry, concrete, or steel pipe columns. Secure girders with anchor bolts embedded in grouted masonry or concrete or with bolts through top plates of pipe columns.

1. Where grout space under bearing plates is indicated for girders supported on concrete or masonry, install as specified in "Installing Bearing and Leveling Plates" Article.

D. Install pipe columns on concrete footings with grouted baseplates. Position and grout column baseplates as specified in "Installing Bearing and Leveling Plates" Article.

1. Grout baseplates of columns supporting steel girders after girders are installed and leveled.

3.3 ADJUSTING AND CLEANING

A. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas. Paint uncoated and abraded areas with the same material as used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

1. Apply by brush or spray to provide a minimum 2.0-mil dry film thickness.

B. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780.

END OF SECTION 05 50 00

SECTION 05 50 01
METAL FABRICATIONS FOR SKATEBOARD PARKS

PART 1 – GENERAL

1.1 SCOPE OF WORK

A. Furnish materials, labor, transportation, services, and equipment necessary to install all Metal Fabrications for the skate park as indicated on scope of work contract and shown on drawings and as specified herein.

B. Custom Coping and Custom Metal Fabrication:
   1. The custom coping and custom metal fabrication consisting of rolling to specified radii (flat, gaining or losing elevation), cutting, piecing, sleeves, anchors, welding and setting to horizontal and vertical elevations is deemed sole source specialty work within the Contract Documents.
   2. All work related to the custom coping, metal fabrication and installation shall be coordinated with the RESIDENT ENGINEER, prior to project start.
   3. All custom fabricated steel coping and rails to be manufactured and supplied by **Raw Edge Steel**, (Available at Thompson Building Materials, Fontana, CA) or approved equal.

C. Related Work:
   1. Section 03 11 01 – Concrete Formwork for Skateboard Parks
   2. Section 03 20 01 – Concrete Reinforcement for Skateboard Parks
   3. Section 03 30 01 – Cast-In-Place Concrete for Skateboard Parks
   4. Section 03 37 01 – Shotcrete for Skateboard Parks

1.2 REFERENCES

A. Comply with the applicable reference specifications as specified in the GENERAL PROVISIONS and in accordance with applicable laws, codes and regulations required by the City of San Diego, CA. Comply with the current provisions of the following Codes and Standards:

B. ASTM - American Society for Testing and Materials:
   1. ASTM A36 – Structural Steel.
   2. ASTM A120 – Steel Pipe and Tubing.
   3. ASTM F2480 – Standard Guide for In-ground Concrete Skate Park.

C. CBC – California Building Code

D. AWS – American Welding Society
   1. AWS D1.1 – Structural Welding Code (latest edition)

E. CRSI – Concrete Reinforcing Steel Institute: “Manual of Standard Practice,” latest edition.

F. AISC – American Institute of Steel Construction, Inc: “Specifications of Architecturally Exposed Structural Steel," latest edition.

1.3 QUALITY ASSURANCE

A. Qualifications of Fabricators: Experienced in fabrication of miscellaneous metals.

B. Qualifications of Welders: Welding shall be done only by certified welding operators currently qualified according to AWS D1.1.

C. Qualifications of Workmen: Provide at least one person who shall be present at all times during execution of this portion of the Work, and who shall be thoroughly familiar with the type of materials being installed, the referenced standards, the requirements of this Work, and who shall direct all work performed under this Section. Welds indicated may be made in shop or field with approval.

1.4 SUBMITTALS

A. Shop Drawings:
   1. CONTRACTOR shall submit shop drawings for all custom fabricated items under this section. Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners and accessories. Indicate welded connections using standard AWS welding symbols.

   2. Verification: Verify all measurements at the job. Show dimensions, sizes, thicknesses, gauges, finishes, joining, attachments, and relationship of work to adjoining construction. Where items shall fit and coordinate with finished surfaces and/or constructed spaces, take measurements at site and not from drawings.

B. Samples: Required for all Coping and Edging of concrete work. Submit finish metal samples for final finish selection. Submit prior to delivery to site. Attach name, address of manufacturer and/or supplier to each sample.

1.5 DELIVERY, STORAGE AND HANDLING

A. Storage of Materials: Materials which are stored at the project site shall be above ground on platforms, skids, or other supports. Protect steel from corrosion. Store other materials in a weather-tight and dry place until ready for use.

B. Protection:
   1. Use all means necessary to protect miscellaneous metals before, during and after installation and to protect the installed work and materials of all other trades.
   2. Protect any adjacent materials or areas below from damage due to weld splatter or sparks during field welding.

C. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the RESIDENT ENGINEER and at no additional cost to the CITY.

1.6 JOB CONDITIONS

A. Examine existing conditions in which the work is to be installed. Notify RESIDENT ENGINEER if conditions are unacceptable to begin work.
B. Do not proceed with the work until unsatisfactory conditions have been corrected.

1.7 COORDINATION

A. Templates and Built-ins: Furnish all anchors, fastenings, sleeves, setting templates and layouts affecting or installed in the work of other trades.

B. Delivery: Where items shall be incorporated or built into adjacent work, deliver to trade responsible for such work in sufficient time that progress of work is not delayed. Be responsible for proper location of such items.

C. Coordination: Coordinate with work of Cast-In-Place Concrete for skateboard parks.

1.8 JOB SITE SAMPLE

A. CONTRACTOR to provide fabricated, onsite sample of metal item(s), complete with approved finish, for review by the RESIDENT ENGINEER before fabrication of total quantities. Any fabrication of project item(s) by CONTRACTOR before RESIDENT ENGINEER review and approval is subject to rejection.

B. Approved sample(s) shall be used as the standard of workmanship and shall remain on site until work has been completed and approved by the RESIDENT ENGINEER.

PART 2 - PRODUCTS

2.1 MATERIALS

A. 2" ROUND STEEL PIPE COPING / RAIL: HSS 2.375 O.D. X 2.067" I.D. X 0.154", Schedule 40.

B. 2" X 6" RECTANGULAR STEEL TUBE RAIL: HSS 2.000 X 6.000 X 0.188, ASTM A-500.

C. 4" X 2" RECTANGULAR STEEL TUBE RAIL: HSS 4.000 X 2.000 X 0.188, ASTM A-500.

D. 4" X 4" BENT PLATE COPING: HSS 4.000 X 4.000 X 0.2500, ASTM A-36, Hot Rolled Steel.

E. 6" STEEL C-CHANNEL: HSS 6.000 X 1.920 X 0.200, ASTM A-36, Hot Rolled Steel.

F. 6" STEEL FLAT PLATE: HSS 6.000 X 0.125, ASTM A-36, Hot Rolled Steel plate.

G. 1/2" THICK STEEL FLAT PLATE: HSS 0.500, ASTM A-36, Hot Rolled Steel plate. Length and width varies per plan)

H. WELDING RODS: E-70 series low hydrogen unless otherwise noted on drawings.

2.2 GROUT: Non-shrinking Master Builder's "Embedco", Conrad Sovig's "Metel-Mxs Grout", Sonneborn's "Ferrolith G Redi-Mixed Grout"' or approved equal.

2.3 OTHER MATERIALS: All other materials, not specifically described but required for a complete and proper installation of miscellaneous metals, shall be new, first quality of their respective kinds and subject to the approval of RESIDENT ENGINEER.

PART 3 - EXECUTION

3.1 EXISTING CONDITIONS

A. Inspection: Prior to all work of this Section, carefully inspect the installed work of all other trades and verify that all such work is complete to the point where this installation may properly commence.

B. Discrepancies: In the event of a design discrepancy, immediately notify the RESIDENT ENGINEER.

3.2 COORDINATION

A. General: Carefully coordinate with all other trades to insure proper and adequate interface of the work of other trades with the Work of this Section.

B. Delivery: Insure timely delivery of all metal fabrications which shall be installed in other work so as not to delay that work.

3.3 INSTALLATION

A. General:
1. Install metal fabrications in strict accordance with the Drawings, the approved Shop Drawings, and all applicable codes, regulations and standards.
2. Obtain RESIDENT ENGINEER review prior to site cutting or making adjustment which are not parts of the scheduled work.
3. Install items square and level, accurately fitted and free from distortion or defects.
4. Align all metal fabrications as shown on the Drawings, and where vertical or horizontal members are shown. Align them straight, plumb and level within tolerance.
5. Make provisions for erection stresses by temporary bracing. Keep work in alignment.
6. Replace items damaged in course of installation.
7. Perform field welding in accordance with AWS D1.1
8. After installation, grind smooth and touch-up field welds.

3.4 WORKMANSHIP

A. Layout: Set all work plumb, true, rigid, and neatly trimmed out. Miter corners and angles of exposed molding and frames unless otherwise noted.

B. Fitting: Fit exposed connections accurately together to form tight hairline joints.

C. Labor: Employ only workmen specifically skilled in such work.

3.5 FABRICATION

A. Shop assemble in largest practicable dimensions, making members true to length so assembling may be done without fillers.

B. Provide all surfaces free of file marks, dents, hammer marks, wire edges or any unsightly surface defects.

C. STEEL PIPE COPING: Roll pipe to conform with top radius curve of each bowl and ledge as shown on drawings. Refer to drawing details for relational tolerance to concrete surface and other steel.

3.6 ATTACHMENTS AND REINFORCEMENTS

A. Do all cutting, shearing, drilling, punching, threading, tapping, etc., required for site metalwork or for attachment of adjacent work. If applicable, drill or punch holes; do not use cutting torch.

3.7 OTHER CONNECTORS: Make all permanent connections in ferrous metal surfaces using welds where at all possible; do not use bolts or screws.

3.8 WELDING

A. Preparation: Remove all rust, paint, scale and other foreign matter. Wire brush all flame-cut edges. Clamp members as required and alternate welds, all as necessary to prevent warping or misalignment.

C. Exposed Welds: Uniformly grind smooth (no tolerance) all welds normally exposed to view and feel in the finished work.

D. Faulty and Defective Welding: Chip out and replace all welding showing cracks, slag inclusion, lack of fusion, bad undercut or other defects ascertained by visual or other means of inspection. Replace and re-weld at no cost to CITY.

E. Field Welding:
   1. Procedure: Comply with AWS code of manual shielded metal-arc welding, appearance and quality of welds made, and methods used in correcting welding work.
   2. Protection: Protect all adjacent surfaces from damage due to weld sparks, spatter, or tramp metal.

3.9 SURFACE TREATMENT AND PROTECTIVE COATINGS

A. Cleaning:
   1. Thoroughly clean all mill scale, rust, dirt, grease and other foreign matter from ferrous metal prior to any galvanizing, or painting.
   2. Conditions which are too severe to be removed by hand cleaning, shall be cleaned using appropriate methods for solvent cleaning, power tool cleaning and brush-off blast cleaning.

B. Exterior Ferrous Metal:

   1. Grind smooth all welds, burrs, and rough surfaces. Clean all coping from grease.
   2. Shop coat iron metal items; using anti-rust primer.
   3. All welds to be painted with primer after appropriate connections and grinding has taken place. Touch-up all scratched primer prior to shotcrete application.

3.10 REJECTIONS

A. Exposed Welds: Uniformly grind smooth (no tolerance) all welds normally exposed to view and feel in the finished work. Grinds are to be reviewed by the RESIDENT ENGINEER, if rejected the contractor shall re-weld and regrind at no additional cost to the CITY for the RESIDENT ENGINEER'S approval.

B. Faulty and Defective Welding: Chip out and replace all welding showing cracks, slag inclusion, lack of fusion, bad undercut or other defects ascertained by visual or other means of inspection by the RESIDENT ENGINEER. If rejected, the contractor shall replace and re-weld at no additional cost to CITY for the RESIDENT ENGINEER'S approval.

3.11 CLEAN-UP

A. Keep all areas of work clean, neat and orderly at all times. Keep paved areas clean during installation.

B. Clean up and remove all debris from the entire work area prior to Final Acceptance to satisfaction of RESIDENT ENGINEER.

END OF SECTION 05 51 01

SECTION 05 73 00

DECORATIVE METAL RAILINGS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Steel and iron decorative railings.

1.3 DEFINITIONS

A. Railings: Guards, handrails, and similar devices used for protection of occupants at open-sided floor areas and for pedestrian guidance and support, visual separation, or wall protection.

1.4 COORDINATION AND SCHEDULING

A. Coordinate selection of shop primers with topcoats to be applied over them. Comply with paint and coating manufacturers' written instructions to ensure that shop primers and topcoats are compatible.

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

C. Schedule installation so wall attachments are made only to completed walls. Do not support railings temporarily by any means that do not meet structural performance requirements.

1.5 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.6 ACTION SUBMITTALS

A. Product Data: For the following:

1. Manufacturer's product lines of railings assembled from standard components.
2. Grout, anchoring cement, and paint products.

B. Shop Drawings: Include plans, elevations, sections, and attachment details.

C. Samples for Verification: For each type of exposed finish required.

1. Sections of each distinctly different linear railing member, including handrails, top rails, posts, and balusters.
2. Fittings and brackets.
3. Welded connections.
4. Brazed connections.
5. Assembled Samples of railing systems, made from full-size components, including top rail, post, handrail, and infill. Show method of finishing members at intersections. Samples need not be full height.

1.7 INFORMATIONAL SUBMITTALS

A. Qualification Data: For testing agency.

B. Mill Certificates: Signed by manufacturers of stainless-steel products certifying that products furnished comply with requirements.

C. Welding certificates.

D. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, according to ASTM E 894 and ASTM E 935.

E. Preconstruction test reports.

F. Evaluation Reports: For post-installed anchors, from ICC-ES.

1.8 QUALITY ASSURANCE

A. Welding Qualifications: Qualify procedures and personnel according to the following:

1. AWS D1.1/D1.1M, "Structural Welding Code - Steel."
2. AWS D1.2/D1.2M, "Structural Welding Code - Aluminum."
3. AWS D1.6/D1.6M, "Structural Welding Code - Stainless Steel."

1.9 PRECONSTRUCTION TESTING

1.10 FIELD CONDITIONS

A. Field Measurements: Verify actual locations of walls and other construction contiguous with railings by field measurements before fabrication and indicate measurements on Shop Drawings.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Steel Decorative Railings:

1. As indicated on plans

B. Source Limitations: Obtain each type of railing from single source from single manufacturer.

C. Product Options: Drawings indicate size, profiles, and dimensional requirements of railings and are based on the specific system indicated. See Section 01 60 00 "Product Requirements."

1. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.

2.2 PERFORMANCE REQUIREMENTS

A. General: In engineering railings to withstand structural loads indicated, determine allowable design working stresses of railing materials based on the following:

1. Aluminum: The lesser of minimum yield strength divided by 1.65 or minimum ultimate tensile strength divided by 1.95.
2. Copper Alloys: 60 percent of minimum yield strength.
3. Stainless Steel: 60 percent of minimum yield strength.
4. Steel: 72 percent of minimum yield strength.

B. Structural Performance: Railings, including attachment to building construction, shall withstand the effects of gravity loads and the following loads and stresses within limits and under conditions indicated:

1. Handrails and Top Rails of Guards:

a. Uniform load of 50 lbf/ft. applied in any direction.
b. Concentrated load of 200 lbf applied in any direction.
c. Uniform and concentrated loads need not be assumed to act concurrently.

2. Infill of Guards:

a. Concentrated load of 50 lbf applied horizontally on an area of 1 sq. ft..
b. Infill load and other loads need not be assumed to act concurrently.

C. Thermal Movements: Allow for thermal movements from ambient and surface temperature changes acting on exterior railings by preventing buckling, opening of joints, overstressing of components, failure of connections, and other detrimental effects.

1. Temperature Change: 120 deg F, ambient; 180 deg F, material surfaces.

2.3 METALS, GENERAL

A. Metal Surfaces, General: Provide materials with smooth surfaces, without seam marks, roller marks, rolled trade names, stains, discolorations, or blemishes.

B. Brackets, Flanges, and Anchors: Same metal and finish as supported rails unless otherwise indicated.

1. Provide cast-metal brackets with flange tapped for concealed anchorage to threaded hanger bolt.
2. Provide either formed- or cast-metal brackets with predrilled hole for exposed bolt anchorage.
3. Provide formed-steel brackets with predrilled hole for bolted anchorage and with snap-on cover that matches rail finish and conceals bracket base and bolt head.
4. Provide extruded-aluminum brackets with interlocking pieces that conceal anchorage. Locate set screws on bottom of bracket.

2.4 STEEL AND IRON

A. Tubing: [ASTM A 500/A 500M (cold formed)] [or] [ASTM A 513].

B. Bars: Hot-rolled, carbon steel complying with ASTM A 29/A 29M, Grade 1010.

C. Plates, Shapes, and Bars: ASTM A 36/A 36M.

2.5 FASTENERS

A. Fastener Materials: Unless otherwise indicated, provide the following:

1. Stainless-Steel Components: Type 304 Type 316 stainless-steel fasteners.
2. Uncoated Steel Components: Plated-steel fasteners complying with ASTM B 633, Class Fe/Zn 25 for electrodeposited zinc coating where concealed; Type 304 stainless-steel fasteners where exposed.
3. Galvanized-Steel Components: Plated-steel fasteners complying with ASTM B 633, Class Fe/Zn 25 for electrodeposited zinc coating.
4. Dissimilar Metals: Type 304 Type 316 stainless-steel fasteners.

B. Fasteners for Anchoring to Other Construction: Select fasteners of type, grade, and class required to produce connections suitable for anchoring railings to other types of construction indicated and capable of withstanding design loads.

C. Provide concealed fasteners for interconnecting railing components and for attaching railings to other work unless exposed fasteners are the standard fastening method for railings indicated.

1. Provide tamper-resistant square or hex socket flat-head machine screws for exposed fasteners unless otherwise indicated.

D. Post-Installed Anchors: Fastener systems with working capacity greater than or equal to the design load, according to an evaluation report acceptable to authorities having jurisdiction, based on ICC-ES AC193 or ICC-ES AC308.

1. Material for Interior Locations: Carbon-steel components zinc plated to comply with ASTM B 633 or ASTM F 1941, Class Fe/Zn 5, unless otherwise indicated.
2. Material for Exterior Locations and Where Stainless Steel Is Indicated: Alloy Group 1 Group 2 stainless-steel bolts, ASTM F 593 , and nuts, ASTM F 594 .

2.6 MISCELLANEOUS MATERIALS

A. Welding Rods and Bare Electrodes: Select according to AWS specifications for metal alloy welded.

B. Galvanizing Repair Paint: High-zinc-dust-content paint complying with SSPC-Paint 20 and compatible with paints specified to be used over it.

C. Shop Primers: Provide primers that comply with Section 09 91 13 "Exterior Painting."

D. Universal Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79 and compatible with topcoat.

1. Use primer containing pigments that make it easily distinguishable from zinc-rich primer.

E. Epoxy Zinc-Rich Primer: Complying with MPI#20 and compatible with topcoat.

F. Shop Primer for Galvanized Steel: [Cementitious galvanized metal primer complying with MPI#26] [Vinyl wash primer complying with MPI#80] [Water-based galvanized metal primer complying with MPI#134].

G. Intermediate Coats and Topcoats: Provide products that comply with Section 09 91 13 "Exterior Painting."

H. Epoxy Intermediate Coat: Complying with MPI#77 and compatible with primer and topcoat.

I. Polyurethane Topcoat: Complying with MPI#72 and compatible with undercoat.

J. Bituminous Paint: Cold-applied asphalt emulsion complying with ASTM D 1187/D 1187M.

K. Nonshrink, Nonmetallic Grout: Factory-packaged, nonstaining, noncorrosive, nongaseous grout complying with ASTM C 1107/C 1107M. Provide grout specifically recommended by manufacturer for interior and exterior applications.

L. Anchoring Cement: Factory-packaged, nonshrink, nonstaining, hydraulic-controlled expansion cement formulation for mixing with water at Project site to create pourable anchoring, patching, and grouting compound.

1. Water-Resistant Product: At exterior locations provide formulation that is resistant to erosion from water exposure without needing protection by a sealer or waterproof coating and that is recommended by manufacturer for exterior use.

2.7 FABRICATION

A. General: Fabricate railings to comply with requirements indicated for design, dimensions, member sizes and spacing, details, finish, and anchorage, but not less than that required to support structural loads.

B. Assemble railings in the shop to greatest extent possible to minimize field splicing and assembly. Disassemble units only as necessary for shipping and handling limitations. Clearly mark units for reassembly and coordinated installation. Use connections that maintain structural value of joined pieces.

C. Make up wire-rope assemblies in the shop to field-measured dimensions with fittings machine swaged. Minimize amount of turnbuckle take-up used for dimensional adjustment so maximum amount is available for tensioning wire ropes. Tag wire-rope assemblies and fittings to identify installation locations and orientations for coordinated installation.

D. Cut, drill, and punch metals cleanly and accurately. Remove burrs and ease edges to a radius of approximately 1/32 inch unless otherwise indicated. Remove sharp or rough areas on exposed surfaces.

E. Form work true to line and level with accurate angles and surfaces.

F. Fabricate connections that will be exposed to weather in a manner to exclude water. Provide weep holes where water may accumulate. Locate weep holes in inconspicuous locations.

G. Cut, reinforce, drill, and tap as indicated to receive finish hardware, screws, and similar items.

H. Connections: Fabricate railings with welded or nonwelded connections unless otherwise indicated.

I. Welded Connections: Cope components at connections to provide close fit, or use fittings designed for this purpose. Weld all around at connections, including at fittings.

1. Use materials and methods that minimize distortion and develop strength and corrosion resistance of base metals.
2. Obtain fusion without undercut or overlap.
3. Remove flux immediately.
4. At exposed connections, finish exposed welds to comply with NOMMA's "Voluntary Joint Finish Standards" for Type 1 welds; no evidence of a welded joint.

J. Mechanical Connections: Connect members with concealed mechanical fasteners and fittings. Fabricate members and fittings to produce flush, smooth, rigid, hairline joints.

1. Fabricate splice joints for field connection using an epoxy structural adhesive if this is manufacturer's standard splicing method.

K. Form changes in direction as follows:

1. As detailed.

L. Bend members in jigs to produce uniform curvature for each configuration required; maintain cross section of member throughout entire bend without buckling, twisting, cracking, or otherwise deforming exposed surfaces of components.

M. Close exposed ends of hollow railing members with prefabricated end fittings.

N. Provide wall returns at ends of wall-mounted handrails unless otherwise indicated. Close ends of returns, unless clearance between end of rail and wall is 1/4 inch (6 mm) or less.

O. Brackets, Flanges, Fittings, and Anchors: Provide wall brackets, flanges, miscellaneous fittings, and anchors to interconnect railing members to other work unless otherwise indicated.

1. At brackets and fittings fastened to plaster or gypsum board partitions, provide crush-resistant fillers, or other means to transfer loads through wall finishes to structural supports and to prevent bracket or fitting rotation and crushing of substrate.

P. Provide inserts and other anchorage devices for connecting railings to concrete or masonry work. Fabricate anchorage devices capable of withstanding loads imposed by railings. Coordinate anchorage devices with supporting structure.

Q. For railing posts set in concrete, provide stainless-steel sleeves not less than 6 inches long with inside dimensions not less than 1/2 inch greater than outside dimensions of post, with metal plate forming bottom closure.

2.8 GENERAL FINISH REQUIREMENTS

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

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

C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of

approved Samples. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

D. Provide exposed fasteners with finish matching appearance, including color and texture, of railings.

2.9 STEEL AND IRON FINISHES

A. Galvanized Railings:

1. Hot-dip galvanize exterior steel and iron railings, including hardware, after fabrication.
2. Hot-dip galvanize indicated steel and iron railings, including hardware, after fabrication.
3. Comply with ASTM A 123/A 123M for hot-dip galvanized railings.
4. Comply with ASTM A 153/A 153M for hot-dip galvanized hardware.
5. Do not quench or apply post-galvanizing treatments that might interfere with paint adhesion.
6. Fill vent and drain holes that are exposed in the finished Work, unless indicated to remain as weep holes, by plugging with zinc solder and filing off smooth.

B. For galvanized railings, provide hot-dip galvanized fittings, brackets, fasteners, sleeves, and other ferrous components.

C. Preparing Galvanized Railings for Shop Priming: After galvanizing, thoroughly clean railings of grease, dirt, oil, flux, and other foreign matter, and treat with etching cleaner.

D. For nongalvanized-steel railings, provide nongalvanized ferrous-metal fittings, brackets, fasteners, and sleeves, but galvanize anchors to be embedded in exterior concrete or masonry.

E. Preparing Nongalvanized Items for Shop Priming: Prepare uncoated ferrous-metal surfaces to comply with [SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."] [SSPC-SP 7/NACE No. 4, "Brush-off Blast Cleaning."] [requirements indicated below:]

1. Exterior Railings: SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
2. Railings Indicated to Receive Zinc-Rich Primer: SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
3. Railings Indicated to Receive Primers Specified in Section 09 96 00 "High-Performance Coatings": SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
4. Other Railings: SSPC-SP 7/NACE No. 4, "Brush-off Blast Cleaning."

F. Primer Application: Apply shop primer to prepared surfaces of railings unless otherwise indicated. Comply with requirements in SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting. Primer need not be applied to surfaces to be embedded in concrete or masonry.

1. Shop prime uncoated railings with universal shop primer unless zinc-rich primer is indicated.
2. Do not apply primer to galvanized surfaces.

G. Shop-Painted Finish: Comply with Section 09 91 13 "Exterior Painting."

1. Color: As indicated on plans.

H. High-Performance Coating: Apply epoxy intermediate and polyurethane topcoats to prime-coated surfaces. Comply with coating manufacturer's written instructions and with requirements in SSPC-PA 1, "Paint Application Specification No. 1: Shop, Field, and Maintenance Painting of Steel," for shop painting. Apply at spreading rates recommended by coating manufacturer.

1. Color: As indicated on plans.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine plaster and gypsum board assemblies, where reinforced to receive anchors, to verify that locations of concealed reinforcements have been clearly marked for Installer. Locate reinforcements and mark locations if not already done.

3.2 INSTALLATION, GENERAL

A. Fit exposed connections together to form tight, hairline joints.

B. Perform cutting, drilling, and fitting required for installing railings. Set railings accurately in location, alignment, and elevation; measured from established lines and levels and free of rack.

1. Do not weld, cut, or abrade surfaces of railing components that have been coated or finished after fabrication and that are intended for field connection by mechanical or other means without further cutting or fitting.
2. Set posts plumb within a tolerance of 1/16 inch in 3 feet.
3. Align rails so variations from level for horizontal members and variations from parallel with rake of steps and ramps for sloping members do not exceed 1/4 inch in 12 feet (5 mm in 3 m).

C. Control of Corrosion: Prevent galvanic action and other forms of corrosion by insulating metals and other materials from direct contact with incompatible materials.

D. Adjust railings before anchoring to ensure matching alignment at abutting joints.

E. Fastening to In-Place Construction: Use anchorage devices and fasteners where necessary for securing railings and for properly transferring loads to in-place construction.

3.3 RAILING CONNECTIONS

A. Nonwelded Connections: Use mechanical or adhesive joints for permanently connecting railing components. Use wood blocks and padding to prevent damage to railing members and fittings. Seal recessed holes of exposed locking screws using plastic cement filler colored to match finish of railings.

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

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

3.4 ANCHORING POSTS

A. Use steel pipe sleeves preset and anchored into concrete for installing posts. After posts have been inserted into sleeves, fill annular space between post and sleeve with nonshrink, nonmetallic grout, mixed and placed to comply with anchoring material manufacturer's written instructions.

B. Form or core-drill holes not less than 5 inches deep and 3/4 inch larger than OD of post for installing posts in concrete. Clean holes of loose material, insert posts, and fill annular space between post and concrete with nonshrink, nonmetallic grout, mixed and placed to comply with anchoring material manufacturer's written instructions.

C. Cover anchorage joint with flange of same metal as post, [welded to post after placing anchoring material] [attached to post with set screws].

D. Leave anchorage joint exposed with 1/8-inch buildup, sloped away from post.

E. Anchor posts to metal surfaces with flanges, angle type, or floor type as required by conditions, connected to posts and to metal supporting members as follows:

1. For steel railings, weld flanges to posts and bolt to metal-supporting surfaces.

F. Install removable railing sections, where indicated, in slip-fit metal sockets cast in concrete.

3.5 ATTACHING RAILINGS

A. Anchor railing ends to concrete and masonry with sleeves concealed within] flanges connected to railing ends and anchored to wall construction with anchors and bolts.

B. Anchor railing ends to metal surfaces with flanges bolted to metal surfaces and welded to railing ends or connected to railing ends using nonwelded connections.

3.6 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections and to prepare test reports. Payment for these services will be made from the testing and inspecting allowance, as authorized by Change Orders.

B. Extent and Testing Methodology: Testing agency will randomly select completed railing assemblies for testing that are representative of different railing designs and conditions in the completed Work. Test railings according to ASTM E 894 and ASTM E 935 for compliance with performance requirements.

C. Remove and replace railings where test results indicate that they do not comply with specified requirements unless they can be repaired in a manner satisfactory to Architect and comply with specified requirements.

D. Perform additional testing and inspecting, at Contractor's expense, to determine compliance of replaced or additional work with specified requirements.

3.7 CLEANING

A. Clean aluminum and stainless steel by washing thoroughly with clean water and soap, rinsing with clean water, and wiping dry.

B. Clean copper alloys according to metal finisher's written instructions in a manner that leaves an undamaged and uniform finish matching approved Sample.

C. Clean and polish as recommended in writing by manufacturer. Wash both exposed surfaces in each area of Project not more than four days before date scheduled for inspections that establish date of Substantial Completion.

D. Clean by wiping with a damp cloth and then wiping dry.

E. Touchup Painting: Immediately after erection, clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material used for shop painting to comply with SSPC-PA 1 for touching up shop-painted surfaces.

1. Apply by brush or spray to provide a minimum 2.0-mil dry film thickness.

F. Touchup Painting: Cleaning and touchup painting of field welds, bolted connections, and abraded areas of shop paint are specified in Section 09 91 13 "Exterior Painting" and Section 09 91 23 "Interior Painting."

G. Galvanized Surfaces: Clean field welds, bolted connections, and abraded areas and repair galvanizing to comply with ASTM A 780/A 780M.

3.8 PROTECTION

A. Protect finishes of railings from damage during construction period with temporary protective coverings approved by railing manufacturer. Remove protective coverings at time of Substantial Completion.

B. Restore finishes damaged during installation and construction period so no evidence remains of correction work. Return items that cannot be refinished in the field to the shop; make required alterations and refinish entire unit, or provide new units.

END OF SECTION 05 73 00

SECTION 09 91 01
PAINTING FOR SKATEBOARD PARKS

PART 1 – GENERAL

1.1 SCOPE OF WORK

A. Furnish materials, labor, transportation, services, and equipment necessary to install all Painting for the skate park as indicated on scope of work contract and shown on drawings and as specified herein.

B. This Section includes surface preparation and field painting of the following:
   1. Miscellaneous exposed exterior items and surfaces.

C. Paint exposed surfaces, except where the paint schedules indicate that a surface or material is not to be painted or is to remain natural. If the paint schedules do not specifically mention an item or a surface, paint the item or surface the same as similar adjacent materials or surfaces whether or not schedules indicate colors. If the schedules do not indicate color or finish, RESIDENT ENGINEER AND SKATE PARK CONSULTANT shall select from standard colors and finishes available.
   1. Painting includes field painting of exposed steel and iron work, and primed metal surfaces of mechanical and electrical equipment.

D. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.
   1. Finished metal surfaces include the following if used:
      a. Stainless steel.
      b. Bronze and brass.
      c. Iron

   2. Labels: Do not paint over Underwriters Laboratories (UL), Factory Mutual (FM), or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

B. Related Work:
   1. Section 05 50 01 – Metal Fabrications for Skateboard Parks

1.2 REFERENCES

A. Comply with the applicable reference specifications as specified in the GENERAL PROVISIONS and in accordance with applicable laws, codes and regulations required by the City of San Diego, CA. Comply with the current provisions of the following Codes and Standards:

B. ASTM - American Society for Testing and Materials

C. CBC – California Building Code

D. SSPC – Society for Protective Coatings: “Steel Structures Painting Manual,” latest edition.

1.3 DEFINITIONS

A. General: Standard coating terms defined in ASTM D 16 apply to this Section.
   1. Flat refers to a lusterless or matte finish with a gloss range below 15 when measured at an 85-degree meter.
   2. Eggshell refers to low-sheen finish with a gloss range between 5 and 20 when measured at a 60-degree meter.
   3. Satin refers to low-sheen finish with a gloss range between 15 and 35 when measured at a 60-degree meter.

4. Semigloss refers to medium-sheen finish with a gloss range between 30 and 65 when measured at a 60-degree meter.
5. Full gloss refers to high-sheen finish with a gloss range more than 65 when measured at a 60-degree meter.

1.4 SUBMITTALS

A. Product Data: For each paint system specified. Include block fillers and primers.
   1. Material List: Provide an inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
   2. Manufacturer's Information: Provide manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material proposed for use.
   3. Certification by the manufacturer that products supplied comply with local regulations controlling use of volatile organic compounds (VOCs).

B. Samples for Initial Selection: Manufacturer's color charts showing the full range of colors available for each type of finish-coat material indicated.
   1. After color selection, CONTRACTOR will furnish color chips for surfaces to be coated.

C. Samples for Verification: Of each color and material to be applied, with texture to simulate actual conditions, on representative Samples of the actual substrate.
   1. Provide stepped Samples, defining each separate coat, including block fillers and primers. Use representative colors when preparing Samples for review. Resubmit until required sheen, color, and texture are achieved.
   2. Provide a list of materials and applications for each coat of each sample. Label each sample for location and application.
   3. Submit Samples on the following substrates for RESIDENT ENGINEER / SKATE PARK DESIGNER review of color and texture only:
      a. Ferrous Metal: Provide two 4-inch- (100-mm-) square samples of flat metal and two 8-inch- (200-mm-) long samples of solid metal for each color and finish.

1.5 QUALITY ASSURANCE

A. Applicator Qualifications: Engage an experienced applicator who has completed painting system applications similar in material and extent to that indicated for this Project with a record of successful in-service performance.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to the Project Site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label, and the following information:
   1. Product name or title of material.
   2. Product description (generic classification or binder type).
   3. Manufacturer's stock number and date of manufacture.
   4. Contents by volume, for pigment and vehicle constituents.
   5. Thinning instructions.
   6. Application instructions.
   7. Color name and number.

B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F (7 deg C). Maintain containers used in storage in a clean condition, free of foreign materials and residue.

C. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.

1.7 PROJECT CONDITIONS

A. Apply water-based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 and 90 deg F (10 and 32 deg C).

B. Apply solvent-thinned paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 45 and 95 deg F (7.2 and 35 deg C).

C. Do not apply paint in snow, rain, fog, or mist; or when the relative humidity exceeds 85 percent; or at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

PART 2 – PRODUCTS

2.1 MANUFACTURERS

A. Available Products: Subject to compliance with requirements, products that may be incorporated into the Work include, but are not limited to, products listed in the paint schedules.

2.2 MATERIALS

A. Material Compatibility: Provide fillers, primers, undercoats, and finish-coat materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.

B. Material Quality: Provide manufacturer's best-quality paint material of the various coating types specified. Paint-material containers not displaying manufacturer's product identification will not be acceptable.

1. Proprietary Names: Use of manufacturer's proprietary product names to designate colors or materials is not intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers. Furnish manufacturer's material data and certificates of performance for proposed substitutions.

C. Color for Skate Park Rails & Metal/Coping Protection:

Sherwin-Williams or approved equal–Invigorate (Exterior)

R:228, G:114, B:55

Hex Value: #e47267

PART 3 – EXECUTION / CONSTRUCTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with the Applicator present, under which painting will be performed for compliance with paint application requirements.

1. Do not begin to apply paint until unsatisfactory conditions have been corrected and surfaces receiving paint are thoroughly dry.
2. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.

B. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.

1. Notify the RESIDENT ENGINEER about anticipated problems using the materials specified over substrates primed by others.

3.2 PREPARATION

A. General: Remove hardware and hardware accessories, plates, machined surfaces, and similar items already installed that are not to be painted. If removal is impractical or impossible because of the size or weight of the item, provide surface-applied protection before surface preparation and painting.
   1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.

B. Cleaning: Before applying paint or other surface treatments, clean the substrates of substances that could impair the bond of the various coatings. Remove oil and grease before cleaning.
   1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.

C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particularl substrate condition and as specified.
   1. Provide barrier coats over incompatible primers or remove and reprime.
   2. Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.
      a. Scrape and clean small, dry, seasoned knots, and apply a thin coat of white shellac or other recommended knot sealer before applying primer. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.
   3. Ferrous Metals: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with the Steel Structures Painting Council's (SSPC) recommendations.
      a. Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by paint manufacturer, and touch up with the same primer as the shop coat.

D. Materials Preparation: Mix and prepare paint materials according to manufacturer's written instructions.
   1. Maintain containers used in mixing and applying paint in a clean condition, free of foreign materials and residue.
   2. Stir material before application to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into material. If necessary, remove surface film and strain material before using.
   3. Use only thinners approved by paint manufacturer and only within recommended limits.

3.3 APPLICATION

A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.
   1. Paint colors, surface treatments, and finishes are indicated in the schedules.
   2. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
   3. Provide finish coats that are compatible with primers used.
   4. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, covers, and similar components are in place. Extend coatings in these areas, as required, to maintain the system integrity and provide desired protection.
   5. Sand lightly between each succeeding enamel or varnish coat.

B. Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
   1. The number of coats and the film thickness required are the same regardless of application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. If sanding is required to produce a smooth, even surface according to manufacturer's written instructions, sand between applications.
   2. Omit primer on metal surfaces that have been shop primed and touchup painted.

3. If undercoats, stains, or other conditions show through final coat of paint, apply additional coats until paint film is of uniform finish, color, and appearance. Give special attention to ensure edges, corners, crevices, welds, and exposed fasteners receive a dry film thickness equivalent to that of flat surfaces.
4. Allow sufficient time between successive coats to permit proper drying. Do not recoat surfaces until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and where application of another coat of paint does not cause the undercoat to lift or lose adhesion.

C. Application Procedures: Apply paints and coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.
1. Brushes: Use brushes best suited for the type of material applied. Use brush of appropriate size for the surface or item being painted.
2. Rollers: Use rollers of carpet, velvet back, or high-pile sheep's wool as recommended by the manufacturer for the material and texture required.
3. Spray Equipment: Use airless spray equipment with orifice size as recommended by the manufacturer for the material and texture required.

D. Minimum Coating Thickness: Apply paint materials no thinner than manufacturer's recommended spreading rate. Provide the total dry film thickness of the entire system as recommended by the manufacturer.

E. Fillers: Apply fillers at a rate to ensure complete coverage of pores filled.

F. Prime Coats: Before applying finish coats, apply a prime coat of material, as recommended by the manufacturer, to material that is required to be painted or finished and that has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or

unsealed areas in first coat appears, to ensure a finish coat with no burn through or other defects due to insufficient sealing.

G. Pigmented (Opaque) Finishes: Completely cover surfaces as necessary to provide a smooth, opaque surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.

H. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not complying with requirements.

3.4 CLEANING

A. Cleanup: At the end of each workday, remove empty cans, rags, rubbish, and other discarded paint materials from the site.

B. After completing painting, clean paint-spattered surfaces. Remove spattered paint by washing and scraping. Be careful not to scratch or damage adjacent finished surfaces.

3.5 PROTECTION

A. Protect work of other trades, whether being painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as approved by the RESIDENT ENGINEER.

B. Provide "Wet Paint" signs to protect newly painted finishes. Remove temporary protective wrappings provided by others to protect their work after completing painting operations.
1. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces. Comply with procedures specified in PDCA P1.

3.6 EXTERIOR PAINT SCHEDULE

A. Ferrous Metal: Provide the following finish systems over exterior ferrous metal. Primer is not required on shop-primed items.
   1. Semigloss, Acrylic-Enamel Finish: 2 finish coats over a rust-inhibitive primer.
      a. Primer: Rust-inhibitive metal primer applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 1.3 mils (0.033 mm).
         1) Dura Clad 55 High Solids Universal Alkyd Primer by Duron.
         2) 433 RustPlate Rust Inhibitive Primer by Kurfees Coating.
         3) Fuller: 621-04 Blox-Rust Alkyd Metal Primer.
         4) Glidden: 5205 Glid-Guard Tank & Structural Primer, Red.
         5) Moore: IronClad Retardo Rust-Inhibitive Paint #163.
         6) PPG: 6-208 Speedhide Interior/Exterior Rust Inhibitive Steel Primer.
         7) P & L: S/D 1009 Suprime "9" Interior/Exterior Alkyd Metal Primer.

      b. First and Second Coats: Semigloss, exterior, acrylic-latex enamel applied at spreading rate recommended by the manufacturer to achieve a total dry film thickness of not less than 2.6 mils (0.066 mm).
         1) Devoe: 17XX Wonder-Shield Semi-Gloss Exterior Acrylic Latex House and Trim Paint.
         2) Fuller: 664-XX Weather King II Semi-Gloss House & Trim Paint.
         3) Glidden: 6600 Series Spred Ultra Exterior Gloss Latex House & Trim Paint.
         4) Moore: MoorGlo Latex House & Trim Paint #096.

         5) PPG: 78 Line Sun-Proof Semi-Gloss Acrylic Latex House and Trim Paint.
         6) P & L: Z/F 3100 Series Aqua Royal Latex House & Trim Finish.

END OF SECTION 09 91 01

SECTION 10 14 00
SIGNAGE

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:
   1. Graphics and signage is indicated on the drawings and specified below and include, but is not necessarily limited to, disabled accessiblity, safety signage, and interpretive panel signage.

1.2 QUALITY ASSURANCE

A. Qualifications of Fabricators and Installers
   1. For signs with required Braille text, the fabricator shall employ the use of a Certified Library of Congress Braille reader to proof a random sample of signs and provide written certification of the Braille text.
   2. For actual installation of signage, use only personnel who are thoroughly trained and experienced in the fabrication and installation of the specified products.
   3. In acceptance or rejection of completed installation, no allowance will be made for lack of skill on the part of the installers.

1.3 SUBMITTALS

A. Materials List and Shop Drawings: Within 30 days after award of contract, and before any materials have been ordered, submit complete materials list, mounting details, and schedule of sign types and locations to the Resident Engineer for approval.
B. Samples: Accompanying materials list, submit three samples of each proposed sign product in specified font, material, color and finish.
C. For Interpretive Panel Signs, submit three full-sized full-color proofs for each panel to the Resident Engineer for review and approval prior to ordering signs.

1.4 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).
C. Use all means necessary to protect materials before, during, and after installation and to protect the installed work of other trades. In the event of damage, immediately make all repairs and replacements necessary to the approval of the Resident Engineer and at no additional cost to the City.

1.5 WARRANTY

A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.

B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under contract documents.

C. Warranty Period:

1. 100 year limited warranty from date of completion of work for powdercoated steel posts for Interpretive Panel Signage.
2. 15 year limited warranty for color fade for DGI (Digital Graphic Infusion) signs.
3. 15 year limited warranty for Permalene panel signs.

PART 2 - PRODUCTS

2.1 GENERAL

A. All signage shall comply with Americans with Disabilities Act Standards (ADAS) and California Title 24 disabled access regulations.

B. **Finish and contrast.** Characters, symbols and their background shall have a nonglare finish. Characters and symbols shall contrast with their background, either light on a dark background or dark on a light background.

C. **Proportions.** Visual characters on signs shall be selected from fonts where the width of the uppercase letter "O" is 55 percent minimum and 110 percent maximum of the height of the uppercase letter "I". Stroke thickness of the uppercase letter "I" shall be 10 percent minimum and 30 percent maximum of the height of the character.

D. **Character height.** Characters on signs required to be accessible by Section 1117B.5.1, Items 2 and 3 shall be sized according to the following table. The minimum height is measured using an uppercase letter "I". Lowercase characters are permitted. Viewing distance shall be measured as the horizontal distance between the character and an obstruction preventing further approach towards the sign.

Visual Character Height

Height to Finish Floor or Ground From Baseline of Character	Horizontal Viewing Distance	Minimum Character Height
40 inches (1015 mm) to less than or equal to 70 inches (1780 mm)	Less than 72 inches (1830 mm)	5/8 inch (16 mm)
	72 inches (1830 mm) and greater	5/8 inch (16 mm), plus 1/8 inch (3.2 mm) per foot (305 mm) of viewing distance above 72 inches (1830 mm)
Greater than 70 inches (1780 mm) to less than or equal to 120 inches (3050 mm)	Less than 180 inches (4570 mm)	2 inches (51 mm)
	180 inches (4570 mm) and greater	2 inches (51 mm), plus 1/8 inch (3.2 mm) per foot (305 mm) of viewing distance above 180 inches (4570 mm)
Greater than 120 inches (3050 mm)	Less than 21 feet (6400 mm)	3 inches (75 mm)
	21 feet (6400 mm) and greater	3 inches (75 mm), plus 1/8 inch (3.2 mm) per foot (305 mm) of viewing distance above 21 feet (6400 mm)

E. **Raised characters and pictorial symbol signs.** When raised characters are required or when pictorial symbols (pictograms) are used on such signs, they shall conform to the following requirements:

1. **Character type.** Characters on signs shall be raised 1/32 inch (0.794 mm) minimum and shall be sans serif uppercase characters accompanied by contracted Grade 2 Braille complying with Section 2.1.F.
2. **Character size.** Raised characters shall be a minimum of 5/8 inch (15.9 mm) and a maximum of 2 inches (51 mm) high.
3. **Pictorial symbol signs (pictograms).** Pictorial symbol signs (pictograms) shall be accompanied by the verbal description placed directly below the pictogram. The outside dimension of the pictogram field shall be a minimum of 6 inches (152 mm) in height.
4. **Character placement**. Characters and Braille shall be in a horizontal format. Braille shall be placed a minimum of 3/8 inch (9.5 mm) and a maximum of ½ inch (12.7 mm) directly below the tactile characters; flush left or centered. When tactile text is multilined, all Braille shall be placed together below all lines of tactile text.
5. **Proportions.** Raised characters on signs shall be selected from fonts where the width of the uppercase letter "O" is 55 percent minimum and 110 percent maximum of the height of the uppercase letter "I". Stroke thickness of the uppercase letter "I" shall be 15 percent maximum of the height of the character.

F. **Braille.** Contracted Grade 2 Braille shall be used wherever Braille is required in other portions of these standards. Dots shall be 1/10 inch (2.54 mm) on center in each cell with 2/10 inch (5.08 mm) space between cells, measured from the second column of dots in the first cell to the first column of dots in the second cell. Dots shall be raised a minimum of 1/40 inch (0.635 mm) above the background. Braille dots shall be domed or rounded.

G. **Mounting location and height.** Where permanent identification signs are provided for rooms and spaces, signs shall be installed on the wall adjacent to the latch side of the door. Where there is no wall space on the latch side, including at double leaf doors, signs shall be placed on the nearest adjacent wall, preferably on the right.

Where permanent identification signage is provided for rooms and spaces they shall be located on the approach side of the door as one enters the room or space. Signs that identify exits shall be located on the approach side of the door as one exits the room or space.

Signs with raised characters and Braille shall be located 48 inches (1220 mm) minimum above the finish floor or ground surface, measured from the baseline of the lowest tactile character and 60 inches (1525 mm) maximum above the finish floor or ground surface, measured from the baseline of the highest tactile character. Mounting location shall be determined so that a person may approach within 3 inches (76 mm) of signage without encountering protruding objects or standing within the swing of a door.

See also Section 1115B.6 for additional signage requirements applicable to sanitary facilities.

2.2 DISABLED ACCESSIBLE ENTRANCE SIGNAGE

A. Symbol: International Symbol of Accessibility.

B. Size: 6 inch square minimum.

C. Color: White symbol on blue background.

D. Sign Type: Vinyl reverse die-cut graphic adhesive decal.

2.3 SIGNAGE: RESTROOM

A. Product Characteristics

1. Stock: High pressure plastic laminated plastic 1/8 inch thick, with minimum 1/32 inch thick applied letters and Standard English Grade II Braille text.
2. Graphic: International symbol of accessibility, single sex or unisex as applies.
3. Face Color: Blue/White.
4. Letter/Graphic Color: White on blue, blue on white.
5. Sign Size: Per plans and as required by CCR T-14 and ADAAG.
6. Mounting: Per plans.

B. Locations:
1. Door: Install 1/4 inch thick, 12 inch circle, triangle, or unisex symbol on door, with sign centerline located 60 inches above floor level.
2. Wall: Install pictogram with raised letters and Braille on wall adjacent to latch side of door, with sign centerline located 60 inches above finish floor level. Locate per Section 2.1.G.
3. All signs to comply with the City of San Diego Standard Drawings.

2.4 SIGNAGE: INTERPRETIVE PANELS

A. All interpretive signage panels and posts are available through Coast Recreation. Acceptable manufacturer is Landscape Structures or approved equal. Other products may be considered equal if all of the parameters, specifications and design intent of the drawings are met. Mike Eisert at Coast Recreation can be contacted at (714) 619-0100 x206, or meisert@coastrecreation.net.

B. Digital Graphics Infusion (DGI) Panels:
1. Base material to be 7 GA steel.
2. Digital image is to be infused into a powdercoated substrate through a sublimation process.
3. Digital image and layout will be provided in Adobe Illustrator format or similar by the Landscape Architect.

C. Permalene Panels:
1. Colors, graphics, and text to be provided by Landscape Architect.
2. 2-color permalene panel, architectural grade pigments for long lasting UV-stable, 100% recyclable with post-consumer recycled content of 73%.
3. Digital image and layout will be provided in Adobe Illustrator format or similar by Landscape Architect.

D. Posts:
1. 2.375 inch outside diameter posts, powdercoated steel, by Landscape Structures or approved equal.

E. Size:
1. Panels (DGI and Permalene) are 24 inches wide x approximately 36 inches tall.

2.5 SURFACE CONDITIONS

A. Inspection
1. Prior to all work of this section, carefully inspect the installed work of all other trades and verify that such work is complete to the point where this installation may properly commence.
2. Verify that the signage may be installed in complete accordance with the original design, the approved Shop Drawings, and the manufacturer's recommendations.

B. Discrepancies: In the event of discrepancy, immediately notify the Architect. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

2.6 INSTALLATION

A. Install per approved materials list and schedule, and per manufacturer's approved recommendations. Install all signage level, plumb, and true to sign edges.

2.7 PROTECTION

A. Protect the installed signage from damage resulting from subsequent construction activity on the site.

END OF SECTION

SECTION 10 73 00
PRE-ENGINEERED SHADE SHELTER

PART 1 - GENERAL

1.1 DESCRIPTION OF PRODUCT

A. Shelter Type: 12'x30 Monoslope style shelter with Standing Seam roof panels over T&G Ceiling Roof Deck.
B. Roof Slope: 0:12
C. Clear height under Tie Beam (UTB): 9**'-0".** This is the clearance under the tie beam which spans between the columns.

1.2 REFERENCES

A. REFERENCED STANDARDS

1. AISC – American Institute of Steel Construction

   a. AISC Steel Construction Manual – 14th edition
   b. AISC 360-10 Specification for Structural Steel Buildings

2. ASTM – American Society for Testing and Materials

   a. ASTM A36/A36M – Standard Specification for Carbon Structural Steel; 2008
   b. ASTM A325 – Standard Specification for Structural Steel Bolts, Heat Treated, 120/105 ksi Minimum Tensile Strength; 2010
   c. ASTM A563 – Standard Specification for Carbon and Alloy Steel Nuts; 2007a
   d. ASTM A500 – Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes; 2010a
   e. ASTM A653/A653M – Standard Specification for Sheet Steel, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvanealed) by the Hot Dip Process; 2010
   f. ASTM A792/A792M – Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy Coated by the Hot-Dip Process; 2010
   g. ASTM F1554 – Standard Specification for Anchor Bolts, Steel, 36, 50 and 105 ksi Yield Strength; 2007a

3. AWS – American Welding Society

   a. D1.1
   b. D1.3
   c. D1.8

4. OSHA – Occupational Safety and Health Administration

   a. Steel Erection Standard 29 CFR 1926.750 Part R

5. SSPC – Steel Structures Painting Council

   a. SSPC-SP 2 – Hand Tool Cleaning; 2004

b. SSPC-SP 10/NACE No. 2 – Near White Blast Cleaning; 2007

6. LEED – Leadership in Energy and Environmental Design

7. ISO – International Organization for Standardization

1.3 SYSTEM DESCRIPTION

A. The structure shall be a pre-engineered package and shall be shipped as a pre-cut (excluding standing seam roof panels) and pre-fabricated package that shall include the structural framing members, roof panels, fasteners and roof trim as well as job specific installation instructions. The structure will be shipped in an un-assembled package for ease of shipment and minimum shipping charges.

1.4 SUBMITTALS

A. Submit a minimum of four (4) sets of submittal drawings and (2) sets of structural calculations signed and sealed by a Professional Engineer licensed in the state of California.

B. PRODUCT DESIGN REQUIREMENTS:

1. The structure shall meet the following design requirements

a. Building Code: 2019 California Building Code
b. Ground Snow Load: 20 p.s.f.
c. Live Load: 20 p.s.f.
d. Wind Speed: 85 m.p.h. Exp “C”
e. Seismic Design Category: D

C. SUBMITTAL REQUIREMENTS

1. Calculations:

a. Design according to the requirements of the national, state or local building codes as indicated in Section 1.04.B.
b. Calculations shall include all member design for each different member type.
c. Connection design for each different connection that will determine the design of the bolts, welds, plate thickness and anchorage to the foundation.
d. Foundation design shall be for the loads applied, not a generic foundation design, while taking into account all soils information.

2. Submittal Drawings:

a. Anchor bolt layout with all appropriate dimensions for installation.
b. Site specific foundation design.
c. Isometric as well as elevation and plan views of the farming members along with the member sizes and locations indicated on the drawings.
d. Connection details for every connection on the frame.
e. Roof panel connections and trim installation details.
f. All accessories on the structure shall have an installation detail as well as connection details.

D. FOUNDATION DESIGN

1. The foundation design shall be supplied by the manufacturer.

2. Anchor bolts shall be supplied by the manufacturer.

3. Foundation materials and labor shall be provided by the structure contractor.

1.5 QUALITY ASSURANCE

A. MANUFACTURER QUALIFICATIONS

1. The product shall be designed, engineered and fabricated at a facility operated and directly supervised by the manufacturer.

2. The manufacturer shall have knowledge steel shelter fabrication.

3. Full Time on Staff Quality Assurance Manager.

4. All welders must be AWS certified for welding steel structures.

5. Membership in the American Welding Society (AWS).

6. Membership in the American Institute of Steel Construction (AISC).

7. Full Time on Staff Licensed Engineer.

8. Published Quality Control System manual.

9. Quality Control System must pass an annual audit by a Third Part Agency.

10. ISO 9001 certification for Powder Coating System.

B. MANUFACTURER'S CERTIFICATIONS

1. Clark County, NV Approved Fabricator.

2. City of Riverside, CA Approved Fabricator.

3. City of Houston, TX Approved Fabricator Structural Steel.

4. City of Los Angeles, CA Approved Fabricator Structural Steel

1.6 FIELD OR SITE CONDITIONS

A. Foundations shall be installed per the ICON installation drawings.

1. All foundations shall be cast at the same elevation unless specifically noted on the ICON installation drawings.

B. Anchor bolts shall be placed in the foundation as per the ICON installation drawings utilizing the anchor bolt template supplied with the anchor bolts.

1. Anchor bolts shall be installed per the dimensions and orientation shown on the drawings.

1.7 MANUFACTURER WARRANTY

A. Shelter shall have a 10-year limited warranty on the steel framing members.

B. Shelter shall have a 10-year limited warranty on the powder-coated elements.

C. For all Metal Roofing there will be a pass-through warranty direct from the metal Roofing supplier, warranty shall be provided on request.

PART 2 - PRODUCTS

2.1 SHELTER SYSTEM AND MATERIALS

A. MANUFACTURERS:

1. Acceptable Manufacturer (or approved equal):

a. ICON Shelter Systems, Inc.,
1455 Lincoln Rd., Holland, MI, 49423.
Email: info@iconshelters.com,
Website: www.iconshelters.com.

2. Pricing for this specific project and specified shelter can be requested from:

a. Unique Recreation
1804 Garnet Avenue 478
San Diego, CA 92109
951-541-8380
chad@uniquerecreationinc.com

3. The product shall be designed and fabricated at a facility operated and directly supervised by the manufacturer.

B. SUBSTITUTION LIMITATIONS:

1. Substitutions must be approved a minimum of ten (10) business days prior to bid. All approved manufacturers shall be notified on writing before the bid date and shall not be allowed to bid without written notification. Any approval of an alternate manufacturer shall be through and official bid addendum prior to the bid date.

2. Alternate suppliers shall meet the requirements, qualifications and provide proof of certifications listed under Section 1.05 QUALITY ASSURANCE.

3. Alternate suppliers shall provide documentation that the powder-coat system being provided meets or exceeds the ICON supplied powder-coat system listed under Section 2.1(c)(8).

C. PRODUCT REQUIREMENTS AND MATERIALS:

1. GENERAL:

a. The pre-engineered and pre-fabricated package of parts shall be pre-cut and packaged unless noted otherwise. These packages will include all parts and pieces necessary to field assemble the shelter at the jobsite. The shelter shall be shipped in knocked down format to minimize shipping expenses. Field labor will be kept to a minimum with no on-site welding required.

2. CONCRETE FOR FOUNDATIONS:

a. Concrete shall have a minimum 28-day compressive strength of 2,500 psi unless noted otherwise on the foundation detail.

b. Reinforcing steel shall be ASTM A615, Grade 60.

3. COLUMNS:

a. Hollow Structural Section (HSS) columns shall meet ASTM A500, Grade B with a minimum wall thickness of 3/16" (0.1875").

b. Unless the columns are direct buried in the foundation the columns shall attach to the foundation with a minimum of four (4) anchor rods and shall meet OSHA Steel Erection Standard 29 CFR 1926.755(a)(1).

c. CC6-6 Columns – 6" Diameter round Column

4. STRUCTURAL FRAMING:

a. All Hollow Structural Sections (HSS) shall meet ASTM A500, Grade B. "I" Beams, tapered columns or open channel sections shall not be accepted for primary members.

5. COMPRESSION RINGS:

a. Compression rings shall be made of ASTM A36 structural plate or of structural channel welded together to form the ring. All connections not requiring compression rings shall use ASTM A500, Grade B HSS sections for these connections.

6. CONNECTION REQUIREMENTS:

a. Anchor rods shall be ASTM F1554, Grade 36 unless otherwise noted.

b. Structural fasteners shall be ASTM A325 high strength bolts and A563 nuts.

c. All structural fasteners shall be hidden within the framing members whenever possible.

d. No field welding shall be required to finish the construction of the shelter.

e. Manufacturer shall supply extra fasteners.

7. ROOFING MATERIALS:
   a. PRIMARY ROOF DECK – TONGUE & GROOVE WOOD DECK CEILING
      1. Decking shall be 2 x 6 nominal tongue and grooved wood decking.
      2. Wood species shall be Western Lodgepole Pine, kiln dried, #2 or better. One edge V'd and one edge grooved.
      3. Fascia shall be Cedar plank.

   b. 30# felt shall be supplied when the secondary roofing is supplied by ICON.SECONDARY ROOF DECK – MEDALLION-LOK STANDING SEAM ROOFING
      1. Roofing shall be a minimum of 24-gauge Galvalume steel sheet with ribs that are 1 3/4" tall and the panels are 16" wide. Ribs shall run with the slope of the roof for proper drainage.
      2. Roof outside surface shall be a baked on Kynar 500 paint finish and shall be supplied in one of the manufacturer's standard colors: TBD Ceiling color to be a "wash coat" primer.
      3. All roof panel angles shall be cut in the field.
      4. Roofing shall be installed over wood roof deck with 30# felt installed before the metal roof deck.
      5. Metal roofing trim shall match the color of the roof and shall be factory made from 26-gauge Kynar 500 painted Galvalume sheet steel.
      6. Trim includes panel ridge caps, hip caps, eave "J" trim, splice channels, rake trim, roof peak cap and corner trim as applicable for the model selected. Trim may need to be field cut to length. Please refer to the installation drawings for additional information and detail.
      7. Ridge, hip and valley caps shall be pre-formed with a single central bend to match the roof slope and shall be hemmed on both edges.
      8. Roof peak caps shall be pre-fabricated with no field assembly required.
      9. Roofing is attached to sub-framing with clips.

8. FACTORY FRAME FINISH:

   a. E-COAT/ POWDERCOAT:
      1) The steel shall be shot-blasted to the specification of SSPC-SP10 near white blast cleaning. SSPC-SP2 hand tool cleaning will not be an acceptable alternative.
      2) The shot-blasted parts are then washed with zinc-phosphate in an eight (8) stage washer.
      3) The steel is then immersed in a liquid epoxy and coated through an electro-deposition process (E-coat), this is coated both inside and out to a uniform cover of 0.7-0.9 mils. The E-coat totally encapsulates the part for superior corrosion protection.
      4) The parts are then coated with a color coat of TGIC polyester powder and then one clear coat for a final finish thickness of 8 to 12 mils.

9. ACCESSORIES

   a. ELECTRICAL ACCESS
      1) Standard in all column bases is a 1 3/4" diameter hole, located in the center of the plate. This allows electrical wiring into the column base.
   b. I-BEAM COLUMNS
   c. I-BEAM CURVED MEMBERS

PART 3 - EXECUTION

3.1 STORGE AND HANDLING

A. When the shelter arrives at the jobsite protect the products from weather, sunlight and damage.

B. When unloading, pad the forks and use other precautions to protect the powder-coated finish. Do not use chains to move the materials, use straps. Handle all materials carefully in the field to avoid scratching the powder-coat finish.

C. Contractor shall store the product elevated from the soil to allow full air circulation around the materials as do not introduce mold, decay, fungi or insects into or on the materials. One end of the materials shall be elevated higher than the other end if storage will be longer than a few days as to allow the water to run off the materials.

3.2 INSTALLATION OF MATERIALS

A. The shelter shall be placed on prepared foundations that were designed by the manufacturer (unless otherwise noted). Materials for these foundations are not supplied by ICON but by the foundation installation contractor. Foundation shall be constructed to all local building code requirements and per good construction practices for the specific site conditions.

1. In accordance with OSHA Steel Erection Standard 29 CFR 1926.750 Part R, anchor rods shall be installed for proper column stability and shall have a minimum of four (4) anchor bolts per column. Therefore, no single anchor rod column base connections shall be allowed.

B. The contractor shall install all parts and pieces per the manufacturer's supplied installation instructions and these specifications.

C. The interface with other work required is to be coordinated by the customer or the customer's agent. Some design may have electrical or plumbing requirements that are not supplied by ICON.

D. Tolerances on structural steel members are set according to AISC Code of Standard Practice for Steel Buildings and Bridges and have been used for the fabrication of this product. These tolerances will not and cannot be increased. No field slotting or opening of holes will be allowed without proper guidance from the ICON Engineering Department.

3.3 REPAIR

A. No field modifications or corrections are allowed without authorization from the ICON Engineering Department.

3.4 SITE QUALITY CONTROL

A. ICON does not require any on-site inspections or testing but these may be required by local authorities and the local building inspector. Please be aware of any on-site requirements prior to starting installation.

END OF SECTION 10 73 00

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" or "C61-D34."

B. 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. A Manufacturer's Representative must inspect the final installation prior to acceptance. Manufacturer's representative must be a Certified Playground Safety Inspector and not employed by the installer.

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 Fl 951-99.
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, resilient fill, and accessible resilient surfacing have been installed in accordance with manufacturers' recommendations and Contract Documents.

B. Contractor shall provide the City with manufacturers' written warranties for accessible resilient surfacing and 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:

1. 100-YEAR LIMITED WARRANTY
On all PlayBooster®, PlayShaper® and PlaySense® aluminum posts, stainless steel fasteners, clamps, beams and caps, against structural failure due to corrosion/natural deterioration or manufacturing defects, and on PlayBooster, Evos™ and Weevos™ steel posts and arches against structural failure due to material or manufacturing defects.

2. 15-YEAR LIMITED WARRANTY
On all plastic components (including TuffTimbers™ edging), all steel components (except 100-year steel posts), Mobius® climbers, decks and TenderTuff™ coatings (except Wiggle Ladders, Chain Ladders and Swing Chain) against structural failure due to material or manufacturing defects. TuffTurf® tiles against material or manufacturing defects.

3. 10-YEAR LIMITED WARRANTY
On concrete products against structural failure due to natural deterioration or manufacturing defects. Does not cover minor chips, hairline cracks or efflorescence.

4. 8-YEAR LIMITED WARRANTY
On Aeronet™ climbers and climbing cables against defects in materials or manufacturing defects. On CoolToppers® fabric against failure from significant fading, deterioration, breakdown, mildew, outdoor heat, cold or discoloration. This warranty is limited to the design loads as stated in the specifications found in the technical information.

5. 3-YEAR LIMITED WARRANTY
On all other parts, i.e.: CableCore® products, swing seats and hangers, grills, Mobius climber handholds, Wiggle Ladders, Chain Ladders and Swing Chain, Track Ride trolleys and bumpers, all rocking equipment including Sway Fun® gliders, PVC belting material, HealthBeat™ hydraulic cylinders, Seesaws, Wiggle Ring Bridge, etc., 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.

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 Legend and Construction Plans, or approved substitution. The Following Equipment shall include all components from Coast Recreation Quote 1152958-01-02

A. 2-5 Year Play Area:

PlayBooster® (2-5 years)		
PHASE-1 Direct Bury Aluminum		
QTY	**NO.**	**DESCRIPTION**

PlayBooster® (2-5 years)		
PHASE-1 Direct Bury Aluminum		
QTY	**NO.**	**DESCRIPTION**
PlayBooster®		
Climbers W/Permalene Handholds		
1	152431A	ABC Climber 40"Dk DB
1	128252A	Loop Ladder 48"Dk DB
Custom		
1	CP000328A	DTR PB 84x84 Corrugated Steel Roof w/No End Closures
Decks		
1	184354B	Curved Transfer Module Left 2-5yrs 40"Dk DB
2	121948A	Kick Plate 8"Rise
2	111229A	Square Deck Extension
2	111228A	Square Tenderdeck
Enclosures		
2	178482A	Barn Panel Ground Level Custom
3	178476A	Barn Panel Custom Above Deck
1	178477A	Goat Accent Panel Custom
1	178478A	Pig Accent Panel Custom
1	115254A	Storefront Panel
Motion & More Fun		
1	111362A	Talk Tube 40' Tubing Kit PB
2	111363A	Talk Tube At Grade Mounted DB Only
Posts		
3	111404D	124"Alum Post DB
6	111403D	158"Alum Post For Roof DB
1	111404J	76"Alum Post DB
2	111404I	84"Alum Post DB
Slides		
1	123331B	Double Slide 40"Dk DB
1	124863C	SlideWinder2 48"Dk DB 2 Right
Freestanding Play		
Motion & More Fun		
1	233056B	DigiRider Tractor DB
Signs		
1	182503A	Welcome Sign (LSI Provided) Ages 2-5 years Direct Bury

Freestanding Play (2-5 years)

PHASE-1 Direct Bury Aluminum		
QTY	**NO.**	**DESCRIPTION**
Freestanding Play		
Sensory Play		
1	228212A	Rhapsody Ditty Metallophone DB
1	228217A	Rhapsody Kettle Drum Junior DB
1	228218A	Rhapsody Kundu Drum Junior DB

B. 5-12 Year Play Area:

PlayBooster® (5-12 years)		
PHASE-1 Direct Bury Mixed Material		
QTY	**NO.**	**DESCRIPTION**
PlayBooster®		
Bridges & Ramps		
1	147425A	Clatterbridge 123 w/Barriers
1	156233A	Ramp w/Barriers
Climbers Nature-Inspired		
1	172666A	Corkscrew Climber w/Recycled Wood-Grain Handholds 48"Dk DB
1	172665A	Loop Pole w/Recycled Wood-Grain Handholds 48"Dk DB
1	169318D	Wood Plank Wiggle Ladder 56"Deck w/Recycled Wood-Grain Handholds DB
Climbers Other		
1	176081A	Canyon Climber
Climbers W/Permalene Handholds		
1	122914B	Loop Arch 56"Dk DB
1	128252A	Loop Ladder 48"Dk DB
1	145624B	Vertical Ascent 56"Dk
Custom		
1	CP003053	126" X 42" CORRUGATED PORCH ROOF FOR CHICKEN COOP
1	CP003058	126" X 84" CORRUGATED ROOF W/SIDE ACCENTS FLUSH TO PORCH, PB 126i x 84i OC Corrugated Roof with cedar and mink RPL Barn ends and mink side accent panels. One side boards flush to porch roof. *Note: 8 roof posts required. Same as ref but red panels replaced w mink; white replaced w cedar.
1	CP003056	126" X 84" CORRUGATED ROOF WITH SIDE ACCENT PANELS, Cedar and mink RPL Barn ends and mink side accent panels.
1	CP003055	BARN HOLE PANEL
3	CP003054	CHICKEN COOP PANEL, Cedar Recycled Plastic frames on std TT mesh
1	CP003108	CHICKEN COOP PANEL, Cedar Recycled Plastic frames on std TT mesh
1	CP003062	CHICKEN COOP PANEL WITH DIGIFUSE® SIGN, Cedar RPL frames on std TenderTuff mesh.
1	CP000026A	DTR PB Silo Roof for Hex Deck
1	CP003051	FARMSTEAD ELEVATOR CLIMBER FOR 56" DECK, Wood-Grain Handholds. Same as ref but longer to fit 56i deck and rpl hholds. Mink and cedar

PlayBooster® (5-12 years)		
PHASE-1 Direct Bury Mixed Material		
QTY	**NO.**	**DESCRIPTION**
		boards
1	CP002147	GFRC HAY BALE TRANSFER MODULE FOR 40" DECK, Includes tendertuff rails and wood-grain handholds.
Decks		
1	178710A	Hexagon Tenderdeck
2	121948A	Kick Plate 8"Rise
4	111230A	Square Deck Corner
6	111229A	Square Deck Extension
2	111228A	Square Tenderdeck
2	111231A	Triangular Tenderdeck
2	119646A	Tri-Deck Extension
Enclosures		
1	177712A	Color Splash Panel Above Deck
1	218172A	DigiFuse Barrier Panel w/Medallions Above Deck Insects Medallion Set - 000000043
1	173567A	Marble Panel Above Deck
1	127439A	Navigator Reach Panel Ground Level
7	169319A	Recycled Wood-Grain Lumber Panel
Motion & More Fun		
1	201545A	Blender Spinner DB[1]
1	193176A	Boogie Board DB Only
1	111362A	Talk Tube 40' Tubing Kit PB
1	111363A	Talk Tube At Grade Mounted DB Only
1	111363F	Talk Tube Deck Mounted 48"Dk DB Only
Overhead Events		
1	111273A	End Vertical Ladder w/Alum Posts DB
1	119805A	Single Beam Loop Horiz Ladder 84"
Posts		
2	111404E	116"Alum Post DB
1	111404D	124"Alum Post DB
3	111403H	126"Alum Post For Roof DB
4	111404C	132"Alum Post DB
2	111404O	132"Steel Post DB 42" BURY
8	111403D	158"Alum Post For Roof DB
12	111403C	166"Alum Post For Roof DB
1	111403L	174"Steel Post For Roof DB 42" BURY
1	111404J	76"Alum Post DB
2	111405D	82"Alum Flush Post w/Standard Cap DB
2	111405C	90"Alum Flush Post w/Standard Cap DB

PlayBooster® (5-12 years)		
PHASE-1 Direct Bury Mixed Material		
QTY	**NO.**	**DESCRIPTION**
Slides		
1	123333B	Rollerslide 56"Dk DB
Freestanding Play Climbers		
1	158997A	Pod Climber 10" DB
1	120711A	Pod Climber 16" DB
2	120710A	Pod Climber 8" DB
Custom		
1	CP003052	GFRC CHICKEN STEPPER, Chicken with head up, No Configurable Colors
Signs		
1	182503C	Welcome Sign (LSI Provided) Ages 5-12 years Direct Bury

2.02 The layout shown in the plan view is based upon equipment and measurements from Coast Recreation. Acceptable manufacturer is Landscape Structures or approved equal. Other products may be considered equal if all of the parameters, specifications and design intent of the drawings are met. Mike Eisert at Coast Recreation can be contacted at (714) 619-0100 x206, or meisert@coastrecreation.net.

2.03 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 manufacturers 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.

2.04 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.

2.05 Designs and specifications are based upon equipment from Landscape Structures equipment. Equals will be considered against this standard of quality and design and will be determined at the owner's discretion.

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.

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. A Manufacturer's Representative must inspect the final installation prior to acceptance. Manufacturer's representative must be a Certified Playground Safety Inspector and not employed by the installer.

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.
   1. At substantial completion walk through, playground equipment shall be thoroughly cleaned (dust, dirt, debris and markings) in order to evaluate difference between markings and scratches)
   2. At turnover equipment and surfacing shall be cleaned and ready for use by the public.

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.

PART 4-MEASUREMENT AND PAYMENT

4.01 A. Compensation for play equipment materials and installation shall be included in the lump sum bid price for play equipment.

B. Payment shall include full compensation for providing labor, materials, tools, equipment, and incidentals for all work including play equipment, resilient surfacing, wood fiber and sand resilient fill, excavation, curb, drainage, staking, installation, certification and warranties as shown on the Plans, as specified in the Special Provisions and directed by the Resident Engineer, and no additional compensation will be allowed.

END OF SECTION 11 68 13

SECTION 13 31 23 - PRE-ENGINEERED FABRIC TENSION STRUCTURES

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. A single CA licensed shade structure CONTRACTOR shall be responsible for the design, wet stamped engineering drawings, permitting, fabrication, supply and installation of the work specified herein. The intent of this specification is to have only one direct shade structure CONTRACTOR be responsible for all the above functions.

1.3 SUBMITTALS

1.4 QUALITY ASSURANCE

A. All bidders shall be a licensed CONTRACTOR in the state of California and shall be bonded and provide proof of a minimum bonding capacity required by the City of San Diego and the Contract Documents.

B. Manufacturer shall have an approved fabricators license and be accredited by the IAS (International Accreditation Service) for Structural Steel Fabrication under IBC 2012 Section 1704.2.2

C. The City Resident Engineer may reject any and all work that does not meet the criteria set forth by this specification and the Contract Documents. All rejected work shall be removed and replaced at the expense of the CONTRACTOR to the satisfaction of the Resident Engineer.

1.5 PROJECT CONDITIONS

A. Structure Layout Measurements: Verify layout information for shade structures shown on the Drawings in relation to the property survey and existing structures, and verify locations by field measurements prior to construction.

B. The General CONTRACTOR and their SUBCONTRACTOR(s) are responsible for reviewing and understanding the Geotechnical soils analysis and recommendations provided by the Soils Engineer.

1.6 WARRANTY

A. The successful bidder shall provide a 12 month workmanship warranty.

B. A supplemental warranty from the manufacturer shall be provided for a period of 5 years on fabric and 10 years on the structural integrity of the steel and cables from date of substantial completion.

C. The warranty shall not deprive the City of other rights the City may have under the provisions of the Contract Documents and will be in addition to and run concurrent with other warranties made by the CONTRACTOR under requirements of the Contract Documents.

PART 2 – PRODUCTS

2.1 GENERAL

A. The structure shall be a hyper sail with four posts varying in height from 10'-17' with a fabric cover 33'-6" x 43'-6". The columns shall be HSS structural steel sized as required to meet the engineering requirements of the state of California.

B. The structures shall be manufactured by Shade Structures, Inc. dba USA SHADE & Fabric Structures or approved equal and include the wet stamped engineering drawings, structural steel frame, fabric roof, steel cables, all fasteners, and installation of structure(s) including foundations as well as project management.

C. Contact:
USA Shade & Fabric Structures
1085 N. Main St., Suite C, Orange, CA 92867
Phone: (714) 241-5526 Fax: (714) 427-6982
Attn: Patti Abrecht

D. To qualify as an approved equal, please submit product documentation, fabric samples and an approved conceptual detailed drawing showing connection details as well as all quality assurance criteria per whitebook requirements. Final approval of alternate manufacturers shall be by the Resident Engineer.

E. The shade structure shall conform to the current adopted version of the California Building Code 2019.

F. All shade structures are engineered and designed to meet a minimum of 110 mph wind load, Category 2, Exposure C and seismic (earthquake) load based on Zone 4, and a live load of 5 lbs/sf². All shade structures shall be engineered with a zero wind pass-through factor on the fabric. When ASD Steel Design Method is used based on CBC 2013 Section 1605.3.1 the Dead + 0.75 of Live + 0.75 of Wind Load cases must be combined. NO EXCEPTIONS.

G. Steel:

1. All steel members of the shade structure shall be designed in strict accordance with the requirements of the "American Institute of Steel Construction" (AISC) Specifications and the "American Iron and Steel Institute" (AISI) Specifications for Cold Formed Members and manufactured in a IAS (International Accreditation Service) accredited facility for Structural Steel Fabrication under CBC2013 based on Section 1704.2.5.2

2. All connections shall have a maximum internal sleeving tolerance of .0625 inches using high tensile strength steel sections with a minimum sleeve length of 6 inches.

3. All non-hollow structural steel members shall comply to ASTM A-36. All hollow structural steel members shall be cold formed, high strength steel and comply with ASTM A-500, Grade C. All steel plates shall comply to ASTM A-572, Grade 50. All galvanized steel tubing shall be triple coated for rust protection using an in-line electro-plating coat process. All galvanized steel tubing shall be internally coated with zinc and organic coatings to prevent corrosion.

H. Bolts:

1. All structural field connections of the shade structure shall be designed and made with high strength bolted connections using ASTM A-325, Grade B or SAE J249, Grade 8.

2. All stainless steel bolts shall comply with ASTM F-593, Alloy Group 1 or 2. All bolt fittings shall include rubber washer for water tight seal at joints. All nuts shall comply with ASTM F-594, Alloy Group 1 or 2.

I. Welding:

1. All shop welded connections of the shade structure shall be designed and performed in strict accordance with the requirements of the "American Welding Society" (AWS) Specifications. Structural welds shall be made in compliance with the requirements of the "Prequalified" welded joints where applicable and by certified welders. No onsite or field welding shall be permitted.

2. All full penetration welds shall be continuously inspected by an independent inspection agency and shall be tested to the requirement of 2013 CBC.

J. Powder coating:

1. Galvanized steel tubing preparation prior to powder coating shall be executed in accordance to solvent cleaning SSPC-SP1. Solvent such as water, mineral spirits, xylol, toluol, which are to be used to remove foreign matter from the surface. A mechanical method prior to solvent cleaning prior to surface preparation shall be executed according to Power Tool Cleaning SSPC-SP3 and utilizing wire brushes abrasive wheels and needle gun, etc.

2. Carbon structural steel tubing preparation prior to powder coating shall be executed in accordance to commercial blast cleaning SSPC-SP6 or NACE #3. A commercial blast cleaned surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, mill scale, rust, coating, oxides, corrosion, products and other foreign material.

3. Powder coating shall be sufficiently applied, with a minimum 2.0 – 3.0 mils thickness and cured at the recommended temperature to provide proper adhesion and stability to meet salt spray and adhesion tests as defined by the American Society of Testing Materials.

4. Powder used in the powder coat process shall have the following characteristics:
    a. Specific Gravity: 1.77 +/- 0.05 g/cm^3
    b. Coverage at 1.0 mils: 109sq.ft/lb/mil
    c. Storage: 80^o F
    d. Interpron 800 HR is a series of high durability TGIC powder coatings designed for exterior exposure. Tested against the most severe specifications, Interpron 800 HR gives significantly improved gloss retention and resistance to color change.

5. Rust Protection Powder Under Coat Primer will be required on all structures. Powdura® Epoxy Powder Coating Z.R Primer shall be applied in accordance with the manufacturers' specifications. Primer should be fused only and then top coated with the selected powder coat to ensure proper intercoat adhesion.

    a. The Epoxy Powder Coating Primer characteristics:
        a. Adhesion: ASTM D 3359 – 5B
        b. Flexibility: ASTM D 552 – Pass ¼" Mandrel
        c. Pencil Hardness: ASTM D 3363 – H-2H
        d. Impact Resistance: ASTM D 2794 – 120 Dir/Rev
        e. Salt Spray Resistance: ASTM B 117 – 2000 hours
        f. Humidity Resistance: ASTM D 4585 – 2000 hours
        g. 60◦ Gloss: 50.0 – 70.0%
        h. Cure Schedule (metal temp) – 6 min at 392◦F
        i. Film Thickness Range: 2.0 - 3.0 mils

6. Tension Cable: Steel cable is determined based on calculated engineering load.
        a. For light and medium loads; ¼" (nominal) galvanized 7x19 strand cable to be used.

b. For heavy loads; 3/8" (nominal) galvanized 7 x 19 cable to be used.

J. Fabric Roof Systems:

1. UV Shade Fabric:
   a. UV Shade fabric is made of a UV stabilized high-density polyethylene as manufactured by Multiknit. Mesh shall be rachel knitted with monofilament and tape yarn filler to ensure that material will not unravel if cut. Panels to be 10ft wide.
   b. Fabric shall meet the following fire resistance tests:
      1) ASTM E84
      2) NFPA 701-97 (Weathered or unweathered)
      3) CA Fire Marshall Certification

2. Stitching & Thread:
   a. All sewing threads are to be double stitched.
   b. Thread shall be GORE Tenara Sewing Thread manufactured from 100% expanded PTFE (Teflon); mildew resistant exterior approved thread. Thread shall meet or exceed the following:
      1) Flexible temperature range
      2) Very low shrinkage factor
      3) Extremely high strength, durable in outdoor climates
      4) Resists flex and abrasion of fabric
      5) Unaffected by cleaning agents; acid rain, mildew, salt water and rot resistant, unaffected by most industrial pollutants.
      6) Treated for prolonged exposure to the sun.

3. Shade and UV Factors:
   a. Shade protection and UV screen protection factors shall be as follows:

Color	Shade Factor %	UV Factor%
Blue	80%	85%
Green	80%	85%
Red	80%	86%
Silver	80%	81%
Terracotta	75%	82%
Yellow	80%	89%
Desert Sand	80%	92%

PART 3 – EXECUTION

3.1 INSTALLATION

A. Installations of shade structures shall be performed by shade manufacture who shall hold a minimum class B State of CA CONTRACTOR's license and be bonded with certified Rope Access Technicians on staff with experience in tension fabric structures.

B. The installation of the structure shall comply with manufactures instructions for assembly, installation, and erection per approved drawings.

C. Concrete:

1. Concrete work shall be executed in accordance with the latest edition of American Concrete Building Code ACI 318.

2. Concrete specifications shall comply in accordance with the section 03300, and detailed as per plans, shall be as follows:
   a. 28 Days Strength F'c = 3000 psi
   b. Aggregate: HR
   c. Slump: 3 – 5
   d. Portland Cement shall conform to C-150
   e. Aggregate shall conform to ASTM C-33

3. All reinforcement shall conform to ASTM A-615 grade 60.

4. Reinforcing steel shall be detailed, fabricated, and placed in accordance with the latest ACI Detailing Manual and Manual of Standard Practice.

5. Whenever daily ambient temperatures are below 80 degrees Fahrenheit, the CONTRACTOR may have mix accelerators and hot water added at the batch plant (See Table 1).

6. The CONTRACTOR shall not pour any concrete when daily ambient temperature is below 55 degrees Fahrenheit.

TABLE 1

Temperature Range	**% Accelerator**	**Type Accelerator**
75-80 degrees	1%	High Early (non calcium)
70-75 degrees	2%	High Early (non calcium)
Below 70 degrees	3%	High Early (non calcium)

D. Foundations:

1. All Anchor Bolts set in new concrete shall be ASTM A-325.

2. All Anchor Bolts shall be Hot Dipped Galvanized.

3. Footings shall be as follows per manufacturers specifications: The Single Post Pyramid structure is to have a minimum footing of 24" diameter x 6' deep with full rebar cage as per approved manufacturers engineered specifications and drawings.

END OF SECTION 13 31 23

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; Stranded minimum #12 AWG.

B. Branch Circuits: Copper. Stranded, minimum #12 AWG.

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 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. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

C. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.

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. Stranded Conductors: ASTM B 8.
   2. 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 stranded conductor 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.
5. Fencing: Bolted 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. Excavation and Backfill: 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. 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 700 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 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. Colors for 480/277-V Circuits:

1) Phase A: Brown.
2) Phase B: Orange.
3) Phase C: Yellow.

2. Color for Neutral: White.
3. Color for Equipment Grounds: Green.

a. 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.
   c. Black letters on white field.

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.
f. Sports lighting controllers.
g. Switchboards.
h. Transformers.
i. Circuit Breakers.

END OF SECTION 260553

SECTION 26 05 73.13
SHORT-CIRCUIT STUDIES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

A. Section includes a computer-based, fault-current study to determine the minimum interrupting capacity of circuit protective devices.

1.03 DEFINITIONS

A. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed and salvaged, or removed and reinstalled. Existing to remain items shall remain functional throughout the construction period.

B. Field Adjusting Agency: An independent electrical testing agency with full-time employees and the capability to adjust devices and conduct testing indicated and that is a member company of NETA.

C. One-Line Diagram: A diagram that shows, by means of single lines and graphic symbols, the course of an electric circuit or system of circuits and the component devices or parts used therein.

D. Power System Analysis Software Developer: An entity that commercially develops, maintains, and distributes computer software used for power system studies.

E. Power Systems Analysis Specialist: Professional engineer in charge of performing the study and documenting recommendations, licensed in the state where Project is located.

F. Protective Device: A device that senses when an abnormal current flow exists and then removes the affected portion of the circuit from the system.

G. SCCR: Short-circuit current rating.

H. Service: The conductors and equipment for delivering electric energy from the serving utility to the wiring system of the premises served.

I. Single-Line Diagram: See "One-Line Diagram."

1.04 ACTION SUBMITTALS

A. Product Data:

1. For computer software program to be used for studies.
2. Submit the following after the approval of system protective devices submittals. Submittals shall be in digital form.

    a. Short-circuit study input data, including completed computer program input data sheets.

b. Short-circuit study and equipment evaluation report; signed, dated, and sealed by a qualified professional engineer.

1) Submit study report for action prior to receiving final approval of distribution equipment submittals. If formal completion of studies will cause delay in equipment manufacturing, obtain approval from Architect for preliminary submittal of sufficient study data to ensure that selection of devices and associated characteristics is satisfactory.
2) Revised one-line diagram, reflecting field investigation results and results of short-circuit study.

1.05 INFORMATIONAL SUBMITTALS

A. Qualification Data:

1. For Power Systems Analysis Software Developer.
2. For Power System Analysis Specialist.
3. For Field Adjusting Agency.

B. Product Certificates: For short-circuit study software, certifying compliance with IEEE 399.

1.06 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data:

1. For overcurrent protective devices to include in emergency, operation, and maintenance manuals.
2. The following are from the Short-Circuit Study Report:

a. Final one-line diagram.
b. Final Short-Circuit Study Report.
c. Short-circuit study data files.
d. Power system data.

1.07 QUALITY ASSURANCE

A. Study shall be performed using commercially developed and distributed software designed specifically for power system analysis.

B. Software algorithms shall comply with requirements of standards and guides specified in this Section.

C. Manual calculations are unacceptable.

1. Power System Analysis Software Qualifications: Computer program shall be designed to perform short-circuit studies or have a function, component, or add-on module designed to perform short-circuit studies.
2. Computer program shall be developed under the charge of a licensed professional engineer who holds IEEE Computer Society's Certified Software Development Professional certification.

D. Power Systems Analysis Specialist Qualifications: Professional engineer licensed in the state where Project is located. All elements of the study shall be performed under the direct supervision and control of this professional engineer.

E. Short-Circuit Study Certification: Short-Circuit Study Report shall be signed and sealed by Power Systems Analysis Specialist.

F. Field Adjusting Agency Qualifications:

1. Employer of a NETA ETT-Certified Technician Level III or NICET Electrical Power Testing Level III certification responsible for all field adjusting of the Work.
2. A member company of NETA.
3. Acceptable to authorities having jurisdiction.

PART 2 - PRODUCTS

2.01 POWER SYSTEM ANALYSIS SOFTWARE DEVELOPERS

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

1. Operation Technology, Inc.
2. Power Analytics, Corporation.

B. Comply with IEEE 399 and IEEE 551.

1. Analytical features of power systems analysis software program shall have capability to calculate "mandatory," "very desirable," and "desirable" features as listed in IEEE 399.

C. Computer software program shall be capable of plotting and diagramming time-current-characteristic curves as part of its output.

2.02 SHORT-CIRCUIT STUDY REPORT CONTENTS

A. Executive summary of study findings.

B. Study descriptions, purpose, basis, and scope. Include case descriptions, definition of terms, and guide for interpretation of results.

C. One-line diagram of modeled power system, showing the following:

1. Protective device designations and ampere ratings.
2. Conductor types, sizes, and lengths.
3. Transformer kilovolt ampere (kVA) and voltage ratings.
4. Motor and generator designations and kVA ratings.
5. Switchgear, switchboard, motor-control center, and panelboard designations and ratings.
6. Derating factors and environmental conditions.
7. Any revisions to electrical equipment required by the study.

D. Comments and recommendations for system improvements or revisions in a written document, separate from one-line diagram.

E. Protective Device Evaluation:

1. Evaluate equipment and protective devices and compare to available short-circuit currents. Verify that equipment withstand ratings exceed available short-circuit current at equipment installation locations.

2. Tabulations of circuit breaker, fuse, and other protective device ratings versus calculated short-circuit duties.
3. For 600-V overcurrent protective devices, ensure that interrupting ratings are equal to or higher than calculated 1/2-cycle symmetrical fault current.
4. For devices and equipment rated for asymmetrical fault current, apply multiplication factors listed in standards to 1/2-cycle symmetrical fault current.
5. Verify adequacy of phase conductors at maximum three-phase bolted fault currents; verify adequacy of equipment grounding conductors and grounding electrode conductors at maximum ground-fault currents. Ensure that short-circuit withstand ratings are equal to or higher than calculated 1/2-cycle symmetrical fault current.

F. Short-Circuit Study Input Data:

1. One-line diagram of system being studied.
2. Power sources available.
3. Manufacturer, model, and interrupting rating of protective devices.
4. Conductors.
5. Transformer data.

G. Short-Circuit Study Output Reports:

1. Low-Voltage Fault Report: Three-phase and unbalanced fault calculations, showing the following for each overcurrent device location:

    a. Voltage.
    b. Calculated fault-current magnitude and angle.
    c. Fault-point X/R ratio.
    d. Equivalent impedance.

2. Momentary Duty Report: Three-phase and unbalanced fault calculations, showing the following for each overcurrent device location:

    a. Voltage.
    b. Calculated symmetrical fault-current magnitude and angle.
    c. Fault-point X/R ratio.
    d. Calculated asymmetrical fault currents:

        1) Based on fault-point X/R ratio.
        2) Based on calculated symmetrical value multiplied by 1.6.
        3) Based on calculated symmetrical value multiplied by 2.7.

3. Interrupting Duty Report: Three-phase and unbalanced fault calculations, showing the following for each overcurrent device location:

    a. Voltage.
    b. Calculated symmetrical fault-current magnitude and angle.
    c. Fault-point X/R ratio.
    d. No AC Decrement (NACD) ratio.
    e. Equivalent impedance.
    f. Multiplying factors for 2-, 3-, 5-, and 8-cycle circuit breakers rated on a symmetrical basis.
    g. Multiplying factors for 2-, 3-, 5-, and 8-cycle circuit breakers rated on a total basis.

PART 3 - EXECUTION

3.01 POWER SYSTEM DATA

A. Obtain all data necessary for conduct of the study.

1. Verify completeness of data supplied on one-line diagram. Call any discrepancies to Architect's attention.
2. For equipment included as Work of this Project, use characteristics submitted under provisions of action submittals and information submittals for this Project.
3. For equipment that is existing to remain, obtain required electrical distribution system data by field investigation and surveys, conducted by qualified technicians and engineers. Qualifications of technicians and engineers shall be as defined by NFPA 70E.

B. Gather and tabulate the required input data to support the short-circuit study. Comply with requirements in Section 017839 "Project Record Documents" for recording circuit protective device characteristics. Record data on a Record Document copy of one-line diagram. Comply with recommendations in IEEE 551 as to the amount of detail that is required to be acquired in the field. Field data gathering shall be under direct supervision and control of the engineer in charge of performing the study, and shall be by the engineer or its representative who holds NETA ETT-Certified Technician Level III or NICET Electrical Power Testing Level III certification. Data include, but are not limited to, the following:

1. Product Data for Project's overcurrent protective devices involved in overcurrent protective device coordination studies. Use equipment designation tags that are consistent with electrical distribution system diagrams, overcurrent protective device submittals, input and output data, and recommended device settings.
2. Obtain electrical power utility impedance at the service.
3. Power sources and ties.
4. For transformers, include kVA, primary and secondary voltages, connection type, impedance, X/R ratio, taps measured in percent, and phase shift.
5. For reactors, provide manufacturer and model designation, voltage rating, and impedance.
6. For circuit breakers and fuses, provide manufacturer and model designation. List type of breaker, type of trip, SCCR, current rating, and breaker settings.
7. Generator short-circuit current contribution data, including short-circuit reactance, rated kVA, rated voltage, and X/R ratio.
8. Busway manufacturer and model designation, current rating, impedance, lengths, and conductor material.
9. Motor horsepower and NEMA MG 1 code letter designation.
10. Conductor sizes, lengths, number, conductor material and conduit material (magnetic or nonmagnetic).
11. Derating factors.

3.02 SHORT-CIRCUIT STUDY

A. Perform study following the general study procedures contained in IEEE 399.

B. Calculate short-circuit currents according to IEEE 551.

C. Base study on device characteristics supplied by device manufacturer.

D. Extent of electrical power system to be studied is indicated on Drawings.

E. Begin short-circuit current analysis at the service, extending down to system overcurrent protective devices as follows:

1. To normal system low-voltage load buses where fault current is 10 kA or less.
2. Exclude equipment rated 240 V ac or less when supplied by a single transformer rated less than 125 kVA.

F. Study electrical distribution system from normal and alternate power sources throughout electrical distribution system for Project. Study all cases of system-switching configurations and alternate operations that could result in maximum fault conditions.

G. Include the ac fault-current decay from induction motors, synchronous motors, and asynchronous generators and apply to low- and medium-voltage, three-phase ac systems. Also account for the fault-current dc decrement to address asymmetrical requirements of interrupting equipment.

H. Calculate short-circuit momentary and interrupting duties for a three-phase bolted fault and a single line-to-ground fault at each equipment indicated on one-line diagram.

1. For grounded systems, provide a bolted line-to-ground fault-current study for areas as defined for the three-phase bolted fault short-circuit study.

I. Include in the report identification of any protective device applied outside its capacity.

END OF SECTION

SECTION 26 05 73.16
COORDINATION STUDIES

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

A. Section includes computer-based, overcurrent protective device coordination studies to determine overcurrent protective devices and to determine overcurrent protective device settings for selective tripping.

1. Study results shall be used to determine coordination of series-rated devices.

1.03 DEFINITIONS

A. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled. Existing to remain items shall remain functional throughout the construction period.

B. Field Adjusting Agency: An independent electrical testing agency with full-time employees and the capability to adjust devices and conduct testing indicated and that is a member company of NETA.

C. One-Line Diagram: A diagram that shows, by means of single lines and graphic symbols, the course of an electric circuit or system of circuits and the component devices or parts used therein.

D. Power System Analysis Software Developer: An entity that commercially develops, maintains, and distributes computer software used for power system studies.

E. Power System Analysis Specialist: Professional engineer in charge of performing the study and documenting recommendations, licensed in the state where Project is located.

F. Protective Device: A device that senses when an abnormal current flow exists and then removes the affected portion of the circuit from the system.

G. SCCR: Short-circuit current rating.

H. Service: The conductors and equipment for delivering electric energy from the serving utility to the wiring system of the premises served.

I. Single-Line Diagram: See "One-Line Diagram."

1.04 ACTION SUBMITTALS

A. Product Data:

1. For computer software program to be used for studies.
2. Submit the following after the approval of system protective devices submittals. Submittals shall be in digital form.

a. Coordination-study input data, including completed computer program input data sheets.
b. Study and equipment evaluation reports.

3. Overcurrent protective device coordination study report; signed, dated, and sealed by a qualified professional engineer.

a. Submit study report for action prior to receiving final approval of distribution equipment submittals. If formal completion of studies will cause delay in equipment manufacturing, obtain approval from Architect for preliminary submittal of sufficient study data to ensure that selection of devices and associated characteristics is satisfactory.

1.05 INFORMATIONAL SUBMITTALS

A. Qualification Data:

1. For Power System Analysis Software Developer.
2. For Power Systems Analysis Specialist.
3. For Field Adjusting Agency.

B. Product Certificates: For overcurrent protective device coordination study software, certifying compliance with IEEE 399.

1.06 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For overcurrent protective devices to include in emergency, operation, and maintenance manuals.

1. The following are from the Coordination Study Report:

a. Final one-line diagram.
b. Final protective device coordination study.
c. Coordination study data files.
d. List of all protective device settings.
e. Time-current coordination curves.
f. Power system data.

1.07 QUALITY ASSURANCE

A. Studies shall be performed using commercially developed and distributed software designed specifically for power system analysis.

B. Software algorithms shall comply with requirements of standards and guides specified in this Section.

C. Manual calculations are unacceptable.

D. Power System Analysis Software Qualifications:

1. Computer program shall be designed to perform coordination studies or have a function, component, or add-on module designed to perform coordination studies.
2. Computer program shall be developed under the charge of a licensed professional engineer who holds IEEE Computer Society's Certified Software Development Professional certification.

E. Power Systems Analysis Specialist Qualifications: Professional engineer licensed in the state where Project is located. All elements of the study shall be performed under the direct supervision and control of this professional engineer.

F. Field Adjusting Agency Qualifications:

1. Employer of a NETA ETT-Certified Technician Level III responsible for all field adjusting of the Work.
2. A member company of NETA.
3. Acceptable to authorities having jurisdiction.

PART 2 - PRODUCTS

2.01 POWER SYSTEM ANALYSIS SOFTWARE DEVELOPERS

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

1. Operation Technology, Inc.
2. Power Analytics, Corporation.

B. Comply with IEEE 242 and IEEE 399.

C. Analytical features of device coordination study computer software program shall have the capability to calculate "mandatory," "very desirable," and "desirable" features as listed in IEEE 399.

D. Computer software program shall be capable of plotting and diagramming time-current-characteristic curves as part of its output. Computer software program shall report device settings and ratings of all overcurrent protective devices and shall demonstrate selective coordination by computer-generated, time-current coordination plots.

1. Optional Features:

a. Arcing faults.
b. Simultaneous faults.
c. Explicit negative sequence.
d. Mutual coupling in zero sequence.

2.02 COORDINATION STUDY REPORT CONTENTS

A. Executive summary of study findings.

B. Study descriptions, purpose, basis, and scope. Include case descriptions, definition of terms, and guide for interpretation of results.

C. One-line diagram of modeled power system, showing the following:

1. Protective device designations and ampere ratings.
2. Conductor types, sizes, and lengths.
3. Transformer kilovolt ampere (kVA) and voltage ratings.
4. Motor and generator designations and kVA ratings.
5. Switchgear, switchboard, motor-control center, and panelboard designations.
6. Any revisions to electrical equipment required by the study.

7. Study Input Data: As described in "Power System Data" Article.

    a. Short-Circuit Study Output: As specified in "Short-Circuit Study Output Reports" Paragraph in "Short-Circuit Study Report Contents" Article in Section 260573.13 "Short-Circuit Studies."

D. Protective Device Coordination Study:

1. Report recommended settings of protective devices, ready to be applied in the field. Use manufacturer's data sheets for recording the recommended setting of overcurrent protective devices when available.

    a. Phase and Ground Relays:

        1) Device tag.
        2) Relay current transformer ratio and tap, time dial, and instantaneous pickup value.
        3) Recommendations on improved relaying systems, if applicable.

    b. Circuit Breakers:

        1) Adjustable pickups and time delays (long time, short time, and ground).
        2) Adjustable time-current characteristic.
        3) Adjustable instantaneous pickup.
        4) Recommendations on improved trip systems, if applicable.

    c. Fuses: Show current rating, voltage, and class.

E. Time-Current Coordination Curves: Determine settings of overcurrent protective devices to achieve selective coordination. Graphically illustrate that adequate time separation exists between devices installed in series, including power utility company's upstream devices. Prepare separate sets of curves for the switching schemes and for emergency periods where the power source is local generation. Show the following information:

1. Device tag and title, one-line diagram with legend identifying the portion of the system covered.
2. Terminate device characteristic curves at a point reflecting maximum symmetrical or asymmetrical fault current to which the device is exposed.
3. Identify the device associated with each curve by manufacturer type, function, and, if applicable, tap, time delay, and instantaneous settings recommended.
4. Plot the following listed characteristic curves, as applicable:

    a. Power utility's overcurrent protective device.
    b. Medium-voltage equipment overcurrent relays.
    c. Medium- and low-voltage fuses including manufacturer's minimum melt, total clearing, tolerance, and damage bands.
    d. Low-voltage equipment circuit-breaker trip devices, including manufacturer's tolerance bands.
    e. Transformer full-load current, magnetizing inrush current, and ANSI through-fault protection curves.
    f. Cables and conductors damage curves.
    g. Ground-fault protective devices.
    h. Motor-starting characteristics and motor damage points.
    i. Generator short-circuit decrement curve and generator damage point.
    j. The largest feeder circuit breaker in each motor-control center and panelboard.

5. Maintain selectivity for tripping currents caused by overloads.
6. Maintain maximum achievable selectivity for tripping currents caused by overloads on series-rated devices.
7. Provide adequate time margins between device characteristics such that selective operation is achieved.
8. Comments and recommendations for system improvements.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine Project overcurrent protective device submittals for compliance with electrical distribution system coordination requirements and other conditions affecting performance of the Work. Devices to be coordinated are indicated on Drawings.

1. Proceed with coordination study only after relevant equipment submittals have been assembled. Overcurrent protective devices that have not been submitted and approved prior to coordination study may not be used in study.

3.02 POWER SYSTEM DATA

A. Obtain all data necessary for conduct of the overcurrent protective device study.

1. Verify completeness of data supplied in one-line diagram on Drawings. Call any discrepancies to Architect's attention.
2. For equipment included as Work of this Project, use characteristics submitted under provisions of action submittals and information submittals for this Project.
3. For equipment that is existing to remain, obtain required electrical distribution system data by field investigation and surveys, conducted by qualified technicians and engineers. Qualifications of technicians and engineers shall be as defined by NFPA 70E.

B. Gather and tabulate all required input data to support the coordination study. List below is a guide. Comply with recommendations in IEEE 551 for the amount of detail required to be acquired in the field. Field data gathering shall be under direct supervision and control of the engineer in charge of performing the study, and shall be by the engineer or its representative who holds NETA ETT-Certified Technician Level III or NICET Electrical Power Testing Level III certification. Data include, but are not limited to, the following:

1. Product Data for overcurrent protective devices specified in other Sections and involved in overcurrent protective device coordination studies. Use equipment designation tags that are consistent with electrical distribution system diagrams, overcurrent protective device submittals, input and output data, and recommended device settings.
2. Electrical power utility impedance at the service.
3. Power sources and ties.
4. Short-circuit current at each system bus (three phase and line to ground).
5. Full-load current of all loads.
6. Voltage level at each bus.
7. For transformers, include kVA, primary and secondary voltages, connection type, impedance, X/R ratio, taps measured in percent, and phase shift.
8. For reactors, provide manufacturer and model designation, voltage rating, and impedance.
9. For circuit breakers and fuses, provide manufacturer and model designation. List type of breaker, type of trip and available range of settings, SCCR, current rating, and breaker settings.
10. Generator short-circuit current contribution data, including short-circuit reactance, rated kVA, rated voltage, and X/R ratio.

11. For relays, provide manufacturer and model designation, current transformer ratios, potential transformer ratios, and relay settings.
12. Maximum demands from service meters.
13. Busway manufacturer and model designation, current rating, impedance, lengths, size, and conductor material.
14. Motor horsepower and NEMA MG 1 code letter designation.
15. Low-voltage cable sizes, lengths, number, conductor material, and conduit material (magnetic or nonmagnetic).
16. Medium-voltage cable sizes, lengths, conductor material, cable construction, metallic shield performance parameters, and conduit material (magnetic or nonmagnetic).
17. Data sheets to supplement electrical distribution system one-line diagram, cross-referenced with tag numbers on diagram, showing the following:

    a. Special load considerations, including starting inrush currents and frequent starting and stopping.
    b. Transformer characteristics, including primary protective device, magnetic inrush current, and overload capability.
    c. Motor full-load current, locked rotor current, service factor, starting time, type of start, and thermal-damage curve.
    d. Generator thermal-damage curve.
    e. Ratings, types, and settings of utility company's overcurrent protective devices.
    f. Special overcurrent protective device settings or types stipulated by utility company.
    g. Time-current-characteristic curves of devices indicated to be coordinated.
    h. Manufacturer, frame size, interrupting rating in amperes root mean square (rms) symmetrical, ampere or current sensor rating, long-time adjustment range, short-time adjustment range, and instantaneous adjustment range for circuit breakers.
    i. Manufacturer and type, ampere-tap adjustment range, time-delay adjustment range, instantaneous attachment adjustment range, and current transformer ratio for overcurrent relays.
    j. Switchgear, switchboards, motor-control centers, and panelboards ampacity, and SCCR in amperes rms symmetrical.
    k. Identify series-rated interrupting devices for a condition where the available fault current is greater than the interrupting rating of downstream equipment. Obtain device data details to allow verification that series application of these devices complies with NFPA 70 and UL 489 requirements.

3.03 COORDINATION STUDY

A. Comply with IEEE 242 for calculating short-circuit currents and determining coordination time intervals.

B. Comply with IEEE 399 for general study procedures.

C. Base study on device characteristics supplied by device manufacturer.

D. Extent of electrical power system to be studied is indicated on Drawings.

E. Begin analysis at the service, extending down to system overcurrent protective devices as follows:

1. To normal system low-voltage load buses where fault current is 10 kA or less.
2. Exclude equipment rated 240 V ac or less when supplied by a single transformer rated less than 125 kVA.

F. Study electrical distribution system from normal and alternate power sources throughout electrical distribution system for Project. Study all cases of system-switching configurations and alternate operations that could result in maximum fault conditions.

G. Transformer Primary Overcurrent Protective Devices:

1. Device shall not operate in response to the following:

   a. Inrush current when first energized.
   b. Self-cooled, full-load current or forced-air-cooled, full-load current, whichever is specified for that transformer.
   c. Permissible transformer overloads according to IEEE C57.96 if required by unusual loading or emergency conditions.

2. Device settings shall protect transformers according to IEEE C57.12.00, for fault currents.

H. Motor Protection:

1. Select protection for low-voltage motors according to IEEE 242 and NFPA 70.
2. Select protection for motors served at voltages more than 600 V according to IEEE 620.

I. Conductor Protection: Protect cables against damage from fault currents according to ICEA P-32-382, ICEA P-45-482, and protection recommendations in IEEE 242. Demonstrate that equipment withstands the maximum short-circuit current for a time equivalent to the tripping time of the primary relay protection or total clearing time of the fuse. To determine temperatures that damage insulation, use curves from cable manufacturers or from listed standards indicating conductor size and short-circuit current.

J. Generator Protection: Select protection according to manufacturer's written instructions and to IEEE 242.

K. Include the ac fault-current decay from induction motors, synchronous motors, and asynchronous generators and apply to low- and medium-voltage, three-phase ac systems. Also account for fault-current dc decrement, to address asymmetrical requirements of interrupting equipment.

L. Calculate short-circuit momentary and interrupting duties for a three-phase bolted fault and a single line-to-ground fault at each equipment indicated on one-line diagram.

1. For grounded systems, provide a bolted line-to-ground fault-current study for areas as defined for the three-phase bolted fault short-circuit study.

M. Protective Device Evaluation:

1. Evaluate equipment and protective devices and compare to short-circuit ratings.
2. Adequacy of switchgear, motor-control centers, and panelboard bus bars to withstand short-circuit stresses.
3. Any application of series-rated devices shall be recertified, complying with requirements in NFPA 70.
4. Include in the report identification of any protective device applied outside its capacity.

3.04 LOAD-FLOW AND VOLTAGE-DROP STUDY

A. Perform a load-flow and voltage-drop study to determine the steady-state loading profile of the system. Analyze power system performance two times as follows:

1. Determine load flow and voltage drop based on full-load currents obtained in "Power System Data" Article.
2. Determine load flow and voltage drop based on 80 percent of the design capacity of load buses.
3. Prepare load-flow and voltage-drop analysis and report to show power system components that are overloaded, or might become overloaded; show bus voltages that are less than as prescribed by NFPA 70.

3.05 MOTOR-STARTING STUDY

A. Perform a motor-starting study to analyze the transient effect of system's voltage profile during motor starting. Calculate significant motor-starting voltage profiles and analyze the effects of motor starting on the power system stability.

3.06 FIELD ADJUSTING

A. Adjust relay and protective device settings according to recommended settings provided by the coordination study. Field adjustments shall be completed by the engineering service division of equipment manufacturer under the "Startup and Acceptance Testing" contract portion.

B. Make minor modifications to equipment as required to accomplish compliance with short-circuit and protective device coordination studies.

C. Testing and adjusting shall be by a full-time employee of the Field Adjusting Agency, who holds NETA ETT-Certified Technician Level III or NICET Electrical Power Testing Level III certification.

1. Perform each visual and mechanical inspection and electrical test stated in NETA ATS. Certify compliance with test parameters. Perform NETA tests and inspections for all adjustable overcurrent protective devices.

3.07 DEMONSTRATION

A. Engage Power Systems Analysis Specialist to train Owner's maintenance personnel in the following:

1. Acquaint personnel in fundamentals of operating the power system in normal and emergency modes.
2. Hand-out and explain the coordination study objectives, study descriptions, purpose, basis, and scope. Include case descriptions, definition of terms, and guide for interpreting time-current coordination curves.
3. For Owner's maintenance staff certified as NETA ETT-Certified Technicians Level III or NICET Electrical Power Testing Level III Technicians, teach how to adjust, operate, and maintain overcurrent protective device settings.

END OF SECTION

SECTION 26 05 73.19
ARC-FLASH HAZARD ANALYSIS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SUMMARY

A. Section includes a computer-based, arc-flash study to determine the arc-flash hazard distance and the incident energy to which personnel could be exposed during work on or near electrical equipment.

1.03 DEFINITIONS

A. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

B. Field Adjusting Agency: An independent electrical testing agency with full-time employees and the capability to adjust devices and conduct testing indicated and that is a member company of NETA.

C. One-Line Diagram: A diagram that shows, by means of single lines and graphic symbols, the course of an electric circuit or system of circuits and the component devices or parts used therein.

D. Power System Analysis Software Developer: An entity that commercially develops, maintains, and distributes computer software used for power system studies.

E. Power Systems Analysis Specialist: Professional engineer in charge of performing the study and documenting recommendations, licensed in the state where Project is located.

F. Protective Device: A device that senses when an abnormal current flow exists and then removes the affected portion from the system.

G. SCCR: Short-circuit current rating.

H. Service: The conductors and equipment for delivering electric energy from the serving utility to the wiring system of the premises served.

I. Single-Line Diagram: See "One-Line Diagram."

1.04 ACTION SUBMITTALS

A. Product Data: For computer software program to be used for studies.

B. Study Submittals: Submit the following submittals after the approval of system protective devices submittals. Submittals shall be in digital form:

1. Arc-flash study input data, including completed computer program input data sheets.
2. Arc-flash study report; signed, dated, and sealed by Power Systems Analysis Specialist.

3. Submit study report for action prior to receiving final approval of distribution equipment submittals. If formal completion of studies will cause delay in equipment manufacturing, obtain approval from Architect for preliminary submittal of sufficient study data to ensure that selection of devices and associated characteristics is satisfactory.

1.05 INFORMATIONAL SUBMITTALS

A. Qualification Data:

1. For Power Systems Analysis Software Developer.
2. For Power System Analysis Specialist.
3. For Field Adjusting Agency.

B. Product Certificates: For arc-flash hazard analysis software, certifying compliance with IEEE 1584 and NFPA 70E.

1.06 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data:

1. Provide maintenance procedures in equipment manuals according to requirements in NFPA 70E.
2. Operation and Maintenance Procedures: In addition to items specified in Section 017823 "Operation and Maintenance Data," provide maintenance procedures for use by Owner's personnel that comply with requirements in NFPA 70E.

1.07 QUALITY ASSURANCE

A. Study shall be performed using commercially developed and distributed software designed specifically for power system analysis.

B. Software algorithms shall comply with requirements of standards and guides specified in this Section.

C. Manual calculations are unacceptable.

D. Power System Analysis Software Qualifications: An entity that owns and markets computer software used for studies, having performed successful studies of similar magnitude on electrical distribution systems using similar devices.

1. Computer program shall be designed to perform arc-flash analysis or have a function, component, or add-on module designed to perform arc-flash analysis.
2. Computer program shall be developed under the charge of a licensed professional engineer who holds IEEE Computer Society's Certified Software Development Professional certification.

E. Power Systems Analysis Specialist Qualifications: Professional engineer in charge of performing the arc-flash study, analyzing the arc flash, and documenting recommendations, licensed in the state where Project is located. All elements of the study shall be performed under the direct supervision and control of this professional engineer.

F. Arc-Flash Study Certification: Arc-Flash Study Report shall be signed and sealed by Power Systems Analysis Specialist.

G. Field Adjusting Agency Qualifications:

1. Employer of a NETA ETT-Certified Technician Level III or NICET Electrical Power Testing Level III certification responsible for all field adjusting of the Work.
2. A member company of NETA.
3. Acceptable to authorities having jurisdiction.

PART 2 - PRODUCTS

2.01 COMPUTER SOFTWARE DEVELOPERS

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

1. EasyPower, LLC (formerly ESA Inc.).
2. Power Analytics, Corporation.
3. SKM Systems Analysis, Inc.

B. Comply with IEEE 1584 and NFPA 70E.

C. Analytical features of device coordination study computer software program shall have the capability to calculate "mandatory," "very desirable," and "desirable" features as listed in IEEE 399.

2.02 ARC-FLASH STUDY REPORT CONTENT

A. Executive summary of study findings.

B. Study descriptions, purpose, basis, and scope. Include case descriptions, definition of terms, and guide for interpretation of results.

C. One-line diagram, showing the following:

1. Protective device designations and ampere ratings.
2. Conductor types, sizes, and lengths.
3. Transformer kilovolt ampere (kVA) and voltage ratings, including derating factors and environmental conditions.
4. Motor and generator designations and kVA ratings.
5. Switchgear, switchboard, motor-control center, panelboard designations, and ratings.

D. Study Input Data: As described in "Power System Data" Article.

E. Short-Circuit Study Output Data: As specified in "Short-Circuit Study Output Reports" Paragraph in "Short-Circuit Study Report Contents" Article in Section 260573.13 "Short-Circuit Studies."

F. Protective Device Coordination Study Report Contents: As specified in "Coordination Study Report Contents" Article in Section 260573.16 "Coordination Studies."

G. Arc-Flash Study Output Reports:

1. Interrupting Duty Report: Three-phase and unbalanced fault calculations, showing the following for each equipment location included in the report:

a. Voltage.
b. Calculated symmetrical fault-current magnitude and angle.
c. Fault-point X/R ratio.

d. No AC Decrement (NACD) ratio.
e. Equivalent impedance.
f. Multiplying factors for 2-, 3-, 5-, and 8-cycle circuit breakers rated on a symmetrical basis.
g. Multiplying factors for 2-, 3-, 5-, and 8-cycle circuit breakers rated on a total basis.

H. Incident Energy and Flash Protection Boundary Calculations:

1. Arcing fault magnitude.
2. Protective device clearing time.
3. Duration of arc.
4. Arc-flash boundary.
5. Restricted approach boundary.
6. Limited approach boundary.
7. Working distance.
8. Incident energy.
9. Hazard risk category.
10. Recommendations for arc-flash energy reduction.

I. Fault study input data, case descriptions, and fault-current calculations including a definition of terms and guide for interpretation of computer printout.

2.03 ARC-FLASH WARNING LABELS

A. Comply with requirements in Section 260553 "Identification for Electrical Systems" for self-adhesive equipment labels. Produce a 3.5-by-5-inch (76-by-127-mm) self-adhesive equipment label for each work location included in the analysis.

B. Label shall have an orange header with the wording, "WARNING, ARC-FLASH HAZARD," and shall include the following information taken directly from the arc-flash hazard analysis:

1. Location designation.
2. Nominal voltage.
3. Protection boundaries.
    a. Arc-flash boundary.
    b. Restricted approach boundary.
    c. Limited approach boundary.
4. Arc flash PPE category.
5. Required minimum arc rating of PPE in Cal/cm squared.
6. Available incident energy.
7. Working distance.
8. Engineering report number, revision number, and issue date.

C. Labels shall be machine printed, with no field-applied markings.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine Project overcurrent protective device submittals. Proceed with arc-flash study only after relevant equipment submittals have been assembled. Overcurrent protective devices that have not been submitted and approved prior to arc-flash study may not be used in study.

3.02 ARC-FLASH HAZARD ANALYSIS

A. Comply with NFPA 70E and its Annex D for hazard analysis study.

B. Preparatory Studies: Perform the Short-Circuit and Protective Device Coordination studies prior to starting the Arc-Flash Hazard Analysis.

1. Short-Circuit Study Output: As specified in "Short-Circuit Study Output Reports" Paragraph in "Short-Circuit Study Report Contents" Article in Section 260573.13 "Short-Circuit Studies."
2. Coordination Study Report Contents: As specified in "Coordination Study Report Contents" Article in Section 260573.16 "Coordination Studies."

C. Calculate maximum and minimum contributions of fault-current size.

1. Maximum calculation shall assume a maximum contribution from the utility and shall assume motors to be operating under full-load conditions.
2. Calculate arc-flash energy at 85 percent of maximum short-circuit current according to IEEE 1584 recommendations.
3. Calculate arc-flash energy at 38 percent of maximum short-circuit current according to NFPA 70E recommendations.
4. Calculate arc-flash energy with the utility contribution at a minimum and assume no motor contribution.

D. Calculate the arc-flash protection boundary and incident energy at locations in electrical distribution system where personnel could perform work on energized parts.

E. Include medium- and low-voltage equipment locations, except equipment rated 240 V ac or less fed from transformers less than 125 kVA.

F. Calculate the limited, restricted, and prohibited approach boundaries for each location.

G. Incident energy calculations shall consider the accumulation of energy over time when performing arc-flash calculations on buses with multiple sources. Iterative calculations shall take into account the changing current contributions, as the sources are interrupted or decremented with time. Fault contribution from motors and generators shall be decremented as follows:

1. Fault contribution from induction motors shall not be considered beyond three to five cycles.
2. Fault contribution from synchronous motors and generators shall be decayed to match the actual decrement of each as closely as possible (for example, contributions from permanent magnet generators will typically decay from 10 per unit to three per unit after 10 cycles).

H. Arc-flash energy shall generally be reported for the maximum of line or load side of a circuit breaker. However, arc-flash computation shall be performed and reported for both line and load side of a circuit breaker as follows:

1. When the circuit breaker is in a separate enclosure.

2. When the line terminals of the circuit breaker are separate from the work location.

I. Base arc-flash calculations on actual overcurrent protective device clearing time. Cap maximum clearing time at two seconds based on IEEE 1584, Section B.1.2.

3.03 POWER SYSTEM DATA

A. Obtain all data necessary for conduct of the arc-flash hazard analysis.

1. Verify completeness of data supplied on one-line diagram on Drawings. Call discrepancies to Architect's attention.
2. For new equipment, use characteristics from approved submittals under provisions of action submittals and information submittals for this Project.
3. For existing equipment, whether or not relocated, obtain required electrical distribution system data by field investigation and surveys conducted by qualified technicians and engineers.

B. Electrical Survey Data: Gather and tabulate the following input data to support study. Comply with recommendations in IEEE 1584 and NFPA 70E as to the amount of detail that is required to be acquired in the field. Field data gathering shall be under the direct supervision and control of the engineer in charge of performing the study, and shall be by the engineer or its representative who holds NETA ETT-Certified Technician Level III or NICET Electrical Power Testing Level III certification. Data include, but are not limited to, the following:

1. Product Data for overcurrent protective devices specified in other Sections and involved in overcurrent protective device coordination studies. Use equipment designation tags that are consistent with electrical distribution system diagrams, overcurrent protective device submittals, input and output data, and recommended device settings.
2. Obtain electrical power utility impedance or available short circuit current at the service.
3. Power sources and ties.
4. Short-circuit current at each system bus (three phase and line to ground).
5. Full-load current of all loads.
6. Voltage level at each bus.
7. For transformers, include kVA, primary and secondary voltages, connection type, impedance, X/R ratio, taps measured in percent, and phase shift.
8. For reactors, provide manufacturer and model designation, voltage rating and impedance.
9. For circuit breakers and fuses, provide manufacturer and model designation. List type of breaker, type of trip and available range of settings, SCCR, current rating, and breaker settings.
10. Generator short-circuit current contribution data, including short-circuit reactance, rated kVA, rated voltage, and X/R ratio.
11. For relays, provide manufacturer and model designation, current transformer ratios, potential transformer ratios, and relay settings.
12. Busway manufacturer and model designation, current rating, impedance, lengths, size, and conductor material.
13. Motor horsepower and NEMA MG 1 code letter designation.
14. Low-voltage conductor sizes, lengths, number, conductor material and conduit material (magnetic or nonmagnetic).
15. Medium-voltage conductor sizes, lengths, conductor material, conductor construction and metallic shield performance parameters, and conduit material (magnetic or nonmagnetic).

3.04 LABELING

A. Apply one arc-flash label on the front cover of each section of the equipment for each equipment included in the study. Base arc-flash label data on highest values calculated at each location.

B. Each piece of equipment listed below shall have an arc-flash label applied to it:

1. Low voltage transformers. Exclude transformers with high voltage side 240 V or less and less than 125 kVA.
2. Panelboard and safety switch over 250 V.
3. Applicable panelboard and safety switch under 250 V.
4. Control panel.
5. Pedestal.

C. Note on record Drawings the location of equipment where the personnel could be exposed to arc-flash hazard during their work.

1. Indicate arc-flash energy.
2. Indicate protection level required.

3.05 APPLICATION OF WARNING LABELS

A. Install arc-flash warning labels under the direct supervision and control of Power System Analysis Specialist.

3.06 DEMONSTRATION

A. Engage Power Systems Analysis Specialist to train Owner's maintenance personnel in potential arc-flash hazards associated with working on energized equipment and the significance of arc-flash warning labels.

END OF SECTION

SECTION 260923
LIGHTING CONTROL DEVICES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Outdoor photoelectric switches, solid state, luminaire-mounted.
2. Outdoor motion sensors.
3. Conductors and cables.

B. Related Requirements:
1. Section 262726 "Wiring Devices" for wall-box dimmers, non-networkable wall-switch occupancy sensors, and manual light switches.

1.2 ACTION SUBMITTALS

A. Product Data:

1. For each type of product.

B. Shop Drawings:

1. Show installation details for the following:

a. Occupancy sensors.

2. Interconnection diagrams showing field-installed wiring.
3. Include diagrams for power, signal, and control wiring.

C. Field quality-control reports.

1.3 INFORMATIONAL SUBMITTALS

A. Sample Warranty: For manufacturer's warranties.

1.4 WARRANTY

A. Special Extended Warranty: Manufacturer and Installer warrant that installed lighting control devices perform in accordance with specified requirements and agree to repair or replace, including labor, materials, and equipment, devices that fail to perform as specified within extended warranty period.

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

a. Faulty operation of lighting control software.
b. Faulty operation of lighting control devices.

2. Extended Warranty Period: Two year(s) from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 OUTDOOR PHOTOELECTRIC SWITCHES, SOLID STATE, LUMINAIRE-MOUNTED

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

1. Cooper Industries, Inc.
2. Intermatic, Inc.
3. Leviton Manufacturing Co., Inc.
4. NSi Industries LLC.
5. TE Connectivity Ltd.

B. Description: Solid state, with SPST dry contacts rated for 1800 VA inductive, to operate connected load, complying with UL 773, and compatible with CFL and LED lamps.

1. Listed and labeled in accordance with NFPA 70, by a qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.
2. Light-Level Monitoring Range: 1.5 to 10 fc (16.14 to 108 lx), with an adjustment for turn-on and turn-off levels within that range.
3. Time Delay: Thirty-second minimum, to prevent false operation.
4. Lightning Arrester: Air-gap type.
5. Mounting: Twist lock complying with ANSI C136.10, with base from same source and manufacturer as switch.
6. Failure Mode: Luminaire stays ON.

2.2 OUTDOOR MOTION SENSORS

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

1. Cooper Industries, Inc.
2. Hubbell Control Solutions; brand of Hubbell Electrical Solutions; Hubbell Incorporated.
3. Leviton Manufacturing Co., Inc.
4. Lithonia Lighting; Acuity Brands Lighting, Inc.
5. Sensor Switch, Inc.
6. WattStopper; Legrand North America, LLC.

B. Description: Solid-state outdoor motion sensors, integral to luminaire.

1. Listed and labeled in accordance with NFPA 70, by a qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application, and must comply with California Title 24.
2. PIR type, weatherproof. Detect occurrences of 6 inch (150 mm) minimum movement of any portion of a human body that presents a target of not less than 36 sq. inch (23 200 sq. mm). Comply with UL 773A.
3. Switch Rating:

    a. Luminaire-Mounted Sensor: 1000 W incandescent, 500 VA fluorescent/LED.

4. Switch Type: SP
5. Voltage: Match the circuit voltage type.
6. Detector Coverage:

a. Standard Range: 210-degree field of view, with a minimum coverage area of 900 sq. ft. (84 sq. m).
b. Long Range: 180-degree field of view and 110 ft. (34 m) detection range.

7. Ambient-Light Override: Concealed, field-adjustable, light-level sensor from 10 to 150 fc (108 to 1600 lx). The switch prevents the lights from turning on when the light level is higher than the set point of the sensor.
8. Concealed, "off" time-delay selector at 30 seconds and 5, 10, and 20 minutes.
9. Operating Ambient Conditions: Suitable for operation in ambient temperatures ranging from minus 40 to plus 130 deg F (minus 40 to plus 54 deg C), rated as "raintight" in accordance with UL 773A.

2.3 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."

B. Classes 2 and 3 Control Cable: Multiconductor cable with stranded-copper conductors not smaller than No. 18 AWG. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

C. Class 1 Control Cable: Multiconductor cable with stranded-copper conductors not smaller than No. 14 AWG. Comply with requirements in Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine lighting control devices before installation. Reject lighting control devices that are wet, moisture damaged, or mold damaged.

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

3.2 INSTALLATION OF SENSORS

A. Install and aim sensors in locations to achieve not less than 90 percent coverage of areas indicated. Do not exceed coverage limits specified in manufacturer's instructions.

3.3 INSTALLATION OF WIRING

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: Separate power-limited and nonpower-limited conductors in accordance with conductor manufacturer's instructions.

C. Size conductors in accordance with lighting control device manufacturer's instructions unless otherwise indicated.

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

3.4 IDENTIFICATION

A. Identify components and power and control wiring in accordance with Section 260553 "Identification for Electrical Systems.

1. Identify controlled circuits in lighting contactors.
2. Identify circuits or luminaires controlled by photoelectric and occupancy sensors at each sensor.

B. Label time switches and contactors with a unique designation.

3.5 FIELD QUALITY CONTROL

A. Tests and Inspections:

1. Operational Test: After installing time switches and sensors, and after electrical circuitry has been energized, start units to confirm proper unit operation.
2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.

B. Nonconforming Work:

1. Lighting control devices will be considered defective if they do not pass tests and inspections.
2. Remove and replace defective units and retest.

C. Prepare test and inspection reports.

3.6 ADJUSTING

A. Occupancy Adjustments: When requested within 12 months from date of Substantial Completion, provide on-site assistance in adjusting lighting control devices to suit actual occupied conditions. Provide up to two visits to Project during other-than-normal occupancy hours for this purpose.

1. For occupancy and motion sensors, verify operation at outer limits of detector range. Set time delay to suit Owner's operations.

3.7 MAINTENANCE

A. Software and Firmware Service Agreement:

1. Technical Support: Beginning at Substantial Completion, verify that software and firmware service agreement includes software support for two years.
2. Upgrade Service: At Substantial Completion, update software and firmware to latest version. Install and program software upgrades that become available within two years from date of Substantial Completion. Verify upgrading software includes operating system and new or revised licenses for using software.

    a. Upgrade Notice: No fewer than 30 days to allow Owner to schedule and access the system and to upgrade computer equipment if necessary.

3. Upgrade Reports: Prepare written report after each update, documenting upgrades installed.

END OF SECTION 260923

SECTION 262213
LOW-VOLTAGE DISTRIBUTION TRANSFORMERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Distribution, dry-type transformers with nominal primary and secondary rating of 600 V and less, with capacities up to 1500 kVA.

1.2 ACTION SUBMITTALS

A. Product Data:

1. For each type of product.

a. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type and size of transformer.
b. Include rated nameplate data, capacities, weights, dimensions, minimum clearances, installed devices and features, and performance for each type and size of transformer.

B. Shop Drawings:

1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of field connections.
2. Vibration Isolation Base Details: Detail fabrication including anchorages and attachments to structure and to supported equipment.
3. Include diagrams for power, signal, and control wiring.

C. Field Quality-Control Submittals:

1. Field quality-control reports.

1.3 INFORMATIONAL SUBMITTALS

A. Manufacturers' Published Instructions: Record copy of official installation instructions issued to Installer by manufacturer for the following:

1. Transformer temporary heating, working clearances, anchoring, torque values, and insulation-resistance testing.

B. Source quality-control reports.

1.4 DELIVERY, STORAGE, AND HANDLING

A. Inspection: On receipt, inspect for and note shipping damage to packaging and transformer.

1. If manufacturer packaging is removed for inspection, and transformer will be stored after inspection, re-package transformer using original or new packaging materials that provide protection equivalent to manufacturer's packaging.

B. Storage: Store in warm, dry, and temperature-stable location in original shipping packaging.

C. Temporary Heating: Apply temporary heat in accordance with manufacturer's published instructions within enclosure of ventilated-type units, throughout periods during which equipment is not energized and when transformer is not in space that is continuously under normal control of temperature and humidity.

D. Handling: Follow manufacturer's instructions for lifting and transporting transformers.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

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

1. Eaton.
2. Federal Pacific.
3. Square D; Schneider Electric USA.

B. Source Limitations: Obtain each type of transformer from single source from single manufacturer.

2.2 GENERAL TRANSFORMER REQUIREMENTS

A. Description: Factory-assembled and -tested, air-cooled units for 60 Hz service.

B. Electrical Components, Devices, and Accessories: Listed and labeled in accordance with NFPA 70, by qualified electrical testing laboratory recognized by authorities having jurisdiction, and marked for intended location and application.

C. Transformers Rated 15 kVA and Larger:

1. Comply with 10 CFR 431 (DOE 2016) efficiency levels.
2. Marked as compliant with DOE 2016 efficiency levels by qualified electrical testing laboratory recognized by authorities having jurisdiction.

D. Shipping Restraints: Paint or otherwise color-code bolts, wedges, blocks, and other restraints that are to be removed after installation and before energizing. Use fluorescent colors that are easily identifiable inside transformer enclosure.

2.3 DISTRIBUTION TRANSFORMERS

A. Comply with NFPA 70.

B. Cores: Electrical grade, non-aging silicon steel with high permeability and low hysteresis losses.

1. One leg per phase.

2. Core volume must allow efficient transformer operation at 10 percent above nominal tap voltage.
3. Grounded to enclosure.

C. Coils: Continuous windings without splices except for taps.

1. Coil Material: Copper.
2. Internal Coil Connections: Brazed or pressure type.
3. Terminal Connections: Bolted.

D. Enclosure: Ventilated.

1. Core and coil must be encapsulated within resin compound to seal out moisture and air.
2. KVA Ratings: Based on convection cooling only and not relying on auxiliary fans.
3. Wiring Compartment: Sized for conduit entry and wiring installation.
4. Environmental Protection:
   a. Outdoor: UL 50E, Type 3R.

5. Finish Color: Gray weather-resistant enamel.

E. Taps for Transformers 25 kVA and Larger: Two 2.5 percent taps above and two 2.5 percent taps below normal full capacity.

F. Insulation Class, 30 kVA and Larger: 220 deg C, UL-component-recognized insulation system with maximum of 150 deg C rise above 40 deg C ambient temperature.

G. Grounding: Provide ground-bar kit or ground bar installed on inside of transformer enclosure.

H. K-Factor Rating: Transformers indicated to be K-factor rated must comply with UL 1561 requirements for nonsinusoidal load current-handling capability to degree defined by designated K-factor.

1. Unit may not overheat when carrying full-load current with harmonic distortion corresponding to designated K-factor, without exceeding indicated insulation class in 40 deg C maximum ambient and 24-hour average ambient of 30 deg C.
2. Indicate value of K-factor on transformer nameplate.
3. Unit must comply with requirements of DOE 2016 efficiency levels when tested in accordance with NEMA TP 2 with K-factor equal to one.

I. Low-Sound-Level Requirements: Maximum sound levels when factory tested in accordance with IEEE C57.12.91, as follows:
1. 30.01 to 50.00 kVA: 45 dB(A-weighted) for K-factors of 1, 4, and 9.

2.4 IDENTIFICATION

A. Nameplates:

1. Engraved, laminated-acrylic or melamine plastic signs for distribution transformers, mounted with corrosion-resistant screws. Nameplates and label products are specified in Section 260553 "Identification for Electrical Systems."

2.5 SOURCE QUALITY CONTROL

A. Testing Administrant: Engage qualified electrical testing agency to evaluate transformer.

B. Factory Tests and Inspections: Test and inspect assembled system, by, or under supervision of, qualified electrical testing laboratory recognized by authorities having jurisdiction, in accordance with IEEE C57.12.01 and IEEE C57.12.91 before delivering to site. Affix label with name and date of manufacturer's certification of system compliance on control units.

1. Resistance measurements of windings at rated voltage connections and at tap connections.
2. Ratio tests at rated voltage connections and at tap connections.
3. Phase relation and polarity tests at rated voltage connections.
4. No load losses, and excitation current and rated voltage at rated voltage connections.
5. Impedance and load losses at rated current and rated frequency at rated voltage connections.
6. Applied and induced tensile tests.
7. Regulation and efficiency at rated load and voltage.
8. Insulation-Resistance Tests:

    a. Line-side to ground.
    b. Load-side to ground.
    c. Line-side to load-side.

9. Temperature tests.
10. Factory Sound-Level Tests: Conduct sound-level tests on equipment for this Project.

C. Nonconforming Work:

1. System equipment that does not pass tests and inspections will be considered defective.

D. Prepare test and inspection reports.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine conditions for compliance with enclosure- and ambient-temperature requirements for transformers.

B. Verify that field measurements are as needed to maintain working clearances required by NFPA 70 and manufacturer's published instructions.

C. Examine walls, floors, roofs, and concrete bases for suitable mounting conditions where transformers will be installed.

D. Verify that ground connections are in place and requirements in Section 260526 "Grounding and Bonding for Electrical Systems" have been met.

E. Environment: Enclosures must be rated for environment in which they are located. Covers for UL 50E, Type 4X enclosures may not cause accessibility problems.

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

3.2 INSTALLATION

A. Install transformers level and plumb on concrete base with vibration-dampening supports. Locate transformers away from corners and not parallel to adjacent wall surface.

B. Secure covers to enclosure and tighten bolts to manufacturer-recommended torques to reduce noise generation.

C. Remove shipping bolts, blocking, and wedges.

3.3 CONNECTIONS

A. Ground equipment in accordance with Section 260526 "Grounding and Bonding for Electrical Systems."

B. Connect wiring in accordance with Section 260519 "Low-Voltage Electrical Power Conductors and Cables."

C. Tighten electrical connectors and terminals in accordance with manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.

D. Provide flexible connections at conduit and conductor terminations and supports to eliminate sound and vibration transmission to building structure.

3.4 FIELD QUALITY CONTROL

A. Tests and Inspections:

1. Small (Up to 167 kVA Single-Phase or 500 kVA Three-Phase) Dry-Type Transformer Field Tests:

a. Visual and Mechanical Inspection.

1) Inspect physical and mechanical condition.
2) Inspect anchorage, alignment, and grounding.
3) Verify that resilient mounts are free and that shipping brackets have been removed.
4) Verify that unit is clean.
5) Perform specific inspections and mechanical tests recommended by manufacturer.
6) Verify that as-left tap connections are as specified.
7) Verify presence of surge arresters and that their ratings are as specified.

b. Electrical Tests:

1) Measure resistance at windings, taps, and bolted connections.
2) Perform insulation-resistance tests winding-to-winding and windings-to-ground. Apply voltage in accordance with manufacturer's published data. In absence of manufacturer's published data, comply with NETA ATS, Table 100.5. Calculate polarization index: value of index may not be less than 1.0.
3) Perform turns-ratio tests at tap positions. Test results may not deviate by more than one-half percent from either adjacent coils or calculated ratio. If test fails, replace transformer.
4) Verify correct secondary voltage, phase-to-phase and phase-to-neutral, after energization and prior to loading.

B. Test Labeling: On completion of satisfactory testing of units, attach dated and signed "Satisfactory Test" label to tested components.

C. Nonconforming Work:

1. Transformer will be considered defective if it does not pass tests and inspections.
2. Remove and replace units that do not pass tests or inspections and retest as specified above.

D. Assemble and submit test and inspection reports.

E. Manufacturer Services:

1. Engage factory-authorized service representative to support field tests and inspections.

3.5 ADJUSTING

A. Record transformer secondary voltage at unit for at least 48 hours of typical occupancy period. Adjust transformer taps to provide optimum voltage conditions at secondary terminals. Optimum is defined as not exceeding nameplate voltage plus 5 percent and not being lower than nameplate voltage minus 3 percent at maximum load conditions. Submit recording and tap settings as test results.

B. Output Settings Report: Prepare written report recording output voltages and tap settings.

3.6 CLEANING

A. Vacuum dirt and debris; do not use compressed air to assist in cleaning.

END OF SECTION 262213

SECTION 262413
SWITCHBOARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:

1. Service and distribution switchboards rated 600 V and less.
2. Disconnecting and overcurrent protective devices.
3. Accessory components and features.
4. Identification.

B. Related Requirements

1. Section 260573.19 "Arc-Flash Hazard Analysis" for arc-flash analysis and arc-flash label requirements.

1.3 ACTION SUBMITTALS

A. Product Data: For each switchboard, overcurrent protective device, surge protection device, ground-fault protector, accessory, and component.

1. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, accessories, and finishes.

B. Shop Drawings: For each switchboard and related equipment.

1. Include dimensioned plans, elevations, sections, and details, including required clearances and service space around equipment. Show tabulations of installed devices, equipment features, and ratings.
2. Detail enclosure types for types other than NEMA 250, Type 1.
3. Detail bus configuration, current, and voltage ratings.
4. Detail short-circuit current rating of switchboards and overcurrent protective devices.
5. Detail utility company's metering provisions with indication of approval by utility company.
6. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.

7. Include time-current coordination curves for each type and rating of overcurrent protective device included in switchboards. Submit on translucent log-log graft paper; include selectable ranges for each type of overcurrent protective device.
8. Include schematic and wiring diagrams for power, signal, and control wiring.

C. Delegated Design Submittal:

1. For arc-flash hazard analysis.
2. For arc-flash labels.

1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For testing agency.

B. Seismic Qualification Data: Certificates, for switchboards, overcurrent protective devices, 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.

C. Field Quality-Control Reports:

1. Test procedures used.
2. Test results that comply with requirements.
3. Results of failed tests and corrective action taken to achieve test results that comply with requirements.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For switchboards and components to include in emergency, operation, and maintenance manuals.

1. In addition to items specified in Division 01, include the following:

a. Routine maintenance requirements for switchboards and all installed components.
b. Manufacturer's written instructions for testing and adjusting overcurrent protective devices.
c. Time-current coordination curves for each type and rating of overcurrent protective device included in switchboards. Submit on translucent log-log graft paper; include selectable ranges for each type of overcurrent protective device.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers qualified as defined in NEMA PB 2.1 and trained in electrical safety as required by NFPA 70E.

B. Testing Agency Qualifications: Accredited by NETA.

1. Testing Agency's Field Supervisor: Certified by NETA to supervise on-site testing.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver switchboards in sections or lengths that can be moved past obstructions in delivery path.

B. Handle and prepare switchboards for installation according to NECA 400.

1.8 FIELD CONDITIONS

A. Installation Pathway: Remove and replace access fencing, doors, lift-out panels, and structures to provide pathway for moving switchboards into place.

B. Environmental Limitations:
1. Rate equipment for continuous operation under the following conditions unless otherwise indicated:

a. Ambient Temperature: Not exceeding 104 deg F (40 deg C).
b. Altitude: Not exceeding 6600 feet (2000 m).

1.9 COORDINATION

A. Coordinate layout and installation of switchboards and components with other construction that penetrates walls or is supported by them, including electrical and other types of equipment, raceways, piping, encumbrances to workspace clearance requirements, and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

B. Coordinate sizes and locations of concrete bases with actual equipment provided. Cast anchor-bolt inserts into bases. Concrete, reinforcement, and formwork requirements are specified with concrete.

1.10 WARRANTY

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

1. Warranty Period: Five years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Seismic Performance: Switchboards shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation. Shake-table testing shall comply with ICC-ES AC156.
2. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event."

2.2 SWITCHBOARDS

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

1. Eaton.
2. Square D; Schneider Electric USA.

B. Source Limitations: Obtain switchboards, overcurrent protective devices, components, and accessories from single source from single manufacturer.

C. Product Selection for Restricted Space: Drawings indicate maximum dimensions for switchboards including clearances between switchboards and adjacent surfaces and other items. Comply with indicated maximum dimensions.

D. 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.

E. Comply with NEMA PB 2.

F. Comply with NFPA 70.

G. Comply with UL 891.

H. Front-Connected, Front-Accessible Switchboards:

1. Main Devices: Panel mounted.
2. Branch Devices: Panel mounted.
3. Sections front and rear aligned.

I. Nominal System Voltage: 480Y/277 V.

J. Main-Bus Continuous: 600A.

K. Seismic Requirements: Fabricate and test switchboards according to IEEE 344 to withstand seismic forces.

1. Basis for Certification: Indicate whether withstand certification is based on actual test of assembled components or on calculation. Shake-table testing shall comply with ICC-ES AC156.
    a. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified and the unit will be fully operational after the seismic event."

L. Enclosure Finish for Indoor Units: Factory-applied finish in manufacturer's standard gray finish over a rust-inhibiting primer on treated metal surface.

M. Outdoor Enclosures: Type 3R.

1. Finish: Factory-applied finish in manufacturer's standard color; undersurfaces treated with corrosion-resistant undercoating.
2. Enclosure: Downward, rearward sloping roof; for each section, with provisions for padlocking.
3. Doors: Personnel door at each end of aisle, minimum width of 30 inches (762 mm); opening outwards; with panic hardware and provisions for padlocking. At least one door shall be sized to permit the largest single switchboard section to pass through without disassembling doors, hinges, or switchboard section.

N. Barriers: Between adjacent switchboard sections.

O. Service Entrance Rating: Switchboards intended for use as service entrance equipment shall contain from one to six service disconnecting means with overcurrent protection, a neutral bus with disconnecting link, a grounding electrode conductor terminal, and a main bonding jumper.

P. Utility Metering Compartment: Barrier compartment and section complying with utility company's requirements; hinged sealable door; buses provisioned for mounting utility company's current transformers and potential transformers or potential taps as required by utility company. If separate vertical section is required for utility metering, match and align with basic switchboard. Provide service entrance label and necessary applicable service entrance features.

Q. Bus Transition and Incoming Pull Sections: Matched and aligned with basic switchboard.

R. Hinged Front Panels: Allow access to circuit breaker, metering, accessory, and blank compartments.

S. Buses and Connections: Three phase, four wire unless otherwise indicated.

1. Provide phase bus arrangement A, B, C from front to back, top to bottom, and left to right when viewed from the front of the switchboard.
2. Phase- and Neutral-Bus Material: Hard-drawn copper of 98 percent conductivity,.
3. Copper feeder circuit-breaker line connections.
4. Ground Bus: Minimum-size required by UL 891, hard-drawn copper of 98 percent conductivity, equipped with mechanical connectors for feeder and branch-circuit ground conductors.
5. Main-Phase Buses and Equipment-Ground Buses: Uniform capacity for entire length of switchboard's main and distribution sections. Provide for future extensions from both ends.

6. Neutral Buses: 100 percent of the ampacity of phase buses unless otherwise indicated, equipped with mechanical connectors for outgoing circuit neutral cables. Brace bus extensions for busway feeder neutral bus.

T. Future Devices: Equip compartments with mounting brackets, supports, bus connections, and appurtenances at full rating of circuit-breaker compartment.

2.3 DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES

A. Molded-Case Circuit Breaker (MCCB): Comply with UL 489, with interrupting capacity to meet available fault currents.

1. Thermal-Magnetic Circuit Breakers: Inverse time-current element for low-level overloads and instantaneous magnetic trip element for short circuits. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A and larger.
2. Adjustable Instantaneous-Trip Circuit Breakers: Magnetic trip element with front-mounted, field-adjustable trip setting.
3. Electronic trip circuit breakers with rms sensing; field-replaceable rating plug or field-replicable electronic trip; and the following field-adjustable settings:

    a. Instantaneous trip.
    b. Long- and short-time pickup levels.
    c. Long and short time adjustments.
    d. Ground-fault pickup level, time delay, and I squared t response.
4. MCCB Features and Accessories:

    a. Standard frame sizes, trip ratings, and number of poles.
    b. Lugs: Mechanical style, suitable for number, size, trip ratings, and conductor material.
    c. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HID for feeding fluorescent and high-intensity discharge (HID) lighting circuits.

2.4 IDENTIFICATION

A. Service Equipment Label: NRTL labeled for use as service equipment for switchboards with one or more service disconnecting and overcurrent protective devices.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Receive, inspect, handle, and store switchboards according to NECA 400.

1. Lift or move panelboards with spreader bars and manufacturer-supplied lifting straps following manufacturer's instructions.
2. Use rollers, slings, or other manufacturer-approved methods if lifting straps are not furnished.

3. Protect from moisture, dust, dirt, and debris during storage and installation.
4. Install temporary heating during storage per manufacturer's instructions.

B. Examine switchboards before installation. Reject switchboards that are moisture damaged or physically damaged.

C. Examine elements and surfaces to receive switchboards for compliance with installation tolerances and other conditions affecting performance of the Work or that affect the performance of the equipment.

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

3.2 INSTALLATION

A. Install switchboards and accessories according to NECA 400.

B. Equipment Mounting: Install switchboards on concrete base, 4-inch (100-mm) nominal thickness. Comply with requirements for concrete base specified in Division 03.

1. Install conduits entering underneath the switchboard, entering under the vertical section where the conductors will terminate. Install with couplings flush with the concrete base. Extend 2 inches (50-mm) above concrete base after switchboard is anchored in place.
2. Install dowel rods to connect concrete base to concrete floor. Unless otherwise indicated, install dowel rods on 18-inch (450-mm) centers around the full perimeter of concrete base.
3. For supported equipment, install epoxy-coated anchor bolts that extend through concrete base and anchor into structural concrete floor.
4. Place and secure anchorage devices. Use setting drawings, templates, diagrams, instructions, and directions furnished with items to be embedded.
5. Install anchor bolts to elevations required for proper attachment to switchboards.
6. Anchor switchboard to building structure at the top of the switchboard if required or recommended by the manufacturer.

C. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, straps and brackets, and temporary blocking of moving parts from switchboard units and components.

D. Operating Instructions: Frame and mount the printed basic operating instructions for switchboards, including control and key interlocking sequences and emergency procedures. Fabricate frame of finished wood or metal and cover instructions with clear acrylic plastic. Mount on front of switchboards.

E. Install filler plates in unused spaces of panel-mounted sections.

F. Install overcurrent protective devices, surge protection devices, and instrumentation.

1. Set field-adjustable switches and circuit-breaker trip ranges.

G. Comply with NECA 1.

3.3 CONNECTIONS

A. Bond conduits entering underneath the switchboard to the equipment ground bus with a bonding conductor sized per NFPA 70.

B. Support and secure conductors within the switchboard according to NFPA 70.

3.4 IDENTIFICATION

A. Identify field-installed conductors, interconnecting wiring, and components; provide warning signs complying with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

B. Switchboard Nameplates: Label each switchboard compartment with a nameplate complying with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

C. Device Nameplates: Label each disconnecting and overcurrent protective device and each meter and control device mounted in compartment doors with a nameplate complying with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

3.5 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Tests and Inspections:

1. Acceptance Testing:

    a. Test insulation resistance for each switchboard bus, component, connecting supply, feeder, and control circuit. Open control and metering circuits within the switchboard, and remove neutral connection to surge protection and other electronic devices prior to insulation test. Reconnect after test.
    b. Test continuity of each circuit.
2. Perform each visual and mechanical inspection and electrical test stated in NETA Acceptance Testing Specification. Certify compliance with test parameters.
3. Correct malfunctioning units on-site where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.

4. Test and adjust controls, remote monitoring, and safeties. Replace damaged and malfunctioning controls and equipment.

C. Switchboard will be considered defective if it does not pass tests and inspections.

D. Prepare test and inspection reports, including a certified report that identifies switchboards included and that describes scanning results. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

3.6 ADJUSTING

A. Adjust moving parts and operable components to function smoothly, and lubricate as recommended by manufacturer.

3.7 PROTECTION

A. Temporary Heating: Apply temporary heat, to maintain temperature according to manufacturer's written instructions, until switchboard is ready to be energized and placed into service.

3.8 DEMONSTRATION

A. Train Owner's maintenance personnel to adjust, operate, and maintain switchboards, overcurrent protective devices, instrumentation, and accessories.

END OF SECTION 262413

SECTION 262416
PANELBOARDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section Includes:
   1. Lighting and appliance branch-circuit panelboards.

1.3 DEFINITIONS

A. ATS: Acceptance testing specification.

B. HID: High-intensity discharge.

C. MCCB: Molded-case circuit breaker.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of panelboard.

   1. Include materials, switching and overcurrent protective devices, SPDs, accessories, and components indicated.
   2. Include dimensions and manufacturers' technical data on features, performance, electrical characteristics, ratings, and finishes.

B. Shop Drawings: For each panelboard and related equipment.

   1. Include dimensioned plans, elevations, sections, and details.
   2. Show tabulations of installed devices with nameplates, conductor termination sizes, equipment features, and ratings.
   3. Detail enclosure types including mounting and anchorage, environmental protection, knockouts, corner treatments, covers and doors, gaskets, hinges, and locks.
   4. Detail bus configuration, current, and voltage ratings.
   5. Short-circuit current rating of panelboards and overcurrent protective devices.
   6. Detail features, characteristics, ratings, and factory settings of individual overcurrent protective devices and auxiliary components.
   7. Include wiring diagrams for power, signal, and control wiring.
   8. Key interlock scheme drawing and sequence of operations.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For testing agency.

B. Panelboard Schedules: For installation in panelboards.

1.6 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For panelboards and components to include in emergency, operation, and maintenance manuals. In addition to items specified in Division 01, include the following:

1. Manufacturer's written instructions for testing and adjusting overcurrent protective devices.
2. Time-current curves, including selectable ranges for each type of overcurrent protective device that allows adjustments.

1.7 MAINTENANCE MATERIAL SUBMITTALS

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

1. Keys: Two spares for each type of panelboard cabinet lock.

1.8 QUALITY ASSURANCE

A. Manufacturer Qualifications: ISO 9001 or ISO 9002 certified.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Remove loose packing and flammable materials from inside panelboards; install temporary electric heating (250 W per panelboard) to prevent condensation.

B. Handle and prepare panelboards for installation according to NECA 407.

1.10 FIELD CONDITIONS

A. Environmental Limitations:
1. Rate equipment for continuous operation under the following conditions unless otherwise indicated:

a. Ambient Temperature: Not exceeding minus 22 deg F (minus 30 deg C) to plus 104 deg F (plus 40 deg C).
b. Altitude: Not exceeding 6600 feet (2000 m).

1.11 WARRANTY

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

1. Panelboard Warranty Period: 18 months from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PANELBOARDS AND LOAD CENTERS COMMON REQUIREMENTS

A. Product Selection for Restricted Space: Drawings indicate maximum dimensions for panelboards including clearances between panelboards and adjacent surfaces and other items. Comply with indicated maximum dimensions.

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. Comply with NEMA PB 1.

D. Comply with NFPA 70.

E. Enclosures: Flush-mounted, dead-front cabinets.

1. Rated for environmental conditions at installed location.
   a. Outdoor Locations: NEMA 250, Type 3R.

2. Height: 84 inches (2.13 m) maximum.
3. Hinged Front Cover: Entire front trim hinged to box and with standard door within hinged trim cover. Trims shall cover all live parts and shall have no exposed hardware.
4. Finishes:

   a. Panels and Trim: galvanized steel, factory finished immediately after cleaning and pretreating with manufacturer's standard two-coat, baked-on finish consisting of prime coat and thermosetting topcoat.
   b. Back Boxes: Same finish as panels and trim.

F. Incoming Mains:

1. Location: Top.
2. Main Breaker: Main lug interiors up to 400 amperes shall be field convertible to main breaker.

G. Phase, Neutral, and Ground Buses:

1. Material: Hard-drawn copper, 98 percent conductivity.

   a. Plating shall run entire length of bus.
   b. Bus shall be fully rated the entire length.

2. Interiors shall be factory assembled into a unit. Replacing switching and protective devices shall not disturb adjacent units or require removing the main bus connectors.
3. Equipment Ground Bus: Adequate for feeder and branch-circuit equipment grounding conductors; bonded to box.
4. Full-Sized Neutral: Equipped with full-capacity bonding strap for service entrance applications. Mount electrically isolated from enclosure. Do not mount neutral bus in gutter.

H. Conductor Connectors: Suitable for use with conductor material and sizes.

1. Material: Hard-drawn copper, 98 percent conductivity.
2. Terminations shall allow use of 75 deg C rated conductors without derating.

3. Size: Lugs suitable for indicated conductor sizes, with additional gutter space, if required, for larger conductors.
4. Main and Neutral Lugs: Compression type, with a lug on the neutral bar for each pole in the panelboard.
5. Ground Lugs and Bus-Configured Terminators: Compression type, with a lug on the bar for each pole in the panelboard.
6. Feed-Through Lugs: Compression type, suitable for use with conductor material. Locate at opposite end of bus from incoming lugs or main device.

I. NRTL Label: Panelboards or load centers shall be labeled by an NRTL acceptable to authority having jurisdiction for use as service equipment with one or more main service disconnecting and overcurrent protective devices. Panelboards or load centers shall have meter enclosures, wiring, connections, and other provisions for utility metering. Coordinate with utility company for exact requirements.

J. Future Devices: Panelboards or load centers shall have mounting brackets, bus connections, filler plates, and necessary appurtenances required for future installation of devices.

1. Percentage of Future Space Capacity: 25 percent.

K. Panelboard Short-Circuit Current Rating: Fully rated to interrupt symmetrical short-circuit current available at terminals. Assembly listed by an NRTL for 100 percent interrupting capacity.

1. Panelboards and overcurrent protective devices rated 240 V or less shall have short-circuit ratings as shown on Drawings, but not less than 10,000 A rms symmetrical.
2. Panelboards and overcurrent protective devices rated above 240 V and less than 600 V shall have short-circuit ratings as shown on Drawings, but not less than 14,000 A rms symmetrical.

2.2 PERFORMANCE REQUIREMENTS

A. Seismic Performance: Panelboards shall withstand the effects of earthquake motions determined according to ASCE/SEI 7.

1. The term "withstand" means "the unit will remain in place without separation of any parts from the device when subjected to the seismic forces specified."

2.3 LIGHTING AND APPLIANCE BRANCH-CIRCUIT PANELBOARDS

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

1. ABB, Electrification Business.
2. Eaton.
3. Square D; Schneider Electric USA.

B. Panelboards: NEMA PB 1, lighting and appliance branch-circuit type.

C. Mains: Circuit breaker.

D. Branch Overcurrent Protective Devices: Bolt-on circuit breakers, replaceable without disturbing adjacent units.

E. Doors: Door-in-door construction with concealed hinges; secured with multipoint latch with tumbler lock; keyed alike. Outer door shall permit full access to the panel interior. Inner door shall permit access to breaker operating handles and labeling, but current carrying terminals and bus shall remain concealed.

2.4 DISCONNECTING AND OVERCURRENT PROTECTIVE DEVICES

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

1. ABB, Electrification Business.
2. Eaton.
3. Square D; Schneider Electric USA.

B. MCCB: Comply with UL 489, with interrupting capacity to meet available fault currents.

1. Thermal-Magnetic Circuit Breakers:

a. Inverse time-current element for low-level overloads.
b. Instantaneous magnetic trip element for short circuits.
c. Adjustable magnetic trip setting for circuit-breaker frame sizes 250 A and larger.

2. Adjustable Instantaneous-Trip Circuit Breakers: Magnetic trip element with front-mounted, field-adjustable trip setting.
3. Subfeed Circuit Breakers: Vertically mounted.
4. MCCB Features and Accessories:

a. Standard frame sizes, trip ratings, and number of poles.
b. Breaker handle indicates tripped status.
c. UL listed for reverse connection without restrictive line or load ratings.
d. Lugs: Compression style, suitable for number, size, trip ratings, and conductor materials.
e. Application Listing: Appropriate for application; Type SWD for switching fluorescent lighting loads; Type HID for feeding fluorescent and HID lighting circuits.
f. Rating Plugs: Three-pole breakers with ampere ratings greater than 150 amperes shall have interchangeable rating plugs or electronic adjustable trip units.
g. Multipole units enclosed in a factory assembled to operate as a single unit.
h. Handle Padlocking Device: Fixed attachment, for locking circuit-breaker handle in on or off position.

2.5 IDENTIFICATION

A. Panelboard Label: Manufacturer's name and trademark, voltage, amperage, number of phases, and number of poles shall be located on the interior of the panelboard door.

B. Breaker Labels: Faceplate shall list current rating, UL and IEC certification standards, and AIC rating.

C. Circuit Directory: Computer-generated circuit directory mounted inside panelboard door with transparent plastic protective cover.

1. Circuit directory shall identify specific purpose with detail sufficient to distinguish it from all other circuits.

2.6 ACCESSORY COMPONENTS AND FEATURES

A. Accessory Set: Include tools and miscellaneous items required for overcurrent protective device test, inspection, maintenance, and operation.

B. Portable Test Set: For testing functions of solid-state trip devices without removing from panelboard. Include relay and meter test plugs suitable for testing panelboard meters and switchboard class relays.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify actual conditions with field measurements prior to ordering panelboards to verify that equipment fits in allocated space in, and comply with, minimum required clearances specified in NFPA 70.

B. Receive, inspect, handle, and store panelboards according to NECA 407.

C. Examine panelboards before installation. Reject panelboards that are damaged, rusted, or have been subjected to water saturation.

D. Examine elements and surfaces to receive panelboards for compliance with installation tolerances and other conditions affecting performance of the Work.

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

3.2 INSTALLATION

A. Coordinate layout and installation of panelboards and components with other construction that penetrates walls or is supported by them, including electrical and other types of equipment, raceways, piping, encumbrances to workspace clearance requirements, and adjacent surfaces. Maintain required workspace clearances and required clearances for equipment access doors and panels.

B. Comply with NECA 1.

C. Install panelboards and accessories according to NECA 407.

D. Temporary Lifting Provisions: Remove temporary lifting eyes, channels, and brackets and temporary blocking of moving parts from panelboards.

E. Mount top of trim 90 inches (2286 mm) above finished floor unless otherwise indicated.

F. Mount panelboard cabinet plumb and rigid without distortion of box.

G. Mount recessed panelboards with fronts uniformly flush with wall finish and mating with back box.

H. Install overcurrent protective devices and controllers not already factory installed.

1. Set field-adjustable, circuit-breaker trip ranges.
2. Tighten bolted connections and circuit breaker connections using calibrated torque wrench or torque screwdriver per manufacturer's written instructions.

I. Make grounding connections and bond neutral for services and separately derived systems to ground. Make connections to grounding electrodes, separate grounds for isolated ground bars, and connections to separate ground bars.

J. Install filler plates in unused spaces.

3.3 IDENTIFICATION

A. Identify field-installed conductors, interconnecting wiring, and components; install warning signs complying with requirements in Section 260553 "Identification for Electrical Systems."

B. Create a directory to indicate installed circuit loads; incorporate Owner's final room designations. Obtain approval before installing. Handwritten directories are not acceptable. Install directory inside panelboard door.

C. Panelboard Nameplates: Label each panelboard with a nameplate complying with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

D. Device Nameplates: Label each branch circuit device in power panelboards with a nameplate complying with requirements for identification specified in Section 260553 "Identification for Electrical Systems."

E. Install warning signs complying with requirements in Section 260553 "Identification for Electrical Systems" identifying source of remote circuit.

3.4 FIELD QUALITY CONTROL

A. Perform tests and inspections.

B. Acceptance Testing Preparation:

1. Test insulation resistance for each panelboard bus, component, connecting supply, feeder, and control circuit.
2. Test continuity of each circuit.

C. Tests and Inspections:

1. Perform each visual and mechanical inspection and electrical test for low-voltage air circuit breakers stated in NETA ATS, Paragraph 7.6 Circuit Breakers. Perform optional tests. Certify compliance with test parameters.
2. Correct malfunctioning units on-site, where possible, and retest to demonstrate compliance; otherwise, replace with new units and retest.

D. Panelboards will be considered defective if they do not pass tests and inspections.

E. Prepare test and inspection reports, including a certified report that identifies panelboards included and that describes scanning results, with comparisons of the two scans. Include notation of deficiencies detected, remedial action taken, and observations after remedial action.

3.5 ADJUSTING

A. Adjust moving parts and operable components to function smoothly, and lubricate as recommended by manufacturer.

3.6 PROTECTION

A. Temporary Heating: Prior to energizing panelboards, apply temporary heat to maintain temperature according to manufacturer's written instructions.

END OF SECTION 262416

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. 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.

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. Delegated Design: Engage a qualified professional engineer, as defined in Section 014000 "Quality Requirements," to design pole foundation.

B. 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.

C. Structural Characteristics: Comply with AASHTO LTS-6-M.

D. Dead Load: Weight of luminaire and its horizontal and vertical supports, lowering devices, and supporting structure, applied according to AASHTO LTS-6-M.

E. Live Load: Single load of 500 lbf (2200 N) distributed according to AASHTO LTS-6-M.

F. 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.

G. 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.

H. Luminaire Attachment Provisions: Comply with luminaire manufacturers' mounting requirements. Use stainless-steel fasteners and mounting bolts unless otherwise indicated.

2.1 ALUMINUM POLES

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

1. Hubbell Incorporated.
2. Lithonia Lighting; Acuity Brands Lighting, Inc.
3. Lumca Lighting.

B. Poles: Seamless, extruded structural tube complying with ASTM B221, Alloy 6061-T6, with access handhole in in pole wall.

1. Shape: Square, curved and straight, flat top.
2. Mounting Provisions: Butt flange for bolted mounting on foundation or breakaway support.

C. Brackets for Luminaires: Detachable, cantilever, without underbrace.

1. Adaptor fitting welded to pole, allowing the bracket to be bolted to the pole-mounted adapter, 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.

D. Grounding and Bonding Lugs: Bolted 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 listed in that Section, and accessible through handhole.

E. Fasteners: Stainless steel, size and type as determined by manufacturer. Corrosion-resistant items compatible with support components.

1. Materials: Compatible with poles and standards as well as to 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.

F. Handhole: Oval shaped, with minimum clear opening of 2-1/2 by 5 inches (65 by 130 mm), with cover secured by stainless-steel captive screws.

G. Prime-Coat Finish: Manufacturer's standard prime-coat finish ready for field painting.

H. Powder-Coat Finish: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" recommendations for applying and designating finishes.

1. Surface Preparation: Clean surfaces to comply with SSPC-SP 1 to remove dirt, oil, grease, and other contaminants that could impair powder coat bond. Grind welds and polish surfaces to a smooth, even finish. Remove mill scale and rust, if present, from uncoated steel, according to SSPC-SP 5/NACE No. 1 or SSPC-SP 8.
2. Powder coat shall comply with AAMA 2604.
    a. Electrostatic applied powder coating; single application with a minimum 2.5- to 3.5-mils (64- to 89-um) dry film thickness; cured according to manufacturer's instructions. Coat interior and exterior of pole for equal corrosion protection.
    b. Color: As selected by Architect from manufacturer's full range.

2.2 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.

B. Brackets for Luminaires: Detachable, cantilever, without underbrace.

1. Adaptor fitting welded to pole, allowing the bracket to be bolted to the pole-mounted adapter, 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. 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.

D. 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.

2.3 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. Sturctural 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 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.

3.5 IDENTIFICATION

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

3.6 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.

B. Related Requirements:

1. Section 260923 "Lighting Control Devices" for automatic and remote control of lighting.
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.

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. Above-grade utilities and structures.
5. Existing above-grade utilities and structures.

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.

E. Product Test Reports: For each luminaire, for tests performed by manufacturer.

F. Source quality-control reports.

G. Sample warranty.

1.6 CLOSEOUT SUBMITTALS

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 minimum70. 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: 277 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 TYPES

A. Area and Site:

1. Luminaire Shape: Curved and Straight.
2. Mounting: Pole.
3. Luminaire-Mounting Height: see schedule and detail drawings.
4. Distribution: As indicated on the drawings.
5. Diffusers and Globes: Heat and impact resistant tempered flat glass.
6. Housings:

    a. Aluminum housing and heat sink.

2.4 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" for wiring connections and wiring methods.

3.3 IDENTIFICATION

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

3.4 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.

3.5 ADJUSTING

A. Occupancy Adjustments: When requested within 12 months of date of Substantial Completion, provide on-site assistance in adjusting the direction of aim of luminaires to suit occupied conditions. Make up to two visits to Project during other-than-normal hours for this purpose. Some of this work may be required during hours of darkness.

1. During adjustment visits, inspect all luminaires. Replace lamps or luminaires that are defective.
2. Parts and supplies shall be manufacturer's authorized replacement parts and supplies.
3. Adjust the aim of luminaires in the presence of the Resident Engineer.

END OF SECTION 265619

SECTION 26 56 68
EXTERIOR ATHLETIC LIGHTING

PART 1 – GENERAL

1.1 SUMMARY

A. Work covered by this section of the specifications shall conform to the contract documents, engineering plans as well as state and local codes.

B. The purpose of these specifications is to define the lighting system performance and design standards for Beyer Park Recreations Fields using an LED Lighting source. The manufacturer / contractor shall supply lighting equipment to meet or exceed the standards set forth in these specifications.

C. The sports lighting will be for the following venues:

1. Recreation Fields 1-4
2. Basketball
3. Dog Park

D. The primary goals of this sports lighting project are:

1. Guaranteed Light Levels: Selection of appropriate light levels impact the safety of the players and the enjoyment of spectators. Therefore, light levels are guaranteed to not drop below specified target values for a period of 25 years.
2. Environmental Light Control: It is the primary goal of this project to minimize spill light to adjoining properties and glare to the players, spectators, and neighbors.
3. Cost of Ownership: In order to reduce the operating budget, the preferred lighting system shall be energy efficient and cost effective to operate. All maintenance costs shall be eliminated for the duration of the warranty.
4. Control and Monitoring: To allow for optimized use of labor resources and avoid unneeded operation of the facility, customer requires a remote on/off control system for the lighting system. Fields should be proactively monitored to detect luminaire outages over a 25-year life cycle. All communication and monitoring costs for 25-year period shall be included in the bid.

1.2 LIGHTING PERFORMANCE

A. Illumination Levels and Design Factors: Playing surfaces shall be lit to an average target illumination level and uniformity as specified in the chart below. Lighting calculations shall be developed, and field measurements taken on the grid spacing with the minimum number of grid points specified below. Appropriate light loss factors shall be applied and submitted for the basis of design. Average illumination level shall be measured in accordance with the IESNA LM-5-04 (IESNA Guide for Photometric Measurements of Area and Sports Lighting Installations). Illumination levels shall not to drop below desired target values in accordance to IES RP-6-15, Page 2, Maintained Average Illuminance and shall be guaranteed for the full warranty period.

Area of Lighting	**Average Target Illumination Levels**	**Maximum to Minimum Uniformity Ratio**	**Grid Points**	**Grid Spacing**

Rec Fields 1-4	30 Footcandles	2.5:1	Fields 1-2, 4 – 50 Field 3 - 96	30’ x 30’
Basketball	30 Footcandles	2.0:1	50	10’ x 10’
Dog Park	7 Footcandles	N/A	90	20’ x 20’

B. Color: The lighting system shall have a minimum color temperature of 4500K and a CRI of 75.

C. Mounting Heights: To ensure proper aiming angles for reduced glare and to provide better playability, minimum mounting heights shall be as described below. Higher mounting heights may be required based on photometric report and ability to ensure the top of the field angle is a minimum of 10 degrees below horizontal.

# Of Poles	Pole Designation	Pole Height
2	B1-B2	40’
8	P1-P8	70’

1.3 ENVIRONMENTAL LIGHT CONTROL

A. Light Control Luminaires: All luminaires shall utilize spill light and glare control devices including, but not limited to, internal shields, louvers, and external shields. No symmetrical beam patterns are accepted.

B. Spill Light and Glare Control: To minimize impact on adjacent properties, spill light and candela values must not exceed the following levels taken at 3 feet above grade.

150’ from Field Edge	Maximum
Specified Spill Line Horizontal Footcandles	<.5 fc
Specified Spill Line Max Vertical Footcandles	<.5 fc
Specified Spill Line Max Candela	<10,000 cd

C. Spill Scans: Spill scans must be submitted indicating the amount of horizontal and vertical footcandles along the specified lines. Light levels shall be taken at 30-foot intervals along the boundary line. Readings shall be taken with the meter orientation at both horizontal and aimed towards the most intense bank of lights. Illumination level shall be measured in accordance with the IESNA LM-5-04 after 1 hour warm up.

D. The first page of a photometric report for all luminaire types proposed showing horizontal and vertical axial candle power shall be provided to demonstrate the capability of achieving the specified performance. Reports shall be certified by a qualified testing laboratory or by a manufacturer’s laboratory with a current accreditation under the National Voluntary Laboratory Accreditation Program for Energy Efficient Lighting Products. A summary of the horizontal and vertical aiming angles for each luminaire shall be included with the photometric report.

1.4 Cost of Ownership

A. Manufacturer shall submit a 25-year Cost of Ownership summary that includes energy consumption, anticipated maintenance costs, and control costs. All costs associated with faulty luminaire replacement - equipment rentals, removal and installation labor, and shipping - are to be included in the maintenance costs.

PART 2 – PRODUCT

2.1 SPORTS LIGHTING SYSTEM CONSTRUCTION

A. Manufacturing Requirements: All components shall be designed and manufactured as a system. All luminaires, wire harnesses, drivers and other enclosures shall be factory assembled, aimed, wired, and tested.

B. Durability: All exposed components shall be constructed of corrosion resistant material and/or coated to help prevent corrosion. All exposed carbon steel shall be hot dip galvanized per ASTM A123. All exposed aluminum shall be powder coated with high performance polyester or anodized. All exterior reflective inserts shall be anodized, coated, and protected from direct environmental exposure to prevent reflective degradation or corrosion. All exposed hardware and fasteners shall be stainless steel, passivated and coated with aluminum-based thermosetting epoxy resin for protection against corrosion and stress corrosion cracking. Structural fasteners may be carbon steel and galvanized meeting ASTM A153 and ISO/EN 1461 (for hot dipped galvanizing), or ASTM B695 (for mechanical galvanizing). All wiring shall be enclosed within the cross-arms, pole, or electrical components enclosure.

C. System Description: Lighting system shall consist of the following:

1. Galvanized steel poles and cross-arm assembly.
2. Non-approved pole technology:
    a. Square static cast concrete poles will not be accepted.
    b. Direct bury steel poles which utilize the extended portion of the steel shaft for their foundation will not be accepted due to potential for internal and external corrosive reaction to the soils and long-term performance concerns.
3. Lighting systems shall use concrete foundations. See Section 2.4 for details.
    a. For a foundation using a pre-stressed concrete base embedded in concrete backfill the concrete shall be air-entrained and have a minimum compressive design strength at 28 days of 3,000 PSI. 3,000 PSI concrete specified for early pole erection actual required minimum allowable concrete strength is 1,000 PSI. All piers and concrete backfill must bear on and against firm undisturbed soil.
    b. For anchor bolt foundations or foundations using a pre-stressed concrete base in a suspended pier or re-inforced pier design pole erection may occur after 7 days. Or after a concrete sample from the same batch achieves a certain strength.
4. Manufacturer will supply all drivers and supporting electrical equipment
    a. Remote drivers and supporting electrical equipment shall be mounted approximately 10 feet above grade in aluminum enclosures. The enclosures shall be touch-safe and include drivers and fusing with indicator lights on fuses to notify when a fuse is to be replaced for each luminaire. Disconnect per circuit for each pole structure will be located in the enclosure. Integral drivers are not allowed. If allowed, integral drivers mounted at the top of the pole will require a pole mounted enclosure approximately 10 feet above grade. The enclosure shall include a disconnect per circuit, individual luminaire fusing, and surge protection. The pole shall include steps, cables, and platforms for luminaire maintenance, if owner responsible for removal of faulty luminaires.
    b. Manufacturer shall provide surge protection at the pole equal to or greater than 40 kA for each line to ground (Common Mode) as recommended by IEEE C62.41.2_2002.
5. Wire harnesses complete with an abrasion protection sleeve, strain relief and plug-in connections for fast, trouble-free installation.
6. All luminaires, visors, and cross-arm assemblies shall withstand 150 mi/h winds and maintain luminaire aiming alignment.
7. Control cabinet to provide remote on-off control, monitoring of the lighting system. See Section 2.3 for further details.
8. Manufacturer shall provide lightning grounding as defined by NFPA 780 and be UL Listed per UL 96

and UL 96A.

a. Integrated grounding via concrete encased electrode grounding system.

b. If grounding is not integrated into the structure, the manufacturer shall supply grounding electrodes, copper down conductors, and exothermic weld kits. Electrodes and conductors shall be sized as required by NFPA 780.The grounding electrode shall be minimum size of 5/8 inch diameter and 8 feet long, with a minimum of 10 feet embedment. Grounding electrode shall be connected to the structure by a grounding electrode conductor with a minimum size of 2 AWG for poles with 75 feet mounting height or less, and 2/0 AWG for poles with more than 75 feet mounting height.

D. Safety: All system components shall be UL listed for the appropriate application.

2.2 ELECTRICAL

A. Electric Power Requirements for the Sports Lighting Equipment:
1. Electric power: 480 Volt, 3 Phase
2. Maximum total voltage drops: Voltage drop to the disconnect switch located on the poles shall not exceed three (3) percent of the rated voltage.

B. Energy Consumption: The kW consumption for the field lighting system shall be 69.04 kW.

2.3 CONTROL

A. Instant On/Off Capabilities: System shall provide for instant on/off of luminaires.

B. Lighting contactor cabinet(s) constructed of NEMA Type 4 aluminum, designed for easy installation with contactors, labeled to match field diagrams and electrical design. Manual off-on-auto selector switches shall be provided.

C. Dimming: System shall provide for 3-stage dimming (high-medium-low). Dimming will be set via scheduling options (Website, app, phone, fax, email)

D. Remote Lighting Control System: System shall allow owner and users with a security code to schedule on/off system operation via a web site, phone, fax or email up to ten years in advance. Manufacturer shall provide and maintain a two-way TCP/IP communication link. Trained staff shall be available 24/7 to provide scheduling support and assist with reporting needs.

The owner may assign various security levels to schedulers by function and/or fields. This function must be flexible to allow a range of privileges such as full scheduling capabilities for all fields to only having permission to execute “early off” commands by phone. Scheduling tool shall be capable of setting curfew limits.

Controller shall accept and store 7-day schedules, be protected against memory loss during power outages, and shall reboot once power is regained and execute any commands that would have occurred during outage.

E. Remote Monitoring System: System shall monitor lighting performance and notify manufacturer if individual luminaire outage is detected so that appropriate maintenance can be scheduled. The controller shall determine switch position (manual or auto) and contactor status (open or closed).

F. Management Tools: Manufacturer shall provide a web-based database and dashboard tool of actual field usage and provide reports by facility and user group. Dashboard shall also show current status of luminaire outages, control operation and service. Mobile application will be provided suitable for IOS, Android and Blackberry devices.

Hours of Usage: Manufacturer shall provide a means of tracking actual hours of usage for the field lighting system that is readily accessible to the owner.

1. Cumulative hours: shall be tracked to show the total hours used by the facility
2. Report hours saved by using early off and push buttons by users.

G. Communication Costs: Manufacturer shall include communication costs for operating the control and

monitoring system for a period of 25 years.

H. Communication with luminaire drivers: Control system shall interface with drivers in electrical components enclosures by means of powerline communication.

2.4 STRUCTURAL PARAMETERS

A. Wind Loads: Wind loads shall be based on the 2019 California Building Code. Wind loads to be calculated using ASCE 7-10, a design wind speed of 95 mph, exposure category C and wind importance factor of 1.0.

B. Pole Structural Design: The stress analysis and safety factor of the poles shall conform to 2009 AASHTO Standard Specification for Structural Supports for Highway Signs, Luminaires, and Traffic Signals (LTS-5).

C. Foundation Design: The foundation design shall be based on soil parameters as outlined in the geotechnical report. GEOCON Inc., Project No.# G2618-11-01, dated February 9, 2021. Must also review the Storm Water report from the same company, same project number, dated February 24, 2021.

C. Foundation Drawings: Project specific foundation drawings stamped by a registered engineer in the state where the project is located are required. The foundation drawings must list the moment, shear (horizontal) force, and axial (vertical) force at ground level for each pole. These drawings must be submitted at time of bid to allow for accurate pricing.

PART 3 – EXECUTION

3.1 SOIL QUALITY CONTROL

A. It shall be the Contractor's responsibility to notify the Owner if soil conditions exist other than those on which the foundation design is based, or if the soil cannot be readily excavated. Contractor may issue a change order request / estimate for the Owner's approval / payment for additional costs associated with:

1. Providing engineered foundation embedment design by a registered engineer in the State of California for soils other than specified soil conditions.
2. Additional materials required to achieve alternate foundation
3. Excavation and removal of materials other than normal soils, such as rock, caliche, etc.

3.2 DELIVERY TIMING

A. Delivery Timing Equipment On-Site: The equipment must be on-site 6-8 from receipt of approved submittals and receipt of complete order information.

3.3 FIELD QUALITY CONTROL

A. Illumination Measurements: Upon substantial completion of the project and in the presence of the Contractor, Project Engineer, Owner's Representative, and Manufacturer's Representative, illumination measurements shall be taken and verified. The illumination measurements shall be conducted in accordance with IESNA LM-5-04.

B. Field Light Level Accountability

1. Light levels are guaranteed not to fall below the target maintained light levels for the entire warranty period of 25 years. These levels will be specifically stated as "guaranteed" on the illumination summary provided by the manufacturer.
2. The contractor/manufacturer shall be responsible for conducting initial light level testing and an additional inspection of the system, in the presence of the owner, one year from the date of commissioning of the lighting.

3. The contractor/manufacturer will be held responsible for any and all changes needed to bring these fields back to compliance for light levels and uniformities. Contractor/Manufacturer will be held responsible for any damage to the fields during these repairs.

C. Correcting Non-Conformance: If, in the opinion of the Owner or his appointed Representative, the actual performance levels including footcandles and uniformity ratios are not in conformance with the requirements of the performance specifications and submitted information, the Manufacturer shall be required to make adjustments to meet specifications and satisfy Owner.

3.4 WARRANTY AND GUARANTEE

A. 25-Year Warranty: Each manufacturer shall supply a signed warranty covering the entire system for 25 years from the date of shipment. Warranty shall guarantee specified light levels. Manufacturer shall maintain specifically funded financial reserves to assure fulfillment of the warranty for the full term. Warranty does not cover weather conditions events such as lightning or hail damage, improper installation, vandalism or abuse, unauthorized repairs or alterations, or product made by other manufacturers.

B. Maintenance: Manufacturer shall monitor the performance of the lighting system, including on/off status, hours of usage and luminaire outage for 25 years from the date of equipment shipment. Parts and labor shall be covered such that individual luminaire outages will be repaired when the usage of any field is materially impacted. Manufacturer is responsible for removal and replacement of failed luminaires, including all parts, labor, shipping, and equipment rental associated with maintenance. Owner agrees to check fuses in the event of a luminaire outage.

END OF SECTION 26 56 68

SECTION 321316
DECORATIVE CONCRETE PAVING

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes colored and textured concrete paving.

1.2 PREINSTALLATION MEETINGS

A. Preinstallation Conference: Conduct conference at Project site.

1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples: For each type of exposed color, pattern, or texture indicated.

1.4 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and approved by manufacturer of decorative concrete paving systems.

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

C. Mockups: Build mockups to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Build mockups of full-thickness sections of concrete paving to demonstrate typical joints; surface finish, texture, and color; curing; and standard of workmanship.
2. Build mockups of concrete paving in the location and of the size indicated or, if not indicated, build mockups where directed by Architect and not less than 96 inches by 96 inches.
3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

PART 2 - PRODUCTS

2.1 CONCRETE, GENERAL

A. ACI Publications: Comply with ACI 301 unless otherwise indicated.

2.2 FORMS

A. Form Materials: Plywood, metal, metal-framed plywood, or other approved panel-type materials to provide full-depth, continuous, straight, and smooth exposed surfaces.

2.3 STEEL REINFORCEMENT

A. Plain-Steel Welded-Wire Reinforcement: ASTM A 1064/A 1064M, fabricated from as-drawn steel wire into flat sheets.

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

C. Steel Bar Mats: ASTM A 184/A 184M; with ASTM A 615/A 615M, Grade 60 deformed bars; assembled with clips.

D. Bar Supports: Bolsters, chairs, spacers, and other devices for spacing, supporting, and fastening reinforcing bars, welded-wire reinforcement, and dowels in place. Manufacture bar supports according to CRSI's "Manual of Standard Practice" from steel wire, plastic, or precast concrete of greater compressive strength than concrete specified, and as follows:

2.4 CONCRETE MATERIALS

A. Cementitious Materials:

1. Portland Cement: ASTM C 150/C 150M, gray portland cement Type II.
2. Fly Ash: ASTM C 618, Class C or F.
3. Slag Cement: ASTM C 989/C 989M, Grade 100 or 120.
4. Blended Hydraulic Cement: ASTM C 595/C 595M, Type IS, portland blast-furnace slag cement.

B. Normal-Weight Aggregates: ASTM C 33/C 33M, Class 4S, uniformly graded. Provide aggregates from a single source with documented service-record data of at least 10 years' satisfactory service in similar paving applications and service conditions using similar aggregates and cementitious materials.

1. Maximum Coarse-Aggregate Size: 1 inch nominal.
2. Fine Aggregate: Free of materials with deleterious reactivity to alkali in cement.

C. Air-Entraining Admixture: ASTM C 260/C 260M.

D. Chemical Admixtures: Admixtures certified by manufacturer to be compatible with other admixtures and to contain not more than 0.1 percent water-soluble chloride ions by mass of cementitious material.

E. Color Pigment: ASTM C 979/C 979M, synthetic mineral-oxide pigments or colored water-reducing admixtures; color stable, free of carbon black, nonfading, and resistant to lime and other alkalis.

F. Water: Potable and complying with ASTM C 94/C 94M.

2.5 SURFACE COLORING MATERIALS

A. Pigmented Mineral Dry-Shake Hardener: Factory-packaged, dry combination of portland cement, graded quartz aggregate, color pigments, and plasticizing admixture. Use color pigments that are finely ground, nonfading mineral oxides interground with cement.

B. Pigmented Powder Release Agent: Factory-packaged, dry combination of surface-conditioning and dispersing agents interground with color pigments that facilitates release of stamp mats. Use color pigments that are finely ground, nonfading mineral oxides interground with cement.

C. Liquid Release Agent: Manufacturer's standard, clear, evaporating formulation that facilitates release of stamp mats and texture rollers.

2.6 CURING MATERIALS

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

B. Waterborne, Membrane-Forming Curing Compound: ASTM C 309, Type I, Class B, manufactured for colored concrete.

1. For integrally colored concrete, curing compound shall be pigmented type approved by coloring admixture manufacturer.
2. For concrete indicated to be sealed, curing compound shall be compatible with sealer.

C. Clear Acrylic Sealer, Low-to-Medium Gloss: Manufacturer's standard, waterborne, non-yellowing and UV-resistant, membrane-forming, acrylic copolymer emulsion or epoxy-modified acrylic emulsion, manufactured for colored concrete, containing not less than 15 percent solids by volume.

D. Clear Acrylic Sealer, High Gloss: Manufacturer's standard, waterborne, non-yellowing and UV-resistant, membrane-forming, high-gloss, acrylic copolymer emulsion solution, manufactured for colored concrete, containing not less than 25 percent solids by volume.

E. Slip-Resistance-Enhancing Additive: Manufacturer's standard finely graded aggregate or polymer additive, designed to be added to clear acrylic sealer to enhance slip resistance of sealed paving surface.

2.7 RELATED MATERIALS

A. Joint Fillers: ASTM D 1751, asphalt-saturated cellulosic fiber or ASTM D 1752, cork or self-expanding cork in preformed strips.

B. Polyethylene Film: ASTM D 4397, 1 mil thick, clear.

2.8 CONCRETE MIXTURES

A. Prepare design mixtures, proportioned according to ACI 301.

B. Cementitious Materials: Limit percentage, by weight, of cementitious materials other than portland cement in concrete as follows:

1. Fly Ash or Pozzolan: 25 percent.
2. Slag Cement: 50 percent.
3. Combined Fly Ash or Pozzolan, and Slag Cement: 50 percent, with fly ash or pozzolan not exceeding 25 percent.

C. Add air-entraining admixture at manufacturer's prescribed rate to result in normal-weight concrete at point of placement having an air content as follows:

1. Air Content: 5-1/2 percent plus or minus 1.5 percent.

D. Chemical Admixtures: Use admixtures according to manufacturer's written instructions.

E. Synthetic Fiber: Uniformly disperse in concrete mixture at manufacturer's recommended rate, but not less than 1.0 lb/cu. yd..

F. Color Pigment: Add color pigment to concrete mixture according to manufacturer's written instructions and to result in hardened concrete color consistent with approved mockup.

G. Concrete Mixtures: Normal-weight concrete.

1. Compressive Strength (28 Days): As indicated.
2. Maximum W/C Ratio at Point of Placement: 0.50.
3. Slump Limit: 4 inches, plus or minus 1 inch.

2.9 CONCRETE MIXING

A. Ready-Mixed Concrete: Measure, batch, and mix concrete materials and concrete according to ASTM C 94/C 94M and ASTM C 1116/C 1116M. Furnish batch certificates for each batch discharged and used in the Work.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Proof-roll prepared subbase surface below decorative concrete paving to identify soft pockets and areas of excess yielding.

3.2 PREPARATION

A. Remove loose material from compacted subbase surface immediately before placing concrete.

3.3 EDGE FORMS AND SCREED CONSTRUCTION

A. Set, brace, and secure edge forms, bulkheads, and intermediate screed guides to required lines, grades, and elevations. Install forms to allow continuous progress of work and so forms can remain in place at least 24 hours after concrete placement.

3.4 STEEL REINFORCEMENT INSTALLATION

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

3.5 JOINTS

A. General: Form construction, isolation, and contraction joints and tool edges true to line, with faces perpendicular to surface plane of concrete. Construct transverse joints at right angles to centerline unless otherwise indicated.

B. Construction Joints: Set construction joints at side and end terminations of paving and at locations where paving operations are stopped for more than one-half hour unless paving terminates at isolation joints.

C. Isolation Joints: Form isolation joints of preformed joint-filler strips abutting concrete curbs, catch basins, manholes, inlets, structures, walks, other fixed objects, and where indicated.

D. Contraction Joints: Form weakened-plane contraction joints, sectioning concrete into areas as indicated. Construct contraction joints for a depth equal to at least one-fourth of the concrete thickness.

E. Edging: After initial floating, tool edges of paving, gutters, curbs, and joints in concrete with an edging tool to a 1/8-inch radius. Repeat tooling of edges after applying surface finishes. Eliminate edging-tool marks on concrete surfaces.

3.6 CONCRETE PLACEMENT

A. Moisten subbase to provide a uniform dampened condition at time concrete is placed. Do not place concrete around manholes or other structures until they are at required finish elevation and alignment.

B. Comply with ACI 301 requirements for measuring, mixing, transporting, and placing concrete.

C. Deposit and spread concrete in a continuous operation between transverse joints. Do not push or drag concrete into place or use vibrators to move concrete into place.

D. Screed paving surface with a straightedge and strike off.

E. Commence initial floating using bull floats or darbies to impart an open-textured and uniform surface plane before excess moisture or bleedwater appears on the surface. Do not further disturb concrete surfaces before beginning finishing operations or spreading surface treatments.

3.7 FLOAT FINISHING

A. General: Do not add water to concrete surfaces during finishing operations.

B. Float Finish: Begin the second floating operation when bleedwater sheen has disappeared and concrete surface has stiffened sufficiently to permit operations. Float surface with power-driven floats or by hand floating if area is small or inaccessible to power units. Finish surfaces to true planes. Cut down high spots and fill low spots. Refloat surface immediately to uniform granular texture.

3.8 INTEGRALLY COLORED CONCRETE FINISH

A. Integrally Colored Concrete Finish: After final floating, apply the following finish:

1. Medium-to-Fine-Textured Broom Finish: Draw a soft-bristle broom across float-finished concrete surface, perpendicular to line of traffic, to provide a uniform, fine-line texture.

2. Top Cast, or approved equal finish: As indicated and prescribed by manufacturers specifications.

3.9 PIGMENTED MINERAL DRY-SHAKE HARDENER APPLICATION

A. Pigmented Mineral Dry-Shake Hardener Finish: After initial floating, apply dry-shake materials to paving surfaces according to manufacturer's written instructions and as follows:

1. After final power floating, apply the following finish:

a. Medium-to-Fine-Textured Broom Finish: Draw a soft-bristle broom across float-finished concrete surface, perpendicular to line of traffic, to provide a uniform, fine-line texture.

B. Pigmented Powder Release Agent: Uniformly distribute onto dry-shake-hardened and still-plastic concrete at a rate of 3 to 4 lb/100 sq. ft.

C. Liquid Release Agent: Uniformly mist surface of dry-shake-hardened and still-plastic concrete at a rate of 5 gal/1000 sq. ft.

3.10 CONCRETE PROTECTION AND CURING

A. General: Protect freshly placed concrete from premature drying and excessive cold or hot temperatures.

B. Comply with ACI 306.1 for cold-weather protection.

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

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

E. Curing Compound: Apply immediately after final finishing. Apply uniformly in continuous operation by power spray or roller according to manufacturer's written instructions. Recoat areas subjected to heavy rainfall within three hours after initial application. Maintain continuity of coating, and repair damage during curing period.

1. Cure integrally colored concrete with a curing compound.
2. Cure concrete finished with pigmented mineral dry-shake hardener with a curing compound.

3.11 SEALER APPLICATION

A. Clear Acrylic Sealer: Apply uniformly in two coats in continuous operations according to manufacturer's written instructions. Allow first coat to dry before applying second coat, at 90 degrees to the direction of the first coat, using same application methods and rates.

1. Begin sealing dry surface no sooner than 14 days after concrete placement.
2. Thoroughly mix slip-resistance-enhancing additive into sealer before applying sealer according to manufacturer's written instructions. Stir sealer occasionally during application to maintain even distribution of additive.

3.12 PAVING TOLERANCES

A. Comply with tolerances in ACI 117.

3.13 REPAIR AND PROTECTION

A. Remove and replace decorative concrete paving that is broken or damaged or does not comply with requirements in this Section. Remove work in complete sections from joint to joint unless otherwise approved by Architect.

B. Detailing: remove concrete "squeeze" left from tool placement during concrete placement and curing. Color coat areas with slurry of color hardener mixed with water and bonding agent to fill any voids or imperfections. Remove excess release agent with high-velocity blower.

C. Protect decorative concrete paving from damage. Exclude traffic from paving for at least 14 days after placement. When construction traffic is permitted, maintain paving as clean as possible by removing surface stains and spillage of materials as they occur.

D. Maintain decorative concrete paving free of stains, discoloration, dirt, and other foreign material. Sweep paving not more than two days before date scheduled for Substantial Completion inspections.

END OF SECTION 32 13 16

SECTION 32 15 41 - DECOMPOSED GRANITE SURFACING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

A. Section includes decomposed granite (DG) surfacing.

1.3 DEFINITIONS

A. Decomposed Granite (DG): Non-stabilized aggregate surfacing materials as specified herein.

B. Stabilized DG: DG that is stabilized by adding binder to the aggregate mixture.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Samples for Color Verification: For all proposed aggregates:

1. Quantity: 5 pounds

C. Samples for Analysis and Verification: For aggregates proposed for use in stabilized DG surfacing areas:

1. After color verification samples have been approved, submit two identical samples: One to Architect and the other to binder manufacturer.
2. Quantity: 5 pounds.
3. Include aggregate supplier’s sieve analysis for grading.
4. Allow two weeks processing time for binder manufacturer to perform additional analysis to determine blending formula.
5. Submit binder manufacturer’s blending formula to District Construction Manager for a

D. Sample Mock-up: Provide 8 ft. x 8 ft. x 4 inch thick sample mock-up with header for each color of stabilized decomposed granite.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For installer.

B. Manufacturer Certificates: Material Certificates: Signed by suppliers certifying that each material complies with requirements.

1.6 CLOSEOUT SUBMITTALS

A. Maintenance Data: For stabilized DG surfacing to include in maintenance manuals.

1.7 QUALITY ASSURANCE

A. Stabilized DG Surfacing Installer Qualifications: Installer shall be familiar with installation requirement of the specified products.

B. Stabilized DG Surfacing Mockup:

1. Build mockup to verify selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for fabrication and installation.
2. Construction of mock-up shall be the same as construction indicated on Drawings and in specifications.
3. Size: Approximately four feet by 10 feet by full thickness, including base.
4. Include edging.
5. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless District Construction Manager specifically approves such deviations in writing.

1.8 DELIVERY, STORAGE, AND HANDLING

A. Bulk Materials:

1. Accompany each delivery of bulk materials with appropriate certificates.
2. Do not dump or store bulk materials near structures, utilities, walkways and pavements, or on existing turf areas or plants.
3. Do not move or handle materials when they are wet.
4. Protect bulk materials from erosion. Provide erosion-control measures to prevent erosion or displacement of bulk materials, discharge of soil-bearing water runoff and airborne dust reaching adjacent properties, water conveyance systems, or walkways.

B. Packaged Materials: Deliver packaged materials in original, unopened containers showing weight, name and address of manufacturer, and compliance with state and Federal laws if applicable.

1.9 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit DG and stabilized DG surfacing to be installed according to manufacturer's written instructions. Do not install during rainy conditions or when temperature is below 40 degrees Fahrenheit and falling.

PART 2 - PRODUCTS

2.1 AGGREGATE MATERIALS

A. Igneous rock which has weathered in place or any sedimentary material principally derived from igneous rock.

B. Base: #57 crushed granular road base.

C. Provide washed material free of organic material and other deleterious substances.

D. C-35, crushed 3/8” minus or ¼” minus conforming to the following gradation as determined by ASTM C 136:

Sieve Size	Percent Passing (by weight)
3/8 inch	100
No. 4	100
No. 8	93
No. 16	65
No. 30	44
No. 50	28
No. 100	16
No. 200	8.7

Resistance “R” value 82%

Sand equivalent value 61%

2.2 BINDER

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

1. Stabilizer as distributed by Stabilizer Solutions, Inc.
2. Natracil as distributed by Gail Materials.
3. Or Equal.

B. Description: Colorless, odorless, non-toxic, organic polymer derived from psyllium husk, in concentrated powder form.

2.3 EDGING

1. 8X8 concrete curb.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine areas to receive DG surfacing, with Installer present, for compliance with requirements and conditions affecting installation and performance of the Work.

1. Where surfacing is indicated to fit with other construction, verify dimensions of other construction by field measurements before proceeding with the Work.
2. Verify that subgrade is dry and in suitable condition to support surfacing and imposed loads.
3. Verify that no foreign or deleterious material has been deposited within DG surfacing area. Such materials include paint, paint washout, concrete slurry, concrete layers or chunks, cement, plaster, oils, gasoline, diesel fuel, paint thinner, turpentine, tar, roofing compound, acid.

B. If contamination by foreign or deleterious material or liquid is present within DG surfacing area, remove the contamination as directed by District Construction Manager and replace with new uncontaminated sub-grade materials.

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

3.2 PREPARATION

A. General: Proof-roll subgrade using heavy, pneumatic-tired rollers to locate areas that are unstable or that require further compaction.

3.3 INSTALLATION OF BASE AT STABILIZED DG SURFACING

A. Provide 3 inch deep compacted layer of specified base material.

B. Pre-soak base material with water and compact to 95% per ASTM D 1557.

C. Compaction testing to be performed by District testing agency prior to installation of stabilized DG surfacing.

3.4 INSTALLATION OF EDGINGS

A. CONCRETE CURB:
   1. Install 8” wide concrete curb per plan.

3.5 INSTALLATION OF NON-STABILIZED DG SURFACING

A. Place and compact surfacing material at optimum moisture content to required grades, lines, cross sections, and thickness to not less than 95 percent of maximum dry unit weight according to ASTM D 1557.

   1. Shape material to grades as indicated on Drawings.
   2. Place materials in a single layer.
   3. Compacted thickness shall be 4 inches minimum.

B. Compact surfacing with 5 ton or larger rollers or using other equipment acceptable to District Construction Manager. Compact with vibratory-plate compactors in areas inaccessible to rollers.

3.6 INSTALLATION OF STABILIZED DG SURFACING

A. Binder manufacturer’s technical representative shall visit site at start of stabilized DG surfacing installation to verify installer understands correct installation methods.

B. Blending

   1. For bidding purposes, mix at the rate of 15 pounds of binder per ton of aggregate. Actual rate will be determined by binder manufacturer based on analysis of submitted aggregate sample.
   2. Binder and aggregates must be dry during blending.
   3. Thoroughly pre-mix binder into aggregate per manufacturer’s recommendations, including mixing apparatus.
   4. Binder and aggregates must be dry during blending.
   5. The following techniques are not acceptable:
      a. Drop spreading binder over pre-placed aggregate.
      b. Mixing by rototilling.
      c. Bucket blending.

C. Placing

   1. Do not place blended aggregate on filter fabric.
   2. Place blended aggregate directly on prepared base.
   3. Depth of blended aggregate: 4 inches minimum or as indicated on Drawings.
   4. Place in equal thickness lifts not exceeding 3 inches per lift. (For example, two 2-inch lifts for 4-inch total; two 2-1/2 inch lifts for 5-inch total, etc.)
   5. Level to grades and cross-sections indicated on Drawings.

D. Watering

1. Water heavily for even, full-depth moisture penetration of blended aggregate. Apply 25 to 45 gallons of water per ton of blended aggregate to achieve saturation. Perform random moisture depth tests using manufacturer recommended probing device which reaches full depth.
2. If surface of aggregate dries significantly quicker than subsurface material, lightly mist surface before compaction.
3. Do not compact until stabilized aggregate is able to accept compaction from a 2-5 ton roller without separation, plowing or any other physical compromise of aggregate. Obtain approval from Project Inspector.

E. Compaction

1. Complete compaction within 72 hours of after placing aggregate. Do not begin compaction if pumping or pancaking of the surface occurs.
2. Perform compaction using 2-5 ton double drum roller, making 3-4 passes. Do not use vibratory plate compactor or vibration feature on roller.
3. Compact stabilized aggregate to 90% relative compaction.
4. Carefully compact areas near planting and irrigation systems using 8-inch or 10-inch hand tamp.
5. Following compaction, lightly spray surface area with water. Do not disturb surface with spray action.

3.7 INSTALLATION TOLERANCES

A. Thickness: Compact to produce the thickness indicated within the following tolerances:

1. Surfacing Course: Plus 1/4 inch, no minus.

B. Surface Smoothness: Compact to produce a surface smoothness within the following tolerances as determined by using a 10-foot straightedge applied transversely or longitudinally to surfaced areas:

1. Surfacing Course: 1/4 inch max.

3.8 INSPECTION

A. General: Finished compacted surface shall be smooth and uniform, firm throughout profile, with no spongy areas.

B. Stabilized DG Surfacing: Finished surface shall have no evidence of chipping or cracking. Loose material shall not be present on surface after installation.

C. Repair irregularities in surfacing to approval of District Construction Manager.

3.9 REPAIRS

A. Excavate damaged area to depth of aggregate and square off edgings or adjacent pavements. If area is dry, moisten damaged portion lightly.

B. DG Surfacing: Install moisture conditioned aggregate matching existing material. Install in excavated area to match finish grade and profile indicated on Drawings.

C. Stabilized DG Surfacing: Pre-blend matching aggregate and binder as recommended by binder manufacturer. Add water to pre-blended material. Thoroughly moisten mix with 25-45 gallons water per 1 ton of pre-blended material, or to approximately 10% moisture content. Install moistened, pre-blended aggregate mixture in excavated area to match finish grade and profile indicated on Drawings.

D. Compact with an 8-inch or 10-inch hand tamp or 250-300 pound roller.

3.10 FIELD QUALITY CONTROL

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

1. Compaction of base material at stabilized DG surfacing areas according to ASTM D 1557; one test per 1,000 square feet of base.

3.11 CLEANUP AND PROTECTION

A. Cleanup: Promptly and carefully remove debris and excess excavated materials created by DG surfacing work. Debris includes paper, grass clippings, organic material. Remove by gentle mechanical blowing or hand raking. Legally dispose of materials off District property.

B. Protection

1. Erect temporary fencing or barricades and warning signs as required to protect newly installed DG surfacing areas from traffic and public access. Maintain fencing in place for 72 hours minimum after completion of installation. Drying period might take longer due to weather conditions.
2. Do not permit vehicular traffic on finished surfacing.
3. Alert District Construction Manager to nearby landscape irrigation that could possibly create damaging conditions during and after installation. Damaging conditions include standing water on or adjacent to surfacing.

3.12 MAINTENANCE SERVICE FOR STABILIZED DG SURFACING

A. Stabilized DG Surfacing Maintenance Service: Provide 180 day full maintenance by skilled employees of stabilized DG surfacing installer.

B. Coordinate start of stabilized DG surfacing maintenance period with start of landscape maintenance period to end at the same time.

END OF SECTION 32 15 40

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: Peak deceleration of no more than 200 G-max
      b. Head Injury Criteria: No more than 1,000 for a head-first fall from the highest accessible portion of play equipment being installed as shown on drawings.
      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 showing depths of Wear Course and sub-base materials, anchoring systems and edge details.
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. Manufacturer's Written Warranty.
3. 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. 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 9UFAS) 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:
   a. Poured in Place Surface: The poured in place surface shall consist of 100 percent recycled granulated and or shredded tire material mixed with a polyurethane binder and capped with a TPV granule mixed with an aliphatic binder.
   b. It shall consist of a uniform material manufactured in such a way that the Wear Course meets the requirements specified herein for wear surface.
   c. The type safety surfacing shall be a poured-in-place system and shall be indicated on the drawings.

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 .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. Aggregate Sub Base: Tolerance of aggregate sub base shall be within 3/8" inch (10 mm) in 10' ft (3050 mm). Verify that aggregate sub base has been fully compacted. Per ADA Guidelines: compacted Aggregate sub base – 4" inches of 3/4" inch minus irregular stone with fines compacted to 95% percent in 2" inch watered lifts.

C. Concrete Sub Base: Tolerance of concrete sub base shall be within 1/8" inch (3.0 mm) in 10' feet (3050 mm). 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.

D. 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 form all traffic during the curing period of 48 hours or as instructed by the Manufacturer.

END OF SECTION 32 18 16

DECORATIVE METAL FENCES AND GATES
SECTION 32 31 19

PART 1 GENERAL

1.01 WORK INCLUDED

A. Conceptual plan, materials, testing, installation, adjustments, repair, and cleaning of Clearvu manufacturer decorative security fences and gates or equal. Protection of installed product and adjacent materials

1.02 RELATED WORK

A. Master Format Section 03 30 00: Cast-in-Place Concrete: Concrete post footings.

1.03 SYSTEM DESCRIPTION

A. Furnish, install, make adjustments, and test complete fencing system where shown, including appurtenant footings, hardware, mountings, or connections required for compliance with Manufacturer's installation requirements and compliance with applicable building codes and standards. Repair and clean if needed.

1.04 Quality Assurance

A. Use adequate numbers of skilled workmen trained and experienced in necessary trades and crafts and completely familiar with specified requirements and methods for proper performance of Work of this section.

B. Qualifications:

1. Manufacturer:
   (a) Expertise manufacturing components similar to or exceeding requirements of project.
   (b) Having sufficient capacity to produce and deliver required materials without causing delay in work.
   (c) Capable of providing field service representation during construction.
2. Licensed Professional: A Professional Structural Engineer, experienced in security fencing design, and licensed in the State in which the Project is located.
3. Installer: Acceptable to the manufacturer, experienced in performing work of this section and has specialized in installation of work similar to that required for this project.

1.05 ADMINISTRATIVE REQUIREMENTS

A. Coordinate with work of other trades for proper time and sequence to avoid construction delays.

B. Conduct preinstallation meeting one week prior to commencing work of this Section and on- site installations to verify project requirements, substrate conditions and coordination with other building subtrades, and to review manufacturer's installation instructions and manufacturer's warranty requirements.

1.06 REFERENCES

A. ASTM International (ASTM):

1. ASTM A36 Standard Specification for Carbon Structural Steel.
2. ASTM A53 Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
3. ASTM A653 Standard Specification for Steel Sheet, Zinc-Coated Galvanized or Zinc-Iron Alloy-Coated Galvannealed by the Hot-Dip Process.
4. ASTM B117 Standard Practice for Operating Salt Spray (Fog) Apparatus.
5. ASTM D3359 Standard Test Methods for Measuring Adhesion by Tape Test.

6. ASTM F2453 Standard Specification for Welded Wire Mesh Fence Fabric.
7. ASTM F626 Standard Specification for Fence Fittings.
8. ASTM F668 Standard Specification for Polyvinyl Chloride (PVC), Polyolefin and Other Polymer-Coated Steel Chain Link Fence Fabric.
9. ASTM G26 Practice for Operating Light Exposure Apparatus (Xenon Arc Type) With and Without Water for Exposure of Nonmetallic Materials (Withdrawn 2000).
10. ASTM G53 Practice for Operating Light and Water Exposure Apparatus (Fluorescent UV Condensation Type) for Exposure of Nonmetallic Materials (Withdrawn 2000).

1.07 SUBMITTALS

A. Furnish the following submittals in accordance with Contract Conditions and Section [01 33 00 – Submittal Procedures]:

submittal	description
ACTION	
Product Data	1. Manufacturer's product data. 2. Catalog pages illustrating products to be incorporated into project. 3. Material Safety Data Sheets (MSDS).
Shop Drawings	1. Layout of fencing, include types and locations of gates. 2. Footing details. 3. Fastening details, gate details, and relationships to adjacent construction.
Material Samples	Required on request, full-size actual products. Samples can be returned to Contractor for incorporation in work/project.
Design Data	Submit engineering data illustrating compliance with specified design and performance criteria. Have submittal signed and sealed by the Licensed Professional.
INFORMATION	
Test and Evaluation Reports	Certified test reports showing compliance with specified performance characteristics and physical properties.
Manufacturer's Instructions	Submit manufacturer's storage and installation instructions and requirements.
Source Quality Control	Submit documentation verifying that components and materials specified in this Section are from single manufacturer.
Manufacturer's Field Reports	Submit manufacturer's field reports.
Qualification Letters or Certificates	Required for Manufacturer, Licensed Professionals, and Installers performing work on this project. Also submit certifications of procedure qualifications for each procedure used.
CLOSEOUT	

submittal	description
Operation and Maintenance Data	Submit operation and maintenance data for installed products in accordance with Section [01 78 23 - Operation and Maintenance Data]. Include: Manufacturer's instructions detailing maintenance requirements. Parts catalog giving complete list of available parts. Replacement parts with cuts and identifying numbers.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Delivery and Acceptance Requirements:
   1. Deliver material in accordance with Section [01 61 00 - Common Product Requirements] and in accordance with manufacturer's written instructions.
   2. Deliver materials in manufacturer's original packaging with identification labels intact and in sizes to suit project.

B. Storage and Handling Requirements
   1. Store materials protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.

PART 2 PRODUCTS

2.01 MANUFACTURER

A. Single Source Responsibility: Provide components and materials specified in this section from a single manufacturer.

B. Substitution Limitations: Substitutions: [In accordance with [Contract Conditions] [Section 01 25 00 - Substitution Procedures] [No substitutions permitted].

C. Acceptable Manufacturer include the following or equal:
   1. Manufacturer: **Cochrane USA**
      Contact: Ryan Kalin
      Phone: 213-705-6022, Fax: 202-639-8238; E-mail: Rkalin@cochraneusa.com
      6080 Center Drive, Suite 670, Los Angeles, CA 90045;
      Website: www.cochraneusa.com

2.02 DESCRIPTION

A. Regulatory Requirements: In accordance with Section [01 41 00 - Regulatory Requirements].

B. Compatibility: Ensure components and materials are compatible with specified accessories and adjacent materials.

C. Design Criteria: Capable of resisting lateral loads of [ ] and vertical loads of [ ] in accordance with ASCE/OBC Subsection 4.1.10.1 (1) (f) and 4.1.10.1 (2) to (4).

2.03 MATERIALS/COMPONENTS/FINISHES

A. Posts - Cochrane Taper Locking Post:
   1. Length: 10' - 10 1/8" [As indicated on the drawings].
   2. Post width shall be 3.5 inches (85 mm), tapering to 2 inches (45 mm) with a depth of 3.5 inches (85 mm).
   3. Post Locking Recess Mechanism to secure panel edge.
   4. Fittings: Locking Recess Mechanism, UV stabilized polymer cap.
   5. Post finish: Hot Dipped Galvanized then Marine Fusion Bond Coated.

B. Panels-Cochrane ClearVu or equal:

1. Panel shall be of 10 feet 10 inches width and 8 feet in height from ground level with 1 foot extended mesh at 40 degree outward angle
2. Aperture Size (Centers): 3 ×1⁄2 inches.
3. Reinforcing (Rigidity): 4 × 2 inches by 50 mm deep-V formation horizontal recessed bands.
4. Side Flanges: 2 × 21⁄2 inch flanges at 70 degrees along sides of panel (internal fixtures—all fixtures shall be on the inside of fence line.
5. Anti-scale locking devices: located on post panel connection.
6. Top and Toe Flanges: 2 × 21⁄2 inch flanges, integrated rigid angle.
7. Panel post shall have a flush panel post finish with no climbing aid and no external locking devices or components exposed to attack side of the fence line.

Specifier Note: Retain gate type(s) below to conform to project requirements. Insert description including size and direction of swing or travel.

C. Swinging Gates: As indicated on the drawings
D. Materials
   1. Steel Pipe (ASTM A53): Zinc-coated and seamless.
   2. Steel (ASTM A36): Carbon structural steel.
   3. Panel Fabric (ASTM F2453): Welded wire mesh.
   4. Fittings (ASTM F626): Zinc-coated.
E. Fabrication
   1. Panels: Fabricate panel posts with a flush panel post finish with no climbing aid.
   2. Swinging Gates:
      (a) Weld all connections and joints to form rigid frames or assembled with corner fittings.
      (b) Fabricate hinges so that they will not twist or turn under the action of the gate, and arranged so that a closed gate cannot be lifted off the hinges to obtain entry.
F. Finishes
   1. Galvanize: Hot-dip galvanize in accordance with ASTM A653.
   2. Finish: Manufacturer’s standard Marine Fusion Bond Coating.
      (a) Performance:
         (1) Loss of Adhesion (ASTM D3359): Zero loss.
         (2) Corrosion: (ASTM B117): Under-film scribe tested for 1000 hours: 0–0.5 mm.
         (3) Salt Resistance (ASTM B117): 20,000 hours with no blistering, cracking, corrosion or flaking.
         (4) UV Performance (ASTM G26 and G53): No appreciable loss of color, gloss or mechanical properties for 2000 hours or five years in California at 45 degrees by the sea in the sun.
   3. Color: DARK BRONZE – TO MATCH ELECTRICAL POLES AND BOLLARDS

2.04 SOURCE QUALITY CONTROL

A. Contractor to describe each test to be conducted that is required by fence manufacture. Include test method, sampling requirements, observation by independent authorities (if any) and reporting requirements. Describe each inspection to be conducted, including method, personnel and reporting requirements.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verification of Conditions: Verify that conditions of substrates previously installed under other sections or contracts are acceptable for product installation in accordance with manufacturer's instructions prior to security fencing and gate installation.
   1. Inform general contractor of unacceptable conditions immediately upon discovery.
   2. Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval from resident engineer.

3.02 PREPARATION

A. Surface Preparation: Prepare surface in accordance with manufacturer's written recommendations and coordinate with Section.

3.03 INSTALLATION

A. Coordinate fencing and gate work with work of other trades for proper time and sequence to avoid construction delays.
B. Install fencing and gates plumb and level.
C. Accurately fit, align, securely fasten and install free from distortion or defects.
D. Furnish and install fencing and gate materials at locations shown on Submittals.
E. The following installation standards shall be followed:
   1. Applicable OSHA and Cal OSHA regulations
   2. Applicable building and fire code requirements
   3. Manufacturer's installation and warranty requirements
F. Refer variances between above documents and Contract Documents to the Resident Engineer.
G. Install fencing and gates according to Manufacturer's installation and warranty requirements.
H. Fencing and gate materials shall be furnished and installed by Contractor at locations shown on Submittals.
I. Install fencing and gate materials to tolerances recommended by Manufacturer. Unless otherwise shown, install fencing true, plumb, and level using precision gauges and levels.
J. Built-up parts shall be free of warp.

3.04 ADJUSTING

A. Adjust components and systems for correct function and operation in accordance with manufacturer's written instructions.
B. Lubricate moving parts to operate smoothly and fit accurately.

3.05 FIELD QUALITY CONTROL

A. Field testing shall include the following:

Item	Test for	Test Standard (ASTM or Other Test Standard)	Frequency	First Test Paid for by	Retests Paid for by
Ornamental Steel Fences and Gates	No bends, twists or open joints No projecting edges or corners at intersections	Visual inspection	All fencework and gates	Contractor	Contractor

Item	Test for	Test Standard (ASTM or Other Test Standard)	Frequency	First Test Paid for by	Retests Paid for by
	Field Performance	Demonstrate compliance to Contract Documents and Manufacturer's printed literature	1 test	Contractor	Contractor
	Warranty Inspection	Demonstrate compliance to Contract Documents and Manufacturer's printed literature	1 test	Contractor	Contractor

3.06 CLEANING

A. Waste Management:
   1. Contractor to follow Best Management Practices for waste removal.
   2. Collect recyclable waste and dispose of or recycle field generated construction waste created during demolition, construction or final cleaning.
   3. Remove recycling containers and waste bins from site.

3.07 PROTECTION

A. Protect installed product from damage during construction.
B. Repair damage to adjacent materials caused by installation of decorative metal fence and gates system

END OF SECTION 32 31 19

SUPPLEMENTARY SPECIAL PROVISIONS

APPENDICES

APPENDIX A

NOTICE OF DETERMINATION AND MITIGATED NEGATIVE DECLARATION

FILED
Mar 21, 2022 02:11 PM
Ernest J. Dronenburg, Jr.
SAN DIEGO COUNTY CLERK
File # 2022-000217
State Receipt # 37032120220187
Document # 2022-NOD-32

SAN DIEGO COUNTY CLERK
CEQA FILING COVER SHEET

THIS SPACE FOR CLERK'S USE ONLY

Complete and attach this form to each CEQA Notice filed with the County Clerk

TYPE OR PRINT CLEARLY

Project Title

BEYER PARK SDP

Check Document being Filed:

- ○ Environmental Impact Report (EIR)
- ◉ Mitigated Negative Declaration (MND) or Negative Declaration (ND)
- ○ Notice of Exemption (NOE)
- ○ Other (Please fill in type):

FILED IN THE OFFICE OF THE SAN DIEGO
COUNTY CLERK ON March 21, 2022
Posted March 21, 2022 **Removed** _____
Returned to agency on _____
DEPUTY _____

Filing fees are due at the time a Notice of Determination/Exemption is filed with our office.For more information on filing fees and No Effect Determinations, please refer to California Code of Regulations, Title 14, section 753.5.

NOTICE OF DETERMINATION

(Choose one)

To: ☒ Recorder/County Clerk
P.O. Box 1750, MS A33
1600 Pacific Hwy, Room 260
San Diego, CA 92101-2422

☒ Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, CA 95814

From: City of San Diego
Development Services Department
1222 First Avenue, MS 501
San Diego, CA 92101

Project Number: 589554

State Clearinghouse Number: 2020049049

Project Title: Beyer Park SDP

Project Location: The southeast of the eastern terminus of Beyer Boulevard.

Project Description: A request for the construction and operation of 16.5-acre open space park which would include a soccer field, 3 children's fields, a 19,375-square foot skate park, a 19,450-square foot large dog park, a 14,700-square foot small dog park, a 10,400-square foot children's play area, a 450-square foot comfort station, a 350-square foot maintenance building and trash enclosure, a half basketball court, shade structures, picnic areas, and trails. The park would also have 69 on-site parking and 15 street parking stalls. In addition, various site improvements would be constructed that include associated hardscape and landscape, retaining walls, infrastructure (e.g. off-site utility connections of water, sewer), storm drain, and access. The 43-acre site is located southeast of the eastern terminus of Beyer Boulevard. The project site is designated park and open space and zoned OP-1-1 and RS-1-7 per the San Ysidro Community Plan. The project site is also within the Multi-Habitat Planning Area, the Airport Land Use Compatibility Overlay Zone (Brown Field), the Airport Influence Area (Brown Field – Review Area 2), the FAA Part 77 Noticing Area (Brown Field and NOLF Imperial Beach), the Very High Fire Hazard Severity Zone, the Parking Standards Transit Priority Area, and the Transit Priority Area. (LEGAL DESCRIPTION: A portion of the southwest quarter of the southeast quarter section 36, together with a portion of the west 27 acres of the southeast quarter of the southeast quarter of section 36, all in township 18 south, range 2 west, San Bernardino base and Meridian, according to the official plat thereof.)

Project Applicant: Darren Genova, City of San Diego Engineering and Capital Projects, 525 B Street, San Diego California 92101, (619) 533-4659.

This is to advise that the Development Services Department of the City of San Diego on November 19, 2020 approved the above described project and made the following determinations:

1. The project in its approved form ☐ will, ☒ will not, have a significant effect on the environment.

2. ☐ An Environmental Impact Report was prepared for this project and certified pursuant to the provisions of CEQA.

   ☒ A (Mitigated) Negative Declaration was prepared for this project pursuant to the provisions of CEQA.

   ☐ An Addendum to Negative Declaration / Mitigated Negative Declaration / Environmental Impact Report No. was prepared for this project pursuant to the provisions of CEQA.

   Record of project approval may be examined at the address above.

3. Mitigation measures ☒ were, ☐ were not, made a condition of the approval of the project; and a mitigation, monitoring and reporting program ☒ was, ☐ was not, adopted for the project.

4. (EIR only) Findings ☐ were, ☐ were not, made pursuant to CEQA Guidelines Section 15091.

5. (EIR only) A Statement of Overriding Considerations ☐ was, ☐ was not, adopted for this project.

It is hereby certified that the final environmental report, including comments and responses, is available to the general public at the office of the Development Services Department, 1222 First Avenue, San Diego, CA 92101.

Analyst: M. Dresser

Telephone: (619) 446-5404

Filed by: Mary Medel
Signature

Senior Planner 3/21/22
Title

State of California - Department of Fish and Wildlife

2022 ENVIRONMENTAL FILING FEE CASH RECEIPT

DFW 753.5a (Rev. 01/01/22) Previously DFG 753.5a

RECEIPT NUMBER:	
37-03/21/2022-0187	
STATE CLEARING HOUSE NUMBER(*If applicable*)	
2020049049	

SEE INSTRUCTIONS ON REVERSE. TYPE OR PRINT CLEARLY.

LEAD AGENCY	LEAD AGENCY EMAIL	DATE
CITY OF SAN DIEGO DEVELOPMENT SERVICES DEPARTMENT		03/21/2022
COUNTY/STATE AGENCY OF FILING		**DOCUMENT NUMBER**
SAN DIEGO		2022-NOD-0032

PROJECT TITLE
BEYER PARK SDP

PROJECT APPLICANT NAME	PROJECT APPLICANT EMAIL		PHONE NUMBER
DARREN GENOVA, CITY OF SAN DIEGO ENGINERRING AND CAPITAL PROJECTS			619-533-4659
PROJECT APPLICANT ADDRESS	**CITY**	**STATE**	**ZIP CODE**
525 B STREET	SAN DIEGO	CA	92101

PROJECT APPLICANT (*Check appropriate box*)

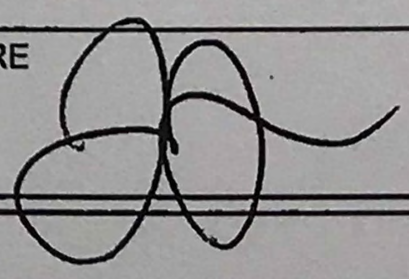
☒ Local Public Agency ☐ School District ☐ Other Special District ☐ State Agency ☐ Private Entity

CHECK APPLICABLE FEES:

☐ Environmental Impact Report (EIR)	$3,539.25	$	0.00
☒ Mitigated/Negative Declaration (MND)/(ND)	$2,548.00	$	2,548.00
☐ Certified Regulatory Program (CRP) document - payment due directly to CDFW	$1,203.25	$	0.00
☐ Exempt from fee			
☐ Notice of Exemption (attach)			
☐ CDFW No Effect Determination (attach)			
☐ Fee previously paid (attach previously issued cash receipt copy)			
☐ Water Right Application or Petition Fee(State Water Resources Control Board only)	$850.00	$	0.00
☒ County documentary handling fee		$	50.00
☐ Other		$	0.00

PAYMENT METHOD:

☐ Cash ☐ Credit ☒ Check ☐ Other **TOTAL RECEIVED** $ 2,598.00

SIGNATURE	AGENCY OF FILING PRINTED NAME AND TITLE
X 	San Diego County Clerk, JULIE ANN SAN JUAN, Deputy

Payment Reference #: CHECK #0001881561 AND CHECK #001881564

ORIGINAL - PROJECT APPLICANT COPY - CDFW/ASB COPY - LEAD AGENCY COPY - COUNTY CLERK DFW 752.5A (Rev. 01012022)

San Diego County

Transaction #: 6352958
Receipt #: 2022136123

Ernest J. Dronenburg, Jr.
Assessor/Recorder/County Clerk
1600 Pacific Highway Suite 260
P. O. Box 121750, San Diego, CA 92112-1750
Tel. (619) 237-0502 Fax (619) 557-4155
www.sdarcc.com

Cashier Date: 03/21/2022
Cashier Location: SD

Print Date: 03/21/2022 2:12 pm

Payment Summary

Total Fees:	$2,598.00
Total Payments:	$2,598.00
Balance:	$0.00

Payments

CHECK PAYMENT #0001881561	$2,548.00
CHECK PAYMENT #0001881564	$50.00
Total Payments	$2,598.00

Filing

CEQA - NOD FILE #: 2022-000217 Date: 03/21/2022 2:11PM Pages: 3

State Receipt # 37-03/21/2022-0187

Fees:	Fish & Wildlife County Administrative Fee	$50.00
Fees:	Fish & Wildlife Mitigated/Negative Declaration	$2,548.00
Total Fees Due:		$2,598.00

Grand Total - All Documents: $2,598.00

THE CITY OF SAN DIEGO

MITIGATED NEGATIVE DECLARATION

Project No. 589554
SCH No. 2020049049

SUBJECT: **Beyer Park ~~SDP~~**: A ~~SITE DEVELOPMENT PERMIT~~ request for the construction and operation of 16.5-acre open space park which would include a soccer field, 3 children's fields, a 19,375-square foot skate park, a 19,450-square foot large dog park, a 14,700-square foot small dog park, a 10,400-square foot children's play area, a 450-square foot comfort station, a 350-square foot maintenance building and trash enclosure, a half basketball court, shade structures, picnic areas, and trails. The park would also have 69 on-site parking and 15 street parking stalls. In addition, various site improvements would be constructed that include associated hardscape and landscape, retaining walls, infrastructure (e.g. off-site utility connections of water, sewer), storm drain, and access. The 43-acre site is located southeast of the eastern terminus of Beyer Boulevard. The project site is designated park and open space and zoned OP-1-1 and RS-1-7 per the San Ysidro Community Plan. The project site is also within the Multi-Habitat Planning Area, the Airport Land Use Compatibility Overlay Zone (Brown Field), the Airport Influence Area (Brown Field – Review Area 2), the FAA Part 77 Noticing Area (Brown Field and NOLF Imperial Beach), the Very High Fire Hazard Severity Zone, the Parking Standards Transit Priority Area, and the Transit Priority Area. (LEGAL DESCRIPTION: A portion of the southwest quarter of the southeast quarter section 36, together with a portion of the west 27 acres of the southeast quarter of the southeast quarter of section 36, all in township 18 south, range 2 west, San Bernardino base and Meridian, according to the official plat thereof.) APPLICANT: City of San Diego Public Works.

UPDATE: **October 12, 2020. Revisions have been made to this document when compared to the final Mitigated Negative Declaration (MND). More Specifically, clarifications have been made to the Mitigation Monitoring and Reporting Program (MMRP) to provide timing and triggers to the mitigation measures. Additionally, the MMRP was revised to utilize City standard MMRP. In accordance with the California Environmental Quality Act (CEQA), Section 15073.5(c)(4), the addition of new information that clarifies, amplifies, or makes insignificant modifications does not require recirculation as there are no new impacts and no new mitigation identified. An environmental document need only be recirculated when there is the identification of new significant environmental impacts or the addition of a new mitigation measure required to avoid a significant environmental impact. The text modifications within the final environmental document do not**

affect the environmental analysis or conclusions of the MND. Revisions to the MND are reflected in a ~~strikeout~~/underline format.

I. PROJECT DESCRIPTION:

See attached Initial Study.

II. ENVIRONMENTAL SETTING:

See attached Initial Study.

III. DETERMINATION:

The City of San Diego conducted an Initial Study which determined that the proposed project could have a significant environmental effect in the following areas(s): **Biological Resources and Noise**. Subsequent revisions in the project proposal create the specific mitigation identified in Section V of this Mitigated Negative Declaration. The project as revised now avoids or mitigates the potentially significant environmental effects previously identified, and the preparation of an Environmental Impact Report will not be required.

IV. DOCUMENTATION:

The attached Initial Study documents the reasons to support the above Determination.

V. MITIGATION, MONITORING AND REPORTING PROGRAM:

A. GENERAL REQUIREMENTS – PART I: Plan Check Phase (prior to permit issuance)

1. Prior to the issuance of a Notice To Proceed (NTP) for a subdivision, or any construction permits, such as Demolition, Grading or Building, or beginning any construction related activity on-site, the Development Services Department (DSD) Director's Environmental Designee (ED) shall review and approve all Construction Documents (CD), (plans, specification, details, etc.) to ensure the MMRP requirements are incorporated into the design.

2. In addition, the ED shall verify that the MMRP Conditions/Notes that apply ONLY to the construction phases of this project are included VERBATIM, under the heading, "**ENVIRONMENTAL/MITIGATION REQUIREMENTS**."

3. These notes must be shown within the first three (3) sheets of the construction documents in the format specified for engineering construction document templates as shown on the City website:

   http://www.sandiego.gov/development-services/industry/standtemp.shtml

4. The **TITLE INDEX SHEET** must also show on which pages the "Environmental/Mitigation Requirements" notes are provided.

5. **SURETY AND COST RECOVERY –** The Development Services Director or City Manager may require appropriate surety instruments or bonds from private Permit Holders to ensure the long-term performance or implementation of required mitigation measures or programs. The City is authorized to recover its cost to offset the salary, overhead, and expenses for City personnel and programs to monitor qualifying projects.

B. GENERAL REQUIREMENTS – PART II: Post Plan Check (After permit issuance/Prior to start of construction)

PRE-CONSTRUCTION MEETING IS REQUIRED TEN (10) WORKING DAYS PRIOR TO BEGINNING ANY WORK ON THIS PROJECT. The PERMIT HOLDER/OWNER is responsible to arrange and perform this meeting by contacting the CITY RESIDENT ENGINEER (RE) of the Field Engineering Division and City staff from MITIGATION MONITORING COORDINATION (MMC). Attendees must also include the Permit holder's Representative(s), Job Site Superintendent and the following consultants:

Qualified Biologist

Note: Failure of all responsible Permit Holder's representatives and consultants to attend shall require an additional meeting with all parties present.

CONTACT INFORMATION:

a) The PRIMARY POINT OF CONTACT is the **RE** at the **Field Engineering Division – (858) 627-3200**
b) For Clarification of ENVIRONMENTAL REQUIREMENTS, it is also required to call **RE and MMC at (858) 627-3360**

2. **MMRP COMPLIANCE:** This Project, Project Tracking System (PTS) No. 589554 and/or Environmental Document No. 589554 shall conform to the mitigation requirements contained in the associated Environmental Document and implemented to the satisfaction of the DSD's Environmental Designee (MMC) and the City Engineer (RE). The requirements may not be reduced or changed but may be annotated (i.e. to explain when and how compliance is being met and location of verifying proof, etc.). Additional clarifying information may also be added to other relevant plan sheets and/or specifications as appropriate (i.e., specific locations, times of monitoring, methodology, etc

Note: Permit Holder's Representatives must alert RE and MMC if there are any discrepancies in the plans or notes, or any changes due to field conditions. All conflicts must be approved by RE and MMC BEFORE the work is performed.

3. **OTHER AGENCY REQUIREMENTS:** Evidence of compliance with all other agency requirements or permits shall be submitted to the RE and MMC for review and acceptance prior to the beginning of work or within one week of the Permit Holder obtaining documentation of those permits or requirements. Evidence shall include copies of permits, letters of resolution or other documentation issued by the responsible agency.

Not Applicable

4. **MONITORING EXHIBITS:** All consultants are required to submit, to RE and MMC, a monitoring exhibit on a 11x17 reduction of the appropriate construction plan, such as site plan, grading, landscape, etc., marked to clearly show the specific areas including the **LIMIT OF WORK**, scope of that discipline's work, and notes indicating when in the construction schedule that work will be performed. When necessary for clarification, a detailed methodology of how the work will be performed shall be included.

Note: Surety and Cost Recovery – When deemed necessary by the Development Services Director or City Manager, additional surety instruments or bonds from the private Permit Holder may be required to ensure the long-term performance or implementation of required mitigation measures or programs. The City is authorized to recover its cost to offset the salary, overhead, and expenses for City personnel and programs to monitor qualifying projects.

5. **OTHER SUBMITTALS AND INSPECTIONS:** The Permit Holder/Owner's representative shall submit all required documentation, verification letters, and requests for all associated inspections to the RE and MMC for approval per the following schedule:

DOCUMENT SUBMITTAL/INSPECTION CHECKLIST		
Issue Area	Document Submittal	Associated Inspection/Approvals/Notes
General	Consultant Qualification Letters	Prior to Preconstruction Meeting
General	Consultant Construction Monitoring Exhibits	Prior to or at Preconstruction Meeting
Biology	Biologist Limit of Work Verification	Limit of Work Inspection
Biology	Biology Reports	Biology/Habitat Restoration Inspection
Noise	Acoustical Reports	Noise Mitigation Features Inspection

Bond Release	Request for Bond Release Letter	Final MMRP Inspections Prior to Bond Release Letter

C. SPECIFIC MMRP ISSUE AREA CONDITIONS/REQUIREMENTS

~~**Biological Resources**~~

~~**BIO-1 General Measures Prior to Construction**~~

A. ~~**Biologist Verification** - The owner/permittee shall provide a letter to the City's Mitigation Monitoring Coordination (MMC) section stating that a Project Biologist (Qualified Biologist) as defined in the City of San Diego's Biological Guidelines (2012), has been retained to implement the project's biological monitoring program. The letter shall include the names and contact information of all persons involved in the biological monitoring of the project.~~

B. ~~**Preconstruction Meeting** - The Qualified Biologist shall attend the preconstruction meeting, discuss the project's biological monitoring program, and arrange to perform any follow up mitigation measures and reporting including site-specific monitoring, restoration or revegetation, and additional fauna/flora surveys/salvage.~~

C. ~~**Biological Documents** - The Qualified Biologist shall submit all required documentation to MMC verifying that any special mitigation reports including but not limited to, maps, plans, surveys, survey timelines, or buffers are completed or scheduled per City Biology Guidelines, Multiple Species Conservation Program (MSCP), Environmentally Sensitive Lands Ordinance (ESL), project permit conditions; California Environmental Quality Act (CEQA); endangered species acts (ESAs); and/or other local, state or federal requirements.~~

D. ~~**BCME** - The Qualified Biologist shall present a Biological Construction Mitigation/Monitoring Exhibit (BCME) which includes the biological documents in C above. In addition, include: restoration/revegetation plans, plant salvage/relocation requirements (e.g., coastal cactus wren plant salvage, burrowing owl exclusions, etc.), avian or other wildlife surveys/survey schedules (including general avian nesting and USFWS protocol), timing of surveys, wetland buffers, avian construction avoidance areas/noise buffers/ barriers, other impact avoidance areas, and any subsequent requirements determined by the Qualified Biologist and the City ADD/MMC. The BCME shall include a site plan, written and graphic depiction of the project's biological mitigation/monitoring program, and a schedule. The BCME shall be approved by MMC and referenced in the construction documents.~~

E. **Avian Protection Requirements** - To avoid any direct impacts to any species identified as a listed, candidate, sensitive, or special status species in the MSCP, removal of habitat that supports active nests in the proposed area of disturbance should occur outside of the breeding season for these species (February 1 to September 15). If removal of habitat in the proposed area of disturbance must occur during the breeding season, the Qualified Biologist shall conduct a pre-construction survey to determine the presence or absence of nesting birds on the proposed area of disturbance. The pre-construction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The applicant shall submit the results of the pre-construction survey to City DSD for review and approval prior to initiating any construction activities. If nesting birds are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines and applicable State and Federal Law (i.e. appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City's MMC Section and Biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.

F. **Resource Delineation** - Prior to construction activities, the Qualified Biologist shall supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other project conditions as shown on the BCME. This phase shall include flagging plant specimens and delimiting buffers to protect sensitive biological resources (e.g., habitats/flora & fauna species, including nesting birds) during construction. Appropriate steps/care should be taken to minimize attraction of nest predators to the site.

G. **Education** – Prior to commencement of construction activities, the Qualified Biologist shall meet with the owner/permittee or designee and the construction crew and conduct an on-site educational session regarding the need to avoid impacts outside of the approved construction area and to protect sensitive flora and fauna (e.g., explain the avian and wetland buffers, flag system for removal of invasive species or retention of sensitive plants, and clarify acceptable access routes/methods and staging areas, etc.).

BIO-2 General Measures During Construction

A. **Monitoring**- All construction (including access/staging areas) shall be restricted to areas previously identified, proposed for development/staging, or previously disturbed as shown on "Exhibit A" and/or the BCME. The Qualified Biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas,

or cause other similar damage, and that the work plan has been amended to accommodate any sensitive species located during the pre-construction surveys. In addition, the Qualified Biologist shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR shall be e-mailed to MMC on the 1st day of monitoring, the 1st week of each month, the last day of monitoring, and immediately in the case of any undocumented condition or discovery.

B. **Subsequent Resource Identification** - The Qualified Biologist shall note/act to prevent any new disturbances to habitat, flora, and/or fauna onsite (e.g., flag plant specimens for avoidance during access, etc). If active nests or other previously unknown sensitive resources are detected, all project activities that directly impact the resource shall be delayed until species specific local, state or federal regulations have been determined and applied by the Qualified Biologist.

BIO-3 Post Construction Measures

A. In the event that impacts exceed previously allowed amounts, additional impacts shall be mitigated in accordance with City Biology Guidelines, ESL and MSCP, State CEQA, and other applicable local, state and federal law. The Qualified Biologist shall submit a final BCME/report to the satisfaction of the City ADD/MMC within 30 days of construction completion.

BIO-4 Habitat-based Mitigation

A. **On-site Restoration -** To fulfill the project's mitigation requirements for impacts to Tier I and Tier II vegetation (i.e., maritime succulent scrub, disturbed maritime succulent scrub, Diegan coastal sage scrub, and disturbed Diegan coastal sage scrub), a total of 13.32 acres of mitigation is required. The following mitigation program is proposed: 6.25 acres of maritime succulent scrub and 1.54 acre of disturbed maritime succulent scrub shall be enhanced in the MHPA portion of the eastern project parcel; 2.05 acres of maritime succulent scrub and 0.59 acre of disturbed maritime succulent scrub will be enhanced outside of the MHPA; and a total of 3.70 acres of disturbed lands, both inside and outside the MHPA will be restored to maritime succulent scrub, for a total of 14.12 acres of enhancement and restoration of Tier I vegetation. Table 7 provides a breakdown of mitigation requirements and Table 8 provides a summary. A Mitigation and Restoration Plan detailing the proposed enhancement and restoration has been developed (RECON 2019).

This plan also documents the requirements for a 5-year maintenance and monitoring period and includes plant salvage of sensitive succulent species and seeding of beach goldenaster with the ultimate goal of creating habitat

suitable for burrowing owl. Currently the maritime succulent scrub within the proposed mitigation area is fragmented and contains evidence of anthropogenic impacts, through the presence of unauthorized trails used by pedestrians and vehicles. The proposed restoration and enhancement activities will remove the fragmentation and effects of the anthropogenic impacts to create one contiguous patch of maritime succulent scrub. It is anticipated that restoration of the disturbed lands to native habitat and enhancement of the disturbed maritime succulent scrub to reduce the extent of non-native invasive plants will increase the habitat quality and resiliency of the maritime succulent scrub. In addition, the County of San Diego preserve area located immediately east of the mitigation site provides connectivity to natural open space further increasing the post-restoration quality.

B. **Preservation of Occupied Burrowing Owl Habitat –** In accordance with the City's Biology Guidelines, mitigation for impacts to occupied burrowing owl habitat must be through the conservation of occupied burrowing owl habitat or conservation of lands appropriate for restoration, management, and enhancement of burrowing owl nesting and foraging requirements.

A Conceptual Burrowing Owl Mitigation Plan is included as a component of the project Mitigation and Restoration Plan and was prepared in accordance with the CDFW 2012 Staff Report or the most recent state and/or federal protocols/guidance for approval by MSCP and the Wildlife Agencies (RECON 2019). A total of 13.55 acres of occupied habitat will be impacted by the project and will require 10.42 acres of mitigation per Table 3 of the Land Development Code Biology Guidelines. The plan includes on-site mitigation for the loss of 10.42 acres of suitable occupied burrowing owl habitat based on the ratios presented for the impacts to the underlying vegetation communities through preservation of occupied habitat within the adjacent maritime succulent scrub. Table 9 presents the breakdown of these mitigation requirements. The quality of preserved suitable occupied burrowing owl habitat must be comparable to or better than the habitat being impacted, otherwise enhancement of the habitat may be included as an aspect of the mitigation plan. The land to be preserved has been established to be occupied by burrowing owl (RECON 2017f) and supports fossorial mammals. The occupied habitat is maritime succulent scrub which will be enhanced/restored for impacts to vegetation as outlined in section A and the restoration design will ensure that the habitat remains appropriate for western burrowing owl. A map showing the proposed areas for artificial burrow construction can be found in Figure 10. The site will be preserved in perpetuity as part of the City MSCP Program. Prior to the issuance of any construction permits or beginning any construction-related activity on-site, the City shall provide the location of mitigation lands to the satisfaction of MSCP and the Wildlife Agencies. In addition, long-term maintenance and monitoring of the approved mitigation land shall be conducted in accordance with the MSCP program by the City Parks and Recreation department.

Funding for maintenance would occur through the operating budget for the management of Park and Recreation Open Space lands.

BIO-5 Beach Goldenaster Restoration

A pre-construction survey will be conducted to determine the number of individuals present at the time of the proposed project. Impacted beach goldenaster individuals will be mitigated in-kind through restoration. The results of this pre-construction survey may inform the number of beach goldenaster to planted. A potential restoration area has been identified based on this species' preferred habitat conditions within the MHPA (see Figure 10). For restoration of this species, the following steps are recommended: seed collection from the on-site population, bulking of seed in an approved nursery, installation of container plants, hand-seeding within the restoration area during the appropriate time of year, installation of site protection, and implementation of a maintenance and monitoring program. The restoration approach for beach goldenaster is documented in the Mitigation and Restoration Plan (RECON 2019) and will be maintained and monitored for a 60-month period or until success standards are obtained.

BIO-6. Burrowing Owl Measures Prior to Permit or Notice to Proceed Issuance

A. As this project has been determined to be BUOW occupied or to have BUOW occupation potential, the Applicant Department or Permit Holder shall submit evidence to the ADD of Entitlements verifying that a Biologist possessing qualifications pursuant "Staff Report on Burrowing Owl Mitigation, State of California Natural Resources Agency Department of Fish and Game. March 7, 2012 (hereafter referred as CDFG 2012, Staff Report), has been retained to implement a burrowing owl construction impact avoidance program.

B. The qualified BUOW biologist (or their designated biological representative) shall attend the pre-construction meeting to inform construction personnel about the City's BUOW requirements and subsequent survey schedule.

BIO-7. Burrowing Owl Measures Prior to Construction

A. The Applicant Department or Permit Holder and Qualified Biologist must ensure that initial pre-construction/take avoidance surveys of the project "site" are completed between 14 and 30 days before initial construction activities, including brushing, clearing, grubbing, or grading of the project site; regardless of the time of the year. "Site" means the project site and the area within a radius of 300 feet of the project site. The report shall be submitted and approved by the Wildlife Agencies and/or City MSCP staff prior to construction or BUOW eviction(s) and shall include maps of the project site and BUOW locations on aerial photos.

B. The pre-construction survey shall follow the methods described in CDFG 2012, Staff Report -Appendix D (please note, in 2013, CDFG became California Department of Fish and Wildlife or CDFW).

C. 24 hours prior to commencement of ground disturbing activities, the Qualified Biologist shall verify results of preconstruction/take avoidance surveys. Verification shall be provided to the City's Mitigation Monitoring and Coordination (MMC) and EPS Section. If results of the preconstruction surveys have changed and BUOW are present in areas not previously identified, immediate notification to the City and WA's shall be provided prior to ground disturbing activities.

BIO-8. Burrowing Owl Measures During Construction

A. **Post Construction**: Best Management Practices shall be employed as BUOWs are known to use open pipes, culverts, excavated holes, and other burrow-like structures at construction sites. Legally permitted active construction projects which are BUOW occupied and have followed all protocol in this mitigation section, or sites within 300 feet of occupied BUOW areas, should undertake measures to discourage BUOWs from recolonizing previously occupied areas or colonizing new portions of the site. Such measures include, but are not limited to, ensuring that the ends of all pipes and culverts are covered when they are not being worked on, and covering rubble piles, dirt piles, ditches, and berms.

C. **On-going BUOW Detection** - If BUOWs or active burrows are not detected during the pre-construction surveys, Section "A" below shall be followed. If BUOWs or burrows are detected during the pre-construction surveys, Section "B" shall be followed. NEITHER THE MSCP SUBAREA PLAN NOR THIS MITIGATION SECTION ALLOWS FOR ANY BUOWs TO BE INJURED OR KILLED OUTSIDE **OR** WITHIN THE MHPA; in addition, IMPACTS TO BUOWs WITHIN THE MHPA MUST BE AVOIDED.

1. **Post Survey Follow Up if Burrowing Owls and/or Signs of Active Natural or Artificial Burrows Are Not Detected During the Initial Pre-Construction Survey** - Monitoring the site for new burrows is required using CDFW Staff Report 2012 Appendix D methods for the period following the initial pre-construction survey, until construction is scheduled to be complete and is complete *(NOTE - Using a projected completion date (that is amended if needed) will allow development of a monitoring schedule).*

    a. If no active burrows are found but BUOWs are observed to occasionally (1-3 sightings) use the site for roosting or foraging, they should be allowed to do so with no changes in the construction or construction schedule.

b. If no active burrows are found but BUOWs are observed during follow up monitoring to repeatedly (4 or more sightings) use the site for roosting or foraging, the City's Mitigation Monitoring and Coordination (MMC) Section and Environmental and Permitting Support Section (EPS) of Public Works shall be notified and any portion of the site where owls have been sites and that has not been graded or otherwise disturbed shall be avoided until further notice.

c. If a BUOW begins using a burrow on the site at any time after the initial preconstruction survey, procedures described in Section B must be followed.

d. Any actions other than these require the approval of the City and the Wildlife Agencies.

D. **Post Survey Follow Up if Burrowing Owls and/or Active Natural or Artificial**
Burrows are detected during the Initial Pre-Construction Survey – Monitoring the site for new burrows is required using Appendix D CDFG 2012, Staff Report for the period following the initial pre-construction survey, until construction is scheduled to be complete and is complete *(NOTE - Using a projected completion date (that is amended if needed) will allow development of a monitoring schedule which adheres to the required number of surveys in the detection protocol).*

1. This section (B) applies only to sites (including biologically defined territory) wholly outside of the MHPA – **all direct and indirect impacts to BUOWs within the MHPA SHALL be avoided.**

2. If one or more BUOWs are using any burrows (including pipes, culverts, debris piles *etc.*) on or within 300 feet of the proposed construction area, the City's MMC and EPS Sections shall be contacted. The City's MMC Section shall contact the Wildlife Agencies regarding eviction/collapsing burrows and enlist appropriate City biologist for on-going coordination with the Wildlife Agencies and the qualified consulting BUOW biologist. No construction shall occur within 300 feet of an active burrow without written concurrence from the Wildlife Agencies. This distance may increase or decrease, depending on the burrow's location in relation to the site's topography, and other physical and biological characteristics.

a. **Outside the Breeding Season** - If the BUOW is using a burrow on site outside the breeding season (i.e. September 1 – January 31), the BUOW may be evicted after the qualified BUOW biologist has determined via

fiber optic camera or other appropriate device, that no eggs, young, or adults are in the burrow and written concurrence from the Wildlife Agencies for eviction is obtained prior to implementation.

b. **During Breeding Season** – If a BUOW is using a burrow on-site during the breeding season (February 1–August 31), construction shall not occur within 300 feet of the burrow until the young have fledged and are no longer dependent on the burrow, at which time the BUOWs can be evicted. Eviction requires written concurrence from the Wildlife Agencies prior to implementation.

3. **Survey Reporting During Construction** - Details of construction surveys and evictions (if applicable) carried out shall be immediately (within 5 working days or sooner) reported to the City's MMC and EPS Section and the Wildlife Agencies and must be provided in writing (as by e-mail) and acknowledged to have been received by the required Agencies and DSD Staff member(s).

a. Details of the all surveys and actions undertaken on-site with respect to BUOWs (i.e. occupation, eviction, locations etc.) shall be reported to the City's MMC and EPS Section and the Wildlife Agencies within 21 days post-construction and prior to the release of any grading bonds. This report must include summaries off all previous reports for the site; and maps of the project site and BUOW locations on aerial photos.

BIO-9 Recommendations for Northern Harrier

If any active nests of the northern harrier are identified in the MHPA within 900 feet of construction, an impact avoidance buffer is required to be established until the young are independent of the nest. Construction activities are expected to result in noise levels exceeding 60 dB(A) Leq within the adjacent MHPA lands. Prior to the commencement of any construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a Qualified Biologist; OR

At least two weeks prior to the commencement of construction activities, under the direction of a Qualified Acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) Leq within the northern harrier 900-foot nest avoidance area. Concurrent with the commencement of construction activities and the construction of necessary attenuation facilities, noise monitoring* shall be conducted at the edge of the occupied

habitat area to ensure that noise levels do not exceed 60 dB(A) Leq. If the noise attenuation techniques implemented are determined to be inadequate by the Qualified Acoustician or Biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (August 16).

*Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) Leq or to the ambient noise level if it already exceeds 60 dB(A) Leq. If not, other measures shall be implemented in consultation with the biologist and the City Manager, as necessary, to reduce noise levels to below 60 dB(A) Leq or to the ambient noise level if it already exceeds 60 dB(A) Leq. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

BIO-10 Noise Restrictions for Coastal California Gnatcatcher –

Between March 1 and August 15, no construction activities shall occur where construction activities would result in noise levels exceeding 60 dB(A) Leq at the edge of gnatcatcher occupied MHPA habitat. Prior to the commencement of any construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a Qualified Biologist; OR

At least two weeks prior to the commencement of construction activities, under the direction of a Qualified Acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) Leq at the edge of MHPA habitat occupied by coastal California gnatcatcher. Concurrent with the commencement of construction activities and the construction of necessary attenuation facilities, noise monitoring* shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dB(A) Leq. If the noise attenuation techniques implemented are determined to be inadequate by the Qualified Acoustician or Biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (August 16).

*Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) Leq or to the ambient noise level if it already exceeds 60 dB(A) Leq. If not, other measures shall be implemented in consultation with the biologist and the City Manager, as necessary, to reduce

noise levels to below 60 dB(A) Leq or to the ambient noise level if it already exceeds 60 dB(A) Leq. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

BIO-11 Noise Restrictions for Least Bell's Vireo

A. Between March 15 and September 15, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dB(A) Leq (hourly noise equivalent of 60 A-weighted decibels [dB(A)] or less) at the edge of occupied least Bell's vireo habitat. Prior to the commencement of any construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a Qualified Biologist; OR

B. At least two weeks prior to the commencement of construct ion activities, under the direction of a Qualified Acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) Leq at the edge of habitat occupied by least Bell's vireo. Concurrent with the commencement of construction activities and the construction of necessary attenuation facilities, noise monitoring* shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dB(A) Leq. If the noise attenuation techniques implemented are determined to be inadequate by the Qualified Acoustician or Biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (September 16).

* Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) Leq or to the ambient noise level if it already exceeds 60 dB(A) Leq. If not, other measures shall be implemented in consultation with the biologist and the City Manager, as necessary, to reduce noise levels to below 60 dB(A) Leq or to the ambient noise level if it already exceeds 60 dB(A) Leq. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

BIO-12 Coastal Cactus Wren Habitat Restoration –

Direct impacts to occupied habitat shall be mitigated at a ratio of 1:1. In accordance with the City's Biology Guidelines, restoration of impacted coastal cactus wren habitat shall include salvage and transplantation of the following species if present: snake cholla, coast cholla, liveforevers (*Dudleya* spp.), San Diego barrel cactus, fish-hook cactus, coast prickly pear, chaparral prickly pear, chaparral candle (*Hesperoyucca whipplei*), and Mojave yucca (*Yucca*

schidigera) to an on-site or off-site restoration site or a receiver site approved by the City.

BIO-13 Noise Restrictions for Coastal Cactus Wren –

Between February 15 and August 15, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dB(A) Leq at the edge of occupied coastal cactus wren habitat. Prior to the commencement of any construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a Qualified Biologist; OR
At least two weeks prior to the commencement of construct ion activities, under the direction of a Qualified Acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) Leq at the edge of habitat occupied by coastal cactus wren. Concurrent with the commencement of construction activities and the construction of necessary attenuation facilities, noise monitoring shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dB(A) Leq. If the noise attenuation techniques implemented are determined to be inadequate by the Qualified Acoustician or Biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (August 16).

* Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) Leq or to the ambient noise level if it already exceeds 60 dB(A) Leq. If not, other measures shall be implemented in consultation with the biologist and the City Manager, as necessary, to reduce noise levels to below 60 dB(A) Leq or to the ambient noise level if it already exceeds 60 dB(A) Leq. Such measures may include, but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

BIO-14 San Diego Fairy Shrimp Measures Prior to Construction

A. Temporary fencing (with silt barriers) shall be installed along the limits of project impacts (including construction staging areas and access routes) to prevent impacts to San Diego fairy shrimp-occupied habitat and prevent the spread of silt from the construction zone into adjacent habitat. Fencing shall be installed in a manner that does not impact the habitat or watershed to be avoided. Final construction plans shall include photographs that show the fenced limits of impact and all areas of San Diego fairy shrimp habitat to be impacted or avoided. If work inadvertently occurs beyond the fenced or demarcated limits of impact, all work shall cease until the problem has been

remedied to the satisfaction of the City. Temporary construction fencing shall be removed upon project completion.

BIO-15 San Diego Fairy Shrimp Measures During Construction

A. Impacts from fugitive dust that may occur during construction grading shall be avoided and minimized through watering and other appropriate measures.

B. A qualified monitoring biologist that has been approved by the City shall be on-site during project construction activities to ensure compliance with all mitigation measures identified in the environmental document. The biologist shall be knowledgeable of vernal pool species biology and ecology. The biologist shall perform the following duties:

- Oversee installation of and inspect the fencing and erosion control measures within or upslope of vernal pool restoration and/or preservation areas a minimum of once per week and daily during all rain events to ensure that any breaks in the fence or erosion control measures are repaired immediately.

- Periodically monitor the work area to ensure that work activities do not generate excessive amounts of dust.

- Train all contractors and construction personnel on the biological resources associated with this project and ensure that training is implemented by construction personnel. At a minimum, training shall include (1) the purpose for resource protection; (2) a description of the vernal pool species and their habitat(s); (3) the conservation measures that must be implemented during project construction to conserve the vernal pool species, including strictly limiting activities, and vehicles, equipment, and construction materials to the fenced project footprint to avoid sensitive resource areas in the field (i.e., avoided areas delineated on maps or on the project site by fencing); (4) environmentally responsible construction practices as outlined in measures C, D, and E, below; (5) the protocol to resolve conflicts that may arise at any time during the construction process; and (6) the general provisions of the project's mitigation monitoring and reporting program, the need to adhere to the provisions of the ESA, and the penalties associated with violating the ESA.

- Halt work, if necessary, and confer with the City to ensure the proper implementation of species and habitat protection measures. The biologist shall report any violation to the City within 24 hours of its occurrence.

- Submit regular (e.g., weekly) letter reports to the City during project construction and a final report following completion of construction. The final report shall include as-built construction drawings with an overlay of habitat that was impacted and avoided, photographs of habitat areas that were avoided, and other relevant summary information documenting that authorized impacts were not exceeded and that general compliance with all conservation measures was achieved.

C. The following conditions shall be implemented during project construction:

- Employees shall strictly limit their activities, vehicles, equipment, and construction materials to the fenced project footprint.

- The project site shall be kept as clean of debris as possible. All food-related trash items shall be enclosed in sealed containers and regularly removed from the site.

- Disposal or temporary placement of excess fill, brush, or other debris shall be limited to areas within the fenced project footprint.

D. All equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other such activities shall occur in designated areas within the fenced project impact limits. These designated areas shall be located in previously compacted and disturbed areas to the maximum extent practicable in such a manner as to prevent any runoff from entering the vernal pools or their watersheds and shall be shown on the construction plans. Fueling of equipment shall take place within existing paved areas greater than 100 feet from the vernal pools or their watersheds. Contractor equipment shall be checked for leaks prior to operation and repaired as necessary. A spill kit for each piece of construction equipment shall be on-site and must be used in the event of a spill. "No fueling zones" shall be designated on construction plans.

E. Grading activities immediately adjacent to vernal pools shall be timed to avoid wet weather to minimize potential impacts (e.g., siltation) to the vernal pools unless the area to be graded is at an elevation below the pools. To achieve this goal, grading adjacent to avoided pools shall comply with the following:

- Grading shall occur only when the soil is dry to the touch both at the surface and 1 inch below. A visual check for color differences (i.e., darker soil indicating moisture) in the soil between the surface and 1 inch below indicates whether the soil is dry.

- ~~After a rain of greater than 0.2-inch, grading shall occur only after the soil surface has dried sufficiently as described above, and no sooner than 2 days (48 hours) after the rain event ends.~~

- ~~To prevent erosion and siltation from storm water runoff due to unexpected rains, best management practices (i.e., silt fences) shall be implemented as needed during grading.~~

- ~~If rain occurs during grading, work shall stop and resume only after soils are dry, as described above.~~

- ~~Grading shall be done in a manner to prevent runoff from entering preserved vernal pools.~~

- ~~If necessary, water spraying shall be conducted at a level sufficient to control fugitive dust but not to cause runoff into vernal pools.~~

- ~~If mechanized grading is necessary, grading shall be performed in a manner to minimize soil compaction (i.e., use the smallest type of equipment needed to feasibly accomplish the work).~~

F. ~~Permanent protective fencing along any interface with developed areas and/or use other measures approved by the City to deter human and pet entrance into on- or off-site habitat shall be installed. Fencing shall be shown on the development plans and should have no gates (accept to allow access for maintenance and monitoring of the biological conservation easement areas) and be designed to prevent intrusion by pets. Signage for the biological conservation easement area shall be posted and maintained at conspicuous locations. The requirement for fencing and/or other preventative measures shall be included in the project's mitigation program.~~

~~BIO-16 Post-construction San Diego Fairy Shrimp Monitoring –~~

~~The San Diego fairy shrimp population that occurs in the artificial ditch in the western portion of the project parcels shall be monitored on an annual basis for a minimum period of five years. A qualified biologist holding a valid USFWS Section 10(a)(1)(A) Recovery Permit shall conduct wet season surveys in accordance with the current USFWS Survey Guidelines for the Large Listed Branchiopods (dated November 13, 2017 at the time of preparation of this report) with the following amendment: once mature San Diego fairy shrimp have been detected in any one survey period, sampling for the species shall cease; site visits shall continue following the survey schedule identified in the guidelines only to collect hydrological data. Photo-points shall also be established to capture the occupied depression's inlet(s) and outlet(s). At a minimum, photographs will be taken annually at each photo-point.~~

Biological Resources

Bio-1 BIOLOGICAL RESOURCE PROTECTION DURING CONSTRUCTION

Prior to issuance of Notice To Proceed (NTP), the Development Services Department (DSD) Environmental Designee (ED) shall review and approve all construction documents (plans, specifications, details, etc.) to ensure these MMRP requirements are incorporated.

I. **Prior to Construction**

H. **Biologist Verification -** The owner/permittee shall provide a letter to the City's Mitigation Monitoring Coordination (MMC) section stating that a Project Biologist (Qualified Biologist) as defined in the City of San Diego's Biological Guidelines (2012~~8~~), has been retained to implement the project's biological monitoring program. The letter shall include the names and contact information of all persons involved in the biological monitoring of the project.

I. **Preconstruction Meeting -** The Qualified Biologist shall attend the preconstruction meeting, discuss the project's biological monitoring program, and arrange to perform any follow up mitigation measures and reporting including site-specific monitoring, restoration or revegetation, and additional fauna/flora surveys/salvage.

J. **Biological Documents -** The Qualified Biologist shall submit all required documentation to MMC verifying that any special mitigation reports including but not limited to, maps, plans, surveys, survey timelines, or buffers are completed or scheduled per City Biology Guidelines, Multiple Species Conservation Program (MSCP), Environmentally Sensitive Lands Ordinance (ESL), project permit conditions; California Environmental Quality Act (CEQA); endangered species acts (ESAs); and/or other local, state or federal requirements.

K. **BCME -**The Qualified Biologist shall present a Biological Construction Mitigation/Monitoring Exhibit (BCME) which includes the biological documents in C above. In addition, include: restoration/revegetation plans, plant salvage/relocation requirements (e.g., coastal cactus wren plant salvage, burrowing owl exclusions, etc.), avian or other wildlife surveys/survey schedules (including general avian nesting and USFWS protocol), timing of surveys, wetland buffers, avian construction avoidance areas/noise buffers/ barriers, other impact avoidance areas, and any subsequent requirements determined by the Qualified Biologist and the City ADD/MMC. The BCME shall include a site plan, written and graphic depiction of the project's biological mitigation/monitoring program, and a schedule. The BCME shall be approved by MMC and referenced in the construction documents.

L. **Avian Protection Requirements -** To avoid any direct impacts to Least Bell's vireo, Northern harrier, Coastal cactus wren or California gnatcatcher and any species identified as a listed, candidate, sensitive, or special status species in the MSCP, removal of habitat that supports active nests in the proposed area of disturbance should occur outside of the breeding season for these species (February 1 to September 15). If removal of habitat in the proposed area of disturbance must occur during the breeding season, the Qualified Biologist shall conduct a pre-construction survey to determine the presence or absence of Least Bell's vireo, Northern harrier, Coastal cactus wren or California gnatcatcher on the proposed area of disturbance. The pre-construction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The applicant shall submit the results of the pre-construction survey to City DSD for review and approval prior to initiating any construction activities. If nesting Least Bell's vireo, Northern harrier, Coastal cactus wren or California gnatcatcher, sensitive or MSCP-covered birds are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines and applicable State and Federal Law (i.e. appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided. The report or mitigation plan shall be submitted to the City for review and approval and implemented to the satisfaction of the City. The City's MMC Section and Biologist shall verify and approve that all measures identified in the report or mitigation plan are in place prior to and/or during construction.

M. **Resource Delineation -** Prior to construction activities, the Qualified Biologist shall supervise the placement of orange construction fencing or equivalent along the limits of disturbance adjacent to sensitive biological habitats and verify compliance with any other project conditions as shown on the BCME. This phase shall include flagging plant specimens and delimiting buffers to protect sensitive biological resources (e.g., habitats/flora & fauna species, including nesting birds) during construction. Appropriate steps/care should be taken to minimize attraction of nest predators to the site.

N. **Education -** Prior to commencement of construction activities, the Qualified Biologist shall meet with the owner/permittee or designee and the construction crew and conduct an on-site educational session regarding the need to avoid impacts outside of the approved construction area and to protect sensitive flora and fauna (e.g., explain the avian and wetland buffers, flag system for removal of

invasive species or retention of sensitive plants, and clarify acceptable access routes/methods and staging areas, etc.).

I. **During Construction**

C. **Monitoring -** All construction (including access/staging areas) shall be restricted to areas previously identified, proposed for development/staging, or previously disturbed as shown on "Exhibit A" and/or the BCME. The Qualified Biologist shall monitor construction activities as needed to ensure that construction activities do not encroach into biologically sensitive areas, or cause other similar damage, and that the work plan has been amended to accommodate any sensitive species located during the pre-construction surveys. In addition, the Qualified Biologist shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR shall be e-mailed to MMC on the 1st day of monitoring, the 1st week of each month, the last day of monitoring, and immediately in the case of any undocumented condition or discovery.

D. **Subsequent Resource Identification -** The Qualified Biologist shall note/act to prevent any new disturbances to habitat, flora, and/or fauna onsite (e.g., flag plant specimens for avoidance during access, etc). If active nests or other previously unknown sensitive resources are detected, all project activities that directly impact the resource shall be delayed until species specific local, state or federal regulations have been determined and applied by the Qualified Biologist.

III. **Post Construction Measures**

A. In the event that impacts exceed previously allowed amounts, additional impacts shall be mitigated in accordance with City Biology Guidelines, ESL and MSCP, State CEQA, and other applicable local, state and federal law. The Qualified Biologist shall submit a final BCME/report to the satisfaction of the City ADD/MMC within 30 days of construction completion.

Bio-2 HABITAT-BASED MITIGATION (RESTORATION/CREATION)

Prior to issuance of Notice To Proceed (NTP), the Development Services Department (DSD) Environmental Designee (ED) shall review and approve all construction documents (plans, specifications, details, etc.) to ensure these MMRP requirements are incorporated.

I. **Prior to Permit Issuance**

A. Land Development Review (LDR) Plan Check

1. Prior to NTP or issuance for any construction permits, including but not limited to, the first Grading Permit, Demolition Plans/Permits and Building Plans/Permits, whichever is applicable, the ADD environmental designee shall verify that the requirements for the revegetation/restoration plans and specifications, including mitigation of direct impacts to 0.91 acre of maritime succulent scrub, 4.86 acres of disturbed maritime succulent scrub, 1.41 acres of Diegan coastal sage scrub, and 4.29 acres of disturbed Diegan coastal sage scrub to be mitigated through enhancement of 10.42 acres of maritime succulent scrub and disturbed maritime succulent scrub, and restoration of 3.70 acres of disturbed land in the eastern parcel (including MHPA and non-MHPA lands) as well as impacts to beach goldenaster, number of individuals present to be determined with pre-construction surveys have been shown and noted on the appropriate landscape construction documents. The landscape construction documents and specifications must be found to be in conformance with the *Enhancement and Restoration of Maritime Succulent Scrub as Habitat for Western Burrowing Owl and Beach Goldenstar for the Beyer Park Development Project San Diego, California Plan* prepared by RECON Environmental, August 4, 2020 the requirements of which are summarized below:

B. Revegetation/Restoration Plan(s) and Specifications

1. Landscape Construction Documents (LCD) shall be prepared on D-sheets and submitted to the City of San Diego Development Services Department, Landscape Architecture Section (LAS) for review and approval. LAS shall consult with Mitigation Monitoring Coordination (MMC) and obtain concurrence prior to approval of LCD. The LCD shall consist of revegetation/restoration, planting, irrigation and erosion control plans; including all required graphics, notes, details, specifications, letters, and reports as outlined below.

2. Landscape Revegetation/Restoration Planting and Irrigation Plans shall be prepared in accordance with the San Diego Land Development Code (LDC) Chapter 14, Article 2, Division 4, the LDC Landscape Standards submittal requirements, and Attachment "B" (General Outline for Revegetation/Restoration Plans) of the City

of San Diego's LDC Biology Guidelines (July 2002). The Principal Qualified Biologist (PQB) shall identify and adequately document all pertinent information concerning the revegetation/restoration goals and requirements, such as but not limited to, plant/seed palettes, timing of installation, plant installation specifications, method of watering, protection of adjacent habitat, erosion and sediment control, performance/success criteria, inspection schedule by City staff, document submittals, reporting schedule, etc. The LCD shall also include comprehensive graphics and notes addressing the ongoing maintenance requirements (after final acceptance by the City).

3. The Revegetation Installation Contractor (RIC), Revegetation Maintenance Contractor (RMC), Construction Manager (CM) and Grading Contractor (GC), where applicable shall be responsible to insure that for all grading and contouring, clearing and grubbing, installation of plant materials, and any necessary maintenance activities or remedial actions required during installation and the 120 day plant establishment period are done per approved LCD. The following procedures at a minimum, but not limited to, shall be performed:

    a. The RMC shall be responsible for the maintenance of the upland mitigation area for a minimum period of 120 days. Maintenance visits shall be conducted on a weekly basis throughout the plant establishment period.

    b. At the end of the 120-day period the PQB shall review the mitigation area to assess the completion of the short-term plant establishment period and submit a report for approval by MMC.

    c. MMC will provide approval in writing to begin the five-year long-term establishment/maintenance and monitoring program.

    d. Existing indigenous/native species shall not be pruned, thinned or cleared in the revegetation/mitigation area.

e. The revegetation site shall not be fertilized.

f. The RIC is responsible for reseeding (if applicable) if weeds are not removed, within one week of written recommendation by the PQB.

g. Weed control measures shall include the following: (1) hand removal, (2) cutting, with power equipment, and (3) chemical control. Hand removal of weeds is the most desirable method of control and will be used wherever possible.

h. Damaged areas shall be repaired immediately by the RIC/RMC. Insect infestations, plant diseases, herbivory, and other pest problems will be closely monitored throughout the five-year maintenance period. Protective mechanisms such as metal wire netting shall be used as necessary. Diseased and infected plants shall be immediately disposed of off-site in a legally acceptable manner at the discretion of the PQB or Qualified Biological Monitor (QBM) (City approved). Where possible, biological controls will be used instead of pesticides and herbicides.

4. If a Brush Management Program is required the revegetation/restoration plan shall show the dimensions of each brush management zone and notes shall be provided describing the restrictions on planting and maintenance and identify that the area is impact neutral and shall not be used for habitat mitigation/credit purposes.

C. Letters of Qualification Have Been Submitted to ADD

1. The applicant shall submit, for approval, a letter verifying the qualifications of the biological professional to MMC. This letter shall identify the PQB, Principal Restoration Specialist (PRS), and QBM, where applicable, and the names of all other persons involved in the implementation of the revegetation/restoration plan and biological monitoring program, as they are defined in the City of San Diego Biological Review

References. Resumes and the biology worksheet should be updated annually.

2. MMC will provide a letter to the applicant confirming the qualifications of the PQB/PRS/QBM and all City Approved persons involved in the revegetation/restoration plan and biological monitoring of the project.

3. Prior to the start of work, the applicant must obtain approval from MMC for any personnel changes associated with the revegetation/restoration plan and biological monitoring of the project.

4. PBQ must also submit evidence to MMC that the PQB/QBM has completed Storm Water Pollution Prevention Program (SWPPP) training.

II. **Prior to Start of Construction**

A. PQB/PRS Shall Attend Preconstruction (Precon) Meetings

1. Prior to beginning any work that requires monitoring:

a. The owner/permittee or their authorized representative shall arrange and perform a Precon Meeting that shall include the PQB or PRS, Construction Manager (CM) and/or Grading Contractor (GC), Landscape Architect (LA), Revegetation Installation Contractor (RIC), Revegetation Maintenance Contractor (RMC), Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC.

b. The PQB shall also attend any other grading/excavation related Precon Meetings to make comments and/or suggestions concerning the revegetation/restoration plan(s) and specifications with the RIC, CM and/or GC.

c. If the PQB is unable to attend the Precon Meeting, the owner shall schedule a focused Precon Meeting with MMC, PQB/PRS, CM, BI, LA, RIC, RMC, RE and/or BI, if appropriate, prior to the start of any work associated with the revegetation/ restoration phase of the project, including site grading preparation.

2. Where Revegetation/Restoration Work Will Occur

    a. Prior to the start of any work, the PQB/PRS shall also submit a revegetation/restoration monitoring exhibit (RRME) based on the appropriate reduced LCD (reduced to 11"x 17" format) to MMC, and the RE, identifying the areas to be revegetated/restored including the delineation of the limits of any disturbance/grading and any excavation.
    b. PQB shall coordinate with the construction superintendent to identify appropriate Best Management Practices (BMP's) on the RRME.

3. When Biological Monitoring Will Occur

    a. Prior to the start of any work, the PQB/PRS shall also submit a monitoring procedures schedule to MMC and the RE indicating when and where biological monitoring and related activities will occur.

4. PQB Shall Contact MMC to Request Modification

    a. The PQB may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the revegetation/restoration plans and specifications. This request shall be based on relevant information (such as other sensitive species not listed by federal and/or state agencies and/or not covered by the MSCP and to which any impacts may be considered significant under CEQA) which may reduce or increase the potential for biological resources to be present.

III. **During Construction**

A. PQB or QBM Present During Construction/Grading/Planting

1. The PQB or QBM shall be present full-time during construction activities including but not limited to, site preparation, cleaning, grading, excavation, landscape establishment in association with grading and construction of the park which could result in impacts to sensitive biological resources

as identified in the LCD and on the RRME. **The RIC and/or QBM are responsible for notifying the PQB/PRS of changes to any approved construction plans, procedures, and/or activities. The PQB/PRS is responsible to notify the CM, LA, RE, BI and MMC of the changes.**

2. The PQB or QBM shall document field activity via the Consultant Site Visit Record Forms (CSVR). The CSVR's shall be emailed by the CM the first day of monitoring, the last day of monitoring, monthly, and in the event that there is a deviation from conditions identified within the LCD and/or biological monitoring program. The RE shall forward copies to MMC.

3. The PQB or QBM shall be responsible for maintaining and submitting the CSVR at the time that CM responsibilities end (i.e., upon the completion of construction activity other than that of associated with biology).

4. All construction activities (including staging areas) shall be restricted to the development areas as shown on the LCD. The PQB/PRS or QBM staff shall monitor construction activities as needed, with MMC concurrence on method and schedule. This is to ensure that construction activities do not encroach into biologically sensitive areas beyond the limits of disturbance as shown on the approved LCD.

5. The PQB or QBM shall supervise the placement of orange construction fencing or City approved equivalent, along the limits of potential disturbance adjacent to (or at the edge of) all sensitive habitats mule fat scrub, maritime succulent scrub, disturbed maritime succulent scrub, Diegan coastal sage scrub, disturbed Diegan coastal sage, San Diego barrel cactus, beach goldenaster, south coast saltscale, San Diego but-sage, Palmer's grapplinghook, California box-thorn, small-flowered microseris, and San Diego County viguiera scrub as shown on the approved LCD.

6. The PBQ shall provide a letter to MMC that limits of potential disturbance has been surveyed, staked and that the construction fencing is installed properly.

7. The PQB or QBM shall oversee implementation of BMP's, such as gravel bags, straw logs, silt fences or equivalent erosion control measures, as needed to ensure prevention of any significant sediment transport. In addition, the PQB/QBM shall be responsible to verify the removal of all temporary construction BMP's upon completion of construction activities. Removal of temporary construction BMP's shall be verified in writing on the final construction phase CSVR.

8. PQB shall verify in writing on the CSVR's that no trash stockpiling or oil dumping, fueling of equipment, storage of hazardous wastes or construction equipment/material, parking or other construction related activities shall occur adjacent to sensitive habitat. These activities shall occur only within the designated staging area located outside the area defined as biological sensitive area.

9. The long-term establishment inspection and reporting schedule per LCD must all be approved by MMC prior to the issuance of the Notice of Completion (NOC) or any bond release.

B. Disturbance/Discovery Notification Process

1. If unauthorized disturbances occurs or sensitive biological resources are discovered that where not previously identified on the LCD and/or RRME, the PQB or QBM shall direct the contractor to temporarily divert construction in the area of disturbance or discovery and immediately notify the RE or BI, as appropriate.

2. The PQB shall also immediately notify MMC by telephone of the disturbance and report the nature and extent of the disturbance and recommend the method of additional protection, such as fencing and appropriate Best Management Practices (BMP's). After obtaining

concurrence with MMC and the RE, PQB and CM shall install the approved protection and agreement on BMP's.

3. The PQB shall also submit written documentation of the disturbance to MMC within 24 hours by fax or email with photos of the resource in context (e.g., show adjacent vegetation).

C. Determination of Significance

1. The PQB shall evaluate the significance of disturbance and/or discovered biological resource and provide a detailed analysis and recommendation in a letter report with the appropriate photo documentation to MMC to obtain concurrence and formulate a plan of action which can include fines, fees, and supplemental mitigation costs.

2. MMC shall review this letter report and provide the RE with MMC's recommendations and procedures.

IV. **Post Construction**

A. Mitigation Monitoring and Reporting Period

1. Five-Year Mitigation Establishment/Maintenance Period

a. The RMC shall be retained to complete maintenance monitoring activities throughout the five-year mitigation monitoring period.

b. Maintenance visits will be conducted twice per month for the first six months, once per month for the remainder of the first year, and quarterly thereafter.

c. Maintenance activities will include all items described in the LCD.

d. Plant replacement will be conducted as recommended by the PQB (note: plants shall be increased in container size

relative to the time of initial installation or establishment or maintenance period may be extended to the satisfaction of MMC.)

2. Five-Year Biological Monitoring

   a. All biological monitoring and reporting shall be conducted by a PQB or QBM, as appropriate, consistent with the LCD.

   b. Monitoring shall involve both qualitative horticultural monitoring and quantitative monitoring (i.e., performance/success criteria). Horticultural monitoring shall focus on soil conditions (e.g., moisture and fertility), container plant health, seed germination rates, presence of native and non-native (e.g., invasive exotic) species, any significant disease or pest problems, irrigation repair and scheduling, trash removal, illegal trespass, and any erosion problems.

   c. After plant installation is complete, qualitative monitoring surveys will occur monthly during year one and quarterly during years two through five.

   d. Upon the completion of the 120-days short-term plant establishment period, quantitative monitoring surveys shall be conducted at 0, 6, 12, 24, 36, 48 and 60 months by the PQB or QBM. The revegetation/restoration effort shall be quantitatively evaluated once per year (in spring) during years three through five, to determine compliance with the performance standards identified on the LCD. All plant material must have survived without supplemental irrigation for the last two years.

   e. Quantitative monitoring shall include the use of fixed transects and photo points to determine the vegetative cover within the revegetated habitat. Collection of fixed transect data within the

revegetation/restoration site shall result in the calculation of percent cover for each plant species present, percent cover of target vegetation, tree height and diameter at breast height (if applicable) and percent cover of non-native/non invasive vegetation. Container plants will also be counted to determine percent survivorship. The data will be used determine attainment of performance/success criteria identified within the LCD.

f. Biological monitoring requirements may be reduced if, before the end of the fifth year, the revegetation meets the fifth-year criteria and the irrigation has been terminated for a period of the last two years.

g. The PQB or QBM shall oversee implementation of post-construction BMP's, such as gravel bags, straw logs, silt fences or equivalent erosion control measure, as needed to ensure prevention of any significant sediment transport. In addition, the PBQ/QBM shall be responsible to verify the removal of all temporary post-construction BMP's upon completion of construction activities. Removal of temporary post-construction BMPs shall be verified in writing on the final post-construction phase CSVR.

B. Submittal of Draft Monitoring Report

1. A draft monitoring letter report shall be prepared to document the completion of the 120-day plant establishment period. The report shall include discussion on weed control, horticultural treatments (pruning, mulching, and disease control), erosion control, trash/debris removal, replacement planting/reseeding, site protection/signage, pest management, vandalism, and irrigation maintenance. The revegetation/restoration effort shall be visually assessed at the end of 120-day period to determine mortality of individuals.

2. The PQB shall submit two copies of the Draft Monitoring Report which describes the results, analysis, and conclusions of all phases of the Biological Monitoring and Reporting Program (with appropriate graphics) to MMC for review and approval within 30 days following the completion of monitoring. Monitoring reports shall be prepared on an annual basis for a period of five years. Site progress reports shall be prepared by the PQB following each site visit and provided to the owner, RMC and RIC. Site progress reports shall review maintenance activities, qualitative and quantitative (when appropriate) monitoring results including progress of the revegetation relative to the performance/success criteria, and the need for any remedial measures.

3. Draft annual reports (three copies) summarizing the results of each progress report including quantitative monitoring results and photographs taken from permanent viewpoints shall be submitted to MMC for review and approval within 30 days following the completion of monitoring.

4. MMC shall return the Draft Monitoring Report to the PQB for revision or, for preparation of each report.

5. The PQB shall submit revised Monitoring Report to MMC (with a copy to RE) for approval within 30 days.

6. MMC will provide written acceptance of the PQB and RE of the approved report.

C. Final Monitoring Reports(s)

1. PQB shall prepare a Final Monitoring upon achievement of the fifth-year performance/success criteria and completion of the five-year maintenance period.

    a. This report may occur before the end of the fifth year if the revegetation meets the fifth-year performance /success criteria and the irrigation has been terminated for a period of the last two years.

    b. The Final Monitoring report shall be submitted to MMC for evaluation of the success of the mitigation effort and final acceptance. A request for a pre-final inspection shall be submitted at

this time, MMC will schedule after review of report.

c. If at the end of the five years any of the revegetated area fails to meet the project's final success standards, the applicant must consult with MMC. This consultation shall take place to determine whether the revegetation effort is acceptable. The applicant understands that failure of any significant portion of the revegetation/restoration area may result in a requirement to replace or renegotiate that portion of the site and/or extend the monitoring and establishment/maintenance period until all success standards are met.

Bio-3 BURROWING OWL

A. PRECONSTRUCTION SURVEY ELEMENT

Prior to Permit or Notice to Proceed Issuance:

1. As this project has been determined to be BUOW occupied or to have BUOW occupation potential, the Applicant Department or Permit Holder shall submit evidence to the ADD of Entitlements and Multiple Species Conservation Program (MSCP) staff verifying that a Biologist possessing qualifications pursuant "Staff Report on Burrowing Owl Mitigation, State of California Natural Resources Agency Department of Fish and Game. March 7, 2012 (hereafter referred as CDFG 2012, Staff Report), has been retained to implement a burrowing owl construction impact avoidance program.

2. The qualified BUOW biologist (or their designated biological representative) shall attend the pre-construction meeting to inform construction personnel about the City's BUOW requirements and subsequent survey schedule.

Prior to Start of Construction:

1. The Applicant Department or Permit Holder and Qualified Biologist must ensure that initial pre-construction/take avoidance surveys of the project "site" are completed between 14 and 30 days before initial construction activities, including brushing, clearing, grubbing, or grading of the project site; regardless of the time of the year. "Site" means the project site and the area within a radius of 450 feet of the project site. The report shall be submitted and approved by the Wildlife Agencies and/or City MSCP staff prior to construction or BUOW eviction(s) and shall include maps of the project site and BUOW locations on aerial photos.

2. The pre-construction survey shall follow the methods described in CDFG 2012, Staff Report -Appendix D.

3. 24 hours prior to commencement of ground disturbing activities, the Qualified Biologist shall verify results of preconstruction/take avoidance surveys. Verification shall be provided to the City's Mitigation Monitoring and Coordination (MMC) and MSCP Sections. If results of the preconstruction surveys have changed and BUOW are present in areas not previously identified, immediate notification to the City and WA's shall be provided prior to ground disturbing activities.

During Construction:

1. **Best Management Practices shall be employed as** BUOWs are known to use open pipes, culverts, excavated holes, and other burrow-like structures at construction sites. Legally permitted active construction projects which are BUOW occupied and have followed all protocol in this mitigation section, or sites within 450 feet of occupied BUOW areas, should undertake measures to discourage BUOWs from recolonizing previously occupied areas or colonizing new portions of the site. Such measures include, but are not limited to, ensuring that the ends of all pipes and culverts are covered when they are not being worked on, and covering rubble piles, dirt piles, ditches, and berms.

2. **On-going BUOW Detection** - If BUOWs or active burrows are not detected during the pre-construction surveys, Section "A" below shall be followed. If BUOWs or burrows are detected during the pre-construction surveys, Section "B" shall be followed. NEITHER THE MSCP SUBAREA PLAN NOR THIS MITIGATION SECTION ALLOWS FOR ANY BUOWs TO BE INJURED OR KILLED OUTSIDE **OR** WITHIN THE MHPA; in addition, IMPACTS TO BUOWs WITHIN THE MHPA MUST BE AVOIDED.

    A. **Post Survey Follow Up if Burrowing Owls and/or Signs of Active Natural or Artificial Burrows Are Not Detected During the Initial Pre-Construction Survey -** Monitoring the site for new burrows is required using CDFW Staff Report 2012 Appendix D methods for the period following the initial pre-construction survey, until construction is scheduled to be complete and is complete *(NOTE - Using a projected completion date (that is amended if needed) will allow development of a monitoring schedule).*

        1. If no active burrows are found but BUOWs are observed to

occasionally (1-3 sightings) use the site for roosting or foraging, they should be allowed to do so with no changes in the construction or construction schedule.

2. If no active burrows are found but BUOWs are observed during follow up monitoring to repeatedly (4 or more sightings) use the site for roosting or foraging, the City's Mitigation Monitoring and Coordination (MMC) Section shall be notified and any portion of the site where owls have been sites and that has not been graded or otherwise disturbed shall be avoided until further notice.

3. If a BUOW begins using a burrow on the site at any time after the initial pre-construction survey, procedures described in Section B must be followed.

4. Any actions other than these require the approval of the City and the Wildlife Agencies.

B. **Post Survey Follow Up if Burrowing Owls and/or Active Natural or Artificial Burrows are detected during the Initial Pre-Construction Survey -** Monitoring the site for new burrows is required using Appendix D CDFG 2012, Staff Report for the period following the initial pre-construction survey, until construction is scheduled to be complete and is complete *(NOTE - Using a projected completion date (that is amended if needed) will allow development of a monitoring schedule which adheres to the required number of surveys in the detection protocol).*

1. This section (B) applies only to sites (including biologically defined territory) wholly outside of the MHPA – **all direct and indirect impacts to BUOWs within the MHPA SHALL be avoided.**

2. If one or more BUOWs are using any burrows (including pipes, culverts, debris piles *etc.*) on or within 300 feet of the proposed construction area, the City's MMC Section shall be contacted. The City's MMC Section shall contact the Wildlife Agencies regarding eviction/collapsing burrows and enlist appropriate City biologist for on-going coordination with the Wildlife Agencies and the qualified consulting BUOW biologist. No construction shall occur within 300 feet of an active burrow without written concurrence from the Wildlife Agencies. This distance may increase or decrease, depending on the burrow's location in relation to the site's topography, and other physical and biological characteristics.

    a. **Outside the Breeding Season** - If the BUOW is using a burrow on site outside the breeding season (i.e. September 1 – January 31), the BUOW may be evicted after the qualified BUOW biologist has determined via fiber optic camera or other appropriate device, that no eggs, young, or adults are in the burrow. Eviction requires preparation of an Exclusion Plan prepared in accordance with CDFW Staff Report 2012, Appendix E (or most recent guidance available) for review and submittal to Wildlife Agencies. Written concurrence from the Wildlife Agencies is

required prior to Exclusion Plan implementation.

b. **During Breeding Season** - If a BUOW is using a burrow on-site during the breeding season (Feb 1-Aug 31), construction shall not occur within 300 feet of the burrow until the young have fledged and are no longer dependent on the burrow, at which time the BUOWs can be evicted. Eviction requires preparation of an Exclusion Plan prepared in accordance with CDFW Staff Report 2012, Appendix E (or most recent guidance available) for review and submittal to Wildlife Agencies. Written concurrence from the Wildlife Agencies is required prior to Exclusion Plan implementation.

3. **Survey Reporting During Construction -** Details of construction surveys and evictions (if applicable) carried out shall be immediately (within 5 working days or sooner) reported to the City's MMC, and MSCP Sections and the Wildlife Agencies and must be provided in writing (as by e-mail) and acknowledged to have been received by the required Agencies and DSD Staff member(s).

Post Construction:

1. Details of the all surveys and actions undertaken on-site with respect to BUOWs (i.e. occupation, eviction, locations etc.) shall be reported to the City's MMC Section and the Wildlife Agencies within 21 days post-construction and prior to the release of any grading bonds. This report must include summaries off all previous reports for the site; and maps of the project site and BUOW locations on aerial photos.

BIO-4 Occupied Burrowing Owl Habitat Mitigation

Mitigation for impacts to 13.55 acres of occupied burrowing owl habitat shall occur at ratios 0:1 (Tier IV) 1:1 (Tier I impact outside MHPA/mitigation inside MHPA),

1.5:1(Tier II impacts outside MHPA/mitigation outside MHPA) resulting in a requirement of 10.42 acres of on-site mitigation in accordance with *Enhancement and Restoration of Maritime Succulent Scrub as Habitat for Western Burrowing Owl and Beach Goldenstar for the Beyer Park Development Project San Diego, California* prepared by RECON (November 26, 2019: Revised August 4, 2020. Long term management of the mitigation site would commence following the completion of Initial Tasks and a five-year monitoring and reporting program. Long Term management would be conducted by City of San Diego Park and Recreation Department Open Space Division.

Prior to the pre-construction meeting and starting construction on any portion of the park the following shall be required:

1. Evidence of completion of initial tasks pursuant to burrowing owl mitigation plan stated above to the satisfaction of the City Multiple Species Conservation Program (MSCP) and Wildlife Agencies, including fencing/access control, trash/debris removal, dethatching, weed removal, berm placement, and artificial burrow installation.

Bio-5 LEAST BELL'S VIREO (STATE ENDANGERED/FEDERALLY PROTECTED)

1. Prior to issuance of Notice To Proceed (NTP), the Development Services Department (DSD) Environmental Designee (ED) shall review and approve all construction documents (plans, specifications, details, etc.) to verify that the following project requirements regarding the least Bell's vireo are shown on the construction plans:

   No clearing, grubbing, grading, or other construction activities shall occur between March 15 and September 15, the breeding season of the least Bell's vireo, until the following requirements have been met to the satisfaction of the City Manager:

   A. A qualified biologist (possessing a valid endangered species act section 10(a)(1)(a) recovery permit) shall survey those wetland areas that would be subject to construction noise levels exceeding 60 decibels [dB(A)] or to the ambient noise level if it already exceeds 60 dB(A) hourly average for the presence of the least bell's vireo. Surveys for this species shall be conducted pursuant to the protocol survey guidelines established by the U.S. Fish and Wildlife Service within the breeding season prior to the commencement of construction. If the least Bell's vireo is present, then the following conditions must be met:

   I. Between March 15 and September 15, no clearing, grubbing, or grading of occupied least Bell's vireo habitat shall be permitted.

Areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist; and

II. Between March 15 and September 15, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding 60 dB(A) or to the ambient noise level if it already exceeds 60 dB(A) hourly average at the edge of occupied least bell's vireo or habitat. An analysis showing that noise generated by construction activities would not exceed 60 dB(A) hourly average at the edge of occupied habitat must be completed by a qualified acoustician (possessing current noise engineer license or registration with monitoring noise level experience with listed animal species) and approved by the city manager at least two weeks prior to the commencement of construction activities. Prior to the commencement of any of construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist; or

III. At least two weeks prior to the commencement of construction activities, under the direction of a qualified acoustician, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) or to the ambient noise level if it already exceeds 60 dB(A) hourly average hourly average at the edge of habitat occupied by the least Bell's vireo. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring* shall be conducted at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If the noise attenuation techniques implemented are determined to be inadequate by the qualified acoustician or biologist, then the associated construction activities shall cease until such time that adequate noise attenuation is achieved or until the end of the breeding season (September 16).

* Construction noise monitoring shall continue to be monitored at least twice weekly on varying days, or more frequently depending on the construction activity, to verify that noise levels at the edge of occupied habitat are maintained below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. If not, other measures shall be implemented in consultation with the biologist and the City Manager, as necessary, to reduce noise levels to below 60 dB(A) hourly average or to the ambient noise level if it already exceeds 60 dB(A) hourly average. Such measures may include,

but are not limited to, limitations on the placement of construction equipment and the simultaneous use of equipment.

B. If least Bell's vireo are not detected during the protocol survey, the qualified biologist shall submit substantial evidence to the City Manager and applicable resource agencies which demonstrates whether or not mitigation measures such as noise walls are necessary between March 15 and September 15 as follows:

I. If this evidence indicates the potential is high for least Bell's vireo to be present based on historical records or site conditions, then condition A.III shall be adhered to as specified above.

II. If this evidence concludes that no impacts to this species are anticipated, no mitigation measures would be necessary.

Bio-6 Coastal Cactus Wren Habitat Restoration

Prior to issuance of Notice To Proceed (NTP), the Development Services Department (DSD) Environmental Designee (ED) shall review, all listed species in Table I actually present on-site (as appropriate) shall be described in a salvage plan to the satisfaction of the City ADD of Entitlements (or Designee). The salvaged plan is required to provide appropriate species for use within City sanctioned coastal cactus wren mitigation sites. These sites are currently as follows: Northern -Lake Hodges and Wild Animal Park; Southern -Rancho Jamul/San Diego National Wildlife Refuge Sites.

Preconstruction

A. Prior to the first pre-construction meeting, the applicant shall provide a letter of verification to the ADD of Entitlements stating that a qualified Biologist, as defined in the City of San Diego Biological Resource Guidelines (BRG), has been retained to implement the coastal cactus wren salvage plan.

B. At least thirty days prior to the pre-construction meeting, the qualified Biologist shall verify that a coastal cactus wren plant salvage/ relocation plan (including species, locations, numbers, timing and handling, etc.) plan has been completed and approved by City Mitigation Monitoring Coordination (MMC) Staff and the appropriate contact from the receiving site (MMC can aid notification by phone and/or email).

Construction

A. Salvage, storage and transport requirements shall be carried out as specified in the approved salvage plan and at the preconstruction meeting.

Post-construction

A. Prior to the release of the grading bond, the project biologist shall submit a letter report to the Environmental Review Manager that assesses any project impacts resulting from construction. Any actions taken related to coastal cactus wren protection, including salvage of species in Table 1, shall also be included in this letter. This letter report shall be submitted to EAS, MSCP, and MMC Staff.

TABLE 1
NATIVE CACTUS AND SUCCULENT SPECIES TARGETED FOR SALVAGE*
(*this list is to be annotated with a star for those species present on-site based on site specific biology reports & City staff input – this list is also subject to future refinements at the discretion of the City and Wildlife Agencies)

Scientific Name	Common Name
Cylindropuntia californica var. californica	Snake cholla –
*Cylindropuntia prolifera**	Coast cholla
Dudleya spp.	Live-forevers
*Ferocactus viridescens**	Barrel cactus
*Mammillaria dioica**	Fish-hook cactus
Opuntia littoralis	Coastal prickly pear
Opuntia oricola	Chaparral prickly pear
Yucca whipplei	Our Lord's candle
Yucca schidigera	Mojave yucca
Euphorbia misera	Cliff Spurge

BIO-7 Post-construction San Diego Fairy Shrimp Monitoring

The San Diego fairy shrimp population that occurs in the artificial ditch in the western portion of the project parcels shall be monitored on an annual basis for a minimum period of five years. A qualified biologist holding a valid USFWS Section 10(a)(1)(A) Recovery Permit shall conduct wet season surveys in accordance with the current USFWS Survey Guidelines for the Large Listed Branchiopods (dated November 13, 2017 at the time of preparation of this report) with the following amendment: once mature San Diego fairy shrimp have been detected in any one survey period, sampling for the species shall cease; site visits shall continue following the survey schedule identified in the guidelines only to collect hydrological data. Photo-points shall also be established to capture the occupied depression's inlet(s) and outlet(s). At a minimum, photographs will be taken annually at each photo-point.

Noise

NOI-1 – Operational

1. The hours of operation of Beyer Community Park shall be limited to between the hours of 7:00 AM and 10:00 PM.

NOI-2 – Construction Noise Reduction Measures

1. During all project site excavation and grading on-site, construction contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers, consistent with manufacturer standards.

2. The contractor shall place all stationary construction equipment so that emitted noise is directed away from the noise sensitive receptors nearest the project site.

3. Equipment shall be shut off and not left to idle when not in use.

4. The contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise/vibration sources and sensitive receptors nearest the project site during all project construction.

5. The project proponent shall mandate that the construction contractor prohibit the use of music or sound amplification on the project site during construction.

6. The construction contractor shall limit haul truck deliveries to the same hours specified for construction equipment.

7. Prior to the issuance of any construction permits for construction anticipated to occur within 1,200 of occupied MHPA habitat, the City Manager (or appointed designee) shall verify that the MHPA boundaries and the following project requirements regarding the sensitive wildlife species are shown on the construction plans:

   A qualified biologist (possessing a valid Endangered Species Act Section 10(a)(1)(A) recovery permit) shall survey those habitat areas within the MHPA that would be subject to construction noise levels exceeding 60 dB(A) hourly average for the presence of the sensitive wildlife species. Surveys shall be conducted pursuant to the protocol survey guidelines established by the U.S. Fish and Wildlife Service within the breeding season prior to the commencement of any construction. If noise sensitive species are present, then the following conditions must be met:

- Between March 1 and August 15, no clearing, grubbing, or grading of sensitive habitat shall be permitted. Areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist; and

- Between March 1 and August 15, no construction activities shall occur within any portion of the site where construction activities would result in noise levels exceeding a hourly equivalent noise level (Leq) of 60 dB(A) at the edge of occupied sensitive habitat. An analysis showing that noise generated by construction activities would not exceed 60 dBA Leq at the edge of occupied habitat must be completed by a qualified acoustician and approved by the City Manager at least two weeks prior to the commencement of construction activities. Prior to the commencement of construction activities during the breeding season, areas restricted from such activities shall be staked or fenced under the supervision of a qualified biologist; or

- At least two weeks prior to the commencement of construction activities, noise attenuation measures (e.g., berms, walls) shall be implemented to ensure that noise levels resulting from construction activities will not exceed 60 dB(A) Leq at the edge of habitat occupied by the sensitive wildlife species. Concurrent with the commencement of construction activities and the construction of necessary noise attenuation facilities, noise monitoring shall be conducted, under the direction of a qualified acoustician, at the edge of the occupied habitat area to ensure that noise levels do not exceed 60 dBA Leq. If the noise attenuation techniques implemented are determined to be inadequate by measurement, then the associated construction activities shall cease until such time that adequate noise attenuation can be demonstrated, or until the end of the breeding season (August 16).

VI. PUBLIC REVIEW DISTRIBUTION:

Draft copies or notice of this Mitigated Negative Declaration were distributed to:

Federal
US Fish and Wildlife Service (23)

State
California Department of Fish and Wildlife (32)
California Natural Resources Agency (43)
State Clearinghouse (46)

City of San Diego
Mayor's Office (91)

Councilmember Moreno, District 8
Development Services Department
- EAS
- Engineering
- Geology
- Planning Review
- Park and Recreation
- DPM

Planning Department
- Long Range
- MSCP

Parks and Recreation Department (77)
MMC (77A)
Library Department - Government Documents (81)
San Diego Central Library (81A)
San Ysidro Branch Library (81EE)
Park and Recreation Board (83)
Park and Recreation (89)
Park Development (93)
City Attorney's Office (93C)
Public Notice Journal (144)

Other Organizations, Groups and Interested Individuals
Sierra Club (165)
Neighborhood Canyon Creek and Park Groups (165A)
San Diego Audubon Society (167)
Mr. Jim Peugh (167A)
California Native Plant Society (170)
Endangered Habitats League (182A)
Citizens Coordinate for Century 3 (189)
San Ysidro Community Planning Group (433)
United Border Community Town Council (434)
Applicant: City of San Diego Public Works

VII. RESULTS OF PUBLIC REVIEW:

( ) No comments were received during the public input period.

( ) Comments were received but did not address the accuracy or completeness of the draft environmental document. No response is necessary and the letters are incorporated herein.

(X) Comments addressing the accuracy or completeness of the draft environmental document were received during the public input period. The letters and responses are incorporated herein.

Copies of the draft Mitigated Negative Declaration, the Mitigation, Monitoring and Reporting Program and any Initial Study material are available in the office of the Development Services Department for review, or for purchase at the cost of reproduction.

E. Shearer-Nguyen
Senior Planner
Development Services Department

April 23, 2020
Date of Draft Report

October 12, 2020
Date of Final Report

Analyst: M. Dresser

Attachments: Initial Study Checklist
Figure 1: Location Map
Figure 2: Site Plan

U.S. FISH AND WILDLIFE SERVICE
Carlsbad Fish and Wildlife Office
2177 Salk Avenue, Suite 250
Carlsbad, California 92008

CALIFORNIA DEPARTMENT OF
FISH AND WILDLIFE
South Coast Region
3883 Ruffin Road
San Diego, California 92123

In Reply Refer to:
FWS/CDFW-20B0171-20TA1080

May 29, 2020
Sent Electronically

Ms. Morgan Dresser
Associate Planner
Development Services Department
City of San Diego
1222 First Avenue, MS 501
San Diego, California 92101

Subject: Comments on the Draft Mitigated Negative Declaration (MND) for the Beyer Park SDP, San Diego County, California (Project # 589554; SCH# 2020049049)

Dear Ms. Dresser:

1. The U.S. Fish and Wildlife Service (Service) and the California Department of Fish and Wildlife (CDFW), collectively referred to as the Wildlife Agencies, have reviewed the Draft Mitigated Negative Declaration (MND) for the Beyer Park SDP dated April 23, 2020 (Project). The comments provided in this letter are based on information provided in the MND and the Biological Resources Report for the Beyer Park Development Project, San Diego, California (RECON 2019), our knowledge of sensitive and declining species and their habitats in the region, and our participation in the Multiple Species Conservation Program (MSCP) and the City's MSCP Subarea Plan (SAP).

2. The primary concern and mandate of the Service is the protection of public fish and wildlife resources and their habitats. The Service has legal responsibility for the welfare of migratory birds, anadromous fish, and endangered animals and plants occurring in the United States. The Service is also responsible for administering the Federal Endangered Species Act of 1973 (Act), as amended (16 U.S.C. 1531 *et seq.*), including habitat conservation plans (HCP) developed under section 10(a)(l) of the Act. CDFW is a Trustee Agency and a responsible Agency pursuant to the California Environmental Quality Act (CEQA), Sections 15386 and 15381, respectively. The CDFW is responsible for the conservation, protection, and management of the State's biological resources; including rare, threatened, and endangered plant and animal species, pursuant to the California Endangered Species Act (CESA), and administers the Natural Community Conservation Planning (NCCP) program. The City participates in CDFW's NCCP and the Service's HCP programs by implementing its SAP.

3. The City proposes construction and operation of a 16.5-acre open space park which would include a soccer field, 3 children's fields, a 19,375-square foot skate park, a 19,450-square foot

City staff response(s) to the U.S. Fish and Wildlife Service and California Department of Fish and Wildlife comment(s) letter for Beyer Park, Project No. 589554

1. Comment noted. The comment does not address the adequacy of the draft Mitigated Negative Declaration. No further response is required.

2. Comment noted. The comment does not address the adequacy of the draft Mitigated Negative Declaration. No further response is required.

3. Comment noted. This comment summarizes the project. No response is necessary.

large dog park, a 14,700-square foot small dog park, a 10,400-square foot children's play area, a 450-square foot comfort station, a 350-square foot maintenance building and trash enclosure, a half basketball court, shade structures, picnic areas, and trails. The park would also have 69 on-site parking and 15 street parking stalls. Site improvements would include associated hardscape and landscape, retaining walls, infrastructure (e.g., off-site utility connections of water, sewer), storm drain, and access roads/trails. Grading would entail approximately 81,100 cubic yards of cut with a maximum cut depth of 21 feet. The project is anticipated to begin a year after the CEQA process has been completed.

The 43-acre site is located southeast of the eastern terminus of Beyer Boulevard. The project site is designated park and open space and zoned OP-1-1 and RS-1-7 per the San Ysidro Community Plan. Portions of the project site are within the City's MSCP Multiple Habitat Planning Areas (MHPA). The project site is also within the City's Vernal Pool HCP. The project site is bounded by residential development to the north, and designated open space to the south, east, and west.

The project impact footprint supports the following vegetation communities: Diegan coastal sage scrub, maritime succulent scrub, mulefat scrub, vernal pool, and disturbed. The project will impact 5.77 acres of maritime succulent scrub and 5.70 acres of Diegan coastal sage scrub (11.47 acres total) outside of the MHPA. The project also proposes to enhance 7.79 acres of maritime succulent scrub in the MHPA and 2.64 acres of maritime succulent scrub outside of the MHPA. In addition, 3.70 acres of disturbed, both inside and outside the MHPA will be restored to maritime succulent scrub for a total of 14.12 acres of enhancement and restoration.

3.

The project site supports the federally endangered San Diego fairy shrimp (*Branchinecta sandiegonensis*); the federally threatened coastal California gnatcatcher (*Polioptila californica californica*; gnatcatcher); the federally threatened, state-endangered and MSCP narrow endemic Otay tarplant (*Deinandra conjugens*); four California Species of Special Concern which are also covered species under the MSCP: western burrowing owl (*Athene cunicularia*), northern harrier (*Circus cyaneus*), coastal cactus wren (*Campylorhynchus brunneicapillus*), and Southern California rufous-crowned sparrow (*Aimophila ruficeps*); and three additional MSCP covered species: Belding's orange-throated whiptail (*Aspidoscelis hyperythra beldingi*), southern mule deer (*Odocoileus hemionus*), and San Diego barrel cactus (*Ferocactus viridescens*). Although found on the site, impacts to San Diego fairy shrimp and Otay tarplant will be avoided by the project as stated in the MND.

The Wildlife Agencies offer comments and recommendations (Attachment) to assist the City in avoiding, minimizing, and adequately mitigating project-related impacts to biological resources. Thank you for the opportunity to comment on the subject MND. If you have any questions, please contact Nasseer Idrisi of CDFW[1] at 858- 467-2720, or Patrick Gower of the Service[2] at 760-431-9440 ext. 352.

[1] Nasseer.Idrisi@wildlife.ca.gov
[2] Patrick Gower@fws.gov

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Sincerely,

CHRISTINE MEDAK
Digitally signed by CHRISTINE MEDAK
Date: 2020.05.29 06:43:44 -07'00'

for David A. Zoutendyk
Acting Assistant Field Supervisor
U.S. Fish and Wildlife Service

David A. Mayer
Environmental Programs Manager
California Department of Fish and Wildlife

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LITERATURE CITED

Alden Environmental. 2020. Resource Management Plan for the Turecek Off-site Mitigation Parcel. Prepared for Sunroad Enterprises San Diego Califoria. 37 pp

[ICR] San Diego Zoo's Institute of Conservation Research. 2017. Burrowing Owl Conservation and Management Plan for San Diego County. San Diego California. 86pp.

RECON. 2019. Biological Resources Report for the Beyer Park Development Project, San Diego, California. Prepared for Mr. Darren Genova City of San Diego Public Works – Engineering San Diego California. 175 pp

Schaefer Ecological Solutions. 2019. Burrowing Owl Mitigation Plan for the Metropolitan Airpark Project. Prepared for Metropolitan Airpark, LLC San Diego California. 69 pp

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ATTACHMENT

Wildlife Agencies' Comments on the City of San Diego's Draft Mitigated Negative Declaration (MND) for the Beyer Park SDP, City of San Diego, California

1. The MSCP requires that occupied burrowing owl habitat be mitigated with occupied, or occupiable (i.e., with enhancement) habitat at ratios reflective of impacts/conservation within or outside of the MHPA. If a proposed mitigation parcel is not within, or amended into via a Boundary Line Adjustment, the City's MHPA, the mitigation acreage requirement would be higher. The MSCP allows active or passive protocols for burrowing owl as approved by the Wildlife Agencies. This species has fared extremely poorly over the course of 20 years of MSCP implementation and it is important to ensure that positive conservation outcomes will be obtained when impacts to this species are proposed. To achieve this, and to be consistent with requirements applied to development projects elsewhere in the City, the City needs to develop a comprehensive habitat enhancement and resource management plan to address the proposed burrowing owl mitigation site, and submit a draft of this plan for review and eventual approval by the Wildlife Agencies. This plan needs to thoroughly evaluate the proposed mitigation site's existing conditions and include any necessary measures to enhance the site in order to support burrowing owls. This begins with providing an initial local/regional contextual review of the site and adjoining lands. Additionally, the site's soils, vegetation composition and condition, proximity to development, and other factors must be evaluated relative to compatibility for burrowing owls. The site's soils are particularly important to determine if they can support a robust population of fossorial mammals (e.g., ground squirrels). The San Diego Zoo's Institute of Conservation Research (ICR) has provided guidance materials to evaluate soils and other factors in selecting a potential burrowing owl mitigation site (ICR 2017). An earthen berm may need to be constructed to provide suitable fossorial habitat on the mitigation site. Artificial burrows may also be necessary to provide immediately available burrow habitat as refugia to support owls until sufficient natural burrows become established by squirrels. If artificial burrows are employed, they must be maintained at least twice a year, once in the fall and once just prior to the pre-spring breeding season, unless the site has demonstrated that the ground squirrel population has established sufficient, well-developed burrows to support owls without the need for artificial burrows. The Wildlife Agencies recommend following the recently approved (by the City and Wildlife Agencies) Resource Management Plan for the Turecek Off-site Mitigation Parcel (Alden Environmental 2020) or the Burrowing Owl Mitigation Plan for the Metropolitan Airpark Project (Schaefer Ecological Solutions 2019) as examples for burrowing owl mitigation. Both documents are available through the City of San Diego's MSCP Division.

4.

2. The 2016/2017 protocol surveys for fairy shrimp has reached the 3-year time limit as per Attachment I Sample Protocol Survey Requirements of the City's Land Development Manual – Biology Guidelines; therefore, before project construction can begin, new protocol surveys should be completed. The Wildlife Agencies request that

5.

4. The final Mitigated Negative Declaration has been revised to include City standard Burrowing Owl Mitigation Measures. Additionally, the *Enhancement and Restoration of Maritime Succulent Scrub as Habitat for Western Burrowing Owl and Beach Goldenaster for the Beyer Park Development Project San Diego, California* (Recon, November 2019, revised September 2020) was prepared for the project and is included as an appendix to the MND. This will serve as the mitigation plan for MSS and BUOW, habitat enhancement, and resource management plan. The document evaluated the proposed mitigation site's existing conditions and proposes measures to enhance and restore the mitigation site to support burrowing owl. A local/regional contextual review of the site and the adjoining lands is included. The site was evaluated by RECON Environmental Inc. and Natural History Museum specialists in conjunction with City of San Diego staff. Factors that were evaluated include but are not limited to the soil, vegetation composition and condition, and proximity to development. The presence of fossorial mammals was confirmed. The installation/maintenance of artificial burrows is provided; however, the Plan has been revised to include the addition of an earthen berm. The language and specifications for the earthen berm are modeled after the *Resource Management Plan for the Turecek Off-site Mitigation Parcel*. Artificial burrow design is based on the design recommended by San Diego Zoo Conservation Research in the report titled, *2018 Project Report: Advancing Burrowing Owl Conservation in San Diego County through Mitigation Measures using Science and Adaptive Management*. The evaluation of the site and measures outlined in the plan for the enhancement and restoration of the mitigation site to support burrowing owl were based on several published documents for burrowing owl conservation. These include the 2012 CDFW *Staff Report on Burrowing Owl Mitigation* and 2017 San Diego Zoo Institute for Conservation Research *Conservation and Management Plan for San Diego County*. In addition, information was gathered through breeding season surveys (*Results of the 2017 Burrowing Owl Breeding Season Surveys for Beyer Park Development Project*) and repeated site visits outlined in the *Biological Resource Report for the Beyer Park Development Project*.

5. The watershed containing San Diego fairy shrimp is illustrated in Figure 7c of the Biological Resource Report for the Beyer Park Development Project and discussion on how the project will not negatively impact the vernal pool's watershed can be found in Section 5.3.1.2 and Section 5.3.2.2 of the report. Additionally, Section V. of the MND contains mitigation measures to ensure no impacts to the vernal pool or the associated watershed would occur. These mitigation measures follow the guidelines within the City of San Diego Vernal Pool Habitat Conservation Plan (2017). The City will conduct a verification survey prior to construction to determine whether existing conditions observed during the protocol surveys in 2016/2017 have been altered. This survey would assess whether mapped depressions are still present, relative size of the depressions and whether new depressions are present within the project impact area. The survey would also document the presence of VPHCP species, if observed. A memorandum outlining the verification survey results will be provided to MSCP and the Wildlife Agencies upon completion.

5. the final MND demonstrate that the project will not negatively impact the vernal pool's watershed or result in changes to the hydrology.

6. 3. The Wildlife Agencies recommend permanent barriers/fencing should be installed along the park/MHPA boundary to preclude human entrance into the MHPA outside of approved entrances. These barriers should be described in Section 3.2.3 of the MND.

7. 4. Because the proposed project is sponsored by the City's Parks Department, the MND should provide Area Specific Management Directives (ASMDs) to reduce impacts to cactus wrens and to ensure the Park activities are compatible with long-term habitat of the cactus wren. The Wildlife Agencies recommend that trails and active uses at the park property are located as far as possible from mature cactus habitat.

8. 5. Pre-construction surveys must be performed to ensure that any active nests of northern harrier are provided a 900-foot buffer from construction activities, as required by the MSCP.

9. 6. The Proposed Mitigation Design (Figure 8) in the Biological Resources Report shows Otay tarplant along a trail that will be closed, but this trail continues outside of the mitigation area. The Wildlife Agencies recommend fencing be erected to protect Otay tarplant along the remaining trail segments on City property.

10. 7. Figure 8c (Jurisdictional Waters – City of San Diego Wetlands) in the Biological Resources Report shows the 100-foot wetlands avoidance buffer overlapping with the project impact area. Project impact areas should be located outside the 100-foot wetlands avoidance buffer.

11. 8. The Wildlife Agencies recommend the North/South trail that is located within the MHPA (as depicted in Figure 10 in the Biological Resources Report) be moved to the boundary of the developed area. This action would be consistent with City's MSCP SAP Public Access, Trails, and Recreation Priority 1, which states that: "#2 *Locate trails, view overlooks, and staging areas in the least sensitive areas of the MHPA. Locate trails along the edges of urban land uses adjacent to the MHPA, or the seam between land uses (e.g., agriculture/habitat), and follow existing dirt roads as much as possible rather than entering habitat or wildlife movement areas. Avoid locating trails between two different habitat types (ecotones) for longer than necessary due to the typically heightened resource sensitivity in those locations.*"

12. 9. The Biological Resources Report (page 91) specifies that the mitigation site will be maintained and monitored by the City Parks and Recreation Department, but it does not address the conservation mechanism that will be in place to preserve the land into perpetuity. The Wildlife Agencies recommend that the mitigation site adjacent to the MHPA be incorporated through a Boundary Line Adjustment into the MHPA.

13. 10. Mitigation Measure BIO-14: San Diego Fairy Shrimp Measures Prior to Construction states that, "*If work inadvertently occurs beyond the fenced or demarcated limits of*

6. Permanent barriers will be installed along the park boundary adjacent to the MHPA as well as along the habitat side of any paths within the park. Additionally, the majority of the MHPA overlaps with the mitigation site and permanent three wire cable fencing or equivalent will be installed along the perimeter of the mitigation site as described in Section 3.2.3 of the Enhancement and Restoration of Maritime Succulent Scrub as Habitat for Western Burrowing Owl and Beach Goldenaster for the Beyer Park Development Project. Additionally, the MND has been revised to include information pertaining to barriers adjacent to the MHPA as well as adjacent to habitat along paths within the park.

7. The ASMDs for cactus wren are outlined below with the associated section in the Biological Resource Report for the Beyer Park Development Project in which the ASMD is addressed.

The restoration of maritime succulent scrub habitat as specified in the Otay Ranch RMP and GDP must occur at the specified 1:1 ratio.

No impacts to occupied cactus wren habitat will occur as a result of this project. However, mitigation for unoccupied maritime succulent scrub will be satisfied. Mitigation for impacts to maritime succulent scrub are being mitigated at a 1:1 ratio as illustrated in table 7 of the Biological Resource Report for the Beyer Park Development Project.

Area management directives must include restoration of maritime succulent scrub habitat, including propagation of cactus patches, active/adaptive management of cactus wren habitat, monitoring of populations within preserves and specific measures to reduce or eliminate detrimental edge effects.

As outlined in the Enhancement and Restoration of Maritime Succulent Scrub as Habitat for Western Burrowing Owl and Beach Goldenaster for the Beyer Park Development Project maritime succulent scrub would be restored and enhanced. The area chosen for restoration/enhancement has existing cactus onsite as illustrated in Figure 7b of the Biological Resource Report for the Beyer Park Development Project. Cactus within the project footprint will be transplanted to the restoration/enhancement area as outlined in Section 3.2.1 of the Enhancement and Restoration of Maritime Succulent Scrub as Habitat for Western Burrowing Owl and Beach Goldenaster for the Beyer Park Development Project. Specific measures to reduce or eliminate detrimental edge effects such as fencing around the mitigation site and having the mitigation site adjacent to County Lands to extend the preservation of maritime succulent scrub are discussed in Sections 2.3.1.

No clearing of occupied habitat may occur from the period of February 15 through August 15.

Park active use areas were designed in locations within the project footprint to avoid impacts to cactus wren during park use. Direct impacts to mature cactus habitat will not occur as a result of this project. During surveys for cactus wren it was observed that mature cactus habitat (Cactus Scrub Type 1 and Cholla Type 1) was present north of the project site. Additional fragments of cactus habitat observed were of lower quality (Cactus Scrub Type 3 or 4 and Cholla Type 2 or 3) and were highly fragmented. This is described in the Biological Resource Report for the Beyer Park Development Project in Section 2.7, Section 3.3.4.1.i and

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is illustrated in Figure 7c. Noise modeling was conducted to determine the potential extent of noise encroachment during park construction and operations into occupied cactus wren habitat. Figure 9 within the Biological Resource Report for the Beyer Park Development Project illustrates that the anticipated 60 dB(A) Leq noise contour from park operations would be approximately 250 feet from the closest mature cactus habitat. Locations of active use areas within the park are located as far as possible from the mature cactus stands.

There is a trail currently present between the park and the mature cactus stand that is used by border patrol. The project will not alter this existing trail or any of the trails that are designated trails according to the Otay Mesa Community Plan.

8. The final Mitigated Negative Declaration has been revised to include City standard northern harrier Mitigation Measures. Specifically, pre-construction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation). The applicant shall submit the results of the pre-construction survey to City DSD for review and approval prior to initiating any construction activities. If nesting Least Bell's vireo, Northern harrier, Coastal cactus wren or California gnatcatcher, sensitive or MSCP-covered birds are detected, a letter report or mitigation plan in conformance with the City's Biology Guidelines and applicable State and Federal Law (i.e. appropriate follow up surveys, monitoring schedules, construction and noise barriers/buffers, etc.) shall be prepared and include proposed measures to be implemented to ensure that take of birds or eggs or disturbance of breeding activities is avoided.

9. The perimeter of the mitigation site will be fenced using permanent three wire cable fencing or equivalent as described in Section 3.2.3 of the Enhancement and Restoration of Maritime Succulent Scrub as Habitat for Western Burrowing Owl and Beach Goldenaster for the Beyer Park Development Project. Additionally, the City concurs that a lodge pole fence or similar barrier should be erected along the designated trails that are termed "trails to remain open" in Figure 8 of the Enhancement and Restoration of Maritime Succulent Scrub as Habitat for Western Burrowing Owl and Beach Goldenaster for the Beyer Park Development Project to deter trespass within the City parcel.

10. Per the San Diego Municipal Code Section 143.0141(b) a 100-foot wetland avoidance buffer should be provided for all identified wetlands within the Coastal Overlay Zone. The Beyer Park Project is not located within the Coastal Overlay Zone. Per Section II.A.1.b.:
"A wetland buffer shall be maintained around all wetlands as appropriate to protect the functions and values of the wetland. Section 320.4(b)(2) of the U.S. Army Corps of Engineers General Regulatory Policies (33CFR 320-330) list criteria for consideration when evaluating wetland functions and values. These include wildlife habitat (spawning, nesting, rearing, and foraging), food chain productivity, water quality, ground water recharge, and areas for the protection from storm and floodwaters." Therefore, the width of the avoidance buffer may be reduced from 100-feet as long as the functions and values of the wetland are protected. A 100-foot avoidance buffer is illustrated in the Figure 8c and it is acknowledged in Biological Resource Report for the Beyer Park Development Project in Section 5.5 that the project overlaps with this area. However, an analysis is provided (Section 5.5) using the U.S. Army Corps of Engineers General Regulatory Policies (33CFR 320-330) list criteria and concludes that park improvements will likely have a positive effect on wildlife habitat, food chain

13. *impact, all work shall cease until the problem has been remedied to the satisfaction of the City.*" Given the special status of this species, mitigation measure BIO-14 should be amended to include notification, reporting, and coordination with the Wildlife Agencies regarding next steps.

14. 11. Page 5 of the MND (section E) states that, "*The pre-construction survey shall be conducted within 10 calendar days prior to the start of construction activities (including removal of vegetation).*" The Wildlife Agencies recommend that pre-construction surveys occur no more than 3 days prior to the start of construction.

productivity, water quality, ground water recharge and areas for the protection from storm and floodwaters.

11. The North/South trail that is located within the MHPA is an existing trail/ dirt access road and is therefore the least sensitive area. No new trails are proposed as part of this project. In addition, the North/South trail is a designated trail per the Otay Mesa Community Plan and moving the existing trail would potentially impact more sensitive resources. As stated in response 6, the City concurs that a lodge pole fence or similar barrier should be erected along the designated trails that are termed "trails to remain open". This measure along with the perimeter fencing of the park which directs the public to established trails would minimize long term impacts.

12. The project does not encroach within the MHPA and the project was redesigned to avoid all impacts within the MHPA. Therefore, a MHPA boundary line adjustment was not warranted. The parcel was selected for restoration mitigation because it is contiguous with the MHPA and with conservation lands in the adjacent County owned preserve. The mitigation site is City-owned property and would be managed consistent with the adjacent MHPA in accordance with the Management Framework Plan of the MSCP Section 1.5.2. I. Additionally, the mitigation area and on-site MHPA will be added as a HabiTriak gain and depicted as City owned and managed upon issuance of the Notice To Proceed for a City project.

13. The final Mitigated Negative Declaration has been revised to include City standard Mitigation Measures. Additionally, The project would be subject to measures within the City of San Diego Vernal Pool Habitat Conservation Plan, which would be made a condition of approval, to ensure that the project would not result in any indirect impacts to the vernal pools onsite.

14. The 10-day period is standard language for all City projects for general avian bird requirements. Surveys can occur no more than 10 days prior to construction but will be conducted at the discretion of the project biologist to ensure impacts are avoided. Any required protocol surveys will be conducted per established protocols.

INITIAL STUDY CHECKLIST

1. Project title/Project number: Beyer Park ~~SDP~~ / 589554

2. Lead agency name and address: City of San Diego, 1222 First Avenue, San Diego, California 92101

3. Contact person and phone number: Morgan Dresser / (619) 446-5404

4. Project location: Southeast of the eastern terminus of Beyer Boulevard, San Diego, California

5. Project Applicant/Sponsor's name and address: City of San Diego Public Works Department

6. General/Community Plan designation: Park and Open Space

7. Zoning: OP-1-1 and RS-1-7

8. Description of project (Describe the whole action involved, including but not limited to, later phases of the project, and any secondary, support, or off-site features necessary for its implementation.):

   A ~~SITE DEVELOPMENT PERMIT~~ request for the construction and operation of 16.5-acre open space park which would include a soccer field, 3 children's fields, a 19,375-square foot skate park, a 19,450-square foot large dog park, a 14,700-square foot small dog park, a 10,400-square foot children's play area, a 450-square foot comfort station, a 350-square foot maintenance building and trash enclosure, a half basketball court, shade structures, picnic areas, and trails. The park would also have 69 on-site parking spaces (60 standard stalls, 3 accessible stalls, and 6 future HOV/EV Stalls) and 15 street parking stalls. In addition, various site improvements would be constructed that include associated hardscape and landscape, retaining walls infrastructure (e.g. off-site utility connections of water, sewer), storm drain, and access.

   The project landscaping has been reviewed by City Landscape staff and would comply with all applicable City of San Diego Landscape ordinances and standards. Drainage would be directed into appropriate storm drain systems designated to carry surface runoff, which has been reviewed and accepted by City Engineering staff. Ingress and egress would be via Enright Drive and Delany Drive.

   Grading would entail approximately 81,100 cubic yards of cut with a maximum cut depth of twenty-one feet.

9. Surrounding land uses and setting:

   The 43-acre site is located southeast of the eastern terminus of Beyer Boulevard. The project site is bounded by residential development to the north, and designated open space to the south, east and west. Vegetation on-site consists of a variety of native vegetation. Topographically, the site varies from gently sloping and undulating to steep walls in the Moody Canyon area. The western area is gently sloping and undulating, with elevations ranging from about 233 feet above mean sea level (amsl) at the base of the ridge to

elevations 181 to 200 feet amsl along the western slope. Steeply graded and heavily eroded slopes exist in the eastern portion of the site, with elevations ranging from approximately 245 feet amsl to about 285 feet amsl. In addition, the project site is located within a developed area currently served by existing public services and utilities.

The project site is designated park and open space and zoned OP-1-1 and RS-1-7 per the San Ysidro Community Plan. The project site is also within the Multi-Habitat Planning Area, the Airport Land Use Compatibility Overlay Zone (Brown Field), the Airport Influence Area (Brown Field – Review Area 2), the FAA Part 77 Noticing Area (Brown Field and NOLF Imperial Beach), the Very High Fire Hazard Severity Zone, the Parking Standards Transit Priority Area, and the Transit Priority Area. (LEGAL DESCRIPTION: A portion of the southwest quarter of the southeast quarter section 36, together with a portion of the west 27 acres of the southeast quarter of the southeast quarter of section 36, all in township 18 south, range 2 west, San Bernardino base and Meridian, according to the official plat thereof.)

10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement):

None required.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, has consultation begun?

In accordance with the requirements of Public Resources Code 21080.3.1, the City of San Diego provided formal notifications to the Iipay Nation of Santa Ysabel and the Jamul Indian Village, both traditionally and culturally affiliated with the project area; requesting consultation on October 11, 2018.

Note: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐	Aesthetics	☐	Greenhouse Gas Emissions	☐	Population/Housing
☐	Agriculture and Forestry Resources	☐	Hazards & Hazardous Materials	☐	Public Services
☐	Air Quality	☐	Hydrology/Water Quality	☐	Recreation
☒	Biological Resources	☐	Land Use/Planning	☐	Transportation/Traffic
☐	Cultural Resources	☐	Mineral Resources	☐	Tribal Cultural Resources
☐	Geology/Soils	☒	Noise	☐	Utilities/Service System
				☐	Mandatory Findings Significance

DETERMINATION: (To be completed by Lead Agency)

On the basis of this initial evaluation:

☐ The proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ The proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ The proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect (a) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (b) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required.

☐ Although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or (MITIGATED) NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or (MITIGATED) NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact answer should be explained where it is based on project specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis.)

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses", as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or (mitigated) negative declaration. *Section 15063(c)(3)(D).* In this case, a brief discussion should identify the following:

    a. Earlier Analysis Used. Identify and state where they are available for review.

    b. Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

    c. Mitigation Measures. For effects that are "Less Than Significant With Mitigation Measures Incorporated", describe the mitigation measures that were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

    a. The significance criteria or threshold, if any, used to evaluate each question; and

    b. The mitigation measure identified, if any, to reduce the impact to less than significant.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS – Would the project:				
a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒

The project site is not located within, or adjacent to a designated scenic vista or view corridor that is identified in the San Ysidro Community Plan. Therefore, the project would not have a substantial adverse effect on a scenic vista. No impact would result.

b) Substantially damage scenic resources, including but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒

The project is situated adjacent to a developed neighborhood comprised of residential and open space uses. There are no scenic resources (trees, rock outcroppings, or historic buildings) located on the project site. The project would not result in the physical loss, isolation, or degradation of a community identification symbol or landmark, as none are identified by the General Plan or community plan as occurring in the project vicinity. Therefore, no impact would result.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒

The project site is vacant and is generally surrounded by residential and open space uses. The project would create a neighborhood park and preserve existing open space land. The topography of the site would be minimally altered to allow for the development of the park. The project is compatible with the surrounding development and permitted by the General Plan, community plan land use and zoning designations. The project would not substantially degrade the existing visual character or quality of the site and its surroundings; therefore, no impact would result.

d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Lighting

The project would comply with the outdoor lighting standards in Municipal Code Section 142.0740 (*Outdoor Lighting Regulations*) that require all outdoor lighting be installed, shielded, and adjusted so that the light is directed in a manner that minimizes negative impacts from light pollution, including trespass, glare, and to control light from falling onto surrounding properties. Therefore, lighting installed with the project would not adversely affect day or nighttime views in the area, resulting in a less than significant lighting impact. Additionally, the project would comply with Multi-Habitat Planning Area (MHPA) Land Use Adjacency Guidelines lighting requirements which states lighting adjacent to the MHPA should be directed away from the MHPA and the project should provide adequate shielding with non-invasive plant materials, berming and/or other methods to protect the MHPA and sensitive species.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Glare

The project would comply with Municipal Code Section 142.0730 (Glare Regulations) that require exterior materials utilized for proposed structures be limited to specific reflectivity ratings. The project proposes minimal structures which would consist of wood siding, wood shingles, adobe and concrete blocks, brick, stucco, concrete or natural stone. The project would have a less than significant glare impact.

As such, the project would not create a new source of substantial light or glare that would adversely affect day or nighttime views in the area; impacts would be less than significant.

II. AGRICULTURAL AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. – Would the project:

a) Converts Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☐	☒

The project site is located within a developed neighborhood surrounded by residential and open space uses. As such, the project site does not contain nor is it adjacent to any lands identified as Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland) as show on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resource Agency. Therefore, the project would not result in the conversion of such lands to non-agricultural use. No impact would result.

b) Conflict with existing zoning for agricultural use, or a Williamson Act Contract?	☐	☐	☐	☒

Refer to response II (a), above. There are no Williamson Act Contract Lands on or within the vicinity of the site. Furthermore, the project would not affect any properties zoned for agricultural use or affected by a Williamson Act Contract, as there are none within the project vicinity. Agricultural land is not present on the site or in the general vicinity of the site; therefore, no conflict with the Williamson Act Contract would result. No impact would result.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 1220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

The project would not conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production. No designated forest land or timberland occur onsite. No impacts would result.

d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒

Refer to response II(c) above. Additionally, the project would not contribute to the conversion of any forested land to non-forest use, as surrounding land uses are built out. No impacts would result.

e) Involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒

Refer to response II (a) and II (c), above. The project and surrounding areas do not contain any farmland or forest land. No changes to any such lands would result from project implementation. Therefore, no impact would result.

III. AIR QUALITY – Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make the following determinations – Would the project:

a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐

The project site is located in the San Diego Air Basin (SDAB) and is under the jurisdiction of the San Diego Air Pollution Control District (SDAPCD) and the California Air Resources Board (CARB). Both the State of California and the Federal government have established health-based Ambient Air Quality Standards (AAQS) for the following six criteria pollutants: carbon monoxide (CO); ozone (O3); nitrogen oxides (NOx); sulfur oxides (SOx); particulate matter up to 10 microns in diameter (PM10); and lead (Pb). O_3 (smog) is formed by a photochemical reaction between NOx and reactive organic compounds (ROCs). Thus, impacts from O_3 are assessed by evaluating impacts from NOx and ROCs. A new increase in pollutant emissions determines the impact on regional air quality as a result of a proposed project. The results also allow the local government to determine whether a proposed project would deter the region from achieving the goal of reducing pollutants in accordance with the Air Quality Management Plan (AQMP) in order to comply with Federal and State AAQS.

The SDAPCD and San Diego Association of Governments (SANDAG) are responsible for developing and implementing the clean air plan for attainment and maintenance of the ambient air quality standards in the SDAB. The County Regional Air Quality Strategy (RAQS) was initially adopted in 1991 and is updated on a triennial basis (most recently in 2009). The RAQS outlines the SDAPCD's plans and control measures designed to attain the state air quality standards for ozone (O_3). The RAQS relies on information from the CARB and SANDAG, including mobile and area source emissions, as well as information regarding projected growth in San Diego County and the cities in the county, to project future emissions and then determine the strategies necessary for the reduction of emissions

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

through regulatory controls. CARB mobile source emission projections and SANDAG growth projections are based on population, vehicle trends, and land use plans developed by San Diego County and the cities in the county as part of the development of their general plans.

The RAQS relies on SANDAG growth projections based on population, vehicle trends, and land use plans developed by the cities and by the county as part of the development of their general plans. As such, projects that propose development that is consistent with the growth anticipated by local plans would be consistent with the RAQS. However, if a project proposes development that is greater than that anticipated in the local plan and SANDAG's growth projections, the project might be in conflict with the RAQS and may contribute to a potentially significant cumulative impact on air quality.

The project is consistent with the General Plan, community plan land use designation, and the underlying zone. Therefore, the project would be consistent with the RAQS and would not obstruct implementation of the RAQS. No impacts would result.

b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐

Short-Term (Construction) Emissions. Construction-related activities are temporary, short-term sources of air emissions. Sources of construction-related air emissions include fugitive dust from grading activities; construction equipment exhaust; construction-related trips by workers, delivery trucks, and material-hauling trucks; and construction-related power consumption.

Variables that factor into the total construction emissions potentially generated include the level of activity, length of construction period, number of pieces and types of equipment in use, site characteristics, weather conditions, number of construction personnel, and the amount of materials to be transported on or offsite.

Fugitive dust emissions are generally associated with land-clearing and grading operations. Construction operations would include standard measures as required by City of San Diego grading permit to limit potential air quality impacts. Therefore, impacts associated with fugitive dust are considered less than significant and would not violate an air quality standard or contribute substantially to an existing or projected air quality violation. No mitigation measures are required.

Long-Term (Operational) Emissions. Long-term air emission impacts are those associated with stationary sources and mobile sources related to any change caused by a project. The project would produce minimal stationary sources emissions. The project is compatible with the surrounding development and is permitted by the General Plan, community plan land use and zoning designation. Based on the land use, project emissions over the long-term are not anticipated to violate any air quality standard or contribute substantially to an existing or projected air quality violation. Impacts would be less than significant, and no mitigation measures are required.

c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal	☐	☐	☒	☐

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?				

As described above, construction operations could temporarily increase the emissions of dust and other pollutants. However, construction emissions would be temporary and short-term in duration; implementation of Best Management Practices (BMPs) would reduce potential impacts related to construction activities to a less than significant level. Therefore, the project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a non-attainment under applicable federal or state ambient air quality standards. Impacts would be less than significant.

d)	Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Short-term (Construction)

Odors would be generated from vehicles and/or equipment exhaust emissions during construction of the project. Odors produced during construction would be attributable to concentrations of unburned hydrocarbons from tailpipes of construction equipment and architectural coatings. Such odors are temporary and generally occur at magnitudes that would not affect a substantial number of people. Therefore, impacts would be less than significant.

Long-term (Operational)

In the long-term operation, parks, are not uses typically associated with the creation of such odors nor are they anticipated to generate odors affecting a substantial number or people. Therefore, project operations would result in less than significant impacts.

IV. BIOLOGICAL RESOURCES – Would the project:

a)	Have substantial adverse effects, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

A Biological Resource Report was prepared by RECON Environmental, Inc. (RECON) to address potential biological resource impacts for the project site (November 2019). Additional reports prepared include; Enhancement and Restoration of Maritime Succulent Scrub as Habitat for Western Burrowing Owl and Beach Goldenaster for the Beyer Park Development Project (November 26, 2019), Jurisdictional Waters/ Wetland Delineation Report for the Beyer Park Development Project (March 20, 2017), Post-survey Report for the 2016-2017 Wet Season Fairy Shrimp Surveys for the Beyer Park Development Project (June 7, 2017), Results of the 2017 Burrowing Owl Breeding Season Surveys for the Beyer Park Development Project (August 23, 2017), Results of the 2017 Coastal California Gnatcatcher Presence/Absence Survey for the Beyer Park Development Project (August 3, 2017), Results of the 2017 Dry Season Fairy Shrimp Survey for the Beyer Park Development Project (October 25, 2017), Results of the 2017 Least Bell's Vireo Presence/Absence Survey for the Beyer

Park Development Project (September 15, 2017), Results of the 2017 Quino Checkerspot Butterfly Presence/Absence Survey for the Beyer Park Development Project (July 17, 2017), and the Burrowing Owl Habitat Assessment Summary Report for the Beyer Park Development Project prepared by Busby Biological Services (April 24, 2017).

The survey for the Biological Resources Report encompassed 58.2 acres which includes a 100-foot buffer and a focus on the 15-acre impact footprint. The project site lies within the boundaries of the City's Multiple Species Conservation Plan (MSCP) Subarea. Furthermore, the Multi-Habitat Planning Area (MHPA) is mapped on-site and adjacent to the project. The results of this analysis are discussed below.

Eight vegetation communities were mapped within the survey area including mule fat scrub, maritime succulent scrub, disturbed maritime succulent scrub, Diegan coastal sage scrub, disturbed Diegan coastal sage scrub, disturbed land, ornamental plantings, and urban/developed. The project would result in direct impacts to 11.47 acres of sensitive vegetation communities including 0.91 acre of maritime succulent scrub, 4.86 acres of disturbed maritime succulent scrub, 1.41 acres of Diegan coastal sage scrub, and 4.29 acres of disturbed Diegan coastal sage scrub. These impacts would be mitigated through enhancement of 10.42 acres of maritime succulent scrub and disturbed maritime succulent scrub, restoration of 3.70 acres of disturbed land in the eastern parcel (including MHPA and non-MHPA lands). A total of 13.55 acres of occupied western burrowing owl habitat would be directly impacted and would require mitigation at the same ratio as required by impacts to the sensitive vegetation communities.

Thirteen sensitive plant species were observed within the project area. The project would directly impact eight of the observed species including San Diego barrel cactus, beach goldenaster, south coast saltscale, San Diego ~~but~~ bur-sage, ~~Plamer's~~ Palmer's grapplinghook, California box-thorn, small-flowered microseris, and San Diego County viguiera. Direct impacts to beach goldenaster would be considered significant and would be mitigated through restoration of beach goldenaster within the project site. Indirect impacts to sensitive plant species would be minimized and/or avoided ~~by~~ with implementation of MHPA land use adjacency guidelines and would not be significant.

Thirteen wildlife species were observed within or adjacent to the project site and four additional sensitive wildlife species were identified as having a high or moderate potential to occur. The project would result in significant direct impacts to western burrowing owl. Direct impacts to western burrowing owl and its habitat would be mitigated through preparation and/or implementation of a habitat restoration plan, a burrow exclusion plan, pre-construction surveys, grading restrictions, and construction monitoring. Indirect construction related impacts to San Diego fairy shrimp would be avoided through implementation of avoidance measures and minimization measures in compliance with the City's Vernal Pool Habitat Conservation Plan. These measures would reduce the level of impact to less than significant.

Indirect noise impacts to least Bell's ~~verio~~ vireo, California gnatcatcher, northern harrier, and coastal cactus wren would be mitigated through implementation of noise attenuation measures and/or noise monitoring, if construction occurs during the nesting season.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Within the survey area, jurisdictional wetlands and waters were delineated in Moody Canyon and a small depression near the western edge of the survey area. These include 0.07 acre of U.S. Army Corps of Engineers non-wetland waters of the U.S./California Department of Fish and Wildlife (CDFW) streambed/Regional Water Quality Control Board (RWQCB) unvegetated streambed in Moody Canyon, and 0.02-acre RWQCB isolated waters within the small depression. No direct impacts to jurisdictional wetlands or waters are proposed as part of the project.

Therefore, a Mitigation Monitoring Reporting Program (MMRP), as detailed in Section V of the Mitigated Negative Declaration would be implemented. With implementation of the MMRP, potential biological resources impacts would be reduced to below a level of significance.

b) Have a substantial adverse effect on any riparian habitat or other community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐

As detailed in the project Biological Resources Report (RECON 2019), the project site supports a number of wetland and upland plant communities which are identified as important in local, state, and/or federal planning efforts. The project would result in direct impacts to 11.47 acres of sensitive vegetation communities. Proposed Impacts to Vegetation Communities, would include 0.91 acre of maritime succulent scrub, 4.86 acres of disturbed maritime succulent scrub, 1.41 acres of Diegan coastal sage scrub, and 4.29 acres of disturbed Diegan coastal sage scrub. In addition, a total of 13.55 acres of occupied western burrowing owl habitat would be directly impacted.

In order to mitigate project impacts, the project would implement mitigation measures BIO-1 (Biological Resource Protection During Construction), BIO-2 (Habitat Based Mitigation (Restoration/Creation), BIO-4 (Burrowing Owl), BIO-4 (Occupied Burrowing Owl Habitat Mitigation), BIO-5 (Least Bell's Vireo (State Endangered/Federally Protected)), BIO-6 (Coastal Cactus Wren Habitat Restoration), and BIO-7 (Post Construction San Diego Fairy Shrimp Monitoring). ~~BIO-4 (sensitive vegetation communities), BIO-5 (sensitive plant species), BIO-6-8 (Western Burrowing Owl), BIO-9 (Northern Harrier), BIO-10 (Coastal California Gnatcatcher), BIO-11 (Least Bell's Vireo), BIO-12-13 (Coastal Cactus Wren), and BIO 14-16 (San Diego Fairy Shrimp).~~

The project would result in significant direct impacts to 11.47 acres of Tier I and Tier II habitat. Per the Biological Guidelines, impacts to Tier I would require mitigation within the MHPA at a ratio of 1:1 and outside the MHPA at a ratio of 2:1. Impacts to and Tier II habitat would require mitigation within the MHPA at a ratio of 1:1 and outside of the MHPA at a ratio of 1.5:1. The project would provide enhancement of 6.25 acres of maritime succulent scrub and 1.54 acres of disturbed maritime succulent scrub within the MHPA; restoration of 2.05 of maritime succulent scrub and 0.59 acres of disturbed maritime succulent scrub outside of the MHPA; and the restoration of 3.70 acres of disturbed lands to maritime succulent scrub, both inside and outside of the MHPA. Thus, sensitive upland impacts would be reduced to below a level of significance.

To ensure the proposed on-site mitigation lands described above would be managed and maintained in perpetuity, long-term management would be required. Mitigation Measure BIO-2

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

~~BIO-4~~ provides for the long-term maintenance and monitoring in perpetuity. This measure includes a requirement for a 5-year maintenance and monitoring period, plant salvage of sensitive succulent species and seeding of beach goldenaster with the ultimate goal of creating habitat suitable for burrowing owl. Overall, this measure would ensure adequate long-term management of the biological open space area.

Overall, the project would result in impacts to sensitive upland ~~and wetland habitats and~~ therefore, mitigation measures BIO-1 through BIO-7~~BIO-5 through BIO-16~~ would be required.

A Mitigation Monitoring Reporting Program (MMRP), as detailed in Section V of the Mitigated Negative Declaration would be implemented. With implementation of the MMRP, potential biological resources impacts would be reduced to below a level of significance.

c) Have a substantial adverse effect on federally protected wetlands as defined by section 404 of the Clean Water Act (including but not limited to marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒

Per the Jurisdictional Waters/Wetlands Delineation Report (RECON 2017), the project site contains habitats under the jurisdiction of Regional Water Quality Control Board (RWQCB) and California Department of Fish and Wildlife (CDFW). However, the project would have no impact to jurisdictional habitats. <u>The project would be subject to measures within the City of San Diego Vernal Pool Habitat Conservation Plan, which would be made a condition of approval, to ensure that the project would not result in any indirect impacts to the vernal pools onsite.</u>

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒

The project site does not function as a true wildlife corridor due to the residential development, commercial development, Interstate 805, and Interstate 5 interrupting any direct connection to the Tijuana River valley to the west. The site contributes as a stepping-stone connection for avian and other winged species and as evident by observations of migratory bird species nearby. The site also contributes to available habitat for terrestrial animals. However, the project ~~sire~~ <u>site</u> does not serve as a regional connection for large terrestrial wildlife.

Overall, the project would not substantially interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors or impede the use of native wildlife nursery sites. Impacts would be less than significant.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

The project would not conflict with any local policies and/or ordinances protecting biological resources. No impact would result.

f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☒	☐	☐

The City's MSCP Subarea Plan has been prepared to meet the requirements of the California Natural Communities Conservation Planning (NCCP) Act of 1992. This Subarea Plan describes how the City's portion of the MSCP Preserve, the MHPA, would be implemented. The MSCP identifies a MHPA that is intended to link all core biological areas into a regional wildlife preserve.

The project site lies within the boundaries of the City San Diego Multiple Species Conservation Plan (MSCP) Subarea Plan. The City's Multi-Habitat Planning Area (MHPA) is mapped onsite. MHPA Lands are those that have been included within the City's MSCP Subarea Plan for habitat conservation. These lands have been determined to provide the necessary habitat quality, quantity, and connectivity to sustain the unique biodiversity of the San Diego region. A field survey and a biological technical report was prepared by RECON Environmental (2019) to assess the vegetation communities on site and determine what impacts would result through project implementation. Refer to Section IV.a - e, Biological Resources discussion for further details.

Due to the presence of the MHPA, on and adjacent to the site, the project would be required to comply with the MHPA Land Use Adjacent Guidelines (Section 1.4.3) of the City's MSCP Subarea Plan to ensure that the project would not result in any indirect impacts to the MHPA. Per the MSCP, potential indirect effects from drainage, toxics, lighting, noise, barriers, invasives, and brush management from project construction and operation must not adversely affect the MHPA.

More specifically, drainage would be directed away from the MHPA, and/or would not drain directly into these areas. The project's storm water drainage would be conveyed away from the MHPA and into bio-retention basins where water would be pre-treated and released into the existing storm drain system. Light would be directed away from the MHPA and be consistent with the City's lighting regulations which would require exterior lighting to be low-level lights and directed away from native habitat or shielded to minimize light pollution. Landscape plantings would consist of only native plant species. Brush Management Zone One would occur outside of the MHPA and within the development footprint. Brush Management Zone Two would not occur within the MHPA. In addition, no staging/storage area would be allowed to be located within or adjacent to sensitive biological areas and no equipment maintenance would be permitted. With respect to grading, the limits of grading would be clearly demarcated by the biological monitor to ensure no impacts occur outside those area delineated. Additionally, the project does not anticipate establishment of any new barriers that would affect the normal functioning of wildlife movements in the adjacent MHPA.

The project would be consistent with the MHPA Adjacency Guidelines and indirect impacts to the MHPA would be avoided. Furthermore, the project as designed would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Permanent barriers will be installed

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

along the park boundary adjacent to the MHPA as well as along the habitat side of any paths within the park. Additionally, the majority of the MHPA overlaps with the mitigation site and permanent three wire cable fencing or equivalent will be installed along the perimeter of the mitigation site.

Therefore, a Mitigation Monitoring Reporting Program (MMRP), as detailed in Section V of the Mitigated Negative Declaration would be implemented. With implementation of the MMRP, potential land use (MHPA Land Use Adjacency Guidelines) impacts would be reduced to below a level of significance.

V. CULTURAL RESOURCES – Would the project:

a) Cause a substantial adverse change in the significance of an historical resource as defined in §15064.5?	☐	☐	☐	☒

The purpose and intent of the Historical Resources Regulations of the Land Development Code (Chapter 14, Division 3, and Article 2) is to protect, preserve and, where damaged, restore the historical resources of San Diego. The regulations apply to all proposed development within the City of San Diego when historical resources are present on the premises. Before approving discretionary projects, CEQA requires the Lead Agency to identify and examine the significant adverse environmental effects which may result from that project. A project that may cause a substantial adverse change in the significance of a historical resource may have a significant effect on the environment (sections 15064.5(b) and 21084.1). A substantial adverse change is defined as demolition, destruction, relocation, or alteration activities, which would impair historical significance (sections 15064.5(b)(1)). Any historical resource listed in, or eligible to be listed in the California Register of Historical Resources, including archaeological resources, is considered to be historically or culturally significant.

The City of San Diego criteria for determination of historic significance, pursuant to CEQA, is evaluated based upon age (over 45 years), location, context, association with an important event, uniqueness, or structural integrity of the building. Projects requiring the demolition and/or modification of structures that are 45 years or older can result in potential impacts to a historical resource. There are no existing structures on site. Therefore, no impacts would result.

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒

Many areas of San Diego County, including mesas and the coast, are known for intense and diverse prehistoric occupation and important archaeological and historical resources. The region has been inhabited by various cultural groups spanning 10,000 years or more. The project area is located within an area identified as sensitive on the City of San Diego Historical Resources Sensitivity Maps. Per the San Diego Land Development Manual-Historical Resources Guidelines an Archaeological survey is required when development is proposed on previously undeveloped parcels when a known resource is identified on site or within a one-mile radius, when a previous survey is more than 5 years old if the potential for resources exists, or based on a site visit by a qualified consultant or knowledgeable City staff. Based on this information, there is a potential for buried cultural resources to be impacted through implementation of the project. Therefore, an Archaeological Resources Survey for the Beyer Park Development Project was completed by RECON Environmental,

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

Inc. dated August 2018, which included literature review, record search, Native American Consultation, and completion of a pedestrian field survey of the parcel along with a Native American monitor from Red Tail Monitoring & Research, Inc. on January 18, 2017, per the City's requirements. The results and conclusions of the technical report are summarized below.

The records search from the California Historical Resources Information System South Coast Information Center (SCIC) indicated four previous investigations have surveyed portions of the project site. Additionally, one additional survey was completed by Tierra Environmental in 2007 which covered a similar project footprint and identified five lithic scatters, a lithic shell scatter, and one isolated hammerstone. Based on the SCIC records and the 2007 survey, a total of 55 prehistoric sites, 7 historic sites, 16 isolated prehistoric artifacts, one isolated historic artifact, and two multi-component sites have been recorded within one-mile radius of the project site. Five of these sites are located within the survey area and one isolate is located within the area of potential effect (APE).

During the field survey, two previously recorded cultural resources, two prehistoric resources and four new prehistoric isolated artifacts were located within the survey area. The four newly recorded isolates and one of the previously recorded cultural resources are not considered significant because they lack characteristics that would qualify them for listing on the NRHP, CRHR, or City of San Diego Historical Resources Register. The other cultural resource and two prehistoric resources have the potential to qualify under criteria D-4 (potential to yield information important to prehistory).

The project impact area would avoid the three potentially significant resources; therefore, a testing program is not required, and no monitoring would be required. The project impact area has been highly disturbed, and the chances of finding unknown buried cultural resources is considered low. Therefore, the project would not result in a significant impact.

c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

According to the site-specific Revised Desktop Geotechnical Investigation prepared by K2 Engineering, Inc. dated December 13, 2017, the project site is underlain by river terrace deposits, San Diego Formation, and Otay Formation. San Diego Formation and Otay Formation have a high sensitivity for paleontological resources.

San Diego Formation is well known for its rich fossil beds that have yielded extremely diverse assemblages of marine clams, scallops, snails, crabs, barnacles, sand dollars, sharks, rays, bony fishes, sea birds, walrus, fur seal, sea cow, dolphins, and baleen whales. In addition, rare remains of terrestrial mammals including cat, wolf, skunk, peccary, camel, antelope, deer, horse, and gomphothere have also been recovered from the formation. Rounding out this impressive fossil record is the occurrence of fossil wood and leaves including the remains of pine, oak, laurel, cottonwood, and avocado. Taken together this diverse assemblage of fossil organisms represents one of the most important sources in the world of information on Pliocene marine organisms and environments.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

The San Diego Formation is exposed extensively throughout the southwestern portion of the County from the International Border north to Mission Valley with isolated occurrences stretched out along the Rose Canyon Fault Zone at Tecolote Canyon, Balboa Avenue, Rose Canyon and all along the southern slopes of Mount Soledad from I-5 to the sea cliffs at Pacific Beach. Due to the extremely important remains of fossil marine mammals, sea birds, and molluscs recovered from this rock unit, it is assigned a high paleontological resource sensitivity.

The Otay Formation has yielded numerous fossil localities in the upper sandstone-mudstone member and the middle gritstone member. No fossils are recorded from the angular conglomerate member. Prior to residential and commercial development in the Eastlake area, the Otay formation was not known to be fossilferous. Fossils from the formation discovered during this development include well preserved remains of a diverse assemblage of terrestrial vertebrates such as tortoise, lizards, snake, birds, shrews, rodents, rabbit, dog, fox, rhinoceros, camels, mouse-deer, and oreodonts. Based on these recent discoveries the Otay Formation is now considered to be the richest source of late Oligocene terrestrial vertebrates in California.

The Otay Formation is exposed throughout the southwestern portion of the Coastal Plain Province, from approximately the latitude of SR-94 south to the International Border, and from I-805 east to the base of the San Ysidro Mountains and San Miguel Mountain. The lower fanglomerate portion of the formation is exposed extensively in the area around Lowe Otay Lake, as well as in patches along the northern side of the San Ysidro Mountains as far east as Sycamore Canyon. The upper sandstone portion of the Otay Formation has produced extremely important vertebrate fossil remains and is assigned a high paleontological resource sensitivity. The lower gritstone and fanglomerate portion of the formation has produced vertebrate fossils from only a few localities and is assigned a moderate resource sensitivity.

According to the City of San Diego's Significance Determination Thresholds, more than 1,000 cubic yards of grading at depths of greater than 10 feet (less than 10 feet if the site has been graded) into formations with a high resource sensitivity rating could result in a significant impact to paleontological resources, and mitigation would be required.

Grading operations would entail approximately 81,100 cubic yards of cut with a maximum cut depth of twenty-one feet. The projects grading exceeds the CEQA Significance Determination Thresholds, therefore, ~~the project would subject to the grading ordinance and the requirement for paleontological monitoring, which would be made conditions of approval. Regulatory compliance would therefore preclude impacts to this resource; thus, impacts would be identified as less than significant.~~ the project would require paleontological monitoring during grading and/or excavation activities in accordance with SDMC Section 142.0151 (Paleontological Resources Requirements for Grading Activities). Compliance with these SDMC regulations are assured through permit conditions. Implementation of the Paleontological Resources Requirements for Grading Activities, as required by SDMC Section 142.0151, would ensure that impacts to paleontological resources would be less than significant.

d)	Disturb ~~and~~ ~~any~~ human remains, including those interred outside of dedicated cemeteries?	☐	☐	☐	☒

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

While there is a very low possibility of encountering human remains during subsequent project construction activities, it is noted that activities would be required to comply with state regulations that are intended to preclude impacts to human remains. Per CEQA Section 15064.5(e), the California Public Resources Code (Section 5097.98) and State Health and Safety Code (Section 7050.5), if human remains are discovered during construction, work would be required to halt in that area, and no soil would be exported off-site until a determination could be made regarding the provenance of the human remains via the County Coroner and other authorities as required.

VI. GEOLOGY AND SOILS – Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☒	☐

The project site is not located within an established Alquist-Priolo Earthquake Fault Zone. The La Nacion Fault/Sweetwater Fault Zone is located within the project site. The La Nacion fault is exposed in an approximate 10-foot-high cut slope in the eastern portion of the site just south of the cul-de-sac on Enright Drive. The lack of geomorphic expression of the fault throughout most of its length from the Mexico Border to the San Diego State University area, suggests that the faults making up this fault zone have not been active during the Holocene age. It is recommended that habitable structures be setback at least 25 feet from the fault area, however, this project does not propose any habitable structures. The project would be required to comply with seismic requirement of the California Building Code, utilize proper engineering design and standard construction practices, to be verified at the building permit stage, in order to ensure that would reduce impacts to people or structures to an acceptable level of risk. Therefore, impacts would be less than significant.

ii) Strong seismic ground shaking?	☐	☐	☒	☐

The site could be affected by seismic activity as a result of earthquakes on major active faults located throughout the Southern California area. Implementation of proper engineering design and utilization of standard construction practices, to be verified at the building permit stage, would reduce the potential impacts associated with seismic ground shaking to an acceptable level of risk. Therefore, impacts would be less than significant.

iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐

Liquefaction generally occurs when loose, unconsolidated, water-laden soils are subject to shaking, causing the soils to lose cohesion. According to the site-specific geotechnical investigation, the site is not considered subject to liquefaction due to the dense soil, grain-size distribution, and the deep

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

groundwater table. The project would be required to comply with the California Building Code that would reduce impacts to people or structures to an acceptable level of risk. Implementation of proper engineering design and utilization of standard construction practices, to be verified at the building permit stage, would ensure that the potential for impacts from regional geologic hazards would remain less than significant.

iv) Landslides?	☐	☐	☒	☐

Two major landslides have been documented in the vicinity of the project site, the Moody Canyon landslide and the San Ysidro landslide. According to the site-specific Geotechnical Investigation, the limits of the San Ysidro landslide has a static safety factor of 1.5 and a seismic safety factor of at least 1.1 against deep seated landslides. Implementation of proper engineering design and utilization of standard construction practices, to be verified at the building permit stage, would ensure that the potential for impacts would be reduced to an acceptable level of risk. Impacts would be less than significant.

b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐

Demolition and construction activities would temporarily expose soils to increase erosion potential. The project would be required to comply with the City's Storm Water Standards, which requires the implementation of appropriate best management practices (BMPs). Grading activities would be required to comply with the City of San Diego Grading Ordinance as well as the Storm Water Standards, which would ensure soil erosion and topsoil loss is minimized to less than significant levels. Furthermore, permanent storm water BMPs would also be required post-construction consistent with the City's regulations. Therefore, the project would not result in substantial soils erosion or loss of topsoil; therefore, impacts would be less than significant.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐

As discussed in Section VI(a) and VI(b), the project site has a low potential to be subject to landslides, and the potential for liquefaction and subsidence is negligible. The soils and geologic units underlying the site are considered to have a "low to very high" expansion potential. The project design would be required to comply with the requirements of the California Building Code ensuring hazards associated with expansive soils would be reduced to an acceptable level of risk. As such, impacts due to expansive soils are expected to be less than significant.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☒	☐

The project site is considered to have low to very high expansive soil potential. The project would be required to comply with seismic requirements of the California Building Code that would reduce

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

impacts to people or structures due to local seismic events to an acceptable level of risk. Implementation of proper engineering design and utilization of standard construction practices, to be verified at the building permit stage, would ensure that the potential for impacts from regional geologic hazards would remain less than significant.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

The project site is located within an area that is already developed with existing infrastructure (i.e., water and sewer lines) and does not propose any septic system. In addition, the project does not require the construction of any new facilities as it relates to wastewater, as services are available to serve the project. No impact would occur.

VII. GREENHOUSE GAS EMISSIONS – Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐

Climate Action Plan

The City adopted the Climate Action Plan (CAP) in December 2015 (City of San Diego 2015). With implementation of the CAP, the City aims to reduce emissions 15% below the baseline to approximately 11.1 million metric tons of carbon dioxide equivalent (MMT CO2E) by 2020, 40% below the baseline to approximately 7.8 MMT CO2E by 2030, and 50% below the baseline to approximately 6.5 MMT CO2E by 2035. The City has identified the following five CAP strategies to reduce GHG emissions to achieve the 2020 and 2035 targets: (1) energy- and water-efficient buildings; (2) clean and renewable energy; (3) bicycling, walking, transit, and land use; (4) zero waste (gas and waste management); and (5) climate resiliency. The City's CAP Consistency Checklist, adopted July 12, 2016, is the primary document used by the City to ensure project-by-project consistency with the underlying assumptions in the CAP and thereby to ensure that the City would achieve the emission reduction targets identified in its CAP.

CAP Consistency Checklist

The CAP Consistency Checklist is the City's significance threshold utilized to ensure project-by-project consistency with the underlying assumptions in the CAP and to ensure that the City would achieve its emission reduction targets identified in the CAP. The CAP Consistency Checklist includes a three-step process to determine project if the project would result in a GHG impact. Step 1 consists of an evaluation to determine the project's consistency with existing General Plan, Community Plan, and zoning designations for the site. Step 2 consists of an evaluation of the project's design features compliance with the CAP strategies. Step 3 is only applicable if a project is not consistent with the land use and/or zone, but is also in a transit priority area to allow for more intensive development than assumed in the CAP.

Under Step 1 of the CAP Consistency Checklist, the project is consistent with the existing General Plan and Clairemont Mesa Community Plan land use designations and zoning for the site. Therefore,

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

the project is consistent with the growth projections and land use assumptions used in the CAP. Furthermore, the project would not be subject to Step 2 because the project is a permit that does not result in the expansion or enlargement of a building which would require a certificate of occupancy. Thus, the project is consistent with the CAP. Step 3 of the CAP Consistency Checklist would not be applicable, as the project is not proposing a land use amendment or a rezone.

Based on the project's consistency with the City's CAP Consistency Checklist, the project's contribution of GHGs to cumulative statewide emissions would be less than cumulatively considerable. Therefore, the project's direct and cumulative GHG emissions would have a less than significant impact on the environment.

b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Refer to Section VII (a). Impacts would be less than significant.

VIII. HAZARDS AND HAZARDOUS MATERIALS – Would the project:

a) Create a significant hazard to the public or the environment through routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐

Construction of the project may require the use of hazardous materials (fuels, lubricants, solvents, etc.), which would require proper storage, handling, use and disposal. Although minimal amounts of such substances may be present during construction of the project, they are not anticipated to create a significant public hazard. Once constructed, due to the nature of the project, the routine transport, use, or disposal of hazardous materials on or through the subject site is not anticipated. Therefore, impacts would be less than significant.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐

As noted in previous response VIII (a), no health risks related to the storage, transport, use, or disposal of hazardous materials would result from the implementation of the project. Therefore, impacts would be less than significant.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒

San Ysidro Adult School and San Ysidro Middle School located within one-quarter mile of the site. The area within one-quarter mile is developed with homes or commercial/retail uses. However, the

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

proposed project would not be expected to emit hazardous materials or substances that would affect any existing or proposed schools in the area. No impact would occur.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒

A search of potential hazardous materials sites compiled pursuant to Government Code Section 65962.5 was completed for the project site. Several databases and resources were consulted including the Department of Toxic Substances Control (DTSC) EnviroStor database, the California State Water Resources Control Board GeoTracker database, and other sources of potential hazardous materials sites available on the California EPA website. Based on the searches conducted, no contaminated sites are on or adjacent to the project site. Furthermore, the project site was not identified on the DTSC Cortese List. Therefore, the project would not create a significant hazard to the public or the environment. No impacts would result.

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two mile of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

The project is consistent with the General Plan, community plan, and zoning designations. The project is within the Airport Land Use Compatibility Overlay Zone (Brown Field), the Airport Influence Area (Brown Field – Review Area 2), the FAA Part 77 Noticing Area (Brown Field and NOLF Imperial Beach), as depicted in the 2014 Airport Land Use Compatibility Plan (ALUCP). However, the project site is not within a designated Accident Potential Zone (APZ) or Safety Zone as identified in the ALUCP and would, therefore, not subject people working or residing within the project area to a significant safety hazard. The proposed development would not penetrate the FAA notification surface and is nor proposed at greater than 200 feet above grade, therefore, the proposal is not required to notify the Federal Aviation Administration (FAA) per Municipal Code Section 132.1520(c). The use and density are considered consistent with the ALUCP and would not result in a safety hazard for people residing or working in the area. Therefore, a less than significant impact would result.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

Refer to response VIII(e) above. The project site is not in proximity to any private airstrip. Therefore, no impacts will occur.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

The project would not impair the implementation of, or physically interfere with, an adopted emergency response plan or evacuation plan. No roadway improvements are proposed that would interfere with circulation or access. No impacts would occur.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Brush Management is required for development that is adjacent to any highly flammable area of native or naturalized vegetation. These fire hazard conditions currently exist for the proposed development. Where brush management is required, a comprehensive program is required to reduce fire hazards around all structures by providing an effective firebreak between structures and contiguous area of flammable vegetation. The firebreak is required to consist of two distinct brush management zones; a 35-foot-wide brush management zone one and a 65-foot-wide brush management zone two, which are required per the Land Development Code. The project would implement Brush Management Zones consistent with the City's Landscape Regulations, which have been reviewed and accepted by staff; therefore, impacts would be less than significant.

IX. HYDROLOGY AND WATER QUALITY - Would the project:

a) Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐

Potential impacts to existing water quality standards associated with the project would include minimal short-term construction-related erosion/sedimentation and no long-term operational storm water discharge. According to the City's Storm Water Requirements Applicability Checklist, the project is considered to be a Priority Development Project and therefore required to prepare a Storm Water Quality Management Plan (August 2018) to identify and implement required best management practices (BMPs) for storm water pollutant control (BMP Design Manual Chapter 5, Part 1 of Storm Water Standards). Thus, seven biofiltration basins, a detention pond/vault for hydromodification, and one proprietary Biofiltration BMP (in the form of a modular wetland) would be constructed onsite, which would be implemented as the project's permanent ~~project~~ BMP's. These requirements would be implemented during construction and post-construction, which have been reviewed by qualified staff and would be re-verified during the ministerial process. Adherence with the standards would ensure adverse impacts associated with compliance with quality standards and waste discharge requirements are avoided. Impacts would be less than significant.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

The project does not require the construction of wells or the use of groundwater. Therefore, the project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. The project would connect to the existing public water system. No impact would result.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner, which would result in substantial erosion or siltation on- or off-site?	☐	☐	☒	☐

A site-specific Drainage Study was prepared by RBF Consulting (January 2007), which identified the following. The existing drainage conveyance is natural and offsite is conveyed through the site but bypasses the disturbed areas. The site runoff generally flows to the west and north. Stormwater runoff travels across the site via an existing small water courses, gullies and concrete ditches. Portions of the southwesterly area flows to an existing inlet in the terrace ditch prior to discharging offsite. Portions of the northwesterly area discharge to Filoi Avenue via an existing concrete ditch. The runoff from the northerly side of the site surface flows to Delany Avenue and Enright Avenue. Runoff from remainder of the area furthest north flows directly to Moody Canyon north of the disturbed area. Runoff from the site ultimately flows to the Pacific Ocean by way of the Tijuana River. The proposed drainage pattern would be altered slightly to accommodate the development and to facilitate the conveyance of the runoff to the proposed biofiltration BMP's. Outflow from the proposed BMP's is discharged to an existing conveyance system including concrete ditch and dirt swales. The site is designed to reduce the overall 100-year peak flow rate from 38.90 to 37.39 cubic feet per seconds (cfs) a 1.52 cfs reduction.

There are no streams or rivers located on-site and thus, no such resources would be impacted through the proposed grading activities. Although grading would be required for the project, the project would implement BMPs to ensure that substantial erosion or siltation on or off-site would not occur. Impacts would be less than significant.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner, which would result in flooding on- or off-site?	☐	☐	☒	☐

Refer to XI(c), the project would not significantly alter the overall drainage pattern for the site or area, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. Although site drainage would be altered, the flows would comply with San Diego Municipal Code Section 143.0142(f). Impacts would be less than significant.

e) Create or contribute runoff water, which would exceed the capacity of existing or planned stormwater drainage systems or provide	☐	☐	☒	☐

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
substantial additional sources of polluted runoff?				

The project would be required to comply with all City storm water standards during and after construction. Appropriate best management practices would be implemented to ensure that water quality is not degraded; therefore, ensuring that project runoff is directed to appropriate drainage systems. Any runoff from the site is not anticipated to exceed the capacity of existing storm water systems or provide substantial additional sources of polluted runoff. Impacts would be less than significant.

f) Otherwise substantially degrade water quality?	☐	☐	☒	☐

Refer to Section IX (a). The project would be required to comply with all City storm water standards both during and after construction, using appropriate best management practices that would ensure that water quality is not degraded. Impacts would be less than significant.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒

The project site is not located within a 100-year flood hazard area or any other known flood area. Therefore, no impacts would occur.

h) Place within a 100-year flood hazard area, structures that would impede or redirect flood flows?	☐	☐	☐	☒

The project site is not located within a 100-year flood hazard area or any other known flood area. Therefore, no impacts would occur.

X. LAND USE AND PLANNING – Would the project:

a) Physically divide an established community?	☐	☐	☐	☒

The project is compatible with the surrounding development and permitted by the General Plan, community plan land use and zoning designations. The project would not substantially change the nature of the surrounding area and would not introduce any barriers or project features that could physically divide the community. Thus, the project would result in no impact related to physically dividing an established community. No impact would occur.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

The project site is designated Residential and zoned OP-1-1 and RS-1-7 per the San Ysidro Community Plan area. The project is consistent with the underlying zone and the land use designation. The project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, community plan, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. No impact would result.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

As previously identified, the project site partially lies within the boundaries of the City San Diego Multiple Species Conservation Plan (MSCP) Subarea Plan. The City's Multi-Habitat Planning Area (MHPA) is mapped onsite; more specifically, the project site lies partially within the MHPA of the City's MSCP along the eastern boundary. MHPA Lands are those that have been included within the City's MSCP Subarea Plan for habitat conservation. These lands have been determined to provide the necessary habitat quality, quantity, and connectivity to sustain the unique biodiversity of the San Diego region.

The proposed development associated with the park is approximately 300 feet from all environmentally sensitive lands (ESL). Due to the presence of the MHPA, "edge effects" could result because of the potential introduction of drainage, toxics, lighting, noise, invasives, grading, barriers and brush management that can indirectly affect adjacent habitat and wildlife species. Indirect impacts to the MHPA would be avoided through implementation of the MHPA Land Use Adjacency Guidelines (LUAG) as outlined in the City's MSCP Subarea Plan (Section 1.4.3).

Further, the project site is also located adjacent to a developed residential neighborhood. Although the project site contains ESL, such lands would (ESL/MSCP lands) would not be impacted by the proposed project. The project as designed would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Impacts would not result. Refer to Land Use Section X(c) for further details. No other adopted conservation plans affect the project site. No impacts would result.

XI. MINERAL RESOURCES – Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒

There are no known mineral resources located on the project site. The urbanized and developed nature of the project site and vicinity would preclude the extraction of any such resources. No impacts would result.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local	☐	☐	☐	☒

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
general plan, specific plan or other land use plan?				

See XI (a), above. The project site has not been delineated on a local general, specific or other land use plan as a locally important mineral resource recovery site, and no such resources would be affected with project implementation. Therefore, no impacts were identified.

XII. NOISE – Would the project result in:				
a) Generation of, noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐

A site-specific Noise Technical Report was prepared by GEPermit. (April 2019) to assess potential impacts associated with the project. The technical study evaluated impacts associated with construction and operation of the project. The following is a summary of the report.

Construction Noise

The City of San Diego Noise Abatement and Control Ordinance (Ordinance) contains the regulations governing construction and operational (stationary) noise levels within the City. The Ordinance prohibits construction activities between the hours of 7:00 p.m. and 7:00 a.m. that create disturbing, excessive or offensive noise. The Ordinance also prohibits construction activities from generating an average noise sound level greater than 75 dB from 7:00 a.m. to 7:00 p.m. at or beyond the property lines of any property zoned residential.

Construction activities would include grading, building construction, site utilities, paving, architectural coating, and associated and landscaping, with site preparation expected to produce the highest sustained construction noise. Construction noise could be as high as 83 to 85 A-weighted decibels average sound level [dB(A) L_{eq}] measured at 50 feet from the acoustic center of the construction. Noise levels are not anticipated to exceed 75 dB(A) L_{eq} past 200 feet from the acoustic center of construction or exceed 60 dB(A) L_{eq} past 1,200 feet from the acoustic center of construction. Therefore, impacts from construction noise would remain less than significant.

If construction noise exceeds 60 dB(A) L_{eq} at occupied habitat within the MHPA during breeding season, indirect impacts to noise sensitive wildlife species would be considered significant. Mitigation measures are required to ensure impacts to noise sensitive wildlife species within the MHPA are avoided. Therefore, impacts would be less than significant.

Operational Noise

The project site is located adjacent to I-805, I-5, Brown Field Municipal Airport and the San Diego Trolley Blue Line, where vehicular, airplane and trolley traffic is the dominant noise source. Existing ambient noise levels range were measured ranging from 50.2 dB(A) L_{eq} and 63.5 dB(A) L_{eq} between the hours of 12:00pm and 7:30pm. Noise impacts associated with project implementation would include project generated vehicle traffic, landscape maintenance, kids playing, fans during games, skate park noise, ball field/basketball noise, and associated dog park noise. Existing traffic noise levels plus the projects modeled traffic noise levels range between 49.72 CNEL and 65.17 CNEL. The increase in ambient noise levels along Enright Drive would be greater than 3 dB (4.3 dB), however,

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

the resulting noise levels would not exceed applicable noise/land use compatibility standards of 65 CNEL. Peak park operational noise levels are modeled at 51.3 dB(A) L_{eq} at the closest sensitive receptors, which would not exceed the City noise standards. Additionally, the peak park operational noise levels are not expected to exceed 60 dB(A) L_{eq} at the MSCP MHPA boundary.

Although peak hour operations are unlikely to occur between the hours of 10:00pm and 7:00am, park hours of operation would be restricted to the hours of 7:00am and 10:00pm as a mitigation measure to ensure the City's applicable nighttime noise standards would not be violated. Therefore, impacts would be less than significant.

Therefore, a Mitigation Monitoring Reporting Program (MMRP), as detailed within Section V of the MND, would be implemented. With implementation of the monitoring program, potential impacts related to noise (operational and construction) would be reduced to less than significant.

b) Generation of, excessive ground borne vibration or ground borne noise levels?	☐	☐	☒	☐

Vibration levels in the project area would be influenced by construction activities including vibratory rollers and bulldozers. Velocity or acceleration is used to describe vibration, which is measured by peak particle velocities (PPV). A vibratory roller could produce 0.21 PPV and a large bulldozer could produce up to 0.09 PPV at 25 feet. At 50 feet or the nearest residential structures, the worst-case vibrator roller would produce 0.11 PPV and a bulldozer would produce 0.07 PPV, which would be well below the ground borne vibration below any risk of architectural damage. Additionally, the vibration levels would be short-term; therefore, impacts would be less than significant.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐

The project would not significantly increase long-term noise levels. The project would not introduce a new land use, or significantly increase the intensity of the allowed land use. Post-construction noise levels and traffic would not substantially increase as compared to the existing residential use. Therefore, no substantial permanent increase in ambient noise levels is anticipated. A less than significant impact would occur.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above existing without the project?	☐	☐	☒	☐

The project would not expose people to a substantial increase in temporary or periodic ambient noise levels. Construction noise would result during grading, demolition, and construction activities, but would be temporary in nature. Construction-related noise impacts from the project would generally be higher than existing ambient noise levels in the project area but would no longer occur once construction is completed. In addition, the project would be required to comply with the San Diego Municipal Code, Article 9.5, Noise Abatement and Control. Implementation of these standard measures would reduce potential impacts from an increase in ambient noise level during construction to a less than significant level.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
e) For a project located within an airport land use plan, or, where such a plan has not been adopted, within two miles of a public airport or public use airport would the project expose people residing or working in the area to excessive noise levels?	☐	☐	☐	☒

Although the project site is located in Airport Influence Area – Review Area 2 for the Brown Field Municipal Airport, it is located outside the airport noise contours. As such, the project would not expose people to working in the area to excessive aircraft noise levels. No impact would result.

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

The project is not located within the vicinity of a private airstrip. No impacts would occur.

XIII. POPULATION AND HOUSING – Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒

The project is located within a developed residential neighborhood and is surrounded by residential development and open space. The project site currently receives water and sewer service from the City, and no extension of infrastructure to new areas is required. As such, the project would not induce substantial population growth in the area. Impacts would not occur.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

No such displacement would result. The project site is currently vacant, and a park would be constructed. No impacts would occur.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

No such displacement would result. The project site is currently vacant, and a park would be constructed. No impacts would occur.

XIV. PUBLIC SERVICES

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
a) Would the project result in substantial adverse physical impacts associated with the provisions of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service rations, response times or other performance objectives for any of the public services:				
i) Fire protection	☐	☐	☒	☐

The project site is located in an urbanized area where fire protection services are provided. The project would not adversely affect existing levels of fire protection services to the area and would not require the construction of new or expanded governmental facilities. Impacts to fire protection would be less than significant.

ii) Police protection	☐	☐	☒	☐

The project site is located in an urbanized area where police protection services are provided. The project would not adversely affect existing levels of police protection services to the area and would not require the construction of new or expanded governmental facilities. Impacts to fire protection would be less than significant.

iii) Schools	☐	☐	☒	☐

The project would not affect existing levels of public services and would not require the construction or expansion of a school facility. The project site is located in an urbanized and developed area where public school services are available. The project would not significantly increase the demand on public schools over that which currently exists and is not anticipated to result in a significant increase in demand for public educational services. Impacts would be less than significant.

iv) Parks	☐	☐	☒	☐

The project site is located in an urbanized and developed area where City-operated parks are available. The project would construct a new park within a community; therefore, the project would not significantly increase the demand on existing neighborhood or regional parks or other recreational facilities over that which presently exists and is not anticipated to result in a significant increase in demand for parks or other offsite recreational facilities. Impacts would be less than significant.

v) Other public facilities	☐	☐	☒	☐

The project site is located in an urbanized and developed area where City services are already available. The project would not adversely affect existing levels of public services and not require the construction or expansion of an existing governmental facility. Impacts would be less than significant.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☒	☐

The project would not adversely affect the availability of and/or need for new or expanded recreational resources as the project is creating a new neighborhood park. The project would not adversely affect existing levels of public services and would not require the construction or expansion of an existing governmental facility. The project would not significantly increase the use of existing neighborhood or regional parks or other recreational facilities. Therefore, the project is not anticipated to result in the use of available parks or facilities such that substantial deterioration occurs, or that would require the construction or expansion of recreational facilities to satisfy demand. Impacts would be less than significant.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Refer to XV (a) above. The project would create a neighborhood park and would therefore include recreational facilities. The project would not require additional expansion of existing recreational facilities and would therefore not have an adverse effect on the environment. No impact would occur.

XVI. TRANSPORTATION/TRAFFIC – Would the project?				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐

A site-specific Access Analysis Report was prepared by STC Traffic (October 2019). The project is anticipated to generated approximately 458 weekday trips per day, which includes 18 AM peak hour trips (9 in and 9 out) and approximately 37 PM peak hour trips (19 in and 18 out). The analysis of existing conditions shows that both study intersections (E. Beyer Boulevard/ Otay Mesa Road/ Beyer Boulevard and Beyer Boulevard/ W. Park Avenue/ Alaquinas Drive) and roadway segments (Beyer Boulevard from Enright Drive to Otay Mesa Road and Beyer Boulevard from Otay Mesa Road to W. Park Avenue/Alaquinas Drive) operate at acceptable LOS C or better. Under existing plus project conditions, both study intersections and roadway segments would operate at acceptable LOS C or

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

better. Additionally, analysis was conducted to forecast traffic generated for Opening Year 2020 conditions which included projects in the area that are approved or pending. Both study intersections and roadway segments would operate at acceptable LOS C or better. Therefore, the project would not cause a significant near-term impact to the roadway segments and intersections levels of service. Additionally, the project does not propose any changes to the public transit system, bicycle lanes, or pedestrian circulation. Impacts would be less than significant.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐

Refer to response XVI (a). The project would not conflict with any applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. Impacts would be less than significant.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☒	☐

The project would not result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks in that the project would be consistent with land use plans and underlying zones. Implementation of the project would not result in a change in air traffic patterns, as they would not be constructed at a height that would impair air travel; nor result in either an increase in traffic levels or a change in location that results in substantial safety risks in that the project would be consistent with land use plans and underlying zones. The project would not result in a substantial safety risk. Impacts would be less than significant.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒

The project would not alter existing circulation patterns. No design features or incompatible uses that would increase potential hazards are proposed. The project would not affect emergency access to the project site or adjacent properties. Access would be provided to the project site Enright Drive and Delany Drive. The project has been designed in accordance with the City's street design manual and Municipal Code regulations and would include adequate sight distances at the project driveways. No impacts would result.

e) Result in inadequate emergency access?	☐	☐	☐	☒

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

The project is consistent with the community plan designation and would not result in inadequate emergency access. The project design would be subject to City review and approval for consistency with all design requirements to ensure that no impediments to emergency access occur. No impacts would result.

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

The project would not alter the existing conditions of the project site or adjacent facilities with regard to alternative transportation. Construction of the project would not result in design measures or circulation features that would conflict with existing policies, plan, or programs supporting alternative transportation. No impacts would result.

XVII. TRIBAL CULTURAL RESOURCES – Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	☐	☐	☐	☒

The project would not cause a substantial adverse effect to tribal cultural resources, as there are no recorded sites listed or sites eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined by the Public Resources Code. No impact would result.

b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	☐	☒	☐	☐

Tribal Cultural Resources include sites, features, places, cultural landscapes, and sacred places or objects that have cultural value or significance to a Native American Tribe. Tribal Cultural Resources include “non-unique archaeological resources” that, instead of being important for “scientific” value as a resource, can also be significant because of the sacred and/or cultural tribal value of the resource. Tribal representatives are considered experts appropriate for providing substantial evidence regarding the locations, types, and significance of tribal cultural resources within their traditionally and cultural affiliated geographic area (PRC § 21080.3.1(a)).

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

The City of San Diego, as Lead Agency, determined that Tribal Cultural Resources pursuant to subdivision Public Resources Code Section 5024.1(c) would not be potentially impacted through project implementation, as the project site has been developed and is located within an urban area. Notification, as required by Public Resources Code section 21074, was provided to the Iipay Nation of Santa Ysabel and Jamul Indian Village of Kumeyaay Nation. City of San Diego Development Services Department staff notified these two Native American communities of the proposed project by email on October 11, 2018. The Iipay Nation of Santa Isabel and the Jamul Indian Village responded within the 30-day formal notification period declining the consultation request. Both tribes concurred with the City's determination that the area of potential effect does not contain Tribal Cultural Resources. Therefore, no impact would occur.

XVIII. UTILITIES AND SERVICE SYSTEMS – Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☒	☐

Implementation of the project would not interrupt existing sewer service to the project site or other surrounding development. The project is not anticipated to generate significant amount of wastewater. Wastewater facilities used by the project would be operated in accordance with the applicable wastewater treatment requirements of the Regional Water Quality Control Board (RWQCB). Existing sewer infrastructure exists within roadways surrounding the project site and adequate services are available to serve the project. Thus, impacts would be less than significant.

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐

See XVII (a) above. Adequate services are available to serve the site and the project would not require the construction or expansion of existing facilities. Impacts would be less than significant.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒

The project would not exceed the capacity of the existing storm water system and require the construction of new or expanded treatment facilities of which would cause significant environmental effects. The project was reviewed by qualified City staff who determined that the existing facilities are adequately sized to accommodate the proposed development. No impacts would result.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

The project does not meet the CEQA significance thresholds requiring the need for the project to prepare a water supply assessment. The existing project site currently receives water service from the City, and adequate services are available to serve the site without requiring new or expanded entitlements. Impacts would be less than significant.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐

Construction of the project would not adversely affect existing wastewater treatment services. Adequate services are available to serve the site without requiring new or expanded facilities. Impacts would be less than significant.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐

The project would be served by a landfill with sufficient permitted capacity to accommodate the project's disposal needs. Construction debris and waste would be generated from the site preparation, grading and construction of the park. All construction waste from the project site would be transported to an appropriate facility, which would have adequate capacity to accept the limited amount of waste that would be generated by the project. Long-term operation of the proposed park is anticipated to generate typical amounts of solid waste associated with recreational uses. Furthermore, the project would be required to comply with the City's Municipal Code (including the Refuse and Recyclable Materials Storage Regulations (Municipal Code Chapter 14, Article 2, Division 8), Recycling Ordinance (Municipal Code Chapter 6, Article 6, Division 7), and the Construction and Demolition (C&D) Debris Deposit Ordinance (Municipal Code Chapter 6, Article 6, Division 6)) for diversion of both construction waste during the demolition phase and solid waste during the long-term, operational phase. Impacts are considered to be less than significant.

g) Comply with federal, state, and local statutes and regulation related to solid waste?	☐	☐	☒	☐

The project would comply with all Federal, State, and local statutes and regulations related to solid waste. The project would not result in the generation of large amounts of solid waste, nor generate or require the transport of hazardous waste materials, other than minimal amounts generated during the construction phase. All demolition activities would comply with any City of San Diego requirements for diversion of both construction waste during the demolition phase and solid waste during the long-term, operational phase. Impacts would be less than significant.

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. MANDATORY FINDINGS OF SIGNIFICANCE –				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐

As documented in this Initial Study, the project may have the potential to degrade the quality of the environment, notably with respect to Biological Resources and Noise. As such, mitigation measures have been incorporated to reduce impacts to less than significant as outlined within the Initial Study.

b) Does the project have impacts that are individually limited but cumulatively considerable ("cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☒	☐

Cumulative environmental impacts are those impacts that by themselves are not significant, but when considered with impacts occurring from other projects in the vicinity would result in a cumulative impact. Related projects considered to have the potential of creating cumulative impacts in association with the project consist of projects that are reasonably foreseeable and that would be constructed or operated during the life of the project. The project would be located in a developed area that is largely built out. No other construction projects are anticipated in the immediate area of the project.

As documented in this Initial Study, the project may have the potential to degrade the environment as a result of Biological Resource and Noise impacts, which may have cumulatively considerable impacts when viewed in connection with the effects of other potential projects in the area. As such, mitigation measures have been identified to fully mitigate and reduce impacts to a less than significant level. Other future projects within the surrounding area would be required to comply with applicable local, State, and Federal regulations to reduce potential impacts to less than significant, or to the extent possible. As such, the project is not anticipated to contribute to potentially significant cumulative environmental impacts. Project impacts would be less than significant.

c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Issue	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact

As discussed throughout this document, it is not anticipated that the demolition, construction, and operation of the project would not cause environmental effects that would significantly directly or indirectly impact human beings. All impacts identified as being significant have been mitigated to below a level of significance. For this reason, all environmental effects fall below the thresholds established by the City of San Diego. Impacts would be less than significant.

INITIAL STUDY CHECKLIST
REFERENCES

I. Aesthetics / Neighborhood Character

☐ City of San Diego General Plan
☒ Community Plans: Clairemont Mesa Community Plan

II. Agricultural Resources & Forest Resources

☒ City of San Diego General Plan
☐ U.S. Department of Agriculture, Soil Survey - San Diego Area, California, Part I and II, 1973
☐ California Agricultural Land Evaluation and Site Assessment Model (1997)
☐ Site Specific Report:

III. Air Quality

☐ California Clean Air Act Guidelines (Indirect Source Control Programs) 1990
☐ Regional Air Quality Strategies (RAQS) - APCD
☐ Site Specific Report:

IV. Biology

☐ City of San Diego, Multiple Species Conservation Program (MSCP), Subarea Plan, 1997
☐ City of San Diego, MSCP, "Vegetation Communities with Sensitive Species and Vernal Pools" Maps, 1996
☒ City of San Diego, MSCP, "Multiple Habitat Planning Area" maps, 1997
☐ Community Plan - Resource Element
☐ California Department of Fish and Game, California Natural Diversity Database, "State and Federally-listed Endangered, Threatened, and Rare Plants of California," January 2001
☐ California Department of Fish and Game, California Natural Diversity Database, "State and Federally-listed Endangered and Threatened Animals of California, "January 2001
☐ City of San Diego Land Development Code Biology Guidelines
☒ Site Specific Report:

Biological Resources Report for the Beyer Park Development Project prepared by RECON Environmental, Inc. dated November 26, 2019

Enhancement and Restoration of Maritime Succulent Scrub as Habitat for Western Burrowing Owl and Beach Goldenaster for the Beyer Park Development Project prepared by RECON Environmental, Inc. dated November 26, 2019

Jurisdictional Waters/ Wetland Delineation Report for the Beyer Park Development Project prepared by RECON Environmental, Inc. dated March 20, 2017

Post-survey Report for the 2016-2017 Wet Season Fairy Shrimp Surveys for the Beyer Park Development Project prepared by RECON Environmental, Inc. dated June 7, 2017

Results of the 2017 Burrowing Owl Breeding Season Surveys for the Beyer Park Development Project prepared by RECON Environmental, Inc. dated August 23, 2017

Results of the 2017 Coastal California Gnatcatcher Presence/Absence Survey for the Beyer Park Development Project prepared by RECON Environmental, Inc. dated August 3, 2017

Results of the 2017 Dry Season Fairy Shrimp Survey for the Beyer Park Development Project prepared by RECON Environmental, Inc. dated October 25, 2017

Results of the 2017 Least Bell's Vireo Presence/Absence Survey for the Beyer Park Development Project prepared by RECON Environmental, Inc. dated September 15, 2017

Results of the 2017 Quino Checkerspot Butterfly Presence/Absence Survey for the Beyer Park Development Project prepared by RECON Environmental, Inc. dated July 17, 2017

2017 Burrowing Owl Habitat Assessment Summary Report for the Beyer Park Development Project prepared by Busby Biological Services dated April 24, 2017

☐ City of San Diego Historical Resources Guidelines
☒ City of San Diego Archaeology Library
☐ Historical Resources Board List
☐ Community Historical Survey:
☒ Site Specific Report:

Archaeological Resources Survey for the Beyer Park Development Project, prepared by RECON Environmental, Inc. dated August 28, 2018

VI. Geology/Soils

☒ City of San Diego Seismic Safety Study
☐ U.S. Department of Agriculture Soil Survey - San Diego Area, California, Part I and II, December 1973 and Part III, 1975
☒ Site Specific Report:

Revised Desktop Geotechnical Investigation and Slope Stability Analysis Proposed Beyer Community Park prepared by K2 Engineering, Inc. dated December 13, 2017

VII. Greenhouse Gas Emissions

☒ Site Specific Report: Climate Action Plan Consistency Checklist

VIII. Hazards and Hazardous Materials

☒ San Diego County Hazardous Materials Environmental Assessment Listing
☐ San Diego County Hazardous Materials Management Division
☐ FAA Determination
☐ State Assessment and Mitigation, Unauthorized Release Listing, Public Use Authorized
☐ Airport Land Use Compatibility Plan
☐ Site Specific Report:

IX. Hydrology/Drainage

☐ Flood Insurance Rate Map (FIRM)
☐ Federal Emergency Management Agency (FEMA), National Flood Insurance Program-Flood Boundary and Floodway Map
☐ Clean Water Act Section 303(b) list, http://www.swrcb.ca.gov/tmdl/303d_lists.html
☒ Site Specific Report:

Preliminary Drainage Assessment Beyer Community Park prepared by RBF Consulting dated January 27, 2007

Preliminary Drainage Study for Beyer Park prepared BWE Engineering dated August 2018

X. Land Use and Planning

☒ City of San Diego General Plan
☒ Community Plan
☐ Airport Land Use Compatibility Plan
☒ City of San Diego Zoning Maps
☐ FAA Determination:
☐ Other Plans:

XI. Mineral Resources

☐ California Department of Conservation - Division of Mines and Geology, Mineral Land Classification
☐ Division of Mines and Geology, Special Report 153 - Significant Resources Maps
☐ City of San Diego General Plan: Conservation Element
☐ Site Specific Report:

XII. Noise

☒ City of San Diego General Plan
☐ Community Plan
☐ San Diego International Airport - Lindbergh Field CNEL Maps
☐ Brown Field Airport Master Plan CNEL Maps
☐ Montgomery Field CNEL Maps
☐ San Diego Association of Governments - San Diego Regional Average Weekday Traffic Volumes
☐ San Diego Metropolitan Area Average Weekday Traffic Volume Maps, SANDAG
☒ Site Specific Report:
Nosie Technical Report Beyer Community Park prepared by GEPermit dated April 2019

XIII. Paleontological Resources

☒ City of San Diego Paleontological Guidelines
☐ Deméré, Thomas A., and Stephen L. Walsh, "Paleontological Resources City of San Diego," Department of Paleontology San Diego Natural History Museum, 1996
☒ Kennedy, Michael P., and Gary L. Peterson, "Geology of the San Diego Metropolitan Area, California. Del Mar, La Jolla, Point Loma, La Mesa, Poway, and SW 1/4 Escondido 7 1/2 Minute Quadrangles," *California Division of Mines and Geology Bulletin* 200, Sacramento, 1975
☐ Kennedy, Michael P., and Siang S. Tan, "Geology of National City, Imperial Beach and Otay Mesa Quadrangles, Southern San Diego Metropolitan Area, California," Map Sheet 29, 1977
☐ Site Specific Report:

XIV. Population / Housing

☐ City of San Diego General Plan
☐ Community Plan
☐ Series 11/Series 12 Population Forecasts, SANDAG
☐ Other:

XV. Public Services

☐ City of San Diego General Plan

☐ Community Plan

XVI. Recreational Resources

☐ City of San Diego General Plan
☐ Community Plan
☐ Department of Park and Recreation
☐ City of San Diego - San Diego Regional Bicycling Map
☐ Additional Resources:

XVII. Transportation / Circulation

☐ City of San Diego General Plan
☐ Community Plan:
☐ San Diego Metropolitan Area Average Weekday Traffic Volume Maps, SANDAG
☐ San Diego Region Weekday Traffic Volumes, SANDAG
☒ Site Specific Report:
Beyer Park Access Analysis Report prepared by STC Traffic dated October 14, 2019

XVIII. Utilities

☐ Site Specific Report:

XIX. Water Conservation

☐ Sunset Magazine, *New Western Garden Book*, Rev. ed. Menlo Park, CA: Sunset Magazine

XX. Water Quality

☐ Clean Water Act Section 303(b) list, http://www.swrcb.ca.gov/tmdl/303d_lists.html
☒ Site Specific Report:
Priority Development Project (PDP) Storm Water Quality Management Plan (SWQMP) Beyer Park prepared by BWE Engineering dated August 21, 2018

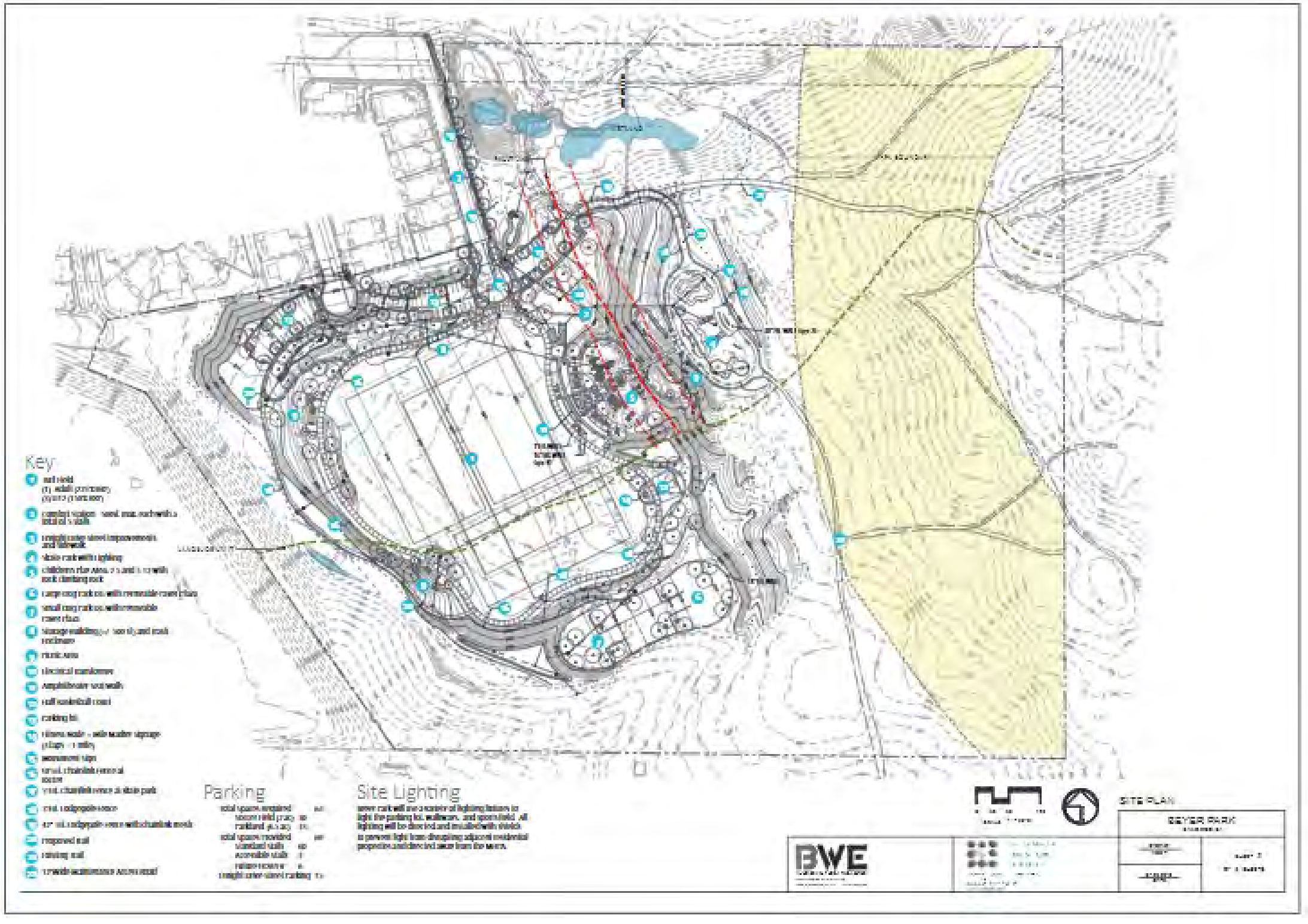
Revised: August 2018

Project Location Map

Beyer Park– southeast of the eastern terminus of Beyer Boulevard
PROJECT NO. 589554

Beyer Park Development
K-24-2170-DBB-3-A-C

North



Site Plan

Beyer Park SDP–southeast of the eastern terminus of Beyer Boulevard
PROJECT NO. 589554

North

EXHIBIT A

MITIGATION MONITORING AND REPORTING PROGRAM FOR
ARCHAEOLOGICAL AND NATIVE AMERICAN MONITORING

This Mitigation Monitoring and Reporting Program is designed to ensure compliance with Public Resources Code Section 21081.6 during implementation of mitigation measures. This program identifies at a minimum: the department responsible for the monitoring, what is to be monitored, how the monitoring shall be accomplished, the monitoring and reporting schedule, and completion requirements. A record of the Mitigation Monitoring and Reporting Program will be maintained at the offices of the Development Services Department, 1222 First Avenue, Fifth Floor, San Diego, CA, 92101.

ARCHAEOLOGICAL RESOURCES

I. Prior to Permit Issuance or Bid Opening/Bid Award

A. Entitlements Plan Check

1. Prior to permit issuance or Bid Opening/Bid Award, whichever is applicable, the Assistant Deputy Director (ADD) Environmental designee shall verify that the requirements for Archaeological Monitoring and Native American monitoring have been noted on the applicable construction documents through the plan check process.

B. Letters of Qualification have been submitted to ADD

1. Prior to Bid Award, the applicant shall submit a letter of verification to Mitigation Monitoring Coordination (MMC) identifying the Principal Investigator (PI) for the project and the names of all persons involved in the archaeological monitoring program, as defined in the City of San Diego Historical Resources Guidelines (HRG). If applicable, individuals involved in the archaeological monitoring program must have completed the 40-hour HAZWOPER training with certification documentation.
2. MMC will provide a letter to the applicant confirming the qualifications of the PI and all persons involved in the archaeological monitoring of the project meet the qualifications established in the HRG.
3. Prior to the start of work, the applicant must obtain written approval from MMC for any personnel changes associated with the monitoring program.

II. Prior to Start of Construction

A. Verification of Records Search

1. The PI shall provide verification to MMC that a site specific records search (1/4 mile radius) has been completed. Verification includes, but is not limited to a copy of a confirmation letter from South Coastal Information Center, or, if the search was in-house, a letter of verification from the PI stating that the search was completed.
2. The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.
3. The PI may submit a detailed letter to MMC requesting a reduction to the ¼ mile radius.

B. PI Shall Attend Precon Meetings

1. Prior to beginning any work that requires monitoring; the Applicant shall arrange a Precon Meeting that shall include the PI, Native American consultant/monitor (where Native American resources may be impacted), Construction Manager (CM) and/or Grading Contractor, Resident Engineer (RE), Building Inspector (BI), if appropriate, and MMC. The qualified Archaeologist and Native American Monitor shall attend any

grading/excavation related Precon Meetings to make comments and/or suggestions concerning the Archaeological Monitoring program with the Construction Manager and/or Grading Contractor.

a. If the PI is unable to attend the Precon Meeting, the Applicant shall schedule a focused Precon Meeting with MMC, the PI, RE, CM or BI, if appropriate, prior to the start of any work that requires monitoring.

2. Acknowledgement of Responsibility for Curation (CIP or Other Public Projects)

   The applicant shall submit a letter to MMC acknowledging their responsibility for the cost of curation associated with all phases of the archaeological monitoring program.

3. Identify Areas to be Monitored
   a. Prior to the start of any work that requires monitoring, the PI shall submit an Archaeological Monitoring Exhibit (AME) (with verification that the AME has been reviewed and approved by the Native American consultant/monitor when Native American resources may be impacted) based on the appropriate construction documents (reduced to 11x17) to MMC identifying the areas to be monitored including the delineation of grading/excavation limits.
   b. The AME shall be based on the results of a site specific records search as well as information regarding the age of existing pipelines, laterals and associated appurtenances and/or any known soil conditions (native or formation).
   c. MMC shall notify the PI that the AME has been approved.
4. When Monitoring Will Occur
   a. Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE indicating when and where monitoring will occur.
   b. The PI may submit a detailed letter to MMC prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as age of existing pipe to be replaced, depth of excavation and/or site graded to bedrock, etc., which may reduce or increase the potential for resources to be present.
5. Approval of AME and Construction Schedule
   After approval of the AME by MMC, the PI shall submit to MMC written authorization of the AME and Construction Schedule from the CM.

III. During Construction

A. Monitor Shall be Present During Grading/Excavation/Trenching
   1. The Archaeological Monitor shall be present full-time during all soil disturbing and grading/excavation/trenching activities which could result in impacts to archaeological resources as identified on the AME. **The Construction Manager is responsible for notifying the RE, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the AME.**
   2. The Kumeyaay Native American consultant/monitor shall determine the extent of their presence during soil disturbing and grading/excavation/trenching activities based on the AME and provide that information to the PI and MMC. If prehistoric resources are encountered during the Native American consultant/monitor's absence, work shall stop and the Discovery Notification Process detailed in Section III.B-C and IV.A-D shall commence.
   3. The PI may submit a detailed letter to MMC during construction requesting a modification to the monitoring program when a field condition such as modern

disturbance post-dating the previous grading/trenching activities, presence of fossil formations, or when native soils are encountered that may reduce or increase the potential for resources to be present.

4. The archaeological and Native American consultant/monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR's shall be faxed by the CM to the RE the first day of monitoring, the last day of monitoring, monthly (**Notification of Monitoring Completion)**, and in the case of ANY discoveries. The RE shall forward copies to MMC.

B. Discovery Notification Process
   1. In the event of a discovery, the Archaeological Monitor shall direct the contractor to temporarily divert all soil disturbing activities, including but not limited to digging, trenching, excavating or grading activities in the area of discovery and in the area reasonably suspected to overlay adjacent resources and immediately notify the RE or BI, as appropriate.
   2. The Monitor shall immediately notify the PI (unless Monitor is the PI) of the discovery.
   3. The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC within 24 hours by fax or email with photos of the resource in context, if possible.
   4. No soil shall be exported off-site until a determination can be made regarding the significance of the resource specifically if Native American resources are encountered.

C. Determination of Significance
   1. The PI and Native American consultant/monitor, where Native American resources are discovered shall evaluate the significance of the resource. If Human Remains are involved, follow protocol in Section IV below.
      a. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC indicating whether additional mitigation is required.
      b. If the resource is significant, the PI shall submit an Archaeological Data Recovery Program (ADRP) and obtain written approval of the program from MMC, CM and RE. ADRP and any mitigation must be approved by MMC, RE and/or CM before ground disturbing activities in the area of discovery will be allowed to resume. **Note: If a unique archaeological site is also an historical resource as defined in CEQA Section 15064.5, then the limits on the amount(s) that a project applicant may be required to pay to cover mitigation costs as indicated in CEQA Section 21083.2 shall not apply.**
         (1). Note: For pipeline trenching and other linear projects in the public Right-of-Way, the PI shall implement the Discovery Process for Pipeline Trenching projects identified below under "D."
      c. If the resource is not significant, the PI shall submit a letter to MMC indicating that artifacts will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that that no further work is required.
         (1). Note: For Pipeline Trenching and other linear projects in the public Right-of-Way, if the deposit is limited in size, both in length and depth; the information value is limited and is not associated with any other resource; and there are no unique features/artifacts associated with the deposit, the discovery should be considered not significant.
         (2). Note, for Pipeline Trenching and other linear projects in the public Right-of-Way, if significance cannot be determined, the Final Monitoring Report and

Site Record (DPR Form 523A/B) shall identify the discovery as Potentially Significant.

D. Discovery Process for Significant Resources - Pipeline Trenching and other Linear Projects in the Public Right-of-Way

The following procedure constitutes adequate mitigation of a significant discovery encountered during pipeline trenching activities or for other linear project types within the Public Right-of-Way including but not limited to excavation for jacking pits, receiving pits, laterals, and manholes to reduce impacts to below a level of significance:

1. Procedures for documentation, curation and reporting
    a. One hundred percent of the artifacts within the trench alignment and width shall be documented in-situ, to include photographic records, plan view of the trench and profiles of side walls, recovered, photographed after cleaning and analyzed and curated. The remainder of the deposit within the limits of excavation (trench walls) shall be left intact.
    b. The PI shall prepare a Draft Monitoring Report and submit to MMC via the RE as indicated in Section VI-A.
    c. The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) the resource(s) encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines. The DPR forms shall be submitted to the South Coastal Information Center for either a Primary Record or SDI Number and included in the Final Monitoring Report.
    d. The Final Monitoring Report shall include a recommendation for monitoring of any future work in the vicinity of the resource.

IV. Discovery of Human Remains

If human remains are discovered, work shall halt in that area and no soil shall be exported off-site until a determination can be made regarding the provenance of the human remains; and the following procedures as set forth in CEQA Section 15064.5(e), the California Public Resources Code (Sec. 5097.98) and State Health and Safety Code (Sec. 7050.5) shall be undertaken:

A. Notification
    1. Archaeological Monitor shall notify the RE or BI as appropriate, MMC, and the PI, if the Monitor is not qualified as a PI. MMC will notify the appropriate Senior Planner in the Environmental Analysis Section (EAS) of the Development Services Department to assist with the discovery notification process.
    2. The PI shall notify the Medical Examiner after consultation with the RE, either in person or via telephone.

B. Isolate discovery site
    1. Work shall be directed away from the location of the discovery and any nearby area reasonably suspected to overlay adjacent human remains until a determination can be made by the Medical Examiner in consultation with the PI concerning the provenience of the remains.
    2. The Medical Examiner, in consultation with the PI, will determine the need for a field examination to determine the provenience.

3. If a field examination is not warranted, the Medical Examiner will determine with input from the PI, if the remains are or are most likely to be of Native American origin.

C. If Human Remains **ARE** determined to be Native American
   1. The Medical Examiner will notify the Native American Heritage Commission (NAHC) within 24 hours. By law, **ONLY** the Medical Examiner can make this call.
   2. NAHC will immediately identify the person or persons determined to be the Most Likely Descendent (MLD) and provide contact information.
   3. The MLD will contact the PI within 24 hours or sooner after the Medical Examiner has completed coordination, to begin the consultation process in accordance with CEQA Section 15064.5(e), the California Public Resources and Health & Safety Codes.
   4. The MLD will have 48 hours to make recommendations to the property owner or representative, for the treatment or disposition with proper dignity, of the human remains and associated grave goods.
   5. Disposition of Native American Human Remains will be determined between the MLD and the PI, and, if:
      a. The NAHC is unable to identify the MLD, OR the MLD failed to make a recommendation within 48 hours after being notified by the Commission, OR;
      b. The landowner or authorized representative rejects the recommendation of the MLD and mediation in accordance with PRC 5097.94 (k) by the NAHC fails to provide measures acceptable to the landowner, THEN
      c. To protect these sites, the landowner shall do one or more of the following:
         (1) Record the site with the NAHC;
         (2) Record an open space or conservation easement; or
         (3) Record a document with the County.
      d. Upon the discovery of multiple Native American human remains during a ground disturbing land development activity, the landowner may agree that additional conferral with descendants is necessary to consider culturally appropriate treatment of multiple Native American human remains. Culturally appropriate treatment of such a discovery may be ascertained from review of the site utilizing cultural and archaeological standards. Where the parties are unable to agree on the appropriate treatment measures the human remains and items associated and buried with Native American human remains shall be reinterred with appropriate dignity, pursuant to Section 5.c., above.

D. If Human Remains are **NOT** Native American
   1. The PI shall contact the Medical Examiner and notify them of the historic era context of the burial.
   2. The Medical Examiner will determine the appropriate course of action with the PI and City staff (PRC 5097.98).
   3. If the remains are of historic origin, they shall be appropriately removed and conveyed to the San Diego Museum of Man for analysis. The decision for internment of the human remains shall be made in consultation with MMC, EAS, the applicant/landowner, any known descendant group, and the San Diego Museum of Man.

V. Night and/or Weekend Work

A. If night and/or weekend work is included in the contract

1. When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the precon meeting.
2. The following procedures shall be followed.
    a. No Discoveries
    In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVR and submit to MMC via fax by 8AM of the next business day.
    b. Discoveries
    All discoveries shall be processed and documented using the existing procedures detailed in Sections III - During Construction, and IV – Discovery of Human Remains. Discovery of human remains shall always be treated as a significant discovery.
    c. Potentially Significant Discoveries
    If the PI determines that a potentially significant discovery has been made, the procedures detailed under Section III - During Construction and IV-Discovery of Human Remains shall be followed.
    d. The PI shall immediately contact the RE and MMC, or by 8AM of the next business day to report and discuss the findings as indicated in Section III-B, unless other specific arrangements have been made.

B. If night and/or weekend work becomes necessary during the course of construction
    1. The Construction Manager shall notify the RE, or BI, as appropriate, a minimum of 24 hours before the work is to begin.
    2. The RE, or BI, as appropriate, shall notify MMC immediately.

C. All other procedures described above shall apply, as appropriate.

VI. Post Construction

A. Submittal of Draft Monitoring Report
    1. The PI shall submit two copies of the Draft Monitoring Report (even if negative), prepared in accordance with the Historical Resources Guidelines (Appendix C/D) which describes the results, analysis, and conclusions of all phases of the Archaeological Monitoring Program (with appropriate graphics) to MMC via the RE for review and approval within 90 days following the completion of monitoring. **It should be noted that if the PI is unable to submit the Draft Monitoring Report within the allotted 90-day timeframe as a result of delays with analysis, special study results or other complex issues, a schedule shall be submitted to MMC establishing agreed due dates and the provision for submittal of monthly status reports until this measure can be met.**
        a. For significant archaeological resources encountered during monitoring, the Archaeological Data Recovery Program or Pipeline Trenching Discovery Process shall be included in the Draft Monitoring Report.
        b. Recording Sites with State of California Department of Parks and Recreation
        The PI shall be responsible for recording (on the appropriate State of California Department of Park and Recreation forms-DPR 523 A/B) any significant or potentially significant resources encountered during the Archaeological Monitoring Program in accordance with the City's Historical Resources Guidelines, and submittal of such forms to the South Coastal Information Center with the Final Monitoring Report.

2. MMC shall return the Draft Monitoring Report to the PI via the RE for revision or, for preparation of the Final Report.
3. The PI shall submit revised Draft Monitoring Report to MMC via the RE for approval.
4. MMC shall provide written verification to the PI of the approved report.
5. MMC shall notify the RE or BI, as appropriate, of receipt of all Draft Monitoring Report submittals and approvals.

B. Handling of Artifacts
1. The PI shall be responsible for ensuring that all cultural remains collected are cleaned and catalogued
2. The PI shall be responsible for ensuring that all artifacts are analyzed to identify function and chronology as they relate to the history of the area; that faunal material is identified as to species; and that specialty studies are completed, as appropriate.

C. Curation of artifacts: Accession Agreement and Acceptance Verification
1. The PI shall be responsible for ensuring that all artifacts associated with the survey, testing and/or data recovery for this project are permanently curated with an appropriate institution. This shall be completed in consultation with MMC and the Native American representative, as applicable.
2. When applicable to the situation, the PI shall include written verification from the Native American consultant/monitor indicating that Native American resources were treated in accordance with state law and/or applicable agreements. If the resources were reinterred, verification shall be provided to show what protective measures were taken to ensure no further disturbance occurs in accordance with Section IV – Discovery of Human Remains, Subsection C.
3. The PI shall submit the Accession Agreement and catalogue record(s) to the RE or BI, as appropriate for donor signature with a copy submitted to MMC.
4. The RE or BI, as appropriate shall obtain signature on the Accession Agreement and shall return to PI with copy submitted to MMC.
5. The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE or BI and MMC.

D. Final Monitoring Report(s)
1. The PI shall submit one copy of the approved Final Monitoring Report to the RE or BI as appropriate, and one copy to MMC (even if negative), within 90 days after notification from MMC of the approved report.
2. The RE shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC which includes the Acceptance Verification from the curation institution.

Paleontological Construction Monitoring Requirements

PALEONTOLOGICAL MONITORING AND REPORTING PROGRAM (PMRP):

I. **GENERAL REQUIREMENTS.** Post Plan Check (After permit issuance/Prior to start of construction).

A. PRE CONSTRUCTION MEETING IS REQUIRED TEN (10) WORKING DAYS PRIOR TO BEGINNING ANY WORK ON THIS PROJECT.

1. The Contractor is responsible to arrange and perform this meeting by contacting the City Resident Engineer (RE)/Construction Manager (CM) of the Construction Management and Field Engineering (CMFE) Division and City staff from Mitigation Monitoring Coordination (MMC). Attendees shall also include the Contractor's representative(s), job site superintendent, and the paleontologist**.**

2. NOTE: Failure of all responsible Contractor's representatives and paleontological monitor to attend the pre-construction meeting shall require an additional focused meeting with all parties present.

3. CONTACT INFORMATION:

a) The primary point of contact is the RE/CM at the CMFE Division at 858-627-3200.

b) For clarification of environmental requirements, call the RE/CM and MMC at 858-627-3360.

B. PMRP COMPLIANCE.

1. This Project shall conform to the City's paleontological monitoring requirements, as further specified below, in accordance with the City of San Diego's Land Development Code – Grading Regulations, Section 142.0151, and implemented to the satisfaction of MMC and RE/CM. The requirements shall not be reduced or changed but may be annotated (i.e. to explain when and how compliance is being met and location of verifying proof, etc.). Additional clarifying information may also be added to other relevant plan sheets and/or specifications as appropriate (i.e., specific locations, times of monitoring, methodology, etc.

2. NOTE: Contractor shall alert RE/CM and MMC if there are any discrepancies in the plans or notes, or any changes due to field conditions. All conflicts shall be approved by RE/CM and MMC before the Work is performed.

3. Prior to the commencement of construction, a qualified Project Paleontologist shall be retained to oversee the mitigation program (a Project Paleontologist is a person with a Ph.D. or Master's Degree in Paleontology or related field, and who has knowledge of San Diego County paleontology and documented experience in professional paleontological procedures and techniques). In addition, a regional fossil repository shall be designated to receive any discovered fossils (because the Project is in San Diego County, the recommended repository is the San Diego Natural History Museum).

4. Pre-Construction: Prior to development of the mitigation/ restoration site, a paleontological field survey should be conducted to field check outcrops of the San Diego Formation and Otay Formation, and to inspect the surface of the site for any exposed fossil remains. If encountered, fossils should be salvaged and

treated (as outlined in mitigation measures below), and paleontological monitoring may be implemented during earthwork associated with development of the mitigation/restoration site, at the discretion of the Project Paleontologist. If no fossils are encountered during the field survey, paleontological monitoring will not be required during development of the mitigation/restoration site.

5. Pre-Construction (training): The Project Paleontologist should conduct a paleontological resource training workshop to be attended by earth excavation personnel prior to commencement of grading activities.

C. MONITORING EXHIBIT.

1. Contractor's qualified Project Paleontologist is required to submit, to RE/CM and MMC, a paleontological monitoring exhibit on a 11 x 17 inch reduction of the appropriate construction plan, such as site plan, grading, landscape, etc., marked to clearly show the Limits of Work, scope of that discipline's work (i.e. delineation showing work area(s) requiring paleontological monitoring), and notes indicating when in the construction schedule that work will be performed. When necessary for

clarification, a detailed methodology of how the work will be performed shall be included.

D. OTHER SUBMITTALS ANDINSPECTIONS.

1. The Contractor or Engineering and Capital Projects Department's consultant (if applicable) shall submit all required documentation, verification letters, and requests for all associated inspections to the RE/CM and MMC for approval per the following schedule:

DOCUMENT SUBMITTAL/INSPECTION CHECKLIST:

ISSUE AREA	DOCUMENT SUBMITTAL	ASSOCIATED INSPECTION, APPROVALS, NOTES
Paleontology	Principal Investigator & Paleontological Monitors Qualification Letters	Prior to Pre-Construction Meeting
Paleontology	Site-Specific Records Search	Prior to Pre-Construction Meeting
Paleontology	Paleontological Monitoring Exhibit	Prior to, or at, the Pre-Construction Meeting
Paleontology	Letter of Acknowledgement of Responsibility for Curation	Prior to the Pre-Construction Meeting
Paleontology	Construction Schedule (Monitoring)	Prior to Construction
Paleontology	Paleontology Reports	Paleontology Observation

Final PMRP		Final PMRP Inspection

SPECIFIC PMRP ISSUE AREA CONDITIONS/REQUIREMENTS:

I. PALEONTOLOGICAL RESOURCES.

A. Prior to Permit Issuance or Construction.

1. **Letters of Qualification have been submitted to MMC**.

a) Prior to the pre-construction meeting, Engineering and Capital Projects Department shall submit a letter of verification to MMC identifying the Principal Investigator (PI) for the project and the names of all persons involved in the paleontological monitoring program, as defined in the City of San Diego Paleontology Guidelines.

b) MMC will provide a letter to Engineering and Capital Projects Department confirming the qualifications of the PI and all persons involved in the paleontological monitoring of the project.

c) Prior to the start of work, Engineering and Capital Projects Department shall obtain approval from MMC for any personnel changes associated with the monitoring program.

B. Prior to Start of Construction.

1. **Verification of Records Search**.

a) The PI shall provide verification to MMC that a site-specific records search has been completed. Verification includes, but is not limited to a copy of a confirmation letter from San Diego Natural History Museum, other institution or, if the search was in-house, a letter of verification from the PI stating that the search was completed.

b) The letter shall introduce any pertinent information concerning expectations and probabilities of discovery during trenching and/or grading activities.

C. PI Shall Attend Pre-Construction Meetings.

1. Prior to beginning any work that requires monitoring, the City or City's representative shall arrange a pre-construction meeting that shall include the PI, Grading Contractor, RE/CM, Building Inspector (BI), if appropriate, and MMC. The qualified paleontologist shall attend any grading/excavation related pre-constructionmeetingstomakecommentsand/orsuggestionsconcerning the Paleontological Monitoring Program with the RE/CM and/or BI and Grading Contractor.

a) If the PI is unable to attend the pre-construction meeting, the Contractor, shall schedule a focused pre-construction meeting with MMC, PI, and RE/CM or BI, if appropriate, prior to the start of any work that requires monitoring.

2. Acknowledgement of Responsibility for Curation (Capital Improvement Program Project or Other Public Projects).

a) The Contractor, or Engineering and Capital Projects Department's consultant (if applicable), shall submit a letter to MMC, RE/CM and/or BI acknowledging their responsibility for the cost of curation associated

with all phases of the paleontological monitoring program.

3. Identify Areas to be Monitored.

   a) Prior to the start of any work that requires monitoring, the PI shall submit a Paleontological Monitoring Exhibit (PME) based on the appropriate construction documents (reduced to 11x17 inch) to MMC and RE/CM and/or BI for approval identifying the areas to be monitored including the delineation of grading/excavation limits. Monitoring shall begin at depths below 10 feet from existing grade or

   as determined by the PI in consultation with MMC. The determination shall be based on site-specific records search data which supports monitoring at depths less than ten feet. The PME shall be based on the results of a site-specific records search as well as information regarding existing known soil conditions (native or formation). MMC shall notify the PI that the PME has been approved prior to commencing with any ground-disturbing activities.

4. When Monitoring Will Occur:

   a) Prior to the start of any work, the PI shall also submit a construction schedule to MMC through the RE/CM and/or BI indicating when and where monitoring will occur.

   b) The PI may submit a detailed letter to MMC and RE/CM and/or BI prior to the start of work or during construction requesting a modification to the monitoring program. This request shall be based on relevant information such as review of final construction documents which indicate conditions such as depth of excavation and/or site graded to bedrock, presence or absence of fossil resources, etc., which may reduce or increase the potential for resources to be present.

5. Approval of PME and Construction Schedule.

   a) After approval of the PME by MMC, the PI shall submit to MMC and RE/CM and/or BI written authorization of the PME and Construction Schedule from the Contractor.

D. During Construction.

1. The Monitor shall be present during Grading/Excavation/Trenching.

   a) During Construction (monitoring): A paleontological monitor (working under the direction of the Project Paleontologist) should be on-site on a full-time basis during all original cutting of previously undisturbed deposits of the San Diego Formation and Otay Formation to inspect exposures for unearthed fossils. San Diego Formation strata located along the west side of the La Nacion Fault strand, having already produced significant vertebrate fossils, should be a particular focus of monitoring.

   b) The Contractor is responsible for notifying the RE/CM and/or BI, PI, and MMC of changes to any construction activities such as in the case of a potential safety concern within the area being monitored. In certain circumstances OSHA safety requirements may necessitate modification of the PME.

c) The PI may submit a detailed letter to MMC and RE/CM and/or BI during construction requesting a modification to the monitoring program when a field condition such as trenching activities that do not encounter formational soils as previously assumed, and/or when unique/unusual fossils are encountered, which may reduce or increase the potential for resources to be present.

d) The paleontological monitor shall document field activity via the Consultant Site Visit Record (CSVR). The CSVR's shall be emailed and/or provided hard copy by the Contractor or Engineering and Capital Projects Department's consultant (if applicable) to the RE/CM and/or BI the first day of monitoring, the last day of monitoring, monthly (Notification of Monitoring Completion), and in the case of ANY discoveries. The RE/CM and/or BI shall forward copies to MMC.

2. Discovery Notification Process.

a) In the event of a discovery, the paleontological monitor shall direct the contractor to temporarily divert trenching activities in the area of discovery and immediately notify the RE/CM and/or BI, as appropriate.

b) The paleontological monitor shall immediately notify the PI (unless paleontological monitor is the PI) of the discovery.

c) The PI shall immediately notify MMC by phone of the discovery, and shall also submit written documentation to MMC and RE/CM and/or BI within 24 hours by fax or email with photos of the resource in context, if possible.

3. Determination of Significance.

a) The PI shall evaluate the significance of the resource.

i. The PI shall immediately notify MMC by phone to discuss significance determination and shall also submit a letter to MMC and RE/CM and/or BI indicating whether mitigation is required. The determination of significance for fossil discoveries shall be at the discretion of the PI.

ii. If the resource is significant, the PI shall submit a Paleontological Recovery Program (PRP) and obtain written approval of the program from MMC and/or RE/CM and/or BI. PRP and any mitigation must be approved by MMC and RE/CM and/or BI before ground-disturbing activities in the area of discovery will be allowed to resume.

iii. If resource is not significant (e.g., small pieces of broken common shell fragments or other scattered common fossils) the PI shall notify the RE, or BI as appropriate, that a non-significant discovery has been made. The Paleontologist shall continue to monitor the area without notification to MMC unless a significant resource is encountered.

iv. The PI shall submit a letter to MMC and RE/CM and/or BI indicating that fossil resources will be collected, curated, and documented in the Final Monitoring Report. The letter shall also indicate that no further work is required.

4. Discovery Process for Significant Resources

a) Procedures for Documentation, Curation and Reporting. The following procedure constitutes adequate mitigation of a significant discovery encountered during pipeline trenching activities including but not limited to excavation for jacking pits, receiving pits, laterals, and manholes to reduce impacts to below a level of significance.

i. One hundred percent of the fossil resources within the trench alignment and width shall be documented in-situ photographically, drawn in plan view (trench and profiles of side walls), recovered from the trench and photographed after cleaning, then analyzed and curated consistent with Society of Invertebrate Paleontology Standards. The remainder of the deposit within the limits of excavation (trench walls) shall be left intact and so documented.

ii. The PI shall prepare a Draft Paleontological Monitoring Report and submit to MMC via the RE/CM and/or BI as indicated in **Section F - Post Construction**.

iii. The PI shall be responsible for recording (on the appropriate forms for the San Diego Natural History Museum) the resource(s) encountered during the Paleontological Monitoring Program in accordance with the PMRP. The forms shall be submitted to the San Diego Natural History Museum and included in the Final Paleontological Monitoring Report.

iv. The Final Paleontological Monitoring Report shall include a recommendation for monitoring of any future work in the vicinity of the resource.

E. Night and/or Weekend Work.

1. If night and/or weekend work is included in the contract:

a) When night and/or weekend work is included in the contract package, the extent and timing shall be presented and discussed at the pre-construction meeting. The following procedures shall be followed:

i. No Discoveries - In the event that no discoveries were encountered during night and/or weekend work, the PI shall record the information on the CSVR and submit to MMC via the RE/CM and/or BI via email or in person by 8AM on the next business day.

ii. Discoveries - All discoveries shall be processed and documented using the existing procedures detailed in **Section D - During Construction**.

iii. Potentially Significant Discoveries - If the PI determines that a potentially significant discovery has been made, the procedures detailed under **Section D - During Construction** shall be followed.

b) The PI shall immediately contact the RE/CM and/or BI and MMC, or by 8AM on the next business day, to report and discuss the findings as indicated in **Section D - During Construction**, unless other specific arrangements have been made.

2. If night and/or weekend work becomes necessary during the course of

construction:

a) The Contractor shall notify the RE/CM and/or BI a minimum of 24 hours before the work is to begin.

b) The RE/CM and/or BI, as appropriate, shall notify MMC immediately.

3. All other procedures described above shall apply, as appropriate.

F. Post Construction.

1. Preparation and Submittal of Draft Paleontological Monitoring Report.

a) The PI shall submit two copies of the Draft Paleontological Monitoring Report (even if negative), prepared to the satisfaction of MMC, which describes the methods, results, analysis, and conclusions of all phases of the Paleontological Monitoring Program (with appropriate graphics) to MMC via the RE/CM and/or BI for review and approval within 90 calendar days following the completion of monitoring.

i. For significant or potentially significant paleontological resources encountered during monitoring, as identified by the PI, the Paleontological Recovery Program or Pipeline Trenching Discovery Process shall be included in the Draft Monitoring Report.

ii. The PI shall be responsible for recording (on the appropriate forms) any significant or potentially significant fossil resources encountered during the Paleontological Monitoring Program

in accordance with the PMRP, and submittal of such forms to the San Diego Natural History Museum with the Final Monitoring Report.

b) MMC shall return the Draft Monitoring Report to the PI via the RE/CM and/or BI for revision or, for preparation of the Final Report.

c) The PI shall submit revised Draft Monitoring Report to MMC via the RE/CM and/or BI for approval.

d) MMC shall provide written verification to the PI and RE/CM and/or BI of the approved report.

2. Handling of Fossil Remains.

a) The PI shall ensure that all fossils collected are cleaned to the point of curation (e.g., removal of extraneous sediment, repair of broken specimens, and consolidation of fragile/brittle specimens) and catalogued as part of the Paleontological Monitoring Program.

b) The PI shall ensure that all fossils are analyzed to identify stratigraphic provenance, geochronology, and taphonomic context of the source geologic deposit; that faunal material is taxonomically identified; and that curation has been completed, as appropriate.

3. Curation of Fossil Remains: Deed of Gift and Acceptance Verification.

a) The PI shall be responsible for ensuring that all fossil remains associated with the monitoring for this project are permanently curated with an accredited institution that maintains paleontological collections

(such as the San Diego Natural History Museum).

b) The PI shall submit the Deed of Gift and catalogue record(s) to the RE/CM and/or BI, as appropriate for donor signature with a copy submitted to MMC.

c) The RE/CM and/or BI, as appropriate shall obtain signature on the Deed of Gift and shall return to PI with copy submitted to MMC.

d) The PI shall include the Acceptance Verification from the curation institution in the Final Monitoring Report submitted to the RE/CM and/or BI and MMC.

4. Final Paleontological Monitoring Report(s).

a) The PI shall submit two copies of the Final Paleontological Monitoring Report to MMC (even if negative), within 90 calendar days after notification from MMC of the approved report.

b) The RE/CM and/or BI shall, in no case, issue the Notice of Completion until receiving a copy of the approved Final Monitoring Report from MMC, which includes the Acceptance Verification from the curation institution.

APPENDIX B

FIRE HYDRANT METER PROGRAM

CITY OF SAN DIEGO CALIFORNIA DEPARTMENT INSTRUCTIONS	NUMBER **DI** 55.27	DEPARTMENT Water Department
SUBJECT **FIRE HYDRANT METER PROGRAM (FORMERLY: CONSTRUCTION METER PROGRAM)**	**PAGE** 1**OF** 10	**EFFECTIVE DATE** October 15, 2002
	SUPERSEDES **DI** 55.27	**DATED** April 21, 2000

1. **PURPOSE**

1.1 To establish a Departmental policy and procedure for issuance, proper usage and charges for fire hydrant meters.

2. **AUTHORITY**

2.1 All authorities and references shall be current versions and revisions.

2.2 San Diego Municipal Code (NC) Chapter VI, Article 7, Sections 67.14 and 67.15

2.3 Code of Federal Regulations, Safe Drinking Water Act of 1986

2.4 California Code of Regulations, Titles 17 and 22

2.5 California State Penal Code, Section 498B.0

2.6 State of California Water Code, Section 110, 500-6, and 520-23

2.7 Water Department Director

Reference

2.8 State of California Guidance Manual for Cross Connection Programs

2.9 American Water Works Association Manual M-14, Recommended Practice for Backflow Prevention

2.10 American Water Works Association Standards for Water Meters

2.11 U.S.C. Foundation for Cross Connection Control and Hydraulic Research Manual

3. **DEFINITIONS**

3.1 **Fire Hydrant Meter:** A portable water meter which is connected to a fire hydrant for the purpose of temporary use. (These meters are sometimes referred to as Construction Meters.)

3.2 **Temporary Water Use:** Water provided to the customer for no longer than twelve (12) months.

3.3 **Backflow Preventor:** A Reduced Pressure Principal Assembly connected to the outlet side of a Fire Hydrant Meter.

4. POLICY

4.1 The Water Department shall collect a deposit from every customer requiring a fire hydrant meter and appurtenances prior to providing the meter and appurtenances (see Section 7.1 regarding the Fees and Deposit Schedule). The deposit is refundable upon the termination of use and return of equipment and appurtenances in good working condition.

4.2 Fire hydrant meters will have a 2 ½" swivel connection between the meter and fire hydrant. The meter shall not be connected to the 4" port on the hydrant. All Fire Hydrant Meters issued shall have a Reduced Pressure Principle Assembly (RP) as part of the installation. Spanner wrenches are the only tool allowed to turn on water at the fire hydrant.

4.3 The use of private hydrant meters on City hydrants is prohibited, with exceptions as noted below. All private fire hydrant meters are to be phased out of the City of San Diego. All customers who wish to continue to use their own fire hydrant meters must adhere to the following conditions:

a. Meters shall meet all City specifications and American Water Works Association (AWWA) standards.

b. Customers currently using private fire hydrant meters in the City of San Diego water system will be allowed to continue using the meter under the following conditions:

1. The customer must submit a current certificate of accuracy and calibration results for private meters and private backflows annually to the City of San Diego, Water Department, Meter Shop.

2. The meter must be properly identifiable with a clearly labeled serial number on the body of the fire hydrant meter. The serial number shall be plainly stamped on the register lid and the main casing. Serial numbers shall be visible from the top of the meter casing and the numbers shall be stamped on the top of the inlet casing flange.

3. All meters shall be locked to the fire hydrant by the Water Department, Meter Section (see Section 4.7).

4. All meters shall be read by the Water Department, Meter Section (see Section 4.7).

5. All meters shall be relocated by the Water Department, Meter Section (see Section 4.7).

6. These meters shall be tested on the anniversary of the original test date and proof of testing will be submitted to the Water Department, Meter Shop, on a yearly basis. If not tested, the meter will not be allowed for use in the City of San Diego.

7. All private fire hydrant meters shall have backflow devices attached when installed.

8. The customer must maintain and repair their own private meters and private backflows.

9. The customer must provide current test and calibration results to the Water Department, Meter Shop after any repairs.

10. When private meters are damaged beyond repair, these private meters will be replaced by City owned fire hydrant meters.

11. When a private meter malfunctions, the customer will be notified and the meter will be removed by the City and returned to the customer for repairs. Testing and calibration results shall be given to the City prior to any re-installation.

12. The register shall be hermetically sealed straight reading and shall be readable from the inlet side. Registration shall be in hundred cubic feet.

13. The outlet shall have a 2 ½ "National Standards Tested (NST) fire hydrant male coupling.

14. Private fire hydrant meters shall not be transferable from one contracting company to another (i.e. if a company goes out of business or is bought out by another company).

4.4 All fire hydrant meters and appurtenances shall be installed, relocated and removed by the City of San Diego, Water Department. All City owned fire hydrant meters and appurtenances shall be maintained by the City of San Diego, Water Department, Meter Services.

4.5 If any fire hydrant meter is used in violation of this Department Instruction, the violation will be reported to the Code Compliance Section for investigation and appropriate action. Any customer using a fire hydrant meter in violation of the requirements set forth above is subject to fines or penalties pursuant to the Municipal Code, Section 67.15 and Section 67.37.

4.6 **Conditions and Processes for Issuance of a Fire Hydrant Meter**

Process for Issuance

a. Fire hydrant meters shall only be used for the following purposes:

1. Temporary irrigation purposes not to exceed one year.

2. Construction and maintenance related activities (see Tab 2).

b. No customer inside or outside the boundaries of the City of San Diego Water Department shall resell any portion of the water delivered through a fire hydrant by the City of San Diego Water Department.

c. The City of San Diego allows for the issuance of a temporary fire hydrant meter for a period not to exceed 12 months (365 days). An extension can only be granted in writing from the Water Department Director for up to 90 additional days. A written request for an extension by the consumer must be submitted at least 30 days prior to the 12 month period ending. No extension shall be granted to any customer with a delinquent account with the Water Department. No further extensions shall be granted.

d. Any customer requesting the issuance of a fire hydrant meter shall file an application with the Meter Section. The customer must complete a "Fire Hydrant Meter Application" (Tab 1) which includes the name of the company, the party responsible for payment, Social Security number and/or California ID, requested location of the meter (a detailed map signifying an exact location), local contact person, local phone number, a contractor's license (or a business license), description of specific water use, duration of use at the site and full name and address of the person responsible for payment.

e. At the time of the application the customer will pay their fees according to the schedule set forth in the Rate Book of Fees and Charges, located in the City Clerk's Office. All fees must be paid by check, money order or cashiers check, made payable to the City Treasurer. Cash will not be accepted.

f. No fire hydrant meters shall be furnished or relocated for any customer with a delinquent account with the Water Department.

g. After the fees have been paid and an account has been created, the

meter shall be installed within 48 hours (by the second business day). For an additional fee, at overtime rates, meters can be installed within 24 hours (within one business day).

4.7 **Relocation of Existing Fire Hydrant Meters**

a. The customer shall call the Fire Hydrant Meter Hotline (herein referred to as "Hotline"), a minimum of 24 hours in advance, to request the relocation of a meter. A fee will be charged to the existing account, which must be current before a work order is generated for the meter's relocation.

b. The customer will supply in writing the address where the meter is to be relocated (map page, cross street, etc). The customer must update the original Fire Hydrant Meter Application with any changes as it applies to the new location.

c. Fire hydrant meters shall be read on a monthly basis. While fire hydrant meters and backflow devices are in service, commodity, base fee and damage charges, if applicable, will be billed to the customer on a monthly basis. If the account becomes delinquent, the meter will be removed.

4.8 **Disconnection of Fire Hydrant Meter**

a. After ten (10) months a "Notice of Discontinuation of Service" (Tab 3) will be issued to the site and the address of record to notify the customer of the date of discontinuance of service. An extension can only be granted in writing from the Water Department Director for up to 90 additional days (as stated in Section 4.6C) and a copy of the extension shall be forwarded to the Meter Shop Supervisor. If an extension has not been approved, the meter will be removed after twelve (12) months of use.

b. Upon completion of the project the customer will notify the Meter Services office via the Hotline to request the removal of the fire hydrant meter and appurtenances. A work order will be generated

for removal of the meter.

c. Meter Section staff will remove the meter and backflow prevention assembly and return it to the Meter Shop. Once returned to the Meter Shop the meter and backflow will be tested for accuracy and functionality.

d. Meter Section Staff will contact and notify Customer Services of the final read and any charges resulting from damages to the meter and backflow or its appurtenance. These charges will be added on the customer's final bill and will be sent to the address of record. Any customer who has an outstanding balance will not receive additional meters.

e. Outstanding balances due may be deducted from deposits and any balances refunded to the customer. Any outstanding balances will be turned over to the City Treasurer for collection. Outstanding balances may also be transferred to any other existing accounts.

5. EXCEPTIONS

5.1 Any request for exceptions to this policy shall be presented, in writing, to the Customer Support Deputy Director, or his/her designee for consideration.

6. MOBILE METER

6.1 Mobile meters will be allowed on a case by case basis. All mobile meters will be protected by an approved backflow assembly and the minimum requirement will be a Reduced Pressure Principal Assembly. The two types of Mobile Meters are vehicle mounted and floating meters. Each style of meters has separate guidelines that shall be followed for the customer to retain service and are described below:

a) **Vehicle Mounted Meters**: Customer applies for and receives a City owned Fire Hydrant Meter from the Meter Shop. The customer mounts the meter on the vehicle and brings it to the Meter Shop for

inspection. After installation is approved by the Meter Shop the vehicle and meter shall be brought to the Meter Shop on a monthly basis for meter reading and on a quarterly basis for testing of the backflow assembly. Meters mounted at the owner's expense shall have the one year contract expiration waived and shall have meter or backflow changed if either fails.

b) **Floating Meters**: Floating Meters are meters that are not mounted to a vehicle. **(Note: All floating meters shall have an approved backflow assembly attached.)** The customer shall submit an application and a letter explaining the need for a floating meter to the Meter Shop. The Fire Hydrant Meter Administrator, after a thorough review of the needs of the customer, (i.e. number of jobsites per day, City contract work, lack of mounting area on work vehicle, etc.), may issue a floating meter. At the time of issue, it will be necessary for the customer to complete and sign the "Floating Fire Hydrant Meter Agreement" which states the following:

    1) The meter will be brought to the Meter Shop at 2797 Caminito Chollas, San Diego on the third week of each month for the monthly read by Meter Shop personnel.

    2) Every other month the meter will be read and the backflow will be tested. This date will be determined by the start date of the agreement.

If any of the conditions stated above are not met the Meter Shop has the right to cancel the contract for floating meter use and close the account associated with the meter. The Meter Shop will also exercise the right to refuse the issuance of another floating meter to the company in question.

Any Fire Hydrant Meter using reclaimed water shall not be allowed use again with any potable water supply. The customer shall incur the cost of replacing the meter and backflow device in this instance.

7. FEE AND DEPOSIT SCHEDULES

7.1 **Fees and Deposit Schedules:** The fees and deposits, as listed in the Rate Book of Fees and Charges, on file with the Office of the City Clerk, are based on actual reimbursement of costs of services performed, equipment and materials. Theses deposits and fees will be amended, as needed, based on actual costs. Deposits, will be refunded at the end of the use of the fire hydrant meter, upon return of equipment in good working condition and all outstanding balances on account are paid. Deposits can also be used to cover outstanding balances.

All fees for equipment, installation, testing, relocation and other costs related to this program are subject to change without prior notification. The Mayor and Council will be notified of any future changes.

8. UNAUTHORIZED USE OF WATER FROM A HYDRANT

8.1 Use of water from any fire hydrant without a properly issued and installed fire hydrant meter is theft of City property. Customers who use water for unauthorized purposes or without a City of San Diego issued meter will be prosecuted.

8.2 If any unauthorized connection, disconnection or relocation of a fire hydrant meter, or other connection device is made by anyone other than authorized Water Department personnel, the person making the connection will be prosecuted for a violation of San Diego Municipal Code, Section 67.15. In the case of a second offense, the customer's fire hydrant meter shall be confiscated and/or the deposit will be forfeited.

8.3 Unauthorized water use shall be billed to the responsible party. Water use charges shall be based on meter readings, or estimates when meter readings are not available.

8.4 In case of unauthorized water use, the customer shall be billed for all applicable charges as if proper authorization for the water use had been obtained, including but not limited to bi-monthly service charges, installation charges and removal charges.

8.5 If damage occurs to Water Department property (i.e. fire hydrant meter, backflow, various appurtenances), the cost of repairs or replacements will be charged to the customer of record (applicant).

Water Department Director

Tabs: 1. Fire Hydrant Meter Application
2. Construction & Maintenance Related Activities With No Return To Sewer
3. Notice of Discontinuation of Service

APPENDIX

Administering Division: Customer Support Division

Subject Index:
Construction Meters
Fire Hydrant
Fire Hydrant Meter Program
Meters, Floating or Vehicle Mounted
Mobile Meter
Program, Fire Hydrant Meter

Distribution: DI Manual Holders

Application for Fire Hydrant Meter (EXHIBIT A)

City of San Diego PUBLIC UTILITIES Water & Wastewater

(For Office Use Only)

NS REQ	FAC#
DATE	BY

METER SHOP (619) 527-7449

Application Date	Requested Install Date:

Meter Information

Fire Hydrant Location: (Attach Detailed Map//Thomas Bros. Map Location or Construction drawing.) Zip:	T.B.	G.B. (CITY USE)
Specific Use of Water:		
Any Return to Sewer or Storm Drain, If so , explain:		
Estimated Duration of Meter Use:	☐	Check Box if Reclaimed Water

Company Information

Company Name:			
Mailing Address:			
City:	State:	Zip:	Phone: ( )
*Business license#	*Contractor license#		
A Copy of the Contractor's license OR Business License is required at the time of meter issuance.			
Name and Title of Billing Agent: (PERSON IN ACCOUNTS PAYABLE)			Phone: ( )
Site Contact Name and Title:			Phone: ( )
Responsible Party Name:			Title:
Cal ID#			Phone: ( )
Signature:	Date:		

Guarantees Payment of all Charges Resulting from the use of this Meter. Insures that employees of this Organization understand the proper use of Fire Hydrant Meter

☐ Fire Hydrant Meter Removal Request	Requested Removal Date:	
Provide Current Meter Location if Different from Above:		
Signature:	Title:	Date:
Phone: ( )	Pager: ( )	

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

WATER USES WITHOUT ANTICIPATED CHARGES FOR RETURN TO SEWER

Auto Detailing
Backfilling
Combination Cleaners (Vactors)
Compaction
Concrete Cutters
Construction Trailers
Cross Connection Testing
Dust Control
Flushing Water Mains
Hydro Blasting
Hydro Seeing
Irrigation (for establishing irrigation only; not continuing irrigation)
Mixing Concrete
Mobile Car Washing
Special Events
Street Sweeping
Water Tanks
Water Trucks
Window Washing

Note:

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

Date

Name of Responsible Party
Company Name and Address
Account Number:_____

Subject: Discontinuation of Fire Hydrant Meter Service

Dear Water Department Customer:

The authorization for use of Fire Hydrant Meter #_____, located at *(Meter Location Address)* ends in 60 days and will be removed on or after *(Date Authorization Expires)*. Extension requests for an additional 90 days must be submitted in writing for consideration 30 days prior to the discontinuation date. If you require an extension, please contact the Water Department, or mail your request for an extension to:

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

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

Sincerely,

Water Department

APPENDIX C

MATERIALS TYPICALLY ACCEPTED BY CERTIFICATE OF COMPLIANCE

MATERIALS TYPICALLY ACCEPTED BY CERTIFICATE OF COMPLIANCE

1. Soil amendment
2. Fiber mulch
3. PVC or PE pipe up to 16 inch diameter
4. Stabilizing emulsion
5. Lime
6. Preformed elastomeric joint seal
7. Plain and fabric reinforced elastomeric bearing pads
8. Steel reinforced elastomeric bearing pads
9. Waterstops (Special Condition)
10. Epoxy coated bar reinforcement
11. Plain and reinforcing steel
12. Structural steel
13. Structural timber and lumber
14. Treated timber and lumber
15. Lumber and timber
16. Aluminum pipe and aluminum pipe arch
17. Corrugated steel pipe and corrugated steel pipe arch
18. Structural metal plate pipe arches and pipe arches
19. Perforated steel pipe
20. Aluminum underdrain pipe
21. Aluminum or steel entrance tapers, pipe downdrains, reducers, coupling bands and slip joints
22. Metal target plates
23. Paint (traffic striping)
24. Conductors
25. Painting of electrical equipment
26. Electrical components
27. Engineering fabric
28. Portland Cement
29. PCC admixtures
30. Minor concrete, asphalt
31. Asphalt (oil)
32. Liquid asphalt emulsion
33. Epoxy

APPENDIX D

SAMPLE CITY INVOICE WITH CASH FLOW FORECAST

City of San Diego, CM&FS Div., 9753 Chesapeake Drive, SD CA 92123

Project Name:

Work Order No or Job Order No.

City Purchase Order No.

Resident Engineer (RE):

RE Phone#: Fax#:

Contractor's Name:

Contractor's Address:

Contractor's Phone #:

Contractor's fax #:

Contact Name:

Invoice No.

Invoice Date:

Billing Period: (To)

Item #	Item Description	Contract Authorization				Previous Totals To Date		This Estimate		Totals to Date	
		Unit	Price	Qty	Extension	%/QTY	Amount	% / QTY	Amount	% / QTY	Amount
1					$ -		$ -		$ -	0.00	$ -
2					$ -		$ -		$ -	0.00%	$ -
3					$ -		$ -		$ -	0.00%	$ -
4					$ -		$ -		$ -	0.00%	$ -
5					$ -		$ -		$ -	0.00%	$ -
6					$ -		$ -		$ -	0.00%	$ -
7					$ -		$ -		$ -	0.00%	$ -
8					$ -		$ -		$ -	0.00%	$ -
5					$ -		$ -		$ -	0.00%	$ -
6					$ -		$ -		$ -	0.00%	$ -
7					$ -		$ -		$ -	0.00%	$ -
8					$ -		$ -		$ -	0.00%	$ -
9					$ -		$ -		$ -	0.00%	$ -
10					$ -		$ -		$ -	0.00%	$ -
11					$ -		$ -		$ -	0.00%	$ -
12					$ -		$ -		$ -	0.00%	$ -
13					$ -		$ -		$ -	0.00%	$ -
14					$ -		$ -		$ -	0.00%	$ -
15					$ -		$ -		$ -	0.00%	$ -
16					$ -		$ -		$ -	0.00%	$ -
17	**Field Orders**				$ -		$ -		$ -	0.00%	$ -
					$ -		$ -		$ -	0.00%	$ -
	CHANGE ORDER No.				$ -		$ -		$ -	0.00%	$ -
					$ -		$ -		$ -	0.00%	$ -
	Total Authorized Amount (including approved Change Order)				**$ -**		**$ -**		$ -	**Total Billed**	$ -

SUMMARY

A. Original Contract Amount	$ -
B. Approved Change Order #00 Thru #00	$ -
C. Total Authorized Amount (A+B)	$ -
D. Total Billed to Date	$ -
E. Less Total Retention (5% of D)	$ -
F. Less Total Previous Payments	$ -
G. Payment Due Less Retention	**$0.00**
H. Remaining Authorized Amount	$0.00

I certify that the materials have been received by me in the quality and quantity specified

_____

Resident Engineer

_____

Construction Engineer

Retention and/or Escrow Payment Schedule

Total Retention Required as of this billing (Item E)	$0.00
Previous Retention Withheld in PO or in Escrow	$0.00
Add'l Amt to Withhold in PO/Transfer in Escrow:	***$0.00***
Amt to Release to Contractor from PO/Escrow:	

Contractor Signature and Date: _____

NOTE: CONTRACTOR TO CALCULATE TO THE 2ND DECIMAL PLACE.

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												

APPENDIX E

LOCATION MAP

Engineering & Capital Projects

BEYER PARK DEVELOPMENT

SENIOR ENGINEER
Jennifer Scott
619-533-5414

PROJECT MANAGER
Darren Genova
619-533-4601

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

LOCATION MAP

Legend

Project Location

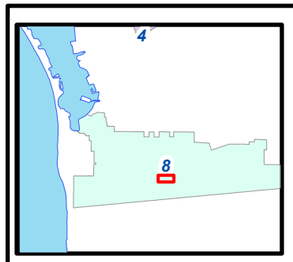
Community Name: San Ysidro & Otay Mesa
Date: 5-28-2019

Council District: 08

SAP ID# S00752

APPENDIX F

ADJACENT PROJECTS MAP



Engineering & Capital Projects

Beyer Park Development

SENIOR ENGINEER	PROJECT MANAGER	FOR QUESTIONS ABOUT THIS PROJECT
DARREN GENOVA	DARREN GENOVA	Call: (619) 533-4207
619-533-4601	619-533-4601	Email: engineering@sandiego.gov

CONSTRAINTS MAP

Legend

- AC Water & Sewer Group 1040 (S) - B18068
- AC Water & Sewer Group 1040 (W) - B18068
- Beyer Park Development - S00752

COMMUNITY NAME: SAN YSIDRO, OTAY MESA

COUNCIL DISTRICT: 8

WBS NO: S-00752

Date: 2/8/2023

APPENDIX G

LONG-TERM MAINTENANCE AND MONITORING OPTION AGREEMENT

LONG-TERM MAINTENANCE AND MONITORING OPTION AGREEMENT

This Option Agreement (LTMMA) for the **60-Month Long-Term Maintenance and Monitoring Work (LTMMA Work)** is made and entered into by and between the City of San Diego (City), a municipal corporation, and **Dick Miller, Inc.** (Contractor), who may be individually or collectively referred to herein as a "Party" or the "Parties."

RECITALS

A. On _____, 2023, the Parties entered into a general contract (Construction Contract) for the construction of **Beyer Park Development** (Project), WBS number **S-00752,** Bid No**. K-24-2170-DBB-3-A-C.**

B. In accordance with the Construction Contract, the Contractor submitted a bid for the Option for Long-Term Maintenance and Monitoring Work, and signed this LTMMA with the City for the purpose of implementing and fulfilling long-term maintenance requirements in accordance with the City of San Diego Municipal Code and the Contract Documents for the specified elopement(s) of **Beyer Park Development** (Maintenance Requirements).

C. The Contractor is ready and willing to fulfill its maintenance requirements in accordance with the terms of this LTMMA.

NOW, THEREFORE, in consideration of the above recitals and the mutual covenants and conditions set forth herein, and for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereby set forth their mutual covenants and understandings as follows:

INTRODUCTORY PROVISIONS

A. **Recitals Incorporated.** The above referenced Recitals are true and correct and are incorporated into this LTMMA by this reference.

B. **Exhibits Incorporated.** All Exhibits and Attachments referenced in this LTMMA are incorporated into this LTMMA by this reference.

C. **Contract Term.** If awarded by the City, this LTMM Option Agreement shall be effective upon completion of the Plant Establishment Period (PEP) as described in **Section 6-1.1** of **ATTACHMENT E – Supplementary Special Provisions** and **Section 802** of the 2021 GREENBOOK AND WHITEBOOK and it shall be effective until the completion of the Work as described below.

D. **Terms and Conditions.** This LTMMA is subject to the terms and conditions of the Construction Contract included in the 2021 GREENBOOK, WHITEBOOK, and Special Provisions (**Contract Document Attachment C, Part 1, and Part 8)** except as otherwise stated in this LTMMA.

E. **Partial Release of Payment Bond and Performance Bond.**

1. **Performance of Contract in Two Phases.** There are two separate phases of Work to be performed by the Contractor under this Contract. The first phase covers the Work involved in the original agreement as described in this agreement ("Phase 1

Work"). The second phase covers the work involved in the long-term maintenance and monitoring work for the Enhancement/ Restoration Areas to occur concurrent with and after Phase 1 Work has been completed if awarded by the City ("Phase 2 Work").

2. **Bond Handling for Contract Phases.** The Payment Bond and the Performance Bond covering Phase 1 Work on this Contract shall remain in full force and effort until completion of that phase is certified. The original Payment Bond and the original Performance Bond covering Phase 1 Work on this Contract shall continue in full force and effort for Phase 2 Work, however the value of each bond may be reduced as follows:

   i. Completion by the Contractor of all Phase 1 Work shall be evidenced solely by the City Engineer affirming in writing that to the best of their knowledge that all Phase 1 Work has been completed by the Contractor in strict conformity with all City-approved plans and revisions, and that the Phase 1 Work completed by the Contractor meets all applicable standards ("Notice of Completion").

   ii. Upon issuance by the City Engineer of the Notice of Completion for Phase 1 Work, the Payment Bond for this Project, and the Performance Bond for this Project, may be released, and a separate bond for the LTMM Work will be secured and remain in full effect for the duration of the LTMMA. The LTMMA payment and performance bond will cover the full cost of Phase 2 Work on this Project, which will be the amount specified in "Section 4: COMPENSATION" in Section 4.1 of this LTMMA.

3. **No Partial Release Upon Default.** No Partial Performance Bond Release and Reduction shall be given to the Contractor if the Performance Bond and/or this Agreement is in default on Phase 1 Work.

SECTION 1 - MAINTENANCE CONTRACT SUMMARY

1.1. **General.** The Contractor shall fulfill the Project's Maintenance Requirements (Work) as identified in the scope of work attached as **Exhibit A** in a manner satisfactory to the City.

The Contractor shall provide all equipment, labor, and materials necessary to perform the **Work** as described in **Exhibit A**, at the direction of the City.

1.2. **Schedule of Work.** The Contractor shall follow the Schedule of Work (Schedule) for the maintenance and monitoring period provided in the Plans and Mitigation and monitoring requirements included in the MMRP and "Mitigation plan".

After receiving notification of award of the LTMMA from the City, the Contractor shall create a comprehensive Schedule of Work (Schedule) for performance of this LTMMA for the City's approval. The Schedule shall include routine work, weed control, plant inspection, and watering schedule.

The City will approve the Schedule prior to the commencement of the Work. The City may require the Contractor to revise the Schedule. The Contractor shall not revise the Schedule unless the revisions have received the prior written approval of the City.

1.3. **Commencement of Work & Maintenance Period.** This LTMMA shall commence when the City approves of the Work of the Plant Establishment Period and sends notice of the approval to the Contractor in accordance with **Part 8, Section 802** of the Construction Contract and shall continue for **60** months. A copy of the approval form is attached as **Exhibit B**.

1.4. **License.** The Contractor shall hold the following licenses in good standing:

1.4.1. **C-27** State Contractor's License.

1.4.1.1. Alternatively, the Contractor shall retain the services of a Subcontractor with a **C-27** State Contractor's License.

1.4.2. Pest Control Advisor's License.

1.4.2.1. Alternatively, the Contractor shall retain the services of a licensed Pest Control Advisor.

1.4.3. Registration with the County Agriculture Commission.

1.4.4. Qualified Applicator's Certificate for Category B. This shall apply to any person supervising the use of pesticides, herbicides, or rodenticides.

1.4.5. City of San Diego Business License.

Prior to performing the Work, the Contractor shall complete and submit to the City the License Data Sheet. **See Exhibit C**.

1.5. **Hours of Performance.** The Contractor shall perform the Work between the hours of 7:00 a.m. and 5:00 p.m., Monday through Friday (Working Hours). The City may, in its sole discretion, grant permission to the Contractor to perform Work during non-Working Hours. Maintenance functions that generate excess noise (operations of power equipment which would cause annoyance to area residents for example) shall not begin before 7:00 a.m.

SECTION 2 - ADMINISTRATION

2.1. **Contract Administrator.** Purchasing & Contracting Department, Public Works Division is the Contract Administrator for the LTMMA. The Contractor shall perform the LTMMA Work under the direction of a designated representative of the Engineering and Capital Projects Department. The City will communicate with the Contractor on all matters related to the administration of this LTMMA and the Contractor's performance of the LTMMA Work rendered hereunder. When this LTMMA refers to communications to or with the City, those communications shall be with the City, unless the City or this LTMMA specifies otherwise. Further, when this LTMMA requires an act or approval by City, that act or approval will be performed by the City.

2.2. **Local Office.** The Contractor shall maintain a local office with a company representative who is authorized to discuss matters pertaining to this LTMMA with the City and shall promptly respond and be available during Normal Working Hours. A local office is one located in San Diego County that can be reached by telephone and facsimile. An answering service in conjunction with a company email address for the designated company representative may fulfill this requirement. A mobile telephone shall not fulfill the requirement for a local office. All calls to the Contractor from the City shall be returned within a 1-hour period.

2.3. **Emergency Calls.** The Contractor shall have the capability to receive and to respond immediately to calls of an emergency nature. The City shall refer emergency calls to the Contractor for immediate disposition. The Contractor shall provide the City with a 24 hour emergency telephone number for this purpose.

2.4. **Staffing.** The Contractor shall furnish supervisory and working personnel capable of promptly accomplishing all LTMMA Work required under this LTMMA on schedule and to the satisfaction of the City.

2.5. **Contractor Inspections.** The Contractor shall perform inspections of the LTMMA Work site and shall prepare and submit to the City a Punchlist and dates of correction. The Punchlist shall include a comprehensive report of LTMMA Work performed at the Work site to ensure performance and cover standards have been met.

SETION 3: WORK SITE MAINTENANCE

3.1. **Use of Chemicals.** The Contractor shall submit to the City for approval sample labels and MSDS for all chemical herbicides, rodenticides, and pesticides proposed for use under this LTMMA. Materials included shall be limited to chemicals approved by the State of California Department of Agriculture.

The use of any chemical shall be based on the recommendations of a licensed pest control advisor. Annual PCA Pesticide Recommendations are required for each pesticide proposed to be used for the LTMMA Work site covered by this LTMMA. The use of

chemicals shall conform to the current San Diego County Department of Agriculture regulations.

No chemical herbicide, rodenticide, or pesticide shall be applied until its use is approved, in writing, by City as appropriate for the purpose and area proposed.

The Contractor shall submit a monthly pesticide use report to the City along with the Contractor's invoices for payment. This report shall include a statement of all applications of herbicides, rodenticides, and pesticides, detailing the chemical used, undiluted quantity, rate of application, applicator's name, and the date and purpose of the application. For months in which no pesticides are applied, state "No Pesticide Used" on the report.

3.2. Irrigation Water. The Contractor shall diligently practice water conservation, including minimizing run-off or other waste. The Contractor shall turn off irrigation systems, if any, during periods of rainfall and at such other times when suspension of irrigation is desirable to conserve water and to remain within the guidelines of good horticultural landscape maintenance practices in accordance with the instructions from the Project Biologist. The Contractor's failure to properly manage and conserve water may result in deductions from the monthly payment to be made to the Contractor or other penalties under this LTMMA.

If the Contractor causes excessive use or waste of irrigation water, the estimated cost of that water shall be deducted from the monthly payment. Further, any monetary fines or other damages assessed to City for the Contractor's failure to follow water conservation regulations imposed by the City, the Public Utilities Department of the City of San Diego, and, where appropriate, the State of California, the County Water Authority, or other legal entities shall be solely the responsibility of the Contractor and may be deducted from the monthly payment to be made to the Contractor under this LTMMA.

3.3. Payment for Water. The Contractor shall pay for the water used in the maintenance of the LTMMA Work site and this cost is included in the price of this LTMMA.

3.4. Satisfactory Progression. If the Revegetation/Restoration Area is not progressing towards the required performance criteria, as defined in the Scope of Work, in accordance with the Work Schedule, and as determined by City, the City may accordingly adjust monthly payments to the Contractor.

SECTION 4: COMPENSATION

4.1. Maximum Compensation. The compensation for this LTMMA shall not exceed $_____ **CONTRACTOR'S LUMP SUM BID AMOUNT FOR THIS LONG-TERM MAINTENANCE OPTION AGREEMENT – TO BE ESTABLISHED DURING THE AWARD PROCESS. SEE EXHIBIT A.** (LTMMA Contract Price).

4.2. Method of Payment and Reports. The payments will be made monthly in direct proportion that each month bears to the total value of the LTMMA Contract Price. As conditions precedent to payment, the Contractor shall submit a detailed invoice and

report of maintenance LTMMA Work performed every month. The Contractor's failure to submit the required reports or certified payrolls as described in the Construction Contract shall constitute a basis for withholding payment by the City.

4.3. Final Payment. The Contractor shall not receive final payment until the following conditions have been completed to the City's satisfaction:

4.3.1. The item(s) of the LTMMA Work subject to this maintenance coverage as specified in **Exhibit A** (Maintenance Items) have been determined to be in compliance with the Construction Contract and this LTMMA.

4.3.2. The Contractor has provided to the City a signed and notarized Affidavit of Disposal, a copy of which is attached to the Construction Contract, stating that all brush, trash, debris, and surplus materials resulting from the LTMMA Work have been disposed of in a legal manner.

4.3.3. The Contractor has provided a final work summary report to the City.

4.3.4. The Contractor has performed comprehensive and successful testing and checks of the Maintenance Items.

SECTION 5: BONDS AND INSURANCE

5.1. Contract Bonds. Prior to the commencement of Work, the Contractor, at its sole cost and expense, shall provide the following bonds issued by a surety authorized to issue bonds in California satisfactory to the City:

5.1.1. A Payment Bond (Material and Labor Bond) in an amount not less than the LTMMA Contract Price for this Bid item, to satisfy claims of material suppliers and mechanics and laborers employed by it on the Work. The Payment Bond shall be maintained by the Contractor in full force and effect until the LTMMA Work is accepted by City and until all claims for materials and labor are paid, and shall otherwise comply with the California Civil Code.

5.1.2. A Performance Bond in an amount not less than the LTMMA Contract Price for this bid item to guarantee the faithful performance of all Work within the time prescribed in a manner satisfactory to the City and to guarantee all materials and workmanship will be free from original or developed defects. The Performance Bond shall remain in full force and effect until performance of the LTMMA Work is completed as set forth in this LTMMA.

5.2. Insurance. The Contractor shall maintain insurance coverage as specified below under 5.2.1 at all times during the term of this LTMMA.

The Contractor shall not begin the LTMMA Work under this LTMMA until they have complied with the following:

5.2.1. Obtain insurance certificates reflecting evidence of insurance:

1. Commercial General Liability
2. Commercial Automobile Liability
3. Worker's Compensation

5.2.2. Confirm that all policies contain the specific provisions required in **Section 5-4, "INSURANCE"**.

The Contractor shall submit copies of any policy upon request by the City.

The Contractor shall not modify any policy or endorsement thereto which increases the City's exposure to loss for the duration of this LTMMA.

SECTION 6: MISCELLANOUS

6.1. **Illness and Injury Prevention Program.** The Contractor shall comply with all the mandates of Senate Bill 198 and shall specifically have a written Injury Prevention Program on file with the City in accordance with all applicable standards, orders, or requirements of California Labor Code, Section 6401.7. This Program shall be on file prior to the performance of any Work.

6.2. **City Standard Provisions.** This LTMMA is subject to the same standard provisions and Contractor Certification requirements as the Construction Contract.

6.3. **Taxpayer Identification Number.** I.R.S. regulations require the City to have the correct name, address, and Taxpayer Identification Number (TIN) or Social Security Number (SSN) on file for businesses or persons who provide services or products to the City. This information is necessary to complete Form 1099 at the end of each tax year. As such, the Contractor shall provide the City with a Form W-9 upon execution of this LTMMA.

6.4. **Assignment.** The Contractor shall not assign the obligations under this LTMMA, whether by express assignment or by sale of the company, nor any monies due or to become due, without the City's prior written approval. Any assignment in violation of this section shall constitute a Default and is grounds for immediate termination of this LTMMA, at the sole discretion of City. In no event shall any putative assignment create a contractual relationship between the City and any putative assignee.

6.5. **Independent Contractors.** The Contractor and any Subcontractors employed by Contractor shall be independent contractors and not agents of the City. Any provisions of this LTMMA that may appear to give the City any right to direct the Contractor concerning the details of performing the LTMMA Work, or to exercise any control over such performance, shall mean only that the Contractor shall follow the direction of the City concerning the end results of the performance.

6.6. **Covenants and Conditions.** All provisions of this LTMMA expressed as either covenants or conditions on the part of the City or the Contractor shall be deemed to be both covenants and conditions.

6.7. **Jurisdiction and Venue**. The jurisdiction and venue for any suit or proceeding arising out of or concerning this LTMMA, the interpretation or application of any of its terms, or any related disputes shall be the County of San Diego, State of California.

6.8. **Successors in Interest.** This LTMMA and all rights and obligations created by it shall be in force and effect whether or not any Parties to this LTMMA have been succeeded by another entity and all rights and obligations created by this LTMMA shall be vested and binding on any Party's successor in interest.

6.9. **Integration.** This LTMMA and the exhibits, attachments, and references incorporated into this LTMMA fully express all understandings of the Parties concerning the matters covered in this LTMMA. No change, alteration, or modification of the terms or conditions of this LTMMA, and no verbal understanding of the Parties, their officers, agents, or employees shall be valid unless made in the form of a written change agreed to in writing by both Parties or by an amendment to this LTMMA agreed to by both Parties. All prior negotiations and agreements shall be merged into this LTMMA.

6.10. **Counterparts.** This LTMMA may be executed in counterparts, which when taken together shall constitute a single signed original as though all Parties had executed the same page.

6.11. **No Waiver.** Any failure of either the City or the Contractor to insist upon the strict performance by the other of any covenant, term, or condition of this LTMMA, nor any failure to exercise any right or remedy consequent upon a breach of any covenant, term, or condition of this LTMMA, shall constitute a waiver of any such breach or of such covenant, term, or condition. No waiver of any breach shall affect or alter this LTMMA, and each and every covenant, condition, and term hereof shall continue in full force and effect to any existing or subsequent breach.

6.12. **Severability.** The unenforceability, invalidity, or illegality of any provision of this LTMMA shall not render any other provision of this LTMMA unenforceable, invalid, or illegal.

6.13. **Signing Authority.** The representative for each Party signing on behalf of a corporation, partnership, joint venture or governmental entity hereby declares that authority has been obtained to sign on behalf of the corporation, partnership, joint venture, or entity and agrees to hold the other Party or Parties hereto harmless if it is later determined that such authority does not exist.

IN WITNESS WHEREOF, this Contract is executed by the City of San Diego, acting by and through its Public Works Department Director in accordance with Ordinance No. R-**INSERT NUMBER OF RESOLUTION AUTHORIZING ADVERTISING AND AWARD OF THE UNDERLYING CONSTRUCTION CONTRACT**, and by Contractor.

Dated this _____ day of_____ , **2024**.

THE CITY OF SAN DIEGO

By:_____
Claudia C. Abarca
Director
Purchasing & Contracting Department

I HEREBY CERTIFY I can legally bind Dick Miller, Inc, and that I have read this entire contract, this day of 03/04, **2024**.

By:_____

Printed Name: Glen Bullock

Title: President

I HEREBY APPROVE the form of the foregoing Contract this

_____ day _____of **2024**.

Mara W. Elliott, City Attorney

By:_____

Printed Name:_____
Deputy City Attorney

EXHIBIT A

SCOPE OF WORK

I. Location of LTMMA Work. The location of the LTMMA Work to be performed (Enhancement/ Restoration Areas) is shown on Specifications and Drawings numbered **42356-001-D**- through **42356-150-D** (Specifications), which are incorporated into this Contract by this reference as though fully set forth herein.

II. Description of LTMMA Work. The Contractor shall maintain and monitor the Enhancement/ Restoration Area during the Monitoring Program in accordance with this Contract. The Enhancement/ Restoration Area shall meet the success criteria specified in the Specifications, plans, and the report titled "Enhancement and Restoration of Maritime Succulent Scrub as Habitat for Western Burrowing Owl and Beach Goldenaster for the Beyer Park Development Project" prepared by RECON Environmental Inc., dated August 4, 2020 herein referred to as (Mitigation plan) at each of the milestones listed in the Schedule for the maintenance and monitoring period. The LTMMA Work includes complete landscape maintenance consisting of irrigation, pruning when necessary for plant health,; weed control; control of all plant diseases and pests; and trash removal, and all other maintenance listed in this Contract and as required to maintain the Revegetation Area in a useable condition and to maintain the plant material in a healthy and viable state.

The LTMMA Work also includes biological monitoring of the Enhancement/ Restoration Area according to the schedule and methods specified in the Revegetation/Restoration Plan. The monitoring work shall include all reporting tasks specified in the Plan, Specifications, Mitigation Plan.

III. Method of Performing LTMMA Work.

A. Irrigation. Irrigation shall be applied to container and salvaged plants in accordance with instructions from the Project Biologist. Irrigation delivery techniques and schedules will vary depending on the availability of a sprinkler irrigation system and weather patterns. Failure of an existing irrigation system to provide full and proper irrigation shall not relieve Contractor of the responsibility to provide adequate irrigation with full and proper coverage of all areas subject to this LTMMA.

1. In areas where an automatic sprinkler system is installed, Contractor shall periodically inspect the operation of the system for any malfunction. The maximum interval between inspections shall not exceed 7 Calendar Days. The Contractor shall maintain all sprinkler systems in such a way as to guarantee proper coverage and full working capability, and shall make whatever adjustments may be necessary to prevent excessive run-off into streets, rights-of-way, or other areas not meant to be irrigated. The cost of wasted water may be charged to Contractor.

2. All areas not adequately covered by a sprinkler system shall be irrigated by a portable irrigation method in accordance with instructions from the

Project Biologist. The Contractor shall furnish all hoses, nozzles, sprinklers, etc. necessary to accomplish this supplementary irrigation. The Contractor shall exercise due diligence to prevent water waste, erosion, and detrimental seepage into existing underground improvements and to existing structures.

3. Irrigation shall be accomplished as follows:

a) Plants shall be irrigated Monday through Friday, as required, to maintain acceptable growth, viability and health, and to encourage deep rooting, in accordance with instructions from the Project Biologist. Additional irrigation shall be performed in the event of unusually hot/dry weather conditions (as are present during Santa Ana conditions, or other times of low humidity or high winds, or during a prolonged high temperature period during summer months).

b) Planted and seeded areas shall be irrigated as required to maintain acceptable growth, viability and health, and to encourage deep rooting, in accordance with instructions from the Project Biologist. Planted and seeded areas shall be irrigated at a rate which keeps surface runoff to a minimum. The irrigation rate shall be adjusted to the needs of plant types, seasons and weather conditions.

4. **Maintenance of Irrigation System.** The Contractor shall keep controller and valve boxes (if any) clear of soil and debris and shall maintain the irrigation system at no additional cost to City, including replacement, repair, adjustment, raising or lowering, straightening and any other operation required for the continued proper operation of the system from the "cold" side of the water meter throughout the Revegetation/Restoration Area. The Contractor shall also be responsible for maintaining the painted surfaces of irrigation and lighting controller cabinets as well as the corresponding automatic irrigation battery numbers on the lids of the automatic control valve boxes (if any). The Contractor shall be responsible for light bulb replacements in controller cabinets as necessary.

a) Repair or replacement includes: sprinkler system laterals (piping), sprinkler mains (pressure lines), vacuum breakers, sprinkler control valves, sprinkler controllers, sprinkler heads, sprinkler caps, sprinkler head risers, valve covers, boxes and lids (including electrical pull boxes and lids), valve sleeves and lids, quick coupler valves and hose bibs. Any replacement shall conform to the type and kind of existing system. Any deviation shall be approved in writing by City.

b) The Contractor shall repair irrigation systems which are damaged or altered in any way, including by acts of God, vandalism, vehicular damage, or theft.

5. **Operation of Automatic Irrigation Controllers.** Where the operation of automatic irrigation controllers is required as part of this LTRMC, the Contractor shall:

   a) Not duplicate any coded City key furnished by City for access and operation of the controller;

   b) Surrender all keys furnished by City, promptly at the end of the term of this LTRMC, or at any time deemed necessary by City to prevent serious loss to City;

   c) protect the security of City's property by keeping controller cabinet and building doors locked at all times; and

   d) refrain from using premises behind locked doors for storage of materials, supplies, or tools except as approved by City.

B. **Pruning Shrubs and Ground Cover Plants.** The Contractor shall prune all shrubs and ground cover plants growing in the Enhancement/ Restoration Area as required to:

1. Maintain plant growth viability and health, and to encourage deep rooting, in accordance with instructions from the Project Biologist.

2. Prevent encroachment in any manner deemed objectionable by the City.

   The Contractor shall remove dead or damaged limbs with sharp pruning tools, with no stubs remaining. The Contractor shall seal any pruning cut which exceeds 2 inches in diameter with an approved pruning paint when required by the City. The Contractor shall perform pruning to permit plants to grow naturally in accordance with their normal growth characteristics except where box hedging is required by the City. The Contractor shall not shear, hedge, or severely prune plants, unless authorized by the City. The Contractor shall not use growth regulators.

C. **Tree Maintenance.** The Contractor shall maintain all trees and container plants in the revegetation area in accordance with instructions from the Project Biologist. The Contractor shall perform pruning in accordance with instructions from the Project Biologist, when necessary. The Contractor shall not top trees.

1. **Potential Hazards.** The Contractor shall notify the City within 24 hours of any tree that shows signs of root heaving or leaning, or is in any manner a potential safety hazard. The Contractor shall immediately reestablish trees and shrubs that are uprooted due to storms, if possible. If trees or shrubs cannot be reestablished, Contractor shall remove them immediately (including roots) and fill the holes until replacement planting is complete.

2. **Replacement.** The Contractor shall completely remove and replace trees lost due to Contractor's faulty maintenance or negligence, as determined by the City. The Contractor shall replace trees in kind and size as determined by the City. If there is a difference in value between the tree lost and the replacement tree, the City will deduct the difference from

payment to be made under this LTMMA. The City shall determine the value of the tree lost using the latest International Society of Arboriculture (I.S.A.) guidelines for value determination.

3. **Staking.** The Contractor shall securely stake any newly planted trees and other trees needing support with two "lodge pole" type stakes placed on opposite sides of the tree outside the root ball and secured to the tree with at least two flexible rubber tree ties. The Contractor shall regularly inspect tree ties and stakes and reposition them as necessary to ensure against girdling and abrasion.

D. **Fertilization.** The Contractor shall only fertilize the Restoration Area as necessary in accordance with instructions from the Project Biologist. Contractor shall submit to City Material Safety Data Sheets and a schedule of application showing the site, date, and approximate time of fertilizer application (Fertilizer Schedule). The Fertilization Schedule, regardless of its intensity, timing, or the number of sites covered daily or weekly, shall not excuse Contractor from performing any other LTMMA Work regularly required under this LTMMA. All fertilization shall first be approved by the Project Biologist.

1. The Contractor shall notify the City at least 48 hours before beginning any fertilization. Fertilizer shall be delivered to the site only in the original unopened containers bearing the manufacturer's guaranteed analysis. Damaged packages shall not be accepted. The Contractor shall furnish to the City with duplicate signed, legible copies of all certificates and invoices for all fertilizer to be used for this LTMMA. The invoices shall state the grade, amount and quantity received. Both the copy to be retained by the City and the Contractor's copy shall be signed by the City, on site, before any fertilizer may be used.

2. Fertilizers, if necessary, shall be applied at the direction of the Project Biologist and according to manufacturer's product specifications.

3. If deemed necessary by the City to achieve required results, the Contractor shall apply other materials as directed by the City, including:

    a) iron chelate;

    b) soil sulfur;

    c) gypsum; or

    d) surfactant enzymes such as Sarvon or Naiad.

4. The Contractor shall adequately irrigate the fertilized area(s) immediately following the application of fertilizers and/or amendments to force fertilizer material to rest directly on the soil surface. Drip irrigated areas shall be adequately hand watered using quick coupler valves and hoses to dissolve fertilizer.

E. **Weed Removal.** The Contractor shall completely remove weeds from the Enhancement/ Restoration Area as shown on the LTMMA Work Schedule. For the purposes of this Section, "Weed" means any undesirable or misplaced plant. The Contractor shall control Weeds by manual, mechanical, or chemical methods. The City or Project Biologist may restrict the use of chemical weed control in certain areas such as within close proximity to wetlands or other sensitive biological areas.

Weed removal in areas with native habitat shall be in accordance with **Section 802 of the WHITEBOOK**.

F. **Disease and Pest Control.** The Contractor shall regularly inspect the Revegetation Area for the presence of disease and insect or rodent infestation. The Contractor shall notify the City within 4 Calendar Days if disease or insect or rodent infestation is discovered. In its notice to the City, the Contractor shall identify the disease, insect, or rodent and specify the control measures to be taken. Upon approval of the City, the Contractor shall implement the approved control measures, exercising extreme caution in the application of all sprays, dusts, or other materials utilized. The Contractor shall continue the approved control measures until the disease, insect, or rodent is controlled to the satisfaction of the City.

1. All individuals who supervise the mixing and application of herbicides, pesticides, and rodenticides on behalf of the Contractor shall possess valid Qualified Applicators Certificate for Category B issued to them by the State Department of Food and Agriculture.

2. The Contractor shall utilize all safeguards necessary during disease, insect or rodent control operations to ensure safety of the public and the employees of the Contractor, in accordance with current standard practices accepted by the State of California Department of Food and Agriculture. If the Contractor is unable to control the pest or disease, a pest control company will be hired and the cost shall be deducted from Contractor's monthly payment.

G. **Plant Replacement.** Except as provided in **Section H** below, the Contractor shall notify the City within 4 Calendar Days of the loss of plant material due to any cause.

1. The Contractor shall, at no cost to the City, replace any tree, shrub, ground cover, or other plant which is damaged or lost as a result of Contractor's faulty maintenance or negligence. The size and species of replacement plant materials shall be as directed by the City.

2. If so directed by the City, the Contractor shall replace any plant damaged or lost that is not a result of the Contractor's faulty maintenance or negligence. The size and species of replacement plant materials shall be as directed by City. The City will pay for materials and labor outside of warranty.

3. The City may determine that certain plants should be replaced in order to ensure maximum ecological health and overall aesthetic appearance of planting in the Revegetation Area. When the City determines such

replacement should occur, Contractor shall replace the plants as directed by the City. The City will pay for materials and labor outside of warranty.

H. **Damage Reports.** The Contractor shall notify the City within 24 hours of any damage to the LTMMA Work Area caused by accident, vandalism, or theft.

I. **Litter.** The Contractor shall promptly dispose of all trash and debris at an appropriate City disposal site. The Contractor shall pay any and all fees associated with the disposal of debris or trash accumulated under the terms of this LTMMA. The Contractor understands that disposal of refuse at City landfills is subject to a fee and that the Refuse Disposal Division can be contacted at (619) 573-1418 for fee information.

1. **Contractor Generated Litter.** The Contractor shall promptly remove all debris generated by the Contractor's pruning, trimming, weeding, edging and other LTMMA Work required by this LTMMA. Immediately after working in streets, park walks, gutters, driveways, and paved areas, the Contractor shall clean them in accordance with all applicable laws.

2. **Third Party Generated Litter.** Upon discovery, the Contractor shall remove all litter, including bottles, glass, cans, paper, cardboard, fecal matter, leaves, branches, metallic items, and other debris, from the LTMMA Work site.

J. **Monitoring.** The Project Biologist will oversee all maintenance operations and conduct qualitative and quantitative biological monitoring of the Enhancement/ Restoration Area according to the schedule and methods described in the Plans, Specifications, MMRP and Mitigation Plan. The Project Biologist will be responsible for preparing and submitting monitoring reports according to the schedule and instructions in the Plans, Specifications, MMRP and Mitigation Plan. The Project Biologist shall meet all requirements specified in **Section 802 of the WHITEBOOK**.

K. **Final Site Cleanup**. Prior to completion of the LTMMA, all temporary irrigation materials, BMP's, and signs shall be removed from the site and properly disposed of.

EXHIBIT B

INSERT A COPY OF THE ENGINEER'S FIELD NOTIFICATION WHICH ACCEPTS THE PLANT ESTABLISHMENT PERIOD (PEP) AND ESTABLISHES THE COMMENCEMENT DATE OF THE MONITORING PROGRAM, SEE THE 2021 WHITEBOOK, SECTION 802

EXHIBIT C

LICENSE DATA SHEET

State Contractor License Classification and Number:_____

Name of License Holder:_____

Expiration Date:_____

City of San Diego Business License Number:_____

Expiration Date:_____

APPENDIX H

SAMPLE OF PUBLIC NOTICE

The City of SAN DIEGO

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

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.

The City of SAN DIEGO

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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.

APPENDIX I

SAMPLE ARCHAEOLOGY INVOICE

(FOR ARCHAEOLOGY ONLY)
Company Name
Address, telephone, fax

Date: Insert Date

To: Name of Resident Engineer
City of San Diego
Construction Management and
Field Services Division
9573 Chesapeake Drive
San Diego, CA 92123-1304

Project Name: Insert Project Name

SAP Number (WBS/IO/CC): Insert SAP Number

Drawing Number: Insert Drawing Number

Invoice period: Insert Date to Insert Date

Work Completed: Bid item Number – Description of Bid Item – Quantity – Unit Price– Amount

Detailed summary of work completed under this bid item: Insert detailed description of Work related to Archaeology Monitoring Bid item. See Note 1 below.

Summary of charges:

Description of Services	Name	Start Date	End Date	Total Hours	Hourly Rate	Amount
Field Archaeologist	Joe Smith	8/29/2011	9/2/2011	40	$84	$3,360
Laboratory Assistant	Jane Doe	8/29/2011	9/2/2011	2	$30	$60
Subtotal						$3,420

Work Completed: Bid item Number – Description of Bid Item – Quantity – Unit Price– Amount

Detailed summary of work completed under this bid item: Insert detailed description of Work related to Archaeology Curation/Discovery Bid item. See Note 2 below.

Summary of charges:

Description of Services	Where work occurred (onsite vs offsite/lab)	Name	Start Date	End Date	Total Hours	Hourly Rate	Amount
Field Archaeologist		Joe Smith	8/29/2011	9/2/2011	40	$84	$3,360
Laboratory Assistant		Jane Doe	8/29/2011	9/2/2011	2	$30	$60
Subtotal							$3,420

Total this invoice: $_____

Total invoiced to date: $_____

Note 1:

For monitoring related bid items or work please include summary of construction work that was monitored from Station to Station, Native American monitors present, MMC coordination, status and nature of monitoring and if any discoveries were made.

Note 2:

For curation/discovery related bid items or work completed as part of a discovery and curation process, the PI must provide a response to the following questions along with the invoice:

1. Preliminary results of testing including tentative recommendations regarding eligibility for listing in the California Register of Historical Resources (California Register).
    a. Please briefly describe your application (consideration) of all four California Register criteria.
    b. If the resource is eligible under Criterion D, please define the important information that may be present.
    c. Were specialized studies performed? How many personnel were required? How many Native American monitors were present?
    d. What is the age of the resource?
    e. Please define types of artifacts to be collected and curated, including quantity of boxes to be submitted to the San Diego Archaeological Center (SDAC). How many personnel were required? How many Native American monitors were present?
2. Preliminary results of data recovery and a definition of the size of the representative sample.
    a. Were specialized studies performed? Please define types of artifacts to be collected and curated, including quantity of boxes to be submitted to the SDAC. How many personnel were required? How many Native American monitors were present?
3. What resources were discovered during monitoring?
4. What is the landform context and what is the integrity of the resources?
5. What additional studies are necessary?
6. Based on application of the California Register criteria, what is the significance of the resources?
    a. If the resource is eligible for the California Register, can the resource be avoided by construction?
    b. If not, what treatment (mitigation) measures are proposed? Please define data to be recovered (if necessary) and what material will be submitted to the SDAC for curation. Are any specialized studies proposed?

(After the first invoice, not all the above information needs to be re-stated, just revise as applicable).

APPENDIX J

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 402-2, "Protection", of the 2021 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

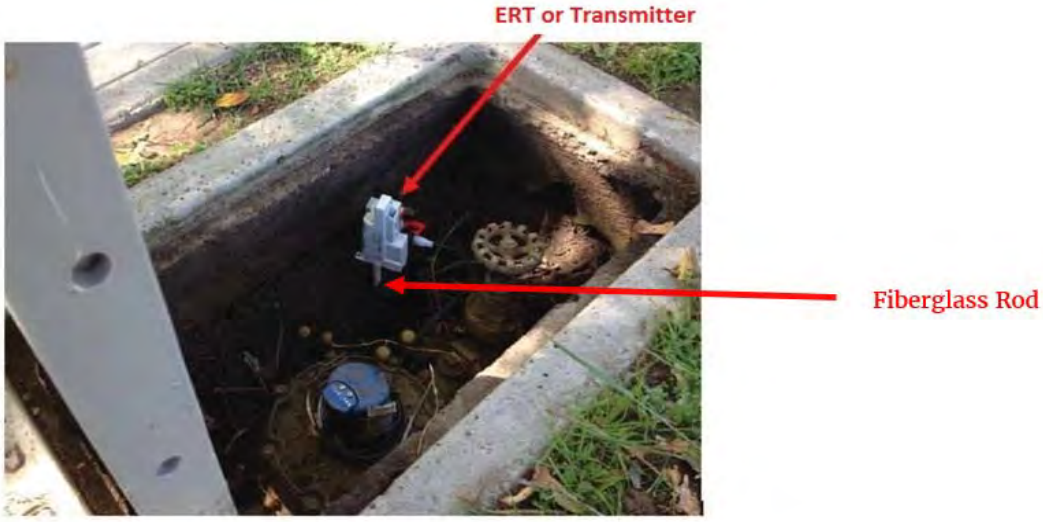


Photo 6 below is an example of disturbance that shall be avoided:

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 Elvira Santiesteban, Compliance & Metering Manager 619-380-3804 and Kevin Wilson, Senior Water Utility Supervisor 619-857-8257 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

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 Elvira Santiesteban, Compliance & Metering Manager 619-380-3804 and Kevin Wilson, Senior Water Utility Supervisor 619-857-8257.

APPENDIX K

SWPPP CONSTRUCTION BMP MAINTENANCE LOG

SWPPP Construction BMP Maintenance Log

Examples of construction BMP maintenance activites 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 Acitivities

- 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

APPENDIX L

PUBLIC ART INSTALLATION DRAFT PERMITTING PLAN SET

Note: Image is for illustrative purposes only.

Air Sanctuary

Beyer Park Development - Art Installation
City of San Diego

Marisol Rendon & Ingram Ober

Project Team

Project Owner:

City of San Diego
P : TBD
E : TBD

Artist:

Marisol Rendon & Ingram Ober
P : 619.325.9724
E : marisolrendon@mac.com

Fabricator:

Westech Metal Fabrication
Mike Bjelland
P : TBD
E : mike@westechmetalfab.com

Project Manager:

City of San Diego
Darren Genova
P : 619.533.4601
E : dgenova@sandiego.gov

Drafter:

Abel Zatarain
P : 760.636.8986
E : abel@shapinglogics.com

Water Consultant:

Koolfog
Michael Mulqueeney
P : 760.321.9203
E : mmulqueeney@koolfog.com

General Contractor:

TBD
P : TBD
E : TBD

Structural Engineer:

DCI Engineers
Jon Deck
P : 619.234.0501
E : jdeck@dci-engineers.com

Lighting Consultant:

Absolutely Electric
Travis Nixon
P : TBD
E : absolutelyelectric@gmail.com

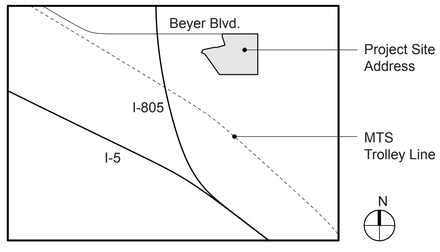
Project Description

The 'Air Sanctuary' project proposes the fabrication and installation of a 24-foot tall sculpture at Beyer Park. The project includes the installation of a tree enclosed at the center of the sculpture.

The sculpture features a 4-foot tall cylindrical concrete base, supporting a 20-foot tall interconnected stainless steel, tube structure. The sculpture is segmented into a circular array of 12 equal 'modules' fastened to each other and the concrete base.

In addition, an 'inward' facing water misting system attached to the sculpture and a series of ground level, upward facing lights are proposed.

Vicinity Map



Sheet Index

August 29, 2023

Air Sanctuary

Beyer Park Development
San Diego, CA

Project No. 1038226

Drawing Revisions:

No.	Date	Notes

Drawn By: AZ

Title Sheet

T1

SPECIFICATIONS

DIVISION 1 – GENERAL REQUIREMENTS AND CONDITIONS

I. GENERAL REQUIREMENTS

A. General Conditions: The project specifications, construction drawings and bid package are part of the construction documents.

B. Substitutions: The General Contractor shall inform the Artist in writing of any variances or substitutions to the project specifications or construction drawings with the project bid. Any substitutions or deviations from these documents must be submitted as a proposed alternate and include all information necessary for evaluation together with reason or justification for substitution to the Artist and Owner before the final contract for construction is signed. The written decision accepting or denying the proposed alternate shall govern. It is the responsibility of the General Contractor to obtain approval from the Owner for all materials or items not herein specified.

C. Dimensions:

1. All dimensions and conditions shall be checked and verified by the General Contractor prior to the commencement of work. Any errors or discrepancies shall be brought to the attention of the Artist before construction begins.

2. Reproductions of the construction documents may be subject to distortion. Do not scale construction documents. Contact the Artist or Engineer for any dimension(s) that may appear to be missing.

D. These requirements shall apply continuously and not be limited to normal working hours.

1. The General Contractor shall furnish all labor, materials, utensils, utilities, temporary facilities, etc. for the full performance of work specified herein. The General Contractor shall insure the work is to be properly pursued, completed and ready to occupy in a timely manner.

2. The General Contractor shall maintain facilities for the inspection of all work.

3. The General Contractor shall properly protect all structures, facilities, grounds, plants, trees, paving etc. from damage by natural causes or by acts of carelessness or vandalism.

4. The General Contractor agrees to assume sole and complete responsibility for job site conditions during the course of construction including the safety of all persons and property.

E. The General Contractor shall defend, indemnify and hold the Owner and Consultants harmless from any and all liability, real or alleged, in connection with the performance of the work on this project except for liability arising from the sole negligence of the Owner or Consultants.

F. The General Contractor shall remove all rubbish, leaving the sculpture and site in clean, perfect working order and condition upon completion of the work.

G. The General Contractor shall guarantee all work against defective materials or faulty workmanship for a period of one year after the date of final payment.

H. The Contractor shall comply with all OSHA requirements.

II. SPECIAL REQUIREMENTS

A. Permits, Fees, Taxes, Licenses and Deposits: Shall be paid for by each Subcontractor and the General Contractor as they relate to their work. The Owner shall pay all building permit fees and associated fees. If arrangements are made in advance with the Owner, the General Contractor may pay these fees at the time of issuance of the permit and be reimbursed by the Owner.

B. Code Compliance: Project shall comply with the **TBD**. Compliance with all current adopted Codes, Ordinances, Rules and Regulations governing the work shall be made and/or enforced by the General Contractor and Subcontractors at all times.

C. Special Inspection: Special inspections, as required, shall be arranged for and scheduled by the General Contractor and paid for by the Owner.

D. Deferred Submittals: Submittal documents for deferred submittal items shall be submitted to the artist or engineer of record, who shall review them and forward them to the building official with a notation indicating that the deferred submittal documents have been reviewed and that they have been found to be in general conformance with the design of the building. The deferred submittal items shall not be installed until their design and submittal documents have been approved by the building official. Deferred submittals for this project, if any, are located within the construction documents on sheet T1.

E. Reproduction: These construction documents may not be altered or used at any other location without written authorization of all professionals involved. The project specifications and construction drawings are property of the Artist and are protected by copyright. Reproduction in any form without express written permission is prohibited.

III. TEMPORARY FACILITIES

A. The General Contractor shall provide and maintain all temporary facilities for the project for the duration of the Contract including, but not limited to the following: (Unless otherwise agreed to by the Owner.)

1. Electricity and water.

2. Work site toilet facilities.

3. Fences, barricades and protective devices necessary for the safety of workmen, conforming to all governing laws and regulations.

4. Trash bin.

DIVISION 3 – SECTION 1 – STRUCTURAL CONCRETE

See Sheet S-1 for additional requirements.

I. GENERAL REQUIREMENTS

A. Scope: This section includes all labor, material and equipment necessary to complete all work specified herein and as indicated within the construction documents. The work of this section includes, but is not limited to; structural concrete.

II. MATERIALS

A. Rebar Chairs: Plastic.

III. PERFORMANCE OF WORK

A. General Requirements: Contractor to provide all labor, materials, and equipment to form, place and finish concrete as required for a complete finished job.

B. Artist to provide concrete formwork for faceted application.

C. Horizontal slab faces shall be level with no variations unless sloping surface is specifically noted on plans.

DIVISION 5 – SECTION 1 – STRUCTURAL METALS

See Sheet S-1 for additional requirements.

IV. GENERAL REQUIREMENTS

A. Scope: This section includes all labor, material and equipment necessary to complete all work specified herein and as indicated within the construction documents. The work of this section includes, but is not limited to; structural metal fabrication and assembly.

V. MATERIALS

A. Hollow Tube Steel: 1-1/2" Diameter Stainless Steel, Thickness: 0.12" (Type 304) or as specified by Structural Documents.

B. Flat Bar: 5/16" Stainless Steel, (Type 304) or as specified by Structural Documents.

C. Bolts: 5/8" Stainless Steel, (Type 304) or as specified by Structural Documents.

D. Nuts: 5/8" Stainless Steel, Type: Acorn, (Type 304) or as specified by Structural Documents.

VI. PERFORMANCE OF WORK

A. Steel parts shall be accurately fabricated as shown on plans. Verify measurements prior to fabrication. Grind all welds smooth.

B. The nuts and bolts shall be installed in accordance with best practices, ensuring proper torque and thread engagement.

C. Surface Finish: Polished, deburred, and free from sharp edges.

DIVISION 7 – SECTION 7 – JOINT PROTECTION

VII. GENERAL REQUIREMENTS

A. Scope: This section includes all labor, material and equipment necessary to complete all work specified herein and as indicated within the construction documents. The work of this section includes, but is not limited to; joint sealants and fillers.

VIII. MATERIALS

A. Concrete to Steel Sealant: *Butyl-Rubber Caulk*, Color: Grey

B. General Sealant: TBD, Color: Grey

IX. PERFORMANCE OF WORK

A. Prior to sealant installation, inspect affected surfaces for cleanliness, dryness, and any defects that may affect the adhesion of the sealant.

B. Remove any protective coatings that may interfere with the installation of the sealant.

C. Apply the sealant evenly and consistently into the joint, filling it completely without air gaps.

D. Ensure that the sealant covers the joint's entire depth and width, providing a continuous and uniform seal.

E. Allow the sealant sufficient time to cure, per the manufacturer's recommendations before subjecting it to movement or exposure to water.

DIVISION 13 – SECTION 52 – STORAGE EQUIPMENT

I. GENERAL REQUIREMENTS

1. Scope: This section includes all labor, material and equipment necessary to complete all work specified herein and as indicated within the construction documents. Also included are materials not specifically mentioned herein or shown, but which are necessary to make a complete, properly functioning utility enclosure.

II. MATERIALS

A. All work and materials shall be in accordance with all governing and applicable codes, rules and regulations.

B. Aluminum Pump Enclosure: **STRONGBOX** *PE-60AL*

III. PERFORMANCE OF WORK

A. Installation: Refer to manufacturer's instructions.

B. Location: See drawings for location.

DIVISION 16 – SECTION 1 – ELECTRICAL POWER & LIGHTING

I. GENERAL REQUIREMENTS

A. Scope: This section includes all labor, material and equipment necessary to complete all work specified herein and as indicated within the construction documents. Also included are materials not specifically mentioned herein or shown, but which are necessary to make a complete, properly functioning electrical system.

1. A complete service and distribution system including the main panels, conduit, conductor, breakers, sub panels, etc. as required. Electrical contractor shall provide electrical load calculations, single line diagram and panel schedules to City Building Department prior to start of work.

2. Complete branch circuit wiring system for lighting and junction boxes as shown or specified.

3. Furnishing and installation of lighting fixtures as shown on the plans complete with all lamps.

4. Trenching necessary for underground electrical service needed.

5. Refer to the construction documents, see appliance schedule for appliances and their respective electrical requirements. Also refer to mechanical plan for equipment schedule.

B. Special Requirements: All work performed under this section shall be performed by a State of California Licensed electrical contractor.

II. MATERIALS

A. All work and materials shall be in accordance with all governing and applicable codes, rules and regulations.

B. All materials shall be new and UL listed (Refer to the construction documents, see electrical plans and lighting schedule for fixtures). Provide a cost allowance for items not selected.

C. All wiring shall be copper. Wire gauge shall be sufficient for anticipated electrical loads.

D. Light Fixture 1: **TBD**

B. High Pressure Pump: **KOOLFOG** *Mohave M88*. Power: Single Phase – 220V

C. Misting Line: **KOOLFOG** *SSM006 Stainless Steel Distribution Line* (Length: 40 ft.)

D. Distribution Line: **KOOLFOG** *HPH0004 Flexible Distribution Line* (Length: 100 ft.)

E. Misting Nozzle: **KOOLFOG** *KMN60 Stainless Steel Misting Nozzle* (Qty: 100)

IX. PERFORMANCE OF WORK

A. Installation: Refer to manufacturer's instructions.

Page Order

1	3	5
2	4	

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Air Sanctuary

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San Diego, CA

Project No. 1038226

Drawing Revisions:

No.	Date	Notes

Drawn By: AZ

Specifications

SP1

Tree Schedule

Botanical Name	Common Name	Qty.	Size (Gallons)
Lyonothamnus floribundus	Catalina Ironwood	1	TBD

Note: Contractor shall protect tree from harm during sculpture installation.

Joint Schedule

No.	Connections	Qty.	Connection Type
Zone 1			
J1-1	Concrete Base, T1-1	12	Weld tube connections and fasten to concrete base.
J1-2	T1-1, T2-2, J3-1, J3-2	12	Weld tube connections and fasten to adjacent joints.
J1-3	T1-2, T1-3, J3-3, J3-4	12	Weld tube connections and fasten to adjacent joints.
J1-4	T1-3, J3-5, J3-6	12	Weld tube connections and fasten to adjacent joints.
Zone 2			
J2-1	Concrete Base, T2-1, T3-1	12	Weld tube connections and fasten to concrete base.
J2-2	T2-1, T2-2, T3-2(2x)	12	Weld joint to listed tube connections.
J2-3	T2-2, T2-3, T3-3 (2x), T3-4 (2x)	12	Weld joint to listed tube connections.
J2-4	T2-3, T2-4, T3-5 (2x)	12	Weld joint to listed tube connections.
J2-5	T2-4, T2-5, T3-6 (2x)	12	Weld joint to listed tube connections.
J2-6	T2-5, T4-1 (2x)	12	Weld joint to listed tube connections.
Zone 3			
J3-1	T3-1, T3-2, T3-3, J1-2	12	Weld tube connections and fasten to adjacent joints.
J3-2	T3-1, T3-2, T3-3, J1-2	12	Weld tube connections and fasten to adjacent joints.
J3-3	T3-4, T3-5, T3-6, J1-3	12	Weld tube connections and fasten to adjacent joints.
J3-4	T3-4, T3-5, T3-6, J1-3	12	Weld tube connections and fasten to adjacent joints.
J3-5	T3-7, J1-4, J3-6	12	Weld tube connections and fasten to adjacent joints.
J3-6	T3-7, J1-4, J3-5	12	Weld tube connections and fasten to adjacent joints.

Note: See sheets J1-J16 for more information.

Tube Schedule

No.	Length	Qty.	Total Lengths	Notes
Zone 1				
T1-1	10’ - 10 1/2”	12	130’ - 5”	See 1/A3 for Removable tube location. (Qty. 1)
T1-2	5’ - 0”	12	60’ - 0”	
T1-3	7’ - 3 1/2”	12	87’ - 6”	
Zone 2				
T2-1	11’ - 6 1/4”	12	138’ - 3”	
T2-2	8’ - 2 1/2”	12	98’ - 6”	
T2-3	1’ - 0”	12	12’ - 0”	
T2-4	5’ - 9 1/2”	12	69’ - 6”	
T2-5	5’ - 10”	12	70’ - 0”	
Zone 3				
T3-1	10’ - 9 1/2”	24	259’ - 0”	
T3-2	1’ - 8 1/2”	24	41’ - 0”	
T3-3	9’ - 2 1/4”	24	220’ - 6”	
T3-4	4’ - 8”	24	112’ - 0”	
T3-5	5’ - 6 1/2”	24	133’ - 0”	
T3-6	5’ - 10 1/2”	24	141’ - 0”	
T3-7	0’ - 10 1/2”	24	21’ - 0”	
Grand Total			**1,593’ - 8”**	

Note: Length measurement excludes tube end caps, see detail 1/SD1 for typical tube assembly.

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Drawn By: AZ

Schedules

SC1

Site Legend

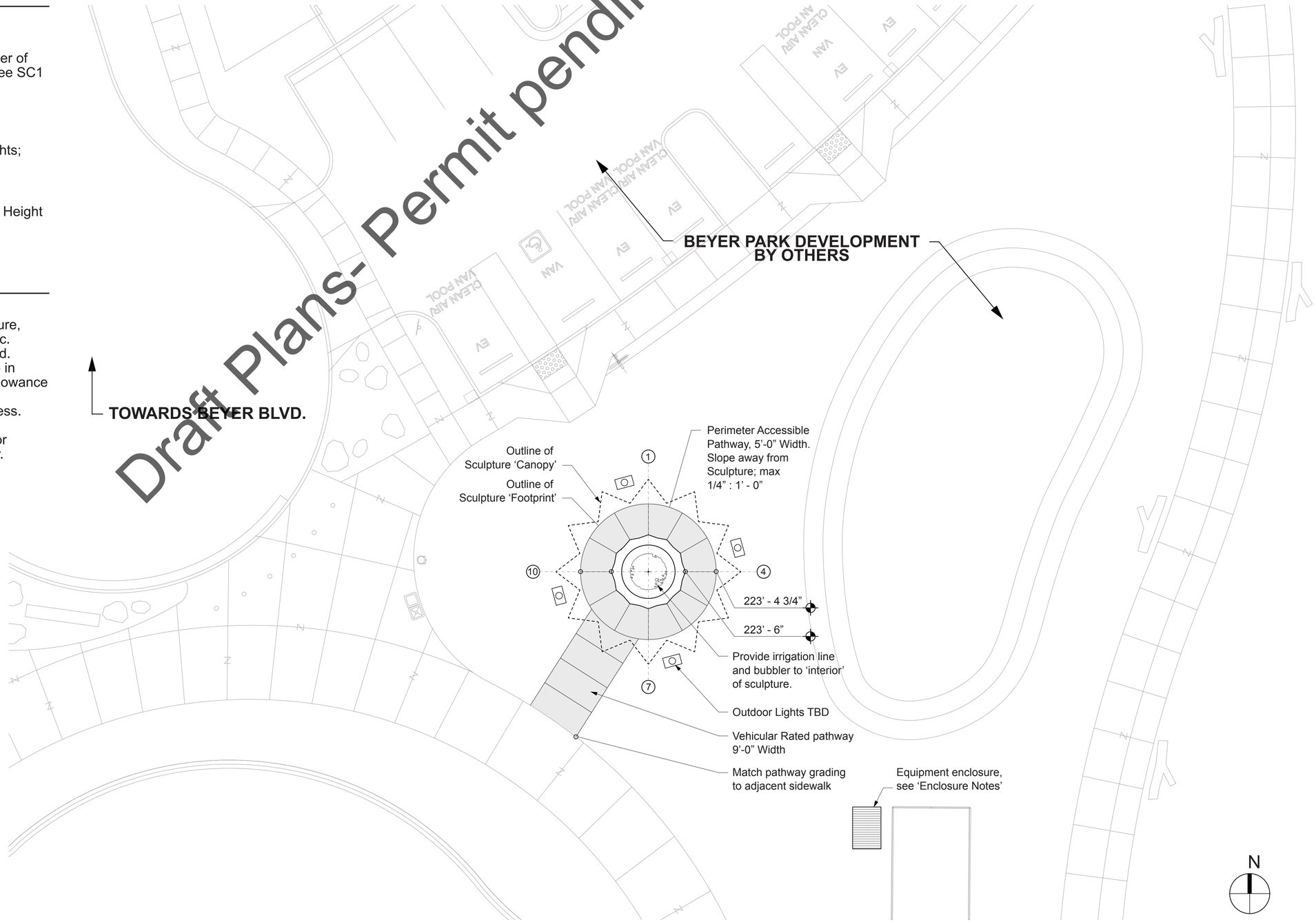
Tree at center of sculpture; see SC1 for spec.

Outdoor Lights; per spec.

Finish Floor Height

Enclosure Notes

1. Provide equipment enclosure, Strongbox ‘PE-AL60’ per spec. or equal, include concrete pad.
2. Locate Mohave M88 pump in enclosure, provide 1” PVC allowance for distribution line.
3. Provide potable water access.
4. Provide 208v/220v power.
5. Locate low-voltage timer for lighting and misting controller.



1 Site Plan

Scale: 1/8” = 1’ - 0”

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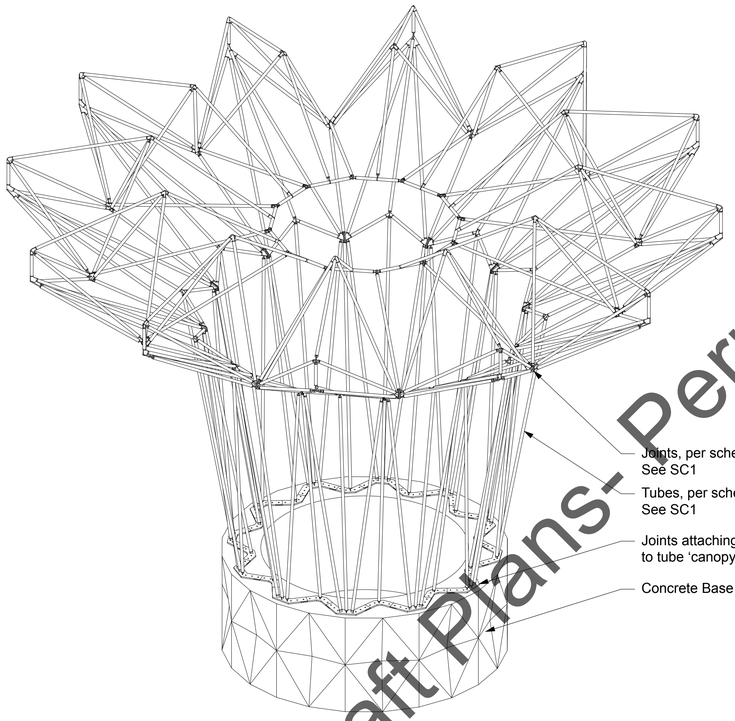
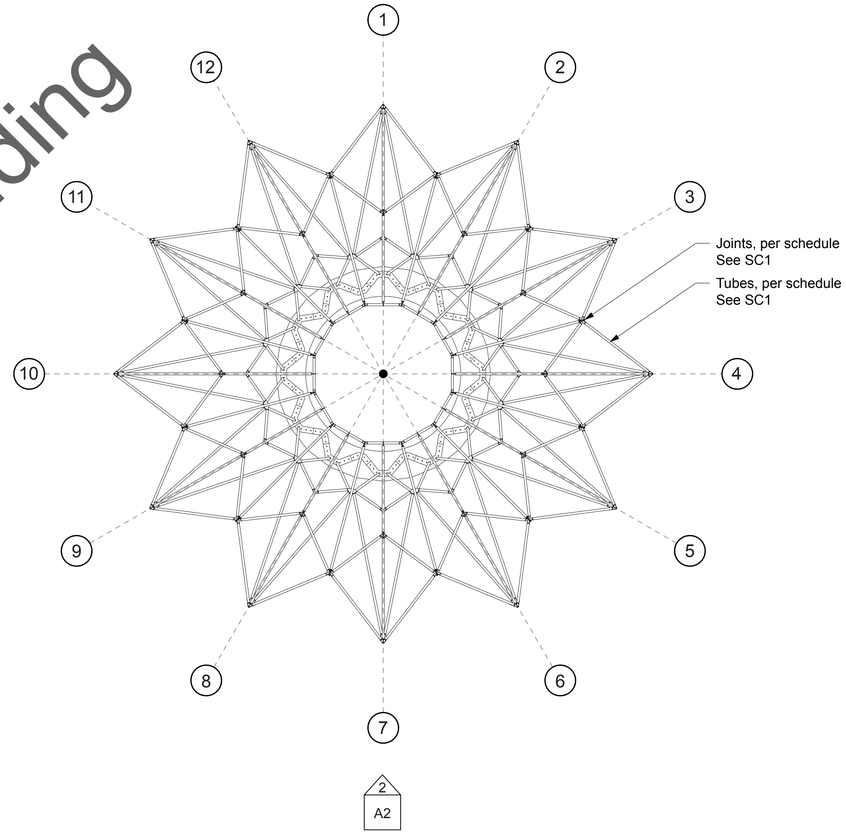
Drawn By: AZ

Site Plan

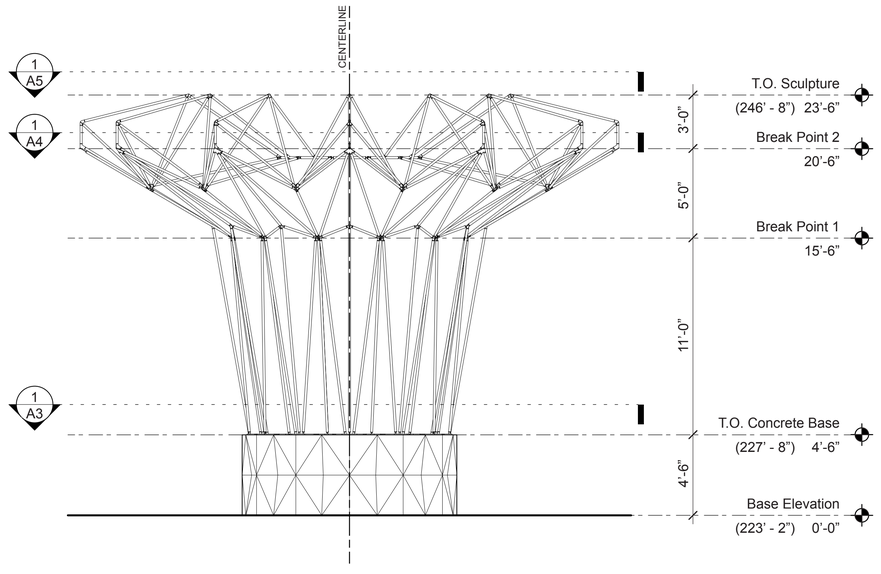
A1



3 Isometric View
Scale: NTS



1 Overall Plan
Scale: 1/4" = 1'- 0"



2 Overall Elevation
Scale: 1/4" = 1'- 0"

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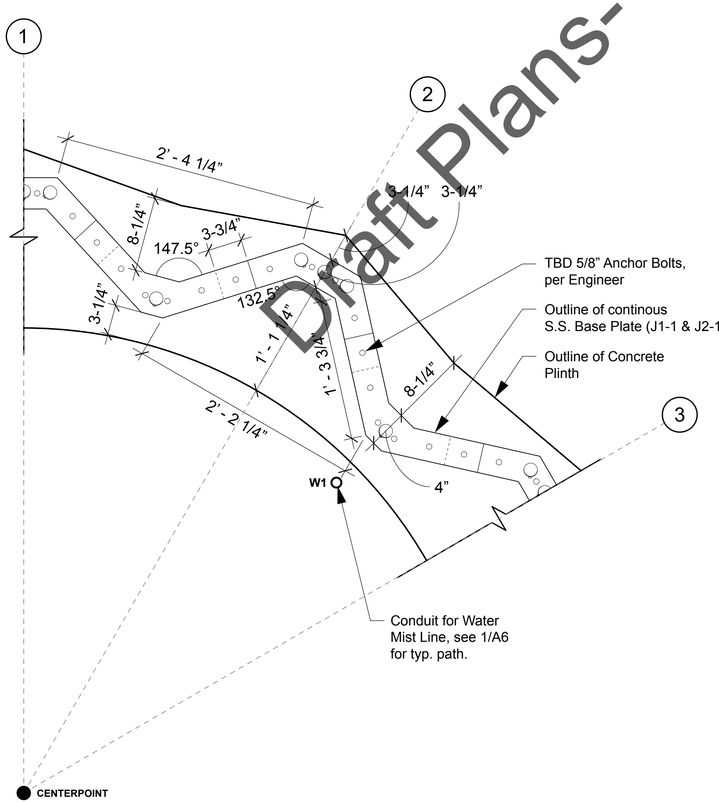
Drawn By: AZ

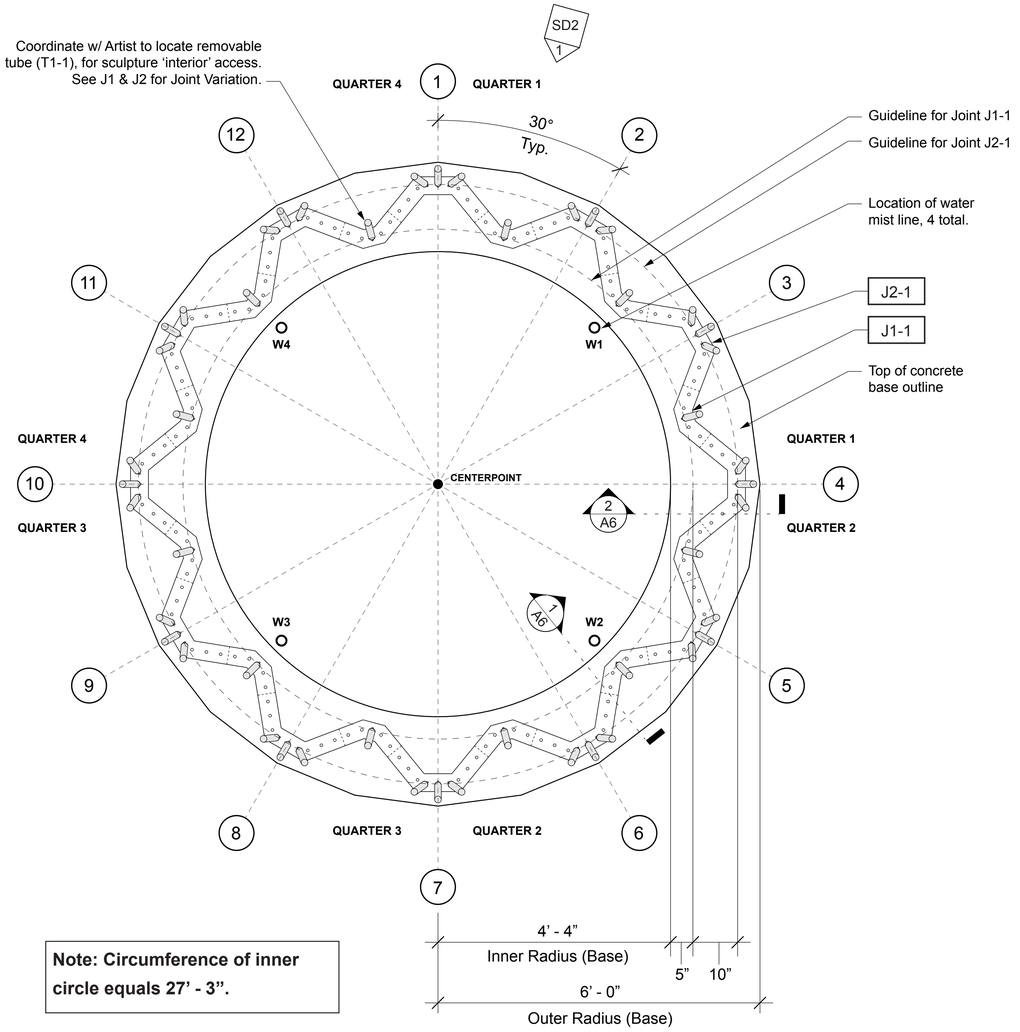
Overall Plan & Elevation

A2



2 Plan Detail

Scale: 1-1/2" = 1'- 0"



Note: Circumference of inner circle equals 27' - 3".

1 Enlarged Plan

Scale: 3/4" = 1'- 0"

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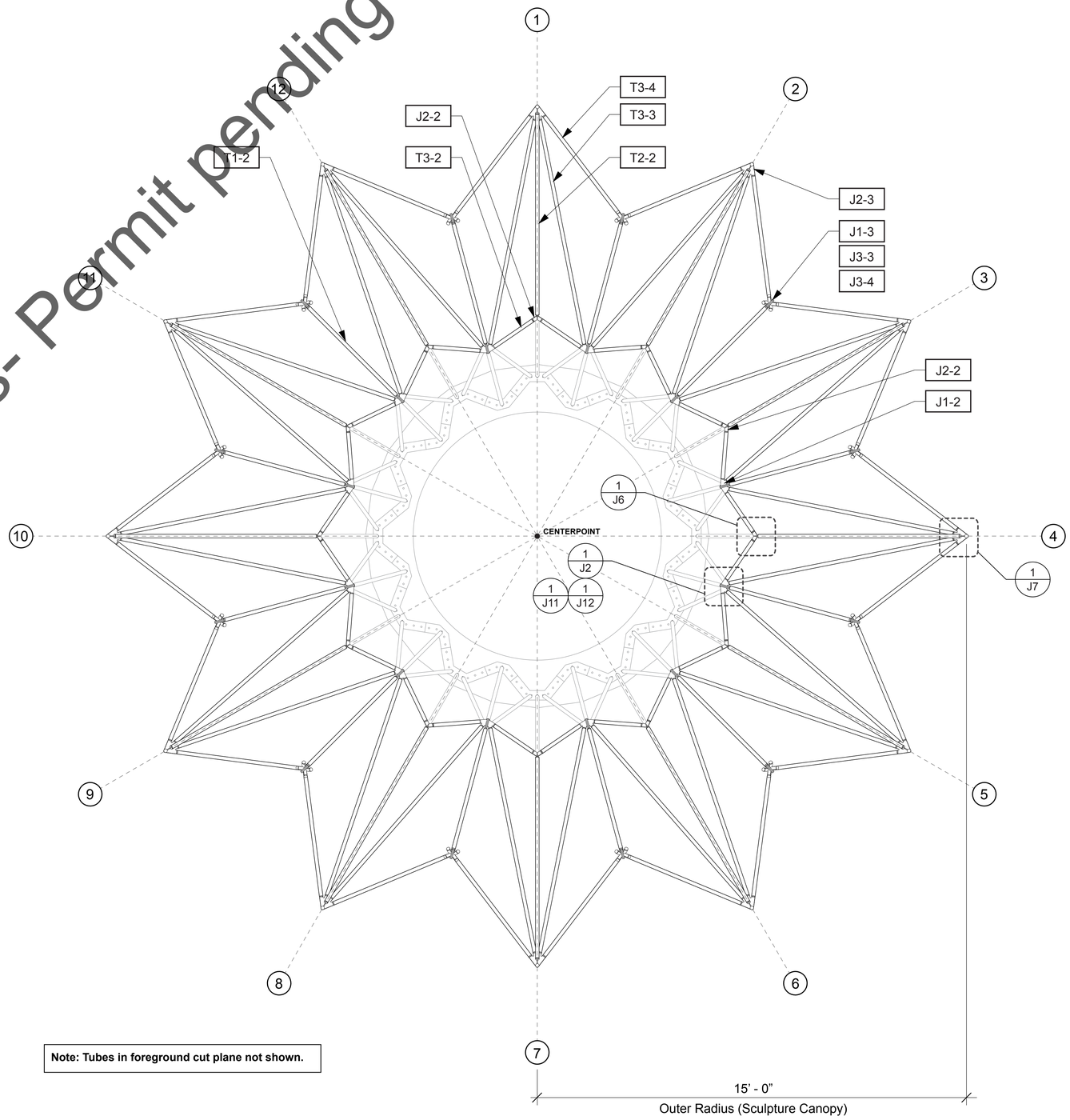
Drawn By: AZ

Enlarged Plan

A3



1 Enlarged Plan

Scale: 1/2" = 1'- 0"

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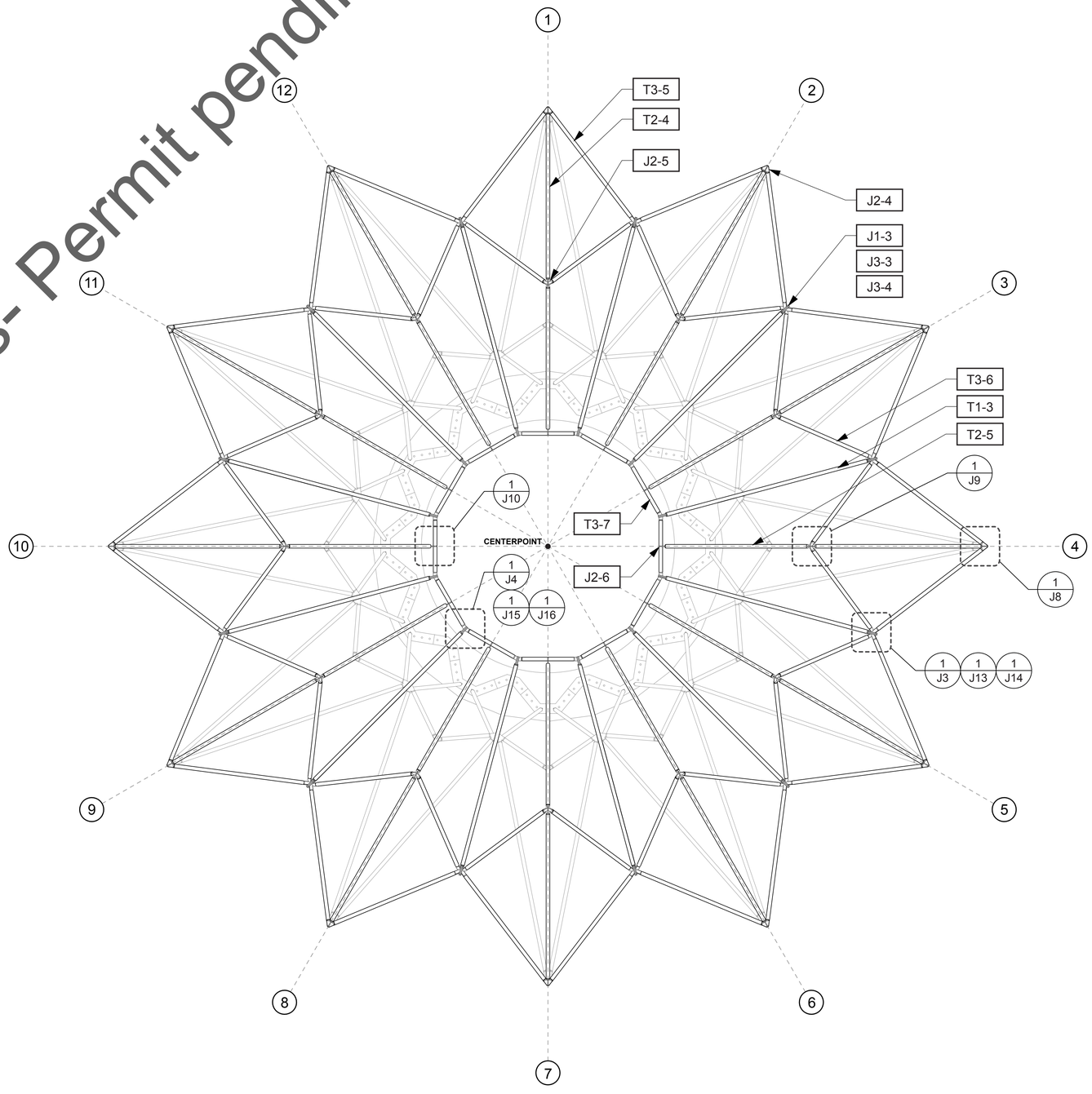
Drawn By: AZ

Enlarged Plan

A4

Draft Plans- Permit pending



1 Enlarged Plan

Scale: 1/2” = 1’- 0”

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Drawing Revisions:

No.	Date	Notes

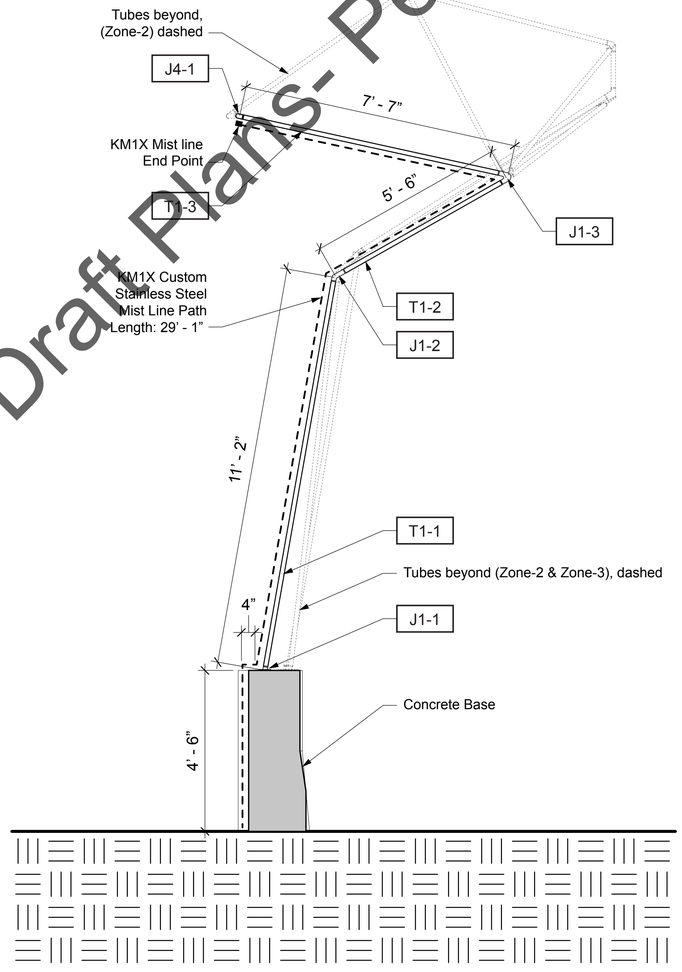
Drawn By: AZ

Enlarged Plan

A5

Draft Plans- Permit pending

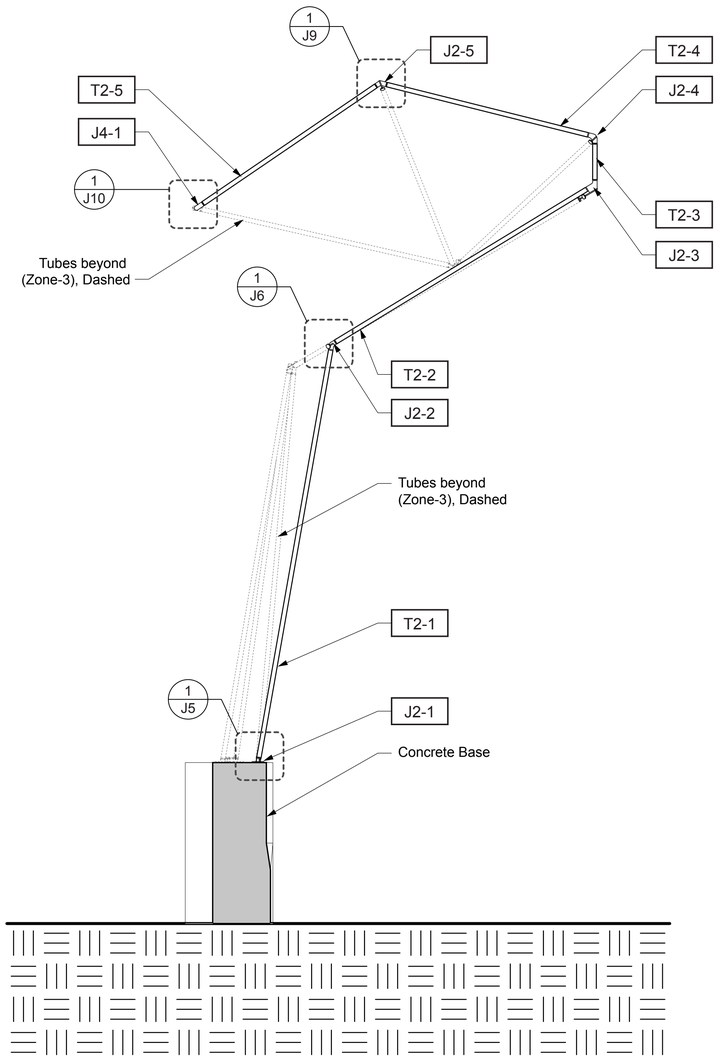
Note: Tubes in foreground section-cut plane; not shown.



1 Sculpture Section (Zone 1)

Scale: 1/2" = 1'- 0"

Note: Tubes in foreground section-cut plane; not shown.



2 Sculpture Section (Zone 2)

Scale: 1/2" = 1'- 0"

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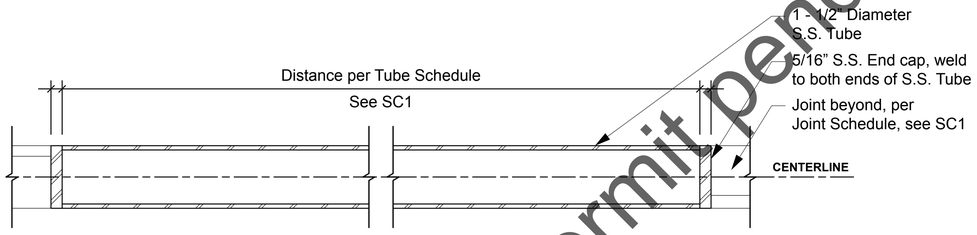
Drawing Revisions:

No.	Date	Notes

Drawn By: AZ

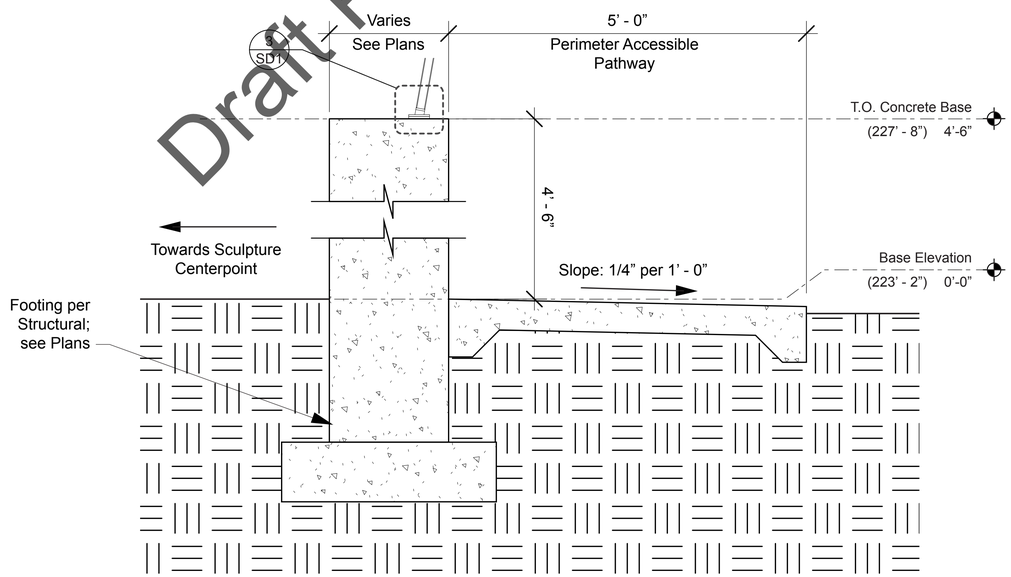
Sections

A6



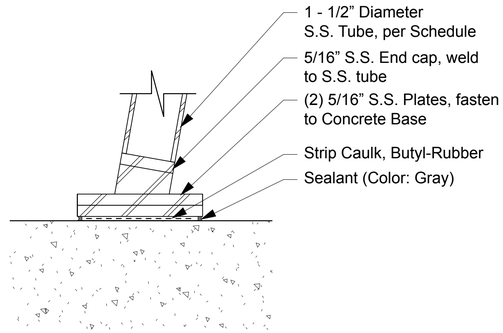
1 Typical Tube & Cap Assembly

Scale: 6" = 1' - 0"



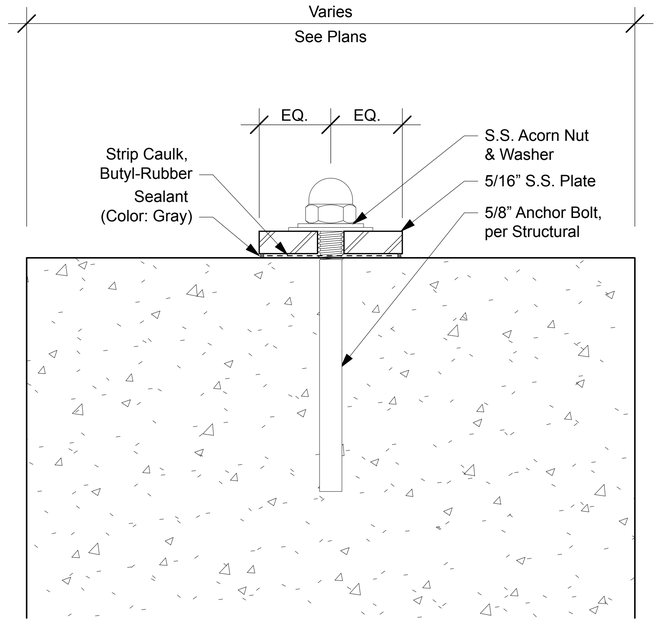
2 Typical Base Detail

Scale: 1" = 1' - 0"



3 Typical Steel to Concrete Assembly

Scale: 6" = 1' - 0"



4 Typical Anchor Bolt Connection

Scale: 6" = 1' - 0"

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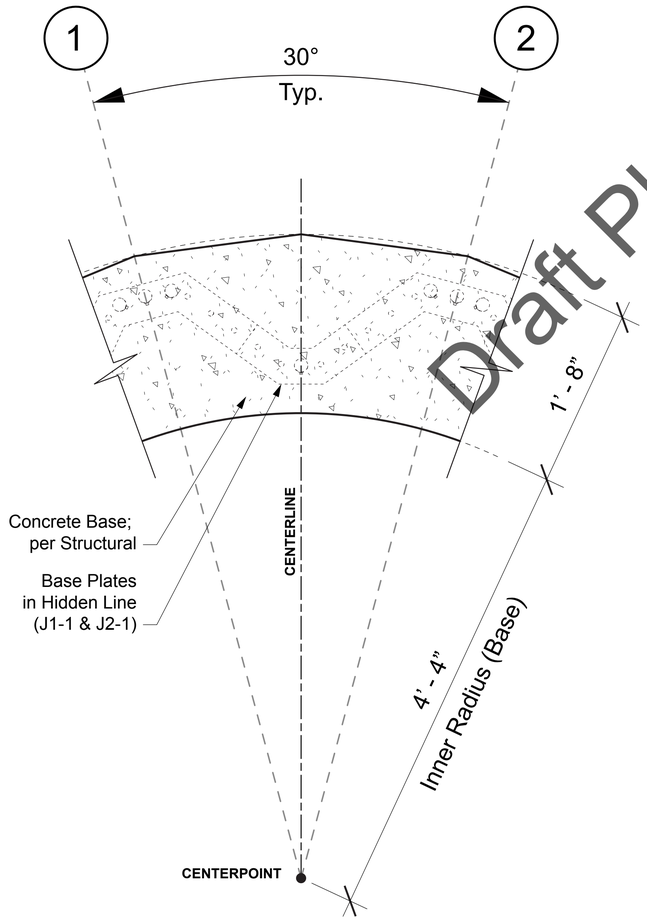
Drawn By: AZ

Standard Details

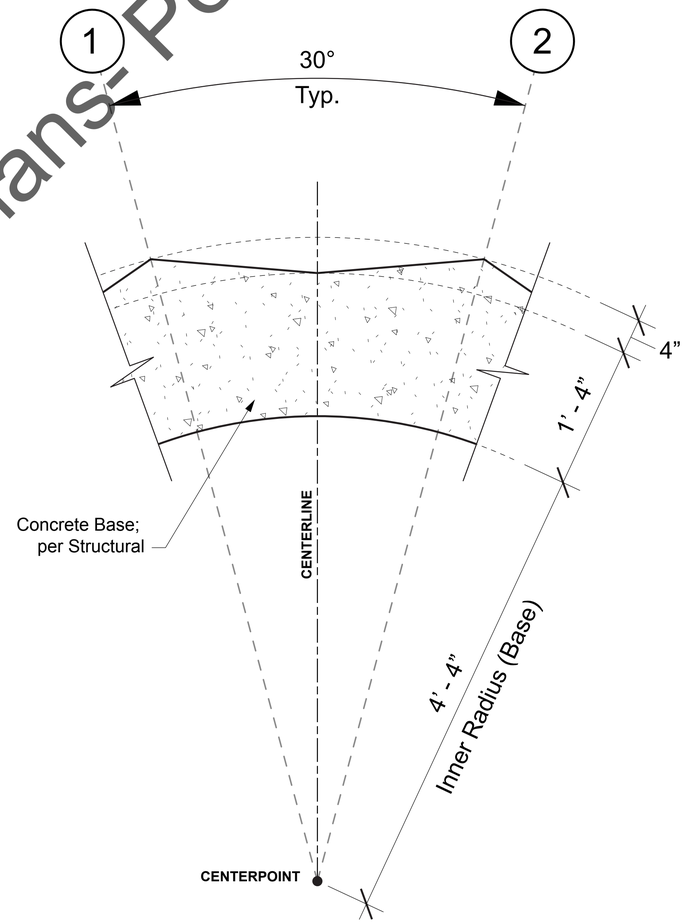
SD1



Note: Concrete Base follows a repeatable pattern every 30° per plans. For a total of 12 modules.

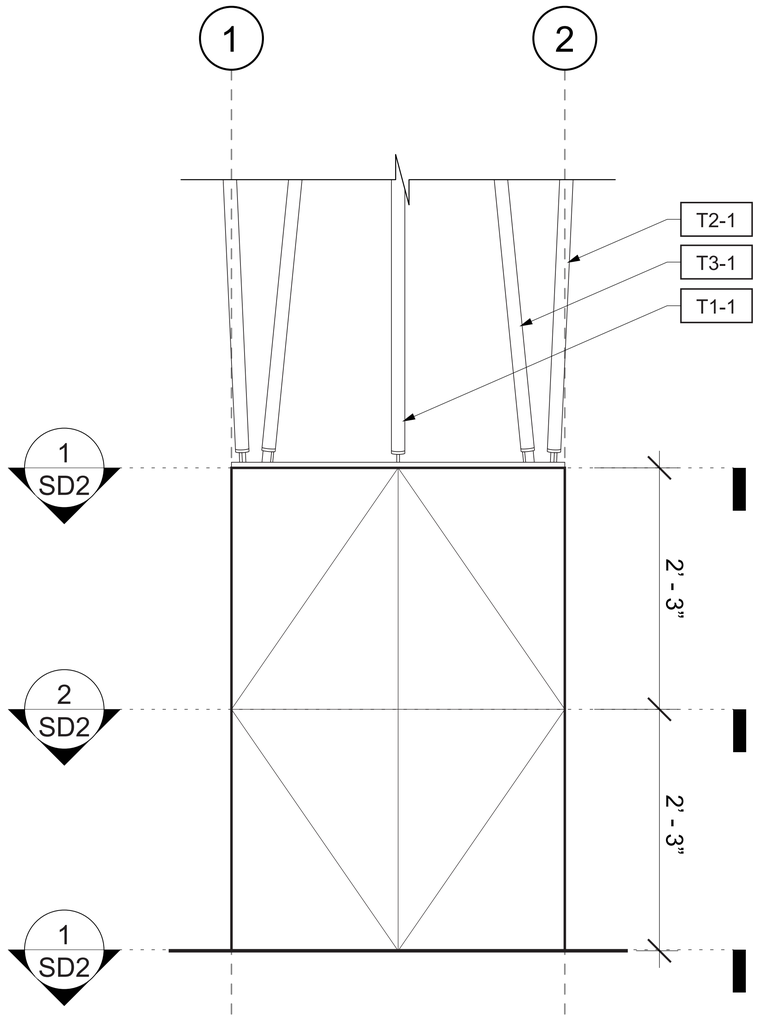
1 Typical Base Plan (Top & Bottom)

Scale: 1-1/2" = 1'- 0"



2 Typical Base Plan (Middle)

Scale: 1-1/2" = 1'- 0"



3 Typical Base Elevation

Scale: 1-1/2" = 1'- 0"

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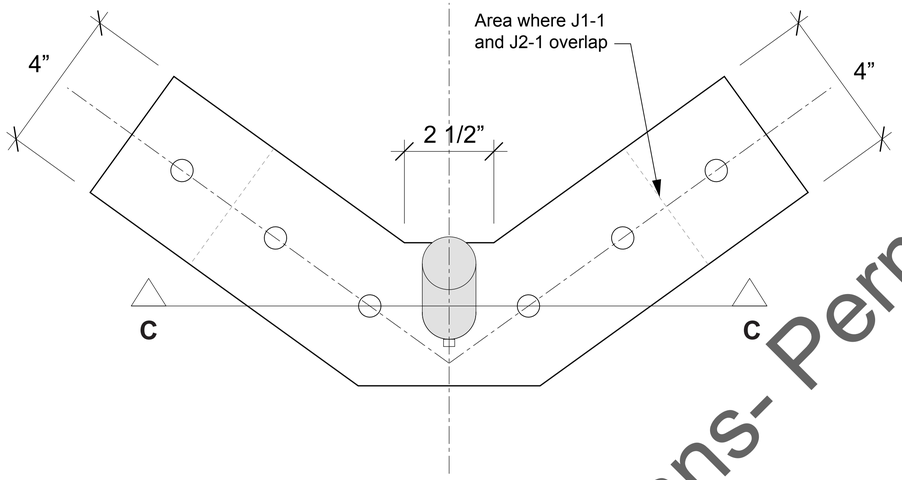
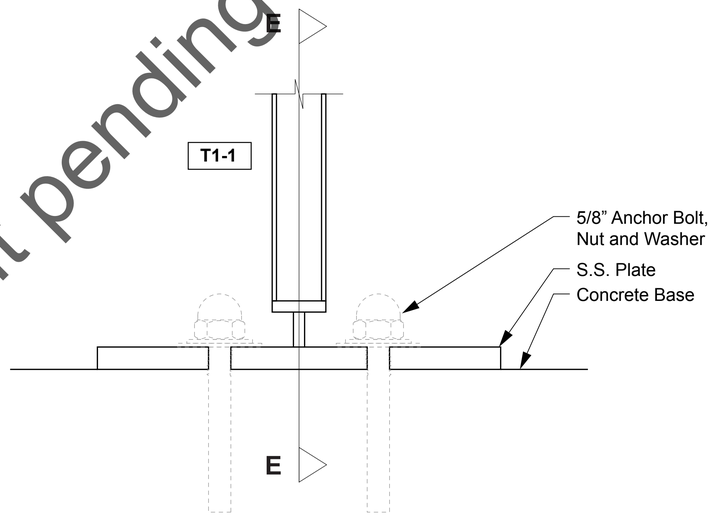
Drawn By: AZ

Standard Details

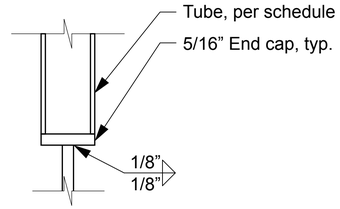
SD2



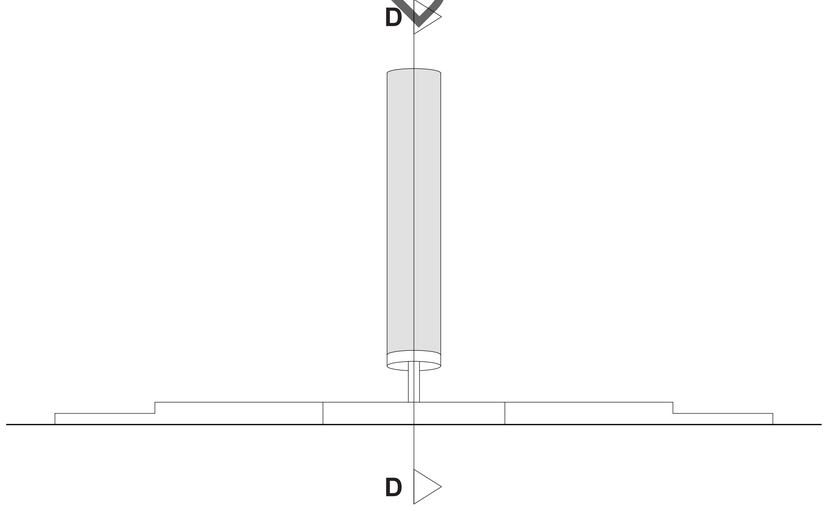
A - Plan



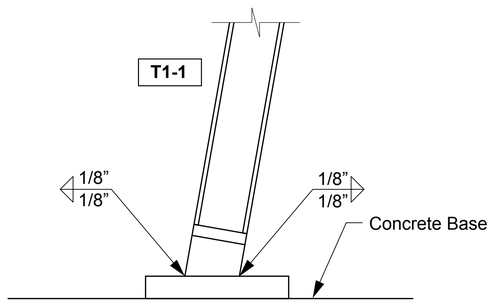
C - Section 1



E - Connection Detail 1

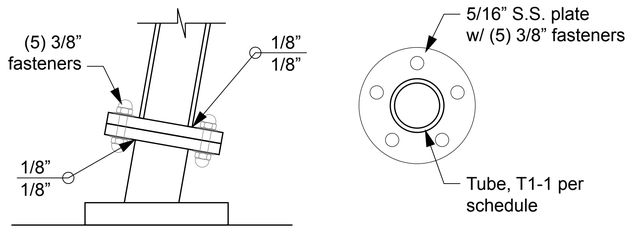


B - Elevation



D - Section 2

Note: Detail applies only @ removable tube, verify location w/ Artist



F - Connection Variation 1

Note: Plate Dimensions will be provided digitally for Water Jet Cutting.

1 Joint Details (J1-1)

Scale: 6” = 1’- 0”

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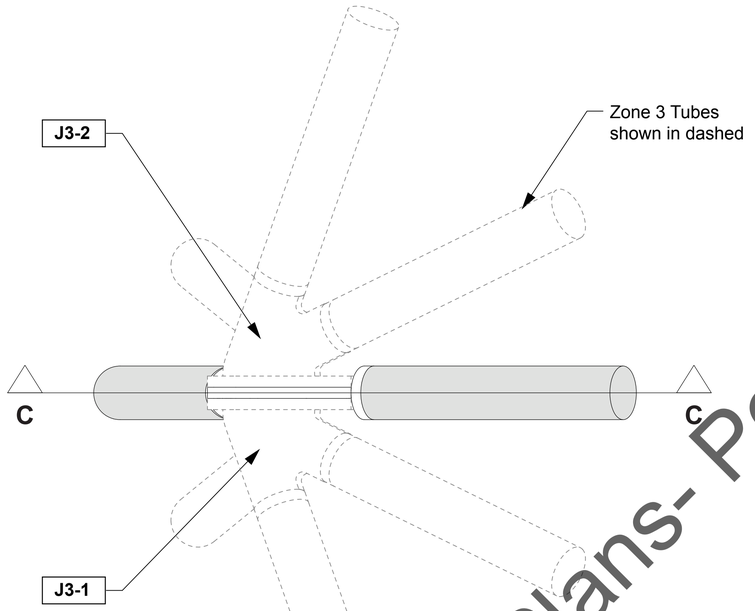
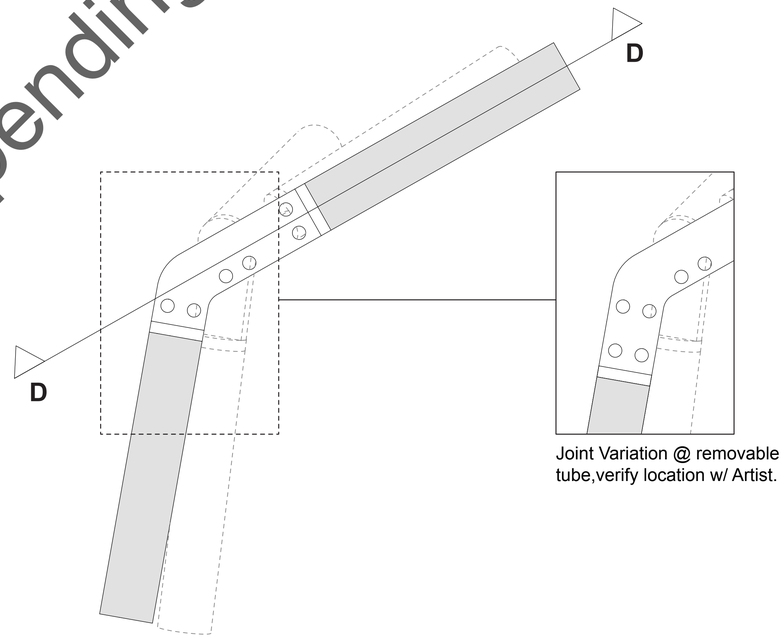
Drawn By: AZ

Joint Details
J1-1

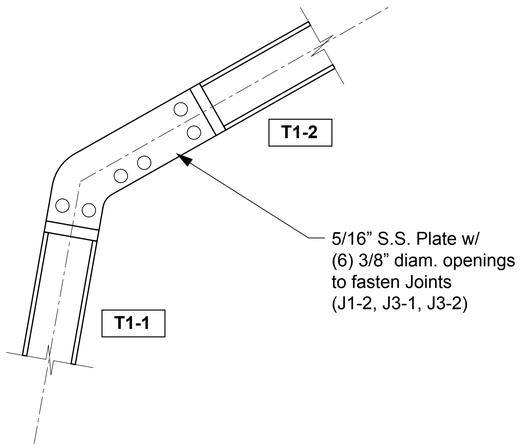
J1



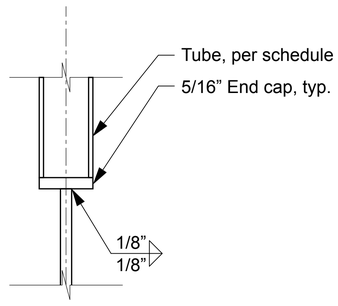
A - Plan



B - Elevation

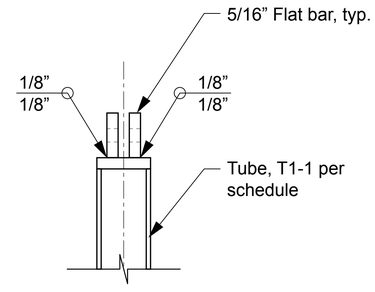


C - Section 1



D - Connection Detail 1

Note: Detail applies only @ removable tube, verify location w/ Artist



E - Connection Variation 1

Note: Plate Dimensions will be provided digitally for Water Jet Cutting.

1 Joint Details (J1-2)

Scale: 6” = 1’- 0”

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Drawing Revisions:

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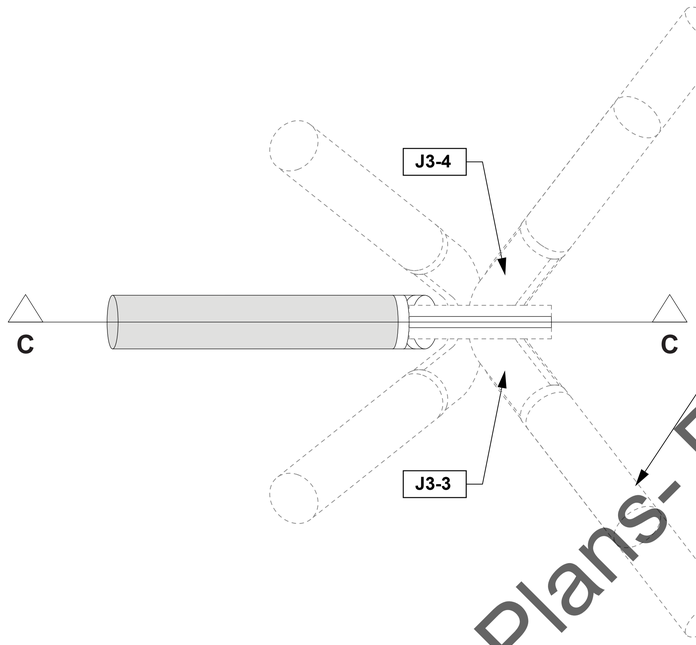
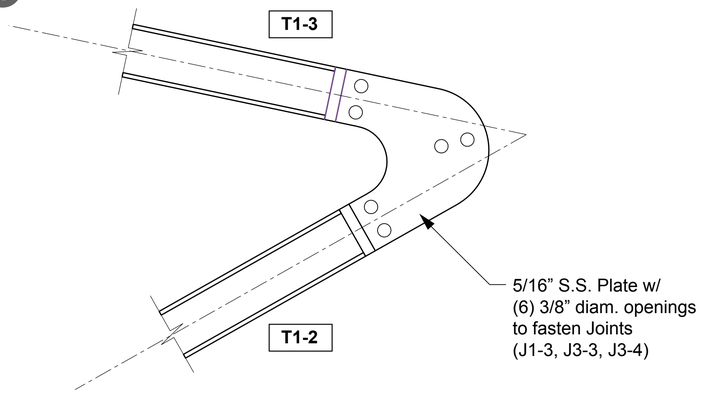
Drawn By: AZ

Joint Details
J1-2

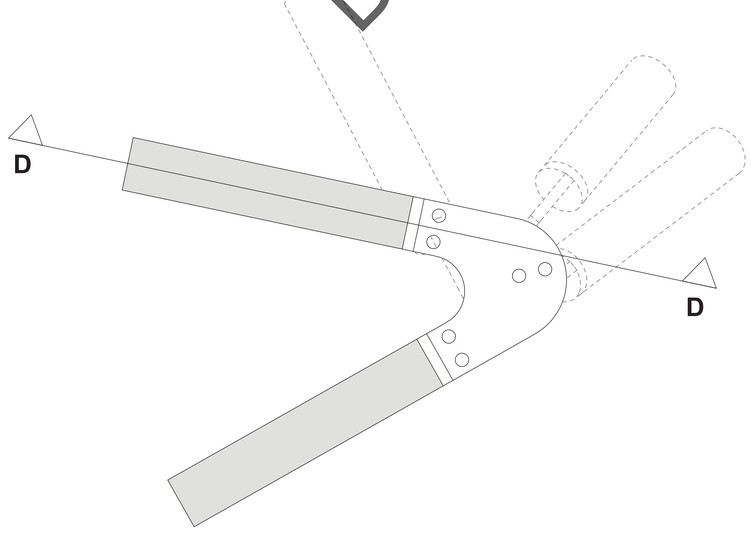
J2



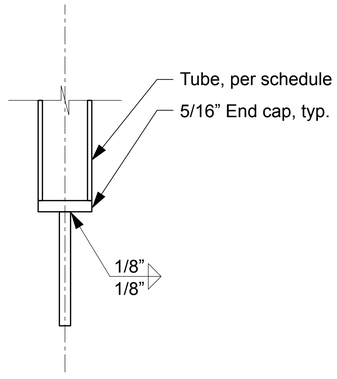
A - Plan



C - Section 1



B - Elevation



D - Connection Detail 1

Note: Plate Dimensions will be provided digitally for Water Jet Cutting.

1 Joint Details (J1-3)

Scale: 6” = 1’- 0”

August 29, 2023

Air Sanctuary

Beyer Park Development
San Diego, CA

Project No. 1038226

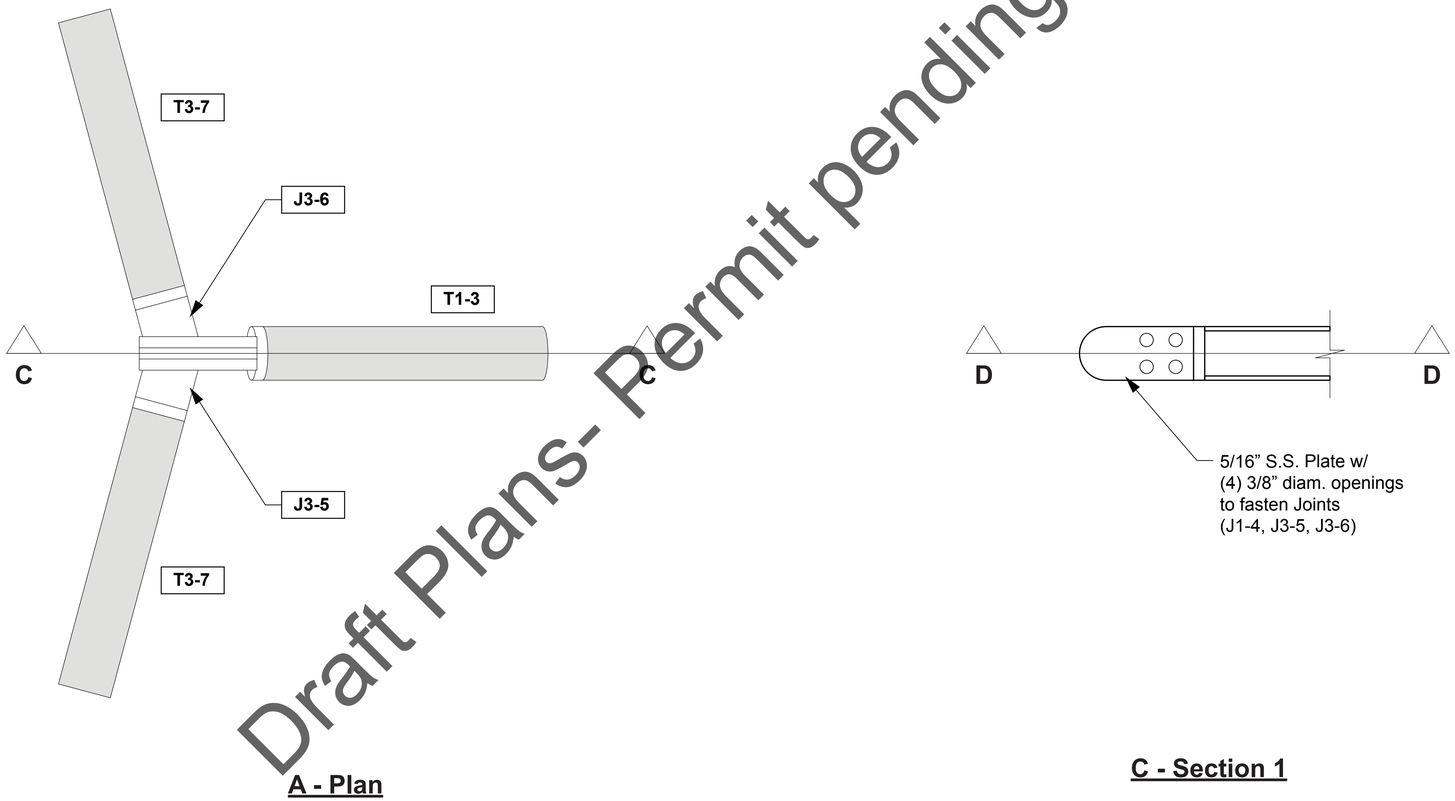
Drawing Revisions:

No.	Date	Notes

Drawn By: AZ

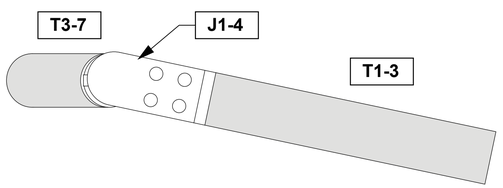
Joint Details
J1-3

J3

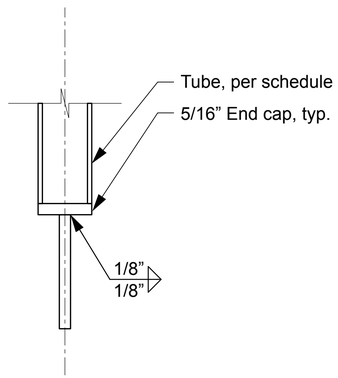


A - Plan

C - Section 1



B - Elevation



D - Connection Detail 1

Note: Plate Dimensions will be provided digitally for Water Jet Cutting.

1 Joint Details (J1-4)

Scale: 6” = 1’- 0”

August 29, 2023

Air Sanctuary

Beyer Park Development
San Diego, CA

Project No. 1038226

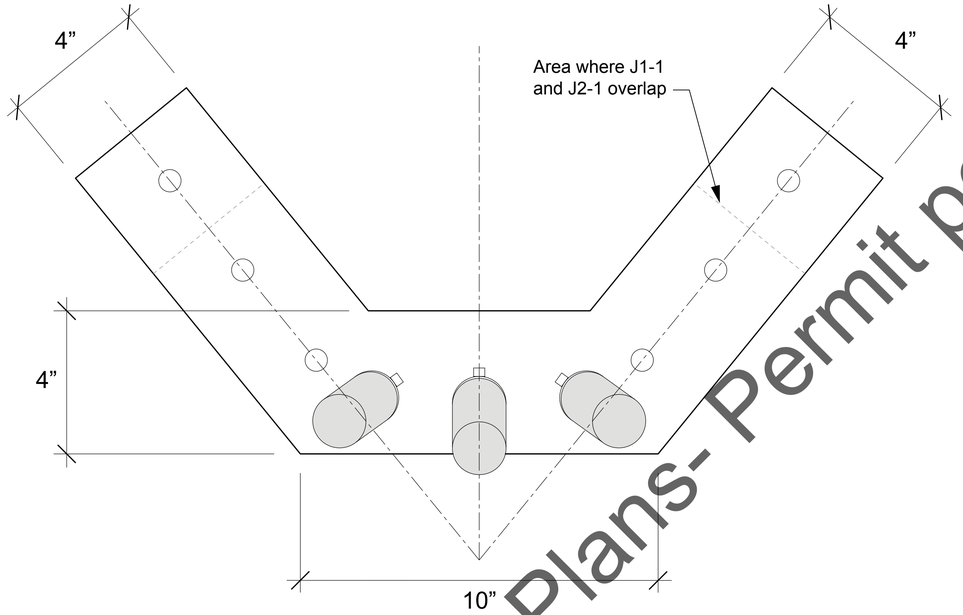
Drawing Revisions:

No.	Date	Notes

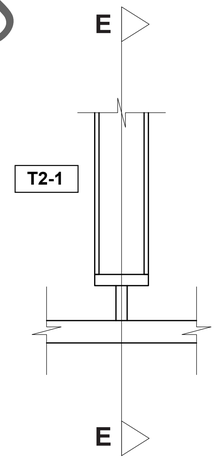
Drawn By: AZ

Joint Details
J1-4

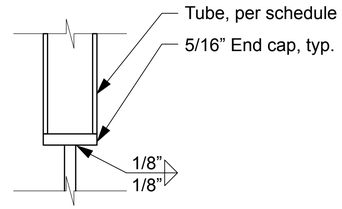
J4



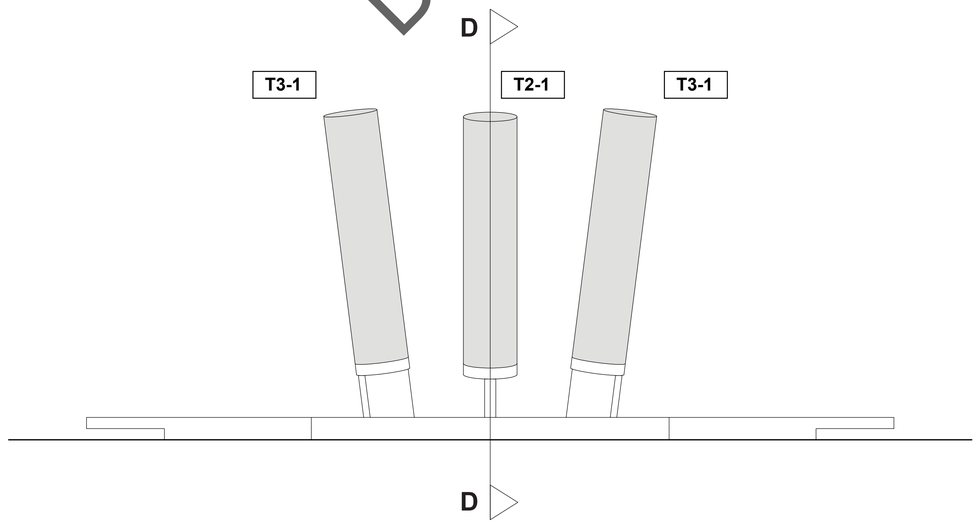
A - Plan



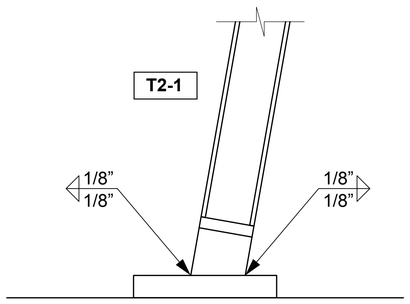
C - Section 1



E - Connection Detail 1



B - Elevation



D - Section 2

Note: Plate Dimensions will be provided digitally for Water Jet Cutting.

1 Joint Details (J2-1)

Scale: 6” = 1’- 0”

August 29, 2023

Air Sanctuary

Beyer Park Development
San Diego, CA

Project No. 1038226

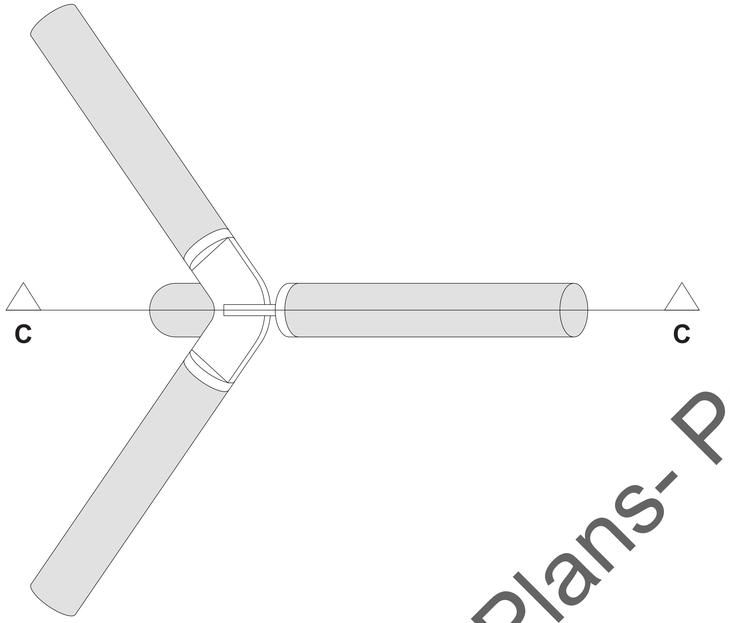
Drawing Revisions:

No.	Date	Notes

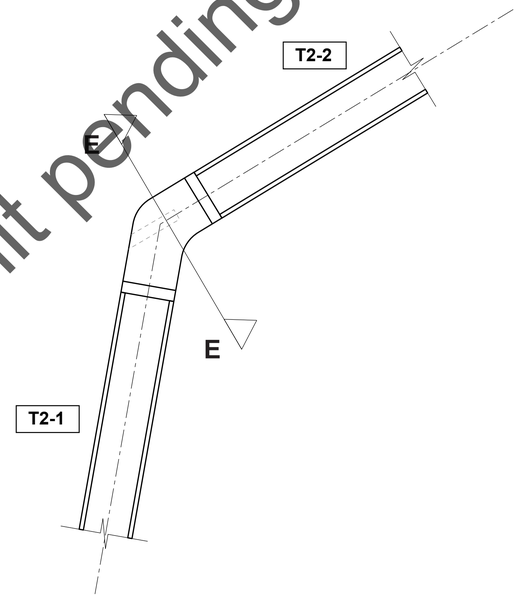
Drawn By: AZ

Joint Details
J2-1

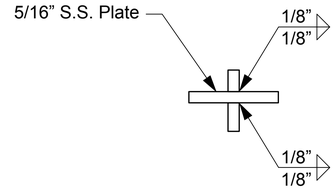
J5



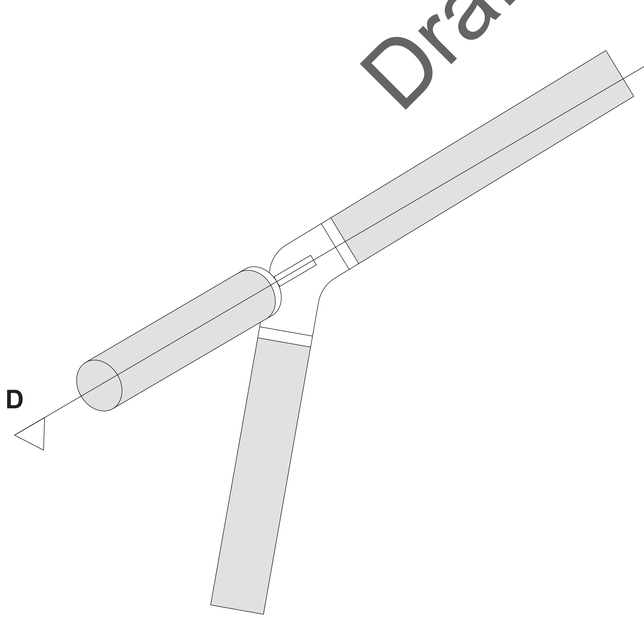
A - Plan



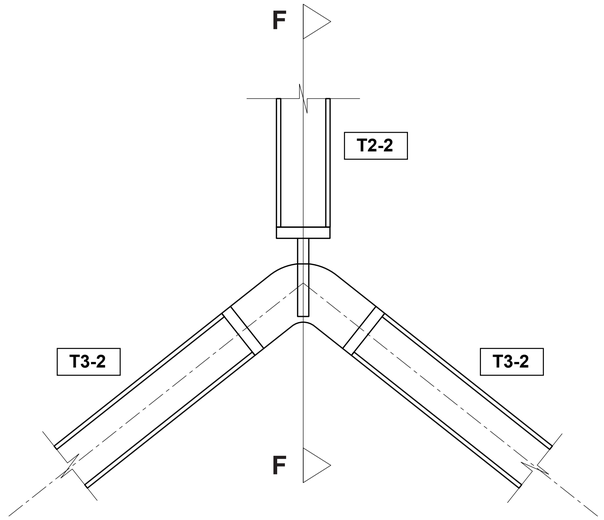
C - Section 1



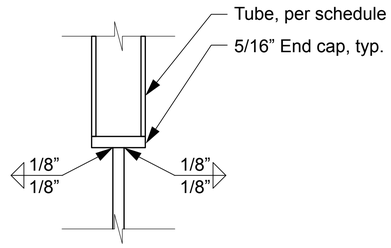
E - Connection Detail 1



B - Elevation



D - Section 2



F - Connection Detail 1

Note: Plate Dimensions will be provided digitally for Water Jet Cutting.

1 Joint Details (J2-2)

Scale: 6” = 1’- 0”

August 29, 2023

Air Sanctuary

Beyer Park Development
San Diego, CA

Project No. 1038226

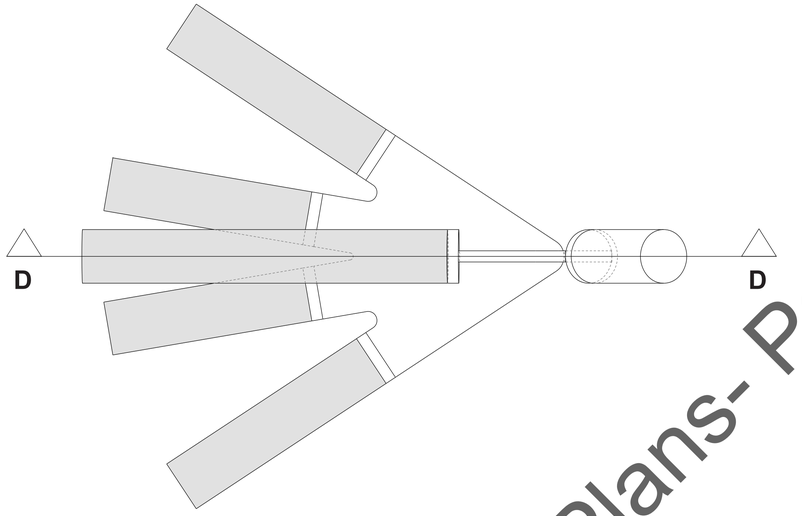
Drawing Revisions:

No.	Date	Notes

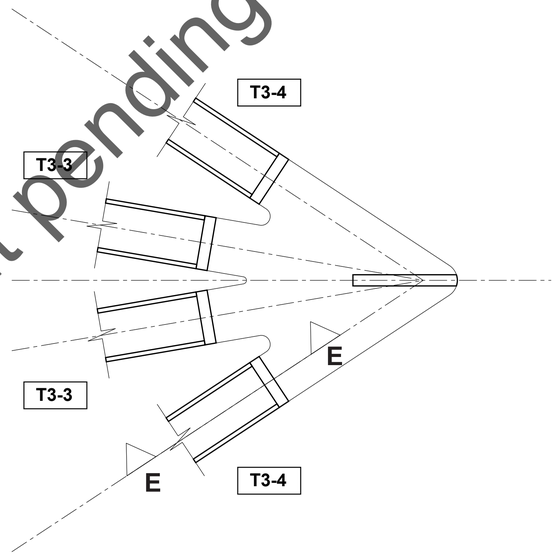
Drawn By: AZ

Joint Details
J2-2

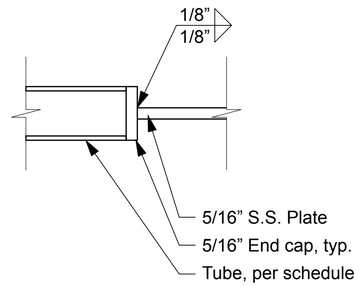
J6



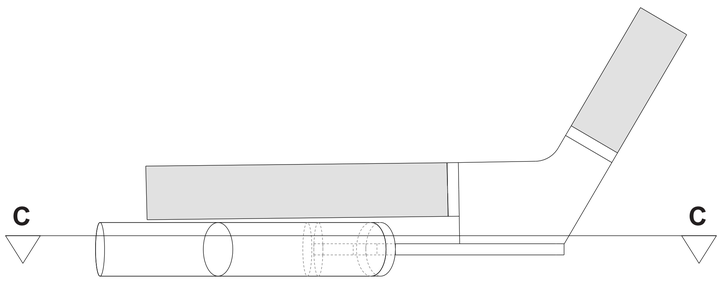
A - Plan



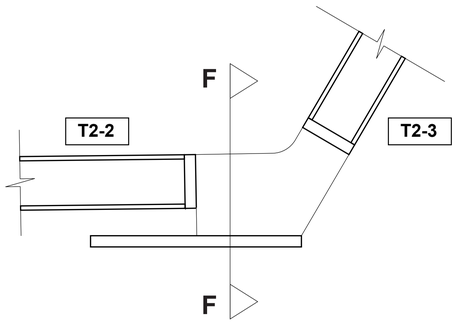
C - Section 1



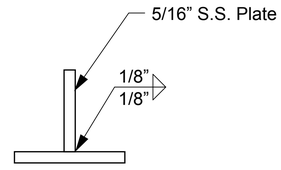
E - Connection Detail 1



B - Elevation



D - Section 2



F - Connection Detail 2

Note: Plate Dimensions will be provided digitally for Water Jet Cutting.

1 Joint Details (J2-3)

Scale: 6” = 1’- 0”

August 29, 2023

Air Sanctuary

Beyer Park Development
San Diego, CA

Project No. 1038226

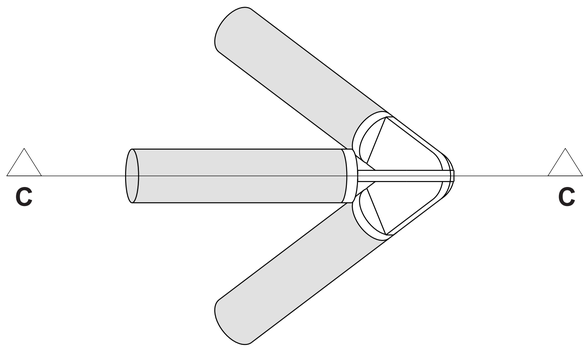
Drawing Revisions:

No.	Date	Notes

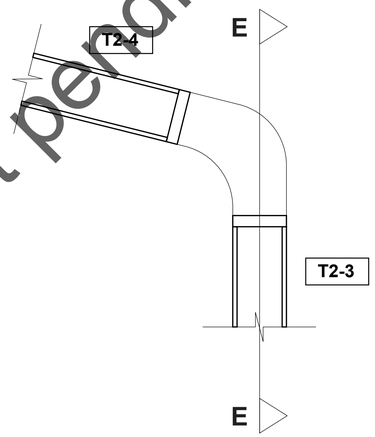
Drawn By: AZ

Joint Details
J2-3

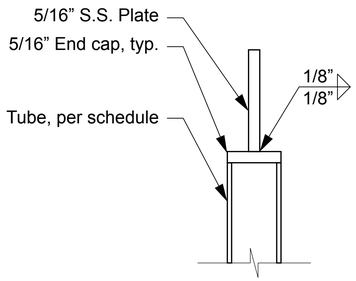
J7



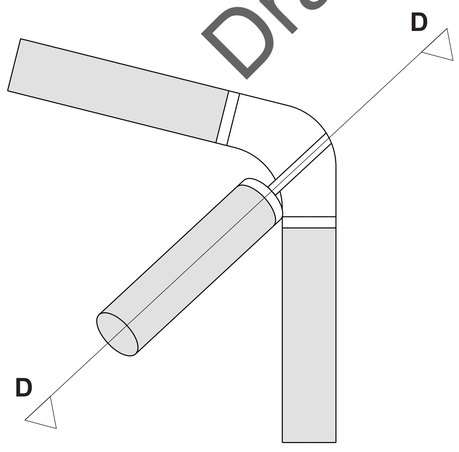
A - Plan



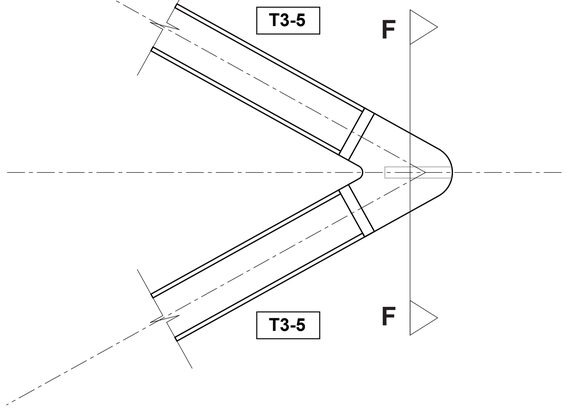
C - Section 1



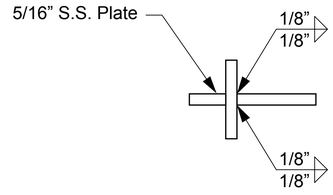
E - Connection Detail 1



B - Elevation



D - Section 2



F - Connection Detail 2

Note: Plate Dimensions will be provided digitally for Water Jet Cutting.

1 Joint Details (J2-4)

Scale: 6” = 1’- 0”

August 29, 2023

Air Sanctuary

Beyer Park Development
San Diego, CA

Project No. 1038226

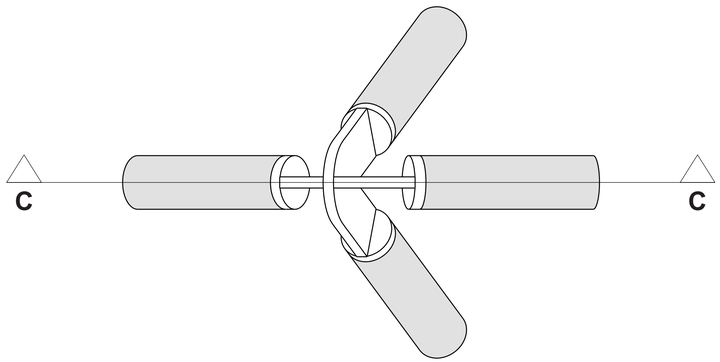
Drawing Revisions:

No.	Date	Notes

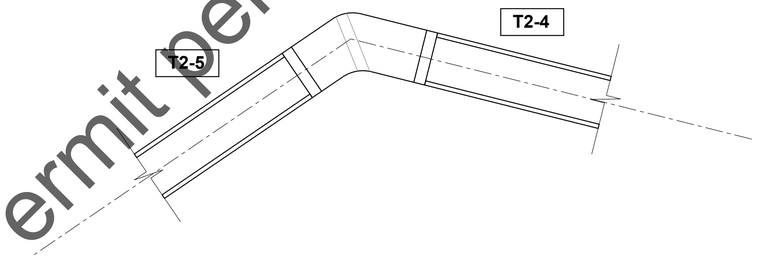
Drawn By: AZ

Joint Details
J2-4

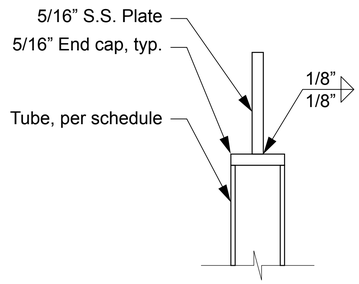
J8



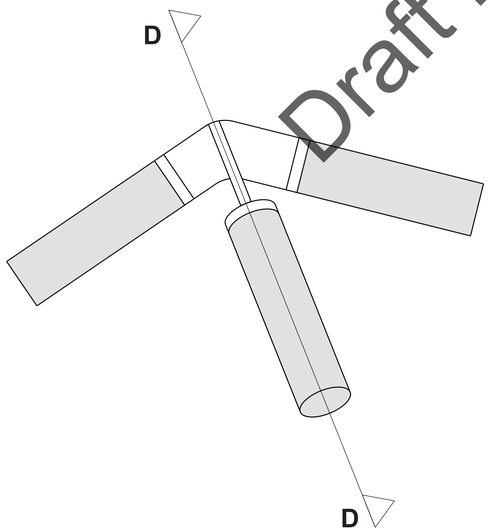
A - Plan



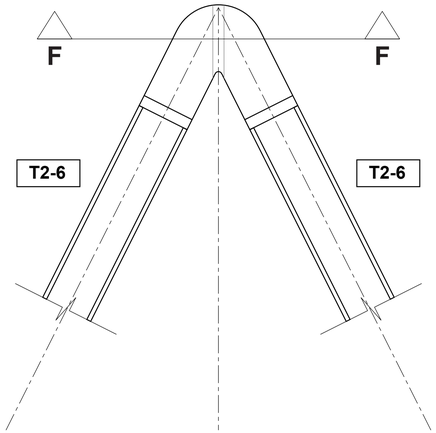
C - Section 1



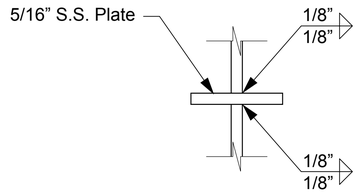
E - Connection Detail 1



B - Elevation



D - Section 2



F - Connection Detail 2

Note: Plate Dimensions will be provided digitally for Water Jet Cutting.

1 Joint Details (J2-5)

Scale: 6” = 1’- 0”

August 29, 2023

Air Sanctuary

Beyer Park Development
San Diego, CA

Project No. 1038226

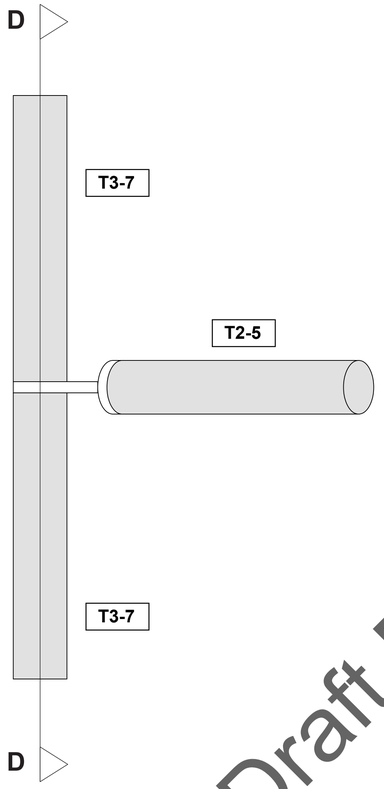
Drawing Revisions:

No.	Date	Notes

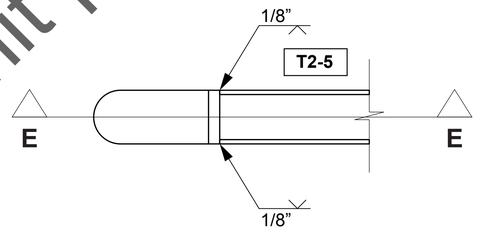
Drawn By: AZ

Joint Details
J2-5

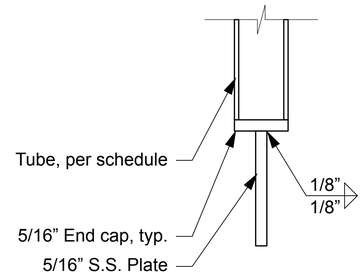
J9



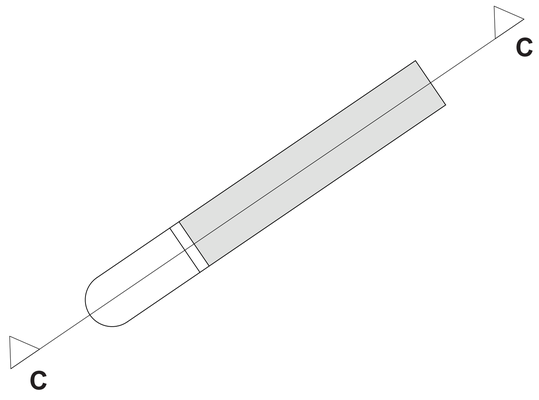
A - Plan



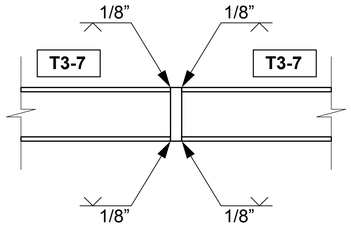
C - Section 1



E - Connection Detail 1



B - Elevation



D - Section 2

Note: Plate Dimensions will be provided digitally for Water Jet Cutting.

1 Joint Details (J2-6)

Scale: 6” = 1’- 0”

August 29, 2023

Air Sanctuary

Beyer Park Development
San Diego, CA

Project No. 1038226

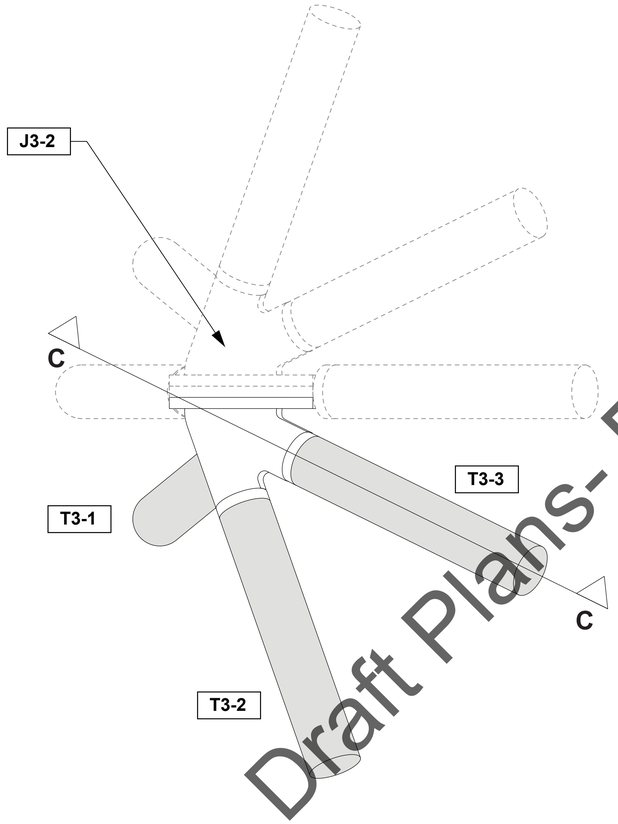
Drawing Revisions:

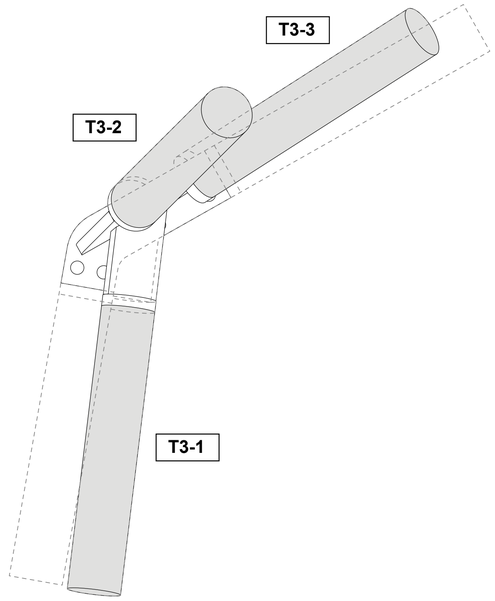
No.	Date	Notes

Drawn By: AZ

Joint Details
J2-6

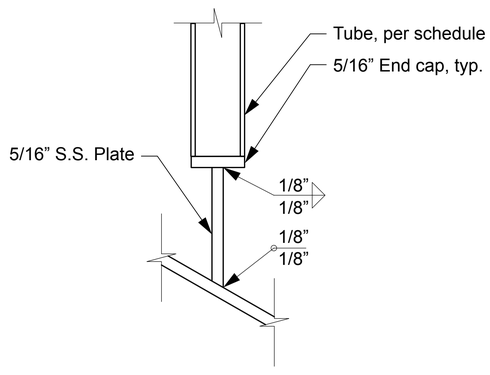
J10





A - Plan

B - Elevation



C - Connection Detail 1

Joints (J3-1 & J3-2) are mirror images of each other.

Note: Plate Dimensions will be provided digitally for Water Jet Cutting.

1 Joint Details (J3-1)

Scale: 6” = 1’- 0”

August 29, 2023

Air Sanctuary

Beyer Park Development
San Diego, CA

Project No. 1038226

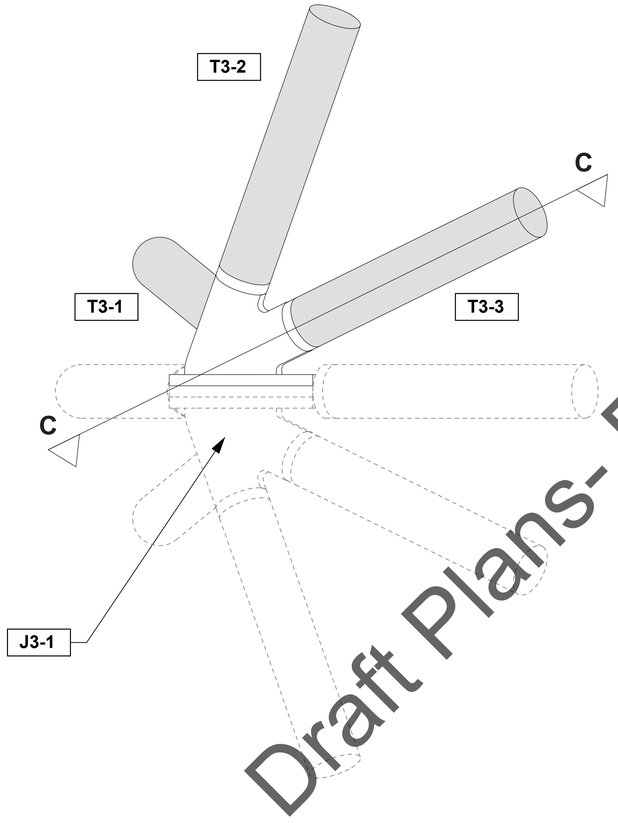
Drawing Revisions:

No.	Date	Notes

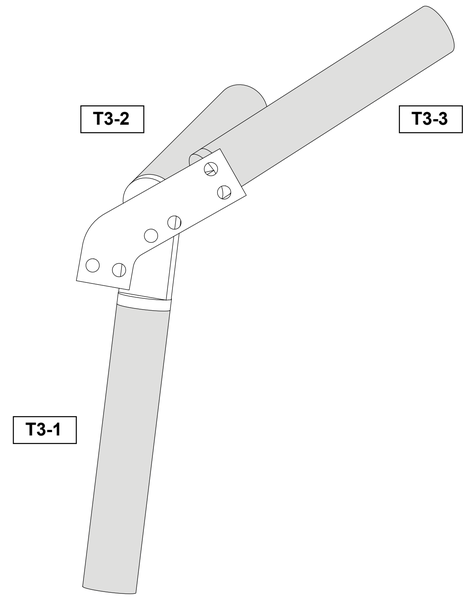
Drawn By: AZ

Joint Details
J3-1

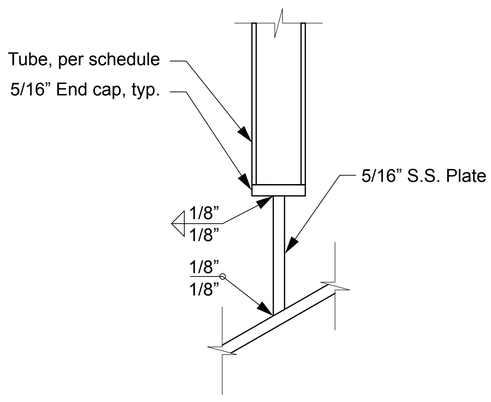
J11



A - Plan



B - Elevation



C - Connection Detail 1

Joints (J3-1 & J3-2) are mirror images of each other.

Note: Plate Dimensions will be provided digitally for Water Jet Cutting.

1 Joint Details (J3-2)

Scale: 6” = 1’- 0”

August 29, 2023

Air Sanctuary

Beyer Park Development
San Diego, CA

Project No. 1038226

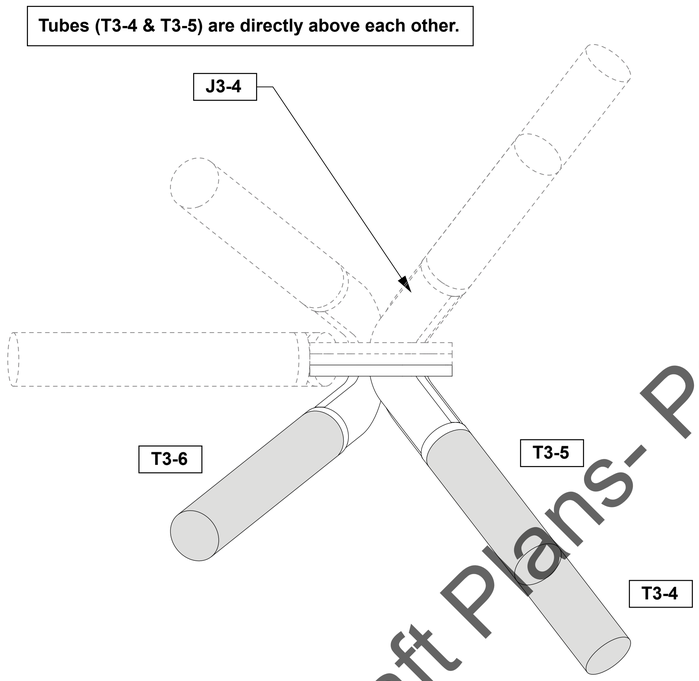
Drawing Revisions:

No.	Date	Notes

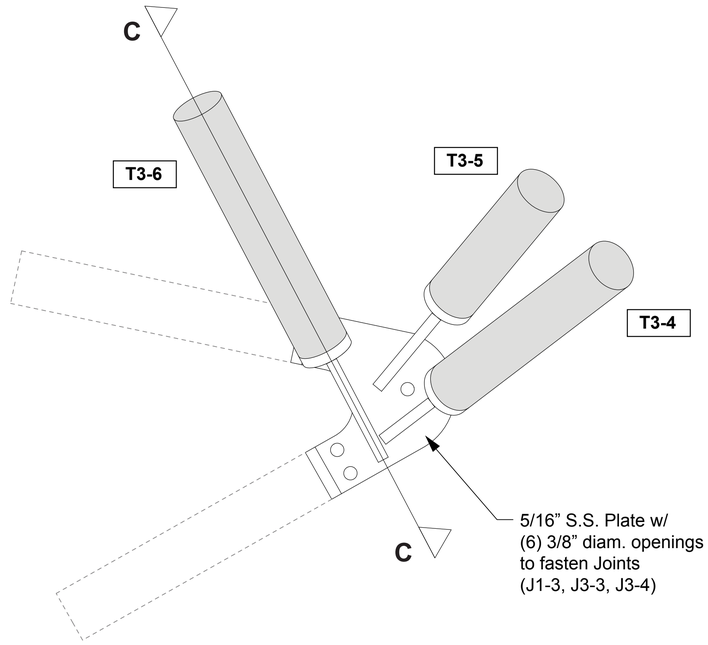
Drawn By: AZ

Joint Details
J3-2

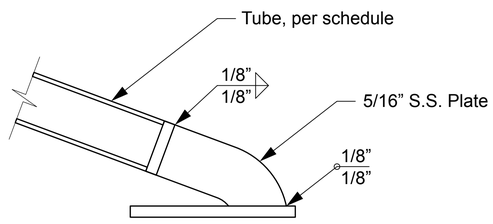
J12



A - Plan



B - Elevation



C - Connection Detail 1

Joints (J3-3 & J3-4) are mirror images of each other.

Note: Plate Dimensions will be provided digitally for Water Jet Cutting.

1 Joint Details (J3-3)

Scale: 6” = 1’- 0”

August 29, 2023

Air Sanctuary

Beyer Park Development
San Diego, CA

Project No. 1038226

Drawing Revisions:

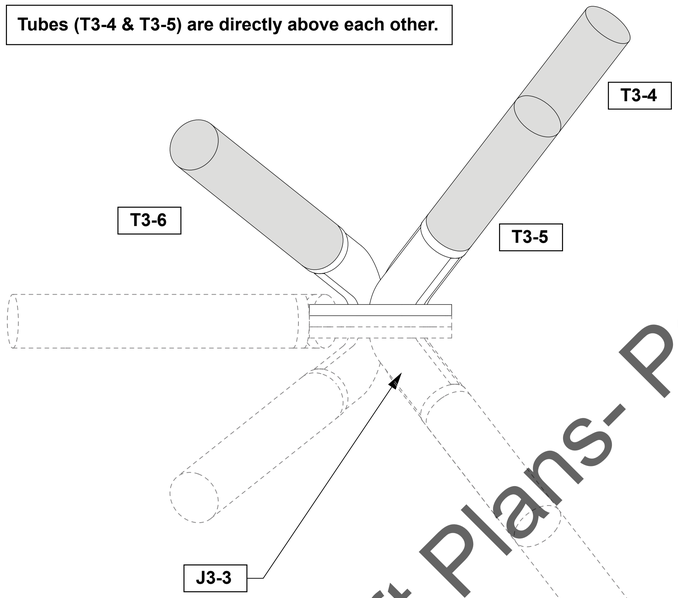
No.	Date	Notes

Drawn By: AZ

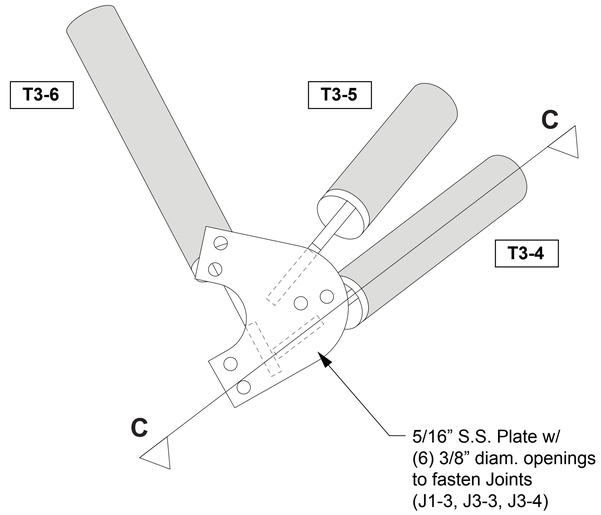
Joint Details
J3-3

J13

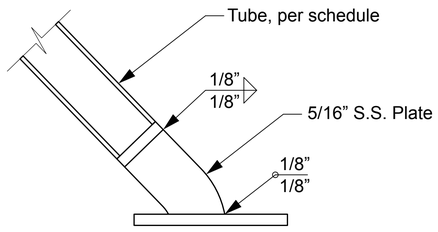
August 29, 2023



A - Plan



B - Elevation



C - Connection Detail 1

Joints (J3-3 & J3-4) are mirror images of each other.

Note: Plate Dimensions will be provided digitally for Water Jet Cutting.

1 Joint Details (J3-4)

Scale: 6” = 1’- 0”

Air Sanctuary

Beyer Park Development
San Diego, CA

Project No. 1038226

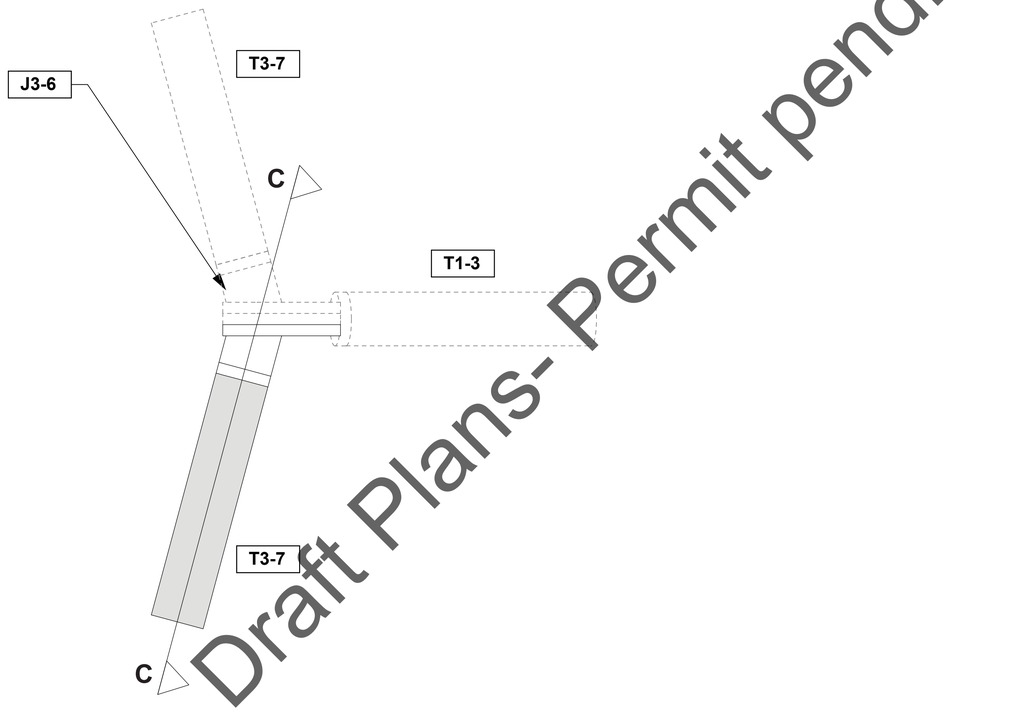
Drawing Revisions:

No.	Date	Notes

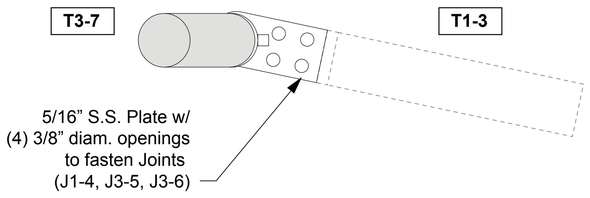
Drawn By: AZ

Joint Details
J3-4

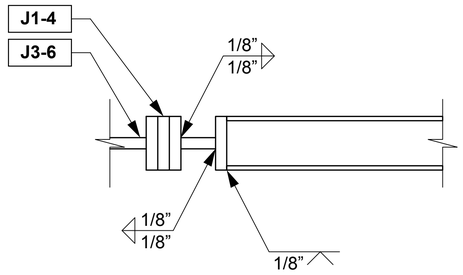
J14



A - Plan



B - Elevation



C - Connection Detail 1

Joints (J3-5 & J3-6) are mirror images of each other.

Note: Plate Dimensions will be provided digitally for Water Jet Cutting.

1 Joint Details (J3-5)

Scale: 6” = 1’- 0”

August 29, 2023

Air Sanctuary

Beyer Park Development
San Diego, CA

Project No. 1038226

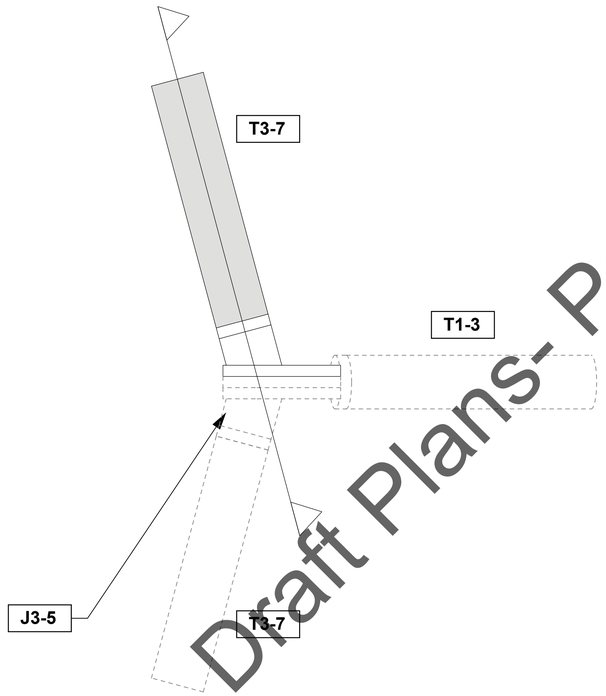
Drawing Revisions:

No.	Date	Notes

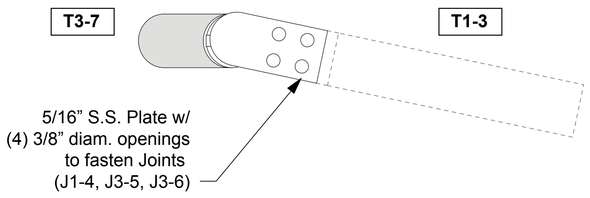
Drawn By: AZ

Joint Details
J3-5

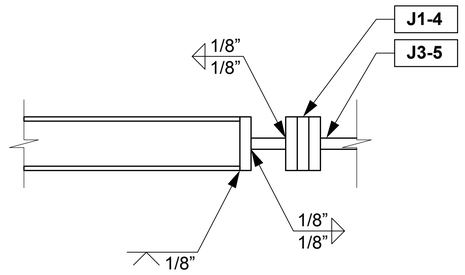
J15



A - Plan



B - Elevation



C - Connection Detail 1

Joints (J3-5 & J3-6) are mirror images of each other.

Note: Plate Dimensions will be provided digitally for Water Jet Cutting.

1 Joint Details (J3-6)

Scale: 6” = 1’- 0”

August 29, 2023

Air Sanctuary

Beyer Park Development
San Diego, CA

Project No. 1038226

Drawing Revisions:

No.	Date	Notes

Drawn By: AZ

Joint Details
J3-6

J16

STRUCTURAL - GENERAL NOTES

GENERAL REQUIREMENTS

GOVERNING CODE: The design and construction of this project is governed by the **"California Building Code (CBC)", 2022 Edition**, hereafter referred to as the CBC, as adopted and modified by the City of **San Diego, CA** understood to be the Authority Having Jurisdiction (AHJ).

REFERENCE STANDARDS: Refer to Chapter 35 of 2022 CBC. Where other Standards are noted in the drawings, use the latest edition of the standard unless a specific date is indicated. Reference to a specific section in a code does not relieve the contractor from compliance with the entire standard.

DEFINITIONS: The following definitions cover the meanings of certain terms used in these notes:

(1) "**Architect/Engineer**" – The Architect of Record and the Structural Engineer of Record.

(2) "**Structural Engineer of Record**" **(SER)** – The structural engineer who is licensed to stamp & sign the structural documents for the project.

(3) "**Submit for review**" - Submit to the Architect/SER for review prior to fabrication or construction.

(4) "**Per Plan**" – Indicates references to the structural plans, elevations and structural general notes.

OTHER DRAWINGS: Refer to the architectural, mechanical, electrical, civil and plumbing drawings for additional information including but not limited to dimensions, elevations, slopes, finishes, drains, waterproofing, and other nonstructural items.

STRUCTURAL DETAILS: The structural drawings are intended to show the general character and extent of the project and are not intended to show all details of the work. Use entire detail sheets and specific details referenced in the plans as "typical" wherever they apply. Similarly, use details on entire sheets with "typical" in the name wherever they apply.

STRUCTURAL RESPONSIBILITIES: The structural engineer (SER) is responsible for the strength and stability of the foundation structure in its completed form.

COORDINATION: The Contractor is responsible for coordinating details and accuracy of the work; for confirming and correlating all quantities and dimensions; for selecting fabrication processes; for techniques of assembly; and for performing work in a safe and secure manner.

NEW CONSTRUCTION: The contractor shall remove all interfering items for new construction and shall repair or replace all removed items to match the existing conditions in accordance with the architectural drawings. New construction elements shall be designed and installed per current California Building Code 2022, hereafter referred to as CBC as allowed by IEBC.

MEANS, METHODS and SAFETY REQUIREMENTS: The contractor is responsible for the means and methods of construction and all job-related safety standards such as OSHA and DOSH (Department of Occupational Safety and Health. The contractor is responsible for means and methods of construction related to the intermediate structural conditions (i.e., movement of the structure due to moisture and thermal effects; construction sequence; temporary bracing, etc.).

CONSTRUCTION LOADS: Loads on the structure during construction shall not exceed the design loads as noted in DESIGN CRITERIA & LOADS below or the capacity of partially completed construction as determined by the Contractor's SSE for Bracing/Shoring.

CHANGES IN LOADING: The contractor has the responsibility to notify the SER of any architectural, mechanical, electrical, or plumbing load imposed onto the structure that differs from, or that is not documented on the original Contract Documents (architectural / structural / mechanical / electrical or plumbing drawings). Provide documentation of location, load, size and anchorage of all undocumented loads in excess of **400** pounds. Provide marked-up structural plan indicating locations of any new equipment or loads. Submit plans to the Architect/Engineer for review prior to installation.

NOTE PRIORITIES: Plan and detail notes and specific loading data provided on individual plans and detail drawings supplements information in the Structural General Notes.

DISCREPANCIES: In case of discrepancies between the General Notes, Specifications, Plans/Details or Reference Standards, the Architect/Engineer shall determine which shall govern. Discrepancies shall be brought to the attention of the Architect/Engineer before proceeding with the work. Should any discrepancy be found in the Contract Documents, the Contractor will be deemed to have included in the price the most expensive way of completing the work, unless prior to the submission of the price, the Contractor asks for a decision from the Architect as to which shall govern. Accordingly, any conflict in or between the Contract Documents shall not be a basis for adjustment in the Contract Price.

SITE VERIFICATION: The contractor shall verify all dimensions and conditions at the site. Conflicts between the drawings and actual site conditions shall be brought to the attention of the Architect/Engineer before proceeding with the work.

ALTERNATES: Alternate products of similar strength, nature and form for specified items may be submitted with adequate technical documentation (proper test report, etc.) to the Architect/Engineer for review. Alternate materials that are submitted without adequate technical documentation or that significantly deviate from the design intent of materials specified may be returned without review. Alternates that require substantial effort to review will not be reviewed unless authorized by the Owner.

DESIGN CRITERIA AND LOADS

OCCUPANCY:	Risk Category of Building per 2022 CBC Table 1604.5 =	II

WIND DESIGN:	**MAIN WIND FORCE RESISTING SYSTEM**	
	Ultimate Design Wind Speed, V_{ULT} (MPH)	**97**
	Exposure Category	**C**
	Internal Pressure Coefficient **Cpi =**	**+/- 0.18**
	Topographic Factor **Kzt =**	**1.0**
	Wind Analysis procedure used:	**Directional**

SEISMIC DESIGN:	**Seismic Design Category: SDC =**	**D**
	Tenant Improvement Site Classification per CBC 1613.3.2 & ASCE 7-16, Ch. 20 **Site Class =**	**D**
	Seismic Importance Factor per ASCE 7-16 Table 1.5-2 **Ie =**	**1.0**
	Spectral Response Acceleration (Short Period) **S_s =**	**0.903 g**
	Spectral Response Acceleration (1-Second Period) **S_1 =**	**0.316g**
	Spectral Design Response Coefficient (Short Period) **S_{DS} =**	**0.722 g**

SUBMITTALS

SUBMIT FOR REVIEW: SUBMITTALS of shop drawings and product data are required for items noted in the individual materials sections and for *bidder designed* elements.

SUBMITTAL REVIEW PERIOD: Submittals shall be made in time to provide a minimum of TWO WEEKS or 10 WORKING DAYS for review by the Architect/Engineer prior to the onset of fabrication.

GENERAL CONTRACTOR'S PRIOR REVIEW: Prior to submission to the Architect/Engineer, the Contractor shall review the submittal for completeness. Dimensions and quantities are not reviewed by the SER, and therefore, must be verified by the General Contractor. Contractor shall provide any necessary dimensional details requested by the Detailer and provide the Contractor's review stamp and signature before forwarding to the Architect/ Engineer.

SHOP DRAWING REVIEW: Once the contractor has completed their review, the SER will review the submittal for general conformance with the design concept and the contract documents of the building and will stamp the submittal accordingly. Markings or comments shall not be construed as relieving the contractor from compliance with the project plans and specifications, nor departures there from. The SER will return submittals in the form they are submitted in (either hard copy or electronic). For hard copy submittals, the contractor is responsible for submitting the required number of copies to the SER for review.

SHOP DRAWING DEVIATIONS: When shop drawings (component design drawings) differ from or add to the requirements of the structural drawings they shall be designed and stamped by the responsible SSE.

INSPECTIONS, QUALITY ASSURANCE VERIFICATIONS AND TEST REQUIREMENTS

INSPECTIONS: Foundations, footings, under slab systems and framing are subject to inspection by the Building Official in accordance with CBC 110.3. Contractor shall coordinate all required inspections with the Building Official.

SPECIAL INSPECTIONS, VERIFICATIONS and TESTS: Special Inspections, Verifications and Testing shall be done in accordance with CBC Chapter 17, the STATEMENT AND SCHEDULES OF SPECIAL INSPECTIONS listed in these drawings, and the AHJ STATEMENT OF SPECIAL INSPECTION and/or STATEMENT OF STRUCTURAL OBSERVATIONS.

Structural Observation for this project is not required per CBC Section 1704.6.

CONTRACTOR RESPONSIBILITY: Prior to issuance of the building permit, the Contractor is required to provide the Authority Having Jurisdiction a signed, written acknowledgement of the Contractor's responsibilities associated with the above Statement of Special Inspections addressing the requirements listed in CBC Section 1704.4.

CAST-IN-PLACE CONCRETE

REFERENCE STANDARDS: Conform to:
(1) ACI 301-20 "Specifications for Structural Concrete"
(2) CBC Chapter 19 "Concrete"
(3) ACI 318-19 "Building Code Requirements for Structural Concrete"
(4) ACI 117-10 "Specifications for Tolerances for Concrete Construction and Materials"

FIELD REFERENCE: The contractor shall keep a copy of ACI Field Reference manual, SP-15, "Standard Specifications for Structural Concrete (ACI 301) with Selected ACI and ASTM References."

CONCRETE MIXTURES: Conform to ACI 301 Section 4 "Concrete Mixtures" and CBC Section 1904.1.

MATERIALS: Conform to ACI 301 Section 4.2.1 "Materials" for requirements for cementitious materials, aggregates, mixing water and admixtures.

SUBMITTALS: Provide all submittals required by ACI 301 Section 4.1.2. Submit mix designs for each mix in the table below. Substantiating strength results from past tests shall not be older than 24 months per ACI 318 Section 26.4.3.1 (b).

TABLE OF MIX DESIGN REQUIREMENTS

Member Type/Location	Strength f'c (psi)	Test Age (days)	Nominal Maximum Aggregate	Exposure Class	Max W/C Ratio	Air Content	Notes (1 to 8 Typical UNO)
Footing/Stem Walls	4000	56	1"	F1	0.55	–	-

Table of Mix Design Requirements Notes:

(1) W/C Ratio: Water–cementitious material ratios shall be based on the total weight of cementitious materials. Maximum ratios are controlled by strength noted in the Table of Mix Design Requirements and durability requirements given in ACI 318 Section 19.3.

(2) Cementitious Materials:
a. DCI encourages the reduction of cement content and/or the use of blended hydraulic cements. Where requirements of this section prohibit inclusion of any of these mixes, contact DCI for further coordination.
b. The use of fly ash, other pozzolans, silica fume, or slag shall conform to ACI 318 Sections 19.3.2 and 26.4.2.2.
c. For concrete used in elevated floors, minimum cementitious-materials content shall conform to ACI 301 Table 4.2.1.1.(b) Acceptance of lower cement content is contingent on providing supporting data to the SER for review and acceptance.
d. Cementitious materials shall conform to the relevant ASTM standards listed in ACI 318 Section 26.4.1.1.1(a).

(3) Air Content: Conform to ACI 318 Section 19.3.3.1. Minimum standards for exposure class are noted in the table. If freezing and thawing class is not noted, air content given is that required by the SER. Tolerance is ±1-½%. Air content shall be measured at point of placement.

(4) Aggregates shall conform to ASTM C33.

(5) Slump: Conform to ACI 301 Section 4.2.2.1. Slump shall be determined at point of placement.

(6) Chloride Content: Conform to ACI 318 Table 19.3.2.1.

(7) Non- chloride accelerator: Non-chloride accelerating admixture may be used in concrete placed at ambient temperatures below 50°F at the contractor's option.

(8) ACI 318, Section 19.3.1.1 exposure classes shall be assumed to be [F0], [S0], [W0], and [C0] unless different exposure classes are listed in the Table of Mix Design Requirements that modify these base requirements.

MEASURING, MIXING, AND DELIVERY: Conform to ACI 301 Section 4.3.

HANDLING, PLACING, CONSTRUCTING AND CURING: Conform to ACI 301 Section 5. In addition, hot weather concreting shall conform to ACI 305R-20 and cold weather concreting shall conform to ACI 306R-16.

EMBEDDED ITEMS: Position and secure in place expansion joint material, anchors and other structural and non-structural embedded items before placing concrete. Contractor shall refer to mechanical, electrical, plumbing and architectural drawings and coordinate other embedded items.

POST-INSTALLED ANCHORS to CONCRETE: Anchor location, type, diameter and embedment shall be as indicated on drawings. Reference the POST INSTALLED ANCHORS section for applicable Post-Installed Anchor Adhesives. Anchors shall be installed and inspected in strict accordance with the applicable ICC-Evaluation Service Report (ESR). Special inspection shall be per the TESTS and INSPECTIONS section.

BONDING AGENT: Use MasterEmaco ADH 326. Apply in accordance with manufacturer's instructions.

SHRINKAGE: Conventional and post-tensioned concrete slabs will continue to shrink after initial placement and stressing of concrete. Contractor and subcontractor shall coordinate jointing and interior material finishes to provide adequate tolerance for expected structural frame shrinkage and shall include, but not be limited to curtain wall, dryvit, storefront, skylight, floor finish, and ceiling suppliers. Contact Engineer for expected range of shrinkage.

STRENGTH TESTING AND ACCEPTANCE:

Testing: Obtain samples and conduct tests in accordance with ACI 301 Section 1.7.3.3. Additional samples may be required to obtain concrete strengths at alternate intervals than shown below.
(1) Cure 4 cylinders for 28-day test age. Test 1 cylinder at 7 days, test 2 cylinders at 28 days, and hold 1 cylinder in reserve for use as the Engineer directs. After 56 days, unless notified by the Engineer to the contrary, the reserve cylinder may be discarded without being tested for specimens meeting 28-day strength requirements.

(2) The number of cylinders indicated above reference 6 by 12 in cylinders. If 4 by 8 in cylinders are to be used, additional cylinders must be cured for testing of 3 cylinders at test age per the table of mix design requirements.

Acceptance. Strength is satisfactory when:

(1) The averages of all sets of 3 consecutive tests equal or exceed the specified strength.

(2) No individual test falls below the specified strength by more than 500 psi.

A "test" for acceptance is the average strength of two 6 by 12 in. cylinders or three 4 by 8 in. cylinders tested at the specified test age.

CONCRETE PLACEMENT TOLERANCE: Conform to ACI 117-10 for concrete placement tolerance.

CONCRETE REINFORCEMENT

REFERENCE STANDARDS: Conform to:
(1) ACI 301-20 "Standard Specifications for Structural Concrete", Section 3 "Reinforcement and Reinforcement Supports."
(2) ACI SP-66(04) "ACI Detailing Manual"
(3) CRSI MSP-09, 28th Edition, "Manual of Standard Practice."
(4) ANSI/AWS D1.4; 2005, "Structural Welding Code - Reinforcing Steel."
(5) CBC Chapter 19-Concrete.
(6) ACI 318-19 "Building Code Requirements for Structural Concrete."
(7) ACI 117-10 "Specifications for Tolerances for Concrete Construction and Materials"

SUBMITTALS: Conform to ACI 301 Section 3.1.2 "Submittals." Submit placing drawings showing fabrication dimensions and placement locations of reinforcement and reinforcement supports.

MATERIALS:
- Reinforcing Bars ....ASTM A615, Grade 60, deformed bars.
  ASTM A706, Grade 60, deformed bars.
- Smooth Welded Wire Fabric ....ASTM A1064
- Deformed Welded Wire Fabric.........ASTM A1064
- Bar Supports ....CRSI MSP-09, Chapter 3 "Bar Supports."
- Tie Wire...........................16 gage or heavier, black annealed.
- Headed Deformed Bars ....ASTM A970

FABRICATION: Conform to ACI 301, Section 3.2.2. "Fabrication", and ACI SP-66 "ACI Detailing Manual."

WELDING: Bars shall not be welded unless authorized. When authorized, conform to ACI 301, Section 3.2.2.2. "Welding", AWS D1.4, and provide ASTM A706, grade 60 reinforcement.

PLACING: Conform to ACI 301, Section 3.3.2 "Placing." Placing tolerances shall conform to ACI 117.

CONCRETE COVER: Conform to the following cover requirements unless noted otherwise in the drawings.
- Concrete cast against earth .... 3"
- Concrete exposed to earth or weather ...... 2"
- Ties in columns and beams .... 1-½"
- Bars in slabs.......................¾"
- Bars in walls ....¾"
- Exterior bars in Tilt-up Panels...........1"

SPLICES: Conform to ACI 301, Section 3.3.2.7, "Splices". Refer to "Typical Lap Splice and Development Length Schedule" for typical reinforcement splices. Splices indicated on individual sheets shall control over the schedule. Mechanical connections may be used when approved by the SER.

FIELD BENDING: Conform to ACI 301 Section 3.3.2.8. "Field Bending or Straightening." Bar sizes #3 through #5 may be field bent cold the first time. Subsequent bends and other bar sizes require preheating. Do not twist bars. Bars shall not be bent past 45 degrees.

TYPICAL CONCRETE REINFORCEMENT: Unless noted on the plans, concrete walls shall have the following minimum reinforcement. Contractor shall confirm minimum reinforcement of walls with SER prior to rebar fabrication.

TABLE of MINIMUM CONCRETE WALL REINFORCING

Wall Thickness	HORIZONTAL Bars	VERTICAL Bars	Location
6"	#4 @ 12" OC	#4 @ 12" OC	center in wall
8"	#5 @ 12" OC	#5 @ 12" OC	center in wall
10"	#4 @ 16" OC EF	#4 @ 16" OC EF	EF = each face
12"	#4 @ 12" OC EF	#4 @ 12" OC EF	EF = each face

POST-INSTALLED ANCHORS (INTO CONCRETE)

REFERENCE STANDARDS: Conform to:
(1) CBC Chapter 19 "Concrete"
(2) ACI 318-19 "Building Code Requirements for Structural Concrete"

POST-INSTALLED ANCHORS: Install only where specifically shown in the details or allowed by SER. All post-Installed anchors types and locations shall be approved by the SER and shall have a current ICC-Evaluation Service Report that provides relevant design values necessary to validate the available strength exceeds the required strength. Submit current manufacturer's data and ICC ESR report to SER for approval regardless of whether or not it is a pre-approved anchor. Anchors shall be installed in strict accordance with ICC-ESR and the manufacturer's printed installation instructions (MPII) in conjunction with edge distance, spacing and embedment depth as indicated on the drawings. The contractor shall arrange for a manufacturer's field representative to provide installation training for all products to be used, prior to the commencement of work. Only trained installer shall perform post installed anchor installation. A record of training shall be kept on site and be made available to the SER as requested. Adhesive anchors installed in horizontally or upwardly inclined orientation shall be performed by a certified adhesive anchor installer (AAI) as certified through ACI/CRSI or approved equivalent. Proof of current certification shall be submitted to the engineer for approval prior to commencement of installation. No reinforcing bars shall be damaged during installation of post-installed anchors. Special inspection shall be per the TESTS and INSPECTIONS section. Anchor type, diameter and embedment shall be as indicated on drawings.

(1) SCREW ANCHORS: The following Screw type anchor is pre-approved for anchorage to CONCRETE or MASONRY in accordance with corresponding current ICC ESR report:
a. HILTI "KH-EZ" – ICC ESR-3027 for anchorage to CONCRETE

PREPARED BY:

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CIVIL / STRUCTURAL

SIGNATURE:

REGISTERED PROFESSIONAL ENGINEER
JONATHAN M. PARK
S6473
Exp. 12/31/24
STRUCTURAL
STATE OF CALIFORNIA

REVISIONS:
NO. DATE DESCRIPTION

APPROVALS:
Job No.: 23051-0044
Proj. Manager: Designer
Drawn: Author
Reviewed: Approver
Dwg. Chk. Checker
Date: 08/28/23
Scale: AS NOTED

PROJECT TITLE:
BEYER PARK
BEYER BLVD
SAN DIEGO, CA 92173

SHEET TITLE:
GENERAL NOTES

SHEET NO.
S1

8/29/2023 11:53:08 AM C:_localrevit\STRUCT 23051-0044 R2023_natkins01.rvt

SPECIAL INSPECTIONS

The following Statement and Schedules of Inspections are those Special Inspections and Tests that shall be performed for this project. Special Inspectors shall reference these plans and CBC Chapter 17 for all special inspection requirements.
The owner shall retain an "approved agency" per CBC 1703 to provide special inspections for this project. Special Inspectors shall be qualified persons per CBC 1704.2.1.
Special inspection reports shall be provided on a weekly basis. Submit copies of all inspection reports to the Architect/Engineer and the Authority Having Jurisdiction for review. In addition to special inspection reports and tests, submit reports and certificates noted in CBC 1704.5 to the Authority Having Jurisdiction. Final special inspection reports will be required by each special inspection firm per CBC 1704.2.4.

STATEMENT OF SPECIAL INSPECTIONS:

This statement of Special Inspections has been written with the understanding that the Building Official will:

- **Review and approve the qualifications of the Special Inspectors**
- **Monitor the special inspection activity on the project site to assure that Special Inspectors are qualified and performing their duty as state within this statement.**
- **Review all Special Inspection Reports submitted to them by the Special Inspector**
- **Perform inspections as required by CBC Section 110.3.**

POST-INSTALLED ANCHORS TO CONCRETE AND MASONRY: shall comply with CBC Section 1703. Inspections shall be in accordance with the requirements set forth in the approved ICC Evaluation Report and as indicated by the design requirements specified on the drawings. Refer to the POST INSTALLED ANCHORS section of these notes for anchors that are the basis of the design. Special inspector shall verify anchors are as specified in the POST INSTALLED ANCHORS section of these notes or as otherwise specified on the drawings. Substitutions require approval by the SER and require substantiating calculations and current 2022 CBC recognized ICC Evaluation Services (ES) Report. Special Inspector shall document in their Special Inspection Report compliance with each of the elements required within the applicable ICC Evaluation Services (ES) Report.

PREFABRICATED CONSTRUCTION: All prefabricated construction shall conform to CBC Section 1703.

SCHEDULES OF SPECIAL INSPECTIONS:

TABLE 1705.3 - REQUIRED SPECIAL INSPECTIONS AND TESTS OF CONCRETE CONSTRUCTION

TYPE	CONTINUOUS SPECIAL INSPECTION	PERIODIC SPECIAL INSPECTION	REFERENCED STANDARD	CBC REFERENCE
1. Inspection, reinforcement and verify placement.	-	X	ACI 318 Ch. 20, 25.2, 25.3, 26.6.1-26.6.3	-
2. Inspect anchors cast in concrete	-	X	ACI 318: 17.8.2	-
3. Inspect anchors post-installed in hardened concrete members: a. Adhesive anchors installed in horizontally or upwardly inclined orientations to resist sustained tension loads	X	-	ACI 318: 17.8.2.4	-
b. Mechanical anchors and adhesive anchors not defined in 4.a	-	X	ACI 318: 17.8.2	
4. Verify use of required design mix	-	X	ACI 318: Ch. 19, 26.4.3, 26.4.4	1904.1, 1904.2
5. Prior to concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete	X	-	ASTM C172 ASTM C31 ACI 318: 26.5, 26.12	-
6. Verify maintenance of specified curing temperature and techniques	-	X	ACI 318 :26.5.3 - 26.5.5	-
7. Inspect formwork for shape, location and dimensions of the concrete member being formed	-	X	ACI 318: 26.11.1.2 (b)	-

MINIMUM REQUIREMENTS FOR INSPECTIONS OF STRUCTURAL STEEL CONSTRUCTION

O - Observe these items on a random basis. Operations need not be delayed pending these inspections
P - Perform these tasks for each welded joint or member, each bolted connection, or each steel element

INSPECTION TASKS	QC	QA	REFERENCED STANDARD
INSPECTION TASKS PRIOR TO WELDING			
1. Welder qualification records and continuity records	P	O	AISC 360 TABLE N5.4-1
2. Material identification (type/grade)	O	O	AISC 360 TABLE N5.4-1
3. Welder Identification system	O	O	AISC 360 TABLE N5.4-1
4. Fit-up of groove welds (including joint geometry) • Joint preparation • Dimensions (alignment, root opening, root face, bevel) • Cleanliness (condition of steel surfaces) • Tacking (tack welding quality and location) • Backing type and fit (if applicable)	O	O	AISC 360 TABLE N5.4-1
5. Configuration and finish of access holes	O	O	AISC 360 TABLE N5.4-1
6. Fit-up of fillet welds • Dimensions (alignment, gaps at root) • Cleanliness (condition of steel surfaces) • Tacking (tack weld quality and location)	O	O	AISC 360 TABLE N5.4-1
7. Check welding equipment	O	-	AISC 360 TABLE N5.4-1
INSPECTION TASKS DURING WELDING			
1. Use of qualified welders	O	O	AISC 360 TABLE N5.4-2
2. Control and handling of welding consumables • Packaging • Exposure control	O	O	AISC 360 TABLE N5.4-2
3. No welding over cracked tack welds	O	O	AISC 360 TABLE N5.4-2
4. Environmental conditions • Wind speed within limits • Precipitation and temperature	O	O	AISC 360 TABLE N5.4-2
5. WPS followed • Settings on welding equipment • Travel speed • Selected welding materials • Shielding gas type/flowrate • Preheat applied • Interpass temperature maintained (min/max) • Proper position (F, V, H, OH)	O	O	AISC 360 TABLE N5.4-2
6. Welding techniques • Interpass and final cleaning • Each pass within profile limitations • Each pass meets quality requirements	O	O	AISC 360 TABLE N5.4-2
INSPECTION TASKS AFTER WELDING			
1. Welds cleaned	O	O	AISC 360 TABLE N5.4-3
2. Size, length, and locations of welds	P	P	AISC 360 TABLE N5.4-3
3. Welds meet visual acceptance criteria • Crack prohibition • Weld/base-metal fusion • Crater cross section • Weld profiles • Weld size • Undercut • Porosity	P	P	AISC 360 TABLE N5.4-3
4. Arc strikes	P	P	AISC 360 TABLE N5.4-3
5. k-area	P	P	AISC 360 TABLE N5.4-3
6. Weld access holes in rolled heavy shapes and built-up heavy shapes	P	P	AISC 360 TABLE N5.4-3
7. Backing removed and weld tabs removed (if required)	P	P	AISC 360 TABLE N5.4-3
8. Repair activities	P	P	AISC 360 TABLE N5.4-3
9. Document acceptance or rejection of welded joint or member	P	P	AISC 360 TABLE N5.4-3
10. No prohibited welds have been added without the approval of the EOR	P	P	AISC 360 TABLE N5.4-3
INSPECTION TASKS PRIOR TO BOLTING			
1. Manufacturer's certifications available for fastener materials	O	P	AISC 360 TABLE N5.6-1
2. Fasteners marked in accordance with ASTM requirements	O	O	AISC 360 TABLE N5.6-1
3. Correct fasteners selected for the joint detail (grade, type, bolt length if threads are to be excluded from shear plane)	O	O	AISC 360 TABLE N5.6-1
4. Correct bolting procedure selected for joint detail	O	O	AISC 360 TABLE N5.6-1
5. Connecting elements, including the appropriate faying surface condition and hole preparation, if specified, meet applicable requirements	O	O	AISC 360 TABLE N5.6-1
6. Pre-installation verification testing by installation personnel observed and documented for fastener assemblies and methods used.	P	O	AISC 360 TABLE N5.6-1
7. Proper storage provided for bolts, nuts, washers and other fasteners components	O	O	AISC 360 TABLE N5.6-1
INSPECTION TASKS DURING BOLTING			
1. Fastener assemblies, of suitable condition, placed in all holes and washers are positioned as required	O	O	AISC 360 TABLE N5.6-2
2. Joint brought to the snug-tight condition prior to the pre-tensioning operation	O	O	AISC 360 TABLE N5.6-2
3. Fastener component not turned by the wrench prevented from rotating	O	O	AISC 360 TABLE N5.6-2
4. Fasteners are pre-tensioned in accordance with the RCSC Specification, progressing systematically from the most rigid point toward the free edges	O	O	AISC 360-10 TABLE N5.6-2
INSPECTION TASKS AFTER BOLTING			
1. Document acceptance or rejection of bolted connections	P	P	AISC 360 TABLE N5.6-3

DRAWING LEGEND

MARK	DESCRIPTION	MARK	DESCRIPTION
F2.0	FOOTING SYMBOL (REFER TO SPREAD FOOTING SCHEDULE)		INDICATES WIDE FLANGE COLUMN
P1	PILE CAP SYMBOL (REFER TO PILE CAP SCHEDULE)		INDICATES HOLLOW STRUCTURAL SECTION (HSS) COLUMN OR TUBE STEEL (TS) COLUMN
1	TILT-UP/PRECAST CONCRETE WALL CONNECTION SYMBOL (REFER TO CONNECTION DETAIL)		INDICATES HOLLOW STRUCTURAL SECTION (HSS) COLUMN OR STEEL PIPE COLUMN
2W4	SHEAR WALL SYMBOL (REFER TO SHEAR WALL SCHEDULE)		INDICATES WOOD POST
0 RFI 00	REVISION TRIANGLE		INDICATES BUNDLED STUDS
1	TILT-UP/PRECAST CONCRETE WALL PANEL NUMBER (REFER TO TILT-UP/ PRECAST CONCRETE WALL ELEVATIONS)		INDICATES CONCRETE COLUMN
1	CMU WALL REINFORCING SYMBOL (REFER TO CMU WALL REINFORCING SCHEDULE)		INDICATES PRECAST CONCRETE COLUMN
8"	CONTINUITY PLATE LENGTH (REFER TO TYPICAL DETAIL)		INDICATES MOMENT FRAME CONNECTION
DS	INDICATES DOUBLE SHEAR CONNECTION (REFER TO THE DOUBLE SHEAR PLATE CONNECTIONS DETAIL)		INDICATES PARTIALLY RESTRAINED MOMENT FRAME CONNECTION
00TB	INDICATES REINFORCING TYPE (REFER TO THE REINFORCING SCHEDULE)		INDICATES CANTILEVER CONNECTION
SR__	INDICATES NUMBER OF STUD RAIL REQUIRED AT COLUMN (REFER TO STUD RAIL DETAILS)		INDICATES DRAG CONNECTION
1	ROOF/FLOOR DIAPHRAGM NAILING SYMBOL (REFER TO DIAPHRAGM NAILING SCHEDULE)		INDICATES A LEDGER
C1 COLUMN SIZE	STEEL/CONCRETE COLUMN SYMBOL (REFER TO STEEL COLUMN SCHEDULE)		INDICATES WOOD OR STEEL STUD BEARING WALL LINE PER KEY ON SHEET
T/FTG = X'-X"	ELEVATION SYMBOL (T/ REFERS TO COMPONENT THAT THE ELEVATION REFERENCES)	OR	INDICATES WOOD OR STEEL STUD SHEAR WALL LINE AND HOLD-DOWNS PER KEY ON SHEET
3	STUD BUBBLE (INDICATES NUMBER OF STUDS REQUIRED IF EXCEEDS NUMBER SPECIFIED IN PLAN NOTE)		INDICATES MASONRY/CMU WALL
S	INDICATES STEP IN FOOTING (REFER TO TYPICAL STEP IN FOOTING DETAIL)		INDICATES CONCRETE/TILT-UP CONCRETE WALL
X SX.X	DETAILS OR SECTION CUT (DETAIL NUMBER/SHEET NUMBER)		INDICATES BEARING WALL BELOW
00 S0.0	DETAILS OR SECTION CUT IN PLAN VIEW (DETAIL NUMBER/SHEET NUMBER)		INDICATES EXISTING WALL
XX/SXX.XX	INDICATES LOCATION OF CONCRETE WALLS, SHEAR WALLS OR BRACED FRAME ELEVATIONS		POST-TENSION DEAD END (PLAN)
	STRUCTURAL EXTENT SYMBOL SINGLE ARROW - END OF EXTENT DOUBLE ARROW - CONTINUOUS EXTENT ALONG THE ELEMENT LINE UNTIL THE ELEMENT IS INTERRUPTED		POST-TENSION STRESSING END (PLAN)
		3	POST-TENSION PROFILE (PLAN) (IN INCHES)
	INDICATES DIRECTION OF DECK SPAN		INTERMEDIATE STRESSING (PLAN)

ABBREVIATIONS

L	Angle	FB	Factory-Built	PJP	Partial Joint Penetration
AB	Anchor Bolt	FD	Floor Drain	PREFAB	Prefabricated
ADDL	Additional	FDN	Foundation	PSF	Pounds per Square Foot
ADH	Adhesive	FIN	Finish	PSI	Pounds Per Square Inch
ALT	Alternate	FLR	Floor	PSL	Parallel Strand Lumber
ARCH	Architectural	FRP	Fiberglass Reinforced Plastic	P-T	Post-Tensioned
B or BOT	Bottom	FRT	Fire Retardant Treated	PT	Pressure Treated
B/	Bottom Of	FTG	Footing	R	Radius
BLDG	Building	F/	Face of	RD	Roof Drain
BLKG	Blocking	GA	Gage	REF	Refer/Reference
BMU	Brick Masonry Unit	GALV	Galvanized	REINF	Reinforcing
BP	Baseplate	GEOTECH	Geotechnical	REQD	Required
BRBF	Buckling Restrained Braced Frame	GL	Glue Laminated Timber	RET	Retaining
		GWB	Gypsum Wall Board	SB	Site-Built
BRG	Bearing	HDR	Header	SCBF	Special Concentric Braced Frame
BTWN	Between	HF	Hem-Fir		
C	Camber	HGR	Hanger	SCHED	Schedule
CB	Castellated Beam	HD	Hold-down	SER	Structural Engineer of Record
C'BORE	Counterbore	HORIZ	Horizontal		
CL or ℄	Centerline	HP	High Point	SFRS	Seismic Force-Resisting System
CLT	Cross-Laminated Timber	HSS = TS	(Hollow Structural Section)		
CIP	Cast in Place	IBC	International Building Code	SHTHG	Sheathing
CJ	Construction or Control Joint	ID	Inside Diameter	SIM	Similar
		IE	Invert Elevation	SLBB	Short Leg Back-to-Back
CJP	Complete Joint Penetration	IF	Inside Face	SMF	Special Moment Frame
		INT	Interior	SOG	Slab on Grade
CLR	Clear	k	Kips	SP	Southern Pine
CLG	Ceiling	KSF	Kips Per Square Foot	SPEC	Specification
CMU	Concrete Masonry Unit	LF	Lineal Foot	SQ	Square
COL	Column	LL	Live Load	SR	Studrail
CONC	Concrete	LLBB	Long Leg Back-to-Back	SF	Square Foot
CONN	Connection	LLH	Long Leg Horizontal	SST	Stainless Steel
CONST	Construction	LLV	Long Leg Vertical	STAGG	Stagger/Staggered
CONT	Continuous	LP	Low Point	STD	Standard
C'SINK	Countersink	LONGIT	Longitudinal	STIFF	Stiffener
CTRD	Centered	LSL	Laminated Strand Lumber	STL	Steel
DIA	Diameter	LVL	Laminated Veneer Lumber	STRUCT	Structural
DB	Drop Beam	MAS	Masonry	SWWJ	Solid Web Wood Joist
DBA	Deformed Bar Anchor	MAX	Maximum	SYM	Symmetrical
DBL	Double	MECH	Mechanical	T	Top
DEMO	Demolish	MEP	Mechanical, Electrical, Plumbing	T/	Top Of
DEV	Development			T&B	Top & Bottom
DF	Douglas Fir	MEZZ	Mezzanine	TC AX LD	Top Chord Axial Load
DIAG	Diagonal	MFR	Manufacturer	TCX	Top Chord Extension
DIST	Distributed	MIN	Minimum	TDS	Tie Down System
DL	Dead Load	MISC	Miscellaneous	T&G	Tongue & Groove
DN	Down	NIC	Not In Contract	THKND	Thickened
DO	Ditto	NLT	Nail-Laminated Timber	THRD	Threaded
DP	Depth/Deep	NTS	Not To Scale	THRU	Through
DWG	Drawing	OC	On Center	TRANSV	Transverse
(E)	Existing	OCBF	Ordinary Concentric Braced Frame	TYP	Typical
EA	Each			UNO	Unless Noted Otherwise
EF	Each Face	OD	Outside Diameter	URM	Unreinforced Masonry Unit
EL	Elevation	OF	Outside Face		
ELEC	Electrical	OPNG	Opening	VERT	Vertical
ELEV	Elevator	OPP	Opposite	W	Wide
EMBED	Embedment	OWSJ	Open Web Steel Joist	W/	With
EQ	Equal	OWWJ	Open Web Wood Joist	W/O	Without
EQUIP	Equipment	PL	Plate	WHS	Welded Headed Stud
EW	Each Way	PAF	Powder Actuated Fastener	WP	Working Point
EXP	Expansion	PC	Precast	WWF	Welded Wire Fabric
EXP JT	Expansion Joint	PERP	Perpendicular	±	Plus or Minus
EXT	Exterior	PLWD	Plywood		

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SIGNATURE:
REGISTERED PROFESSIONAL ENGINEER
JONATHAN M. C...
S6473
Exp. 12/31/24
STRUCTURAL
STATE OF CALIFORNIA

REVISIONS:
NO. DATE DESCRIPTION

APPROVALS:
Job No.: 23051-0044
Proj. Manager: Designer
Drawn: Author
Reviewed: Approver
Dwg. Chk.: Checker
Date: 08/28/23
Scale: AS NOTED

PROJECT TITLE:
BEYER PARK
BEYER BLVD
SAN DIEGO, CA 92173

SHEET TITLE:
SPECAIL INSPECTIONS

SHEET NO.
S2

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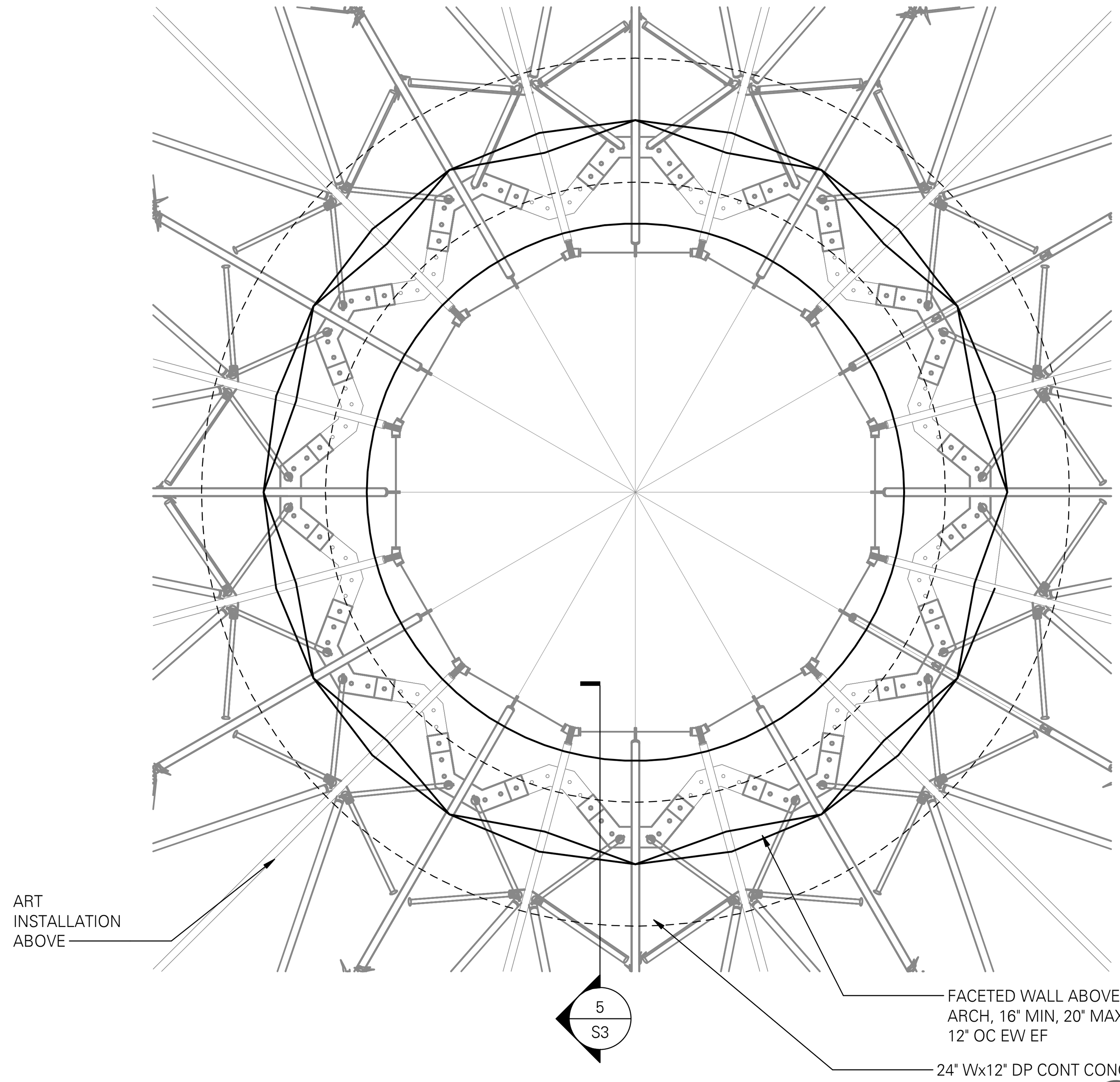
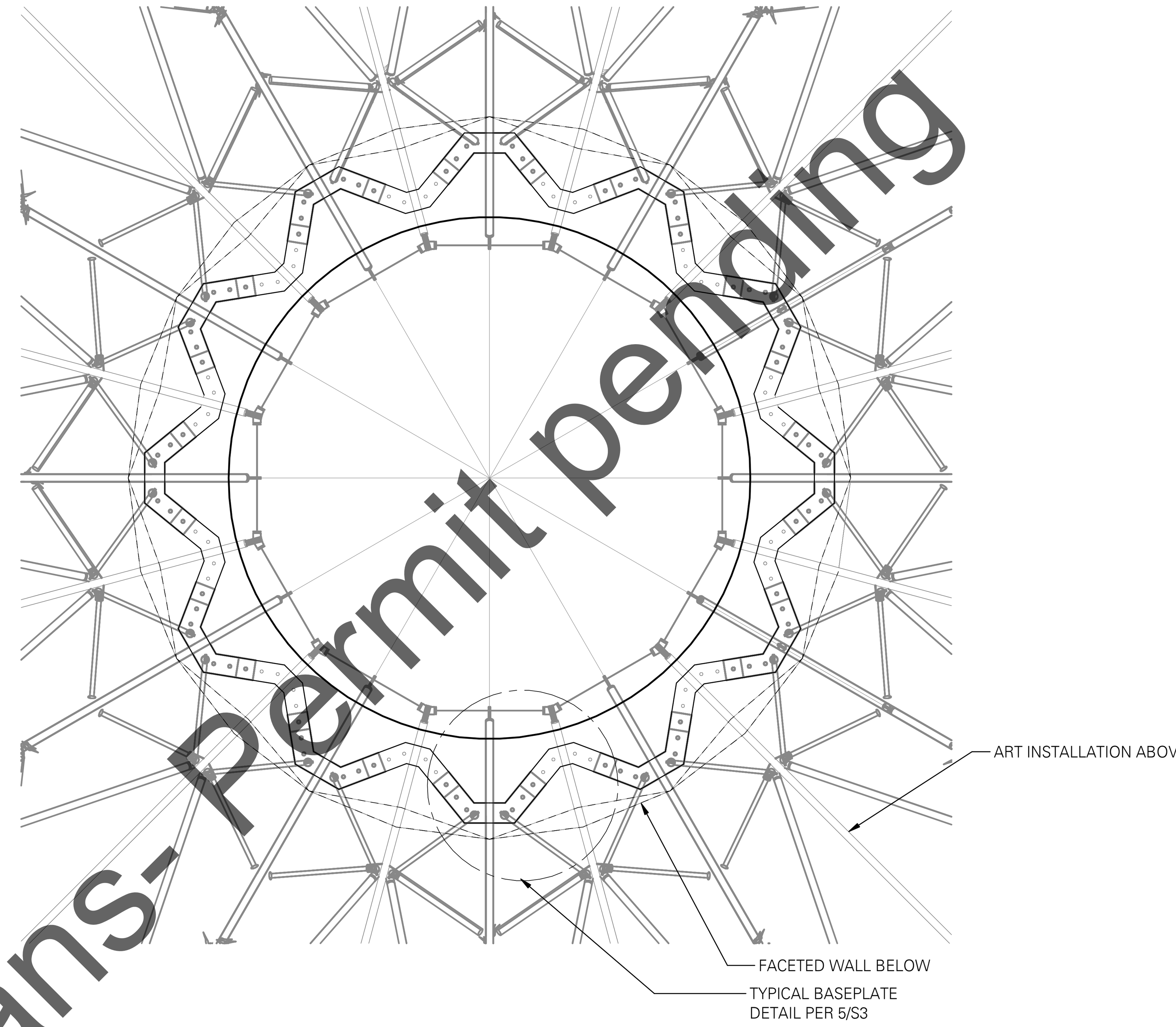


1 FOUNDATION PLAN

SCALE: 1/2" = 1'-0"



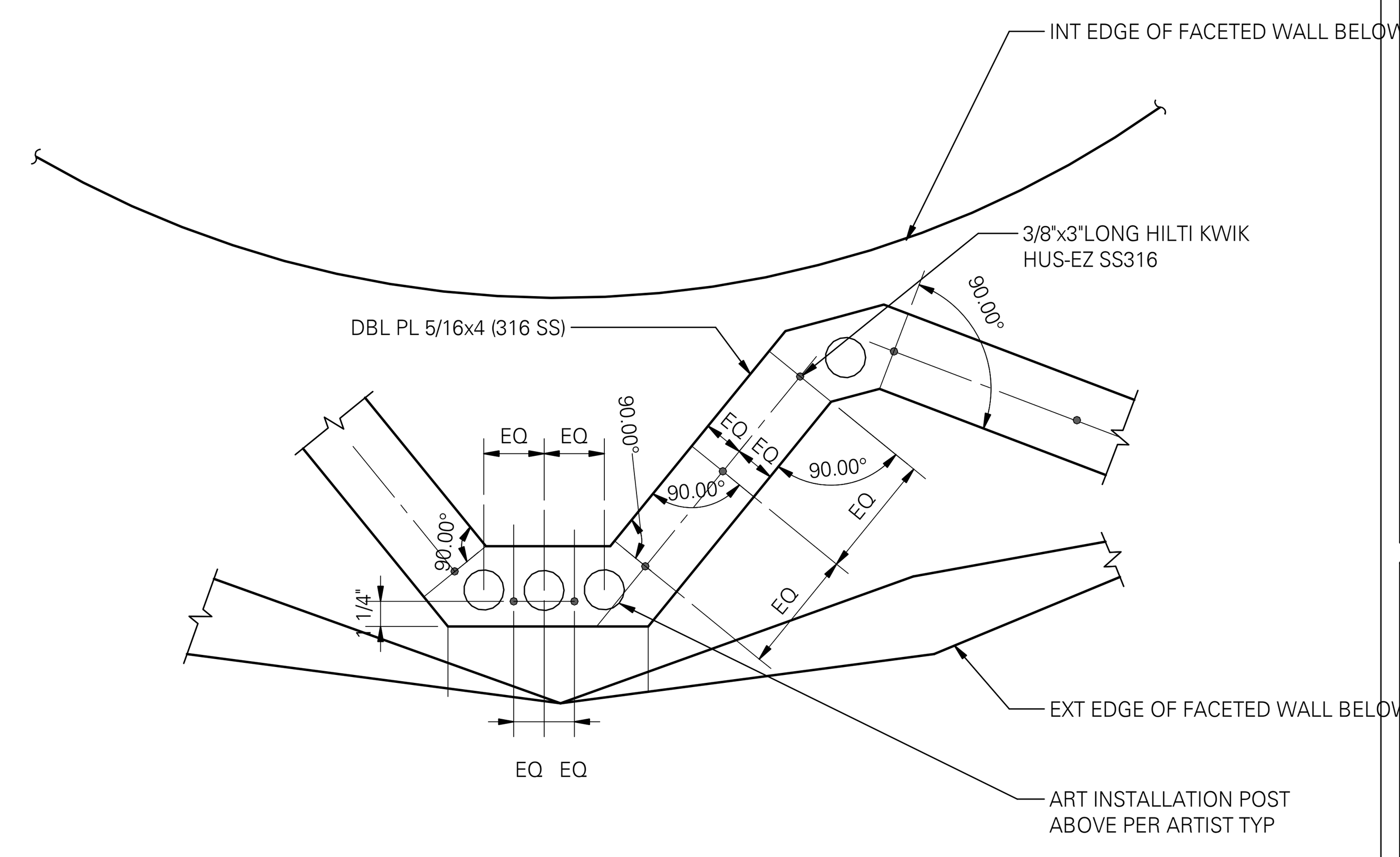
2 BASEPLATE PLAN

SCALE: 1/2" = 1'-0"

FOUNDATION PLAN NOTES:

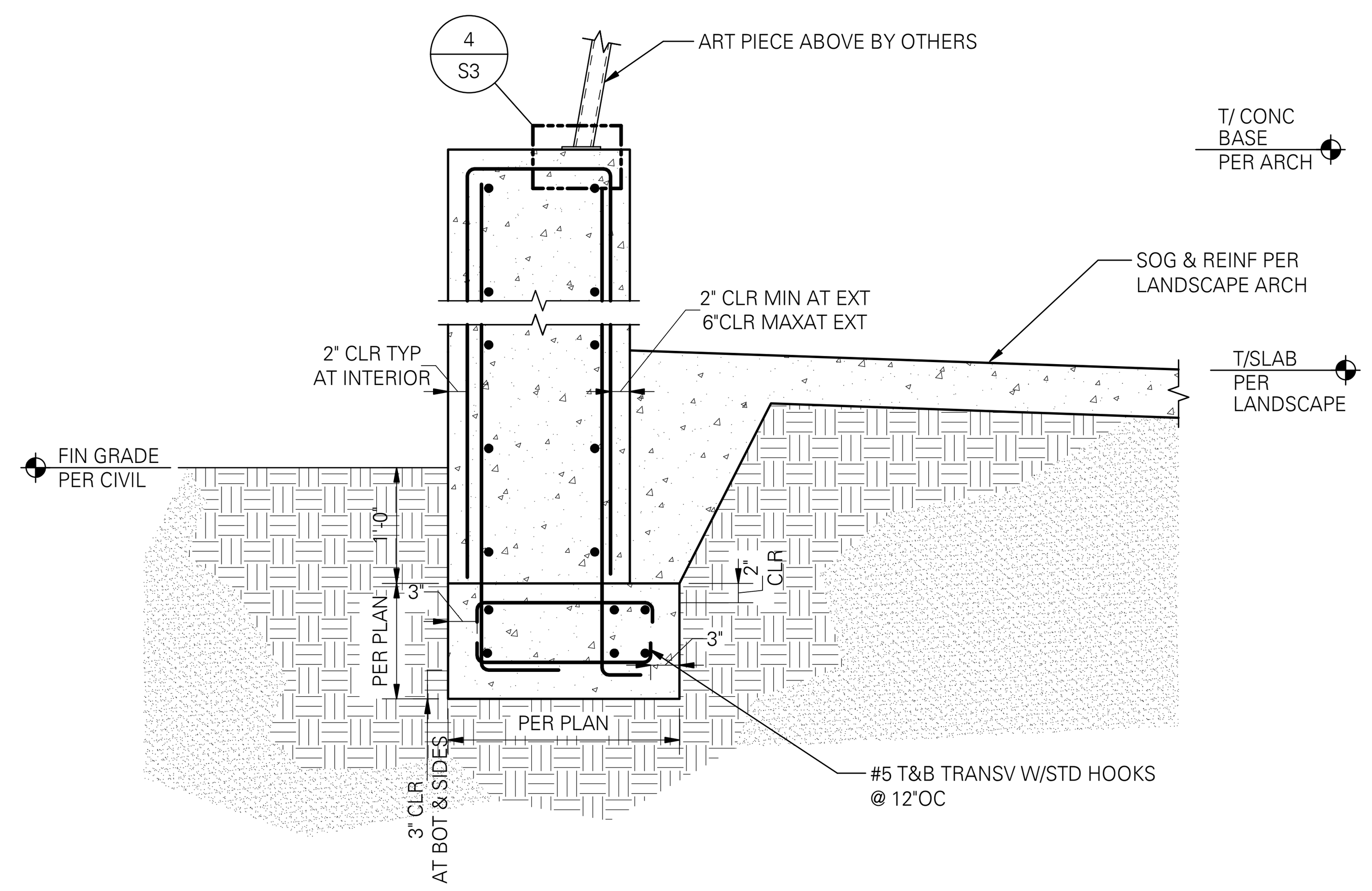
1. STRUCTURAL GENERAL NOTES, DESIGN CRITERIA, ABBREVIATIONS AND LEGEND PER S1 AND S2.
2. VERIFY ALL DIMENSIONS AND ELEVATIONS WITH THE ARCHITECTURAL/ART PIECE DRAWINGS.
3. CONTRACTOR SHALL LOCATE AND VERIFY THE FOLLOWING WITH OTHERS PRIOR TO POURING CONCRETE: DRAINS AND SLOPES; BLOCKOUTS FOR PLUMBING, SPRINKLERS. ALL PIPES PER PLUMBING, ELECTRICAL AND SPRINKLER DRAWINGS.
4. FOUNDATION TO BEAR ON COMPETENT NATIVE SOIL AND/OR COMPACTED STRUCTURAL FILL.
5. CONTRACTOR TO VERIFY TOP OF CONCRETE (T/CONC) WALL ELEVATIONS ON ALL SITE WALLS.
6. MOISTURE PROOF ALL CONCRETE STEM AND BASEMENT WALLS PER ARCHITECT. CONTRACTOR TO VERIFY ADDITIONAL LOCATIONS WHICH REQUIRE WATERPROOFING PER ARCHITECTURAL DRAWINGS.
7. TYPICAL DETAILS PER:

   8/S3 TYPICAL LAP SPLICE SCHEDULE
   7/S3 STANDARD HOOKS AND BAR BENDS



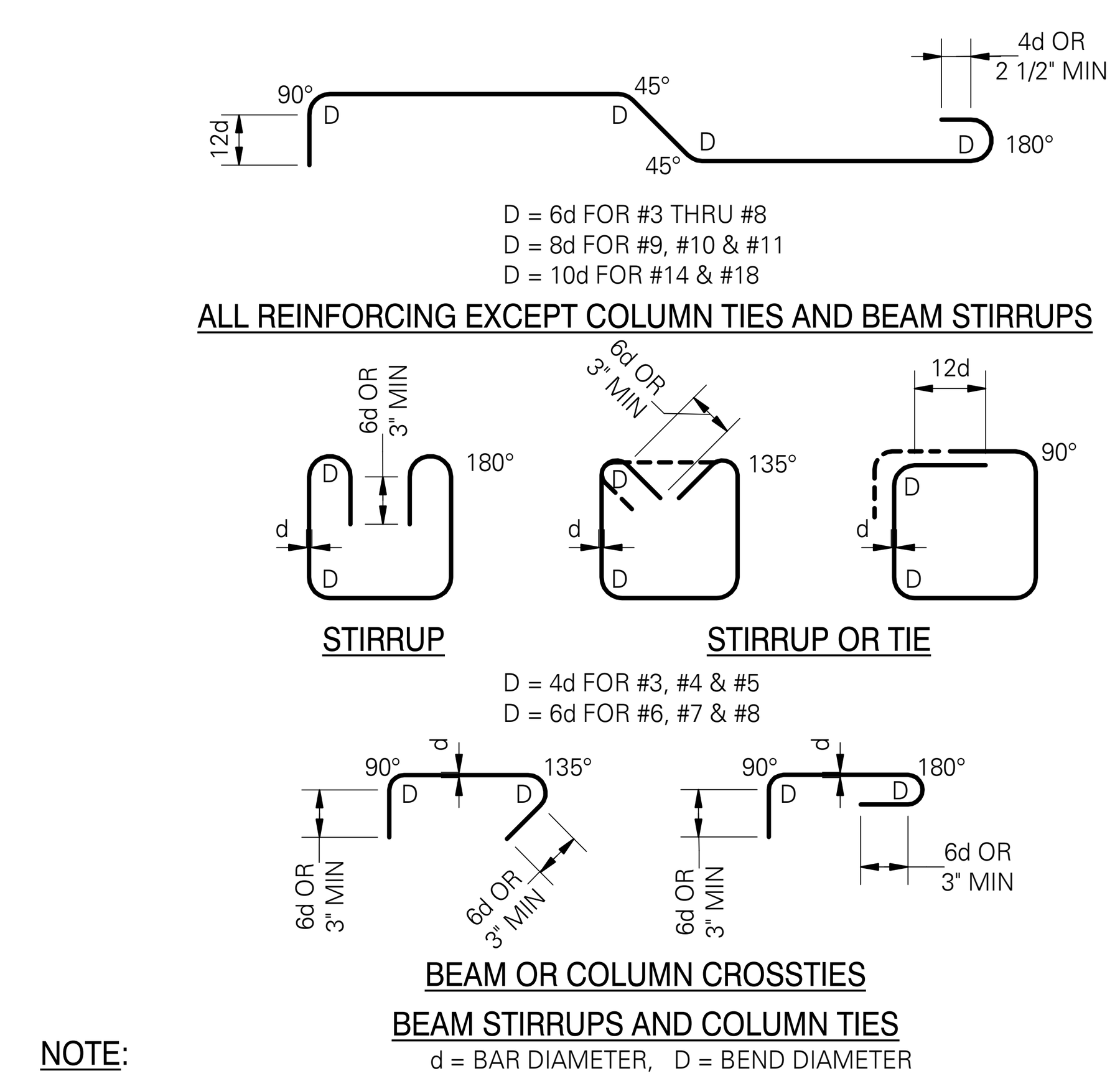
4 BASE PLATE ANCHORAGE

SCALE: 1 1/2" = 1'-0"



5 TYPICAL BASE DETAIL

SCALE: 3/4" = 1'-0"



NOTE:

TIES AND CROSSTIES FOR SHEAR WALL BOUNDARY ELEMENTS SHALL BE DETAILED AS COLUMN TIES/CROSSTIES.

7 STANDARD HOOKS AND BENDS

SCALE: 3/4" = 1'-0" (03400)

01400	GRADE 60 REINFORCING				
BAR SIZE	MISCELLANEOUS BARS		TOP BARS (see note #5)		HOOKED BARS
	Ld	Splice	Ld	Splice	Ldh
f'c = 4000psi					
#3	15	19	19	25	8
#4	19	25	25	33	10
#5	24	31	31	41	12
#6	29	37	37	49	15
#7	42	54	54	71	17
#8	48	62	62	81	19
#9	54	70	70	91	22
#10	61	79	79	102	25
#11	67	87	87	114	27
#14	81	N/A	105	N/A	33
#18	108	N/A	140	N/A	43

NOTES:

1. ALL TABULATED VALUES ARE IN INCHES.
2. VALUES FOR UNCOATED REINFORCING AND NORMAL WEIGHT CONCRETE WITH CLEAR SPACING > db, CLEAR COVER > db AND MINIMUM STIRRUPS OR TIES THROUGHOUT Ld OR CLEAR SPACING > 2db AND CLEAR COVER > db.
3. DEVELOP ALL REINFORCING IN STRUCTURAL SLABS WITH MINIMUM DEVELOPMENT LENGTH Ld.
4. Ldh = DEVELOPMENT LENGTH OF BAR WITH STANDARD HOOK.
5. TOP BAR = HORIZONTAL BAR WITH MORE THAN 12" OF FRESH CONCRETE BELOW OR AS NOTED ON DOCUMENTS AS "TOP BAR".
6. LAP SPLICE OF DIFFERENT SIZED BARS TO BE THE LARGER OF Ld OF THE LARGER BAR OR SPLICE LENGTH OF THE SMALLER BAR.
7. LAP SPLICE OF #14 AND #18 BARS IS NOT PERMITTED. LAP SPLICE OF SMALLER TO #14 AND #18 BARS IS NOT PERMITTED.
8. LAP SPLICE OF DIFFERENT GRADES OF REINFORCING TO BE THE LARGER OF Ld OF THE HIGHER GRADE BAR OR SPLICE LENGTH OF THE LOWER GRADE BAR.

8 TYPICAL LAP SPLICE AND DEVELOPMENT LENGTH SCHEDULE

SCALE: 3/4" = 1'-0" (01400)

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CIVIL / STRUCTURAL

SIGNATURE:

REGISTERED PROFESSIONAL ENGINEER
JONATHAN M. CRAIK
S6473
Exp. 12/31/24
STRUCTURAL
STATE OF CALIFORNIA

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Scale: AS NOTED

PROJECT TITLE:
BEYER PARK
BEYER BLVD
SAN DIEGO, CA 92173

SHEET TITLE:
STRUCTURAL DETAILS

SHEET NO.
S3

ATTACHMENT F

RESERVED

ATTACHMENT G

CONTRACT AGREEMENT

ATTACHMENT G

CONTRACT AGREEMENT

CONSTRUCTION CONTRACT

This contract is made and entered into between THE CITY OF SAN DIEGO, a municipal corporation, herein called "City", and Dick Miller, Inc., herein called "Contractor" for construction of **Beyer Park Development**; Bid No. **K-24-2170-DBB-3-A-C;** in the total amount of Sixteen Million Six Hundred Forty Eight Thousand Three Hundred Ten Dollars and Zero Cents ($16,648,310.00) , which is comprised of the Base Bid. If the City exercises its option for the LTMMA Work, then the not to exceed amount shall be increased in an amount equal to the LTMMA Contract Price, specifically $418,030.00, which will bring the total not to exceed amount to $17,066,340.00.

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) Long-Term Revegetation Maintenance Option Agreement (LTMMA), if the City exercises its option for the LTMMA Work.

   (e) That certain documents entitled **Beyer Park Development**, on file in the office of the City Clerk as Document No**. S-00752**, 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 **Beyer Park Development**, Bid Number **K-24-2170-DBB-3-A-C**, 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. Contractor acknowledges and agrees that this Contract includes an option for the City for the LTMMA Work, which City may exercise in its sole discretion at anytime prior to 365 days of Notice to Proceed. City shall not be liable for any costs associated with the LTMMA Work, unless the City Council has approved by ordinance, the extension of the Contract obligations beyond five (5) years, and the City has delivered a copy of the fully signed LTMMA to Contractor.

CONTRACT AGREEMENT (continued)

5. 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.

6. This contract is effective as of the date that the Mayor or designee signs the agreement and is approved by the City Attorney in accordance with San Diego Charter Section 40.

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 Section 22.3102 authorizing such execution.

THE CITY OF SAN DIEGO

By C.A.Garcia

Print Name: Claudia C. Abarca
Director
Purchasing & Contracting Department

Date: March 4, 2024

APPROVED AS TO FORM

Mara W. Elliott, City Attorney

By Dana Fairchild

Print Name: 3/20/2024
Deputy City Attorney

Date: Dana Fairchild

CONTRACTOR

By G F B

Print Name: Glen F Bullock

Title: President

Date: 01/16/2024

City of San Diego License No.: B2014004558

State Contractor's License No.: 380204

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.

CONTRACTOR CERTIFICATION

PRODUCT ENDORSEMENT

I declare under penalty of perjury that I acknowledge and agree to comply with the provisions of City of San Diego Administrative Regulation 95.65, concerning product endorsement. Any advertisement identifying or referring to the City as the user of a product or service requires the prior written approval of the City.

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:

BEYER PARK DEVELOPMENT
(Project Title)

as particularly described in said contract and identified as Bid No**. K-24-2170-DBB-3-A-C;** SAP No. (WBS) **S-00752;** and **WHEREAS**, the specification of said contract requires the Contractor to affirm that "all brush, trash, debris, and surplus materials resulting from this project have been disposed of in a legal manner"; and **WHEREAS**, said contract has been completed and all surplus materials disposed of:

_____

_____

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

_____

_____

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

Dated this _____ DAY OF _____, _____.

By:_____
Contractor

ATTEST:

State of _____ County of _____

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

Notary Public in and for said County and State

LIST OF SUBCONTRACTORS

***** PROVIDED FOR ILLUSTRATIVE PURPOSES ONLY *** TO BE SUBMITTED IN ELECTRONIC FORMAT ONLY*** SEE INSTRUCTIONS TO BIDDERS, FOR FURTHER INFORMATION**

In accordance with the requirements of the "Subletting and Subcontracting Fair Practices Act", Section 4100, of the California Public Contract Code (PCC), the Bidder is to list below the name, address and license number of each Subcontractor who will perform work, labor, render services or specially fabricate and install a portion [type] of the work or improvement, in an amount of or in excess of 0.5% of the Contractor's total Bid. Failure to comply with this requirement may result in the Bid being rejected as non-responsive. The Contractor is to list only one Subcontractor for each portion of the Work. The Bidder's attention is directed to the Special Provisions – General; Paragraph 2-3 Subcontracts, which stipulates the percentage of the Work to be performed with the Bidder's own forces. The Bidder is to also list all SLBE, ELBE, DBE, DVBE, MBE, WBE, OBE, SDB, WoSB, HUBZone, and SDVOSB Subcontractors for which the Bidders are seeking recognition towards achieving any mandatory, voluntary, or both subcontracting participation percentages.

NAME, ADDRESS AND TELEPHONE NUMBER OF SUBCONTRACTOR	CONSTRUCTOR OR DESIGNER	SUBCONTRACTOR LICENSE NUMBER	TYPE OF WORK	DOLLAR VALUE OF SUBCONTRACT	MBE, WBE, DBE, DVBE, OBE, ELBE, SLBE, SDB, WoSB, HUBZone, OR SDVOSB①	WHERE CERTIFIED②	CHECK IF JOINT VENTURE PARTNERSHIP
Name:_____ Address:_____ City:_____ State:_____ Zip:_____ Phone:_____ Email:_____							
Name:_____ Address:_____ City:_____ State:_____ Zip:_____ Phone:_____ Email:_____							

① As appropriate, Bidder shall identify Subcontractor as one of the following and shall include a valid proof of certification (except for OBE, SLBE and ELBE):

Certified Minority Business Enterprise	MBE	Certified Woman Business Enterprise	WBE
Certified Disadvantaged Business Enterprise	DBE	Certified Disabled Veteran Business Enterprise	DVBE
Other Business Enterprise	OBE	Certified Emerging Local Business Enterprise	ELBE
Certified Small Local Business Enterprise	SLBE	Small Disadvantaged Business	SDB
Woman-Owned Small Business	WoSB	HUBZone Business	HUBZone
Service-Disabled Veteran Owned Small Business	SDVOSB		

② As appropriate, Bidder shall indicate if Subcontractor is certified by:

City of San Diego	CITY	State of California Department of Transportation	CALTRANS
California Public Utilities Commission	CPUC		
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 SDVOSB①	WHERE CERTIFIED②
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

FAILURE TO FULLY COMPLETE AND SUBMIT ANY OF THE FOLLOWING FORMS WILL DEEM YOUR BID NON-RESPONSIVE.

PLANETBIDS WILL NOT ALLOW FOR BID SUBMISSIONS WITHOUT THE ATTACHMENT OF THESE FORMS

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. **SUBCONTRACTOR LISTING FOR ALTERNATE ITEMS**
D. **MANDATORY DISCLOSURE OF BUSINESS INTERESTS FORM**
E. **DEBARMENT AND SUSPENSION CERTIFICATION (PRIME CONTRACTOR)**
F. **DEBARMENT AND SUSPENSION CERTIFICATION (SUBCONTRACTORS/SUPPLIERS/MANUFACTURERS)**
G. **DISCLOSURE OF LOBBYING ACTIVITIES**

BID BOND

See Instructions to Bidders, Bidder Guarantee of Good Faith (Bid Security)

KNOW ALL MEN BY THESE PRESENTS,

That **DICK MILLER, INC** 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

BEYER PARK DEVELOPMENT

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 **6TH** day of **NOVEMBER**, 20**23**

DICK MILLER, INC (SEAL)
(Principal)

By: _____
(Signature)

THE OHIO CASUALTY INSURANCE COMPANY
(Surety)

By: _____
(Signature)

Bart Stewart - Attorney-in-Fact

(SEAL AND NOTARIAL ACKNOWLEDGEMENT OF SURETY)

CALIFORNIA 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 November 27, 2023 before me, Patricia Rosales Notary Public
(here insert name and title of the officer)

personally appeared Glen Bullock

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.

PATRICIA ROSALES
Notary Public - California
San Diego County
Commission # 2364819
My Comm. Expires Jul 8, 2025

WITNESS my hand and official seal.

Signature Patricia Rosales

(Seal)

Optional Information

Although the information in this section is not required by law, it could prevent fraudulent removal and reattachment of this acknowledgment to an unauthorized document and may prove useful to persons relying on the attached document.

Description of Attached Document

The preceding Certificate of Acknowledgment is attached to a document titled/for the purpose of Bid Bond

containing _____ pages, and dated _____.

The signer(s) capacity or authority is/are as:

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

representing: _____ Name(s) of Person(s) or Entity(ies) Signer is Representing

Additional Information

Method of Signer Identification

Proved to me on the basis of satisfactory evidence:
○ form(s) of identification ○ credible witness(es)

Notarial event is detailed in notary journal on:
Page # _____ Entry # _____

Notary contact: _____

Other

☐ Additional Signer(s) ☐ Signer(s) Thumbprint(s)

☐ _____

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.

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

Certificate No: **8206236 - 969556**

POWER OF ATTORNEY

KNOWN ALL PERSONS BY THESE PRESENTS: That The Ohio Casualty Insurance Company is a corporation 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, Bart Stewart

all of the city of Encinitas 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 3rd day of September, 2021.

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

By: _____
David M. Carey, Assistant Secretary

State of PENNSYLVANIA
County of MONTGOMERY ss

On this 3rd day of September, 2021 before me personally appeared David M. Carey, who acknowledged himself to be the Assistant Secretary of 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 King of Prussia, Pennsylvania, on the day and year first above written.

Commonwealth of Pennsylvania - Notary Seal
Teresa Pastella, Notary Public
Montgomery County
My commission expires March 28, 2025
Commission number 1126044
Member, Pennsylvania Association of Notaries

By: _____
Teresa Pastella, Notary Public

This Power of Attorney is made and executed pursuant to and by authority of the following By-laws and Authorizations of 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 David M. Carey, 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, Renee C. Llewellyn, the undersigned, Assistant Secretary, 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 6th day of November, 2023.

By: _____
Renee C. Llewellyn, Assistant Secretary

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT **CIVIL CODE § 1189**

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California)
County of San Diego)

On November 6. 2023 before me, Genevieve Sistar, Notary Public,
Date *Here Insert Name and Title of the Officer*

personally appeared Bart Stewart
Name(s) of Signer(s)

,

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

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

WITNESS my hand and official seal.

GENEVIEVE SISTAR
Notary Public - California
San Diego County
Commission # 2341051
My Comm. Expires Jan 8, 2025

Signature _____
Signature of Notary Public

Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____ Document Date: _____

Number of Pages: _____ Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer(s)

Signer's Name: _____
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

Signer's Name: _____
☐ Corporate Officer — Title(s): _____
☐ Partner — ☐ Limited ☐ General
☐ Individual ☐ Attorney in Fact
☐ Trustee ☐ Guardian or Conservator
☐ Other: _____
Signer Is Representing: _____

CONTRACTOR'S CERTIFICATION OF PENDING ACTIONS

As part of its bid or proposal (Non-Price Proposal in the case of Design-Build contracts), the Bidder shall provide to the City a list of all instances within the past 10 years where a complaint was filed or pending against the Bidder in a legal or administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers, and a description of the status or resolution of that complaint, including any remedial action taken.

CHECK ONE BOX ONLY.

☒ The undersigned certifies that within the past 10 years the Bidder has NOT been the subject of a complaint or pending action in a legal administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers.

☐ The undersigned certifies that within the past 10 years the Bidder has been the subject of a complaint or pending action in a legal administrative proceeding alleging that Bidder discriminated against its employees, subcontractors, vendors or suppliers. A description of the status or resolution of that complaint, including any remedial action taken and the applicable dates is as follows:

DATE OF CLAIM	LOCATION	DESCRIPTION OF CLAIM	LITIGATION (Y/N)	STATUS	RESOLUTION/REMEDIAL ACTION TAKEN

Contractor Name: DICK MILLER INC.

Certified By JOHN MARTINEZ Title ESTIMATOR

Name

Signature Date 11/30/2023

USE ADDITIONAL FORMS AS NECESSARY

SUBCONTRACTORS FOR ALTERNATES

***** FOR USE WHEN LISTING SUBCONTRACTORS FOR ALTERNATES ONLY *****
(Use Additional Sheets As Needed)

IDENTIFY ALTERNATE (example: Deductive Alternate B) Only one Alternate and Sub per line	SUBCONTRACTOR NAME, LOCATION, PHONE & EMAIL	SUBCNTRACTOR'S CA LICENSE NUMBER	SUBCONTRACTOR'S DIR REGISTRATION NUMBER	IS SUBCONTRACTOR CONSTRUCTOR, DESIGNER, OR SUPPLIER	TYPE OF WORK	DOLLAR VALUE OF THE ALTERNATE SUBCONTRACT (Negative If Deductive)
	Name:___ Address:___ City:___ State:___ Zip:___ Phone:___ Email:___	NONE				
	Name:___ Address:___ City:___ State:___ Zip:___ Phone:___ Email:___					
	Name:___ Address:___ City:___ State:___ Zip:___ Phone:___ Email:___					
	Name:___ Address:___ City:___ State:___ Zip:___ Phone:___ Email:___					

SUBCONTRACTORS FOR ALTERNATE ITEMS ARE NOT CONSIDERED IN THE CALCULATION TOWARD ACHIEVING SLBE/ELBE PARTICIPATION GOALS

Mandatory Disclosure of Business Interests Form

BIDDER/PROPOSER INFORMATION

Legal Name		DBA	
GLEN F. BULLOCK		DICK MILLER INC.	
Street Address	**City**	**State**	**Zip**
930 BOARDWALK STE H	SAN MARCOS	CA.	92078
Contact Person, Title		**Phone**	**Fax**
JOHN MARTINEZ SR. EDTIMATOR		951-216-4070	760-471-6178

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
GLEN F. BULLOCK	PRESIDENT
City and State of Residence	**Employer (if different than Bidder/Proposer)**
SAN MARCOS, CA.	
Interest in the transaction	
100%	

Name	Title/Position
City and State of Residence	**Employer (if different than Bidder/Proposer)**
Interest in the transaction	

*** Use Additional Pages if Necessary ***

Under penalty of perjury under the laws of the State of California, I certify that I am responsible for the completeness and accuracy of the responses contained herein, and that all information provided is true, full and complete to the best of my knowledge and belief. I agree to provide written notice to the Mayor or Designee within five (5) business days if, at any time, I learn that any portion of this Mandatory Disclosure of Business Interests Form requires an updated response. Failure to timely provide the Mayor or Designee with written notice is grounds for Contract termination.

JOHN MARTINEZ SR.ESTIMATOR		11/30/2023
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.

DEBARMENT AND SUSPENSION CERTIFICATION

PRIME CONTRACTOR

FAILURE TO COMPLETE AND SUBMIT AT TIME OF BID SHALL RENDER BID NON-RESPONSIVE

EFFECT OF DEBARMENT OR SUSPENSION
To promote integrity in the City's contracting processes and to protect the public interest, the City shall only enter into contracts with responsible- bidders and contractors. In accordance with San Diego Municipal Code §22.0814 (a): *Bidders* and *contractors* who have been *debarred* or *suspended* are excluded from submitting bids, submitting responses to requests for proposal or qualifications, receiving *contract* awards, executing *contracts*, participating as a *subcontractor*, employee, agent or representative of another *person* contracting with the City.

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 Names of the Principal Individual owner(s).

The names of all persons interested in the foregoing proposal as Principals are as follows:

NAME	TITLE
GLEN F BULLOCK	PRESIDENT

IMPORTANT NOTICE: If Bidder or other interested person is a corporation, state secretary, treasurer, and manager thereof; if a co-partnership, state true name of firm, also names of all individual co-partners composing firm; if Bidder or other interested person is an individual, state first and last names in full.

The Bidder, under penalty of perjury, certifies that, except as noted below, he/she or any person associated therewith in the capacity of owner, partner, director, officer, manager:

- Is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal, State or local agency;
- has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal, State or local agency within the past 3 years;
- does not have a proposed debarment pending; and
- has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

If there are any exceptions to this certification, insert the exceptions in the following space.

Exceptions will be considered in determining bidder responsibility. For any exception noted above, indicate below to whom it applies, initiating agency, and dates of action.

Contractor Name: DICK MILLER INC.

Certified By JOHN MARTINEZ Title SR. ESTIMATOR

Name

Signature

Date 11/30/2023

NOTE: Providing false information may result in criminal prosecution or administrative sanctions.

DEBARMENT AND SUSPENSION CERTIFICATION

SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS

TO BE COMPLETED BY BIDDER

FAILURE TO COMPLETE AND SUBMIT AT TIME OF BID SHALL RENDER BID NON-RESPONSIVE

Names of the Principal individual owner(s)

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 Names of the Principal Individual owner(s) for their subcontractor/supplier/manufacturers.

Please indicate if principal owner is serving in the capacity of **subcontractor**, **supplier**, and/or **manufacturer**:

☒ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE
MIKE SCHWEITZER	PRESIDENT

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

Contractor Name: SWS ENGINEERING INC.

Certified By JOHN MARTINEZ Title SR. ESTIMATOR

Name

Signature

Date 11/30/2023

USE ADDITIONAL FORMS AS NECESSARY*

DEBARMENT AND SUSPENSION CERTIFICATION

SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS

TO BE COMPLETED BY BIDDER

FAILURE TO COMPLETE AND SUBMIT AT TIME OF BID SHALL RENDER BID NON-RESPONSIVE

Names of the Principal individual owner(s)

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 Names of the Principal Individual owner(s) for their subcontractor/supplier/manufacturers.

Please indicate if principal owner is serving in the capacity of **subcontractor, supplier,** and/or **manufacturer:**

☑ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE
Maverick Cissell	CEO

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

Contractor Name: SoCal Shaker Plates & Construction Site Services

Certified By Juan De La Torre Title Director of Operations

Name

Juan De La Torre Date 11/30/2023

Signature

USE ADDITIONAL FORMS AS NECESSARY*

DEBARMENT AND SUSPENSION CERTIFICATION

SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS

TO BE COMPLETED BY BIDDER

FAILURE TO COMPLETE AND SUBMIT AT TIME OF BID SHALL RENDER BID NON-RESPONSIVE

Names of the Principal individual owner(s)

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 Names of the Principal Individual owner(s) for their subcontractor/supplier/manufacturers.

Please indicate if principal owner is serving in the capacity of **subcontractor**, **supplier,** and/or **manufacturer**:

☒ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE
Makelele Systems Landscape & Maintenance, Inc.	Jose Cardenas, President

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE
N/A	

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE
N/A	

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE
N/A	

Contractor Name: Makelele Systems Landscape & Maintenance, Inc.

Certified By Jose Cardenas Title President

Name

Signature Date 29 November2023

USE ADDITIONAL FORMS AS NECESSARY*

Makelele Systems Landscape & Maintenance, Inc.
760.208.8749 * CA. License No. 987557 * QAL No. 145564 (B + C)
SOS Entity No. C3675404 * DIR No. 1000028415
City of SD SLBE No. 14MS1248 * SB (Micro - CA DGS) Cert No. 2012569
City of San Diego Business Tax Certificate No. B2015030954
Mailing Address: PO Box 2044, San Marcos, California 92079
makelele@makelelesystems.com

DEBARMENT AND SUSPENSION CERTIFICATION

SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS

TO BE COMPLETED BY BIDDER

FAILURE TO COMPLETE AND SUBMIT AT TIME OF BID SHALL RENDER BID NON-RESPONSIVE

Names of the Principal individual owner(s)

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 Names of the Principal Individual owner(s) for their subcontractor/supplier/manufacturers.

Please indicate if principal owner is serving in the capacity of **subcontractor**, **supplier,** and/or **manufacturer**:

☒ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE
ROBERT B. LANGE	CEO

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

Contractor Name: BRANDT GROUP, INC

Certified By JOHN MARTINEZ Title SR. ESTIMATOR

Name

Signature

Date 11/30/2023

USE ADDITIONAL FORMS AS NECESSARY*

DEBARMENT AND SUSPENSION CERTIFICATION

SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS

TO BE COMPLETED BY BIDDER

FAILURE TO COMPLETE AND SUBMIT AT TIME OF BID SHALL RENDER BID NON-RESPONSIVE

Names of the Principal individual owner(s)

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 Names of the Principal Individual owner(s) for their subcontractor/supplier/manufacturers.

Please indicate if principal owner is serving in the capacity of **subcontractor**, **supplier**, and/or **manufacturer**:

☒ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE
JULIAN MOEN	OWNER

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

Contractor Name: WESTERN STATE BUILDERS

Certified By JOHN MARTINEZ Title SR. ESTIMATOR

Name

Date 11/30/2023

Signature

USE ADDITIONAL FORMS AS NECESSARY*

DEBARMENT AND SUSPENSION CERTIFICATION

SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS

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☒ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE
JIM DOBMEIER	CEO

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

Contractor Name: SURFACE AMERICA

Certified By JOHN MARTINEZ Title SR. ESTIMATOR

Name

Signature Date 11/30/2023

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Please indicate if principal owner is serving in the capacity of **subcontractor, supplier,** and/or **manufacturer:**

☒ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE
JOSEPH MALETIC	VICE PRESIDENT
DAWN LILLY	PRESIDENT

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

Contractor Name: TEAM WEST CONTRACTING CORPORATION

Certified By _____ Title _____

Name

Signature

Date 11/30/2023

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☒ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE
Alice E. Brewster	President

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

Contractor Name: PanGIS, Inc.

Certified By Alice E. Brewster Title President

Name

Alice E. Brewster Date 11/27/2023

Signature

USE ADDITIONAL FORMS AS NECESSARY*

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☒ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE
George Zadrozny	President, GeoCon Skateparks

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

Contractor Name: GeoCon Skateparks

Certified By JOHN MARTINEZ Title SR. ESTIMATOR

Name

Signature Date 11/30/2023

USE ADDITIONAL FORMS AS NECESSARY*

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☒ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE
Scott Nelson	Estimator

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

Contractor Name: Seal Right Paving Inc.

Certified By Scott Nelson Title Estimator

Name

Scott Nelson Date 11/30/23

Signature

USE ADDITIONAL FORMS AS NECESSARY*

DEBARMENT AND SUSPENSION CERTIFICATION

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☒ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE
Boulderscape - Ryan Allen	President

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

☐ SUBCONTRACTOR ☐ SUPPLIER ☐ MANUFACTURER

NAME	TITLE

Contractor Name: Boulderscape, Inc.

Certified By Ryan Allen Title President

Name

Signature Date 11/28/23

USE ADDITIONAL FORMS AS NECESSARY*

DEBARMENT AND SUSPENSION CERTIFICATION

SUBCONTRACTORS, SUPPLIERS AND MANUFACTURERS

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[X] SUBCONTRACTOR [ ] SUPPLIER [ ] MANUFACTURER

NAME	TITLE
Aranuad Teo	President

[ ] SUBCONTRACTOR [ ] SUPPLIER [ ] MANUFACTURER

NAME	TITLE

[ ] SUBCONTRACTOR [ ] SUPPLIER [ ] MANUFACTURER

NAME	TITLE

[ ] SUBCONTRACTOR [ ] SUPPLIER [ ] MANUFACTURER

NAME	TITLE

Contractor Name: MAC GC-ELECTRIC INC

Certified By Jerry Bauer Title Sr Estimator

Name

Jerry Bauer Digitally signed by Jerry Bauer DN: CN=JB, E=jerry@bauerinc.com, O=J BAUER INC, CN=Jerry Bauer Location: Orange County CA Reason: I am approving this document Contact Info: (714)702-4545 jerryb@mciaw.com Date: 2023.11.30 08:02:33-08'00'

Date 11/30/2023

Signature

USE ADDITIONAL FORMS AS NECESSARY*

DISCLOSURE OF LOBBYING ACTIVITIES Approved by OMB

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352 0348-0046

(See reverse for public burden disclosure)

1. Type of Federal Action:	2. Status of Federal Action:	3. Report Type:
☐ a. Contract a. Grant b. Cooperative agreement c. Loan d. Loan guarantee e. Loan insurance	☐ a. bid/offer/application b. initial award c. post-award	☐ a. initial finding b. material change **For Material Change Only** year_____ quarter _____ date of last report_____

4. Name and Address of Reporting Entity: ☐ Prime ☐ Subawardee Tier _____, *if known:* Congressional District, *if known:*	5. If Reporting Entity in No. 4 is a Subawardee, Enter Name and Address of Prime: Congressional District, *if known:*
6. Federal Department/Agency:	7. Federal Program Name/Description: CFDA Number, *if applicable:* _____
8. Federal Action Number, if known:	9. Award Amount, if known: $
10. a. Name and Address of Lobbying Entity (if individual, last name, first name, M)	b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI):
(attach Continuation Sheet(s) SF-LLL4, *if necessary*)	
11. Amount of Payment (check all that apply) $_____ ☐ actual ☐ planned	13. Type of Payment (check all that apply) ☐ a. retainer ☐ b. one-time lee ☐ c. commission ☐ d. contingent fee ☐ e. deferral ☐ f. other: specify:_____
12. Form of Payment (check all that apply) ☐ a, cash ☐ b. in-kind: specify: nature _____ Value_____	

14. Brief Description of Services Performed or to be Performed and Date(s) of Service, Including officer(s), employee(s), or Member(s), contacted, for Payment indicated in item 11:

(attach Continuation Sheet(s) SF-LLLA, *if necessary*)

15. Continuation Sheet(s) SF-LLLA attached: ☐ Yes ☑ No

16.	Information requested through this for misauthorized by title 31 U.S.C. section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less that $10,000 and not more than $100,000 for each such failure.	Signature: [signature] Print Name: JOHN MARTINEZ Title: SR. ESTIMATOR Telephone No.: 951-216-4070 Date: 11/30/2023

Federal Use Only: Authorized for Local Reproduction Standard Form LLL (Rev. 7-07)

Bid Results

Bidder Details

Vendor Name	Dick Miller Inc.
Address	930 Boardwalk, Suite H San Marcos, California 92078 United States
Respondee	John Martinez
Respondee Title	Sr. Estimator
Phone	951-216-4070
Email	jmartinez@dmiusa.net
Vendor Type	DVBE, CAU, SLBE, SDVSB, MALE, CADIR
License #	380204
CADIR	1000004547

Bid Detail

Bid Format	Electronic
Submitted	11/30/2023 1:58 PM (PST)
Delivery Method	
Bid Responsive	
Bid Status	Submitted
Confirmation #	354609

Respondee Comment

Buyer Comment

Attachments

File Title	File Name	File Type
SUB DEBARMENT ALL.pdf	SUB DEBARMENT ALL.pdf	Subcontractor - Debarment and Suspension
DEBARMENT PRIME.pdf	DEBARMENT PRIME.pdf	Prime Contractor - Debarment and Suspension
MDOBI.pdf	MDOBI.pdf	Mandatory Disclosure of Business Interests Form
subs for alts.pdf	subs for alts.pdf	Subcontractor Listing for Alternate Items
CCOPA.pdf	CCOPA.pdf	Contractor's Certification of Pending Actions
LOBBYING ACTIVITIES.pdf	LOBBYING ACTIVITIES.pdf	Disclosure of Lobbying Activities
BID BOND-BEYER PARK DEVELOPMENT.pdf	BID BOND-BEYER PARK DEVELOPMENT.pdf	Bid Bond

Subcontractors

Showing 13 Subcontractors

Name & Address	Desc	License Num	CADIR	Amount	Type
Boulderscape, Inc. 27134 B Paseo Espoda San Juan Capistrano, California 9267	CLIMBING WALL, CONTRACTOR	444828	1000380133	$189,693.34	
Brantd Group 17 Corporate Pl Newport Beach, California 92660	monument sign CONTRACTOR SDVOB	881954	1000016041	$28,800.00	
GeoCon Skateparks 24738 Gallineta Way Ramona, California 92065	SKATEPARK CONTRACTOR	506706	1000000098	$1,234,800.00	Local
MAC GC-Electric, Inc. 10439 Roselle St. San Diego, California 92121	ELECTRICAL AND LIGHTING CONTRACTOR	911785	1000437660	$1,416,830.00	CADIR, MBE, SDB, WBE, FEM, WOSB, Asian, Local
Makelele Systems Landscape & Mai 420 N Twin Oaks Valley Road #2044 Makelele Systems San Marcos, California 92079	LANDSCAPE & IRRIGATION	987557	1000028415	$2,529,931.00	MBE, CADIR, MALE, LAT, ELBE, Local
NOVA Services, Inc. DVBE/SLBE 4373 Viewridge Avenue Suite B San Diego, California 92123	SPECIAL INSPECTION	000000	1000007909	$75,000.00	DVBE, CADIR, SLBE, SDVSB, Local
PanGIS, Inc. (Archaeology/History/C 6353 El Camino Real Ste. B Carlsbad, California 92009	ARCHAEOLOGICAL, PALEONTOLOGICAL BIOLOGICAL, SERVICE	000000000	10000052606	$477,905.25	DBE, SDB, WBE, CADIR, ELBE, FEM, WOSB, CAU, Local
SWS Engineering, Inc. 1635 Lake San Marcos Drive Suite 200 San Marcos, California 92078	SURVEY, SERVICE	59658	1000008599	$213,000.00	Local
SealRight Paving, Inc. 9053 Olive Dr. Spring Valley, California 91977	ASPHALT PAVING & CL II BASE, CONTRACTOR	364113	1000039542	$179,463.48	MBE, CADIR, DBE, MALE, LAT, PQUAL, SLBE, Local
SoCal Shaker Plates & Construction 600 Central Ave #105 Lake Elsinore, California 92530	SWPPP DEVELOPMENT, IMPLEMENTATION, & MAINTENANCE CONTRACTOR	1099259	100096352	$240,688.00	HUBZ, MALE, CAU, CADIR
Surface America, Inc. 505 Aero Drive Cheektowaga, New York 14225	PIP RUBBER SURFACE, CONTRACTOR	858674	1000034512	$317,437.00	CADIR
Team West Contracting Corp. 2733 Vista Ave. Bloomington, California 92316	FENCING, CONTRACTOR	934352	1000768825	$420,650.00	
Western State Builders Inc 2141 Orange Ave Escondido, California 92029	INSTALL PLAYGROUND EQUIPMENT & SHADE STRUCTURES	1069677	1000706410	$217,450.00	CAU, MALE, PQUAL, CADIR, Local

Line Items

Discount Terms No Discount

Item #	Item Code	Type	Item Description	UOM	QTY	Unit Price	Line Total	Response	Comment
Main Bid							$17,066,340.00		
1	237990		Mobilization	LS	1	$300,000.00	$300,000.00	Yes	
2	524126		Bonds (Payment and Performance)	LS	1	$287,500.00	$287,500.00	Yes	
3	236220		Building Permits (EOC Type I)	AL	1	$75,000.00	$75,000.00	Yes	
4	237990		Specialty Inspection Paid For By the Contractor (EOC Type I)- Third party CPSI Inspection	AL	1	$25,000.00	$25,000.00	Yes	
5	541690		Archaeological and Native American Monitoring Program	LS	1	$73,810.00	$73,810.00	Yes	
6	541690		Archaeological and Native American Mitigation and Curation (EOC Type I)	AL	1	$15,000.00	$15,000.00	Yes	
7	541690		Paleontological Monitoring Program	LS	1	$38,830.00	$38,830.00	Yes	
8	541690		Paleontological Mitigation and Excavation (EOC Type I)	AL	1	$300,000.00	$300,000.00	Yes	
9	541330		Biological Monitoring and Reporting	LS	1	$26,230.00	$26,230.00	Yes	
10	541330		60-Month Revegetation Biological Monitoring Program - LTMMA Option	LS	1	$40,425.00	$40,425.00	Yes	
11	237990		Construction of Park Improvements	LS	1	$11,917,745.00	$11,917,745.00	Yes	
12			Field Orders (EOC Type II)	AL	1	$500,000.00	$500,000.00	Yes	
13	541330		Traffic Control and Working Drawings	LS	1	$27,000.00	$27,000.00	Yes	
14	561730		Landscaping (Park landscape areas) materials, installation, and 90-day PEP maintenance	LS	1	$882,812.00	$882,812.00	Yes	
15	561730		Irrigation System (Park areas)	LS	1	$960,000.00	$960,000.00	Yes	
16	561730		Irrigation System (Restoration and Enhancement areas)	LS	1	$282,700.00	$282,700.00	Yes	
17	541330		Restoration and Enhancement areas materials, installation, and 120-day PEP maintenance	LS	1	$501,071.00	$501,071.00	Yes	
18	541330		60-Month Maintenance Program for Restoration and Enhancement Areas- LTMMA Option	LS	1	$352,605.00	$352,605.00	Yes	
19			Field Orders for 60-Month Revegetation Maintenance and Monitoring Program (EOC Type II)- LTMMA Option	AL	1	$25,000.00	$25,000.00	Yes	
20	237990		Public Artwork materials, installation and Coordination (EOC Type I)	AL	1	$112,812.00	$112,812.00	Yes	
21	238210		SDG&E Fee Allowance (EOC Type I)	AL	1	$20,000.00	$20,000.00	Yes	
22	541330		SWPPP Development	LS	1	$27,800.00	$27,800.00	Yes	
23	237310		SWPPP Implementation	LS	1	$265,000.00	$265,000.00	Yes	
24	541330		SWPPP Permit Fee (EOC Type I)	AL	1	$10,000.00	$10,000.00	Yes	
Deductive Alternate A							-$22,000.00		
25	237990		Art Walls at Playground (Deductive)	LS	-1	$22,000.00	-$22,000.00	Yes	
Deductive Alternate B							-$265,000.00		
26	237990		Cast in Place Concrete Sedimentary Walls (Deductive)	LS	-1	$265,000.00	-$265,000.00	Yes	

Line Item Subtotals

Section Title	Line Total
Main Bid	**$17,066,340.00**
Deductive Alternate A	**-$22,000.00**
Deductive Alternate B	**-$265,000.00**
Grand Total	**$16,779,340.00**