AFFILIATED AGENCIES

Orange County Transit District

Local Transportation Authority

Service Authority for Freeway Emergencies

Consolidated Transporation Service Agency

Congestion Management Agency

March 31, 2025

SUBJECT: Invitation for Bids (IFB) 5-3922
"Installation of Battery Electric Bus Chargers and Electrical Infrastructure at Santa Ana Bus Base"

Ladies/Gentlemen:

This letter and its attachment comprise **Addendum No. 3** to the above captioned Invitation for Bids issued by the Orange County Transportation Authority ("Authority").

1. Bidders are advised that answers to the bidders' questions submitted by April 2, 2024, are presented as Attachment A to this Addendum No. 3.

2. Bidders are advised that Bid Booklet, Book 2 of 2 is presented as Attachment B to this Addendum No. 3 to revise the Bid Form only, to add allowance Item 2 for Bid Plans vs. Southern California Edison Final Service Plan variances in the amount of $50,000.00. Bidders are to use this Bid Booklet, Book 2 of 2, Addendum No. 3 to submit their bids.

3. Bidders are advised that the Authority has revised Exhibit C – Project Drawings which is presented in its entirety as Attachment C to this Addendum No. 3.

4. Bidders are advised that the pre-bid conference registration sheets are presented as Attachment D to this Addendum No. 3.

5. Bidders are advised that the following Paragraph is to be added at the end of **Article 6 – Payment**.

   "D. Allowances are to be paid for based on Force Account. No work under allowance categories shall commence unless authorized in writing by the Engineer. Any costs which exceed, or are less than the bid allowance amount, shall require an adjustment to the maximum cumulative payment obligation amount by Change Order."

6. Bidders are advised that Section IV: Agreement, Article 4. Delivery/Recovery Schedule, Paragraph A, has been deleted in its entirety and replaced with the following:

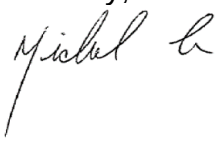
"**ARTICLE 4. DELIVERY / RECOVERY SCHEDULE**

A. CONTRACTOR shall fully complete the herein above described work within (365) calendar days from the effective date of written Notice to Proceed (NTP) issued by AUTHORITY. CONTRACTOR shall give AUTHORITY not less than seventy-two (72) hours advance notice of the start of any work. Within five (5) calendar days after said notice, CONTRACTOR shall provide any construction schedules as may be requested by AUTHORITY."

Bidders are reminded to acknowledge receipt of this **Addendum No. 3** in their "Bid Form". Bidders are advised that all changes addressed in this **Addendum No. 3** shall be incorporated into the final Agreement.

Questions regarding this Addendum No. 3 should be directed to the undersigned at 714-560-5314 or mle1@octa.net.

Sincerely,



Michael Le
Senior Contract Administrator
Contracts Administration and Materials Management

Attachment:
Attachment A: Questions Received and Authority Responses
Attachment A-1: OCTA Equipment List
Attachment B: Bid Booklet, Book 2 of 2
Attachment C: Revised Project Drawings
Attachment D: Pre-Bid Conference Registration Sheets

Questions Received (Q) and Authority Answers (A)

Q1. Under the scope of work section in Addendum #1, it states the project will include the installation of multiple ChargePoint chargers and equipment. My question is, will the project allow for equivalent equipment from non-ChargePoint manufacturers to be installed?

A1. The project includes installation of Owner (OCTA)-furnished Battery-Electric Bus (BEB) chargers, which have been purchased by OCTA under a separate competitive procurement, and therefore the contractor furnishing the BEB chargers is not a part of this bid and/or agreement.

Q2. Is there any DBE or SBE set aside for the Installation of Battery Electric Bus Chargers and Electrical Infrastructure at Santa Ana Bus Base opportunity?

A2. There is no DBE or SBE set aside for this project.

Q3. Can a Contractor with a "B" and "C-20" bid this project?

A3. No. Bidders will be required to hold a valid State of California C-10 specialty contractor license or hold a valid State of California A general engineering contractor license and subcontract to valid State of California C-10 specialty contractor licensee.

Q4. Who purchases the EV chargers and other material for the project? We're a distributor for EV chargers and other equipment.

A4. The Owner (OCTA) will furnish BEB charger equipment that were purchased under a separate competitive procurement. Refer to Attachment A-1 to this Addendum No. 3 for a list of BEB charger equipment furnished by Owner (OCTA), which shall be installed by project contractor awarded the agreement under this IFB. All other project-related equipment and materials, not listed within Attachment A-1 to this Addendum No. 3, shall be provided by project contractor.

Q5. Can OCTA please confirm that all MV scope not listed is the responsibility of SCE – SCE owned transformer and SCE owned switch?

A5. Southern California Edison (SCE) is responsible for installation of SCE-owned electrical service infrastructure and equipment, including SCE-owned transformer and PME switch. Project contractor is responsible for installation of project related electrical service infrastructure and equipment, as identified within project documents; project contractor is also responsible for coordination with SCE and related installation work to connect SCE-installed electrical service infrastructure with project contractor-installed electrical service infrastructure.

Unforeseen work related to Bid Plans vs. SCE Final Service Plan variances on SCE PME Switch and SCE Transformer locations shall be addressed by bid allowance item. Refer to Attachment B, Bid Booklet, Book 2 of 2 of this Addendum No. 3 for bid allowance item; refer to Item No. 5 of this Addendum No. 3 cover letter for bid allowance method of payment.

Q6. Can OCTA please estimate SCE's timeline for procuring equipment and SCE's portion of work?

A6. SCE's timeline for procuring SCE-installed equipment and related installation work is anticipated to be completed in a similar timeline (anticipated completion) of this project.

Q7. Who is responsible for the conduit from the secondary side of SCE transformer to new customer owned 489v switch?

A7. Conduits to connect SCE-owned transformer and OCTA-owned meter switchboard and related work are typically shared responsibility between SCE and Owner (OCTA), of which details of related work are coordinated between parties during construction.

For bidding purposes, project contractor shall be responsible for providing conduits and related work from the Customer or OCTA-owned meter switchboard to SCE-owned transformer; the contractor-installed conduits from the Customer or OCTA-owned meter switchboard shall terminate a distance of 5-feet horizontally from exterior face of SCE-owned transformer. The contractor shall furnish the tie-in conduit to SCE, for SCE to make the tie-in to their transformer, and the contractor shall furnish all conductors from the SCE transformer to the Customer or OCTA-owned meter switchboard.

Refer to response A5 above for additional information.

Q8. Who is responsible for installing and terminating conductors between SCE transformer and customer owned 480v switch?

A8. SCE is responsible for terminating conductors between SCE-owned transformer and OCTA-owned meter switchboard.

Refer to response A5 above for additional information.

Q9. Can OCTA clarify the payment process for contractor-purchased equipment on behalf of the customer? Specifically, will payment be issued upon equipment delivery to the site through the schedule of values, or only after full installation?

A9. Payments to project contractor for contractor-purchased equipment shall be made accordingly after installation of such equipment has commenced; per General Provisions (Exhibit A) of IFB 5-3922 Addendum No. 1, “no progress payments will be made for materials not installed.”

Q10. Please provide drawings, details, and specifications for Southern California Edison (SCE) work (switch and transformer) that is performed contractor.

A10. Project related SCE Final Service Plan is not yet available at this time. Refer to response A5 above for additional information.

Q11. See sheet SA-S103, Construction Note 5. Please provide detail for new concrete utility trench.

A11. Refer to Attachment C to this Addendum No. 3 for detail 5/SA-S501 related to new concrete utility trench.

Q12. See sheet SA-S103, Construction Note 7. Please provide detail for new SEC utility transformer.

A12. Project related SCE Final Service Plan (including detail related to SCE utility transformer) is not yet available at this time; of note, SCE utility transformer shall be furnished and installed by SCE, per project documents.

Refer to response A5 above for additional information.

Q13. See sheet SA-S103, Construction Note 8. Please provide detail for SCE MV PME-8 Switch Cabinet.

A13. Project related SCE Final Service Plan (including detail related to SCE MV PME-8 switch cabinet) is not yet available at this time; of note, SCE MV PME-8 switch cabinet shall be furnished and installed by SCE, per project documents.

Refer to response A5 above for additional information.

Q14. When will the So Cal Edison final design be provided? This information is needed to allow for lineal footages of conduit, trenching and restoration.

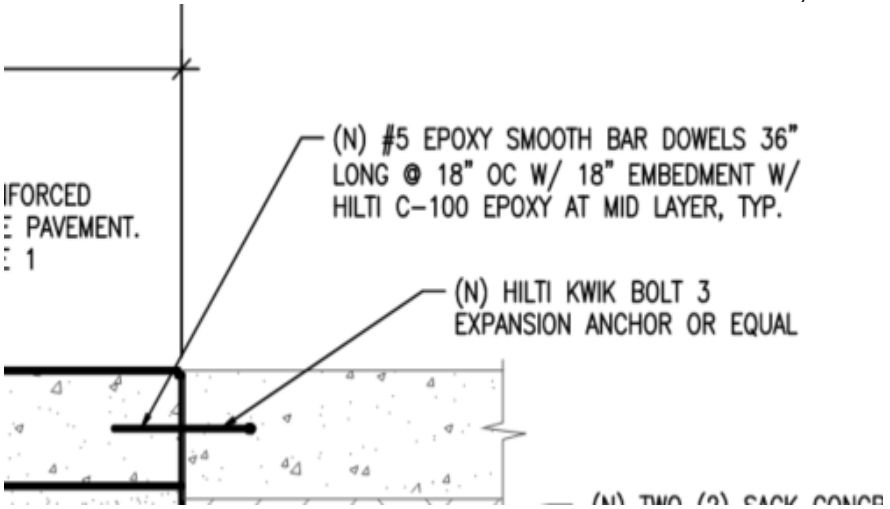
A14. SCE Final Service Plan (final design) will be provided to project contactor when it’s made available to OCTA. Refer to response A7 above for additional information.

Q15. Per plans- SA-S101-Note 13 calls for removal of existing curb along the west charger line. As the excavation is only to be 6” below existing curb, the new gravel fill will sit proud of the existing concrete. Will a barrier be required to retain the gravel

from spilling out onto the concrete? If so, please provide a spec for the new barrier (Refer to 2&3/SA-E505 for elevation cut section)

A15. Refer to Attachment C to this Addendum No. 3 for revised drawings, which includes updated details 2/SA-E505 and 3/SA-E505 that addresses potential gravel spillover.

Q16. Detail 3/SA-E504 calls for epoxy dowels @ 18" centers where new concrete ties into existing. Another note calls for Hilti Kwik Bolt expansion anchors. Please confirm which note is to be used for these dowels, see below



A16. Refer to Attachment C to this Addendum No. 3 for revised drawings, which includes updated detail 3/SA-E504 and note related to dowels.

Q17. It was mentioned at the site walk that outside of construction hours, the drive isle over the new conduit trench will need to remain open. This presents (2) questions:

a. While excavation is open, trench plates will need to be installed to maintain drive isle. Will plates need to be welded together on a daily basis upon completion of the work day?

b. When concrete is poured back in the drive isle, will the work need to be phased (one half poured, allow for cure time, then move to the other half)?

A17. Temporary trench plates provided by project contractor, to cover open excavations related to conduit trenching at driveways/drive aisles, are not required to be welded together on a daily basis. During trench related work, temporary trench plates shall be placed securely by project contractor in a manner that will prevent damaging OCTA bus fleet and other properties; project contractor shall bear all expense for repair or replacement due to property damage by project contractor's operations in conjunction with placement of temporary trench plates.

Phasing to complete concrete placement (pour) related work at driveways/drive aisles shall be implemented to allow for appropriate cure time of concrete and allow

for bus operations to remain fully operational. Phasing of concrete placement related work shall be based on project contractor's means and methods, and shall be coordinated with OCTA in a timely manner.

Q18. Please confirm: The HSE representative is to be provided and paid for by the contractor and must be onsite full time.

A18. Onsite HSE representative during construction activities are to be provided and paid for by the project contractor. Onsite HSE representative are required to be onsite on a full time basis during all construction activities.

Q19. Please confirm: All deputy/consultant inspections (epoxy anchors, concrete, compaction, survey, etc..) are provided by OCTA with schedule coordination from the contractor.

A19. Project contractor is responsible for timely coordination of third-party/deputy inspections related to epoxy anchors, concrete, and compaction that shall be provided and paid for by OCTA. Survey related work/services are not provided nor paid for by OCTA.

Q20. Detail 1/SA-E505 and Note 13/SA-E104 call for exposed wall mounted installation of sched 80 pvc conduit painted to match existing wall. Should this material be changed to Rigid steel conduit?

A20. Exposed wall-mounted conduits shall be of schedule 80 PVC material, unless otherwise noted within project drawings (Attachment C to this Addendum No. 3).

Q21. Section 1 11 00 Summary of Work-1.01-H-4-e specifies the installation of stainless steel cabinets. Section 26 24 13 "Switchboards"1.1-A only specifies Nema 3R switchboard sections, and Section 26 24 16 "Panelboards" 1.1-A & B both call for panel boards in stainless steel enclosures. Please clarify by name (IE..MSB-BEB, SB-BEB 1, 2 and 3) which equipment sections or enclosures are required to be stainless steel.

A21. Refer to updated drawing sheet SA-E104 (within Attachment C to this Addendum No. 3) for construction note 4, which identifies a lockable hinged door panel that is to be of stainless steel material.

Q22. Sheet SA-E102 "FLEETWATCH FR-200 DATA ACQUISITION" specifies programming, testing, commissioning and demonstrating usage of the Fleetwatch FR-200 units. In addition, 3 days of field and classroom training including written hard copies of manuals are to be given to OCTA personnel. Does this coordination and attendance fall on OCTA or the contractor?

A22. As it relates to Fleetwatch (data receiver) units related work, project contractor is required to furnish and install units per project documents. Project contractor is also required to coordinate with Fleetwatch unit manufacturer for testing and commissioning related work to ensure that the units are fully operational. Training related work by Fleetwatch unit manufacturer shall be coordinated by OCTA.

Q23. Will the Fleetwatch FR-200 data receivers be supplied by OCTA or contractor procured?

A23. Fleetwatch (data receiver) units shall be furnished/supplied and installed by project contractor.

Q24. Are Burndy crimps an acceptable alternate to the cad weld connections for ufer ground and ground loop connections?

A24. No, Burndy crimps is not an approved alternate to cad weld connections.

Q25. Is the on-site “designated” HSE Representative allowed to perform other job duties in addition to primary safety duties with all other requirements met? For example, can a superintendent who meets all of the requirements meet the intent of a on-site “designated” HSE representative?

A25. Yes, the safety professional (onsite HSE representative) is allowed to perform other job duties as long as they have all required certifications and/or other requirements to perform the work of the appropriate positions.

Q26. Safety Trained Supervisor-Construction is a BCSP designation; is this designation acceptable?

A26. Yes, a BCSP-STSC (Safety Trained Supervisor Construction) is acceptable.

Q27. Sheet C-26 Storm Drain Profiles – please clarify where these profiles are referenced on the plans.

A27. Refer to Attachment C to this Addendum No. 3 for revised drawings, which includes updated drawing sheet C-26 with added references.

Q28. Please extend the RFI deadline by one week to accommodate new questions based on information from the pre-bid meeting held only 2 days prior to the current deadline.

A28. The Authority has established March 20, 2025 as the deadline to submit questions for the project; therefore, the request for extension is denied.

Equipment List for OCTA-furnished Battery-Electric Bus (BEB) Chargers

Item #	Description

1	ChargePoint Plug-in Chargers
	• Power Block (EXPP-PB1000-250A-PD)
	  ○ Quantity – 10 each
	• Power Module (EXPP-PM-40kW)
	  ○ Quantity – 40 each
	• Express Plus Power Link PL1000 Series (EXPP-PL1011B-3A1M0)
	  ○ Quantity – 10 each

2	ChargePoint Pantograph Charger
	• Power Block (EXPP-PB1000-250A-PD)
	  ○ Quantity – 3 each
	• Power Module (EXPP-PM-40kW)
	  ○ Quantity – 12 each
	• EXPP Pantograph Controller (EXPP-PD-CONTROLLER)
	  ○ Quantity – 1 each
	• Express Plus Power Link PL2000 Series (EXPP-PL2014X-7A5X00)
	  ○ Quantity – 1 each
	• Mast (Valmont Pantograph Mast)
	  ○ Quantity – 1 each
	• Pantograph (Schunk SLS 201.102)
	  ○ Quantity – 1 each

BID DOCUMENT SUBMISSION CHECKLIST

IFB NO._____

PROJECT TITLE: _____

The Orange County Transportation Authority has prepared this checklist as a reminder of the documents required to be submitted with the bid. These documents must be complete, fully executed, notarized where appropriate as required in the bid documents in order to render the bid responsive.

THE FOLLOWING CHECKED DOCUMENTS MUST BE SUBMITTED WITH THE BID:

General IFB Forms:

	Bid Form – include all pages 1 through 4. *All addenda must be acknowledged, signed, dated, corporate seal*
	Bid Security Form: Bid Bond or Check (circle one) *Correct bid number, signed, dated, notarized (bid bond)*
	Information Required of Bidder *Provide all information, signed*
	Bidders Certificate of Compliance Regarding Workers Compensation Insurance *Signed and dated*
	Bidders Certificate of Compliance Regarding State of California Business and Professions Code Section 7028.15 *Signed, dated, notarized*
	List of Subcontractors (Exhibit D) *License Number- address/ name should match that associated with License # on CSLB website, DIR Registration Number, Description of work (one subcontractor for each portion), Dollar amount and Bidders name at bottom of form*
	Status of Past and Present Contracts Form *Signed, dated*
	Non-Collusion Declaration Form *Signed, dated*
	Iran Contracting Act Certification Applicable (Bids over $1,000,000 only) *Signed, dated, (select one option only)*

Signature on this Bid Document Submission Checklist is affirmation that items marked above are hereby submitted with the bid. I understand that failure to complete and/or submit any of the required documents may deem my bid non-responsive.

_____ _____
Authorized Signature Print Name and Title

_____ _____
Firm Name Date

OCTA

BID FORM

The undersigned hereby proposes to perform all work for which a contract may be awarded and to furnish any and all plant, labor, services, material, tools, equipment, supplies, transportation, utilities, and all other items and facilities necessary therefore as required in the **IFB 5-3922**, **"INSTALLATION OF BATTERY ELECTRIC BUS CHARGERS AND ELECTRICAL INFRASTRUCTURE AT SANTA ANA BUS BASE"**, and to do everything required therein; and further proposes that, if this bid is accepted, will contract in the form and manner stipulated to perform all the work in strict conformity therewith within the time limits set forth therein, and will accept as full payment therefore, the following price:

ITEM	DESCRIPTION / BID ALLOWANCES	TOTAL BID PRICE
1	**Bid Amount – Installation of Battery Electric Bus Chargers and Electrical Infrastructure at Santa Ana Bus Base**	$
2	Allowance – Bid Plans vs. Southern California Edison Final Service Plan variances	$50,000.00
	TOTAL BID AMOUNT	$

A cashier's check/certified check/bid bond (circle applicable term) properly made payable to Orange County Transportation Authority, hereinafter designated as the Owner, for the sum of _____

Dollars
($ _____)
which amount is not less than ten percent (10%) of the total amount of this bid, is attached hereto and is given as a guarantee that the undersigned will execute the Agreement and furnish the required bonds, "Guaranty" and "Certificate of Insurance", if awarded the contract, and in case of failure to do so within the time provided, (a) the proceeds of said check shall be forfeited to the Authority; or (b) surety's liability to the Authority for forfeiture of the face amount of the bond shall be considered as established [circle (a) or (b)].

The undersigned hereby represents that:

BID FORM, PAGE 2

1. Bidder has thoroughly examined and become familiar with the work required and documents included under this IFB. The bidder understands that the award of the contract, if it is awarded, will be based on the lowest total bid submitted by a responsive and responsible bidder, and further, that the amounts and the total on the Bid Form will be subject to verification by the Authority.

2. By investigation at the site of the work and otherwise, it is satisfied as to the nature and location of the work and is fully informed as to all conditions and matters, which can in any way affect the work or the cost thereof.

3. Bidder fully understands the scope of the work/specifications and has checked carefully all words and figures inserted in said Invitation For Bids (IFB) and further understands that the Authority will in no way be responsible for any errors or omissions in the preparation of this bid. Bidder further asserts that it is capable of performing quality work to meet Authority's requirements.

4. Bidder will execute the Agreement and furnish the required Performance and Payment Bonds, Guaranty and proof of insurance coverage within ten (10) calendar days after notice of acceptance of bid by the Authority; and further, that this bid may not be withdrawn for a period of 120 calendar days after the date set for the opening thereof, unless otherwise required by law. If any bidder shall withdraw its bid within said period, the bidder shall be liable under the provisions of the Bid Security, or the bidder and the surety shall be liable under the Bid Bond, as the case may be.

5. Bidder hereby certifies that this bid is genuine and not a sham or collusive or made in the interest or on behalf of any person not herein named, and the undersigned has not directly or indirectly induced or solicited any other bidder to put in a sham bid, or any other person, firm, or corporation to refrain from bidding; the undersigned has not in any manner sought by collusion to secure for himself an advantage over any other bidder.

6. In conformance with current statutory requirements of Section 1860, et. seq., of the Labor Code of the State of California, the Bidder shall execute the document included in this IFB entitled "Bidder's Certificate of Compliance Regarding Workers' Compensation Insurance."

7. Bidder hereby further certifies that each, and every representations made in this bid are true and correct and made under penalty of perjury.

BID FORM, PAGE 3

8. Bidder shall permit the authorized representative of the Authority to inspect and audit all data and records of bidder relating to this bid, and if awarded a contract resulting from this bid, shall permit such inspection and audit of all data and records of bidder related to bidder's performance of such contract.

9. Bidder does not employ anyone who is now, or for one (1) year immediately prior to the date of this offer was, a director, officer, member, or employee of the Orange County Transportation Authority. The undersigned has not agreed to pay a fee contingent upon the award of a contract resulting from this bid to anyone who is now, or for one (1) year immediately prior to the date of this bid was, a director, officer, member, or employee of the Orange County Transportation Authority. No member of or delegate to the Congress of the United States shall be admitted to any share of the contract or to any benefit arising therefrom.

10. If awarded a contract resulting from this bid, bidder shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age or national origin. The bidder shall take affirmative action to ensure that applicants are employed, and that employees are treated during their employment, without regard to their race, religion, color, sex, age or national origin. Such actions shall include, but not be limited to the following: employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship.

11. Bid will be in effect for 120 calendar days after the bid closing date.

BID FORM, PAGE 4

Now: In compliance with the **Invitation For Bids (IFB) 5-3922**, **"INSTALLATION OF BATTERY ELECTRIC BUS CHARGERS AND ELECTRICAL INFRASTRUCTURE AT SANTA ANA BUS BASE"**, the undersigned, with full cognizance thereof, hereby proposes to perform the entire work in strict compliance with all of the said requirements and provisions for the prices set forth herein upon which award of contract is made. The undersigned affirms that the information provided herein is true and accurate and that any misrepresentations are made under penalty of perjury.

Dated _____ , 202_ Bidder _____

The above bid includes Signature _____

Addenda Nos. _____ Name _____

Title _____

Bidder's Authorized Representative _____

Title _____

Telephone # _____

Fax # _____

Email Address _____

Bidders post office address _____

_____

_____

Corporation organized under the laws of the State of _____

Contractor's License No. _____

Expiration Date of License _____

Surety or sureties _____

_____

(CORPORATE SEAL)

BID SECURITY FORM
BID BOND

KNOW ALL MEN BY THESE PRESENTS:

That, _____ as principal and Bidder and _____ as Surety, are held and firmly bound unto the Orange County Transportation Authority, of State of California, hereinafter referred to as "Authority," in the sum of _____ Dollars ($_____), to be paid to the Authority, its successors, and assigns; for which payment, well and truly to be made, bind themselves, their heirs, executors, administrators, successors, and assigns, jointly and severally, firmly by these presents, this amount being ten percent (10%) of the total amount of the Bid.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if the certain bid of the above named bounden principal _____ _____ for_____ at the Orange County Transportation Authority's _____ as specifically set forth in documents entitled **IFB 5-3922, "INSTALLATION OF BATTERY ELECTRIC BUS CHARGERS AND ELECTRICAL INFRASTRUCTURE AT SANTA ANA BUS BASE",** shall not be withdrawn within a period of 120 calendar days after the date set for the opening of bids, (unless otherwise required by law, and notwithstanding the award of the contract to another Bidder), and that if said bid is accepted by the Authority through action of its legally constituted contracting authorities and if the above bounden_____ its heirs, executors, administrators, successors and assigns, shall execute a contract for such construction and deliver the required Performance and Payment Bonds, "Guaranty," and proof of insurance coverage within ten (10) calendar days after notification of contract award from the Authority, then this obligation shall become null and void; otherwise it shall be and remain in full force and effect.

IN WITNESS WHEREOF, we hereunto set our hands and seals this _____ day of _____, 202_.

_____
_____

NOTE: The standard printed bond form of any bonding company acceptable to the Authority may be used in lieu of the foregoing approved sample bond form provided the security stipulations protecting the Authority are not in any way reduced by use of the security company's printed standard form.

BID SECURITY FORM
CHECK TO ACCOMPANY BID

(NOTE: The following form shall be used in case check accompanies bid)

Accompanying this bid is a Certified or Cashiers check (circle the appropriate one) payable to the order of Orange County Transportation Authority, hereinafter referred to as "Authority" for _____ dollars ($_____), this amount being ten percent (10%) of the total amount of the Bid submitted in response to **IFB 5-3922, "INSTALLATION OF BATTERY ELECTRIC BUS CHARGERS AND ELECTRICAL INFRASTRUCTURE AT SANTA ANA BUS BASE"**. The proceeds of this check shall become the property of Authority provided this bid shall be accepted by Authority through action of its legally constituted contracting authorities and the undersigned shall fail to execute a contract and furnish the required Guaranty Form, Performance and Payment Bonds and proof of insurance coverage within ten (10) calendar days after date of notification of contract award from the Authority. The proceeds of this check shall also become the property of the Authority if the undersigned bidder withdraws the bid within the period of 120 days after the date set for the opening thereof, unless otherwise required by law, and notwithstanding the award of the contract to another bidder. Otherwise, the check shall be returned to the undersigned.

Bidder:_____

Signature:_____

Date:_____

NOTE: If the bidder desires to use a bond instead of check, the Bid Bond form shall be executed and the sum of this bond shall be ten percent [10%] of the total amount of the bid.

INFORMATION REQUIRED OF BIDDER

The bidder is required to supply the following information. Additional sheets may be attached if necessary.

1. Name of Bidder: _____
2. Business Address: _____
3. Telephone ( )_____ Fax ( )_____E-Mail: _____
4. Type of Firm - Individual, Partnership or Corporation: _____
5. Corporation organized under the laws of state of: _____
6. Contractor's License No.: _____ Class_____Years of Experience: __
7. Expiration Date of License: _____
8. Is your firm a certified small business in California? Yes____ No____
9. List the names and addresses of all owners of the firm or names and titles of all officers of the corporation:

   _____

   _____

INFORMATION REQUIRED OF BIDDER, PAGE 2

10. Please list the following: a) All prior and current license numbers that the current owner(s) or officers possess or have possessed in the last five years and the current status of those license; b) any prior company names that the owner(s) had in operation during the previous five years.

Current Officers or Owners Name	Prior Company Names (During the last 5 years)	Prior and Current License Numbers	Status of License

Note: If additional space is required to detail the information requested, please attach another page. All information requested must be included. Failure to identify all of the information may result in your bid being found non-responsive and your bid being rejected.

11. List all construction projects (public and private) for which Bidder has provided general contractor services for the past three years:

Contract Type (Public or Private)	Project Description	Dates of Service	Total Cost	Name and Address of Owner	Contact Name and Phone Number

Note: If additional space is required to detail the information requested, please attach another page. All information requested must be included. Failure to identify all of the information, may result in your bid being found non-responsive and your bid being rejected.

12. List the name, address and phone number of Superintendent for this project:

_____

13. List all construction projects (public and private) for which Superintendent has provided services as a Superintendent for the past three years.

Contract Type (Public or Private)	Project Description	Dates of Service	Total Cost	Name and Address of Owner	Contact Name and Phone Number

Bidder hereby certifies that it:

_____ is a certified Disadvantaged Business Enterprise as defined herein.

_____ is not a Disadvantaged Business Enterprise as defined herein.

NOTE: If requested by the Authority, bidder shall furnish a certified financial statement, financial data, or other information and references sufficiently comprehensive to permit an appraisal of its current financial condition.

I hereby certify the above is true and correct to the best of my belief.

_____
Signature

_____
Name

_____
Title

_____
Company Name

_____
Telephone Number

_____
Fax Number

_____
Email Address

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

1. The Bidders' attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

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

Timetable Goals for Minority Participation for Each Trade (11.9)

Goals for Female Participation in Each Trade (6.9)

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.

The Contractor's compliance with the Executive Order and the regulations in 41 C.F.R. 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 C.F.R. 60-4.3 (a), and its efforts to meet the goals established for the geographical area where the contract resulting from this solicitation is to be performed. The hours of minority and female employment and training must 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 C.F.R. Part 60-4. Compliance with the goals will be measured against the total work hours performed.

3. The Contractor shall provide written notification to the Director of the Office of Federal Contract Compliance Programs within ten (10) working days of award of any construction subcontract in excess of $10,000 at any tier for construction work under the contract resulting from this solicitation. The notification shall list the name, address and telephone number of the subcontractor; employer identification number; estimated dollar amount of the subcontract; estimated starting and completion dates of the subcontract; and the geographical area in which the contract is to be performed.

4. As used in this Notice, and in the contract resulting from this solicitation, the "covered area" includes the County of Orange, California.

BIDDER'S CERTIFICATE OF COMPLIANCE REGARDING WORKERS' COMPENSATION INSURANCE

In conformance with current statutory requirements of Section 1860, et. seq., of the Labor Code of the State of California, the undersigned confirms the following certification:

> "I am aware of the provisions of Section 3700 of the 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."

Bidder/Contractor: _____

Signature: _____

Name and Title: _____

Date: _____

BIDDER'S CERTIFICATE OF COMPLIANCE REGARDING STATE OF CALIFORNIA BUSINESS AND PROFESSIONS CODE SECTION 7028.15

Contractor License Number: _____

Expiration Date of Contractor's License: _____

Each, every and all of the representations made by Bidder in the attached bid are true and correct.

Name of Bidder/Contractor: _____

Signed: _____

Title: _____

Subscribed to and sworn before me, a Notary Public in and for the State of California, on _____, 202___.

_____
Notary Public

My commission expires on:

_____, 202__
(NOTARY SEAL)

LIST OF SUBCONTRACTORS (EXHIBIT D)

List only the subcontractors, which will perform work or labor or render services to the bidder in excess of one-half of one percent (1/2 of 1%) of the bidder's total bid amount. Do not list alternative subcontractors for the same work. (Use additional sheets if necessary.)

Name & Address Under Which Subcontractor is Licensed	License Number	DIR Registration No.	Specific Description of Work to be Rendered	Small Business Y/N	Type	Dollar Amount
						$
						$
						$
						$
						$
						$
TOTAL VALUE OF SUBCONTRACTED WORK						$

Bidder's Name _____

STATUS OF PAST AND PRESENT CONTRACTS FORM

On the form provided below, Offeror/Bidder shall list the status of past and present contracts where the firm has either provided services as a prime vendor or a subcontractor during the past five (5) years in which the contract has been the subject of or may be involved in litigation with the contracting authority. This includes, but is not limited to, claims, settlement agreements, arbitrations, administrative proceedings, and investigations arising out of the contract.

A separate form must be completed for each contract. Offeror/Bidder shall provide an accurate contact name and telephone number for each contract and indicate the term of the contract and the original contract value. Offeror/Bidder shall also provide a brief summary and the current status of the litigation, claims, settlement agreements, arbitrations, administrative proceedings, or investigations. If the contract was terminated, list the reason for termination.

Offeror/Bidder shall have an ongoing obligation to update the Authority with any changes to the identified contracts and any new litigation, claims, settlement agreements, arbitrations, administrative proceedings, or investigations that arise subsequent to the submission of the bid. Each form must be signed by an officer of the Offeror/Bidder confirming that the information provided is true and accurate.

Project city/agency/other:
Contact Name: **Phone:**
Project Award Date: **Original Contract Value:**
Term of Contract:
(1) Litigation, claims, settlements, arbitrations, or investigations associated with contract:
(2) Summary and Status of contract:
(3) Summary and Status of action identified in (1):
(4) Reason for termination, if applicable:

By signing this Form entitled "Status of Past and Present Contracts," I am affirming that all of the information provided is true and accurate.

_____ _____

Name Signature

_____ _____

Title Date

Revised. 03/16/2018

Non-Collusion Affidavit

To the Orange County Transportation Authority

In accordance with Title 23 United States Code Section 112 and Public Contract Code 7106 the bidder declares that the bid is not made in the interest of, or on the 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, 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 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.

Name of Bidder:_____

Signature: _____

Date:_____

IRAN CONTRACTING ACT CERTIFICATION

(California Public Contract Code Sections 2200, *et seq.*)

The Iran Contracting Act of 2010 (PCC Sections 2200-2208), prohibits bidders who are engaged in investment activities in the energy sector of Iran from bidding on, submitting proposals for, or entering into or renewing contracts with public entities for goods or services of one million dollars ($1,000,000) or more. At the time of submitting a bid, each bidder must certify that the bidder is not identified on the Department of General Services list of ineligible persons pursuant to PCC Section 2203(b). Each bidder is also required to certify that the bidder is not engaged in investment activities in violation of the Iran Contracting Act of 2010.

A bidder who is engaged in investment activities in the energy sector of Iran is defined as:

1. A person providing goods or services of twenty million dollars ($20,000,000) or more in the energy sector of Iran, including a person that provides oil or liquefied natural gas tankers, or products used to construct or maintain pipelines used to transport oil or liquefied natural gas, for the energy sector of Iran; or
2. A person that is a financial institution that extends twenty million dollars ($20,000,000) or more in credit to another person, for 45 days or more, if that person will use the credit to provide goods or services in the energy sector in Iran and is identified on a list created pursuant to PCC Section 2203(b).

A bidder is not required to certify that it is engaged in investment activities in the energy sector of Iran if the bidder is exempt from the certification under PCC Section 2203(c) or (d). If the bidder is exempt from the certification requirement, the bidder will be required to provide documentation demonstrating the exemption.

To comply with the Iran Contracting Act of 2010, the bidder shall complete **one** of the options below. Please note: under PCC Section 2205, false certification of this form may result in civil penalties of $250,000 or twice the amount of the contract for which false certification was made, termination of the contract, and/or ineligibility to bid on contracts for a period of three years.

Option No. 1: Certification

I, the official named below, certify I am duly authorized to execute this certification on behalf of the vendor/financial institution identified below, and the vendor/financial institution identified below, and any subcontractor who will perform work or labor or render services to the vendor identified below, is not on the current Department of General Services list identifying persons engaged in investment activities in the energy sector of Iran, and is not a financial institution extending twenty million dollars ($20,000,000) or more in credit to another person/vendor, for 45 days or more, if that other person/vendor will use the credit to provide goods or services in the energy sector in Iran and is identified on the current Department of General Services list identifying persons engaged in investment activities in the energy sector of Iran.

Vendor/Financial Institution: _____

Signature: _____

Name and Title: _____

Date: _____

Option No. 2: Exemption

Pursuant to PCC Section 2203(c) and (d), a public entity may permit a bidder or financial institution engaged in investment activities in Iran, on a case-by-case basis, to be eligible for, or to bid on, submit proposals for, or enter into or renew a contract with a public entity for goods or services of one million dollars ($1,000,000) or more. If the bidder, financial institution, or any subcontractor who will perform work or labor or render services to the bidder has obtained an exemption from the certification requirement, please complete and sign below and attach the documentation demonstrating the exemption approval.

Vendor/Financial Institution: _____

Signature: _____

Name and Title: _____

Date: _____

Option No. 3: Non-Applicability

Pursuant to PCC Section 2203(b), a bidder or financial institution engaged in investment activities in Iran may not be eligible for, or to bid on, submit proposals for, or enter into or renew a contract with a public entity for goods or services of one million dollars ($1,000,000) or more. If the contract is not for goods or services of one million dollars ($1,000,000) or more, please sign below indicating that the contract is not for goods or services of one million dollars ($1,000,000) or more and thus bidder is not required to certify and does not meet the exemption.

Vendor/Financial Institution: _____

Signature: _____

Name and Title: _____

Date: _____

ORANGE COUNTY TRANSPORTATION AUTHORITY

SANTA ANA BUS BASE

INSTALLATION OF BATTERY-ELECTRIC BUS CHARGERS AND ELECTRICAL INFRASTRUCTURE

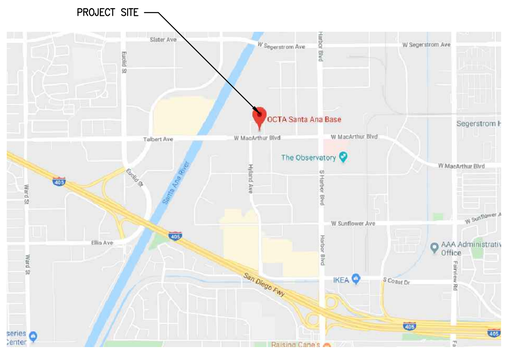
4301 WEST MACARTHUR BOULEVARD

SANTA ANA, CA 92704

CONTRACT No. C-5-3922

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: (949) 756-8654
FAX: (949) 502-0777

VICINITY MAP



PROJECT LOCATION

PROJECT INFORMATION

OWNER:	ORANGE COUNTY TRANSPORTATION AUTHORITY (OCTA)
SITE ADDRESS:	4301 WEST MACARTHUR BLVD., SANTA ANA, CA 92704
FACILITY USE:	BUS MAINTENANCE
ZONE:	INDUSTRIAL
REFERENCE:	–
BUILDING FOOT PRINT:	N/A
ALLOWABLE FLOOR AREA:	N/A
TYPE OF CONSTRUCTION:	N/A
SPRINKLERS REQUIREMENT:	N/A
HAZARD MATERIAL:	NO HAZARDOUS MATERIAL IS STORED NEARBY

OWNER	CONSULTING ENGINEERS
ORANGE COUNTY TRANSPORTATION AUTHORITY (OCTA) 550 S. MAIN STREET ORANGE, CA 92868	DAHL, TAYLOR & ASSOCIATES, Inc. 2960 DAIMLER STREET SANTA ANA, CA 92705

BUILDING CODES AND STANDARDS

2022 BUILDING STANDARDS ADMINISTRATIVE CODE, PART 1, TITLE 24 C.C.R.

2022 CALIFORNIA BUILDING CODE (CBC), PART 2, TITLE 24 C.C.R.

2022 CALIFORNIA ELECTRICAL CODE (CEC), PART 3, TITLE 24 C.C.R.

2022 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24 C.C.R.

2022 CALIFORNIA PLUMBING CODE (CPC), PART 5, TITLE 24. C.C.R

2022 CALIFORNIA ENERGY CODE, PART 6, TITLE 24 C.C.R.
2022 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R.

2022 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.
TITLE 19 C.C.R., PUBLIC SAFETY, STATE FIRE MARSHAL REGULATIONS.

2022 CALGreen

ALL WORK AND MATERIALS SHALL BE IN FULL ACCORDANCE WITH THESE CODES AND ALL APPLICABLE LOCAL ORDINANCES. WHERE CONTRACT DOCUMENTS EXCEED THESE REQUIREMENTS WITHOUT VIOLATING CODE AND REGULATION REQUIREMENTS, CONTRACT DOCUMENTS SHALL TAKE PRECEDENCE. WHERE CODES CONFLICT, THE MORE STRINGENT SHALL APPLY. 1

CONTRACTORS BID NOTES

1. CONTRACTORS BIDDING ON THIS PROJECT SHALL REVIEW THE ENTIRE IFB 5-3922 PACKAGE INCLUDING THE DRAWING SET, DIVISION I SPECIFICATIONS, AND TECHNICAL SPECIFICATIONS IN PREPARATION OF THEIR BID. REMOVAL OF ANY PORTION OF THE IFB PACKAGE IS PROHIBITED.
2. GENERAL CONTRACTOR WILL BE RESPONSIBLE FOR THE SCOPE OF WORK AS DESCRIBED IN THE ENTIRE IFB PACKAGE, FOR INSTALLATION, STARTUP TESTING, AND COMMISSIONING OF CHARGEPOINT BEB PLUG-IN AND PANTOGRAPH CHARGERS, AND FOR COORDINATION OF ALL TRADES.
3. GENERAL CONTRACTOR AND SUB-CONTRACTORS ARE TO COORDINATE ALL RELATED WORK AND SCE INSTALLATION OF MEDIUM VOLTAGE EQUIPMENT.

SCOPE OF WORK

1. COORDINATION WITH SOUTHERN CALIFORNIA EDISON (SCE) FOR SCE INSTALLATION OF A NEW ELECTRICAL SERVICE, CONDUITS, SWITCH CABINET, UTILITY TRANSFORMER, AND WIRING, AND FOR TERMINATION OF UTILITY FEEDERS IN THE METERED SWITCHBOARD.
2. INSTALLATION, STARTUP TESTING, AND COMMISSIONING OF NEW ELECTRICAL DISTRIBUTION SYSTEM TO FEED POWER TO NEW BATTERY-ELECTRIC-BUS (BEB) CHARGERS.
3. INSTALLATION, STARTUP TESTING, AND COMMISSIONING OF THIRTEEN (13) CHARGEPOINT POWER BLOCKS, TEN (10) CHARGEPOINT POWER LINK 1000 BEB CHARGERS, AND ONE (1) PANTOGRAPH DOWN 2000 BEB CHARGER THAT ARE FURNISHED BY OCTA. 1
4. INSTALLATION, STARTUP TESTING, AND COMMISSIONING OF NEW EMERGENCY POWER SYSTEM CONSISTING OF A GENERATOR, AN AUTOMATIC TRANSFER SWITCH, A REMOTE MONITORING PANEL, A PSP PRODUCTS LSC SERIES STANDALONE PROGRAMMABLE LOAD MANAGEMENT CONTROLLER, WIRING, AND ALUMINUM PLATFORMS WITH SAFETY PROTECTION RAILINGS AND STAIRS FOR SERVICE ACCESS.
5. INSTALLATION, STARTUP TESTING, AND COMMISSIONING OF NEW FLEETWATCH FR200 DATA RECEIVERS, LOCKABLE HINGED DOOR STAINLESS STEEL CABINETS, ETHERNET SWITCH, WIFI MODEM, CAT6 STP CABLING, CONTROL WIRING, 120V RECEPTACLES, AND 120V POWER WIRING.
6. AN INDEPENDENT UTILITY LOCATOR TO VERIFY UNDERGROUND UTILITIES PRIOR TO SAW-CUTTING, REMOVAL, AND DISPOSAL OF CONCRETE CURB AND PAVEMENT. TRENCHING, & REPLACEMENT OF 9" THICK REINFORCED CONCRETE PAVEMENT TO MATCH THE EXISTING CONCRETE PAVEMENT.
7. CONSTRUCTION OF CONCRETE CURBS, FOUNDATIONS, PADS, PAVEMENT, PAVEMENT STRIPING AND MARKING, SLABS, WHEEL STOPS, GRANITE GRAVEL FILL, AND BOLLARDS TO PROTECT AND SUPPORT CHARGEPOINT BEB CHARGER CABINETS AND PANTOGRAPH MAST, EMERGENCY POWER GENERATOR, SWITCHBOARD, PANEL-BOARDS, COMMUNICATION AND CONTROL CABINETS, SCE SWITCH CABINET, AND SCE UTILITY TRANSFORMER.
8. REFER TO IFB 5-3922 DOCUMENTS FOR COMPLETE SCOPE OF WORK.

DRAWING INDEX

MARK	DATE	BY	REVISIONS
1	03/28/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

Sheet Title
TITLE SHEET, DRAWING INDEX, SCOPE OF WORK, PROJECT LOCATION AND VICINITY MAP

Project
OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-T001

550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA

GENERAL NOTES

GENERAL NOTES:

1) THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, TOOLS, AND EQUIPMENT TO PROVIDE A COMPLETE AND FINISHED PRODUCT. ALL MATERIALS SHALL BE NEW, UNLESS NOTED OTHERWISE.

2) ALL WORK PERTAINING TO THIS PROJECT SHALL BE DONE IN ACCORDANCE WITH THESE PLANS AND THE SPECIFICATIONS, AND CONTRACT DOCUMENTS, AND THE LOCAL AGENCY OF JURISDICTION BUILDING CODE REQUIREMENTS. CONTRACTOR IS REQUIRED TO OBTAIN CONSTRUCTION PERMIT AND BUSINESS LICENSE FROM THE CITY BEFORE BEGINNING CONSTRUCTION WORK.

3) THE CONTRACTOR SHALL INFORM THE PROJECT MANAGER 72 HOURS BEFORE STARTING CONSTRUCTION WORK. THE PROJECT ENGINEER WILL SCHEDULE A MEETING BETWEEN CONTRACTOR AND OCTA FACILITY AND OPERATION STAFF BEFORE WORK BEGINS.

4) THE CONTRACTOR SHALL PROVIDE ALL NECESSARY BARRICADES, FENCES AROUND WORK AREA, WARNING SIGNS, AND OTHER PROTECTIVE DEVICES, AND TAKE ALL NECESSARY PRECAUTIONARY MEASURES TO PROTECT ALL OCTA PERSONNEL, PUBLIC, PROPERTY AND THE WORK.

5) DUST CONTROL SHALL BE REQUIRED DURING CONSTRUCTION. DUST SHALL BE CONTROLLED BY THE CONTRACTOR BY ENCLOSING AREA OF WORK WITH PLASTIC SHEET OR CANVAS BARRICADES TO PREVENT DUST SPREAD TO ADJACENT BUSES, BUILDINGS, EQUIPMENT AND OCTA WORKERS.

6) DEMOLITION NECESSARY FOR COMPLETION OF CONSTRUCTION SHALL BE A PART OF THIS PROJECT. THE EXISTING MATERIAL REMOVED DURING CONSTRUCTION, SHALL BE LEGALLY DISPOSED OFF-SITE DAILY. ALL DEBRIS SHALL BE REMOVED FROM PREMISES DAILY AND ALL AREAS SHALL BE LEFT IN A CLEAN (BROOM) CONDITION AT ALL TIMES, AND AT THE END OF EACH WORK DAY, CLEAN THE WORK AND SURROUNDING AREAS WHERE CONSTRUCTION DEBRIS HAS SPREAD DURING THE WORK DAY.

7) ALL DRAINAGE FROM NEW CONSTRUCTION WORK SHALL BE PREVENTED FROM ENTERING EXISTING STORM DRAINS ON SITE.

8) THE CONTRACTOR IS REQUIRED TO TAKE ALL PRECAUTIONARY MEASURES TO LOCATE AND PROTECT ABOVE AND BELOW GROUND UTILITIES, EQUIPMENT, AND STRUCTURES SHOWN OR NOT SHOWN ON THESE PLANS. THE PROTECTION OF ALL UTILITIES IS THE RESPONSIBILITY OF THE CONTRACTOR. AT EACH OCTA'S PROPERTY, THE CONTRACTOR SHALL UTILIZE AN INDEPENDENT UNDERGROUND UTILITY LOCATING SERVICE, WHICH USES STANDARD LOCATING TECHNIQUES OTHER THAN EXCAVATING, TO IDENTIFY THE LOCATION OF UNDERGROUND UTILITIES IN THE AREAS OF THE WORK PRIOR TO EXCAVATING. THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION OF UTILITIES IDENTIFIED IN THE WORK AREA BY POTHOLING USING HAND TOOLS BEFORE USING ANY POWER OPERATED EXCAVATING EQUIPMENT. UTILITIES NOT SHOWN ON THE PLANS WHICH ARE IN DIRECT CONFLICT WITH THE WORK WILL BE DEALT WITH BY CHANGE ORDER. THE CONTRACTOR SHALL BEAR ALL EXPENSE FOR THE REPAIR OR REPLACEMENT OF UTILITIES OR OTHER PROPERTY DAMAGE BY HIS OPERATIONS IN CONJUNCTION WITH THE EXECUTION OF THE CONTRACT WORK.

9) THE CONTRACTOR SHALL DELINEATE TRAFFIC THROUGH THE CONSTRUCTION WORK AREA, AND SHALL COOPERATE WITH THE OCTA FACILITY, OPERATIONS, AND MAINTENANCE PERSONNEL TO KEEP THE FACILITY OPERATIONAL AT ALL TIMES. PROVIDE A 20 FEET WIDE DRIVE-WAY ADJACENT TO WORK AREA FOR BUS AND OTHER TRAFFIC TO PASS AROUND WORK AREA. PROVIDE ACCESS FOR BUS AND CAR PARKING IN ADJACENT PARKING STALLS. CONTRACTOR IS REQUIRED TO KEEP OCTA BUS AND FACILITY TRAFFIC OPERATIONAL AT ALL TIMES. DO NOT PARK TRUCKS EQUIPMENT IN BUS DRIVEWAYS, ENTRANCE OR EXITS.

10) ALL WORK SHALL BE COMPLETED BETWEEN THE HOURS OF 7:00 A.M. AND 3:30 P.M. ALL EXISTING FACILITIES, EQUIPMENT, AND UTILITIES DISCONNECTED BY CONTRACTOR DURING THE WORK DAY SHALL BE RE-CONNECTED AT 3:30 PM FOR OCTA TO CONTINUE ITS NORMAL AFTER HOURS OPERATIONS.

11) PLANS HAVE BEEN PREPARED FROM VISUAL AND ACTUAL MEASUREMENT OF THE WORK AREA. THE CONTRACTOR SHALL REPORT TO THE PROJECT MANAGER ANY ERROR, INCONSISTENCY, OR OMISSION HE MAY DISCOVER IN THE DRAWINGS BEFORE BEGINNING WORK. THE CONTRACTOR IS RESPONSIBLE FOR CORRECTING ANY ERROR AT NO COST TO THE AUTHORITY AFTER THE START OF CONSTRUCTION. THE CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS BEFORE SUBMITTING HIS BID. IN CASE OF DISCREPANCIES, CONTRACTOR SHALL OBTAIN CLARIFICATION FROM THE PROJECT MANAGER. SUBMITTAL OF BID INDICATES CONTRACTOR IS AWARE OF SITE AND WORK CONDITIONS AND UNDERSTANDS THE WORK REQUIRED BY THE CONTRACT.

12) ON SITE VERIFICATION OF ALL DIMENSIONS AND CONDITIONS SHALL BE RESPONSIBILITY OF THE CONTRACTOR, NOTIFY PROJECT MANAGER OF ANY DISCREPANCY BEFORE STARTING WORK.

13) THE CONTRACTOR SHALL PROVIDE TEMPORARY WATER, POWER, AND OTHER FACILITIES REQUIRED TO COMPLETE THE PROJECT. CONTRACTOR SHALL PROVIDE TEMPORARY TOILET FACILITIES ON SITE FOR HIS WORKERS WHICH SHALL BE CLEANED ON A DAILY BASIS.

14) THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE WORK WHILE THE WORK IS IN PROGRESS AND UNTIL COMPLETED.

15) THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL REPLACE OR REMEDY ANY FAULTY, IMPROPER OR INFERIOR MATERIAL OR WORKMANSHIP, OR ANY DAMAGE TO WORK OR ADJACENT AREAS OR STRUCTURES.

16) CONTRACTOR SHALL COMPLY WITH ALL SAFETY CODE REGULATIONS AND THE STATE DEPARTMENT OF INDUSTRIAL RELATIONS, DIVISION OF INDUSTRIAL SAFETY (O.S.H.A.) REQUIREMENTS.

17) VERIFY ALL MEASUREMENTS ON SITE BEFORE PREPARING AND SUBMITTING SHOP DRAWINGS.

18) THE CONTRACTOR SHALL POST ADVANCE CONSTRUCTION WARNING SIGNS. THE CONTRACTOR SHALL PROVIDE ALL BARRICADES, WARNING SIGNS, AND PROTECTIVE DEVICES AND SHALL TAKE ALL NECESSARY MEASURES TO PROTECT ALL PERSONNEL, PROPERTY, AND THE WORK SITE DURING CONSTRUCTION. CONTRACTOR SHALL PROVIDE FLASHING LIGHTS AROUND THE CONSTRUCTION WORK AREA ON THE BARRICADES FROM DUSK (4:00 PM) TO DAWN (7:00 AM) EVERYDAY WHEN WORK IS IN PROGRESS. COMPLETELY CLOSE WITH BARRICADES ENTRANCE AND EXITS OF THE CONSTRUCTION AREA, AND INSTALL NOTIFICATION SIGNS IN ADVANCE OF CLOSURE OF THE AREA FOR CONSTRUCTION, INSTALL NOTIFICATION SIGNS ONE WEEK BEFORE CONSTRUCTION BEGINS.

19) WORK UNDER THIS CONTRACT SHALL BE DONE SO THAT EXISTING BUS OPERATIONS AND BUS MAINTENANCE SHALL REMAIN IN FULL OPERATIONS DURING CONSTRUCTION. OCTA'S BUS OPERATION AND BUS MAINTENANCE, REPAIR SHALL REMAIN UNINTERRUPTED, ONGOING, AND IN FULL OPERATION DURING CONSTRUCTION. CONTRACTOR SHALL ARRANGE HIS WORK TO OFFER LEAST INTERFERENCE TO OCTA'S CONTINUED DAILY BUS OPERATION AT THE BUS BASE. KEEP NON-CONSTRUCTION AREAS OPEN TO OCTA STAFF WORK.

20) CONTRACTOR SHALL ARRANGE HIS WORK TO OFFER LEAST INTERFERENCE WITH OCTA DAILY BUS OPERATIONS. OCTA PROJECT MANAGER WILL COORDINATE WORK ACTIVITIES, AND TEMPORARY CHANGES IN FACILITY ACTIVITY WHICH ARE NECESSARY FOR CONTRACTOR'S WORK. CONTRACTOR SHALL COORDINATE HIS WORK ACCORDINGLY.

21) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DAMAGES TO EXISTING FACILITIES RESULTING FROM HIS CONSTRUCTION. ALL DISTURBED OR DAMAGED AREAS SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE AND/OR PATCHED TO MATCH ADJACENT MATERIALS, OR AS EXISTED BEFORE CONSTRUCTION.

22) IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO LOCATE ALL UTILITIES WHETHER SHOWN ON THE DRAWINGS OR NOT, AND TO PROTECT THEM AS NECESSARY. THE CONTRACTOR SHALL BEAR ALL EXPENSE OF REPAIR OR REPLACEMENT OF UTILITIES DAMAGED BY HIS OPERATIONS OR CONSTRUCTION WORK. CONTRACTOR SHALL LOCATE ALL UTILITIES IN THE WORK AREA AND PROTECT THEM FROM DAMAGE. IF DAMAGED BY CONSTRUCTION, CONTRACTOR WILL BE REQUIRED TO REPAIR DAMAGED UTILITY IMMEDIATELY SO THAT OCTA BUS OPERATIONS IS NOT INTERRUPTED. PROVIDE TEMPORARY UTILITIES DURING BREAKDOWN PERIOD. CONTRACTOR SHALL FULLY CO-OPERATE WITH OCTA BUS AND FACILITY MAINTENANCE STAFF TO COMPLETE THE WORK. IF REQUIRED BY OCTA STAFF, PROVIDE TEMPORARY FACILITIES, UTILITIES, OR EQUIPMENTS DURING TEMPORARY DISCONNECTION, BREAKDOWN, OR DAMAGE OF OCTA FACILITIES, UTILITIES, OR EQUIPMENTS DUE TO CONTRACTOR'S WORK.

23) NO OMISSION OF THE WORK SHALL BE MADE WITHOUT WRITTEN APPROVAL OF OCTA.

24) NO SUBSTITUTION OF THE WORK SHALL BE MADE WITHOUT WRITTEN APPROVAL OF OCTA. CHANGES TO THE CONTRACT DRAWINGS OR SPECIFICATIONS SHALL BE MADE BY A WRITTEN ADDENDUM OR CHANGE ORDER APPROVED BY OCTA.

25) ALL WORKMANSHIP SHALL BE PERFORMED BY SKILLED MECHANICS USING THE BEST STANDARD PRACTICES OF THE TRADE AND CONSTRUCTION INDUSTRY.

26) WHERE NO SPECIFIC DETAIL IS SHOWN, THE CONSTRUCTION SHALL BE SIMILAR TO THAT INDICATED OR NOTED FOR SIMILAR CONDITIONS OF CONSTRUCTION ON THE PROJECT. REFERENCES OF NOTES AND DETAILS TO SPECIFIC CONDITIONS AND LOCATIONS SHALL NOT LIMIT THEIR APPLICABILITY.

27) THE STRUCTURE IS DESIGNED AS A STABLE UNIT AFTER ALL COMPONENTS ARE INSTALLED. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ALL TEMPORARY SHORING, BRACING, SCAFFOLDING, AND OTHER SUPPORTS NECESSARY. CONTRACTOR SHALL PROVIDE ALL NECESSARY TEMPORARY BACKING, SUPPORTS, SLEEVES, FRAMING FOR SUPPORTING THE WORK DURING INSTALLATION.

28) CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT OCTA STAFF AND BUSES FROM ENTERING CONSTRUCTION AREA DURING DEMOLITION AND CONSTRUCTION. SIGNS SHALL BE POSTED TO NOTIFY OCTA WORKERS OF CONSTRUCTION. PROVIDE BARRIERS AROUND GENERAL AREA OF CONSTRUCTION WHILE WORK IS IN PROGRESS. FENCES, BARRICADES, ENCLOSURES, WARNING SIGNS, ETC. SHALL BE PROVIDED AROUND THE LOCAL WORK AREA BY THE CONTRACTOR TO KEEP THE PUBLIC OUT OF CONTRACTOR'S WORK AREA AND WARN THE PUBLIC OF CONSTRUCTION WORK IN PROGRESS.

29) THE CONTRACTOR SHALL ASSUME SOLE AND COMPLETE RESPONSIBILITY FOR JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THE PROJECT INCLUDING SAFETY OF ALL PERSONS AND PROPERTY AND THAT THE REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

30) THE CONTRACTOR SHALL BE RESPONSIBLE FOR SAFETY AND SECURITY OF THE PROPERTY AND ALL WORKERS ON SITE. CONTRACTOR SHALL PROVIDE ALL SAFETY EQUIPMENT FOR HIS WORKERS.

31) THE SCHEDULE OF THE PROJECT IS CRITICAL. EACH SUB-CONTRACTOR SHALL START HIS WORK PER THE SCHEDULE AND PURSUE IT DILIGENTLY AND COMPLETE IT IN ACCORDANCE WITH THE GENERAL CONTRACTOR'S SCHEDULE OF CONSTRUCTION. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR THE SUPERVISION OF THE WORK OF ALL ITS SUB-CONTRACTORS.

32) CARE SHALL BE EXERCISED TO PREVENT DAMAGE DUE TO CARELESSNESS OR VANDALISM. ALL MATERIALS AND EQUIPMENT SHALL BE SECURED AFTER WORKING HOURS. NO CONSTRUCTION MATERIALS OR EQUIPMENT ARE TO BE LEFT UNSECURED AT ANY TIME. THE CONTRACTOR SHALL PROVIDE FOR HIS OWN SECURITY, STORAGE ENCLOSURES AS NECESSARY IN DESIGNATED LAY-DOWN OR STORAGE ENCLOSURE AREA APPROVED BY THE OCTA FACILITY MAINTENANCE MANAGER. THE CONTRACTOR SHALL BE RESPONSIBLE TO FENCE AND SECURE HIS STORAGE AND EQUIPMENT AT ALL TIMES. OCTA IS NOT RESPONSIBLE FOR CONTRACTOR'S MATERIAL OR EQUIPMENT LOSS ON OCTA PROPERTY. CONTRACTOR'S MATERIALS, TRUCKS, OR EQUIPMENTS SHALL NOT BLOCK TRAFFIC DRIVEWAYS OR OCTA BUS OPERATIONS AND MAINTENANCE WORK DURING CONSTRUCTION.

33) DO NOT BLOCK BUS ENTRANCE, EXITS AND DRIVEWAYS OR BUS PARKING STALLS WITH CONTRACTOR'S MATERIAL, EQUIPMENT OR TRUCKS. KEEP ALL MATERIALS, TOOLS, EQUIPMENT, AND TRUCKS WITHIN LIMIT OF CONSTRUCTION OR IN ASSIGNED SPACE BY FACILITY MANAGER.

34) DO NOT LOAD OR STORE NEW EQUIPMENT (TO BE INSTALLED) AT ONE SPOT OR LOCATION ON THE ROOF.

35) WHEN WORKING ON ROOF TO INSTALL EQUIPMENT DURING CONSTRUCTION, CONTRACTOR IS REQUIRED TO CORDON OFF (WITH TRAFFIC DELINEATORS AND YELLOW WARNING TAPE) WORKING AREA BELOW IN THE SHOP (MAINTENANCE BUILDING) SO THAT OCTA WORKERS ARE AWARE OF CONSTRUCTION WORK OVERHEAD ON ROOF. PREVENT TOOLS, EQUIPMENT AND DEBRIS FROM FALLING BELOW IN WORK AREAS OF MAINTENANCE BUILDING.

36) THIS TASK SHALL BE COORDINATED WITH THE PROJECT MANAGER, BUS BASE MANAGER, AND FACILITY MANAGER

A JOB HAZARD ANALYSIS SHALL BE DEVELOPED FOR THE TASK THAT IDENTIFIES DAILY SAFETY TAILGATE BRIEFINGS, BARRICADES, VEHICLE AND EQUIPMENT STAGING (DIAGRAM), COMMUNICATIONS, EVACUATING EFFECTED PERSONNEL INSIDE THE BUILDING, CRANE ACTIVITY, REMOVING OLD EQUIPMENT, INSTALLING NEW EQUIPMENT, FALL PROTECTION, ALLOWING EFFECTED EVACUATED PERSONNEL BACK INTO THEIR AREA OF BUILDING, HOUSEKEEPING/CLEAN-UP, DEMOBILIZATION. THE JOB HAZARD ANALYSIS IS REQUIRED TO BE SUBMITTED TO THE OCTA PROJECT MANAGER 10 WORKING DAYS PRIOR TO THE SCHEDULED HVAC TASK ACTIVITY FOR OCTA REVIEW.

NO LATER THAN TEN (10) WORKING DAYS PRIOR TO THE ARRIVAL OF A CRANE, THE CONTRACTOR MUST PROVIDE THE MOST RECENT ANNUAL AND QUADRENNIAL CERTIFICATES. THE CONTRACTOR MUST ALSO PROVIDE CRANE OPERATOR CERTIFICATES FROM THE NATIONAL COMMISSION FOR THE CERTIFYING OF CRANE OPERATORS (NCCCO), AS OUTLINED IN CIIPP, NO LATER THAN TEN WORKING DAYS PRIOR TO A CRANE OPERATOR WORKING ON SITE.

PICK AND CARRY WITH RUBBER TIRED CRANES IS FORBIDDEN ON OCTA PROJECTS.

A RIGGING PLAN DEVELOPED BY THE CRANE COMPANY OR CRANE OWNER IS REQUIRED FOR ALL LIFTS. THE RIGGING PLAN SHALL BE SUBMITTED NO LATER THAN 10 WORKING DAYS PRIOR TO THE SCHEDULED CRANE ACTIVITY FOR OCTA REVIEW.

THE PLAN SHALL INCLUDE:

- THE VERIFIED LOAD WEIGHT AND THE RIGGING WEIGHTS
- BOTTOM ANGLE AND REACH IN FEET FOR THIS LOAD PLACEMENT
- COPY OF THE LOAD CHART APPLICABLE TO THE ANGLE, REACH AND LOAD
- THE PERCENTAGE OF CRANE RATED CAPACITY FOR THIS LOAD PLACEMENT
- A PLOT PLAN OR GOOGLE MAP DIAGRAM OF THE CRANE SET-UP LOCATION AND THE LOAD PLACEMENT LOCATIONS
- IDENTIFY THE COMMUNICATION METHOD (RADIO, HAND SIGNAL, ECT.)
- DELIVERY TRUCK/TRAILER LOCATION

CRITICAL LIFTS REQUIRE AN ENGINEERED PLAN DESIGNED BY A REGISTERED PROFESSIONAL ENGINEER LICENSED IN CALIFORNIA. A CRITICAL LIFT INCLUDES, BUT IS NOT LIMITED TO:

1. ANY LIFT LOCATION THAT COULD RESULT IN THE BOOM OR LOAD FALLING INTO A HAZARDOUS AREA IN THE EVENT OF A MISHAP, INCLUDING ENERGIZED ELECTRICAL WIRING AND EQUIPMENT, GAS MANIFOLDS, AND OPERATING MACHINERY,
2. LIFTS EQUAL TO OR GREATER THAN 10 TONS,
3. LIFTS EQUAL TO OR GREATER THAN 75% OF RATED CAPACITY,
4. LIFTS OVER OCCUPIED BUILDINGS, RAILWAYS OR PUBLIC ROAD WAYS,
5. THE USE OF MULTIPLE CRANES FOR ONE LIFT, AND/OR
6. LIFT AND TRANSIT OF LOAD GREATER THAN 75% OF RATED CAPACITY OF TRACK CRAWLER CRANE.

37) DURING CONSTRUCTION REMOVE EQUIPMENT, DISCONNECT OR REMOVE UTILITIES, AND ROOF ACCESSORIES TO FACILITATE AND INSTALL NEW EQUIPMENT. REINSTALL ALL THE ABOVE AFTER NEW EQUIPMENT HAS BEEN INSTALLED AND OPERATIONAL. INFORM OCTA, SEVEN DAYS AHEAD OF EQUIPMENT OF UTILITY DISCONNECTION.

38) THE PROTECTION OF ALL OCTA PROPERTY, STRUCTURES, EQUIPMENT, UTILITIES, AND ACCESSORIES IS THE RESPONSIBILITY OF THE CONTRACTOR.

39) THE EXTENT OF THE WORK IS ONLY INDICATED GENERALLY ON THE DRAWINGS ARE BASED ON EXISTING CONDITIONS AND RECORD DRAWINGS.

40) IT IS THE INTENT OF THESE CONSTRUCTION DOCUMENTS TO INCLUDE ITEMS AND COMPONENTS FOR THE PROPER EXECUTION OF THE WORK, AND FOR THE PROVISION FOR A COMPLETE FUNCTIONING SYSTEM. IN THAT REGARD ALL APPURTENANT AND ACCESSORY ITEMS AND COMPONENTS REQUIRED FOR THE CONSTRUCTION OF COMPLETE AND FUNCTIONING SYSTEM SHALL BE PROVIDED WHETHER SPECIFICALLY IDENTIFIED IN THESE DOCUMENTS OR NOT.

41) BEFORE SUBMITTING A BID, CONTRACTOR SHALL VISIT THE SITE IN THE PRE-BID JOB-WALK AND VERIFY ALL EXISTING ITEMS SHOWN ON THE PLANS, CONDITIONS, HAZARDS, ELEVATIONS, STRUCTURES, EQUIPMENT, UTILITIES, AND LOCAL REQUIREMENTS. SUBMISSION OF A BID BY THE CONTRACTOR SHALL BE DEEMED EVIDENCE OF SUCH VISIT AND REVIEW OF SITE. ALL BIDDERS SHALL TAKE THESE EXISTING CONDITIONS INTO CONSIDERATION AND A LACK OF SPECIFIC INFORMATION ON THE DRAWING SHALL NOT RELIEVE THE CONTRACTOR OF ANY RESPONSIBILITY. NO REQUEST FOR ADDITIONAL PAYMENT SHALL BE CONSIDERED AS VALID DUE TO FAILURE TO ALLOW FOR CONDITIONS WHICH CURRENTLY EXISTS ON SITE.

42) LOCATIONS AND ELEVATIONS OF THE VARIOUS ITEMS INCLUDED WITHIN THE WORK HAVE BEEN OBTAINED FROM EXISTING DRAWINGS AND LIMITED FIELD SURVEY. CONTRACTOR SHALL EXAMINE THE SITE, VERIFY FIELD CONDITIONS, STRUCTURES, EQUIPMENT UTILITIES AND SERVICES REQUIRED AND BE ADEQUATELY INFORMED AS TO THEIR RELATION TO THE WORK. THE SUBMISSION OF BID SHALL BE DEEMED OF EVIDENCE OF SUCH A VISIT.

43) OCTA STAFF WILL CONTINUE TO WORK ON BUS MAINTENANCE AND REPAIR DURING CONSTRUCTION IN THE MAINTENANCE BUILDING. CONTRACTOR'S WORK SHALL NOT DISRUPT OCTA BUS MAINTENANCE WORK.

44) CONTRACTOR WILL BE ALLOWED TO WORK ON REMOVING AND REPLACING ONE HV UNIT AT A TIME. CONTRACTOR SHALL REMOVE AND REPLACE ONE FAN AND COMPLETE ALL WORK ON THE FAN INCLUDING MAKING IT OPERATIONAL BEFORE PROCEEDING TO THE NEXT HV UNIT REPLACEMENT. THE CONTRACTOR SHALL COORDINATE THE WORK WITH OCTA PROJECT MANAGER AND FACILITY MAINTENANCE TO SEQUENCE HIS DAILY WORK SCHEDULE.

45) CONTRACTOR SHALL SCHEDULE DEACTIVATION OF UTILITIES WITH THE OCTA PROJECT MANAGER AND FACILITY MAINTENANCE. DEACTIVATION OR RELOCATION OF UTILITIES, SYSTEMS, EQUIPMENT, OR OTHER ACCESSORIES SHALL BE SCHEDULE A WEEK IN ADVANCE WITH THE PROJECT MANAGER. PROVIDE TEMPORARY SERVICE DURING DEACTIVATION PERIOD. MINIMIZE DEACTIVATION DOWN TIME.

46) CONTRACTOR SHALL COVER ALL OCTA EQUIPMENT, STRUCTURES BELOW IN BUS MAINTENANCE BAYS WHEN WORKING ON ROOF TO PREVENT DUST SPREAD AND DAMAGE TO OCTA TOOLS, EQUIPMENT. CLEAN ALL ABOVE ITEMS AND WORK AREA AT END OF WORK DAY.

47) THE GENERAL CONTRACTOR SHALL TAKE ALL PREVENTIVE MEASURES DURING CONSTRUCTION TO PREVENT DAMAGE TO OCTA PROPERTY AND STAFF WORKING IN AND AROUND THE BUILDING. THE MAINTENANCE BUILDING STAFF WILL BE WORKING IN THE BUILDING DURING CONSTRUCTION WORK. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR AND SHALL REPLACE OR REPAIR ANY FAULTY IMPROPER OR INFERIOR MATERIAL OR WORKMANSHIP OR ANY DAMAGE TO THE WORK OR ADJACENT AREAS, OR STRUCTURES IN AND AROUND THE MAINTENANCE BUILDING.

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: ∮ (949) 756-8654
FAX: ∮ (949) 502-0777

MARK	DATE	BY	REVISIONS
3	3/20/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

Sheet Title: GENERAL NOTES

Project: OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-GN-1

550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA

GENERAL NOTES

1. THE ELECTRICAL DRAWINGS, SPECIFICATIONS AND GENERAL NOTES DESCRIBE THE SCOPE OF WORK; CONSTRUCTION DOCUMENTS ARE TO BE USED FOR THE PURPOSE OF BIDDING, BUILDING DEPARTMENT REVIEW, AND TO SECURE THE NECESSARY CONSTRUCTION PERMIT. ALL EQUIPMENT SHOWN IS NEW, CONTRACTOR FURNISHED AND INSTALLED, UNLESS NOTED OTHERWISE (U.N.O.).

2. THE CONTRACTOR SHALL VERIFY THE INPUT VOLTAGE AND AMPERAGE (HORSEPOWER) RATING OF ALL EQUIPMENT PRIOR TO INSTALLATION, AND NOTIFY THE ENGINEER FOR DIRECTION PRIOR TO PROCEEDING.

3. PROVIDE AN ADDITIONAL JUNCTION BOX (SIZE AS REQUIRED) WHERE THE NUMBER OF CONDUCTORS EXCEEDS THE MAXIMUM ALLOWED FOR A GIVEN JUNCTION POINT OR OUTLET.

4. ELECTRICAL CONTRACTOR SHALL PROVIDE CONSTRUCTION AND SHOP DRAWINGS FOR APPROVAL BY THE OWNER BASED ON THESE DRAWINGS, SPECIFICATIONS AND ADDITIONAL DESIGN CRITERIA FURNISHED BY OWNER.

5. CONTRACTOR'S BID SHALL INCLUDE ALL PREMIUM OVERTIME COSTS, UTILITY CHARGES, COST FOR TEMPORARY UTILITY SERVICES, ALTERATION, DEMOLITION AND EXTENSION WORK, PLAN CHECK / INSPECTION FEES, MISCELLANEOUS CONTINGENCY COSTS, ETC.

6. IF CONTRACTOR PROPOSES TO SUBSTITUTE FOR EQUIPMENT SPECIFIED, CONTRACTOR SHALL SUBMIT A REQUEST FOR CONSIDERATION TO THE OWNER AND ENGINEER IN WRITING PRIOR TO COMMENCEMENT OF WORK. ALL SUBSTITUTIONS MUST BE SUBMITTED TO THE ENGINEER FOR HIS REVIEW AND APPROVAL. SUCH REVIEW SHALL NOT RELIEVE THE CONTRACTOR FROM COMPLYING WITH THE REQUIREMENTS OF THE DRAWINGS AND SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE AT HIS OWN EXPENSE FOR ANY CHANGES RESULTING FROM HIS PROPOSED SUBSTITUTIONS WHICH AFFECT OTHER PARTS OF HIS OWN WORK OR THE WORK OF OTHER CONTRACTORS.

7. THE ELECTRICAL DRAWINGS ARE DIAGRAMMATIC ONLY. DO NOT SCALE THE ELECTRICAL DRAWINGS TO DETERMINE THE LOCATION OF EQUIPMENT OR OUTLETS. COMPLY WITH ALL THE CLEARANCES AND MOUNTING HEIGHT REQUIREMENTS. ROUTE CONDUITS PER FIELD CONDITIONS, PREVENTING CONFLICTS WITH STRUCTURAL ELEMENTS AND EXISTING EQUIPMENT AND UTILITIES. COMPLY WITH THE NATIONAL ELECTRICAL CODE.

8. ALL FINAL CONNECTIONS TO FURNISHED EQUIPMENT SHALL BE MADE BY THE CONTRACTOR UNLESS OTHERWISE NOTED. VERIFY ELECTRICAL CHARACTERISTICS AND U.L. LISTING PRIOR TO CONNECTION.

9. SEAL ALL PENETRATIONS THROUGH FIRE RATED WALLS, CEILINGS, FLOORS, ETC., TO MAINTAIN THE EXISTING FIRE RATING. FURNISH AND INSTALL FIRE RATED ENCLOSURE FOR ALL EQUIPMENT PENETRATING INTO FIRE RATED ENVELOPES, SPACES, ETC. PER NEC 300-21.

10. ELECTRICAL OUTLETS ON OPPOSITE SIDES OF FIRE RATED WALLS AND PARTITIONS MUST BE SEPARATED BY A DISTANCE OF 24 INCHES HORIZONTAL. OPENINGS IN FIRE RATED WALLS MUST BE FIRE STOPPED.

11. CONDUCTORS SHALL BE COPPER XHWN-2/XHHW-2 600 VOLT INSULATION. USE PROPER TEMPERATURE RATING OF CONDUCTORS BASED ON THE AMBIENT AIR TEMPERATURE WHERE CONDUCTORS ARE LOCATED. HIGHER AMPACITY CONDUCTORS AND LARGER RACEWAY SHALL BE PROVIDED AS REQUIRED TO MEET THE AMPACITY CORRECTION FACTORS AS INDICATED IN NEC TABLE 310 AND ELSEWHERE IN CODE.

12. THE SEISMIC BRACING AND ANCHORAGE OF ELECTRICAL CONDUITS, BUS DUCTS, WIREWAYS AND CABLE TRAYS SHALL BE IN ACCORDANCE WITH THE "GUIDELINE FOR SEISMIC RESTRAINS OF MECHANICAL SYSTEMS AND PLUMBING PIPING SYSTEMS" PUBLISHED BY SMACNA LATEST VERSION.

13. WHERE BRACING AND ANCHORAGE DETAILS ARE NOT SHOWN ON THE DRAWINGS OR IN THE GUIDELINE, THE FIELD INSTALLATION SHALL BE SUBJECT TO THE APPROVAL OF THE PROJECT ENGINEER. ALL EQUIPMENT ANCHORAGE SHALL BE DESIGNED PER 2022 CBC & ASCE 7-16 FORMULA 13.3-1, 13.3-2, AND 13.3-3.

14. PRIOR TO COMMENCEMENT OF WORK, CONTRACTOR SHALL SURVEY THE ENTIRE PROJECT SITE AND BECOME THOROUGHLY FAMILIAR WITH ACTUAL EXISTING CONDITIONS. THE INTENT OF THE WORK IS SHOWN ON THE DRAWINGS AND DESCRIBED HEREIN. THE CONTRACTOR SHALL BE DEEMED TO HAVE MADE SUCH A STUDY AND EXAMINATION AND TO ACCEPT ALL CONDITIONS PRESENT AT THE SITE. NO REQUEST FOR ADDITIONAL PAYMENT SHALL BE CONSIDERED VALID, DUE TO CONTRACTOR FAILURE TO ALLOW IN COST ESTIMATE FOR CONDITIONS WHICH MAY EXIST.

15. EXISTING CONDITIONS SHOWN ARE FROM AVAILABLE RECORD DRAWINGS AND VISUAL FIELD SURVEYS AND SHOWN FOR REFERENCE ONLY. CONTRACTOR SHALL VERIFY ACTUAL EXISTING CONDITIONS AT SITE PRIOR TO STARTING WORK.

16. ALL ELECTRICAL WORK SHALL BE PERFORMED PER NEC, UTILIZING THE CODE ISSUED IN FORCE AT THE LOCATION OF THE CONSTRUCTION SITE. ELECTRICAL WORK SHALL COMPLY WITH ALL APPLICABLE CURRENT BASE CODES AND REGULATIONS.

17. ALL ELECTRICAL EQUIPMENT UTILIZED AT THIS PROJECT SHALL BE U.L. LABELED OR U.L. LISTED.

18. INSTALL ALL WIRING IN CONDUITS.

19. ALL ELECTRICAL PANEL BOARD BUSES SHALL BE COPPER.

20. ALL ELECTRICAL DEVICES AND EQUIPMENT MOUNTED ON THE EXTERIOR OF THE BUILDING OR EXPOSED TO WEATHER SHALL BE NEMA 3R WEATHERPROOF TYPE.

21. CONSTRUCTION WORK SHALL BE DONE IN A MANNER WHICH WILL NOT CAUSE INCONVENIENCE OR DANGER TO USERS OF THE PREMISES AND ADJACENT AREAS AND NOT INTERFERE WITH THEIR WORK. ANY CONSTRUCTION WORK TO BE PERFORMED MUST BE PLANNED IN ADVANCE. SCHEDULING SHALL BE DONE IN COOPERATION WITH AUTHORIZED ISD'S PROJECT MANAGER, WHO WILL BE AVAILABLE BEFORE AND DURING THE PERFORMANCE OF THE WORK. INCLUDE ALL PREMIUM TIME CHARGES IN BID TO COVER THE AFTER-HOURS AND WEEKEND WORK.

22. DO ALL DRILLING, CUTTING, CHANNELING AND PATCHING REQUIRED TO INSTALL ELECTRICAL WORK AS INDICATED OR HEREIN SPECIFIED. ALL HOLES, CURBS, ETC., IN FLOORS, CEILINGS AND WALLS SHALL BE PATCHED, UNLESS INDICATED OTHERWISE. PAINT ALL NEW EXPOSED ELECTRICAL RACEWAYS, CABINETS, ENCLOSURES AND FITTINGS TO MATCH THE COLOR OF ADJACENT SURFACES IN FINISHED AREAS.

ABBREVIATIONS

A	AMPERE
AC	AIR CONDITIONING
AF	AMPERE FUSE OR AMP FRAME
AFC	AVAILABLE FAULT CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPERES INTERRUPTING CAPACITY (SYMMETRICAL)
ALT	ALTERNATE
ARCH	ARCHITECTURAL
AS	AMPERE SWITCH
AT	AMPERE TRIP
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BATT	BATTERY
BCC	BARE COPPER CONDUCTOR
BD	BOARD
BFG	BELOW FINISHING GRADE
BKBD.	BACKBOARD
BLDG.	BUILDING
C	CONDUIT
CAT	CATALOG
CATV	CABLE TELEVISION
CB	CIRCUIT BREAKER
CEC	CALIFORNIA ELECTRICAL CODE
CL	CURRENT LIMITING
CLF	CURRENT LIMITING FUSES
CLG	CEILING
CLK	CLOCK
C.O.	CONDUIT ONLY
COMM.	COMMUNICATION
CONT.	CONTINUATION
CT	CURRENT TRANSFORMER
CTC	COMMUNICATION TERMINAL CABINET
CTRL	CONTROL
CU	COPPER
CW	COLD WATER
DB	DECIBEL
DC	DIRECT CURRENT
DE	DUAL ELEMENT
DEF	DUAL ELEMENT SWITCH
DISC. SW.	DISCONNECT SWITCH
DN	DOWN
DP	DEPTH
DPP	DISTRIBUTION POWER PANEL
DWG.	DRAWING
(E)	EXISTING
EA	EACH
E.C.	EMPTY CONDUIT
EF	EXHAUST FAN
ELECT.	ELECTRICAL
ELEV	ELEVATION
EMAC	ENERGY MANAGEMENT AND CONTROL
EMRG.	EMERGENCY
EMS	ENERGY MANAGEMENT AND ENVIRONMENTAL CONTROL SYSTEM
EMT	ELECTRICAL METALLIC TUBING
EN	EXISTING AT NEW LOCATION
EQPT.	EQUIPMENT
EXIST.	EXISTING
EXT	EXTERIOR
F	FUSE
FA	FIRE ALARM, FORCED AIR
FACP	FIRE ALARM CONTROL PANEL
FAU	FURNACE
FBO	FURNISHED BY OTHERS
FD	FIRE DEPARTMENT
FDR	FEEDER
FL	FLOOR
FLA	FULL LOAD AMPERES
FOC	FLOOR MATERIAL CHANGE
FOS	FACE OF STUD
FS	FUSIBLE SWITCH
FT.	FOOT/FEET
G	GROUND
GA	GAUGE
GFI	GROUND FAULT CIRCUIT INTERRUPTER
GFP	GROUND FAULT PROTECTION
GND	GROUND
GSA	GENERAL SERVICES AGENCY
H	HOOD (KITCHEN)
HD	HEAVY DUTY
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTO
HP	HORSEPOWER
HPF	HIGH POWER FACTOR
HPS	HIGH PRESSURE SODIUM
HW	HOT WATER
HZ	HERTZ
IC	INTERCOM
IG	ISOLATED GROUND
IMC	INTERMEDIATE METALLIC CONDUIT
INC	INCANDESCENT
J-BOX	JUNCTION BOX
KVA	KILOVOLT AMPERES
KW	KILOWATT
LA	LIGHTING ARRESTOR
LCL	LONG CONTINUOUS LOAD
L.O.	LUGS ONLY
LTG.	LIGHTING
MCB	MAIN CIRCUIT BREAKER
MCC	THOUSAND CIRCULAR MIL(S)
MECH	MECHANICAL
MH	MANHOLE OR MOUNTING HEIGHT
	NEUTRAL, OR METAL HALIDE
MIN	MINIMUM
MLO	MAIN LUGS ONLY
MOD	MOTOR OPERATED DAMPER
MTD	MOUNTED
MTG	MOUNTING
N	NEUTRAL
(N)	NEW
NA	NON-AUTOMATIC
N.C.	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURER'S ASSOCIATION
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
N.I.C.	NOT IN CONTRACT
NL	NIGHT LIGHT
N.O.	NORMALLY OPEN
NTS	NOT TO SCALE
O.C.	ON CENTER
OD	OUTSIDE DIAMETER
OL	OVER LOAD
ORV	OPERATOR RELIEF VEHICLES
P	POLE
PB	PULLBOX
P/B	PUSH BUTTON
PH	PHASE
PL	PHILIPS FLUORESCENT LAMPS
PIV	POST INDICATING VALVE
PNL	PANEL
POC	POINT OF CONNECTION
PP	POWER PANEL
PR	PAIR
PRI	PRIMARY
PT	POTENTIAL TRANSFORMER
PVC	POLYVINYL CHLORIDE
PVS	PHOTO VOLTAIC SYSTEM
PWR	POWER
R	EXISTING TO BE RELOCATED
RECEPT.	RECEPTACLE
REQ'D	REQUIRED
REQMT'S	REQUIREMENTS
RF	RETURN FAN
RGS	RIGID GALVANIZED STEEL
RLA	RUNNING LOAD AMPS
RM.	ROOM
RMS	ROOT-MEAN-SQUARE
RR	REMOVE AND RELOCATE
RSC	RIGID STEEL CONDUIT
SEC	SECURITY
SF	SQUARE FEET
SHT.	SHEET
SP	SINGLE POLE
ST	SINGLE THROW
STA	STATION
SURF	SURFACE
SW.	SWITCH
TCL	TOTAL CONNECTED LOAD
TD	TIME DELAY
TEL	TELEPHONE
TEMP	TEMPORARY
TTB	TELEPHONE TERMINAL BOARD
TV	TELEVISION
TYP.	TYPICAL
UE	UNDERGROUND ELECTRICAL
UG	UNDERGROUND
U.L.	UNDERWRITERS LABORATORIES
U.O.N.	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTED POWER SUPPLY
UT	UNDERGROUND TELEPHONE
V	VOLT
VA	VOLTAMP(S)
VAR	VARIABLE
VL	VERIFY LOCATION
VISCO	VALLEY IRON STEEL CO.
W	WATTS OR WIRE
W/	WITH
WH	WATER HEATE
W/O	WITHOUT
WP	WEATHERPROOF
X	EXISTING TO BE REMOVED
XFMR	TRANSFORMER
+12"	HEIGHT FROM FINISHED FLOOR TO CENTER LINE OF DEVICE
1P, 2P	SINGLE OR DOUBLE POLE
ø	PHASE PROVIDE FURNISH & INSTALL

SYMBOLS LEGEND

- PANEL BOARD
- (E) RECESSED MOUNTED BRANCH CIRCUIT PANEL BOARD
- (E) SURFACE MOUNTED BRANCH CIRCUIT PANEL BOARD
- (N) SURFACE MOUNTED BRANCH CIRCUIT PANEL BOARD
- (N) RECESSED MOUNTED BRANCH CIRCUIT PANEL BOARD
- WP — WEATHERPROOF
- A-4 — HOMERUN TO PANEL "A", CIRCUIT 4
- CONDUIT CONCEALED IN WALL OR CEILING
- CONDUIT BELOW FLOOR OR GRADE, OR IN SLAB
- CONDUIT EXPOSED
- WIREMOLD
- CONDUIT EXPOSED
- 3/4"C-2#12, 1#12N, 1#12G
- 3/4"C-3#12, 1#12N, 1#12G
- CONDUIT STUBBED AND CAPPED
- CONDUIT RUNNING UP
- CONDUIT RUNNING DOWN
- WEATHERTIGHT FLEX CONDUIT TO EQUIPMENT
- CONDUIT, FLEXIBLE WITH WIRING AS INDICATED
- PULLBOX, SIZE AS SHOWN ON PLAN
- (M) METER
- (G) GENERATOR
- CONTACTOR
- OVERLOAD RELAY
- GROUND
- (5) ELECTRICAL MOTOR OR EXHAUST FAN (5 HORSEPOWER)
- TRANSFORMER
- (T) THERMOSTAT
- PHOTOCELL
- WALL MOUNTED COMBINATION DATA TELEPHONE OUTLET AT +15" U.O.N
- WALL MOUNTED TELEPHONE OUTLET AT +15" U.O.N
- PROVIDE FLEXIBLE FINAL CONNECTION. LIQUID TIGHT FOR EXTERIOR OR DAMP LOCATIONS.
- S — SINGLE POLE SWITCH. +48" AFF. UNLESS OTHERWISE NOTED
- S^3 — THREE WAY SWITCH. +48" AFF. UNLESS OTHERWISE NOTED
- Sab — SUB-LETTERS AT SWITCH IDENTIFIED SWITCH LEG
- Sm — MOTOR RATED SWITCH
- S^S — NEW WALL SWITCH OCCUPANCY SENSOR. +48" AFF. UNLESS OTHERWISE NOTED. LEVITON OSSMT-MDA OR APPROVE EQUAL.
- DUPLEX RECEPTACLE. +26"AFF., U.O.N 1 = CIRCUIT NUMBER
- DOUBLE DUPLEX RECEPTACLE. +26"AFF., U.O.N 1 = CIRCUIT NUMBER
- WP GFI — DUPLEX RECEPTACLE, WEATHERPROOF, GROUND FAULT CIRCUIT INTERRUPTER. +15" AFF UON. 1 = CIRCUIT NUMBER
- 208/230V RECEPTACLE. +26"AFF., U.O.N 1 = CIRCUIT NUMBER
- 250V RECEPTACLE. +26"AFF., U.O.N 1 = CIRCUIT NUMBER
- 480V RECEPTACLE. +15"AFF., U.O.N 1 = CIRCUIT NUMBER
- SWITCHED DUPLEX RECEPTACLE
- SPECIAL RECEPTACLE. SIZE AS NOTED.
- DUPLEX-RECEPTACLE IN NON-METALLIC BOX WITH STAINLESS STEEL COVER IN CONCRETE (MANUFACTURE: CARLON, ROUND FLOOR BOX MODEL #E971FB, TWO-DOOR COVER MODEL #E97SS2).
- (1) NOTE REFERENCE CALL OUT
- LIGHT LINE WEIGHT INDICATES EXISTING TO REMAIN
- HEAVY THICK LINE INDICATES NEW WORK
- DASHED LINE INDICATES DEMOLITION

- (E) INDICATES EXISTING
- (N) INDICATES NEW
- A/22 — LIGHT FIXTURE CALL-OUT. TOP NUMBER: IDENTIFICATION NUMBER. BOTTOM NUMBER: INPUT WATTAGE.
- NON-FUSED DISCONNECT SWITCH
- F — FUSED DISCONNECT SWITCH, FUSED PER EQUIPMENT MANUFACTURER'S NAMEPLATE RATING
- MOTOR STARTER, NEMA SIZE AS INDICATED.
- MOTOR STARTER WITH O.L. PROTECTION, H.O.A SWITCH A RED PILOT LIGHT, AUXILARY CONTACTS AND L.V. TRANSFORMER, PROVIDE NAMEPLATES. NUMBER ADJACENT INDICATES STARTER SIZE.
- COMBINATION MOTOR STARTER WITH THERMAL/MAGNETIC C/B AND ELECTRONIC OVERLOAD RELAYS
- MOLDED CASE CIRCUIT BREAKER SIZE AS INDICATED ON SINGLE LINE DIAGRAM.
- 100AS 90AFU — FUSED SWITCH. "AS" INDICATES AMPERE SWITCH RATING, "AFU" AMPERE FUSE RATING, NUMBER OF POLES AS INDICATED.
- SWITCH
- (M) UTILITY METER SOCKET, WITH C.T.S, CLIPS, ETC., PER SERVING UTILITY COMPANY.
- NEW CEILING-MOUNT DAYLIGHT SENSOR. WATT STOPPER MODEL # LS-101 OR APPROVED EQUAL.
- (J) JUNCTION BOX, CEILING MOUNTED OR WALL MOUNTED
- S^t — NEW WALL TIMER SWITCH. +48" AFF. UNLESS OTHERWISE NOTED. LEVITON 6124H OR APPROVE EQUAL.
- S_M — NEW MOTOR RATED SNAP SWITCH
- A-012 — NEW LIGHTING FIXTURE A=PANEL NAME 01=CIRCUIT NUMBER 2=TIMER SWITCH CONTROLING FIXTURE
- A-0123 — NEW LIGHTING FIXTURE A=PANEL NAME 01=CIRCUIT NUMBER 2=TIMER SWITCH CONTROLING FIXTURE 3=DAYLIGHT SENSOR CONTROLING FIXTURE
- A-01 — NEW FLUORESCENT LIGHTING FIXTURE A=PANEL NAME 01=CIRCUIT NUMBER
- P/1 — MECHANICAL EQUIPMENT CALL OUT, SEE MECHANICAL DRAWINGS FOR FULL RATING

REGISTERED PROFESSIONAL ENGINEER — QUANG V. VU — NO. E19880 — ELECTRICAL — STATE OF CALIFORNIA

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: # (949) 756-8654
FAX: # (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/28/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

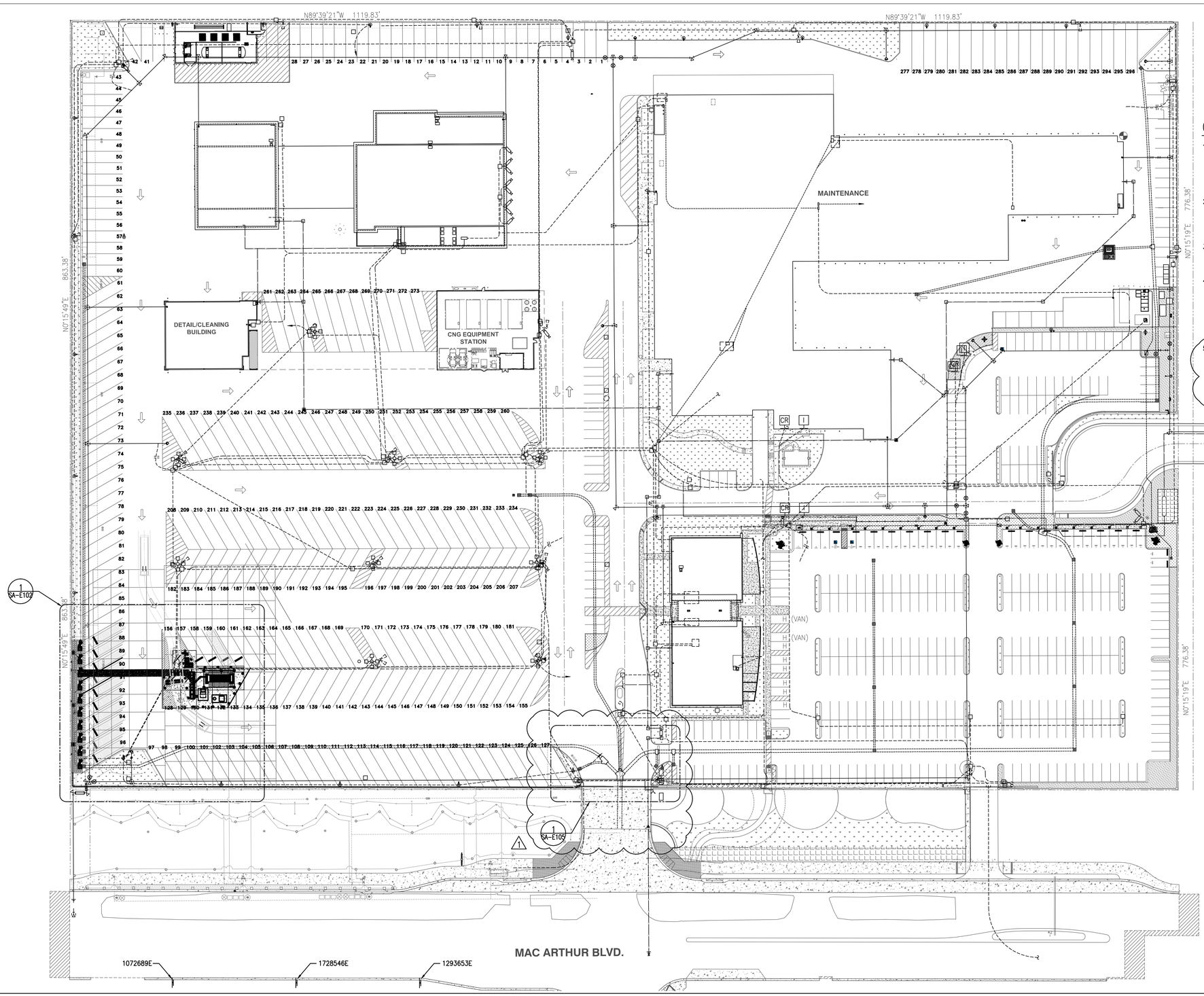
Sheet Title ELECTRICAL ABBREVIATIONS, SYMBOLS AND NOTES

Project OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-E001

550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA



GENERAL NOTES:

1. THE CONTRACTOR SHALL UTILIZE AN INDEPENDENT UTILITY LOCATOR TO VERIFY, CONFIRM, AND DOCUMENT ALL EXISTING UNDERGROUND UTILITIES PRIOR TO SAW-CUTTING AND EXCAVATING PAVEMENT, AND TRENCHING FOR INSTALLATION OF NEW UNDERGROUND ELECTRICAL CONDUITS AND CONSTRUCTION OF CONCRETE FOUNDATIONS.
2. THE CONTRACTOR SHALL RELOCATE EXISTING UNDERGROUND UTILITIES TO ACCOMMODATE CONSTRUCTION OF NEW IMPROVEMENTS AND KEEP SANTA ANA BUS BASE IN OPERATION 24/7 WITHOUT ANY INTERRUPTIONS TO ITS OPERATIONS AND SERVICES.
3. THE CONTRACTOR SHALL INSTALL PULL BOXES IN ACCESSIBLE LOCATION, OUT OF TRAFFIC AREA, AND AS REQUIRED FOR PROPER INSTALLATION OF CABLES.
4. THE CONTRACTOR SHALL COORDINATE WITH SOUTHERN CALIFORNIA EDISON (SCE) FOR SCE'S LOCATION AND INSTALLATION OF MEDIUM VOLTAGE (MV) FEEDER SUBSTRUCTURES AND STRUCTURES, SWITCH CABINET, AND UTILITY TRANSFORMER THAT ARE REQUIRED FOR NEW ELECTRICAL SERVICE TO FEED BATTERY-ELECTRIC-BUS (BEB) CHARGERS.
5. THE CONTRACTOR SHALL CONNECT NEW CAT6 STP ETHERNET CABLES TO ETHERNET SWITCHES INSIDE AN EXISTING CMU WALL MOUNTED PANEL LOCATED NEAR MAIN SLIDING GATE, POWER WIRES TO A RECEPTACLE INSIDE THE PANEL, AND OM4 FIBER OPTIC (FO) CABLE TO EXISTING DATA RACK DR-4 IN OPERATIONS BUILDING.

1

BUS PARKING STALL CALCULATION

CURRENT BUS PARKING STALLS:	260
BUS PARKING STALLS LOST:	6
BUS PARKING STALLS AVAILABLE:	254

SITE PLAN

SCALE 1"=50'-0" 1

REGISTERED PROFESSIONAL ENGINEER — JUAN G. VILLASENOR — NO. 17760 — ELECTRICAL — STATE OF CALIFORNIA

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: ∮ (949) 756-8654
FAX: ∮ (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/28/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

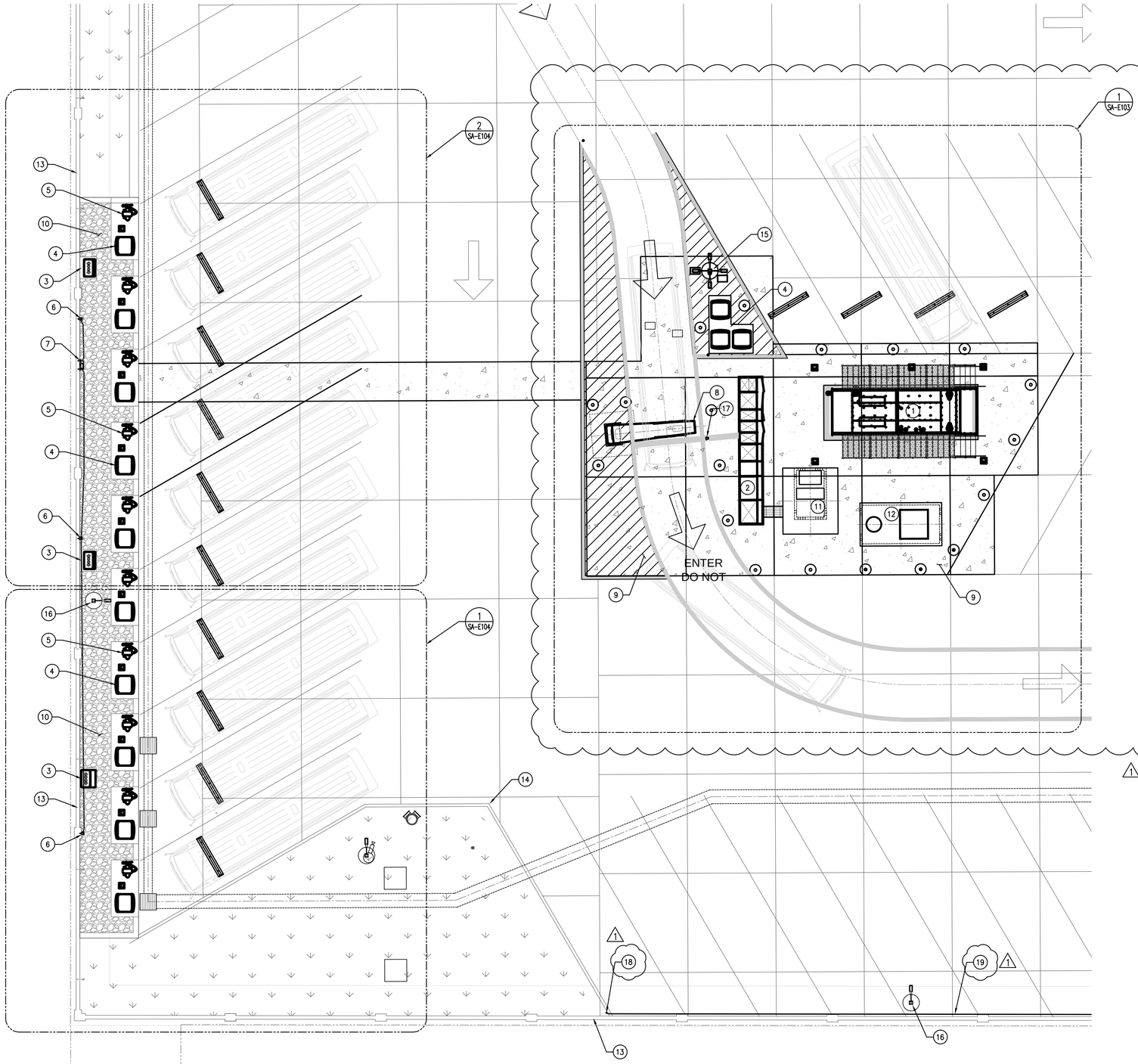
Sheet Title SITE PLAN

Project OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-E101

550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA



GENERAL NOTES:

1. THE CONTRACTOR SHALL UTILIZE AN INDEPENDENT UTILITY LOCATOR TO VERIFY, CONFIRM, AND DOCUMENT ALL EXISTING UNDERGROUND UTILITIES PRIOR TO SAW-CUTTING AND EXCAVATING PAVEMENT, AND TRENCHING FOR INSTALLATION OF NEW UNDERGROUND ELECTRICAL CONDUITS AND CONSTRUCTION OF CONCRETE FOUNDATIONS.
2. THE CONTRACTOR SHALL RELOCATE EXISTING UNDERGROUND UTILITIES TO ACCOMMODATE CONSTRUCTION OF NEW IMPROVEMENTS AND KEEP SANTA ANA BUS BASE IN OPERATION 24/7 WITHOUT ANY INTERRUPTIONS TO ITS OPERATIONS AND SERVICES.
3. THE CONTRACTOR SHALL INSTALL PULL BOXES IN ACCESSIBLE LOCATION, OUT OF TRAFFIC AREA, AND AS REQUIRED FOR PROPER INSTALLATION OF CABLES.
4. THE CONTRACTOR SHALL COORDINATE WITH SOUTHERN CALIFORNIA EDISON (SCE) FOR SCE'S LOCATION AND INSTALLATION OF MEDIUM VOLTAGE (MV) FEEDER SUBSTRUCTURES AND STRUCTURES, SWITCH CABINET, AND UTILITY TRANSFORMER THAT ARE REQUIRED FOR NEW ELECTRICAL SERVICE TO FEED BATTERY-ELECTRIC-BUS (BEB) CHARGERS.

CONSTRUCTION NOTES:

1. NEW 1000KW EMERGENCY POWER DIESEL GENERATOR.
2. NEW NEMA 3R MAIN METERED SWITCHBOARD "MSB-BEB" AND ATO BREAKERS.
3. NEW NEMA 3R SWITCHBOARD "SB-BEB".
4. NEW CHARGEPOINT POWER BLOCK. (TYPICAL OF 13).
5. NEW CHARGEPOINT POWER LINK 1000 BEB CHARGER. (TYPICAL OF 10).
6. NEW FLEETWATCH FR200 DATA RECEIVER. SEE DETAIL 3/SA-E505.
7. NEW NEMA 3R LOCKABLE HINGED S.S. NETWORK PANEL (48"x24"x6.5").
8. NEW CHARGEPOINT EXPRESS PLUS PANTOGRAPH DOWN 2000 BEB CHARGER.
9. SEE STRUCTURAL PLANS FOR "SAW CUT EXISTING 10" REINFORCED CONCRETE PAVEMENT AREA, REMOVE, AND LEGALLY DISPOSE OFF-SITE. NEW 4,000 PSI REINFORCED CONCRETE PAVEMENT AND JOINT LINES, WHICH ARE 16' O.C."
10. SEE STRUCTURAL PLANS FOR "REMOVE AND LEGALLY DISPOSE OFF-SITE EXISTING LANDSCAPE (MULCH) AND SUBGRADE SOIL IN AREA TO 2" BELOW TOP OF CURB. COMPACT SOIL TO 90% DENSITY AND FILL AREA WITH NEW 3/4" GRAVEL."
11. SCE UTILITY TRANSFORMER THAT IS FURNISHED AND INSTALLED BY SCE.
12. SCE MV SWITCH CABINET PME-8 THAT IS FURNISHED AND INSTALLED BY SCE.
13. EXISTING CMU WALL.
14. EXISTING CONCRETE CURB.
15. (1) INSTALL NEW UNDERGROUND CONDUITS AND TRAFFIC-RATED PULL BOXES. (2) INSTALL NEW ELECTRICAL WIRES, COMMUNICATION CABLES, AND OM4 FIBER OPTIC (FO) CABLE FROM EXISTING PULL BOXES TO NEW PULL BOXES. (3) RELOCATE AND INSTALL EXISTING LIGHT POLE WITH LOUD SPEAKER AND NEW AXIS CAMERA ON NEW CONCRETE FOUNDATION. (4) SPLICE NEW WIRES AND CABLES TO EXISTING WIRES AND CABLES TO MATCH THE EXISTING INSTALLATION AND FUNCTIONALLY TEST THE LIGHTS, SPEAKER, AND CAMERA. SEE DETAIL 3/SA-E503.
16. EXISTING LIGHT POLE.
17. NEW FLEETWATCH FR200 DATA RECEIVER, SEE DETAIL 4/SA-E505.
18. NEW 2"C PVC SCH. 80 / OM4 FIBER OPTIC (FO) CABLE, 2"C / CAT6 STP ETHERNET CABLES, AND 1"C / POWER WIRES MOUNTED ON EXISTING CMU WALL GO DOWN UNDERGROUND IN LANDSCAPE AREA. INSTALL NEMA 3R PULL BOXES TO FACILITATE CABLE PULLS. PAINT CONDUITS AND PULL BOXES TO MATCH EXISTING CMU WALL COLOR.
19. ROUTE AND CONNECT NEW 2"C PVC SCH. 80 / OM4 FO CABLE, 2"C / CAT6 STP ETHERNET CABLES, AND 1"C / POWER WIRES MOUNTED ON EXISTING CMU WALL TO AN EXISTING ETHERNET SWITCH PANEL NEAR THE MAIN GATE. CONNECT CAT6 CABLES TO ETHERNET SWITCHES AND POWER WIRES TO RECEPTACLE INSIDE THE PANEL. ROUTE OM4 FO CABLE THROUGH EXISTING CONDUITS AND PULL BOXES TO DATA RACK DR-4 IN OPERATIONS BUILDING.

FLEETWATCH FR200 DATA ACQUISITION:

AFTER COMPLETE INSTALLATION OF ALL FLEETWATCH FR200 UNITS, FLEETWATCH FACTORY TECHNICIANS SHALL PERFORM PROGRAMMING, TESTING, COMMISSIONING, AND DEMONSTRATING THE FOLLOWING FUNCTIONS.

1, DIRECTLY OBTAIN MILEAGE FROM BUS.

2, OBTAIN CHARGE AMOUNT FROM CHARGEPOINT CLOUD SOFTWARE.

3. CONVERT CHARGEPOINT DATA TO DGE, FORMAT IT INTO A STANDARD TRANSACTION, AND TRANSMIT IT TO OCTA'S MAINTENANCE SOFTWARE SYSTEM.

N

NEW EQUIPMENT PLAN

SCALE 1"=10'-0"

1

REGISTERED PROFESSIONAL ENGINEER
QUANG D. VU
No. 17080
ELECTRICAL
STATE OF CALIFORNIA

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: ∮ (949) 756-8654
FAX: ∮ (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/20/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

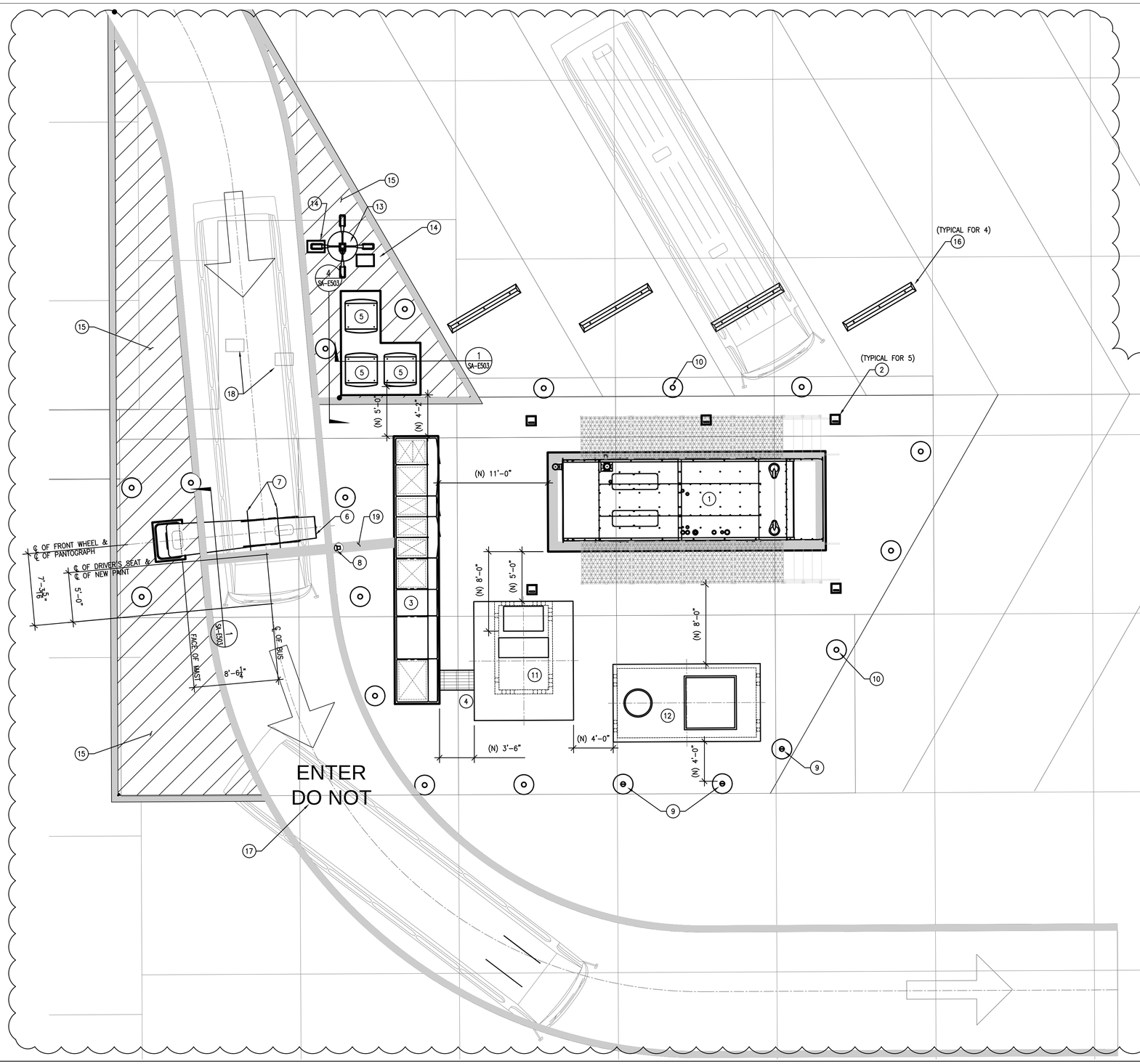
Sheet Title: NEW EQUIPMENT PLAN

Project: OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-E102

550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA



GENERAL NOTES:

1. THE CONTRACTOR SHALL UTILIZE AN INDEPENDENT UTILITY LOCATOR TO VERIFY, CONFIRM, AND DOCUMENT ALL EXISTING UNDERGROUND UTILITIES PRIOR TO SAW-CUTTING AND EXCAVATING PAVEMENT, AND TRENCHING FOR INSTALLATION OF NEW UNDERGROUND ELECTRICAL CONDUITS AND CONSTRUCTION OF CONCRETE FOUNDATIONS.
2. THE CONTRACTOR SHALL RELOCATE EXISTING UNDERGROUND UTILITIES TO ACCOMMODATE CONSTRUCTION OF NEW IMPROVEMENTS AND KEEP SANTA ANA BUS BASE IN OPERATION 24/7 WITHOUT ANY INTERRUPTIONS TO ITS OPERATIONS AND SERVICES.
3. THE CONTRACTOR SHALL INSTALL PULL BOXES IN ACCESSIBLE LOCATION, OUT OF TRAFFIC AREA, AND AS REQUIRED FOR PROPER INSTALLATION OF CABLES.
4. THE CONTRACTOR SHALL COORDINATE WITH SOUTHERN CALIFORNIA EDISON (SCE) FOR SCE'S LOCATION AND INSTALLATION OF MEDIUM VOLTAGE (MV) FEEDER SUBSTRUCTURES AND STRUCTURES, SWITCH CABINET, AND UTILITY TRANSFORMER THAT ARE REQUIRED FOR NEW ELECTRICAL SERVICE TO FEED BATTERY-ELECTRIC-BUS (BEB) CHARGERS.

CONSTRUCTION NOTES:

1. NEW 1000KW EMERGENCY POWER DIESEL GENERATOR.
2. NEW 12"x12"x18" POLYOLEFIN GROUND INSPECTION HOUSING. SEE DETAIL 1/E506.
3. NEW NEMA 3R MAIN METER SWITCHBOARD "MSB-BEB", AUTOMATIC TRANSFER SWITCH "ATS", & 208Y/120V DISTRIBUTION BOARD.
4. NEW CONCRETE UTILITY TRENCH, 24" WIDE x 36" DEEP WITH METAL GRATING.
5. NEW CHARGEPOINT POWER BLOCK. (TYPICAL OF 3).
6. NEW CHARGEPOINT EXPRESS PLUS PANTOGRAPH DOWN 2000 BEB CHARGER.
7. NEW BUS OVERHEAD DC CHARGE RAIL.
8. NEW FLEETWATCH FR200 DATA RECEIVER. SEE DETAIL 4/SA-E505 FOR SUPPORT.
9. NEW 6"ø REMOVABLE BOLLARD, SEE STRUCTURAL DETAIL 4/SA-S501.
10. NEW 6"ø BOLLARD, SEE STRUCTURAL DETAIL 3/SA-S502.
11. SCE UTILITY TRANSFORMER THAT IS FURNISHED AND INSTALLED BY SCE.
12. SCE MEDIUM VOLTAGE (MV) PME-8 SWITCH CABINET THAT IS FURNISHED AND INSTALLED BY SCE.
13. (1) INSTALL NEW UNDERGROUND CONDUITS AND TRAFFIC-RATED PULL BOXES. (2) INSTALL NEW ELECTRICAL WIRES, COMMUNICATION CABLES, AND OM4 FIBER OPTIC (FO) CABLE FROM EXISTING PULL BOXES TO NEW PULL BOXES. (3) RELOCATE AND INSTALL THE EXISTING LIGHT POLE WITH LOUD SPEAKER AND NEW AXIS CAMERA ON NEW CONCRETE FOUNDATION. (4) SPLICE NEW WIRES AND CABLES TO EXISTING WIRES AND CABLES TO MATCH THE EXISTING INSTALLATION AND FUNCTIONALLY TEST THE LIGHTS, SPEAKER, AND CAMERA. SEE DETAIL 3/SA-E503.
14. NEW PULL BOX FRB BOX AMRMORCAST #A6001946TAX18. SEE 3/SA-E506 FOR DETAILS.
15. SEE STRUCTURAL PLANS FOR WORK IN YELLOW STRIPE AREA.
16. SEE STRUCTURAL PLANS FOR DETAILS ON NEW WHEEL STOP.
17. PAINT "DO NOT ENTER" IN 36" HIGH YELLOW LETTERS.
18. EXISTING PULL BOXES.
19. 12" WIDE REFLECTIVE YELLOW STRIPE.

NEW PLAN AT GENERATOR

SCALE 3/16"=1'-0" | 1

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: # (949) 756-8654
FAX: # (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/28/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

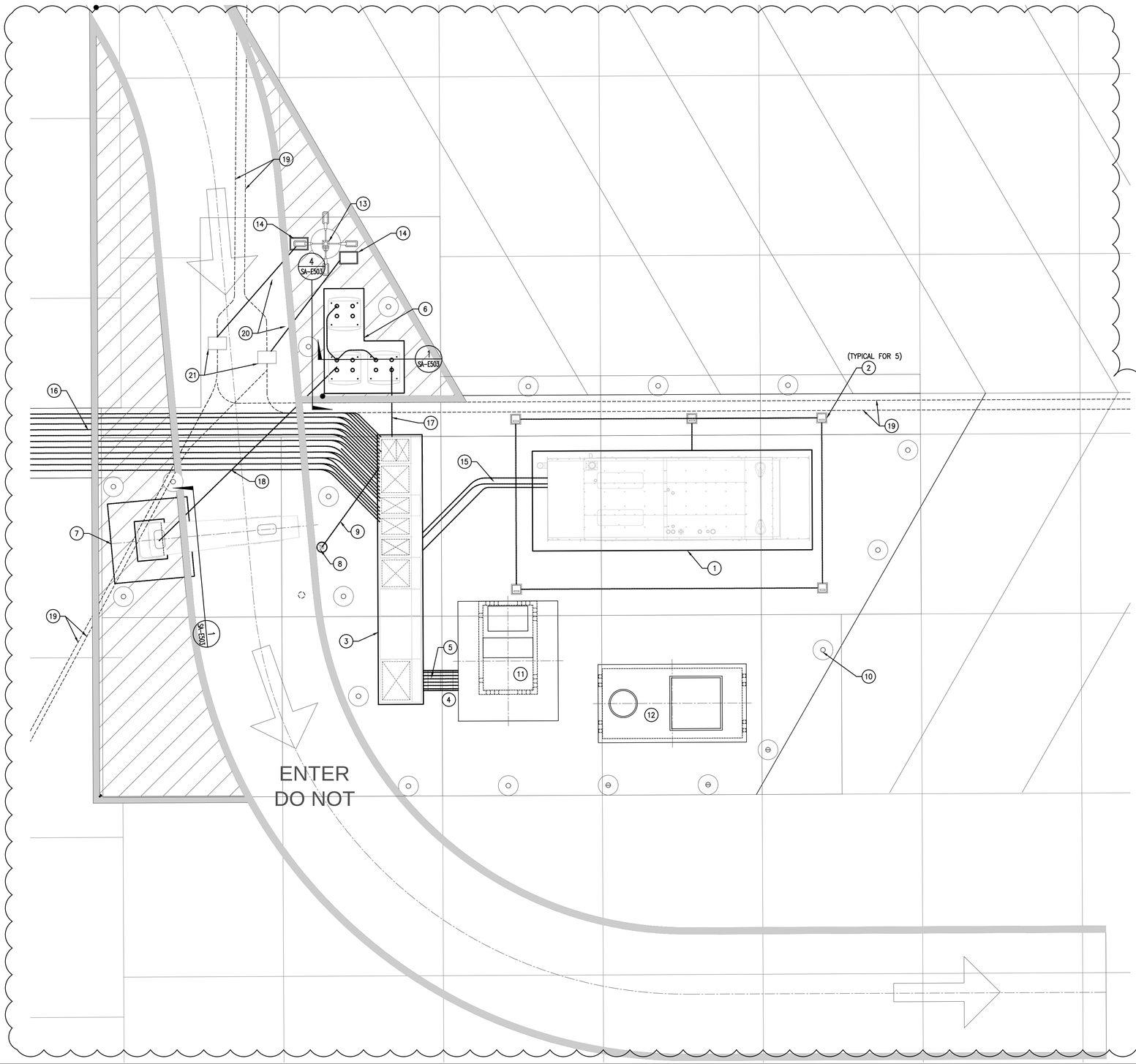
Sheet Title: NEW PLAN AT GENERATOR

Project: OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-E103

550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA



GENERAL NOTES:

1. THE CONTRACTOR SHALL UTILIZE AN INDEPENDENT UTILITY LOCATOR TO VERIFY, CONFIRM, AND DOCUMENT ALL EXISTING UNDERGROUND UTILITIES PRIOR TO SAW-CUTTING AND EXCAVATING PAVEMENT, AND TRENCHING FOR INSTALLATION OF NEW UNDERGROUND ELECTRICAL CONDUITS AND CONSTRUCTION OF CONCRETE FOUNDATIONS.
2. THE CONTRACTOR SHALL RELOCATE EXISTING UNDERGROUND UTILITIES TO ACCOMMODATE CONSTRUCTION OF NEW IMPROVEMENTS AND KEEP SANTA ANA BUS BASE IN OPERATION 24/7 WITHOUT ANY INTERRUPTIONS TO ITS OPERATIONS AND SERVICES.
3. THE CONTRACTOR SHALL INSTALL PULL BOXES IN ACCESSIBLE LOCATION, OUT OF TRAFFIC AREA, AND AS REQUIRED FOR PROPER INSTALLATION OF CABLES.
4. THE CONTRACTOR SHALL COORDINATE WITH SOUTHERN CALIFORNIA EDISON (SCE) FOR SCE'S LOCATION AND INSTALLATION OF MEDIUM VOLTAGE (MV) FEEDER SUBSTRUCTURES AND STRUCTURES, SWITCH CABINET, AND UTILITY TRANSFORMER THAT ARE REQUIRED FOR NEW ELECTRICAL SERVICE TO FEED BATTERY-ELECTRIC-BUS (BEB) CHARGERS.

CONSTRUCTION NOTES:

1. NEW 1000KW EMERGENCY POWER DIESEL GENERATOR FOUNDATION.
2. NEW 12"x12"x18" POLYOLEFIN GROUND INSPECTION HOUSING. SEE DETAIL 1/E506.
3. NEW NEMA 3R MAIN METER SWITCHBOARD "MSB-BEB", AUTOMATIC TRANSFER SWITCH "ATS", & 208Y/120V DISTRIBUTION BOARD.
4. NEW CONCRETE UTILITY TRENCH, 24" WIDE x 36" DEEP WITH METAL GRATING.
5. NEW (12) 5"C, 3#500 MCM & 1#4/0 GROUND (6) 5"C SPARE
6. NEW CHARGEPOINT POWER BLOCK FOUNDATION.
7. NEW PANTOGRAPH BEB CHARGER MAST FOUNDATION.
8. NEW FLEETWATCH FR200 DATA RECEIVER. SEE 4/SA-E505 FOR SUPPORT DETAILS.
9. NEW 1"ØC PVC SCH. 80 CAT6 ETHERNET CABLE AND 1"ØC PVC SCH. 80 2#12 & 1#12 GND.
10. NEW 6"ø BOLLARD.
11. SCE UTILITY TRANSFORMER THAT IS FURNISHED AND INSTALLED BY SCE.
12. SCE MEDIUM VOLTAGE (MV) PME-8 SWITCH CABINET THAT IS FURNISHED AND INSTALLED BY SCE.
13. (1) INSTALL NEW UNDERGROUND CONDUITS AND TRAFFIC-RATED PULL BOXES. (2) INSTALL NEW ELECTRICAL WIRES, COMMUNICATION CABLES, AND OM4 FIBER OPTIC (FO) CABLE FROM EXISTING PULL BOXES TO NEW PULL BOXES. (3) RELOCATE AND INSTALL EXISTING LIGHT POLE WITH LOUD SPEAKER AND AXIS CAMERA ON NEW CONCRETE FOUNDATION. (4) SPLICE NEW WIRES AND CABLES TO EXISTING WIRES AND CABLES TO MATCH THE EXISTING INSTALLATION AND FUNCTIONALLY TEST THE LIGHTS, SPEAKER, AND CAMERA. SEE DETAIL 3/SA-E503.
14. NEW PULL BOX FRB BOX AMRMORCAST #A6001946TAX18. SEE 3/SA-E506 FOR DETAILS.
15. NEW (5) 5"ØC PVC SCH. 80 – 3#500 MCM & 1#4/0 GND, (5) 5"ØC PVC SCH. 80 SPARE, (1) 2"ØC PVC SCH. 80 – 8#12 CONTROL WIRES, (1) 2"ØC PVC SCH. 80, 14#10 & (2) SPARE 2"ØC PVC SCH. 80.
16. NEW (15) 5"C PVC SCH. 80– 3#500 MCM & 1#4/0 GND, (5) 5"C PVC SCH. 80 SPARE, 2"C PVC SCH. 80 – (3) CAT 6 CABLES, (2) 2"C PVC SCH. 80 – 4#10 & 1#10 GND, 2"C – OM4 FIBER OPTIC (FO) CABLE TO AXIS CAMERA ON LIGHT POLE, AND (2) 2"C PVC SCH. 80 SPARE.
17. NEW (3) 4"ØC PVC SCH. 80 – 3#350 MCM & 1#4/0 GND, (1) 4"ØC PVC SCH. 80 SPARE, AND (3) 1"C – CAT6 STP CABLE OUTDOOR RATED FROM NETWORK CABINET.
18. NEW (3) 2"C PVC SCH. 80, 2#4/0 HV DC & (2) 2"C SPARE.
    (1) 1"C, 2#6 48V DC & (1) CAT6 STP ETHERNET CABLE OUTDOOR RATED FROM EACH OF POWER BLOCKS PB-11 AND PB-12 TO POWER LINK 2000.
19. PROTECT EXISTING UNDERGROUND ELECTRICAL CONDUITS & WIRES DURING CONSTRUCTION.
20. NEW UNDERGROUND POWER LINES AND COMMUNICATION LINES.
21. EXISTING PULL BOX.

NEW PLAN AT GENERATOR

SCALE 3/16"=1'-0" 1

REGISTERED PROFESSIONAL ENGINEER
QUANG D. VU
No. 17980
ELECTRICAL
STATE OF CALIFORNIA

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: # (949) 756-8654
FAX: # (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/20/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

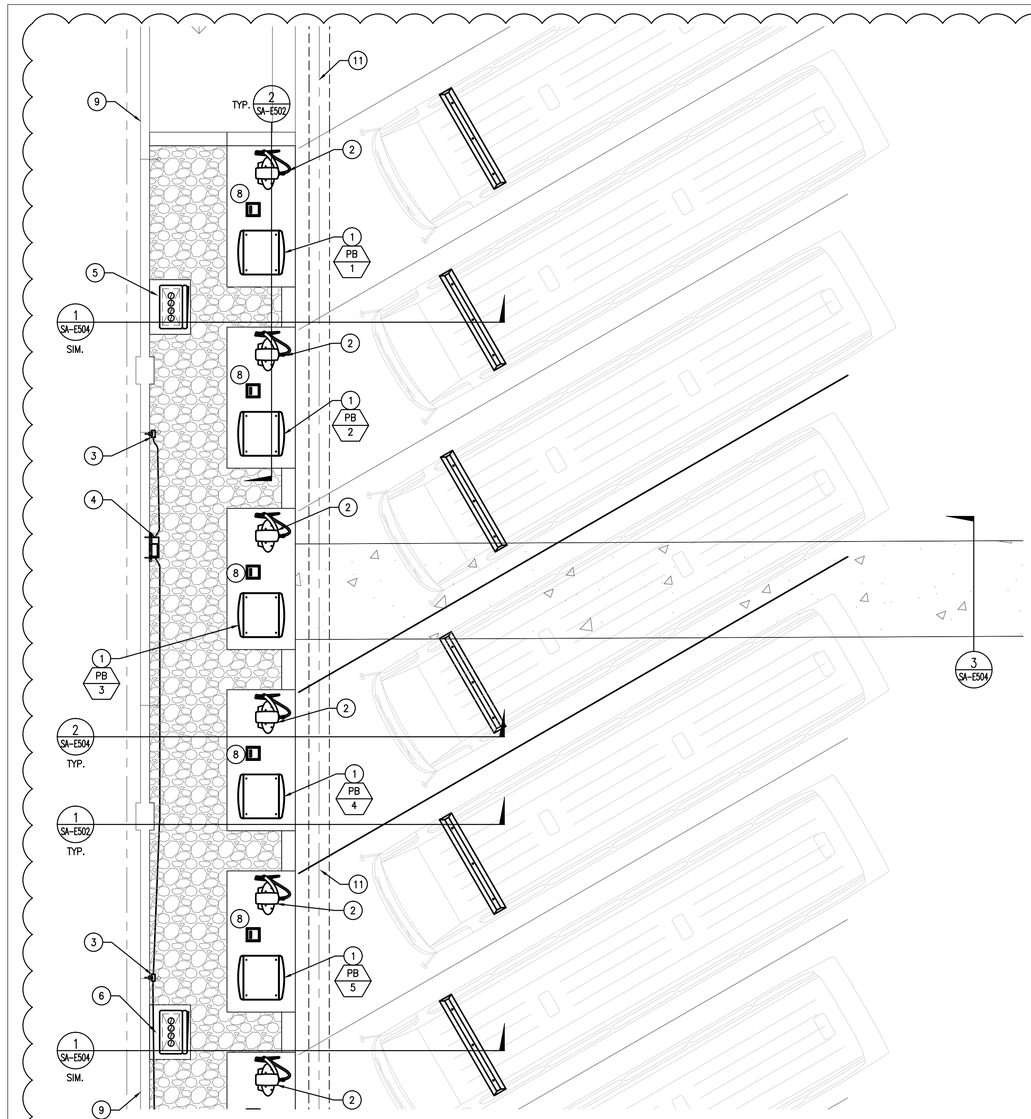
Sheet Title: NEW PLAN AT GENERATOR

Project: OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

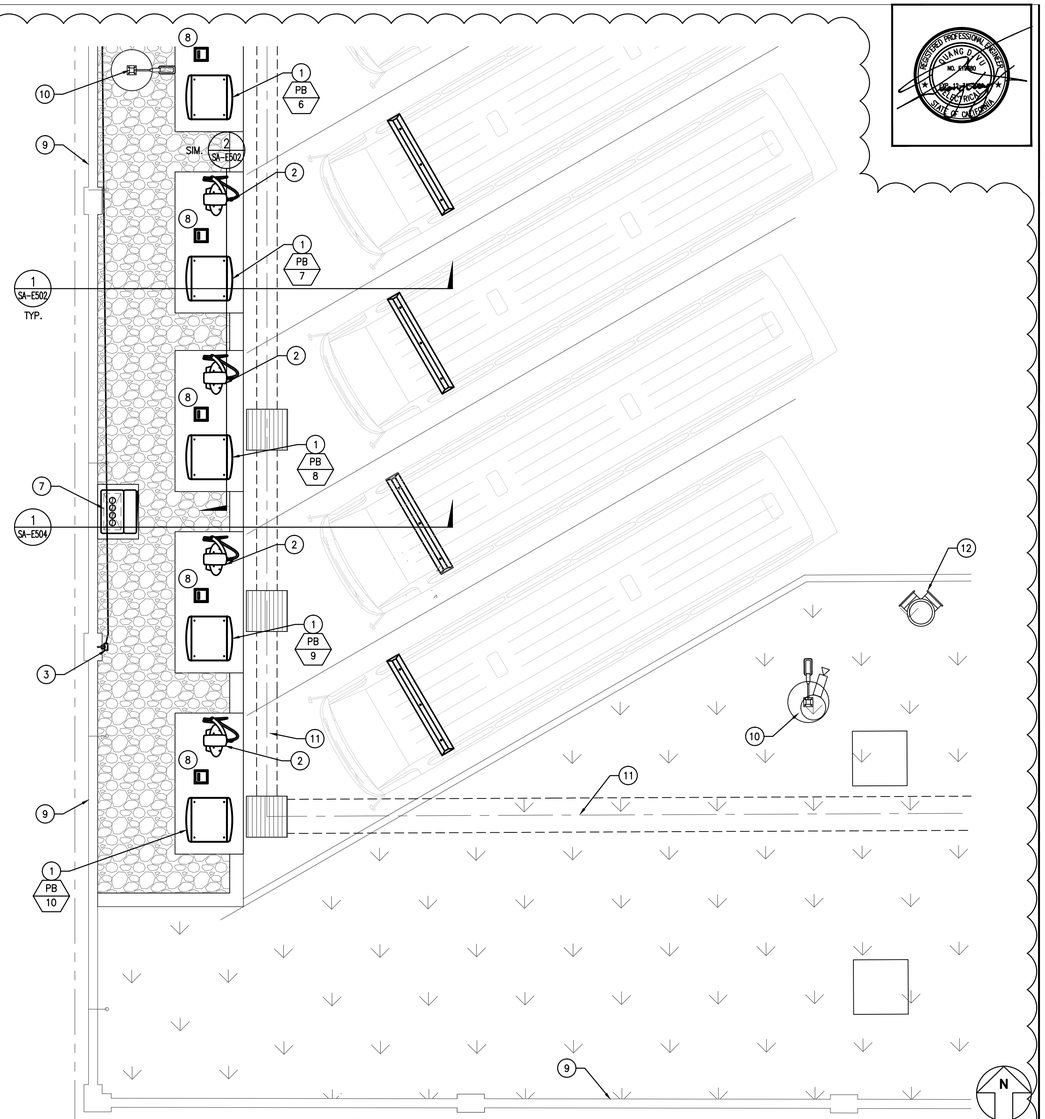
JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-E103.1

550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA



NEW BEB CHARGER PLAN — SCALE 3/16"=1'-0" — 2



NEW BEB CHARGER PLAN — SCALE 3/16"=1'-0" — 1

CONSTRUCTION NOTES:

1. NEW CHARGEPOINT POWER BLOCK. (TYPICAL OF 10).
2. NEW CHARGEPOINT POWER LINK 1000 BEB CHARGER. (TYPICAL OF 10).
3. NEW FLEETWATCH FR200 DATA RECEIVER (TYPICAL OF 3). SEE SA-E505 & SA-E506 FOR INSTALLATION & SUPPORT DETAILS.
4. NEW NEMA 3R LOCKABLE HINGED S.S. NETWORK PANEL (48"x24"x6.5"). SEE 1/SA-E505 AND 2/SA-E505 FOR SUPPORT DETAILS.
5. NEW NEMA 3R SWITCHBOARD "SB-BEB-1".
6. NEW NEMA 3R SWITCHBOARD "SB-BEB-2".
7. NEW NEMA 3R SWITCHBOARD "SB-BEB-3".
8. NEW 12"x12"x18" POLYOLEFIN GROUND INSPECTION HOUSING. SEE DETAIL 1/E506.
9. EXISTING CMU WALL.
10. PROTECT EXISTING (E) LIGHT POLE DURING CONSTRUCTION.
11. PROTECT (E) UNDERGROUND (U/G) STORM DRAIN LINE DURING CONSTRUCTION.
12. PROTECT EXISTING FIRE HYDRANT DURING CONSTRUCTION.

CONSTRUCTION NOTES — SCALE NONE — 3

REGISTERED PROFESSIONAL ENGINEER — QUANG D. VU — No. 17660 — ELECTRICAL — STATE OF CALIFORNIA

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: # (949) 756-8654
FAX: # (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/28/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

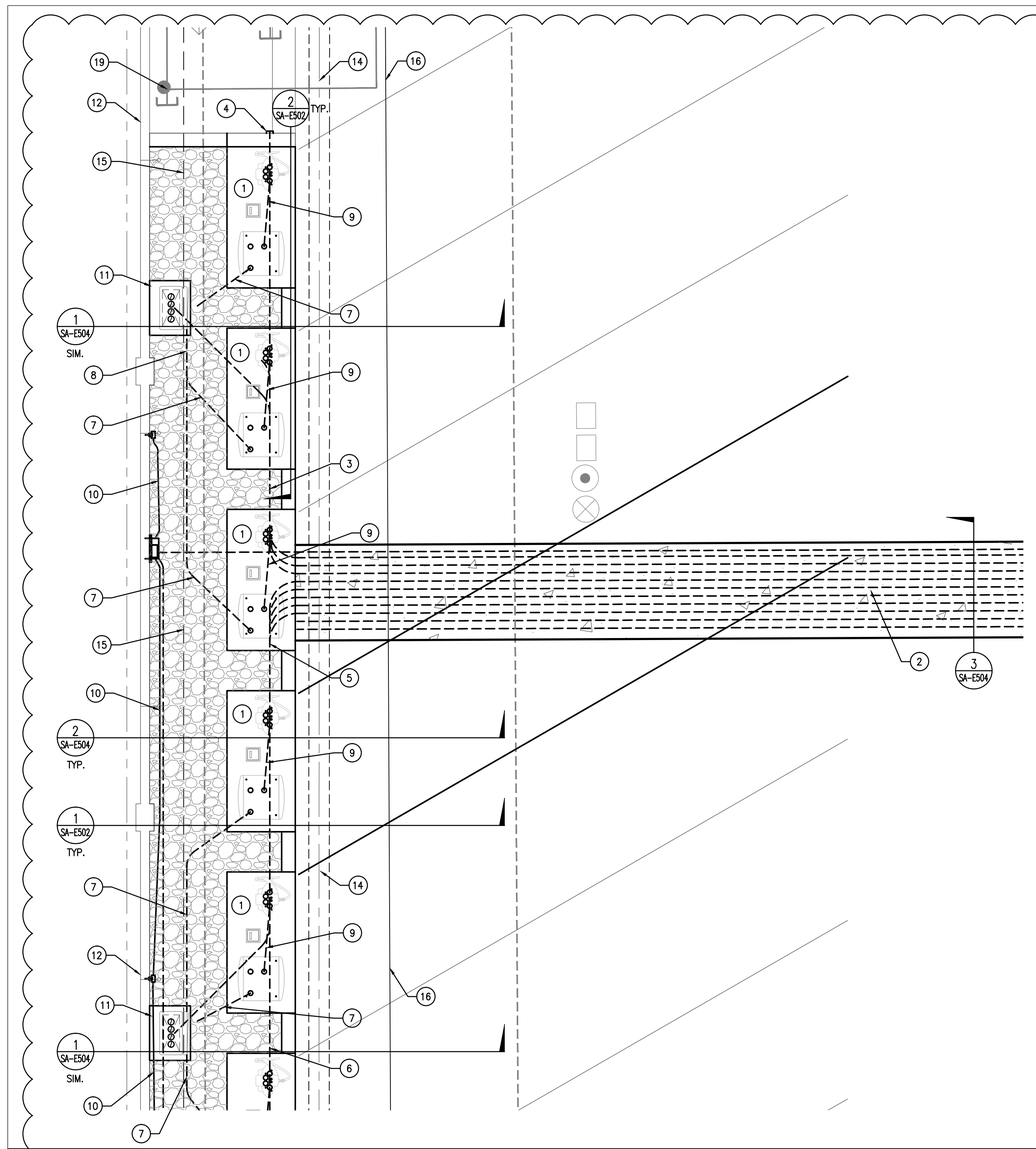
Sheet Title: NEW PLAN AT BEB

Project: OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

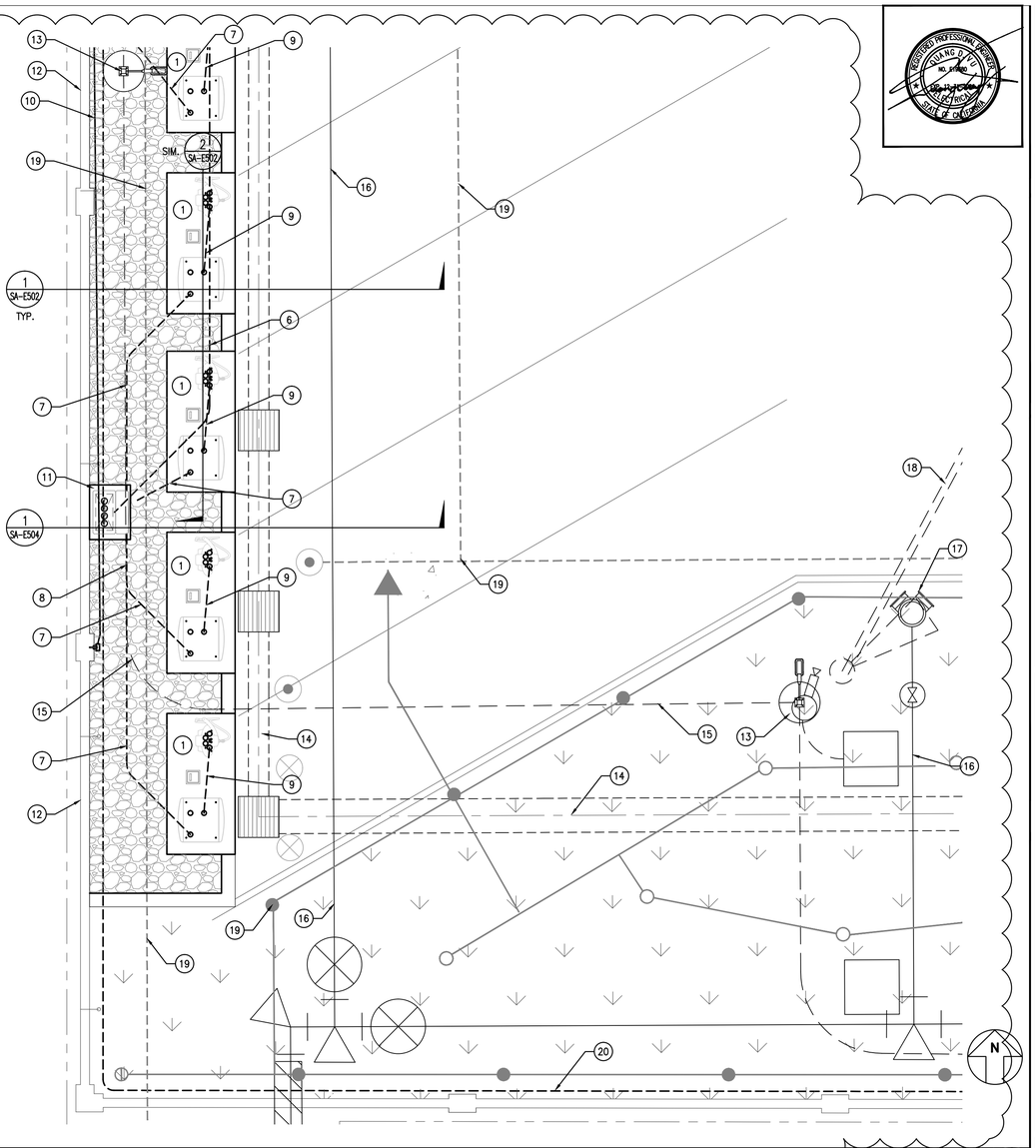
JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-E104

550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA



NEW BEB CHARGER PLAN — SCALE 3/16"=1'-0" — 2



NEW BEB CHARGER PLAN — SCALE 3/16"=1'-0" — 1

CONSTRUCTION NOTES:

1. NEW CHARGEPOINT POWER BLOCK AND POWER LINK 1000 BEB CHARGER FOUNDATION. (TYPICAL OF 10).
2. NEW (15) 5"C PVC SCH. 80– 3#500 MCM & 1#4/0 GND, (5) 5"C SPARE, 2"C PVC SCH. 80 – OM4 FO CABLE, 2"C PVC SCH. 80 – (3) CAT 6 CABLES, 2"C PVC SCH. 80 – 4#10 & 1#10 GND, AND (2) 2"C PVC SCH. 80 SPARE.
3. NEW (5) 5"C PVC SCH. 80– 3#500 MCM & 1#4/0 GND, (5) 5"C PVC SCH. 80 SPARE.
4. NEW TRAFFIC–RATED PULLBOX & (4) 5"C SPARE PVC SCH. 80 STUBBED AND CAPPED W/ PULL ROPE AND PLUG FOR FUTURE USE.
5. NEW (10) 5"C PVC SCH. 80– 3#500 MCM & 1#4/0 GND.
6. NEW (5) 5"C PVC SCH. 80– 3#500 MCM & 1#4/0 GND.
7. NEW (1) 4"C PVC SCH. 80–3#350 MCM, 1#4/0 GROUND.
8. NEW (2) 4"C PVC SCH. 80–3#350 MCM, 1#4/0 GROUND.
9. NEW (1) 2"C, 2#4/0 MCM, 1/#4 GROUND, (1) 1"C, 2#6 48V DC WIRES & (1) CAT6 STP ETHERNET CABLE OUTDOOR RATED, AND 1"C & 2"C SPARE.
10. NEW 1"ø PVC SCH. 80 CAT6 ETHERNET CABLE & 1"ø PVC SCH. 80 – 2#12 & 1#12 GND TO FLEETWATCH FR200 PANEL MOUNTED ON EXISTING CMU WALL. PAINTED TO MATCH EXISTING WALL COLOR. SEE 1/SA–E505 FOR DETAILS.
11. NEW NEMA 3R SWITCHBOARD "SB–BEB" FOUNDATION. (TYPICAL OF 3).
12. EXISTING CMU WALL.
13. PROTECT EXISTING (E) LIGHT POLE DURING CONSTRUCTION.
14. PROTECT (E) UNDERGROUND (U/G) STORM DRAIN LINE DURING CONSTRUCTION.
15. REMOVE, RELOCATE, AND REPLACE (E) U/G ELECTRICAL CONDUIT & WIRES TO ACCOMMODATE CONSTRUCTION & MAINTAIN SITE LIGHTING WITHOUT INTERRUPTION. NUMERICALLY TAG CONDUITS & WIRES THAT ARE TO BE REMOVED, RELOCATED, AND REPLACED AND SUBMIT A WRITTEN REPORT INCLUDING DESTINATION, FUNCTION, NUMBER, TYPE, AND VOLTAGE OF EACH CONDUIT AND WIRE TO THE PROJECT MANAGER FOR REVIEW AND CONFIRMATION BEFORE EXECUTING THE REMOVAL. PERFORM FUNCTIONAL TESTING FOR ALL INVOLVED DEVICES.
16. PROTECT (E) U/G WATER LINE DURING CONSTRUCTION.
17. PROTECT EXISTING FIRE HYDRANT DURING CONSTRUCTION.
18. VERIFY EXISTING POWER WIRES AND COMMUNICATION CABLES BETWEEN PULL BOXES AT LIGHT POLES AND PROTECT THEM DURING CONSTRUCTION. SEE NOTE #15 FOR TAGGING, REPORTING, AND TESTING REQUIREMENTS.
19. EXISTING IRRIGATION. SEE SA–S101 FOR REMOVAL, CAPPING, AND REPLACEMENT OF EXISTING IRRIGATION PIPES AND SPRINKLER HEADS.
20. NEW UNDERGROUND 2"C PVC SCH. 80 – OM4 FIBER OPTIC (FO) CABLE, 2"C – (6) CAT6 STP ETHERNET CABLES, 1"C – 4#10 & 1#10 GND, AND 2"C SPARE TO THE S.S. NETWORK PANEL.

CONSTRUCTION NOTES — SCALE NONE — 3

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: # (949) 756–8654
FAX: # (949) 502–0777

MARK	DATE	BY	REVISIONS
1	3/28/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

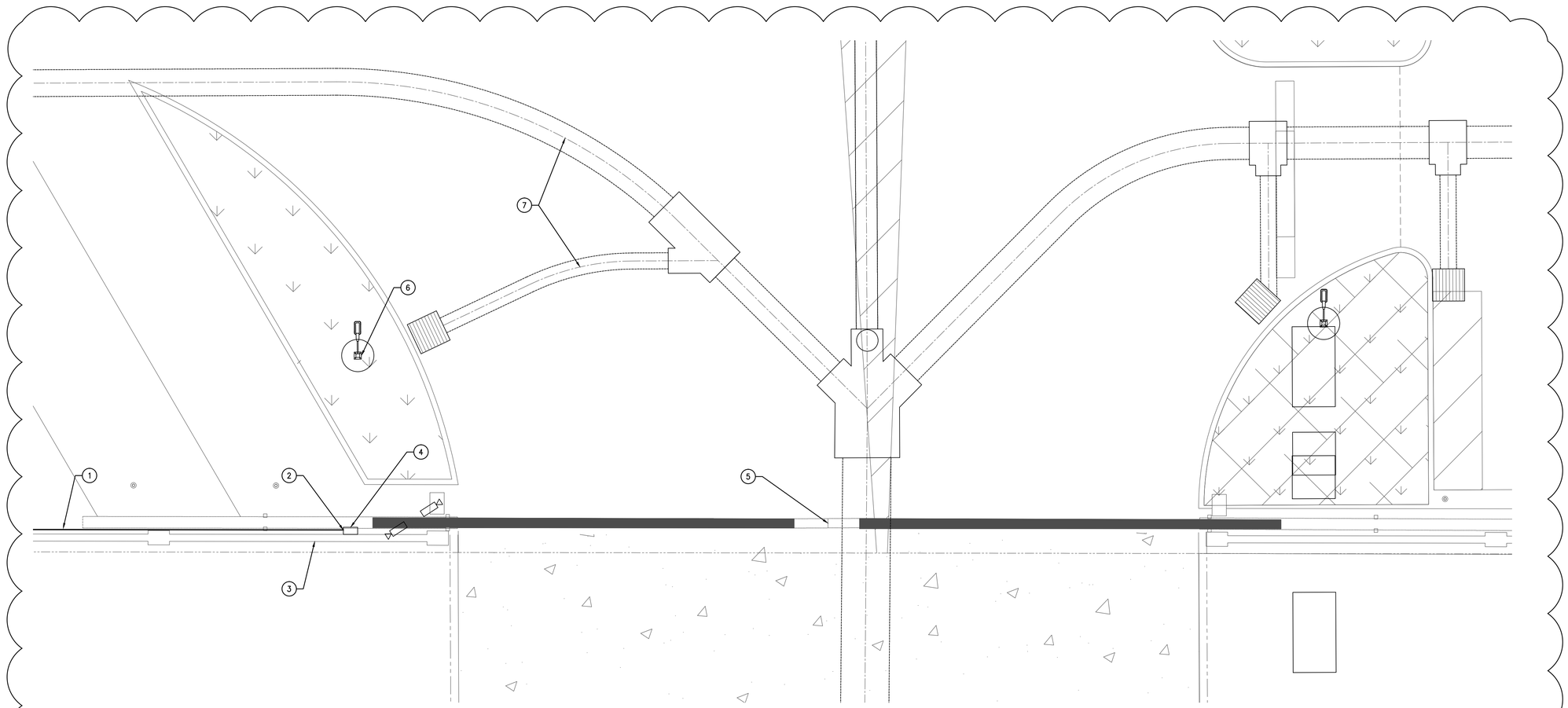
Sheet Title NEW PLAN AT BEB CHARGERS

Project OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03–28–2025
SCALE	AS NOTED
SHEET	SA-E104.1

550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA



CONSTRUCTION NOTES:

1. NEW (2) 2"C & 1"C PVC SCH. 80 MOUNTED ON EXISTING CMU WALL. INSTALL VARIOUS HEIGHT SUPPORTS TO MAINTAIN STRAIGHT CONDUITS AND NEMA 3R PULL BOXES TO FACILITATE CAT6 CABLE AND WIRE PULLS. PAINT CONDUIT AND PULL BOXES TO MATCH EXISTING CMU WALL COLOR.
2. CONNECT NEW 2"C PVC SCH. 80 – OM4 FIBER OPTIC (FO) CABLE, 2"C – (6) CAT6 STP ETHERNET CABLES, AND 1"C, (4)#10 & (1)#10 GND MOUNTED ON EXISTING CMU WALL TO AN EXISTING ETHERNET SWITCH PANEL NEAR THE MAIN GATE. CONNECT CAT6 CABLES TO ETHERNET SWITCHES AND POWER WIRES TO RECEPTACLE INSIDE THE PANEL. ROUTE OM4 FO CABLE TO DATA RACK DR-4 THRU PULLBOXES CP10, CP2, CP1 (AT GUARD SHACK), & 4CB (AT OPERATIONS BUILDING). COORDINATE & WORK WITH CONVERGINT TECHNOLOGIES AT (714) 546-2780 ON REQUIREMENTS, PROGRAMMING, AND COMMISSIONING.
3. EXISTING CMU WALL.
4. EXISTING ETHERNET SWITCH PANEL MOUNTED ON CMU WALL.
5. EXISTING SLIDING GATE.
6. EXISTING LIGHT POLE.
7. EXISTING UNDERGROUND (U/G) STORM DRAIN LINE.

PLAN AT EXISTING GATE

SCALE 3/16"=1'-0" | 1

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: ∮ (949) 756-8654
FAX: ∮ (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/28/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

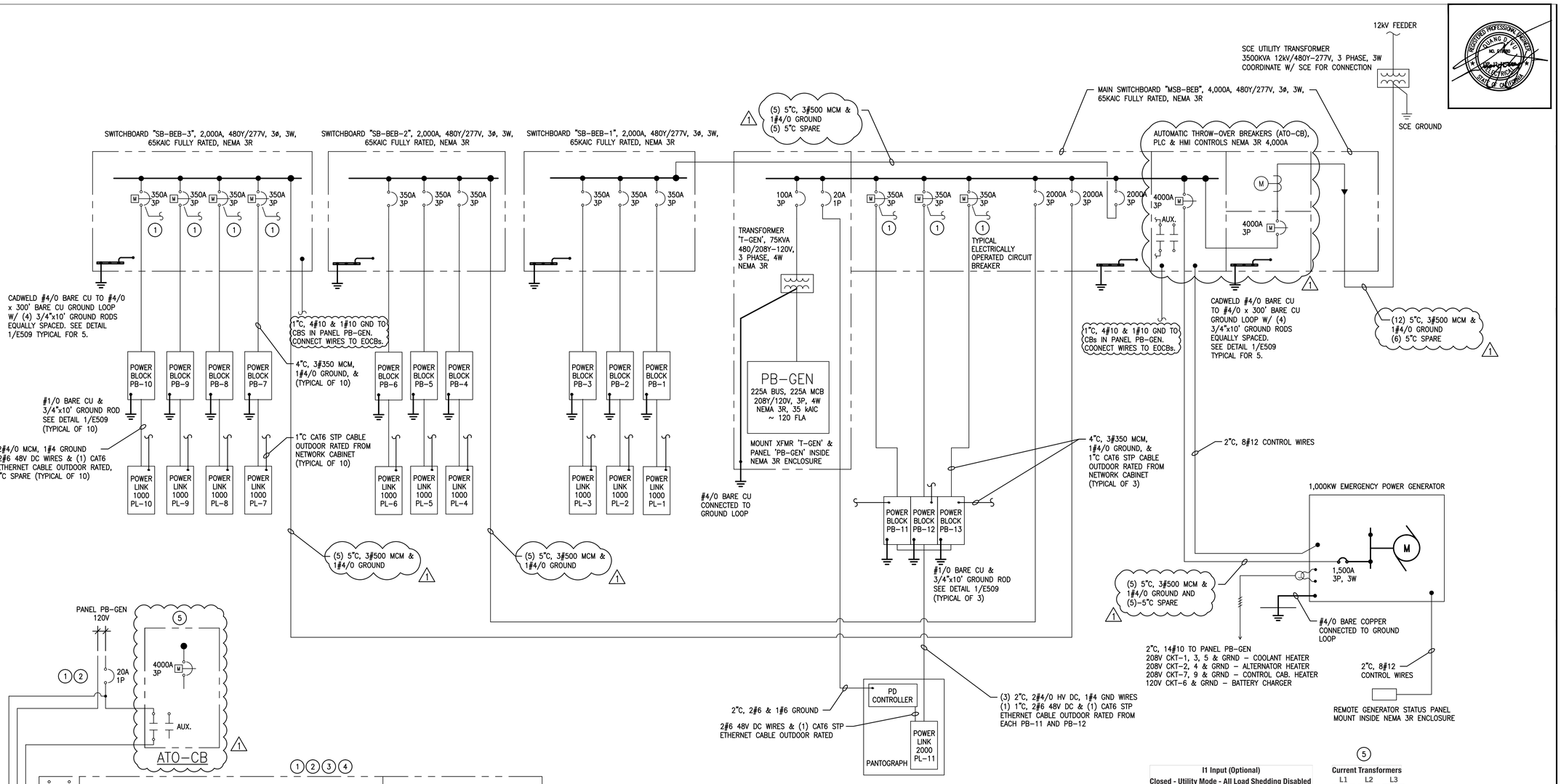
Sheet Title: PLAN AT EXISTING GATE

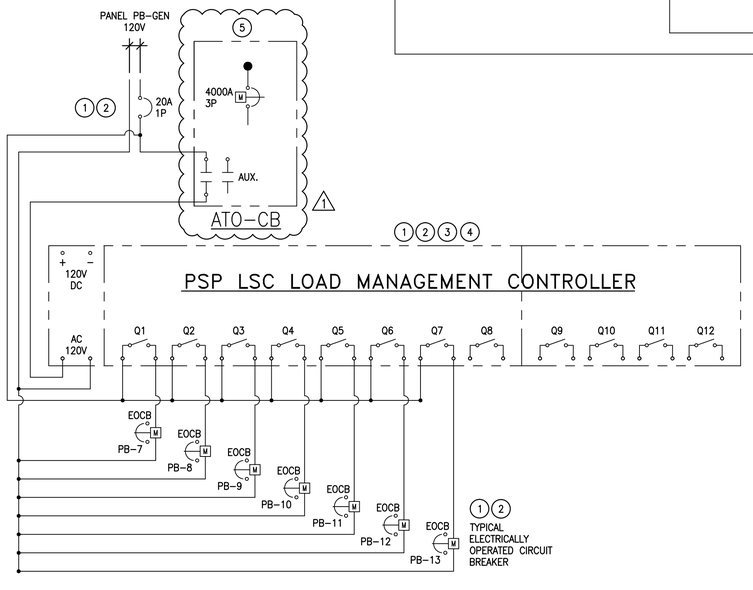
Project: OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-E105

550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA

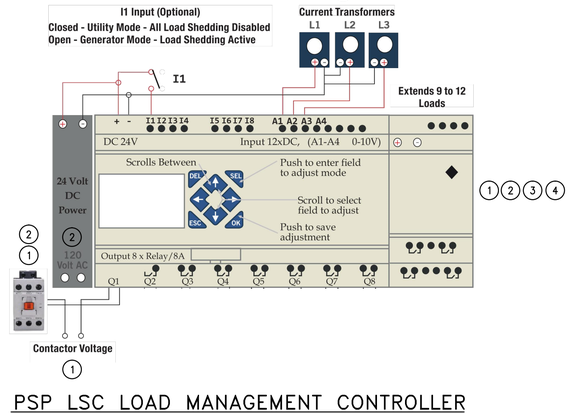




EMERGENCY POWER LOAD MANAGEMENT WIRING DIAGRAM

EMERGENCY POWER LOAD MANAGEMENT NOTES:

1. CONNECT 2 – #10 AUTOMATIC CONTROL WIRES IN 1"C TO PSP LSC SERIES UNIT TO OPEN AND CLOSE EACH OF THE SEVEN (7) ELECTRICALLY OPERATED CIRCUIT BREAKERS BASED ON LOAD AMPERES IN COMPARISON TO CAPACITY AMPERES OF THE 1000 KW GENERATOR.
2. INSTALL 1"C, 2#10 AND 1#10 GROUND WIRES FROM PANEL PB-GEN TO PSP LSC SERIES LOAD MANAGEMENT CONTROLLER TO PROVIDE 120V POWER TO THE LSC CONTROLLER AND CONTACTS, AND 2"C, 12#10 WIRES FROM THE LSC CONTROLLER TO SWITCHBOARD SB-BEB-3.
3. INSTALL ETHERNET SWITCH, WIFI MODEM, PSP LSC SERIES CONTROLLER, A 120V POWER WIRE TERMINAL STRIP, A 120V CONTROL WIRE TERMINAL STRIP, A 24V DC WIRE TERMINAL STRIP, REMOVAL COVER WIRE RACEWAYS, AND 120V RECEPTACLES IN A 48" x 24" X 6.5" NEMA 3R STAINLESS STEEL HINGED DOOR PANEL.
4. COORDINATE WITH CUMMINS GENERATOR APPLICATION ENGINEER AND FOLLOW MANUFACTURER'S INSTRUCTIONS FOR PSP LSC SERIES CONTROLLER TO SET UP THE OPEN AND CLOSE OPERATION SEQUENCE OF SEVEN (7) ELECTRICALLY OPERATED CIRCUIT BREAKERS TO KEEP THE GENERATOR'S CURRENT DRAW AT 1250A, TO CLOSE ONE (1) EOCB WHEN THE CURRENT DRAW IS BELOW 1000A, AND TO OPEN (1) EOCB WHEN THE CURRENT DRAW IS OVER 1250A. THE OPEN/CLOSE ORDER SEQUENCE IS THE POWER BLOCK (PB) NUMERICAL ORDER. SUBMIT LOAD MANAGEMENT WIRING SHOP DRAWINGS AND A CONTROL SEQUENCE AND PROVIDE PERFORMANCE TESTING AND COMMISSIONING FOR THE EMERGENCY POWER LOAD MANAGEMENT SYSTEM.
5. AT AUTOMATIC THROW-OVER BREAKER (ATO-CB), INSTALL 1500A, 480V RATED CURRENT TRANSFORMERS (CTs) 1500:5 ON WIRES COMING FROM THE 1000KW GENERATOR AND LOW VOLTAGE CONTROL WIRES TO READ THE GENERATOR'S ACTUAL CURRENT AND ACCURATELY MANAGE LOADS TO PREVENT OVERLOADING.



PSP LSC LOAD MANAGEMENT CONTROLLER

SINGLE LINE DIAGRAM – ELECTRICAL DISTRIBUTION SYSTEM FOR BEB AND PANTOGRAPH BEB CHARGERS

SCALE NONE

1

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: # (949) 756-8654
FAX: # (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/28/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

Sheet Title
BEB PLUG-IN AND PANTOGRAPH CHARGER
SINGLE LINE DIAGRAM (SLD)

Project
OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-E301

550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA

PANELBOARD NAME:	PANEL "SB-BEB-1"	MOUNTING:				OVERSIZED NEUTRAL BUS: NO.				SPECIAL ENCLOSURE:				
BUS: 2000 A	VOLTAGE: 480/277 VOLTS, 3-Ph, 3-W					MAIN (Amps): 2000 A / 3 P				KAIC 65	TOP OR BOTTOM FEED: SEE PLANS			
LOCATION						FED FROM:								

DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CONT.	QTY	BRKR TRIP	BRKR P	CKT REF		BRKR P	BRKR TRIP	QTY	CONT.	LOAD KVA A	LOAD KVA B	LOAD KVA C	DESCRIPTION
POWER BLOCK PB-1	57				–	350	3	1	2	3	350			57			POWER BLOCK PB-2
POWER BLOCK PB-1		57			–	350		3	4		350				57		POWER BLOCK PB-2
POWER BLOCK PB-1			57		–	350		5	6		350					57	POWER BLOCK PB-2
POWER BLOCK PB-3	57				–	350	3	7	8	3	350			–			–
POWER BLOCK PB-3		57			–	350		9	10		350				–		–
POWER BLOCK PB-3			57		–	350		11	12		350					–	–
–	–				–	350	3	13	14	3	350			–			–
–		–			–	350		15	16		350				–		–
–			–		–	350		17	18		350					–	–
–	–				–	350	3	19	20	3	350			–			–
–		–			–	350		21	22		350				–		–
–			–		–	350		23	24		350					–	–
PARTITAL TOTAL	114	114	114											57	57	57	PARTIAL TOTALS
TOTAL CONNECTED/PHASE	171	171	171														

TOTAL CONNECTED VA = TOTAL VA + 0.25 x CONT. VA = 513 + 128.25 = 641.25 KVA AV . AMPS/PH = 771.30 A

NOTES:

TYPICAL SWITCHBOARD "SB-BEB-1" SCHEDULE

SCALE NONE 3

PANELBOARD NAME:	PANEL "SB-BEB-2"	MOUNTING:				OVERSIZED NEUTRAL BUS: NO.				SPECIAL ENCLOSURE:				
BUS: 2000 A	VOLTAGE: 480/277 VOLTS, 3-Ph, 3-W					MAIN (Amps): 2000 A / 3 P				KAIC 65	TOP OR BOTTOM FEED: SEE PLANS			
LOCATION						FED FROM:								

DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CONT.	QTY	BRKR TRIP	BRKR P	CKT REF		BRKR P	BRKR TRIP	QTY	CONT.	LOAD KVA A	LOAD KVA B	LOAD KVA C	DESCRIPTION
POWER BLOCK PB-4	57				–	350	3	1	2	3	350			57			POWER BLOCK PB-5
POWER BLOCK PB-4		57			–	350		3	4		350				57		POWER BLOCK PB-5
POWER BLOCK PB-4			57		–	350		5	6		350					57	POWER BLOCK PB-5
POWER BLOCK PB-6	57				–	350	3	7	8	3	350			–			–
POWER BLOCK PB-6		57			–	350		9	10		350				–		–
POWER BLOCK PB-6			57		–	350		11	12		350					–	–
–	–				–	350	3	13	14	3	350			–			–
–		–			–	350		15	16		350				–		–
–			–		–	350		17	18		350					–	–
–	–				–	350	3	19	20	3	350			–			–
–		–			–	350		21	22		350				–		–
–			–		–	350		23	24		350					–	–
PARTITAL TOTAL	114	114	114											57	57	57	PARTIAL TOTALS
TOTAL CONNECTED/PHASE	171	171	171														

TOTAL CONNECTED VA = TOTAL VA + 0.25 x CONT. VA = 513 + 128.25 = 641.25 KVA AV . AMPS/PH = 771.30 A

NOTES:

TYPICAL SWITCHBOARD "SB-BEB-2" SCHEDULE

SCALE NONE 4

PANELBOARD NAME:	PANEL "SB-BEB-3"	MOUNTING:				OVERSIZED NEUTRAL BUS: NO.				SPECIAL ENCLOSURE:				
BUS: 2000 A	VOLTAGE: 480/277 VOLTS, 3-Ph, 3-W					MAIN (Amps): 2000 A / 3 P				KAIC 65	TOP OR BOTTOM FEED: SEE PLANS			
LOCATION						FED FROM:								

DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CONT.	QTY	BRKR TRIP	BRKR P	CKT REF		BRKR P	BRKR TRIP	QTY	CONT.	LOAD KVA A	LOAD KVA B	LOAD KVA C	DESCRIPTION
POWER BLOCK PB-7	57				–	350	3	1	2	3	350			57			POWER BLOCK PB-8
POWER BLOCK PB-7		57			–	350		3	4		350				57		POWER BLOCK PB-8
POWER BLOCK PB-7			57		–	350		5	6		350					57	POWER BLOCK PB-8
POWER BLOCK PB-9	57				–	350	3	7	8	3	350			57			POWER BLOCK PB-10
POWER BLOCK PB-9		57			–	350		9	10		350				57		POWER BLOCK PB-10
POWER BLOCK PB-9			57		–	350		11	12		350					57	POWER BLOCK PB-10
–	–				–	350	3	13	14	3	350			–			–
–		–			–	350		15	16		350				–		–
–			–		–	350		17	18		350					–	–
–	–				–	350	3	19	20	3	350			–			–
–		–			–	350		21	22		350				–		–
–			–		–	350		23	24		350					–	–
PARTITAL TOTAL	114	114	114											114	114	114	PARTIAL TOTALS
TOTAL CONNECTED/PHASE	228	228	228														

TOTAL CONNECTED VA = TOTAL VA + 0.25 x CONT. VA = 684 + 171 = 855 KVA AV . AMPS/PH = 1028.40 A

NOTES:

TYPICAL SWITCHBOARD "SB-BEB-3" SCHEDULE

SCALE NONE 5

PANELBOARD NAME:	PANEL "MSB-BEB"	MOUNTING:				OVERSIZED NEUTRAL BUS: NO.				SPECIAL ENCLOSURE:				
BUS: 4000 A	VOLTAGE: 480/277 VOLTS, 3-Ph, 3-W					MAIN (Amps): 4000 A / 3 P				KAIC 65	TOP OR BOTTOM FEED: SEE PLANS			
LOCATION						FED FROM:								

DESCRIPTION	LOAD KVA A	LOAD KVA B	LOAD KVA C	CONT.	QTY	BRKR TRIP	BRKR P	CKT REF		BRKR P	BRKR TRIP	QTY	CONT.	LOAD KVA A	LOAD KVA B	LOAD KVA C	DESCRIPTION
POWER BLOCK PB-11	57				–	350	3	1	2	3	350			57			POWER BLOCK PB-12
POWER BLOCK PB-11		57			–	350		3	4		350				57		POWER BLOCK PB-12
POWER BLOCK PB-11			57		–	350		5	6		350					57	POWER BLOCK PB-12
POWER BLOCK PB-13	57				–	350	3	7	8	3	2000			171			SWITCHBOARD SB-BEB-1
POWER BLOCK PB-13		57			–	350		9	10		2000				171		SWITCHBOARD SB-BEB-1
POWER BLOCK PB-13			57		–	350		11	12		2000					171	SWITCHBOARD SB-BEB-1
SWITCHBOARD SB-BEB-3	228				–	2000	3	13	14	3	2000			171			SWITCHBOARD SB-BEB-2
SWITCHBOARD SB-BEB-3		228			–	2000		15	16		2000				171		SWITCHBOARD SB-BEB-2
SWITCHBOARD SB-BEB-3			228		–	2000		17	18		2000					171	SWITCHBOARD SB-BEB-2
XFMR "T-GEN"	14.41				–	100	3	19	20	3	–			–			–
XFMR "T-GEN"		14.41			–	100		21	22		–				–		–
XFMR "T-GEN"			14.41		–	100		23	24		–					–	–
–	–				–	–	3	25	26	3	–			–			–
–		–			–	–		27	28		–				–		–
–			–		–	–		29	30		–					–	–
–	–				–	–	3	31	32	3	–	–		–			–
–		–			–	–		33	34		–	–			–		–
–			–		–	–		35	36		–	–				–	–
PANTOGRAPH PD CONTROLLER	0.55				–	20	1	37	38	3	–	–		–			–
–		–			–	–		39	40		–	–			–		–
–			–		–	–		41	42		–	–				–	–
PARTITAL TOTAL	356.96	356.41	356.41											399	399	399	PARTIAL TOTALS
TOTAL CONNECTED/PHASE	755.96	755.41	755.41														

TOTAL CONNECTED VA = TOTAL VA + 0.25 x CONT. VA = 2,266.78 + 566.70 = 2,833.48 KVA AV . AMPS/PH = 3,408.15 A

NOTES:

SWITCHBOARD "MSB-BEB" SCHEDULE

SCALE NONE 1

PANELBOARD NAME:	PANEL "PB-GEN"	MOUNTING:				OVERSIZED NEUTRAL BUS: NO.				SPECIAL ENCLOSURE:				
BUS: 225 A	VOLTAGE: 120/208 VOLTS, 3-Ph, 4-W					MAIN (Amps): 225 / 3 P				KAIC 35	TOP OR BOTTOM FEED: SEE PLANS			
LOCATION						FED FROM: XFMR "T-BEB"								

DESCRIPTION	LOAD VA A	LOAD VA B	LOAD VA C	CONT.	QTY	BRKR TRIP	BRKR P	CKT REF		BRKR P	BRKR TRIP	QTY	CONT.	LOAD VA A	LOAD VA B	LOAD VA C	DESCRIPTION
1000 KW GENERATOR COOLANT HEATER	1400				–	30	1	1	2	1	20			600			1000 KW GENERATOR BATTERY CHARGER
1000 KW GENERATOR COOLANT HEATER		1400			–	30	1	3	4	1	20				600		1000 KW GENERATOR BATTERY CHARGER
1000 KW GENERATOR ALTERNATOR HEATER			200		–	30	1	5	6	1	20					360	GENERATOR CONTROL PANEL
1000 KW GENERATOR ALTERNATOR HEATER	200				–	30	1	7	8	1	20			360			GFIC RECEPTACLE
RECEPTACLE-WP CONTROL PANEL		180			–	20	1	9	10	1	15				60		FLEETWATCH DATA RECEIVER FR200-GR UNIT
RECEPTACLE-WP CONTROL PANEL			180		–	20	1	11	12	1	15					60	FLEETWATCH DATA RECEIVER FR200-GR UNIT
CONTROL POWER-ELEC. OPERATED CBs	380				–	20	1	13	14	1	15			60			FLEETWATCH DATA RECEIVER FR200-GR UNIT
CONTROL POWER-ELEC. OPERATED CBs		380			–	20	1	15	16	1	20				380		POWER FOR PSP LSC CONTROLLER
POWER TO ATO-CB FOR CONTROLS			380		–	–	1	17	18	–	–					380	POWER TO SB-BEB-3 FOR CONTROLS
–	–				–	–	–	19	20	–	–			–			–
–		–			–	–	–	21	22	–	–				–		–
–			–		–	–	–	23	24	–	–					–	–
PARTITAL TOTAL	1980	1960	660											1020	1040	800	PARTIAL TOTALS
TOTAL CONNECTED/PHASE	3000	3000	1460														

TOTAL CONNECTED VA = TOTAL VA + 0.25 x CONT. VA = 7,460 + 1,100 = 8,560 VA AV . AMPS/PH = 23.6 A

NOTES:

1

PANEL "PB-GEN" SCHEDULE

SCALE NONE 2

OWNER-FURNISHED BATTERY ELECTRIC BUS (BEB) CHARGER SCHEDULE

SYMBOL	QUANTITY	MAKE	MODEL	PORT	INPUT CAPACITY KVA	ELECTRICAL VOLT/P/AMP	OUTPUT VOLT/AMP DC	REQUIRED CIRCUIT BREAKER AMPS	DC CONNECTION	CABLE LENGTH	LCD DISPLAY	–	INSTALLATION REMARKS FOR THE CONTRACTOR
PB 1-10 / PL 1-10	10	CHARGEPOINT	POWER BLOCK POWER LINK 1000	SINGLE	160	480 / 3 / 260	100-1000V/350A	350	NACS (J3400), CCS1 (SAE J1772 COMBO), CCS2 (IEC 61851-23), CHAdeMO	19'	FULL COLOR 203 mm (8 in) INTERACTIVE DISPLAY WITH FULL MOTION VIDEO, UV PROTECTION, GESTURE TOUCH CONTROLS, AND MULTI-LANGUAGE SUPPORT	–	INSTALL CONDUITS AND CABLES FOR AC UTILITY POWER, DC POWER, ETHERNET CAT6, INTERLOCK CONTROLS, AND GROUNDING FOR COMPLETE INSTALLATION REQUIRED BY CHARGEPOINT MANUFACTURER.
PB 11-13 / PL 11	3 PB 1 PL 2000	CHARGEPOINT	POWER BLOCK POWER LINK 2000	PANTOGRAPH	160	480 / 3/ 260	100-1000V/350A	350	–	–	–	–	INSTALL CONDUITS AND CABLES FOR AC UTILITY POWER, DC POWER, ETHERNET CAT6, INTERLOCK CONTROLS, AND GROUNDING FOR COMPLETE INSTALLATION REQUIRED BY CHARGEPOINT MANUFACTURER.

PB 1

PB-1 TO 10 = POWER BLOCK COUPLED WITH POWER LINK 1000 (PL). PB-11 TO 13 = PANTOGRAPH POWER BLOCKS COUPLED WITH POWER LINK 2000. INSTALL CONDUITS AND OUTDOOR RATED CABLES FOR AC UTILITY POWER, DC POWER, CAT6 ETHERNET, INTERLOCK CONTROLS, AND GROUNDING FOR COMPLETE INSTALLATION, STARTUP TESTING, AND COMMISSIONING REQUIRED BY CHARGEPOINT MANUFACTURER. FOLLOW CHARGEPOINT GUIDES FOR DATA, SITE DESIGN, AND INSTALLATION.

OWNER-FURNISHED – BATTERY ELECTRIC BUS (BEB) CHARGER SCHEDULE

SCALE NONE 5

REGISTERED PROFESSIONAL ENGINEER — QUANG V. VU — No. EE 19160 — ELECTRICAL — STATE OF CALIFORNIA

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: ∮ (949) 756-8654
FAX: ∮ (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/20/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

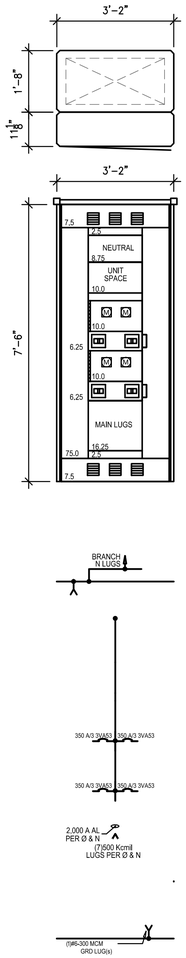
Sheet Title BATTERY-ELECTRIC-BUS (BEB) CHARGER & PANEL SCHEDULES

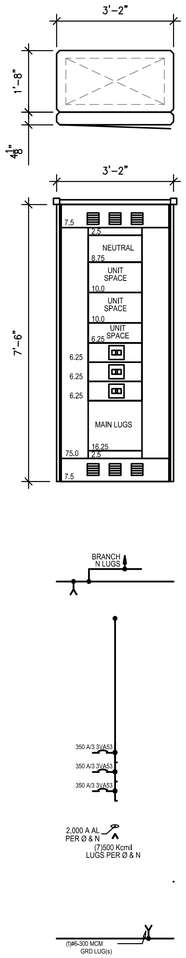
Project OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

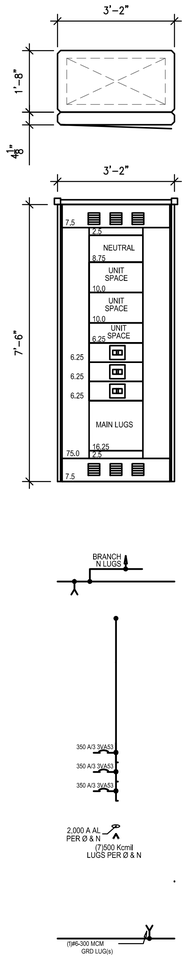
JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-E401

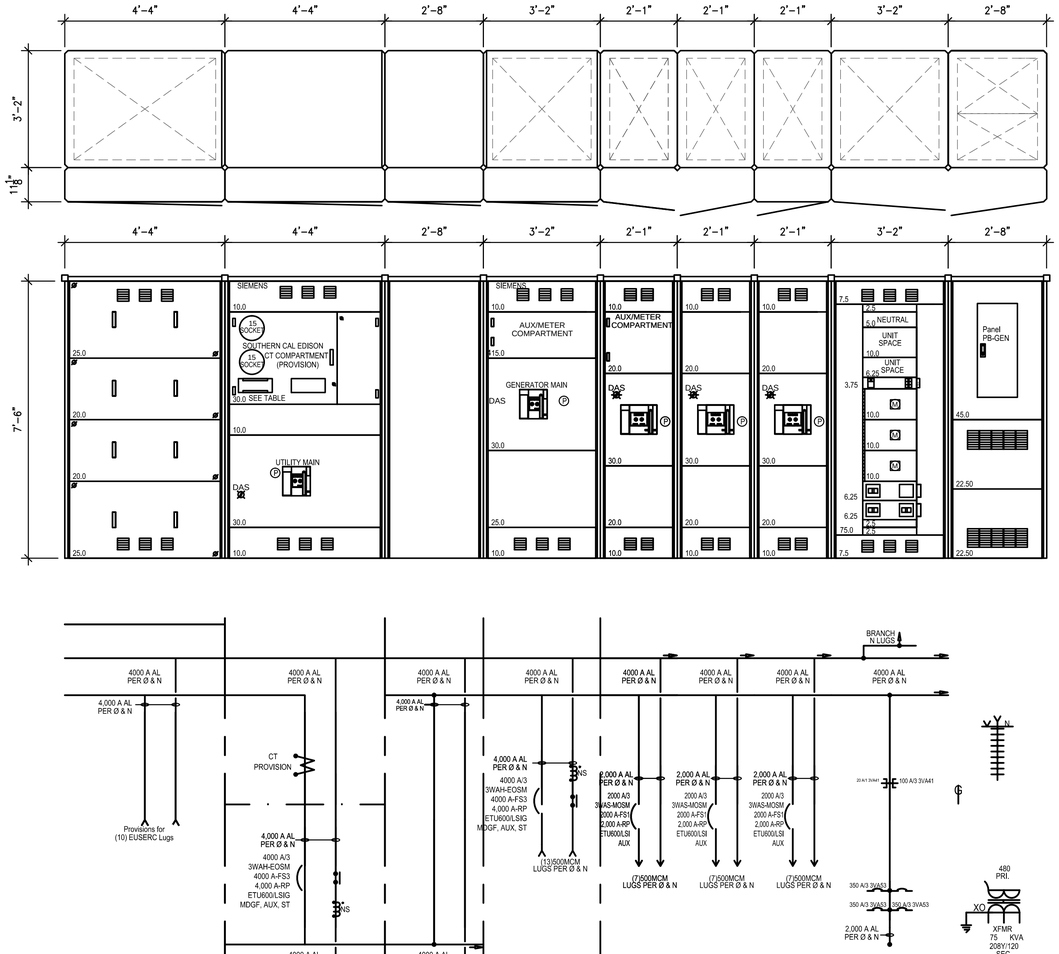
550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA









"SB-BEB-1" ELEV. | SCALE 1/2"=1'-0" | 4

"SB-BEB-1" ELEV. | SCALE 1/2"=1'-0" | 3

"SB-BEB-1" ELEV. | SCALE 1/2"=1'-0" | 2

MAIN BEB SWITCHBOARD "MSB-BEB" ELEVATION | SCALE 1/2"=1'-0" | 1

REGISTERED PROFESSIONAL ENGINEER
QUANG V. VU
No. E19880
ELECTRICAL
STATE OF CALIFORNIA

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: (949) 756-8654
FAX: (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/28/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

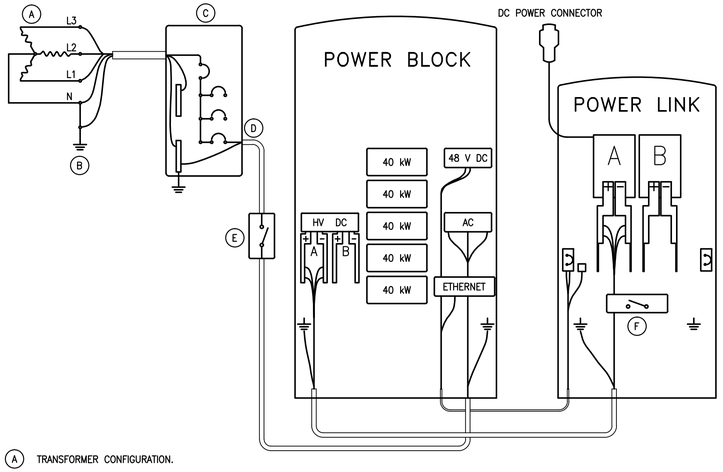
Sheet Title
NEW MAIN BEB SWITCHBOARD ELEVATION

Project
OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-E501

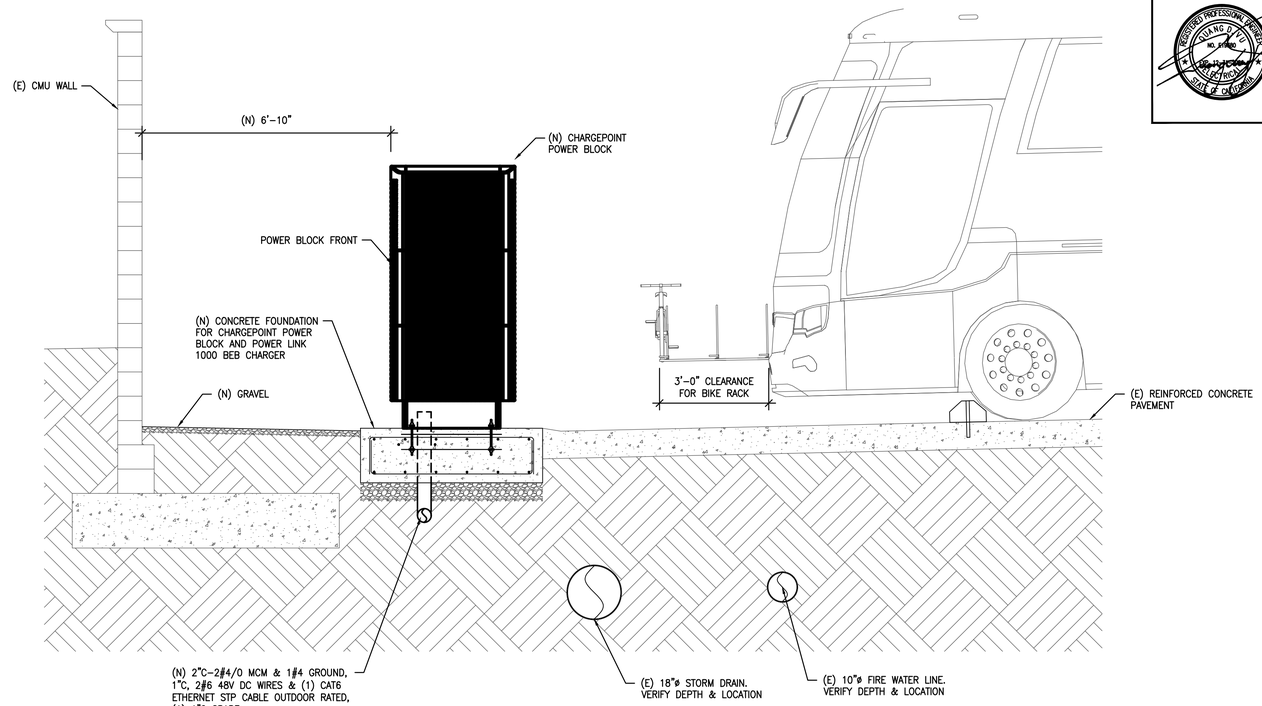
550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA

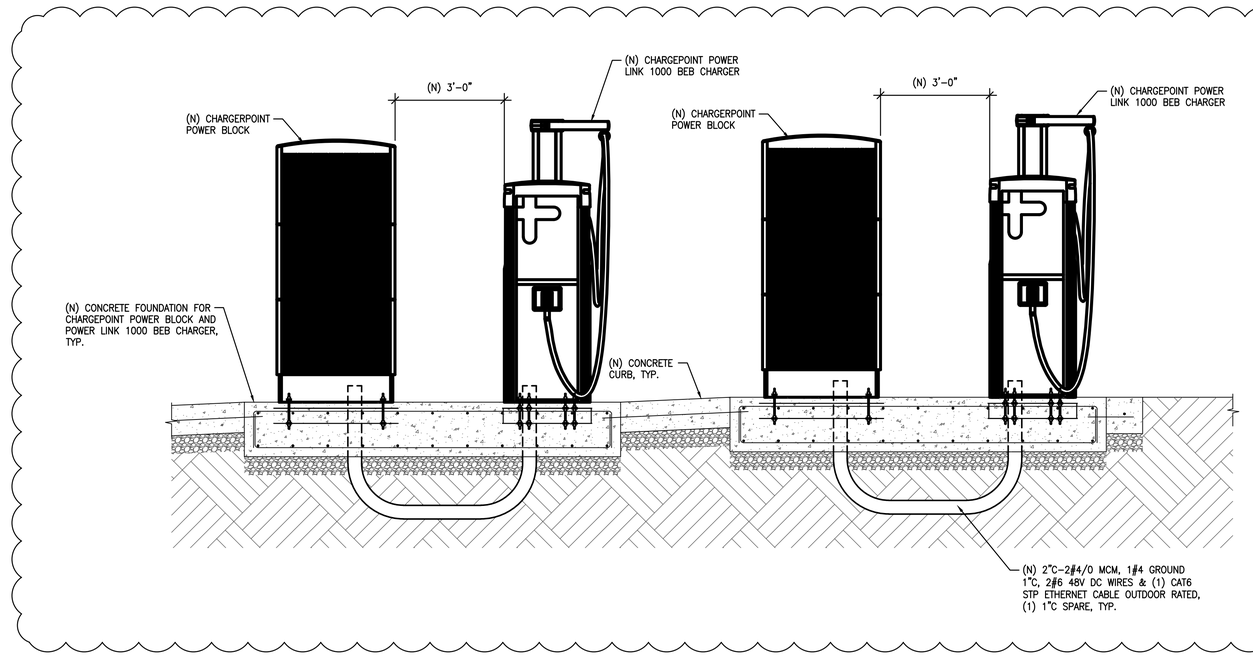


(A) TRANSFORMER CONFIGURATION.
(B) GROUND CONNECTION.
(C) ELECTRICAL PANEL.
(D) CIRCUIT BREAKERS.
(E) AC DISCONNECT SWITCH (OPTIONAL).
(F) MAINTENANCE SWITCH (OPTIONAL).

TYPICAL WIRING DIAGRAM FOR CHARGEPOINT CHARGER — SCALE: NONE — 3



SECTION — SCALE: 1/2"=1'-0" — 1



1

SECTION — SCALE: NONE — 2

– — SCALE: NONE — –

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: # (949) 756-8654
FAX: # (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/20/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

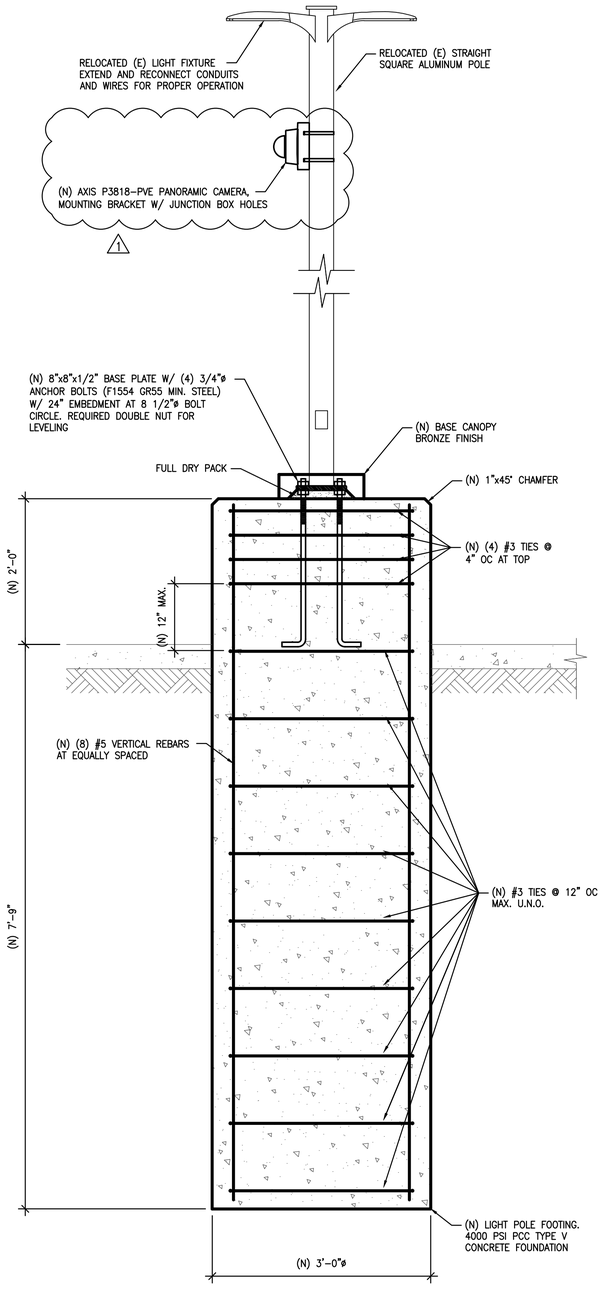
Sheet Title: DETAILS AND SECTIONS

Project: OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

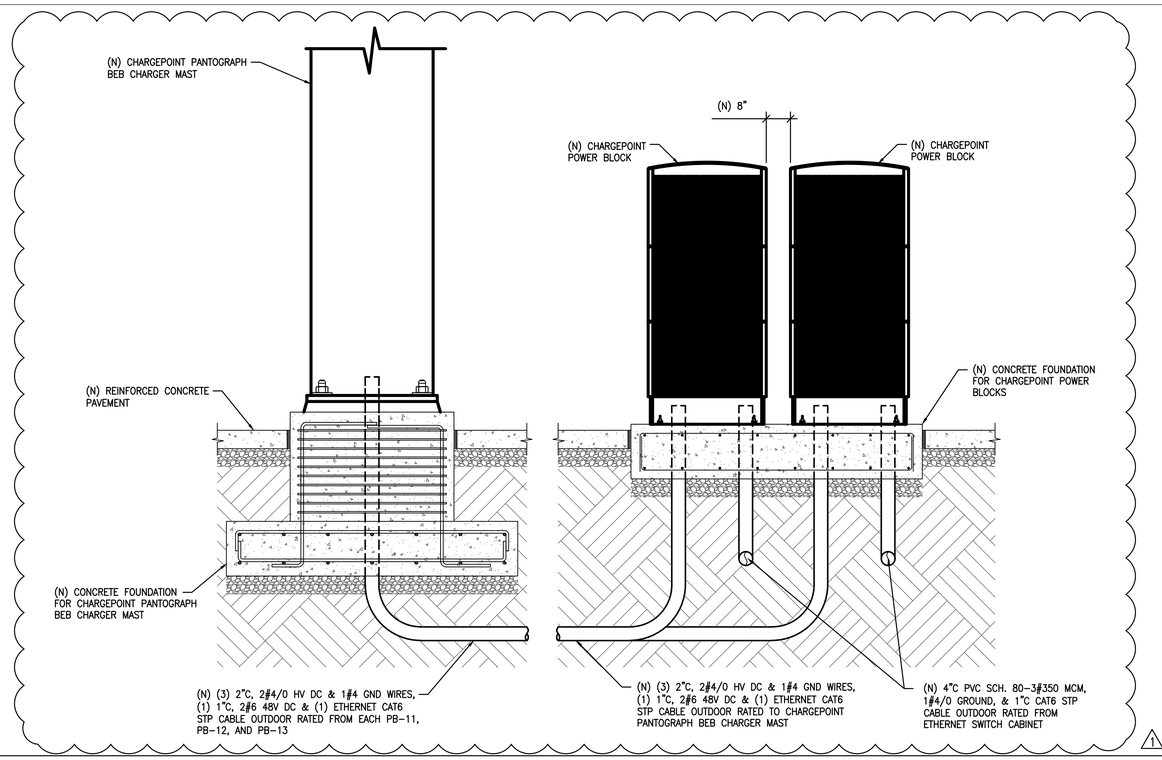
JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-E502

550 South Main Street
Orange, CA 92668
714/560/OCTA

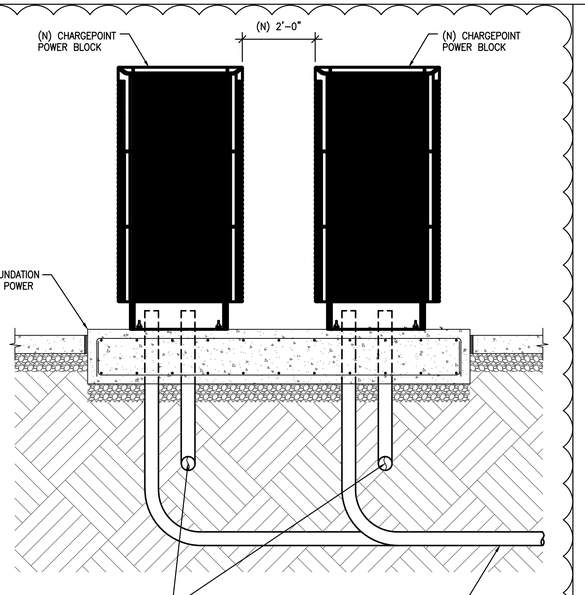
OCTA



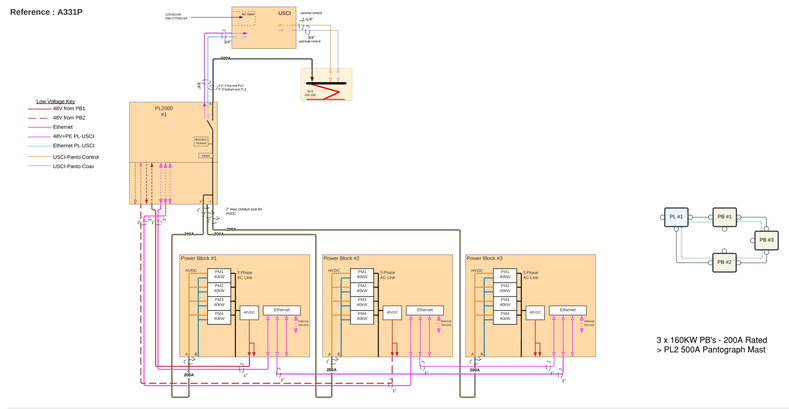
EXISTING LIGHT POLE AT NEW LOCATION DETAIL | SCALE NONE | 3



SECTION | SCALE 1/2"=1'-0" | 1



SECTION AT POWER BLOCK | SCALE NONE | 4



POWER WIRING DIAGRAM FOR PANTOGRAPH BEB CHARGER | SCALE NONE | 2

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: # (949) 756-8654
FAX: # (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/20/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

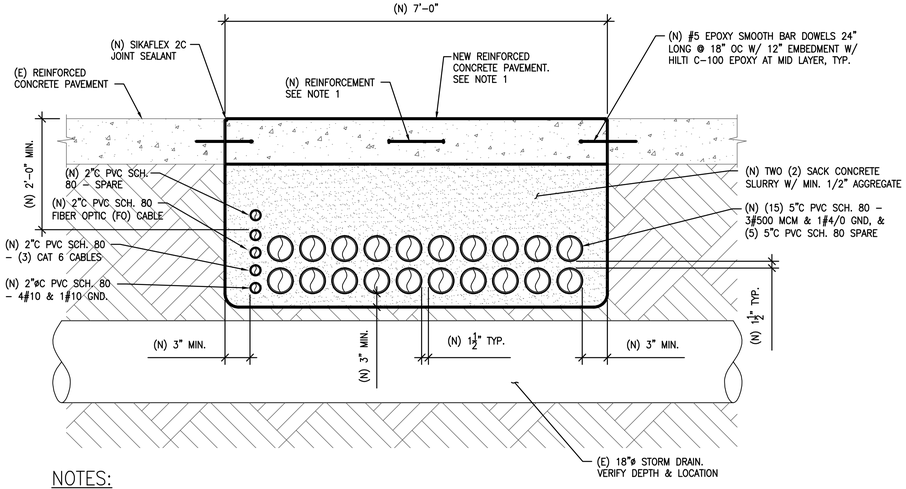
Sheet Title: DETAILS AND SECTIONS

Project: OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-E503

550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA

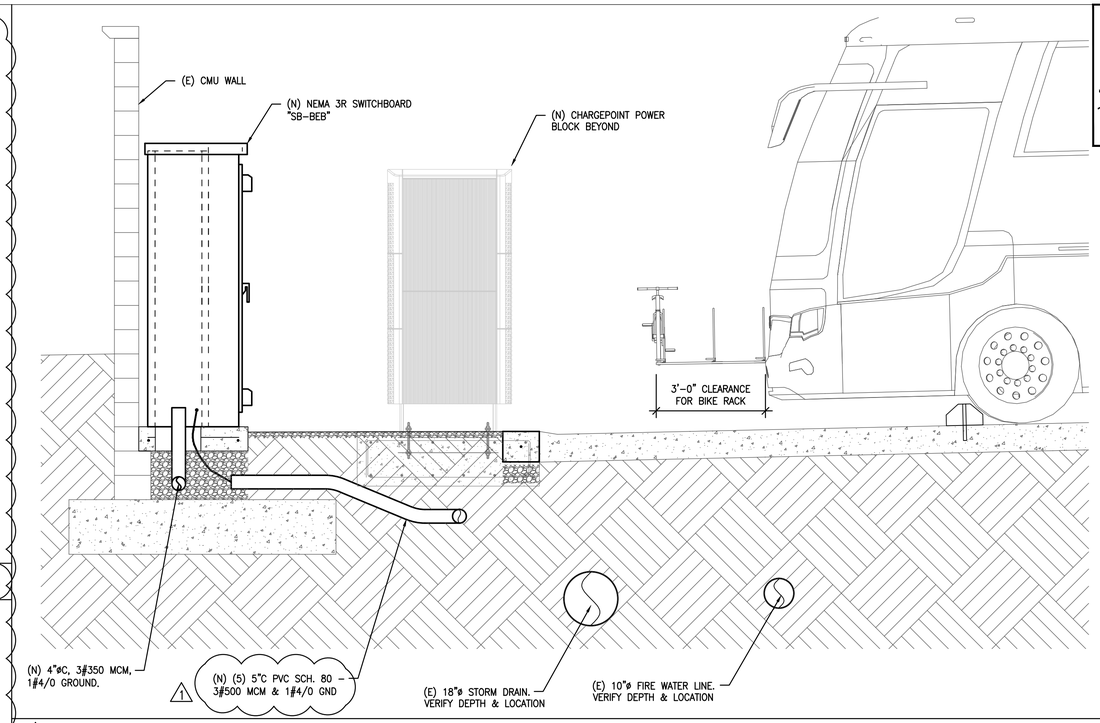


NOTES:

1. NEW 10" THICK, 4,000 PSI AT 28 DAYS PCC TYPE V CONCRETE PAVEMENT WITH #4 REINFORCING STEEL BARS @ 12" ON CENTERS EACH WAY.

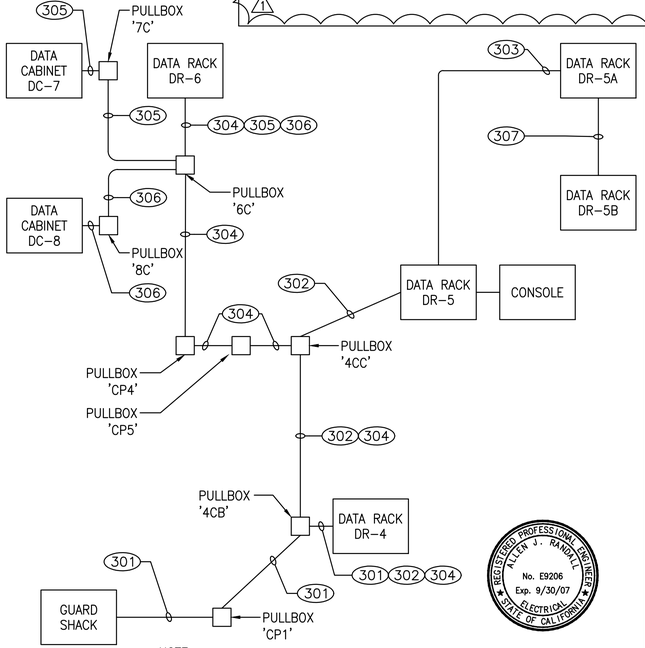
CONCRETE ENCASED CONDUIT CROSS SECTION

SCALE 3/4"=1'-0" — 3



1 SECTION — SCALE 1/2"=1'-0" — 1

196		3"	3	350KCMIL	#2	DB7A	BUS DRYER PANEL	
197		3" CO				DB7A	FUTURE BUS DRYER PANEL	STUB UP & CAP
200	3	4" CO	–	–	–	TELEPHONE POC	TELEPHONE BACKBOARD TB-4	–
201		2"	1	12 TEL PAIR CABLE		TELEPHONE BACKBOARD TB-4	LOT MONITORING SHACK	VIA PULLBOXES
202	2	4"	2	100 TEL PAIR CABLE		TELEPHONE BACKBOARD TB-4	TELEPHONE BACKBOARD TB-5	VIA PULLBOXES
203		4"	1	100 TEL PAIR CABLE		TELEPHONE BACKBOARD TB-5	TELEPHONE BACKBOARD TB-5A	
204		4"	1	50 TEL PAIR CABLE		TELEPHONE BACKBOARD TB-6	TB-4	VIA PULLBOXES
205		2"	1	12 TEL PAIR CABLE		TELEPHONE BACKBOARD TB-6	TELEPHONE CABINET TC-7	VIA PULLBOXES
206		2" CO	1	12 TEL PAIR CABLE		TELEPHONE BACKBOARD TB6	TELEPHONE CABINET TC-8	VIA PULLBOXES
207		2" CO				PULLBOX CP1	PULLBOX CP3B	VIA PULLBOXES
208		2" CO				PULLBOX CP9	PULLBOX 4CC	
301		4"	1	12 STRAND FO CABLE		DATA RACK DR-4	LOT MONITORING SHACK	VIA PULLBOXES
302		4"	1	12 STRAND FO CABLE		DATA RACK DR-4	DATA RACK DR-5	VIA PULLBOXES
303		4"	1	12 STRAND FO CABLE		DATA RACK DR-5	DATA RACK DR-5A	
304		4"	1	12 STRAND FO CABLE		DATA RACK DR-6	DATA RACK DR-4	VIA PULLBOXES
305		4"	1	12 STRAND FO CABLE		DATA RACK DR-6	DATA CABINET DC-7	VIA PULLBOXES
306		4"	1	12 STRAND FO CABLE		DATA RACK DR-6	DATA CABINET DC-8	VIA PULLBOXES
307	(RFI #221)	4"	1	12 STRAND FO CABLE		DATA RACK DR-5A	DATA RACK DR-5B	
401		2"	1	CAMERA FO CABLE		SITE CAMERA	SECURITY ROOM #166	VIA PULLBOXES
402		2"	2	CAMERA FO CABLE		SITE CAMERA	SECURITY ROOM #166	VIA PULLBOXES
403		2"	3	CAMERA FO CABLE		SITE CAMERA	SECURITY ROOM #166	VIA PULLBOXES
404		2"	4	CAMERA FO CABLE		SITE CAMERA	SECURITY ROOM #166	VIA PULLBOXES
405		4"	5	CAMERA FO CABLE		SITE CAMERA	SECURITY ROOM #166	VIA PULLBOXES
406		2"				CAMERA C5	PULLBOX CP6	FURTURE CCTV
407		2"				PULLBOX CP6	PULLBOX CP7	FURTURE CCTV

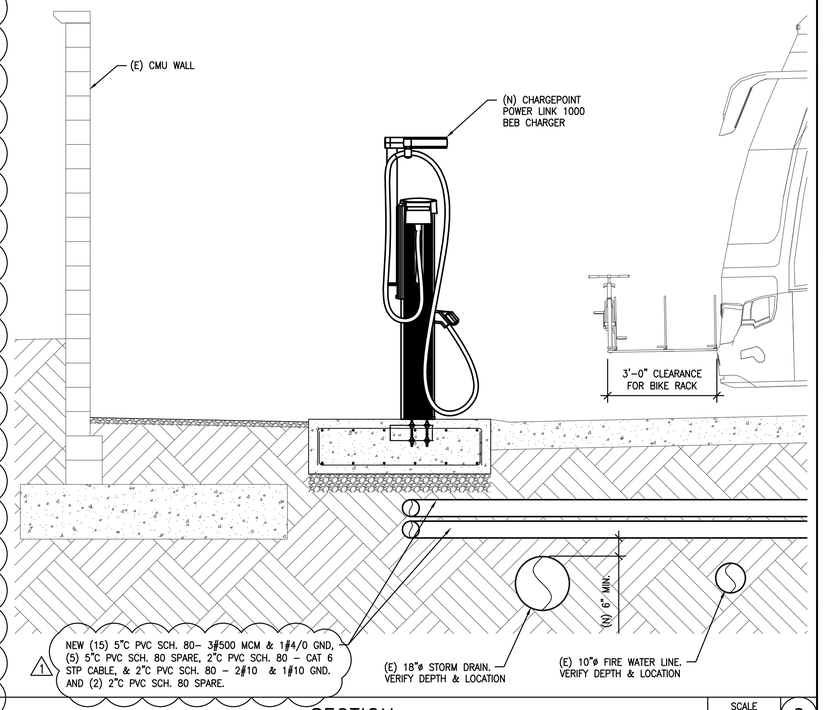


NOTE:

1. COORDINATE REQUIREMENTS, PROGRAMMING, AND COMMISSIONING WITH CONVERGINT AT 714-546-2780.

EXISTING DATA SYSTEM BLOCK DIAGRAM

SCALE NONE — 4



SECTION

SCALE 1/2"=1'-0" — 2

REGISTERED PROFESSIONAL ENGINEER — ALLEN J. RANDALL — No. E9206 — Exp. 9/30/07 — ELECTRICAL — STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER — QUANG D. VU — No. 17660 — ELECTRICAL — STATE OF CALIFORNIA

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: # (949) 756-8654
FAX: # (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/28/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

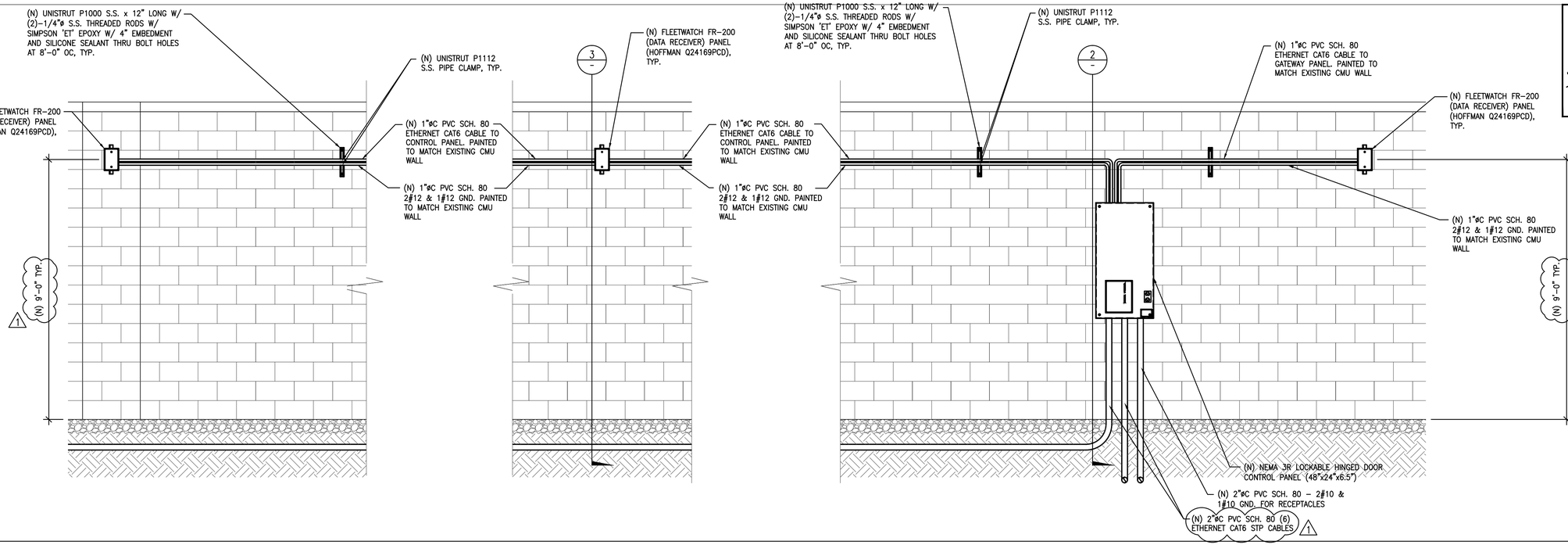
Sheet Title: DETAILS AND SECTIONS

Project: OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-E504

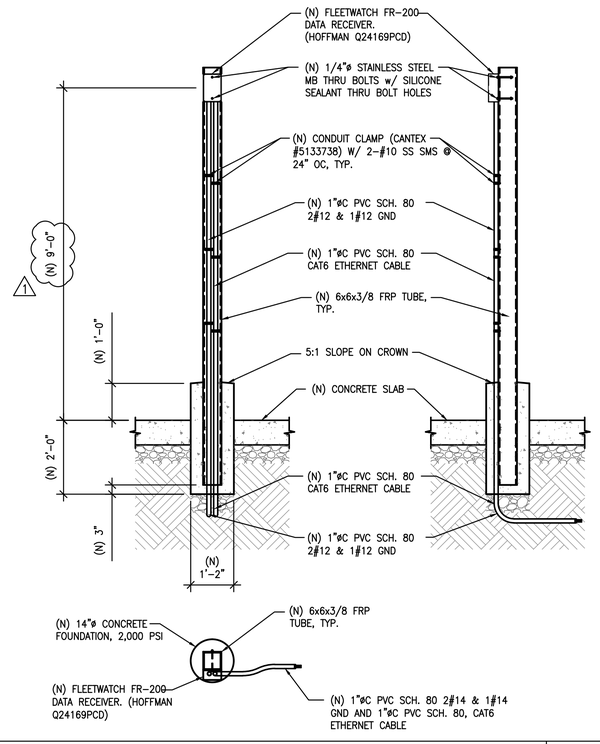
550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA



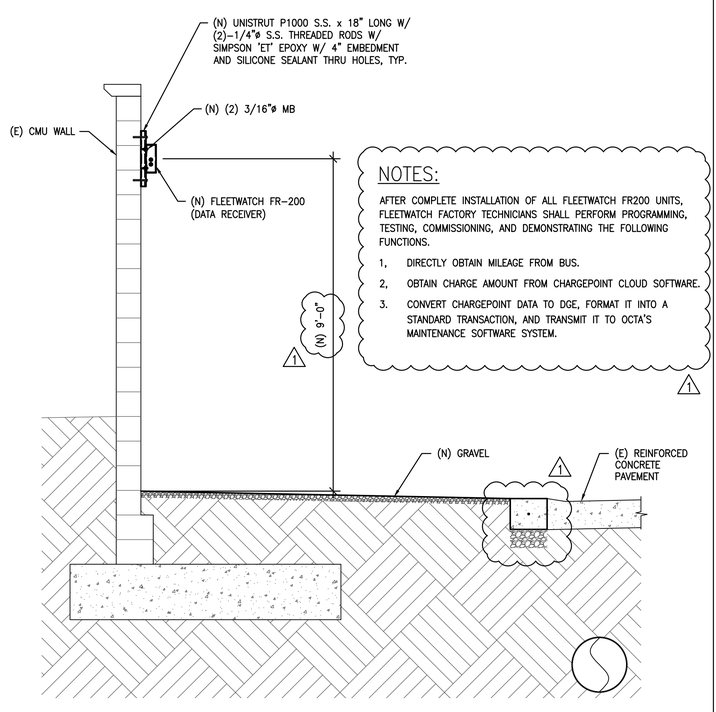
CONTROL PANEL AND FLEETWATCH FR-200 (DATA RECEIVER) ON CMU WALL

SCALE 1/2"=1'-0" 1



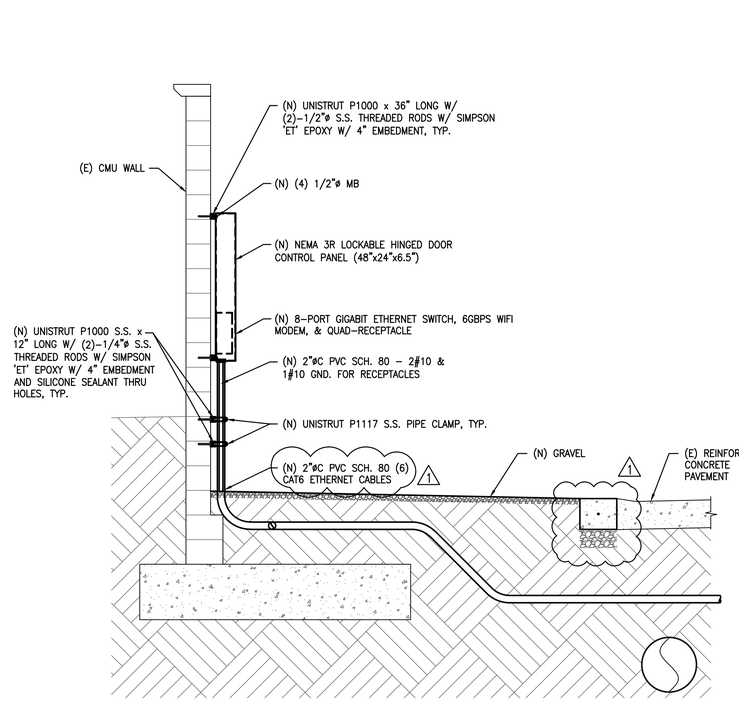
FLEETWATCH FR200 SUPPORT DETAIL

SCALE 1/2"=1'-0" 4



FLEETWATCH FR200 SUPPORT DETAIL

SCALE 1/2"=1'-0" 3



NEMA 3R CONTROL PANEL SUPPORT DETAIL

SCALE NONE 2

REGISTERED PROFESSIONAL ENGINEER — GUANG V. QIU — NO. E19880 — ELECTRICAL — STATE OF CALIFORNIA

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: # (949) 756-8654
FAX: # (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/28/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

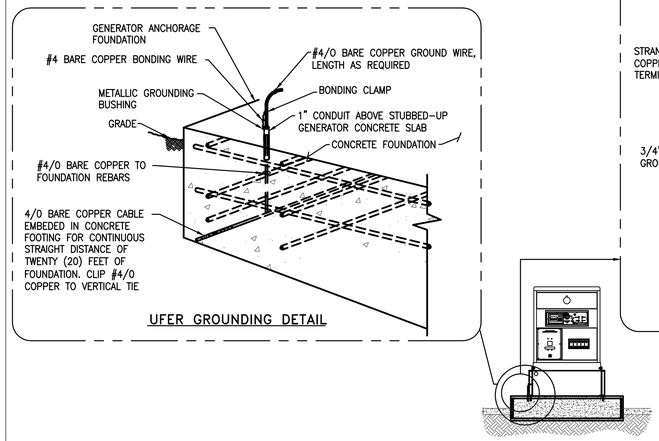
Sheet Title: DETAILS AND SECTIONS

Project: OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

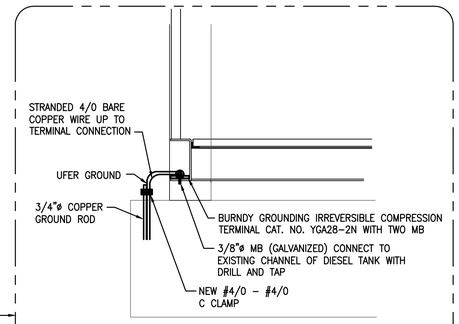
JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-E505

550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA



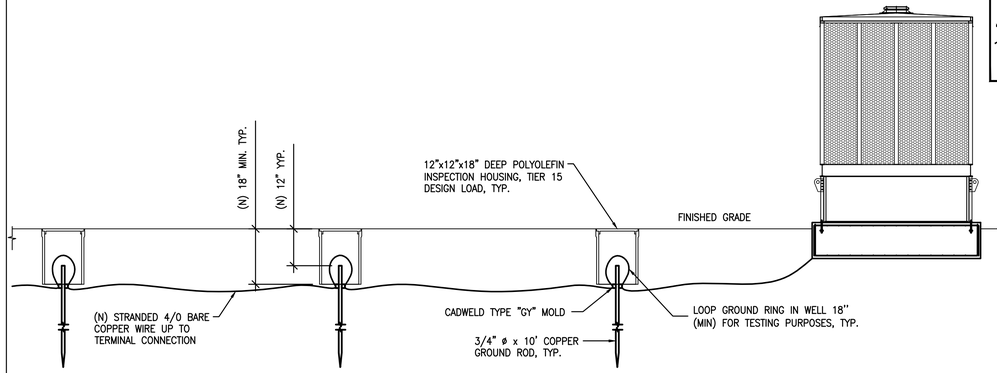
UFER GROUNDING DETAIL



GROUNDING CONNECTION TO EQUIPMENT DETAIL

GROUND DETAIL

SCALE	
NONE	2



GROUND TEST WELL DETAIL

SCALE	
NONE	1

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: ∮ (949) 756-8654
FAX: ∮ (949) 502-0777

MARK	DATE	BY	REVISIONS
3	3/28/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

Sheet Title DETAILS AND SECTIONS

Project OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-E506

550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA

FLEETWATCH FR200-GR STAND-ALONE GATE READER

Fleet Information Technology
SA SYSTEMS, INC.

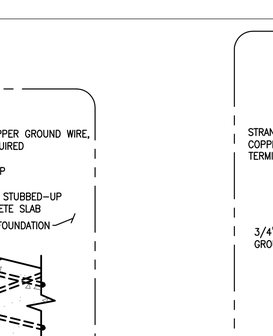
PRODUCT FEATURES

FLEETWATCH® Stand-Alone Receivers allow remote data collection without requiring the installation of a full Fluid Management Control System. The FR200-GR is designed for installation in remote environments such as gated entrances to collect vehicle mileage as assets enter and exit property. They can also be installed in parking areas, at garage entrances, and other similar locations to gather information from infrequently fueled support vehicles, remotely stored paratransit fleets, and remote parking hubs.

These systems are designed to provide an easy mechanism for collecting data from newer electric vehicles (mileage, SOC, and approximate energy use) that don't often visit existing fueling areas. When integrated with the Fleetwatch EV Cloud, they operate alongside select EV and BEB chargers to enable total data collection for the EV fleet (energy used, energy lost, SOC, mileage, fault codes, etc.).

All data collected integrates directly with the existing Fleetwatch Fluid Management System. Readings are stored for later reporting, or can create direct transactions that feed data into existing maintenance and reporting systems.

Newer UWB functionality built into the unit integrates alongside existing Fleetwatch Location Awareness Technology offerings to precisely track vehicle position.



FR200-GR Stand-Alone Fixed Receiver is integrated with the FLEETWATCH® Fluid Management System for fully electronic capture of vehicle information

FR200-GR Technical Specifications

Power:	120VAC/0.5A or 12VDC/0.5A
Interface:	Ethernet or RS-232
Transmit & Receiver Frequency:	125kHz Beacon, 2.4GHz DSSS 802.15.4, Zigbee Channels 11-25 UWB Channels 5 and 9 (6.5GHz and 8GHz)
Operating Range:	-40C to 85C (-40F to 185F)
Dimensions:	15.28x11.34x4.84 Inches (388x288x123 mm)
Weight:	7.04lbs Typical Configuration

P.O. Box 1928 • Rockwall, TX 75087 • 972-722-1009 (voice) • 972-722-1033 (fax) www.fleetwatch.com

FLEETWATCH FR200 DATA SHEET

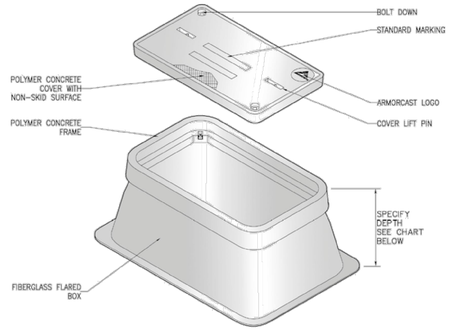
SCALE	
NONE	4

13" x 24" FRP FLARED BOX ASSEMBLY

12" & 24" DEPTHS

FIBERGLASS — ARMORCAST PRODUCTS COMPANY

A6001946



13"W x 24"L FRP FLARED BOX ASSEMBLIES Specify Depth Below

DESCRIPTION	NOMINAL SIZE W x L x D	LOAD RATING	ANSI TIER	PART NUMBER	APPROX. WEIGHT	PALLET QTY.
Box & Cover Assembly	13" x 24" x 12"	10K	8	A6001946AX12	70 lbs.	16
	13" x 24" x 12"	20K	15	A6001946TAX12	81 lbs.	16
Box & Cover Assembly	13" x 24" x 18"	10K	8	A6001946AX18	74 lbs.	16
	13" x 24" x 18"	20K	15	A6001946TAX18	85 lbs.	16
Box & Cover Assembly	13" x 24" x 24"	10K	8	A6001946AX24	87 lbs.	12
	13" x 24" x 24"	20K	15	A6001946TAX24	98 lbs.	12

COMPONENTS

DESCRIPTION	NOMINAL SIZE W x L x D	LOAD RATING	ANSI TIER	PART NUMBER	APPROX. WEIGHT	PALLET QTY.
Replacement Covers	13" x 24"	10K	8	A6001866	33 lbs.	50
	13" x 24"	20K	15	A6001969	41 lbs.	50
Replacement Boxes	13" x 24" x 12"	10K / 20K	8 /15	A6001946X12	36 lbs.	16
	13" x 24" x 18"	10K / 20K	8 /15	A6001946X18	46 lbs.	16
	13" x 24" x 24"	10K / 20K	8 /15	A6001946X24	58 lbs.	12
Extensions 18" Boxes Only	13" x 24" x 8"	10K / 20K	8 /15	A6001946EX8	31 lbs.	16
	13" x 24" x 16"	10K / 20K	8 /15	A6001946EX16	43 lbs.	8

• Boxes are Open Bottom.
• For sizes not shown please contact Armorcast Products for more information

FIBERGLASS BOXES

www.armorcastprod.com Tel: (818) 982-3600 Fax: (818) 982-7742

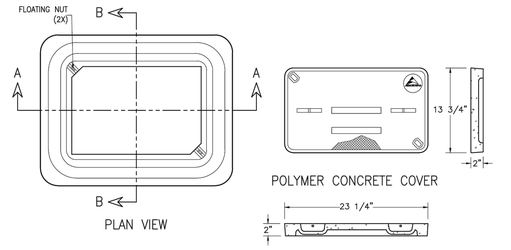
94

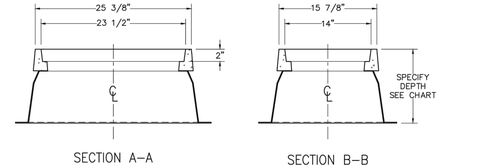
13" x 24" FRP FLARED BOX ASSEMBLY

STANDARD DIMENSIONS

ARMORCAST PRODUCTS COMPANY — FIBERGLASS

A6001946





Armorcast Products Company reserves the right to update or discontinue product information at any time without notice.

FIBERGLASS BOXES

www.armorcastprod.com Tel: (818) 982-3600 Fax: (818) 982-7742

95

PULL BOX DETAIL

SCALE	
NONE	3

LATERAL LOAD DESIGN CRITERIA

BUILDING CODES: 2022 CBC AND ASCE 7–16

WIND LOAD

P=qGCp–qi(GCpi) for Enclosed & Partially Enclosed Building — Per Equation 27.3–1

Where: Wind Speed Vfm=78 Mile per hour (fast wind speed)
Basic Wind Speed V3s=92 Mile per hour (3 sec gust wind speed)
H=Building mean height
C=Exposure category
Cp=External Pressure Coefficient — Per Figure 27.3–1 to 27.3–3
GCpi=Internal Pressure Coefficient — Per Table 26.13–1
V=3 second gust wind speed
q=qz for windward walls elevated at height z above the ground.
q=qh for leeward walls, sidewalls, and roof evaluated at height h.
qi=qh for windward walls, sidewalls, leeward walls, and roofs of enclosed buildings.
qi=qz for positive internal pressure evaluation in partially enclosed buildings where height z = highest opening.

P=qh(GCp–(GCpi)) — Per Equation 29.4–4

P=Ptable(EAF)(RF)Kz — Per Equation 30.6–1

Where
EAF(Exposure Adjustment Factor) — Per Table 30.6–2
Kz(Topographic Factor as defined in Section 26.8)
RF(Effective Area Reduction Factor) — Per Table 30.6–2

F = qh(GCf)(As) for Freestanding Walls — Per Equation 29.3–1
F = qz(GCf)(Af) for Tanks and Open Signs, Frames, and Trussed Towers — Per Equation 29.4–1

Where:
qh(Velocity Pressure evaluated at height h) — Per Equation 29.3–1
G(Gust–effect Factor) — Per Section 26.11
Cf(Force coefficient) — Per Figure 29.3–1
Af = Projected Area
As = Gross Area

SEISMIC LOAD FOR NONBUILDING STRUCTURE DESIGN
PER ASCE 7–16

V=(Cs)(W) (FORMULA 12.8–1)
Cs=(Sds)(Ie)/R (FORMULA 12.8–2)
WHERE
V= Seismic base shear
Cs=The seismic response coefficient
W= The seismic effective weight
Sds=The design spectral response acceleration parameter
R= The response modification factor
Ie= The important factor = 1
Cs(min.)=0.01

SEISMIC LOAD FOR EQUIPMENT SUPPORT AND ANCHOR DESIGN
PER ASCE 7–16

Fp=[((0.4)(ap)(Sds)(Wp))/(Rp/Ip)][1+2(z/h)] (13.3–1)
Fp(MAX.)=(1.6)(Sds)(Ip)(Wp) (13.3–2)
Fp(MIN.)=(0.3)(Sds)(Ip)(Wp) (13.3–3)
Fp(VERT.)=(0.2)(Sds)(Ip)(Wp)

WHERE: BASED ON SITE CLASS E
SEISMIC DESIGN CATEGORY D
Ss=1.162
Fa= 1.2 Short–period site coefficient, per table 11.4.1 ASCE 7–16
Sms=(Fa)(Ss) = 1.394g, Per 11.4–1 ASCE 7–16
Sds=(2/3)(Sms) = 0.93g, Per 11.4–3 ASCE 7–16
Rp=Component response modification factor, per table 13.5–1 or 13.6–1 ASCE 7–16
ap=Component amplification factor, per table 13.5–1 or 13.6–1 ASCE 7–16
Ip= 1 Component importance factor, per 13.1.3 ASCE 7–16
z=Height of component in structure withrespect to the base, per 13.3.1 ASCE 7–16
h=Average roof height of structure with respect to the base, per 13.3.1 ASCE 7–16
Wp=Component operating weight, per 13.3.1 ASCE 7–16

SPECIAL INSPECTION PROGRAM

ADDRESS OR LEGAL DESCRIPTION: 4301 WEST MACARTHUR BLVD., SANTA ANA, CA 92704

PLAN CHECK NUMBER: OWNER'S NAME: OCTA

I, AS THE OWNER, OR AGENT OF THE OWNER (CONTRACTOR MAY NOT EMPLOY THE SPECIAL INSPECTOR), CERTIFY THAT I, OR THE ENGINEER OF RECORD, WILL BE RESPONSIBLE FOR EMPLOYING THE SPECIAL INSPECTOR(S) AS REQUIRED BY CALIFORNIA BUILDING CODE (CBC) SECTION 1704.1 FOR THE CONSTRUCTION PROJECT LOCATED AT THE SITE LISTED ABOVE.

SIGNED: DATE:

I, AS THE ENGINEER OF RECORD, CERTIFY THAT I HAVE PREPARED THE FOLLOWING SPECIAL INSPECTION PROGRAM AS REQUIRED BY CBC SECTION 1704 FOR THE CONSTRUCTION PROJECT LOCATED AT THE SITE LISTED ABOVE.

SIGNED: DATE:

1. LIST OF WORK REQUIRING SPECIAL INSPECTION:

- ☒ SOILS COMPLIANCE PRIOR TO FOUNDATION INSPECTION
- ☐ STRUCTURAL CONCRETE OVER 2500 PSI
- ☐ PRESTRESSED CONCRETE
- ☐ STRUCTURAL MASONRY DESIGNER SPECIFIED
- ☒ FIELD WELDING
- ☒ HIGH STRENGTH BOLTING
- ☐ EPOXY ANCHORS
- ☐ SPRAYED–ON FIREPROOFING
- ☐ OTHER:

GENERAL NOTES

1. THE CONTRACTOR SHALL:
   a) THOROUGHLY REVIEW ALL CONTRACT DOCUMENTS, AND VERIFY ALL DIMENSIONS AND CONDITIONS AT THE SITE PRIOR TO START OF CONSTRUCTION.
   b) IMMEDIATELY NOTIFY THE ARCHITECT OR ENGINEER OF ANY OMISSION OR DISCREPANCY BETWEEN VARIOUS ELEMENTS OF THE CONTRACT DOCUMENTS FOR DIRECTION BEFORE PROCEEDING WITH THE WORK.
   c) IMMEDIATELY NOTIFY THE ARCHITECT OR ENGINEER OF ANY CONDITION WHICH IN HIS OPINION MIGHT ENDANGER THE STABILITY OR OTHERWISE CAUSE DISTRESS OF THE STRUCTURE.
   d) BE RESPONSIBLE FOR ALL FORM WORK AND SHORING WORK DURING CONSTRUCTION.
   e) ENSURE PROPER ALIGNMENT OF FINAL STRUCTURE INCLUDING ANY PRELOADING OF THE STRUCTURE TO DETERMINE FINAL POSITION OF THE COMPLETED WORK.
   f) COORDINATE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR SIZE AND LOCATION OF ALL OPENINGS REQUIRED FOR DUCTS, PIPES, SLEEVES, ELECTRICAL CONDUITS AND OTHER ITEMS TO BE EMBEDDED IN CONCRETE OR BE INCORPORATED IN STRUCTURAL WORK.
   g) SAFELY DISTRIBUTE ALL CONSTRUCTION MATERIALS TO BE TEMPORARILY STORED ON ROOF/FLOOR FRAMING OR OTHER PARTS OF THE STRUCTURE SO THE DESIGN LIVE LOAD WILL NOT BE EXCEEDED.
2. ALL WORK SHALL CONFORM TO THE REQUIREMENT OF ALL REGULATING AGENCIES EXERCISING AUTHORITY OVER ANY PORTION OF THE WORK INCLUDING THE STATE OF CALIFORNIA DIVISION OF INDUSTRIAL SAFETY AND CAL/OSHA TITLE 21 & 24 ETC., AND SHALL CONFORM TO THE CALIFORNIA BUILDING CODE 2016 EDITION.
3. ALL WORK SHALL CONFORM TO THE BEST PRACTICE PREVAILING IN THE VARIOUS TRADES COMPRISING THE WORK.
4. ANY ASTM DESIGNATIONS SHALL BE AS AMENDED TO DATE.
5. THE CONTRACTOR SHALL PROVIDE TEMPORARY ERECTION BRACING AND SHORING FOR ALL STRUCTURAL MEMBERS OR AS REQUIRED FOR STRUCTURAL STABILITY OF THE STRUCTURE DURING ALL PHASES OF CONSTRUCTION.
6. THE CONTRACTOR SHALL REFER TO THE SPECIFICATIONS FOR INFORMATION NOT COVERED BY THESE GENERAL NOTES OR THE STRUCTURAL DRAWINGS. SPECIFIC NOTES AND DETAILS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS.
7. CONTRACTOR SHALL GIVE DUE AND LEGAL NOTICE TO ADJACENT PROPERTY OWNERS REGARDING THE PROTECTION OF THEIR PROPERTY AND STRUCTURES WHICH MAY BE NECESSARY DUE TO EXCAVATION AND CONSTRUCTION INDICATED ON THESE DRAWINGS, IN DUE TIME PRIOR TO START OF EXCAVATION.

CONCRETE

1. CONCRETE PCC TYPE V SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH AT 28 DAYS AS FOLLOWS.
   A. FOUNDATION, FOOTINGS, PILES, PILE CAPS: 4,000 PSI.
   B. COLUMNS, PILASTERS: 5,000 PSI.
   C. PAD, PAVEMENT, SLAB–ON–GRADE: 4,000 PSI.
   D. LIGHTWEIGHT CONCRETE: 3,000 PSI.
2. ALL CONCRETE SHALL BE STONE CONCRETE UTILIZING AGGREGATE CONFORMING TO ASTM C33. MAX. SIZE OF AGGREGATE 3/4".
3. CEMENT SHALL BE TYPE V CONFORMING TO TABLE 19–A–4 OF C.B.C. READY–MIXED CONCRETE SHALL CONFORM TO C.B.C., WATER AND CEMENT RATIO TO BE 0.5.
4. CONCRETE COVER OVER REINFORCING STEEL SHALL BE AS FOLLOWS:
   a) CONCRETE AGAINST EARTH (UNFORMED).....3"
   b) CONCRETE AGAINST EARTH (FORMED).....2"
   c) CONCRETE BEAMS AND COLUMNS (STRUCTURAL).....2"
   d) CONCRETE SLABS (STRUCTURAL).....1"
   e) CONCRETE WALLS–INTERIOR FACE.....1"
   EXTERIOR FACE.....1–1/2"
5. BEFORE CONCRETE IS PLACED THE CONTRACTOR SHALL COORDINATE AND CHECK WITH ALL TRADES TO ENSURE THE PROPER PLACEMENT OF ALL OPENINGS. SLEEVES, INSERT, CURBS, DEPRESSIONS, ETC., RELATING TO THE WORK A SHOWN IN THE DRAWINGS. ANY CHANGE OR DISCREPANCY SHALL BE APPROVED BY THE STRUCTURAL ENGINEER AND THE LOCAL BUILDING AGENCY PRIOR TO PLACING OF CONCRETE.
6. SLEEVES, OPENINGS OR OTHER ATTACHMENTS NOT SHOWN ON THE DRAWINGS SHALL BE APPROVED BY THE STRUCTURAL ENGINEER AND THE LOCAL BUILDING AGENCY PRIOR TO PLACING OF THE CONCRETE.
7. ALL CONCRETE MIXES SHALL CONFORM TO THE PROPORTIONS ESTABLISHED BY CODE FOR THE VARIOUS CONCRETE STRENGTHS REQUIRED FOR THE WORK. CONTRACTOR MAY AT THIS OPTION ENGAGE A CERTIFIED INDEPENDENT TESTING LABORATORY TO PREPARE MIX DESIGNS FOR THE WORK, AND HAVE COPIES OF SUCH MIX DESIGN AS WELL AS 7–DAY AND 28–DAY CYLINDER TEST RESULTS WITHIN 6 MONTHS SUBMITTED TO THE STRUCTURAL ENGINEER AND LOCAL BUILDING OFFICIALS TO OBTAIN APPROVAL PRIOR TO ITS USE IN THE WORK.
8. ALL CONCRETE UNLESS OTHERWISE NOTED ON PLANS WILL BE REGULAR WEIGHT HARD ROCK TYPE (150 LB/CU. FT.) AGGREGATE SHALL CONFORM TO A.S.T.M. C–33 WITH PROVEN SHRINK CHARACTERISTICS OF LESS THAN 0.04% AS PER A.S.T.M. C–157. AGGREGATE FOR CONCRETE FILL OVER STEEL DECK SHALL BE LIGHTWEIGHT EXPANDED SHALL AGGREGATE CONFORMING TO ASTM 330.
9. MAXIMUM SLUMP OF CONCRETE USED IN POLE FOUNDATION WORK SHALL BE FOUR INCHES ± 1/4". VIBRATION: VIBRATION OF CONCRETE SHALL BE IN ACCORDANCE WITH THE GENERAL PROVISIONS OUTLINED IN PORTLAND CEMENT ASSOCIATION SPECIFICATIONS ST26. CURING: CONCRETE SHALL BE MAINTAINED IN A MOIST CONDITION FOR MINIMUM OF FIVE DAYS AFTER ITS PLACEMENT. APPROVED CURING COMPOUNDS MAY BE USED IN LIEU OF MOIST CURING.
10. ANCHOR BOLTS, DOWELS, INSERTS, ETC. SHALL BE SECURELY TIED IN PLACE PRIOR TO POURING CONCRETE.
11. LOCATING CONSTRUCTION AND POUR JOINTS SHALL BE APPROVED BY THE OWNER PRIOR TO POURING CONCRETE.
12. ALL CONCRETE SHALL BE PLACED UNDER THE SUPERVISION OF A DEPUTY INSPECTOR LICENSED BY THE LOCAL BUILDING OFFICIAL FOR CONTINUOUS INSPECTION.
13. INSPECTION AND TESTS SHALL COMPLY WITH SECTION 1704 OF THE CBC.

REINFORCING STEEL

1. ALL REINFORCING STEEL SHALL COMPLY WITH 2016 CBC AND SHALL BE NEW STOCK DEFORMED BARS CONFORMING TO ASTM A–615 GRADE, OR ASTM A–706 FOR THOSE TO BE WELDED, AS FOLLOWS:
   a) STIRRUPS & TIES.....GRADE 60
   b) ALL OTHERS.....GRADE 60
   c) ALL OTHER.....GRADE 60
   d) WALL DOWELS TO FOOTING.....GRADE 60
   A. DEFORMATIONS SHALL BE IN ACCORDANCE WITH A.S.T.M. A305.
   B. WELDED WIRE FABRIC SHALL BE MADE OF COLD DRAWN WIRE CONFORMING TO ASTM A185 AND SHALL BE SPLICED WITH A MINIMUM LAP OF 12".
   C. TIE WIRE SHALL CONFORM TO ASTM A–82.
2. ALL BARS SHALL BE FREE OF RUST, GREASE, MILL SCALE OR ANY MATERIAL WHICH MIGHT AFFECT ITS BOND TO CONCRETE.
3. ALL BAR BENDS SHALL BE MADE COLD. NO REBENDING OF BARS WILL BE PERMITTED.
4. BAR LAPS SHALL BE MADE AWAY FROM POINTS OF MAXIMUM STRESS, AROUND CORNERS IN EACH DIRECTION OR AT LOCATIONS SHOWN ON THE DRAWINGS OR AS INDICATED BELOW. THE MINIMUM AMOUNT OF ANY LAP SHALL BE NOT LESS THAN 2 FEET.
   a) HORIZONTAL STEEL IN CONCRETE SLABS, WALLS, BEAMS AND GIRDERS – 36 DIAMETERS.
   b) CONCRETE BLOCK MASONRY – 48 DIAMETERS.
5. ALL TESTING OF REINFORCING STEEL SHALL BE AS REQUIRED BY LOCAL BUILDING CODE OR AS OTHERWISE NOTED IN THE SPECIFICATIONS.
6. REFER TO CONCRETE NOTES FOR REQUIREMENTS FOR PLACEMENT DRAWINGS.
7. PRIOR WELDING PROCEDURE APPROVAL IS REQUIRED FOR WELDING OF REINFORCING STEEL AND STEEL SHALL BE COMPLY WITH ASTM A706.
8. WELDING OF REINFORCING STEEL SHALL BE PERFORMED BY THE ELECTRIC ARC PROCESS AND PERFORMED, UTILIZING EXX–70 ELECTRODES. ALL WELDING TO BE DONE UNDER THE CONTINUOUS INSPECTION OF A DEPUTY–INSPECTOR REGISTERED BY THE LOCAL BUILDING OFFICIAL.
9. ALL REINFORCING STEEL SHALL BE SUPPORTED AND TIED IN CONFORMANCE WITH THE LATEST EDITION OF "THE MANUAL OF REINFORCING STEEL PRACTICE FOR REINFORCED CONCRETE STRUCTURES".
10. FOR SPLICES OF REBARS TO BE MECHANISM SPLICER U.N.O. SEE NOTE #7.
11. STAGGER SPLICES A MINIMUM OF TWICE THE LAP LENGTH FOR HORIZONTAL REINFORCEMENT.
12. FOR WELDED REBARS USE ASTM A706 GRADE 60 WELDED REBARS WITH EXX–70.

CONCRETE BLOCK MASONRY AND BRICK MASONRY

1. CONCRETE BLOCK UNITS 12"x4"x16" SHALL BE MEDIUM WEIGHT GRADE "N" UNITS CONFORMING TO ASTM C90. GRADE "N". REFER TO ARCHITECTURAL DRAWING AND /OR SPECIFICATIONS FOR BLOCK SIZE, FACE COLOR, JOINTING, ETC.
2. THE SPECIFIED COMPRESSIVE STRENGTH OF MASONRY (f'm) IS 2000 PSI AT 28 DAYS WITH FULL STRESS USED IN THE DESIGN. THE COMPRESSIVE STRENGTH OF MASONRY SHALL EQUAL OR EXCEEDf'm WITH VERIFICATION BY PRISM TESTING OR UNIT STRENGTH METHOD IN ACCORDANCE WITH 2010 CBC SECTION 2105.
3. MASONRY UNITS SHALL BE SUFFICIENTLY MOIST AT TIME OF LAYING TO PREVENT DEHYDRATION OF MORTAR AND GROUT. ABSORPTION RATE SHALL NOT EXCEED .25 OUNCES PER SQUARE INCH OF DURING ONE MINUTE PERIOD.
4. MASONRY UNITS SHALL BE FREE OF ALL SUBSTANCES WHICH MIGHT IMPAIR THE BOND OF THE UNITS TO MORTAR AND GROUT. FULL SIZE UNITS, OR FULL SIZE UNITS CUT TO PROPER SIZE ONLY SHALL BE USED IN THE WORK. ALL MASONRY UNITS SHALL BE FREE FROM OBJECTIONABLE AMOUNTS OF CRACKS AND SPALLS.
5. MORTAR SHALL BE MACHINE MIXED TO TYPE 'S' MIX CONSISTING BY VOLUME OF 1 PART CEMENT TO 3 PARTS SAND WITH 1/4 TO 1/2 PART LIME PUTTY. THE MORTAR SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI AT THE AGE OF 28 DAYS.
6. GROUT SHALL BE MACHINE MIXED BY VOLUME AND CONSIST OF 1 PART PORTLAND CEMENT, 3 PARTS SAND WITH 1/10 TO 1/5 PART LIME PUTTY. GROUT SPACE MORE THAN 2 INCHES IN WIDTH FOR BRICK MASONRY AND 4 INCHES IN WIDTH FOR CONCRETE BLOCK MASONRY MAY HAVE BEEN IN ADDITION TO THE SAND NOT MORE THAN 2 PARTS PEA GRAVEL. THE GROUT SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT THE AGE OF 28 DAYS.
7. CEMENT FOR MORTAR AND GROUT SHALL BE A LOW ALKALI TYPE CONFORMING TO ASTM C150. LIME SHALL BE TYPE 'S' HYDRATED LIME MEETING THE REQUIREMENTS OF ASTM C20–6.
8. GROUT SHALL BE READY–MIXED CONCRETE, DELIVERED IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM C94.
9. IF WORK IS STOPPED FOR ONE HOUR OR LONGER PROVIDE HORIZONTAL CONSTRUCTION JOINTS BY STOPPING THE GROUT BETWEEN BLOCK UNITS AND REINFORCING STEEL SHALL NOT BE LESS THAN 1/2".
10. THE THICKNESS OF GROUT BETWEEN BLOCK UNITS AND REINFORCING STEEL SHALL NOT BE LESS THAN 1/2".
11. ALL CELLS CONTAINING HORIZONTAL OR VERTICAL REINFORCING STEEL, BOLTS, OR INSERTS SHALL BE GROUTED. WHERE REINFORCING STEEL OCCURS IN OR ADJACENT TO MORTAR JOINTS, THE CELLS ON EACH SIDE OF SAID STEEL SHALL BE GROUTED WHEN NON–SOLID GROUT WALLS ARE USED.
12. FOOTING DOWEL IN MASONRY WALLS SHALL BE THE SAME SIZE AND SPACING AS VERTICAL WALL REINFORCEMENT.
13. NO PIPES OR DUCTS SHALL BE PLACED IN MASONRY WALLS UNLESS SPECIFICALLY MIXED OR DETAILED.
14. BOLTS OR INSERTS SHALL BE GROUTED WITH 1" MINIMUM OF GROUT BETWEEN BOLT OR INSERT AND MASONRY.
15. MASONRY WALLS ABOVE 10'–0" IN HEIGHT SHALL BE BRACED DURING ERECTION. THE BRACING SHALL WITHSTAND A WIND LOAD OF 22 LBS PER SQUARE FOOT APPLIED PERPENDICULAR TO WALL IN EITHER DIRECTION. BRACING SHALL REMAIN IN PLACE UNTIL ROOF DIAPHRAGM IS INSTALLED.
16. FULL HEAD AND BED JOINTS ARE REQUIRED FOR "ALL CELLS FILLED" CONSTRUCTION.
17. ALL CONCRETE BLOCKS SHALL BE LAID IN A RUNNING BOND.
18. ALL GROUT MUST BE CONSOLIDATED EITHER BY (1) VIBRATION OVER THE HEIGHT OF POUR (VIBRATION MUST BE PERFORMED AFTER THE INITIAL LOSS OF WATER AND BEFORE INITIAL SET) OR (2) BY PUDDLING, USING A SHRINKAGE COMPENSATING ADMIXTURE.
19. PROVIDE CLEAN–OUT OPENINGS AT BOTTOM OF ALL VERTICALLY GROUTED CELLS IF GROUT LIFT EXCEEDS 5'–0". MAXIMUM GROUT LIFT IS 10'–0".
20. SHRINKAGE CONTROL JOINTS SHALL BE SPACED AT NO MORE THAN 400 SQUARE FEET OF WALL AND SHALL BE REQUIRED AT MAJOR CHANGES IN WALL HEIGHT, CHANGES IN WALL THICKNESS, WALL OPENINGS AND AT CONTROL JOINTS IN FOUNDATION, IN ROOF AND IN FLOORS, ETC.

LEGEND

FC 1 / 1 S–3 / 2 — EQUIPMENT DESIGNATION, EQUIPMENT NUMBER–1; SEE SECTION 1 ON SHEET S–3; KEY NOTE DESIGNATION

- CONCRETE
- ACOUSTIC
- PLYWOOD
- STEEL

ABBREVIATIONS

A.B.	ANCHOR BOLT	H	HEIGHT
ABV.	ABOVE	H.D.	HOLD DOWN
A/C	AIR CONDITIONING	HR.	HOUR
A.D.	AREA DRAIN		
ADJ.	ADJUSTABLE	IN.	INCH
ALT.	ALTERNATE	INSP.	INSPECTION
ALUM.	ALUMINUM	INSUL.	INSULATION
APPROX.	APPROXIMATE	INT.	INTERIOR
@	AT		
&	AND	L.	LENGTH
L	ANGLE	LBS./#	POUNDS
		LLH	LONG LEG HORIZONTAL
BRD/BD.	BOARD	LLV	LONG LEG VERTICAL
BLK.	BLOCK		
BLKG.	BLOCKING	MAX.	MAXIMUN
BM.	BEAM	MED.	MEDIUM
BOT.	BOTTOM	MET.	METAL
B.S.	BOTH SIDE	MIN.	MINIMUM
C.C.	CENTER TO CENTER	N	NORTH
CEM.	CEMENT	(N)	NEW
C.I.	CAST IRON	N.I.C.	NOT IN CONTRACT
C.M.U.	CONCRETE MASONRY UNIT	NTS	NOT TO SCALE
COL.	COLUMN		
CONC.	CONCRETE	O.C.	ON CENTER
CONT.	CONTINOUS	OPP.	OPPOSITE
CONTR.	CONTRACTOR	OTO	OUT TO OUT
CTR.	CENTER		
		PL.	PLATE
DBL.	DOUBLE	PLYWD.	PLYWOOD
DBSD.	DOUBLE STUD	P.S.F.	POUNDS PER SQUARE FOOT
DIAG.	DIAGONAL	P.S.I.	POUNDS PER SQUARE INCH
DIAM.	DIAMETER	PTN.	PARTITION
DN.	DOWN		
D.O.	DOOR OPENING	S	SOUTH
DR.	DOOR	SHED	SCHEDULE
		SIM.	SIMILAR
(E)	EXISTING	SMS	SHEET METAL SCREWS
EMBED'T	EMBEDMENT	SPEC.	SPECIFICATION
EQ.	EQUAL	SQ.	SQUARE
E.W.	EACH WAY	STL.	STEEL
EXT.	EXTERIOR		
		T & B	TOP AND BOTTOM
FDN.	FOUNDATION	TS	TUBE
FL.	FLOOR	T.W.	TOP OF WALL
F.O.C.	FACE OF CONCRETE	TYP.	TYPICAL
FTG.	FOOTING		
		U.N.O.	UNLESS NOTED OTHERWISE
GA.	GAUGE		
GALV.	GALVANIZED	W	WEST
G.S.M.	GALVANIZED SHEET METAL	W.	WASHER
GYP.BD.	GYPSUM BOARD	W/	WITH
		W/O	WITHOUT
		WT.	WEIGHT

REGISTERED PROFESSIONAL ENGINEER — HIEN NGO — NO. C58580 — EXP. 12-31-2025 — CIVIL — STATE OF CALIFORNIA

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2940 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: ∮ (949) 756–8654
FAX: ∮ (949) 502–0777

MARK	DATE	BY	REVISIONS
1	03/07/25	QV	REVISED DRAWINGS - ADDENDUM No. 3

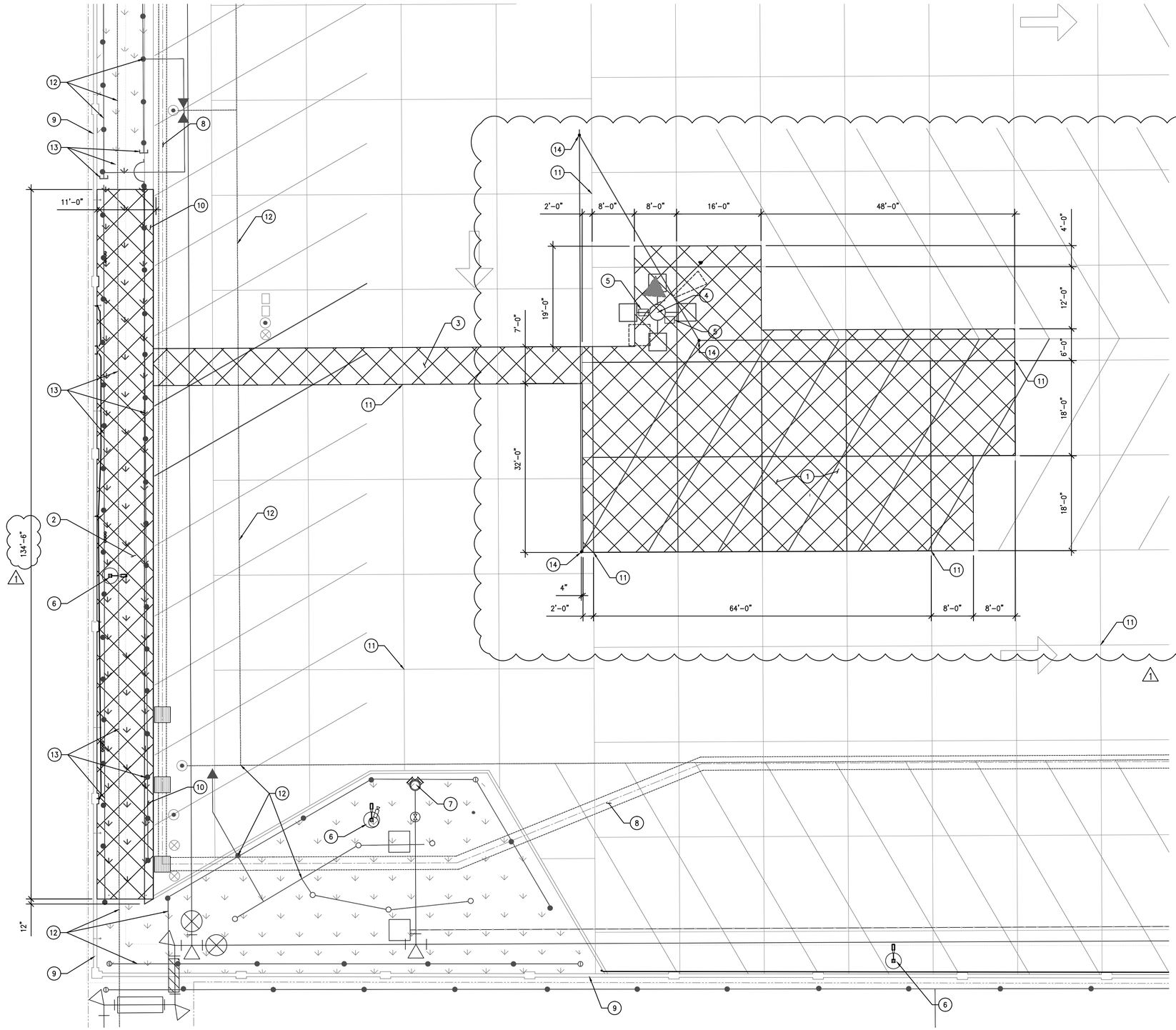
Sheet Title: STRUCTURAL ABBREVIATIONS, SYMBOLS AND NOTES

Project: OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03–28–2025
SCALE	AS NOTED
SHEET	SA-S001

550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA



DEMOLITION NOTES:

SAW CUT OVERCUTTING OF CONCRETE PAVEMENT IS NOT ALLOWED. REPAIRS RELATED TO SAW CUT OVERCUTTING SHALL BE CONSIDERED WITHIN THE CONSTRUCTION SCOPE. DEBRIS, SPOIL, AND WASTE SHALL BE LEGALLY DISPOSED OFF-SITE.

1. SAW-CUTTING OF EXISTING 10" REINFORCED CONCRETE PAVEMENT AREA. REMOVAL AND LEGAL OFF-SITE DISPOSAL OF SPOILS AND WASTE, AND GROUND EXCAVATION.
2. EXCAVATION AREA FOR NEW BUS CHARGERS. REMOVE AND LEGALLY DISPOSE OFF-SITE EXISTING LANDSCAPE (MULCH) AND SUBGRADE SOIL IN AREA TO 6" TOP OF CURB.
3. SAW-CUTTING OF EXISTING 10" REINFORCED CONCRETE PAVEMENT AREA, EXCAVATION, TRENCHING, REMOVAL, AND LEGAL OFF-SITE DISPOSAL OF SPOILS AND WASTE FOR INSTALLATION OF UNDERGROUND CONDUITS.
4. EXISTING LIGHT POLE WITH A LOUD SPEAKER TO BE RELOCATED. REMOVE AND LEGALLY DISPOSE EXISTING REINFORCED CONCRETE FOUNDATION, SPOILS. AND WIRING.
5. PROTECT EXISTING PULL BOXES DURING CONSTRUCTION. SEE E PLANS FOR WIRES.
6. EXISTING LIGHT POLE TO REMAIN. PROTECT IN PLACE.
7. EXISTING FIRE HYDRANT TO REMAIN. PROTECT IN PLACE.
8. EXISTING STORM DRAIN TO REMAIN. PROTECT IN PLACE.
9. EXISTING CMU WALL TO REMAIN. PROTECT IN PLACE.
10. EXISTING CONCRETE CURB TO BE SAW-CUT, REMOVED, AND LEGALLY DISPOSED.
11. TYPICAL EXISTING CONSTRUCTION JOINTS.
12. EXISTING IRRIGATION HEADS, PIPES, AND CONTROL VALVES TO REMAIN.
13. REMOVAL AND LEGAL OFF-SITE DISPOSAL OF EXISTING IRRIGATION PIPING AND HEADS IN INSTALLATION AREA OF BEB CHARGING AND ELECTRICAL EQUIPMENT. INSTALL END CAPS FOR THE REMAINING PIPES THAT STAY IN OPERATION AND DO NOT REQUIRE AN EXTENSION LATER. FOR PRIMARY IRRIGATION WATER PIPES THAT ARE IN THE WAY OF NEW CONSTRUCTION, INSTALL TEMPORARY CAPS AND LATER, RECONNECT THEM TO RESUME OPERATION.
14. CONTROL POINTS / LANDMARKS FOR DEMOLITION AND CONSTRUCTION MEASUREMENTS.

DEMOLITION PLAN

SCALE 1"=10'-0"

1

REGISTERED PROFESSIONAL ENGINEER
HIEN NGO
No. C58580
12-31-2026
CIVIL
STATE OF CALIFORNIA

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: (949) 756-8654
FAX: (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/28/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

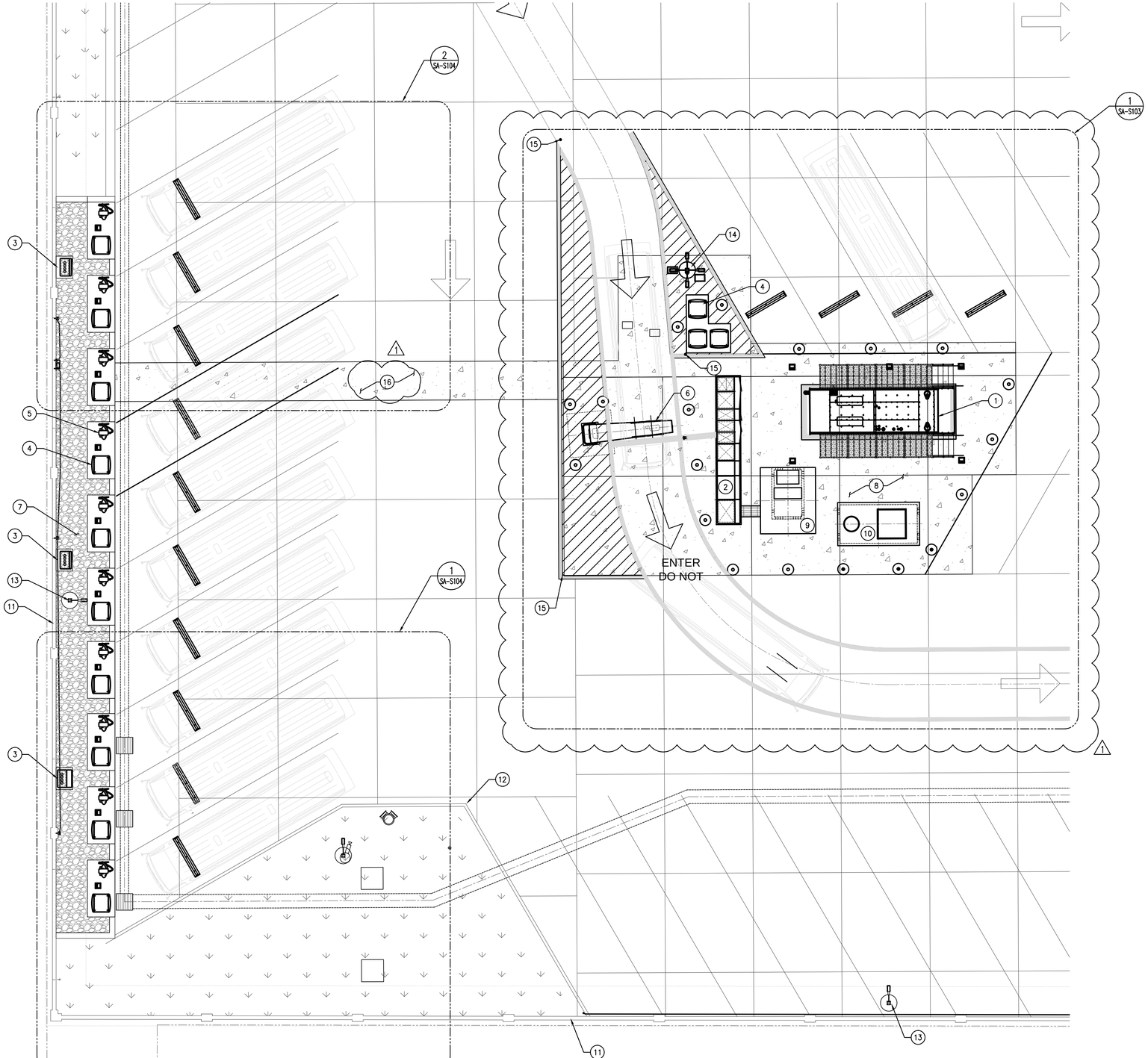
Sheet Title: DEMOLITION PLAN

Project: OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-S101

550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA



CONSTRUCTION NOTES:

1. NEW 1000KW EMERGENCY POWER DIESEL GENERATOR.
2. NEW NEMA 3R MAIN SWITCHBOARD "MSB–BEB".
3. NEW NEMA 3R SWITCHBOARD "SB–BEB".
4. NEW CHARGEPOINT POWER BLOCK. (TYPICAL OF 13).
5. NEW CHARGEPOINT POWER LINK 1000 BEB CHARGER. (TYPICAL OF 10).
6. NEW CHARGEPOINT EXPRESS PLUS PANTOGRAPH DOWN 2000 BEB CHARGER.
7. NEW 3/4" GRAVEL FILL.
8. NEW 10" THICK, 4,000 PSI REINFORCED CONCRETE PAVEMENT UNDERLAIN BY 7.25" OF BASE OVER SUBGRADE SOIL. BASE AND SUBGRADE SOIL SHALL BE COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION. 1
9. SCE UTILITY TRANSFORMER THAT IS FURNISHED AND INSTALLED BY SCE.
10. SCE MV PME–8 SWITCH CABINET THAT IS FURNISHED AND INSTALLED BY SCE.
11. EXISTING CMU WALL TO BE PROTECTED DURING CONSTRUCTION.
12. EXISTING CONCRETE CURB TO BE PROTECTED DURING CONSTRUCTION.
13. EXISTING LIGHT POLE TO BE PROTECTED DURING CONSTRUCTION.
14. RELOCATED LIGHT POLE WITH NEW FOUNDATION AT NEW LOCATION. SEE ELECTRICAL DRAWINGS FOR DETAILS AND REQUIREMENTS.
15. CONTROL POINT / LANDMARK FOR CONSTRUCTION MEASUREMENTS.
16. NEW 10" THICK, 4,000 PSI REINFORCED CONCRETE PAVEMENT UNDERLAIN BY TWO (2) SACK CONCRETE SLURRY WITH ½" AGGREGATE, SEE DETAIL 3/SA–E504. 1

NEW EQUIPMENT PLAN

SCALE 1"=10'-0" 1

REGISTERED PROFESSIONAL ENGINEER — HIEN NGO — NO. C58580 — EXP. 12-31-2026 — CIVIL — STATE OF CALIFORNIA

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: (949) 756–8654
FAX: (949) 502–0777

MARK	DATE	BY	REVISIONS
1	3/20/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

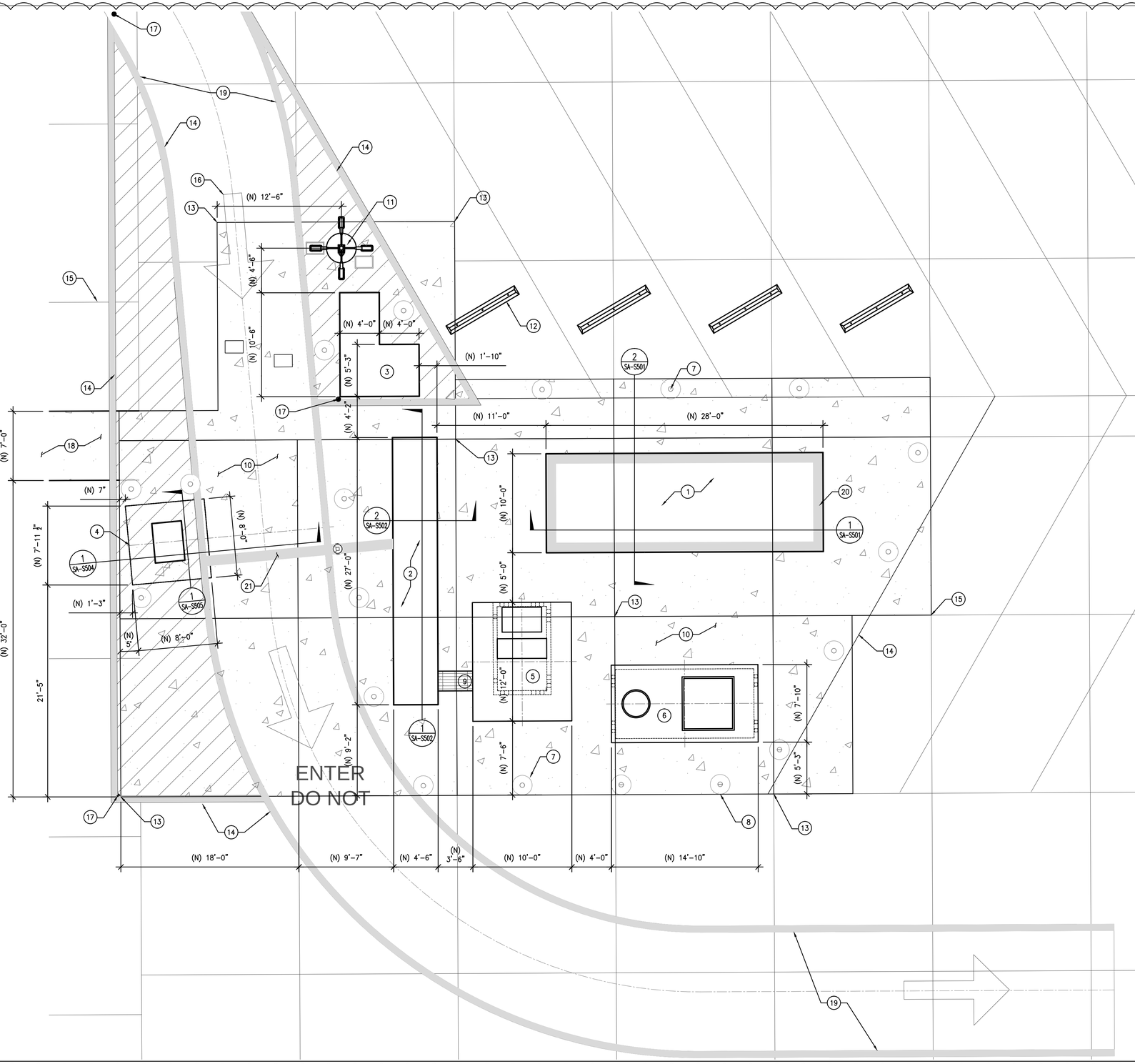
Sheet Title NEW EQUIPMENT AREA PLAN

Project OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03–28–2025
SCALE	AS NOTED
SHEET	SA-S102

550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA



CONSTRUCTION NOTES:

1. NEW 28'-0" x 10'-0" x 3'-0" DEEP REINFORCED CONCRETE FOUNDATION FOR 1000KW GENERATOR, SEE DETAILS 1 & 2/SA-S501.
2. NEW 27'-0" x 4'-6" x 1'-6" DEEP REINFORCED CONCRETE FOUNDATION FOR MAIN SWITCHBOARD "MSB-BEB", SEE DETAIL 1/SA-S502.
3. NEW 1'-6" DEEP REINFORCED CONCRETE FOUNDATION FOR CHARGEPOINT POWER BLOCK. SEE DETAILS 2, 3, & 5/SA-S505.
4. NEW 8'-0" x 8'-0" x 1'-6" DEEP REINFORCED CONCRETE FOUNDATION FOR PANTOGRAPH BEB CHARGER MAST, SEE DETAIL 1/SA-S504.
5. SCE UTILITY TRANSFORMER THAT IS FURNISHED AND INSTALLED BY SCE.
6. SCE MV PME-8 SWITCH CABINET THAT IS FURNISHED AND INSTALLED BY SCE.
7. NEW 6"ø BOLLARDS (TYPICAL OF 16). MOVE & SEPARATE (E) UNDERGROUND CONDUITS & WIRES TO ACCOMMODATE (N) BOLLARDS. SEE DETAIL 3/SA-S02.
8. NEW 6"ø REMOVABLE BOLLARDS (TYPICAL OF 3). SEE DETAILS 4/SA-S01.
9. NEW CONCRETE UTILITY TRENCH, 24" WIDE x 36" DEEP. SEE 5/SA-S01 FOR DETAILS.
10. NEW 10" THICK, 4,000 PSI PCC TYPE V REINFORCED CONCRETE PAVEMENT UNDERLAIN BY 7.25" OF BASE OVER SUBGRADE SOIL. BASE AND SUBGRADE SOIL SHALL BE COMPACTED TO MINIMUM OF 95% RELATIVE COMPACTION. NEW CONSTRUCTION JOINTS TO MATCH (E) JOINTS.
11. RELOCATED LIGHT POLE WITH NEW FOUNDATION AT NEW LOCATION, SEE DETAIL #3 / SA-E503.
12. NEW WHEEL STOP, SEE DETAIL #1 /SA-S503. (TYPICAL OF 4).
13. NEW CONSTRUCTION JOINT LINE. REPLACEMENT CONCRETE PAVEMENT SHALL HAVE CONSTRUCTION JOINT LINES TO MATCH THE EXISTING JOINT LINES.
14. PAINT IN YELLOW COLOR 4" WIDE PARKING STALL STRIPES AND 8" WIDE BOUNDARY AND 6" WIDE DIAGONAL STRIPES IN THE CROSSHATCH AREAS. THE DIAGONAL STRIPES SHALL BE 18" ON CENTERS.
15. EXISTING CONSTRUCTION JOINT LINE.
16. PAINT BUS PATH DIRECTION ARROWS IN REFLECTIVE YELLOW COLOR.
17. CONSTRUCTION CONTROL POINT.
18. 10" THICK, 4000 PSI REINFORCED CONCRETE PAVEMENT UNDERLAIN BY TWO (2) SACK CONCRETE SLURRY, SEE DETAIL 3/SA-E504.
19. 8" WIDE REFLECTIVE YELLOW STRIPE.
20. PAINT 12" WIDE YELLOW STRIP AROUND CONCRETE FOUNDATION AND RISER EDGE.
21. 12" WIDE REFLECTIVE YELLOW STRIPE.

NEW FOUNDATION PLAN AT GENERATOR

SCALE 3/16"=1'-0" 1

REGISTERED PROFESSIONAL ENGINEER
HIEN NGO
No. C58580
12-31-2026
CIVIL
STATE OF CALIFORNIA

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: (949) 756-8654
FAX: (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/28/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

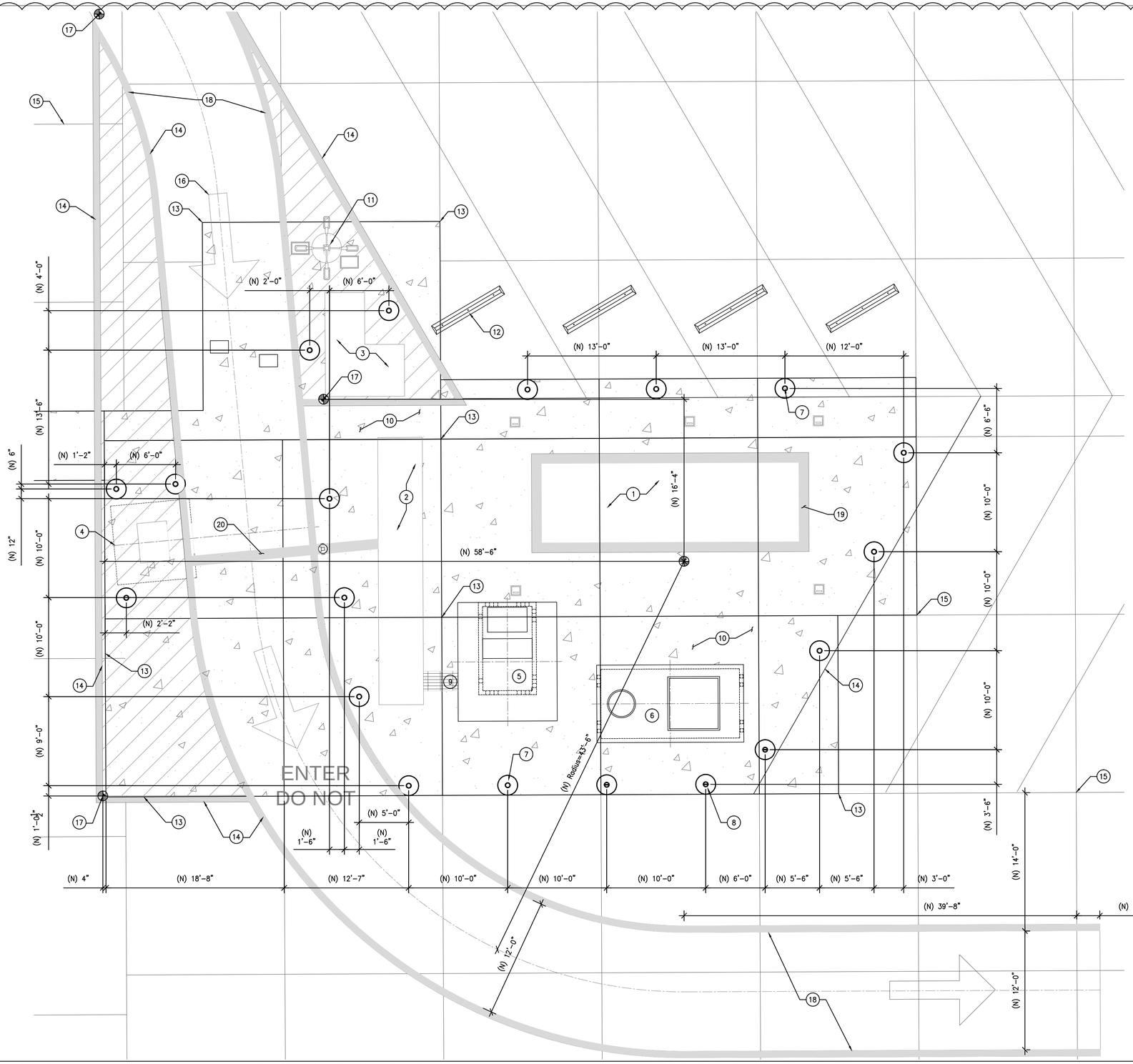
Sheet Title NEW PLAN AT GENERATOR

Project OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-S103

550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA



NEW STEEL BOLLARD PLAN AT GENERATOR

SCALE 3/16"=1'-0" 1

CONSTRUCTION NOTES:

1. NEW 28'-0" x 10'-0" x 3'-0" DEEP REINFORCED CONCRETE FOUNDATION FOR 1000KW GENERATOR, SEE DETAILS 1 & 2/SA-S501.
2. NEW 27'-0" x 4'-6" x 1'-6" DEEP REINFORCED CONCRETE FOUNDATION FOR MAIN SWITCHBOARD "MSB-BEB", SEE DETAIL 1/SA-S502.
3. NEW 1'-6" DEEP REINFORCED CONCRETE FOUNDATION FOR CHARGEPOINT POWER BLOCK. SEE DETAILS 2, 3, & 5/SA-505.
4. NEW 8'-0" x 8'-0" x 1'-6" DEEP REINFORCED CONCRETE FOUNDATION FOR PANTOGRAPH BEB CHARGER MAST, SEE DETAIL 1/SA-S504.
5. SCE UTILITY TRANSFORMER THAT IS FURNISHED AND INSTALLED BY SCE.
6. SCE MV PME-8 SWITCH CABINET THAT IS FURNISHED AND INSTALLED BY SCE.
7. NEW 6"ø BOLLARDS (TYPICAL OF 16). SEE DETAIL 3/SA-502.
8. NEW 6"ø REMOVABLE BOLLARDS (TYPICAL OF 3). SEE DETAILS 4/SA-501.
9. NEW CONCRETE UTILITY TRENCH, 24" WIDE x 36" DEEP. SEE 5/SA-501 FOR DETAILS.
10. NEW 10" THICK, 4,000 PSI PCC TYPE V REINFORCED CONCRETE PAVEMENT UNDERLAIN BY 7.25" OF BASE OVER SUBGRADE SOIL. BASE AND SUBGRADE SOIL SHALL BE COMPACTED TO MINIMUM OF 95% RELATIVE COMPACTION.
11. RELOCATED LIGHT POLE WITH NEW FOUNDATION AT NEW LOCATION, SEE DETAIL #3 / SA-E503.
12. NEW WHEEL STOP, SEE DETAIL #1 /SA-S503. (TYPICAL OF 4).
13. NEW CONSTRUCTION JOINT LINE.
14. PAINT IN YELLOW COLOR 4" WIDE PARKING STALL STRIPES AND 8" WIDE BOUNDARY AND 6" WIDE DIAGONAL STRIPES IN THE CROSSHATCH AREAS. THE DIAGONAL STRIPES SHALL BE 18" ON CENTERS.
15. EXISTING CONSTRUCTION JOINT LINE.
16. PAINT BUS PATH DIRECTION ARROW IN YELLOW.
17. CONSTRUCTION CONTROL POINT.
18. 8" WIDE REFLECTIVE YELLOW STRIPE.
19. PAINT 12" WIDE YELLOW STRIP AROUND CONCRETE FOUNDATION AND RISER EDGE.
20. 12" WIDE REFLECTIVE YELLOW STRIPE.

REGISTERED PROFESSIONAL ENGINEER
HIEN NGO
No. C58580
12-31-2026
CIVIL
STATE OF CALIFORNIA

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: (949) 756-8654
FAX: (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/28/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

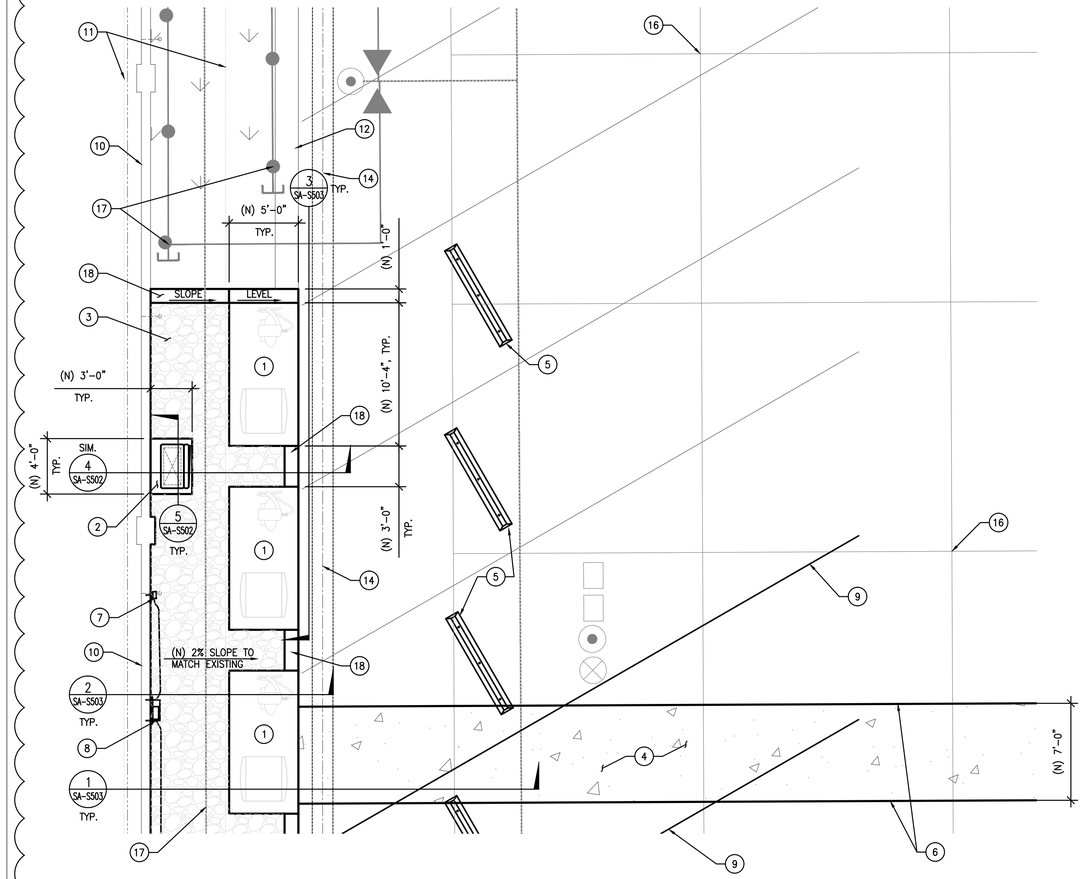
Sheet Title NEW STEEL BOLLARD PLAN AT GENERATOR

Project OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-S103.1

550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA



NEW PLAN AT BEB CHARGERS

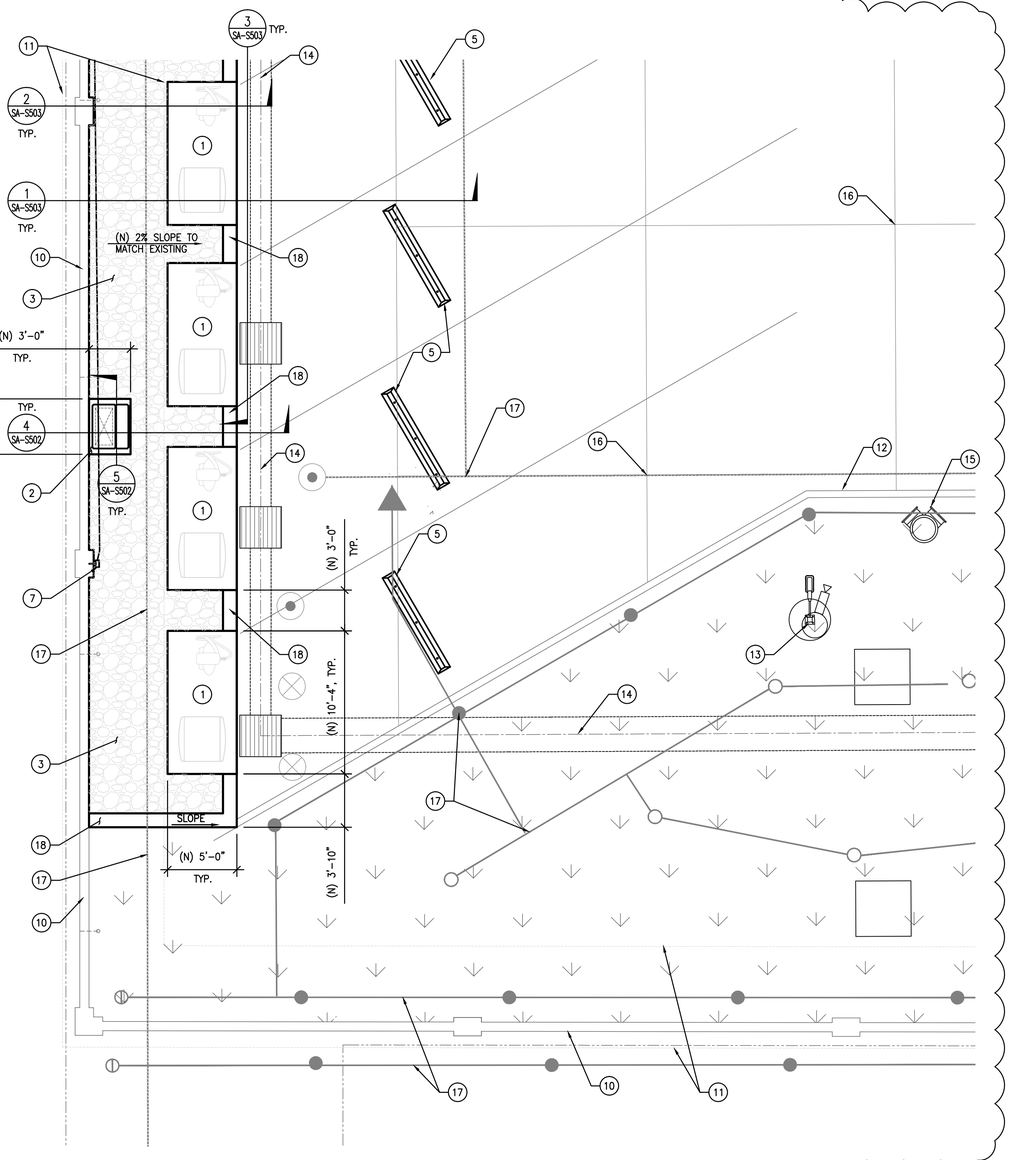
SCALE 3/16"=1'-0" 2

CONSTRUCTION NOTES:

1. NEW 10'-4" x 5'-0" x 1'-6" DEEP REINFORCED CONCRETE FOUNDATION FOR CHARGEPOINT POWER BLOCK AND POWER LINK 1000 BEB CHARGER. PROVIDE ⅝" THICK EPDM RUBBER OR FELT EXPANSION JOINT FILLER AND SIKAFLEX SELF-LEVELING POLURETHANE SEALANT BETWEEN NEW CONCRETE PAD AND EXISTING CONCRETE CURB / PAVEMENT. (TYPICAL OF 10). SEE SA-S503 FOR DETAILS.
2. NEW 36" x 48" x 8" DEEP REINFORCED CONCRETE FOUNDATION FOR BEB SWITCHBOARD "SB-BEB". FOR CONCRETE JOINT, PROVIDE EXPANSION JOINT FILLER AND SEALANT AS SPECIFIED IN NOTE #1. (TYPICAL OF 3). SEE 4/SA-S502 AND 5/SA-S502 FOR DETAILS.
3. NEW 2" THICK OF 3/4" GRAVEL FILL.
4. NEW 10" THICK, 4000 PSI REINFORCED CONCRETE PAVEMENT UNDERLAIN BY TWO (2) SACK CONCRETE SLURRY, SEE DETAIL 3/SA-E504.
5. NEW WHEEL STOP, SEE DETAIL #1 / SA-S503. (TYPICAL OF 10).
6. NEW CONSTRUCTION JOINT.
7. NEW FLEETWATCH FR200 DATA RECEIVER, SEE DETAIL 3/SA-E505. (TYPICAL OF 3)
8. NEW NEMA 3R LOCKABLE HINGED S.S. NETWORK PANEL (48"x24"x6.5"), SEE DETAIL 2/SA-E505.
9. PAINT PARKING STALL STRIPES TO MATCH PRIOR CONDITIONS INCLUDING COLOR, LOCATION, LENGTH, AND WIDTH.
10. EXISTING CMU WALL.
11. EXISTING CMU WALL FOOTING.
12. EXISTING CONCRETE CURB.
13. EXISTING LIGHT POLE.
14. EXISTING UNDERGROUND STORM DRAIN.
15. EXISTING FIRE HYDRANT.
16. EXISTING CONSTRUCTION JOINT.
17. REMOVAL AND LEGAL OFF-SITE DISPOSAL OF EXISTING IRRIGATION PIPING AND HEADS IN INSTALLATION AREA OF BEB CHARGING AND ELECTRICAL EQUIPMENT. INSTALL END CAPS FOR THE REMAINING PIPES THAT STAY IN OPERATION AND DO NOT REQUIRE AN EXTENSION LATER. FOR PRIMARY IRRIGATION WATER PIPES THAT ARE IN THE WAY OF NEW CONSTRUCTION, INSTALL TEMPORARY CAPS AND LATER, RECONNECT THEM TO RESUME OPERATION.
18. NEW 12" x 36" x 10" THICK CONCRETE CURB WITH (1) #4 AT MID LAYER. SLOPE AS REQUIRED.

CONSTRUCTION NOTES

SCALE NONE 3



NEW PLAN AT BEB CHARGERS

SCALE 3/16"=1'-0" 1

N

REGISTERED PROFESSIONAL ENGINEER HIEN NGO No. C58580 12-31-2026 CIVIL STATE OF CALIFORNIA

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: (949) 756-8654
FAX: (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/20/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

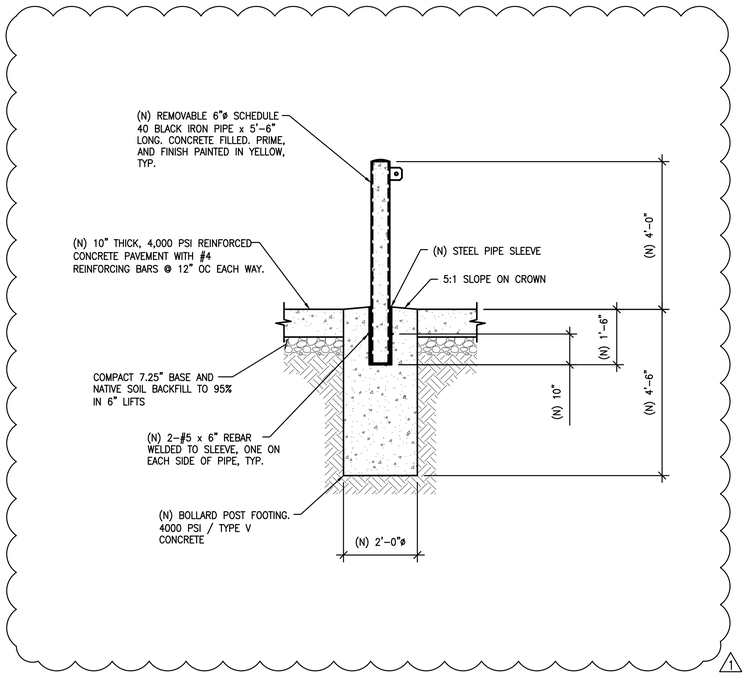
Sheet Title NEW PLAN AT BATTERY-ELECTRIC-BUSES (BEBs)

Project OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

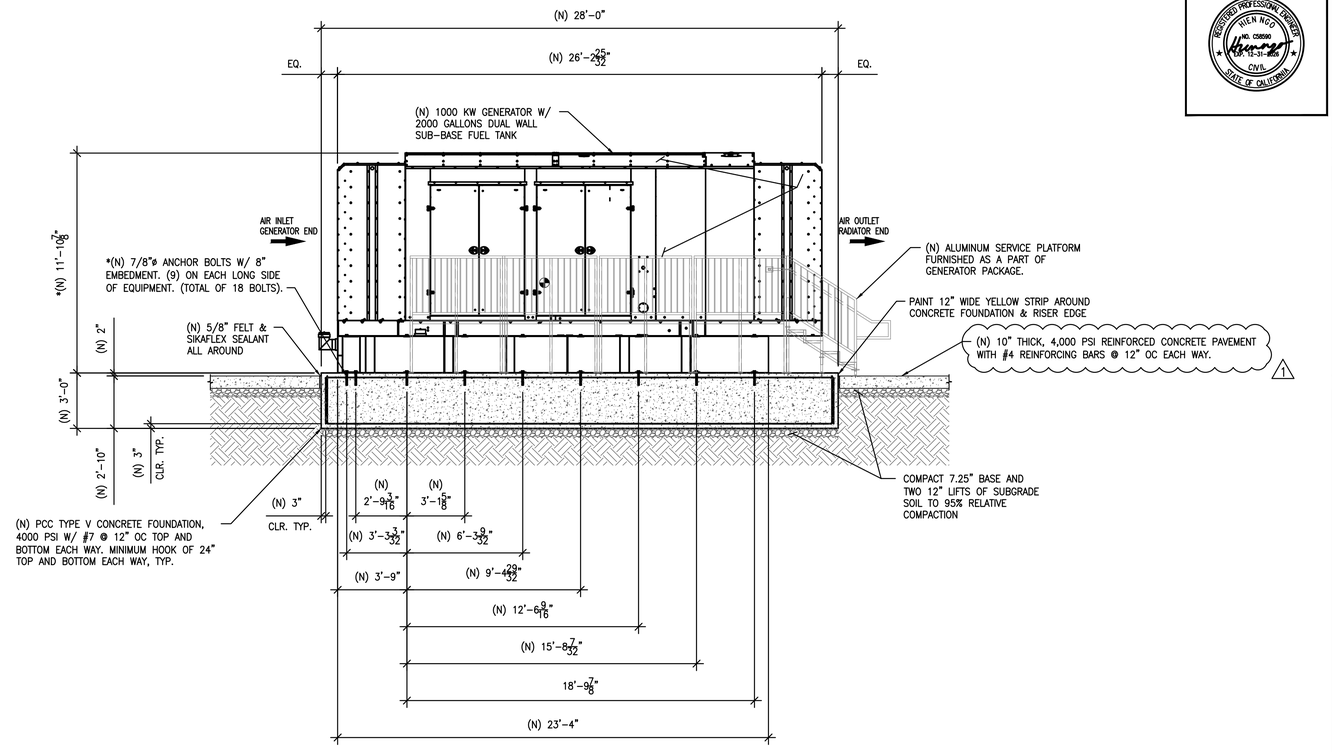
JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-S104

550 South Main Street
Orange, CA 92668
714/560/OCTA

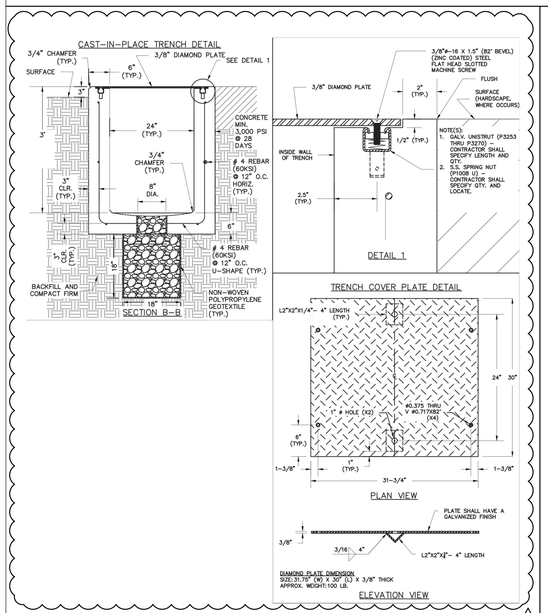
OCTA



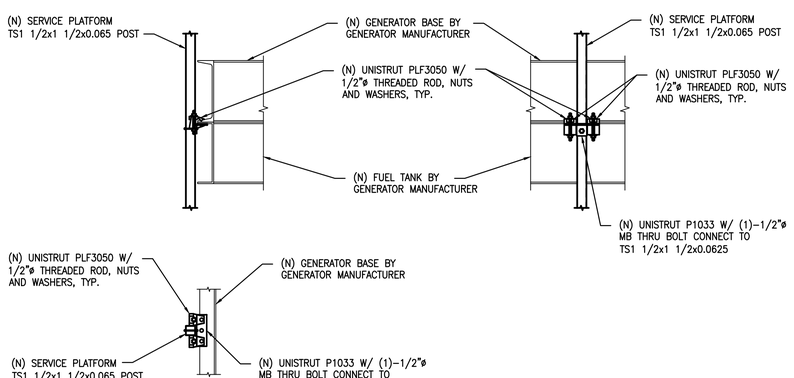
REMOVABLE BOLLARD DETAIL | SCALE 1/2"=1'-0" | 4



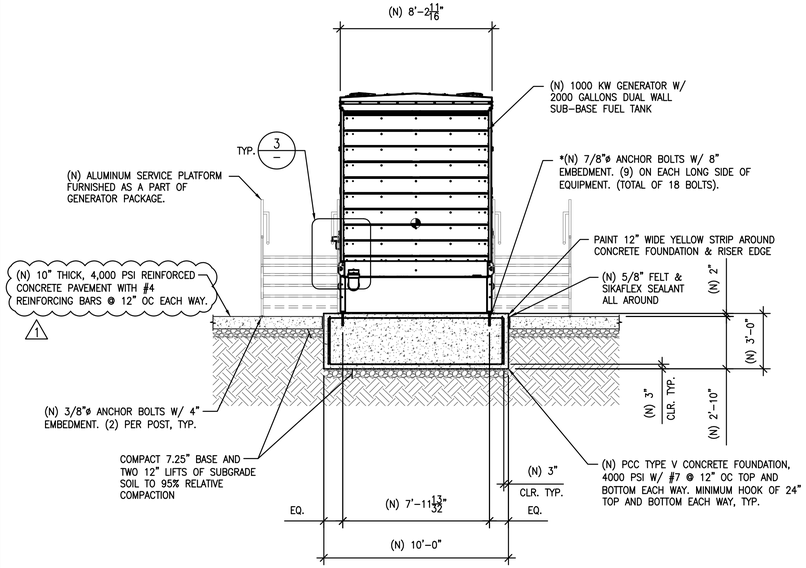
GENERATOR ENCLOSURE AND DIESEL TANK MOUNTING DETAIL | SCALE 1/4"=1'-0" | 1



UTILITY TRENCH DETAIL | SCALE NONE | 5



ATTACHMENT PLATFORM TO GENERATOR DETAILS | SCALE 1"=1'-0" | 3



GENERATOR ENCLOSURE AND DIESEL TANK MOUNTING DETAIL | SCALE 1/4"=1'-0" | 2

REGISTERED PROFESSIONAL ENGINEER
HIEN NGO
NO. C58500
EXP. 12-31-2026
CIVIL
STATE OF CALIFORNIA

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: # (949) 756-8654
FAX: # (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/28/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

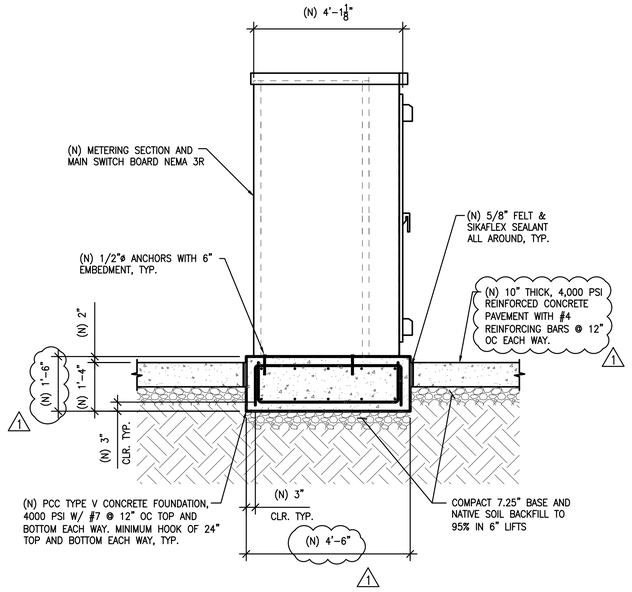
Sheet Title DETAILS AND SECTIONS

Project OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

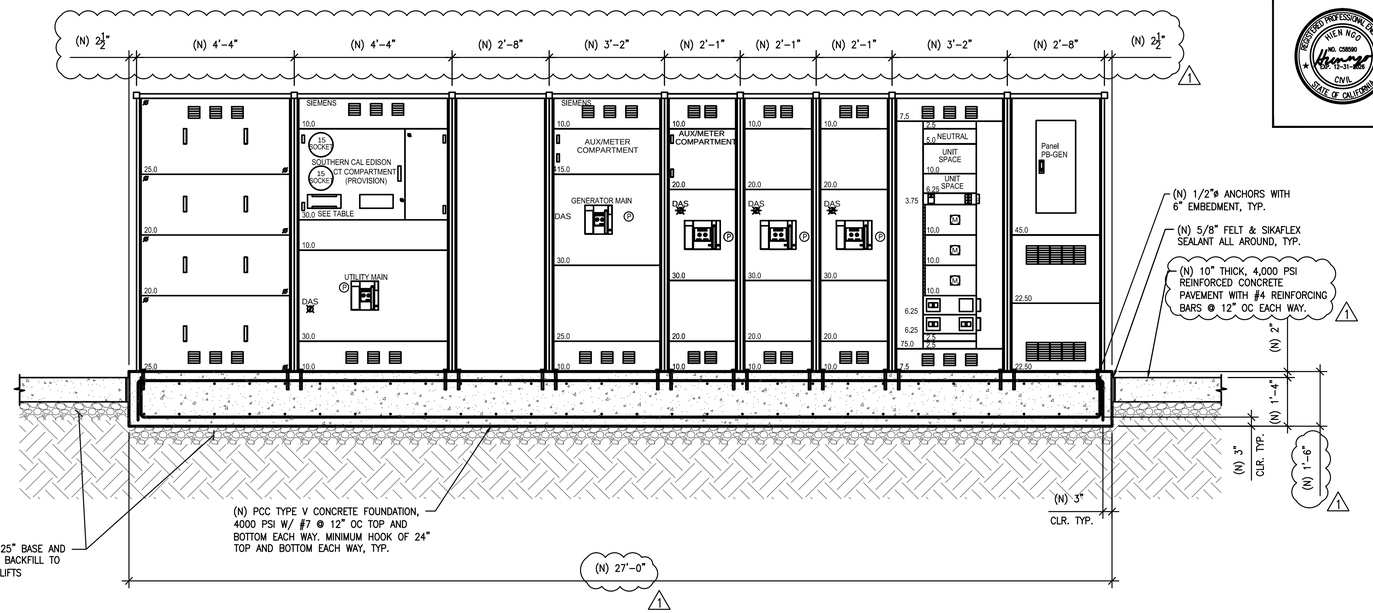
JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-S501

550 South Main Street
Orange, CA 92668
714/560/OCTA

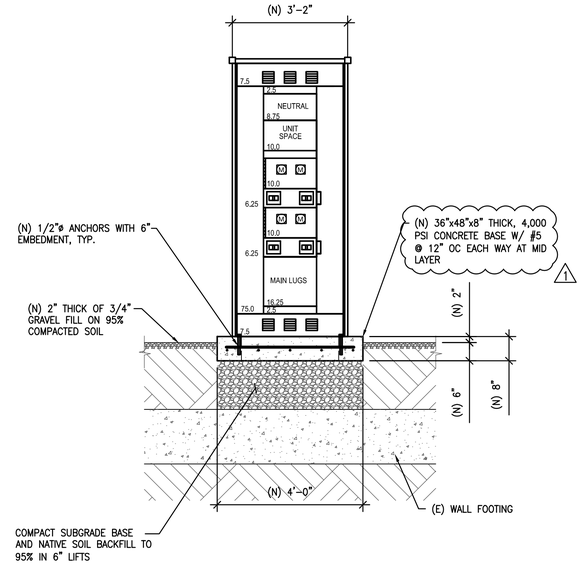
OCTA



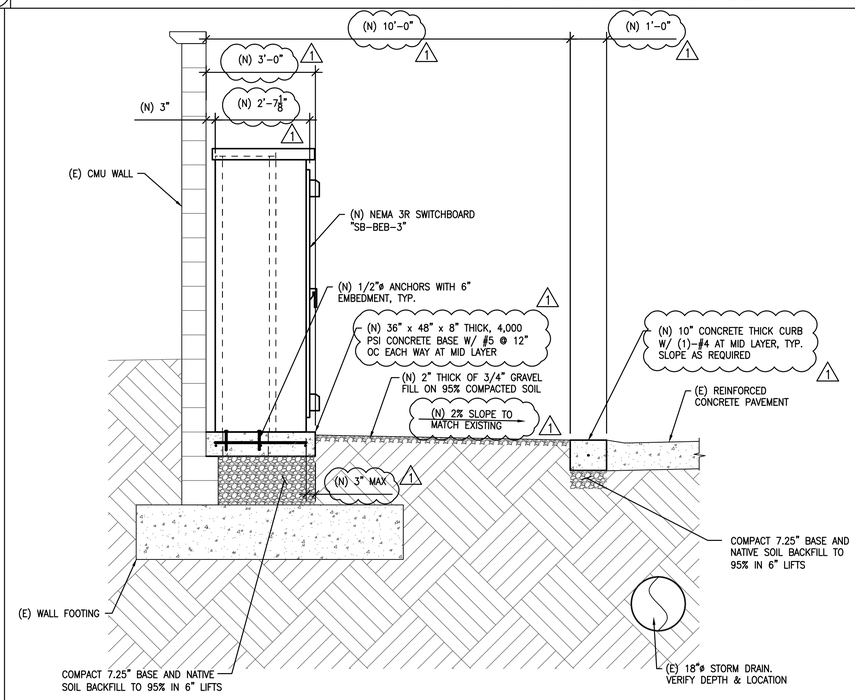
MAIN SWITCHBOARD "MSB-BEB" MOUNTING DETAIL — SCALE 1/2"=1'-0" — 2



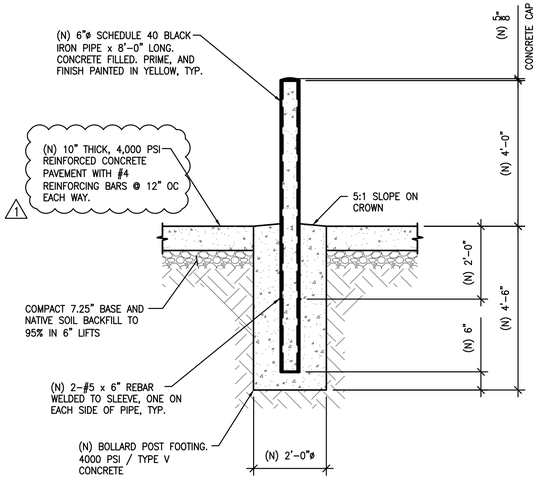
MAIN SWITCHBOARD "MSB-BEB" MOUNTING DETAIL — SCALE 1/2"=1'-0" — 1



BEB SWITCHBOARD "SB-BEB" MOUNTING DETAIL — SCALE 1/2"=1'-0" — 5



BEB SWITCHBOARD "SB-BEB" MOUNTING DETAIL — SCALE 1/2"=1'-0" — 4



BOLLARD DETAIL — SCALE 1/2"=1'-0" — 3

REGISTERED PROFESSIONAL ENGINEER — STEVEN NGO — No. C58590 — EXP. 12-31-2026 — CIVIL — STATE OF CALIFORNIA

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: # (949) 756-8654
FAX: # (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/20/2025	CV	REVISED DRAWINGS - ADDENDUM No. 3

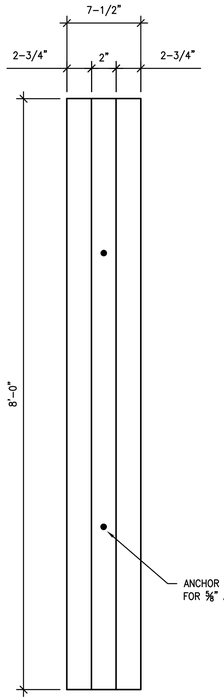
Sheet Title: DETAILS AND SECTIONS

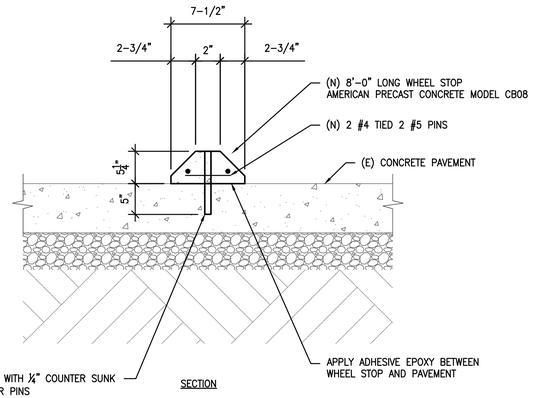
Project: OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-S502

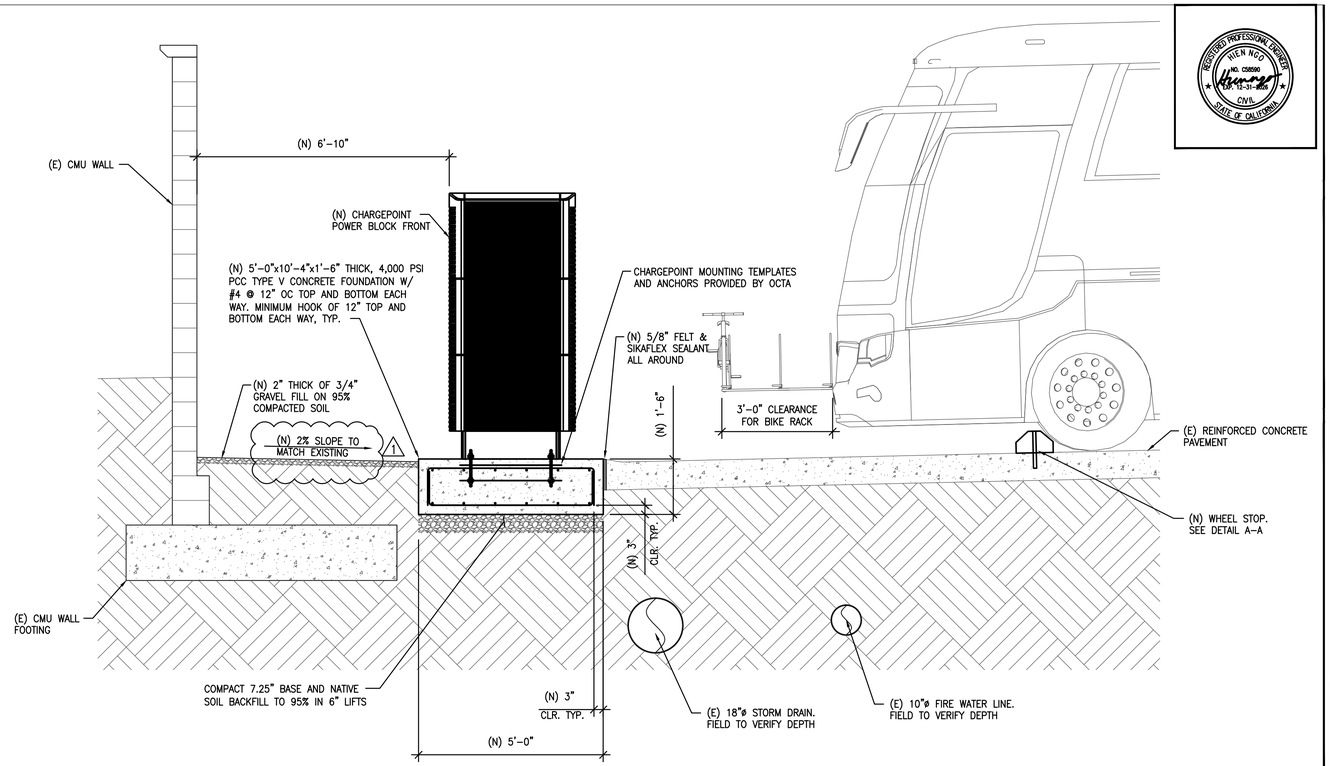
550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA

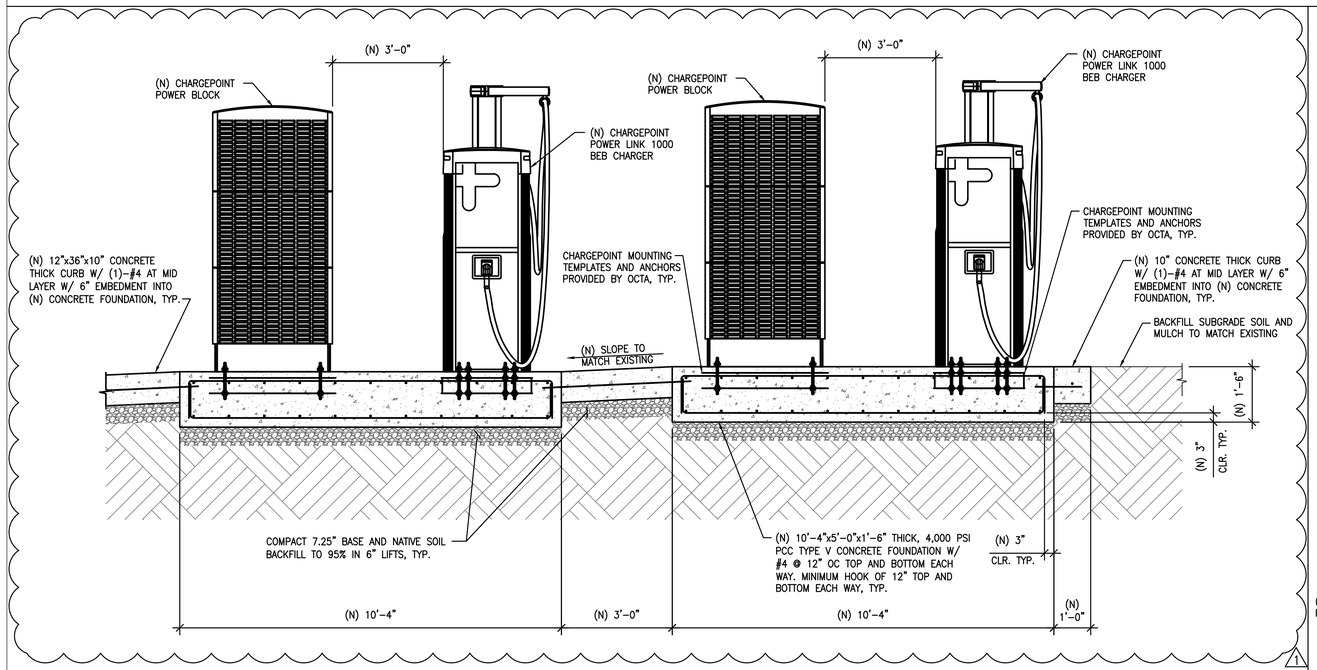




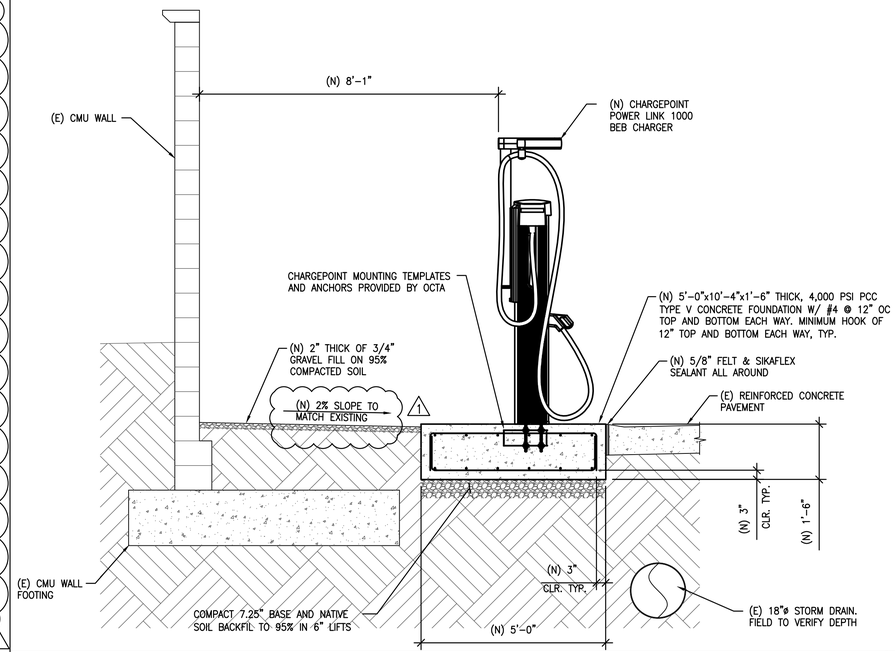
DETAIL A–A



CHARGEPOINT POWER BLOCK MOUNTING DETAIL — SCALE 1/2"=1'-0" — 1



CHARGEPOINT POWER BLOCK & POWER LINK 1000 BEB CHARGER MOUNTING DETAIL — SCALE 1/2"=1'-0" — 3



CHARGEPOINT POWER LINK 1000 BEB CHARGER MOUNTING DETAIL — SCALE 1"=1'-0" — 2

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: (949) 756-8654
FAX: (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/20/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

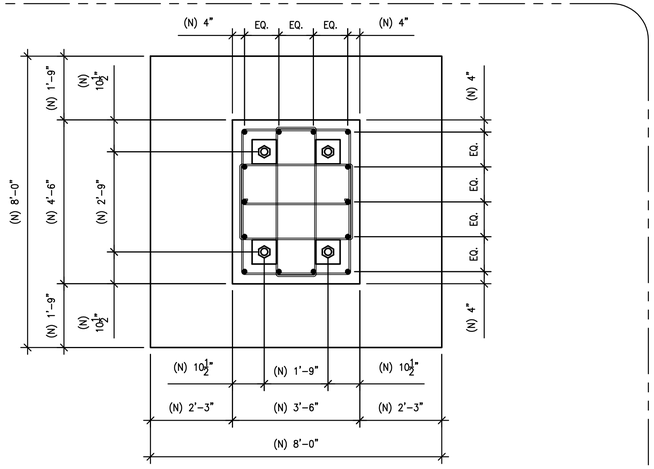
Sheet Title DETAILS AND SECTIONS

Project OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

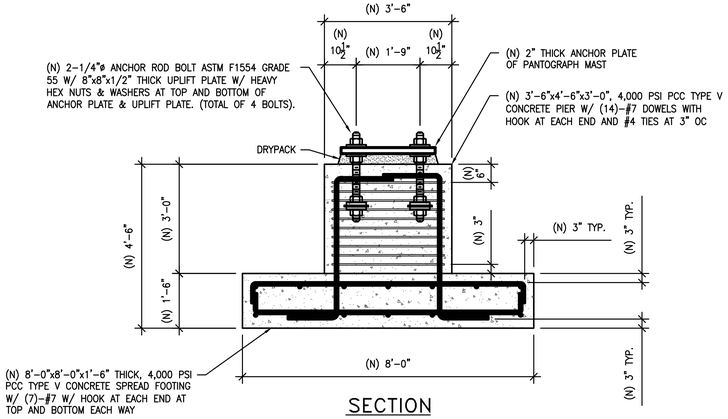
JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-S503

550 South Main Street
Orange, CA 92668
714/560/OCTA

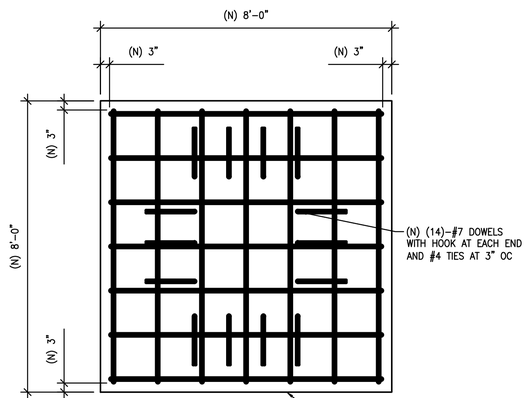
OCTA



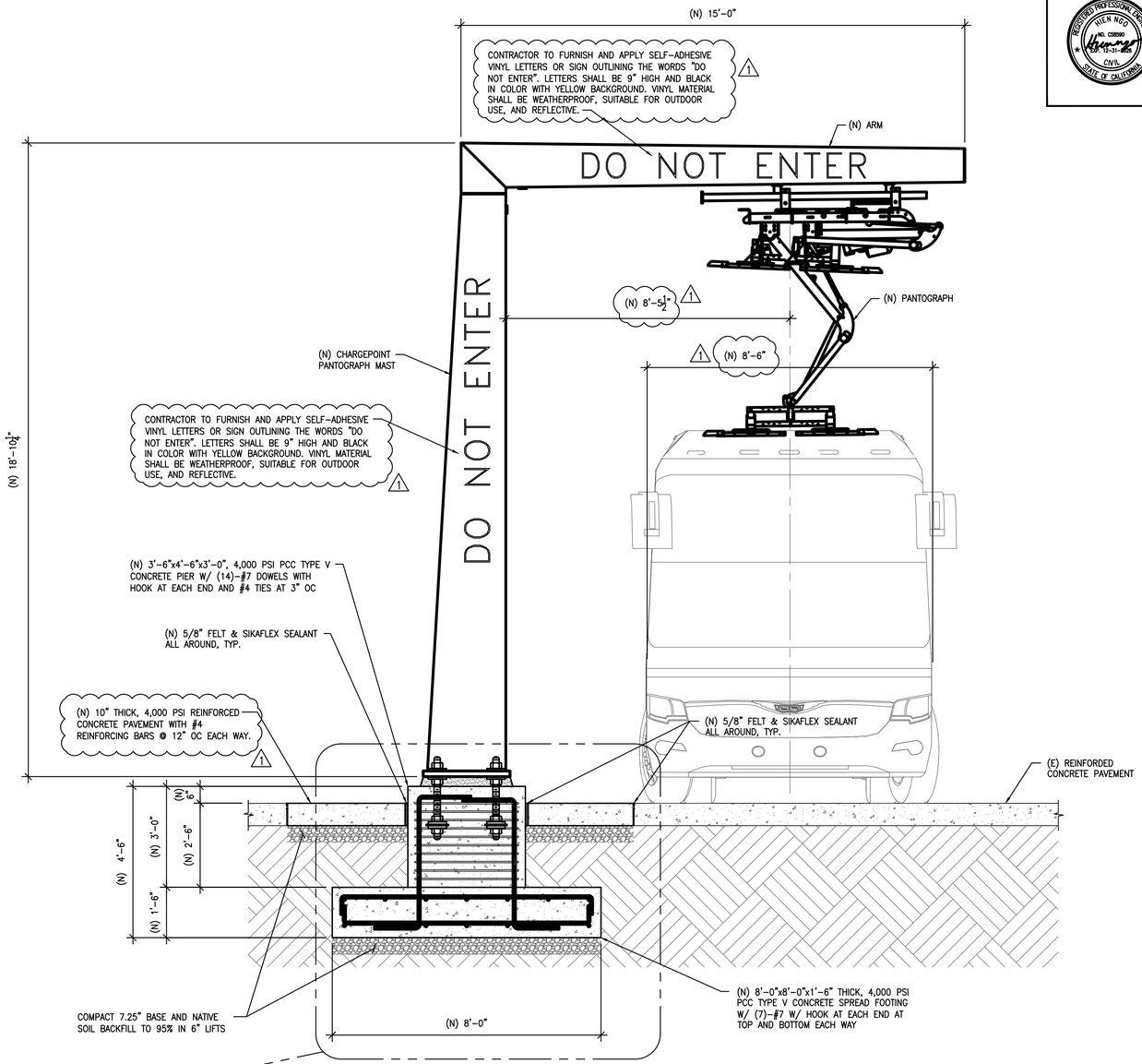
PLAN @ CONCRETE PIER



SECTION



PLAN AT SPREAD FOOTING



CHARGEPOINT PANTOGRAPH BEB CHARGER MOUNTING DETAIL

SCALE 1/2"=1'-0" | 1

REGISTERED PROFESSIONAL ENGINEER — ALEN NGO — No. C58590 — EXP. 12-31-2026 — CIVIL — STATE OF CALIFORNIA

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: # (949) 756-8654
FAX: # (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/28/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

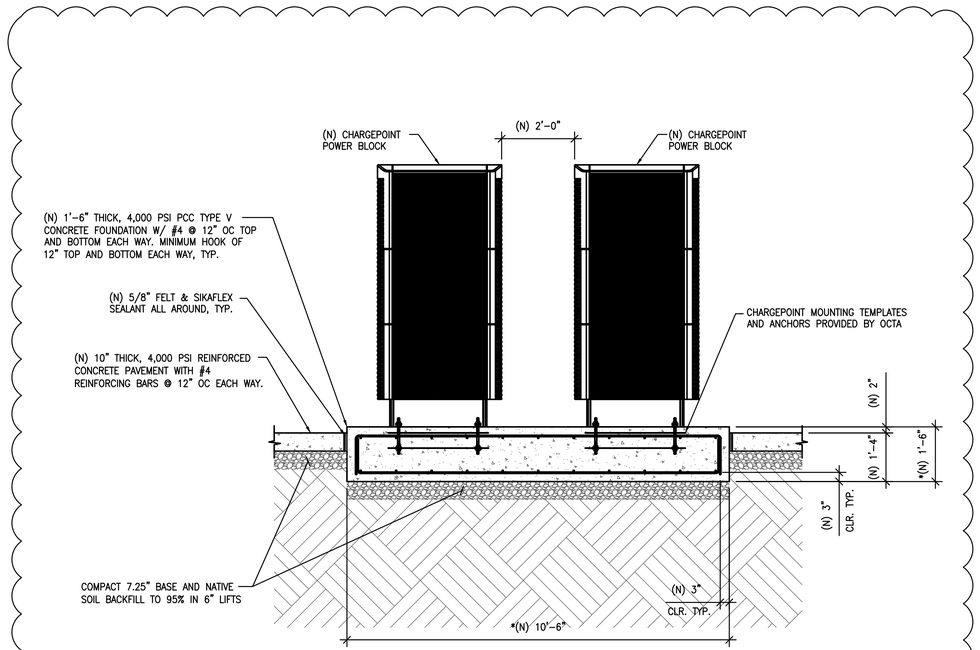
Sheet Title
BEB PANTOGRAPH CHARGER MOUNTING DETAIL

Project
OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-S504

550 South Main Street
Orange, CA 92668
714/560/OCTA

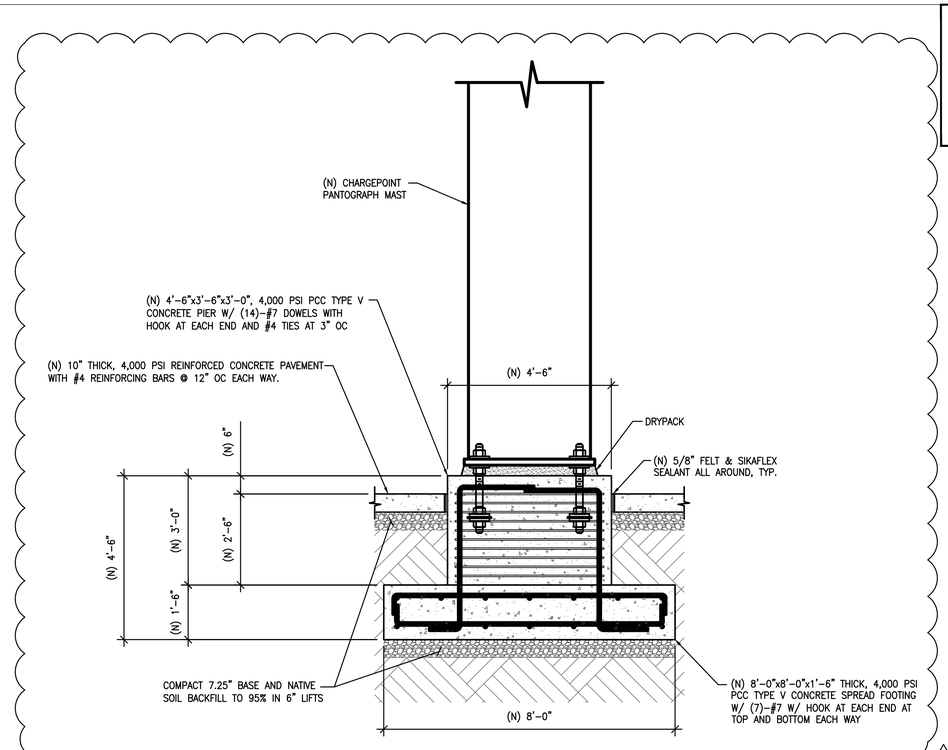
OCTA



1

CHARGEPOINT POWER BLOCK MOUNTING DETAIL

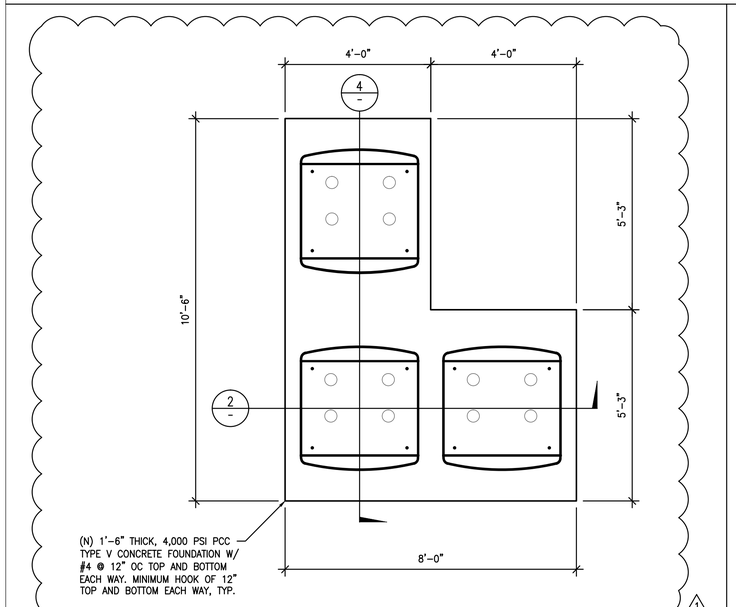
SCALE 1/2"=1'-0" 4



1

CHARGEPOINT PANTOGRAPH BEB CHARGER MOUNTING DETAIL

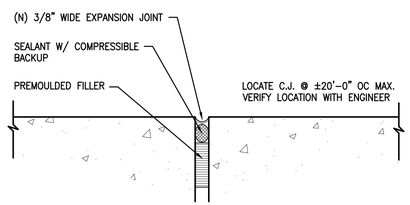
SCALE 1/2"=1'-0" 1



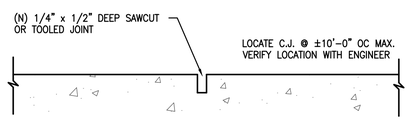
1

CHARGEPOINT POWER BLOCK FOUNDATION PLAN

SCALE 1/2"=1'-0" 5



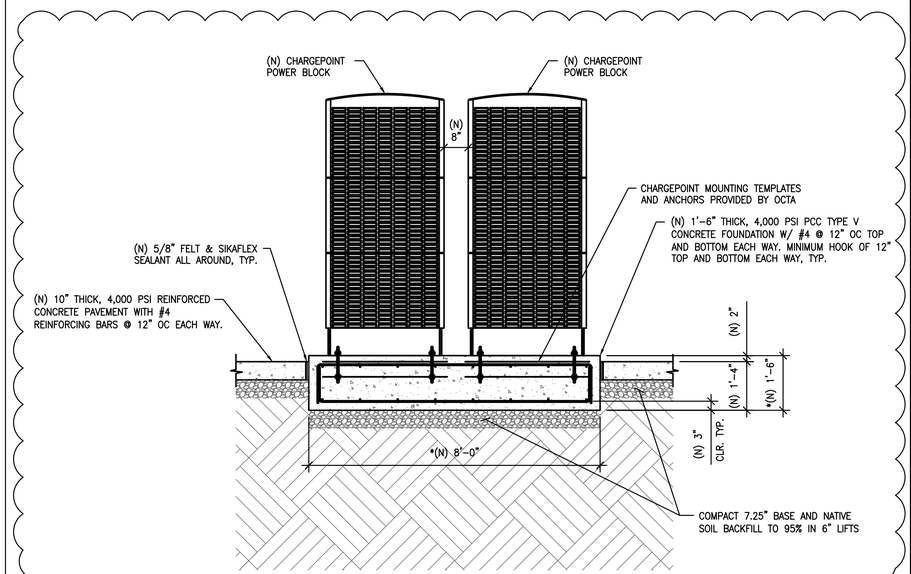
EXPANSION JOINT



CONTROL JOINT

CONSTRUCTION JOINT DETAIL

SCALE NONE 3



1

CHARGEPOINT POWER BLOCK MOUNTING DETAIL

SCALE 1/2"=1'-0" 2

REGISTERED PROFESSIONAL ENGINEER
ALLEN NGO
No. C58590
EXP. 12-31-2026
CIVIL
STATE OF CALIFORNIA

DAHL, TAYLOR & ASSOCIATES
CONSULTING ENGINEERS
2960 DAIMLER STREET
SANTA ANA, CALIFORNIA 92705
TEL: # (949) 756-8654
FAX: # (949) 502-0777

MARK	DATE	BY	REVISIONS
1	3/28/2025	QV	REVISED DRAWINGS - ADDENDUM No. 3

Sheet Title: DETAILS AND SECTIONS

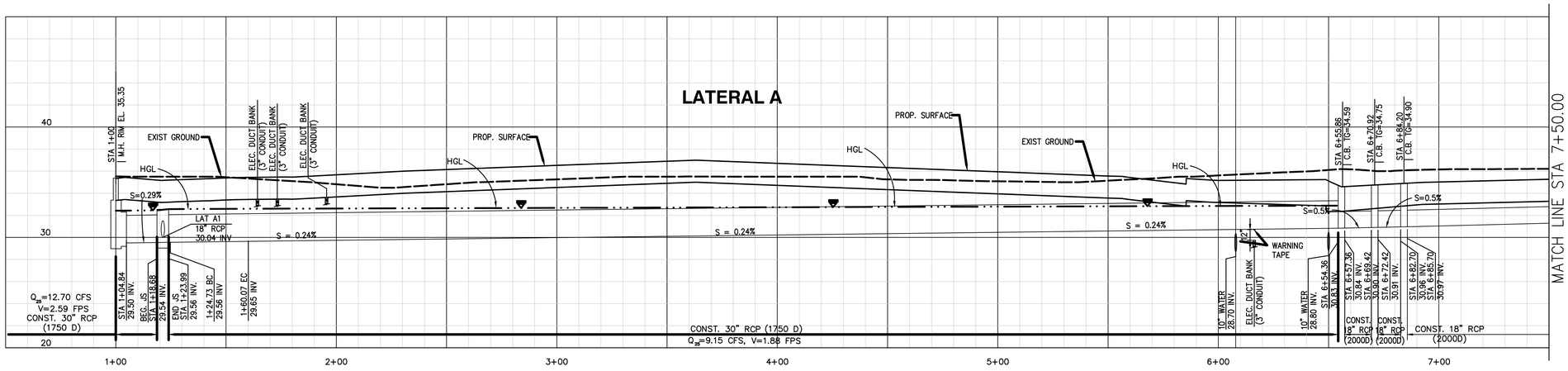
Project: OCTA SANTA ANA BUS BASE
INSTALLATION OF BEB CHARGERS & ELEC. INFRASTR.
4301 WEST MACARTHUR BOULEVARD, SANTA ANA, CA

JOB #	1.19.6
DESIGN BY:	SDV
DRAWN BY:	TMP
CHECKED BY:	QV
DATE	03-28-2025
SCALE	AS NOTED
SHEET	SA-S505

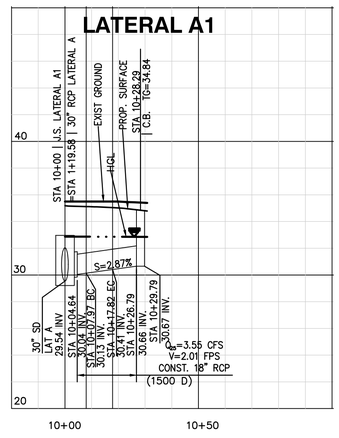
550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA

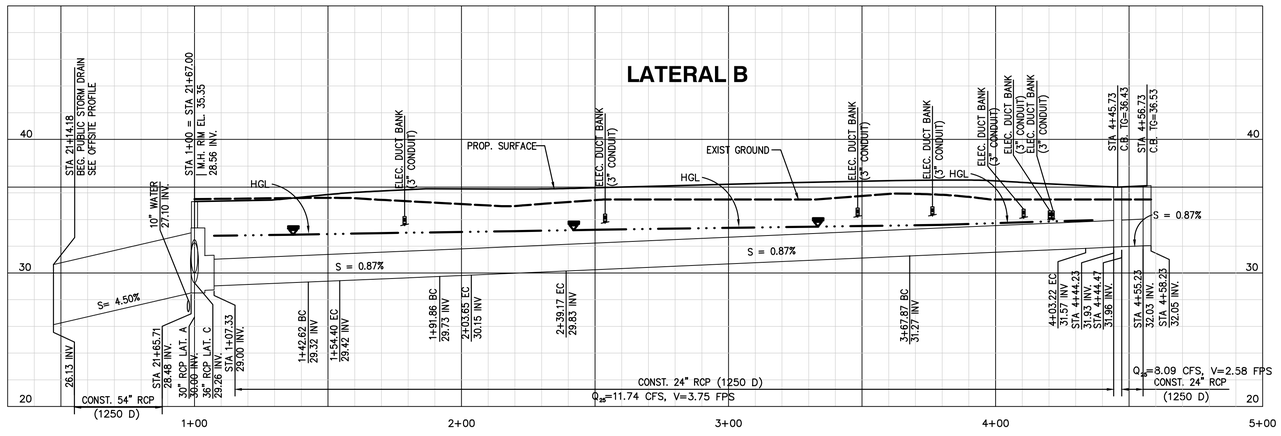
LATERAL A



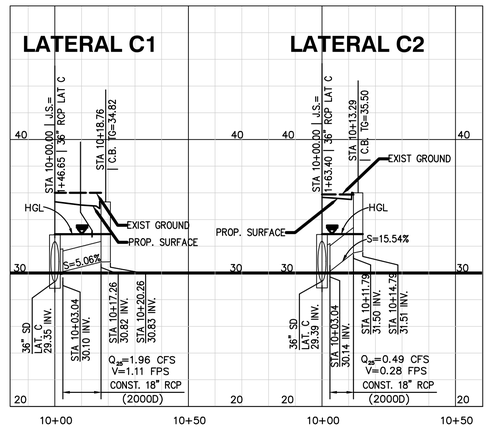
LATERAL A1



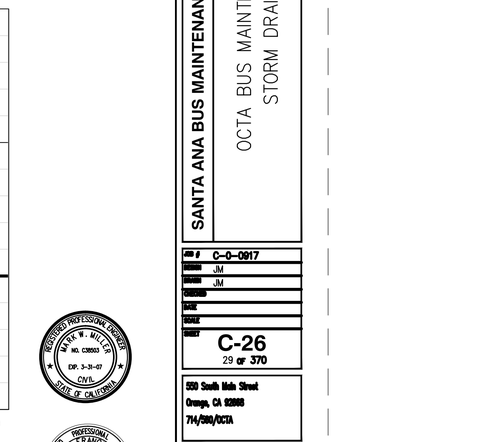
LATERAL B



LATERAL C1



LATERAL C2



MATCH LINE STA 7+50.00
SEE TOP RIGHT

PROFILE SCALE
HORIZONTAL 1" = 20'
VERTICAL 1" = 4'

PROFILES ON THIS SHEET ARE FOR STORM DRAIN PIPES ON THE WESTERLY HALF OF SANTA ANA BUS BASE. THEY ARE MOSTLY ON THE SOUTH AND WEST SIDES ALONG AND NEAR THE CMU WALLS AND CONCRETE CURBS.

BOYLE ENGINEERING CORPORATION
1501 Quail Street
Newport Beach, California 92660
949-476-3300

MARK	DATE	BY	REVISIONS
A	7/01/08		RECORD DRAWING - JP
B	7/31/07		REVISED PER RE-3RD
C	7/31/07		
D	8/01/08		

SANTA ANA BUS MAINTENANCE AND OPERATIONS BASE

OCTA BUS MAINTENANCE FACILITY
STORM DRAIN PROFILES

JOB # C-0-0917
DESIGN JM
DRAWN JM
CHECKED
DATE
SCALE
SHEET C-26
29 OF 370

550 South Main Street
Orange, CA 92868
714/560/OCTA

OCTA

REGISTERED PROFESSIONAL ENGINEER
MARK W. MILLER
NO. C38553
EXP. 3-31-07
CIVIL
STATE OF CALIFORNIA

REGISTERED PROFESSIONAL ENGINEER
FRANCIS TOMEH
NO. C054329
EXP. 12-31-03
STATE OF CALIFORNIA

PRE-BID CONFERENCE REGISTRATION

IFB No. 5-3922 **Date: March 18, 2025**

Title: Installation of Battery Electric Bus Chargers and Electrical Infrastructure at Santa Ana Bus Base

1. **Company Name:** Oscars Electric
   Attendee: Oscar JR. Flores
   Address: 8317 Secura Way
   City, State Zip: Santa Fe Springs
   Phone Number: (323) 909-0160 **Registered on CAMM NET?** ☐ Yes ☐ No
   Prime ☐ **Sub** ☒
   E-Mail Address: Oscar.JR@oscarselectric.com

2. **Company Name:** _____
   Attendee: _____
   Address: _____
   City, State Zip: _____
   Phone Number: (_____) _____ **Registered on CAMM NET?** ☐ Yes ☐ No
   Prime ☐ **Sub** ☐
   E-Mail Address: _____

3. **Company Name:** _____
   Attendee: _____
   Address: _____
   City, State Zip: _____
   Phone Number: (_____) _____ **Registered on CAMM NET?** ☐ Yes ☐ No
   Prime ☐ **Sub** ☐
   E-Mail Address: _____

PRE-BID CONFERENCE REGISTRATION

IFB No. 5-3922 **Date: March 18, 2025**

Title: Installation of Battery Electric Bus Chargers and Electrical Infrastructure at Santa Ana Bus Base

1. **Company Name:** Falcon Construction Inc.
   Attendee: VAL MAJAELE
   Address: 1142 S. DIAMOND BAR Blvd, #432
   City, State Zip: Diamond BAR CA 91765
   Phone Number: (310) 714 1686 **Registered on CAMM NET?** ☒ Yes ☐ No
   Prime ☒ **Sub** ☐
   E-Mail Address: VAL@FALKONCONCRETE.COM

2. **Company Name:**
   Attendee:
   Address:
   City, State Zip:
   Phone Number: ( ) **Registered on CAMM NET?** ☐ Yes ☐ No
   Prime ☐ **Sub** ☐
   E-Mail Address:

3. **Company Name:**
   Attendee:
   Address:
   City, State Zip:
   Phone Number: ( ) **Registered on CAMM NET?** ☐ Yes ☐ No
   Prime ☐ **Sub** ☐
   E-Mail Address:

PRE-BID CONFERENCE REGISTRATION

IFB No. 5-3922 **Date: March 18, 2025**

Title: Installation of Battery Electric Bus Chargers and Electrical Infrastructure at Santa Ana Bus Base

1. **Company Name:** Asplundh Construction
   Attendee: Chad Reis
   Address: 7431 Walnut
   City, State Zip: Buena Park, CA 90620
   Phone Number: (714) 642-0135 **Registered on CAMM NET?** ☐ Yes ☒ No
   Prime ☒ **Sub** ☐
   E-Mail Address: creis@asplundh.com

2. **Company Name:**
   Attendee:
   Address:
   City, State Zip:
   Phone Number: ( ) **Registered on CAMM NET?** ☐ Yes ☐ No
   Prime ☐ **Sub** ☐
   E-Mail Address:

3. **Company Name:**
   Attendee:
   Address:
   City, State Zip:
   Phone Number: ( ) **Registered on CAMM NET?** ☐ Yes ☐ No
   Prime ☐ **Sub** ☐
   E-Mail Address:

PRE-BID CONFERENCE REGISTRATION

IFB No. 5-3922 **Date: March 18, 2025**

Title: Installation of Battery Electric Bus Chargers and Electrical Infrastructure at Santa Ana Bus Base

1. **Company Name:** ROYAL ELECTRIC COMPANY
   Attendee: JERRY LOCKLIN
   Address: 8481 CRAIGE COURT
   City, State Zip: SACRAMENTO, CA 95828
   Phone Number: (310) 925 6923 **Registered on CAMM NET?** ☐ Yes ☐ No
   Prime ☒ **Sub** ☒
   E-Mail Address: jerryl@royalelect.com

2. **Company Name:** Johnson-Peltier
   Attendee: Greg Kelley
   Address: 12082 Shoemaker Ave
   City, State Zip: Santa Fe Springs CA 90670
   Phone Number: (562) 201-5074 **Registered on CAMM NET?** ☒ Yes ☐ No
   Prime ☒ **Sub** ☐
   E-Mail Address: gkelley@johnson-peltier.com

3. **Company Name:**
   Attendee:
   Address:
   City, State Zip:
   Phone Number: ( ) **Registered on CAMM NET?** ☐ Yes ☐ No
   Prime ☐ **Sub** ☐
   E-Mail Address:

PRE-BID CONFERENCE REGISTRATION

IFB No. 5-3922 **Date: March 18, 2025**

Title: Installation of Battery Electric Bus Chargers and Electrical Infrastructure at Santa Ana Bus Base

1. **Company Name:** CDM Constructors
Attendee: Scott Green / Tony Hadsall
Address: 9220 cleveland Ave'
City, State Zip: Rancho Cucamunga
Phone Number: (909) 257-9951 **Registered on CAMM NET?** ☑ Yes ☐ No
Prime ☑ **Sub** ☐
E-Mail Address: Greensc@cdmsmith.com

2. **Company Name:** HAMPTON TEDDER ELECTRIC
Attendee: FRANK AGUILAR
Address: 4571 STATE ST
City, State Zip: MONTCLAIR, CA
Phone Number: (909) 270-9785 **Registered on CAMM NET?** ☒ Yes ☐ No
Prime ☒ **Sub** ☐
E-Mail Address: FRANK.AGUILAR@HAMPTONTEDDER.COM

3. **Company Name:** PARWest Line Contractors, LLC
Attendee: Esdgar B. Martinez-Franco
Address: 10771 Almond Avenue -A
City, State Zip: Fontana CA
Phone Number: (909) 727-1586 **Registered on CAMM NET?** ☐ Yes ☐ No
Prime ☒ **Sub** ☐
E-Mail Address: ebmartinez-franco@parwlc.com