ATTACHMENT A

DRAFT INVITATION FOR BIDS (IFB) 4-2093
BOOK 1 OF 2

BUILDING REPAIRS
AT
SANTA ANA BUS BASE

ORANGE COUNTY TRANSPORTATION AUTHORITY
550 South Main Street
P.O. Box 14184
Orange, CA 92863-1584
(714) 560-6282

Key IFB Dates

Issue Date:	**March 11, 2024**
Pre-Bid Conference/Site Visit:	**March 19, 2024**
Questions/Approved Equal Submittal:	**March 22, 2024**
Bid Submittal Date:	**April 8, 2024**

FEDERAL TRANSIT ADMINISTRATION FUNDED PROJECT

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BID BOOKLET 166

March 11, 2024

SUBJECT: NOTICE INVITING SEALED BIDS
IFB 4-2093, "BUILDING REPAIRS AT SANTA ANA BUS BASE"

TO: ALL BIDDERS

FROM: ORANGE COUNTY TRANSPORTATION AUTHORITY

The Orange County Transportation Authority (Authority) invites sealed bids for building repairs at Santa Ana Bus Base. The description of this project includes structural building repairs, roof repairs, high performance coating, interior restoration, and related work to be performed within the bus wash bays (nominal 80-foot by 62-foot area) of the bus wash building at the Santa Ana Bus Base located at 4301 West MacArthur Boulevard, Santa Ana, CA. Additionally, high performance coating and related work is to be performed within the open canopy structure, adjacent to and east of the bus wash bays.

Please note that by submitting a Bid, Bidder certifies that it is not subject to any Ukraine/Russia-related economic sanctions imposed by the State of California or the United States Government including, but not limited to, Presidential Executive Order Nos. 13660, 13661, 13662, 13685, and 14065. Any individual or entity that is the subject of any Ukraine/Russia-related economic sanction is not eligible to submit a Bid. In submitting a Bid, all Bidders agree to comply with all economic sanctions imposed by the State or U.S. Government.

The estimated cost for this project is $1,650,000. Bidders will be required to hold a valid State of California B General Building license, and either hold valid State of California C-10, C-33, C-39, C-51, and C-61/D-38 specialty class licenses or subcontract to valid State of California C-10, C-33, C-39, C-51, and C-61/D-38 specialty licensed contractors.

The Authority has set a **14%** Disadvantaged Business Enterprise (DBE) participation goal for this project.

Bids must be submitted at or before 11:00 a.m., April 8, 2024.

Bids delivered in person or by a means other than the U.S. Postal Service shall be submitted to the following:

Orange County Transportation Authority
Contracts Administration and Materials Management
600 South Main Street, (Lobby Receptionist)
Orange, California 92868
Attention: Gustavo Valle, Senior Contract Administrator

Or bids delivered using the U.S. Postal Service shall be addressed as follows:

Orange County Transportation Authority
Contracts Administration and Materials Management
550 South Main Street
P.O. Box 14184
Orange, California 92863-1584
Attention: Gustavo Valle, Senior Contract Administrator

Bids and amendments to bids received after the date and time specified above will be returned to the bidders unopened.

Bidders interested in obtaining a copy of this Invitation for Bids (IFB) may do so by downloading the IFB from CAMM NET the Authority's on-line website at https://cammnet.octa.net.

All bidders and sub contractors interested in doing business with the Authority are required to register their business on-line at CAMM NET. The website can be found at https://cammnet.octa.net. From the site menu, click on CAMM NET to register.

To receive all further information regarding this IFB, bidders and sub-contractors must be registered on CAMM NET with at least one of the following commodity codes for this solicitation selected as part of the vendor's on-line registration profile:

Category:	Commodity:
Construction	General Contractor
	Metals - Fabricated / Structural
	Painting Contractor
	Roofing Contractor

An on-site/in person pre-bid conference will be held on March 19, 2024, at 09:00 a.m. at the Authority's Administrative Office, 550 South Main Street, Orange, CA 92868 in Conference Room 07.

Participation via teleconference will also be available. Prospective bidders may join or call-in using the following credentials:

- Click here to join the meeting
- OR Call-in Number: +1 916-550-9867
- Conference ID: 464 992 952#

A copy of the pre-bid conference presentation slides and registration sheet(s) will be issued via addendum prior to the date of the pre-bid conference.

Immediately following the pre-bid conference, a job walk will be conducted at the Santa Ana Bus Base at 4301 West MacArthur Boulevard, Santa Ana, CA 92704. **Please bring a safety vest for the job walk.**

All prospective bidders are encouraged to attend the pre-bid conference, and the job walk.

Please review "Bus Base Visit Protocol" following this notice.

The contract to be awarded is subject to a financial assistance contract between the Orange County Transportation Authority, and the U.S. Department of Transportation. All Bidders will be required to certify that they are not on the Comptroller General's List of Ineligible Contractors.

Bidders will be required to submit the name, business address, and California contractor license number of each subcontractor who will perform work or labor or render service to the bidder in or about the work in an amount in excess of one-half of one percent (1/2 of 1 %) of the bidder's total bid. If a subcontractor's California contractor license number is submitted incorrectly, it will not be grounds for filing a bid protest or grounds for considering the bid nonresponsive if the corrected subcontractor's California contractor license number is submitted to the Authority within 24 hours after the bid opening.

All bidders are encouraged to subcontract with small businesses to the maximum extent possible.

The successful bidder will be required to comply with all applicable equal opportunity laws and regulations.

All bidders must register with the Department of Industrial Relations pursuant to Labor Code Section 1725.5. A bidder is exempt from this requirement pursuant to Labor Code Section 1771.1(a) if the bidder submits a bid authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the bidder is registered to

perform public work pursuant to Section 1725.5 at the time the contract is awarded.

A bid submitted by a contractor or subcontractor will not be accepted or entered into without proof of the contractor or subcontractor's current registration to perform public work pursuant to Labor Code Section 1725.5.

Award of this contract is subject to receipt of federal, state and/or local funds adequate to carry out the provisions of the agreement including the project specification.

Bus Base Visit Protocol

OCTA has a core value of Safety for all employees, visitors, and the public for all transit related operations, therefore Bus Base Rules are established to prevent incidents and injury.

OCTA Maintenance bases require proper personal protective equipment (PPE) while at the bus base maintenance areas.

Basic PPE includes:

1. ANSI Class 2 Reflective Vest.
2. Proper clothing foot ware (i.e., no open toe shoes, sandals, high heel shoes, etc.)
3. Proper eye protection as required.

All Contractors (proposed bidders, visitors, etc.) upon arrival shall report into the base Maintenance Shift Supervisor, with the appropriate OCTA employee escort.

Each person shall:

1. Sign in.
2. Obtain a briefing of potential hazards and emergency procedures.
3. Cell Phones are only allowed inside a building.

All job walk visitors shall stay within the group and be attentive to instructions for a safe visit.

Upon completion of the visit each person shall sign out with the Maintenance Shift Supervisor prior to leaving the property.

SECTION I: INSTRUCTIONS TO BIDDERS

SECTION I. INSTRUCTIONS TO BIDDERS

A. PRE-BID CONFERENCE/SITE VISIT

An on-site/ in-person pre-bid conference will be held on March 19, 2024, at 09:00 a.m. at the Authority's Administrative Office, 550 South Main Street, Orange, CA 92868 in Conference Room 07.

Participation via teleconference will also be available. Prospective bidders may join or call-in using the following credentials:

- Click here to join the meeting
- OR Call-in Number: +1 916-550-9867
- Conference ID: 464 992 952#

A copy of the pre-bid conference presentation slides and registration sheet(s) will be issued via addendum prior to the date of the pre-bid conference.

Immediately following the pre-bid conference, a job walk will be conducted at Santa Ana Bus Base at 4301 West MacArthur Boulevard, Santa Ana, CA 92704. **Please bring a safety vest for the job walk.** All prospective bidders are strongly encouraged to attend the pre-bid conference and the site visit.

By investigation of the work site, bidder shall be satisfied as to the nature and location of the work and shall be fully informed as to the conditions and matters, which can in any way affect the work or the cost thereof. Prospective bidders should familiarize themselves with Authority safety rules that require that pedestrians must wear approved safety vests.

Please bring a safety vest for the job walk.

B. EXAMINATION OF DOCUMENTS

By submitting a bid, the bidder represents that it has thoroughly examined and become familiar with the work required under this IFB and that it is capable of performing quality work to achieve the authority's objective.

A Bid Booklet has been furnished as Book 2 of this IFB.

C. ADDENDA

The Authority reserves the right to revise the IFB documents. Such, if any, will be made by written addendum to this IFB. Any written addenda issued pertaining to this IFB shall be incorporated into the terms and conditions of any resulting Agreement. The Authority will not be bound to any modifications to or deviations from the requirements set forth in this IFB as the result of oral instructions. Bidders shall acknowledge receipt of Addenda in their bids. Failure to acknowledge receipt

of Addenda may cause the bid to be deemed non-responsive to this IFB and be rejected.

D. AUTHORITY CONTACT

All communication and/or contacts with Authority staff regarding this IFB are to be directed to the following Contract Administrator:

Contracts Administration and Materials Management Department
600 South Main Street
P.O. Box 14184
Orange, CA 92863-1584
Phone: 714.560.5670, Fax: 888.404.6282
Email: gvalle@octa.net

Commencing on the date of the issuance of this IFB and continuing until award of the contract or cancellation of this IFB, no bidder, subcontractor, lobbyist or agent hired by the proposer shall have any contact or communications regarding this IFB with any Authority's staff; member of the evaluation committee for this IFB; or any contractor or consultant involved with the procurement, other than the Contract Administrator named above or unless expressly permitted by this IFB. Contact includes face-to-face, telephone, electronic mail (e-mail) or formal written communication. Any bidder, subcontractor, lobbyist or agent hired by the bidder that engages in such prohibited communications may result in disqualification of the bidder at the sole discretion of the Authority.

E. CLARIFICATIONS OF SPECIFICATIONS AND APPROVED EQUALS

1. Specifications Review

Should a bidder find discrepancies in, or omissions from, the drawings or specifications, or be in doubt as to their meaning, the bidder shall notify the Authority in writing in accordance with item 3 ("Submitting Requests"), below. Should it be found that the point in question is not clearly and fully set forth; a written addendum clarifying the matter will be sent to all firms registered on CAMM NET under the commodity codes specified in the IFB.

2. Preference for Materials

In accordance with the California Public Contract Code Section 3400, reference to any equipment, material, article or patented process, by trade name, make, or catalog number, shall not be construed as limiting competition. In those cases where the specifications call for a designated material, product, or service by specific brand or trade name and there is only one brand or trade name listed, the item involves a unique or novel product application required to be used in the public interest or is the only brand or trade name known to the Authority.

Where the specifications or drawings identify any material, product or service by one or more brand names, whether or not “or equal” is added, and the bidder wishes to propose the use of another item as being equal, approval shall be requested as set forth in below.

3. Submitting Requests

a. All requests for approved equals, clarification of specifications, or questions must be put in writing and must be received by the Authority no later than 5:00 p.m., on March 22, 2024.

b. Requests for approved equals, clarifications, questions must be clearly labeled, "Written Questions". The Authority is not responsible for failure to respond to a request that has not been labeled as such.

c. Any of the following methods of delivering written questions are acceptable as long as the questions are received no later than the date and time specified above:

1. U.S. Mail: Orange County Transportation Authority, P.O. Box 14184, Orange, California 92863-1584.
2. Courier/Overnight: Orange County Transportation Authority, 600 South Main Street, 4th floor, Orange, California 92868
3. Facsimile: (888) 404-6282.
4. E-Mail: gvalle@octa.net

d. Any request for an approved equal or clarification of the specifications must be fully supported with technical data, test results, or other pertinent information as evidence that the substitute offered is equal to or better than the specification requirements. The burden of proof as to the equality, substitutability, and the compatibility of proposed alternates or equals shall be upon the bidder, who shall furnish all necessary information at no cost to the Authority. The Authority shall be the sole judge as to the equality, substitutability and compatibility of the proposed alternatives or equals.

4. Authority Responses

Responses from the Authority will be posted on CAMM NET, no later than five (5) calendar days before the scheduled date of bid opening. Bidders may download responses from CAMM NET at *https://cammnet.octa.net*, or request responses may be sent via U.S. Mail by e-mailing or faxing the request to Gustavo Valle, Senior Contract Administrator.

To receive e-mail notification of Authority responses when they are posted on CAMM NET, bidders and their subcontractors must be registered on CAMM NET with at least one of the following commodity codes for this solicitation selected as part of the vendor's on-line registration profile:

Category:	Commodity:
Construction	General Contractor
	Metals - Fabricated / Structural
	Painting Contractor
	Roofing Contractor

Inquiries received after 5:00 p.m. on March 22, 2024, will not be responded to.

F. SUBMISSION OF BIDS

1. Date and Time

Bids must be submitted at or before 11:00 a.m., April 8, 2024.

Bids received after the time due will be rejected without consideration or evaluation.

Bids will be publicly opened in the Authority's Administration Office, 600 South Main Street, Orange, California 92863 in Conference Room 101 at the submission date and time indicated above. Participation via teleconference will also be available. Bidders may join or call-in using the following credentials:

- Click here to join the meeting
- OR Call-in Number: +1 916-550-9867
- Conference ID: 464 992 952#

2. Address

Bids delivered in person or by a means other than the U.S. Postal Service shall be submitted to the following:

Orange County Transportation Authority
Contracts Administration and Materials Management (CAMM)
600 South Main Street, (Lobby Receptionist)
Orange, California 92868
Attention: Gustavo Valle, Senior Contract Administrator

Or bids delivered using the U.S. Postal Services shall be addressed as follows:

Orange County Transportation Authority
Contracts Administration and Materials Management (CAMM)
P.O. Box 14184
Orange, California 92863-1584
Attention: Gustavo Valle, Senior Contract Administrator

3. Bid Booklet and Identification of Bids

Bids must be submitted on the forms provided in the Bid Booklet (Book 2 of 2) that accompanies this IFB. Bids shall include properly completed bidding forms. The bid forms must be enclosed in a sealed package clearly marked as follows:

IFB 4-2093, "BUILDING REPAIRS AT SANTA ANA BUS BASE"

Bidder shall be entirely responsible for any consequences, including disqualification of the bid, resulting from any inadvertent opening of unsealed or improperly identified packages. It is the bidder's sole responsibility to see that its bid is received as required.

G. PRE-CONTRACTUAL EXPENSES

The Authority shall not, in any event, be liable for any pre-contractual expenses incurred by bidder in the preparation of its bid. Bidder shall not include any such expenses as part of its bid.

Pre-contractual expenses are defined as expenses incurred by bidder in:

1. Preparing a bid in response to this IFB;
2. Submitting that bid to the Authority;
3. Negotiating with the Authority any matter related to this bid; and
4. Any other expenses incurred by bidder prior to date of award, if any, of the Agreement.

H. JOINT BIDS

Where two or more firms desire to submit a single bid in response to this IFB, they should do so on a prime-subcontractor basis rather than as a joint venture. The Authority intends to contract with a single firm and not with multiple firms doing business as a joint venture.

I. TAXES

Bids are subject to State and Local sales taxes. However, the Authority is exempt from the payment of Federal Excise and Transportation Taxes. Contractor is

responsible for payment of all taxes for any goods, services, processes, and operations incidental to or involved in the contract.

J. BID SECURITY FORMS

Bids shall be accompanied by a certified or cashier's check, or an acceptable bid bond for an amount not less than ten percent (10%) of the bid, made payable to the order of the Orange County Transportation Authority. A corporate surety (not an individual surety), registered in the state of California and registered to do business in the county of Orange must issue bid bonds. Said check or bond shall be given as a guarantee that the bidder will enter into a contract if awarded the work and in case of refusal or failure to enter into said contract, the check or bond, as the case may be, shall be forfeited to the Authority.

If a bid bond is provided, the Bidder is encouraged to use the Bid Security Bid Bond form provided by the Authority in this IFB. A Bidder may use a standard printed bond form of any bonding company acceptable to the Authority, in lieu of the Authority's Bid Security Bid Bond form, provided that the bid bond contains all of the security stipulations in the Authority's Bid Security Bid Bond form. If all such stipulations are not included, the bid will be deemed as non-responsive.

K. WITHDRAWAL OF BIDS

Bidders may withdraw its bid at any time prior to the time set for opening of bids by means of written request signed by the bidder or its proper authorized representative. Such written request shall be delivered to the Contracts Administrator at the address noted in the cover notice of this IFB.

L. PREVAILING WAGES

This project is funded under a financial assistance contract by the U.S. Department of Transportation and is subject to all conditions of the Davis-Bacon Act (40 U.S.C. 3141–48), as supplemented by the Department of Labor regulations 29 CFR part 5, and the Labor Code of the State of California commencing in Section 1770 et. seq. It is required that all mechanics and laborers employed or working at the site be paid not less than the current basic hourly rates of pay and fringe benefits. Wage rates are available at the Authority's Offices, which shall be made available to any interested party upon request, or on the internet at:

http://www.dir.ca.gov/OPRL/statistics_research.html and

https://sam.gov/content/wage-determinations

A copy of said rates shall be posted at each job site during the course of construction.

Bidders shall utilize the relevant prevailing wage determinations in effect on the first advertisement date of the Notice Inviting Sealed Bids. In the event there are any differences between the minimum wage rates as determined by the United States Secretary of Labor and those determined by the State of California, the highest rate must be paid.

This Agreement is subject to compliance monitoring and enforcement by the Department of Industrial Relations. The Department of Industrial Relations shall monitor and enforce compliance with applicable prevailing wage requirements for this Agreement. The reporting requirements may be found at **https://www.dir.ca.gov/Public-Works/Contractors.html**. Bidder is responsible for complying with all requirements of the Department of Industrial Relations, including filing electronic payroll reports.

A contractor or subcontractor will not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work on a public works project unless registered with the Department of Industrial Relations pursuant to Labor Code Section 1725.5. It is not a violation of Labor Code Section 1771.1 for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

A contractor or subcontractor will not be qualified to bid on, be listed in a bid proposal, subject to Section 6190 of the public Contract Code, or engage in the performance of any contract for public work on a public works project if the contractor or subcontractor is ineligible to perform work pursuant to Section 1777.1 or 1777.7 of the Labor Code.

A bid submitted by a contractor or subcontractor will not be accepted or entered into without proof of the contractor or subcontractor's current registration to perform public work pursuant to Labor Code Section 1725.5.

M. SUBCONTRACTORS AND ASSIGNMENTS

The successful bidder shall perform work equivalent to **at least ten percent (10%) of the total amount of the construction work** at the site; and, perform the work on the site with its own staff.

Pursuant to the provisions of the California Public Contract Code Section 4104, every bidder shall in the bid set forth:

1. The name, business address, California contractor license number, and public works contractor registration number issued pursuant to Section 1725.5 of the Labor Code of each subcontractor who will perform work or labor or render service to the bidder in or about the work in an amount in excess of one-half of one percent (1/2 of 1 %) of the bidder's total bid; and

2. The portion of the work that will be done by each subcontractor. The bidder shall list only one subcontractor for each portion of work as defined by the bidder in its bid.

3. The dollar amount of the work, which will be done by each such subcontractor.

Bidder shall complete Exhibit D "List of Subcontractors" with the above requested information.

If a subcontractor's California contractor license number or public works contractor registration number are submitted incorrectly in the bid, it will not be grounds for filing a bid protest or grounds for considering the bid nonresponsive if the corrected subcontractor's California contractor license number is submitted to the Authority within 24 hours after the bid opening.

If the bidder fails to specify a subcontractor for any portion of the work to be performed under the contract in excess of one-half of one percent (1/2 of 1 %) of the bidder's total bid, or if the bidder specifies more than one (1) subcontractor for the same portion of the work to be performed under the contract in excess of one-half of one percent (1/2 of 1%) of the bidder's total bid, the bidder agrees to perform that portion. **The successful bidder shall not, without the express written consent of the Authority, either:**

1. Substitute any person, firm, or corporation as subcontractor in place of the subcontractor designed in the original bid; or

2. Permit any subcontract to be assigned or transferred; or

3. Allow it to be performed by anyone other than the original subcontractor listed in the bid.

Each bidder shall set forth in its bid the name and location of the place of business address of each subcontractor certified as a Disadvantaged Business Enterprise who will perform work or labor or render service to the prime contractor in connection with the performance of the contract.

Bidder shall not assign any interest it may have in any Agreement with the Authority, nor shall bidder assign any portion of the work under any such Agreement with a value in excess of one-half of one percent (1/2 of 1%) of Agreement price to be sub-contracted to anyone other than these subcontractors listed in Exhibit D in the "List of Subcontractors," except by prior written consent of

Authority. Authority's consent to any assignment shall not be deemed to relieve bidder of its obligations to fully comply with its obligations under its Agreement with the Authority. Bidder with its own forces shall perform minimum of ten percent (10%), calculated as a percentage of the total cost of the project, under this Agreement. Bidder shall also include in its subcontract agreements the provisions of its Agreement with Authority including the stipulation that each subcontractor shall maintain adequate insurance coverage compatible to the insurance coverage required of the bidder.

N. BIDDER'S LICENSING REQUIREMENTS

In conformance with the current statutory requirements of Section 7028.15 of the Business and Professions Code of the State of California, regarding submission of a bid without a license, the bidder shall provide as part of the bid a valid State of California license number, class or type and date of expiration.

Furthermore, the bidder shall ensure that all subcontractors fully comply with the appropriate licensing requirements. The bidder shall also certify that all information provided and representations made in the bid are true and correct, and made under penalty of perjury. Bidders shall provide this information on Exhibit D, "List of Subcontractors" presented in the IFB. Failure to provide the information on the certification form or elsewhere as part of the bid shall render the bidder nonresponsive to this solicitation and will result in the rejection of the bid.

O. PERMITS AND INSPECTION COSTS

Successful bidder shall procure all permits and licenses; pay all charges, assessments and fees, as may be required by the ordinances and regulations of the public agencies having jurisdiction over the areas in which the work is located, and shall comply with all the terms and conditions thereof and with all lawful orders and regulations of each such public agency relating to construction operations under the jurisdiction of such agency.

P. LIQUIDATED DAMAGES

In the event bidder, after entering into an Agreement with the Authority, fails to complete the work within the time specified in the Agreement, the bidder will be required to pay the Authority the amount of **$300.00 per calendar day** of delay as agreed to liquidated damages.

Q. PROTEST PROCEDURES

The Authority has on file a set of written protest procedures applicable to this solicitation that may be obtained by contacting the Contract Administrator responsible for this procurement. Any protest filed by a bidder in connection with this IFB must be submitted in accordance with the Authority's written procedures.

R. CONTRACT AWARD

Any contract awarded as a result of this IFB, will be awarded to the lowest responsive and responsible bidder and shall be on a lump sum basis, in accordance with the requirements of this IFB. The contract to be awarded is the Agreement presented in Section VI of this IFB.

S. EXECUTION OF CONTRACT

The successful bidder shall submit to the Authority the required contract bonds, "Guaranty" and acceptable insurance certificates within ten (10) calendar days after notification of contract award from the Authority. Failure to sign the contract and submit applicable bonds, "Guaranty", and acceptable insurance certificates within the specified time shall be cause to cancel the award and the forfeiture of the Bid Bond. Transfers of contract, or of interest in contracts, are prohibited.

T. AUTHORITY'S RIGHTS

1. The Authority reserves the right to accept or reject any and all bids, or any item or part thereof, or to waive any informalities or irregularities in bids.

2. The Authority reserves the right to withdraw or cancel this IFB at any time without prior notice. The Authority makes no representations that any contract will be awarded to any bidder responding to this IFB.

3. The Authority reserves the right to issue a new IFB for the project.

4. The Authority reserves the right to postpone the bid opening for its own convenience.

5. Each bid will be received with the understanding that acceptance by the Authority of the bid to provide the goods and services described herein shall constitute a contract between the bidder and Authority which shall bind the bidder on its part to furnish and deliver at the prices given and in accordance with conditions of said accepted bid and specifications.

6. The Authority reserves the right to investigate the qualifications of any bidder, and/or require additional evidence of qualifications to perform the work.

7. Submitted IFBs are not to be copyrighted.

U. PUBLIC RECORDS AND INFORMATION

Bids received by Authority are considered public information and will be made available to the public if requested to do so.

V. CONFLICT OF INTEREST

All bidders responding to this IFB must avoid organizational conflicts of interest, which would restrict full and open competition in this procurement. An organizational conflict of interest means that due to other activities, relationships or contracts, a bidder is unable, or potentially unable to render impartial assistance or advice to the Authority; a bidder's objectivity in performing the work identified in the Project Specifications is or might be otherwise impaired; or a bidder has an unfair competitive advantage. Conflict of Interest issues must be fully disclosed in the bidder's bid.

W. CODE OF CONDUCT

Bidders agree to comply with the Authority's Code of Conduct as it relates to Third-Party contracts, which is hereby referenced and by this reference is incorporated herein. Bidders agree to include these requirements in all of its subcontracts.

X. SAFETY

The complete safety requirements for this IFB are included in Section X: Level 3 Safety Specifications Exhibit H. The Contractor will be required to demonstrate compliance with all requirements of the Safety Specifications after Notice to Proceed but prior to mobilization. These requirements include, but are not limited to, an onsite Health Safety and Environmental (HSE) representative to be present at all times during construction. The representative must have a current Board of Certified Safety Professionals (BCSP) certification and a minimum of five years of experience enforcing HSE compliance. BCSP certification requirements may be found at: https://www.bcsp.org/Safety-Certifications.

SECTION II: INSTRUCTIONS TO BIDDING FORMS

SECTION II. INSTRUCTIONS TO BIDDING FORMS

The Bidder shall complete all the forms identified below, and contained in the Bid Booklet Book 2 of this IFB. The bid may not contain exceptions to or deviations from the requirements of this IFB.

A. BID FORM

The bidder must complete and execute the Bid Form, which must be submitted in its entirety. Failure to submit the executed Bid Form in its entirety will result in the bid being non-responsive. In addition to providing the lump sum bid, the bidder affirms the Bid Form statements.

B. BID SECURITY FORM - BID BOND

The bidder shall include the Bid Security Form and include the appropriate bid bond or cashier check with the bid. If a bid bond is provided, the Bidder is encouraged to use the Bid Security Bid Bond form provided by the Authority in this IFB. A Bidder may use a standard printed bond form of any bonding company acceptable to the Authority, in lieu of the Authority's Bid Security Bid Bond form, provided that the bid bond contains all of the security stipulations in the Authority's Bid Security Bid Bond form. If all such stipulations are not included, the bid will be deemed as non-responsive.

C. INFORMATION REQUIRED OF BIDDER

Bidder must provide all the information requested in this form.

D. NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY (EXECUTIVE ORDER 11246) (NO FORM REQUIRED)

The bidder shall include the Notice of Requirement for Affirmative Action to Ensure Equal Employment Opportunity provides notice to Bidder regarding the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications".

E. BIDDER'S CERTIFICATE OF COMPLIANCE - WORKERS' COMPENSATION INSURANCE

In conformance with current statutory requirements of Section 1860, et. seq., of the Labor Code of the State of California, bidder shall execute the bidder's Certificate of Compliance Regarding Workers' Compensation Insurance.

F. BIDDER'S CERTIFICATE OF COMPLIANCE - BUSINESS AND PROFESSIONS CODE SECTION 7028

Bidder shall execute the Bidder's Certificate of Compliance Regarding State of California Business and Professions Code Section 7028.15.

G. LIST OF SUBCONTRACTORS FORM

Bidder shall complete Exhibit D, which lists all subcontractors performing work in excess of one-half of one percent (½ of 1%) of the bid amount per the instructions set forth in Section I "Instructions to Bidders".

H. CERTIFICATION REGARDING DEBARMENT, SUSPENSION AND OTHER RESPONSIBILITY MATTERS - PRIMARY PARTICIPANT AND LOWER-TIER PARTICIPANTS (NO FORM REQUIRED)

Unless otherwise permitted by law, any person or firm that is debarred, suspended, or voluntarily excluded may not take part in any federally funded transaction, as either a participant or a principal, during the period of debarment, suspension, or voluntary exclusion. Accordingly, the Authority may not enter into any transaction with such debarred, suspended, or voluntarily excluded persons or firms during such period, in accordance with 2 CFR part 180, as adopted and supplemented by 2 CFR part 1200. Debarment is defined in 2 CFR Section 180.925, suspension is defined in 2 CFR Section 180.1015, and voluntary exclusion or voluntary excluded is defined in 2 CFR Section 180.1020. (These provisions apply to each contract and any tier, equal or greater than $25,000).

I. STATUS OF PAST AND PRESENT CONTRACTS FORM

Bidder is required to complete and sign the form entitled “Status of Past and Present Contracts” provided in this IFB and submit as part of the bid. Bidder shall identify 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. 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.

A separate form must be completed for each identified contract. Each form must be signed by the Bidder confirming that the information provided is true and accurate. Bidder is required to submit one copy of the completed form(s) as part of its bid.

J. CERTIFICATION OF NON-COLLUSION

This form requires the Bidder to certify that the bid is not collusive or a sham. This form is to be signed, dated and is part of the bid package in Book 2 of 2.

K. DISADVANTAGED BUSINESS ENTERPRISE

In conformance with Title 49 CFR Part 26, "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs," bidders must complete the following forms:

- DBE Participation Commitment Form
- DBE Letter of Acknowledgement and Commitment (required from each proposed DBE firm listed on the DBE Participation Commitment Form)
- DBE Information – Good Faith Efforts (if sufficient participation to meet the DBE goal has not been proposed on the "DBE Participation Commitment Form")
- Bidders List

L. IRAN CONTRACTING ACT CERTIFICATION

This form requires the Bidder to certify that the Bidder is not engaged in specified investment activities in the energy sector of Iran. (Required if the bid is equal to or greater than $1,000,000).

M. "BUILD AMERICA, BUY AMERICA" REQUIREMENTS

Bidders are advised that the requirements of the Build America, Buy America Act, Pub. L. No. 117-58, Sections 70901 et seq., are applicable to this IFB, which provides that no Federal funds may be obligated unless all steel and iron, manufactured products, and construction materials used in the project are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. The successful Bidder must comply with the domestic content procurement requirements set forth therein.

Each Bidder is also required to complete the form titled "Bidder's Certificate Regarding 'Buy America' Requirements for Steel, Iron, or Manufactured Products." This form requires Bidder to certify that it will meet the requirements of 49 U.S.C. 5323(j) and the applicable regulations in 49 C.F.R. Part 661.

N. CERTIFICATION OF RESTRICTIONS ON LOBBYING

This form requires the bidder to certify compliance with the lobbying requirements of 31 U.S.C. Section 1352 and the applicable regulations under 49 CFR part 19 and 20. (Required if the bid is equal or greater than $100,000). Failure to submit the executed Form will render the bid non-responsive.

O. DISCLOSURE OF LOBBYING ACTIVITIES

This form requires the bidder to disclose lobbying activities pursuant to the requirements of 31 U.S.C. Section 1352. If bidder does not have any reportable activities to disclose, they shall check the box entitled “No Reportable Activities” on the attached Standard Form-LLL “Disclosure of Lobbying Activities” and complete Section 16 of the form. The certifying official shall sign and date the form, print his/her name, title and telephone number. Failure to submit the executed Form will render the bid non-responsive.

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 4-2093**, **"BUILDING REPAIRS 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 Allowance	Lump Sum Price
1	Allowance - Mobile Bus Washing Services	$100,000.00
2	Allowance - Unidentified Structural Related Repairs	$35,000.00
3	Base Work- Building Repairs at Santa Ana Bus Base	$_____
	Total Lump Sum 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 one hundred twenty (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 representation 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. If awarded a contract resulting from this bid, Bidder will cooperate with the Authority in meeting commitments and goals with regard to the maximum utilization of DBE firms and will use its best efforts to ensure that the DBE firm shall have the maximum practicable opportunity to compete for subcontract work under such contract.

12. 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 4-2093**, **"BUILDING REPAIRS 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__

The above bid includes

Addenda Nos. _____

Bidder _____

Signature _____

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 4-2093**, **"BUILDING REPAIRS 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__.

PRINCIPAL	SURETY
_____	_____
(Principal Name) (Seal)	(Surety Name) (Seal)
By: _____	By: _____
(Signature)	(Signature)

_____	_____
(Print Name and Title)	(Print Name and Title)
By: _____	By: _____
(Signature)	(Signature)
_____	_____
(Print Name and Title)	(Print Name and Title)
Principal Address and Telephone:	Surety Address and Telephone:
_____	_____
_____	_____
_____	_____
_____	_____

Affix Corporate Seals
Attach Notary Acknowledgments for All Signatures
Attach Power-of-Attorney if Executed by Attorney-in-Fact

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 that the security company's printed standard form contains all of the security stipulations that protect the Authority in the above bond 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 4-2093, "BUILDING REPAIRS 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 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."

Name of Bidder/Contractor:_____

Signature: _____

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 Declaration to be Executed by Bidder and Submitted with Bid

To the Orange County Transportation Authority
The undersigned declares:

I am the _____ of _____, the party making the foregoing bid. In accordance with Title 23 United States Code Section 112 and Public Contract Code Section, 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. The bid is genuine and not collusive or sham. 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. 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. All statements contained in the bid are true. 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, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____ (date), at _____ (city), _____ (state).

Name of Bidder:_____

Signature:_____

Date:_____

DBE PARTICIPATION COMMITMENT FORM

THIS FORM MUST BE COMPLETED AND SUBMITTED WITH THE BID AS A CONDITION OF DBE RESPONSIVENESS

NOTE: Refer to instructions on the reverse side of this form.

Bidder to Complete this Section

1. IFB No.: _____

2. Project Name/Description: _____

3. Prime Bidder Name: _____

4. Contract DBE Goal %: _____

5. Bidder's Total Bid Price _____

Required DBE Commitment Information

6. DBE Firm (Name and Address)	**7.** DBE Certification Number	**8.** Description of Scope of Services/Work	**9.** Bid Item (#)	**10.** Dollar Value ($) of Participation	**11.** Dollar Value ($) of Eligible DBE Participation/ Commitment

Note: **As a condition of responsiveness, the bidder is required to submit no later than 4:00 p.m. on the 2nd business day after the bid due date a DBE Letter of Acknowledgement and Commitment signed and dated from each DBE listed in Column 6 acknowledging that the DBE is participating in the contract for the specified dollar value ($) and scope of work.**

The dollar amount and scope committed in the DBE Letter of Acknowledgement and Commitment and the amount/scope shown on this form MUST match identically.

12. Total Dollar Value ($) of Eligible DBE Participation

$ _____

13. Eligible DBE Participation Represented as a Percentage (%) of Bidder's Total Bid Price

_____%

Bidder Assurance: The bidder certifies that information on this form is complete and accurate, that it has verified the listed DBE(s) certification status and is only crediting eligible DBE participation towards meeting the contract DBE goal.

_____	_____	_____
14. Preparer's Name (Print)	15. Preparer's Signature	16. Preparer's Title
_____	_(___)_____	_____
17. Date	18. Telephone No.	19. Email Address

INSTRUCTIONS - DBE Participation Commitment Form

Bidder is required to ensure all information is complete and accurate:

1. **IFB No.** - Enter the IFB Number.
2. **Project Name/Description** - Enter the name and/or description of the project.
3. **Prime Bidder Name** - Enter the bidder's firm name.
4. **Contract DBE Goal %** - Enter the contract DBE goal percentage.
5. **Bidder's Total Bid Price –** Enter the bidder's total bid price.
6. **DBE Firm** – Enter name and address of the proposed DBE firm. Identify all DBE firms being claimed for credit, regardless of tier.
7. **DBE Certification Number -** Enter the DBE's certification identification number. All DBEs must have a valid DBE certification at time of bid opening.
8. **Description of Scope of Services/Work –** Enter the scope of services/work for each DBE firm listed to participate on this contract.
9. **Bid Item (#) -** Enter bid item number.
10. **Dollar Value ($) of Participation -** Enter the total dollar value of participation for each listed DBE firm.
11. **Dollar Value ($) of Eligible DBE Participation/Commitment** - Enter the dollar value of participation eligible to count towards meeting the contract DBE goal. This value should exclude work performed by lower tier subcontractors and account for the DBE's capacity based on their certification type in conformance with the DBE crediting provisions set forth in Title 49 CFR Part 26.55.
12. **Total Dollar Value ($) of Eligible DBE Participation -** Enter the sum of all eligible participation listed in column 11.
13. **Eligible DBE Participation Represented as a Percentage (%) of Bidder's Total Bid Price -** Enter the corresponding percentage of the total eligible DBE participation that the bidder is counting towards the bidder's DBE goal commitment (Formula: Item (12) Total Value of Eligible DBE Participation / Item (5) Bidder's Total Bid Price = Bidder's DBE Goal Commitment Percent (%)).
14. **Preparer's Name (Print)** - Clearly enter the name of the authorized person preparing the form on behalf of the bidder.
15. **Preparer's Signature** - Authorized person's signature.
16. **Preparer's Title** - Enter the position/title of the authorized person signing the form on behalf of the bidder.
17. **Date** - Enter the date the form is signed.
18. **Telephone No.** - Enter the area code and telephone number of the authorized person signing the form on behalf of the bidder.
19. **Email Address -** Enter the email address of the authorized person signing the form on behalf of the bidder.

NOTE: A firm is only eligible to count towards DBE participation in the NAICS codes contained within its California Unified Certification Program (CUCP) DBE Profile. Bidders are to verify that listed DBE's certification contains the NAICS codes relevant to the scope they are being listed to perform.

DBE LETTER OF ACKNOWLEDGMENT AND COMMITMENT

1. IFB NO.: _____

2. Project Name/Description: _____

3. Bidder: _____

4. DBE Commitment Information

(A) Description of work to be performed by DBE firm (include bid item number on the DBE Participation Commitment Form as applicable):

_____

_____

_____

(B) Dollar value of this work $ _____

5. DBE ACKNOWLEDGMENT*

I acknowledge that my firm has been listed by the Bidder named above, and is committed, to perform the scope and portion of work (A and B) stated above.

DBE Firm's Name: _____

Name: _____

Signature: _____

Title: _____

Telephone: _____

*If the bidder does not receive award of the prime contract, any and all representations in this letter of Acknowledgment and Commitment shall be null and void.

This form may be used to fulfill the DBE Participation Commitment Letter requirement as stated in the IFB.

INSTRUCTIONS - DBE LETTER OF ACKNOWLEDGMENT AND COMMITMENT

Bidder is required to ensure all information is complete and accurate:

1. IFB No. - Enter the IFB Number.
2. Project Name/Description - Enter the name and/or description of the project.
3. Bidder Name - Enter the bidder's firm name.
4A. Description of work - Scope of work to be performed that will be credited towards DBE participation. To include bid item number on the DBE Participation Commitment Form as applicable.
4B. Dollar Value - Enter the total dollar value of participation for the DBE firm.
5. DBE Acknowledgement – DBE to provide firm name, authorized person's name, signature, title, and telephone number if they have been notified that they were listed for the scope and value reflected in #4.

NOTE: If the bidder does not receive award of the prime contract, any and all representations in the letter of Acknowledgment and Commitment shall be null and void.

DBE INFORMATION - GOOD FAITH EFFORTS

IFB No: _____ Bid Opening Date _____

The Orange County Transportation Authority (Authority) established a Disadvantaged Business Enterprise (DBE) goal of __14___% for this contract. The information provided herein shows that a good faith effort was made by _____(Bidder).

Bidder shall submit the following information to document adequate good faith efforts to the Authority no later than 4:00 p.m. on the 2nd business day after the Authority's bid due date, or as otherwise specified in the solicitation. Although not required, bidder should submit the following information even if the "DBE Participation Commitment Form" indicates that the bidder has met the DBE goal. This will protect the bidder's eligibility for award of the contract if Authority determines that the bidder failed to meet the goal for various reasons, e.g., a DBE firm was not certified at bid opening, or the bidder made a mathematical error.

Submittal of only the form may not provide sufficient documentation to demonstrate that adequate good faith efforts were made.

The following good faith efforts items (A through H) shall be performed prior to bid submission. Bidder to complete the following items in sufficient detail to effectively demonstrate that good faith efforts were undertaken to meet the established DBE goal:

A. Items of Work the Bidder Made Available to DBE Firms; a description of work items and approximate dollar amounts made available to DBE firms by the bidder, value of work items as a percentage of total contract work, breakdown of bid items or larger scopes of contract work (including those items normally performed by the bidder with its own forces) into economically feasible units to facilitate DBE participation sufficient to meet the DBE contract goal. It is the bidder's responsibility to demonstrate that sufficient work was made available to facilitate DBE participation as follows (Provide documents that sufficiently evidence the efforts detailed below):

Description of Work Item	Bidder Normally Performs (Y/N)	Unbundled from Larger Scope (Y/N) If Yes, List Scope and/or Bid Item (#)	Amount ($)	Percentage of Contract

B. Solicitation Effort Documentation; the names and dates of written notices sent to certified DBEs soliciting bids for this project and the dates and methods used to following up initial solicitations to determine with certainty whether the DBEs were interested (attach all copies of solicitation, telephone records, fax confirmations, email communications, etc.), amount of DBEs to repond, documentation to demonstrate the DBE firms were provided information about the contract (location of project, contract number, bid date, items of work made available and contact information) in the Invitation to Bid from the bidder, the bidder solicited through all reasonable means (e.g. attendance at pre-bid meetings, advertising and written notices) the interest of all certified DBEs who have the capability to perform the work of the contract, bidder to provide proof of aforementioned items, and DBEs in the market area for the work identified in 'Item A' as follows:

DBE Firm	Contact Name/Title	Method of Solicitation	Date of Initial Solicitation	Date of Follow-Up Solicitation	Response/ Interested in Bidding

(Note: Solicitations should occur at a minimum no later than 14 calendar days prior to the Authority's bid due date and follow up to the solicitation should allow DBE firms reasonable time to respond). DBE firms solicited must be advised if the original bid date has been extended.

C. Rejected DBE Bid Documentation; the names, addresses, phone numbers, and amount of rejected DBE firms, the reasons for the bidder's rejection of the DBE firms, the firms selected and accepted for that work (attach all copies of quotes from the firms involved inclusive of a detailed cost breakdown if opted to self-perform work) and the price difference for each DBE if the selected firms is not a DBE, include an explanation of quote(s) rejected.

D. Publication Efforts Made to Advertise the Projects to Solicit DBE Participation; names and dates of each publication in which a request for DBE participation for this project was placed by the bidder (attach copies of advertisements or proof of publications). Publications should be placed at a minimum 14 calendar days before the Authority's bid due date. If bid due date is extended, bidder is to re-advertise new bid due date.

Publications	Type of Publication (Trade/General/ Minority/Focus)	Dates of Advertisement	Duration of Advertisement	Readvertisement (Bid-Due Date Extension)

E. Agencies, Organizations, or Groups Contacted to Provide Assistance in Contracting, Recruiting, and Using DBEs; the names of agencies, organizations or groups contacted to provide assistance in contacting, recruiting and using DBE firms (Attach copies of requests to agencies, responses received and efforts made by the bidder in response).

F. Efforts to Provide Information About the Plans, Specifications, and Contract Requirements; efforts made to assist interested DBEs in obtaining necessary materials, or related assistance or services, bidder to provide evidence of effort.

G. Assistance with Lines of Credit, Insurance, and/or other Services; efforts made to assist interested DBEs in obtainting bonding, lines of credit or insurance, and any technical assistance or information related to the plans, specifications and requirements for the work which was provided to DBEs, bidder to provide a list of any assistance provided to prospective and bided DBEs:

H. Additional Data to Support a Demonstration of Good Faith Efforts; in determining whether a bidder made adequate good faith efforts, the Authority will take into account the performance of other bidders in meeting the DBE contract goal. Attach any additional information to support demonstration of good faith in this section:

NOTE: USE ADDITIONAL SHEETS AS NECESSARY TO DEMONSTRATE RESPONSIVENESS.

Bidders List

The Department of Transportation requires the Authority to create and maintain a "Bidders List" containing information about all firms (DBE and Non-DBE) that bid, propose or quote on the Authority's DOT-assisted contracts, in accordance with 49 CFR Part 26.11. The "Bidders List" is intended to be a count of all firms that are participating, or attempting to participate, on DOT-assisted contracts, whether successful or unsuccessful in their attempt to obtain a contract.
The bidder is to complete all requested information for every firm who submitted a bid, proposal or quote, including the primary bidder, and submit this information to the Authority no later than 4:00 p.m. on the 2nd business day after the Authority's bid due date, or as otherwise specified in the solicitation. The Authority will utilize this information to assist in the Authority's DBE goal-setting process.

Prime Name and Location	Type of Work/Services/Materials Provided: NAICS/WCC	Subcontract Amount	Percentage of Bid Item Sub-contracted	Contractor License No. / DIR Reg Number	DBE (Y/N) / DBE Certification ID	Phone: / E-mail:	Annual Gross Receipts
Prime Bidder:							☐ Less than $1 million
							☐ Less than $5 million
Contact Name:							☐ Less than $10 million
							☐ Less than $15 million
Address:							☐ More than $15 million
							Age of Firm: _____yrs.

Subcontractor Name and Location	Type of Work/Services/Materials Provided: NAICS/WCC	Subcontract Amount	Percentage of Bid Item Sub-contracted	Contractor License No. / DIR Reg Number	DBE (Y/N) / DBE Certification ID	Phone: / E-mail:	Annual Gross Receipts
Firm Name:							☐ Less than $1 million
							☐ Less than $5 million
Contact Name:							☐ Less than $10 million
							☐ Less than $15 million
Address:							☐ More than $15 million
							Age of Firm: _____yrs.

Subcontractor Name and Location	Type of Work/Services/Materials Provided:	Subcontract Amount	Percentage of Bid Item Sub-contracted	Contractor License No.	DBE (Y/N)	Phone:	Annual Gross Receipts
	NAICS/WCC			DIR Reg Number	DBE Certification ID	E-mail:	
Firm Name:							☐ Less than $1 million
							☐ Less than $5 million
Contact Name:							☐ Less than $10 million
							☐ Less than $15 million
Address:							☐ More than $15 million
							Age of Firm: _____yrs.
Firm Name:							☐ Less than $1 million
							☐ Less than $5 million
Contact Name:							☐ Less than $10 million
							☐ Less than $15 million
Address:							☐ More than $15 million
							Age of Firm: _____yrs.
Name:							☐ Less than $1 million
							☐ Less than $5 million
Contact Name:							☐ Less than $10 million
							☐ Less than $15 million
Address:							☐ More than $15 million
							Age of Firm: _____yrs.

NOTE: USE ADDITIONAL SHEETS AS NECESSARY TO DEMONSTRATE RESPONSIVENESS TO THE BIDDERS LIST REQUIREMENTS.

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: _____

BIDDER'S CERTIFICATE REGARDING "BUY AMERICA" REQUIREMENTS FOR STEEL, IRON, OR MANUFACTURED PRODUCTS

In order to demonstrate compliance with the Buy America Requirements, Bidder shall complete only one of the two statements below:

The _____
Firm name/principal

hereby certifies that it **will comply** with the requirements of 49 U.S.C. Section 5323(j), and the applicable regulations in 49 CFR Part 661.

_____
Signature

_____
Name

_____
Title

_____
Date

Or:

The _____
Firm name/principal

hereby certifies that it **cannot comply** with the requirements of 49 U.S.C. Section 5323(j), but may qualify for an exception to the requirement pursuant to 49 U.S.C. Section 5323(j)(2), as amended, and the applicable regulations in 49 CFR Part 661.7.

_____
Signature

_____
Name

_____
Title

_____
Date

Revised: 07/28/2023

CERTIFICATION
LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS

A. DEFINITIONS

1. Authority, as used in this clause, means the Orange County Transportation Authority, acting on behalf of the Orange County Transit District.

2. Covered Federal action, as used in this clause, means any of the following Federal actions:

   a. The awarding of any Federal contract.

   b. The making of any Federal grant.

   c. The making of any Federal loan.

   d. The entering into of any cooperative agreement.

   e. The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

3. Indian tribe and tribal organization, as used in this clause, have the meaning provided in Section 450b of the Indian self-determination and Education Assistance Act (25 U.S.C. 450) and include Alaskan Natives.

4. Influencing or attempting to influence, as used in this clause, means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

5. Local government, as used in this clause, means a unit of government in a State and, if chartered, established, or other were recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

6. Officer or employee of an agency, as used in this clause, includes the following individuals who are employed by an agency:

   a. An individual who is appointed to a position in the Government under title 5, United States code, including a position under a temporary appointment.

   b. A member of the uniformed services, as defined in the subsection

101(3), Title 37, United States Code.

c. A special Government employee, as defined in Section 202, Title 18, United States Code.

d. An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, Title 5, United States Code, Appendix section 3.

7. Person, as used in this clause, means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit, or not for profit. This term excludes an Indian tribe, tribal organization or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

8. Reasonable compensation, as used in this clause, means with respect to a regularly employed officer of employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

9. Reasonable payment, as used in this clause means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

10. Recipient, as used in this clause, includes the CONSULTANT and all subcontractors. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

11. Regularly employed, as used in this clause, means, with respect to an officer or employee of a person requesting or receiving by such person for at least 130 working days within one year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within one year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

12. State, as used in this clause, means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and a multi-State regional or interstate entity having governmental duties and powers.

B. PROHIBITIONS

1. Section 1352 of Title 31, United States Code, among other things, prohibits a recipient of a Federal contract, grant, loan or cooperative agreement from using appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or, the modification of any Federal contract, grant, loan, or cooperative agreement.

2. The Act also requires consultant to furnish a disclosure if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan or cooperative agreement.

3. The prohibitions of the Act do not apply under the following conditions:

   a. Agency and legislative liaison by own employees.

      (1) The prohibition on the use of appropriated funds, in subparagraph C.1. of this clause, does not apply in the case of payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

      (2) For purposes of paragraph C.3.a.(1) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.

      (3) The following agency and legislative liaison activities are permitted any time where they are not related to a specific solicitation for any covered Federal action:

      Discussing with an agency (including individual demonstrations) the qualities and characteristics of the person's products or services, conditions or terms of sale, and service capabilities.

      Technical discussions and other activities regarding the application of adaptation of the person's products or services for an agency's use.

(4) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action:

Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and,

Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Public Law 95-507, and subsequent amendments.

(5) Only those services expressly authorized by paragraph C.3.a.(1) of this clause are permitted under this clause.

b. Professional and technical services

(1) The prohibition on the use of appropriated funds, in subparagraph C.1. of this clause, does not apply in the case of:

A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as condition for receiving that Federal action.

Any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission or negotiation of any bid, proposal, or application or that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include contractors and trade associations.

(2) For purposes of paragraph C.3.a.(1) of this clause, professional and technical services shall be limited to advise and analysis directly applying any professional or technical discipline. For

example, drafting of a legal document accompanying a bid or proposal is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission, or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission, or negotiation of a covered Federal action.

(3) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation and any other requirements in the actual award documents.

(4) Only those services expressly authorized by paragraph C.3.a.(1) and (2) of this clause are permitted under this clause.

(5) The reporting requirements of FAR 3.803(a) shall not apply with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

c. Disclosure

(1) The consultant who requests or receives from an agency a Federal contract shall file with that agency a disclosure form OMB standard form LLL, Disclosure of Lobbying Activities, (Attachment to the bid package) if such person has made or had agreed to made any payment using non appropriated funds (to include profits from any covered Federal action), which would be prohibited under subparagraph B.1. of this clause, if paid for with appropriated funds.

(2) The consultant shall file a disclosure form at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under subparagraph II.A. of this clause. An event that materially affects the accuracy of the information reported includes:

A cumulative increase of $25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or

A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(3) The consultant shall require the submittal of a certification, and if required, a disclosure form by any person who requests or receives any subcontract exceeding $100,000 under the Federal contract.

(4) All subcontractor disclosure forms (but not certifications) shall be forwarded from tier to tier until received by the prime consultant. The prime consultant shall submit all disclosures to the District at the end of the calendar quarter in which the disclosure form is submitted by the subcontractor. Each subcontractor certification shall be retained in the subcontract file of the awarding consultant.

d. Agreement

The consultant agrees not to make any payment prohibited by this clause.

e. Penalties

(1) Any person who makes an expenditure prohibited under paragraph a) of this clause or who fails to file or amend the disclosure form to be filed or amended by paragraph d) of this clause shall be subject to civil penalties as provided for by 31 U.S.C. 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.

(2) Consultants may relay without liability on the representation made by their subcontractors in the certification and disclosure

forms.

f. Cost Allowability:

Nothing in this clause is to be interpreted to make allowable or reasonable any costs, which will otherwise be unallowable or unreasonable. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any other provisions.

CERTIFICATION OF RESTRICTIONS ON LOBBYING

I, _____ , hereby certify on behalf (name of bidder/offeror) of

_____ that:
(Firm name)

1. No Federal appropriated funds have been paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer of employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds, other than Federal appropriated funds, have been paid or will be paid to any person for influencing or attempting to influence making lobbying contracts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit the attached Standard Form-LLL, "Disclosure of Lobbying Activities", in accordance with its instructions.

3. If bidder/offeror does not have any reportable activities to disclose, they shall check the box entitled “No Reportable Activities” on the attached Standard Form-LLL “Disclosure of Lobbying Activities” and complete Section 16 of the form. The certifying official shall sign and date the form, print his/her name, title and telephone number.

4. The undersigned shall require that the language of this certification be included in all subcontracts, and that all subcontractors shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance is placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The bidder/offeror, _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the bidder/offeror understands and agrees that the provisions of 31 U.S.C. 3801, et seq. apply to this certification and disclosure, if any.

Executed this _____day of _____,202___

By _____
(Signature of authorized official)

_____
(Title of authorized official)

☐ **NO REPORTABLE ACTIVITIES** *(Bidder/Offeror required to complete Section 16 below.)*

DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OMB 003480045

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action:
☐ a. contract
b. grant
c. cooperative agreement
d. loan
e. loan guarantee
f. loan insurance

2. Status of Federal Action:
☐ a. bid/offer application
b. initial award
c. post-award

3. Report Type:
☐ a. initial filing
b. material changes

For Material Change Only:
year _____ quarter _____
date of last report _____

4. Name and Address of Reporting Entity:
☐ Prime ☐ Subawardee
Tier _____, *if known*:

Congressional District, *if known*:

5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:

Congressional District, *if known*:

6. Federal Department/Agency:

7. Federal Program Name/Description:

CFDA number, *if applicable*: _____

8. Federal Action Number, *if known*:

9. Award Amount, *if known*:

$

10. a. Name and Address of Lobbying Entity (if individual, last name, first name, MI)

b. Individuals Performing Services (including address if different from No 10a) (last name, first name, MI):

(attach Continuation Sheet(s) SF - LLL - A if necessary)

11. Amount of Payment (check all that apply):

$_____ ☐ actual ☐ planned

12. Forum of Payment (check all that apply):
☐ a. cash
☐ b. in-kind; specify nature: _____
value: _____

13. Type of Payment (check all that apply):
☐ a. retainer
☐ b. one-time fee
☐ c. commission
☐ d. contingent fee
☐ e. deferred
☐ f. other specify: _____

14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s) or Member(s) contracted for Payment indicated in Item, 11:

(attach Continuation Sheet(s) SF-LLL-A if necessary)

15. Continuation Sheet(s) SF-LLL-A attached: ☐ Yes ☐ No

16. Information requested through this form is authorized by Code 31 U.S.C. Section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000.00 and not more than $100,000.00 for each such failure.

Signature: _____

Print name: _____

Title: _____

Telephone No: _____ Date: _____

Federal Use Only

Authorized for Local Reproduction
Standard Form - LLL

Approved by OMB 003480045

INSTRUCTIONS FOR COMPLETION OF SF-LLL DISCLOSURE OF LOBBYING ACTIVITIES

This DISCLOSURE FORMS SHALL BE COMPLETED BY the reporting entity, whether Subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Use the SF-LLL-A Continuation Sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.

2. Identify the status of the covered Federal action.

3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.

4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be a prime or subaward recipient. Identify the tier of the subawardee e.g., the first subawardee of the prime is the first tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.

5. If the organization filing the report in item 4 checks "Subawardee" then enter the full name, address city, state, and zip code of the prime Federal recipient. Include Congressional District.

6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency, name if known. For example, Department of Transportation, United State Coast Guard.

7. Enter the Federal program name for description of the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.

8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g. Request for Proposal (RFP) number, Invitation for Bid (IFB) number, grant announcement number, the contract, grant, or loan award number, the application/ proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP DE-90-001."

9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.

10. (a) Enter the full name, address, city, state, and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.

    (b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a.). Enter Last Name, First Name, and Middle Initial (MI).

11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.

12. Check the appropriate box (es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.

13. Check the appropriate box (es). Check all boxes that apply. If other, specify nature.

14. Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in actual contact with Federal officials. Identify the Federal official(s) or employee(s) contacted or the officer(s), employee(s), or Member(s) of Congress that were contacted.

15. Check whether or not a SF-LLL-A Continuation Sheet(s) is attached.

16. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

Public reporting burden for this collection for information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Office of Management and Budget Paperwork Reduction Project (0348-0446), Washington, D.C. 20503.

Approved by
OMB
003480045

DISCLOSURE OF LOBBYING ACTIVITIES CONTINUATION SHEET

Reporting Entity:_____ **Page** _____ **of** _____

Authorized for Local Reproduction

SECTION III: ADDITIONAL CONTRACTUAL EXHIBITS

SECTION III. ADDITIONAL CONTRACTUAL EXHIBITS

The following Exhibits will be attached to and incorporated into the signed Agreement resulting from this IFB.

A. PERFORMANCE BOND

The successful bidder shall furnish at its own expense a Performance Bond (Exhibit E) satisfactory to the Authority in the amount of one hundred percent (100%) of the full amount of the contract as a guarantee of good faith on behalf of the Contractor that the terms of the contract, including all warranty provisions, shall be complied with in every particular. The bond shall be issued by a corporation surety (not an individual surety) required in the state of California and registered to do business in the county of Orange. The bond shall not be issued from a corporation surety that requires a funds control, funds disbursement, or funds administration company for the issuance of the performance bond.

The bond shall specifically provide that if the Contractor, or its subcontractor, fails to fully perform that the surety or sureties will pay for the same in an amount not exceeding the amount specified in the bond and in case suit is brought against the Authority, that the surety will undertake the defense of same.

B. PAYMENT BOND

The successful bidder shall furnish a Payment Bond (Exhibit F) satisfactory to the Authority in the amount of one hundred percent (100%) of the full amount of the contract. Such bonds shall be in effect during the entire term of the contract and warranty and shall be issued directly by a corporate surety (not an individual surety) registered in the state of California and registered to do business in the county of Orange. The bond shall not be issued from a corporation surety that requires a funds control, funds disbursement, or funds administration company for the issuance of the performance bond.

The bond shall specifically provide that if the Contractor fails to pay for amounts due under the Employment Insurance Act that the surety or sureties will pay for the same in an amount not exceeding the amount specified in the bond and in case suit is brought against the Authority, that the surety will undertake the defense of same.

Pursuant to California Civil Code Sections 9550 through 9554, in conjunction with the Bond and Undertaking Law (Code of Civil Procedure Sections 995.010, et. seq.), Bidders must provide the following information as part of their payment bond; a certificate of Authority from the Orange County Clerks Office indicating that the insurer has not been surrendered, revoked, canceled, annulled, or suspended or, in the event that it has, that renewed Authority has been granted.

C. GUARANTY

The successful bidder shall also submit to the Authority the executed and notarized Guaranty form (Exhibit G) in this IFB.

All forms must be completed and submitted to the Contract Administrator responsible for this procurement within ten (10) calendar days of award notice by the Authority. Failure to submit the completed and signed forms will result in cancellation of the award.

D. CONTRACT CHANGE ORDER

The Authority's Contract Change Order form (Exhibit H) be attached to and incorporated into the signed Agreement resulting from this IFB.

PERFORMANCE BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, _____
hereinafter referred to as "Contractor", as principal, and _____
as surety, are held and firmly bound unto the Orange County Transportation Authority, State of California, in the sum _____
Dollars, ($_____), lawful money of the United States of America, for the payment of which sum, well and truly to be made, we bind ourselves, jointly and severally, firmly by these presents.

The condition of the foregoing obligation is such that,

WHEREAS, said Contractor has been awarded and is about to enter into the annexed Agreement with the Orange County Transportation Authority for the **IFB 4-2093, "BUILDING REPAIRS AT SANTA ANA BUS BASE,"** as specified in said Agreement, which is incorporated herein to this bond by reference, and is required under the terms of said Agreement to give this bond in connection with the execution thereof;

NOW THEREFORE, if the said Contractor shall well and truly do and perform all of the covenants and obligations of said Agreement on his part to be done and performed at the times and in the manner specified herein, then this obligation shall be null and void, otherwise it shall be and remain in full force and effect; and in the event said Contractor fails to fully perform all requirements in accordance with the terms and conditions of said Agreement, then surety shall enforce performance by the Contractor or shall pay the Orange County Transportation Authority for the same in an amount not exceeding the amount specified in this bond; and, further, if in the event suit is brought upon this bond then said surety shall pay the Orange County Transportation Authority for reasonable attorneys' fees to be fixed by the court;

PROVIDED, that any changes in the work to be done, or the material to be furnished, whether or not made pursuant to the terms of said contract, shall not in any way release either the Contractor or the surety there under, nor shall any extensions of time granted under the provisions of said contract release either the Contractor or the surety, and notice of such changes or extensions of the contract is hereby waived by the surety.

WITNESS our hands this _____ day of _____, 202_.

(SEAL) _____
(Contractor)
By _____

Approved: _____
(Title)

_____ _____
(SEAL) (Surety)
By _____

PAYMENT BOND

KNOW ALL MEN BY THESE PRESENTS:

That we, _____
hereinafter referred to as "Contractor", as principal, and _____
as surety, are held and firmly bound unto the Orange County Transportation Authority, State of California, in the sum _____
Dollars, ($_____), lawful money of the United States of America, for the payment of which sum, well and truly to be made, we bind ourselves, jointly and severally, firmly by these presents.

The Condition of the foregoing obligation is such that,

WHEREAS, said Contractor has been awarded and is about to enter into the annexed Agreement with the ORANGE COUNTY TRANSPORTATION AUTHORITY for the **IFB 4-2093, "BUILDING REPAIRS AT SANTA ANA BUS BASE,"** as specified in said Agreement, which is incorporated herein to this bond by reference, and is required under the terms of said Agreement to give this bond in connection with the execution thereof;

NOW, THEREFORE, if said Contractor or a subcontractor fails to pay any of the persons named in Section 9100 of the Civil Code of the State of California, or amounts due under the Unemployment Insurance Code with respect to work or labor performed under the contract, or for any amounts required to be deducted, withheld and paid over to the Employment Development Department from the wages of employees of said Contractor and subcontractors pursuant to Section 13020 of the Unemployment Insurance Code with respect to such work and labor, then said surety will pay for the same, in an amount not exceeding the sum specified in this bond, and also, in case suit is brought upon this bond, a reasonable attorney's fee, to be fixed by the court. This bond shall inure to the benefit of all persons named in Section 9100 of the Civil Code of the State of California so as to give a right of action to such persons or their assigns in any suit brought upon this bond. This bond shall be subject to and include all of the provisions of Title 3 of Part 64 of Division 4 of the Civil Code of California relating to Payment Bond for Public Works, including but not confined to, Civil Code Sections 8150 – 8154, inclusive and Sections 9550 - 9566, inclusive.

PROVIDED, that any changes in the work to be done or the material to be furnished, whether or not made pursuant to the terms of said contract, shall not in any way release either the Contractor or the surety thereunder, nor shall any extensions of time granted under the provisions of said contract release either the Contractor or the surety, and notice of such alterations or extensions of the contract is hereby waived by the surety.

PAYMENT BOND, PAGE 2

WITNESS our hands this _____ day of _____, 202_.

(SEAL)

_____
(Contractor)

By _____

_____
(Title)

Approved:

_____
(Surety)

_____ By _____
(SEAL)

GUARANTY

The undersigned, as "Contractor," guarantees to the Orange County Transportation Authority that the materials furnished and the completed installation work, and the related work performed by the Contractor pursuant to Agreement No. **C-4-2093, "BUILDING REPAIRS AT SANTA ANA BUS BASE".**

A. For a period of one (1) year from the date of completion, as evidenced by the date of final acceptance of the work by the Authority, the Contractor warrants to the Authority that work performed and materials furnished under this Contract conforms to the Contract requirements and shall be free from any defect in design, material or workmanship performed by the Contractor or its subcontractors or suppliers. Notwithstanding the foregoing, Contractor shall not be liable for any defects of design, material or equipment provided by Authority.

B. Under this guaranty, the Contractor shall remedy at its own expense any such failure to conform or any such defect.

C. Nothing in the above intends or implies that this warranty shall apply to work, which has been abused or neglected by the Authority.

D. This guaranty shall be in addition to the other guarantees and warranties specified in the Agreement and shall be enforceable concurrently with, or in lieu of, said other guarantees.

Should any of the materials or equipment prove defective or should the work as a whole prove defective, due to faulty workmanship, material furnished or methods of installation, or should the work or any part thereof fail to operate properly as originally intended and in accordance with the plans and specifications, due to any of the above causes, all within twelve (12) months after the date on which the work is accepted by the Authority, the undersigned agrees to reimburse the Authority, upon demand, for its expenses incurred in restoring any such equipment or materials replaced and the cost of removing and replacing any other work without cost to the Authority so that said work will function correctly as originally contemplated.

The Authority shall have the unqualified option to make any needed replacements or repairs itself or to have such replacements or repairs done by the undersigned. In the event the Authority elects to have said work performed by the undersigned, the undersigned agrees that the repairs shall be made and such materials as are necessary shall be furnished and installed within a reasonable time after the receipt of demand from the Authority. If the undersigned shall fail or refuse to comply with its obligations under this guaranty, the Authority shall be entitled to all costs and expenses, including attorneys' fees, reasonably incurred by reasons of the said failure or refusal.

GUARANTY, PAGE 2

Subscribed and sworn to before me

this ___ day of _____, 202_

Seal of Notary

_____
Notary Public

_____
Name

_____
Title

_____
Signature

_____
Date

OCTA

CONTRACT CHANGE ORDER

DATE:

PROJECT	OCTA NO	CONTRACT NO.	SUPPL NO.	CHANGE REQUESTED BY:
			N/A	☐ OWNER ☐ CONTRACTOR

TO: TITLE:	ACCOUNT CODE	OTHER ID

You are hereby directed to make the herein described changes from the plans and specifications or do the following work not included in the plans and specifications on this contract. NOTE: This change order is not effective until approved by the Orange County Transportation Authority's Manager of Contracts Administration and Materials Management or in the case of change orders in excess of $210,000.00 the Orange County Transportation Authority's Chief Executive Officer. Describe work to be performed, estimate of quantities, and prices to be paid. Segregate between additional work at contract price, agreed price, and force account. Unless otherwise stated, rates for rental equipment cover only such time as equipment is actually used and no allowance will be made for idle time.

Change Work Description:

MODIFICATIONS DUE TO THIS CHANGE ORDER:

TIME: 0 CALENDER DAYS **PRICE: $0.00** ☐ INCREASE ☐ DECREASE

APPROVAL RECOMMENDED BY: _____ RESIDENT ENGINEER _____ DATE

APPROVAL RECOMMENDED BY: _____ PROJECT MANAGER _____ DATE

APPROVAL RECOMMENDED BY: _____ DIRECTOR OF RAIL PROGRAMS _____ DATE

APPROVAL RECOMMENDED BY: _____ EXECUTIVE DIRECTOR OF CAPITAL PROGRAMS _____ DATE

APPROVAL RECOMMENDED BY: _____ GENERAL COUNSEL _____ DATE

APPROVED BY: _____ CONTRACTS ADMINISTRATION AND MATERIALS MANAGEMENT _____ DATE

APPROVED BY: _____ CHIEF EXECUTIVE OFFICER _____ DATE

We, the Undersigned Contractor, have given careful consideration to the change and hereby agree that we will provide all equipment, furnish all materials, except as may otherwise be noted above, and perform all services necessary for the work above specified, and will therefore accept as full payment the prices shown above. Additionally, we agreed that the compensation (time and cost) set forth in this Change Order comprises the total compensation due the Contractor, and all the Subcontractors and all Suppliers, for the work or change defined in this Change Order, including all impact on any unchanged work. By signing this Change Order, the Contractor acknowledges and agrees, on behalf of themselves, all Subcontractors and all Suppliers, that the stipulated compensation includes payment for all work contained in this Change Order, plus all payments for interruption of schedules, extended overhead costs, delay, and all impact, ripple effect or cumulative impact on all other work under the Contract. The signing of this Change Order shall indicate that the Change Order constitutes the total equitable adjustment owed to the Contractor, all Subcontractors and all Suppliers, and the Contractor agrees to waive all rights, without exception or reservation of any kind whatsoever, to file any further claim or request for equitable adjustment of any type, for any reasonably foreseeable cause that shall arise out of or as a result of this Change Order or the impact of this Change Order on the remainder of the work under this Contract.

ACCEPTED BY:

_____	_____
CONTRACTOR	DATE
_____	_____
NAME	TITLE

If the Contractor does not sign acceptance of this order, their attention is directed to the requirements of the specifications as to proceeding with the ordered work and filing a written protest within the time therein specified.

SECTION IV: DISADVANTAGED BUSINESS ENTERPRISE PROGRAM REQUIREMENTS

DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM REQUIREMENTS

(Revised on 03/06/19)

1.0 DBE Goal

To assist Bidders in ascertaining DBE availability based on the specific items of work associated with this procurement, the Authority has determined that DBEs are ready, willing and able to compete for subcontracting opportunities on this project. The DBE Goal for this contract is 14%.

2.0 DBE Policy and Applicability

In accordance with federal financial assistance agreements with the U.S. Department of Transportation (U.S. DOT), the Orange County Transportation Authority (Authority) has adopted a Disadvantaged Business Enterprise ("DBE") Policy and Program, in conformance with Title 49 CFR part 26, "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs." The contract is subject to the following stipulated regulations. Pursuant to the intent of these Regulations, it is the policy of the Authority to fulfill the spirit and intent of the DBE Program regulations published under U.S. DOT Title 49 CFR, Part 26, by ensuring that DBEs have an equitable opportunity to compete for and participate in Authority's U.S. DOT-assisted contracts and subcontracts. The Authority is firmly committed to its DBE Program objectives, which are designed to:

2.1 Ensure non-discrimination in the award and administration of Authority's DOT-assisted contracts.

2.2 Create a level playing field on which DBEs can fairly compete for the Authority's DOT-assisted contracts.

2.3 Ensure that the DBE Program and Overall Goal are narrowly tailored in accordance with applicable law.

2.4 Ensure that only firms that meet 49 CFR part 26 eligibility standards are permitted to participate as DBEs in the Authority's DBE program.

2.5 Help remove barriers which impede the participation of DBEs in the Authority's U.S. DOT-assisted contracts.

2.6 Promote the use of DBEs in all types of U.S. DOT-assisted agreements and procurement activities conducted by the Authority.

.

2.7 Provide training and other assistance through our resource partners to address capital, bonding and insurance needs.

2.8 Assist in the development of DBE firms that can compete successfully in the marketplace outside the DBE Program; and

2.9 Establish and provide opportunities for DBEs by providing flexibility in the implementation of the Authority's DBE Program.

Bidders shall not discriminate on the basis of race, color, national origin, or sex in the award and performance of subcontracts.

Any terms used in this section that are defined in 49 CFR part 26, or elsewhere in the Regulations, shall have the meaning set forth in the Regulations. In the event of any conflicts or inconsistencies between the Regulations and the Authority's DBE Program with respect to U.S. DOT-assisted contracts, the Regulations shall prevail.

Race-Neutral/Race-Conscious DBE Program Measures

The Authority will utilize both race-neutral and race-conscious means to meet its Overall DBE Program goals.

Race-neutral measures will include but are not limited to conducting outreach, training, providing other resource assistance, and assessing bid delivery schedules to ensure that DBEs interested in bidding for U.S. DOT-assisted solicitations are provided accurate and adequate information about the plans, specifications, and requirements of the solicitation in a timely manner to assist them in responding to the bid. Additional Authority race-neutral measures include ensuring that DBEs and other small business are afforded ample opportunity to participate in the Authority's U.S. DOT-assisted solicitations by unbundling large contracts to make them more accessible to small businesses and requiring or encouraging prime contractors to subcontract portions of work that they might otherwise perform with their own forces. Race-neutral participation also includes any time a DBE obtains a Prime Contract through customary competitive procurement procedures or is awarded a subcontract on a prime contract that does not carry a DBE goal.

In conjunction with the race-neutral measures listed above, the Authority will implement race-conscious measures through the use of contract goals and good faith efforts. When a contract-specific goal is assigned to a project, bidders must demonstrate responsiveness by committing to meet the DBE goal or documenting a bona fide good faith effort to do so, as a condition of award. Contract-specific goals are specifically targeted at DBEs certified through the California Unified Certification Program ("CUCP").

3.0 Definitions

The following definitions apply to the terms as used in these provisions:

3.1 ***"Disadvantaged Business Enterprise ("DBE")"*** means a for-profit small business concern: (a) which is at least 51 percent owned by one or more individuals who are both socially and economically disadvantaged or, in the case of a corporation, in which 51 percent of the stock is owned by one or more such individuals; and (b) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.

3.2 ***"Small Business Concern"*** means a small business as defined pursuant to Section 3 of the Small Business Act and Small Business Administration (SBA) regulations implementing it (13 CFR Part 121) that also does not exceed the cap on average annual gross receipts specified in §26.65(b).

3.3 ***"Socially and Economically Disadvantaged Individuals"*** means any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who has been subjected to racial or ethnic prejudice or cultural bias within American society because of his or her identity as a member of a group and without regard to his or her individual qualities. The social disadvantage must stem from circumstances beyond the individual's control:

3.3.1 Any individual who a recipient finds to be a socially and economically disadvantaged individual on a case-by-case basis. An individual must demonstrate that he or she has held himself or herself out, as a member of a designated group if you require it.

3.3.2 Any individual in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:

3.3.2.1 "Black Americans," which includes persons having origins in any of the Black racial groups of Africa;

3.3.2.2 "Hispanic Americans," which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race;

3.3.2.3 "Native Americans," which includes persons who are enrolled members of a federally or State recognized Indian tribe, Alaska Natives, or Native Hawaiians;

3.3.2.4 "Asian-Pacific Americans," which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma

(Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), Republic of the Northern Marianas Islands, Samoa, Macao, Fiji, Tonga, Kirbati, Tuvalu, Nauru, Federated States of Micronesia, or Hong Kong;

3.3.2.5 "Subcontinent Asian Americans," which includes persons whose origins are from India, Pakistan, and Bangladesh, Bhutan, the Maldives Islands, Nepal or Shri Lanka;

3.3.2.6 Women; and

3.3.2.7 Any additional groups whose members are designated as socially and economically disadvantaged by the SBA, at such time as the SBA designation becomes effective.

3.3.3 Being born in a particular country does not, standing alone, mean that a person is necessarily a member of one of the groups listed in this definition.

3.4 ***"Owned and Controlled"*** means a business: (a) which is at least 51 percent owned by one or more "Socially and Economically Disadvantaged Individuals," or, in the case of a publicly-owned business, at least 51 percent of the stock of which is owned by one or more "Socially and Economically Disadvantaged Individuals;" and (b) whose management and daily business operations are controlled by one or more such individuals.

3.5 ***"Manufacturer"*** means a firm that operates or maintains a factory or establishment that produces on the premises the materials or supplies obtained by the contractor.

3.6 ***"Regular Dealer"*** means a firm that owns, operates or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of the contract are bought, kept in stock, and regularly sold to the public in the usual course of business. The firm must engage in, as its principal business, and in its own name, the purchase and sale of the product in question. A regular dealer in such bulk items as steel, cement, gravel, stone, and petroleum products need not keep such products in stock if it owns or operates distribution equipment.

3.7 **"Fraud"** includes a firm that does not meet the eligibility criteria of being a certified DBE and that attempts to participate in a U.S. DOT-assisted program as a DBE on the basis of false, fraudulent, or deceitful statements or representations, or under circumstances indicating a serious lack of

business integrity or honesty. The Authority may take enforcement action under 49 CFR part 31, Program Fraud and Civil Remedies, against any participant in the DBE program whose conduct is subject to such action under 49 CFR part 31. The Authority may refer cases of identified fraud to the Department of Justice, for prosecution under 18 U.S.C. 1001, or any other applicable provisions of law. Any person who makes a false or fraudulent statement in connection with participation of a DBE in any U.S. DOT-assisted program or otherwise, violates applicable Federal statutes.

3.8 ***"Other Socially and Economically Disadvantaged Individuals"*** means those individuals who are citizens of the United States (or lawfully admitted permanent residents), and who, on a case-by-case basis, are determined by the Small Business Administration or the Authority to meet the social and economic disadvantage criteria described below.

3.8.1 Social Disadvantage

3.8.1.1 The individual's social disadvantage must stem from his/her color, national origin, gender, physical handicap, long-term residence in an environment isolated from the mainstream of American society, or other similar cause beyond the individual's control.

3.8.1.2 The individual must demonstrate that he/she has personally suffered social disadvantage.

3.8.1.3 The individual's social disadvantage must be rooted in treatment which he/she has experienced in American society, not in other countries.

3.8.1.4 The individual's social disadvantage must be chronic, longstanding and substantial; not fleeting or insignificant.

3.8.1.5 The individual's social disadvantage must have negatively affected his/her entry into and/or advancement in the business world.

3.8.1.6 A determination of social disadvantage must be made before proceeding to make a determination of economic disadvantage.

3.8.2 Economic Disadvantage

3.8.2.1 The individual's ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities, as compared to others in the same

line of business and competitive market area that are not socially disadvantaged.

3.8.2.2 The following criteria will be considered when determining the degree of diminished credit and capital opportunities of a person claiming social and economic disadvantage:

With respect to the individual:

- availability of financing
- bonding capability
- availability of outside equity capital
- available markets

With respect to the individual and the business concern:

- personal and business assets
- personal and business net worth
- personal and business income and profits

4.0 DBE Bid Submission Requirements

Bidder shall complete and submit the following DBE Exhibits (forms) with their bid:

- DBE Participation Commitment Form

To be a responsible and responsive bidder, the bidder must submit a DBE Letter of Acknowledgement and Commitment for each DBE firm listed on the DBE Participation Commitment Form to the Authority at time of Bid.

Bidder must complete and submit the following DBE Exhibits (forms) to the Authority no later than 4:00 p.m. on the 2nd business day after the bid due date:

- DBE Letter of Acknowledgement and Commitment (required from each proposed DBE firm listed on the DBE Participation Commitment Form)
- DBE Information – Good Faith Efforts (if sufficient participation to meet the DBE goal has not been proposed on the DBE Participation Commitment Form)
- Bidders List

Required Forms	Submission
DBE Participation Commitment Form	Required at time of bid
DBE Letter of Acknowledgement and Commitment (required from each DBE firm listed on the DBE Participation Commitment Form)	Required no later than 4:00 p.m. on the 2nd business day after the bid due date
DBE Information – Good Faith Efforts	Required no later than 4:00 p.m. on the 2nd business day after the bid due date
Bidders List	Required no later than 4:00 p.m. on the 2nd business day after the bid due date

4.1 "DBE Participation Commitment Form" (Exhibit E-1) required at time of Bid. The Bidder is to provide the following information for each DBE that will participate in the contract:

4.1.1 The complete name and address of each DBE who will participate in the contract;

4.1.2 Valid DBE Certification ID to confirm eligibility status through the CUCP, in conformance with 49 CFR Part 26;

4.1.3 A description of the work that each DBE will perform or provide;

4.1.4 The dollar amount of the work to be performed or provided by the DBE;

4.1.5 The bid item (#) associated with the proposed scope(s) of work;

4.1.6 The dollar amount of the work eligible to be credited for each DBE towards the DBE goal (should not include lower-tier participation and should account for the type of work to be performed);

4.1.7 The bidder shall also submit, for each DBE to perform under this Agreement, a **DBE Letter of Acknowledgement and Commitment (Exhibit E-2) form** signed and dated from each DBE listed, acknowledging that the DBE is participating in the contract for the specified dollar value and scope of work listed on the DBE Participation Commitment Form. The dollar amount and scope(s) in the DBE Letter of Acknowledgement and Commitment and the dollar amount and scope(s) reflected on the DBE Participation

Commitment Form must match identically. The DBE Letter of Acknowledgement and Commitment must be submitted no later than 4:00 p.m. on the 2nd business day after the bid due date.

4.2 "DBE Information - Good Faith Efforts" (Exhibit E-3)

To be a responsible and responsive bidder, the bidder must make good faith efforts to meet the goal. The Bidder can meet this requirement in two ways: (i) the bidder can meet the goal by documenting commitments for participation by DBE firms sufficient for this purpose; or (ii) the bidder can demonstrate that he/she took all necessary and reasonable steps to achieve the DBE goal, or other requirement of this part, which, by their scope, intensity, and appropriateness to the objective, could reasonably be expected to obtain sufficient DBE participation, even if they were not fully successful.

If the Bidder did not meet or obtain enough DBE participation to meet the DBE goal, the bidder must complete and submit the "DBE Information – Good Faith Efforts," form demonstrating that the Bidder made adequate good faith efforts to meet the goal.

If the bidder has met the DBE goal based on the participation of DBEs listed on the bidder's **"**DBE Participation Commitment Form," it is at the bidder's discretion (i.e. this is not mandatory) to submit "DBE Information – Good Faith Efforts," form However, the submission of good faith efforts documentation can protect the bidder's eligibility for award of the contract if the Authority determines that the bidder failed to meet the goal for various reasons (e.g., a DBE firm was not certified at bid submission or the bidder made a mathematical error). Submittal of only the "DBE Information – Good Faith Efforts," form may not provide sufficient documentation to demonstrate that adequate good faith efforts were made; therefore, the bidder is encouraged to attach additional information and supporting documents as necessary.

Good Faith Efforts documentation must be submitted to the Authority no later than 4:00 p.m. on the 2nd business day after the bid due date.

For further guidance, refer to instructions on Exhibit E-3 "DBE Information – Good Faith Efforts" form and the United States Department of Transportation's ("U.S. DOT") DBE Program, Appendix A of Title 49 CFR Part 26 "Guidance Concerning Good Faith Efforts," and the DBE Section of the Authority's Pre-Bid PowerPoint.

4.3 "Bidders List" (Exhibit E-4)

The Authority is required by Regulations to create and maintain a "**Bidders List (Exhibit E-4)**,**"** of all firms bidding or quoting on the Authority's U.S. DOT-assisted contracts for use in calculating the Authority's DBE goal(s). Bidders are required to complete and submit the requested information listed on the "Bidders List" form, for all firms (DBE[s] and Non-DBE[s]) who submitted a bid, proposal or quote, including firms who were contracted by the prime bidder.

The "Bidders List" must be submitted to the Authority no later than 4:00 p.m. on the 2nd business day after the bid due date.

SECTION V: CALIFORNIA UNIFIED CERTIFICATION PROGRAM

CALIFORNIA UNIFIED CERTIFICATION PROGRAM (CUCP)

Dear Business Owner:

Thank you for your interest in participating in the Unified Certification Program (UCP) of California for Disadvantaged Business Enterprises (DBEs). As mandated by the United States Department of Transportation (U.S. DOT) in the DBE Program, Final Rule 49 Code of Federal Regulations (CFR), Part 26, all U.S. DOT recipients of federal financial assistance must participate in a statewide UCP by March 2002. The UCP is a "One-Stop Shopping" certification procedure that will eliminate the need for DBE firms to obtain certifications from multiple agencies within the State.

The UCP of California is charged with the responsibility of certifying firms and compiling and maintaining the Database of certified DBEs for U.S. DOT grantees in California, pursuant to 49 CFR Part 26. The Database is intended to expand the use of DBE firms by maintaining complete and current information on those businesses and the products and services they can provide to all grantees of California.

Complete the attached application and supplemental questionnaire if you wish to be considered for DBE certification and your business meets the following general guidelines:

1. The firm must be at least 51% owned by one or more socially and economically disadvantaged individuals.

2. The firm must be an independent business, and one or more of the socially and economically disadvantaged owners must control its management and daily operations.

3. Only existing for-profit "Small Business Concerns," as defined by the Small Business Act and Small Business Administration (SBA) regulations may be certified. DBE applicants are first subject to the applicable small business size standards of the SBA. Second, the average annual gross receipts for the firm (including its affiliates) over the previous three fiscal years must not exceed U.S. DOT's cap of $17.42 million.

For firm applying for airport concession DBE certification: The average annual gross receipts for the firm (including its affiliates) over the previous three fiscal years must not exceed $30 million.

4. The Personal Net Worth (PNW) of each socially and economically disadvantaged owner must not exceed $750,000. The PNW excludes the individual's ownership interest in the applicant firm and the equity in his/her primary residence.

For firm applying for airport concession DBE certification: A PNW is not required at this time.

Socially and economically disadvantaged individual means any individual who is a citizen of the United States (or lawfully admitted permanent resident) and who is a member of the following groups: Black American, Hispanic American, Native American, Asian-Pacific American, Subcontinent Asian American, or Women,

or

Any individual found to be socially and economically disadvantaged on a case-by-case basis by a certifying agency pursuant to the standards of the U.S. DOT 49 CFR part 26.

In order to avoid unnecessary delays, complete all portions of the application and supplemental questionnaire, placing "N/A" next to items that are not applicable. Include all copies of documents requested on the application, and have the Affidavit of Certification, Affidavit of Social and Economic Disadvantage and Personal Net Worth Statement notarized. Additional documentation may be requested if it is considered necessary to make a certification determination. Incomplete applications/supplemental questionnaires or applications/supplemental questionnaires without all the required documents will not be evaluated until such documents are submitted. We recommend keeping a copy of all submitted documents for your records.

REMEMBER: It is no longer necessary to apply at more than one agency. If your firm meets the criteria for certification, it will be entered into the Database of DBEs for all U.S. DOT grantees in California. Only firms currently certified as eligible DBEs may participate in the DBE programs of U.S. DOT grantees of California.

The California UCP has established four Regional DBE Certification Clusters throughout the State to effectively facilitate statewide DBE certification activities. Forward your completed certification packet to one of the agencies serving the county where your firm has its principal place of business. (See enclosed Roster of Certifying Agencies.)

For Out-of-State Firms: The California UCP will not process a new application for DBE certification from a firm having its principal place of business in another state unless the firm has already been certified in that state. If your firm is located outside of California and is certified as a DBE at its home state, forward your completed certification packet, along with a copy of your DBE certificate, to the California Department of Transportation. (See page 3 of the enclosed Roster of Certifying Agencies.)

CALIFORNIA UNIFIED
CERTIFICATION PROGRAM

DEFINITIONS OF TERMS USED IN UNIFORM CERTIFICATION APPLICATION

Alaska Native Corporation (ANC) – Any Regional Corporation, Village Corporation, Urban Corporation, or Group Corporation organized under the laws of the State of Alaska in accordance with the Alaska Native Claims Settlement Act, as amended.

Concession – A grant of property made by a government or other controlling authority in return for stipulated services or a promise that the property will be used for a specific purpose.

Corporate Tax Returns – Federal Tax Return Form 1120 or 1120S, including Schedules E or C.

Indian Tribe – Any Indian tribe, band, nation, or other organized group or community of Indians, including any ANC, which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians, or is recognized as such by the State in which the tribe, band, nation, group, or community resides. See definition of Tribally-Owned Concern.

Key Person Insurance – Life insurance and long-term disability income insurance on major employees, with benefits payable to the business.

Native Hawaiian – Any individual whose ancestors were natives, prior to 1778, of the area, which now comprises the State of Hawaii.

Native Hawaiian Organization – Any community service organization serving Native Hawaiians in the State of Hawaii which is a not-for-profit organization chartered by the State of Hawaii, is controlled by Native Hawaiians and whose business activities will principally benefit such Native Hawaiians.

Partnership Tax Returns – Federal Tax Return Form 1065, including Schedules K and K-1.

Personal Net Worth – The net value of the assets of an individual remaining after total liabilities are deducted. An individual's personal net worth does not include: The individual's ownership interest in an applicant or participating DBE firm; or the individual's equity in his or her primary place of residence. An individual's personal net worth includes only his or her own share of assets held jointly or as community property with the individual's spouse.

Personal Tax Returns – Federal Tax Return Form 1040, including Schedules B and C.

Regular Dealer – A firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not regular dealers.

Socially and Economically Disadvantaged Individual – Any individual who is a citizen (or lawfully admitted permanent resident) of the United States and who is –

1. Any individual who a recipient finds to be a socially and economically disadvantaged individual on a case-by-case basis.

2. Any individual in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:

   - "African Americans" or "Black Americans," which includes persons having origins in any of the Black racial groups of Africa.

   - "Hispanic Americans," which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other Spanish or Portuguese culture or origin, regardless of race.

   - "Native Americans," which includes persons who are American Indians, Eskimos, Aleuts, or Native Hawaiians.

   - "Asian-Pacific Americans," which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), the Commonwealth of the Northern Marianas Islands, Macao, Fiji, Tonga, Kirbati, Tuvalu, Nauru, Federated States of Micronesia, or Hong Kong.

   - "Asian Indian Americans" or "Subcontinent Asian Americans," which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka.

   - Women.

   - Any additional groups whose members are designated as socially and economically disadvantaged by the SBA, at such time as the SBA designation becomes effective.

Tribally-Owned Concerns – Any concern at least 51 percent owned by an Indian tribe.

DISADVANTAGED BUSINESS ENTERPRISE PROGRAM
49 CFR PART 26

UNIFORM CERTIFICATION APPLICATION

Under Sec. 26.107 of 49 CFR Part 26, dated February 2, 1999, if at any time, the Department or a recipient has reason to believe that any person or firm has willfully and knowingly provided incorrect information or made false statements, the Department may initiate suspension or debarment proceedings against the person or firm under 2 CFR Parts 180 and 1200, take enforcement action under 49 CFR Part 31, Program Fraud and Civil Remedies, and/or refer the matter to the Department of Justice under 18 U.S.C. 1001.

ROADMAP FOR APPLICANTS

← **Should I apply?**
Your firm must meet the following requirements to qualify as a DBE under the United States Department of Transportation (DOT) DBE program:

- ❒ Disadvantaged owners are U.S. citizens or legal permanent residents.
- ❒ Firm's annual gross income does NOT exceed $23.98 million (averaged over 3 years).
- ❒ Firm is at least 51% owned and controlled by socially and economically disadvantaged individuals.
- ❒ Firm meets SBA small business size in the primary industry group (13 CFR Part 121).
- ❒ Firm owned by ANCs, Indian Tribes, and Native Hawaiian Organizations meet the small business size requirements and are controlled by socially and economically disadvantaged individuals.
- ❒ Firm and owners meet the requirements of Part 26 concerning licenses and credentials.
- ❒ Firm must be for-profit.

Note: Firm must undergo an on-site review.

↑ **Is there an easier way to apply?**
If you are currently certified as an 8(a), or SDB firm, you may be eligible for a streamlined certification application process pursuant to a Memorandum of Understanding (MOU) between DOT and the SBA. Under the MOU, the certifying agency to which you are applying will accept your current SBA application package in lieu of requiring you to submit an entirely new application. You must still meet the requirements for the DBE program.

→ **What documents must I submit with this application?**
The following documents must be attached to your application. Missing documents or incomplete information will delay the processing of your application.

All Applicants

- ❒ Work experience resumes that include places of ownership/employment and corresponding dates.
- ❒ Personal Net Worth statement or statement from CPA.
- ❒ Social & economic disadvantage statement.
- ❒ Entire copy of personal tax returns for the last 3 years, if applicable.
- ❒ Documented proof of contributions used to acquire ownership for each owner (e.g. both sides of cancelled checks).
- ❒ Signed loan agreement and security agreements.
- ❒ Description of real estate and proof of ownership listed.
- ❒ List of equipment leased and signed lease agreements.
- ❒ List of construction equipment and/or vehicles owned and titles/proof of ownership.
- ❒ Signed leases for office/storage space.
- ❒ End of Year Balance Sheets and Income Statements for the past 3 years (or life of firm if less than 3 years). A new business must provide a current Balance Sheet.
- ❒ Copies of relevant licenses.
- ❒ DBE/MBE/WBE, SBA 8(a) or SDB certifications or denials and decertifications.
- ❒ Bank Authorizations and Signatory cards.
- ❒ Schedule of salaries paid to all officers, managers, owners or directors of the firm (W-2s).

Sole Proprietorship

- ❒ Assumed name, fictitious name or other registration certificate from appropriate governmental agency.

Partnership or Joint Venture

- ❒ Original and any amended Partnership or Joint Venture Agreements.
- ❒ Assumed name, fictitious name, or other registration Certificate from appropriate governmental agency, if applicable.
- ❒ Partnership tax returns for last 3 years.

Corporation or LLC

- ❒ Official Articles of Incorporation (signed by the state official).
- ❒ Both sides of all Corporate Stock Certificates and Stock.
- ❒ Transfer Ledger.
- ❒ Entire copy of corporate tax returns for the last 3 years.
- ❒ Shareholders' Agreement.
- ❒ Minutes of all Stockholders' and Board of Directors' meetings.
- ❒ Corporate By-laws and any amendments.

NOTE: The specific state or recipient to which you are applying may have additional requirements.

↓ **Where can I find more information?**
U.S. DOT – http://osdbuweb.dot.gov/business/dbe/index.html

SECTION 1: CERTIFICATION INFORMATION

1. Prior/Other Certifications.

(a) Is your firm currently certified for any of the following programs? *(If Yes, attach a copy of your certification(s))*.	☐ DBE	Name of certifying agency:
		Has this firm's home state conducted an on-site visit? ☐Yes, on _____/_____/_____ ☐ No
	☐ 8(a) ☐ SDB	Stop! You may not have to complete this application. Ask about the streamlined application process under the SBA/DOT MOU.
(b) Has your firm applied for certification for any program listed in 1(a) in the past? ☐ Yes, on____/____/____ ☐ No If Yes, identify: Other names your company has used: Identification and certification numbers:		
(c) Has this firm or any of its owners, Board of Directors, officers or management personnel been denied certification or decertified before by any agency in any state, local or Federal entity? ☐ Yes, on ____/____/____ ☐ No If Yes, identify State and name of agency:		

SECTION 2: GENERAL INFORMATION

2. Contact Information.

Contact Person:		Legal name of firm:	
Phone #:	Cell #:		Fax #:
E-Mail:		Web Site *(if firm has one)*:	
Street address of firm: *(No P.O. box no.)*			
Mailing address of firm:			
City:		County/Parish:	State: Zip:

3. Business Profile.

Primary nature of business/NAICS code:	Federal tax ID:
Federal identification number or Applicant's Social Security number:	
This firm was established on _____/_____/_____	I(we) have owned this firm since: _____/_____/_____
Method of acquisition *(check all that apply)*: ☐ Started new business ☐ Bought existing business ☐ Inherited business ☐ Secured concession ☐ Merger or consolidation ☐ Other *(explain)*_____	
Has this firm operated under a different name during the past five years? ☐ Yes ☐ No If Yes, explain.	
Has this firm applied for reorganization under Chapter 11 and/or liquidation under Chapter 7, within the last 3 years? *(If Yes, provide court papers)* ☐ Yes ☐ No	
Type of firm *(Check all applicable)*: ☐ Sole proprietorship *(provide a copy of the assumed name certificate)* ☐ Partnership (provide copies of all partnership agreements and the assumed named certificate) ☐ Corporation (provide Articles of Incorporation, copies of the stock certificates (both sides), Stock Transfer Ledger, Shareholders' Agreement, all minutes of the shareholders' meetings and Board of Directors' meetings, the Corporate Bylaws and Bylaws Amendments (if applicable), the Corporate Bank Resolution and Bank Signature Cards) ☐ Limited Liability Partnership ☐ Joint Venture ☐ Other	
Number of employees: Permanent Full-time___ Temporary Full-time___ Seasonal Full-time___ Permanent Part-time___ Temporary Part-time___ Seasonal Part-time___ Where do you obtain seasonal employees?	
Does your firm directly pay, in its own name, all its employees? ☐ Yes ☐ No If No, explain.	
Specify the gross receipts of the firm for the last 3 years: *(Attach copies of full transactions for each year)*	Year ending_____ Total receipts: $_____ Year ending_____ Total receipts: $_____ Year ending_____ Total receipts: $_____

SECTION 3: OWNERSHIP

4. Identify all individuals or holding companies with any ownership interest. List their cash, equipment and/or real estate and/or other investment in the firm; and attach the documentation of the source of these investments. *(Attach work experience resumes of each person; If more than two owners, attach a separate sheet.)*

First Person

Name:	Title:	Home Phone#:
Home Address *(street and number)*:		
City:	State:	Zip

Gender: ☐ Male ☐ Female U.S. Citizen: ☐ Yes ☐ No Legal permanent resident: ☐ Yes ☐ No	Ethnic Group *(attach proof of status)*: ☐ African American ☐ Hispanic ☐ Native American ☐ Caucasian ☐ Asian Pacific ☐ Asian Indian ☐ Other Ethnic Group *(explain)*_____

Number of years owned:	Initial investment to acquire ownership interest in firm:	Type	Dollar Value
Percentage owned:		Cash	$
Familial relationship to other owners:		Real Estate	$
		Equipment	$
		Other	$

Shares of Stock: Number	Percentage	Class	Date Acquired	Method Acquired

Additional contributions made by anyone since the business was started/acquired:

Second Person

Name:	Title:	Home Phone#:
Home Address (street and number):		
City:	State:	Zip:

Gender: ☐ Male ☐ Female U.S. Citizen: ☐ Yes ☐ No Legal permanent resident: ☐ Yes ☐ No	Ethnic Group (Attach proof of status): ☐ African American ☐ Hispanic ☐ Native American ☐ Caucasian ☐ Asian Pacific ☐ Asian Indian ☐ Other Ethnic Group (explain)_____

Number of years owned:	Initial investment to acquire ownership interest in firm:	Type	Dollar Value
Percentage owned:		Cash	$
Familial relationship to other owners:		Real Estate	$
		Equipment	$
		Other	$

Shares of Stock: Number	Percentage	Class	Date Acquired	Method Acquired

Additional contributions made by anyone since the business was started/acquired:

SECTION 4: CONTROL

5. Identify Officers & Board of Directors. *(Attach work experience resumes of each person; If additional space is required, attach a separate sheet.)*

	Name	Title/Date Appointed	Ethnicity	Gender
Company Officers	1. 2. 3. 4. 5.			
Board of Directors	1. 2. 3. 4 5.			

6. Identify management personnel who control the firm in the following areas. (Attach work experience resumes, including dates of employment at each company for each person; if more than two persons, attach a separate sheet)

	Name	Title	Ethnicity	Gender
Financial Decision (*responsibility for check signing, acquisition of lines of credit, surety bonding, supplies, etc.)*	1. 2.			
Estimating, bidding and negotiating *(cost estimates, bid preparation and submission, negotiation or contract execution)*	1. 2.			
Hiring/firing of management personnel	1. 2.			
Field/Production Operations Supervisor *(site supervision/scheduling, project management services)*	1. 2.			
List all field supervisors	1. 2.			
Office management	1. 2.			
Marketing/Sales	1. 2.			
Purchasing of major equipment	1. 2.			

7. Identify persons or firms who provide the following services.

	Name of firm	Name of person	Address	Phone No.
External management or technical/ Computer service				
Accountant				
Attorney				
Principal Suppliers	1. Materials or equipment supplied _____ 2. Materials or equipment supplied _____			

8. Identify those union(s), business(es), or professional association(s) in which the owner(s) or management personnel have membership.

Name of union, business or professional association	Address	Phone No.
1.		
2.		
3.		

9. **Attach a list of equipment and/or vehicles within your firm's possession or under your control (indicate separately), office space (owned or leased) and storage space (owned or leased), including signed leasing agreements.**

10. **Financial Information.**

(a) Banking Information
Name of bank: _____Phone No. ( )_____
Name of officer: _____
Address of bank: _____City: _____State: _____ Zip:_____

(b) Bonding Information: If you have bonding capacity, identify:
Name of agent or broker:_____ Phone No: ( )_____
Address of agent/broker:_____ City_____State: _____Zip :_____
Bonding limit: Aggregate limit $_____ Project limit $_____

(c) Attach copies of year end balance sheet and profit and loss (income) statements for the last 3 years, or if business has been in operation for less than one year, provide a current balance sheet, a projected profit and loss statement for the next 12 month period and a projected balance sheet for the end of that period.

11. **Identify all sources, amount and purposes of money loaned to the firm, including name of person or firm securing the loan, if other than owner(s).** *(Attach copies of all loan agreements.)*

Name of Source	Address of Source	Amount
1.		
2.		
3.		

12. **List current licenses** *(e.g. contractor, engineer, architect, ICC, etc.). (Attach copies of licenses.)*

Name of Individual or Firm	Name of License	Expiration Date	License Number
1.			
2.			
3.			

13. **Does your firm have key person insurance**? ☐ Yes ☐ No
(If Yes, attach a list of the persons named and the value.)

14. **List the 3 largest contracts completed by this firm in the past 3 years.**

Name of owner/contractor	Name/location of project	Type of work performed
1.		
2.		
3.		

15. **List *all* active jobs this firm is currently working on.** *(If additional space is required, attach a separate sheet.)*

Name of prime contractor and project number	Location of project	Type of work	Date project began	Anticipated completion date
1.				
2.				
3.				

SECTION 5: AFFILIATION

16. Affiliation with other businesses.

(a) Affiliate companies:	
(b) Do any of the people listed in question 4, 5, or 6 perform a management or supervisory function for any other business? ☐ Yes ☐ No If Yes, identify: Person:_____ Title:_____ Business:_____ Function:_____	
(c) Do any of the people listed in questions 4, 5, or 6 own or work for other firms that have a business relationship with yours? *(e.g., ownership interest, shared office space, financial investments, equipment leases or personnel sharing)*? ☐ Yes ☐ No If Yes, identify: Firm: _____ Person:_____ Business Relationship_____	
(d) Whether affiliated or not, is the applicant firm co-located at any of it business locations, or does it share a telephone number, P.O. Box, office space, yard, warehouse, facilities, equipment, or office staff, with any other business, organization, or entity? ☐ Yes ☐ No If Yes, identify: Firm's name:_____ Tax ID number_____ Explain nature of shared facilities: _____ _____	
(e) At present or in the past 5 years: If you answered Yes to any to any of these questions, identify on a separate piece of paper any relevant names, addresses, dates and explanations.	Has this firm been a subsidiary of any other firm? ☐ Yes ☐ No
	Has this firm consisted of a partnership in which one or more of the partners are other firms? ☐ Yes ☐ No
	Has any other firm owned 5% or more of this firm? ☐ Yes ☐ No
	Has this firm had any subsidiaries? ☐ Yes ☐ No
	Has this firm owned 5% or more of any other firm? ☐ Yes ☐ No

SECTION 6: OTHER

17. Are you a trucking firm? ☐ Yes ☐ No
(If Yes, attach proof of ownership of a fully operational truck and trailer. Documentation should include insurance and titles.)

18. Are you a regular dealer? ☐ Yes ☐ No
(If Yes, attach proof of warehouse, product lines carried, and distribution equipment.)

AFFIDAVIT OF CERTIFICATION

A MATERIAL OR FALSE STATEMENT OR OMISSION MADE IN CONNECTION WITH THIS APPLICATION IS SUFFICIENT CAUSE FOR DENIAL OF CERTIFICATION, REVOCATION OF A PRIOR APPROVAL, INITIATION OF SUSPENSION OR DEBARMENT PROCEEDINGS, AND MAY SUBJECT THE PERSON AND/OR ENTITY MAKING THE FALSE STATEMENT TO ANY AND ALL CIVIL AND CRIMINAL PENALTIES AVAILABLE PURSUANT TO APPLICABLE FEDERAL AND STATE LAW.

I_____ (full name), swear or affirm under penalty of law that I am _____(title) of applicant firm_____ (firm name) and that I have read and understood all of the questions in this application and that all of the foregoing information and statements submitted in this application and its attachments and supporting documents are true and correct to the best of my knowledge, and that all responses to the questions are full and complete, omitting no material information. The responses include all material information necessary to fully and accurately identify and explain the operations, capabilities and pertinent history of the named firm, as well as the ownership, control, and affiliations thereof.

I recognize that the information submitted in this application is for the purpose of inducing certification approval by a government agency. I understand that a government agency may, by means it deems appropriate, determine the accuracy and truth of the statements in the application, and I authorize such agency to contact any entity named in the application, and the named firm's bonding companies, banking institutions, credit agencies, contractors, clients, and other certifying agencies for the purpose of verifying the information supplied and determining the named firm's eligibility.

I agree to submit to government audit, examination and review of books, records, documents and files, in whatever form they exist, of the named firm and its affiliates, inspection of its place(s) of business and equipment, and to permit interviews of its principals, agents, and employees. I understand that refusal to permit such inquiries shall be grounds for denial of certification.

If awarded a contract or subcontract, I agree to promptly and directly provide the prime contractor, if any, and the Department, recipient agency, or federal funding agency on an ongoing basis, current, complete and accurate information regarding (1) work performed on the project; (2) payments; and (3) proposed changes, if any, to the foregoing arrangements.

I agree to provide written notice to the recipient agency or Unified Certification Program (UCP) of any material change in the information contained in the original application within 30 calendar days of such change (e.g., ownership, address, telephone number, etc.).

I acknowledge and agree that any misrepresentations in this application or in records pertaining to a contract or subcontract will be grounds for terminating any contract or subcontract which may be awarded; denial or revocation of certification; suspension and debarment; and for initiating action under federal and/or state law concerning false statement, fraud or other applicable offenses.

I declare under penalty of perjury that the foregoing is true and correct.

Signature of owner, officer or partner_____Date*(mm/dd/yy)*_____

I declare under penalty of perjury that the information provided in this application and supporting documents relating to my disadvantaged status and me is true and correct.

Print Name: _____ Signature: _____ Date:_____

Print Name: _____ Signature: _____ Date:_____

Print Name: _____ Signature: _____ Date:_____

Print Name: _____ Signature: _____ Date:_____

Print Name: _____ Signature: _____ Date:_____

NOTARY CERTIFICATION

STATE OF_____

}SS:

COUNTY OF_____

Subscribed and sworn to before me this _____day of _____, 20___

Signature of Notary Public_____

Printed/typed name of Notary Public_____

County of residence_____ Date commission expires _____

AFFIDAVIT OF SOCIAL AND ECONOMIC DISADVANTAGE

This form must be signed and notarized for each owner upon which disadvantaged status is relied.

SOCIAL DISADVANTAGE

I hereby certify under penalty of perjury that I am a member of one of the following groups:
☐ African American ☐ Hispanic ☐ Native American ☐ Caucasian ☐ Asian Pacific
☐ Asian Indian ☐ Other Ethnic Group *(explain)*_____

And that I have held myself out as a member of that group and have acted as a member of that group.

I further certify that I am an owner of the company seeking DBE certification and that I have experienced social disadvantage due to the effect of discrimination based upon my (check all that apply)
☐ race ☐ ethnicity ☐ gender ☐ other *(explain)*_____

Print Name:_____Signature:_____Date:_____

PERSONAL FINANCIAL STATEMENT

I hereby certify under penalty of perjury that my personal net worth does not exceed $1,320,000.

Print Name:_____Signature:_____Date:_____

This statement is supported by (check one)
☐ A signed, notarized statement of personal net worth, with appropriate supporting documentation.
☐ A signed, notarized statement from a certified public accountant (CPA) attesting that he/she has examined my personal net worth and determined, consistent with the provisions of 49 CFR Section 26.67(a)(2) and generally accepted accounting standards, that my personal net worth does not exceed $1,320,000.

NOTARY CERTIFICATION

STATE OF_____
}SS:
COUNTY OF_____

Subscribed and sworn to before me this _____day of _____, 20___

Signature of Notary Public_____

Printed/typed name of Notary Public_____

County of residence_____ Date commission expires _____

PERSONAL NET WORTH STATEMENT
(49 CFR PART 26)

As of _____

For firm applying for airport concession DBE certification: A PNW is not required at this time.

Each individual owner of a DBE firm whose ownership or control is relied upon for DBE certification is required to provide Personal Net Worth (PNW) information and include it in the notarized DBE Certification Application package. For a firm with more than one owner relied upon for DBE certification, make additional copies of this Statement. The Unified Certification Program of California reserves the right to request additional information as necessary and may conduct an on-site visit to verify the information contained in this Statement.

I understand that all personal financial information I submit will remain confidential unless I give my written consent to release this information to a third party. I also understand that the only exception to this confidentiality provision is if I decide to appeal a decision by the Unified Certification Program of California.

Name_____Phone _____
Business Address_____
City, State, & Zip Code_____
Business Name_____

Assets[1]		**Liabilities**	
Cash on Hand & in Banks	$_____	Accounts Payable	$_____
Savings Accounts	$_____	Notes Payable to Banks and Others	$_____
IRA or Other Retirement Accounts	$_____	Installment Accounts (Auto)	$_____
Accounts/Notes Receivable	$_____	(Mo. Payments $_____)	
Life Insurance/Cash Surrender Value	$_____	Other Installment Accounts	$_____
Stocks and Bonds	$_____	(Mo. Payments $_____)	
Real Estate[2]	$_____	Loans on Life Insurance	$_____
Automobile – Present Value	$_____	Mortgages on Real Estate[2]	$_____
Other Personal Property	$_____	Unpaid Taxes	$_____
Other Assets	$_____	Other Liabilities	$_____
Total Assets	**$_____**	**Total Liabilities**	$_____
		NET WORTH	$_____

Sources of Income		**Contingent Liabilities**	
Salary	$_____	As Endorse or Co-Maker	$_____
Net Investment Income	$_____	Legal Claims and Judgment	$_____
Real Estate Income	$_____	Provision for Federal Income Tax	$_____
Other Income[3]	$_____	Other Special Debt	$_____

Is any portion of the equity in the individual's primary residence attributable to withdrawal(s) from the firm applying for DBE certification? _____ If yes, how much? $_____

The undersigned does hereby swear that the foregoing statements are true, accurate, and complete.

Signature_____ Date _____

1. Exclude an individual's ownership interest in the firm applying for DBE certification.
   For individuals claiming to be Alaska Native, exclude any of the following which the individual receives from any Alaska Native Corporation ("ANC"): Cash (including cash dividends on stock received from an ANC) to the extent that it does not, in the aggregate, exceed $2,000 per individual per year; a partnership interest; land, or an interest in land (including land or an interest in land received from an ANC as a dividend or distribution on stock); and an interest in a settlement trust.
2. Do not include the individual's primary residence.
3. Alimony or child support payments need not be disclosed in "Other Income" unless it is desired to have such payments counted toward total income.

PERSONAL NET WORTH STATEMENT
NOTARY ACKNOWLEDGEMENT

STATE OF _____

COUNTY OF _____

On this ___ day of _____ , _____before me, the undersigned Notary Public, personally appeared _____ personally known to me (or proved to me on the basis of satisfactory evidence) to be the person(s) whose name(s) is/are subscribed to the within Affidavit, and acknowledged that he/she/they executed the same in his/her/their authorized capacity, and that by his/her/their signature on the instrument, the person(s) executed the instrument.

WITNESS my hand and Official Seal.

Signature: _____

Name: _____
(Typed or Printed)

CALIFORNIA UNIFIED CERTIFICATION PROGRAM (CUCP)

SUPPLEMENTAL QUESTIONNAIRE

For firm applying for airport concession DBE certification: A Supplemental Questionnaire is not required at this time.

Firm Name: _____

1. Is the firm's principal place of business in California? Yes _____ No

   If no, please include a copy of the firm's DBE certificate issued in its home state. (The California UCP will not process a new application for DBE certification from a firm having its principal place of business in another state unless the firm has already been certified in that state.)
2. Is the firm authorized to do business in the State of California? Yes _____ No

3. List all office locations in California:_____
   _____
   _____
   _____

4. Has the firm ever done business with any U.S. DOT Grantees of California? Yes _____ No

   If yes, please indicate the agency name(s) and latest year(s):

Agency	Latest Year

Agency	Latest Year

5. Is there an upcoming project in which the firm is interested and therefore, would need to be certified prior to a specific date in order to be counted toward DBE participation? Yes _____ No

   If yes, please answer the following:
   Agency letting contract: _____
   Contract number and name:_____
   Bid opening date (If Request for Proposal, submission due date): _____

6. Indicate areas where you prefer to do your work. You may select Statewide (SW) to indicate you are willing to work anywhere in the State.

☐ SW Statewide	☐ 10 Fresno ☐ 50 Stanislaus	☐ 20 Madera	☐ 30 Orange	☐ 40 San Luis Obispo
☐ 01 Alameda	☐ 11 Glenn ☐ 51 Sutter	☐ 21 Marin	☐ 31 Placer	☐ 41 San Mateo
☐ 02 Alpine	☐ 12 Humboldt ☐ 52 Tehema	☐ 22 Mariposa	☐ 32 Plumas	☐ 42 Santa Barbara
☐ 03 Amador	☐ 13 Imperial ☐ 53 Trinity	☐ 23 Mendocino	☐ 33 Riverside	☐ 43 Santa Clara
☐ 04 Butte	☐ 14 Inyo ☐ 54 Tulare	☐ 24 Merced	☐ 34 Sacramento	☐ 44 Santa Cruz

CALIFORNIA UNIFIED CERTIFICATION PROGRAM (CUCP)

☐ 05 Calavaras	☐ 15 Kern ☐ 55 Tuolumne	☐ 25 Modoc	☐ 35 San Benito	☐ 45 Shasta
☐ 06 Colusa	☐ 16 Kings ☐ 56 Ventura	☐ 26 Mono	☐ 36 San Bernardino	☐ 46 Sierra
☐ 07 Contra Costa	☐ 17 Lake ☐ 57 Yolo	☐ 27 Monterey	☐ 37 San Diego	☐ 47 Siskiyou
☐ 08 Del Norte	☐ 18 Lassen ☐ 58 Yuba	☐ 28 Napa	☐ 38 San Francisco	☐ 48 Solano
☐ 09 El Dorado	☐ 19 Los Angeles	☐ 29 Nevada	☐ 39 San Joaquin	☐ 49 Sonoma

CALIFORNIA UNIFIED CERTIFICATION PROGRAM (CUCP)

WORK CATEGORY CODES

Review the enclosed Work Category Codes list and indicate below areas of expertise that you prefer to perform in order of importance. DBE applicants are first subject to the applicable small business size standards of the Small Business Administration (SBA). Second, the average annual gross receipts for the firm (including its affiliates) over the previous three fiscal years must not exceed the U.S. Department of Transportation's cap of $17.42 million. Note that size standards are subject to change at any time by the SBA. To determine if the firm meets SBA's and U.S. DOT's size standards, contact one of the certifying agencies on the enclosed roster.

For firm applying for airport concession DBE certification: The average annual gross receipts for the firm (including its affiliates) over the previous three fiscal years must not exceed $30 million.

Work Code	Title (Description of Work/Service)

CALIFORNIA UNIFIED CERTIFICATION PROGRAM (CUCP)

AGRICULTURE, FORESTRY, AND FISHING

A0110	CASH GRAINS
A0130	FIELD CROPS, EXCEPT CASH GRAINS
A0160	VEGETABLES & MELONS
A0170	FRUITS & TREE NUTS
A0180	HORTICULTURAL SPECIALTIES
A0190	GENERAL FARMS, PRIMARILY CROP
A0210	LIVESTOCK, EXCEPT DAIRY AND POULTRY
A0240	DAIRY FARMS
A0250	POULTRY & EGGS
A0270	ANIMAL SPECIALTIES
A0290	GENERAL FARMS, PRIMARILY ANIMAL
A0710	SOIL PREPARATION SERVICES
A0720	CROP SERVICES
A0740	VETERINARY SERVICES
A0750	ANIMAL SERVICES, EXCEPT VETERINARY
A0760	FARM LABOR & MANAGEMENT SERVICES
A0780	LANDSCAPE & HORTICULTURAL SERVICES
A0810	TIMBER TRACTS
A0830	FOREST PRODUCTS
A0850	FORESTRY SERVICES
A0910	COMMERCIAL FISHING
A0920	FISH HATCHERIES & PRESERVES
A0970	HUNTING, TRAPPING, GAME PROPAGATION

MINING

B1010	IRON ORES
B1020	COPPER ORES
B1030	LEAD & ZINC ORES
B1040	GOLD & SILVER ORES
B1060	FERROALLOY ORES, EXCEPT VANADIUM
B1080	METAL MINING SERVICES
B1090	MISC METAL ORES
B1220	BITUMINOUS COAL & LIGNITE MINING
B1230	ANTHRACITE MINING
B1240	COAL MINING SERVICES
B1310	CRUDE PETROLEUM & NATURAL GAS
B1320	NATURAL GAS LIQUIDS
B1380	OIL & GAS FIELD SERVICES
B1410	DIMENSION STONE
B1420	CRUSHED & BROKEN STONE
B1440	SAND & GRAVEL
B1450	CLAY, CERAMIC, & REFRACTORY MINERALS
B1470	CHEMICAL & FERTILIZER MINERALS
B1480	NONMETALLIC MINERALS SERVICES
B1490	MISC NONMETALLIC MINERALS

CONSTRUCTION

C0600	MISC SUPPLIERS
C0612	SAFETY
C0620	LANDSCAPING & NURSERY
C0624	PETROLEUM, OIL, LUBRICANTS
C0625	SAND & GRAVEL
C0626	GRANITE & MARBLE
C0639	ASPHALT
C0649	PILINGS
C0651	CONCRETE & CEMENT
C0652	REINFORCING BAR SECTION
C0655	STEEL
C0656	DOORS & FRAMES
C0657	LUMBER
C0658	PAPER
C0659	PAINT
C0670	PIPE
C0680	FENCING
C0683	GUARD RAILINGS & BARRIERS
C0685	PAVEMENT MARKERS
C0686	ELECTRICAL & SIGNALS
C0687	GLASS & GLASS BLOCK
C0698	BUILDING MATERIAL
C0699	TOOLS
C0700	CONSTRUCTION STAKING
C1200	CONSTRUCTION AREA SIGNS
C1201	TRAFFIC CONTROL SYSTEM
C1522	RESET, ADJUST ROADWAY ITEMS
C1531	PLANE ASPHALT CONCRETE
C1575	REMOVE BRIDGE ITEM
C1580	MODIFY BRIDGE ITEM
C1601	CLEARING & GRUBBING
C1701	DEVELOP WATER SUPPLY
C1801	DUST PALLIATIVE
C1901	ROADWAY EXCAVATION
C1910	GRADING
C1920	STRUCTURE EXCAVATION
C1925	SHAPED BEDDING
C1930	STRUCTURE BACKFILL
C1940	DITCHES EXCAVATION
C1970	EMBANKMENT CONSTRUCTION
C1980	IMPORTED BORROW
C2000	HIGHWAY PLANTING
C2020	SOIL AMENDMENTS
C2021	HYDROSEEDING

CALIFORNIA UNIFIED CERTIFICATION PROGRAM (CUCP)

CONSTRUCTION (CONTINUED)

C2030	EROSION CONTROL
C2065	IRRIGATION SYSTEM
C2201	FINISHING ROADWAY
C2401	LIME TREATMENT
C2501	AGGREGATE SUBBASE
C2602	AGGREGATE BASE
C2700	CEMENT TREATED BASE
C2800	CONCRETE BASE
C3600	PENETRATION TREATMENT & PRIME COAT
C3701	SEAL COAT
C3901	ASPHALT CONCRETE
C3910	PAVING ASPHALT (ASPHALT CONCRETE)
C3930	PAVEMENT REINFORCING FABRIC
C3940	PLACE ASPHALT CONCRETE DIKE & MISC
C3990	RECYCLE, RECLAIM ASPHALT CONCRETE
C4010	PORTLAND CEMENT & CONCRETE PAVEMENT
C4040	CLEAN & SEAL PAVEMENT JOINTS - ROUT & SEAL CRACKS
C4101	PAVEMENT SUBSEALING & JACKING
C4201	GROOVE & GRIND PAVEMENT
C4901	FURNISH & DRIVE PILING
C4906	CAST-IN-DRILLED-HOLE CONCRETE PILING
C5000	PRESTRESSING CONCRETE CAST-IN-PLACE
C5100	CONCRETE STRUCTURE
C5105	MINOR CONCRETE STRUCTURE
C5110	CONCRETE SURFACE FINISH
C5111	CONCRETE OVERLAY – DRILL & BOND
C5120	FURNISH PRECAST CONCRETE DECK UNIT
C5124	ERECT PRECAST CONCRETE
C5135	CONCRETE BLOCK & MASONRY RETAINING WALL
C5136	REINFORCED CONCRETE CRIB WALL
C5150	CORE CONCRETE - REPAIR BRIDGE DECK
C5180	SOUND WALL (MASONRY BLOCK - CONCRETE)
C5190	JOINT SEAL - WATER STOP
C5201	REINFORCING STEEL
C5301	AIR-BLOWN MORTAR
C5310	PIPE LINING (CEMENT MORTAR)
C5401	WATERPROOFING
C5501	STEEL STRUCTURES
C5570	STEEL CRIB WALL
C5601	SIGN STRUCTURE
C5620	ROADSIDE SIGN
C5701	LUMBER & TIMBER
C5900	CLEAN & PAINT STEEL
C6101	RAILROAD WORK
C6200	ALTERNATIVE PIPE CULVERT
C6301	CAST-IN-PLACE CONCRETE PIPE
C6401	ASBESTOS-CEMENT PIPE
C6500	REINFORCED CONCRETE PIPE
C6552	JACKED REINFORCED CONCRETE PIPE
C6591	NON-REINFORCED CONCRETE PIPE
C6650	CORRUGATED METAL PIPE (CSP)
C6680	JACKED CORRUGATED STEEL PIPE)
C6700	STRUCTURAL STEEL PLATE PIPE, ARCH & PIPE ARCH
C6800	SUBSURFACE DRAIN
C6811	EDGE DRAIN
C6815	HORIZONTAL DRAIN
C6819	FILTER FABRIC
C6820	PERMEABLE MATERIAL
C6900	DOWNDRAIN
C7000	PLASTIC PIPE
C7006	CORRUGATED STEEL PIPE INLET & RISER
C7026	CORRUGATED STEEL PIPE ENERGY DISSIPATOR
C7035	WELDED STEEL PIPE
C7041	JACKED WELDED STEEL PIPE
C7065	DEBRIS RACK-DRAINAGE GATE
C7112	REINFORCED CONCRETE SEWER PIPE
C7140	CLAY SEWER PIPE
C7160	ASBESTOS-CEMENT SEWER PIPE
C7180	CAST IRON SEWER PIPE
C7191	SEWER MANHOLE
C7194	JUNCTION CHAMBER
C7200	ROCK SLOPE PROTECTION
C7215	CONCRETED-ROCK SLOPE PROTECTION
C7218	AIR-BLOWN MORTAR (SLOPE PAVING)
C7250	SACKED CONCRETE
C7301	CONCRETE CURB & SIDEWALK - MISC
C7405	DRAINAGE PUMPING EQUIPMENT
C7410	PUMPING PLANT ELECTRICAL EQUIPMENT
C7415	ENGINE GENERATOR SET
C7500	MISC IRON & STEEL FRAME, COVER & GRATE
C7505	MISC BRIDGE METAL PUMPING PLANT METAL
C7600	DEVELOP, TEST, DRILL, MAINTAIN WELLS
C8000	FENCING
C8101	SURVEY OR HISTORICAL MONUMENT
C8201	OBJECT MARKER
C8320	METAL BEAM GUARD RAILING
C8330	METAL RAILING
C8331	CONCRETE BARRIER
C8391	METAL BEAM BARRIER
C8405	THERMOPLASTIC TRAFFIC STRIPE & MARKING
C8406	PAINTED TRAFFIC STRIPE & MARKING
C8501	PAVEMENT MARKING

CALIFORNIA UNIFIED CERTIFICATION PROGRAM (CUCP)

CONSTRUCTION (CONTINUED)

C8602	SIGNAL & LIGHTING
C8603	SIGNAL
C8604	LIGHTING
C8605	MESSAGE SIGNS, LIGHTING & SIGN ILLUMINATION
C8608	DETECTOR
C8609	TRAFFIC COUNT STATION
C8610	SPEED MONITORING STATION
C8611	RAMP METERING SYSTEM
C8700	CONSULTANT
C8701	BUSINESS ADMINISTRATION
C8702	MANAGEMENT INFORMATION SYSTEMS
C8703	TRAFFIC ENGINEER
C8704	ARCHITECTURAL
C8705	DESIGN
C8706	DESIGN BRIDGES
C8707	FEASIBILITY STUDIES
C8710	ENGINEERING
C8711	COMPUTER
C8712	PUBLIC RELATIONS
C8716	ARCHITECTURAL ENGINEER
C8720	CIVIL ENGINEERING
C8721	RIGHT OF WAY ENGINEER
C8722	ENVIRONMENTAL ENGINEER
C8730	SAFETY STUDIES
C8740	ELECTRICAL ENGINEERS
C8742	MECHANICAL ENGINEERS
C8744	LANDSCAPE ARCHITECTS
C8750	REAL ESTATE
C8760	SURVEYOR
C8761	GEOPHYSICS
C8765	DRAFTING
C8770	CONSTRUCTION MANAGEMENT
C8900	RAIL CAR SERVICES
C8901	AIR CONDITIONING/SHEET METAL
C8902	HEATING
C8903	ELECTRICAL
C8904	GLASS INSTALLATION
C8905	SEATS
C8906	AUTO SERVICE
C8907	MACHINING
C8908	PERSONNEL TRANSPORTATION
C9602	BOTTOM DUMP TRUCKING
C9605	FLAT BED TRUCKING
C9632	HAZARDOUS WASTE TRUCKING
C9670	TRUCK RENTAL
C9771	TRUCK BROKER
C9774	TRUCKER
C9801	BUILDING CONSTRUCTION
C9810	SMALL STRUCTURES
C9822	CARPENTRY
C9826	LAND SURVEYING
C9827	DRYWALL CONSTRUCTION
C9828	CRANE WORK
C9829	RETAINER WALLS
C9830	WALL COVERING
C9834	CABINETRY
C9835	LATHING
C9836	PLASTERING
C9837	ROOFING
C9838	CERAMIC TILE
C9839	CARPET & DRAPES
C9840	FLOOR COVERING
C9842	MASONRY
C9846	ADDITIONS, ALTERATIONS OR REPAIRS
C9850	PLUMBING
C9852	EXTERMINATORS
C9854	PAINTING STRUCTURES
C9858	RESIDENTIAL ELECTRICAL
C9860	WATER METER & TEMP FACILITIES
C9862	RESIDENTIAL AIR CONDITIONING & SHEET METAL
C9864	SHOWER DOORS & MIRROR INSTALLATION
C9866	HEATING & AIR CONDITIONING
C9868	INSULATION
C9869	ASBESTOS REMOVAL/ABATEMENT
C9872	SEWER CONNECTION
C9874	HARDWARE (ROUGH)
C9876	HARDWARE (FINISH)
C9878	SIDING, STUCCO, VENEER
C9901	MISC SERVICES – CALTRANS FACILITIES
C9902	FUEL SYSTEMS
C9903	CONSTRUCTION CLEAN UP
C9904	CORING
C9905	CUTTING
C9906	SANDBLASTING
C9907	CONSTRUCTION EQUIPMENT RENTAL
C9908	HEAVY EQUIPMENT RENTAL
C9947	ELEVATOR
C9980	DEMOLITION
C9981	BUILDING MOVER
C9988	MOVING & STORAGE
C9999	BROKER (FOR FEE ONLY)

CALIFORNIA UNIFIED CERTIFICATION PROGRAM (CUCP)

MANUFACTURING

D2010	MEAT PRODUCTS
D2020	DAIRY PRODUCTS
D2030	PRESERVED FRUITS & VEGETABLES
D2040	GRAIN MILL PRODUCTS
D2050	BAKERY PRODUCTS
D2060	SUGAR & CONFECTIONERY PRODUCTS
D2070	FATS & OILS
D2080	BEVERAGES
D2090	MISC FOOD & KINDRED PRODUCTS
D2110	CIGARETTES
D2120	CIGARS
D2130	CHEWING & SMOKING TOBACCO
D2140	TOBACCO STEMMING & REDRYING
D2210	BROADWOVEN FABRIC MILLS, COTTON
D2220	BROADWOVEN FABRIC MILLS, MANMADE
D2230	BROADWOVEN FABRIC MILLS, WOOL
D2240	NARROW FABRIC MILLS
D2250	KNITTING MILLS
D2260	TEXTILE FINISHING, EXCEPT WOOL
D2270	CARPETS & RUGS
D2280	YARN & THREAD MILLS
D2290	MISC TEXTILE GOODS
D2310	MEN'S & BOYS' SUITS & COATS
D2320	MEN'S & BOYS' FURNISHINGS
D2330	WOMEN'S & MISSES' OUTERWEAR
D2340	WOMEN'S & CHILDREN'S UNDERGARMENTS
D2350	HATS, CAPS, & MILLINERY
D2360	GIRLS' & CHILDREN'S OUTERWEAR
D2370	FUR GOODS
D2380	MISC APPAREL & ACCESSORIES
D2390	MISC FABRICATED TEXTILE PRODUCTS
D2410	LOGGING
D2420	SAWMILLS & PLANING MILLS
D2430	MILLWORK, PLYWOOD & STRUCTURAL MEMBERS
D2440	WOOD CONTAINERS
D2450	WOOD BUILDINGS & MOBILE HOMES
D2490	MISC WOOD PRODUCTS
D2510	HOUSEHOLD FURNITURE
D2520	OFFICE FURNITURE
D2530	PUBLIC BUILDING & RELATED FURNITURE
D2540	PARTITIONS & FIXTURES
D2590	MISC FURNITURE & FIXTURES
D2610	PULP MILLS
D2620	PAPER MILLS
D2630	PAPERBOARD MILLS
D2650	PAPERBOARD CONTAINERS & BOXES
D2670	MISC CONVERTED PAPER PRODUCTS
D2710	NEWSPAPERS
D2720	PERIODICALS
D2730	BOOKS
D2740	MISC PUBLISHING
D2750	COMMERCIAL PRINTING
D2760	MANIFOLD BUSINESS FORMS
D2770	GREETING CARDS
D2780	BLANKBOOKS & BOOKBINDING
D2790	PRINTING TRADE SERVICES
D2810	INDUSTRIAL INORGANIC CHEMICALS
D2820	PLASTICS MATERIALS & SYNTHETICS
D2830	DRUGS
D2840	SOAP, CLEANERS, & TOILET GOODS
D2850	PAINTS & ALLIED PRODUCTS
D2860	INDUSTRIAL ORGANIC CHEMICALS
D2870	AGRICULTURAL CHEMICALS
D2890	MISC CHEMICAL PRODUCTS
D2910	PETROLEUM REFINING
D2950	ASPHALT PAVING & ROOFING MATERIALS
D2990	MISC. PETROLEUM & COAL PRODUCTS
D3010	TIRES & INNER TUBES
D3020	RUBBER & PLASTICS FOOTWEAR
D3050	HOSE & BELTING & GASKETS & PACKING
D3060	FABRICATED RUBBER PRODUCTS, NEC
D3080	MISC PLASTICS PRODUCTS, NEC
D3110	LEATHER TANNING & FINISHING
D3130	FOOTWEAR CUT STOCK
D3140	FOOTWEAR, EXCEPT RUBBER
D3150	LEATHER GLOVES & MITTENS
D3160	LUGGAGE
D3170	HANDBAGS & PERSONAL LEATHER GOODS
D3190	LEATHER GOODS, NEC
D3210	FLAT GLASS
D3220	GLASS & GLASSWARE, PRESSED OR BLOWN
D3230	PRODUCTS OF PURCHASED GLASS
D3240	CEMENT, HYDRAULIC
D3250	STRUCTURAL CLAY PRODUCTS
D3260	POTTERY & RELATED PRODUCTS
D3270	CONCRETE, GYPSUM, & PLASTER PRODUCTS
D3280	CUT STONE & STONE PRODUCTS
D3290	MISC NONMETALLIC MINERAL PRODUCTS
D3310	BLAST FURNACE & BASIC STEEL PRODUCTS
D3320	IRON & STEEL FOUNDRIES
D3330	PRIMARY NONFERROUS METALS
D3340	SECONDARY NONFERROUS METALS
D3350	NONFERROUS ROLLING & DRAWING
D3360	NONFERROUS FOUNDRIES (CASTINGS)

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MANUFACTURING (CONTINUED)

D3390	MISC PRIMARY METAL PRODUCTS
D3410	METAL CANS & SHIPPING CONTAINERS
D3420	CUTLERY, HANDTOOLS, & HARDWARE
D3430	PLUMBING & HEATING, EXCEPT ELECTRIC
D3440	FABRICATED STRUCTURAL METAL PRODUCTS
D3450	SCREW MACHINE PRODUCTS, BOLTS, ETC.
D3460	METAL FORGINGS & STAMPINGS
D3470	METAL SERVICES, NEC
D3480	ORDNANCE & ACCESSORIES, NEC
D3490	MISC FABRICATED METAL PRODUCTS
D3510	ENGINES & TURBINES
D3520	FARM & GARDEN MACHINERY
D3530	CONSTRUCTION & RELATED MACHINERY
D3540	METALWORKING MACHINERY
D3550	SPECIAL INDUSTRY MACHINERY
D3560	GENERAL INDUSTRIAL MACHINERY
D3570	COMPUTER & OFFICE EQUIPMENT
D3580	REFRIGERATION & SERVICE MACHINERY
D3590	INDUSTRIAL MACHINERY, NEC
D3610	ELECTRIC DISTRIBUTION EQUIPMENT
D3620	ELECTRICAL INDUSTRIAL APPARATUS
D3630	HOUSEHOLD APPLIANCES
D3640	ELECTRIC LIGHTING & WIRING EQUIPMENT
D3650	HOUSEHOLD AUDIO & VIDEO EQUIPMENT
D3660	COMMUNICATIONS EQUIPMENT
D3670	ELECTRONIC COMPONENTS & ACCESSORIES
D3690	MISC ELECTRICAL EQUIPMENT & SUPPLIES
D3710	MOTOR VEHICLES & EQUIPMENT
D3720	AIRCRAFT & PARTS
D3730	SHIP & BOAT BUILDING & REPAIRING
D3740	RAILROAD EQUIPMENT
D3750	MOTORCYCLES, BICYCLES, & PARTS
D3760	GUIDED MISSILES, SPACE VEHICLES, PARTS
D3790	MISC TRANSPORTATION EQUIPMENT
D3810	SEARCH & NAVIGATION EQUIPMENT
D3820	MEASURING & CONTROLLING DEVICES
D3840	MEDICAL INSTRUMENTS & SUPPLIES
D3850	OPHTHALMIC GOODS
D3860	PHOTOGRAPHIC EQUIPMENT & SUPPLIES
D3870	WATCHES, CLOCKS, WATCHCASES & PARTS
D3910	JEWELRY, SILVERWARE, & PLATED WARE
D3930	MUSICAL INSTRUMENTS
D3940	TOYS & SPORTING GOODS
D3950	PENS, PENCILS, OFFICE, & ART SUPPLIES
D3960	COSTUME JEWELRY & NOTIONS
D3990	MISC MANUFACTURES

TRANSPORTATION & PUBLIC UTILITIES

E4010	RAILROADS
E4110	LOCAL & SUBURBAN TRANSPORTATION
E4120	TAXICABS
E4130	INTERCITY & RURAL BUS TRANSPORTATION
E4140	BUS CHARTER SERVICE
E4150	SCHOOL BUSES
E4170	BUS TERMINAL & SERVICE FACILITIES
E4210	TRUCKING & COURIER SERVICES, EX. AIR
E4220	PUBLIC WAREHOUSING & STORAGE
E4230	TRUCKING TERMINAL FACILITIES
E4310	U. S. POSTAL SERVICE
E4410	DEEP SEA FOREIGN TRANS. OF FREIGHT
E4420	DEEP SEA DOMESTIC TRANS. OF FREIGHT
E4430	FREIGHT TRANS. ON THE GREAT LAKES
E4440	WATER TRANSPORTATION OF FREIGHT, NEC.
E4480	WATER TRANSPORTATION OF PASSENGERS
E4490	WATER TRANSPORTATION SERVICES
E4510	AIR TRANSPORTATION, SCHEDULED
E4520	AIR TRANSPORTATION, NONSCHEDULED
E4580	AIRPORTS, FLYING FIELDS, & SERVICES
E4610	PIPELINES, EXCEPT NATURAL GAS
E4720	PASSENGER TRANSPORTATION ARRANGEMENT
E4724	TRAVEL SERVICE
E4730	FREIGHT TRANSPORTATION ARRANGEMENT
E4740	RENTAL OF RAILROAD CARS
E4780	MISC TRANSPORTATION SERVICES
E4810	TELEPHONE COMMUNICATIONS
E4820	TELEGRAPH & OTHER COMMUNICATIONS
E4830	RADIO & TELEVISION BROADCASTING
E4840	CABLE & OTHER PAY TV SERVICES
E4890	COMMUNICATIONS SERVICES, NEC
E4910	ELECTRIC SERVICES
E4920	GAS PRODUCTION & DISTRIBUTION
E4930	COMBINATION UTILITY SERVICES
E4940	WATER SUPPLY
E4950	SANITARY SERVICES, NEC
E4952	SEWERAGE SYSTEMS
E4953	WASTE COLLECTION AND DISPOSAL
E4954	HAZARDOUS WASTE COLLECTION AND DISPOSAL
E4960	STEAM & AIR-CONDITIONING SUPPLY
E4970	IRRIGATION SYSTEMS

CALIFORNIA UNIFIED CERTIFICATION PROGRAM (CUCP)

SUPPLIERS

(Construction suppliers listed in Construction section.)

F5030 LUMBER AND CONSTRUCTION MATERIAL
F5040 PROFESSIONAL & COMMERCIAL EQUIPMENT
F5044 OFFICE EQUIPMENT
F5045 COMPUTERS, PERIPHERALS & SOFTWARE
F5050 METALS & MINERALS, EXCEPT PETROLEUM
F5060 ELECTRICAL GOODS
F5070 HARDWARE, PLUMBING & HEATING EQUIPMENT
F5080 MACHINERY, EQUIPMENT, & SUPPLIES
F5085 COMPUTER EQUIPMENT & SUPPLIES
F5088 TRANSPORTATION EQUIPMENT & SUPPLIES
F5090 MISC DURABLE GOODS
F5110 PAPER & PAPER PRODUCTS
F5130 APPAREL, PIECE GOODS, & NOTIONS
F5140 GROCERIES & RELATED PRODUCTS
F5150 FARM-PRODUCT RAW MATERIALS
F5160 CHEMICALS & ALLIED PRODUCTS
F5170 PETROLEUM & PETROLEUM PRODUCTS
F5180 BEER, WINE, & DISTILLED BEVERAGES
F5190 MISC NONDURABLE GOODS
F5210 LUMBER & OTHER BUILDING MATERIALS
F5230 PAINT, GLASS, & WALLPAPER STORES
F5251 HARDWARE STORES
F5260 RETAIL NURSERIES & GARDEN STORES
F5270 MOBILE HOME DEALERS
F5310 DEPARTMENT STORES
F5330 VARIETY STORES
F5390 MISC GENERAL MERCHANDISE STORES
F5410 GROCERY STORES
F5420 MEAT & FISH MARKETS
F5430 FRUIT & VEGETABLE MARKETS
F5440 CANDY, NUT, & CONFECTIONERY STORES
F5450 DAIRY PRODUCTS STORES
F5460 RETAIL BAKERIES
F5490 MISC FOOD STORES
F5510 NEW & USED CAR DEALERS
F5520 USED CAR DEALERS
F5530 AUTO & HOME SUPPLY STORES
F5540 GASOLINE SERVICE STATIONS
F5550 BOAT DEALERS
F5560 RECREATIONAL VEHICLE DEALERS
F5570 MOTORCYCLE DEALERS
F5590 AUTOMOTIVE DEALERS, NEC
F5610 MEN'S & BOYS' CLOTHING STORES
F5620 WOMEN'S CLOTHING STORES
F5630 WOMEN'S ACCESSORY
F5640 CHILDREN'S & INFANTS' WEAR STORES
F5650 FAMILY CLOTHING STORES
F5660 SHOE STORES
F5690 MISC APPAREL & ACCESSORY STORES
F5710 FURNITURE & HOMEFURNISHINGS STORES
F5720 HOUSEHOLD APPLIANCE STORES
F5730 RADIO, TELEVISION, & COMPUTER STORES
F5810 EATING & DRINKING PLACES
F5820 CATERING
F5910 DRUG STORES & PROPRIETARY STORES
F5920 LIQUOR STORES
F5930 USED MERCHANDISE STORES
F5940 MISC SHOPPING GOODS STORES
F5960 NONSTORE RETAILERS
F5980 FUEL DEALERS
F5990 RETAIL STORES, NEC
F5992 FLORIST

FINANCE INSURANCE & REAL ESTATE

H6010 CENTRAL RESERVE DEPOSITORIES
H6020 COMMERCIAL BANKS
H6030 SAVINGS INSTITUTIONS
H6060 CREDIT UNIONS
H6080 FOREIGN BANK & BRANCHES & AGENCIES
H6090 FUNCTIONS CLOSELY RELATED TO BANKING
H6110 FEDERAL & FED.-SPONSORED CREDIT
H6140 PERSONAL CREDIT INSTITUTIONS
H6150 BUSINESS CREDIT INSTITUTIONS
H6160 MORTGAGE BANKERS & BROKERS
H6210 SECURITY BROKERS & DEALERS
H6220 COMMODITY CONTRACTS BROKERS, DEALERS
H6230 SECURITY & COMMODITY EXCHANGES
H6280 SECURITY & COMMODITY SERVICES
H6310 LIFE INSURANCE
H6320 MEDICAL SERVICE & HEALTH INSURANCE
H6330 FIRE, MARINE, & CASUALTY INSURANCE
H6350 SURETY INSURANCE
H6360 TITLE INSURANCE
H6370 PENSION, HEALTH, & WELFARE FUNDS
H6390 INSURANCE CARRIERS, NEC
H6410 INSURANCE AGENTS, BROKERS, & SERVICE
H6510 REAL ESTATE OPERATORS & LESSORS
H6530 REAL ESTATE AGENTS & MANAGERS
H6531 REAL ESTATE APPRAISERS & BROKERS
H6540 TITLE ABSTRACT OFFICES
H6550 SUBDIVIDERS & DEVELOPERS
H6710 HOLDING OFFICES
H6720 INVESTMENT OFFICES
H6730 TRUSTS
H6790 MISC INVESTING

CALIFORNIA UNIFIED CERTIFICATION PROGRAM (CUCP)

SERVICES

I7010	HOTELS & MOTELS
I7020	ROOMING & BOARDING HOUSES
I7030	CAMPS & RECREATIONAL VEHICLE PARKS
I7040	MEMBERSHIP-BASIS ORG. HOTELS
I7210	LAUNDRY, CLEANING, & GARMENTS
I7220	PHOTOGRAPHIC STUDIOS, PORTRAIT
I7230	BEAUTY SHOPS
I7240	BARBER SHOPS
I7250	SHOE REPAIR & SHOESHINE PARLORS
I7260	FUNERAL SERVICE & CREMATORIES
I7290	MISC PERSONAL SERVICES
I7291	TAX RETURN PREPARATION SERVICES
I7310	ADVERTISING
I7320	CREDIT REPORTING & COLLECTION
I7330	MAILING, REPRODUCTION, STENOGRAPHIC
I7336	COMMERICAL ART AND GRAPHIC DESIGN
I7340	SERVICES TO BUILDINGS
I7341	JANITORIAL SERVICES
I7342	DISINFECTING AND PEST CONTROL
I7349	BUILDING MAINTENANCE SERVICES
I7350	MISC EQUIPMENT RENTAL & LEASING
I7360	PERSONNEL SUPPLY SERVICES
I7370	COMPUTER & DATA PROCESSING SERVICES
I7371	COMPUTER PROGRAMMING
I7372	PREPACKAGED SOFTWARE
I7373	INTEGRATED SYSTEMS & CAD/CAM SYSTEMS
I7375	INFORMATION RETRIEVAL SYSTEMS
I7377	COMPUTER RENTAL AND LEASING
I7378	COMPUTER MAINTENANCE & REPAIR
I7380	MISC BUSINESS SERVICES
I7381	DETECTIVE & ARMORED CAR SERVICES
I7382	SECURITY SYSTEMS SERVICES
I7388	INTERIOR DECORATING & DESIGN
I7510	AUTOMOTIVE RENTALS, NO DRIVERS
I7520	AUTOMOBILE PARKING
I7530	AUTOMOTIVE REPAIR SHOPS
I7540	AUTOMOTIVE SERVICES, EXCEPT REPAIR
I7550	TOWING
I7620	ELECTRICAL REPAIR SHOPS
I7630	WATCH, CLOCK, & JEWELRY REPAIR
I7640	REUPHOLSTERY & FURNITURE REPAIR
I7690	MISC REPAIR SHOPS
I7698	LOCKSMITH
I7810	MOTION PICTURE & VIDEO TAPE PRODUCTION
I7820	MOTION PICTURE & VIDEO TAPE DISTRIBUTION
I7830	MOTION PICTURE THEATERS
I7840	VIDEO TAPE RENTAL
I7850	MISCELLANEOUS AUDIO VISUAL SERVICES
I7910	DANCE STUDIOS, SCHOOLS, & HALLS
I7920	PRODUCERS, ORCHESTRAS, ENTERTAINERS
I7930	BOWLING CENTERS
I7940	COMMERCIAL SPORTS
I7990	MISC AMUSEMENT, RECREATION SERVICES
I8010	OFFICES & CLINICS OF MEDICAL DOCTORS
I8020	OFFICES & CLINICS OF DENTISTS
I8030	OFFICES OF OSTEOPATHIC PHYSICIANS
I8040	OFFICES OF OTHER HEALTH PRACTITIONERS
I8050	NURSING & PERSONAL CARE FACILITIES
I8060	HOSPITALS
I8070	MEDICAL LABORATORIES
I8073	DRUG TESTING
I8080	HOME HEALTH CARE SERVICES
I8090	HEALTH & ALLIED SERVICES, NEC
I8110	LEGAL SERVICES
I8210	ELEMENTARY & SECONDARY SCHOOLS
I8220	COLLEGES & UNIVERSITIES
I8230	LIBRARIES
I8240	VOCATIONAL SCHOOLS
I8290	SCHOOLS & EDUCATIONAL SERVICES, NEC
I8320	INDIVIDUAL & FAMILY SERVICES
I8330	JOB TRAINING & RELATED SERVICES
I8350	CHILD DAY CARE SERVICES
I8360	RESIDENTIAL CARE
I8390	SOCIAL SERVICES, NEC
I8410	MUSEUMS & ART GALLERIES
I8420	BOTANICAL & ZOOLOGICAL GARDENS
I8610	BUSINESS ASSOCIATIONS
I8620	PROFESSIONAL ORGANIZATIONS
I8630	LABOR ORGANIZATIONS
I8640	CIVIC & SOCIAL ASSOCIATIONS
I8650	POLITICAL ORGANIZATIONS
I8660	RELIGIOUS ORGANIZATIONS
I8690	MEMBERSHIP ORGANIZATIONS, NEC
I8720	ACCOUNTING, AUDITING, & BOOKKEEPING
I8730	RESEARCH & TESTING SERVICES
I8734	LABORATORY TESTING AND ANALYSIS
I8740	MANAGEMENT & PUBLIC RELATIONS
I8810	PRIVATE HOUSEHOLDS
I8990	SERVICES, NEC
I8991	RECYCLING

CALIFORNIA UNIFIED CERTIFICATION PROGRAM (CUCP)

PUBLIC ADMINISTRATION

J9110 EXECUTIVE OFFICES
J9120 LEGISLATIVE BODIES
J9130 EXECUTIVE & LEGISLATIVE COMBINED
J9190 GENERAL GOVERNMENT, NEC
J9210 COURTS
J9220 PUBLIC ORDER & SAFETY
J9410 ADMIN. OF EDUCATIONAL PROGRAMS
J9430 ADMIN. OF PUBLIC HEALTH PROGRAMS
J9440 ADMIN. OF SOCIAL & MANPOWER PROGRAMS
J9450 ADMINISTRATION OF VETERANS' AFFAIRS
J9510 ENVIRONMENTAL QUALITY
J9530 HOUSING & URBAN DEVELOPMENT
J9610 ADMIN. OF GENERAL ECONOMIC PROGRAMS
J9620 REGULATIONS, ADMIN. OF TRANSPORTATION
J9630 REGULATION, ADMIN. OF UTILITIES
J9640 REGULATION OF AGRICULTURAL MARKETING
J9650 REGULATION MISC COMMERCIAL SECTORS
J9660 SPACE RESEARCH AND TECHNOLOGY
J9710 NATIONAL SECURITY
J9720 INTERNATIONAL AFFAIRS

CALIFORNIA UNIFIED CERTIFICATION PROGRAM (CUCP)

ROSTER OF CERTIFYING AGENCIES

Note: Underlined website includes the California Unified Certification Program Application Package.

If firm has its principal place of business in another state and is certified in that state, please contact the California Department of Transportation in Cluster 4.

Area	Counties	Certifying Agencies	
Riverside, Imperial & San Diego (RIS) *Cluster 1*	Imperial Riverside San Diego	**SAN DIEGO UNIFIED PORT DISTRICT** Equal Opportunity Management P.O. Box 120488 San Diego, CA 92112-0488 Phone: (619) 686-6420 or (800) 854-2757 Fax: (619) 686-6413 www.portofsandiego.org **CITY OF SAN DIEGO** Equal Opportunity Contracting Program 1010 Second Avenue, #500 San Diego, CA 92101 Phone: (619) 533-4492 Fax: (619) 533-4474 www.sannet.gov	**SUNLINE TRANSIT AGENCY** Contracts and Compliance 32-505 Harry Oliver Trail Thousand Palms, CA 92276-3501 Phone: (760) 343-3456, Ext. 167 Fax: (760) 343-3845 www.sunline.org
Los Angeles Area *Cluster 2*	Kern Los Angeles Orange San Bernardino San Luis Obispo Santa Barbara Ventura	**CITY OF LOS ANGELES** Office of Contract Compliance 600 South Spring St., Suite 1300 Los Angeles, CA 90014 Phone: (213) 847-6480 Fax: (213) 847-5566 www.lacity.org/bca **COUNTY OF ORANGE JOHN WAYNE AIRPORT** 3160 Airway Avenue Costa Mesa, CA 92626 Phone: (949) 252-5175 Fax: (949) 252-5225 www.ocair.com	**LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY (MTA)** Small Business Diversity and Labor Compliance One Gateway Plaza Los Angeles, CA 90012 Phone: (213) 922-2600 Fax: (213) 922-7660 www.mta.net

Roster of Certifying Agencies (Continued)

CALIFORNIA UNIFIED CERTIFICATION PROGRAM (CUCP)

Area	Counties	Certifying Agencies	
BayArea Central Valley *Cluster 3*	Alameda Amador Calaveras Contra Costa Fresno Kings Madera Marin Mariposa Merced Monterey Napa San Benito San Francisco San Joaquin San Mateo Santa Clara Santa Cruz Solano Sonoma Stanislaus Tulare Tuolumne	**SANTA CLARA VALLEY TRANSPORTATION AUTHORITY (VTA)** Small & Disadvantaged Businesses 3331 North First Street San Jose, CA 95134-1906 Phone: (408) 321-5962 Fax: (408) 955-9729 www.vta.org **BAY AREA RAPID TRANSIT DISTRICT (BART)** Office of Civil Rights 1330 Broadway, #1702 Oakland, CA 94612 Phone: (510) 464-6195 Fax: (510) 464-7848 www.bart.gov **SAN JOAQUIN REGIONAL RAIL COMMISSION** DBE Liaison Officer 5000 S. Airport Way, #102 Stockton, CA 95206 Phone: (209) 468-5600 Fax: (209) 468-5613 www.acerail.com **CITY OF FRESNO** **DBE Program** 2101 G Street, Building A Fresno, CA 93706 Phone: (559) 498-4071 Fax: (559) 488-1069 www.ci.fresno.ca.us **CITY OF OAKLAND** Contract Compliance Office 250 Frank H. Ogawa Plaza, #3341 Oakland, CA 94612 Phone: (510) 238-3970 Fax: (510) 238-3363 www.oaklandnet.com	**SAN MATEO COUNTY TRANSIT DISTRICT (SAMTRANS)/ PENINSULA CORRIDOR JOINT POWERS BOARD (JPB)** DBE Office 1250 San Carlos Avenue San Carlos, CA 94070 Phone: (650) 508-7939 Fax: (650) 508-7738 www.samtrans.com **CENTRAL CONTRA COSTA TRANSIT AUTHORITY (CCCTA)** Office of Civil Rights 2477 Arnold Industrial Way Concord, CA 94520-5327 Phone: (925) 676-1976 Fax: (925) 686-2630 www.cccta.org **ALAMEDA-CONTRA COSTA TRANSIT DISTRICT (AC TRANSIT)** DBE Program Compliance Administrator 1600 Franklin Street, 6th Floor Oakland, CA 94612 Phone: (510) 891-7176 Fax: (510) 891-4724 www.actransit.org **SAN FRANCISCO PUBLIC TRANSPORTATION DEPT.** Accessible Services and Contract Compliance 1145 Market Street, 7th Floor San Francisco, CA 94103 Phone: (415) 934-3987 Fax: (415) 934-3980 www.sfmuni.com **AIRPORT CONCESSIONS ONLY: SF INTERNATIONAL AIRPORT** Airport Minority/Women Opportunity P.O. Box 8097 San Francisco, CA 94128 Phone: (650) 821-5021 Fax: (650) 821-5146 www.flysfo.com

CALIFORNIA UNIFIED CERTIFICATION PROGRAM (CUCP)

Roster of Certifying Agencies (Continued)

Area	Counties	Certifying Agencies	
Northern California *Cluster 4*	Alpine Butte Colusa Del Norte El Dorado Glenn Humboldt Inyo Lake Lassen Mendocino Modoc Mono Nevada Placer Plumas Sacramento Shasta Sierra Siskiyou Sutter Tehama Trinity Yolo Yuba	**CALIFORNIA DEPARTMENT OF TRANSPORTATION (CALTRANS)** Civil Rights MS 79 1823 14th Street Sacramento, CA 95814 Phone: (916) 324-1700 or (866) 810-6346 Fax: (916) 324-1862 www.dot.ca.gov	**YOLO COUNTY TRANSPORTATION DISTRICT** DBE Programs 350 Industrial Way Woodland, CA 95776 Phone: (530) 661-0816 Fax: (530) 661-1732 www.yctd.org

SECTION VI: AGREEMENT

AGREEMENT NO. C-4-2093

BETWEEN

ORANGE COUNTY TRANSPORTATION AUTHORITY

AND

THIS AGREEMENT is effective this _____ day of _____, 2024 ("Effective Date"), by and between the Orange County Transportation Authority, 550 South Main Street, P.O. Box 14184, Orange, CA 92863-1584, a public corporation of the State of California (hereinafter referred to as "AUTHORITY"), and ___ , ___ , ,___ ,____ (hereinafter referred to as "CONTRACTOR").

WITNESSETH:

WHEREAS, AUTHORITY has determined that it requires Building Repairs at Santa Ana Bus Base; and

WHEREAS, said work cannot be performed by the regular employees of AUTHORITY; and

WHEREAS, CONTRACTOR has represented that it has the requisite personnel, experience, material, and equipment and is otherwise qualified to perform such services; and

WHEREAS, CONTRACTOR wishes to perform these services; and

WHEREAS, AUTHORITY's Board of Directors authorized this Agreement on _____.

NOW, THEREFORE, it is mutually understood and agreed by AUTHORITY and CONTRACTOR as follows:

ARTICLE 1. COMPLETE AGREEMENT

A. This Agreement, including all exhibits and other documents incorporated herein and made applicable by reference, constitutes the complete and exclusive statement of the terms and conditions of the Agreement between AUTHORITY and CONTRACTOR and it supersedes all prior representations, understandings and communications. The invalidity in whole or in part of any term or condition of this Agreement shall not affect the validity of other terms or conditions.

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B. AUTHORITY's failure to insist in any one or more instances upon the performance of any terms or conditions of this Agreement shall not be construed as a waiver or relinquishment of AUTHORITY's right to such performance by CONTRACTOR or to future performance of such terms or conditions and CONTRACTOR's obligation in respect thereto shall continue in full force and effect. CONTRACTOR shall be responsible for having taken steps reasonably necessary to ascertain the nature and location of the work, and the general and local conditions, which can affect the work or the cost thereof. Any failure by CONTRACTOR to do so will not relieve it from responsibility for successfully performing the work without additional expense to AUTHORITY.

C. AUTHORITY assumes no responsibility for any understanding or representations concerning conditions made by any of its officers, employees or agents prior to the execution of this Agreement, unless such understanding or representations by AUTHORITY are expressly stated in this Agreement.

D. Time shall be of the essence hereunder; but CONTRACTOR shall perform work hereunder only to the minimum extent consistent with requirements herein.

E. Changes to any portion of this Agreement shall not be binding upon AUTHORITY except when specifically confirmed in writing by an authorized representative of AUTHORITY and issued in accordance with the provisions of this Agreement.

ARTICLE 2. AUTHORITY DESIGNEE

The Chief Executive Officer of AUTHORITY, or designee, shall have the authority to act for and exercise any of the rights of AUTHORITY as set forth in this Agreement.

ARTICLE 3. SCOPE OF WORK

CONTRACTOR shall provide all labor, equipment, materials and facilities necessary for all work related to building repairs at AUTHORITY's Santa Ana Bus Base in strict compliance with all the requirements specified herein and in:

Attachment A, entitled “Disadvantaged Business Enterprise (DBE) Contract Provisions for U.S. DOT-assisted Contracts”

Attachment A-1, entitled “DBE Participation Commitment Form”

Exhibit A, entitled "General Provisions"; Addendum No's;

Exhibit B, entitled "Specifications";

Exhibit C, entitled "List of Drawings";

Exhibit D, entitled "List of Subcontractors";

Exhibit E, entitled "Performance Bond";

Exhibit F, entitled "Payment Bond";

Exhibit G, entitled "Guaranty";

Exhibit H, entitled "Level III Safety Specifications"; and

Exhibit I, entitled "Contract Change Order";

all of which documents are attached to and, by this reference, incorporated in and made a part of this Agreement. By this reference, also incorporated in and made a part of this Agreement are all applicable provisions of the IFB and all representations made by CONTRACTOR in its original bid to AUTHORITY, including, but not limited to, CONTRACTOR's certifications relative to Workers' Compensation Insurance, and compliance with Section 7028.15 of the State of California Business and Professions Code.

ARTICLE 4. DELIVERY / RECOVERY SCHEDULE

A. CONTRACTOR shall fully complete the herein above described work within three hundred sixty (360) 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.

B. If at any time, the critical path schedule reflects -30 or a greater negative number of days of total float, then CONTRACTOR, within ten (10) days after CONTRACTOR first becomes aware of such schedule delay, shall prepare and submit to AUTHORITY for review and approval a Recovery Schedule demonstrating CONTRACTOR's proposed plan to regain lost schedule progress and to achieve the original contractual milestones in accordance with the Agreement. AUTHORITY shall notify CONTRACTOR within ten days after receipt of each such Recovery Schedule whether the schedule is

deemed accepted or rejected. Within five (5) days after AUTHORITY's rejection of the schedule, CONTRACTOR will resubmit a revised Recovery Schedule incorporating AUTHORITY's comments. When AUTHORITY accepts CONTRACTOR's Recovery Schedule, CONTRACTOR shall, within five (5) days after AUTHORITY's acceptance, incorporate and fully include such schedule into the Project Schedule and deliver it to AUTHORITY.

C. All costs incurred by CONTRACTOR in preparing, implementing and achieving the Recovery Schedule shall be borne by CONTRACTOR and shall not result in a change to the contract price.

D. In the event that CONTRACTOR fails to provide an acceptable Recovery Schedule within thirty (30) days of CONTRACTOR's receipt of a notice to do so, CONTRACTOR shall have no right to receive progress payments until CONTRACTOR has prepared and AUTHORITY has approved such Recovery Schedule.

ARTICLE 5. START OF WORK

CONTRACTOR shall incur no costs, and shall not perform or furnish any work, services, materials or equipment under this Agreement, unless and until a written Notice to Proceed has been given to CONTRACTOR by AUTHORITY. Conditions precedent to AUTHORITY issuing said Notice to Proceed are CONTRACTOR furnishing the Exhibit E "Performance Bond", Exhibit F "Payment Bond", Exhibit G "Guaranty", and certificates of insurance as set forth in Article 11 hereunder. CONTRACTOR shall furnish said documents within ten (10) calendar days after notification of contract award from AUTHORITY. Upon receipt of acceptable bonds, guaranty, and insurance certificates, AUTHORITY will within ten (10) working days thereafter, issue the written Notice to Proceed.

ARTICLE 6. PAYMENT

A. For CONTRACTOR's full and complete performance of its obligations under this Agreement, and subject to the maximum cumulative payment obligation provision set forth in Article 8, AUTHORITY shall pay CONTRACTOR the firm fixed sum of _____Dollars ($.00).

B. Progress payments and the final payment will be made by AUTHORITY to CONTRACTOR in accordance with the terms as set forth in Exhibit A, "General Provisions", under the "Progress

Payments" and "Final Payment and Claims" sections therein. The acceptance by CONTRACTOR of AUTHORITY's final payment hereunder shall constitute a waiver of all claims against AUTHORITY under or arising out of this herein Agreement, as such may from time to time be amended.

C. Failure by AUTHORITY to pay amount in dispute shall not alleviate, diminish or modify in any respect the CONTRACTOR's obligation to achieve final acceptance of and all work in accordance with the contract documents, and CONTRACTOR shall not cease or slow down its performance under this Agreement on account of any such amount in dispute. CONTRACTOR shall proceed as directed by AUTHORITY pending resolution of dispute. Upon resolution of dispute, each party shall promptly pay any amount owing.

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.

ARTICLE 7. PROMPT PAYMENT CLAUSE

A. AUTHORITY has adopted a prompt payment provision on all U.S. DOT-assisted contracts to facilitate timely payment to all subcontractors in accordance with regulatory mandates. The provisions of this Article apply to both DBE and non-DBE subcontractors. Pursuant to Title 49 of the Code of Federal Regulations (CFR) Part 26.29:

B. “CONTRACTOR or subcontractor agrees to pay each subcontractor under this Agreement for satisfactory performance of its Agreement no later than seven (7) days for construction contracts and fifteen (15) days for consultant contracts from the receipt of each progress payment CONTRACTOR receives from AUTHORITY on account of the work performed by the subcontractor. CONTRACTOR agrees further to return retainage payments to each subcontractor within seven (7) days for construction contracts and fifteen (15) days for consultant contracts after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the Agreement work by AUTHORITY. Any delay or postponement of payment from the above referenced time frame may take

place only for good cause and with AUTHORITY's prior written approval." CONTRACTOR agrees further to return retainage payments on construction-related contracts to each subcontractor within seven (7) days after receiving payment for work satisfactorily completed and accepted including incremental acceptances of portions of the Agreement work by AUTHORITY. CONTRACTOR shall incorporate this clause verbatim, set forth above, in all subcontract, broker, dealer, vendor, supplier, purchase order or other source agreements issued to both DBE and non-DBE firms. In the event that there is a dispute over all or any portion of the amount due on a progress payment from CONTRACTOR or subcontractor to a subcontractor, CONTRACTOR or subcontractor may withhold no more than 150 percent of the disputed amount.

C. Any violation of these provisions shall subject the violating CONTRACTOR to the penalties, sanctions, and other remedies specified in Section 7108.5 of the California Business and Professions Code and Section 10262 of the California Public Contract Code for construction contracts, and Section 3321 of the California Civil Code for consultant contracts. This requirement shall not be construed to limit or impair any contractual, administrative or judicial remedies otherwise available to CONTRACTOR or subcontractor in the event of a dispute involving late payment or nonpayment by CONTRACTOR; deficient subcontract performance or noncompliance by a subcontractor.

D. Failure to comply with these provisions without prior written approval from AUTHORITY will constitute noncompliance, which shall result in the application of appropriate administrative sanctions to the licensee, including, but not limited to, a penalty payable to the subcontractor, of two percent (2%) of the invoice amount due per month, for every month that full payment is not made.

ARTICLE 8. MAXIMUM OBLIGATION

Notwithstanding any provisions of this Agreement to the contrary, AUTHORITY and CONTRACTOR mutually agree that AUTHORITY's maximum cumulative payment obligation hereunder (including obligation for CONTRACTOR 's profit), shall be _____Dollars ($.00), which shall include all amounts payable to CONTRACTOR for its subcontracts, leases, materials and costs arising from, or due to termination of, this Agreement.

ARTICLE 9. NOTICES

All notices hereunder and communications regarding the interpretation of the terms of this Agreement, or changes thereto, shall be effected by delivery of said notices in person or by depositing said notices in the U.S. mail, registered or certified mail, returned receipt requested, postage prepaid and addressed as follows:

To CONTRACTOR:	To AUTHORITY:
	Orange County Transportation Authority
	550 South Main Street
	P.O. Box 14184
,	Orange, CA 92863-1584
ATTENTION:	ATTENTION: Gustavo Valle
Title:	Title: Senior Contracts Administrator
Phone: Email:	Phone: (714) 560 -5670 Email: gvalle@octa.net
	Cc: Eric Torres, Sr. Civil Engineer Phone: (714) 560-5345 Email: etorres1@octa.net

AUTHORITY will provide timely notification to CONTRACTOR of the receipt of any third-party claim relating to the Agreement, and CONTRACTOR agrees to timely reimburse AUTHORITY for its reasonable costs incurred in providing such notice in accordance with Public Contract Code Section 9201.

ARTICLE 10. INDEPENDENT CONTRACTOR

A. CONTRACTOR's relationship to AUTHORITY in the performance of this Agreement is that of an independent contractor. CONTRACTOR's personnel performing work under this Agreement shall at

all times be under CONTRACTOR's exclusive direction and control and shall be employees of CONTRACTOR and not employees of AUTHORITY. CONTRACTOR shall pay all wages, salaries and other amounts due its employees in connection with this Agreement and shall be responsible for all

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reports and obligations respecting them, such as social security, income tax withholding, unemployment compensation, workers' compensation and similar matters.

B. Should CONTRACTOR's personnel or a state or federal agency allege claims against AUTHORITY involving the status of AUTHORITY as employer, joint or otherwise, of said personnel, or allegations involving any other independent contractor misclassification issues, CONTRACTOR shall defend and indemnify AUTHORITY in relation to any allegations made.

ARTICLE 11. INSURANCE

A. CONTRACTOR shall procure and continuously maintain in full force and effect through contract completion, insurance coverages specified herein. Coverages shall not be subject to self-insurance provisions. CONTRACTOR shall provide the following insurance coverage:

1. Commercial General Liability, to include Products/Completed Operations, Independent Contractors', Contractual Liability, and Personal Injury with a minimum limit of $1,000,000 per occurrence and $2,000,000 general aggregate.

2. Automobile Liability to include owned, hired and non-owned autos with a combined single limit of $1,000,000 each accident;

3. Workers' Compensation with limits as required by the State of California, including waiver of subrogation, in favor of AUTHORITY, its officers, directors, employees and agents.

4. Builders All Risk policy or course of construction including earthquake and flood coverage with minimum limits of $*(project amount)*.

5. Employers' Liability with minimum limits of $1,000,000.

B. Prior to commencement of any work hereof, CONTRACTOR shall furnish to AUTHORITY's Contract Administrator broker-issued insurance certificate showing the required insurance coverages and

further providing that:

1. AUTHORITY, its officers, directors, employees and agents must be named as additional insured on Commercial General Liability and Automobile Liability policy with respect to performance hereunder; and

2. The coverage shall be primary and noncontributory as to any other insurance with respect to performance hereunder; and

3. Thirty (30) days prior written notice of cancellation or material change be given to AUTHORITY.

C. "Occurrence," as used herein, means any event or related exposure to conditions, which result in bodily injury or property damage.

D. The Certificate of Insurance shall reference Agreement Number C-4-2093; and, the Contract Administrator's Name, Gustavo Valle.

E. Upon AUTHORITY's request, certified, true and exact copies of each of the insurance policies shall be provided to AUTHORITY.

F. AUTHORITY shall notify CONTRACTOR in writing of any changes in the requirements to insurance required to be provided by CONTRACTOR. Except as set forth in this Article, any additional cost from such change shall be paid by AUTHORITY and any reduction in cost shall reduce the Agreement price pursuant to a change order.

G. CONTRACTOR shall also include in each subcontract the stipulation that subcontractors shall maintain coverage in the amounts required as provided in this Agreement.

H. CONTRACTOR shall be required to immediately notify AUTHORITY of any modifications or cancellation of any required insurance policies.

ARTICLE 12. BONDS

A. By submitting Exhibit E, entitled "Performance Bond", and Exhibit F, entitled "Payment Bond", CONTRACTOR shall satisfy AUTHORITY's requirements that CONTRACTOR deposit with AUTHORITY bonds with values in the sum of one hundred percent (100%) of this Agreement's price to cover

CONTRACTOR's failure to fully perform hereunder and CONTRACTOR's failure to pay its labor, material or failure to comply with Article 39 of this Agreement, in performing hereunder. If the Agreement price is increased in connection with a Change Order, AUTHORITY may, in its sole discretion, require a

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corresponding increase in the amount of the Performance and Payment bonds or new bonds covering the Change Order work.

B. Notwithstanding any other provision set forth in this Agreement, performance by a Surety or Guarantor of any obligations of CONTRACTOR shall not relieve CONTRACTOR of any of its obligations thereunder.

ARTICLE 13. ORDER OF PRECEDENCE

To the extent there are any conflicts or inconsistency arising between any provisions or documents incorporated in this Agreement, the order of precedence for conflict resolution in descending order shall be as follows: (1) the provisions of this Agreement, including its Exhibits; (2) the provisions of IFB including all Addendums; (3) the bid submitted to AUTHORITY by CONTRACTOR in response to said IFB; and (4) any other documents, cited herein or incorporated by reference. In the event of conflicting provisions between Exhibit B “Specifications”, and Exhibit C "List of Drawings", the Specifications (Exhibit B) shall take precedence.

ARTICLE 14. CHANGES

A. By written notice or order, AUTHORITY may, from time to time, order work suspension and/or make any change in the general scope of this Agreement, including, but not limited to, changes in the drawings, specifications, schedules (either deceleratory or acceleratory) or any other particular of the specifications or provisions of this Agreement. If any such work suspension or change causes an increase or decrease in the price or time required for performance, CONTRACTOR shall promptly notify AUTHORITY thereof and assert its claim for adjustment within ten (10) calendar days after the change or work suspension is ordered, and an equitable adjustment shall be negotiated. However, nothing in this clause shall excuse CONTRACTOR from proceeding immediately with the Agreement as changed.

Changes will be made in accordance with the terms as set forth in Exhibit A, "General Provisions", paragraph F, Extra Work and Changes, by written Change Order.

B. No claims by CONTRACTOR for equitable adjustment hereunder shall be allowed if asserted after final payment under this Agreement.

C. Any work performed beyond the technical provisions specified in this Agreement, or any extra work performed without AUTHORITY's written authority, will be considered unauthorized work and the cost thereof will not be paid for. Upon order of AUTHORITY's Engineer or its designee, unauthorized work shall be remedied, removed or replaced at CONTRACTOR's expense.

D. Any changes under this Article will be made using AUTHORITY's Contract Change Order form, set forth in Exhibit I, "Contract Change Order".

E. Any changes which constitute a "Claim" as defined by Public Contract Code Section 9204 (hereinafter "Section 9204") will be processed in accordance with Section 9204 and Exhibit A, "General Provisions."

ARTICLE 15. MODIFICATION BID-PRICE BREAKDOWN

CONTRACTOR, in connection with any bid it makes for a change order, shall furnish a price breakdown, itemized as required by AUTHORITY. Unless otherwise directed, the price breakdown shall be in sufficient detail to permit an analysis of all material, labor, equipment, subcontract and overhead costs, as well as profit, and shall cover all work involved in the modification, whether such work was deleted, added or changed. Any expense claimed by subcontractors shall be supported by a similar price breakdown. In addition, if the bid includes a time extension, a justification therefore shall be furnished. The bid, together with the price breakdown and time extension justification, shall be furnished by the date specified by AUTHORITY.

ARTICLE 16. DISPUTES

A. Except as otherwise provided in this Agreement, when a dispute arises between CONTRACTOR and AUTHORITY, the project managers shall meet to resolve the issue. If project managers do not reach a resolution, the dispute will be decided by AUTHORITY's Director of Contracts

Administration and Materials Management (CAMM), who shall reduce the decision to writing and mail or otherwise furnish a copy thereof to CONTRACTOR. The decision of the Director, CAMM, shall be the final and conclusive administrative decision.

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B. Pending final decision of a dispute hereunder, CONTRACTOR shall proceed diligently with the performance of this Agreement and in accordance with the decision of AUTHORITY's Director, CAMM. Nothing in this Agreement, however, shall be construed as making final the decision of any AUTHORITY official or representative on a question of law, which questions shall be settled in accordance with the laws of the State of California.

ARTICLE 17. TERMINATION FOR CONVENIENCE

A. AUTHORITY may terminate this Agreement for its convenience at any time in whole or in part, by giving CONTRACTOR written notice thereof. AUTHORITY shall terminate by delivering to CONTRACTOR a written Notice of Termination for Convenience specifying the extent of termination and its effective date. Upon termination, AUTHORITY shall pay CONTRACTOR its allowable costs incurred to date of that portion terminated. The rights, duties and obligations of the parties shall be construed in accordance with the applicable provisions of the Code of Federal Regulations (CFR) Title 48, Chapter 1, part 49, of the Federal Acquisition Regulation (FAR) and specific subparts and other provisions thereof applicable to termination for convenience. If AUTHORITY sees fit to terminate this Agreement for convenience, said notice shall be given to CONTRACTOR in accordance with the provisions of the FAR referenced above and Article 9, herein. Upon receipt of said notification, CONTRACTOR shall immediately proceed with all obligations, regardless of any delay in determining or adjusting any amounts due under this Article, and agrees to comply with all applicable provisions of the FAR pertaining to termination for convenience.

ARTICLE 18. TERMINATION FOR DEFAULT-DAMAGES FOR DELAY-TIME EXTENSIONS

A. If CONTRACTOR refuses or fails to prosecute the work, or any separable part thereof, with such diligence as will ensure its completion within the time specified in this Agreement, or any extension

thereof, or fails to complete said work within such time, AUTHORITY may, by written notice to CONTRACTOR that specifies the nature of the default, terminate CONTRACTOR's right to proceed with the work or such part of the work as to which there has been delay. In such event, AUTHORITY may take over the work and prosecute the same to completion, by Agreement or otherwise, and may take possession of and utilize in completing the work such materials, appliances and plant as may be on the site of the work and necessary therefore. Whether or not CONTRACTOR's right to proceed with the work is terminated, CONTRACTOR and its sureties shall be liable for any damage to AUTHORITY resulting from its refusal or failure to complete the work within the specified time.

B. If AUTHORITY so terminates CONTRACTOR's right to proceed, the resulting damage will consist of such liquidated damages as set forth in the Article 38 in this Agreement entitled "Liquidated Damages," until such reasonable time as may be required for final completion of the work together with any increased costs occasioned AUTHORITY in completing the work. If AUTHORITY does not so terminate CONTRACTOR's right to proceed, the resulting damage will consist of such liquidated damages until the work is completed or accepted.

C. CONTRACTOR's right to proceed shall not be so terminated nor the CONTRACTOR charged with resulting damage if:

1. The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of CONTRACTOR, including but not restricted to, acts of God, acts of the public enemy, acts or omissions of AUTHORITY, acts of another CONTRACTOR in the performance of an Agreement with AUTHORITY, fires, floods, epidemics, quarantine restrictions, freight embargoes, unusually severe weather, or delays of subcontractors or suppliers arising from unforeseeable causes beyond the control and without the fault or negligence of both CONTRACTOR and such subcontractors or suppliers; and

2. CONTRACTOR, within ten (10) calendar days from the beginning of any such delay, notifies AUTHORITY in writing of the causes of delay. AUTHORITY shall ascertain the facts and the extent of the delay and extend the time for completing the work when, in its judgment, the findings of fact

justify such an extension, and its findings of fact shall be final and conclusive on the parties, subject only to appeal as provided in the "Disputes" clause of this Agreement. Any such time extensions will not become effective until approved by AUTHORITY's Engineer in writing. AUTHORITY's Engineer will furnish CONTRACTOR a weekly statement showing the number of calendar days charged to the Agreement for the preceding week, the number of calendar days of time extensions being considered or approved, the number of calendar days originally specified for the completion of this Agreement and the number of calendar days remaining to complete this Agreement, and the extended date for completion thereof.

3. Should at any time extensions be included by AUTHORITY's Engineer on the Weekly Statement of Contract Calendar Days, a change order covering the sum total of the time extensions will be issued to CONTRACTOR at periodic intervals during the project.

D. If, after notice of termination of CONTRACTOR's right to proceed under the provisions of this clause, it is determined for any reason that CONTRACTOR was not in default under the provisions of this clause, or that the delay was excusable under the provisions of this clause, the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to Article 17, entitled "Termination for Convenience".

E. The rights and remedies of AUTHORITY provided in this clause are in addition to any other rights and remedies provided by law or under this Agreement.

F. As used in paragraph C.1 of this Article, the term "subcontractors or suppliers," means subcontractors or suppliers at any tier.

ARTICLE 19. INDEMNIFICATION

CONTRACTOR shall indemnify, defend, and hold harmless AUTHORITY, its officers, directors, employees and agents from and against any and all claims (including attorneys' fees and reasonable expenses for litigation or settlement) for any loss, costs, penalties, fines, damages, bodily injuries, including death, damage to or loss of use of property, arising out of, resulting from, or in connection with the performance of CONTRACTOR, its officers, directors, employees, agents, subcontractors or

suppliers under the Agreement. Notwithstanding the foregoing, such obligation to defend, hold harmless, and indemnify AUTHORITY, its officers, directors, employees and agents shall not apply to such claims or liabilities arising from the sole or active negligence or willful misconduct of AUTHORITY.

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ARTICLE 20. ASSIGNMENTS AND SUBCONTRACTS

A. Neither this Agreement nor any interest herein nor claim hereunder may be assigned by CONTRACTOR either voluntarily or by operation of law. CONTRACTOR shall not have the right to make any substitutions of any subcontractor listed in Exhibit D, entitled "List of Subcontractors," except in accordance with the provisions of the Subletting and Subcontractors Fair Practices Act, Public Contract Code Section 4100 et seq. AUTHORITY's consent shall not be deemed to relieve CONTRACTOR of its obligation to fully comply with the requirements of this Agreement.

B. CONTRACTOR shall be fully responsible to AUTHORITY for all acts and omissions of its own employees, and of subcontractors and their employees. CONTRACTOR shall coordinate the work performed by any subcontractor.

C. AUTHORITY shall have the right, but not the obligation, to review the form of any subcontract used by CONTRACTOR for the project and to require modifications thereto to conform to the requirements set forth herein.

ARTICLE 21. ACCESS TO RECORDS AND REPORTS

CONTRACTOR shall provide AUTHORITY, the U.S. Department of Transportation (DOT), the Comptroller General of the United States, and their respective representatives, and any other agents of AUTHORITY, such access to CONTRACTOR's accounting books, records, payroll documents and facilities of the CONTRACTOR which are directly pertinent to this Agreement for the purposes of examining, auditing and inspecting all accounting books, records, work data, documents and activities related hereto. CONTRACTOR shall maintain such books, records, data and documents in accordance with generally accepted accounting principles and shall clearly identify and make such items readily accessible to such parties during CONTRACTOR's performance hereunder and for a period of four (4)

years from the date of final payment by AUTHORITY, except in the event of litigation or settlement of claims arising from the performance of this Agreement, in which case CONTRACTOR agrees to maintain same until AUTHORITY, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto. AUTHORITY's right to audit books and records directly related to this Agreement shall also extend to all first-tier subcontractors. CONTRACTOR shall permit any of the foregoing parties to reproduce documents by any means whatsoever or to copy excerpts and transcriptions as reasonably necessary. CONTRACTOR agrees to include these requirements in all subcontracts at any tier.

ARTICLE 22. CONFLICT OF INTEREST

CONTRACTOR agrees to avoid organizational conflicts of interest. An organizational conflict of interest means that due to other activities, relationships or contracts, the CONTRACTOR is unable, or potentially unable to render impartial assistance or advice to AUTHORITY; CONTRACTOR's objectivity in performing the work identified in the Scope of Work is or might be otherwise impaired; or CONTRACTOR has an unfair competitive advantage. CONTRACTOR is obligated to fully disclose to AUTHORITY in writing Conflict of Interest issues as soon as they are known to CONTRACTOR. All disclosures must be submitted in writing to AUTHORITY pursuant to the Notice provision herein. This disclosure requirement is for the entire term of this Agreement.

ARTICLE 23. CODE OF CONDUCT

CONTRACTOR agrees to comply with AUTHORITY's Code of Conduct as it relates to Third-Party contracts which is hereby referenced and by this reference is incorporated herein. CONTRACTOR agrees to include these requirements in all of its subcontracts.

ARTICLE 24. PROHIBITION ON PROVIDING ADVOCACY SERVICES

CONTRACTOR and all subcontractors performing work under this Agreement, shall be prohibited from concurrently representing or lobbying for any other party competing for a contract with AUTHORITY, either as a prime contractor or subcontractor. Failure to refrain from such representation may result in termination of this Agreement.

ARTICLE 25. FEDERAL, STATE AND LOCAL LAWS

CONTRACTOR warrants that, in the performance of this Agreement, it shall comply with all applicable federal, state and local laws, statutes and ordinances and all lawful orders, rules and regulations promulgated thereunder.

ARTICLE 26. EQUAL EMPLOYMENT OPPORTUNITY

During the performance of this Agreement, CONTRACTOR agrees as follows:

A. CONTRACTOR will not discriminate against any employee or applicant for employment because of race, color, religion, sex, sexual orientation, gender identity, or national origin. CONTRACTOR will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, sexual orientation, gender identity, or national origin. Such action 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. CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

B. CONTRACTOR will, in all solicitations or advertisements for employees placed by or on behalf of CONTRACTOR, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, or national origin.

C. CONTRACTOR will not discharge or in any other manner discriminate against any employee or applicant for employment because such employee or applicant has inquired about, discussed, or disclosed the compensation of the employee or applicant or another employee or applicant. This provision shall not apply to instances in which an employee who has access to the compensation information of other employees or applicants as a part of such employee's essential job functions discloses the compensation of such other employees or applicants to individuals who do not otherwise have access to such information, unless such disclosure is in response to a formal complaint or charge, in furtherance of an investigation, proceeding, hearing, or action, including an investigation conducted by

the employer, or is consistent with CONTRACTOR's legal duty to furnish information.

D. CONTRACTOR will send to each labor union or representative of workers with which CONTRACTOR has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of CONTRACTOR's commitments under this Article, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

E. CONTRACTOR will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

F. CONTRACTOR will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to CONTRACTOR's books, records, and accounts by the DOT and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

G. In the event of CONTRACTOR's noncompliance with the nondiscrimination clauses of this Agreement or with any of the said rules, regulations, or orders, this Agreement may be canceled, terminated, or suspended in whole or in part and CONTRACTOR may be declared ineligible for further Government contracts or federally-assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

H. CONTRACTOR will include the portion of the sentence immediately preceding Paragraph (A) and the provisions of Paragraphs (A) through (H) of this Article in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to Section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. CONTRACTOR will take such action with respect to any subcontract or purchase order as the DOT may direct as a means of enforcing such provisions, including sanctions for noncompliance: provided, however, that in the event CONTRACTOR becomes involved in, or is

threatened with, litigation with a subcontractor or vendor as a result of such direction by the DOT, CONTRACTOR may request the United States to enter into such litigation to protect the interests of the United States.

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ARTICLE 27. FINISHED AND PRELIMINARY DATA

A. All of CONTRACTOR's finished technical data, including but not limited to illustrations, photographs, tapes, software, software design documents, including without limitation source code, binary code, all media, technical documentation and user documentation, photoprints and other graphic information required to be furnished under this Agreement, shall be AUTHORITY's property upon payment and shall be furnished with unlimited rights and, as such, shall be free from proprietary restriction except as elsewhere authorized in this Agreement. CONTRACTOR further agrees that it shall have no interest or claim to such finished, AUTHORITY-owned, technical data; furthermore, said data is subject to the provisions of the Freedom of Information Act, Title 5 of the United States Code (U.S.C.) Section 552.

B. It is expressly understood that any title to preliminary technical data is not passed to AUTHORITY but is retained by CONTRACTOR. Preliminary data includes roughs, visualizations, software design documents, layouts and comprehensives prepared by CONTRACTOR solely for the purpose of demonstrating an idea or message for AUTHORITY's acceptance before approval is given for preparation of finished artwork. Preliminary data title and right thereto shall be made available to AUTHORITY if CONTRACTOR causes AUTHORITY to exercise Article 17, and a price shall be negotiated for all preliminary data.

ARTICLE 28. NONDISCRIMINATION

A. Nondiscrimination: In accordance with Federal transit law at 49 U.S.C. Section 5332, CONTRACTOR agrees that it will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, sex, disability, or age. CONTRACTOR agrees to comply with all applicable regulations and other implementing requirements the Federal Transit Administration

(FTA) may issue.

B. Race, Color, Creed, National, Origin, Sex: In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. Section 2000e et seq.; and Federal transit laws at 49 U.S.C. Section 5332; CONTRACTOR agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor;" 41 CFR part 60; and Executive Order No. 11246, "Equal Employment Opportunity in Federal Employment," September 24, 1965, 42 U.S.C. Section 2000e note, as amended by any later Executive Order that amends or supersedes it, referenced in 42 U.S.C. Section 2000e. CONTRACTOR further agrees to comply with Title VI of the Civil Rights Act, as amended, 42 U.S.C. Section 2000d et seq.; 49 CFR part 21; the most recent version of FTA Circular 4702.1B, "Title VI Requirements and Guidelines for Federal Transit Administration Recipients;" DOT Order 5610.2(a) to Address Environmental Justice in Minority Populations and Low Income Populations;" Executive Order No. 13166 and DOT Policy Guidance concerning Recipients' Responsibilities to Limited English Proficiency (70 FR 74087, Dec. 14, 2005); and the most recent version of FTA Circular 4704.1 "Equal Employment Program Guidelines for Grant Recipients," as applicable. CONTRACTOR agrees to comply with any implementing requirements FTA may issue.

C. Age: In accordance with the Age Discrimination in Employment Act, 29 U.S.C. Sections 621-634; U.S. Equal Employment Opportunity Commission regulations, "Age Discrimination in Employment Act," 29 C.F.R. part 1625; the Age Discrimination Act of 1975, as amended, 42 U.S.C. Section 6101 et seq.; U.S. Health and Human Services regulations, "Nondiscrimination on the Basis of Age in Programs or Activities Receiving Federal Financial Assistance," 45 CFR part 90; and Federal transit law at 49 U.S.C. Section 5332; CONTRACTOR agrees to refrain from discrimination against present and prospective employees for reason of age. CONTRACTOR agrees to comply with implementing requirements FTA may issue.

D. Disabilities: In accordance with Section 504 of the Rehabilitation Act of 1973, as amended,

29 U.S.C. Section 794; the Americans with Disabilities Act of 1990, as amended, 42 U.S.C. Section 12101 et seq.; the Architectural Barriers Act of 1968, as amended, 42 U.S.C. Section 4151 et seq., and Federal transit law at 49 U.S.C. Section 5332; CONTRACTOR agrees that it will not discriminate against individuals on the basis of disability. CONTRACTOR agrees to comply with all applicable implementing regulations and requirements FTA may issue, including 49 CFR parts 27, 37, 38, and 39 and the most recent version of FTA Circular 4710.1 "Americans with Disabilities Act: Guidance."

E. DISADVANTAGED BUSINESS ENTERPRISE (DBE): CONTRACTOR shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Contract. The CONTRACTOR shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of U.S. DOT-assisted contracts. In administering the AUTHORITY components of the DBE Program Plan, CONTRACTOR, subrecipient or subconsultant will not, directly, or through contractual or other arrangements, use criteria or methods of administration that have the effect of defeating or substantially impairing accomplishment of the objectives of the DBE Program Plan with respect to individuals of a particular race, color, sex, or national origin. Failure by the CONTRACTOR to carry out these requirements is a material breach of this Agreement, which may result in the termination of this Agreement or such other remedy as the AUTHORITY deems appropriate, which may include, but is not limited to:

(1) Withholding monthly progress payments;

(2) Assessing sanctions;

(3) Assessing liquidated damages; and/or

(4) Disqualifying the CONTRACTOR from future proposing as non-responsible.

CONTRACTOR agrees to include the language above, verbatim and not by reference, in every subcontract agreement, broker, dealer, vendor, supplier, purchase order (PO) or other source agreements issued to both DBE and non-DBE firms. CONTRACTOR agrees to include these requirements in all subcontracts at any tier.

ARTICLE 29. DISADVANTAGED BUSINESS ENTERPRISES

A. In conformance with Title 49 CFR Part 26, "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs," AUTHORITY has established a fourteen (14%) percent Disadvantaged Business Enterprise (DBE) participation goal for the services required in this Agreement.

B. At the time of contract execution, the CONTRACTOR committed to utilize one or more Disadvantaged Business Enterprise (DBE) Firms in the performance of this DOT-assisted contract. CONTRACTOR agrees to enter into agreements with the DBE subcontractors listed on Attachment A-1 "DBE Participation Commitment" and ensure they perform work and/or supply materials in accordance with original commitments. No changes to CONTRACTOR's DBE commitment shall be made until proper review and approval by AUTHORITY is rendered in writing.

C. CONTRACTOR must take appropriate actions to ensure that it will satisfy good faith efforts to attain the DBE goal and/or the DBE commitment made at award (whichever is higher), when change orders or other modifications alter the dollar amount of the Agreement or the distribution of work. CONTRACTOR must apply and report its DBE goal commitment against the total current Agreement value, including any change orders and/or amendments.

D. If there is a DBE goal and/or DBE commitment on the Agreement, CONTRACTOR must complete and submit within the specified timelines, DBE documentation electronically through the AUTHORITY-approved electronic reporting system (ECAT).

E. CONTRACTOR shall comply with all the requirements set forth in Attachment A titled, "DISADVANTAGED BUSINESS ENTERPRISE (DBE) CONTRACT PROVISIONS FOR U.S. DOT-ASSISTED CONTRACTS", which is attached to and, by this reference, incorporated in and made a part of this Agreement.

ARTICLE 30. PRIVACY ACT

A. CONTRACTOR shall comply with, and assures the compliance of its employees with, the information restrictions and other applicable requirements of the Privacy Act of 1974, 5 U.S.C. Section 552(a). Among other things, CONTRACTOR agrees to obtain the express consent of the Federal

Government before CONTRACTOR or its employees operate a system of records on behalf of the Federal Government. CONTRACTOR understands the requirements of the Privacy Act, including the civil and criminal penalties for violation of that Act, apply to those individuals involved, and that failure to comply with the terms of the Privacy Act may result in termination of the underlying Agreement.

B. CONTRACTOR agrees to include this requirement in all of its subcontracts.

ARTICLE 31. OWNERSHIP OF REPORTS AND DOCUMENTS

A. The originals of all letters, documents, reports and other products and data produced under this Agreement shall be delivered to, and become the property of AUTHORITY. Copies may be made for CONTRACTOR's records but shall not be furnished to others without written authorization from AUTHORITY. Such deliverables shall be deemed works made for hire and all rights in copyright therein shall be retained by AUTHORITY.

B. All ideas, memoranda, specifications, plans, manufacturing, procedures, drawings, descriptions, and all other written information submitted to CONTRACTOR in connection with the performance of this Agreement shall not, without prior written approval of AUTHORITY, be used for any purposes other than the performance under this Agreement, nor be disclosed to an entity not connected with the performance of the project. CONTRACTOR shall comply with AUTHORITY's policies regarding such material. Nothing furnished to CONTRACTOR, which is otherwise known to CONTRACTOR or is or becomes generally known to the related industry shall be deemed confidential. CONTRACTOR shall not use AUTHORITY's name, photographs of the project, or any other publicity pertaining to the project in any professional publication, magazine, trade paper, newspaper, seminar or other medium without the express written consent of AUTHORITY.

C. No copies, sketches, computer graphics or graphs, including graphic artwork, are to be released by CONTRACTOR to any other person or agency except after prior written approval by AUTHORITY, except as necessary for the performance of services under this Agreement. All press releases, including graphic display information to be published in newspapers, magazines, etc., are to be handled only by AUTHORITY unless otherwise agreed to by CONTRACTOR and AUTHORITY.

ARTICLE 32. INCORPORATION OF FTA TERMS

All contractual provisions required by the DOT, whether or not expressly set forth in this document, as set forth in FTA Circular 4220.1F, are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. CONTRACTOR shall not perform any act, fail to perform any act, or refuse to comply with any AUTHORITY requests, which would cause AUTHORITY to be in violation of the FTA terms and conditions.

ARTICLE 33. FEDERAL CHANGES

CONTRACTOR shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the agreement between AUTHORITY and FTA, as they may be amended or promulgated from time to time during this Agreement. CONTRACTOR's failure to comply shall constitute a material breach of Agreement.

ARTICLE 34. NO GOVERNMENT OBLIGATION TO THIRD PARTIES

AUTHORITY and CONTRACTOR acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying Agreement, absent the express written consent by the Federal Government, the Federal Government is not a party to this Agreement and shall not be subject to any obligations or liabilities to AUTHORITY, CONTRACTOR, or any other party (whether or not a party to this Agreement) pertaining to any matter resulting from the underlying Agreement. CONTRACTOR agrees to include this requirement in all of its subcontracts.

ARTICLE 35. PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS AND ACTS

A. CONTRACTOR acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. Sections 3801 et seq. and DOT regulations, "Program Fraud Civil Remedies," 49 CFR Part 31, apply to its actions pertaining to this project. By execution of this Agreement, CONTRACTOR certifies or affirms the truthfulness and accuracy of any statement it has made, it makes,

it may make, or causes to be made, pertaining to the underlying Agreement of the FTA assisted project for which this Agreement's work is being performed. In addition to other penalties that may be applicable, CONTRACTOR acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose penalties of the Program Fraud Civil Remedies Act of 1986 on the CONTRACTOR to the extent the Federal Government deems appropriate.

B. CONTRACTOR also acknowledges that if CONTRACTOR makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under an agreement connected with a project that is financed in whole or part with Federal assistance awarded by FTA under the authority of 49 U.S.C. Chapter 53, the Federal Government reserves the right to impose the penalties of 18 U.S.C. Section 1001 and 49 U.S.C. Section 5323 on the CONTRACTOR, to the extent the Federal Government deems appropriate. CONTRACTOR agrees to include this requirement in all of its subcontracts.

ARTICLE 36. CONVICT LABOR

In connection with the performance of work under this Agreement, CONTRACTOR agrees not to employ any person undergoing sentence of imprisonment at hard labor. This does not include convicts who are on parole or probation.

ARTICLE 37. NOTICE OF LABOR DISPUTE

Whenever CONTRACTOR has knowledge that any actual or potential labor dispute may delay its performance under this Agreement, CONTRACTOR shall immediately notify and submit all relevant information to AUTHORITY. CONTRACTOR shall insert the substance of this entire clause in any subcontract hereunder as to which a labor dispute may delay performance under this Agreement. However, any subcontractor need give notice and information only to its next higher-tier subcontractor.

ARTICLE 38. LIQUIDATED DAMAGES

If CONTRACTOR fails to complete the work within the time specified in Article 4 of this Agreement, or any AUTHORITY authorized extension thereof, the actual damage to AUTHORITY for the

delay will be difficult or impossible to determine. Therefore, in lieu of actual damages, CONTRACTOR shall pay to AUTHORITY as fixed, agreed-to liquidated damages for each calendar day of delay the sum of Three Hundred Dollars ($300.00). Alternatively, AUTHORITY may terminate this Agreement in whole or in part as provided in Article 17 of this Agreement, and in that event, CONTRACTOR shall be liable, in addition to the excess costs provided in Article 17 of this Agreement, for such liquidated damages accruing until such time as AUTHORITY may reasonably obtain delivery or performance of similar supplies or services from a different source. CONTRACTOR shall not be charged with liquidated damages when the delay is determined to be excusable in accordance with Article 59 hereunder. AUTHORITY shall ascertain the facts and extent of the delay and shall extend the time for performance of the Agreement when in its judgment, the findings of fact justify an extension.

ARTICLE 39. WARRANTY

A. In addition to any other warranties set forth in this Agreement, whether expressed or implied, CONTRACTOR warrants that (1) all work performed and all equipment and material provided under this Agreement by CONTRACTOR or any of its subcontractors or suppliers at any tier, conforms to the requirements herein and is free of any defects; (2) equipment furnished by CONTRACTOR or any of its subcontractors or suppliers at any tier, shall be of modern design, in good working condition and fit for use of its intended purpose; and (3) all work shall meet all of the requirements of this Agreement. Such warranty shall continue for a period of one (1) year from AUTHORITY's acceptance as shown in Article 42 hereunder. Under this warranty, CONTRACTOR shall remedy at its own expense any such failure to conform or correct any such defect. In addition, CONTRACTOR shall remedy at its own expense any damage to AUTHORITY owned or controlled real or personal property, when that damage is the result of CONTRACTOR's failure to conform to Agreement requirements or any such defect of equipment, material, workmanship or design. CONTRACTOR shall also restore any work damaged in fulfilling the terms of this clause. CONTRACTOR's warranty with respect to work repaired or replaced hereunder will run for one year from the date of such repair or replacement.

B. AUTHORITY shall notify CONTRACTOR in writing within a reasonable time after the

discovery of any failure, defect or damage. CONTRACTOR has seven (7) days from receipt of notice from AUTHORITY to respond to AUTHORITY's notification and indicate how CONTRACTOR will remedy the failure, defect, or damage. If AUTHORITY is not satisfied with the remedy proposed by CONTRACTOR, CONTRACTOR and AUTHORITY shall meet and mutually agree when and how CONTRACTOR shall remedy such violation. In the case of an emergency requiring immediate corrective action, CONTRACTOR shall implement such action, as it deems necessary and shall notify AUTHORITY in writing of the urgency of a decision and action taken. CONTRACTOR and AUTHORITY shall, then promptly meet in order to agree on a remedy. If CONTRACTOR and AUTHORITY fail to agree on the remedy within a five (5)-day period, AUTHORITY, after notice to CONTRACTOR, shall have the right to perform or have performed by third parties the necessary remedy, and the costs thereof shall be borne by CONTRACTOR.

C. Should CONTRACTOR fail to remedy any failure, defect or damage described in paragraph A above within a reasonable time after receipt of notice thereof, AUTHORITY shall have the right to replace, repair or otherwise remedy such failure, defect or damage at CONTRACTOR's expense and CONTRACTOR shall be liable for all damages, including, but not limited to, actual or consequential damages and cost of any suit to enforce AUTHORITY's rights hereunder, including reasonable attorney's fees.

D. In addition to the other rights and remedies provided by this clause, all subcontractors, manufacturers, and suppliers' warranties, expressed or implied, respecting any work and materials furnished hereunder, shall, at the direction of AUTHORITY, be enforced by CONTRACTOR for the benefit of AUTHORITY. In such case if CONTRACTOR's warranty under paragraph A above has expired, any suit directed by AUTHORITY shall be at the expense of AUTHORITY. CONTRACTOR shall obtain any warranties, which the subcontractors, manufacturers or suppliers would give in normal commercial practice and shall cause all subcontractor or supplier warranties to be extend to AUTHORITY.

E. If directed by AUTHORITY, CONTRACTOR shall require any such warranties to be executed in writing to AUTHORITY.

F. Notwithstanding any other provision of this clause, unless such a defect is caused by the negligence of CONTRACTOR or its subcontractors or suppliers at any tier, CONTRACTOR shall not be liable for the repair of any defects of material or design furnished by AUTHORITY nor for the repair of any damage which results from any such defect in AUTHORITY furnished material or design.

G. The warranty specified herein shall not limit AUTHORITY's rights under the Inspection and Acceptance clause of this Agreement with respect to latent defects, gross mistakes or fraud.

H. Defects in design or manufacture of equipment specified by AUTHORITY on a "brand name and model" basis shall not be included in this warranty. CONTRACTOR shall require any subcontractors, manufacturers or suppliers thereof to execute their warranties in writing directly to AUTHORITY.

I. Any disagreement between AUTHORITY and CONTRACTOR relating to this Article shall be subject to dispute resolution in accordance with Article 16.

ARTICLE 40. GENERAL WAGE RATES AND DAVIS-BACON AND COPELAND ANTI-KICKBACK ACTS

A. State Prevailing Wage and Labor Code Requirements. Notice is hereby given that, in accordance with the provisions of California Labor Code, Division 2, Part 7, Chapter 1, Articles 1 and 2, CONTRACTOR is required to pay not less than the general prevailing rate of per diem wages for work of a similar character in the locality in which the public works is performed, and not less than the general prevailing rate of per diem wages for holiday and overtime work. In that regard, the Director of the Department of Industrial Relations of the State of California (DIR) is required to and has determined such general prevailing rates of per diem wages. CONTRACTOR agrees to comply with the provisions of California Labor Code Sections 1771, 1774 and 1775 concerning the payment of prevailing rates of wages to workers and the penalties for failure to pay prevailing wages. Copies of such prevailing rates of per diem wages may be obtained online at (http://www.dir.ca.gov/), are on file at the AUTHORITY's office, and will be available to any interested party upon request. In accordance with the Labor Code, no workman employed upon work under this Agreement shall be paid less than the above referenced prevailing wage rate. A copy of said rates shall be posted at each job site during the course of

construction.

1. This Agreement is subject to compliance monitoring and enforcement by the DIR. The DIR shall monitor and enforce compliance with applicable prevailing wage requirements for this Agreement. The reporting requirements may be found at https://www.dir.ca.gov/Public-Works/Contractors.html. CONTRACTOR is responsible for complying with all requirements of the DIR, including filing electronic payroll reports.

2. Pursuant to Labor Code Section 1771.1, CONTRACTOR and any subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work on a public works project unless registered with the DIR and qualified to perform public work pursuant to Labor Code Section 1725.5. It is not a violation of Labor Code Section 1771.1 for an unregistered contractor to submit a bid that is authorized by Business and Professions Code Section 7029.1 or by Public Contract Code Section 10164 or 20103.5, provided CONTRACTOR is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded. CONTRACTOR shall not perform any work under this Agreement with any subcontractor who is ineligible to perform work on the public works project pursuant to Section 1777.1 or 1777.7 of the Labor Code.

3. Pursuant to Labor Code Section 1771.4, CONTRACTOR will post all job site notices, as prescribed by regulation.

4. CONTRACTOR, and all subcontractors, shall comply with the provisions of Labor Code Sections 1777.5 and 1777.6 concerning the employment of apprentices. CONTRACTOR shall have full responsibility for compliance with such Labor Code sections for all apprenticeable occupations, regardless of any other contractual or employment relationships alleged to exist.

5. CONTRACTOR agrees to comply with the provisions of Labor Code Section 1776, including the keeping of payroll records and furnishing certified copies thereof in accordance with said Section and with the terms as set forth in Exhibit A, "General Provisions." CONTRACTOR is responsible for compliance with Section 1776 by all subcontractors.

6. CONTRACTOR agrees to comply with all applicable Labor Code provisions governing legal working hours and shall forfeit, as a penalty to AUTHORITY, twenty-five dollars ($25.00) for each laborer, workman or mechanic employed in the execution of the contract, by him or any sub-contractor under him, upon any of the work hereinbefore mentioned, for each calendar day during which the laborer, workman or mechanic is required or permitted to labor more than eight (8) hours in any one calendar day and forty (40) hours in any one calendar week in violation of the Labor Code.

7. In accordance with the provisions of Labor Code Section 3700, CONTRACTOR will be required to secure the payment of compensation to his or her employees.

B. Federal Prevailing Wage Rates and Anti-Kickback.

1. CONTRACTOR shall comply with the Davis-Bacon Act, 40 U.S.C. Sections 3141-3144 and Sections 3146-3148, as supplemented by U.S. DOL regulations at 29 CFR part 5, "Labor Standards Provisions Applicable to Contracts Governing Federally Financed and Assisted Construction." Under 49 U.S.C. Section 5333(a), prevailing wage protections apply to laborers and mechanics employed on FTA-assisted construction, alteration, or repair projects. In accordance with the statute, CONTRACTOR shall pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. CONTRACTOR agrees to pay wages not less than once per week. CONTRACTOR shall comply with the Davis-Bacon Labor Provisions of 2 CFR Section 5.5, as set forth in Exhibit A, "General Provisions."

2. CONTRACTOR shall comply with the Copeland "Anti-Kickback" Act (40 U.S.C. Section 3145), as supplemented by U.S. DOL regulations at 29 CFR part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in part by Loans or Grants from the United States." CONTRACTOR is prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled.

ARTICLE 41. CONTRACT WORK HOURS AND SAFETY STANDARDS

A. If the maximum cumulative payment obligation of this Agreement exceeds $100,000,

CONTRACTOR agrees to comply with the Federal Contract Work Hours and Safety Standards (40 U.S.C. Section 3701 et seq. as supplemented by 29 CFR part 5). Under 40 U.S.C. Section 3702, CONTRACTOR shall compute the wages of every mechanic and laborer, including watchmen and guards, on the basis of a standard work week of forty (40) hours.

1. Overtime requirements: CONTRACTOR, and any subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics, shall not require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty (40) hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half (1.5) times the basic rate of pay for all hours worked in excess of forty (40) hours in such workweek.

2. Violation; liability for unpaid wages; liquidated damages: In the event of any violation of paragraph (A) of this Article, CONTRACTOR and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, CONTRACTOR and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (A) of this Article, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty (40) hours without payment of the overtime wages required by paragraph (A) of this Article.

3. Withholding for unpaid wages and liquidated damages: FTA shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by CONTRACTOR or subcontractor under any such contract or any other Federal contract with CONTRACTOR, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by CONTRACTOR, such sums as may be determined to be necessary to satisfy any liabilities of CONTRACTOR or subcontractor for unpaid wages and liquidated damages as provided in this Article.

4. Subcontracts**:** CONTRACTOR shall insert in any subcontracts the clauses set forth

in paragraphs (A) of this Article and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. CONTRACTOR shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in paragraph A of this Article.

B. CONTRACTOR agrees to comply with U.S. DOL Regulations, "Recording and Reporting Occupational Injuries and Illnesses," 29 CFR part 1904; "Occupational Safety and Health Standards," 29 CFR part 1910; and "Safety and Health Regulations for Construction," 29 CFR part 1926.

ARTICLE 42. INSPECTION AND ACCEPTANCE

A. All work (which term includes but is not restricted to materials, equipment, workmanship, and manufacture and fabrication of components) shall be subject to inspection and test by AUTHORITY at all reasonable times and at all places prior to acceptance. Any such inspection and test is for the sole benefit of AUTHORITY and shall not relieve CONTRACTOR of the responsibility of providing quality control measures to assure that the work strictly complies with requirements of this Agreement. No inspection or test by AUTHORITY or its representative shall be construed as constituting or implying acceptance. Any inspection or test shall not relieve CONTRACTOR of responsibility for damage to or loss of the material prior to acceptance, nor in any way affect the continuing rights of AUTHORITY after acceptance of the completed work under the terms of paragraph F of this Article, except as herein above provided.

B. CONTRACTOR shall, without charge, replace any material or correct any workmanship found by AUTHORITY not to conform to the requirements of this Agreement, unless in the public interest AUTHORITY consents to accept such material or workmanship with an appropriate adjustment in the price of this Agreement. CONTRACTOR shall promptly segregate and remove rejected material from the premises.

C. CONTRACTOR shall furnish promptly, without additional charge, all facilities, labor, equipment and material reasonably needed for performing such safe and convenient inspection and test as may be required by AUTHORITY. All inspections and tests by AUTHORITY shall be performed in such manner as to not unnecessarily delay the work. AUTHORITY reserves the right to charge to CONTRACTOR any additional cost of inspection or test when material or workmanship is not ready at

the time specified by CONTRACTOR for inspection or test or when reinspection or retest is necessitated by prior rejection.

D. If CONTRACTOR does not promptly replace rejected material or correct rejected workmanship, AUTHORITY (1) may, by Agreement or otherwise, replace such material or correct such workmanship and charge the cost thereof to CONTRACTOR, or (2) may terminate CONTRACTOR's right to proceed in accordance with the clause of this Agreement entitled "Termination for Default."

E. Should it be considered necessary or advisable by AUTHORITY at any time before acceptance of the entire work to make an examination of work already completed, by removing or tearing out same, CONTRACTOR shall, on request, promptly furnish all necessary facilities, labor and material. If such work is found to be defective or nonconforming in any material respect, due to the fault of CONTRACTOR or its subcontractors, CONTRACTOR shall pay all costs of such examination and of satisfactory reconstruction. If, however, such work is found to meet the requirements of this Agreement, an equitable adjustment shall be made in the Agreement price to compensate CONTRACTOR for the additional services involved in such examination and reconstruction and, if completion of the work has been delayed thereby, it shall in addition, be granted a suitable extension of time.

F. Unless otherwise provided in this Agreement, acceptance by AUTHORITY shall be made as promptly as practicable after completion and inspection of all work required by this Agreement, or that portion of the work that AUTHORITY determines can be accepted separately. Acceptance shall be final and conclusive except as regards latent defects, fraud, or such gross mistakes as may amount to fraud or as regards AUTHORITY's rights under the warranty provisions set forth herein.

ARTICLE 43. MATERIAL AND WORKMANSHIP

A. Unless otherwise specifically provided in this Agreement, all equipment, material, and articles incorporated in the work covered by this Agreement are to be new and of the most suitable grade for the purpose intended. Unless otherwise specifically provided in this Agreement, reference to any equipment, material, article or patented process, by trade name, make or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition, and CONTRACTOR

may, at its option, use any equipment, material, article or process which, in the judgment of AUTHORITY, is equal to that named. CONTRACTOR shall furnish to AUTHORITY for its approval the name of the manufacturer, the model number and other identifying data and information respecting the performance, capacity, nature and rating of the machinery and mechanical and other equipment, which CONTRACTOR contemplates incorporating in the work. When required by this Agreement or when called for by AUTHORITY, CONTRACTOR shall furnish AUTHORITY, for approval, full information concerning the material or articles, which it contemplates incorporating in the work. When so directed, samples shall be submitted for approval at CONTRACTOR's expense, with all shipping charges prepaid. Machinery, equipment, material and articles installed or used without required approval shall be at the risk of subsequent rejection.

B. All work under this Agreement shall be performed in a skillful and workmanlike manner. Notwithstanding the provisions of Article 3 hereof, AUTHORITY may, in writing, require CONTRACTOR to remove from the work any employee AUTHORITY deems incompetent, careless or otherwise objectionable.

ARTICLE 44. NON-CONFORMING WORK

A. Nonconforming work rejected by AUTHORITY shall be removed and replaced so as to conform to the requirements of this Agreement, at CONTRACTOR's cost and without a time extension; and CONTRACTOR shall promptly take all action necessary to prevent similar deficiencies from occurring in the future. The fact that AUTHORITY may not have discovered the nonconforming work shall not constitute an acceptance of such nonconforming work. If CONTRACTOR fails to correct any nonconforming work within ten (10) days of receipt of notice from AUTHORITY requesting correction, or if such nonconforming work cannot be corrected within ten (10) days, and CONTRACTOR fails to; (1) provide to AUTHORITY a schedule for correcting any such nonconforming work acceptable to AUTHORITY within such ten (10) day period, (2) commence such corrective work within such ten (10) day period and (3) thereafter diligently prosecute such correction in accordance with such approved schedule to completion, then AUTHORITY may cause the nonconforming work to be remedied or

removed and replaced and may deduct the cost of doing so from any moneys due or to become due to CONTRACTOR and/or obtain reimbursement from CONTRACTOR for such cost.

B. If AUTHORITY agrees to accept any nonconforming work without requiring it to be fully corrected, AUTHORITY shall be entitled to reimbursement of a portion of the contract price in an amount equal to the greater of the amount deemed appropriate by AUTHORITY to provide compensation for future maintenance and/or other costs relating to the nonconforming work, or 100% of CONTRACTOR's cost savings associated with its failure to perform the work in accordance with Contract requirements. Such reimbursement shall be payable to AUTHORITY within ten (10) days after CONTRACTOR's receipt of an invoice thereof. CONTRACTOR acknowledges and agrees that AUTHORITY shall have sole discretion regarding acceptance or rejection of nonconforming work and that AUTHORITY shall have sole discretion with regard to the amount payable in connection therewith.

ARTICLE 45. CONTRACTOR INSPECTION SYSTEM

CONTRACTOR shall maintain an adequate inspection system and perform such inspections as will assure that the work performed under this Agreement conforms to the specified requirements, and shall maintain and make available to AUTHORITY adequate records of such inspections.

ARTICLE 46. SUPERINTENDENCE BY CONTRACTOR

CONTRACTOR, at all times during performance and until the work is completed and accepted, shall give its personal superintendence to the work or have on the work a competent superintendent, satisfactory to AUTHORITY and with authority to act for and on behalf of CONTRACTOR.

ARTICLE 47. OTHER CONTRACTS

AUTHORITY may undertake or award other agreements for additional work, and CONTRACTOR shall fully cooperate with such other CONTRACTOR's and AUTHORITY's employees and carefully fit its own work to such additional work as may be directed by AUTHORITY. CONTRACTOR shall not commit or permit any act, which will interfere with the performance of work by any other CONTRACTOR or by AUTHORITY.

ARTICLE 48. INSPECTION OF SITE

CONTRACTOR acknowledges that it has investigated and satisfied itself as to the conditions affecting the work including, but not restricted to, those bearing upon transportation, disposal, handling and storage of materials, availability of labor, water, electric power and roads and uncertainties of weather, river stages, tides or similar physical conditions at the site, the conformation and conditions of the ground, the character of equipment and facilities needed preliminary to and during prosecution of the work. CONTRACTOR further acknowledges that it has satisfied itself as to the character, quality and quantity of surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including all exploratory work done by AUTHORITY, as well as from information presented by the drawings and specifications made a part of this Agreement. Any failure by CONTRACTOR to acquaint itself with the available information will not relieve it from responsibility for the difficulty or cost of successfully performing the work. AUTHORITY assumes no responsibility for any conclusions or interpretations made by CONTRACTOR on the basis of the information made available by AUTHORITY.

ARTICLE 49. DIFFERING SITE CONDITIONS

A. CONTRACTOR shall immediately, and before such conditions are disturbed, notify AUTHORITY in writing of: (1) subsurface or latent physical conditions at the site which differ materially from those indicated in this Agreement, or (2) unknown physical conditions at the site, of an unusual nature, which differ materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in this Agreement. AUTHORITY will investigate the conditions within three (3) business days of receipt of notification, and if it finds that such conditions do materially so differ and cause an increase or decrease in CONTRACTOR's cost of, or the time required for, performance of any part of the work under this Agreement, whether or not changed as a result of such conditions, an equitable adjustment shall be made and the Agreement modified in writing accordingly.

B. No claim of CONTRACTOR under this Article shall be allowed unless CONTRACTOR has given the written notice required above; no claim by CONTRACTOR for an equitable adjustment hereunder shall be allowed if asserted after final payment under this Agreement.

ARTICLE 50. SEISMIC SAFETY REQUIREMENTS

CONTRACTOR agrees that the work performed under this Agreement will be accomplished in accordance with the standards for Seismic Safety required in DOT's Seismic Safety Regulations 49 CFR part 41 and will certify compliance to the extent required by the regulation for such work. CONTRACTOR shall ensure that all work performed under this Agreement including work performed by a subcontractor is in compliance with the standards required by the Seismic Safety Regulations and the certification of compliance issued on the project.

ARTICLE 51. RECYCLED PRODUCTS

CONTRACTOR shall comply with all the requirements of Section 6002 of the Resource Conservation and Recovery Act (RCRA), as amended (42 U.S.C. Section 6962), including but not limited to the regulatory provisions of 40 CFR part 247, and Executive Order 12873, as they apply to the procurement of the items designated in subpart B of 40 CFR part 247. CONTRACTOR agrees to include this requirement in all of its subcontracts.

ARTICLE 52. ENERGY CONSERVATION REQUIREMENTS

If the maximum cumulative payment obligation of this Agreement exceeds the Simplified Acquisition Threshold, as defined in 48 CFR Subpart 2.1, CONTRACTOR shall comply with mandatory standards and policies relating to energy efficiency, which are contained in the state energy conservation plan issued in compliance with the Energy Policy Conservation Act.

ARTICLE 53. CLEAN AIR

CONTRACTOR shall comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 U.S.C. Section 7401 et seq. CONTRACTOR shall report any violations of use of prohibited facilities to the FTA and the United States Environmental Protection Agency (US EPA). CONTRACTOR agrees to include this requirement in each subcontractor exceeding Simplified Acquisition Threshold.

ARTICLE 54. CLEAN WATER REQUIREMENTS

If the maximum cumulative payment obligation of this Agreement exceeds Simplified Acquisition

Threshold, as defined in 48 CFR Subpart 2.1, CONTRACTOR shall comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 U.S.C. Section 1251 et seq. CONTRACTOR shall report any violations of use of prohibited facilities to the FTA /

and US EPA. CONTRACTOR agrees to include this requirement in each subcontract exceeding Simplified Acquisition Threshold.

ARTICLE 55. OPERATIONS AND STORAGE AREAS

A. All operations of CONTRACTOR (including storage of materials and equipment) on AUTHORITY-owned premises shall be confined to areas authorized or approved by AUTHORITY. CONTRACTOR shall hold AUTHORITY and its officers and agents free and harmless from liability of any nature occasioned by CONTRACTOR's operations.

B. Temporary building (storage sheds, shops, offices, etc.) may be erected by CONTRACTOR with the written consent of AUTHORITY, and shall be built with labor and materials furnished by CONTRACTOR without expense to AUTHORITY. Such temporary buildings and utilities shall remain the property of CONTRACTOR and shall be removed by CONTRACTOR at its expense upon the completion of the work. With the written consent of AUTHORITY, such buildings and utilities may be abandoned and need not be removed.

C. CONTRACTOR shall, under regulations prescribed by AUTHORITY, use only established roadways or construct and use such temporary roadways as may be authorized by AUTHORITY. Where materials are transported in the prosecution of work, vehicles shall not be loaded beyond the loading capacity recommended by the manufacturer of the vehicle or prescribed by any federal, state or local law or regulation. When it is necessary to cross curbing or sidewalks, protection against damage shall be provided by CONTRACTOR and any damaged roads, curbing or sidewalks shall be repaired by, or at the expense of, CONTRACTOR.

ARTICLE 56. BUILD AMERICA, BUY AMERICA

A. CONTRACTOR shall comply with the domestic content procurement preferences set forth in

the Build America, Buy America Act, Pub. L. No. 117-58, Sections 70901 et seq., which provides that no Federal funds may be obligated unless all steel and iron, manufactured products, and construction materials used in the project are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver.

B. CONTRACTOR shall also comply with the "Buy America" requirements of 49 U.S.C. Section 5323(j) and 49 CFR part 661, as amended, and shall furnish a Certificate of Compliance, conforming to the provisions of this Article, for all steel and iron materials.

C. CONTRACTOR shall ensure all subcontractors at every tier comply with these requirements.

ARTICLE 57. PROTECTION OF VEGETATION, UTILITIES, IMPROVEMENTS

A. CONTRACTOR shall preserve and protect all existing vegetation such as trees, shrubs and grass on or adjacent to the site of work which is not to be removed and which does not unreasonably interfere with the construction work. Care will be taken in removing trees authorized for removal to avoid damage to vegetation to remain in place. Any limbs or branches of trees broken during such operations or by the careless operation of equipment, or by workmen, shall be trimmed with a clean cut and painted with an approved tree pruning compound as directed by AUTHORITY.

B. CONTRACTOR shall protect from damage all existing improvements or utilities at or near the site of the work, the location of which is made known to it, and will repair or restore any damage to such facilities resulting from failure to comply with the requirements of this Agreement or the failure to exercise reasonable care in the performance of the work. If CONTRACTOR fails or refuses to repair any such damage promptly, AUTHORITY may have the necessary work performed and charge the cost to CONTRACTOR.

ARTICLE 58. CLEANING UP

A. CONTRACTOR shall at all times keep the construction area, including storage areas used by it, free from accumulations of waste material or rubbish, and prior to completion of the work remove any rubbish from AUTHORITY owned premises and all tools, scaffolding, equipment and materials not the property of AUTHORITY. Upon completion of the construction, CONTRACTOR shall leave the work and

premises in a clean, neat and workmanlike condition satisfactory to AUTHORITY.

B. After completion of all work on the project, and before making application for acceptance of the work, CONTRACTOR shall clean the construction site, including all areas under the control of AUTHORITY, that have been used by CONTRACTOR in connection with the work on the project and remove all debris, surplus material and equipment, and all temporary construction or facilities of whatever nature, unless otherwise approved by AUTHORITY. Final acceptance of the work by AUTHORITY will be withheld until CONTRACTOR has satisfactorily complied with the foregoing requirements for final cleanup of the project site.

C. Full compensation for conforming to the provisions in this Article, not otherwise provided for, shall be considered as included in price of this Agreement and no additional compensation will be allowed therefore.

ARTICLE 59. USE AND POSSESSION TO COMPLETION

AUTHORITY shall have the right to take possession of or use any completed or partially completed part of the work. Prior to such possession or use, AUTHORITY shall furnish CONTRACTOR an itemized list of work remaining to be performed or corrected on such portions of the project as are to be possessed or used by AUTHORITY, provided that failure to list any item of work shall not relieve CONTRACTOR of responsibility for compliance with the terms of this Agreement. Such possession or use shall not be deemed an acceptance of any work under this Agreement. While AUTHORITY has such possession or use, CONTRACTOR shall be relieved of the responsibility for the loss or damage to the work resulting from AUTHORITY's possession or use. If such prior possession or use by AUTHORITY delays the progress of the work or causes additional expense to CONTRACTOR, an equitable adjustment in the Agreement price or the time of completion will be made and the Agreement shall be modified in writing accordingly.

ARTICLE 60. PROHIBITED INTERESTS

A. CONTRACTOR covenants that, for the term of this Agreement, no director, officer or employee of AUTHORITY, during his/her tenure in office or for one (1) year thereafter, shall have any

interest, direct or indirect, in this Agreement or the proceeds thereof.

B. No member of or delegates to the Congress of the United States shall have any interest, direct or indirect, in this Agreement or the benefits thereof.

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ARTICLE 61. CONTRACTOR PURCHASED EQUIPMENT

A. If during the course of this Agreement, additional equipment is required, which will be paid for by AUTHORITY, CONTRACTOR must request prior written authorization from AUTHORITY's project manager before making any purchase. As part of this purchase request, CONTRACTOR shall provide a justification for the necessity of the equipment or supply and submit copies of three (3) competitive quotations. If competitive quotations are not obtained, CONTRACTOR must provide the justification for the sole source.

B. CONTRACTOR shall maintain an inventory record for each piece of equipment purchased that will be paid for by AUTHORITY. The inventory record shall include the date acquired, total cost, serial number, model identification, and any other information or description necessary to identify said equipment or supply. A copy of the inventory record shall be submitted to AUTHORITY upon request.

C. At the expiration or termination of this Agreement, CONTRACTOR may keep the equipment and credit AUTHORITY in an amount equal to its fair market value. Fair market value shall be determined, at CONTRACTOR's expense, on the basis of an independent appraisal. CONTRACTOR may sell the equipment at the best price obtainable and credit AUTHORITY in an amount equal to the sales price. If the equipment is to be sold, then the terms and conditions of the sale must be approved in advance by AUTHORITY's project manager.

D. Any subcontractor agreement entered into as a result of this Agreement shall contain all provisions of this clause.

ARTICLE 62. DEBARMENT AND SUSPENSION GUIDELINES

CONTRACTOR shall not do business with a subcontractor or other participant who is debarred, suspended or otherwise disqualified. CONTRACTOR shall comply with 2 CFR part 180, as adopted and

supplemented by 2 CFR part 1200. CONTRACTOR shall include the requirements in any lower tier covered transaction it enters into.

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ARTICLE 63. HEALTH AND SAFETY SPECIFICATIONS

CONTRACTOR shall comply with all requirements set forth in Exhibit H, Level 3 Safety Specifications.

ARTICLE 64. LOBBYING

CONTRACTOR shall comply with the lobbying requirements of 31 U.S.C. Section 1352 and the applicable regulations under 49 CFR part 20. If the maximum cumulative payment obligation of this Agreement exceeds $100,000, CONTRACTOR shall file both the "Certification of Restrictions on Lobbying" and the "Disclosure of Lobbying Activities." CONTRACTOR shall also require each subcontractor to certify to CONTRACTOR that subcontractor will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. Section 1352. CONTRACTOR shall also require any subcontractor to disclose to CONTRACTOR the name of any registrant under the Lobbying Disclosure Act of 1995 who has made lobbying contacts on its behalf with non-Federal funds with respect to that Federal contract, grant or award covered by 31 U.S.C. Section 1352.

ARTICLE 65. TRANSPORTATION OF EQUIPMENT, MATERIALS OR COMMODITIES BY OCEAN VESSEL

A. CONTRACTOR shall utilize privately owned United States-flag commercial vessels to ship at least 50% of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners and tankers) involved, whenever shipping any equipment, materials or commodities pursuant to this section, to the extent such vessels are available at fair and reasonable rates for United States-flag commercial vessels.

B. CONTRACTOR shall furnish within twenty (20) working days following the date of loading for shipments originating within the United States, or within thirty (30) working days following the date of loading for shipping originating outside the United States, a legible copy of a rated, "on-board" commercial ocean bill-of lading in English for each shipment of cargo described in paragraph A of this Article to AUTHORITY (through the prime CONTRACTOR in the case of subcontractor bills-of-lading) and to the Division of National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590, marked with appropriate identification of the project.

ARTICLE 66. FLY AMERICA REQUIREMENTS

A. CONTRACTOR agrees to comply with 49 U.S.C. 40118 (the "Fly America" Act) in accordance with the General Services Administration's regulations at 41 CFR Part 301-10, which provide that recipients and subrecipient of Federal funds and their contractors are required to use U.S. Flag air carriers for U.S. Government-financed international air travel and transportation of their personal effects or property, to the extent such service is available, unless travel by foreign air carrier is a matter of necessity, as defined by the Fly America Act. CONTRACTOR shall submit, if a foreign air carrier was used, an appropriate certification or memorandum adequately explaining why service by a U.S. flag air carrier was not available or why it was necessary to use a foreign air carrier and shall, in any event, provide a certificate of compliance with the Fly America requirements. CONTRACTOR agrees to include the requirements of this section in all subcontracts that may involve international air transportation.

ARTICLE 67. CLAYTON AND CARTWRIGHT ACT

In entering into a public works contract or a subcontract to supply goods, services, or materials pursuant to this Agreement, CONTRACTOR and any subcontractor offers and agrees to assign to AUTHORITY all rights, title, and interest in and to all causes of action it may have under Section 4 of the Clayton Act (15 U.S.C. Section 15) or under the Cartwright Act (Chapter 2 (commencing with Section 16700) of Part 2 of Division 7 of the Business and Professions Code), arising from purchases of goods, services, or materials pursuant to the public works contract or subcontract entered into for purposes of this Agreement. This assignment shall be made and become effective at the time the AUTHORITY

tenders final payment to the CONTRACTOR, without further acknowledgment by the parties.

ARTICLE 68. PROHIBITION ON CONTRACTING FOR CERTAIN TELECOMMUNICATIONS AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT

A. Pursuant to Subsections 889(a)(l)(A)-(B) of the John S. McCain National Defense Authorization Act for Fiscal Year 2019 (Pub. L. 115-232), Federal funds may not be used to procure or obtain, or to enter into a contract or extend or renew a contract with an entity that uses, any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, as defined. CONTRACTOR is prohibited from providing to AUTHORITY or the Federal Government any equipment, system, or service that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system, unless an exception applies or the covered telecommunication equipment or services are covered by a waiver described in FAR §4.2104. As described in Section 889, covered telecommunications equipment is telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).

1. For the purpose of public safety, security of government facilities, physical security surveillance of critical infrastructure, and other national security purposes, video surveillance and telecommunications equipment produced by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).

2. Telecommunications or video surveillance services provided by such entities or using such equipment.

3. Telecommunications or video surveillance equipment or services produced or provided by an entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

ARTICLE 69. NOTICE TO AUTHORITY AND FTA OF INFORMATION RELATED TO FRAUD, WASTE, ABUSE, OR OTHER LEGAL MATTERS

CONTRACTOR shall report to AUTHORITY and FTA any current or prospective legal matter that may affect the Federal Government, including a major dispute, default, breach, litigation, or naming the Federal Government as a party to litigation, or a legal disagreement in any forum for any reason. Matters that may affect the Federal Government include, but are not limited to, the Federal Government's interest in the federal award, any underlying agreements, or the Federal Government's administration or enforcement of federal laws, regulations, and requirements. In addition, CONTRACTOR shall promptly notify AUTHORITY, FTA, and the U.S. DOT Inspector General of any knowledge of potential fraud, waste, or abuse occurring on the Project. This includes knowledge that any person or entity, including CONTRACTOR, has or may have submitted a false claim under the False Claims Act, 31 U.S.C. § 3729, et seq., or has or may have committed a criminal or civil violation of law pertaining to such matters as fraud, conflict of interest, bid rigging, misappropriation or embezzlement, bribery, gratuity, or similar misconduct involving federal assistance. "Knowledge," as used in this Article, includes, but is not limited to, knowledge of a criminal or civil investigation by a federal, state, or local law enforcement or other investigative agency; a criminal indictment or civil complaint; or probable cause that could support a criminal indictment, or any other credible information in the possession of the CONTRACTOR. CONTRACTOR agrees to include these requirements in all subcontracts at any tier.

ARTICLE 70. SAFE OPERATION OF MOTOR VEHICLES

A. Seat Belt Use. Pursuant to Executive Order 13043, "Increasing Seat Belt Use in the United States," April 16, 1996, 23 U.S.C Section 402, note (62 Fed. Reg. 19217), CONTRACTOR shall adopt and promote on-the-job seat belt use policies and programs for its employees and other personnel that operate company-owned, company-rented, or personally operated vehicles.

B. Distracted Driving. Pursuant to Executive Order 13513, "Federal Leadership on Reducing Text Messages While Driving," October 1, 2009, 23 U.S.C. Section 402, note (74 Fed. Reg. 51225); and

U.S. DOT Order 3902.10, "Text Messaging While Driving," December 30, 2009; CONTRACTOR is encouraged to comply with the following pertaining to distracted driving:

1. Adopt and enforce workplace safety policies to decrease crashes caused by distracted drivers, including policies to ban text messaging while using an electronic device supplied by an employer, and driving a vehicle the driver owns or rents, a vehicle CONTRACTOR owns, leases, or rents, or a privately-owned vehicle when on official business in connection with the Agreement, or when performing any work under the Agreement.

2. Conduct workplace safety initiatives in a manner commensurate with CONTRACTOR's size, such as establishing new rules and programs to prohibit text messaging while driving, re-evaluating the existing programs to prohibit text messaging while driving, and providing education, awareness, and other outreach to employees about the safety risks associated with texting while driving.

C. Subcontracts. CONTRACTOR shall include these requirements in all of its subcontracts.

ARTICLE 71. FORCE MAJEURE

Either party shall be excused from performing its obligations under this Agreement during the time and to the extent that it is prevented from performing by an unforeseeable cause beyond its control, including but not limited to: any incidence of fire, flood; acts of God; commandeering of material, products, plants or facilities by the federal, state or local government; national fuel shortage; or a material act or omission by the other party; when satisfactory evidence of such cause is presented to the other party, and provided further that such nonperformance is unforeseeable, beyond the control and is not due to the fault or negligence of the party not performing.

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IN WITNESS WHEREOF, the parties hereto have caused this Agreement No. C-4-2093 to be executed as of the date of the last signature below.

CONTRACTOR

By: _____

License No: _____

ORANGE COUNTY TRANSPORTATION AUTHORITY

By: _____
Darrell E. Johnson
Chief Executive Officer

APPROVED AS TO FORM:

By: _____
James M. Donich
General Counsel

APPROVED:

By: _____
James G. Beil, P.E.
Executive Director, Capital Programs

DISADVANTAGED BUSINESS ENTERPRISE (DBE) CONTRACT PROVISIONS FOR U.S. DOT-ASSISTED CONTRACTS

I. DBE Participation

It is the CONTRACTOR'S responsibility to be fully informed regarding the requirements of 49 CFR, Part 26 and AUTHORITY's DBE program developed pursuant to these regulations.

CONTRACTOR must complete and submit, within the specified timelines, the required DBE documentation in Section IV. of this Attachment, through the AUTHORITY's electronic reporting system (ECAT). CONTRACTOR's submitted "DBE Participation Commitment Form," executed subcontracts and/or purchase orders, as well as on-going DBE documentation will be utilized to monitor CONTRACTOR's DBE commitment. Unless otherwise directed and/or approved in writing by AUTHORITY prior, CONTRACTOR must not effectuate any changes to its DBE participation commitment.

CONTRACTOR must complete and submit all required DBE documentation to effectively capture DBE utilization on AUTHORITY's U.S. DOT-assisted contracts whether achieved race neutrally or race consciously. No changes to CONTRACTOR'S DBE commitment shall be made until proper review and approval by AUTHORITY is rendered in writing.

To ensure full compliance with the requirements of 49 CFR, Part 26 and AUTHORITY's DBE Program, CONTRACTOR must:

A. Take appropriate actions to ensure that it will satisfy good faith efforts to meet the DBE agreement goal and continue to meet the DBE commitment made at award, when change orders or other modifications alter the dollar amount of the Agreement or the distribution of work. CONTRACTOR must apply and report its DBE goal commitment against the total Agreement value, including any change orders and/or amendments.

II. DBE Policy and Applicability

In accordance with federal financial assistance agreements with the U.S. Department of Transportation ("U.S. DOT"), AUTHORITY has adopted a Disadvantaged Business Enterprise ("DBE") Policy and Program in conformance with Title 49 CFR, Part 26, "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs".

The project is subject to these stipulated regulations and AUTHORITY's DBE Program. To ensure that AUTHORITY achieves its overall DBE Program goals and objectives, AUTHORITY encourages the participation of DBEs as defined in 49 CFR, Part 26, in the performance of agreements financed in whole or in part with U.S. DOT funds. Pursuant to the intent of these

Regulations, it is also the policy of AUTHORITY to:

Fulfill the spirit and intent of the DBE Program regulations published under U.S. DOT Title 49 CFR, Part 26, by ensuring that DBEs have an equitable opportunity to compete for and participate in AUTHORIT's U.S. DOT-assisted contracts and subcontracts. AUTHORITY is firmly committed to the DBE Program objectives, which are designed to:

A. Ensure non-discrimination in the award and administration of AUTHORITY's U.S. DOT-assisted contracts;

B. Create a level playing field by which DBE's can fairly compete for AUTHORITY's U.S. DOT-assisted contracts;

C. Ensure that AUTHORITY's DBE Program and Overall Goals are narrowly tailored in accordance with applicable law;

D. Ensure that only firms that fully meet 49 CFR, Part 26 eligibility standards are permitted to participate as DBE's in the AUTHORITY's DBE Program;

E. Help remove barriers which impede the participation of DBE's in AUTHORITY's U.S. DOT-assisted contracts;

F. Promote the use of DBE's in all types of U.S. DOT-assisted contracts and procurement activities conducted by AUTHORITY;

G. Provide training and other assistance through our resource partners to address capital, bonding, and insurance needs;

H. Assist in the development of DBE firms that can compete successfully in the marketplace outside of the DBE Program; and

I. Establish and provide opportunities for DBEs by providing flexibility in the implementation of AUTHORITY's DBE Program.

CONTRACTOR must not discriminate on the basis of race, color, national origin, or sex in the award and performance of subcontractor. Any terms used in this section that are defined in 49 CFR, Part 26, or elsewhere in the Regulations, must have the meaning set forth in the Regulations. In the event of any conflicts or inconsistencies between the Regulations and AUTHORITY's DBE Program with respect to U.S. DOT-assisted contracts, the Regulations must prevail.

III. AUTHORITY's DBE Policy Implementation Directives

Pursuant to the provisions associated with Title 49 CFR, Part 26, the Disadvantaged Business

Enterprise ("DBE") Program exists to ensure participation, equitable competition, and assistance to participants in the U.S. DOT DBE program. Accordingly, based on the AUTHORITY's analysis of its past utilization data, coupled with Overall Goal Methodology findings and examination of similar Agencies' disparity studies, AUTHORITY's DBE Program is implemented utilizing both race-conscious and race-neutral means. When a contract-specific DBE goal is assigned to a project, meeting the contract-specific goal by committing to utilize DBEs, or documenting a bona fide good faith effort to do so, is a condition of award.

A. Definitions

The following definitions apply to the terms used in these provisions:

1. ***"Disadvantaged Business Enterprise (DBE)"*** means a small business concern: (a) which is at least fifty-one percent (51%) owned by one or more socially and economically disadvantaged individuals or, in the case of any publicly-owned business, at least fifty-one percent (51%) of the stock of which is owned by one or more socially and economically disadvantaged individuals; and (b) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.

2. ***"Small Business Concern"*** means a small business as defined pursuant to Section 3 of the Small Business Act and Small Business Administration (SBA) regulations implementing it (13 CFR Part 121) that also does not exceed the cap on average annual gross receipts specified in §26.65(b).

3. ***"Socially and Economically Disadvantaged Individuals"*** means any individual who is a citizens (or lawfully admitted permanent resident) of the United States and who has been subjected to racial or ethnic prejudice or cultural bias within American society because of his or her identity as a member of groups and without regard to his or her individual qualities. The social disadvantage must stem from circumstances beyond the individual's control.

    a) Any individual who a recipient finds to be a socially and economically disadvantaged individual on a case-by-case basis. An individual must demonstrate that he or she has held himself or herself out, as a member of a designated group if you require it.

    b) Any individual in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:

        i. "Black Americans," which includes persons having origins in any of the Black racial groups of Africa";
        ii. "Hispanic Americans," which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other

Spanish or Portuguese culture or origin, regardless of race";

iii. "Native Americans," which includes persons who are enrolled members of a federally or State recognized Indian tribe, Alaskan Natives, or Native Hawaiians";

iv. "Asian-Pacific Americans," which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), Republic of the Northern Marianas Islands, Samoa, Macao, Fiji, Tonga, Kirbati, Tuvalu, Nauru, Federated States of Micronesia, or Hong Kong";

v. "Subcontinent Asian Americans," which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka;"

vi. Women; and

vii. Any additional groups whose members are designated as socially and economically disadvantaged by the SBA, at such time as the SBA designation becomes effective.

c) Being born in a particular country does not, standing alone, mean that a person is necessarily a member of one of the groups listed in this definition.

4. ***"Owned and Controlled"*** means a business: (a) which is at least 51 percent owned by one or more "Socially and Economically Disadvantaged Individuals" or, in the case of a publicly-owned business, at least 51 percent of the stock of which is owned by one or more "Socially and Economically Disadvantaged Individuals"; and (b) whose management and daily business operations are controlled by one or more such individuals.

5. ***"Manufacturer"*** means a firm that operates or maintains a factory or establishment that produces on the premises the materials or supplies obtained by the CONTRACTOR.

6. ***"Regular Dealer"*** means a firm that owns, operates or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of the Agreement are bought, kept in stock, and regularly sold to the public in the usual course of business. The firm must engage in, as its principal business, and in its own name, the purchase and sale of the product in question. A regular dealer in such bulk items as steel, cement, gravel, stone and petroleum products need not keep such products in stock if it owns or operates distribution equipment.

7. ***"Fraud"*** includes a firm that does not meet the eligibility criteria of being a certified DBE and attempts to participate in a U.S. DOT-assisted program as a DBE on the basis of false, fraudulent, or deceitful statements or representations, or under circumstances indicating a serious lack of business integrity or honesty. AUTHORITY

may take enforcement action under 49 CFR, Part 31, Program Fraud and Civil Remedies, against any participant in the DBE program whose conduct is subject to such action under 49 CFR, Part 31. AUTHORITY may refer cases of identified fraud to the Department of Justice, for prosecution under 18 U.S.C. 1001, or any other applicable provisions of law. Any person who makes a false or fraudulent statement in connection with participation of a DBE in any U.S. DOT-assisted program or otherwise, violates applicable Federal statutes.

8. ***"Other Socially and Economically Disadvantaged Individuals"*** means those individuals who are citizens of the United States (or lawfully admitted permanent residents), and who, on a case-by-case basis, are determined by Small Business Administration or AUTHORITY to meet the social and economic disadvantage criteria described below.

   a) Social Disadvantage

      1. The individual's social disadvantage must stem from his/her color, national origin, gender, physical handicap, long-term residence in an environment isolated from the mainstream of American society, or other similar cause beyond the individual's control.

      2. The individual must demonstrate that he/she has personally suffered social disadvantage.

      3. The individual's social disadvantage must be rooted in treatment which he/she has experienced in American society, not in other countries.

      4. The individual's social disadvantage must be chronic, longstanding and substantial; not fleeting or insignificant.

      5. The individual's social disadvantage must have negatively affected his/her entry into and/or advancement in the business world.

      6. A determination of social disadvantage must be made before proceeding to make a determination of economic disadvantage.

   b) Economic Disadvantage

      1. The individual's ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities, as compared to others in the same line of business and competitive market area that are not socially disadvantaged.

      2. The following criteria will be considered when determining the degree of diminished credit and capital opportunities of a person claiming social and economic disadvantage:

With respect to the individual:

- availability of financing
- bonding capability
- availability of outside equity capital
- available markets

With respect to the individual and the business concern:

- personal and business assets
- personal and business net worth
- personal and business income and profits

IV. Submission of DBE Information and Ongoing Reporting Requirements (Post-Award)

CONTRACTOR must complete and submit within the specified timelines, the following DBE and Non-DBE documentation, electronically through the submission process detailed below:

Form/Electronic Submittal	Frequency of Submission	Process for Submission:
Monthly DBE Attainment and Subcontractor Prompt Payment Verification Report	Monthly by the 10th of each month	Enter data and submit via ECAT to AUTHORITY
DBE Subcontract Agreements	Within ten (10) days of prime contract award, or with Request to Add for DBE firms added post-award	Upload Subcontract to Subcontractor profile and submit via ECAT to AUTHORITY
Request to Add Subcontractor	As needed (see instructions below)	Enter data and submit via ECAT to AUTHORITY
DBE Commitment Change Request(s)	As needed (see instructions below)	Enter data and submit via ECAT to AUTHORITY
On-Going Good Faith Efforts (GFE) Post-Award	As needed (see instructions below)	Upload GFE attachment and submit via ECAT to AUTHORITY
Final Report-Utilization of Disadvantaged Business Enterprises (DBE) and First-Tier Subcontractors	Within thirty (30) days from the date of project completion.	Enter data and submit via ECAT to AUTHORITY
Disadvantaged Business Enterprises (DBE) Certification Status Change	Within thirty (30) days from the date of project completion.	Enter data and submit via ECAT to AUTHORITY

A penalty of ten dollars ($10) per day, per Form/Electronic submittal will be implemented for late submission of any of the above.

A. Monthly DBE Attainment and Subcontractor Prompt Payment Verification Data Submission

This submission serves to ensure CONTRACTOR's DBE commitments are attained, properly reported, and credited in accordance with DBE crediting provisions based on the capacity the DBE performs the scope of work/service.

This submission further serves to monitor prompt payment to both DBE and non-DBE firms, and collect DBE utilization data as required under 49 CFR, Part 26.

CONTRACTOR is required to enter data directly into ECAT and submit by the 10th of each month until completion of the Agreement. CONTRACTOR's first submission is due following the first month of Agreement activity. Even if no DBE participation will be reported within a period, CONTRACTOR must complete and submit Monthly by the required timelines.

If there is not a DBE goal and no DBE commitment has been made by CONTRACTOR, CONTRACTOR is required to enter data directly into ECAT and submit by bi-annually on April 10th and October 10th of each year. Additionally, upon completion of the contract, a final report must be submitted and marked final.

Data required for submission includes the amount(s) received by CONTRACTOR from AUTHORITY and the amount(s) paid to lower-tier subcontractors during the Month. CONTRACTOR to submit pertinent payment details for any firm (DBE and Non-DBE) to whom they have reported a payment within the reporting period. CONTRACTOR is advised not to report the participation of DBE(s) toward the CONTRACTOR's DBE attainment until the amount being claimed has been paid to the DBE.

Pertinent payment details include:

- Invoice Number
- Invoice Amount
- Payment Amount
- Invoice Date
- Check Number
- Date of Payment
- Corresponding Prime Invoice (associated to subcontractors' invoice)
- Retention
- Disputed or Withheld invoice amounts

If DBE trucking credit is being claimed, CONTRACTOR must electronically report through ECAT the amount paid to DBE trucking companies and their lower-tier firms (including owner operators for the leasing of trucks). Pertinent payment details required for submission will include truck number, owner's name, California Highway Patrol CA number, and if applicable, the DBE certification number of the owner of the truck for all trucks paid during that month. If the DBE leases trucks from a non-DBE, CONTRACTOR may count only the fee or commission the DBE

receives as a result of the lease arrangement.

Firms will receive a notification from ECAT when a payment is reported to them and will be required to log-in to ECAT to verify the payment information provided by CONTRACTOR. A reported payment to a lower-tier DBE firm will not be credited towards the DBE goal until the DBE firm has validated the payment through ECAT. All payments reported by CONTRACTOR must be validated by affected firm, prior to the 10th of each month following the reporting period.

Electronic submission of the Monthly DBE Commitment and Attainment Summary and Subcontractor Prompt Pay Verification Data includes a certification under penalty of perjury of the prompt payment assurance statement of compliance, providing assurance that timely payments have been issued to all subcontractors in accordance with regulatory mandates and as required by 49 CFR Part 26.29.

B. DBE Subcontract Agreements

CONTRACTOR must electronically submit to AUTHORITY via ECAT, copies of executed subcontracts and/or purchase orders (PO) for all DBE firms participating on the contract within ten (10) working days of award. CONTRACTOR must immediately notify AUTHORITY in writing, of any problems it may have in obtaining the subcontract agreements from listed DBE firms within the specified time.

C. Additional DBE Firms

In the event CONTRACTOR identifies additional DBE Subcontractors or suppliers not previously identified by CONTRACTOR for DBE participation under the Agreement, CONTRACTOR must notify AUTHORITY by filling out and submitting a “Request to Add,” through ECAT. This will enable AUTHORITY to verify the firm’s eligibility, capacity, CUF and scope of work. Proposed firms will not be applied towards CONTRACTOR’S DBE participation until approved by AUTHORITY.

CONTRACTOR must also submit, for each DBE identified after contract execution, a written confirmation from the DBE acknowledging that it is participating in the contract for a specific value, including the corresponding scope of work (a subcontract agreement can serve in lieu of the written confirmation). This supporting documentation is a required upload by ECAT when submitting a Request to Add.

D. DBE Commitment Change Request(s), DBE Substitution, Termination and Increasing or Decreasing Commitment Values

CONTRACTOR shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the CONTRACTOR obtains AUTHORITY’s written consent. CONTRACTOR shall not terminate, decrease or substitute a listed DBE for convenience and perform work originally designated for a DBE with its own work force or those

of an affiliate, a non-DBE firm, another DBE firm or obtain materials from other sources without prior written authorization from AUTHORITY. CONTRACTOR shall not be entitled to any payment for work or materials unless it is performed or supplied by the listed DBE on the DBE Participation Commitment form, unless the DBE is terminated in accordance with this section and is approved by AUTHORITY. This includes partial terminations.

CONTRACTOR shall provide written notification to AUTHORITY in a timely manner of any changes to its anticipated DBE participation. This notice should be provided prior to the commencement of that portion of the work.

AUTHORITY shall only provide written consent to a request to use other forces or sources of materials if CONTRACTOR has good cause to terminate or decrease its DBE commitment to a DBE firm. For the purposes of this section good cause includes any of the following justifications:

1. Listed DBE fails or refuses to execute a written contract based on the requirements of the project.
2. Listed DBE firm fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE Subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of CONTRACTOR.
3. Listed DBE firm fails or refuses to meet the CONTRACTOR's reasonable, nondiscriminatory bond requirements.
4. Listed DBE becomes bankrupt or insolvent, or exhibits credit unworthiness.
5. Listed DBE firm is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1,200 or applicable state law.
6. AUTHORITY has determined that the listed DBE firm is not a responsible firm.
7. Listed DBE firm voluntarily withdraws from the project and provides written notice of its withdrawal.
8. Listed DBE is ineligible to receive credit for the type of work required.
9. Listed DBE owner dies or becomes disabled resulting in the inability of the DBE to perform the work on the Contract.
10. Other documented good cause that the Authority determines compels the termination (inclusive of decreases to commitment values and substitutions) of a DBE firm.

To submit a request to substitute, decrease or terminate a DBE subcontractor commitment, CONTRACTOR is required to submit a DBE Commitment Change Request through ECAT. The DBE Commitment Change Request includes options to increase, decrease, substitute or terminate a DBE commitment.

If decrease, substitute or terminate is selected, CONTRACTOR must give notice in writing to the DBE, with a copy to AUTHORITY, of its intent to decrease, substitute and/or terminate, and provide justification, allowing the DBE five (5) days to respond to CONTRACTOR of the reasons, if any, why it objects to the proposed termination of its contract and why AUTHORITY should not

approve CONTRACTOR's request. The following documentation will be required by ECAT when submitting the DBE Commitment Change Request.

1. One or more of the good cause justifications listed above.
2. Notices from CONTRACTOR to the DBE regarding the request.
3. Responses from the DBEs to CONTRACTOR regarding the request.
4. Any documentation necessary to validate the good cause justification.
5. Proof of DBE certification of proposed firm (if requesting to substitute).
6. Written confirmation of work and amount signed by proposed firm (if requesting to substitute).

In the event of an approved DBE substitution, termination, or failure of a DBE to complete its work on the contract for any reason, the DBE must be substituted with another DBE or adequate good faith efforts must be documented by CONTRACTOR within five (5) days, to the extent needed to meet the contract-specific DBE goal. Note: The five (5) day period may be extended for an additional five (5) days if necessary, at the request of the CONTRACTOR. The substitute DBE must be certified as a DBE within the appropriate NAICS categories at the time of request for substitution.

CONTRACTOR shall not be entitled to any payment for work or materials unless it is performed or supplied by the listed DBE, unless the DBE is terminated in accordance with this section and is approved by AUTHORITY in writing. This includes partial terminations.

Should CONTRACTOR elect to submit a good faith effort documentation in lieu of proposing additional DBE participation, AUTHORITY will review the documentation and provide a determination through ECAT to CONTRACTOR stating whether or not good faith efforts have been adequately demonstrated.

The substitute DBE cannot work on the Agreement until its work eligibility has been confirmed by AUTHORITY.

E. On-Going Good Faith Efforts Post-Award

During the term of the Agreement, CONTRACTOR shall continue to make a Good Faith Effort (GFE) to ensure that DBEs have an opportunity to successfully perform in the Agreement, and that the CONTRACTOR meets the DBE contract goal. These efforts shall include, but shall not be limited to, the following:

a. Negotiating in good faith to attempt to finalize and execute a subcontractor agreement with the DBEs committed to;
b. Continuing to provide assistance to DBE firms in obtaining bonding, lines of credit, etc.
c. Notifying a DBE in writing of any potential problem and attempting to resolve the problem prior to formally requesting AUTHORITY approval to substitute the DBE.

d. Paying all firms (DBEs and non-DBEs) in a timely manner, as listed in the Agreement specifications;
e. Alerting AUTHORITY in a timely manner of any problems anticipated in attaining the DBE participation committed to in the proposal;
f. If a DBE substitution is necessary, making a Good Faith Effort to replace the DBE with another DBE, subject to the approval of AUTHORITY.

Should CONTRACTOR's DBE commitment fall below the DBE contract goal, submittal of good faith effort documentation will be required on a monthly basis until the goal has been met through executed DBE contract agreements. Documentation should include but is not limited to:

a. Conducting market research to identify and solicit DBE firms that have the capability to perform the work on the Agreement. All reasonable and available means should be utilized. This may include attendance at matchmaking meetings and events, advertising, written notices or emails to all DBEs listed in the State's directory of transportation firms that specialize in the areas of work desired and which are located in the area or surrounding areas of the project.

b. CONTRACTOR should solicit this interest as early in the process as practicable to allow the DBEs to respond to the solicitation and submit a timely proposal. CONTRACTOR should determine with certainty if the DBEs are interested by taking appropriate steps to follow up on initial solicitations.

c. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out Agreement work items into economically feasible units (for example, smaller tasks or quantities) to facilitate DBE participation, even when CONTRACTOR might otherwise prefer to perform these work items with its own forces. This may include, where possible, establishing flexible timeframes for performance.

d. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, State, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

F. Final Report-Utilization of Disadvantaged Business Enterprises

Upon completion of the project, CONTRACTOR must electronically designate their last Monthly DBE Attainment and Subcontractor Prompt Payment Verification Report as final and submit to the Authority utilizing ECAT within thirty (30) days from the date of project completion. The amount of ten-thousand dollars ($10,000) will be withheld from payment until a satisfactory form is submitted.

G. Disadvantaged Business Enterprises Certification Status Change

If a DBE Subcontractor is decertified during the life of the project, the decertified subcontractor must notify the CONTRACTOR in writing with the date of decertification and last date of work on the project while still certified. Within ten (10) days of receipt of decertification documentation, CONTRACTOR must electronically furnish the written documentation to AUTHORITY via ECAT. Upon completion of the project, "Disadvantaged Business Enterprises Certification Status Change" form must be signed and certified correct by the CONTRACTOR indicating each DBE's existing certification status, utilizing ECAT.

If there are no changes, CONTRACTOR indicates "No Changes." The signed and certified form must be furnished to AUTHORITY within thirty (30) days from the date of project completion.

Failure to submit any of the required submittals above and their support documentation within the specified timeline shall result in a penalty of ten dollars ($10) per day, per submittal document.

AUTHORITY requires CONTRACTOR to maintain records and documents of payments to lower-tiers, including DBEs, for a period of four (4) years from the date of final payment by AUTHORITY, unless otherwise provided by applicable record retention requirements for CONTRACTOR'S agreement, whichever is longer. These records will be made available for inspection upon request in accordance with Article 21 entitled "Access to Records and Reports", of this Agreement. This reporting requirement extends to all lower-tiers, both DBE and non-DBE.

AUTHORITY reserves the right, at its sole discretion, to demonstrate responsiveness to requirements of CFR 49 Part 26.37 by posting CONTRACTOR payment data to a website, database, or other place accessible to Subcontractors to assist them in determining when they should expect to receive payment.

V. <u>DBE Eligibility and Commercially Useful Function Standards</u>

A DBE must be certified at the time of bid submission:

> A DBE must be a small business firm defined pursuant to 13 CFR Part 121 and be certified through the California Unified Certification Program ("CUCP") at the time of bid/proposal submission. A listing of DBEs certified by the CUCP is available at the link to the CUCP web site, which can be accessed at: https://ucp.dot.ca.gov/licenseForm.htm

1. A DBE may participate as a prime CONTRACTOR, Subcontractor, joint venture partner, vendor of material or supplies, or as a trucking company.

2. A DBE joint venture partner must be responsible for specific items of work, or clearly defined portions thereof. Responsibility means actually performing, managing, and supervising the work with its own work forces. The DBE joint venture partner must

share in the capital contribution, control, management, risks, and profits of the joint venture commensurate with its ownership interest.

3. The use of joint-checks for DBE firms must be approved by AUTHORITY prior to execution, and a joint-check agreement must accompany the request to AUTHORITY.

4. A DBE must perform a commercially useful function in accordance with 49 CFR Part 26.55 (i.e. must be responsible for the execution of a distinct element of the work, and must carry out its responsibility by actually performing, managing, and supervising the work). A DBE should perform at least thirty percent (30%) of the total cost of its contract with its own workforce to presume it is performing a commercially useful function.

VI. DBE Crediting Provisions

A. When a DBE is proposed to participate in the Agreement, at any tier, only the value of the work proposed to be performed by the DBE with its own work force may be counted towards DBE participation. If CONTRACTOR is a DBE joint venture participant, only the DBE proportionate interest in the joint venture must be counted.

1. If a DBE intends to subcontract part of the work of its subcontract to a lower-tier Subcontractor, the value of the subcontracted work may be counted toward DBE participation only if the Subcontractor is a certified DBE and performs the work with their own forces. Services subcontracted to a non-DBE firm may not be credited toward the CONTRACTOR'S DBE attainment.

2. CONTRACTOR is to calculate and credit participation by eligible DBE vendors of equipment, materials, and supplies toward DBE attainment as follows:

   a) Sixty percent (60%) of expenditures for equipment, materials, and supplies required under the Agreement obtained from a regular dealer; or

   b) One hundred percent (100%) of expenditures for equipment, materials, and supplies required under the Agreement obtained from a DBE manufacturer.

3. The following types of fees or commissions paid to DBE Subcontractors, Brokers, and Packagers may be credited toward CONTRACTOR'S DBE attainment, provided that the fee or commission is reasonable and not excessive, as compared with fees or commissions customarily allowed for similar work including:

   a) Fees and commissions charged for providing bona fide professional or technical services, or procurement of essential personnel, facilities, equipment,

materials, or supplies required in the performance of the Agreement;

b) Fees charged for delivery of material and supplies (excluding the cost of materials or supplies themselves), when the licensed hauler, trucker, or delivery service is not also the manufacturer of, or a regular dealer in, the material and supplies;

c) Fees and commissions charged for providing any insurance specifically required in the performance of the Agreement.

4. CONTRACTOR may count the participation of DBE trucking companies toward DBE attainment, as follows:

   a) The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract.
   b) The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
   c) The DBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.
   d) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
   e) The DBE may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks equipped with drivers from a non-DBE is entitled to credit for the total value of transportation services provided by non-DBE leased trucks equipped with drivers not to exceed the value of transportation services on the contract provided by the DBE-owned trucks or leased trucks with DBE drivers. Additional participation by non-DBE owned trucks equipped with drivers receives credit only for the fee or commission it receives as a result of the lease arrangement.
   f) The DBE may lease trucks without drivers from a non-DBE truck leasing company and if the DBE uses its own employees as drivers, it is entitled to credit for the total value of these hauling services.

   For purposes of this paragraph, a lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

5. If the CONTRACTOR listed a non-certified, 1st tier Subcontractor to perform work on this Agreement, and the non-certified Subcontractor subcontracts a part of its work

or purchases materials and/or supplies from a lower tier DBE certified Subcontractor or Vendor, the value of work performed by the lower tier DBE firm's own forces can be counted toward DBE participation on the Agreement. If a DBE contractor performs the installation of purchased materials and supplies, they are eligible for full credit of the cost of the materials.

6. CONTRACTOR is advised not to report the participation of DBE(s) toward the CONTRACTOR's DBE attainment until the amount being claimed has been paid to the DBE.
7. If the CONTRACTOR listed a non-certified, 1st tier Subcontractor to perform work on this Agreement, and the non-certified Subcontractor subcontracts a part of its work or purchases materials and/or supplies from a lower tier DBE certified Subcontractor or Vendor, the value of work performed by the lower tier DBE firm's own forces can be counted toward DBE participation on the Agreement. If a DBE contractor performs the installation of purchased materials and supplies, they are eligible for full credit of the cost of the materials.

8. CONTRACTOR is advised not to report the participation of DBE(s) toward the CONTRACTOR'S DBE attainment until the amount being claimed has been paid to the DBE.

VII. DBE "Frauds" and "Fronts"

Only legitimate DBEs are eligible to participate as DBEs in the AUTHORITY's U.S. DOT-assisted contracts. CONTRACTOR is cautioned against knowingly and willfully using "fronts." The use of "fronts" and "pass through" subcontracts to non-disadvantaged firms constitute criminal violations. Further, any indication of fraud, waste, abuse, or mismanagement of Federal funds should be immediately reported to the Office of Inspector General, U.S. Department of Transportation at the toll-free hotline: (800) 424-9071; or email at hotline@oig.dot.gov, or by mail to the following: DOT Inspector General, 1200 New Jersey Ave SE, West Bldg 7th Floor, Washington, DC 20590.

VIII. Dispute Resolution

All Agreements in excess of five-hundred thousand dollars ($500,000) shall contain provisions or conditions which will allow for dispute resolution remedies in instances where CONTRACTORS violate or breach DBE Program requirements, inclusive but not limited to, prompt payment and provide for such sanctions and penalties as may be appropriate.

CONTRACTOR shall incorporate this Section into each subcontract related to work arising under this Agreement and shall not incorporate by reference.

CONTRACTOR and subcontractor agree to notify AUTHORITY within five (5) business days of any prompt payment and/or DBE Program disputes which cannot be settled by discussions

between the parties involved.

CONTRACTOR and subcontractor further agree to proceed through informal meetings, mediation, or any combination thereof as further detailed below. Dispute submittals shall include the method(s) of dispute resolution selected, terms, timeframes, and a detailed summary of assistance being requested (as applicable).

A. Informal Meetings

AUTHORITY is available to assist CONTRACTOR with coordination of informal meeting requests to assist in the resolution of disputes between CONTRACTOR and subcontractor. AUTHORITY's DBELO or a designated DBE support representative will conduct the informal meetings with parties in dispute. Representatives from CONTRACTOR and subcontractor for the purpose of dispute resolution, must include individuals authorized to bind each interested party. All parties must agree to the procedure.

B. Mediation

The parties to a Agreement may agree to endeavor to settle a dispute through informal mediation under independent third-party organizations. AUTHORITY's DBELO and his/her designated support staff is considered an independent third party. Submission to informal mediation is voluntary; it is not binding and offers advisory opinions.

Performance During Dispute: Unless otherwise directed by AUTHORITY, CONTRACTOR and its sub tiers shall continue performance under the Agreement while matters in dispute are being resolved.

Flow Down Requirements: The dispute resolution provisions flow down to all tiers.

These provisions shall not apply to disputes between CONTRACTOR and AUTHORITY. These provisions do not alter in any way or waive compliance with other provisions in the Agreement.

IX. <u>Administrative Remedies and Enforcement</u>

CONTRACTOR must fully comply with the DBE Agreement requirements, including the Authority's DBE Program and Title 49 CFR, Part 26 "Participation of Disadvantaged Businesses in Department of Transportation Financial Assistance Programs," and ensure that all subcontractors, regardless of tier, are also fully compliant. Failure by CONTRACTOR to carry out these requirements is a material breach of this Agreement, which may result in the termination of this Agreement, or such other remedy as AUTHORITY deems appropriate, which may include, but is not limited to:

1. Withholding monthly progress payments;
2. Assessing sanctions;

3. Assessing liquidated damages; and/or

4. Disqualifying CONTRACTOR from future bidding/proposing as non-responsible.

In instances of identified non-compliance, a Cure Notice will be issued to CONTRACTOR identifying the DBE non-compliance matter(s) and specifying the required course of action for remedy.

CONTRACTOR must be given ten (10) working days from the date of the Cure Notice to remedy or to: (1) File a written appeal accompanied by supporting documentation; and/or (2) Request a hearing with AUTHORITY to reconsider AUTHORITY's DBE determination.

Failure to respond within the ten (10) business day period will constitute a waiver of CONTRACTOR'S right to appeal. If CONTRACTOR files an appeal, AUTHORITY, must issue a written determination and/or set a hearing date within ten (10) business days of receipt of the written appeal, as applicable. A final Determination will be issued within ten (10) business days after the hearing, as applicable.

If after review of CONTRACTOR'S appeal, AUTHORITY decides to uphold the decision to impose DBE administrative remedies on CONTRACTOR, the written determination must state the specific remedy(ies) to be imposed.

Failure to comply with the Cure Notice and/or to remedy the identified DBE non-compliance matter(s) is a material breach of the Agreement and is subject to administrative remedies including withholding a minimum of two percent (2%) of the invoice amount due per month for every month that the identified non-compliance matter(s) is not remedied. Upon satisfactory compliance, AUTHORITY will release all withholdings.

In addition to administrative remedies defined in this section, AUTHORITY is not precluded from invoking other contractual and/or legal remedies available under federal, state or local laws.

DISADVANTAGED BUSINESS ENTERPRISE (DBE) CONTRACT PROVISIONS FOR U.S. DOT-ASSISTED CONTRACTS

I. DBE Participation

It is the CONTRACTOR'S responsibility to be fully informed regarding the requirements of 49 CFR, Part 26 and AUTHORITY's DBE program developed pursuant to these regulations.

CONTRACTOR must complete and submit, within the specified timelines, the required DBE documentation in Section IV. of this Attachment, through the AUTHORITY's electronic reporting system (ECAT). CONTRACTOR's submitted "DBE Participation Commitment Form," executed subcontracts and/or purchase orders, as well as on-going DBE documentation will be utilized to monitor CONTRACTOR's DBE commitment. Unless otherwise directed and/or approved in writing by AUTHORITY prior, CONTRACTOR must not effectuate any changes to its DBE participation commitment.

CONTRACTOR must complete and submit all required DBE documentation to effectively capture DBE utilization on AUTHORITY's U.S. DOT-assisted contracts whether achieved race neutrally or race consciously. No changes to CONTRACTOR'S DBE commitment shall be made until proper review and approval by AUTHORITY is rendered in writing.

To ensure full compliance with the requirements of 49 CFR, Part 26 and AUTHORITY's DBE Program, CONTRACTOR must:

A. Take appropriate actions to ensure that it will satisfy good faith efforts to meet the DBE agreement goal and continue to meet the DBE commitment made at award, when change orders or other modifications alter the dollar amount of the Agreement or the distribution of work. CONTRACTOR must apply and report its DBE goal commitment against the total Agreement value, including any change orders and/or amendments.

II. DBE Policy and Applicability

In accordance with federal financial assistance agreements with the U.S. Department of Transportation ("U.S. DOT"), AUTHORITY has adopted a Disadvantaged Business Enterprise ("DBE") Policy and Program in conformance with Title 49 CFR, Part 26, "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs".

The project is subject to these stipulated regulations and AUTHORITY's DBE Program. To ensure that AUTHORITY achieves its overall DBE Program goals and objectives, AUTHORITY encourages the participation of DBEs as defined in 49 CFR, Part 26, in the performance of agreements financed in whole or in part with U.S. DOT funds. Pursuant to the intent of these

Regulations, it is also the policy of AUTHORITY to:

Fulfill the spirit and intent of the DBE Program regulations published under U.S. DOT Title 49 CFR, Part 26, by ensuring that DBEs have an equitable opportunity to compete for and participate in AUTHORIT's U.S. DOT-assisted contracts and subcontracts. AUTHORITY is firmly committed to the DBE Program objectives, which are designed to:

A. Ensure non-discrimination in the award and administration of AUTHORITY's U.S. DOT-assisted contracts;

B. Create a level playing field by which DBE's can fairly compete for AUTHORITY's U.S. DOT-assisted contracts;

C. Ensure that AUTHORITY's DBE Program and Overall Goals are narrowly tailored in accordance with applicable law;

D. Ensure that only firms that fully meet 49 CFR, Part 26 eligibility standards are permitted to participate as DBE's in the AUTHORITY's DBE Program;

E. Help remove barriers which impede the participation of DBE's in AUTHORITY's U.S. DOT-assisted contracts;

F. Promote the use of DBE's in all types of U.S. DOT-assisted contracts and procurement activities conducted by AUTHORITY;

G. Provide training and other assistance through our resource partners to address capital, bonding, and insurance needs;

H. Assist in the development of DBE firms that can compete successfully in the marketplace outside of the DBE Program; and

I. Establish and provide opportunities for DBEs by providing flexibility in the implementation of AUTHORITY's DBE Program.

CONTRACTOR must not discriminate on the basis of race, color, national origin, or sex in the award and performance of subcontractor. Any terms used in this section that are defined in 49 CFR, Part 26, or elsewhere in the Regulations, must have the meaning set forth in the Regulations. In the event of any conflicts or inconsistencies between the Regulations and AUTHORITY's DBE Program with respect to U.S. DOT-assisted contracts, the Regulations must prevail.

III. AUTHORITY's DBE Policy Implementation Directives

Pursuant to the provisions associated with Title 49 CFR, Part 26, the Disadvantaged Business

Enterprise ("DBE") Program exists to ensure participation, equitable competition, and assistance to participants in the U.S. DOT DBE program. Accordingly, based on the AUTHORITY's analysis of its past utilization data, coupled with Overall Goal Methodology findings and examination of similar Agencies' disparity studies, AUTHORITY's DBE Program is implemented utilizing both race-conscious and race-neutral means. When a contract-specific DBE goal is assigned to a project, meeting the contract-specific goal by committing to utilize DBEs, or documenting a bona fide good faith effort to do so, is a condition of award.

A. Definitions

The following definitions apply to the terms used in these provisions:

1. ***"Disadvantaged Business Enterprise (DBE)"*** means a small business concern: (a) which is at least fifty-one percent (51%) owned by one or more socially and economically disadvantaged individuals or, in the case of any publicly-owned business, at least fifty-one percent (51%) of the stock of which is owned by one or more socially and economically disadvantaged individuals; and (b) whose management and daily business operations are controlled by one or more of the socially and economically disadvantaged individuals who own it.

2. ***"Small Business Concern"*** means a small business as defined pursuant to Section 3 of the Small Business Act and Small Business Administration (SBA) regulations implementing it (13 CFR Part 121) that also does not exceed the cap on average annual gross receipts specified in §26.65(b).

3. ***"Socially and Economically Disadvantaged Individuals"*** means any individual who is a citizens (or lawfully admitted permanent resident) of the United States and who has been subjected to racial or ethnic prejudice or cultural bias within American society because of his or her identity as a member of groups and without regard to his or her individual qualities. The social disadvantage must stem from circumstances beyond the individual's control.

    a) Any individual who a recipient finds to be a socially and economically disadvantaged individual on a case-by-case basis. An individual must demonstrate that he or she has held himself or herself out, as a member of a designated group if you require it.

    b) Any individual in the following groups, members of which are rebuttably presumed to be socially and economically disadvantaged:

        i. "Black Americans," which includes persons having origins in any of the Black racial groups of Africa";
        ii. "Hispanic Americans," which includes persons of Mexican, Puerto Rican, Cuban, Dominican, Central or South American, or other

Spanish or Portuguese culture or origin, regardless of race";

iii. "Native Americans," which includes persons who are enrolled members of a federally or State recognized Indian tribe, Alaskan Natives, or Native Hawaiians";

iv. "Asian-Pacific Americans," which includes persons whose origins are from Japan, China, Taiwan, Korea, Burma (Myanmar), Vietnam, Laos, Cambodia (Kampuchea), Thailand, Malaysia, Indonesia, the Philippines, Brunei, Samoa, Guam, the U.S. Trust Territories of the Pacific Islands (Republic of Palau), Republic of the Northern Marianas Islands, Samoa, Macao, Fiji, Tonga, Kirbati, Tuvalu, Nauru, Federated States of Micronesia, or Hong Kong";

v. "Subcontinent Asian Americans," which includes persons whose origins are from India, Pakistan, Bangladesh, Bhutan, the Maldives Islands, Nepal or Sri Lanka;"

vi. Women; and

vii. Any additional groups whose members are designated as socially and economically disadvantaged by the SBA, at such time as the SBA designation becomes effective.

c) Being born in a particular country does not, standing alone, mean that a person is necessarily a member of one of the groups listed in this definition.

4. ***"Owned and Controlled"*** means a business: (a) which is at least 51 percent owned by one or more "Socially and Economically Disadvantaged Individuals" or, in the case of a publicly-owned business, at least 51 percent of the stock of which is owned by one or more "Socially and Economically Disadvantaged Individuals"; and (b) whose management and daily business operations are controlled by one or more such individuals.

5. ***"Manufacturer"*** means a firm that operates or maintains a factory or establishment that produces on the premises the materials or supplies obtained by the CONTRACTOR.

6. ***"Regular Dealer"*** means a firm that owns, operates or maintains a store, warehouse, or other establishment in which the materials or supplies required for the performance of the Agreement are bought, kept in stock, and regularly sold to the public in the usual course of business. The firm must engage in, as its principal business, and in its own name, the purchase and sale of the product in question. A regular dealer in such bulk items as steel, cement, gravel, stone and petroleum products need not keep such products in stock if it owns or operates distribution equipment.

7. ***"Fraud"*** includes a firm that does not meet the eligibility criteria of being a certified DBE and attempts to participate in a U.S. DOT-assisted program as a DBE on the basis of false, fraudulent, or deceitful statements or representations, or under circumstances indicating a serious lack of business integrity or honesty. AUTHORITY

may take enforcement action under 49 CFR, Part 31, Program Fraud and Civil Remedies, against any participant in the DBE program whose conduct is subject to such action under 49 CFR, Part 31. AUTHORITY may refer cases of identified fraud to the Department of Justice, for prosecution under 18 U.S.C. 1001, or any other applicable provisions of law. Any person who makes a false or fraudulent statement in connection with participation of a DBE in any U.S. DOT-assisted program or otherwise, violates applicable Federal statutes.

8. ***"Other Socially and Economically Disadvantaged Individuals"*** means those individuals who are citizens of the United States (or lawfully admitted permanent residents), and who, on a case-by-case basis, are determined by Small Business Administration or AUTHORITY to meet the social and economic disadvantage criteria described below.

   a) Social Disadvantage

      1. The individual's social disadvantage must stem from his/her color, national origin, gender, physical handicap, long-term residence in an environment isolated from the mainstream of American society, or other similar cause beyond the individual's control.

      2. The individual must demonstrate that he/she has personally suffered social disadvantage.

      3. The individual's social disadvantage must be rooted in treatment which he/she has experienced in American society, not in other countries.

      4. The individual's social disadvantage must be chronic, longstanding and substantial; not fleeting or insignificant.

      5. The individual's social disadvantage must have negatively affected his/her entry into and/or advancement in the business world.

      6. A determination of social disadvantage must be made before proceeding to make a determination of economic disadvantage.

   b) Economic Disadvantage

      1. The individual's ability to compete in the free enterprise system has been impaired due to diminished capital and credit opportunities, as compared to others in the same line of business and competitive market area that are not socially disadvantaged.

      2. The following criteria will be considered when determining the degree of diminished credit and capital opportunities of a person claiming social and economic disadvantage:

With respect to the individual:

- availability of financing
- bonding capability
- availability of outside equity capital
- available markets

With respect to the individual and the business concern:

- personal and business assets
- personal and business net worth
- personal and business income and profits

IV. Submission of DBE Information and Ongoing Reporting Requirements (Post-Award)

CONTRACTOR must complete and submit within the specified timelines, the following DBE and Non-DBE documentation, electronically through the submission process detailed below:

Form/Electronic Submittal	Frequency of Submission	Process for Submission:
Monthly DBE Attainment and Subcontractor Prompt Payment Verification Report	Monthly by the 10th of each month	Enter data and submit via ECAT to AUTHORITY
DBE Subcontract Agreements	Within ten (10) days of prime contract award, or with Request to Add for DBE firms added post-award	Upload Subcontract to Subcontractor profile and submit via ECAT to AUTHORITY
Request to Add Subcontractor	As needed (see instructions below)	Enter data and submit via ECAT to AUTHORITY
DBE Commitment Change Request(s)	As needed (see instructions below)	Enter data and submit via ECAT to AUTHORITY
On-Going Good Faith Efforts (GFE) Post-Award	As needed (see instructions below)	Upload GFE attachment and submit via ECAT to AUTHORITY
Final Report-Utilization of Disadvantaged Business Enterprises (DBE) and First-Tier Subcontractors	Within thirty (30) days from the date of project completion.	Enter data and submit via ECAT to AUTHORITY
Disadvantaged Business Enterprises (DBE) Certification Status Change	Within thirty (30) days from the date of project completion.	Enter data and submit via ECAT to AUTHORITY

A penalty of ten dollars ($10) per day, per Form/Electronic submittal will be implemented for late submission of any of the above.

A. Monthly DBE Attainment and Subcontractor Prompt Payment Verification Data Submission

This submission serves to ensure CONTRACTOR's DBE commitments are attained, properly reported, and credited in accordance with DBE crediting provisions based on the capacity the DBE performs the scope of work/service.

This submission further serves to monitor prompt payment to both DBE and non-DBE firms, and collect DBE utilization data as required under 49 CFR, Part 26.

CONTRACTOR is required to enter data directly into ECAT and submit by the 10th of each month until completion of the Agreement. CONTRACTOR's first submission is due following the first month of Agreement activity. Even if no DBE participation will be reported within a period, CONTRACTOR must complete and submit Monthly by the required timelines.

If there is not a DBE goal and no DBE commitment has been made by CONTRACTOR, CONTRACTOR is required to enter data directly into ECAT and submit by bi-annually on April 10th and October 10th of each year. Additionally, upon completion of the contract, a final report must be submitted and marked final.

Data required for submission includes the amount(s) received by CONTRACTOR from AUTHORITY and the amount(s) paid to lower-tier subcontractors during the Month. CONTRACTOR to submit pertinent payment details for any firm (DBE and Non-DBE) to whom they have reported a payment within the reporting period. CONTRACTOR is advised not to report the participation of DBE(s) toward the CONTRACTOR's DBE attainment until the amount being claimed has been paid to the DBE.

Pertinent payment details include:

- Invoice Number
- Invoice Amount
- Payment Amount
- Invoice Date
- Check Number
- Date of Payment
- Corresponding Prime Invoice (associated to subcontractors' invoice)
- Retention
- Disputed or Withheld invoice amounts

If DBE trucking credit is being claimed, CONTRACTOR must electronically report through ECAT the amount paid to DBE trucking companies and their lower-tier firms (including owner operators for the leasing of trucks). Pertinent payment details required for submission will include truck number, owner's name, California Highway Patrol CA number, and if applicable, the DBE certification number of the owner of the truck for all trucks paid during that month. If the DBE leases trucks from a non-DBE, CONTRACTOR may count only the fee or commission the DBE

receives as a result of the lease arrangement.

Firms will receive a notification from ECAT when a payment is reported to them and will be required to log-in to ECAT to verify the payment information provided by CONTRACTOR. A reported payment to a lower-tier DBE firm will not be credited towards the DBE goal until the DBE firm has validated the payment through ECAT. All payments reported by CONTRACTOR must be validated by affected firm, prior to the 10th of each month following the reporting period.

Electronic submission of the Monthly DBE Commitment and Attainment Summary and Subcontractor Prompt Pay Verification Data includes a certification under penalty of perjury of the prompt payment assurance statement of compliance, providing assurance that timely payments have been issued to all subcontractors in accordance with regulatory mandates and as required by 49 CFR Part 26.29.

B. DBE Subcontract Agreements

CONTRACTOR must electronically submit to AUTHORITY via ECAT, copies of executed subcontracts and/or purchase orders (PO) for all DBE firms participating on the contract within ten (10) working days of award. CONTRACTOR must immediately notify AUTHORITY in writing, of any problems it may have in obtaining the subcontract agreements from listed DBE firms within the specified time.

C. Additional DBE Firms

In the event CONTRACTOR identifies additional DBE Subcontractors or suppliers not previously identified by CONTRACTOR for DBE participation under the Agreement, CONTRACTOR must notify AUTHORITY by filling out and submitting a “Request to Add,” through ECAT. This will enable AUTHORITY to verify the firm’s eligibility, capacity, CUF and scope of work. Proposed firms will not be applied towards CONTRACTOR’S DBE participation until approved by AUTHORITY.

CONTRACTOR must also submit, for each DBE identified after contract execution, a written confirmation from the DBE acknowledging that it is participating in the contract for a specific value, including the corresponding scope of work (a subcontract agreement can serve in lieu of the written confirmation). This supporting documentation is a required upload by ECAT when submitting a Request to Add.

D. DBE Commitment Change Request(s), DBE Substitution, Termination and Increasing or Decreasing Commitment Values

CONTRACTOR shall utilize the specific DBEs listed to perform the work and supply the materials for which each is listed unless the CONTRACTOR obtains AUTHORITY’s written consent. CONTRACTOR shall not terminate, decrease or substitute a listed DBE for convenience and perform work originally designated for a DBE with its own work force or those

of an affiliate, a non-DBE firm, another DBE firm or obtain materials from other sources without prior written authorization from AUTHORITY. CONTRACTOR shall not be entitled to any payment for work or materials unless it is performed or supplied by the listed DBE on the DBE Participation Commitment form, unless the DBE is terminated in accordance with this section and is approved by AUTHORITY. This includes partial terminations.

CONTRACTOR shall provide written notification to AUTHORITY in a timely manner of any changes to its anticipated DBE participation. This notice should be provided prior to the commencement of that portion of the work.

AUTHORITY shall only provide written consent to a request to use other forces or sources of materials if CONTRACTOR has good cause to terminate or decrease its DBE commitment to a DBE firm. For the purposes of this section good cause includes any of the following justifications:

1. Listed DBE fails or refuses to execute a written contract based on the requirements of the project.
2. Listed DBE firm fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE Subcontractor to perform its work on the subcontract results from the bad faith or discriminatory action of CONTRACTOR.
3. Listed DBE firm fails or refuses to meet the CONTRACTOR's reasonable, nondiscriminatory bond requirements.
4. Listed DBE becomes bankrupt or insolvent, or exhibits credit unworthiness.
5. Listed DBE firm is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215 and 1,200 or applicable state law.
6. AUTHORITY has determined that the listed DBE firm is not a responsible firm.
7. Listed DBE firm voluntarily withdraws from the project and provides written notice of its withdrawal.
8. Listed DBE is ineligible to receive credit for the type of work required.
9. Listed DBE owner dies or becomes disabled resulting in the inability of the DBE to perform the work on the Contract.
10. Other documented good cause that the Authority determines compels the termination (inclusive of decreases to commitment values and substitutions) of a DBE firm.

To submit a request to substitute, decrease or terminate a DBE subcontractor commitment, CONTRACTOR is required to submit a DBE Commitment Change Request through ECAT. The DBE Commitment Change Request includes options to increase, decrease, substitute or terminate a DBE commitment.

If decrease, substitute or terminate is selected, CONTRACTOR must give notice in writing to the DBE, with a copy to AUTHORITY, of its intent to decrease, substitute and/or terminate, and provide justification, allowing the DBE five (5) days to respond to CONTRACTOR of the reasons, if any, why it objects to the proposed termination of its contract and why AUTHORITY should not

approve CONTRACTOR's request. The following documentation will be required by ECAT when submitting the DBE Commitment Change Request.

1. One or more of the good cause justifications listed above.
2. Notices from CONTRACTOR to the DBE regarding the request.
3. Responses from the DBEs to CONTRACTOR regarding the request.
4. Any documentation necessary to validate the good cause justification.
5. Proof of DBE certification of proposed firm (if requesting to substitute).
6. Written confirmation of work and amount signed by proposed firm (if requesting to substitute).

In the event of an approved DBE substitution, termination, or failure of a DBE to complete its work on the contract for any reason, the DBE must be substituted with another DBE or adequate good faith efforts must be documented by CONTRACTOR within five (5) days, to the extent needed to meet the contract-specific DBE goal. Note: The five (5) day period may be extended for an additional five (5) days if necessary, at the request of the CONTRACTOR. The substitute DBE must be certified as a DBE within the appropriate NAICS categories at the time of request for substitution.

CONTRACTOR shall not be entitled to any payment for work or materials unless it is performed or supplied by the listed DBE, unless the DBE is terminated in accordance with this section and is approved by AUTHORITY in writing. This includes partial terminations.

Should CONTRACTOR elect to submit a good faith effort documentation in lieu of proposing additional DBE participation, AUTHORITY will review the documentation and provide a determination through ECAT to CONTRACTOR stating whether or not good faith efforts have been adequately demonstrated.

The substitute DBE cannot work on the Agreement until its work eligibility has been confirmed by AUTHORITY.

E. On-Going Good Faith Efforts Post-Award

During the term of the Agreement, CONTRACTOR shall continue to make a Good Faith Effort (GFE) to ensure that DBEs have an opportunity to successfully perform in the Agreement, and that the CONTRACTOR meets the DBE contract goal. These efforts shall include, but shall not be limited to, the following:

a. Negotiating in good faith to attempt to finalize and execute a subcontractor agreement with the DBEs committed to;
b. Continuing to provide assistance to DBE firms in obtaining bonding, lines of credit, etc.
c. Notifying a DBE in writing of any potential problem and attempting to resolve the problem prior to formally requesting AUTHORITY approval to substitute the DBE.

d. Paying all firms (DBEs and non-DBEs) in a timely manner, as listed in the Agreement specifications;
e. Alerting AUTHORITY in a timely manner of any problems anticipated in attaining the DBE participation committed to in the proposal;
f. If a DBE substitution is necessary, making a Good Faith Effort to replace the DBE with another DBE, subject to the approval of AUTHORITY.

Should CONTRACTOR's DBE commitment fall below the DBE contract goal, submittal of good faith effort documentation will be required on a monthly basis until the goal has been met through executed DBE contract agreements. Documentation should include but is not limited to:

a. Conducting market research to identify and solicit DBE firms that have the capability to perform the work on the Agreement. All reasonable and available means should be utilized. This may include attendance at matchmaking meetings and events, advertising, written notices or emails to all DBEs listed in the State's directory of transportation firms that specialize in the areas of work desired and which are located in the area or surrounding areas of the project.

b. CONTRACTOR should solicit this interest as early in the process as practicable to allow the DBEs to respond to the solicitation and submit a timely proposal. CONTRACTOR should determine with certainty if the DBEs are interested by taking appropriate steps to follow up on initial solicitations.

c. Selecting portions of the work to be performed by DBEs in order to increase the likelihood that the DBE goals will be achieved. This includes, where appropriate, breaking out Agreement work items into economically feasible units (for example, smaller tasks or quantities) to facilitate DBE participation, even when CONTRACTOR might otherwise prefer to perform these work items with its own forces. This may include, where possible, establishing flexible timeframes for performance.

d. Effectively using the services of available minority/women community organizations; minority/women contractors' groups; local, State, and Federal minority/women business assistance offices; and other organizations as allowed on a case-by-case basis to provide assistance in the recruitment and placement of DBEs.

F. Final Report-Utilization of Disadvantaged Business Enterprises

Upon completion of the project, CONTRACTOR must electronically designate their last Monthly DBE Attainment and Subcontractor Prompt Payment Verification Report as final and submit to the Authority utilizing ECAT within thirty (30) days from the date of project completion. The amount of ten-thousand dollars ($10,000) will be withheld from payment until a satisfactory form is submitted.

G. Disadvantaged Business Enterprises Certification Status Change

If a DBE Subcontractor is decertified during the life of the project, the decertified subcontractor must notify the CONTRACTOR in writing with the date of decertification and last date of work on the project while still certified. Within ten (10) days of receipt of decertification documentation, CONTRACTOR must electronically furnish the written documentation to AUTHORITY via ECAT. Upon completion of the project, "Disadvantaged Business Enterprises Certification Status Change" form must be signed and certified correct by the CONTRACTOR indicating each DBE's existing certification status, utilizing ECAT.

If there are no changes, CONTRACTOR indicates "No Changes." The signed and certified form must be furnished to AUTHORITY within thirty (30) days from the date of project completion.

Failure to submit any of the required submittals above and their support documentation within the specified timeline shall result in a penalty of ten dollars ($10) per day, per submittal document.

AUTHORITY requires CONTRACTOR to maintain records and documents of payments to lower-tiers, including DBEs, for a period of four (4) years from the date of final payment by AUTHORITY, unless otherwise provided by applicable record retention requirements for CONTRACTOR'S agreement, whichever is longer. These records will be made available for inspection upon request in accordance with Article 21 entitled "Access to Records and Reports", of this Agreement. This reporting requirement extends to all lower-tiers, both DBE and non-DBE.

AUTHORITY reserves the right, at its sole discretion, to demonstrate responsiveness to requirements of CFR 49 Part 26.37 by posting CONTRACTOR payment data to a website, database, or other place accessible to Subcontractors to assist them in determining when they should expect to receive payment.

V. <u>DBE Eligibility and Commercially Useful Function Standards</u>

A DBE must be certified at the time of bid submission:

> A DBE must be a small business firm defined pursuant to 13 CFR Part 121 and be certified through the California Unified Certification Program ("CUCP") at the time of bid/proposal submission. A listing of DBEs certified by the CUCP is available at the link to the CUCP web site, which can be accessed at: https://ucp.dot.ca.gov/licenseForm.htm

1. A DBE may participate as a prime CONTRACTOR, Subcontractor, joint venture partner, vendor of material or supplies, or as a trucking company.

2. A DBE joint venture partner must be responsible for specific items of work, or clearly defined portions thereof. Responsibility means actually performing, managing, and supervising the work with its own work forces. The DBE joint venture partner must

share in the capital contribution, control, management, risks, and profits of the joint venture commensurate with its ownership interest.

3. The use of joint-checks for DBE firms must be approved by AUTHORITY prior to execution, and a joint-check agreement must accompany the request to AUTHORITY.

4. A DBE must perform a commercially useful function in accordance with 49 CFR Part 26.55 (i.e. must be responsible for the execution of a distinct element of the work, and must carry out its responsibility by actually performing, managing, and supervising the work). A DBE should perform at least thirty percent (30%) of the total cost of its contract with its own workforce to presume it is performing a commercially useful function.

VI. DBE Crediting Provisions

A. When a DBE is proposed to participate in the Agreement, at any tier, only the value of the work proposed to be performed by the DBE with its own work force may be counted towards DBE participation. If CONTRACTOR is a DBE joint venture participant, only the DBE proportionate interest in the joint venture must be counted.

1. If a DBE intends to subcontract part of the work of its subcontract to a lower-tier Subcontractor, the value of the subcontracted work may be counted toward DBE participation only if the Subcontractor is a certified DBE and performs the work with their own forces. Services subcontracted to a non-DBE firm may not be credited toward the CONTRACTOR'S DBE attainment.

2. CONTRACTOR is to calculate and credit participation by eligible DBE vendors of equipment, materials, and supplies toward DBE attainment as follows:

   a) Sixty percent (60%) of expenditures for equipment, materials, and supplies required under the Agreement obtained from a regular dealer; or

   b) One hundred percent (100%) of expenditures for equipment, materials, and supplies required under the Agreement obtained from a DBE manufacturer.

3. The following types of fees or commissions paid to DBE Subcontractors, Brokers, and Packagers may be credited toward CONTRACTOR'S DBE attainment, provided that the fee or commission is reasonable and not excessive, as compared with fees or commissions customarily allowed for similar work including:

   a) Fees and commissions charged for providing bona fide professional or technical services, or procurement of essential personnel, facilities, equipment,

materials, or supplies required in the performance of the Agreement;

b) Fees charged for delivery of material and supplies (excluding the cost of materials or supplies themselves), when the licensed hauler, trucker, or delivery service is not also the manufacturer of, or a regular dealer in, the material and supplies;

c) Fees and commissions charged for providing any insurance specifically required in the performance of the Agreement.

4. CONTRACTOR may count the participation of DBE trucking companies toward DBE attainment, as follows:

   a) The DBE must be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular contract.
   b) The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.
   c) The DBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.
   d) The DBE may lease trucks from another DBE firm, including an owner-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the contract.
   e) The DBE may also lease trucks from a non-DBE firm, including an owner-operator. The DBE who leases trucks equipped with drivers from a non-DBE is entitled to credit for the total value of transportation services provided by non-DBE leased trucks equipped with drivers not to exceed the value of transportation services on the contract provided by the DBE-owned trucks or leased trucks with DBE drivers. Additional participation by non-DBE owned trucks equipped with drivers receives credit only for the fee or commission it receives as a result of the lease arrangement.
   f) The DBE may lease trucks without drivers from a non-DBE truck leasing company and if the DBE uses its own employees as drivers, it is entitled to credit for the total value of these hauling services.

   For purposes of this paragraph, a lease must indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks must display the name and identification number of the DBE.

5. If the CONTRACTOR listed a non-certified, 1st tier Subcontractor to perform work on this Agreement, and the non-certified Subcontractor subcontracts a part of its work

or purchases materials and/or supplies from a lower tier DBE certified Subcontractor or Vendor, the value of work performed by the lower tier DBE firm's own forces can be counted toward DBE participation on the Agreement. If a DBE contractor performs the installation of purchased materials and supplies, they are eligible for full credit of the cost of the materials.

6. CONTRACTOR is advised not to report the participation of DBE(s) toward the CONTRACTOR's DBE attainment until the amount being claimed has been paid to the DBE.
7. If the CONTRACTOR listed a non-certified, 1st tier Subcontractor to perform work on this Agreement, and the non-certified Subcontractor subcontracts a part of its work or purchases materials and/or supplies from a lower tier DBE certified Subcontractor or Vendor, the value of work performed by the lower tier DBE firm's own forces can be counted toward DBE participation on the Agreement. If a DBE contractor performs the installation of purchased materials and supplies, they are eligible for full credit of the cost of the materials.

8. CONTRACTOR is advised not to report the participation of DBE(s) toward the CONTRACTOR'S DBE attainment until the amount being claimed has been paid to the DBE.

VII. DBE "Frauds" and "Fronts"

Only legitimate DBEs are eligible to participate as DBEs in the AUTHORITY's U.S. DOT-assisted contracts. CONTRACTOR is cautioned against knowingly and willfully using "fronts." The use of "fronts" and "pass through" subcontracts to non-disadvantaged firms constitute criminal violations. Further, any indication of fraud, waste, abuse, or mismanagement of Federal funds should be immediately reported to the Office of Inspector General, U.S. Department of Transportation at the toll-free hotline: (800) 424-9071; or email at hotline@oig.dot.gov, or by mail to the following: DOT Inspector General, 1200 New Jersey Ave SE, West Bldg 7th Floor, Washington, DC 20590.

VIII. Dispute Resolution

All Agreements in excess of five-hundred thousand dollars ($500,000) shall contain provisions or conditions which will allow for dispute resolution remedies in instances where CONTRACTORS violate or breach DBE Program requirements, inclusive but not limited to, prompt payment and provide for such sanctions and penalties as may be appropriate.

CONTRACTOR shall incorporate this Section into each subcontract related to work arising under this Agreement and shall not incorporate by reference.

CONTRACTOR and subcontractor agree to notify AUTHORITY within five (5) business days of any prompt payment and/or DBE Program disputes which cannot be settled by discussions

between the parties involved.

CONTRACTOR and subcontractor further agree to proceed through informal meetings, mediation, or any combination thereof as further detailed below. Dispute submittals shall include the method(s) of dispute resolution selected, terms, timeframes, and a detailed summary of assistance being requested (as applicable).

A. Informal Meetings

AUTHORITY is available to assist CONTRACTOR with coordination of informal meeting requests to assist in the resolution of disputes between CONTRACTOR and subcontractor. AUTHORITY's DBELO or a designated DBE support representative will conduct the informal meetings with parties in dispute. Representatives from CONTRACTOR and subcontractor for the purpose of dispute resolution, must include individuals authorized to bind each interested party. All parties must agree to the procedure.

B. Mediation

The parties to a Agreement may agree to endeavor to settle a dispute through informal mediation under independent third-party organizations. AUTHORITY's DBELO and his/her designated support staff is considered an independent third party. Submission to informal mediation is voluntary; it is not binding and offers advisory opinions.

Performance During Dispute: Unless otherwise directed by AUTHORITY, CONTRACTOR and its sub tiers shall continue performance under the Agreement while matters in dispute are being resolved.

Flow Down Requirements: The dispute resolution provisions flow down to all tiers.

These provisions shall not apply to disputes between CONTRACTOR and AUTHORITY. These provisions do not alter in any way or waive compliance with other provisions in the Agreement.

IX. Administrative Remedies and Enforcement

CONTRACTOR must fully comply with the DBE Agreement requirements, including the Authority's DBE Program and Title 49 CFR, Part 26 "Participation of Disadvantaged Businesses in Department of Transportation Financial Assistance Programs," and ensure that all subcontractors, regardless of tier, are also fully compliant. Failure by CONTRACTOR to carry out these requirements is a material breach of this Agreement, which may result in the termination of this Agreement, or such other remedy as AUTHORITY deems appropriate, which may include, but is not limited to:

1. Withholding monthly progress payments;
2. Assessing sanctions;

3. Assessing liquidated damages; and/or

4. Disqualifying CONTRACTOR from future bidding/proposing as non-responsible.

In instances of identified non-compliance, a Cure Notice will be issued to CONTRACTOR identifying the DBE non-compliance matter(s) and specifying the required course of action for remedy.

CONTRACTOR must be given ten (10) working days from the date of the Cure Notice to remedy or to: (1) File a written appeal accompanied by supporting documentation; and/or (2) Request a hearing with AUTHORITY to reconsider AUTHORITY's DBE determination.

Failure to respond within the ten (10) business day period will constitute a waiver of CONTRACTOR'S right to appeal. If CONTRACTOR files an appeal, AUTHORITY, must issue a written determination and/or set a hearing date within ten (10) business days of receipt of the written appeal, as applicable. A final Determination will be issued within ten (10) business days after the hearing, as applicable.

If after review of CONTRACTOR'S appeal, AUTHORITY decides to uphold the decision to impose DBE administrative remedies on CONTRACTOR, the written determination must state the specific remedy(ies) to be imposed.

Failure to comply with the Cure Notice and/or to remedy the identified DBE non-compliance matter(s) is a material breach of the Agreement and is subject to administrative remedies including withholding a minimum of two percent (2%) of the invoice amount due per month for every month that the identified non-compliance matter(s) is not remedied. Upon satisfactory compliance, AUTHORITY will release all withholdings.

In addition to administrative remedies defined in this section, AUTHORITY is not precluded from invoking other contractual and/or legal remedies available under federal, state or local laws.

SECTION VII: GENERAL PROVISIONS - EXHIBIT A

SECTION VII: GENERAL PROVISIONS

A. COST BREAKDOWN

Within fifteen (15) calendar days after "Notice to Proceed," the Contractor shall, upon request by the Authority, submit a cost breakdown of the lump sum Bid entered on the Bid Form for all construction work. This cost breakdown will form the basis for progress payments in accordance with these Specifications and shall show all of the major categories and subcategories of work and equipment requested by the Authority. Additionally, all costs shall be segregated between off-site and on-site costs. Mobilization costs shall not exceed ten percent (10%) of total construction costs. Bonds and insurance costs will be identified as a separate line item. Such cost breakdown shall not be required if the Authority, at its sole discretion, elects to pay the Contractor in lump sum within thirty (30) calendar days of receipt of proper invoice following the Contractor's satisfactory completion and the Authority's acceptance of all work.

B. PROGRESS PAYMENTS

1. The Authority, no later than the twenty-fifth (25th) day of each month, shall prepare a progress payment estimate based on the estimated percentage of completion of each Bid Item and on the Contractor's actually incurred allowable expenses on such Bid Items. The Authority will issue the progress payment, in the amount it deems appropriate, by approximately the fifteenth (15th) day of the following month.

2. For purposes of calculating the progress payments, Authority will use the cost breakdown submitted by the Contractor for each Bid Item at the start of this Agreement. In no event will the Authority make a progress payment that, when added to the prior progress payments, amounts to a sum more than the Contractor's actual aggregate incurred expenses, adjusted to include Contractor's overhead and profit as allocated to such incurred expenses.

3. The Authority will pay only ninety-five percent (95%) of each progress payment amount as determined above, retaining five percent (5%) as part security for the fulfillment of this Agreement by the Contractor, subject to Public Contract Code 22300.

4. The amount retained in accordance with paragraph B.3., hereinabove from the progress payments will be paid in full to the Contractor as part of the final payment upon Contractor's full completion of this Agreement, except that one half of one percent (½ of 1%) of this Agreement's total price shall be retained for one (1) year beyond the date of the Notice of Completion filed for this Agreement as partial security for fulfillment of the warranty obligations by the Contractor under this Agreement.

5. No progress payments will be made for materials not installed.

6. Progress payments made by Authority in no way shall be deemed or construed as acceptance by the Authority of work or waiver by the Authority of any rights hereunder.

7. The Contractor shall pay subcontractors, promptly upon receipt of each Authority progress payment; the respective amounts allowed the Contractor on account of the work performed by subcontractors, to the extent of each such subcontractor's interest therein. Such payments to subcontractors shall be based on estimates made pursuant to this Agreement. Any diversion by the Contractor of payments received for prosecution of a contract, or failure to reasonably account for the application or use of such payments, constitutes ground for termination of the Contractor's control over the work and for taking over the work, in addition to disciplinary action by the Contractor's State License Board. The subcontractor shall notify, in writing, the Contractor's State License Board and the Authority of any payment less than the amount or percentage approved for the class or item of work as set forth in this Agreement.

8. In addition to other amounts properly withheld under this Agreement, the Authority shall withhold all legally required sums for, but not necessarily limited to, stop notices, labor and tax liens, etc.

C. FINAL INSPECTION AND ACCEPTANCE

Promptly after Substantial Completion has occurred, Contractor shall perform all Punch List Work, if any, which was deferred for purposes of Project Completion, and shall satisfy all of its other contractual obligations under the contract documents.

When the Contractor determines that the work is fully completed, including satisfactory completion of all inspections, tests, and required documentation, Punch List and clean-up items, Contractor shall give the Authority a written request for Final Acceptance within ten (10) days thereafter, specifying that the work is completed and the date on which it was completed.

Within thirty (30) days after receipt of the request for Final Acceptance from Contractor, Authority will make a final inspection of the work and will either:

1. Reject the request for Final Acceptance, specifying the defective or uncompleted work; or

2. Issue a written Final Acceptance and record Notice of Completion with County Recorder.

Substantial Completion is defined herein as; In the opinion of the Authority, that work or portion thereof that is sufficiently complete and in accordance with the Contract, that it can be utilized by the Authority for the purpose for which it was intended. A determination of Substantial Completion does not waive, but may not

require the prior completion of minor items, which do not impair the Authority's ability to safely occupy and utilize the Work for its intended purpose.

D. CLAIMS

A "Claim" that falls within the definition of Public Contract Code Section 9204 (hereafter, "Section 9204"), as may be amended, means a separate demand by Contractor, sent by registered mail or certified mail with return receipt requested, for one or more of the following: (a) a time extension, including, without limitation, for relief from damages or penalties for delay assessed by Authority; (b) payment by Authority of money or damages arising from work done by, or on behalf of, the Contractor and payment for which is not otherwise expressly provided or to which Contractor is not otherwise entitled; and/or (c) payment of an amount that is disputed by the Authority.

It is important that the Authority be promptly notified of any potential claims so that it can timely and reasonably investigate the merits of the Claim when the events giving rise to the Claim are current and, when appropriate, make timely adjustments in the work in response thereto. Contractor shall submit to Authority a Notice of Claim within fifteen (15) calendar days after receipt of or the discovery of information, or the occurrence of an event, or any actions of Authority or its agents, that Contractor believes may result in a Claim. The Notice of Claim shall state the reason(s) for the Claim and the nature of the additional costs or delay that Contractor believes it will incur. Such Notice shall be submitted prior to the submission of the Claim documentation described below. If a Notice of Claim is not submitted within the fifteen (15) day period, it shall be deemed waived.

The Authority and Contractor agree to attempt to informally resolve any disputes which may give rise to a Claim. The Authority and Contractor shall meet within twenty (20) calendar days, or any mutually agreeable extension thereof, from the date the Notice of Claim is received by Authority in a good faith effort to resolve the dispute. Contractor shall provide a representative at the meeting who has authority to resolve the claim on the Contractor's behalf. If a resolution is not reached and the Authority and Contractor have not, in writing, mutually agreed to continue with informal efforts at resolution, Contractor shall file a Claim within thirty (30) calendar days after the informal resolution process has concluded, or such Claim shall be deemed waived.

The Authority and the Contractor shall process the Claim in accordance with Section 9204 and the requirements set forth herein.

1. Claim Requirements.

a. Any submittal intended by the Contractor to be evaluated by Authority as a Claim shall be entitled "Claim" and sent to Authority by registered mail or certified mail with return receipt requested. The Contractor may present a Claim on behalf of a subcontractor or a lower tier subcontractor meeting the requirements of Section 9204(d)(5).

b. All Claims shall be submitted by the Contractor within thirty (30) calendar days after the conclusion of the informal resolution process discussed above; however, this timeframe may be extended unilaterally by Authority in writing. Any Claim not submitted within the specified thirty (30) calendar days, or as otherwise authorized by Authority, shall be deemed untimely and waived.

c. All Claims shall include reasonable documentation in support, including a detailed factual statement that sets forth names, dates, and specific events that took place. In addition, supporting documents shall include a detailed analysis of a request for a time extension, if applicable, and a detailed breakdown of a request for additional compensation. A revised construction schedule shall also be included identifying the impact of the delays, including proposals to minimize any of the impacts.

d. Claims filed by the Contractor shall be in sufficient detail to enable the Authority to ascertain the basis and amount of said Claims. The Authority will consider and determine the Contractor's Claims, and it will be the responsibility of the Contractor to furnish within a reasonable time such further information and details as may be required by the Authority to determine the facts or contentions involved in its Claims. Failure to submit sufficient information and details will be cause for Authority to deny the Claim and/or find the Claim untimely and, therefore, waived. If the Claim is silent regarding entitlement to extra time, the Contractor shall be entitled to no extra time in connection with the Claim. If the Claim is silent regarding additional compensation, the Contractor shall be entitled to no additional compensation in connection with the Claim.

e. No Claims shall be filed later than the date of final payment.

f. All Claims and any amendments thereto shall include the fully executed certification set forth below. Any Claim submitted without a fully executed certification shall be rejected by Authority and returned to the Contractor.

Certificate

Under the penalty of law for perjury or falsification with specific reference to the California False Claims Act, Government Code Section 12650 et. Seq., the undersigned,

_____
(Name)

_____
(Title)

_____
(Company)

herby certifies that the claim for the additional compensation and time, if any, made herein for the work on this Contract is a true statement of the actual cost incurred and time sough, and is fully documented and supported under the Contract between the parties

Dated: _____

Signature: _____

Subscribed and sworn before this _____ day of _____ , 202__
_____ .

_____
Notary Public

My Commission Expires: _____

2. Claim Review

Within forty-five (45) calendar days of receipt of the Claim, or any extension thereof agreed upon by the Authority and the Contractor, the Authority will conduct a reasonable review of the Claim and provide the Contractor with a written statement identifying what portion of the Claim is disputed and what portion is undisputed. Payment of any undisputed portion of the Claim shall be made within sixty (60) calendar days after the Authority issues its written statement. If the Authority does not provide a written statement within the time specified, the Claim shall be deemed rejected.

3. Claim Settlement Conference

If the Contractor disputes the Authority's written statement or if the Claim is deemed rejected, the Contractor may demand in writing, by registered or certified

mail to the Authority, return receipt requested, an informal conference to meet and confer in an effort to settle the disputed portion of any Claim. Within thirty (30) calendar days of receipt of such written demand, the Authority shall schedule a meet and confer conference. Such conference shall be attended by an officer or principle of the Contractor who has the authority to resolve the Claim on the Contractors' behalf.

If any portion of the Claim remains in dispute after the conference, the Authority shall, within ten (10) business days of the conclusion of the conference, provide the Contractor with a written statement identifying any portion that remains in dispute and any portion that is undisputed. Payment of any undisputed portion shall be made within sixty (60) calendar days after the Authority issues its written statement.

Any remaining disputed portion shall be submitted to nonbinding mediation, unless the Contractor and Authority waive the mediation upon mutual written agreement. Mediation includes any nonbinding process, including, but not limited to, a neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. The Authority and the Contractor will share in the costs of mediation equally in accordance with Section 9204.

Within ten (10) business days after issuance of the Authority's written statement, the Authority and Contractor shall select a mutually-agreeable mediator. If the parties cannot agree to a mediator, the Authority and Contractor will each select a mediator who will then select a qualified neutral third party to mediate with regard to the disputed portion of the Claim. Authority and Contractor will each bear its own fees and costs for its respective mediator in connection with the selection of the neutral mediator.

Claims which are not resolved through this Claims settlement process shall be resolved in accordance with the laws of the State of California.

E. FINAL PAYMENT

1. After the filing of the Notice of Completion, (or acceptance of the Project), the Authority will make a proposed final estimate, in writing, of the total amount payable to the Contractor, including therein an itemization of said amount, segregated as to Contract item quantities, extra work and any other basis for payment, and shall also show therein all deductions made or to be made for prior payments and amounts to be kept or retained under the provisions of the contract. All prior estimates and payments shall be subject to correction in the proposed final estimate. Within fifteen (15) days after proposed final estimate has been submitted, Contractor shall submit to the Authority written approval of proposed final estimate and/or a written statement of all claims of the Contract. No claim will be considered that was not included in written statement of claims, nor will any claim be allowed unless the Contractor has previously complied with the notice and protest requirements.

2. On the Contractor's approval, or if he files no claim within stated period, Authority will issue a final written estimate, in accordance with the proposed final estimate submitted to the Contractor; and thirty-five (35) days after the date of filing the Notice of Completion (or acceptance) Authority will pay the entire sum found to be due. Such final estimate and payment thereon shall be conclusive and binding against the Contractor on all questions relating to the amount of work done and the compensation payable therefore, except as otherwise provided.

3. If the Contractor within said period of fifteen (15) days files claims, Authority will issue a semi-final estimate in lieu of the final estimate submitted to the Contractor; and thirty-five (35) days after the date of filing of the Notice of Completion, the Authority will pay the sum found to be due. Such semi-final estimate and payment thereon shall be conclusive and binding against the Contractor on all questions relating to the amount of work done and the compensation payable therefore, except insofar as affected by the claims filed within the time and in the manner required hereunder and except as otherwise provided.

4. Upon final determination of any outstanding claims, the Authority shall then make and issue a final estimate in writing and within thirty (30) days thereafter, the Authority will pay the entire sum, if any, found due. Such final estimate shall be conclusive and binding against the Contractor on all questions relating to the amount of work done and the compensation payable therefore, except as otherwise provided.

F. EXTRA WORK AND CHANGES

1. New and unforeseen work, which in the judgment of the Authority is found necessary or desirable for the satisfactory completion of the work, will be classified as extra work, as well as work specifically designated as such in the plans or specifications. The Contractor shall do such extra work and furnish material and equipment therefore as directed by the Engineer in writing by a Contract Change Order. No extra work will be paid for or allowed unless the same was done upon written Contract Change Order of the Engineer and after all legal requirements have been complied with. The Contractor agrees that he will accept as full compensation for extra work, so ordered, an amount to be determined by one of the following methods:

    a. A price mutually agreed upon in writing by the Engineer and Contractor (hereafter Agreed Price).

    b. Force Account as hereafter provided.

2. It is mutually agreed that on the agreed price, the Contractor and subcontractor(s) shall add not more than a total markup of twenty percent (20%) to be divided between the Contractor and subcontractor(s) as full

compensation for all other expenses including overhead, profit, bond, superintendence, insurance and small tools.

3. When extra work is to be paid for on a force account basis, compensation will be determined as follows:

a. Materials

A sum equal to the actual cost to the Contractor of the materials furnished by him, as shown by paid receipts, plus not more than fifteen percent (15%). Only installed materials shall be paid for.

b. Labor

1. The actual wages paid as shown on the certified copies of Contractor's payroll, for all labor directly engaged in the work and including the cost of any compensation insurance paid for by the Contractor, subsistence and travel allowance aid to such workmen as required by collective bargaining agreements plus not more than twenty percent (20%).

2. To the actual wages as described in Subsection 1 above will be added a labor surcharge of not more than seventeen percent (17%), and shall constitute full compensation for all other payments, including payments imposed by State and Federal laws.

c. Equipment

1. Equipment will be paid for as a rental charge whether owned by the Contractor or not, and said rental rates prevailing in the area for comparable equipment will be paid. To the direct costs of "Equipment Rental" will be added a not more than fifteen percent (15%) markup.

2. All extra work at Force Account shall be adjusted daily upon report sheets prepared by the Engineer, furnished to the Contractor and signed by both parties. Said daily reports shall thereafter be considered the true record of all extra work done. The decision of the Engineer as to whether extra work has in fact been performed shall be conclusive and binding upon both parties to the contract.

4. A Contract Change Order approved by Authority may be issued to the Contractor at any time. Any such changes will be made using the Authority's Contract Change Order form, set forth in Exhibit H to the Contract. Should the Contractor disagree with any terms or conditions set forth in the Contract Change Order, the Contractor shall submit a written protest to the Authority within fifteen (15) days after the receipt of the Contract Change Order. The

protest shall state the points of disagreement and, if possible, the contract specification references, quantities and costs involved. If a written protest is not submitted within the above period, payment will be made as set forth in the approved Contract Change Order and such payment shall constitute full compensation for all work included therein or required thereby. Such unprotested approved Contract Change Orders will be considered as executed Contract Change Orders.

5. Contractor shall promptly notify the Authority in writing when it receives direction, instruction, interpretation or determination from any source other than the Authority or its designated representatives that may lead to or cause change in the work. Such written notification shall be given to the Authority before the Contractor acts on said direction, instruction, interpretation or determination.

G. EXTENDED FIELD OFFICE OVERHEAD COSTS

1. Within thirty (30) days after receipt of the Notice to Proceed, the Contractor shall submit a written statement to the Authority detailing its field office overhead costs which are time related. The Authority will review this cost submittal and reach a written agreement with the Contractor on a daily field office overhead cost rate which shall be issued as an agreed upon Change Order. The daily rate agreed to in this Change Order will be applicable throughout the duration of the Contract. No field office costs will be paid until such agreement is reached between the Authority and the Contractor and the Change Order concerning this daily rate is executed by both parties.

2. The individual cost components of the daily field office overhead rate shall represent costs which increase as a direct result of any time extension caused solely and exclusively by an act of the Authority. This listing may include such cost items as on-site project management, supervision, engineering and clerical salaries; on-site office utilities and rent; on-site company vehicles and their operating expenses; and site maintenance and security expenses. Field office overhead costs which are unaffected by increased time shall not be allowable costs in calculating the daily field office overhead rate. These non-time related costs include, but are not limited to, acquisition and installation of stationary equipment; temporary construction facilities; utilities and office furnishings (unless such items are rented or leased); the preparation of the site including clearing, grubbing, grading and fencing; mobilization and demobilization costs; and the costs of permits, bonds and insurance coverage for the project.

3. The individual wage cost components used to calculate the daily field office overhead rate shall be supported by actual employee payroll

records, not salary ranges or estimates. Hourly rates for management, supervisory, engineering and clerical employees shall be based upon 2,080 works hours per year and shall not include allowances for holidays, vacation or sick time.

4. The daily field office overhead rate shall be multiplied by the number of days the Contract is delayed or extended by Change Order and shall be added to the agreed upon Change Order cost. The days of delay shall be those caused solely by action of the Authority and documented by a time impact analysis prepared and submitted by the Contractor. In the event of a deductive Change Order is issued which reduces time under the Contract, the daily field office overhead rate shall be added to the deductive amount. No allowance for overhead costs and no profit allowance shall be added to the extended field office overhead cost.

H. ACCELERATION

1. Authority reserves the right to accelerate the work of the Contract at any time during its performance. In the event that the Authority directs acceleration, such directive will be given to the Contractor in writing. The Contractor shall keep cost and other Project records related to the acceleration directive separately from normal Project cost records and shall provide a written record of acceleration costs to the Authority on a daily basis.

2. In the event that the Contractor believes that some action or inaction on the part of the Authority constitutes an acceleration directive, the Contractor shall immediately notify the Authority in writing that the Contractor considers the actions or inactions an acceleration directive. This written notification shall detail the circumstances of the acceleration directive. The Contractor shall not accelerate their work efforts until the Authority responds to the written notification. If acceleration is then directed or required by the Authority, all cost records referred to in Subsection H.1 shall be maintained by the Contractor and provided to the Authority on a daily basis.

3. In order to recover additional costs due to acceleration, the Contractor must document that additional expenses were incurred and paid by the Contractor. Labor costs recoverable will only be overtime or shift premium costs or the cost of additional laborers brought to the site to accomplish the accelerated work effort. Equipment costs recoverable will only be the cost of added equipment mobilized to the site to accomplish the accelerated work effort.

I. VALUE ENGINEERING

Authority encourages the Contractor to submit Value Engineering Proposals (VEP's) whenever it identifies areas and/or instances in which improvements can be made, in order to avail the Authority of potential cost savings. Contractor and the Authority will share any savings in the manner described below.

A VEP applies to a Contractor developed and documented VEP that:

1. Requires a change to the contract.

2. Reduces the total contract price without impairing essential functions or characteristics of the work.

3. Results in an estimated total net savings to the Authority equal to or greater than $1,000.

At a minimum, a VEP should include the following information:

1. A description of the existing contract requirements that are involved in the proposed change.

2. A description of the proposed change, and all specifications and/or plans necessary for the complete evaluation of the proposed change. Include a discussion of the differences between existing requirements and the proposed change, together with advantages and disadvantages of each changed item. All relevant back up documentation needs to be included to support proposed changes.

3. Cost estimate for existing contract requirements correlated to the Contractors lump sum breakdown and the proposed changes in those requirements, including costs of development and implementation by the Contractor.

Contractor shall submit the VEP to the Authority. At its sole discretion, Authority may accept, in whole or in part and by Change Order, any VEP submitted pursuant to this section. Until a Change Order is issued on a VEP, Contractor shall remain obligated to perform in accordance with the Contract. The decision of the Authority as to the rejection or acceptance of a VEP shall be at the sole discretion of the Authority.

If a VEP, submitted by the Contractor pursuant to this section is accepted by the Authority, the total Contract price shall be adjusted based upon a sharing of the net savings by the Contractor and the Authority (50% Authority, 50% Contactor). Contractor's profit shall not be reduced by application of the VEP.

Net savings are defined as gross savings less the Contractor's costs and less the Authority's costs.

1. Contractors cost means reasonable costs incurred by the Contractor in preparing the VEP and making the change.

2. Authority's costs means reasonable costs incurred by the Authority for evaluating and implementing the VEP.

3. Contractor is not entitled to share in either concurrent, collateral or future

Contract savings. Collateral savings are those measurable net reductions in the Authority's costs of operation that result from the VEP. Concurrent savings cover the reductions in the cost of performance of other contracts.

Contractor shall include appropriate VEP provisions in all subcontracts greater than $25,000.

J. STOP NOTICES

The Authority, at its sole discretion, may, at any time, retain out of any amounts due the Contractor, sums sufficient to cover claims filed pursuant to Section 9358 et seq. of the California Civil Code.

K. ORDER OF WORK

Contractor shall perform work hereunder at such places, and in such order or precedence, as may be determined necessary by the Engineer to expedite completion of the required work.

L. DAVIS-BACON LABOR PROVISIONS (2 CFR SECTION 5.5)

1. Prevailing Wages

   Contractor shall comply with all applicable requirements of Division 2, Part 7, Chapter 1 of the California Labor Code. If this Agreement is funded, in whole or in part, by federal funds, Contractor shall comply with these Davis-Bacon Labor Provisions ("Labor Provisions") and all applicable federal requirements respecting prevailing wages, including, but not limited to, the Davis-Bacon Act, 40 U.S.C. Sections 3141-3144, and Sections 3146-3148, as supplemented by U.S. DOL regulations at 29 CFR part 5, "Labor Standards Provisions Applicable to Contracts Governing Federally Financed and Assisted Construction."

   If there is a difference between the minimum wage rates predetermined by the Secretary of Labor and the wage rates determined by the Director of the Department of Industrial Relations (DIR) for similar classifications of labor, the Contractor and subcontractors shall not pay less than the higher wage rate. The DIR will not accept lower state wage rates not specifically included in the Federal minimum wage determination.

2. Minimum Wages

   a. All mechanics and laborers employed or working upon the site of the work will be paid unconditionally, and not less often than once a week and without subsequent deduction or rebate on any account, the full amount of wages and bona fide fringe benefits (Or cash equivalents thereof) due at time of payment computed at wage rates not less than those specified in the General Wage Determinations referenced in this section regardless of any contractual relationship which may be alleged to exist between the Contractor and such laborers and mechanics; and the wage determination

decision shall be posted by the Contractor at the site of the work in a prominent place where it can be easily seen by the workers. For the purpose of this clause, contributions made or cost reasonably anticipated under the Labor Code of the State of California on behalf of laborers or mechanics are considered wages paid by such Laborers or mechanics. Also for the purpose of this clause, regular contributions made or costs incurred for more than a weekly period under plans, funds or programs, but covering the particular weekly period, are deemed to be constructively made or incurred during such weekly period.

b. Authority shall require that any class of laborers or mechanics, including helpers, apprentices and trainees, which is not listed in the General Wage Determinations and which is to be employed under this Contract, shall be classified conformably to such wage determinations. The Authority will approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met: (1) the work to be performed by the classification requested is not performed by a classification in the wage determination; and (2) the classification is utilized in the area by the construction industry; and (3) the proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination. If the Contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the Authority agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the Authority to the Administrator of the Wage and Hour Division, U.S. Department of Labor. The Administrator will approve, modify, or disapprove every additional classification action within thirty (30) days from receipt and so advise the Authority or will notify the Authority within the thirty (30)-day period that additional time is necessary.

c. In the event the Authority does not concur in the Contractor's proposed classification or reclassification of a particular class of laborers and mechanics (including apprentices and trainees) to be used, the question, accompanied by the recommendation of the Authority, shall be referred to the State Director of Industrial Relations for determination. The wage rate (including fringe benefits where appropriate) determined pursuant to this subsection shall be paid to all workers performing work in the classification under this Contract from the first day on which work is performed in the classification.

d. Authority shall require, whenever the minimum wage rate prescribed in the Contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly wage and the Contractor is obligated to pay a cash equivalent of such a fringe benefit, an hourly cash equivalent thereof to be established. In the event the interested parties cannot agree upon cash equivalent of the fringe benefit, the questions, accompanied by the

recommendation of the Authority, shall be referred to the State Director of Industrial Relations for determination.

e. If the Contractor does not make payments to a trustee or other third person, the Contractor may consider as part of the wages of any laborer or mechanic the amount of costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, provided that the Secretary of Labor has found, upon written request of Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under this plan or program.

f. All disputes concerning the payment of wages or the classification of workers under this Agreement shall be promptly reported to the Authority.

3. Deductions

Authority may deduct from each progress payment and the Final Payment the following:

a. Any Authority or third-party claims or losses for which Contractor is responsible hereunder or any Liquidated Damages which have accrued as of the date of the application for payment;

b. If a notice to stop payment is filed with Authority, due to the Contractor's failure to pay for labor or materials used in the work, money due for such labor or materials, plus the 25% prescribed by law, will be withheld from payment to the Contractor. In accordance with Section 9358 of the Civil Code, Authority may accept a bond by a corporate surety in lieu of withholding payment;

c. Any sums expended by or owing to Authority as a result of Contractor's failure to maintain the as-built drawings;

d. Any sums expended by Authority in performing any of the Contractor's obligations under the Contract which Contractor has failed to perform; and

e. Any other sums which Authority is entitled to recover from Contractor under the terms of the Contract.

f. The amount of the accrued payments or advances as many be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the Contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work, all or part of the wages required by the Contract, the Authority may, after written notice to the Contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

The failure by Authority to deduct any of these sums from a progress payment shall not constitute a waiver of Authority's right to such sums.

All amounts owing by Contractor to Authority under the Contract shall earn interest from the date on which such amount is owing at the lesser of (i) ten percent (10%) per annum or (ii) the maximum rate allowable under applicable Governmental Rules.

4. Payrolls and Basic Records

a. Payrolls and basic records relating thereto will be maintained during the course of the work and preserved for a period of three (3) years thereafter for all laborers and mechanics working at the site of the work. Such records will contain the name, address and social security number of each such worker, the correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in Section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in Section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the rations and wage rates prescribed in the applicable programs.

b. Contractor will submit weekly a copy of all payrolls to the Authority as required in these "Labor Provisions." The copy shall be accompanied by a statement signed by the employer or its agent indicating that the payrolls

are correct and complete; that each laborer or mechanic (including helpers, apprentices, and trainees) have been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR part 3; that the wage rates contained therein are not less than those determined by the State Director of Industrial Relations and that the classifications as set forth for each laborer or mechanic conform to the work performed. A submission of the "Weekly Statement of Compliance," which is required under this Contract, shall satisfy this requirement. The prime Contractor shall be responsible for the submission of copies of payrolls of all subcontractors. The Contractor will make the records required under the labor standard clauses of the Contract available for the inspection by authorized representatives of the Authority, and will permit such representatives to interview employees during working hours on the job.

5. Apprentices and Trainees

   a. Apprentices: Apprentices will be permitted to work at less than the predetermined rate for the work they perform when they are employed and individually registered in a bona fide apprenticeship program as defined in Section 1777.5 of the Labor Code of the State of California. The allowable ratio of apprentices to journeymen in any craft classification shall not be greater than the ratio permitted to the Contractor as to his entire work force under the registered program. Any employee listed on a payroll at an apprentice wage rate who is not registered or otherwise employed as stated above, shall be paid the wage rate determined by the State Director of Industrial Relations for the classification of work he actually performed. The Contractor or subcontractor will be required to furnish to the Authority or the State Director of Industrial Relations written evidence of the registration of his program and apprentices as well as the appropriate ratios and wage rates (expressed in percentages of the journeyman's rate contained in the applicable wage determination).

   b. Trainees: Except as provided in 29 CFR Section 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to or individually registered in a program which has received prior approval, evidenced by formal certification, by the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training. The ratio of trainees to journeymen shall not be greater than that permitted under the plan approved by the Bureau of Apprenticeship and Training. Every trainee must be paid at not less than the rate specified in the approved program for his level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall

be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage-Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate determined by the Secretary of Labor for the classification of work he actually performed. The Contractor or subcontractor will be required to furnish the contracting officer or a representative of the Wage-Hour Division of the U.S. Department of Labor written evidence of the certification of his program, the registration of the trainees, and the ratios and wage rates prescribed in that program. In the event the Employment and Training Administration withdraws approval of a training program, the Contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

c. Equal Employment Opportunity: The utilization of apprentices, trainees, and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, 29 CFR part 30, and 41 CFR part 60.

6. Compliance with Copeland Regulations (29 CFR part 3)

The Contractor shall comply with the Copeland “Anti-Kickback” Act (18 U.S.C. 874 and 40 U.S.C. 276c). The Contractor shall also comply with the Copeland Regulations (29 CFR part 3), which are herein incorporated by reference.

7. Contract Termination; Debarment

A breach of Subsections 1 through 6 above may be grounds for termination of the Contract, and for debarment as a contractor and subcontractor provided in 29 CFR Section 5.12.

8. Overtime Requirements

No Contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any laborer or mechanic in any work week in which he is employed on such work to work in excess of eight (8) hours a day or forty (40) hours in such work week unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate

of pay for all hours worked in excess of eight (8) hours a day or forty (40) hours in such work week.

9. Violation; Liability for Unpaid Wages

Pursuant to Section 1775 of the Labor Code of the State of California, in the event that any workman employed on this public works project is paid less than the amount specified in the General Prevailing Wage Determinations or less than is required, relative to overtime, the Contractor and any subcontractor responsible therefore shall be liable to the affected workman for the unpaid wages. In addition, such Contractor and subcontractor shall be liable to the State of California or the Authority for liquidated damages. Such liquidated damages shall be computed with respect to each individual workman found to be underpaid and shall be in the amount of $50 per calendar day that a workman was underpaid.

10. Withholding for Liquidated Damages

The Authority may withhold or cause to be withheld, from any monies payable on account of work performed by the Contractor or subcontractor, such sums as may administratively be determined to be necessary to satisfy any liabilities of such Contractor or subcontractor for liquidated damages as provided in this section.

11. Final Labor Summary

The Contractor and each subcontractor shall furnish to the Authority, upon the completion of the Contract, a summary of all employment, indicating for the completed project, the total hours worked and the total amount earned.

12. Final Certificate

Upon completion of the Contract, the Contractor shall submit to the Authority, with the voucher for a final payment for any work performed under the Contract, a certification concerning wages and classifications for laborers and mechanics, including apprentices and trainees employed on the project, in the following form:

The undersigned, Contractor on

_____
(Contract No.)

hereby certifies that all laborers, mechanics, apprentices and trainees employed by the Contractor or by a subcontractor performing work under the contract on the project have been paid wages at rates not less than those required by the contract provisions, and that the work performed by each such laborer, mechanic, apprentice or trainee conformed to the classifications set forth in the contract or training program provisions applicable to the wage rate paid.

_____
Signature and Title

13. Notice to the Authority of Labor Dispute

Whenever the Contractor has knowledge that any actual or potential labor dispute is delaying or threatens to delay the timely performance of this contract, the Contractor shall immediately give notice thereof, including all relevant information with respect thereto, to the Authority.

14. Disputes Clause

a. Disputes arising out of these Labor Provisions will be resolved in accordance with the procedures set forth in 29 CFR parts 5, 6, and 7, including disputes between the Authority, the Contractor (or any of its subcontractors), the U.S. Department of Labor, or the employees or their representatives. All disputes concerning the payment of prevailing wage rates or classifications shall be promptly reported to the Authority for its referral to DOT for decision or, at the option of the Authority, DOT referral to the Secretary of Labor. The decision of DOT or the Secretary of Labor, as the case may be, shall be final.

b. All questions relating to the application or interpretation of the Copeland Act, the Contract Work Hours Standards Act, the Davis-Bacon Act, or Section 13 of the Act shall be sent to the Federal Transit Administration (FTA) for referral to the Secretary of Labor for

ruling or interpretation, and such ruling or interpretation shall be final.

15. Compliance with Davis-Bacon and Related Act requirements

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference.

16. Certification of Eligibility

By entering into this Agreement, the Contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the Contractor's firm is a person or firm ineligible to be awarded government contracts by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1). No part of this Contract shall be subcontracted to any person or firm ineligible for award of a government contract by virtue of Section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1). The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. Section 1001.

17. Insertion in Subcontracts

The Contractor shall set forth in all subcontracts Subsections 1 through 16 above so that all of the provisions of this section will be inserted in all construction subcontracts of any tier, and such other clauses as the Government may by appropriate instructions require.

18. Certified Payroll Records

a. The Authority shall obtain from the Contractor and each subcontractor a certified copy of each weekly payroll within seven (7) days after the regular payroll date. Following a review by the Authority for compliance with State and Federal labor laws, the payroll copy shall be retained at the project site for later review by FTA.

b. Contractor may use the Department of Labor Form WH-347, "Optional Payroll Form," which provides for all the necessary payroll information and certifications.

c. If, on or before the twentieth (20th) of the month, the Contractor has not submitted satisfactory payrolls covering its work and the work of all subcontractors for all payroll periods ending on or before the sixty (6th) of that month, such payrolls will be considered to be delinquent. Regardless of the number of delinquent payrolls, an amount equal to ten percent (10%) (but not less than $1,000 or more than $10,000) shall be deducted from the estimate. Deductions will be made separately for each estimate period in which a new delinquency appears and will be continued until payrolls have been submitted.

d. Contractors employing apprentices or trainees under approved programs shall include a notation on the first weekly certified payrolls submitted to the Authority that their employment is pursuant to an approved program and shall identify the program.

M. TIME EXTENSION/DELAYS

a. Contractor may be granted an extension of time for any portion of a delay in completion of the work due to acts of God, the public enemy, wars, civil unrest, fires, quarantine restrictions, or weather more severe than normal, providing that (1) the aforesaid causes were not foreseeable and did not result from an act or omission by the Contractor, (2) Contractor has taken reasonable precautions to prevent further delays owing to such causes, and (3) Contractor notifies Authority in writing of the cause(s) for the delay within ten (10) days from the beginning of any such delay. No claims for additional compensation or damages for the foregoing delays shall be allowed to the Contractor, and the extension of time provided for herein shall be the sole remedy of the Contractor on account of any such delays.

b. An extension of time will not be granted for a delay described in the above paragraph(s) caused by a shortage of materials, except if materials are furnished by Authority, unless the Contractor supplies the Authority with documented proof that every effort to obtain the materials from all known sources that (a) such materials could have been obtained only at exorbitant prices or (b) the prices were entirely inconsistent with current rates, taking into account the quantities; and (c) such facts could not have been known or anticipated at the time the Notice To Proceed was issued. Contractor shall also submit proof, that the inability to obtain such materials when originally planned, did in fact, cause a delay in completion of the work that could not be compensated for by revising the sequence of its operations. Only the physical shortage of material will be considered as a basis for an extension of time.

c. An extension of time for weather more severe than normal shall be granted only to the extent the work is actually delayed as determined by the Authority. Normal is defined as the monthly average of the temperature and rainfall wherein the work was performed for the prior twenty (20) years before the execution of the Contract.

d. In the event Contractor is actually and necessarily delayed by an act or omission on the part of the Authority, as determined by the Authority, the Contractor shall notify the Authority in writing within five (5) days from the beginning of any such delay. The time for completion of the work may be extended at the sole discretion of the Authority.

e. Within thirty (30) days after the last day of delay, Contractor shall provide Authority with detailed information concerning the circumstances of the

delay, the number of days actually delayed, and the measures taken to minimize or prevent the delay. Failure to submit information shall be sufficient reason to deny the claim. Authority shall ascertain the facts and the extent of the delay; and provide the Contractor its written findings, which will be final and conclusive. Except for the additional compensation for herein and except as provided in Public Contract Code Section 7102, Contractor shall have no claim for damages or compensation for any delay or hindrance.

f. No extension of time will be granted for any Authority caused delay or delay as defined in which (a) the performance of work would have been concurrently delayed by Contractor induced causes, including but not limited to an act or omission of the Contractor, or (b) remedies are included or excluded by any other Contract provision. Only the actual delay necessarily resulting from the causes specified in this Article shall be grounds for extension of time. Should the Contractor be delayed at any time for any period by two or more of the causes specified in this article, Contractor shall only be entitled to one time extension for the entire delay.

g. Any time extension granted to Contractor shall not release the Contractor or surety from its obligations. Work shall continue and be carried on in accordance with the Contract provisions, unless formally suspended or terminated by the Authority.

N. AFFIRMATIVE ACTION

If this Agreement is funded in whole, or in part, by federal funds, Contractor and subcontractors holding a value of work of $10,000 or more must submit a Monthly Employment Utilization Report (Form 257) to the Authority Engineer by the fifth (5th) of each month or sanctions shall be applied for late submittal, non-submittal and incomplete forms returned to the Contractor and resubmitted after the due date.

The reporting period shall be for each calendar month.

The report shall include the information requested for each Contractor's aggregate work force (for all workers on all projects within Orange County) and not just for workers on this project.

If the form is not received by the fifth (5th) of the month, a deduction of ten (10%) (with a minimum of $1,000 and a maximum of $10,000) will be withheld from the monthly estimate at the option of the Authority.

The Contractor shall designate an Equal Employment Officer for the project and notify the Authority in writing whom that person is prior to beginning of work. All workers shall also be informed who the EEO Officer is.

O. STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS (EXECUTIVE ORDER 11246)

If this Agreement is funded in whole, or in part, by federal funds, Contractor and subcontractors holding a value of work of $10,000 or more shall comply with the Standard Federal Equal Employment Opportunity Construction Contract Specifications, set forth in 41 CFR Section 60-4.3, which are incorporated herein by this reference.

P. CONFLICT OF INTEREST

All Contractors responding to this Invitation For Bids must avoid organizational conflicts of interest which would restrict full and open competition in this procurement. An organizational conflict of interest means that due to other activities, relationships or contracts, a Contractor is unable, or potentially unable to render impartial assistance or advice to the Authority; a Contractor's objectivity in performing the work identified in the specifications is or might be otherwise impaired; or a Contractor has an unfair competitive advantage. Contractor is obligated to fully disclose to the Authority in writing any conflict of interest issues as soon as they are known. All disclosures must be disclosed at the time of bid submittal.

Q. CODE OF CONDUCT

Contractor agrees to comply with the Authority's Code of Conduct as it related to Third-Party contracts, which is hereby referenced and by this reference is incorporated herein. Contractor agrees to include these requirements in all of it's subcontracts.

R. GOVERNMENT INSPECTIONS

The Authority and Federal Government representatives shall have access to the construction site and shall have the right to inspect all project works.

S. LICENSING, PERMITS AND INSPECTION COSTS

1. The Contractor warrants that it has all necessary licenses and permits required by the laws of the United States, State of California, the County of Orange, the Local Jurisdictions, and all other appropriate governmental agencies, and agrees to maintains these licenses and permits in effect for the duration of the Agreement. Further, Contractor warrants that its employees, agents, and Contractors and subcontractors shall conduct themselves in compliance with such laws and licensure requirements including, without limitation, compliance with laws applicable to nondiscrimination, sexual harassment and ethical behavior throughout the duration of this Agreement. Contractor further warrants that it shall not retain or employ an unlicensed subcontractor to perform work on this Project. Contractor shall notify the Authority immediately and in writing of its employees', agents', Contractors' or subcontractors'

inability to obtain or maintain, irrespective of the pendency of any appeal, any such licenses, permits, approvals, certificates, waivers, and exemptions. Such inability shall be cause for termination of this Agreement.

2. Contractor shall procure all permits and licenses; pay all charges, assessments and fees, as may be required by the ordinances and regulations of the public agencies having jurisdiction over the areas in which the work is located, and shall comply with all the terms and conditions thereof and with all lawful orders and regulations of each such public agency relating to construction operations under the jurisdiction of such agency.

T. HAZARDOUS SUBSTANCES

1. CAL-OSHA Requirements

   All flammable, corrosive, toxic, or reactive materials being bid must have a complete CAL-OSHA Safety Data Sheet (SDS) accompanying the submitted bid.

2. South Coast Air Quality Management District (SCAQMD)

   All materials (paints, coatings, inks, solvents, and adhesives) shall comply with the volatile organic compounds (VOC) content requirements of the applicable SCAQMD rules.

3. Notice of Hazardous Substances

   Title 8, California Code of Regulations, Section 5194 (e) (c), states that the employer must inform any Contractor employers with employees working in the employer's workplace of the hazardous substances to which their employees may be exposed while performing their work. In compliance with this requirement, the Authority hereby gives notice to all bidders that the following general categories of hazardous substances are present on the Authority's premises:

   - Adhesives, sealant, patching, and coating products
   - Antifreezes, coolants
   - Cleaners, detergents
   - Paints, thinners, solvents
   - Pesticides, Petroleum products (diesel and unleaded fuel, oil products)
   - Printing, photocopying materials
   - Propane Welding materials/compressed gases (e.g., acetylene, oxygen, nitrogen)

   More specific information may be obtained from the Authority's Safety and Benefits office at (714) 560-5854, and from Safety Data Sheets (SDS) for individual products.

4. Hazardous Waste Labels

   Containers containing hazardous substances must be labeled with the following information:

   - Identity of hazardous substance-chemical name, not manufacturer or trade name;
   - Appropriate health warning relative to health and physical hazard; and
   - Name and address of manufacturer or other responsible party.

All containers containing hazardous substances may be rejected unless containers are properly labeled. Containers of 55 gallons or larger must have either weather resistant labels or the information should be painted directly on the containers.

U. CHANGES IN LAWS AND REGULATIONS

CONTRACTOR shall at all times comply with all applicable state and local regulations, policies, procedures and directives, including without limitation those listed directly or by reference in this Agreement. CONTRACTOR's failure to so comply shall constitute a material breach of Contract.

V. MEDIA AND THE PUBLIC

Contractor shall immediately refer all inquires from the news media or other public sources to the Authority's Project Manager, or designated representative, relating to this project.

W. COORDINATION AND ACCESS

Authority may undertake or award other contracts for additional work at the project site. Contractor is responsible for coordinating its work with the work of other Contractors as appropriate. The Contractor acknowledges that they do not have any exclusive access to the site or other work areas Authority may require that certain facilities and areas be used concurrently by the Contractors and others. Contractor shall cooperate fully with Authority Contractors/consultants that may be performing work in the construction area.

X. UTILITIES RELATED DELAYS

If, due to interruptions caused by the undocumented utilities, Contractor sustains loss which could not have been avoided by the judicious handling of forces, equipment and plant, there shall be paid to the Contractor that amount that the Authority may find to be a fair and reasonable compensation for the part of the Contractor's actual loss, that, in the opinion of Authority was unavoidable, determined as follow: Compensation for idle time of equipment will be determined in the same manner as determinations are made for equipment used in the performance of extra work paid for on a force account basis, as provided in Section F. Extra Work and Changes, Item 3,c. Equipment with the following exceptions:

1. The utility related delay factor for each classification of equipment shown in the Department of Transportation publication entitled Labor Surcharge And Equipment Rental Rates will be applied to that equipment rental rate.

2. The time for which the compensation will be paid will be the actual normal working time during which the delay condition exists, but in no case will exceed eight (8) hours in any one day.

3. The days for which compensation will be paid will be the calendar days, excluding Saturdays, Sundays and legal holidays, during the existence of the delay, except that when the rented equipment can be returned or used elsewhere on the project, then no payment will be made for utilities related delays.

Actual loss shall be understood to include no items of expense other than idle time of equipment and necessary payments for idle time of workers, and cost of extra moving of equipment. Compensation for idle time of equipment will be determined as provided in this section and compensation for idle time of workers will be determined as provided in Section F. Extra Work and Changes, Item 3, b. "Labor," and no markup will be added in either case for overhead and profit. The cost of extra moving of equipment will be paid for as extra work and changes as provided in Section F of General Provisions.

If performance of the Contractor's work is delayed as the result of the Utilities Related Delays, an extension of time determined pursuant to the provisions in Article 18. Termination for Default – Damages for Delay – Time Extensions will be granted.

Y. UTILITIES AND SUBSURFACE STRUCTURES

Contractor shall protect from damage utility and other subsurface structures that are to remain in place, be installed, relocated or otherwise rearranged (as used herein, rearranged includes installation, relocation, alteration or removal).

The right is reserved to the Authority, or their authorized agents, to enter upon the site for the purpose of making those changes that are necessary for the rearrangement of their facilities or for making necessary connections or repairs to their properties. Contractor shall cooperate with forces engaged in this work and shall conduct operations in such a manner as to avoid any unnecessary delay or hindrance to the work being performed by the other forces. Wherever necessary, the work of Contractor shall be coordinated with the rearrangement of utility or other non-highway facilities, and Contractor shall make arrangements with the owner of those facilities for the coordination of the work.

Attention is directed to the possible existence of underground main or trunk line facilities not indicated on the plans or in the special provisions and to the possibility that underground main or trunk lines may be in a location different from that which is indicated on the plans or in the special provisions. Contractor shall ascertain

the exact location of underground main or trunk lines whose presence is indicated on the plans or in the special provisions, the location of their service laterals or other appurtenances, and of existing service lateral or appurtenances of any other underground facilities which can be inferred from the presence of visible facilities such as buildings, meters and junction boxes prior to doing work that may damage any of the facilities or interfere with their service.

If Contractor cannot locate an underground facility whose presence is indicated on the plans or in the special provisions, the Contractor shall so notify the Authority in writing. If the facility for which the notice is given is in a substantially different location from that indicated on the plans or in the special provisions, the additional cost of locating the facility will be paid for as extra work as provided in Section F.

If Contractor discovers underground main, trunk lines or other structures and utilities not indicated on the plans or in the special provisions, Contractor shall immediately give the Authority and the Utility Company written notification of the existence of those facilities. Such facilities shall be located and protected from damage as directed by the Authority, and the cost of that work will be paid for as extra work as provided in Section F. Contractor shall, if directed by the Authority repair any damage which may occur to the main or trunk lines. The cost of that repair work, not due to the failure of the Contractor to exercise reasonable care, will be paid for as extra work as provided in Section F. Damage due to Contractor's failure to exercise reasonable care shall be repaired at the Contractor's cost and expense.

Where it is determined by the Authority that the rearrangement of an underground facility is essential in order to accommodate the project work and the plans and specifications do not provide that the facility is to be rearranged, Authority will provide for the rearrangement of the facility by other forces or the rearrangement shall be performed by Contractor and will be paid for as extra work as provided in Section F.

When ordered by the Authority in writing, Contractor shall rearrange any utility or other subsurface structures necessary to be rearranged as a part of the project work and that work will be paid for as extra work as provided in Section F.

Should Contractor desire to have any rearrangement made in any utility facility, or other improvement, for the Contractor's convenience in order to facilitate the Contractor's construction operations, which rearrangement is in addition to, or different from, the rearrangements indicated on the plans or in the special provisions, the Contractor shall make whatever arrangements are necessary with the owners of the utility or other subsurface structure for the rearrangement and bear all expenses in connection therewith.

Contractor shall immediately notify the Authority of any delays to the Contractor's operations as a direct result of underground utilities or other structures which were not indicated on the plans or in the special provisions or were located in a position substantially different from that indicated on the plans or in the special provisions,

(other than delays in connection with rearrangements made to facilitate the Contractor's construction operations or delays due to a strike or labor dispute). These delays will be considered utilities related delays within the meaning of Section X. Utilities Related Delays and compensation for the delay will be determined in conformance with the provisions in Section M. Contractor shall be entitled to no other compensation for that delay.

Z. LOCATION OF UNDERGROUND FACILITIES (OFFSITE WORK ONLY)

Contractor is required to obtain digging permits prior to start of excavation by contacting the appropriate permitting agencies 15 calendar days in advance. For the Offsite work scan the construction site with electromagnetic or sonic equipment, and mark the surface of the ground where existing underground utilities are discovered. Verify the elevations of existing piping, utilities, and any type of underground obstruction not indicated or specified to be removed but indicated or discovered during scanning in locations to be traversed by piping, ducts, and other work to be installed. Verify elevations before installing new work closer than nearest manhole or other structure at which an adjustment in grade can be made. Perform potholing to confirm location of all the utilities along the construction alignment prior to start of the construction. The Contractor is responsible for all costs associated with these investigations including the cost of equipment, labor and materials required for any confined space entry.

AA. UNFORESEEN HAZARDOUS OR REGULATED MATERIALS

All known hazardous or regulated materials are indicated in the Contract documents. If material that is not indicated in the Contract documents is encountered that may be dangerous to human health upon disturbance during construction operations, stop that portion of work and notify Authority immediately. Intent is to identify materials such as PCB, lead paint, mercury, petroleum products, and friable and non-friable asbestos. Within 14 calendar days, the Authority will determine if the material is hazardous. If the material is not hazardous or poses no danger, the Authority will direct Contractor to proceed without change. If the material is hazardous and handling of the material is necessary to accomplish the work, Authority will contract with a qualified environmental remediation/hazardous materials removal Contractor for such remediation or removal as may be necessary. The remediation or removal will be performed in compliance with applicable State, Federal, and local environmental laws and regulations.

Contractor shall immediately notify the Authority of any delays to the Contractor's operations as a direct result of Unforeseen Hazardous and Regulated Materials These delays will be considered utilities related delays within the meaning of Section Z. Utilities Related Delays and compensation for the delay will be determined in conformance with the provisions in Section M. Contractor shall be entitled to no other compensation for that delay.

BB. TRENCHING AND EXCAVATIONS

In the event the Contractor is required to dig any trench or excavation that extends deeper than four (4) feet below the surface in order to perform the work authorized under the Agreement, Contractor agrees to promptly notify the Authority in writing and before further disturbing the site, if any, of the conditions set forth below are discovered:

1. Materials that the Contractor believes may be hazardous waste, as defined in Section 25117 of the Health and Safety Code that is required to be removed to a Class I, Class II, or Class III disposal site in accordance with the provisions of existing law.

2. Subsurface or latent physical conditions at the site differing from those indicated by information about the site made available to bidders prior to the deadline for submitting bids.

3. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Agreement.

The Authority will promptly investigate the conditions, and if it determines that the conditions do materially so differ, or do involve hazardous waste, and cause a decrease or increase in the Contractor's cost of, or the time required for, performance of any part of the work shall issue a Change Order under the procedures described in the Agreement.

In the event that a dispute arises between the Authority and the Contractor whether the conditions materially differ, or involve hazardous waste, or cause a decrease or increase in the Contractor's cost of, or time required for, performance of any part of the work, the Contractor shall not be excused from any scheduled completion date provided for by the Agreement, but shall proceed with all work to be performed under the Contract. The Contractor shall retain any and all rights provided either by contract or by law which pertain to the resolution of disputes and protests between the contracting parties.

SECTION VIII: PROJECT SPECIFICATIONS - EXHIBIT B

ORANGE COUNTY TRANSPORTATION AUTHORITY

BUILDING REPAIRS AT SANTA ANA BUS BASE

PROJECT SPECIFICATIONS

IFB 4-2093
Exhibit B

JANUARY 2024

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ORANGE COUNTY TRANSPORTATION AUTHORITY

BUILDING REPAIRS AT SANTA ANA BUS BASE

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END OF SECTION

SECTION 01 11 00
SUMMARY OF WORK

PART 1 - GENERAL

1.01 DESCRIPTION

A. Contract documents: The Contractor shall obtain all copies of the Contract Drawings and Specifications including all addenda through the OCTA CAMMNET website, as required to perform the work. The cost for obtaining any additional documents required by the contractor shall be included in the bid price and no additional compensation will be allowed.

B. All drawings, specifications, and other contract documents, and copies furnished by the Authority are its property. They are not to be used on other work and with the exception of signed contract sets are to be returned to the Authority upon request at the completion of the work. The location of the work, its general nature and extent, and the form and general dimensions of the project and appurtenant works are shown on the contract drawings which are hereby made a part of these specifications as listed herein.

C. The general intent of the contract, specifications, drawings, and other contract documents is that the Contractor shall:

1. Furnish tools, qualified labor, material, equipment, qualified superintendence, and services, assurances and guarantees, and assumptions of risk and responsibility, necessary for the performance of the Work as set forth in the contract documents unless otherwise specifically provided.

2. Begin work promptly and proceed expeditiously and continuously without cessation or shutdown of Work unless otherwise specifically approved in writing by the OCTA Engineer or directed by the contract documents.

3. Perform, complete, and make ready for its intended purpose, within the times specified, including additional times provided for certain conditions, the work or parts thereof covered by the contract, all in accordance with drawings, specifications, and modifications thereto and directions or instructions the OCTA Engineer may give to supplement the drawings and specifications. The Contractor shall retain sole responsibility and expense for quality control of the work.

D. Words and abbreviations which have well-known technical meanings or trade meanings are used in the contract documents in accordance with such recognized meanings.

E. The organization of the specifications into divisions, sections, parts, and paragraphs, and the arrangement of the drawings, shall not control the Contractor in dividing the work among subcontractors or in establishing the extent of work to be performed by

any trade. Study and compare the contract documents and immediately report to the OCTA Engineer any error, inconsistency, or omission that may be discovered. Contractor shall be liable to OCTA for damage resulting from unreported errors, inconsistencies, or omissions in the contract documents.

F. It will be the responsibility of the Contractor to stage the construction activities at the project site, using the Site-Specific Work Plan process (SSWP)

G. Ownership of Materials:

1. Materials furnished by the Contractor under this contract shall become the property of OCTA.

H. General Summary of Work:

1. Work to be performed by Contractor shall consist of the construction of the work shown on the drawings and detailed in the specifications.

2. The descriptions provided in this section are general in nature and are not meant to define the full extent of the work required by the contract documents.

3. The work under this contract generally includes structural building repairs, high performance coating, interior restoration, and related work to be performed within the Bus Wash Bays (nominal 80-foot by 62-foot area) of the Bus Wash Building at Santa Ana Bus Base located at 4301 West MacArthur Boulevard, Santa Ana, CA; additionally, high performance coating and related work to be performed within the Open Canopy Structure, adjacently east of the bus wash bays. The work under this contract is further defined below.

    a. Remove existing roofing section (including roof insulation), roof metal decking, and manufactured open-web steel roof joists (9 total) within the bus wash bays; legally dispose removed materials off-site. Remove and salvage (recycle) existing temporary shoring within the bus wash bays; Contractor shall provide OCTA with credit received from salvaged materials at actual cost.

    b. Furnish and install new roof joists, roof deck, and roofing within the bus wash bays' footprint.

    c. Perform surface preparation (including commercial abrasive blasting) within bus wash bays' and open canopy structure's footprints.

    d. Placement of high-performance coating within bus wash bays' and open canopy structure's footprint.

    e. Selective replacement or repair of mechanical, electrical, and equipment components.

    f. And all other related work.

4. This project is a capital improvement project under OCTA Level 3 Health, Safety and Environmental Specifications and requirements.

I. Other features of the work include, but are not limited to, the following:

1. The Contractor shall arrange to provide mobile bus washing services for the duration of the Bus Wash Bays closure.

2. Protection in place of all existing equipment, piping, conduits, trench drains and other non-structural items within the Bus Wash Bays. De-energize all equipment within the Bus Wash Bays. Seal the trench drains to prevent debris accumulation.

3. Install temporary lateral wind/seismic bracing at the east and west side's nominal 24-foot-tall concrete masonry (CMU) walls of the Bus Wash Bays during the time between commencement of existing steel roof deck deconstruction and completion of the new steel roof deck installation.

4. Protect and maintain operations of the adjacent spaces north Brake Dyno Bay and south (Equipment Room) of the Bus Wash Bays during construction. Maintain the existing roofing system above these spaces.

5. Non-structural upgrades at the Bus Wash Bays include repairs to the existing pneumatic system, new forced ventilation fans, new LED lights.

6. Obtaining necessary construction and related permits from various jurisdictional agencies. The Contractor shall be responsible for all related fees from various jurisdictional agencies.

7. Obtain and pay for all licenses required by all jurisdictions associated with the approval and requirements of the project.

1.02 INTENT OF DRAWINGS AND SPECIFICATIONS

A. The intent of the drawings and specifications is to prescribe the details for construction and completion of the work that the Contractor undertakes to perform in accordance with the terms of the Contract. Where the drawings or specifications describe portions of the work in general terms, but not complete detail, it is understood that only the best industry practice is to prevail and that only materials and workmanship of the first quality are to be used. Unless otherwise specified, the Contractor shall furnish all labor, materials, tools, equipment, and incidentals, and perform all the work involved in executing the contract in a satisfactory and workmanlike manner.

B. Drawings and specifications are essential parts of the Contract, and a requirement indicated in one is binding as though indicated in all. They are intended to be complementary and to describe and provide for the complete work.

C. Summaries or introductory descriptions of the work of individual sections do not limit requirements. The Contractor's responsibilities include all requirements for proper execution of the work.

D. Division 01 of the specifications governs all divisions. Comply with Division 01 requirements whether or not referenced in individual sections in Divisions 02-49.

E. References to the singular include the plural and do not imply that only one unit of a product is required.

F. Unless an object or activity is specified to be less than the total, the quantity or amount is all of the object or activity.

G. Unless a requirement is specified to apply for a limited time, it applies for the duration of the work.

H. "Including," "such as," "as follows," and similar terms do not limit the meaning to only items listed. The phrase "but not limited to" is understood to follow these expressions.

I. All items in a list apply unless the items are specified as choices.

1.03 REFERENCE MATERIAL

A. Reference specifications or standards referred to in the plans or specifications shall be the most recent version developed as of Contract award. Where referenced standards refer to the "specifications" or the "special conditions," this shall be understood by the Contractor to mean the drawings and specifications of this contract. The Contractor is responsible to obtain all reference material at its own expense and to make itself familiar with the requirements therein.

1.04 PROJECT ACCESS AND CONTRACT LIMITS

A. The Contractor shall submit a transportation plan outlining access to the job site and for maintaining the facility as operational at all times.

B. Construction activity shall be within the normal work hours between 7:00 am to 4:00 pm Monday through Friday. Construction areas shall be cordoned off using temporary barriers and chain link fencing. See project plans for additional information on phasing and work windows.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this section.

END OF SECTION 01 11 00

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SECTION 01 14 22

RULES AND HOURS OF OPERATION

PART 1 – GENERAL

1.01 SUMMARY

A. This section outlines rules and hours of operation to which Contractor shall conform during the execution of the work under this contract. It is Contractor's responsibility to ensure that these rules are acceptable to OCTA.

1.02 REFERENCE STANDARDS

A. Comply with the provisions of applicable local, State, and Federal codes, specifications, standards, and recommended practices, and with OCTA policy, including:

1. SSPWC: Public Works Standards, Inc., Standard Specifications for Public Works Construction.

2. Caltrans: California Department of Transportation, Trenching and Shoring Manual.

3. Cal/OSHA: California Department of Industrial Relations, Division of Occupational Safety and Health (Cal/OSHA) regulations.

4. OSHA: Federal Occupational Safety and Health Administration regulations.

1.03 SUBMITTALS

A. Site Specific Work Plan (SSWP) containing the information specified herein.

1.04 PROJECT COORDINATION

A. Cooperate with the OCTA Project Manager in all matters requiring coordination.

B. Coordinate execution of the work with the OCTA Project Manager to eliminate or minimize to the greatest extent possible interference with bus operations.

C. Keep OCTA Project Manager fully informed regarding all work.

1.05 CONTRACTOR'S RESPONSIBILITY

A. Perform work in accordance with the contract and all applicable codes, ordinances, rules, regulations, orders, and other legal requirements of governmental bodies and public agencies having jurisdiction, including the OCTA.

B. Damage caused by Contractor to third-party property, signal and communications equipment, or other facilities shall be repaired at Contractor's expense to a condition equal or better than the condition prior to Contractor entry and as accepted by the OCTA Project Manager. At the sole discretion of the OCTA Project Manager, the OCTA Project Manager may direct repairs to be performed by other contractors. Charges for those repairs shall be deducted from Contractor's payment due under this Contract.

C. Items shown on the drawings to be protected in place shall be protected in place in accordance with SSPWC Section 7-9, Protection and Restoration of Existing Improvements, at no additional cost to the OCTA.

D. Perform work within the operating envelope or which affects the operating system only after submitting a Site Specific Work Plan (SSWP) and receiving written approval of the SSWP from the OCTA Project Manager.

E. Furnish all labor, materials, and equipment as required to perform and complete the work within the work windows in accordance with the approved schedule in the SSWP.

1.06 SSWP – GENERAL CONTRACTOR REQUIREMENTS

A. SSWPs with potential to impact normal functioning of any part of the operating system shall include a detailed schedule of events indicating the expected hourly progress of each activity that has duration of one hour or longer. The schedule shall include a time at which each activity planned under the SSWP and the requested work window will be completed. The total duration of the construction activities shall be less than the approved work window. Contractor's failure to complete scheduled activities by the planned time or to put in place an approved contingency plan may adversely impact the operations of scheduled trains.

B. The SSWP shall be prepared by the Contractor and shall include the following information:

1. All activities necessary to perform construction activities.

2. Conformance with all other requirements applicable under the contract documents.

3. A schedule for the work showing each activity and where and how it affects normal operation. Each activity in the plan shall include all labor, materials, and equipment required to complete the activity within the OCTA allotted time period.

4. List of approved proposed work plans to be performed under the SSWP, with names and phone numbers of Contractor's supervisors in charge of SSWP tasks.

C. SSWPs must be of sufficient detail, clarity, and organization to permit easy review and approval by the OCTA Project Manager before the proposed work is performed. SSWPs shall be submitted to the OCTA Project Manager as follows:

1. At least 14 calendar days prior to start of work.

D. The OCTA Project Manager may request explanations and changes to the SSWP to conform the SSWP to the requirements of the contract documents. If the SSWP is not acceptable, Contractor shall revise the SSWP to make it acceptable. Contractor is responsible for submitting a revised SSWP that can be reviewed and approved by the OCTA at least seven days in advance of any work.

E. Contractor will be informed if the SSWP is acceptable not less than seven calendar days prior to the scheduled start of work within the operating envelope. Once the SSWP is accepted, Contractor shall assemble the resources necessary to perform the work represented by the SSWP, so that necessary resources are available one day before the work is to be accomplished. At that time, the OCTA Project Manager will make a final decision as to whether or not the work is to proceed as planned or will be canceled. The prime consideration will be the stage of readiness of Contractor, which Contractor shall demonstrate to the OCTA Project Manager.

1.07 SSWP – SPECIAL CONTRACTOR REQUIREMENTS

A. Contractor shall provide sufficient personnel, equipment, materials, and all other resources necessary to return impacted facilities to full service upon the conclusion of the approved work window.

B. Contractor shall perform the work expeditiously and continuously with no gaps or breaks in work activities or substantive reductions in the labor force, equipment, and materials necessary to construct, reconstruct, or repair the impacted facility to full service upon conclusion of the approved work window.

C. In general, open excavation areas shall be protected per OSHA regulations.

1.08 WORK WINDOWS - GENERAL

A. Site-specific available work windows shall be as approved by the OCTA Project Manager under established procedures.

B. Construction hours shall be limited to 7:00 am to 4:00 pm Monday through Friday unless approved in advance by OCTA and appropriate regulatory agencies.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

PART 4 – MEASUREMENT AND PAYMENT

No payment will be made to Contractor for work of this section.

END OF SECTION

SECTION 01 14 23

COORDINATION WITH OCTA AND CITY

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Requirements for coordination with OCTA and City.

1.02 REGULATIONS

A. If additional work is being performed by others, on or adjacent to the work site for this Contract, coordinate work with other activities in order to avoid conflicts.

1.03 COORDINATION

A. Coordination: Contractor shall coordinate the Work as stated in the Conditions of the Contract.

B. Relationship of Contract Documents: Drawings, Specifications and other Contract Documents are intended to be complementary. What required by one shall be as if required by all. What shown or required, or may be reasonably inferred to be required, or which usually and customarily provided for similar work, shall be included in the Work.

C. Discrepancies in Contract Documents: In the event of error, omission, ambiguity or conflict in the Drawings or Specifications, Contractor shall bring the matter to the OCTA's attention in timely manner, for the OCTA's determination and direction in accordance with provisions of the Conditions of the Contract.

D. Construction Interfacing and Coordination: Layout, Phasing, and Sequencing of Work shall be solely the Contractor's responsibility. Contractor shall bring together the various parts, components, systems and assemblies as required for the correct interfacing and integration of all elements of Work. Contractor shall coordinate Work to correctly and accurately connect abutting, adjoining, overlapping and related elements, including utilities, for a complete operational system to the satisfaction of the OCTA, agencies, and companies. Provide adequate access for OCTA and buses to pass through all areas at all times. Do not block non-construction areas.

E. Contractor shall notify OCTA a minimum of two working days before excavation begin. The work shall be construction in phases where indicated on the contract drawings or specifications. A phase shall be completed and operational before proceeding to the next phase.

F. The Contractor shall cooperate fully with all forces of the Authority. Contractor should note that additional work is being conducted on site with other construction contracts and work of this contract must be coordinated amounts the trades and not additional compensation will be allowed for this coordination work.

G. Unless otherwise directed, provide twenty (20) days notice of all utility outages and shutdowns. Duration of outages and shutdowns shall not hinder normal operations and maintenance of the facility. In case of accidental damage to power or utility lines, repair power or utility line immediately. Provide alternate source of power to keep facility operation.

1.04 GENERAL REQUIREMENTS

A. Adhere to work window rules detailed in the approved SSWP under Section 01 14 22, Rules and Hours of Operation and the specifications.

B. See Section 01 14 22, Rules and Hours of Operation

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this section.

END OF SECTION

SECTION 01 14 25

PROCEDURES IN CONSTRUCTION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Procedures used in performance of work of a general nature, including work by Contractor, Contractor use of work site, work zone limitations of site, and pollution controls.

B. Related Sections:

1. Section 01 14 23, Rules and Hour of Operation.

2. Section 01 14 27, Legal Relations and Responsibility.

1.02 WORK BY CONTRACTOR

A. Provide work reasonably inferred from the drawings and specifications as being required to produce the intended result whether or not specifically called for.

B. Work, materials, or equipment described in words which have known technical or trade meaning shall be deemed to carry the accepted meaning of recognized standards.

C. Complete all work enumerated under the contract including but not limited to the following:

1. Perform work set forth in the contract documents, including the drawings and specifications.

2. Obtain required permits, inspections, and certifications for material compliance.

1.03 SUBMITTALS

A. Storm Water Pollution Prevention Plan (SWPPP).

B. Health and Safety Work Plan (HASP).

C. Material Safety Data Sheets (MSDSs).

D. OCTA Level 3 Safety Requirements

1.04 STORM WATER MANAGEMENT

A. Contractor is responsible for preventing and/or mitigating potential chemical releases, erosion and sedimentation impacts associated with storm water runoff. Prepare and submit a Storm Water Pollution Prevention Plan (SWPPP) for the project to the OCTA for review and approval prior to beginning work on the project site. The plan preparer and plan implanter must be certified by California Stormwater Quality Association (CASQA) as a Qualified Developer (QSD). SWPPP is required to be submitted to Regional Water Quality Control Board (RWQCB) through smart system within 30 days of effective date of notice to proceed (NTP). See Section 01 57 13, Temporary Erosion and Sedimentation Control, for additional requirements. The OCTA will provide review comments to Contractor within 10 working days. Comply with the OCTA-approved plan. Prepare the plan consistent with the provisions of National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002, Waste Discharge Requirements for Discharges of Storm Water Runoff Associated with Construction Activity, adopted by the State Water Resources Control Board as Order No. 99-08-DWQ, and related modifications and implementing regulations.

B. Identify in the plan the specific best management practices (BMPs) Contractor proposes to use in connection with the execution of construction activity at the project site. Use applicable BMPs included in the Construction Site Best Management Practices (BMPs) Manual prepared by the California Stormwater Quality Association, *www.cabmphandbooks.com* .

C. Provide copies of the approved plan to subcontractors and keep a copy available onsite at the project office. Provide amendments to the plan when there is a change in construction or operations, or where storm water runoff conditions may affect the discharge of significant quantities of pollutants to surface waters, groundwater, or separate municipal storm sewer systems. Submit the amended plan to the OCTA for review and approval as soon as practicable, and retain the amended plan on site.

D. Preparation and implementation of an OCTA-approved plan does not relieve the Contractor or subcontractors of their responsibilities to comply with state, county, and local governmental requirements, including those for storm water management and non-point source runoff controls.

1.05 HEALTH AND SAFETY PROGRAM (HASP)

A. Develop a Health and Safety Program (HASP) in accordance with the California Health and Safety Code. The HASP shall identify, evaluate, and control health and safety hazards and provide for emergency response. Take all necessary steps to ensure worker health and safety as provided for in the HASP. Submit a written HASP including but not limited to the following:

1. Organizational structure.

2. Comprehensive work plan.

3. Site-specific safety and health plan.

4. Safety and training program.

5. Contractor's standard operating program for safety and health.

6. Any necessary interface between the general program and site-specific activities.

7. Provisions specific to handling of soils containing elevated concentrations of petroleum; paraffins, naphthenes, and aromatics (PNAs); and metals.

B. Submit the HASP to the OCTA within 21 days from the effective date of the Notice to Proceed. Amend the HASP to incorporate any changed conditions. Submit amendments to the OCTA for review and approval.

C. Keep an approved copy of the Health and Safety Plan at the work site at all times.

D. See Section 01 35 24 OCTA Level 3 Health, Safety, and Environmental Specifications for additional OCTA safety requirement, submissions and approval of various items is required prior to start of any on-site work.

1.06 MATERIAL SAFETY DATA SHEETS (MSDS)

A. Material Safety Data Sheets (MSDSs) are prepared by manufacturers and suppliers of products that contain hazardous materials. Hazardous material is defined as any substance which is a physical or health hazard, or is included in the Cal/OSHA Director's List of Hazardous Substances, or is listed by the California EPA Office of Environmental Health Hazard Assessment under Title 27 of the California Code of Regulations, Section 27001, Chemicals Known to the State to Cause Cancer or Reproductive Toxicity.

B. No hazardous materials shall be delivered, stored, or used at any work site or facility unless they are properly labeled, tagged, or marked and a copy of the MSDS has been provided to the OCTA. Provide a copy of any updated MSDS to the Engineer immediately.

C. Maintain a file of MSDSs at the work site. Keep MSDS files current; add new or updated MSDSs immediately and provide a copy to the OCTA.

D. See Section 01 35 24 OCTA Level 3 Health, Safety, and Environmental Specifications for additional requirements.

1.07 CONTRACTOR USE OF WORK SITE

A. Coordinate access, use, and preparation of facilities adjacent to project areas with owners and agencies. Coordination shall include but not be limited to the following:

1. Staging and laydown areas for use under this Contract are as specified or shown on the Drawings. Staging and laydown areas not covered in the Contract Documents shall be requested in writing and approved by the OCTA. The OCTA may or may not grant approval. No equipment may be operated or materials stored or placed for any period of time in unfenced areas. Provide a fence to enclose each laydown or staging area within the right-of-way. Furnish the OCTA with photographs of all staging and laydown areas to document their condition prior to start of work.

2. Contractor shall submit construction staging plan for review and approval by OCTA. The staging plan must be accepted by the OCTA prior to undertaking work in accordance with the staging plan.

3. Prior to demobilization, restore to full serviceability fences, walls, signs, and gates affected by Contractor's access to the right-of-way.

B. Confine work site operations to areas permitted by law, ordinances, permits, and the contract.

C. Consider the safety of the work, OCTA patrons and property on and adjacent to the work site when determining amount, location, movement, and use of materials and equipment on work site.

D. Do not load work site with excessive amounts of material, equipment, or other items which have the potential to interfere with the work or with bus base operations.

E. Protect products, equipment, and materials stored on work site.

F. Coordinate operations and secure from property owners at no cost to OCTA additional storage or work areas as needed for proper execution of the work. Adhere to the noise levels and work hours of local ordinances.

G. Protect the general public from work-related activities, and do not unnecessarily inconvenience those persons by work activities.

H. Submit proposed locations of staging areas for OCTA’s approval.

I. Preserve drainage facilities throughout the duration of the work so that there is no ponding or accumulation of water in any work site area, there is no flow of water diverted out of normal drainage channels. Maintain culvert inlets and outlets free of debris.

J. Preserve existing right-of-way fences and walls, and replace any fences or walls damaged during the work to the satisfaction of the owner(s) of the fences or walls.

K. Provide and maintain barriers and chain link fence around the work area as shown on the contract drawings.

1.08 WORK ZONE LIMITATIONS OF SITE

A. In addition to site utilization limitations and requirements indicated in contract documents, divide available space equitably among subcontractors and other entities needing access and space so as to provide best overall efficiency in performance of total work of the project.

B. Schedule deliveries so as to minimize space and time requirements for storage of materials and equipment on site, with minimal disruption to adjoining property owners and operations. Pick-up and delivery shall be conducted only during normal working hours and as approved by OCTA.

1.09 POLLUTION CONTROLS

A. Conduct operations for the execution of the project in compliance with applicable Federal, State, and local regulations controlling pollution and noise levels related to construction work, in accordance with Section 01 14 27, Legal Relations and Responsibility.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this section.

END OF SECTION

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SECTION 01 14 27

LEGAL RELATIONS AND RESPONSIBILITY

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Laws to be observed, fire prevention, protection of premises, use of explosives, access roads, construction roads, waste control, public relations, and pollution controls.

2. This section complements requirements in other sections.

1.02 LAWS TO BE OBSERVED

A. Keep fully informed of State and Federal laws; county, municipal, and other local ordinances; regulations; and orders of authorities having jurisdiction that affect those engaged in the work, materials used in the work, or conduct of the work.

B. Observe and comply with laws, ordinances, regulations, and orders of authorities having jurisdiction over the work. Contractor's responsibilities include causing Contractor's agents, employees, subcontractors, and visitors to observe and comply with these laws, ordinances, regulations, and orders.

C. Protect and indemnify OCTA and its officers and employees against claims and liabilities arising from or based on Contractor's violation of a law, ordinance, regulation, or order.

D. Report to the OCTA, in writing within two days of discovery, discrepancies or inconsistencies discovered in the drawings, specifications, or contract documents in relation to laws, ordinances, regulations, or orders.

1.03 COORDINATION WITH UTILITIES

A. Coordinate with utility companies to ensure that utility locations are clearly marked for the duration of construction activities.

1.04 FIRE PROTECTION

A. Comply with Federal, State, county, municipal, and other laws and regulations pertaining to the prevention, control, and fighting of fire and to the conduct of welding and burning operations. Procure all related permits and licenses.

B. Supply fire-fighting equipment, supplies, and personnel and perform work required by laws and regulations pertaining to fire protection. If loss or damage results from fire or other cause, promptly repair loss or damage at no expense to OCTA.

1.05 PROTECTION OF PREMISES

A. Take precautions necessary and be responsible for maintaining lights, guards, signs, temporary passages, or other protection.

B. Restore loss or damage to materials, tools, or other articles used or held for use in connection with the work at no expense to OCTA.

C. Restore loss or damage as a result of fire or other cause attributable to Contractor or subcontractors at no expense to OCTA. Promptly repair damage and restore loss to materials, tools, or other articles used or held for use in connection with the work. Carry the work to completion without damage to or interference with other work or contiguous property.

1.06 USE OF EXPLOSIVES

A. Use of explosives is not permitted unless specifically detailed in the specifications or approved in advance in writing by OCTA.

1.07 WORK SITES AND WASTE MATERIAL

A. Obtain required approvals and bear costs of location, construction, maintenance, operation, removal, and transportation of sanitation facilities and waste material from work sites. Sanitation shall conform to local, State, and Federal requirements. Maintain work sites in a neat and orderly condition.

B. Before starting work, submit to OCTA a contingency plan for cleanup of accidental spillage of toxic or detrimental materials and for restoration of soil damaged thereby to near-natural conditions. Conduct the handling, storage, and disposal of waste material so as to avoid pollution of rivers, streams, ponds, or wells, and in compliance with local, State, and Federal environmental laws and regulations

C. OCTA shall acquire all applicable permits. These permits include, but would not be limited to, a Section 404 Wetlands Fill Permit from the USACE, or a Report of Waste Discharge from the Regional Water Quality Control Board (RWQCB), and a Section 401 Water Quality Certification from the RWCQB. Additionally, a Section 1602

Streambed Alteration Agreement from the California Department of Fish and Wildlife (CDFW) would be required for development that would cross or affect any stream course.

1.08 PUBLIC RELATIONS, CONVENIENCE, AND NOTICE OF DAMAGE

A. Conduct operations so as to offer the least possible obstruction and inconvenience to the public. Have under construction no greater length or amount of work than can be prosecuted properly with due regard to the rights of the public. Control temporary noise from construction equipment by using work hour controls and maintenance of muffler systems on machinery as necessary.

B. Provide, at Contractor's expense, adequate safeguards, safety devices, and protective equipment, and take other needed action, both at Contractor's own volition and as the OCTA may determine reasonably necessary, to protect property, life, health, and public safety in connection with the performance of the work covered by the contract.

C. Notify the OCTA in writing within 24 hours after causing injury to persons or damage to public or private property, including above and below ground structures. Contractor shall be responsible and liable for all damages and injuries.

1.09 ENVIRONMENTAL AND ANTI-POLLUTION

A. Comply with Federal, State, county, municipal, and other local laws and regulations pertaining to the environment, including noise, aesthetics, air quality, water quality, and resources of archaeological significance. Refer also to Section 01 14 43 Environmental Resource Protection for additional requirements. Expense of compliance with these laws and regulations is included in the lump sum and unit prices. Provide water used for dust control, or for pre-wetting areas to be paved, as required; no payment will be made by OCTA for this water.

B. Carry out grading and other work in a manner which will not create a pollution problem. Temporary construction roads, haul roads, and work areas shall be maintained free from excessive dust by an approved program of sprinkling, graveling, chemical treatment, temporary asphalt pavement, or combination thereof for the duration of the work.

C. Give attention to the effect of work operations upon the landscape, and take care to maintain natural surroundings undamaged. Disturbances of land or waters outside the limits of construction shall be rehabilitated by Contractor at its expense, when and as directed by the OCTA.

D. Prevent pollution of storm drains, rivers, streams, irrigation ditches, and reservoirs with sediment or other harmful materials. Fuels, oils, bitumen, calcium chloride, cement, or other contaminants that would contribute to water pollution shall not be dumped into or placed where they will leach into storm drains, rivers, streams, irrigation ditches, or reservoirs. If operating equipment in streambeds or in and

around open waters, protect the quality of ground water, wetlands, and surface waters.

E. Protect adjacent properties and water resources from erosion and sediment damage throughout the duration of the contract. Comply with applicable NPDES permits and Storm Water Pollution Prevention Plan (SWPPP) requirements. See Section 01 14 25, Procedures in Construction, and Section 01 57 13, Temporary Erosion and Sedimentation Control.

F. Do not conduct construction activities outside the right-of-way during muddy or wet ground conditions.

G. If archaeological remains are uncovered during construction, stop grading operations in the vicinity of the find and immediately notify the OCTA. Refer to Section 01 14 43, Environmental and Resource protection for additional requirements.

H. Costs associated with environmental and pollution control measures are considered incidental to the contract work, at no additional cost to OCTA.

I. Take the following actions and others as necessary to control environmental pollution:

1. Reduce air pollution by minimizing dust, containing chemical vapors, and controlling engine exhaust gases. Limit idling of machinery as directed by the OCTA.

2. Reduce water pollution by control of sanitary facilities and proper storage of fuel and other contaminants.

3. Reduce turbidity and siltation by controlling erosion and sedimentation.

4. Minimize noise levels.

5. Dispose of waste and spoil properly.

6. Prevent landscape defacement and damage.

J. Comply with South Coast Air Quality Management District (SCAQMD) Rule 403 to control fugitive dust emissions. In addition to the requirements contained therein, comply with the following:

1. Water all land clearing/earth moving activity areas to control dust as required by the OCTA. Areas shall remain visibly moist during active operations.

2. Visually inspect construction equipment prior to leaving work sites. Wash off any loose dirt with wheel washers as necessary.

3. Properly tune and maintain all construction equipment in accordance with manufacturer's specifications.

4. Maintain and operate construction equipment so as to minimize exhaust emissions. During construction activities, trucks and vehicles in loading and unloading queues shall have their engines turned off when not in use to reduce noise and exhaust emissions.

5. Establish on-site construction equipment staging areas and construction worker parking lots on either paved surfaces or unpaved surfaces treated with soil stabilization materials.

6. Use electricity from power poles where feasible, rather than temporary diesel or gasoline powered generators. Muffle noise from generators to the extent practical.

7. Use on-site mobile equipment powered by alternative fuel sources, such as ultra-low sulfur diesel, methanol, natural gas, propane or butane.

8. Construction grading or earth moving on days when wind gusts exceed or are forecast to exceed 25 mph is prohibited.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

PART 4 – MEASUREMENT AND PAYMENT

A. There will be no separate measurement for work of this section.

B. Full compensation for all work involved shall be included in the various items of work, and no separate payment shall be allowed therefor.

END OF SECTION

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SECTION 01 14 43

ENVIRONMENTAL RESOURCE PROTECTION

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Protection of species habitat.
2. Protection of archaeological resources.
3. Protection of paleontological resources (fossils).
4. Protection of human remains.
5. Protection from previously existing contamination.
6. Prevention of fuel spills and hazardous material spills.
7. Prevention of stored fuel leaks.
8. Protection of stormwater quality and control of stormwater quantity.
9. Prevention of traffic impacts.
10. Prevention of road damage.
11. Prevention of fugitive dust.
12. SCAQMD requirements.
13. Disposal of refuse.

B. Related Sections:

1. Section 01 14 25, Procedures in Construction.
2. Section 01 14 27, Legal Relations and Responsibility.

1.02 SUBMITTALS

A. Submit under Section 01 33 00, Submittal Procedures.

B. Written commitment to clean up leaks of fuel or hazardous materials.

C. Traffic control plan.

1.03 GENERAL

A. Provisions of this section are required to reduce or avoid potential environmental impacts of the project, in accordance with environmental mitigation measures imposed by the OCTA and other responsible agencies.

B. This section summarizes required mitigation. Proceed with mitigation only after consultation with OCTA and Contractor's biological, archaeological, and geological consultants.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

3.01 PROTECTION OF SPECIES HABITAT

A. Avoid placement of construction equipment and personnel within environmentally sensitive habitat areas used by target species of concern. Activities that cannot be conducted without placement of construction equipment and personnel within sensitive habitats shall be timed to avoid the breeding season of the target species of concern. Coordinate such activities and their timing with the OCTA.

B. Locate equipment storage, fueling and staging areas to minimize risks of direct drainage or runoff into riparian areas or other environmentally sensitive habitats. Take every precaution to prevent the release of toxic substances into surface waters. Report immediately all project spills of hazardous materials to the OCTA, OCTA, US Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and Regional Water Quality Control Board (RWQCB). Immediately clean up hazardous materials and remove all contaminated soils; dispose of only at approved disposal sites.

C. Stockpiling and staging of materials shall be limited to disturbed areas without native vegetation, areas to be impacted by the project or in non-sensitive habitats.

D. Establish No-Fueling zones within a minimum of 33 feet from all drainages and fire-sensitive areas.

E. Maintain project areas clean of debris to avoid attracting predators of the target species of concern. Enclose all food related trash in sealed containers and regularly

remove from site. Pets of construction personnel shall not be allowed on site where they may come into contact with any listed species.

F. If dead or injured listed species are located, biologist, in consultation with the OCTA, will notify the USFWS and the CDFG according to required protocols. Obtain instructions form the OCTA on how to proceed following such discovery.

G. Nesting avian species protected by the Migratory Bird Treaty Act (MBTA):

1. Prior to any construction or vegetation removal between February 15 and August 31, a nesting bird survey shall be conducted by contractor's qualified biologist of all habitats within 250 feet of the construction area. Surveys shall be conducted no less than 14 days and no more than 30 days prior to commencement of construction activities and surveys will be conducted in accordance with CDFG protocol as applicable. If no active nests are identified on or within 250 feet of the construction site, no further mitigation is necessary. A copy of the pre-construction survey shall be submitted to the City of Santa Ana. If an active nest of a MBTA protected species is identified onsite (per established thresholds) a 100-foot no-work buffer shall be maintained between the nest and construction activity. This buffer can be reduced in consultation with CDFW and/or USFWS.

2. Completion of the nesting cycle shall be determined by qualified ornithologist or biologist.

3.02 PROTECTION OF ARCHAEOLOGICAL RESOURCES

A. If evidence of an archaeological site or other suspected historical resource as defined by CEQA Guidelines Section 15064.5, including darkened soil representing past human activity, that could conceal material remains (e.g., worked stone, fired clay vessels, faunal bone, hearths, storage pits, or burials) are discovered during any project-related earth-disturbing activities (including projects that would not encounter undisturbed soils), all earth-disturbing activity within 100 feet of the find shall be halted and OCTA shall be notified.

3.03 PROTECTION OF PALEONTOLOGICAL RESOURCES (FOSSILS)

A. Should paleontological resources (i.e., fossil remains) be identified at a particular site during project construction, the construction foreman shall cease construction within 100 feet of the find until a qualified professional can provide an evaluation.

3.04 PROTECTION OF HUMAN REMAINS

A. In the event of the discovery of human remains during construction, procedures outlined in Section 15064.5(e) of the CEQA Guidelines shall be strictly followed. Upon discovery all excavation at the site or any nearby area reasonably suspected to overlie human remains shall cease immediately. Notify OCTA immediately. OCTA

will notify County Coroner who will determine if remains are Native American. If the remains are determined to be Native American, the coroner will contact the Native American Heritage OCTA (NAHC). The NAHC will identify the Most Likely Descendent (MLD). The MLD will make recommendations for the appropriate treatment and disposition of the remains and any associated artifacts in accordance with Public Resources Code (PRC), Section 5097.98. Do not commence construction in the area until notified to do so by the OCTA.

3.05 PROTECTION FROM PREVIOUSLY EXISTING CONTAMINATION

A. In the event that previously unknown or unidentified soil and/or groundwater contamination that could present a threat to human health or the environment is encountered during construction of the proposed project, construction activities in the immediate vicinity of the contamination shall cease immediately. If contamination is encountered, a Risk Management Plan shall be prepared and implemented that (1) identifies the contaminants of concern and the potential risk each contaminant would pose to human health and the environment during construction and post development and (2) describes measures to be taken to protect workers, and the public from exposure to potential site hazards. Such measures could include a range of options, including, but not limited to, physical site controls during construction, remediation, long-term monitoring, post development maintenance or access limitations, or some combination thereof. Depending on the nature of contamination, if any, appropriate agencies shall be notified. If needed, a Site Health and Safety Plan that meets Occupational Safety and Health Administration requirements shall be prepared and in place prior to commencement of work in any contaminated area.

3.06 PREVENTION OF FUEL SPILLS AND HAZARDOUS MATERIAL SPILLS

A. Store fuel, hazardous materials, and chemicals of all types in a contained staging area.

B. Conduct equipment refueling and maintenance in the contained staging area.

C. Check vehicles daily for leaks.

3.07 PREVENTION OF STORED FUEL LEAKS

A. Provide berms or other secondary containment at fuel/chemical storage areas.

B. Test storage tanks, valves, etc., for leaks.

C. Submit a written commitment to provide labor, equipment, and materials to promptly clean up any leakage.

3.08 PROTECTION OF STORMWATER QUALITY AND CONTROL OF QUANTITY

A. Comply with the stormwater quality plan prepared before issuance of construction permits. The plan will incorporate the state's industrial best management practices and other techniques if more effective. Refer to Section 01 14 25 Procedures in Construction for additional requirements.

B. Runoff from impervious areas is to be detained, treated to industrial standards, and released under control.

3.09 PREVENTION OF TRAFFIC IMPACTS

A. The Contractor shall prepare a Traffic Management Plan in conjunction with local jurisdictions addressing the following:

1. Detours.

2. Coordination with any other construction projects.

3. Length and timing of street closures.

4. Coordination with police and fire departments regarding changes in emergency access routes.

5. Temporary access routes and signage for any affected commercial property.

6. Contact information for OCTA, contractors and their personnel.

B. Conform to all conditions required therein. Notify Resident Inspector in advance of any constructions activities that could potentially violate the requirements and conditions set forth in the plan.

C. Construction parking shall be configured to minimize traffic interference during the construction period and, therefore, reduce idling of traffic.

D. Temporary traffic controls are provided, such as a flag person, during all phases of construction to facilitate smooth traffic flow.

E. Construction activities that affect traffic flow on the arterial system be scheduled to off-peak hours (10:00 A.M. to 4:00 P.M.).

F. Dedicated on-site and off-site left-turn lanes on truck hauling routes be utilized for movement of construction trucks and equipment on site and off site to the extent feasible during construction activities.

G. To ensure adequate access for emergency vehicles when construction activities would result in temporary lane or roadway closures, the contractor shall consult with the City of Santa Ana, Police and Fire Departments to disclose temporary lane or roadway closures and alternative travel routes. The contractor shall be required to

keep a minimum of one lane in each direction free from encumbrances at all times on perimeter streets accessing the project site. If construction activities require the complete closure of a roadway segment, the Contractor shall coordinate with the City of Santa Ana, Police and Fire Departments to designate proper detour routes and signage indicating alternative routes.

3.10 PREVENTION OF ROAD DAMAGE

A. Before and after offsite road and utility construction, videotape the affected roadway and its access roads.

B. Temporarily repair roadway damage caused during construction.

C. Permanently restore damaged roadway to its original condition immediately after offsite improvements are completed.

D. Establish construction truck routes with local jurisdictions before beginning offsite work. Refer to Section 01 14 27 Legal Relations and Responsibility for additional requirements.

E. Consult with local jurisdictions to coordinate offsite work with other projects in the vicinity.

3.11 SCAQMD REQUIREMENTS

A. Refer to Section 01 14 27 Legal Relations and Responsibility for these requirements.

B. All diesel-powered equipment used will be retrofitted with after-treatment products (e.g., engine catalysts).

C. All heavy-duty diesel-powered equipment operating and refueling at the project site use low-NOX diesel fuel to the extent that it is readily available and cost effective (up to 125 percent of the cost of California Air Resources Board diesel) in the South Coast Air Basin (this does not apply to diesel powered trucks traveling to and from the project site).

D. Construction equipment engines be maintained in good condition and in proper tune per manufacturer's specification for the duration of construction.

E. Construction operations rely on the electricity infrastructure surrounding the construction site rather than electrical generators powered by internal combustion engines.

F. As required by South Coast Air Quality Management District Rule 403—Fugitive Dust, all construction activities that are capable of generating fugitive dust are required to implement dust control measures during each phase of project development to reduce the amount of particulate matter entrained in the ambient air. These measures include the following:

1. Application of soil stabilizers to inactive construction areas.

2. Quick replacement of ground cover in disturbed areas.

3. Watering of exposed surfaces three times daily.

4. Watering of all unpaved haul roads three times daily.

5. Covering all stock piles with tarp.

6. Reduction of vehicle speed on unpaved roads.

7. Post signs on-site limiting traffic to 15 miles per hour or less.

8. Sweep streets adjacent to the project site at the end of the day or hourly per Section 01 14 27, 1.10 J if visible soil material is carried over to adjacent roads.

9. Cover or have water applied to the exposed surface of all trucks hauling dirt, sand, soil, or other loose materials prior to leaving the site to prevent dust from impacting the surrounding areas.

3.12 PREVENTION OF NOISE IMPACTS

A. Limit noise-producing activities to hours required by the local jurisdictions for construction activities.

B. Construction-related equipment, including heavy-duty equipment, motor Vehicles, and portable equipment, shall be turned off when not in use for more than 30 minutes. Diesel-fueled commercial motor vehicles with gross vehicular weight ratings of greater than 10,000 pounds shall be turned off when not in use for more than 5 minutes.

C. Contractor shall require by contract specifications that the following construction best management practices (BMPs) be implemented by contractors to reduce construction noise levels:

1. As requested by the OCTA's Project Manager and/or specified in Contract Document, two weeks prior to the commencement of construction, the Contractor shall provide notification to surrounding land uses within 300 feet of the project site disclosing the construction schedule, including the various types of activities that would be occurring throughout the duration of the construction period.

2. Ensure that construction equipment is properly muffled according to industry standards and be in good working condition.

3. Place noise-generating construction equipment and locate construction staging areas away from sensitive uses, where feasible.

4. Schedule high noise-producing activities between the hours of 8:00 A.M. and 3:30 P.M. to minimize disruption on sensitive uses, Monday through Friday.

5. Implement noise attenuation measures, which may include, but are not limited to, temporary noise barriers or noise blankets around stationary construction noise sources.

6. Use electric air compressors and similar power tools rather than diesel equipment, where feasible.
7. Construction-related equipment, including heavy-duty equipment, motor vehicles, and portable equipment, shall be turned off when not in use for more than 10 minutes.

8. Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted at all construction entrances to allow for surrounding owners and residents to contact the job superintendent. If the City or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the reporting party.

D. Construction staging areas along with the operation of earthmoving equipment within the project area would be located as far away from vibration and noise sensitive sites as possible.

E. Heavily loaded trucks used during construction would be routed away from residential streets.

3.13 DISPOSAL OF REFUSE

The Contractor shall establish a construction management plan with Disposal Company to divert a target of 50 percent of construction, demolition, and site clearing waste.

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for the work of this section.

END OF SECTION

SECTION 01 25 00

SUBSTITUTION PROCEDURES

PART 1 - GENERAL

1.02 SUMMARY

A. Section Includes:

1. Administrative and procedural requirements for requesting substitutions.

B. Definitions:

1. Substitutions: Requests by the Contractor to deviate from specified requirements for products, material, equipment, and methods, or to provide products other than those specified, shall be considered requests for substitutions, limited to the following conditions:

a. Substitutions requested during the bidding period and accepted prior to the execution of the Contract.

b. Substitutions requested after execution of the Contract.

C. Substitution Provisions: Refer to substitution provisions of the Instructions to Bidders, in addition to the following specific requirements.

D. Substitution Request Submittal Period:

1. Time Limit:

a. Substitutions requested during Bidding Period: OCTA will consider requests for substitutions if received during bidding. Request permission for substitutions from the OCTA per provisions of the Instructions to Bidders. If approved, OCTA will issue an addendum allowing all bidders to incorporate the request substitution.

b. Substitutions requested after execution of Contract: Only within 14 calendar days of the Notice to Proceed will the Authority and the Engineer consider requests for substitutions, requests submitted after this will be denied.

2. Product Availability Waiver: Substitutions will be considered 21 calendar days of execution of the Agreement only when a product becomes unavailable due to no fault of the Contractor. Failure to place orders for specified products sufficiently in advance of required date for incorporation into the Work will not be considered as

a valid reason for which Contractor may request a substitution or deviation from requirements of the Drawings and Specifications.

1.02 SUBMITTAL REQUIREMENTS

A. Substitution Requests: Submit three copies of each request for consideration to the OCTA. Identify product or fabrication or installation method proposed for substitution. Include specification section number and title and drawing numbers and titles.

1. Substitution Request Form: Use form acceptable to OCTA Project Manager.

2. Documentation: Substitutions will not be considered when they are indicated or implied on shop drawings, product data or sample submittals without a separate written request, or when acceptance will required substantial revision of the Contract Documents. Show compliance with requirements and the following, as applicable:

a. Statement indicating why specified material or product cannot be provided.

b. Coordination information, including a list of changes or modifications needed to other parts of the work and to construction performed by OCTA and separate contractors, which will be necessary to accommodate proposed substitution.

c. Detailed comparison of significant qualities of proposed substitution with those of the work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated or specified.

d. Product data, including drawings and descriptions of products and fabrication and installation procedures.

e. Samples, where applicable or requested.

f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.

g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated or specified.

h. Research/evaluation reports evidencing compliance with building code in effect for project, from a model code organization acceptable to Inspector and authorities having jurisdiction.

i. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the work, including effect on the overall contract time. If specified product or method of construction cannot be provided within the contract time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.

j. Cost information, including a proposal of change, if any, in the contract sum.

k. Contractor's certification that Contractor has investigated proposed substitution and that it complies with requirements in the contract documents and is appropriate for applications indicated. Contractor further certifies that Contractor will provide the same or better guarantee or warranty as for specified product or method of construction. Contractor shall also certify that Contractor will coordinate installation of accepted substitution into work, making any changes as may be required for work to be complete in all respects as specified.

l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.

m. Only one request for substitution will be considered for each product.

n. If the proposed substitution is not accepted, provide the specified product.

3. OCTA Project Manager's Action: If necessary, OCTA Project Manager will request additional information or documentation for evaluation within 7 days of receipt of a request for substitution. OCTA Project Manager will notify Contractor of acceptance or rejection of proposed substitution within 15 days of receipt of request, or 7 days of receipt of additional information or documentation, whichever is later.

   a. Form of Acceptance: Change Order, if costs involved; otherwise written approval.

   b. Use product specified if OCTA Project Manager is unable to make a decision on proposed substitution within time allocated.

1.03 COMPARABLE PRODUCTS

A. See Section 01 60 00, Product Requirements, for discussion of comparable products.

1.04 PRODUCT SUBSTITUTIONS

A. OCTA Project Manager will consider Contractor's request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, OCTA Project Manager will return requests without action, except to record noncompliance with these requirements:

1. Requested substitution is submitted within the time frame state herein above.

2. Requested substitution offers OCTA a substantial advantage in cost, time, energy conservation, or other considerations, after deducting additional responsibilities OCTA must assume. OCTA's additional responsibilities may include compensation to consultants for redesign and evaluation services, increased cost of other construction by OCTA, and similar considerations.

3. Requested substitution does not require extensive redesign of the project or revisions to the contract documents.

4. Requested substitution is consistent with the contract documents and will produce indicated results.

5. Substitution request is fully documented and properly submitted.

6. Requested substitution will not adversely affect Contractor's Construction Schedule.

7. Requested substitution has received necessary approvals of authorities having jurisdiction.

8. Requested substitution is compatible with other portions of the work.

9. Requested substitution has been coordinated with other portions of the work.

10. Requested substitution provides specified warranty.

11. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of the work, is uniform and consistent, is compatible with other products, and is acceptable to all contractors involved.

B. Substitutions will not be considered if they are indicated or implied on shop drawings or project data submittals or Requests for Information without formal submittal request detailed in this section.

1.05 AVAILABILITY OF SPECIFIED ITEMS

A. Prior to execution of Contract, Contractor shall verify that all specified items will be available as required by the schedule for orderly and timely progress of the work. Notify OCTA Project Manager if specified items will not be available.

B. Costs of delays because of non-availability of specified items, when such delays could have been avoided by the Contractor, will deducted from amounts due or to become due the contractor, and will not be borne by OCTA.

C. Substitutions during construction for prior approved items will only be considered under the following circumstances:

1. Substitution is required for compliance with subsequent interpretation of code.

2. Specified item cannot be provided within the contract time or becomes unavailable through no fault of contractor.

3. Subsequent information discloses that specified item or system will not perform properly or fit in designated space, or manufacturer or supplier refuses to certify or warrant performance as required.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used

PART 4 – MEASUREMENT AND PAYMENT

A. No separate measurement will be made for the work of this section.

B. No separate payment will be made for the work of this section.

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SECTION 01 26 00

CONTRACT MODIFICATION PROCEDURES

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Administrative and procedural requirements for handling and processing contract modifications.

B. Related Sections:

1. Section 01 60 00, Product Requirements, for procedures to approve comparable products.

2. Section 01 25 00, Substitution Procedures, for procedures to propose substitutions.

3. Section 01 26 13 Requests for Information, for procedures to clarify and interpret the contract documents.

1.02 MINOR CHANGES IN THE WORK / FIELD ORDERS

A. OCTA will issue supplemental instructions authorizing minor changes in the work, not involving adjustment to the Contract Price or the Contract Time, in written form.

1.03 DOCUMENTATION OF CHANGES IN AGREEMENT PRICE AND AGREEMENT TIME

A. Documentation of Changes in Contract Sum and Contract Time: Provide full information required for evaluation of proposed changes and to substantiate costs of changes in the Work.

1. Maintain detailed records of Work completed on time and material basis. Contractor shall use “Daily Extra Work Report” provided by the Authority. All extra work reports shall be signed by the Authority and the Contractor verifying all extra materials and labor incorporated into the project at the end of each work day.

2. Document each quotation for a change in Contract Sum and Contract Time, with sufficient cost breakdown data for labor, materials, and equipment to allow evaluation of the quotation.

3. Provide details of cost of all material used for change in work. Provide detail of labor hours expended in change of work, and wage rate of worker. Provide total of hours equipment was used in the work, and hourly rate of the equipment.

B. Additional Data: Upon request by the Engineer, provide additional data to support computations:

1. Quantity of product, material, labor, and equipment.

2. Overhead and profit (20% includes all superintendence, taxes, insurance, bonds, overhead and profit, etc.). 20 percent overhead and profit shall be divided between Contractor and sub-contractor(s).

3. Justification for change in Contract Time, if claimed.

4. Credit for deletions from Contract, similarly documented.

1.04 CHANGE PROCEDURES

A. Change Procedure – General: The following describe administrative procedures to be followed in complying with provisions of the Conditions of the Contract for changes in the Work.

B. The Engineer's Supplemental Instructions: Minor changes in the Work, not involving an adjustment in either the Contract Sum or Contract Time, as authorized by the Conditions of the Contract. The Contractor shall take prompt action on such instructions.

C. OCTA-Initiated Proposal Requests: OCTA will issue a detailed description of proposed changes in the work that may require adjustment to the Contract Price or the Contract Time. If necessary, the description will include supplemental or revised drawings and specifications.

1. Proposal Requests issued by OCTA are not instructions either to stop work in progress or to execute the proposed change.

2. Proposal Request may include an estimate of additional or deductions in Contract Sum or Contract Time for executing the change and may include stipulations regarding overtime work and period of time the requested response from the Contractor shall be considered valid.

a. Within time specified in Proposal Request or five (5) calendar days, when not otherwise specified, after receipt of Proposal Request, submit a quotation estimating cost adjustments to the Contract Price and the Contract Time necessary to execute the change. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.

b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.

c. Include costs of labor and supervision directly attributable to the change.

d. Include an updated Contractor's construction schedule that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

e. Submit name of individual authorized to receive construction change documents and who is responsible for informing others in Contractor's employ or subcontractors of changes in the Work.

f. Quotation Form: Use forms acceptable to OCTA.

D. Upon OCTA's approval of a Proposal Request, OCTA will issue a Change Order for signatures of OCTA and Contractor. The OCTA and Contractor will sign the Change Order indicating acceptance and approval of the change.

1.05 WORK CHANGE DIRECTIVE

A. Work Change Directive: In accordance with provisions of the Conditions of the Contract, OCTA may issue a Work Change Directive. A Work Change Directive instructs Contractor to proceed with a change in the work, for subsequent inclusion in a Change Order.

B. Work Change Directive contains a complete description of change in the work. It also designates method to be followed to determine change in the Contract Price or the Contract Time. Contractor shall promptly execute the change in the Work.

C. Changes Based on Stipulated Sum or Time: Construction Change Directive shall be based on stipulated adjustment in Contract Sum and Contract Time as mutually-acceptable to the Authority and Contractor and the change shall be performed immediately. A Change Order for this amount shall be executed at the earliest convenience of all parties. Contractor shall provide a cost estimate based on section 1.03 of this section.

D. Changes Based on Unit Costs or Quantities: When scope of change cannot be accurately determined in advance, a Construction Change Directive shall be executed based on mutually-acceptable quantities and pre-determined unit prices. Actual costs shall be determined after completion of the Work and a Change Order for this amount shall be executed.

E. Changes Based on Time and Material Costs: If directed for changes for which amounts are not defined or are disputed, a Construction Change Directive will be issued by the Authority and Contractor shall execute the Work, keeping accurate records of time, both labor and calendar days, and cost of materials. See Section 1.03. A. 1.

F. Cost and Time Resolution: If amounts for changes in Agreement price and Agreement time cannot be agreed upon by the Authority and Contractor, amounts shall be resolved in accordance with requirements of the Conditions of the Contract for resolution of disputes.

G. Documentation: Maintain detailed records on a time and material basis of work required by the Work Change Directive. The total construction cost of the change shall not exceed the mutually agreed adjustment in Contract Sum and Contract time of the Change Order.

H. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the contract.

1.06 CHANGE ORDER

A. Change Orders, General:

1. In accordance with provisions of the Conditions of the Contract, the Engineer and Authority will review Contractor's response to a Proposal Request or a Construction Change Directive and determine with the Contractor the acceptable amount, if any, of the change in Contract Sum and Contract Time.

2. When agreement is reached on the change in Contract Time and Sum, the Engineer will prepare a Change Order, with supplementary documents (Contractor's cost estimate) as necessary to describe the change and the associated costs and schedule impacts, if any.

3. The Authority and Contractor will sign the Change Order indicating acceptance and approval of the change.

1.07 RECONCILIATION OF CHANGE ORDER

A. Schedule of Values: Promptly revise the Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjustment to the Contract Sum.

B. Schedules: Promptly revise progress schedules to reflect changes in Contract Time, revising sub-schedules to adjust time for other items of Work as may be affected by the change. Submit revised schedules at the next Application for Payment following approval and acceptance of the Change Order.

C. Change in work due to request for information, or any other reason shall not be reason for claims of delays by the contractor. Contractor shall allow the Consultant seven (7) days to respond to request for information, and additional fourteen (14) days to the Authority to make necessary changes to resolve changes in work and change orders. Allow the Authority 30 calendar days for final Change Order approval.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

PART 4 - MEASUREMENT AND PAYMENT

Not Used.

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SECTION 01 26 13

REQUESTS FOR INFORMATION

PART 1 - GENERAL

1.01 DESCRIPTION

A. Section Includes:

1. The general requirements for Contractor's requests for information and pertains to all portions of the contract documents.

1.02 DEFINITION

A. A "Request for Information" is defined as a document submitted by the Contractor requesting clarification of a portion of the contract documents, hereinafter referred to as RFI.

B. All questions and requests for clarification of the Contract Documents from the contractor and subcontractors shall be submitted in writing as a "Request for Information".

1.03 CONTRACTOR'S REQUESTS FOR INFORMATION (RFI)

A. When the Contractor is unable to determine from the contract documents, the exact material, process or system to be installed, the Contractor shall request the OCTA to make a clarification of the indeterminate item. Wherever possible, such clarification shall be requested at the next appropriate project meeting, with the response entered into the meeting minutes. When clarification at the meeting is not possible, either because of the urgency of the need or the complexity of the item, the Contractor shall prepare and submit an RFI to the OCTA.

B. RFI's shall be submitted on a form provided by or approved by the OCTA. The Contractor will be given the form electronically upon Notice To Proceed.

C. RFI forms shall be completely filled in, and if prepared by hand, shall be fully legible after photocopying. Each page of attachments to RFI's shall bear the RFI number. Each RFI shall reference a drawing number and/or Specification Section. The Contractor shall include sketches, mark ups on the contract drawings, and/or photographs to clearly demonstrate its requests or questions in each RFI.

D. RFI's from Subcontractors or Material suppliers shall be submitted through, reviewed by, and signed by the Contractor prior to submittal to the OCTA.

E. Prior to submitting an RFI, the Contractor shall carefully study the Contract Documents to assure that the requested information is not available therein. Contractor shall be responsible for insuring that RFI's are not frivolous or excessive.

F. Frivolous RFIs: Frivolous RFIs include requests for information shown in the contract documents or resulting from Contractor's failure to study and compare contract documents or to coordinate its own work; and RFIs that are incomplete, contain errors, or include unrelated items. The cost in time and materials on the part of OCTA and related design professionals to review unnecessary or frivolous RFIs will be assessed to the Contractor.

G. RFI's shall not be used for the following purposes:

1. To request approval of submittals.

2. To request approval of substitutions.

3. To request changes which entail additional cost or credit or changes in the contract time.

4. To request different methods of performing work than those shown or specified.

H. In the event the Contractor believes that a clarification by the OCTA results in additional cost, the Contractor shall not proceed with the Work indicated by the RFI until a Change Order is prepared and approved. Answered RFI's shall not be construed as approval to perform extra work.

I. RFIs submitted to request clarification of issues related to means, methods, techniques and sequencing of construction, or to establish scope of subcontractors' work will be returned without response.

J. Unanswered RFI's will be returned with a stamp or notation indicating: "Not Reviewed."

K. Assign each RFI a sequential number. Contractor shall prepare and maintain a log of RFI's and, at any time requested by the OCTA, Contractor shall furnish copies of the log showing all outstanding RFI's. Contractor shall also note all unanswered RFI's in the log.

L. Contractor shall allow for 14 calendar days review and response time for RFI's.

1.04 RESPONSE TO RFI'S

A. OCTA's response to RFIs will be in writing. RFIs received after 12:00 noon will be considered as received on the following working day for purposes of establishing the start of the 14 day response time. Contractor shall indicate on the RFI the date by which response is required. OCTA's response may include a request for additional

information, in which case OCTA's time for response will date from time of receipt of additional information.

B. No extension of time will be granted because of Contractor's failure to submit RFIs in a timely manner or to allow a sufficient amount of time for review.

C. OCTA's response will confirm a stated interpretation or solution or otherwise interpret the design intent; this may include an alternative solution, consistent with the design intent of the Contract Documents. Where such a solution would result, in the contractor's opinion, in an extra cost or time extension to the project, contractor shall notify the OCTA prior to implementing the response.

D. Each RFI and the OCTA's response shall become a part of the Contract Documents. To the extent that OCTA's response changes, modifies or amends any portion of the Contract Documents, the response shall be deemed sufficient. No revised Contract Documents will be issued unless the RFI response is insufficient in providing direction to the Contractor. Whenever possible, revised contract documents will be issued in 8-1/2x11 inch or 11x17 inch size, suitable for inclusion with the RFI response. Re-issuance of full size drawings or sets of drawings will be kept to an absolute minimum.

1.05 SPOKEN COMMUNICATIONS

A. Any spoken instructions given to the Contractor on the job site by any person other than the OCTA is subject to nullification by the OCTA. Contractor shall obtain written documentation of any and all spoken instructions (especially if instructions may reflect an addition to or deduction from the contract sum) from the OCTA prior to commencement of the work resulting from the verbal instructions.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used.

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this Section.

END OF SECTION

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SECTION 01 29 00

PAYMENT PROCEDURES

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Administrative and procedural requirements necessary to prepare and process Applications for Payment.

2. Administrative and procedural requirements for preparing and submitting a Schedule of Values.

B. Related Sections:

1. Section 01 26 00, Contract Modification Procedures, for administrative procedures for handling changes to the contract.

2. Section 01 32 00, Construction Progress Documentation, for administrative requirements governing the preparation and submittal of the Contractor's construction schedule.

3. Section 01 33 00, Submittal Procedures, for administrative requirements governing the preparation and submittal of the Schedule of Values.

1.02 DEFINITIONS

A. Schedule of Values (Cost Breakdown): A document furnished by Contractor allocating portions of the Contract Price to various portions of the work and used as the basis for reviewing Contractor's Applications for Payment. The Contract Scope of Work including any and all required deliverables are considered by OCTA to be part of the Schedule of Values upon which progress payments will be made to the Contractor, and if not clearly identified in the Contractor’s Schedule of Values, 100% of progress payment will not be made until all required Scope of Work items are completed and received by OCTA.

1.03 SCHEDULE OF VALUES

A. Prepare and submit within 15 calendar days after the effective date in the Notice to Proceed, but in any event prior to the Contractor’s first Application for Payment, for approval by OCTA, a Schedule of Values. If the schedules are affected by Change Orders, prepare and submit updated copies of the schedules under this Section.

B. Submit, under the provisions of Section 01 33 00, Submittals, and a Schedule of Values including the following information:

1. Identify items in the Schedule of Values with the title of Project and location, agreement number, name and address of the Contractor, date of submission, Specification Section/Subsection number, Specification Section/Sub-section title, and Bid item number as contained in the Schedule of Quantities and Prices submitted with the Contractor's bid.

2. Schedule shall list the installed value of the component parts of the Work in sufficient detail to serve as a basis for computing values as itemized in the Cost Breakdown for progress payments during construction. Percentage of completed items installed will be paid.

3. Provide a line item to identify each of the following:

   a. Bonds;

   b. Insurance premiums;

   c. Mobilization cost (not to exceed 10% of the total contract amount).

   d. Field supervision;

4. Upon request by OCTA, support values given with data, which will substantiate the correctness of the values.

5. In addition to the requirements stated in the General Conditions, the Schedule of Values shall be in the form of an Excel hardcopy spreadsheet along with the electronic file on a read-only compact disk (CD-ROM).

C. Each item shall include a directly proportional amount of Contractor's overhead and profit, which will not be paid separately.

D. Lump Sum bid payment based on Schedule of Values approved by OCTA based on percentage of work completed.

E. The sum of all values listed in the schedule shall equal the total contract Sum.

F. Cost loading of Schedule of Values is for fund management purposes only and will not be constructed to establish unit cost.

G. OCTA's Review: OCTA will review the Schedule of Values to assure that they are reasonable and balanced. When approved, they will be used in reviewing and approving the monthly partial payment requests. If review by OCTA indicates that changes to the schedules are required, upon five (5) calendar days the Contractor shall revise and resubmit schedules in the same manner as the original schedules were prepared and submitted.

1.04 APPLICATION FOR PAYMENT – GENERAL

A. Progress Payment Application: The Authority, no later than 25th day of each month, shall prepare a progress payment estimate based on the estimated percentage of completion of each Bid Item and on the Contractor's actually incurred allowable expenses on such Bid Items. The Authority will issue the progress payment, in the amount it deems appropriate, by approximately the 15th day of the following month.

B. Application for progress payments and partial progress payments shall be in accordance with Contract General Provision and the approved Schedule of Values.

C. The Contractor shall submit the progress payment application prepared by the Authority and signed by the Contractor's authorized representative and furnish an invoice for further process based on a schedule to be established at the pre-construction meeting. Submit other documentation such as certified payroll, monthly labor utilization form, and waivers as required by contract.

D. For the final payment, OCTA shall determine if all Work of the Contract has been performed by the Contractor according to the provisions of the Contract. OCTA shall make a final estimate and determine the amount remaining due the Contractor. This amount shall include any amounts withheld from previous estimates, but exclude any and all deductions that have been or should be made at the time under other sections of these Specifications.

1.05 WORK AUTHORIZATION CHANGE NOTICE WORK

A. Measurement and payment of Work associated with a Work Authorization Change Notice (WACN) shall be as detailed in the OCTA's Exhibit A.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

Not Used.

PART 4 - MEASUREMENT AND PAYMENT

Not Used.

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SECTION 01 31 00

PROJECT MANAGEMENT AND COORDINATION

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Administrative provisions for coordinating construction operations on project including, but not limited to, the following:

   a. General project coordination procedures.

   b. Administrative and supervisory personnel.

   c. Project meetings.

B. Contractor is responsible for coordination with OCTA selected material suppliers and contractors involved in the project.

C. Related Sections:

1. Section 01 32 00, Construction Progress Documentation, for preparing and submitting Contractor's construction schedule.

2. Section 01 43 01, Contractor Qualifications and Requirements, for required staff and qualifications.

3. Section 01 71 23, Field Engineering, for procedures for coordinating general installation and field-engineering services, including establishment of benchmarks and control points.

4. Section 01 77 00, Closeout Procedures, for coordinating closeout of the contract.

5. Individual specification sections for normal startup, testing, and adjusting procedures required.

1.02 COORDINATION

A. Coordination: Coordinate construction operations with those of other OCTA selected material suppliers and contractors. Coordinate construction operations included in different sections of the specifications to ensure efficient and orderly installation of each part of the work. Coordinate construction operations, included in different sections, which depend on each other for proper installation, connection, and

operation. Contractor is responsible for progress and performance of the work, and shall provide direction to others as required to properly coordinate trades and processes.

1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the work depends on installation of other components, before or after its own installation.

2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.

3. Make adequate provisions to accommodate items scheduled for later installation.

4. Coordinate equipment installation requirements with equipment contractors to prevent delays and facilitate proper installation. Acknowledge, accommodate, and respect equipment contractors' needs for access to the work for the periods required to complete equipment installation. Incorporate these periods into the construction progress schedule and work plan before commencing work.

B. Prepare memoranda for distribution to each party involved (including OCTA and separate contractors and suppliers) outlining special procedures required for coordination. Include such items as required notices, actions, reports, and list of attendees at meetings.

C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities and activities of other contractors to avoid conflicts and to ensure orderly progress of the work. Such administrative activities include, but are not limited to, the following:

1. Preparation of Contractor's construction schedule.

2. Preparation of the schedule of values.

3. Installation and removal of temporary facilities and controls.

4. Delivery and processing of submittals.

5. Progress meetings.

6. Pre-installation conferences.

7. Startup and adjustment of systems.

8. Training activities.

9. Project closeout activities.

D. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

1.03 KEY PERSONNEL

A. Key Personnel Names: Within 15 days of date of Notice to Proceed, submit a list of key personnel assignments, including superintendent and other personnel in attendance at project site. Conform to requirement of Section 01 43 01 Contractor Qualifications and Requirements. Identify individuals and their duties and responsibilities; list addresses and telephone numbers, including home, office, and cellular telephone numbers and email addresses. Provide names, addresses, and telephone numbers of individuals assigned as standbys in the absence of individuals assigned to project.

1. Post copies of list in project meeting room and in temporary field office. Keep list current at all times.

1.04 INITIAL CONSTRUCTION MEETING

A. The OCTA will schedule the Initial Construction Meeting (Pre-construction meeting) after the Contractor has been provided the written Notice to Proceed.

B. OCTA will distribute a notice of this meeting, along with an agenda of the subjects to be addressed at least one (1) work day prior to the meeting.

C. Contractor's Construction Project Manager and key staff, as defined in Section 01 43 01, and as identified per the requirements of 1.03, shall attend the meeting.

D. The following is a minimum agenda for the Initial Construction Meeting:

1. OCTA will explain and discuss:

a. Insurance, laws, codes, maintenance of traffic, permits, quality control, inspection, and related items.

b. Preparation, submittal, and review of Site Specific Work Plans (SSWP)

c. Procedures for processing RFI's and Submittals

d. Monthly estimate cutoff dates, and procedures for processing Applications for Payment.

e. Distribution of the contract documents.

f. Preparation of record documents.

g. Use of the premises.

h. Work restrictions and permitted working hours.

i. Owner's occupancy requirements.

j. Responsibility for temporary facilities and controls.

k. Procedures for disruptions and shutdowns.

l. Construction waste management and recycling.

m. Parking availability.

n. Areas available for Contractor's Office, work, and storage areas.

o. First aid.

p. Security.

q. Progress cleaning.

2. The Contractor shall introduce, explain, and discuss the following:

a. Contractor's representatives and personnel, briefly describing each person's responsibilities, and furnishing complete contact information for the Contractor's staff.

b. Arrangements for safety, first aid, emergency actions, and security.

c. A list of Subcontractors and suppliers.

d. Sequence of critical Work, the construction schedule and the submittal schedule.

e. Plan for construction sequencing of entire Contract, general worksite layout, temporary facilities, erosion and sedimentation control plans, haul routes, noise, air and water pollution control and temporary closure plans.

f. Breakdown of lump sum and Unit Price items.

g. Status of coordination and notification for utility Work.

h. Locations and use of office, storage, parking and construction areas.

i. Method of providing security to the Worksite.

j. Construction methods and coordination of Work within the provisions of the Contract Documents.

k. Coordination with the Work of Subcontractors and procedures for sharing access to the Worksite.

l. Plan for deliveries of major construction equipment and deliveries of long lead-time materials and products needed in the construction of this Contract.

1.05 PROGRESS MEETINGS

A. Progress meetings will be scheduled on a weekly basis and more often as necessary by the OCTA. OCTA will make every effort to accommodate the Contractor's availability in establishing the meeting schedule.

B. Attendees: In addition to OCTA and representatives of the Contractor, subcontractors, suppliers, and other entities concerned with current progress or involved in planning, coordination, or performance of future activities shall be represented at these meetings. All participants at the meeting shall be familiar with project and authorized to conclude matters relating to the work.

C. Meetings will focus on the competent and timely execution of the Work under the Contract. The OCTA will chair these meetings. Weekly site meetings will start when Contract Work commences. At the weekly meetings the Contractor shall present a review of the following topics:

1. Safety and accidents.

2. Contractor's Schedule status.

3. Progress according to the current approved CPM schedule.

4. Presentation of new 28-day schedule.

5. Critical activities on the 28-day schedule.

6. OCTA's needs and requests

7. Specific late items of Work.

8. Overall Project schedule status.

9. Contract time.

10. Public impacts, notifications, and contacts.

11. RFI, submittal and change order logs and status.

12. Contract Issues including:

    a. Status of proposal requests.

    b. Pending changes.

    c. Status of Change Orders.

    d. Pending claims and disputes.

    e. Documentation of information for payment requests.

1.06 PRE-INSTALLATION CONFERENCES:

A. Contractor shall conduct a pre-installation conference at Project site before each construction activity that requires coordination with other construction, as required in individual specification sections.

B. Attendees: Installer and representatives of manufacturers and fabricators involved in or affected by the installation and its coordination or integration with other materials and installations that have preceded or will follow, shall attend the meeting. Advice OCTA of scheduled meeting dates.

C. Suggested Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:

    1. Contract Documents.

    2. Options.

    3. Related RFIs.

    4. Purchases.

    5. Deliveries.

    6. Submittals.

7. Review of any required mockups.

8. Possible conflicts.

9. Compatibility problems.

10. Time schedules.

11. Weather limitations.

12. Manufacturer's written recommendations.

13. Warranty requirements.

14. Compatibility of materials.

15. Acceptability of substrates.

16. Installation procedures.

17. Coordination with other work.

18. Required performance results.

19. Protection of adjacent work.

D. Contractor shall record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.

E. Reporting: Distribute minutes of the meeting to OCTA, each party present and to other parties requiring information.

F. Do not proceed with installation if the conference cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the work and reconvene the conference at earliest feasible date.

1.07 PROJECT CLOSEOUT MEETING:

A. OCTA will schedule and conduct a project closeout conference, at a time convenient to Contractor, but no later than 15 calendar days prior to the scheduled date of Substantial Completion. The conference will review requirements and responsibilities related to project closeout.

B. Attendees: OCTA, Contractor's key personnel, major subcontractors and other concerned parties shall attend the meeting. Participants at the meeting shall be familiar with project and authorized to conclude matters relating to the work.

C. Agenda: OCTA will introduce and discuss items of significance that could affect or delay Project closeout, including the following:

1. Preparation of record documents.
2. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
3. Submittal of written warranties.
4. Requirements for preparing operations and maintenance data.
5. Requirements for demonstration and training.
6. Preparation of Contractor's punch list.
7. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
8. Final Submittal procedures.
9. Coordination of separate contracts.
10. Owner's partial occupancy requirements.
11. Installation of Owner's fixtures, and equipment.
12. Responsibility for removing temporary facilities and controls.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

3.01 REPORTING

A. Minutes: OCTA Project Manager will record significant discussions and agreements achieved at all conference chaired by OCTA Project Manager, including initial

construction meeting, progress meetings and project closeout meeting. OCTA Project Manager will distribute the meeting minutes to everyone concerned within five (5) working days of the meeting.

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this section.

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SECTION 01 32 00

CONSTRUCTION PROGRESS DOCUMENTATION

PART 1 - GENERAL

1.01 DESCRIPTION

A. This Section specifies the requirements for preparation of a preliminary schedule, a Contractor's Progress Schedule, related narratives, and progress reporting.

B. The reports and schedules shall be designed to:

1. Assure adequate planning and execution of the Work so that the Work is completed within the number of calendar days allowed in the Contract

2. Assist the Contractor and OCTA Project Manager in appraising:

a. The attainability of the proposed schedule.

b. Conformance to contract requirements.

c. The progress of Work.

C. For all schedules and scheduling requirements/activities related to this Contract, the Contractor shall utilize the latest version of Primavera Project Planner and or Microsoft Project software as directed by the OCTA Project Manager.

1.02 SUBMITTALS

A. Submit the following information under the provisions of 01 33 00, Submittal Procedures. All electronic file submittals shall include the entire schedule, which is typically provided by utilizing the file backup routine in the software. Electronic submittals shall be on read-only compact disc (CD-ROM) media.

1. Construction Schedule (with narrative) in print and electronic format.

2. Contractor's Progress Schedule in print and electronic format.

3. Weekly Progress Reports (28 day schedule) in print and electronic format.

B. Milestones, as specified in the Contract Documents, shall be incorporated into all areas of the scheduling process.

1.03 CONTRACTOR'S CONSTRUCTION SCHEDULE (BASE SCHEDULE)

A. Within five (5) calendar days of the Notice to Proceed, the Contractor shall prepare and submit to the Engineer for approval a detailed schedule of work. This schedule shall indicate the areas in which the Contractor anticipates working and the dates during which construction operations will be performed. All submittals by the Contractor shall be listed on the schedule as parts of construction activities. The Contractor shall submit three (3) hard copies and a PDF file of the schedule to the Engineer for approval.

B. The detailed schedules shall be of the bar chart or critical path method, at the Contractor's option. The critical path method type schedule shall be in the form of a network diagram and activity listing. The schedule shall be comprehensive, covering activities at the site of the work, procurement, and construction.

C. The schedule shall identify work items or Milestones that affect or are affected by OCTA Project Manager, other utilities, and other third parties including Subcontractors.

D. The work activities making up the schedule shall be of sufficient detail to assure that adequate planning has been done for proper execution of the Work and such that, in the judgment of the OCTA Project Manager, it provides an appropriate basis for monitoring and evaluating the progress of the Work. A work activity is defined as any activity requiring time and resources (manpower, equipment and/or material) to accomplish. Activity durations will be in workdays. Typical construction activity durations should be between 3 and 14 workdays. Exceptions may be reviewed by the OCTA Project Manager where sub-schedules will be used to define critical portions of prime schedules, materials delivery, key submittals, etc. Activities shall include but not necessarily be limited to the following:

1. Project mobilization.

2. Submittal and review of plans and procedures.

3. Procurement of Materials.

4. Each item of Work.

5. Final cleanup.

6. Final inspection.

7. All activities by Contractor, OCTA Project Manager, and others, which affect progress or required dates for completion, or both, for each part of the Work.

8. Release of areas to OCTA Project Manager according to Milestone Dates.

E. Other requirements that shall be incorporated into the Contractor's schedule include

1. Division of Work into major work areas (i.e. Areas 1, 2, etc.).

2. Manpower required to perform the Work in total man-hours by craft for each activity.

3. All activities that require unusual shift work, such as two shifts, 6-day workweek, etc. shall be clearly identified in the schedule.

F. Each activity shall be labeled with an alphanumeric work breakdown structure/sorting/selection code.

G. The sequence, duration in workdays, and interdependence of activities required for the complete performance of all work shall be shown.

H. The schedule shall begin with the date of the Notice to Proceed and conclude with the date of Final Completion shown in the Contract.

I. The schedule shall be comprised of a network diagram and shall include the following:

1. Time scaled network diagrams based on calendar days and shall be critical path method (CPM) precedence format showing the sequence/interdependence of activities required for complete accomplishment of all items of work.

2. Each activity shall be plotted so that the start/finish dates can be determined graphically (by comparison) with the calendar scale.

3. All network diagrams shall be drawn legibly and accurately on 22" x 34" size media, or other size acceptable to the OCTA Project Manager.

4. Each activity shall be labeled with complete description, planned duration in workdays, and total float time.

5. The schedules shall accurately indicate the sequence and interdependency of all work activities.

6. A narrative shall be included that explains the basis for Contractor's determination of progress logic and estimated durations and required man-hours. It shall include estimated quantities and production rates; hours per shift; workdays per week; and types, numbers, and capacities of major construction equipment to be used.

1.04 CONTRACTOR'S PROGRESS SCHEDULE

A. The Contractor shall update the Progress Schedule monthly (the "Schedule Update") and submit to the OCTA Project Manager for review concurrent by the 5th of the month following month for which the progress reflected on schedule.

B. Progress Payment to Contractor will not be made until a schedule conforming to the requirements stated herein is submitted each month to the OCTA Project Manager. A continued failure to supply such schedule data shall be grounds for declaring Contractor in default of the Contract.

C. Contractor's progress schedule shall:

1. Become an integral part of the Contract and will establish interim completion dates for the various activities under the Contract and shall reflect and be consistent with the Milestone Dates established by the Contract.

2. Be used to determine if any activity is not completed by the Milestone date.

3. Be combined with the Schedule of Values for use in the Contractor's submittal/application for and the OCTA Project Manager's review and approval of monthly partial payments.

1.05 PROGRESS REPORTING

A. Contractor shall provide regular progress reports monthly along with progress schedule submittal to include as described herein.

B. A statement that the approved Contractor's Progress Schedule has not changed or has been revised. Only the revisions described in this statement shall be made to the progress schedule.

C. A 28-day schedule covering the past week, current week and two weeks ahead at each scheduled weekly meeting. The schedule shall be a bar chart schedule, divided into 28 calendar days, listing all activities for the four-week period. Scheduled and actual start and finish dates shall be shown. Each activity shall be identified by its approved activity number and a brief description. The bar chart schedule shall have in the heading the Project Title, Contract Number, Contractor's Name, Date, Contract Day Number and Remaining Contract Days.

1.06 PROGRESS EVALUATION

A. If at any time during the Project, the Contractor fails to complete any activity by its latest scheduled completion date and which late completion of such activity will impact the end date of the work past the Contract Completion Date, Contractor shall within five (5) working days, submit to the OCTA Project Manager a written statement as to how and when Contractor will reorganize his work force to return to the current Contractor's construction schedule. Whenever it becomes apparent from progress evaluation and updated construction schedule data that any Milestone Date(s) or the Contract Completion Date will not be met, Contractor, at his sole cost, shall take some or all of the following actions:

   1. Increase construction manpower in such quantities and crafts as shall substantially eliminate the backlog of work and meet the current Contract Completion Date.

   2. Increase the number of working hours per shift, the number of shifts per day, the number of work days per week, the amount of construction equipment, or any combination of the foregoing sufficient to substantially eliminate the backlog of work.

   3. Reschedule work items to achieve concurrent accomplishment of work activities.

B. Under no circumstances will the addition of equipment or construction forces, increasing work hours, or any other method, manner, or procedure required to return to the contractually required completion date be considered justification for a change order or treated as an acceleration.

C. The Contractor’s Progress Schedule shall begin with the date of issuance of the Notice to Proceed (NTP) and conclude with the date of final completion of the project. Float or slack time within the Progress Schedule is not for the exclusive use or benefit of either the OCTA Project Manager or the Contractor but is a jointly owned expiring project resource available to both parties as needed to meet contract milestones and the Contract completion date.

1.07 SUBMITTAL OF SCHEDULES

A. The Contractor shall submit to the OCTA Project Manager for review, two (2) copies of the construction schedule (base schedule) within time frame specified herein. Allow OCTA a minimum of 2 weeks to review the construction schedule. Contractor shall address OCTA's comments on schedule and resubmit within five (5) workdays from receipt of OCTA' comments.

B. The Contractor shall submit to the OCTA Project Manager for review two (2) hard copies of the Contractor's Progress Schedule, one (1) copy of all schedule data, along with one electronic copy within the time frames specified herein. Updates of the Contractor’s schedule shall be submitted monthly as part of the payment application submittal.

C. OCTA Project Manager will have five (5) workdays after receipt of the Contractor's Progress Schedule to respond. Upon receipt of OCTA Project Manager's comments, the Contractor shall confer with the OCTA Project Manager on the appraisal and evaluation of the proposed Contractor's Progress Schedule. The Contractor shall make necessary changes resulting from this review, and the Contractor's Progress Schedule shall be resubmitted for review within three (3) workdays after the receipt of comments.

D. The Contractor's construction schedule (base schedule) when reviewed and recognized by the OCTA Project Manager shall stand until updated schedules are submitted to reflect actual completed work, reviewed changes, or recognized delays.

E. All updated or revised schedules submitted after the base schedule shall be in the same detail as the base submittal unless modified in writing by the OCTA Project Manager.

1.08 REVISIONS TO REVIEWED SCHEDULE

A. The Contractor shall accomplish the Work in accordance with Contractor's construction schedule recognized by the OCTA Project Manager. Changes made to Contractor's construction schedule for accomplishing the Work shall in all cases require prior approval by the OCTA Project Manager.

B. The Contractor shall reflect processed Change Orders that affect the schedule, and issuance of emergency change authorizations in the next schedule submittal.

C. If Contractor desires to make a major change to Contractor's construction schedule, the Contractor shall submit to the OCTA Project Manager a schedule change request in writing stating the reasons and justification for the change, for OCTA's review and acceptance. Major changes are defined as follows:

1. Those that affect the time estimate for the accomplishment of an activity.

2. Those that affect the sequence when varied from the original schedule to a degree that there is doubt that the agreed Contract Completion Date will be met.

3. Changes to activities having adequate float to absorb the change shall be considered as minor changes, except that an accumulation of minor changes may be considered a major change when the effect of such changes impact the Project Milestones or the Contract Completion date.

PART 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not Used

PART 4 – MEASUREMENT AND PAYMENT

A. No separate measurement or payment shall be made under this section. Contractor's Progress Schedule will be reviewed each month. The monthly progress payment will not be made until the Contractor's Progress Schedule is found by the OCTA Project Manager to be in conformance with the requirements of this Section.

END OF SECTION

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SECTION 01 33 00

SUBMITTAL PROCEDURES

PART 1 - GENERAL

1.01 DESCRIPTION

A. This Section consists of requirements for Contractor submittals to the OCTA Project Manager including plans, procedures, certificates, shop drawings, product data, samples, and miscellaneous Work-related submittals. Individual submittal requirements are specified in the applicable specification section for each unit of Work. No construction work shall be commenced prior to submittals and acceptance of all submittals and shop drawings required per contract documents.

1.02 DEFINITIONS

A. Submittals are categorized for convenience as follows:

1. Plans and Procedures: Include narrative descriptions, diagrams, equipment, procedures for excavation, demolition, site clearing, maintenance of traffic, etc.

2. Certificates: Include certified material test reports, certification of proper disposal of demolition materials, or tickets demonstrating compliance with materials, tests or specifications indicated.

3. Equipment: Include equipment specifications, manufacturer information and demonstration of suitability of equipment for intended use.

4. Product Data: Standard published information ("catalog cuts") and specially prepared data for the Work of the Contract, including standard illustrations, schedules, brochures, diagrams, performance charts, instructions and other information to illustrate a portion of the Work. Include standard printed information on materials, products and systems to be furnished by the Contractor for this Contract.

5. Shop Drawings: Include detailed manufacturing and layout information, drawings, diagrams, schedules, and illustrations, demonstrating the contractor’s approach to meeting the intent of the plans and specifications. Shop drawings shall be submitted to the Engineer for review and comment on the conformance of the submitted information to the general intent of the design.

6. Samples: Include physical examples of materials either for limited visual inspection or selection, or (where indicated) for confirmation, testing, and analysis by the OCTA Project Manager.

7. Miscellaneous Submittals: Such submittals shall be related directly to the Work, not administration related. Include but not be limited to asphalt concrete mix design, work schedule, phasing plans, warranties, guarantees, maintenance agreements, workmanship bonds, survey data and reports, physical work records, quality testing and certifying reports, copies of industry standards, record drawings, field measurement data, operating and maintenance materials, overrun stock (and similar information) and, devices and materials applicable to the Work but not processed as shop drawings, product data or samples. Beside the shop drawings required in the project plans or specifications, the OCTA Project Manager may require additional shop drawings demonstrating the contractor's approach to meeting the intent of the plans and specifications as a part of Quality Control/Quality Assurance.

B. Product data, shop drawings, samples, and any other submittals are not contract documents.

1.03 SCHEDULE OF SUBMITTALS

A. It is the Contractor's responsibility to identify the submittals that will be required in each section of specifications and on the contract drawings and determine the date on which each submittal will be made. The submittal schedule shall be submitted by the Contractor at time of initial construction meeting to the OCTA Project Manager for review and acceptance. Allow OCTA a minimum of 14 calendar days to review Schedule of Submittal. After review and return by the Engineer, resubmit Schedule of Submittal within 7 calendar days.

B. Throughout the duration of the Contract, Contractor shall, at the OCTA Project Manager's request, submit all product or procedure documentation for any activity in the Contract.

1.04 GENERAL SUBMITTAL REQUIREMENTS

A. Administrative Requirements for Submittal: Submittals shall be made in accordance with requirements specified herein and in Product Sections of the Specifications.

B. Transmission of Submittals: Transmit all submittals through the Project Engineer, unless otherwise directed. Include all information specified below for identification of submittals and for monitoring of review process.

C. Make submittal at time required per the contract documents and per the Submittal Schedule accepted by the OCTA. Allow three (3) weeks for the OCTA's Consultant to review and accept submittals.

D. OCTA Project Manager and Contractor shall discuss at the initial construction meeting, the exact procedure to be adopted for the processing of submittals. Generally, submittals shall be made at the time indicated in Contractor's approved submittal schedule. OCTA Project Manager will process submittals within 21

calendar days after receipt of each submittal and within 14 calendar days after receipt of each of resubmittals from Contractor. After review and return by the Engineer, resubmit the submittals within 7 calendar days.

E. Contractor shall be responsible for on time delivery and processing of submittals so as not to impede the progress of the Work. Contractor shall submit an electronic copy of each submittal in PDF format, plus up to three (3) hard copies of each submittal if requested by OCTA.

F. Contractor shall, before making submittals, ensure that products will be available in the quantities and in the time required by the Contract.

G. Contractor shall coordinate and sequence different categories of submittals for same work, and interface units of work, so that one will not be delayed for coordination with another.

H. Contractor shall maintain a file of all approved submittal documents on work site.

I. Where required by California law, or as specified in the Contract Documents, submittals shall be signed and sealed by a Professional Engineer licensed in the State of California, or Land Surveyor licensed in the State of California as applicable.

J. Submittals shall be consecutively and uniquely numbered using a document identifier including Contract number and the appropriate suffix, which will include specification section number and submittal number. Submittals under each specification section shall be in a separate package.

K. Submittals Identification: Identify each submittal by Specification Section number followed by a number indicating sequential submittal for that Section. Re-submittals shall use same number as original submittal, followed by a letter R and a number indicating sequential re-submittal. For example:

3300-1	First submittal for Section 3300 – Asphalt Concrete Mix Design
3300-2	Second submittal for Section 3300 – Asphalt Concrete Mix Design.
3300-2-R1	Re-submittal of second submittal for Section 3300 – Asphalt Concrete Mix Design.
3300-2-R2	Second re-submittal of second submittal for Section 3300 – Asphalt Concrete Mix Design.

1. Title each submittal with Project name, the Authority's Project number, Submittal number, Sequence number of Submittal, Contractor's Project number and submission date.

2. Identify each element on submittal by reference to Drawing sheet number, detail, schedule, number, assembly or equipment number, Specifications article and

paragraph, and other pertinent information to clearly correlate submittal with Contract Drawings. Identify field dimensions clearly and relationships to adjacent or critical features of Work, any deviations from the contract documents and applicable standards, ASTM, ACI, OSHA, ect.

L. Contractor's review of submittals: Prior to submission to the Engineer for review, Contractor shall review each submittal for completeness and conformance to specified requirements. Contractor shall stamp each submittal with a review action stamp and sign each copy certifying that:

1. Field measurements have been determined and verified.

2. Field construction criteria have been verified.

3. Catalog numbers and similar data are correct.

4. Conformance with requirements of Contract Drawings and Specifications is confirmed.

5. All deviations from requirements of Drawings and Specifications have been identified and noted, and product is available.

M. Submittals which are received from sources other than through Contractor's office or which have not undergone Contractor's review, will be returned marked "Without Action".

N. Contractor shall be responsible for timely delivery of submittals in the proper specified format for each submittal category.

O. Except as otherwise indicated in individual work sections, the Contractor shall comply with requirements specified herein for each indicated category of submittal.

P. The Contractor shall include an up-to-date log of submittals in each submittal package.

Q. Grouping of Submittals: Unless otherwise specifically permitted by the Engineer, make all submittals in groups containing all associated items. The Engineer may reject partial submittals as incomplete or hold them until related submittals are made. Submittals under a specification section shall be in one submittal package.

R. Unsolicited Submittals: Unsolicited submittals will be returned un-reviewed.

S. Record Submittals: When record submittals are specified, submit three hard copies or sets only. Record submittals will not be reviewed but will be retained for historical and maintenance purposes.

1.05 SHOP DRAWINGS

A. Shop drawings shall be prepared using AutoCAD. Unless otherwise approved by the OCTA Project Manager or indicated in specific sections of the project specific specifications, shop drawings shall be scaled sufficiently large to accurately show all pertinent aspects of the item and its relationship to the work. Acceptable shop drawings hard copy sizes are: 22” x 34”, 11” x 17” and 8½” x 11”. The Contractor shall additionally submit the shop drawing on electronic media in PDF format and in AutoCAD format compatible with AutoCAD version 2012.

B. Shop drawings shall be original drawings prepared for submittal review, fabrication and execution of Work. Direct copies and modified reproductions of Contract Drawings will not be accepted for review. Provide space for review action stamps. Contractor shall field verify all existing conditions and all measurements on site before preparing and submitting shop drawings.

C. Detailed work drawings shall be submitted by Contractor for temporary structures and for such other temporary work as may be required for construction, but which does not become an integral part of the completed project. Submittals shall include back-up calculations or any information needed to explain the structure or system or its intended use.

D. Where a submittal involves engineering computations or original design work is depicted, the submittal shall show the name, the State of California registration number, seal, and signature of the Professional Engineer certifying that such computations or design work are correct and in conformance with standards, codes, and acceptable engineering practice.

E. Contractor shall submit 5 hard copies and a PDF file of each shop drawing submittal. Distribution of submitted shop and working drawings by Contractor for OCTA Project Manager's use will be performed by OCTA Project Manager. Review comments of OCTA Project Manager, and other parties as may be required will be shown on the reproducible set when it is returned to Contractor. Contractor shall make and distribute all copies required for his purposes.

1.06 PRODUCT DATA

A. Contractor shall collect required data into one submittal for each unit of work or system, and mark each copy to show which choices and options are applicable to the Project.

B. Contractor shall include the manufacturer's standard printed recommendations for application and use, certification of compliance with standards, notation of field measurements, which have been checked, and special coordination requirements. A Material Safety Data Sheet (MSDS) shall be submitted for each product.

1.07 CERTIFICATES OF COMPLIANCE

A. Certificates of Compliance shall be submitted by Contractor to OCTA Project Manager for those materials and products for which no samples and test results are specified. The certificates shall:

1. State that the product complies with the respective contract specification and contract drawing requirements.

2. Be accompanied by a certified copy of test results pertaining to the product. All test equipment used shall be verified to be in calibration at the time of each test and test reports shall so indicate. No test shall be made without such verification. When required by the Contract Documents or by law, certified test results shall be sealed by a Professional Engineer licensed to practice in the State of California.

3. Show product represented and its location in the Contract, producer's name, product trade name and catalog number as applicable, place of product origin, test date, testing organization's name and address, quantity of the product to be furnished, and the related Contract Drawing and specification section numbers.

1.08 SAMPLES

A. Provide samples of each color, texture and pattern identical with final condition of proposed materials or products for the work. Include range of samples (not less than three units) where unavoidable variations may be expected. Submit one item only of actual assembly or product. Full-size and complete samples may be returned or may be incorporated into field mock-up and the Work.

B. Submit actual samples. Photographic or printed reproductions will not be accepted. For manufacturer’s products, the Contractor shall submit samples from manufacturer, with manufacturer’s finish.

C. Include information with each sample showing generic description, source or product name, manufacturer and compliance with standards and specifications.

D. Samples are submitted for review and confirmation by OCTA Project Manager. The Engineer will review and select material for Project only after all samples are received, so that materials may be probably coordinated. OCTA Project Manager will not test samples (except as otherwise indicated) for compliance with specifications. Contractor shall have the exclusive responsibility of demonstrating material compliance.

1.09 SURVEY DATA

A. As required per contract documents and/or by OCTA Project Manager, Contractor shall submit survey data, signed and sealed by a Land Surveyor licensed to practice in the State of California. Refer to Section 01 71 23, Field Engineering for requirements.

1.10 GENERAL DISTRIBUTION

A. Contractor shall provide distribution of OCTA Project Manager's reviewed submittals (not included in foregoing copy submittal requirements) to subcontractors, suppliers, fabricators and installers, governing authorities, and others as necessary for proper performance of the Work.

B. Contractor shall include such additional copies of transmittal to OCTA Project Manager, where required, to receive status marking before final distribution.

1.11 REVIEW OF SUBMITTALS

A. Submittals shall be a communication aid between Contractor and the Engineer by which interpretation of Contract Documents requirements may be confirmed in advance of construction. OCTA Project Manager will review submittals for general conformance with the design concept only. Such review by OCTA Project Manager shall not relieve Contractor or any subcontractor of responsibility for full compliance with contract requirements, for proper design of details, for proper fabrication and construction techniques, for proper coordination with other trades, or for providing all devices required for safe and satisfactory construction and operation.

B. Changes shall only be authorized by separate written Change Order or Construction Change Authorization, in accordance with the Conditions of the Contract and Section 01 26 00 - Contract Modification Procedures.

1.12 SUBMITTAL STATUS

A. Submittals reviewed by OCTA Project Manager and returned to Contractor will be marked with one of the following designations:

1. Conforms.
2. Conforms with Corrections as Noted
3. Revise as Noted and Resubmit.
4. Rejected. Resubmit
5. No Action Taken

B. Contractor shall not proceed with procurement, manufacture or fabrication of items submitted for review, until such submittals have been designated by OCTA Project Manager as "Conforms" or "Conforms with Corrections as Noted". Until submittal items receive a conforming designation by OCTA Project Manager, any costs associated with procurement for these items shall be at the Contractor's risk.

1.13 SUBMITTALS DESIGNATED AS "CONFORMS" OR "CONFORMS WITH CORRECTIONS AS NOTED"

A. Each copy of the submittal so designated by OCTA Project Manager will be identified accordingly by being so stamped and dated.

B. One reproducible copy will be returned to Contractor.

C. When a submittal has been designated as "Conforms" by OCTA Project Manager, Contractor shall carry out construction in accordance therewith and no further changes shall be made therein except upon written approval and instructions from OCTA Project Manager.

D. Contractor shall take responsibility for and bear all cost of damages, which may result from the ordering of any material or from proceeding with any part of the Work prior to submittal being marked "Conforms" or "Conforms with Corrections as Noted" by OCTA Project Manager.

E. Where drawings are stamped " Conforms with Corrections as Noted" OCTA Project Manager shall indicate the corrected detail or information as required.

F. Submittals stamped "Conforms" do not relieve the contractor from the responsibility of performance of Work as intended in the plans and specifications. Refer to 1.11 of this Section.

1.14 SUBMITTALS DESIGNATED AS "REVISE AND RESUBMIT," OR "REJECTED. RESUBMIT"

A. Each copy of the submittal so designated by OCTA Project Manager will be identified accordingly by being so stamped and dated.

B. One copy will be returned to Contractor.

C. If corrections to the submittals are required, copies returned to Contractor will be marked "Rejected. Resubmit", or "Revise and Resubmit", and the required corrections shall be made on the re-submittal copies.

D. Re-submittals will be handled in the same manner as first submittals. Direct specific attention in writing on re-submittals to revisions other than the corrections requested by OCTA Project Manager on previous submittals. Re-submittals shall use the same number as original submittal but will be modified by R and number of re-submittal in the suffix.

E. Contractor shall notify OCTA Project Manager prior to execution of any correction, which constitutes a change of the contract requirements indicated on the submittals.

1.15 SUBMITTALS DESIGNATED AS "NO ACTION TAKEN"

A. Each copy of the submittal so designated by OCTA Project Manager will be identified accordingly by being so stamped and dated.

B. One reproducible copy will be returned to Contractor.

C. Submittals made by the Contractor that are not required by the contract documents or were not otherwise requested shall be designated "No Action Taken"

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this Section.

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SECTION 01 35 13

SPECIAL PROJECT PROCEDURES

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Products and installation for patching and extending Work.

B. Transitions and adjustments.

C. Repair of damaged surfaces, finishes, and cleaning.

1.02 RELATED SECTIONS

A. Section 01 35 13 - Coordination with OCTA and City: Authority occupancy and maintenance of utility services.

B. Section 01 73 29 - Cutting and Patching: General requirements for cutting and patching requirements.

C. Section 01 50 00 - Temporary Facilities and Controls: Temporary enclosures, protection installed Work, and cleaning during construction.

PART 2 - PRODUCTS

2.01 PRODUCTS FOR PATCHING AND EXTENDING WORK

A. New Materials: As specified in PART 2 - PRODUCTS of applicable product Specification Sections, provide suitable products and construction procedures for patching and extending Work.

B. Type and Quality of Existing Products: Determine by inspection and testing of Products where necessary, referring to existing construction as a standard.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify that demolition is complete, and areas are ready for execution of Work.

B. Beginning of alteration Work will be interpreted to mean that Contractor has

examined existing conditions and determined that they are acceptable.

3.02 PREPARATION

A. Coverings:

1. Provide weather- and dust-protection coverings as necessary to contain dust and debris. Protect OCTA Property, buses, equipment, utilities, landscaping, and accessories from dust. Provide appropriate covers over all buses parked adjacent to the work area or protect by sprinkling water over work area to control dust.

2. Close area of work with barricades to protect existing construction and new Work from traffic, weather, and extremes of temperature and humidity. At end of work day, provide enclosure around work area with flashing lights so that traffic is aware of construction excavations and new work.

3. Coordinate construction delineation with barricades, but provide OCTA staff cars buses adequate passage to enable the Authority to continue to pass through to parking areas. Provide Bus passage through construction areas if required. OCTA Facility will remain operational during construction.

4. Adjacent bus parking stalls will be used during construction. Provide adequate passage for OCTA buses and staff cars to park in adjacent parking stalls during construction. Do not allow contractor's cars or equipment to park in bus parking stalls adjacent to construction

5. See Section 01 50 00 - Temporary Facilities and Control for additional requirements.

B. Protective Devices and Directional Signage: Provide barricades, directional signage and other protective devices to enable the Authority to continue bus operations, bus traffic through construction areas, occupancy and operation in the existing buildings and adjacent parking stalls. See Section 01 50 00 - Temporary Facilities and Control for additional requirements.

C. Access for Work: Demolish, Cut, move or remove items as necessary for access for alterations, renovation and extension Work. Replace and restore at completion.

D. Disposal of Materials: Immediately remove unsuitable material not marked for salvage, such as decayed wood, insulation, asphalt concrete, corroded rebar, accessories and other materials as required to complete the work. Replace materials as specified for finished Work.

1. Do not allow debris to accumulate in work areas. Dispose debris daily off-site in a legal manner. Dispose all existing asphalt concrete and accessories that are to be removed, and legally dispose off-site.

2. Remove debris and abandoned items from work area and from parking spaces.

E. Surface Preparation: Remove surface finishes and prepare surfaces to provide for proper installation of new materials and finishes.

F. Protection: Protect buses and equipment parked adjacent to construction area from damage.

3.03 INSTALLATION

A. Coordinate Work for alterations and renovations to expedite completion and to accommodate the Authority's concurrent occupancy and use of the facility.

B. Coordinate Work for alterations and renovations in a timely manner to expedite completion and minimize disruption to the Authority's continued use occupied areas and spaces. Park all construction equipment and materials inside areas of construction and barricade construction area on all sides at end of work day. Provide flashing lights around work area from dusk to dawn.

C. Remove, cut, and patch Work in a manner to minimize damage and to provide a means of restoring products and finishes to original or specified new condition. Refer to Section 01 73 29 - Cutting and Patching.

D. Refinish visible existing surfaces to condition before start of construction. Match adjacent finish surface in color and material. Finish to specified condition for each material, with a near transition to adjacent finishes.

E. In addition to specified work, in case of breakdown of under or above ground utilities, plumbing, electrical power, signal systems, and lighting, restore to fully operational condition immediately as before construction commenced. All power, and other systems should be operational at end of work day. The plans are diagrammatic and do not show all utilities, ducting, equipment, and accessories on the site. Contractor will be required to repair immediately utilities, ducting, plumbing lines, power lines, signal and communication system, data lines, equipment, and accessories in case of breakdown or disruption due to construction work and as required to complete the work. Review OCTA record drawings of construction area before excavation.

F. Install products as specified in applicable product specification Sections.

3.04 TRANSITIONS

A. Where Work abuts or aligns with existing construction, perform a smooth and even transition. Patches shall match existing adjacent construction in texture and appearance.

B. When finished surfaces are cut so that a smooth transition is not possible, terminate existing surface along a straight line at a natural line of division. Refer to Section 01

73 29 - Cutting and Patching.

3.05 ADJUSTMENTS

A. Where removal of materials results in adjacent spaces becoming one, rework to a smooth plane without breaks, steps or bulkheads.

B. Where a change of plane of 1/4-inch or more occurs, submit recommendation for providing a smooth transition for the Engineer's review.

C. Fit Work at penetrations of surfaces as specified in Section 01 73 29 - Cutting and Patching.

3.06 REPAIR OF DAMAGED SURFACES

A. Replace portions of adjacent existing surfaces which are damaged, lifted, discolored, or showing other imperfections or require replacement or repairs during replacement work. Extent of replacement will be required to nearest construction joint, expansion joint, break line, natural break, or in a straight line. Provide a smooth transition between existing and new surface.

B. Repair substrate prior to patching finish.

C. Unless noted otherwise or directed by the OCTA Project Manager, all pavement striping, markings, and markers affected by the construction activities shall be reinstalled to match the existing conditions.

3.07 FINISHES

A. Finish surfaces as specified in applicable Sections.

B. Finish patches with material and paint to produce uniform finish and texture over entire area. When finish cannot be matched, refinish entire surface to nearest intersections or joints.

3.08 CLEANING

A. In addition to cleaning specified in Section 01 74 23 - Cleaning, clean the Authority-occupied areas affected by construction activities. Clean areas around the site where asphalt concrete material has fallen during work day. Clean site of work daily before leaving site at end of each work day. Haul debris off-site daily. Clean adjacent bus parking areas daily before leaving site

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this section.

END OF SECTION

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SECTION 01 35 23

OWNER SAFETY REQUIREMENTS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work specified in this section consists of furnishing, operating, maintaining, and utilizing safety equipment; providing safety aids on construction equipment; and assuring safe operation. Compliance with requirements of this section shall not relieve Contractor from other obligations imposed elsewhere in contract, by law and by regulation.

1.02 OTHER SECTIONS WITH SAFETY REQUIREMENTS

A. OCTA Level 3 Health, Safety and Environmental Specifications

B. Section 01 14 22, Rules and Hours of Operation

C. Section 01 14 23, Coordination with OCTA and City

D. Section 01 14 25, Procedures in Construction

E. Section 01 43 01, Contractor Qualifications and Requirements

1.03 REFERENCE STANDARDS

A. Comply with the provisions of all local, State and Federal codes, specifications, standards and recommended practices, and OCTA Project Manager Policy, in particular:

1. Cal/OSHA: California State Occupational Safety and Health Administration

2. OSHA: Federal Occupational Safety and Health Administration

1.04 QUALITY CONTROL AND QUALITY ASSURANCE

A. Contractor's selection and operation of construction equipment and tools shall meet requirements of California State and Federal Occupational Safety and Health Administration (Cal/OSHA, OSHA).

B. If there is a conflict between any of the above, the most stringent requirement will apply.

1.05 SUBMITTALS

A. Contractor shall submit, under provisions of Section 01 33 00, Submittals, the following information:

1. Information required by OCTA Level 3 Health, Safety and Environmental Specifications.

2. Safety Data Sheet, per Section 01 14 25, Procedures in Construction.

3. Notification to OCTA Project Manager as soon as reasonably possible of any injury to Contractor's employee, subcontractor of any tier, supplier or other entity engaged in any portion of the work while on OCTA Project Manager property. Contractor shall submit an injury report to OCTA Project Manager within 24 hours of said injury.

4. Other records as required by agencies listed in Part 1.03.

1.06 SAFETY AND HEALTH PERSONNEL

A. Provide a Site Safety Representative, as described in Sections 01 43 01 Contractor Qualifications and Requirements, OCTA Level 3 Health, Safety and Environmental Specifications and the General Provisions, who shall coordinate and supervise onsite safety and health, including training and testing Contractor's personnel.

1.07 CONSTRUCTION AND SAFETY EQUIPMENT

A. Contractor shall conform to requirements of the OCTA Project Manager, Cal/OSHA, and to applicable codes and regulations of Federal, State, and local authorities having jurisdiction over jobsite safety.

1.08 TESTING EQUIPMENT

A. Testing equipment as applicable to work site safety shall conform to requirements of California Code of Regulations, Title 8, Division of Industrial Safety, unless indicated otherwise.

1.09 IDENTIFICATION OF CONTRACTOR/SUBCONTRACTOR PERSONNEL

A. While performing work at worksite, Contractor personnel of any tier shall be identified with employee's company name or logo affixed to employee's hardhat, identification badge, or other identification acceptable to OCTA Project Manager.

B. Contractor personnel shall wear hard hats, orange safety vests or orange T-shirts with reflective strips, safety glasses, and safety shoes at all times while on the project.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this Section.

END OF SECTION

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SECTION 01 41 00

REGULATORY REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Requirements associated with regulations, standards, and requirements of authorities having jurisdiction.

B. Related Sections:

1. Section 01 14 25, Procedures in Construction.

2. Section 01 14 27, Legal Relations and Responsibility.

1.02 SUBMITTALS

A. Submit in accordance with Section 01 33 00, Submittal Procedures.

B. Before starting the work, submit to OCTA Project Manager copies of permit applications, permits, licenses, receipts for fee payments, judgments, and other similar documents, correspondence, and records obtained for performance of the work.

C. At completion, submit certifications, releases, jurisdictional settlements, notices and other similar documents under Section 01 77 00, Closeout Procedures.

1.03 APPLICABILITY OF INDUSTRY STANDARDS

A. Construction Industry Standards referenced in the contract documents have the same force and effect as if published herein and are made a part of the contract documents. Refer to Section 01 42 00 References.

B. Reference standards (referenced in the contract documents or by governing regulations) have precedence over non-referenced standards that are recognized in the industry for applicability to the work.

1. Building Codes: Performance of the Work shall meet or exceed the minimum requirements of California Code of Regulations (CCR), Title 24, including the following:

a. CCR Title 24, Part 2: Uniform Building Code (UBC), latest edition, with State

of California amendments; referenced as California Building Code (CBC).

b. CCR Title 24, Part 3: National Fire Protection Association (NFPA) 13 - National Electrical Code (NEC), latest edition, with State of California Amendments, referenced as California Electrical Code (CEC).

c. CCR Title 24, Part 9: Uniform Fire Code (UFC), latest edition, with State of California Amendments, referenced as California Fire Code (CFC).

d. CCR Title 24, Part 12: Uniform Building Code Standards (UBC Standards), latest edition, with State of California Amendments; referenced as California Building Standards Code (CBSC).

2. Performance of the Work shall also comply with applicable requirements of California Code of Regulations (CCR), as follows:

a. Title 19 - Public Safety.

b. Title 22 - Social Security.

c. Title 24 - Building Standards, Parts 2 through 7, and Title 25 as applicable.

3. References on the Drawings or in the Specifications to "code", "Code" or "building code" similar terms, not otherwise identified, shall mean the codes specified above, together with all additions, amendments, changes, and interpretations adopted by code authorities of the jurisdiction having authority over the Project.

4. The applicable edition of all codes shall be that adopted at the time of issuance of permits by the jurisdiction having authority and shall include all modifications and additions adopted by that jurisdiction(s).

C. Recognized industry standards shall be used where no specific standard is referenced in the contract documents. Obtain OCTA Project Manager's approval before using any non-referenced standards.

1.04 GOVERNING REGULATIONS AND AUTHORITIES

A. Contact authorities having jurisdiction directly for necessary information and decisions having a bearing on performance of the work.

B. Utility location and protection shall conform to Section 5, Utilities, of the Standard Specifications for Public Works Construction (SSPWC). 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 shall determine the exact location of utilities identified in the work area by potholing using hand tools before using any power operated excavating equipment. Utilities now

shown on the plans which are in direct conflict with the work will be dealt with by change orders.

C. Comply with requirements under the National Pollutant Discharge Elimination System (NPDES).

1.05 OTHER APPLICABLE LAWS, ORDINANCES AND REGULATIONS

A. Work shall be accomplished in conformance with all applicable laws, ordinances, rules and regulations of Federal, State and local governmental agencies and jurisdictions, County of Orange, AQMD, CAL-OSHA and all other agencies having authority over the Project.

B. Work shall be accomplished in conformance with all rules and regulations of public utilities, utility districts, and public agencies providing utility services.

C. Where such laws, ordinances, rules and regulations require more care or greater time to accomplish Work, or require better quality, higher standards or greater size of products, Work shall be accomplished in conformance to such requirements with no change to the Contract Sum And Contract Time, except where changes in laws, ordinances, rules and regulations occur subsequent to the execution date of the Agreement.

D. Contractor shall pay for and obtain all permits required by all agencies having jurisdiction over the work. Contractor shall be required to pay for all temporary utility connections and use to the respective utility company during construction.

1.05 PERMITS

A. Obtain required permits from regulating agencies. Do not start work in areas requiring permits before issuance of permits from authorities having jurisdiction.

1. Coordinate with regulating agencies to obtain required permits.

2. Submit copies of permit applications and permits to OCTA Project Manager.

3. Comply with permit requirements and assume responsibility for any violations.

B. Prepare permit applications and obtain permits as necessary for performance of the work, including but not limited to:

1. Maintenance and protection of vehicle traffic.

2. Excavation, dewatering and discharge of surface water and runoff into existing drainage systems or surface waters.

3. Disposal of debris and soils.

4. All other activities with potential to adversely affect the environment.

5. Written permission from property owner for right of entry onto private property where necessary.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

No separate measurement will be made for work of this section.

4.02 PAYMENT

Work of this section is considered incidental to work under other payment item(s) listed in the Schedule of Quantities and Prices and no separate payment will be made.

END OF SECTION

SECTION 01 42 00

REFERENCES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Use of references in Drawings and Specifications, including requirements for copies of reference standards at Project site.

2. Abbreviations and acronyms.

3. General provisions regarding references.

1.02 USE OF REFERENCES

A. References: The Drawings and Specifications contain references to various standards, standard specifications, codes, practices and requirements for products, execution, tests and inspections. These reference standards are published and issued by the agencies, associations, organizations and societies listed in this Section or identified in individual product specification Sections.

B. Relationship to Drawings and Specifications: Such references are incorporated into and made a part of the Drawings and Specifications to the extent applicable.

C. Referenced Grades Classes and Types: Where an alternative or optional grade, class or type of product or execution is included in a reference but is not identified on the Drawings or in the Specifications, provide the highest, best, and greatest of the alternatives or options for the intended use and prevailing conditions.

D. Copies of Reference Standards:

1. Reference standards are not furnished with the Drawings and Specifications because it is presumed that the Contractor, subcontractors, manufacturers, suppliers, trades and crafts are familiar with these generally-recognized standards of the construction industry.

2. Copies of reference standards may be obtained from publishing sources.

E. Jobsite Copies:

1. Contractor shall obtain and maintain at the Project site copies of reference standards identified on the Drawings and/or in the Specifications in order to properly execute the Work.

2. At a minimum, the following shall be readily available at the site:

   a. Local and State Building Codes: As referenced in Section 01060 - Regulatory Requirements.

   b. Safety Codes: State of California, California Code of Regulations (CCR), Title 8 - Industrial Relations, Chapter 4, Subchapter 7, General Industry Safety Orders.

   c. General Standards: UBC Standards, other model Code standards, UL Building Products Listing, FM Approval Guide and ASTM Standards in Building Codes.

   d. Fire and Life Safety Standards: All referenced standards pertaining to fire rated construction and exiting.

   e. Common Materials Standards: American Concrete Institute (ACI), American Institute of Steel Construction (AISC), American Welding Society (AWS), Gypsum Association (GA), National Fire Protection Association (NFPA), Tile Council of America (TCA) and Woodwork Institute of California (WIC) standards to the extent referenced within the Contract Specifications.

   f. Research Reports: ICBO Evaluation Service (ICBO ES) Research Reports and CABO National Evaluation Service Reports (NER), for products not in conformance to prescribed requirements stated in Building Code.

   g. Product Listings: Approval documentation, indicating approval of authorities having jurisdiction for use of product with City of Santa Ana.

F. Edition Date of References:

   1. When an edition or effective date of a reference is not given, it shall be understood to be the current edition or latest revision published as of the date indicated on the Drawings and Specifications.

   2. All amendments, changes, errata and supplements as of the effective date shall be included.

G. ASTM and ANSI References: Specifications and Standards of the American Society for Testing and Materials (ASTM) and the American National Standards Institute (ANSI) are identified in the Drawings and Specifications by abbreviation and number only and may not be further identified by title, date, revision or amendment. It is presumed that the Contractor is familiar with and has access to these nationally- and industry-recognized specifications and standards.

1.03 DEFINITIONS OF TERMS

A. Words and Terms Used on Drawings and in Specifications: Additional words and terms may be used in the Drawings and Specifications and are defined as follows:

1. Applicable: As appropriate for the particular condition, circumstance or situation.

B. Approved: The term "approved," when used in conjunction with the Engineer's action on the Contractor's submittals, applications, and requests, is limited to the Engineer's duties and responsibilities as stated in the Conditions of the Contract.

1. Approved: Limited to duties and responsibilities of the Authority and the Engineer as stated in the Conditions of the Contract, for actions performed in the professional judgment of the Engineer or the Engineer's responsible design consultant, in conjunction with submittals, applications, and requests. Approvals shall be valid only if obtained in writing and shall not apply to matters regarding the means, methods, techniques, sequences and procedures of construction. Approval action shall not relieve the Contractor from responsibility to fulfill Contract requirements.

2. And/or: If used, shall mean that either or both of the items so joined are required.

3. Directed: Limited to duties and responsibilities of the Engineer as stated in the Conditions of the Contract, and meaning as instructed by the Engineer, in writing, regarding matters other than the means, methods, techniques, sequences and procedures of construction. Terms such as "directed", "requested", "authorized", "selected", "approved", "required", and "permitted" mean "directed by the Engineer", "requested by the Engineer", and similar phrases. No implied meaning shall be interpreted to extend the Engineer's responsibilities into the Contractor's supervision of construction.

4. Equal or Equivalent: As determined by the Engineer as being equivalent, considering such attributes as durability, finish, function, suitability, quality, utility, performance, and aesthetic features.

5. Furnish: Means "supply and deliver, to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations."

6. Indicated: The term "indicated" refers to graphic representations, notes, or schedules on the Drawings, or other Paragraphs or Schedules in the Specifications, and similar requirements in the Contract Documents. Terms such as "shown", "noted", "scheduled", and "specified" are used to help the reader locate the reference. There shall be no limitation on location.

7. Install: Describes operations at the Project site including the actual unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning and similar operations.

8. Installer:

   a. "Installer" refers to the Contractor or an entity engaged by the Contractor, such as an employee, subcontractor, or sub-subcontractor, for performance of a particular construction activity, including installation, erection, application and similar operations. Installers shall be adequately skilled and experienced in the operations they are engaged to perform.

   b. Experienced Installer: The term "experienced," when used with "installer" shall mean having a minimum of 5 previous projects similar in size to this Project, knowing the precautions necessary to perform the Work, and being familiar with requirements of authorities having jurisdiction over the Work.

9. Jobsite: Same as "Site."

10. Necessary: With due consideration of the conditions of the Project and, as determined in the professional judgment of the Engineer as being necessary for performance of the Work in conformance with the requirements of the Contract Documents, but excluding matters regarding the means, methods, techniques, sequences and procedures of construction.

11. Noted: Same as "Indicated."

12. Per: In accordance with or in compliance with.

13. Products: Material, system or equipment.

14. Project Site: Same as "Site."

15. Proper: As determined by the Engineer as being proper for the Work, excluding matters regarding the means, methods, techniques, sequences and procedures of construction, which are solely the Contractor's responsibility to determine.

16. Provide: "Furnish and install, complete, and ready for the intended use."

17. Regulation: Includes laws, ordinances, statutes and lawful orders issued by authorities having jurisdiction, as well as and rules, conventions and agreements within the construction industry that control performance of the Work.

18. Required: Necessary for performance of the Work in conformance with the requirements of the Contract Documents, excluding matters regarding the means, methods, techniques, sequences and procedures of construction, such as:

    a. Regulatory requirements of authorities having jurisdiction.
    b. Requirements of referenced standards.
    c. Requirements generally recognized as accepted construction practices of the locale.

d. Notes, schedules and graphic representations on the Drawings.
e. Requirements specified or referenced in the Specifications.
f. Duties and responsibilities stated in the Bidding and Contract Requirements.

19. Scheduled: Same as "Indicated."

20. Selected: As selected by the Engineer or Authority from the full selection of the manufacturer's products, unless specifically limited in the Contract Documents to a particular quality, color, texture, or price range.

21. Shown: Same as "Indicated."

22. Site: Same as "Jobsite", "Site of the Work" or "Project Site;" the area or areas or spaces occupied by the Project and including adjacent areas and other related areas occupied or used by the Contractor for construction activities, either exclusively or with others performing other construction on the Project. The extent of the Project Site is shown on the Drawings, and may or may not be identical with the description of the land upon which the Project is to be built.

23. Testing Laboratory or Laboratories: Same as "Testing and Inspection Agency."

24. Testing and Inspection Agency: An independent entity engaged to perform specific inspections or tests, at the Project Site or elsewhere, and to report on, and, if required, to interpret, results of those inspections or tests.

1.03 ABBREVIATIONS, ACRONYMS, NAMES AND TERMS, GENERAL

A. Abbreviations, Acronyms, Names and Terms: Where acronyms, abbreviations names and terms are used in the Drawings, Specifications or other Contract Documents, they shall mean the recognized name of the trade association, standards generating organization, authority having jurisdiction or other entity applicable.

B. Abbreviations: The following are commonly-used abbreviations which may be found on the Drawings or in the Specifications:

AC or ac	Alternating current or air conditioning (depending upon context)
AMP or amp	Ampere
C	Celsius
CFM or cfm	Cubic feet per minute
CM or cm	Centimeter
CY or cy	Cubic yard
DC or dc	Direct current
DEG or deg	Degrees
F	Fahrenheit
FPM or fpm	Feet per minute
FPS or fps	Feet per second

FT or ft	Foot or feet
Gal or gal	Gallons
GPM or gpm	Gallons per minute
IN or in	Inch or inches
Kip or kip	Thousand pounds
KSI or ksi	Thousand pounds per square inch
KSF or ksf	Thousand pounds per square foot
KV or kv	Kilovolt
KVA or kva	Kilovolt amperes
KW or kw	Kilowatt
KWH or kwh	Kilowatt hour
LBF or lbf	Pounds force
LF or lf	Lineal foot
M or m	Meter
MPH or mph	Miles per hour
MM or mm	Millimeter
PCF or pcf	Pounds per cubic foot
PSF or psf	Pounds per square foot
PSI or psi	Pounds per square inch
PSY or psy	Per square yard
SF or sf	Square foot
SY or sy	Square yard
V or v	Volts

C. Undefined Abbreviations, Acronyms, Names and Terms: Words and terms not otherwise specifically defined in this Section, in the Instructions to Bidders, in the Conditions of the Contract, on the Drawings or elsewhere in the Specifications, shall be as customarily defined by trade or industry practice, by reference standard and by specialty dictionaries such as the following:

1. The American Institute of Architects (AIA) Document M101, "Glossary of Construction Industry Terms".

2. The Construction Specifications Institute (CSI) Technical Document TD 2-4, "Abbreviations".

3. Dictionary of Architecture and Construction, (Cyril M. Harris, McGraw-Hill Book Company, 1975).

4. Encyclopedia of Associations, published by Gale Research Co., available in most libraries.

1.04 ABBREVIATIONS FOR AGENCIES, ASSOCIATIONS, CODES AND STANDARDS

A. Abbreviations for Agencies, Associations, Codes and Standards: The following abbreviations and acronyms may be used in the Drawings and Specifications. When used, the abbreviation or acronym shall mean the full name of the applicable agency, association, organization, society or standard.

AAMA	American Architectural Manufacturers Association
AAR	Association of American Railroads
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ADA	Americans with Disabilities Act
ADAAG	Americans with Disabilities Act Accessibility Guidelines
AGA	American Galvanizers Association
AGA	American Gas Association
AHRI	Air-Conditioning, Heating, and Refrigeration Institute
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALSC	American Lumber Standard Committee
AMCA	Air Movement and Control Association International, Inc.
ANSI	American National Standards Institute
APA	APA – The Engineered Wood Association (formerly American Plywood Association)
AREMA	American Railway Engineering and Maintenance-of-Way Association
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating, and Air-Conditioning Engineers
ASME	ASME International (formerly American Society of Mechanical Engineers)
ASSE	American Society of Safety Engineers
ASSE	American Society of Sanitary Engineering
ASTM	ASTM International (formerly American Society for Testing and Materials)
AWI	Architectural Woodwork Institute
AWPA	American Wood Protection Association (formerly American Wood-Preservers' Association)
AWS	American Welding Society
BHMA	Building Hardware Manufacturers Association
Cal/EPA	California Environmental Protection Agency
Cal/OSHA	California Department of Industrial Relations, Division of Occupational Safety and Health
Caltrans	California Department of Transportation, Standard Plans & Specifications 2010 Edition
CBC	California Building Code
CEC	California Electrical Code
CFR	Code of Federal Regulations
CMC	California Mechanical Code
CPA	Composite Panel Association
CPC	California Plumbing Code

CPUC	California Public Utilities Authority
CRI	Carpet and Rug Institute
CRSI	Concrete Reinforcing Steel Institute
DHI	Door and Hardware Institute
DOC	U.S. Department of Commerce
DOT	U.S. Department of Transportation
EPA	U.S. Environmental Protection Agency
FM	FM Approvals
FM	FM Global (formerly Factory Mutual)
FRA	Federal Railroad Administration
FS	Federal Specification
FSC	Forest Stewardship Council
FTA	Federal Transit Administration
GA	Gypsum Association
GANA	Glass Association of North America
HI	Hydraulics Institute
HMMA	Hollow Metal Manufacturers Association
ICC	International Code Council
IEEE	Institute of Electrical and Electronics Engineers
IGCC	Insulating Glass Certification Council
IGMA	Insulating Glass Manufacturers Alliance
ISO	International Organization for Standardization
LBTC	Laguna Beach Transportation Center
LEED	Leadership in Energy and Environmental Design
MPI	Master Painters Institute
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
NAAMM	National Association of Architectural Metal Manufacturers
NACE	NACE International (formerly National Association of Corrosion Engineers)
NEMA	National Electrical Manufacturers Association
NETA	InterNational Electrical Testing Association
NFPA	National Fire Protection Association
NFPA	National Forest Products Association
NFRC	National Fenestration Rating Council
NHLA	National Hardwood Lumber Association
NSF	NSF International (formerly National Sanitation Foundation)
OSHA	Occupational Safety and Health Administration
PCI	Precast/Prestressed Concrete Institute
PDI	Plumbing and Drainage Institute
PS	Product Standard (US Department of Commerce)
RCSC	Research Council on Structural Connections
RIS	Redwood Inspection Service
RTA	Railway Tie Association
SDI	Steel Deck Institute
SDI	Steel Door Institute
SCRRA	Southern California Regional Rail Authority
SCAQMD	South Coast Air Quality Management District
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association

SPPWC	Standard Plans for Public Works Construction, 2015 Edition
SSPC	Society for Protective Coatings (formerly Steel Structures Painting Council)
SSPWC	Standard Specifications for Public Works Construction, 2015 Edition
TCNA	Tile Council of North America
UL	Underwriters Laboratories Inc.
USDOJ	U.S. Department of Justice
USDOT	U.S. Department of Transportation
USGBC	U.S. Green Building Council
WCLIB	West Coast Lumber Inspection Bureau (stamped WCLB)
WI	Woodwork Institute
WWPA	Western Wood Products Association

1.03 REFERENCE STANDARDS

A. General

1. Specifications, standards, and guidelines referenced in the text are incorporated by reference as if fully set forth. Where a referenced standard includes both administrative and technical provisions, and the administrative provisions conflict with the contract documents, only the technical provisions shall apply. If a referenced standard appears to conflict with the drawings and specifications, consult OCTA Project Manager for resolution.

2. The governing versions of reference standards and codes are those current at the time of contract execution, including errata, amendments, updates, etc., unless noted otherwise.

3. Contractor shall maintain the latest copy of applicable standards at jobsite during submittals, planning and progress of the work. Make standards available for use by OCTA Project Manager upon request.

4. Caltrans: Standard Plans and Specifications 2010 Edition.

5. Standard Plans for Public Works Construction (SPPWC) 2012 Edition Standard Specifications for Public Works Construction (SSPWC) 2015 Edition.

B. ADA Standards

1. References to ADAAG or the ADA Accessibility Guidelines refer to the ADA [Americans with Disabilities Act] Accessibility Guidelines for Buildings and Facilities, adopted 7/23/04 by the U.S. Access Board, amended 8/5/05, supplemented 3/23/07 reflecting amendments by the U.S. Department of Transportation, available at www.access-board.gov .

2. References to USDOT ADA Standards refer to the U.S. Department of Transportation ADA Standards for Transportation Facilities, effective 11/29/06, available at www.access-board.gov .

3. References to USDOJ ADA Standards are to the U.S. Department of Justice ADA Standards for Accessible Design, 1994, available at www.access-board.gov, or to new standards (currently pending) if in effect at the time of execution of the contract documents.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

PART 4 - MEASUREMENT AND PAYMENT

Not Used.

END OF SECTION

SECTION 01 42 16

DEFINITIONS

PART 1 - GENERAL

1.01 GENERAL

This Section provides definition of terms cited in the Contract Documents.

1.02 DEFINITION OF TERMS

A. Wherever in the specifications and other Contract Documents, the following terms and abbreviations or pronouns in place of them, are used, the intent and meaning shall be interpreted as provided in this section unless the context otherwise requires.

1. Quality Assurance (QA): The process by which the OCTA Project Manager elects to monitor and assure that it receives proper construction related documentation from the Contractor. QA procedures measure the setting of schedules for the receipt and review of documentation and the quality of the information contained within the documentation.

2. Quality Control (QC): The process by which the OCTA Project Manager receives documentation from the Contractor that proves that the Contractor is providing the contractually mandated services, such as training, testing and inspection. Contractor must show evidence of internal procedures demonstrating how he will perform these mandated functions and submit documentation that QC verifications have been completed. QC is the responsibility of the Contractor.

3. Roadway Worker: Any OCTA Project Manager or Contractor employee whose duties include inspection, construction, roadway facilities or roadway machinery within the OCTA and/or City right of way.

4. Salvage: To save any removed item. The salvaged item shall be reused in the contract or delivered and stockpiled for the OCTA Project Manager as specified in the Contract Documents.

5. Site Specific Work Plan (SSWP): A program, plan, and schedule prepared and submitted by the Contractor and approved by the OCTA Project Manager that accurately describes and illustrates the manner in which work within the operating envelope will be accomplished, the impacts on any elements of the Operating System and the manner in which work will be accomplished with the OCTA Project Manager allotted work windows.

6. Project Applicant: all references made by City of Santa Ana or other agencies to Project Applicant means the Contractor and not OCTA.

PART 2 – PRODUCTS

Not Used.

PART 3 – EXECUTION

Not Used.

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this Section.

END OF SECTION

SECTION 01 43 00

QUALITY ASSURANCE

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes: Administrative and procedural requirements for quality assurance.

1. Specific quality assurance requirements for individual construction activities are specified in the sections that specify those activities. Requirements in those sections may also cover production of standard products.

2. Requirements for Contractor to provide quality assurance services required by OCTA, or authorities having jurisdiction are not limited by provisions of this section.

B. Related Sections:

1. Section 01 43 01, Contractor Qualifications and Requirements.

2. Section 01 45 00, Quality Control.

1.02 DEFINITIONS

A. Quality Assurance Services: Activities, actions, and procedures performed before and during execution of the work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.

B. Quality Control Services: Tests, inspections, procedures, and related actions during and after execution of the work to evaluate that actual products incorporated into the work and completed construction comply with requirements. Refer to Section 01 45 00, Quality Control.

C. Mockups: Full-size, physical assemblies that are constructed on-site. Mockups are used to verify selections made under sample submittals, to demonstrate aesthetic effects and, where indicated, qualities of materials and execution, and to review construction, coordination, testing, or operation; they are not samples. Approved mockups establish the standard by which the work will be judged.

D. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, subcontractor, or sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.

1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that

requirements specified apply exclusively to trades people of the corresponding generic name.

E. Experienced: When used with an entity, "experienced" means having successfully completed a minimum of five previous projects similar in size and scope to this project; having a minimum of five years' experience in work similar to that required for this project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1.03 CONFLICTING REQUIREMENTS

A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to OCTA for a decision before proceeding.

B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to OCTA for a decision before proceeding.

1.04 QUALITY ASSURANCE

A. General: Qualifications paragraphs in this article establish the minimum qualification levels required; individual specification sections specify additional requirements.

B. Installer Qualifications: A firm or individual experienced (as defined above) in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this project, whose work has resulted in construction with a record of successful in-service performance.

C. Manufacturer Qualifications: A firm experienced (as defined above) in manufacturing products or systems similar to those indicated for this project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

D. Fabricator Qualifications: A firm experienced (as defined above) in producing products similar to those indicated for this project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.

E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where project is located and who is experienced (as defined above) in providing engineering services of the kind indicated. Engineering services

are defined as those performed for installations of the system, assembly, or product which are similar to those indicated for this project in material, design, and extent.

F. Specialists: Certain sections of the specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.

   1. Requirement for specialists shall not supersede building codes and regulations governing the work.

G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented by a recognized OCTA; and with additional qualifications specified in individual sections; and where required by authorities having jurisdiction, that is acceptable to authorities.

   1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7.

   2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accreditation Program.

H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's products that are similar in material, design, and extent to those indicated for this project.

I. Preconstruction Testing: Where testing agency is indicated to perform preconstruction testing for compliance with specified requirements for performance and test methods, comply with the following:

   1. Contractor responsibilities include the following:

      a. Provide test specimens representative of proposed products and construction.

      b. Submit specimens in a timely manner with sufficient time for testing and analyzing results to prevent delaying the work.

      c. Provide sizes and configurations of test assemblies, mockups, and laboratory mockups to adequately demonstrate capability of products to comply with performance requirements.

      d. Build site-assembled test assemblies and mockups, where indicated, using installers who will perform same tasks for Project.

      e. Build laboratory mockups at testing facility using personnel, products, and methods of construction indicated for the completed work.

f. When testing is complete, remove test specimens, assemblies, mockups, and laboratory mockups; do not reuse products on project.

2. Testing Agency Responsibilities: Submit a certified written report of each test, inspection, and similar quality-assurance service to OCTA, with copy to Contractor. Interpret tests and inspections and state in each report whether tested and inspected work complies with or deviates from the contract documents.

J. Mockups: Before installing portions of the work requiring mockups, build mockups for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed work:

1. Build mockups in location and of size indicated or, if not indicated, as directed by OCTA.

2. Notify OCTA seven days in advance of dates and times when mockups will be constructed.

3. Demonstrate the proposed range of aesthetic effects and workmanship.

4. Obtain OCTA's approval of mockups before starting work, fabrication, or construction.

5. Allow seven days for initial review and each re-review of each mockup.

6. Maintain mockups during construction in an undisturbed condition as a standard for judging the completed work.

7. Demolish and remove mockups when directed, unless otherwise indicated.

PART 2 - PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement will be made for the work of this section.

END OF SECTION

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SECTION 01 43 01

CONTRACTOR QUALIFICATIONS AND REQUIREMENTS

PART 1 – GENERAL

1.01 CONTRACTOR DUTIES

A. Except as specifically noted otherwise, provide:

1. A Construction Project Manager, who shall serve as the Contractor's Representative for the Contract, at or beyond the requirements described in this section.

2. Other labor, supervision, and materials required for the work.

3. Other tools, equipment, and machinery required for the work.

4. Water, heat, and utilities required for the work.

5. Support facilities and services, including fully furnished field office facilities, necessary for the proper execution and completion of the work.

B. Pay legally required sales, consumer, and use taxes.

C. Secure and pay for fees, surcharges, taxes, permits, and licenses necessary for the proper execution of the work.

1.02 REFERENCE STANDARDS

A. OSHA: Occupational Safety and Health Administration regulations.

1.03 CONSTRUCTION PROJECT MANAGER

A. Provide for the work a Construction Project Manager who will manage and coordinate the overall aspects of the work. The Construction Project Manager's qualifications and experience shall include:

1. At least five years of progressively more responsible general construction experience including bridges, concrete structures, site grading, site utilities, paving and concrete flatwork

2. Demonstrated ability to work safely and supervise individuals in safe work.

3. Previous positions and experience supervising and planning work activities of construction superintendents, project engineers, and support personnel foreman and crews.

4. Ability to read and understand survey, grading, paving, striping, utility, and structural, mechanical and electrical construction plans and specifications, and SSWPs.

5. Ability to develop and work from construction schedules.

B. The Construction Project Manager must be:

1. Available at construction site during the normal working hours for the full duration of the project.

2. On the job during the work week to manage and coordinate all aspects of work for the full duration of the project.

3. Able to respond immediately to emergency or problem calls, 24 hours a day, 7 days a week.

C. The Construction Project Manager shall have the necessary authority to provide instructions and orders to his authorized representatives. The Construction Project Manager shall not be replaced without advance approval by the OCTA Project Manager; OCTA Project Manager will have sole approval of the replacement.

1.04 PROJECT SCHEDULER

A. Contractor shall provide a Project Scheduler to manage and coordinate scheduling requirements in accordance with Section 01 32 00, Construction Progress Documentation.

B. Submit for OCTA Project Manager's approval the name and professional history of the person designated as Project Scheduler.

C. Project Scheduler qualifications and experience must include, at a minimum:

1. Five to eight years of verifiable, progressively more responsible experience in preparing, updating, and maintaining CPM based complex construction schedules.

2. Extensive experience utilizing computer based scheduling and tracking software.

3. Ability to communicate effectively, orally and in writing, with office staff, field supervision, and craft personnel.

D. If Contractor fails to comply with requirements of this section and Section 01 32 00, Construction Progress Documentation, Commission reserves the right at its option to engage an independent scheduling consultant to fulfill those requirements and backcharge Contractor for actual costs incurred.

1.05 SITE SAFETY REPRESENTATIVE

A. Provide Site Safety Representative.

B. Site Safety Representative qualifications and experience must include:

1. Meeting qualifications set forth in the General Conditions. Pass OCTA Level 3 Safety Requirements, Section 01 35 24.

C. The Site Safety Representative must be headquartered for the duration of the project at Contractor's construction field office. .

D. The Site Safety Representative will be required to train and test Contractor's employees as described in Section 01 35 23, Owner Safety Requirements.

1.06 SUBMITTALS

A. Contractor shall submit for OCTA Project Manager’s approval the name and professional history of each of the key positions identified in this specification section.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

3.01 PERSONNEL QUALIFICATION

A. Within five days after Notice to Proceed, submit to OCTA Project Manager resumes of personnel listed above in Part 1 above. Each resume shall provide sufficient detail to demonstrate compliance with requirements. Submit a schedule showing, for each employee classification, number of personnel to be assigned to the work and duration of their assignments.

B. The OCTA Project Manager will review resumes to determine acceptability of qualifications and experience. The OCTA Project Manager's decision is final. Do not resubmit resumes of personnel deemed unacceptable by the OCTA Project Manager.

C. Substitutions: To replace any personnel identified in Part 1, follow this section's procedures for obtaining approval of the original personnel. This qualification process, shall be completed before the vacancy occurs. Provision for substitutions does not relieve Contractor of the responsibility to provide personnel as provided in Part 1.

D. Provide required personnel in accordance with Part 1. Once mobilization payment is made, provide appropriate personnel within 30 days. If required personnel are not available within 30 days, or Contractor has made unapproved substitutions or has failed to act in good faith to secure replacement personnel, the OCTA Project Manager may take the following actions at his sole discretion:

1. Option 1: Allow Contractor's operation to proceed and deduct $500 per day for each operation that was under the direct supervision of the subject personnel. This deduction will continue until appropriate personnel are provided or until the operation is completed.

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for work of this section.

END OF SECTION

SECTION 01 45 00

QUALITY CONTROL

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Authority of OCTA Project Manager.
2. Responsibilities of the Contractor.
3. Inspection and testing by OCTA Project Manager.

B. Related Sections:

1. Section 01 14 23, Coordination with OCTA and City of Santa Ana.
2. Section 01 33 00, Submittal Procedures.
3. Section 01 41 00, Regulatory Requirements.
4. Section 01 43 00, Quality Assurance.
5. Section 01 60 00, Product Requirements.

1.02 AUTHORITY OF OCTA PROJECT MANAGER

A. OCTA Project Manager will determine whether the work is completed in accordance with the contract documents. OCTA Project Manager will decide all questions that may arise as to the quality or acceptability of materials furnished and work performed, and interpretations of the contract documents.

B. OCTA Project Manager may require the Contractor to finish a section on which work is in progress before work is started on any additional section. Refer to Section 01 14 22, Rules and Hours of Operation for requirements.

C. OCTA Project Manager may require the Contractor to submit additional shop drawings or documents to demonstrate the Contractor's understanding the intents of contract plans and specifications as part of quality control.

1.03 REFERENCES

A. ASTM D3740 - Practice for Evaluation of Agencies Engaged in Testing and/or Inspection Used in Engineering Design and Construction.

1.04 REGULATORY REQUIREMENTS FOR TESTING AND INSPECTION

A. Regulatory Requirements for Testing and Inspection: Inspections, testing and approvals as required by authorities having jurisdiction. Refer to Section 01060 - Regulatory Requirements.

1. California Code of Regulations (CCR) - Title 24, State Building Code (Uniform Building Code with State of California Amendments), latest edition, as adopted and interpreted by authorities having jurisdiction.

2. California Code of Regulations (CCR) - Title 22, Sections 94065, 94067 and 94069.

1.05 RESPONSIBILITIES OF THE CONTRACTOR

A. Cooperate with OCTA Project Manager and with other contractors as detailed in Section 01 14 24, Coordination with OCTA and City.

B. Ensure that products, services, workmanship and site conditions comply with requirements of the Drawings and Specifications by coordinating, supervising, testing and inspecting the Work and by utilizing only suitably qualified personnel.

C. Perform the work to achieve the level of quality prescribed in the contract documents, including by reference, all Codes, laws, rules, regulations and standards. The no quality basic is prescribed, the quality shall be in accordance with the best accepted practices of the construction industry for the locale of the Project, for projects of this type.

D. Perform the work in the proper sequence in relation to the requirements of the OCTA and other contractors, all as may be directed by OCTA Project Manager.

E. Employ and assign knowledgeable and skilled personnel as necessary to perform quality control functions to ensure that the Work is provided as required.

F. Be responsible for any damage done by it or its agents to the work performed by the OCTA or another contractor.

1.06 SUPERVISION AND CONSTRUCTION PROCEDURES

A. Give the work the constant attention necessary to facilitate the progress of the work.

B. Be solely responsible for all construction means, methods, techniques, and procedures and for coordinating all portions of the work under the contract. Permission given by OCTA Project Manager to use any particular methods, equipment, or appliances shall not be construed to relieve the Contractor from furnishing other equipment or other appliances or adopting other methods when those in use prove unsatisfactory, or as to bind OCTA Project Manager to accept work which does not comply with the contract.

C. Immediately remove from the work, when so ordered by OCTA Project Manager, and do not re-employ on any of the work, without written permission from OCTA Project Manager, any contractor or subcontractor employee doing unsafe, improper, or defective work; who, in OCTA Project Manager's judgment, refuses or neglects the direction of OCTA Project Manager given to the Contractor; who is deemed incompetent or disorderly; or who commits trespassing on public or private property in the vicinity of the work.

D. Be responsible for securing all work areas by barricade in accordance with local and State requirements as applicable at the end of each day.

1.07 QUALITY OF THE WORK

A. Quality of Products: Unless otherwise indicated or specified, all products shall be new, free of defects and fit for the intended use.

B. Quality of Installation: All Work shall be produced plumb, level, square and true, or true to indicated angle, and with proper alignment and relationship between the various elements. New material shall be installed so that drainage merges with existing flow patterns on the site towards the drains.

C. Protection of Existing and Completed Work: Take all measures necessary to preserve and protect existing and completed Work free from damage, deterioration, soiling and staining, until Acceptance by the Authority.

D. Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Unless more stringent requirements are indicated or specified, comply with manufacturer's instructions and recommendations, reference standards and building code research report requirements in preparing, fabricating, erecting, installing, applying, connecting and finishing Work.

E. Deviations from Standards and Code Compliance and Manufacturer's Instructions and Recommendations: Document and explain all deviations from reference standards and building code research report requirements and manufacturer's product installation instructions and recommendations, including acknowledgement by the manufacturer that such deviations are acceptable and appropriate for the Project.

F. Verification of Quality: Work shall be subject to verification of quality by the Authority or Engineer in accordance with provisions of the Conditions of the Contract.

1. Contractor shall cooperate by making Work available for inspection by the Authority or Engineer or their designated representative.

2. Such verification may include mill, plant, shop, or field inspection as required. OCTA designated Inspector shall access to material inspection.

3. Provide access to all parts of the Work, including plants where materials or equipment are manufactured or fabricated.

4. Provide all information and assistance as required, including that by and from subcontractors, fabricators, materials suppliers and manufacturers, for verification of quality by the Authority or Engineer.

5. Contract modifications, if any, resulting from such verification activities shall be governed by applicable provisions in the Conditions of the Contract.

G. Observations by the Engineer and Engineer's Consultants: Periodic and occasional observations of Work in progress may be made by the Engineer and Engineer's consultants as deemed necessary to review progress of Work and general conformance with design intent.

H. Limitations on Inspection, Test and Observations: Neither employment of an Inspector of Record, independent testing and inspection agency, or observations by the Engineer and Engineer's consultants shall in no way relieve Contractor of obligation to perform Work in full conformance to all requirements of Contract Documents and applicable Building Code and other regulatory requirements.

I. The Engineer's Acceptance and Rejection of Work: The Engineer reserves the right to reject all Work not in conformance to the requirements of the Drawings and Specifications.

J. Correction of Non-Conforming Work: Non-conforming Work shall be modified, replaced, repaired or redone by the Contractor at no change in Contract Sum or Contract Time.

K. Acceptance of Non-Conforming Work: Acceptance of non-conforming Work, without specific written acknowledgement and approval of the Authority, shall not relieve the Contractor of the obligation to correct such Work.

L. Contract Adjustment for Non-conforming Work: Should the Authority or Engineer determine that it is not feasible or in Authority's interest to require non-conforming Work to be repaired or replaced, an equitable reduction in Contract Sum shall be made by agreement between the Authority and Contractor. If equitable amount cannot be agreed upon, a Construction Change Directive will be issued and the amount in dispute resolved in accordance with the Conditions of the Contract.

M. Non-Responsibility for Non-Conforming Work: The Engineer and the Engineer's consultants disclaim any and all responsibility for Work produced not in conformance with the Drawings and Specifications.

1.08 INSPECTION AND TESTING

A. The work is to be completed in accordance with the specifications, the drawings, and such instructions or directions as OCTA Project Manager may give to supplement drawings and specifications. Wherever the words "directed," "permitted," "approved," "acceptable," "satisfactory to," or similar words or phrases occur in the contract documents, they shall be understood to be functions of OCTA Project Manager to be exercised at his discretion.

B. The OCTA shall not be responsible for and shall not have control or charge over the acts or omissions of the Contractor, subcontractors, or any of their agents or employees, or any other persons performing any of the work.

C. Inspections and Tests by Authorities Having Jurisdiction: Contractor shall cause all tests and inspections required by authorities having jurisdiction to be made for Work under this Contract, Public Works Department, Fire Department, Health Department, AQMD, SCE and similar agencies. Except as specifically noted, scheduling, conducting and paying for such inspections shall be solely the Contractor's responsibility.

D. Inspections and Tests by Serving Utilities: Contractor shall cause all tests and inspections required by serving utilities to be made for Work under this Contract. Scheduling, conducting and paying for such inspections shall be solely the Contractor's responsibility.

E. Inspections and Tests by Manufacturer's Representatives: Contractor shall cause all tests and inspections specified to be conducted by materials or systems manufacturers to be made. Additionally, all tests and inspections required by materials or systems manufacturers as conditions of warranty or certification of Work shall be made, the cost of which shall be included in the Contract Sum.

F. Inspections by Independent Testing and Inspection Agency or Agencies: The following applies to tests and inspections:

1. The Authority will select and pay for an independent testing and inspection laboratory or agency, to conduct tests and inspections as indicated on Drawings or Specifications, and as required by authorities having jurisdiction.

2. Costs for additional tests, inspections and related services, due to the following, shall be reimbursed to the Authority by the Contractor and no change in Contract Time shall result.

   a. Failure to properly schedule or notify testing and inspection agency or authorities having jurisdiction.

   b. Changes in sources, lots or suppliers of products after original tests or inspections.

   c. Changes in means methods, techniques, sequences and procedures of construction which necessitate additional testing, inspection and related services.

   d. Changes in material after review and acceptance of submittal.

3. Test and Inspection Reports: After each inspection and test, one copy of report shall be promptly submitted to the Engineer, Engineer's consultant (as applicable), Authority, Contractor, City Inspector, and to agency having jurisdiction (if required by Code).

   a. Reports shall clearly identify the following:

Date issued.
Project name and number.
Identification of product and Specifications Section in which Work is specified.
Name of inspector.
Date and time of sampling or inspection.
Location in Project where sampling or inspection was conducted.
Type of inspection or test.
Date of test.
Results of tests.
Comments concerning conformance with Contract Documents and other requirements.

b. Test reports shall indicate specified or required values and shall include statement whether test results indicate satisfactory performance of products.

c. Samples taken, but not tested, shall be reported.

d. Test reports shall confirm that methods used for sampling and testing conform to specified test procedures.

G. Contractor shall provide OCTA Project Manager, independent testing and inspection agency personnel, inspector of record and OCTA's consultant with full access to the work and reasonable time for inspection for ascertaining whether or not the work is performed in accordance with the requirements and intent of the contract. No work shall be covered or materials used without making the work or materials available for inspection by OCTA Project Manager. If OCTA Project Manager so requests, the Contractor shall, at any time before acceptance of the work, remove or uncover such portions of the finished work as may be directed.

H. After examination, Contractor shall restore the work to the standard required by the contract documents. If the work examined proves acceptable, uncovering, removal, and replacement of the work in question will be paid for by OCTA by change order to the Contractor; but if the work proves unacceptable, the uncovering or removal and replacement of the work in question shall be at the Contractor's expense. Inspection will not relieve the Contractor from the responsibility for the quality of this work and to perform the work in accordance with the requirements of the contract documents.

I. All materials and every process of manufacture and construction shall be subject to inspection at all times. OCTA Project Manager and his designated representatives shall have free access to all operations. Contractor shall provide necessary materials and OCTA Project Manager shall have the right to select suitable samples of materials for testing or examination which the contractor shall supply without charge. In case such samples must be shipped to some other point for inspection or testing, Contractor shall box or crate samples as necessary and shall deliver them at points designated for shipment without charge. Omission of inspection shall not relieve the Contractor of its obligations to produce the work required by the contract documents. Materials not in compliance with contract requirements shall be removed promptly from the vicinity of the work, and the Contractor, at its expense, shall promptly remove, reconstruct, replace, and make good any defective work as

directed in writing by OCTA Project Manager. Oversight or error in judgment of inspectors, or previous acceptance of the work, shall not relieve Contractor from the obligation to correct defects whenever discovered.

J. If the Contractor does not correct nonconforming work or remove rejected materials within a reasonable time fixed by written notice, OCTA Project Manager may direct that removals and corrections be performed by other contractors. Charges for such removals and corrections shall be deducted from the Contractor's payment due under this contract or may be paid for by the Contractor's bonds held for this contract.

K. All inspection by OCTA Project Manager is for the protection of the OCTA and its interest and shall not relieve the Contractor of responsibility for providing work in accordance with the contract documents. After completion of the work, a final inspection will be made and any previous inspection or acceptance will not preclude rejection at the final inspection of any item that is not satisfactory to OCTA Project Manager or is not in accordance with the contract documents.

L. If, within the period of time prescribed by law or by the terms of any applicable special warranty required by the contract documents, whichever is longer, any of the work is found to be defective or not in accordance with the contract documents, the Contractor shall correct it promptly after receipt of a written notice from OCTA Project Manager. This obligation shall survive acceptance of the work or termination of the contract. In the event the OCTA prefers to accept or not require correction of defective or nonconforming work, the OCTA may do so instead of requiring its removal and correction, in which case OCTA Project Manager shall determine an appropriate sum to be deducted from the contract price or otherwise charged against the Contractor, which determination shall be final and binding upon the parties. Such adjustment shall be effected whether or not final payment has been made.

M. All defective work which has been rejected shall be remedied or removed and replaced by the Contractor at its own expense, in a manner acceptable to OCTA Project Manager.

N. Whenever all of the work provided for in the contract or authorized as force account work has been completed and the final cleaning-up performed, OCTA Project Manager will make the final inspection, and, if the work is found to be satisfactory, Contractor will be notified in writing of the acceptance. All portions of the work shall be maintained by the Contractor at the standards required by the contract documents until final acceptance.

O. At OCTA Project Manager's discretion, portions of the work that are determined to be substantially complete may be accepted before all the project work is completed. After acceptance of substantially completed work, Contractor shall not use the finished product for any purpose without permission of OCTA Project Manager.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

3.01 FIELD QUALITY CONTROL/QUALITY ASSURANCE

A. Give minimum of 48 hour advance notice of each test and inspection to OCTA Project Manager when ready for testing, observation and inspection.

B. Should any compaction density/strength test or inspection fail to meet specification requirements, necessary corrective work shall be performed by the Contractor. Additional testing shall be required to determine that corrective work provides compaction in the failed area meeting requirements of these Specifications.

C. Contractor shall provide a record of testing results including corrective actions taken if necessary on the approved form to the OCTA Project Manager.

D. Contractor's corrective work to meet requirements and retesting resulting from failing tests shall be at no additional cost to OCTA.

E. Obtain all inspections required by the local regulatory agencies and provide the Authority with the final sign-off cards for the project from the local regulatory agencies.

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this section.

END OF SECTION

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Temporary facilities and controls used during construction.

B. Related Sections:

1. Section 01 14 25, Procedures in Construction.
2. Section 01 14 27, Legal Relations and Responsibility.
3. Section 01 14 43, Environmental Resource Protection.
4. Section 01 71 13, Mobilization and Demobilization
5. Section 01 74 19, Construction Waste Management and Disposal.

1.02 SUBMITTALS

A. Submit in accordance with Section 01 33 00, Submittal Procedures.

B. Site Plans: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

C. Moisture Protection Plan: Describe procedures and controls for: protecting materials and construction from water absorption and damage, including delivery, handling, and storage; discarding water-damage materials; protocols for mitigation of water into completed work; and replacing water-damaged work.

1.03 QUALITY ASSURANCE

A. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

PART 2 - PRODUCTS

2.01 TEMPORARY FACILITIES, PRODUCTS, AND CONTROL

A. Common-Use Field Office: not required.

B. Storage and Fabrication Sheds:

1. No equipment or tools are allowed to be stored at the jobsite without the OCTA Project Manager's written permission. Size to storage requirements for products of individual Sections. Allow for access and orderly provision for maintenance and for inspection of products.

2. Precast concrete planks/beams shall be cast offsite and transported to site.

C. Telephone Service: Provide mobile telephone service for project superintendent.

D. Temporary Electricity:

1. Connect to existing power service at location as directed. Power consumption shall not disrupt Owner's need for continuous service. Exercise measures to conserve energy.

2. Provide power outlets for construction operations, with branch wiring and distribution boxes. Provide flexible power cords as required.

3. Provide main service disconnect and over current protection at convenient location.

4. Comply with NECA, NEMA, and UL standards and regulations for temporary electric service.

5. Permanent convenience receptacles may be utilized during construction.

E. Temporary Fire Protection:

1. Maintain temporary fire protection facilities of the types needed until permanent facilities are installed. Fire Extinguishers shall be portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

2. Comply with NFPA 10 "Standard for Portable Fire Extinguishers" and NFPA 241 "Standard for Safeguarding Construction, Alterations, and Demolition Operations".

3. Fire safety during construction shall comply with CFC - California Fire Code (CCR) California Code of Regulations, Title 24, Part 9, Article 87.

4. Store combustible materials in containers in fire-safe locations.

5. Maintain unobstructed access to fire extinguishers, fire hydrants, temporary fire-protection facilities, stairways, and other access routes.

6. Provide supervision of welding operations, combustion-type temporary heating units, and similar sources of fire ignition.

F. Barriers, enclosures and fencing:

1. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations.

2. Provide protection for plant life and trees designated to remain and for soft and hardscape areas adjacent to work, replace damaged materials in kind.

3. Protect non-owned vehicular traffic, stored materials, if allowed, site and structures from damage.

G. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.

H. Pollution Control:

1. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

2. Conform to Best Management Practices for waste management and material controls as defined in Section 4 of the Construction Activity Handbook published by the Storm Water Quality Association.

3. Coordinate construction activities with control procedures established in the Storm Water Pollution Plan (SWPPP).

I. Security:

1. Provide security and facilities to protect Work, from unauthorized entry, vandalism, or theft.

2. Coordinate with Owner’s security program.

J. Parking: No Contractor’s employees’ parking is allowed on site.

K. Traffic Control:

1. Comply with requirements of authorities having jurisdiction.

2. Obtain all permits, provide all materials and maintain controls as required of authorities having jurisdiction.

3. Maintain access for fire-fighting equipment and access to hydrants.

L. Progress Cleaning:

1. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.

2. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.

3. Provide walk-off mats at each building entry.

M. Waste Disposal:

1. Waste Management: In compliance with City regulations.

2. Maintain work areas free of waste materials, debris, and rubbish.

3. Remove waste materials, debris, and rubbish from site periodically during a work day and legally dispose of off-site at the end of each work day at 3:30 pm.

4. Maintain site area in a clean and orderly condition.

PART 3 - EXECUTION

3.01 INSTALLATION, GENERAL

A. Locate facilities where they will serve project adequately and result in minimum interference with performance of the work. Relocate and modify facilities as required by progress of the work.

1. Locate facilities to avoid protected areas as specified in Section 01 14 43, Environmental Resource Protection.

3.02 TEMPORARY UTILITIES

A. Provide and pay for temporary utility services and facilities such as sanitary facilities, telephone service and internet service adequate for construction and related activities.

3.03 TEMPORARY ROADS, PAVING, PARKING, AND SIMILAR IMPROVEMENTS, AND USE OF SITE

A. See Section 01 14 25, Procedures in Construction.

B. See Section 01 14 27, Legal Relations and Responsibility

3.04 PROTECTION OF AIR AND WATER RESOURCES AND OTHER ENVIRONMENTAL RESOURCES

A. See Section 01 14 25, Procedures in Construction.

B. See Section 01 14 27, Legal Relations and Responsibility.

C. See Section 01 14 43, Environmental Resource Protection.

3.05 CONSTRUCTION WASTE

A. See Section 01 74 19, Construction Waste Management and Disposal.

3.06 SECURITY AND FIRE PROTECTION

A. See Section 01 14 27, Legal Relations and Responsibility.

PART 4 - MEASUREMENT AND PAYMENT

Work of this section is incidental to other work and no separate measurement or payment will be made.

END OF SECTION

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SECTION 01 57 13

TEMPORARY EROSION AND SEDIMENTATION CONTROL

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Temporary erosion and sedimentation control.

2. Accessories required for a complete installation.

B. Related Sections:

1. Section 01 14 25, Procedures in Construction.

2. Section 01 50 00, Temporary Facilities and Controls.

3. Section 01 14 43, Environmental Resource Protection

1.02 REFERENCE STANDARDS

A. Caltrans: State of California Department of Transportation, Standard Specifications.

B. Standard Specifications for Public Works Construction (SSPWC).

1.03 SUBMITTALS

A. Submit in accordance with Section 01 33 00, Submittal Procedures.

B. A Storm Water Pollution Prevention Plan (SWPPP) prepared by a State Water Resources Control Board licensed QSD.

1. Schedules for accomplishment of temporary and permanent erosion control and work required, as applicable for clearing and grubbing, grading, trenching, paving, and other construction.

2. Proposed method of erosion control and a plan for disposal of waste materials.

3. See additional requirements under Section 01 14 25, Procedures in Construction.

C. Working drawings and data on proposed straw bales and fiber rolls, including physical properties of various products.

1.04 DELIVERY, STORAGE, AND HANDLING

A. Deliver, handle, and store materials in accordance with recommendations of manufacturer.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Miscellaneous Materials:

1. Plastic sheeting: Clear polyethylene plastic sheeting at least 10 mils thick, secured with anchor restrainers (gravel filled bags) per Caltrans standard plans, 2010 edition.

2. Temporary Fiber Rolls and Straw Bales: Provide fiber rolls and straw bales with staking per Caltrans standard plans, 2010 edition. If staking is not feasible, contractor shall develop other suitable methods of anchoring that will be acceptable to OCFCD.

3. Temporary concrete washout facility, per Caltrans standard plans, 2010 edition.

4. Gravel bags per Caltrans standard plans, 2010 edition.

PART 3 - EXECUTION

3.01 GENERAL

A. Conform to all applicable local, state and Federal Regulations and laws pertaining to water pollution control and as specified in SSPWC section 7-8.6.

B. Accomplish erosion and sediment control through use of berms, dikes, swales, dams, fiber mats, plastic sheeting, netting, gravel, storm drain inlet protection, slope drains, sediment fences, and other sediment barriers; gravel construction entrances; and other erosion control devices or methods.

C. Coordinate temporary pollution control provisions with permanent erosion control features specified elsewhere in the contract documents to the extent practicable to assure economical, effective, and continuous erosion control throughout the construction and post-construction period.

D. OCTA Project Manager may limit surface area of erodible earth material exposed by clearing, grubbing, excavation, borrow, embankment, and fill operations

1. Provide immediate, permanent or temporary pollution control measures to prevent contamination of adjacent streams or other watercourses, lakes, ponds, or other areas of water impoundment.

2. Work may involve construction of temporary berms, dikes, dams, sediment basins, and slope drains; use of temporary mats; or other control devices or methods as necessary to control erosion.

E. Construct facilities required for clearing, grading, and land alteration activities, to ensure that sediment-laden water does not enter drainage systems or violate applicable water standards. Conform to requirements of Section 01 14 43, Environmental Resource Protection.

F. Permanent Features:

1. Incorporate permanent erosion control features at earliest practicable time. Use temporary pollution control measures to correct unforeseen conditions that develop during construction, to provide measures that are needed prior to installation of permanent pollution control features, or to temporarily control erosion that develops during normal construction.

2. Where erosion interferes with clearing and grubbing operations, schedule and perform work so that grading operations and permanent erosion control features can follow immediately; otherwise, provide temporary erosion control measures between successive construction stages.

G. Areas of Work:

1. Limit the area of clearing, grubbing, excavation, borrow, and embankment operations in progress commensurate with progress. Should seasonal limitations result in unrealistic coordination of operations, take temporary erosion control measures immediately.

2. Flag boundaries of clearing limits prior to construction.

   a. Do not disturb or permit disturbance of ground beyond flagged boundary. Conform to requirements of Section 01 14 43, Environmental Resource Protection

   b. Maintain flagging for duration of work.

3. Temporary soil erosion and sediment control may include construction work outside right of way where work is necessary as a result of project construction such as borrow pit operations, haul roads, and equipment storage sites.

H. Maintenance:

1. Maintain erosion control features installed, including replacement and upgrading of facilities when needed, until work is completed and notice of Final Acceptance issued.

2. Maintain catch basins (inlets with sumps or inverted siphons) so that not more than one foot depth of sediment is allowed to accumulate within a trap (or sump).

   a. Clean catch basins and storm drains prior to paving and prior to Substantial Completion.

   b. Remove sediment. Do not flush sediment-laden water into downstream system.

3. Keep paved areas clean for the duration of the project.

4. Measures in addition to those indicated may be required.

5. Do not permit more than a one-foot depth of sediment to accumulate behind a silt fence.

   a. Remove sediment or regrade it into slopes, and repair and reestablish silt fences as needed.

6. Remove silt fences in entirety when no longer required. Fences are required until uphill area has been permanently stabilized.

7. Remove pipes, end sections, drainage curbs, silt fences, and other materials from temporary erosion control devices; those not incorporated into permanent work become property of Contractor.

3.02 STORM DRAIN INLET PROTECTION

A. Storm drain inlet protection must prevent sediment from entering storm drain systems prior to permanent stabilization of disturbed areas.

B. Use storm drain inlet protection per Caltrans standards plans, 2010 edition:

   1. Where storm drain inlets are operational before permanent stabilization of disturbed drainage area.

   2. Adjacent to and immediately downhill of utility type construction in existing paved areas with catch basin drainage.

   3. When cleaning streets.

C. Use berms when required to direct drainage to flow through filters and prevent bypassing of inlets.

D. Do not permit more than one-foot depth of sediment to accumulate against storm drain inlet protection.

1. Remove sediment and restore inlet protection as needed to maintain sediment trapping and filtering capability.

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for the work of this section.

END OF SECTION

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SECTION 01 60 00

PRODUCT REQUIREMENTS

PART 1 - GENERAL

1.01 SUMMARY

A. This section includes administrative and procedural requirements for selection of products for use in the project; product delivery, storage, and handling.

1.02 SOURCE OF SUPPLY AND QUALITY OF MATERIALS

A. OCTA Project Manager shall approve the source of supply of each of the materials supplied by the Contractor before the purchase or delivery of materials to the work site. Promptly after receiving the Contract award, the Contractor shall notify OCTA Project Manager of all proposed material sources. If it is found after trial that sources of supply previously approved do not produce uniform and satisfactory products, or if the product from any source proves unacceptable at any time, the Contractor shall furnish materials from other sources as approved by OCTA Project Manager.

B. Only materials conforming to Specifications and approved in advance by OCTA Project Manager shall be used in the work. All material being used shall be subject to inspection or test at any time during their preparation or use. No material that after approval has in any way become unfit for use shall be used in the Work.

1.03 UNLOADING, HAULING AND STORING MATERIALS

A. The Contractor shall, at its expense, deliver, unload, store, handle, and be responsible for all materials whether furnished by the OCTA or by the Contractor.

B. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible.

   1. Periodically inspect to ensure products are undamaged, and are maintained under required conditions.

   2. Products damaged by improper storage or protection shall be removed and replaced with new products at no change in Contract Sum or Contract Time.

C. Store products to facilitate inspection and measurement of quantity or counting of units.

D. The unloading, storing and hauling of all the OCTA’s or Contractor's material shall be considered as incidental to contract pricing.

E. When permission to do so is given in writing by OCTA Project Manager, the Contractor may store materials and erect temporary buildings on OCTA property provided such property is not required for the OCTA's use or is not under lease to other parties.

F. Store moisture-sensitive products in a weathertight enclosure or covered with an impervious sheet covering. Provide adequate ventilation to avoid condensation. Maintain product storage within temperature and humidity ranges required by manufacturer's instructions.

1. For exterior storage of fabricated products, place on sloped supports above ground.

2. Store loose granular materials on solid surfaces in a well-drained area. Prevent mixing with foreign matter. Prevent material from flowing or blowing away to other areas of the site. Provide covers for sand, aggregate base, and debris so that wind does not cause it to blow away.

3. Arrange storage to provide access for inspection. Periodically inspect to assure products are undamaged, and are maintained under required conditions.

G. All electrical and mechanical equipment shall be stored so as to be protected from rain, sun, wind, sand, dust, moisture, etc. The equipment shall be stored on supports off the ground or on concrete slabs with all factory provided dust and moisture protection left in place until equipment is installed.

H. Electrical and mechanical equipment shall be maintained in accordance with the manufacturer's operation and maintenance instructions until the Contractor is relieved of the responsibility by OCTA Project Manager.

I. Store heavy materials away from the structure in a manner that will not endanger supporting construction.

J. Building materials shall be stored in a protected environment safe from sun, rain and excessive dust. Store cementitious products and materials on elevated platforms. Damaged or excessively dirty materials will not be permitted to be installed.

K. Protection:

1. Provide barriers, flashing lights, substantial coverings and notices to protect installed Work from traffic and subsequent construction operations.

2. Remove protective measures when no longer required and prior to Acceptance of the Work.

L. Delivery Requirements:

1. Schedule delivery to minimize long-term storage at project site and to prevent overcrowding of construction spaces.

2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.

3. Comply with manufacturer's instructions and recommendations for transportation, delivery and handling. Provide equipment and personnel to handle products by methods to prevent soiling, marring or other damage.

4. Deliver products to project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with manufacturer's labels and instructions for handling, storing, unpacking, protecting, and installing.

5. Contractor is responsible and shall be present at work side for receiving his material delivery at the work site. Promptly inspect products on delivery to ensure compliance with the contract documents and to ensure that products are undamaged and properly protected.

1.04 PRODUCT SELECTION PROCEDURES

A. Products: Items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchase stock, and include material, equipment, assemblies, fabrications and systems.

B. General Product Requirements: Provide products that comply with the contract documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.

1. It is OCTA policy that all manufactured products and supplies be provided by United States manufacturing industries in agreement with related Union organizations. Therefore in the performance of the contract, Contractor shall give United States made products preference.

2. Named Product: Items identified by manufacturer's product name, including make or model designations indicated in the manufacturer's published product data.

3. Specific Product Requirements: Refer to requirements of Section 01 45 00 - Quality Control and individual product Specifications Sections in the project specifications for specific requirements for products.

4. Materials: Products that are shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed or installed to form a part of the Work.

5. Product Completeness: Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.

6. Minimum Requirements: Specified requirements for products are minimum requirements.

7. Standard Products: Where specific products are not specified, provide standard products of types that are suitable for the intended use in similar conditions and that have been produced and used successfully in similar situations on similar projects. Products shall be selected by the Contractor and subject to review and acceptance by the Engineer.

8. Code Compliance: All products, other than commodity products prescribed by Code, shall have a current ICBO Evaluation Service (ICBO ES) Research Report or CABO National Evaluation Report (NER).

9. Interchangeability: To the fullest extent possible, provide products of the same kind from a single source. Products required to be supplied in quantity shall be the same product and interchangeable throughout the Work. When options are specified for the selection of any of two or more products, the product selected shall be compatible with products previously selected.

10. Nameplates:

    a. Except for require labels and operating and safety instructions, do not attach manufacturer's identifying nameplates or trademarks on surfaces exposed to view in occupied spaces or to the exterior.

    b. Provide a permanent nameplate on each item of service-connected or power-operated equipment. Nameplates shall contain identifying information and essential operating data such as the following example:

        Name of manufacturer
        Name of product
        Model and serial number
        Capacity
        Power Characteristics
        Speed

11. OCTA reserves the right to limit selection to products with warranties not in conflict with requirements of the contract documents.

12. Where products are accompanied by the term "as selected" or similar, OCTA Engineer will make selection.

13. Where products are accompanied by the term "match sample" or similar, sample to be matched is OCTA Project Manager's.

14. Descriptive, performance, and reference standard requirements in the specifications establish salient characteristics of products.

C. General Product Selection Requirements:

1. Where products or manufacturers are identified in the specifications, the intent is not to limit competition or to restrict the work to only those products or manufacturers named. Rather, the intent is to establish the level of quality required and the product characteristics important to the success of the work. Subject to compliance with requirements, products of any manufacturer may be incorporated into the work, if shown to be equal to those listed to the satisfaction of OCTA Project Manager.

2. "Or Equal" Provision: Where "or equal" is included after named manufacturer(s) and product(s), equivalent products of unnamed manufacturers will be considered in accordance with requirements specified in Section 01 25 00 Substitution Procedures.

    a. Prior to submitting "Or Equal" product(s) for consideration, Contractor shall review and determine that product(s) meet or exceed the minimum quality and warranty provisions of the specified product.

    b. Cost and time considerations will be waived for products and manufacturers submitted under the "Or Equal" provision, except no increase in Contract Sum or Contract Time shall result.

    c. Contractor's attention is called to the substitution provisions of the Conditions of the Contract.

3. Products Specified by Description: Where Specifications describe a product, listing characteristics required, with or without use of a brand name, provide a product that provides the characteristics and otherwise complies with the specified requirements.

4. Products Specified by Performance Requirements: Where Specifications require compliance with performance requirements, provide product(s) that comply with performance requirements and are recommended by the manufacturer for the intended application. Verification of manufacturer's recommendations may be by product literature or by certification of performance from manufacturer.

5. Products Specified by Reference to Standards Only: Where Specifications require compliance with a standard, provided product shall fully comply with the standard specified.

6. Products Specified by Combination of Methods: Where products are specified by a combination of described characteristics, performance characteristics, reference standards and manufacturer identification, provide products conforming to all such characteristics.

7. Use of products or manufacturers, whether listed or not, is subject to demonstrated compliance with requirements of the contract documents.

D. Product Selection Procedures:

1. Basis of Design: Where products or manufacturers are identified as "basis of design" or where sizes, profiles, and dimensional requirements on drawings are based on a specific product or system, comply with provisions for comparable products to obtain approval for listed alternate products or manufacturers. Comply with provisions for substitutions to obtain approval for use of an equal unnamed product or manufacturer.

2. Specified Products: Where the specifications indicate that a product or manufacturer is to be selected from those listed, comply with the provisions for substitutions to obtain approval for use of an equal unnamed product.

3. Other Named Products: Where products or manufacturers are indicated without qualification, or with the words "or approved equal" or similar terms, comply with provisions for comparable products to obtain approval for use of an equal unnamed product.

4. Visual Matching Specification: Where specifications require matching an established sample, select a product that complies with requirements and matches Engineer's sample. OCTA Project Manager's decision will be final on whether a proposed product matches.

5. Visual Selection Specification: Where specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product that complies with other specified requirements.

    a. Full Range: Where specifications include the phrase "to match existing colors, patterns, textures" or similar phrase, OCTA Project Manager will select color, pattern, density, or texture from manufacturer's product line that includes both standard and premium items.

PART 2 - PRODUCTS

Not used.

PART 3 – EXECUTION

Not Used.

PART 4 - MEASURMENT AND PAYMENT

No separate measurement or payment will be made for the work of this section.

END OF SECTION

SECTION 01 71 13

MOBILIZATION AND DEMOBILIZATION

PART 1 - GENERAL

1.01 DESCRIPTION

A. This section consists of the Contractor furnishing all transportation, labor, materials and equipment necessary and incidental to mobilization and demobilization to perform the work of this contract. Work for mobilization and demobilization as specified in this section consists of preparatory work and operations at the start of the Contract Work and removal of those items at Contract completion. Contractor shall provide written construction notices to residents and tenants adjacent to the project site per City requirements.

1.02 DEFINITIONS

A. Mobilization is operations necessary for the movement and arrival at the worksite of personnel, equipment, supplies, and appurtenances, all in ready and satisfactory working and operational order, which the Contractor intends to use for the work; for the establishment of all temporary offices and Contractor-owned structures and other temporary facilities necessary to perform the work; proper safety training of project personnel; and for incidental work and operations which must be performed prior to beginning work on the various contract items.

B. Demobilization is operations necessary for the removal of all personnel, equipment, supplies, appurtenances, Contractor-owned structures, temporary facilities, materials, and debris from the worksite and restoration of site and surrounding properties, affected by the Contractor's activities, to pre-construction conditions, as approved by OCTA Project Manager.

1.03 SUBMITTALS

A. Shop Drawing showing the installation of any pollution control/SWPPP features to be established on the site prior to initiating construction, maintained for the duration of construction and removed upon completion of construction.

B. Copies of all permits obtained prior to starting Work covered by the permit.

C. List of tenants that need to get the construction notice.

D. Proof from the post office that all letters (construction notices) got sent.

PART 2 - PRODUCTS

Not Used

PART 3 – EXECUTION

3.01 GENERAL

A. The Contractor shall provide personnel, equipment, temporary facilities, construction materials, tools, and supplies at the worksite at the time they are scheduled to be required.

B. The Contractor shall locate plant or equipment appropriately close to the portion of the work for which it will be used.

C. The Contractor shall obtain all necessary permits required by the local jurisdictions to perform the work of this Contract. The Contractor shall provide OCTA Project Manager copies of all permits obtained prior to starting work covered by the permit.

D. The Contractor shall install pollution control features required by permits for the construction. These features shall be maintained throughout the duration of construction and removed at the completion of construction.

E. Upon completion of the work, the Contractor shall remove all equipment, temporary facilities, construction tools, apparatus, equipment, unused materials and supplies, plant, and personnel from the worksite and shall leave the worksite in a clean and satisfactory condition as approved by OCTA Project Manager.

PART 4 – MEASUREMENT AND PAYMENT

Work is considered incidental to work under other payment items and no separate payment will be made.

END OF SECTION

SECTION 01 71 23

FIELD ENGINEERING

PART 1 – GENERAL

1.01 DESCRIPTION

A. Work Includes:

1. Employ land surveyors and professional engineers, licensed in the State of California, to perform surveying and field engineering.

2. Establish and maintain baselines and field control points as required for construction layout survey.

3. Perform survey and measurement to establish design lines and grades.

4. Layout of the Work.

5. Other engineering services, as necessary, to accomplish the Work.

1.02 GENERAL

A. Contractor shall locate and protect all adjacent areas, utilities, equipment, buses, cars, and appurtenances.

B. Control area of work, so that it does not interrupt bus maintenance and operations activities, or bus or car traffic flow on the site. Provide barricade and traffic signs around work area, excavations, and contractor's equipment. Provide flashing lights from dusk to dawn on all sides of construction work.

C. Promptly report and repair to the Engineer's satisfaction disruption in utilities caused by construction work. Repair disruption of utilities immediately.

D. Make no changes without prior written notice to the Engineer.

1.03 SUBMITTALS

A. Submit for OCTA's approval the name and professional history of the land surveying firm designated by the Contractor as its project surveyor.

1. At a minimum the project surveyor must have five to ten years of verifiable experience performing field survey.

B. On request, submit to OCTA Project Manager documentation that verifies accuracy of field engineering work and surveying work. Submit data certifying the all dimensions, elevations, and locations of improvement are in conformance, or non-conformance, with Contract Documents at end of Project.

C. Prior to completion of project and when requested by OCTA Project Manager, submit a copy of site drawing prepared by California registered engineer and signed by land surveyor verifying that the elevations and locations of the work are in conformance with contract documents.

D. Contractor shall submit a complete copy of the baseline survey field notes and final layout.

E. Contractor shall provide As-built redline drawings to the Authority at the completion of the Project.

1.04 REQUIREMENTS

A. Field Engineering: Provide field engineering services, as necessary. Utilize recognized engineering practices.

B. Verification: Verify all existing dimensions before starting work.

C. Layout and Control of the Work: Establish elevations, lines, and grade for all Work under this Contract. Locate and lay out by instrumentation and similar appropriate means. Contractor is responsible for all construction field survey and setting of grades and slopes. New asphalt or concrete paving flow patterns should merge with existing flow patterns on the site so that flow of water is directed towards existing gutters, swales, and storm drains on site. Protect in place existing storm drain system, swales, gutters, concrete walk, storm drain inlets, channel wall, fencing, on-site storage, OCTA equipment, and property during construction.

D. Verification of Work: Periodically verify layout and completed conditions of the Work by same means.

E. Barricade project area on all sides at end of work day, and provide flashing lights on all sides of project area from dusk to dawn.

1.05 QUALITY CONTROL

A. Contractor shall maintain a complete and accurate log of control and survey work as it progresses.

B. OCTA Project Manager reserves the option to check Contractor's survey measurements and calculations. Whether OCTA Project Manager exercises this option or not, the requirement for accuracy will not be waived.

C. On completion of construction and major site improvements, Contractor shall prepare a final certified survey illustrating dimensions, locations, angles, and elevations of construction and work site.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

3.01 EXAMINATION

A. Verify locations of survey control points prior to starting any work on the project site. Contractor shall field verify all existing dimensions, conditions, layout, grading that will affect the project before commencing any work.

B. Review OCTA record drawings for underground utilities and field verify all utilities before demolition work or excavation. Contractor shall utilize an independent utility locator company to survey and map any and all utilities that may affect construction activities and determine if there are any utility lines in conflict with construction of this project.

C. Contractor shall conduct survey (line and grade) of existing improvements such as top of curb, finished surface, flow lines etc. before any demolition or removal is undertaken. Areas where pavement has failed or settled shall be documented.

D. Immediately notify OCTA Project Manager of any discrepancies discovered.

E. Finished grade shall match existing grade and ensure positive drainage is provided.

3.02 SURVEYS AND RECORDS

A. Working from lines and grades established by baseline survey as shown in relation to work, establish and maintain bench marks and other dependable markers to set lines and levels for work on site as needed to locate each element of the project.

B. Contractor shall inform tradesmen performing the work of marked lines and grades provided for their use in layout work.

C. Contractor shall provide a complete copy of baseline survey field notes and final layout to OCTA Project Manager prior to starting construction.

D. Certify all line and grades to OCTA.

3.03 SURVEY REFERENCE POINTS

A. Contractor shall locate and protect survey control and reference points. Preserve permanent reference points during construction.

B. Contractor shall establish appropriate control datum for construction survey.

C. Contractor shall report to OCTA Project Manager the loss or destruction of any reference points or relocation required because of changes in grades or other reasons.

D. Contractor shall replace dislocated survey control points based on original survey control and shall make no changes without prior written notice to and approval by OCTA Project Manager.

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment will be made under this section.

END OF SECTION

SECTION 01 73 29

CUTTING AND PATCHING

PART 1 - GENERAL

1.01 SECTION INCLUDES

A. Requirements and limitations for cutting and patching of Work.

1.02 RELATED SECTIONS

A. Section 01 11 00 - Summary of Work.

B. Individual Product Specification Sections:

1. Cutting and patching incidental to Work specified in the Section.

2. Coordination with Work specified in other Sections for openings required to accommodate Work specified in those other Sections.

C. Include:

1. Identification of Project.

2. Location and description of affected Work.

3. Explanation of necessity for irregular cutting and patching procedures.

4. Description of proposed special work and alternate products to be used.

5. Alternatives to cutting and patching.

6. Effect on existing construction and, if applicable, work being performed for the Authority under separate contracts.

7. Date and time Work will be executed.

8. Written permission of affected separate contractor.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Primary Products: As required for original installation and to match surrounding

construction.

B. Product Substitution: For each proposed change in materials, submit request for substitution under provisions of Section 01 60 00 - Product Requirements.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examination, General: Inspect existing conditions prior to commencing Work, including elements subject to damage or movement during cutting and patching.

B. After uncovering existing Work, inspect conditions affecting proper accomplishment of Work.

C. Beginning of cutting or patching shall be interpreted to mean that existing conditions were found by Contractor to be acceptable.

3.02 PREPARATION

A. Temporary Supports: Provide devices and methods to protect other portions of Project from damage by providing temporary supports.

3.03 CUTTING AND PATCHING

A. Cutting and Patching:

1. Execute cutting, fitting, patching, excavation, and fill, to complete Work.

2. Coordinate installation or application of products for integrated Work.

B. Remedial Work: Remove and replace defective or non-conforming Work.

3.04 PERFORMANCE

A. Cutting and Patching:

1. Execute demolition, cutting and patching by methods to avoid damage to adjoining Work, and which will provide appropriate surfaces to receive final finishing.

2. Saw cut asphalt concrete or Portland cement concrete paving for smooth edges.

Do not overcut corners.

3. Contractor is required to take all precautions during construction to prevent damage to OCTA buses, property, equipment, utilities, and OCTA personnel. All precautions are to taken per CAL-OSHA code to prevent accidents, and damage to adjacent OCTA property and appurtenances.

B. Restoration:

1. Restore Work with new products as specified in individual Sections.

2. Where affected or uncovered by construction work, finish adjacent surfaces and background to condition before construction. Match material, paint, and finish to nearest joint. Re-paint all curbs, traffic striping, legends, parking stalls, numbers, and paving as existed before construction. Damage to adjacent or OCTA property shall be repaired to a condition as existed before construction.

C. Finishing: Refinish (material and paint) surfaces to match adjacent and similar finishes as used for the Project. (match material and paint finish). For continuous surfaces, refinish with material and paint to nearest intersection or natural break or joint. Replace equipment or appurtenances damaged due to demolition, cutting or patching work during construction. Provide material quality to level equal to or better than that which existed before construction started.

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment will be made under this section.

END OF SECTION

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SECTION 01 74 19

CONSTRUCTION WASTE MANAGEMENT AND DISPOSAL

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Includes: Procedures for ensuring optimal diversion of construction and demolition waste generated by the Project, and documentation procedures for tracking waste generation and diversion.

1.02 DEFINITIONS

A. Certified Mixed Debris Processing Facility: A solid waste processing facility that accepts loads of mixed debris for the purpose of recovering re-usable and recyclable materials and disposing of the non-recyclable residual material.

B. Class III Landfill: A landfill that accepts non-hazardous solid waste such as household, commercial, and industrial solid waste. A Class III landfill shall have a California Integrated Waste Management Board (CIWMB) solid waste facilities permit and is regulated by the Local Enforcement Agency.

C. Construction and Demolition (C&D) Debris: Solid waste and recyclable materials that result directly from construction and demolition of buildings and other structures, do not contain hazardous waste (as defined in CCR Title 22, Section 66621.3, *et seq*.), and contain no more than 1 percent putrescible wastes by volume, calculated on a monthly basis. C&D debris includes, but is not limited to: asphalt, concrete, portland cement, brick, lumber, wallboard, roofing material, ceramic tile, pipe, glass and associated packaging.

D. Disposal: Acceptance of solid waste at a legally operating facility for the purpose of landfilling.

E. Diversion: Activities that result in reducing the amount of waste disposed at a landfill. This can include source reduction activities, composting, recycling, and reuse.

F. Inert Backfill Site: A location, other than inert fill or other disposal facility, to which inert waste is taken for the purpose of filling an excavation, shoring, or another soils engineering operation.

G. Inert Fill: A facility that can legally accept inert waste such as asphalt and concrete exclusively for the purpose of disposal.

H. Inert Debris/Inert Waste: Solid waste and recyclable materials that are source separated or separated for reuse, do not contain hazardous waste (as defined in CCR, Title 22, section 66261.3 et. seq.) or soluble pollutants at concentrations in excess of applicable

water quality objectives, and do not contain significant quantities of decomposable waste. Inert debris may not contain more than 1 percent putrescible wastes by volume calculated on a monthly basis. Gravel, rock, soil, sand and similar materials, whether processed or not, that have never been used in connection with any structure, development, or other human purpose are not inert debris.

I. Mixed Debris: Material that includes commingled recyclable and non-recyclable construction and demolition debris.

J. Mixed Debris Processing Facility: A solid waste processing facility that accepts loads of mixed debris for the purpose of recovering re-usable and recyclable materials and disposing of the non-recyclable residual materials. Refer also to Certified Mixed Debris Processing Facility.

K. Permitted Waste Hauler: A company that possesses a valid and current permit from the County of Riverside to collect and transport solid waste from individuals or businesses in the County of Riverside.

L. Recycling: The process of sorting, cleaning, treating, and reconstituting materials for the purpose of using the altered form in the manufacture of a new product. Recycling does not include burning, incinerating, or thermally destroying solid waste.

1. On-site recycling materials that are sorted and processed for use in an altered form in the Project, (e.g. concrete is crushed for use as base for a parking lot on the site).

2. Off-site recycling source-separated materials hauled to another location and used in an altered form in the manufacture of a new product.

M. Recycling Facility: An operation that can legally accept materials for the purpose of processing the materials into an altered form for the manufacture of a new product. Depending on the types of materials accepted and operating procedures, a recycling facility may or may not be required to have a Solid Waste Facilities permit from the CIWMB or be regulated by the Local Enforcement Agency.

N. Reuse: Materials that are recovered for use in the same form. This includes materials that are reused on-site or off-site.

O. Salvage: Materials recovered for reuse or sale or donation to a third party.

P. Source Reduction: Any action causing a net reduction in the generation of solid waste. Source reduction includes, but is not limited to, reducing the use of non-recyclable materials, replacing disposable materials and products with reusable materials and products, reducing packaging, and reducing the amount of yard waste generated.

Q. Source-Separated Materials (Construction and Demolition Debris): Material that is sorted at the site of generation by individual material type for the purpose of reuse or recycling, i.e., loads of concrete that are source-separated for delivery to a base course recycling facility to be crushed into road base material.

R. Solid Waste: Shall mean waste that the CIWMB has deemed acceptable for disposal at a Class III landfill and shall not include source-separated material.

S. Transfer Station: A facility that can legally accept solid waste for the purpose of temporarily storing the materials for re-loading onto other trucks and transporting materials to a landfill for disposal, or recovering some materials for reuse or recycling. Transfer stations must be permitted by the CIWMB and regulated by the Local Enforcement Agency.

1.03 SUBMITTALS

A. Waste Management Plan (WMP): Conduct a site assessment and estimate the types and quantities of materials, under the Project, that are anticipated for on-site or off-site processing, recycling, reuse, or disposal.

1. Not more than 10 working days after Notice to Proceed, submit to OCTA Project Manager a written WMP. The plan shall show the percentage of recycling for inert debris expected from the Project and the percentage recycling for the remaining C&D debris expected from the Project. While no minimum amounts of recycling have been established for this project, Contractor shall make every reasonable effort to achieve a minimum of 50% by weight of material that is recycled, re-used, salvaged or otherwise diverted from landfill.

2. OCTA Project Manager's approval of the Contractor's WMP will not otherwise relieve the Contractor of responsibility for adequate and continuing control of pollutants and other environmental protection measures.

3. Dirt and excavation spoils, whether reused as fill or not, will not be counted in the calculation of diverted and disposed materials.

B. Solid Waste Diversion and Disposal Report (SWDD Report): One week prior to the first of every month, and prior to Contractor's monthly progress estimate for payment, Contractor shall prepare and submit to OCTA Project Manager a written SWDD report quantifying all material generated in the Project which was either disposed or diverted from disposal through reuse or recycling during the time period covered by the SWDD report and progress payment. Include in the Report a cumulative history of the diversion and disposal for the Project. Attach supporting documentation including manifests, weigh tickets, receipts, reports, invoices, and other supporting documents specifically identifying the project, the recyclables and solid waste generated by the Project, and where the material was sent. The final SWDD report shall cover the complete time period of the Project and shall contain a list of the total waste disposed and/or diverted for each reporting period. The final SWDD report and supporting documentation shall be submitted within 30 Calendar Days of Project completion.

1.04 WASTE MANAGEMENT PLAN SUBMITTAL MEETING

A. On or about 5 working days after Notice to Proceed, OCTA Project Manager will

schedule and attend a meeting with the Contractor to discuss the proposed WMP submittal. This meeting shall be held to allow the OCTA and the Contractor an opportunity to develop a mutual understanding regarding the recycling and reuse requirements and programs.

1.05 REUSE, SALVAGE, AND RECYCLING OPTIONS

A. Contractor shall make use of as many reuse and salvage options as is feasible. One option is the California Materials Exchange (CalMAX), a free program sponsored by the CIWMB.

B. Recycling shall include both on-site and off-site recycling of source-separated materials, as well as mixed debris recycling efforts.

C. On-site recycling program shall produce a quality product to meet the specifications identified in the Contract Documents, subject to approval. Estimate the amount of material to be used in the Project and include a program for off-site recycling of any excess material that cannot be used in the Project.

D. Develop and implement a program to include source separation of solid waste, to the greatest extent feasible, of the following types:

1. Asphalt
2. Concrete and concrete block
3. Rock
4. Wood (lumber)
5. Green material (i.e. tree trimmings)
6. Metals

E. Mixed Debris Recycling: Develop and implement a program to transport loads of commingled construction and demolition materials that cannot be feasibly source separated to a mixed debris recycling facility.

1.06 HAULING AND DISPOSAL OPERATIONS

A. Hauling: Arrange the collection and hauling of C&D debris by a waste hauler that is permitted by the County of Orange Waste Management Department and City of Santa Ana as applicable.

B. Recycling And Processing Facilities: Transport C&D debris to recycling or processing facilities. Contractor shall be familiar with the requirements for acceptance of C&D materials at the recycling and processing facilities before the material is delivered.

Always call facilities in advance to verify requirements.

C. Disposal Facilities: Transport C&D debris that cannot be delivered to a recycling or processing facility, to a transfer station or disposal facility that can legally accept the materials for the purpose of disposal.

D. Site Disposal: Do not burn, bury, or otherwise dispose of solid waste on the Project job-site. All trash, debris, and removed materials shall be hauled away and legally disposed off-site on the same day they are removed.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment will be made under this section.

END OF SECTION

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SECTION 01 74 23

CLEANING

PART 1 - GENERAL

1.01 DESCRIPTION.

A. Work Included:

1. Execute cleaning, during progress of the work, and at completion of the work.

B. Related Work Specified Elsewhere:

1. Cleaning for specific products or work; the respective specification section for that work.

2. Refer to Section 01 14 25, Procedures in Construction for requirements for restoration of project site(s), including but not limited to photographic documentation.

3. Refer to Section 01 71 13, Mobilization and Demobilization for requirements for removal of all of Contractors facilities, equipment and tools.

1.02 DISPOSAL REQUIREMENTS.

A. Conduct cleaning and disposal operations to comply with all applicable codes, local codes, ordinances, regulations and laws, rules and practices.

B. Conform to requirements of 01 74 19, Construction Waste Management and Disposal.

PART 2 - PRODUCTS

2.01 MATERIALS

A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.

B. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned.

C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

PART 3 - EXECUTION

3.01 ROUGH CLEAN DURING CONSTRUCTION

A. Provide all labor and equipment required to remove trash and broom clean project sites as required, including surrounding areas affected by construction activities.

B. Provide all labor and equipment required to load, haul, and legally dispose of all construction trash and debris at the end of each work day throughout the duration of the project.

C. Pay all dump fees required to legally dispose of materials.

D. Clean streets adjacent to the project site as required to meet the requirements of all local, City, County and State authorities.

E. Clean and wash parking lots and driveways.

F. Provide labor to clean the office trailer once a week.

G. Clean up all excess concrete from site concrete work.

H. Wet down dry materials and rubbish to prevent blowing dust.

I. At reasonable intervals during progress of work and at the end of each work day, remove waste materials, debris and rubbish from site and dispose of legally away from site.

J. Handle waste materials and debris in a controlled manner with as few handlings as possible; do not drop or throw materials from heights.

K. Schedule cleaning operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly painted surfaces.

L. Do not place waste material, rubbish or debris in fills or backfills or otherwise bury at site. Remove such material from project to a lawful disposal area; pay all associated hauling and dumping charges.

M. Perform any additional cleaning or cleaning at shorter intervals when instructed to do so by OCTA Project Manager.

3.02 FINAL CLEANING

A. SUBSTANTIAL COMPLETION REVIEW CLEANING, GENERAL

1. Substantial Completion Review Cleaning, General: Execute a thorough cleaning prior to Substantial Completion review by the Engineer.

   a. Clean surrounding areas affected by construction. Clean and repair all surrounding areas and appurtenances such as curbs, gutters, swales, storm drain, platforms, equipment, vents, buses, fences, Apex boxes, light concrete pedestal, landscaping, and driveways. Repair equipment, curbs, surrounding driveways, landscaping, and site affected by the construction work by thorough brooming and washdown. Remove all oil, concrete, debris, and paint from the surfaces mentioned.

   b. Remove waste and surplus materials, rubbish and temporary construction facilities, utilities and controls from site.

2. Employ experienced workmen, or professional cleaners, for final cleaning.

3. In preparation for occupancy, conduct final inspection of sight-exposed surfaces, and of concealed spaces.

4. Remove grease, dust, dirt, stains, labels, fingerprints, and other foreign materials, from sight-exposed finished surfaces; polish surfaces so designated to shine finish.

5. Wash and shine glazing and mirrors.

6. Repair, patch and touch up marred surfaces to specified finish, to match adjacent surfaces.

7. Water-jet clean paved surfaces; rake clean other surfaces of grounds. Comply with SWPPP BMP measures.

8. Remove all protective construction coverings and coatings.

9. Contaminated Earth: Final clean-up operations shall include removal and lawful disposal of earth that is contaminated or unsuitable for support of plant life in planting areas, as well as filling of resulting excavations with suitable soil. Contaminated areas include those used for disposal of waste concrete, mortar, plaster, masonry and similar materials; areas in which washing out of concrete and plaster mixes or washing of tools and other similar cleaning operations have been performed; and areas that have been oiled, paved or chemically treated. Do not dispose of waste oil, solvents, paints, solvents and similar material of a penetrating nature by depositing or burying on OCTA's property.

10. Maintain cleaning until project is occupied.

11. Final cleaning shall be done to the satisfaction of OCTA Project Manager.

B. FINAL COMPLETION INTERIOR CLEANING

1. Final Completion Cleaning, General: Complete final cleaning before submitting final Application for Payment.

    a. Remove asphalt, oil, grease, mastic, adhesives, dust, dirt, stains, fingerprints, labels, concrete material, and other foreign materials from all visible exterior surfaces.

    b. Remove dust from all horizontal surfaces not exposed to view, including equipment, light standards, ledges, utilities, buses, apex boxes, and plumbing fixtures on site affected by construction.

    c. Repair all disrupted or broken appurtenances which were damaged during construction to a new condition.

2. Clean all adjacent walls, equipment, and other appurtenances mentioned in article 3.1.A.1 above affected by construction work including areas adjacent to construction and on site.

3. Clean construction area in which phase has been completed and re-stripe before begin of next phase of work

C. FINAL COMPLETION SITE CLEANING

1. Site Cleaning: Broom clean exterior paved surfaces. Rake clean other surfaces of the grounds affected by construction material.

    a. Wash down and scrub where necessary all paving soiled as a result of construction activities. Thoroughly remove material droppings, asphalt splatters, stains, oil, and adhered soil.

    b. Remove from the site all construction waste, unused materials, excess soil and other debris resulting from the Work.

PART 2 – PRODUCTS

Not Used

PART 3 – EXECUTION

Not Used

PART 4 – MEASUREMENT AND PAYMENT

Not Used

END OF SECTION

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SECTION 01 77 00

CLOSEOUT PROCEDURES

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Administrative and procedural requirements for contract closeout, including, but not limited to, the following:

   a. Substantial Completion procedures.

   b. Final Acceptance procedures.

B. Related Sections:

1. Section 01 74 23, Cleaning, for final cleaning of project site(s).

2. Section 01 78 00, Closeout Submittals, for operation and maintenance manual requirements.

3. Section 01 78 00, Closeout Submittals, for submitting record drawings, record specifications, and record product data.

4. Section 01 78 36, Warranties and Guarantees, for submitting Warranties.

5. Divisions 02 through 48 sections for any specific closeout requirements for the work in those sections.

1.02 SUBSTANTIAL COMPLETION

A. Preliminary punch list review: At Contractor's request, the Engineer will attend a preliminary Contract closeout review, not earlier than 14 days prior to anticipated Substantial Completion review day. The Engineer and Contractor shall conduct a brief walk-though of Project to review scope, adequacy and completeness of the Work. The Engineer will prepare a typewritten list of items to be completed and corrected (preliminary punch list).

B. Before requesting review/inspection for determining date of Substantial Completion, the Contractor shall complete the following:

1. Execute cleaning and clear site of temporary facilities and controls, as specified in Section 01 50 00 - Temporary Facilities and Controls and in Section 01 74 23 - Cleaning.

2. Prior to Substantial Completion review, complete all testing, inspection, balancing, sterilization and cleaning of the Work. Obtain final City Inspection and City sign-off. Provide original of final sign-off cards to the Authority.

3. Advise OCTA of pending insurance changeover requirements.

4. Submit specific warranties, workmanship bonds, maintenance service agreements, final certifications, and similar documents. Refer to Section 01 78 00, Closeout Submittals for requirements.

5. Obtain and submit releases permitting OCTA unrestricted use of the work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.

6. Prepare and submit project record documents, operation and maintenance manuals, final completion construction photographic documentation, damage or settlement surveys, property surveys, and similar final record information. Refer to Section 01 78 00, Closeout Submittals for requirements.

7. Deliver tools, spare parts, extra materials, and similar items to location designated by Owner. Label with manufacturer's name and model number where applicable.

8. Make final changeover of permanent locks and deliver keys to OCTA Project Manager. Advise OCTA’s personnel of changeover in security provisions.

9. Complete startup testing of systems.

10. Submit test/adjust/balance records.

11. Terminate and remove temporary facilities from project site, along with mockups, construction tools, and similar elements. Refer to Section 01 71 13, Mobilization and Demobilization for requirements.

12. Advise OCTA Project Manager of changeover in utilities.

13. Submit changeover information related to OCTA's occupancy, use, operation, and maintenance.

14. Complete final cleaning requirements, including touchup painting. Refer to Section 01 74 23, Cleaning for requirements.

15. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.

C. Contractor's Certification: The Contractor shall submit to the Engineer written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Substantial Completion review by the Engineer. Provide five working days notice to the Engineer that Work is substantially complete.

D. Punch List Review: The Authority and the Engineer, and the responsible design consultants, as may be necessary, will attend a Contract closeout review and conduct a walk-thorough of Project to review the updated list of items to be completed and corrected (Punch List).

1. Contractor shall prepare a list and record additions, deletions, and revisions as noted by the Engineer for completion or correction.

2. The Contractor shall complete all items on the punch list and notify the Engineer the completed items. The Engineer will update and distribute the revised Punch List after his next walk-through.

3. Costs of additional visits caused by incomplete scope of work or punch list items after the second visit to the site by the Engineer and the design consultants, to review completion and correction of Work, shall be reimbursed to the Authority by the Contractor.

E. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, OCTA Project Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. OCTA Project Manager will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by OCTA Project Manager, that must be completed or corrected before certificate will be issued.

1. Re-inspection: Request re-inspection when the work identified in previous inspections as incomplete is completed or corrected.

2. Results of completed inspection will form the basis of requirements for final completion.

1.03 FINAL ACCEPTANCE

A. Preliminary Procedures: Before requesting final inspection for determining final acceptance, complete the following:

1. A final Application for Payment according to Section 01 29 00, Payment Procedures and the General Provision of the Contract.

2. Submit certified copy of OCTA Project Manager's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by OCTA Project Manager. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.

3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.

4. Instruct OCTA's personnel in operation, adjustment, and maintenance of products, equipment, and systems.

B. Inspection: Submit a written request for final inspection for final acceptance. On receipt of request, OCTA Project Manager will either proceed with inspection or notify Contractor of unfulfilled requirements. OCTA Project Manager will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.

1. Re-inspection: Request re-inspection when the work identified in previous inspections as incomplete is completed or corrected.

C. Engineer's Certification: The Engineer determines that the list of items to be completed and corrected (Punch List) is sufficiently complete for the Authority to occupy the Project area for the use to which it is intended.

D. Notice of Completion: The Authority, after receipt of the Engineer's certification, will record a Notice of Completion with the county.

PART 2 – PRODUCTS

Not Used

PART 3 - EXECUTION

Not Used

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this section.

END OF SECTION

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SECTION 01 78 00

CLOSEOUT SUBMITTALS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Maintain at the site for OCTA Representative one record copy of Project record documents, including:

   a. Record drawings.

   b. Record specifications.

   c. Addenda.

   d. Change Orders and other Modifications to the Contract.

   e. OCTA's field orders and written instructions.

   f. Reviewed and Accepted Shop Drawings, Product Data and Samples.

   g. Field Test Reports.

   h. Referenced Documents.

B. Related Sections:

1. Section 01 77 00, Closeout Procedures.

2. Section 01 78 36, Warranties and Guarantees.

3. Section 01 33 00, Submittal Procedures.

4. Sections in Division 02-49 for specific requirements related to work of those sections.

5. General Conditions for all financial and payment requirements.

1.02 SUBMITTALS

A. At Contract close-out, deliver Record Documents to the OCTA’s representative.

B. Accompany submittal with transmittal letter in duplicate, containing:

1. Date;

2. Project title and contract number;

3. Contractor's name and address;

4. Title and number of each Record Document; and

5. Signature of Contractor or his authorized representative.

C. Submit in accordance with Section 01 33 00, Submittal Procedures.

D. Record Drawings: Submit one set of marked-up record prints. Submit also as pdf electronic file on electronic media acceptable to OCTA Project Manager.

E. Record Specifications: Submit one set of contract specifications, including addenda and contract modifications. Submit also as pdf electronic file on electronic media acceptable to OCTA Project Manager.

F. Record Product Data: Submit one marked-up copy of each product data submittal. Submit also as pdf electronic file on electronic media acceptable to OCTA Project Manager.

1. Product data need not be submitted separately if included in operation and maintenance manuals.

G. Shop Drawings: Submit one hard copy of reviewed and accepted shop drawings. Also submit as PDF files and AutoCAD files on a CD ROM.

H. Operations and Maintenance Manual:

1. Manual content is specified in individual specification sections to be reviewed at the time of section submittals. Submit review manual content formatted and organized as required by the section. Where applicable, clarify and update reviewed manual content to correspond to modifications and field conditions.

2. Submit three paper copies of each Operations and Maintenance Manual. Include a complete operation and maintenance directory. Enclose tile pages and directories in clear plastic sleeves.

3. Submit PDF electronic file on digital media acceptable to OCTA Project Manager. Assemble each manual into a composite electronically-indexed file.

4. Initial Manual Submittal: Submit draft copy of each manual at least 30 calendar days before commencing demonstration and training. OCTA Project Manager will comment on whether general scope and content of manual are acceptable.

    a. Correct or modify each manual to comply with OCTA Project Manager's comments. Submit copies of corrected manual within 15 calendar days of receipt of comments and prior to commencing demonstration and training.
5. Final Manual Submittal: Submit each manual in final form before requesting inspection for Substantial Completion and at least 15 calendar days before commencing demonstration and training.

I. Other Documents: Unless otherwise specified, submit one (1) hard copy and a PDF electronic file of each document required herein.

1.03 FINAL COMPLETION SUBMITTALS:

A. Final Specifications Submittals: Submit to the Engineer all documents and products required by Specifications to be submitted, including the following which apply:

1. Project record drawings and specifications.

2. Operations and Maintenance data.

3. Guarantees, warranties and bonds.

4. Test reports and certificates of compliance.

5. Local Regulatory Jurisdiction(s) final Sign-off, including any and all documents required by governing authorities, utilities and other agencies, building permit cards, inspection cards signed-off as final by the inspectors, and certifications of inspections and tests.

B. Certificates of Compliance and Test Report Submittals: Submit to the Engineer certificates and reports as specified, as required by manufacturers for warranty and guarantee purposes, and as required by authorities having jurisdiction.

C. Subcontractor List: Submit to the Engineer five copies of updated Subcontractor and Materials Supplier List.

D. Warranty Documents: Prepare and submit to the Engineer warranties and bonds as specified in Section 01 78 36 Warranties and Guarantees.

E. Final Payment: A final Application for Payment will be furnished by the Authority. The Authority will process the final payment per the General Provisions of the Contract.

1.04 PROJECT RECORD DOCUMENTS - GENERAL

A. Maintain on site, one set of the following record documents and record actual construction and all revisions to the Work:

1. Contract Drawings.

2. Project Manual, with Specifications, Addenda, Change Orders and other instruments modifying the Contract.

3. Reviewed shop drawings, product data and samples.

4. Store Record Documents separate from documents used for construction.

1.05 RECORD DRAWINGS:

A. Record Prints: Maintain one set of black-line white prints of the contract drawings and shop drawings for the sole purpose of recording all as-built changes to the work.

B. Preparation: Record information continuously as Work progresses. Do not conceal Work permanently until all required information is recorded. Require individual or entity who obtained record data, where individual or entity is installer, subcontractor, or similar entity, to prepare the marked-up record prints. Legibly and to scale, mark a reproducible set of Contract Drawings to record actual construction where installation varies from that shown on contract drawings, including:

1. Measured dimensions and cross section of work.

2. Measured horizontal and vertical locations of underground utilities, ducts, and vents from specific wall locations, including all new utilities installed and utilities found, abandoned or left in place, referenced to permanent surface improvements and to visible and accessible features of the structure.

3. Field changes of dimensions and details.

4. Details not on original Contract Drawings and any other changes to the original Contract Drawings (Changes of location of utilities, equipment, and other accessories).

5. As-Built information shall be shown along with RFIs, Submittals, Change Orders, or other indicating source of changes. References to written changes such as RFI's of Field Directives should be clouded on the drawings with a copy of the written direction attached to the set of drawings.

6. Give particular attention to information on concealed elements that would be difficult to identify or measure and record later.

7. Accurately record information in an understandable drawing technique.

8. Record data as soon as possible after obtaining it. Record and check the markup before enclosing concealed installations.

C. Mark record sets in red ink. Use other colors as required to distinguish between changes for different categories of the work at same location.

1. Mark important additional information that was either shown schematically, such as conduit runs, or omitted from original drawings.

2. Note work change RFI numbers, directive numbers, alternate numbers, change order numbers, and similar identification, where applicable.

1.06 RECORD SPECIFICATIONS

A. Preparation: In PART 2 – PRODUCTS in each specification section, legibly mark in red ink and record actual products installed or used

1. Give particular attention to information on concealed products and installations that cannot be readily identified and recorded later.

2. Mark copy with the proprietary name and model number or catalog number of products, materials, and equipment furnished, including substitutions or alternates utilized and product options selected.

3. Record the name of manufacturer, supplier, installer, and other information necessary to provide a record of selections made.

4. For each principal product, indicate whether record product data has been submitted in operation and maintenance manuals instead of submitted as record product data.

5. Note related addenda, change orders, record product data, and record drawings, and other instruments modifying the Contract, where applicable.

1.07 SHOP DRAWINGS

A. Maintain as record documents.

1. Legibly annotate drawings to record changes made after review.

2. Record Shop Drawings:

a. Revise the shop drawings CAD files to reflect annotations made on record copy.

b. Submit hard copies, PDF files and CAD files compatible with AutoCAD 2012 and in accordance with paragraph 1.02.

1.08 OPERATIONS AND MAINTENANCE DOCUMENT DIRECTORY

A. Organization: Include a section in the directory for each of the following:

1. List of documents.

2. List of systems.

3. List of equipment.

4. Tables of contents.

B. List of systems and subsystems: List systems alphabetically. Include references to operation and maintenance manuals that contain information about each system.

C. List of Equipment: List equipment for each system, organized alphabetically by system. For pieces of equipment not part of system, list alphabetically in separate list.

D. Tables of Contents: Include a table of contents for each emergency, operation, and maintenance manual.

E. Identification: In the document directory and in each operation and maintenance manual, identify each system, subsystem, and piece of equipment with same designation used in the contract documents. If no designation exists, assign a designation according to ASHRAE Guideline 4, Preparation of Operating and Maintenance Documentation for Building Systems.

1.09 REQUIREMENTS FOR OPERATION AND MAINTENANCE MANUALS

A. Organization: Unless otherwise indicated, organize each manual into a separate section for each system and subsystem, and a separate section for each piece of equipment not part of a system. Each manual shall contain the following materials, in the order listed:

1. Title page.

2. Table of contents.

3. Manual contents.

B. Title Page: Include the following information:

1. Subject matter included in manual.

2. Name and address of project.

3. Name and address of OCTA.

4. Date of submittal.

5. Name and contact information for Contractor.

6. Name and contact information for OCTA Project Manager.

7. Names and contact information for major consultants to OCTA Project Manager that designed the systems contained in the manuals.

8. Cross-reference to related systems described elsewhere in the operation and maintenance manuals.

C. Table of Contents: List each product included in manual, identified by product name, indexed to the content of the volume, and cross-referenced to specification section number in project manual.

   1. If operation or maintenance documentation requires more than one volume to accommodate data, include comprehensive table of contents for all volumes in each volume of the set.

D. Manual Contents: Provide manuals for each piece of equipment including individual components and subsystems of complete assembly. Organize into sets of manageable size. Arrange contents alphabetically by system, subsystem, and equipment. If possible, assemble instructions for subsystems, equipment, and components of one system into a single binder. Line out non-applicable text and illustration. The section of the manual on operation shall describe the functions and limitations of each component and its relationship to the system of which it is a part. Where several models, options, or styles are described, the manual shall identify the items actually provided.

E. Manuals, Electronic Files: Submit manuals in the form of a multiple file composite electronic PDF file for each manual.

   1. Electronic Files: Use electronic files prepared by manufacturer where available. Where scanning of paper documents is required, configure scanned file for minimum readable file size.

   2. File Names and Bookmarks: Enable bookmarking of individual documents based upon file names. Name document files to correspond to system, subsystem, and equipment names used in manual directory table of contents. Group documents for each system and subsystem into individual composite bookmarked files, then create composite manual, so that resulting bookmarks reflect the system, subsystem, and equipment names in a readily navigated file tree. Configure electronic manual to display bookmark panel upon opening file.

F. Manuals, Paper Copy: Submit manuals in the form of hard copy, bound and labeled volumes.

1. Binders: Heavy-duty, three-ring, vinyl-covered, loose-leaf binders, in thickness necessary to accommodate contents, sized to hold 8-1/2 by 11 inch paper; with clear plastic sleeve on cover to hold label and cover sheet describing contents and with pockets inside covers to hold folded oversize sheets.

   a. If two or more binders are necessary to accommodate data of a system, organize data in each binder into groupings by subsystem and related components. Cross-reference other binders if necessary to provide essential information for proper operation or maintenance of equipment or system.

   b. Identify each binder on front and spine, with printed title "Operation and Maintenance Manual," project name, subject matter of contents, and specification section number (on bottom of spine). Indicate volume number for multiple-volume sets.

2. Dividers: Heavy paper dividers with plastic covered tabs for each section of manual. Mark each tab to indicate contents. Include typed list of products and major components of equipment included in the section on each divider, cross-referenced to specification section number and title of project manual.

3. Protective Plastic Sleeves: Transparent plastic sleeves designed to enclose diagnostic software storage media for computerized electronic equipment.

4. Supplementary Text: Prepared on 8-1/2 by 11 inch white bond paper.

5. Drawings: Attach reinforced, punched binder tabs on drawings and bind with text.

   a. If oversize drawings are necessary, fold drawings to same size as text pages and use as foldouts.

   b. If drawings are too large to be used as foldouts, fold and place drawings in labeled enveloped and bind envelopes in rear of manual. At appropriate locations in manual, insert typewritten pages indicating drawing titles, descriptions of contents, and drawing locations.

G. Manuals shall contain the following minimum information for each product or system:

1. List of equipment furnished for project with name, address, and telephone number of each vendor.

2. Name, address and telephone number for nearest manufacturer’s service representative.

3. Catalog, model and serial number for the installed equipment.

4. Description of the normal and emergency operations of the equipment.

5. Statement of warranty and date warranty begins and ends.

6. Standard starting, stopping and operating instructions.

7. Emergency and special operating instructions and a list of service organizations (including addresses and telephone numbers) capable of rendering emergency service to the various parts of the system.

8. Copy of each wiring and control diagram.

9. Routine maintenance procedures.

10. Servicing and lubrication schedule.

11. Manufacturer’s printed operating and maintenance instructions and part lists. Operating and maintenance instructions for each and every item of equipment, setting forth in detail and step-by-step the procedure of starting, stopping, operating, and maintaining the entire system as installed. Include a schedule of recommended maintenance intervals.

12. Manufacturer’s recommended special maintenance tools.

13. List of spare parts to include recommended stock quantities for one year of routine maintenance.

14. Tabulation of motor nameplate horsepower, nameplate current, field-measured current, overlay relay setting, and catalog number for polyphase motors.

15. List of fuses, lamps, seals, and other expendable equipment and devices. Specify size, type, and ordering description. List name, address, email address, fax number, and telephone number of vendor.

16. A copy of shop drawings for mechanical, electrical, and instrument equipment in final form.

17. Certified equipment drawings or reviewed shop drawing data clearly marked for equipment furnished.

H. Brochures shall be loose leaf with durable plastic or fiberboard covers. Each sheet shall be reinforced to prevent tearing from continued use, and each brochure shall have the following information clearly printed on its cover:

1. Project name, name of Owner, and address.

2. Name and address of Owner's Representative.

3. Name and addresses of contractors and subcontractors and department to contact.

4. Telephone number of contractors, including night and emergency numbers.

5. Major equipment vendors' names and telephone numbers.

I. Equipment Data Sheet: Provide six sets of equipment data sheets, bound in three-ring binders, summarizing the equipment manufacturer's maintenance instructions and recommendations. A blank data sheet and a sample data sheet are attached at the end of this specification section.

1.10 PHOTOGRAPHS

A. Prior to performing any work on the site, the Contractor shall take a minimum of twenty (20) photographs of each project site. Each major area of work shall be the subject of at least one photograph.

B. After construction operations have been started at the site, the Contractor shall periodically take color photographs to show general site condition and progress of work. A minimum of twenty (20) photos shall be taken throughout each month and submitted to the OCTA Project Manager by the 5th of the following month. Each major area of work shall be the subject of at least one photograph.

C. The photo submittals shall be a read-only compact disk (CD-ROM) containing high-resolution electronic files of the color photographs. Each photograph will be captioned with date taken, location, and general description. In addition to the electronic file, the Contractor shall submit two (2) (8”X10”) prints of each photograph

PART 2 – PRODUCTS

Not Used

PART 3 - EXECUTION

3.01 RECORDING AND MAINTENANCE OF PROJECT RECORD DOCUMENTS

A. Recording: Post changes and modifications to project record documents as they occur; do not wait until the end of project.

B. Maintenance of Record Documents: Store record documents in the field office apart from the contract documents used for construction. Do not use project record documents for construction purposes. Maintain one copy of each submittal during the construction period for project record document purposes. Maintain record documents in good order and in a clean, dry, legible condition, protected from

deterioration and loss. Provide access to project record documents for OCTA Project Manager's reference during normal working hours.

C. Label each document “PROJECT RECORD” in two-inch high printed letters, or a height appropriate to document size.

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for the work of this section.

SAMPLE

Preventive Maintenance and Operating Requirement Sheets

Preventive Maintenance Program	Equipment Record Number	
EQUIPMENT DESCRIPTION	ELECTRICAL OR MECHANICAL DATA	
Name:	Size:	
Serial No.:	Model:	
Vendor:		
Vendor Address:	Type:	
	Mfr.:	
Vendor Rep:	Voltage:	Amps:
Phone:	Phase:	rpm:
Maintenance Work to be Done		Frequency*
OPERATING REQUIREMENTS AND REFERENCE		

*D - Daily; W - Weekly; B - Biweekly; M - Monthly; Q - Quarterly;
S - Semiannually; A - Annually.

SAMPLE

Preventive Maintenance and Operating Requirement Sheets

Preventive Maintenance Program	Equipment Record Number	
EQUIPMENT DESCRIPTION	ELECTRICAL OR MECHANICAL DATA	
Name: Pump No. 1 Tag No.: P01-1	Size: 15 hp	
Serial No.: 123456ABC Vendor: ABC Pump Co.	Model: 140T Frame Serial No. 987654ZY Class F Insulation W/Space Heater	
Vendor Address: 1111 Pump Circle Newport Beach, CA 92663	Type: Mfr.: DEF Motors, Inc.	
Vendor Rep: XYZ Equipment, Inc.	Voltage: 460	Amps: 20
Phone: 714/752-0505	Phase: 3	RPM: 1,800
Maintenance Work to be Done		Frequency*
1. Operate all valves and check such things as a) bearing temperature, b) changes in running sound, c) suction and discharge gauge readings, d) pump discharge rate, and e) general condition of the drive equipment.		D
2. Check packing.		
3. Checking pumping unit for any dust, dirt, or debris.		D
(Continued on attached sheet)		W
OPERATING REQUIREMENTS AND REFERENCE		
For manufacturer's instructions regarding installation, operation, maintenance, and trouble shooting of this equipment, see Volume ____, Section _____.		

*D - Daily; W - Weekly; B - Biweekly; M - Monthly; Q - Quarterly;
S - Semiannually; A - Annually.

SAMPLE

Preventive Maintenance and Operating Requirement Sheets

Preventive Maintenance Program	Equipment Record Number	
EQUIPMENT DESCRIPTION	ELECTRICAL OR MECHANICAL DATA	
Name:	Size:	
Serial No.:	Model:	
Vendor:		
Vendor Address:	Type:	
	Mfr.:	
Vendor Rep:	Voltage:	Amps:
Phone:	Phase:	RPM:
Maintenance Work to be Done		Frequency*
4. Lubricate bearing frame and motor bearings (consult manufacturer's instructions for type of grease or oil).		Q
5. Disassemble and change or repair the following a) impeller, b) shafts, c) shaft sleeve, d) rotary seals, and e) sleeve bearings.		A
OPERATING REQUIREMENTS AND REFERENCE		

*D - Daily; W - Weekly; B - Biweekly; M - Monthly; Q - Quarterly;
S - Semiannually; A - Annually.

END OF SECTION

SECTION 01 78 36

WARRANTIES, GUARANTEES, AND BONDS

PART 1 - GENERAL

1.01 DESCRIPTION

A. Work Included:

1. General administrative and procedural requirements for preparation and submission of warranties and bonds required by the Contract Documents, including manufacturer's standard warranties on products and special Project warranties. This section specifies the general requirements for written warranties and guarantees required by the Contract Documents.

   a. Refer to the Conditions of the Contract for terms of Contractor's special warranty of workmanship and materials.

   b. Certifications and other commitments and agreements for continuing services to the Authority are specified elsewhere in the Contract Documents.

1.02 RELATED DOCUMENTS AND SECTIONS

A. Section 01 33 00 – Submittal Procedures: General administrative requirements for submittals, applicable to warranties and bonds.

B. Section 01 77 00 – Closeout Procedures: General requirements for closeout of the Contract.

C. Section 01 78 00 – Closeout Submittals: Operating and Maintenance data binders to include copies of warranties and bonds documents.

D. Individual Product Specifications Sections: Special Project warranty requirements for specific products or elements of the Work; commitments and agreements for continuing services to Authority.

1.02 WARRANTIES AND GUARANTEES

A. General: Provide all warranties and manufacturer's guarantees with OCTA named as the beneficiary. For equipment, products, or components bearing a manufacturer's warranty of guarantee that extends for a period of time beyond the Contractor's warranty and guarantee, so state in the warranty or guarantee.

B. Warranty: Assurance to the Authority by the Contractor, installer, supplier, manufacturer or other party responsible as warrantor, for the quantity, quality, performance and other representations of a product, system service of the Work, in whole or in part, for the duration of the specified period of time. Warranty shall be an agreement to repair to repair or replace, without cost and undue hardship to the Authority, work performed under the Contract which is found to be defective during the warranty or guaranty period (correction period).

C. Guaranty: Assurance to the Authority by the Contractor or product manufacturer or other specified party, as guarantor, that the specified warranty will be fulfilled by the guarantor in the event of default by the warrantor.

D. Standard Product Warranty: Preprinted, written warranty published by product manufacturer for particular products and specifically endorsed by the manufacturer to the Authority.

E. Special Project Warranty: Written warranty required by or incorporated into Contract Documents, to extend time limits provided by standard warranty or to provide greater rights for the Authority. For provisions for special warranties, refer to the Conditions of the Contract for terms of the Contractor's special warranty of the workmanship and materials.

F. Specific Warranty and Guarantee Requirements: Refer to Divisions 02 and higher.

G. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties shall not relieve the Contractor of warranty on the work that incorporates the products, nor shall they relieve suppliers, manufacturers and installers required to countersign special warranties with Contractor.

H. Related Damages and Losses: When correcting warranted work that has been found defective, remove and replace other work that has been damaged as a result of such defect or that must be removed and replaced to provide access for correction of warranted work.

I. Correction Period: The Correction Period shall be synonymous with warranty period and guaranty period used in the Contract Specifications. All defective work shall be initiated with 12 hours for critical system operations, as determined solely by the Authority, and within 3 calendar days for all other warranty work.

J. Reinstatement of Warranty: When work covered by a warranty has been found defective and has been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

K. Replacement Cost: Upon determination that work covered by a warranty has been found to be defective, replace or reconstruct the work to a condition acceptable to the OCTA, complying with applicable requirements of the Contract Documents. Contractor shall be responsible for all costs for replacing or reconstructing defective work regardless of whether the OCTA has benefited from use of the work through a portion of its anticipated useful service life.

L. The OCTA's Recourse: Written warranties made to the OCTA are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under law nor shall warranty periods be interpreted as limitations on time in which the OCTA can enforce such other duties, obligation, rights, or remedies.

M. Rejection of Warranties: The OCTA reserves the right to reject warranties and disallow the use of products with warranties in conflict with contract document requirements.

N. Warranty as Condition of Acceptance: The OCTA reserves the right to refuse to accept work for the project where a special warranty, certification or similar commitment is required until evidence is presented that those required to countersign such commitments are willing to do so.

1.04 PREPARATION OF WARRANTY AND GUARANTEE SUBMITTALS

A. Number of Copies: Two, unless otherwise specified or directed.

B. Special Project Warranty and Manufacturer's Guarantee Forms: Forms for Special Project Warranties and for Manufacturer's Guarantees are included in the Conditions of the Contract at the end of this Section. Prepare a written document utilizing the appropriate form, ready for execution by the Contractor or the Contractor and subcontractor, supplier or manufacturer. Submit a draft to the OCTA though OCTA Project Manager for approval prior to final execution.

1. Refer to Division 02 and higher for specific content requirements and particular requirements for submittal of special project warranties.

2. Prepare standard product warranties and product guarantees, excepting manufacturer's standard printed warranties and guarantees, on Contractor's, subcontractor's, material supplier, or manufacturer's own letterhead, addressed to the OCTA

3. Warranty and guarantee letters shall be signed by all responsible parties and by Contractor in every case, with modifications only as approved by OCTA Project Manager to suit the conditions pertaining to the warranty or guarantee.

C. Manufacturer's Guarantee Forms: Manufacturer's guarantee forms may be used in lieu of special project forms included at the end of the Section. Manufacturer's guarantee forms shall contain appropriate terms and identification, ready for execution by the required parties.

   1. If proposed terms and conditions restrict guarantee coverage or require actions by the OCTA beyond those specified, submit draft of guarantee to the OCTA through Engineer for review and acceptance before performance of the work.

   2. In other cases, submit draft of guarantee to OCTA Project Manager for approval prior to final execution of guarantee.

D. Signatures: By persons authorized to sign warranties, guarantees, and bonds on behalf of entity provided the warranty, guarantee, and bonds. All signatures shall be notarized.

E. Co-Signature: the Contractor shall cosign all installer's warranties and bonds Manufacturer's printed guarantees will not require co signatures.

1.04 FORM OF WARRANTY SUBMITTALS

A. Form of warranty and bond submittals: At final completion, compile 2 copies of each required warranty and guaranty and bond, properly executed by the Contractor, or by the Contractor and subcontractor, supplier or manufacturer. Collect and assemble all written warranties and guarantees into binders and deliver binders to OCTA Project Manager for final review and acceptance.

B. Prior to submission, verify that documents are in proper form, contain all required information and are properly signed.

C. Organize the warranty documents into an orderly sequence based on the table of contents of the Specifications.

D. Include a table of contents for the binder, neatly typed, following order, section names, and numbers of the Specifications.

E. Bind warranties and guarantees in heavy-duty, commercial quality, 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, with clear front and spine to receive inserts, and sized for 8 ½" by 11" paper.

F. Provide heavy paper dividers with celluloid or plastic covered tabs for each separate warranty. Mark tabs to identify products or installation, and the name, address, telephone number and responsible person for applicable installer, supplier and manufacturer.

G. Include on a separate typed sheet, if information is not contained in warranty or guarantee form, a description of the product or installation, and the name, address, telephone number, and responsible person for applicable installer, supplier, and manufacturer.

H. Identify each binder on front and spine with typed or printed inserts with title, "WARRANTIES, GUARANTEES, AND BONDS", the project title, and the name of the Contractor. If more than one volume of warranties and guarantees is produced, identify volume number of binder.

I. When operating and maintenance data manuals are required for warranted construction, include additional copies of each required warranty in each required manual. Coordinate with requirements specified in Section 01 78 00 Closeout Submittals.

1.05 TIME OF WARRANTY AND GUARANTEE SUBMITTALS

A. Preliminary Submittal: Unless otherwise specified, obtain preliminary copies of warranties and guarantees within ten (10) calendar days of completion of applicable item or work. Prepare and submit preliminary copies for review as specified herein.

B. Final Submittal: Submit fully executed copies of warranties and guarantees within ten (10) days of date of substantial completion but not later than three (3) days prior to date of application for final payment.

C. Date of Warranties and Guarantees: Unless otherwise directed, the commencement date for warranty and guarantee periods shall be the date of established in Certificate of Completion.

D. For warranties for work such as designated systems, equipment, component part or other portion of the Work is completed, accepted, and occupied or put to beneficial use by the Authority, by a separate agreement with Contractor, prior to Final Completion, submit properly executed warranties to the Engineer within ten (10) calendar days of completion of that designated portion of the Work. List date of commencement of warranty, guaranty, or bond period as date of Acceptance.

E. For warranties for Work not accepted as of the date of substantial completion, submit documents within ten (10) calendar days after acceptance. List the commencement date as the date of acceptance of such Work and as beginning of warranty, guaranty, and bond period.

F. Duration of Warranties and Guarantees: Unless otherwise specified or prescribed by law, warranty and guaranty periods (Correction Period) for all work shall not be less than one year from the filing date of notice of completion. See product specifications Sections in contract specifications for extended warranty and guaranty beyond the minimum duration.

PARTS 2 – PRODUCTS

Not used.

PART 3 – EXECUTION

Not used.

PART 4 – MEASUREMENT AND PAYMENT

No separate measurement or payment shall be made under this Section.

WARRANTY/GUARANTEE

FOR WORK

We, the undersigned, do hereby warranty and guarantee that the parts of the Work described above which we have furnished and/or installed for the OCTA is in accordance with the Contract Documents and that all said Work as installed will fulfill or exceed all of the Warranty and Guarantee requirements. We agree to repair or replace Work installed by us, together with any adjacent Work, which is displaced or damaged by doing so, that proves to be defective in Workmanship, material, or operation within a period of one (1) year from the date of final acceptance by the OCTA or from the date of Certificate of Substantial Completion, whichever is the earlier. Ordinary wear and tear and unusual neglect or abuse is accepted.

In the event of our failure to comply with the above-mentioned conditions within a reasonable time period determined by the OCTA, after notification in writing, we, the undersigned, all collectively and separately, hereby authorize the OCTA to have said defective Work repaired and/or replaced and made good, and agree to pay to the OCTA upon demand all moneys that the OCTA may expend in making good said defective Work, including all collection cost and reasonable attorney fees.

_____
(Subcontractor, Sub subcontractor, Manufacturer, or Supplier)

By_____

Title_____

State License No._____Date_____

_____
(Contractor)

By_____

State License No._____Date_____

Local Representative. For maintenance, repair, or replacement service, contact:

Name:_____

Address:_____

Phone Number:_____

END OF SECTION

SECTION 01 79 00

DEMONSTRATION AND TRAINING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Administrative and procedural requirements for instructing OCTA's personnel, including the following:

a. Demonstration of operation of systems, subsystems, and equipment.

b. Training in operation and maintenance of systems, subsystems, and equipment.

c. Demonstration and training video recordings.

B. Related Sections:

1. Divisions 02 through 49 sections for specific requirements for demonstration and training for products in those sections.

1.02 INFORMATIONAL SUBMITTALS

A. Instruction Program: Submit outline of instructional program for demonstration and training, including a list of training modules and a schedule of proposed dates, times, length of instruction time, and instructors' names for each training module. Include learning objective and outline for each training module.

1. Indicate proposed training modules utilizing manufacturer-produced demonstration and training video recordings for systems, equipment, and products in lieu of video recording of live instructional module.

B. Qualification Data: For instructor.

C. Attendance Record: For each training module, submit list of participants and length of instruction time.

D. Evaluations: For each participant and for each training module, submit results and documentation of performance-based test.

1.03 CLOSEOUT SUBMITTALS

A. Demonstration and Training Video Recordings: Submit two copies on CD within seven days of end of each training module.

1. Identification: On each copy, provide an applied label with the following information:

a. Name of Project.

b. Name and address of videographer.

c. Name of OCTA Project Manager.

d. Name of Contractor.

e. Date of video recording.

2. Transcript: Prepared on 8-1/2-by-11-inch paper, punched and bound in heavy-duty, three-ring, vinyl-covered binders. Mark appropriate identification on front and spine of each binder. Include a cover sheet with same label information as the corresponding video recording. Include name of project and date of video recording on each page.

3. At completion of training, submit complete training manual(s) for OCTA's use.

1.04 QUALITY ASSURANCE

A. Instructor Qualifications: A factory-authorized service representative, complying with requirements in Section 01 43 00, Quality Assurance, experienced in operation and maintenance procedures and training.

B. Videographer Qualifications: A professional videographer who is experienced photographing demonstration and training events similar to those required.

C. Preinstruction Conference: Conduct conference at project site to comply with requirements in Section 01 31 00, Project Management and Coordination. Review methods and procedures related to demonstration and training including, but not limited to, the following:

1. Inspect and discuss locations and other facilities required for instruction.

2. Review and finalize instruction schedule and verify availability of educational materials, instructors' personnel, audiovisual equipment, and facilities needed to avoid delays.

3. Review required content of instruction.

4. For instruction that must occur outside, review weather and forecasted weather conditions and procedures to follow if conditions are unfavorable.

1.05 COORDINATION

A. Coordinate instruction schedule with OCTA's operations. Adjust schedule as required to minimize disrupting OCTA's operations.

B. Coordinate instructors, including providing notification of dates, times, length of instruction time, and course content.

C. Coordinate content of training modules with content of approved emergency, operation, and maintenance manuals. Do not submit instruction program until operation and maintenance data has been reviewed and approved by OCTA Project Manager.

PART 2 - PRODUCTS

2.01 INSTRUCTION PROGRAM

A. Program Structure: Develop an instruction program that includes individual training modules for each system and for equipment not part of a system, as required by individual specification sections.

B. Training Modules: Develop a learning objective and teaching outline for each module. Include a description of specific skills and knowledge that participant is expected to master. For each module, include instruction for the following as applicable to the system, equipment, or component:

1. Basis of System Design, Operational Requirements, and Criteria: Include the following:

   a. System, subsystem, and equipment descriptions.
   b. Performance and design criteria if Contractor is delegated design responsibility.
   c. Operating standards.
   d. Regulatory requirements.
   e. Equipment function.
   f. Operating characteristics.
   g. Limiting conditions.
   h. Performance curves.

2. Documentation: Review the following items in detail:

   a. Emergency manuals.
   b. Operations manuals.
   c. Maintenance manuals.
   d. Project record documents.

e. Identification systems.
f. Warranties and bonds.
g. Maintenance service agreements and similar continuing commitments.

3. Emergencies: Include the following, as applicable:

   a. Instructions on meaning of warnings, trouble indications, and error messages.
   b. Instructions on stopping.
   c. Shutdown instructions for each type of emergency.
   d. Operating instructions for conditions outside of normal operating limits.
   e. Sequences for electric or electronic systems.
   f. Special operating instructions and procedures.

4. Operations: Include the following, as applicable:

   a. Startup procedures.
   b. Equipment or system break-in procedures.
   c. Routine and normal operating instructions.
   d. Regulation and control procedures.
   e. Control sequences.
   f. Safety procedures.
   g. Instructions on stopping.
   h. Normal shutdown instructions.
   i. Operating procedures for emergencies.
   j. Operating procedures for system, subsystem, or equipment failure.
   k. Seasonal and weekend operating instructions.
   l. Required sequences for electric or electronic systems.
   m. Special operating instructions and procedures.

5. Adjustments: Include the following:

   a. Alignments.
   b. Checking adjustments.
   c. Noise and vibration adjustments.
   d. Economy and efficiency adjustments.

6. Troubleshooting: Include the following:

   a. Diagnostic instructions.
   b. Test and inspection procedures.

7. Maintenance: Include the following:

   a. Inspection procedures.
   b. Types of cleaning agents to be used and methods of cleaning.
   c. List of cleaning agents and methods of cleaning detrimental to product.
   d. Procedures for routine cleaning
   e. Procedures for preventive maintenance.

f. Procedures for routine maintenance.
g. Instruction on use of special tools.

8. Repairs: Include the following:

a. Diagnosis instructions.
b. Repair instructions.
c. Disassembly; component removal, repair, and replacement; and reassembly instructions.
d. Instructions for identifying parts and components.
e. Review of spare parts needed for operation and maintenance.

PART 3 – EXECUTION

3.01 PREPARATION

A. Assemble educational materials necessary for instruction, including documentation and training module. Assemble training modules into a training manual organized in coordination with requirements in Section 01 78 00, Closeout Submittals.

B. Set up instructional equipment at instruction location.

3.02 INSTRUCTIONS

A. Engage qualified instructors to instruct OCTA's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system.

B. OCTA Project Manager will furnish Contractor with names and positions of participants.

C. Scheduling: Provide instruction at mutually agreed on times. For equipment that requires seasonal operation, provide similar instruction at start of each season.

1. Schedule training with OCTA personnel, through OCTA Project Manager, with at least seven days' advance notice.

D. Evaluation: At conclusion of each training module, assess and document each participant's mastery of module by use of a demonstration/performance-based review.

E. Cleanup: Collect used and leftover educational materials and remove from project site. Remove instructional equipment. Restore systems and equipment to condition existing before initial training use.

3.03 DEMONSTRATION AND TRAINING VIDEO RECORDINGS

A. General: Engage a qualified commercial videographer to record demonstration and training video recordings. Record each training module separately. Include classroom instructions and demonstrations, board diagrams, and other visual aids, but not student practice.

   1. At beginning of each training module, record each chart containing learning objective and lesson outline.

B. Video Recording Format: Provide high-quality color video recordings with menu navigation in format acceptable to OCTA Project Manager.

C. Recording: Mount camera on tripod before starting recording, unless otherwise necessary to show area of demonstration and training. Display continuous running time.

D. Narration: Describe scenes on video recording by audio narration by microphone while video recording is recorded. Include description of items being viewed.

E. Transcript: Provide a transcript of the narration. Display images and running time captured from videotape opposite the corresponding narration segment.

F. Pre-Produced Video Recordings: Provide video recordings used as a component of training modules in same format as recordings of live training.

PART 4 - MEASUREMENT AND PAYMENT

No separate measurement or payment will be made for this section.

END OF SECTION

SECTION 02 41 19

SELECTIVE DEMOLITION

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Controlled demolition (deconstruction) and removal of the existing roof structure over the Bus Wash Bays only. Protect-in-place all other items to remain.

B. Related Requirements:

1. Section 01 10 00 "Summary of Work" for restrictions on use of the premises, Owner-occupancy requirements, and phasing requirements.

1.02 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be salvaged or reinstalled.

B. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.

C. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled. Protect-in-place from damage during construction.

1.03 MATERIALS OWNERSHIP

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

1.04 PREINSTALLATION MEETINGS

A. Predemolition Conference: Conduct conference at Project site.

1. Inspect and discuss condition of construction to be selectively demolished.
2. Review structural load limitations of existing structure.
3. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.

4. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
5. Review areas where existing construction is to remain and requires protection.

1.05 INFORMATIONAL SUBMITTALS

A. Engineering Survey: Prior to deconstruction work, submit engineering survey of condition of building.

B. Proposed Protection Measures: Submit deconstruction report, including deconstruction Drawings, that indicates the phasing measures proposed for protecting individuals, property, and for dust control. Indicate proposed locations and construction of barriers.

C. Schedule of Selective Demolition Activities: Indicate the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted, except as noted at the Bus Wash Bays.
2. Interruption of utility services. Indicate how long utility services will be interrupted.
3. Coordination for shutoff, capping, and continuation of utility services.
4. Coordination of Owner's continuing occupancy of portions of the existing building and of Owner's partial occupancy of completed Work.

D. Predemolition Photographs or Video: Show existing conditions of adjoining construction, including finish surfaces, that might be misconstrued as damage caused by salvage and demolition operations.

1.06 FIELD CONDITIONS

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

B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.

C. Notify OCTA Project Manager of discrepancies between existing conditions and Drawings before proceeding with selective demolition.

D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.

1. If suspected hazardous materials are encountered, do not disturb; immediately notify the OCTA Project Manager. Hazardous materials will be removed by Owner under a separate contract.
2. An Asbestos and Lead Survey report is appended to this section as Appendix A (Section 02 41 19 A). This report shall be read in conjunction with all other divisions in order to comply with the general conditions of the contract.

1.07 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials and using approved contractors so as not to void existing warranties. Notify warrantor before proceeding.

B. Notify warrantor on completion of selective demolition and obtain documentation verifying that existing system has been inspected and warranty remains in effect. Submit documentation at Project closeout.

1.08 COORDINATION

A. Arrange selective demolition schedule so as not to interfere with Owner's operations.

PART 2 - PRODUCTS

2.01 PERFORMANCE REQUIREMENTS

A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

B. Standards: Comply with ANSI/ASSP A10.6 and NFPA 241.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Review Project Record Documents of existing construction or other existing condition and hazardous material information provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.

B. Perform an engineering survey of condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective building demolition operations.

3.02 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

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

3.03 PROTECTION

A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
2. Cover and protect equipment that have not been removed.
3. Provide for temporary enclosures and dust control for abrasive blasting, painting, and other tasks which reduce the quality of the surrounding environment and to maintain existing OCTA operations at nearby facilities.

B. Temporary Shoring: Design, provide, and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

1. Strengthen or add new supports when required during progress of selective demolition.

C. Remove temporary barricades and protections where hazards no longer exist.

3.04 SELECTIVE DEMOLITION, GENERAL

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:

1. Proceed with selective demolition systematically.
2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering, and not chopping.
3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
5. Maintain fire watch during and for at least two hours after flame-cutting operations.
6. Maintain adequate ventilation when using cutting torches.
7. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
8. Remove structural framing members and lower to ground beyond the footprint of the Bus Wash Bays, within coordinated and OCTA approved areas, by method suitable to avoid free fall and to prevent ground impact or dust generation.

9. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
10. Legally dispose of demolished items and materials promptly. Comply with requirements in Section 01 74 19 Construction Waste Management and Disposal.

B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

C. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition.

3.05 DISPOSAL OF DEMOLISHED MATERIALS

A. Remove demolition waste materials from Project site and recycle or legally dispose of them according to Section 01 74 19 Construction Waste Management and Disposal.

1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn demolished materials.

3.06 CLEANING

A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

END OF SECTION 02 41 19

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Appendix A - Section 02 41 19 A

Asbestos and Lead Survey

Santa Ana Bus Base – Bus Wash Building

4301 West MacArthur Boulevard

Santa Ana, California 92704

Orange County Transportation Authority

555 South Main Street | Orange, California 92863

June 21, 2023 | Project No. 211295009

Geotechnical | Environmental | Construction Inspection & Testing | Forensic Engineering & Expert Witness

Geophysics | Engineering Geology | Laboratory Testing | Industrial Hygiene | Occupational Safety | Air Quality | GIS

Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

Ninyo & Moore
Geotechnical & Environmental Sciences Consultants

35+ YEARS

Asbestos and Lead Survey

Santa Ana Bus Base – Bus Wash Building

4301 West MacArthur Boulevard

Santa Ana, California 92704

Orange County Transportation Authority

555 South Main Street | Orange, California 92863

June 21, 2023 | Project No. 211295009

David M. Kelly, CAC, CRIE, LRC
Senior Project Environmental Scientist
Certified Asbestos Consultant #23-7217
Lead Sampling Technician #2285

Stephen J. Waide, CIH, CSP, CIEC, CMC
Principal Environmental Scientist

LGW/DMK/SJW/scs

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TABLE

1 – Non-Asbestos Containing Materials Sampled 6

FIGURE

1 – Site Location

APPENDICES

~~A – Consultant Certificates~~

B – California Department of Public Health Form 8552

C – Analytical Results and Chain-of-Custody Records

D – Photographs

E – Field Drawings
F – XRF Readings Summary

1 INTRODUCTION

In accordance with the Orange County Transportation Authority, Ninyo & Moore has performed a hazardous building material survey in support of upcoming renovation activities of the Santa Ana Bus Base – Bus Wash Building located at 4301 West MacArthur Boulevard in Santa Ana, California (the site; Figure 1). This report has been prepared in accordance with generally accepted environmental science and engineering practices. This report is based on conditions at the site at the time of the sampling activities and provides documentation of our findings and recommendations.

2 PURPOSE AND SCOPE OF SERVICES

The objective of the survey is to provide information about current conditions within the site building regarding the potential presence of asbestos containing materials (ACM) and lead containing surfaces (LCS) within the building which will require removal prior to the planned renovation activities. For the purposes of this assessment, LCS refers to lead-based paint (LBP), as defined by the California Department of Public Health (CDPH) and United States Department of Housing and Urban Development (HUD).

The scope of services we performed is summarized below:

- Performed a visual reconnaissance of the structure to evaluate the possible presence of ACM and LCS.
- Collected 15 bulk samples and submitted these samples to an independent laboratory for analysis of asbestos content. Samples were analyzed in accordance with the United States Environmental Protection Agency (EPA) recommended method of Polarized Light Microscopy (PLM) in accordance with EPA Test Method 600/R-93/116 July 93.
- Collected 20 X-Ray fluorescence (XRF) readings (including calibrations) of potential LCS.
- Prepared a field drawing showing suspect ACM sampling locations.
- Prepared this report, which presents our data and summarizes field activities, evaluated materials, and locations. This report includes a field drawn sample location map, a general area building description, laboratory testing information, laboratory test results, and conclusions and recommendations.

3 SITE BUILDING DESCRIPTION

The scope of work for this project is limited to the Bus Wash Building.

The Bus Wash Building is single-story and comprises an approximate 8,400 square foot area that includes a brake repair room, a wash bay and a storage room. The walls are finished with concrete masonry units and the ceilings are finished with corrugated metal. The floor is unfinished concrete and the roofing system is finished with built-up asphalt roofing materials.

4 FIELD LIMITATIONS

Survey activities were limited to the aboveground building of the subject site within our scope. Underground utilities, such as suspect cementitious water lines or suspect insulated/coated gas or electrical lines, were not assessed during survey activities.

Physical limitations, such as inaccessible rooms or spaces, were generally not encountered during survey activities. Since non-destructive sampling techniques were used, there is a possibility that additional suspect materials and/or surfaces may be encountered in inaccessible areas (e.g., interstitial wall and ceiling spaces and canopy soffits) during building renovation and/or demolition activities. For instance, untested thermal system insulation may be present within wall and ceiling cavities and/or behind plumbing and heating fixtures (e.g., sinks, boilers, and radiators). Suspect materials and/or surfaces encountered during building renovation and/or demolition activities that have not been assessed either may be assumed to be asbestos- and/or lead-containing and handled accordingly, or may be sampled and analyzed to assess whether they are asbestos- and/or lead-containing.

5 ASBESTOS SURVEY

The asbestos survey was performed on May 23, 2023, by Mr. Edilberto Quintero, an Environmental Protection Agency (EPA) Asbestos Building Inspector. The survey was performed under the supervision of Mr. David Kelly, a Department of Occupational Safety and Health (DOSH) Certified Asbestos Consultant (#23-7217). Consultant certificates are presented in Appendix A.

5.1 Asbestos Inspection, Sampling, and Quantification

The survey inspection and sampling procedures were performed in accordance with the guidelines published by the EPA in 40 Code of Federal Regulations (CFR) Part 763 Subpart E, October 30, 1987 (Asbestos Hazard Emergency Response Act [AHERA]); the EPA guidance document “Asbestos in Buildings: Simplified Sampling Scheme for Friable Surfacing Materials (EPA 560/5-85-030a, October 1985); the National Emission Standards for Hazardous Air Pollutants (NESHAP; 40 CFR Part 61, subpart M); and the South Coast Air Quality Management District (SCAQMD) Rule 1403.

The survey consisted of three parts including: visual inspection, sampling, and quantification of the building materials.

5.1.1 Visual Inspection

Initial observations were made throughout the structure to evaluate the presence and condition of accessible suspect materials. Materials which were similar in general

appearance were grouped into homogeneous sampling areas (areas in which the materials are uniform in color, texture, construction, or application date), as recommended by the EPA. Each homogeneous area was observed for material type, location, condition, and friability.

The definition of friability is any material containing more than one percent asbestos that, when dry, can be crumbled, pulverized, or reduced to powder by hand pressure. The EPA's NESHAP regulation has different material categories for ACMs. These categories are used when demolition or renovation projects are being conducted. Each identified suspect homogeneous material was placed in one of the following EPA categories:

- **Category I Non-friable** - NESHAP defines a Category I non-friable ACM as packing, gaskets, resilient floor covering (except sheet flooring products which are considered friable), and asphalt roofing products which contain more than one percent asbestos.
- **Category II Non-friable** - NESHAP defines a Category II non-friable ACM as any material, except for Category I non-friable ACM, which contains more than one percent asbestos and cannot be reduced to a powder by hand pressure when dry.
- **Regulated Asbestos Containing Material (RACM)** - is (a) friable asbestos material, (b) Category I nonfriable ACM that has become friable, (c) Category I nonfriable ACM that will be or has been subjected to sanding, grinding, cutting or abrading, or (d) Category II nonfriable ACM that has a high probability of becoming or has become crumbled, pulverized, or reduced to powder by the forces expected to act on the material in the course of demolition or renovation operations.

In accordance with the EPA and AHERA, suspect materials were placed in one of three classifications:

- **Surfacing Materials** - materials generally applied via sprayed or trowel methods,
- **Thermal Systems Insulation (TSI)** - materials generally applied to various mechanical systems, or
- **Miscellaneous Materials** - any materials which do not fit in the Surfacing or TSI classifications.

If asbestos is identified in a sample from a homogeneous area, the entire homogeneous area is considered to contain asbestos.

Representative samples were collected from each homogeneous area within the survey area, except areas that were inaccessible, or areas of assumed ACM, within the limitations of the survey.

5.1.2 Sampling Procedures

Following an initial walkthrough, the inspector collected selected samples of accessible materials identified as suspect ACM. EPA, AHERA, NESHAP, and SCAQMD guidelines were used to determine the sampling protocol. Sampling locations were chosen to be representative of the homogeneous material. Samples of surfacing material were collected in general accordance with the EPA sampling protocol outlined in EPA 560/5-85-030a, October 1985. Representative samples were collected from already damaged areas or areas which were the least visible. Samples of miscellaneous materials were collected as randomly as possible, while attempting to sample already damaged areas so as to minimize disturbance of the material. Generally, one to three samples of each homogeneous material were collected of miscellaneous materials and TSI, if present.

5.1.3 Quantification

Quantities of accessible and/or exposed building materials that were suspected of containing asbestos were estimated by taking approximate measurements in the field. Quantities are presented in SF or linear feet to be used as a guide for contractor estimates on bidding for abatement activities. It is the abatement contractor's responsibility to confirm quantities prior to bidding and removal.

5.2 Asbestos Laboratory Analysis Procedures

Analysis was performed by Eurofins Built Environment Testing (Eurofins), located at 2841 Dow Avenue, Suite 300 in Tustin, California (phone number 866-888-6653). Eurofins is a National Volunteer Laboratory Accreditation Program (NVLAP) accredited laboratory (NVLAP No. 200757-0). A chain-of-custody, documenting the possession of the samples from the time they were collected until analyzed and stored, was submitted with the bulk samples. The original chain-of-custody accompanied the materials at all times. Custody documentation began at the time samples were collected and each transferor retained a copy of the chain-of-custody record.

Analysis was performed by using the bulk sample for visual observation and slide preparation(s) for microscopic examination and identification. The samples were mounted on slides and then analyzed for asbestos (chrysotile, amosite, crocidolite, anthophyllite, and actinolite/tremolite), fibrous non-asbestos constituents (mineral wool, paper, etc.), and non-fibrous constituents. Refractive indices, morphology, color, pleochroism, birefringence, extinction characteristics, and signs of elongation identified asbestos. The same characteristics were used to identify the non-asbestos constituents.

The microscopist visually estimated relative amounts of each constituent by determining the volume of each constituent in proportion to the total volume of the sample, using a stereoscope. The bulk samples were analyzed by PLM with dispersion staining as described by the method of the determination of asbestos in bulk insulation, EPA/600/R-93/116, July 1993. This is a standard method of analysis in optical mineralogy and the currently accepted method for the determination of asbestos in bulk samples. A suspect material is immersed in a solution of known refractive index and subjected to illumination by polarized light. The characteristic color displays which result enable mineral identification.

6 LCS SURVEY

The LCS survey was performed on March 23rd, 2023, by Mr. Eddie Quintero, a CDPH Lead-Related Construction (LRC) Sampling Technician (#0274). Work was performed under the supervision of Mr. David Kelly, a CDPH LRC Sampling Technician and Mr. William Larkin, a CDPH LRC Inspector/Assessor (#1285). Consultant certificates are presented in Appendix A.

The survey was conducted using a portable Sci-Aps 550 XRF analyzer in accordance with accepted environmental science and engineering practices. The protocol used for selecting components and sampling locations was that contained in the federal HUD “Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing” (Chapter 7 “Lead-Based Paint Inspection”), except the inspection was limited to accessible materials and, once a pattern was recognized for the component results, fewer readings for each component were collected.

The XRF analyzer used for the testing is a direct-reading instrument that determines the concentration of lead in painted surfaces by subjecting the surfaces to energy from a small radioactive source. When the instrument is placed against a surface, the energy from the XRF causes the surface to emit X-Rays that are indicative of the chemical make-up of the surface coating(s), which the XRF then analyzes. The instrument was calibrated to the manufacturer’s specifications and the calibration was checked, at least every four hours and at the beginning and completion of each set of readings, against known lead sample standards produced by the National Institute of Standards and Testing. The XRF instrument measures lead in units of milligrams per square centimeter (mg/cm^2). A total of 117 XRF readings were collected (including calibration checks) over the course of the survey activities.

The CDPH requires that, after a lead evaluation is performed, a copy of CDPH form 8552 “Lead Hazard Evaluation Report” should be submitted. Ninyo & Moore has faxed this form to the CDPH and a copy is included in Appendix B.

7 SURVEY RESULTS

The following sections describe the survey and inventory results.

7.1 Asbestos Survey

A total of 15 samples of suspect ACM were collected and transferred under chain of custody procedures to Eurofins for analysis. The lower limit of reliable detection for asbestos using the PLM method is approximately 1 percent by volume. In the state of California, DOSH regulations classify a building material as *asbestos containing construction materials* (ACCM) if one sample from a homogeneous area contains asbestos content of greater than one tenth of 1 percent (>0.1 percent) which is confirmed by PLM point count analysis (PLM 400- or 1000-point count analysis). Materials in which no asbestos was detected are defined in the laboratory report as "None detected." Inaccessible suspect ACM that are suspect of being ACM are noted to be assumed asbestos containing.

7.2 Asbestos Results Summary

Based on observations and the analytical results of bulk samples collected during the survey, ACMs were not detected within the areas surveyed and inspected. The building materials which were sampled and found to be *non-asbestos containing* are summarized in Table 1. A copy of the laboratory analytical report and chain-of-custody records are presented in Appendix C. General photographic documentation of the building is presented in Appendix D. The sample locations are shown on the field drawing presented in Appendix E.

Table 1 – Non-Asbestos Containing Materials Sampled

Sample No. from COC	HA No.	Sample Material Descriptions	Material Location
01 – 03	1	Built-up asphalt roof core	Roof
04 – 06	2	Parapet wall	Roof
07 – 09	3	Penetration mastic and silver paint	Roof
10 – 12	4	Caulking	Roof flashing
13 – 15	5	Concrete masonry unit	Walls

Notes:
COC – chain of custody
HA – homogeneous
No. – number

7.3 Lead-Containing Surfaces Summary

Federal efforts to regulate LBP began with the LBP Poison Prevention Act in 1971. In 1973, the Consumer Product Safety Commission (CPSC) defined LBP as paint having lead content equal to or greater than 0.5 percent by weight (1.0 mg/cm^2 by XRF) in a dry film of newly applied paint. In 1978, the CPSC lowered the allowable lead levels in new paint to 0.06 percent which is considered lead containing paint (LCP). HUD developed guidelines relating to HUD facilities that specified lead content of 0.5 percent as an action level in determining the need for corrective

action. However, a more stringent level is established by Los Angeles County Department of Health Services which defines “dangerous levels of lead-bearing substances” as paint or other surface coating with lead greater than 0.7 mg/cm^2 (Los Angeles County Code, Title 11, Chapter 11.28, Section 11.28.010 C). Federal and State DOSH do not define the amount of lead in paint to a regulatory requirement, rather the activities, or task, define when the regulation is in effect. Both Federal and State standards use the term “trigger task” activities. In the work place, employers must make certain assumptions of the exposure levels and comply with regulations based on the level of disturbance rather than the lead level.

A total of 14 XRF readings were collected from the representative testing combinations (e.g., unique combination of room equivalent, building component, substrate, and color) within the planned renovations of the structure. LBP was not detected within the areas survey and inspected. A summary of all XRF readings is presented within Appendix E.

8 RECOMMENDATIONS

The following recommendations are provided.

8.1 Asbestos

In the unlikely event additional suspect asbestos-containing building materials are found to be present during renovation activities, the material should be sampled for asbestos content by qualified personnel in order to determine the materials appropriate handling and disposal requirements.

8.2 Lead

In the unlikely event additional suspect lead containing building materials are found to be present during renovation activities, the material should be sampled for lead content by qualified personnel in order to determine the materials appropriate handling and disposal requirements.

9 LIMITATIONS

Ninyo & Moore’s opinions and recommendations regarding environmental conditions, as presented in this report, are based on limited sampling and chemical analysis. Further assessment of potential adverse environmental impacts may be accomplished by a more comprehensive assessment. The samples collected and used for testing, and the observations made, are believed to be representative of the area(s) evaluated. However, if additional suspect ACMs or LCS are encountered during renovation activities, these materials should be sampled by qualified personnel, and analyzed for content prior to further disturbance. In addition, please

note that quantities of ACMs are approximate. These numbers should be confirmed prior to removal or repair activities.

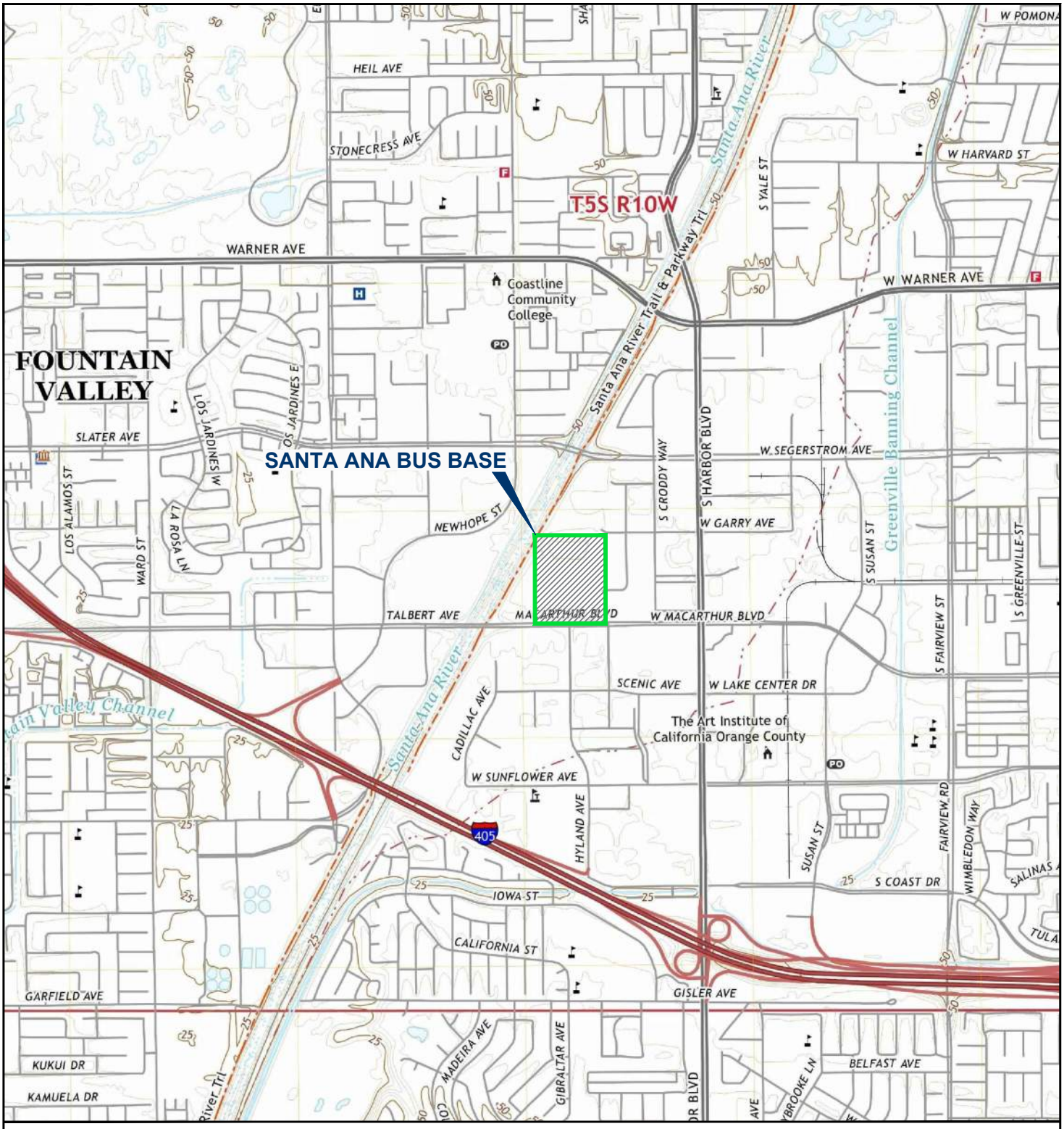
The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard-of-care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Variations in site conditions may exist and conditions not observed or described in this report may be encountered during subsequent activities.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Ninyo & Moore should be contacted if the reader requires any additional information, or has questions regarding content, interpretations presented, or completeness of this document.

The environmental interpretations and opinions contained in this report are based on the results of laboratory tests and analyses intended to detect the presence and concentration of specific chemical or physical constituents in samples collected from the subject site. The testing and analyses have been conducted by an independent laboratory which is certified by the State of California to conduct such tests. Ninyo & Moore has no involvement in, or control over, such testing and analysis. Ninyo & Moore, therefore, disclaims responsibility for any inaccuracy in such laboratory results.

Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. It should be understood that the conditions of a site can change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Ninyo & Moore has no control.

FIGURE



NOTE: DIMENSIONS, DIRECTIONS AND LOCATIONS ARE APPROXIMATE. I REFERENCE: USGS, 2022.

N

FEET

0 2,000 4,000

211295009.dwg 06/20/2023 GK

FIGURE 1

Ninyo & Moore

Geotechnical & Environmental Sciences Consultants

SITE LOCATION

4301 WEST MacARTHUR BOULEVARD
SANTA ANA, CALIFORNIA

211295009 I 6/23

APPENDIX B

California Department of Public Health Form 8552

LEAD HAZARD EVALUATION REPORT

Section 1 — Date of Lead Hazard Evaluation 5/23/2023

Section 2 — Type of Lead Hazard Evaluation (Check one box only)

- [x] Lead Inspection
- [ ] Risk assessment
- [ ] Clearance Inspection
- [ ] Other (specify) _____

Section 3 — Structure Where Lead Hazard Evaluation Was Conducted

Address [number, street, apartment (if applicable)]	City	County	Zip Code
4301 West MacArthur Boulevard	Santa Ana	Orange	92704

Construction date (year) of structure: Unknown

Type of structure:
- [ ] Multi-unit building
- [ ] School or daycare
- [ ] Single family dwelling
- [x] Other Commercial

Children living in structure?
- [ ] Yes
- [x] No
- [ ] Don't Know

Section 4 — Owner of Structure (if business/agency, list contact person)

Name	Telephone number
Orange County Transportation Authority - Eric Torres	(714) 560-5345

Address [number, street, apartment (if applicable)]	City	State	Zip Code
550 South Main Street, P.O. box 14184	Orange	California	92863

Section 5 — Results of Lead Hazard Evaluation (check all that apply)

- [x] No lead-based paint detected
- [ ] Intact lead-based paint detected
- [ ] Deteriorated lead-based paint detected
- [ ] No lead hazards detected
- [ ] Lead-contaminated dust found
- [ ] Lead-contaminated soil found
- [ ] Other _____

Section 6 — Individual Conducting Lead Hazard Evaluation

Name	Telephone number
Edilberto Quintero	949-753-7070

Address [number, street, apartment (if applicable)]	City	State	Zip Code
475 Goddard, Ste. 200	Irvine	California	92618

CDPH certification number	Signature	Date
0274		5/26/2023

Name and CDPH certification number of any other individuals conducting sampling or testing (if applicable)

Section 7 — Attachments

A. A foundation diagram or sketch of the structure indicating the specifc locations of each lead hazard or presence of lead-based paint;
B. Each testing method, device, and sampling procedure used;
C. All data collected, including quality control data, laboratory results, including laboratory name, address, and phone number.

First copy and attachments retained by inspector

Second copy and attachments retained by owner

Third copy only (no attachments) mailed or faxed to:

California Department of Public Health
Childhood Lead Poisoning Prevention Branch Reports
850 Marina Bay Parkway, Building P, Third Floor
Richmond, CA 94804-6403
Fax: (510) 620-5656

APPENDIX C

Analytical Results and Chain-of-Custody Records

eurofins | Built Environment Testing

Report for:

David Kelly
Ninyo & Moore - Irvine
475 Goddard
Suite 200
Irvine, CA 92618

Regarding: Eurofins EPK Built Environment Testing, LLC
Project: 211295009; 4301 West MacArthur Boulevard, Santa Ana CA
EML ID: 3268854

Approved by:

Approved Signatory
Danny Li

Dates of Analysis:
Asbestos PLM: 05-26-2023

Service SOPs: Asbestos PLM (EPA 40CFR App E to Sub E of Part 763 & EPA METHOD 600/R-93-116, SOP EM-AS-S-1267)
NVLAP Lab Code 200757-0

All samples were received in acceptable condition unless noted in the Report Comments portion in the body of the report. The results relate only to the samples as received and tested. The results include an inherent uncertainty of measurement associated with estimating percentages by polarized light microscopy. Measurement uncertainty data for sample results with >1% asbestos concentration can be provided when requested.

Eurofins EPK Built Environment Testing, LLC ("the Company"), a member of the Eurofins Built Environment Testing group of companies, shall have no liability to the client or the client's customer with respect to decisions or recommendations made, actions taken or courses of conduct implemented by either the client or the client's customer as a result of or based upon the Test Results. In no event shall the Company be liable to the client with respect to the Test Results except for the Company's own willful misconduct or gross negligence nor shall the Company be liable for incidental or consequential damages or lost profits or revenues to the fullest extent such liability may be disclaimed by law, even if the Company has been advised of the possibility of such damages, lost profits or lost revenues. In no event shall the Company's liability with respect to the Test Results exceed the amount paid to the Company by the client therefor.

Eurofins EPK Built Environment Testing, LLC
2841 Dow Avenue, Suite 300, Tustin, CA 92780
(800) 651-4802 www.eurofinsus.com/Built

Client: Ninyo & Moore - Irvine
C/O: David Kelly
Re: 211295009; 4301 West MacArthur Boulevard, Santa Ana CA

Date of Sampling: 05-23-2023
Date of Receipt: 05-23-2023
Date of Report: 05-26-2023

ASBESTOS PLM REPORT

Total Samples Submitted:	15
Total Samples Analyzed:	15
Total Samples with Layer Asbestos Content > 1%:	0

Location: 01, Exterior, Roof, N - Core, Asphalt

Lab ID-Version‡: 15865878-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Pebbles	ND
Black Roofing Tar and Felt	ND
Yellow Foam	ND
Brown Fibrous Material	ND
Composite Non-Asbestos Content:	20% Cellulose 20% Glass Fibers
Sample Composite Homogeneity:	Poor

Location: 02, Exterior, Roof, NE - Core, Asphalt

Lab ID-Version‡: 15865879-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Pebbles	ND
Black Roofing Tar and Felt	ND
Yellow Foam	ND
Brown Fibrous Material	ND
Composite Non-Asbestos Content:	20% Cellulose 20% Glass Fibers
Sample Composite Homogeneity:	Poor

Location: 03, Exterior, Roof, S - Core, Asphalt

Lab ID-Version‡: 15865880-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Pebbles	ND
Black Roofing Tar and Felt	ND
Yellow Foam	ND
Brown Fibrous Material	ND
Composite Non-Asbestos Content:	20% Cellulose 20% Glass Fibers
Sample Composite Homogeneity:	Poor

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

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(800) 651-4802 www.eurofinsus.com/Built

Client: Ninyo & Moore - Irvine
C/O: David Kelly
Re: 211295009; 4301 West MacArthur Boulevard, Santa Ana CA

Date of Sampling: 05-23-2023
Date of Receipt: 05-23-2023
Date of Report: 05-26-2023

ASBESTOS PLM REPORT

Location: 04, Exterior, Roof, E - Parapet Wall, Can

Lab ID-Version‡: 15865881-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Pebbles	ND
Black Roofing Tar and Felt 1	ND
Black Roofing Tar and Felt 2	ND
Black Roofing Tar and Felt 3	ND
Black Roofing Tar and Felt 4	ND
Black Roofing Tar and Felt 5	ND
Brown Fibrous Material	ND
Composite Non-Asbestos Content:	30% Glass Fibers 15% Cellulose
Sample Composite Homogeneity:	Poor

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Client: Ninyo & Moore - Irvine
C/O: David Kelly
Re: 211295009; 4301 West MacArthur Boulevard, Santa Ana CA

Date of Sampling: 05-23-2023
Date of Receipt: 05-23-2023
Date of Report: 05-26-2023

ASBESTOS PLM REPORT

Location: 05, Exterior, Roof, S - Parapet Wall, Can

Lab ID-Version‡: 15865882-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Pebbles 1	ND
Black Roofing Shingle with Pebbles 2	ND
Black Roofing Tar and Felt 1	ND
Black Roofing Tar and Felt 2	ND
Brown Fibrous Material	ND
Composite Non-Asbestos Content:	30% Glass Fibers 15% Cellulose
Sample Composite Homogeneity:	Poor

Location: 06, Exterior, Roof, W - Parapet Wall, Can

Lab ID-Version‡: 15865883-1

Sample Layers	Asbestos Content
Black Roofing Shingle with Pebbles 1	ND
Black Roofing Shingle with Pebbles 2	ND
Black Roofing Tar and Felt 1	ND
Black Roofing Tar and Felt 2	ND
Black Roofing Tar and Felt 3	ND
Brown Fibrous Material	ND
Composite Non-Asbestos Content:	30% Glass Fibers 15% Cellulose
Sample Composite Homogeneity:	Poor

Location: 07, Exterior, Roof, N - Penetration Mastic with Silver Paint

Lab ID-Version‡: 15865884-1

Sample Layers	Asbestos Content
Silver Paint	ND
Black Roofing Mastic	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Moderate

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

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‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Eurofins EPK Built Environment Testing, LLC
2841 Dow Avenue, Suite 300, Tustin, CA 92780
(800) 651-4802 www.eurofinsus.com/Built

Client: Ninyo & Moore - Irvine
C/O: David Kelly
Re: 211295009; 4301 West MacArthur Boulevard, Santa Ana CA

Date of Sampling: 05-23-2023
Date of Receipt: 05-23-2023
Date of Report: 05-26-2023

ASBESTOS PLM REPORT

Location: 08, Exterior, Roof, W - Penetration Mastic with Silver Paint

Lab ID-Version‡: 15865885-1

Sample Layers	Asbestos Content
Silver Paint	ND
Black Roofing Mastic	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Moderate

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
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(800) 651-4802 www.eurofinsus.com/Built

Client: Ninyo & Moore - Irvine
C/O: David Kelly
Re: 211295009; 4301 West MacArthur Boulevard, Santa Ana CA

Date of Sampling: 05-23-2023
Date of Receipt: 05-23-2023
Date of Report: 05-26-2023

ASBESTOS PLM REPORT

Location: 09, Exterior, Roof, S - Penetration Mastic with Silver Paint

Lab ID-Version‡: 15865886-1

Sample Layers	Asbestos Content
Silver Paint	ND
Black Roofing Mastic	ND
Composite Non-Asbestos Content:	15% Cellulose
Sample Composite Homogeneity:	Moderate

Location: 10, Exterior, Roof, W - Flashing Caulk

Lab ID-Version‡: 15865887-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Sample Composite Homogeneity:	Good

Location: 11, Exterior, Roof, S - Flashing Caulk

Lab ID-Version‡: 15865888-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Sample Composite Homogeneity:	Good

Location: 12, Exterior, Roof, E - Flashing Caulk

Lab ID-Version‡: 15865889-1

Sample Layers	Asbestos Content
Gray Caulk	ND
Sample Composite Homogeneity:	Good

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

Eurofins EPK Built Environment Testing, LLC
2841 Dow Avenue, Suite 300, Tustin, CA 92780
(800) 651-4802 www.eurofinsus.com/Built

Client: Ninyo & Moore - Irvine
C/O: David Kelly
Re: 211295009; 4301 West MacArthur Boulevard, Santa Ana CA

Date of Sampling: 05-23-2023
Date of Receipt: 05-23-2023
Date of Report: 05-26-2023

ASBESTOS PLM REPORT

Location: 13, Exterior, Wall, N - C.M.U.

Lab ID-Version‡: 15865890-1

Sample Layers	Asbestos Content
Gray Concrete	ND
Sample Composite Homogeneity:	Good

Location: 14, Exterior Wall, S - C.M.U.

Lab ID-Version‡: 15865891-1

Sample Layers	Asbestos Content
Gray Concrete	ND
Sample Composite Homogeneity:	Good

Location: 15, Interior Wall, N - C.M.U.

Lab ID-Version‡: 15865892-1

Sample Layers	Asbestos Content
Gray Concrete	ND
Sample Composite Homogeneity:	Good

The test report shall not be reproduced except in full, without written approval of the laboratory. The report must not be used by the client to claim product certification, approval, or endorsement by any agency of the federal government. The Company reserves the right to dispose of all samples after a period of thirty (30) days, according to all state and federal guidelines, unless otherwise specified.

Inhomogeneous samples are separated into homogeneous subsamples and analyzed individually. ND means no fibers were detected. When detected, the minimum detection and reporting limit is less than 1% unless point counting is performed. Floor tile samples may contain large amounts of interference material and it is recommended that the sample be analyzed by gravimetric point count analysis to lower the detection limit and to aid in asbestos identification.
‡ A "Version" indicated by -"x" after the Lab ID# with a value greater than 1 indicates a sample with amended data. The revision number is reflected by the value of "x".

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	**Project Name :** Bus Base - Bus Wash Building **Address:** 4301 West MacArthur Boulevard Santa Ana, CA **Project No: 211295009** **Project Manager: David Kelly**	Date Sampled: 5/23/23 Sampled By: EQ Sampled By: Date Sampled:	**Laboratory:** **Eurofins Built** Tel: Fax:

CHAIN OF CUSTODY INFORMATION: Email: dkelly@ninyoandmoore.com, equintero@ninyoandmoore.com

Analysis: **PLM EPA 600/R-93/116** TAT: Standard

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
Edilberto Quintero	Ninyo & Moore	5/23/23	11:00	ASHLEY QUIN ASHLEY QUIN	5/23/23 11am

Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
01	BUS wash	Exterior-Roof - N	1	Core (asphalt)	8,000SF	N	G
02		- N/E					
03		- S					
04		- E	2	Parapet wall (can)	720SF		
05		- S					
06		- W					
07		- N	3	Penetration Mastic with silver paint	7 SF		
08		- W					
09		- S					
10		- W	4	Flashing Caulk	6SF		
11		- S					
12		- E					
13		- Wall - N	5	C.M.U	7,200SF		

003268854

ASBESTOS BULK SAMPLE DATA SHEET

Ninyo & Moore 475 Goddard, Suite 200 Irvine, CA 92618 Tel: (949) 753-7070 Fax: (949) 753-7071	**Project Name :** Bus Base - Bus Wash Building **Address:** 4301 West MacArthur Boulevard Santa Ana, CA **Project No: 211295009** **Project Manager: David Kelly**	Date Sampled: 5/23/23 Sampled By: EQ Sampled By: Date Sampled:	**Laboratory:** **Eurofins Built** Tel: Fax:

CHAIN OF CUSTODY INFORMATION: Email: dkelly@ninyoandmoore.com, equintero@ninyoandmoore.com

Analysis: **PLM EPA 600/R-93/116** TAT: Standard

Relinquished By: (sign/print)	Company	Date	Time(24 hr.)	Received By: (sign/print)	Laboratory
EQuintero / Edilberto Quintero	Ninyo & Moore	5/23/23	11:00	Ashley Quim / ASHLEY QUIM	5/23/23 11am

Sample ID	Building Number	Sample Location	HA No.	Sample Description	Quantity (SF/LF/EA)	Friable (Y/N)	Condition
14	Bus wash	Exterior wall - S	5	C.M.U	7,200SF	N	G
15	↓	Iterior wall - N	↓	↓	↓		

EQ 5/23/23

003268854

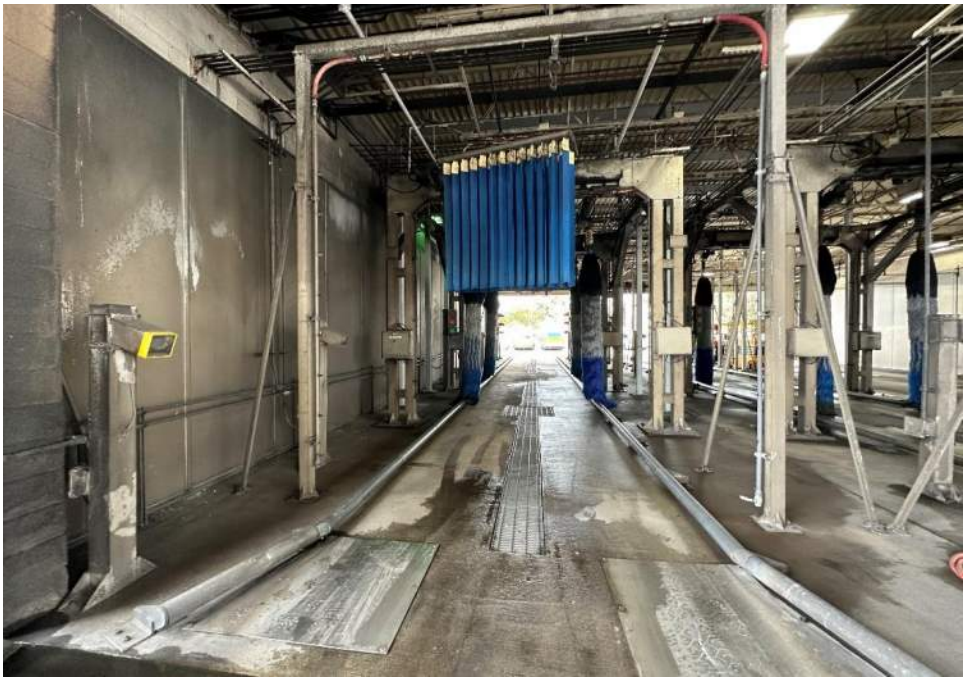
Ninyo - Moore

APPENDIX D

Photographs

Photograph 1: **Exterior view of the Santa Ana Bus Wash Building.**

Photograph 2: **General view of the Roof.**



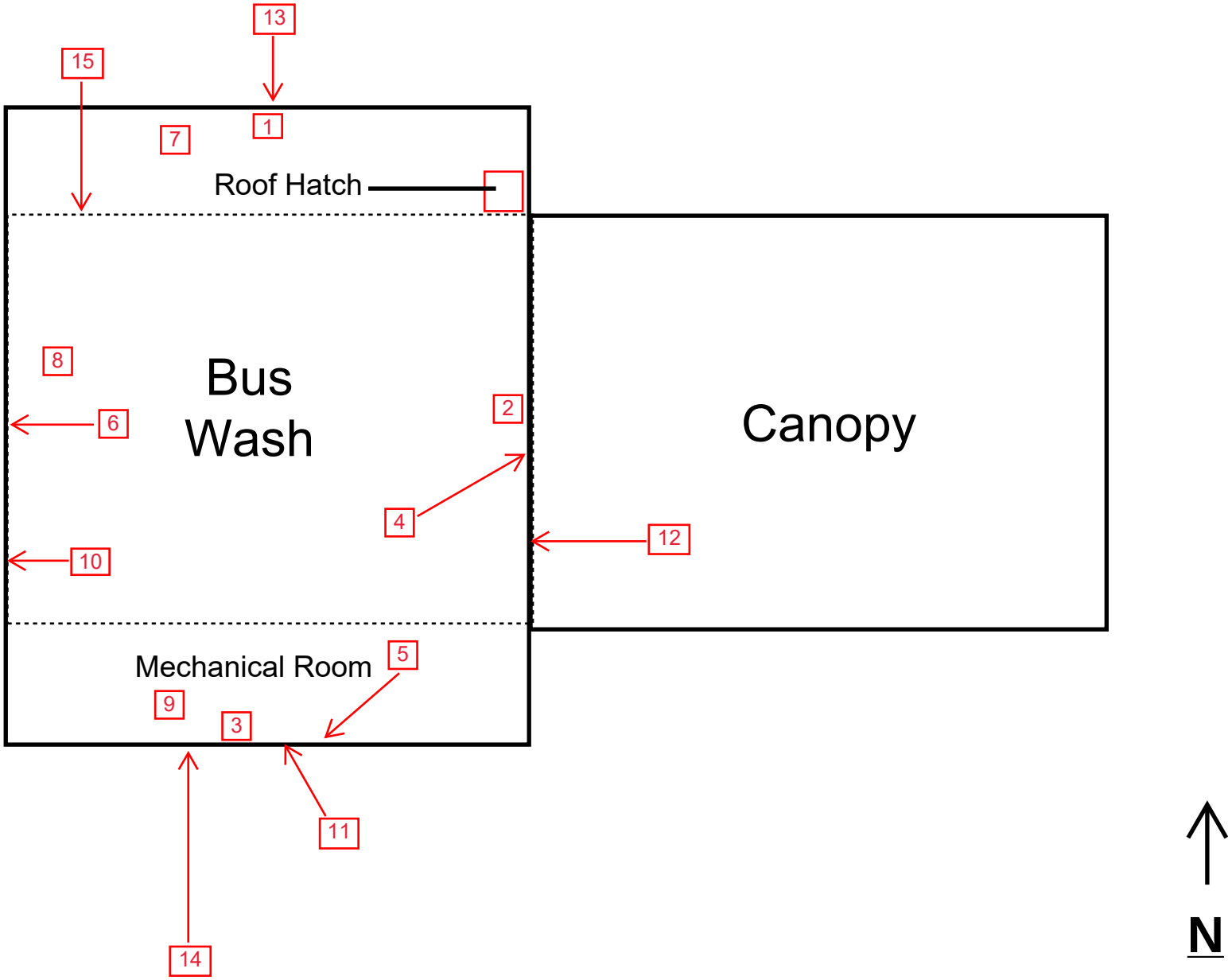
Photograph 3: **General view of the bus wash.**

Photograph 4: **General view of the storage and mechanical room.**

APPENDIX E

Field Drawings

Project Name: Bus Base - Bus Wash
Project No.: 211295009
Date:05/23/2023
Prepared by: EQ



Legend:

- Suspect Asbestos Sampling Locations

APPENDIX F

XRF Readings

XRF Readings Summary

Reading No.	Room	Floor	Side	Component	Substrate	Condition	Color	Action Level (mg/cm^2)	Results	Approximate Quantity	Lead Reading (mg/cm^2)
1	Start			Standard Calibration Check 1.04 +/- 0.06 mg/cm^2				1.0	Positive	N/A	1.1
2				Standard Calibration Check 1.04 +/- 0.06 mg/cm^2				1.0	Positive	N/A	1.0
3				Standard Calibration Check 1.04 +/- 0.06 mg/cm^2				1.0	Positive	N/A	1.0
4	Exterior Bus Wash Canopy	1	A	Canopy Ceiling	Metal	Intact	White	1.0	Negative	N/A	0.0
5	Exterior Bus Wash Canopy	1	C	Cross Bars	Metal	Intact	White	1.0	Negative	N/A	0.0
6	Exterior Bus Wash Canopy	1	C	Beams	Metal	Intact	Tan	1.0	Negative	N/A	0.0
7	Exterior Bus Wash Canopy	1	C	Fascia	Wood	Intact	Black	1.0	Negative	N/A	0.1
8	Exterior Bus Wash Station	1	B	Crash Post	Concrete	Intact	Yellow	1.0	Negative	N/A	0.0
9	Exterior Bus Wash Station	1	C	Wall	Stucco	Intact	Brown	1.0	Negative	N/A	0.0
10	Exterior Bus Wash Station	1	B	Door	Metal	Intact	Brown	1.0	Negative	N/A	0.0
11	Exterior Bus Wash Station	1	B	Door Frame	Metal	Intact	Brown	1.0	Negative	N/A	0.0
12	Exterior Bus Wash Station	1	B	Light Fixtures	Metal	Intact	Black	1.0	Negative	N/A	0.1
13	Interior Bus Wash Station	1	A	Wall	CMU	Intact	White	1.0	Negative	N/A	0.0
14	Interior Bus Wash Station	1	D	Ceiling	Metal	Intact	White	1.0	Negative	N/A	0.0
15	Interior Bus Wash Station	1	D	Beams	Metal	Intact	Gray	1.0	Negative	N/A	0.0
16	Interior Bus Wash Station	1	D	Cross Bars	Metal	Intact	Gray	1.0	Negative	N/A	0.0
17	Interior Bus Wash Station	1	C	Wall	Metal	Intact	Gray	1.0	Negative	N/A	0.0
18	End			Standard Calibration Check 1.04 +/- 0.06 mg/cm^2				1.0	Positive	N/A	1.0
19				Standard Calibration Check 1.04 +/- 0.06 mg/cm^2				1.0	Positive	N/A	1.0
20				Standard Calibration Check 1.04 +/- 0.06 mg/cm^2				1.0	Positive	N/A	1.0

Notes:

CMU - concrete masonry unit

mg/cm^2 - milligrams per cubic centimeter

No. - number

N/A - not applicable

XRF - X-Ray fluorescence

475 Goddard, Suite 200 | Irvine, California 92618 | p. 949.753.7070

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Geotechnical & Environmental Sciences Consultants

SECTION 05 12 00

STRUCTURAL STEEL FRAMING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Miscellaneous Structural steel, including shelf angles, and face mounted wall steel bracket where occurs for joist support.

B. Related Requirements:
1. Section 05 21 00 “Steel Joist Framing”
2. Section 05 31 00 "Steel Decking".
3. Section 09 96 00 "High-Performance Coatings”.

1.02 COORDINATION

A. Coordinate installation of anchorage items to be embedded in or attached to other construction without delaying the Work. Provide setting diagrams, sheet metal templates, instructions, and directions for installation.

1.03 ACTION SUBMITTALS

A. Shop Drawings: Show fabrication of structural-steel components.

B. Materials Certification.

1.04 QUALITY ASSURANCE

A. Welding Qualifications: Qualify procedures and personnel in accordance with AWS D1.1.

1.05 DELIVERY, STORAGE, AND HANDLING

A. Store materials to permit easy access for inspection and identification. Keep steel members off ground and spaced by using pallets, dunnage, or other supports and spacers. Protect steel members and packaged materials from corrosion and deterioration.

B. Store fasteners in a protected place in sealed containers with manufacturer's labels intact.

PART 2 - PRODUCTS

2.01 STRUCTURAL-STEEL MATERIALS

A. Channels, Angles ASTM A36.

B. Plate and Bar: ASTM A36.

C. Welding Electrodes: Comply with AWS requirements.

2.02 RODS

A. Threaded Rods: ASTM A36.

1. Nuts: ASTM A563 hex carbon steel.
2. Washers: ASTM A36 carbon steel.
3. Finish: Hot-dip zinc coating, ASTM A153/A153M, Class C.

2.03 FABRICATION

A. Structural Steel: Fabricate and assemble in shop to greatest extent possible. Fabricate in accordance with ANSI/AISC 303 and to ANSI/AISC 360.

B. Thermal Cutting: Perform thermal cutting by machine to the greatest extent possible.

2.04 GALVANIZING

A. Hot-Dip Galvanized Finish: Apply zinc coating by the hot-dip process to structural steel in accordance with ASTM A123/A123M.

B. Touch up field welds with zinc-rich primer, such as Rust-Oleum Cold Galvanizing Compound

2.05 SOURCE QUALITY CONTROL

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

1. Prepare test and inspection reports.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Verify elevations of masonry-bearing surfaces and locations of anchor rods, bearing plates, and other embedment for compliance with requirements.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 ERECTION

A. Set structural steel accurately in locations and to elevations indicated and in accordance with ANSI/AISC 303 and ANSI/AISC 360.

B. Maintain erection tolerances of structural steel within ANSI/AISC 303.

C. Only splice members where indicated.

D. Do not use thermal cutting during erection.

E. Do not enlarge unfair holes in members by burning or using drift pins. Ream holes that must be enlarged to admit bolts.

3.03 FIELD CONNECTIONS

A. Weld Connections: Comply with AWS D1.1 for tolerances, appearances, welding procedure specifications, weld quality, and methods used in correcting welding work.

1. Comply with ANSI/AISC 303 and ANSI/AISC 360 for bearing, alignment, adequacy of temporary connections, and removal of paint on surfaces adjacent to field welds.

B. Touch up field welds with zinc-rich primer, such as Rust-Oleum Cold Galvanizing Compound

3.04 REPAIR

A. Galvanized Surfaces: Clean areas where galvanizing is damaged or missing, and repair galvanizing to comply with ASTM A780/A780M.

3.05 FIELD QUALITY CONTROL

A. Special Inspections: Owner will engage a special inspector to perform the following special inspections:

1. Verify structural-steel materials and inspect joint details.
2. Verify weld materials and inspect welds.
3. Verify connection materials.

END OF SECTION 05 12 00

SECTION 05 21 00

STEEL JOIST FRAMING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. LH-series long-span steel joists at the Bus Wash Bays.
   2. Steel joist accessories.

B. Related Requirements:
   1. Section 05 12 00 “Structural Steel Framing”
   2. Section 05 31 00 "Steel Decking".
   3. Section 09 96 00 "High-Performance Coatings". Painting of hot dip galvanized joists, bridging and accessories in the Bus Wash Bays.

C. The existing 48-LH roof joists are being replaced due to severe corrosion along the joist members and at joist panel point connections. It appears that the existing joists only received a shop primer which proved inadequate for the highly alkaline bus wash environment (SSPC Environmental Zone 3C, chemical atmospheric exposure, alkaline, pH 10.0 to 12.0)

1.02 DEFINITIONS

A. SJI's "Specifications": Steel Joist Institute's "Standard Specifications, Load Tables and Weight Tables for Steel Joists and Joist Girders."

1.03 ACTION SUBMITTALS

A. Product Data: For each type of joist, accessory, and product.

B. Shop Drawings:

   1. Include layout, designation, number, type, location, and spacing of joists.
   2. Include joining and anchorage details; bracing, bridging, and joist accessories; splice and connection locations and details; and attachments to other construction.
   3. Include structural calculations signed and sealed by California Civil or Structural Engineer.

1.04 INFORMATIONAL SUBMITTALS

A. Qualification Data: For manufacturer.

B. Welding certificates.

C. Mill Certificates: For each type of bolt.

D. Field quality-control reports.

1.05 QUALITY ASSURANCE

A. Manufacturer Qualifications: A manufacturer certified by SJI to manufacture joists complying with applicable standard specifications and load tables in SJI's Standard Specifications and Code of Standard Practice.

B. Welding Qualifications: Qualify field-welding procedures and personnel according to AWS D1.1/D1.1M, "Structural Welding Code - Steel."

1.06 DELIVERY, STORAGE, AND HANDLING

A. Deliver, store, and handle joists as recommended in SJI's Standard Specifications and Code of Standard Practice.

B. Protect joists from corrosion, deformation, and other damage during delivery, storage, and handling.

1.07 SEQUENCING

A. Steel joists may or may not be shop primed by the joist manufacturer, for temporary protection during shipping to the hot dip galvanizing plant. Any primer shall be removed prior to dipping the joist segments into the hot dip galvanizing tub. The long span joists require a field bolted splice near midspan of each joist. After galvanizing, the joists shall receive a high-performance coating system. All joist bridging and joist accessories shall also receive equivalent galvanizing and paint finishes.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Joist manufacturer shall be a member of the Steel Joist Institute.

2.02 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide special joists and connections capable of withstanding design loads indicated on Drawings.

1. Design loads at ASD service-gravity load level and live load deflection criteria are defined by the Structural Drawings in detail 2/S-501.
   a. As a separate load case, design for a net wind uplift as defined by the Structural Drawings detail 2/S-501.
   b. As a separate load case, design for gravity loads plus the seismic axial top chord load defined by the Structural Drawings detail 2/S-501.
   c. Use the load combinations defined by the California Building Code latest edition.

2.03 STEEL JOISTS

A. Long-Span Steel Joist: Manufactured steel joists according to "Standard Specification for Long span Steel Joists, LH-Series and Deep Long span Steel Joists, DLH-Series" in SJI's "Specifications," with steel-angle top- and bottom-chord members; of joist type and end and top-chord arrangements as indicated on Drawings.

1. Joist Type: LH-series long-span steel joists.
2. End Arrangement: Underslung. Refer to the structural drawings.
3. Minimum joist web & chord member thickness shall be 3/16-inch. To address concerns with potential future corrosion along the span and at panel point connections.
4. Top-Chord Arrangement: Top Chord Pitched Two Ways. Refer to the structural drawings.
5. Provide holes in chord members for connecting and securing other construction to joists.
6. Camber long-span steel joists according to SJI's "Specifications”.
7. Equip bearing ends of joists with manufacturer's standard beveled ends or sloped shoes if joist slope exceeds 1/4 inch per 12 inches (1:48).

2.04 STEEL JOIST ACCESSORIES

A. High Strength Bolts at the joist splice points: ASTM A325 hot dip galvanized.

B. Bridging:

1. Provide bridging anchors and number of rows of horizontal or diagonal bridging of material, size, and type required by SJI's "Specifications” for type of joist, chord size, spacing, and span. Furnish additional erection bridging if required for stability, such as at the joist field bolted splice.

C. Welding Electrodes: Comply with AWS standards.

D. Furnish miscellaneous accessories including splice plates and bolts required by joist manufacturer to complete joist assembly.

2.05 HOT DIP GALVANIZING

A. Hot-Dip Galvanized Finish: Apply zinc coating by the hot-dip process to steel joists and all joist accessories including bridging, in accordance with ASTM A123/A123M.

B. Surface Preparation of Steel: Clean surfaces to be hot dip galvanized. Remove loose rust and mill scale and spatter, slag, or flux deposits.

C. Surface Preparation of Galvanized Steel: Prepare galvanized-steel surfaces for High-performance coating per Specification 09 96 00.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Prior to fabrication, the Contractor shall field measure and confirm the existing conditions and dimensions for installation, including the existing bearing plates at the top of masonry walls.

B. Examine supporting substrates, embedded bearing plates, and abutting structural framing for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION

A. Prior to fabrication, Contractor shall perform field survey to confirm joist clear spans, joist seat bearing locations and type of bearing detail.

B. Install joists and accessories plumb, square, and true to line; securely fasten to supporting construction according to SJI's "Specifications**",** joist manufacturer's written instructions, and requirements in this Section.
   1. Space, adjust, and align joists accurately in location before permanently fastening.
   2. Install temporary bracing and erection bridging, connections, and anchors to ensure that joists are stabilized during construction.

C. Field weld joists to support steel bearing plates. Coordinate welding sequence and procedure with placement of joists. Comply with AWS requirements and procedures for welding, appearance and quality of welds, and methods used in correcting welding work.

D. Install and connect bridging concurrently with joist erection before construction loads are applied. Anchor ends of bridging lines at top and bottom chords where terminating at existing masonry walls.

3.03 REPAIRS

A. Repair damaged galvanized coatings on galvanized items with galvanized repair paint according to ASTM A780/A780M and manufacturer's written instructions.

3.04 FIELD QUALITY CONTROL

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

B. Visually inspect field welds according to AWS D1.1/D1.1M.

C. Prepare test and inspection reports. The reports shall include inspection of the joist seat end bearing connections, the joist splice connection near midspan including all splice bolts and/or welds, and all connections of joist bridging required by SJI for joist stability and net wind uplift load case.

END OF SECTION 05 21 00

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SECTION 05 31 00

STEEL DECKING

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Roof deck.

B. Related Requirements:
1. Section 051200 "Structural Steel Framing".
2. Section 052100 "Steel Joist Framing".
3. Section 099600 "High Performance Coatings". For steel deck soffit, and for any mechanical fasteners projecting below the deck soffit.

1.02 DEFINITIONS

A. SDI MOC3: Steel Deck Institute Manual of Construction with Steel Deck (3rd edition)

B. SDI QA/QC: Standard for Quality Control and Quality Assurance for Installation of Steel Deck

C. SDI RD: Standard for Steel Roof Deck.

1.03 ACTION SUBMITTALS

A. Product Data:

1. Roof deck.

B. Shop Drawings:

1. Include layout and types of deck panels, anchorage details, reinforcing channels, pans, cut deck openings, special jointing, accessories, and attachments to other construction.
2. After field confirmation by the Contractor of the existing deck module layout and proposed cuts of existing roof deck, proposed details along lines B&C for the structural roof deck diaphragm lapping of the new and existing steel roof deck. Refer to the structural details 3, 9 & 12 on S-500 and details 3 & 7 on S-501.
3. Include notching and restoration details for any localized notching of the existing roof deck which may occur to gain access to the existing joist seats bearing on top of the masonry walls.

4. Include ridge detail in shop drawings (reference detail 4/S-501)

1.04 INFORMATIONAL SUBMITTALS

A. Certificates:

1. Welding certificates.
2. Product Certificates: For each type of steel deck.

B. Evaluation Reports:

1. Research Reports: For steel deck, from ICC-ES showing compliance with the building code.

C. Field Quality-Control Submittals:

1. Field quality-control reports.

D. Qualification Statements: For welding personnel and testing agency.

1.05 QUALITY ASSURANCE

A. Qualifications:

1. Welding Qualifications: Qualify procedures and personnel in accordance with SDI QA/QC and the following welding codes:

a. AWS D1.1/D1.1M.
b. AWS D1.3/D1.3M.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Protect steel deck from corrosion, deformation, and other damage during delivery, storage, and handling.

B. Store products in accordance with SDI MOC3. Stack steel deck on platforms or pallets and slope to provide drainage. Protect with a waterproof covering with ventilation to avoid condensation.

PART 2 - PRODUCTS

2.01 ROOF DECK

A. Roof Deck: Fabricate panels, without top-flange stiffening grooves, to comply with SDI RD and with the following:

1. Galvanized-Steel Sheet: ASTM A653/A653M, Structural Steel (SS), Grade 33 (230), G90 (Z275) zinc coating.
2. Deck Profile: As indicated by Structural drawings.
3. Design Uncoated-Steel Thickness: As indicated by Structural drawings.
4. Span Condition: Triple span or more.
5. Side Laps: Overlapped or interlocking seam at Contractor's option.

2.02 ACCESSORIES

A. Provide manufacturer's standard accessory materials for deck that comply with requirements indicated.

B. Miscellaneous Sheet Metal Deck Accessories: Steel sheet, minimum yield strength of 33,000 psi, not less than 0.0478-inch design uncoated thickness, of same material and finish as deck; of profile indicated or required for application.

C. Galvanizing Repair Paint: ASTM A780/A780M.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine supporting frame and field conditions for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 INSTALLATION, GENERAL

A. Install deck panels and accessories in accordance with SDI RD; manufacturer's written instructions; and requirements in this Section.

B. Install temporary shoring before placing deck panels if required to meet deflection limitations.

C. Locate deck bundles to prevent overloading of supporting members.

D. Place deck panels on supporting frame and adjust to final position with ends accurately aligned and bearing on supporting frame before being permanently fastened. Do not stretch or contract side-lap interlocks.

E. Place deck panels flat and square and fasten to supporting frame without warp or deflection.

F. Cut and neatly fit deck panels and accessories around openings and other work projecting through or adjacent to deck.

G. Comply with AWS requirements and procedures for manual shielded metal arc welding, appearance and quality of welds, and methods used for correcting welding work.

H. Lap deck along high point ridge line to maintain deck continuity. Contractor shall include ridge details in shop drawings.

3.03 INSTALLATION OF ROOF DECK

A. Fasten roof-deck panels to steel supporting members by arc spot (puddle) welds of the surface diameter indicated or arc seam welds with an equal perimeter that is not less than 1-1/2 inches (38 mm) long, and as follows:

1. Weld Diameter: 5/8-inch nominal.
2. Weld Spacing: Refer to the Structural Drawing S-501.
3. Comply with any field welding limitations that may be defined in the steel joist shop drawings. Exercise caution if welding across the joist top chord's width.

B. Side-Lap and Perimeter Edge Fastening: Refer to the Structural Drawing S-501.

C. End Bearing: Install deck sheet ends over supporting framing with a minimum end bearing of 2 inches and with a minimum sheet end to end lap of 3-inches:

D. Miscellaneous Roof-Deck Accessories: Install ridge and valley plates, finish strips, end closures, and reinforcing channels in accordance with deck manufacturer's written instructions. Weld or mechanically fasten to substrate to provide a complete deck installation.

1. Weld cover plates at changes in direction of roof-deck panels unless otherwise indicated.

3.04 REPAIR

A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on both surfaces of deck with galvanized repair paint in accordance with ASTM A780/A780M and manufacturer's written instructions.

3.05 FIELD QUALITY CONTROL

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

B. Tests and Inspections:

1. Special inspections and qualification of welding special inspectors for cold-formed steel floor and roof deck in accordance with quality-assurance inspection requirements of SDI QA/QC.

a. Field welds will be subject to inspection.

b. Splicing of new deck to existing deck will be subject to inspection. See Structural Drawing Sheets S-500 and S-501 for details.

c. Patching of notched existing deck at new joist seats will be subject to inspection. See Structural Drawing Sheets S-500 and S-501 for details.

2. Steel decking will be considered defective if it does not pass tests and inspections.

C. Prepare test and inspection reports.

END OF SECTION 05 31 00

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SECTION 07 52 16.13

SBS MODIFIED BITUMINOUS MEMBRANE ROOFING, COLD-APPLIED

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Styrene-butadiene-styrene (SBS) modified bituminous membrane roofing system on metal deck, including but not limited to:

   a. Roof insulation.

   b. Roof insulation cover board.

   c. SBS-modified bituminous membrane roofing.

   d. Acrylic coating system.

1.02 DEFINITIONS

A. Roofing Terminology: Refer to ASTM D1079 "Standard Terminology Relating to Roofing and Waterproofing" and glossary in applicable edition of NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" for definition of terms related to roofing work in this Section.

1.03 PREINSTALLATION MEETINGS

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

1. Meet with Owner, Architect, roofing Installer, roofing system manufacturer's representative, deck Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.

2. Review drawings and specifications.

3. Review methods and procedures related to roofing installation, including manufacturer's written instructions.

4. Review and finalize construction schedule and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.

5. Examine substrate conditions and finishes for compliance with requirements, including flatness and fastening.

6. Review structural loading limitations of roof deck during and after roofing installation.

7. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that will affect roofing system.

8. Review temporary protection requirements for roofing system during and after installation.

9. Review roof observation and repair procedures after roofing installation.

1.04 ACTION SUBMITTALS

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

1. Product Test Reports for Solar Reflectance: For roof materials, indicating that roof materials comply with Solar Reflectance Index requirement.

B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work. Provide roof plan showing orientation and types of roof deck, orientation of membrane roofing, and fastening spacings and patterns for mechanically fastened components.

1. Base flashings and built-up terminations.

a. Indicate details meet requirements of NRCA required by this Section.

2. Tapered insulation, including slopes.

3. Crickets, saddles, and tapered edge strips, including slopes.

4. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.

C. Samples for Verification: For the following products:

1. Sheet roofing materials.

1.05 INFORMATIONAL SUBMITTALS

A. Contractor's Product Certificate: Submit certificate, indicating products intended for Work of this Section (including product names and numbers, and manufacturers), with statement indicating that products to be provided meet the requirements of the Contract Documents.

B. Qualification Data: For Installer, Manufacturer, and Roofing Inspector.

1. Include letter from Manufacturer written for this Project indicating approval of Installer.

C. Manufacturer Certificates: Signed by roofing manufacturer certifying that roofing system complies with requirements specified in "Performance Requirements" Article.

1. Submit evidence of compliance with performance requirements.

a. Include: UL listing certificate and energy performance.

2. Product Compatibility: Indicate manufacturer has verified compatibility of roofing system components, including but not limited to: Roofing membrane, flashing sheets, adhesives and sealants.

D. Warranties: Unexecuted sample copies of special warranties.

E. Field Quality Control Reports: Reports of Roofing Inspector. Include description of work performed, tests performed, defective work observed, and corrective actions required and carried out.

1. Submit reports within 24 hours after inspection.

1.06 CLOSEOUT SUBMITTALS

A. Maintenance Data: To include in maintenance manuals.

B. Warranties: Executed copies of warranties.

1.07 QUALITY ASSURANCE

A. Installer Qualifications: An employer of workers trained and certified by manufacturer, including a full-time on-site supervisor with a minimum of five years' experience installing products comparable to those specified, able to communicate verbally with Contractor, Architect, and employees, and qualified by the manufacturer to install manufacturer's product and furnish warranty of type specified.

B. Manufacturer Qualifications: Approved manufacturer with UL listed roofing systems comparable to those specified for this Project, with minimum five years' experience in manufacture of comparable products in successful use in similar applications, and able to furnish warranty with provisions matching specified requirements.

1. Approval of Other Manufacturers and Comparable Products: Submit the following in accordance with project substitution requirements, within time allowed for substitution review:

a. Product data, including certified independent test data indicating compliance with requirements.

b. Samples of each component.

c. Sample submittal from similar project.

d. UL listing.

e. Project references: Minimum of five installations of specified products not less than five years old, with Owner and Architect contact information.

f. Sample warranty.

g. Sample daily inspection report.

2. Substitutions following award of contract are not allowed.

3. Approved manufacturers must meet separate requirements of Submittals Article.

C. Roofing Inspector Qualifications: A technical representative of manufacturer not engaged in the sale of products and experienced in the installation and maintenance of the specified roofing system, qualified to perform roofing observation and inspection specified in Field Quality Control Article, to determine Installer's compliance with the requirements of this Project, and approved by the manufacturer to issue warranty certification. The Roofing Inspector shall be one of the following:

1. An authorized full-time technical employee of the manufacturer.

2. An independent party certified as a Registered Roof Observer by the International Institute of Building Enclosure Consultants (formerly the Roof Consultants Institute) retained by the Contractor or the Manufacturer and approved by the Manufacturer.

D. Manufacturer's Installation Instructions: Obtain and maintain on-site manufacturer's written recommendations and instructions for installation of products.

1.08 D ELIVERY, STORAGE, AND HANDLING

A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.

B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer. Protect stored liquid material from direct sunlight.

1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.

C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.

D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

1.09 PROJECT / FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

B. Daily Protection: Coordinate installation of roofing so insulation and other components of roofing system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.

1. Provide tie-offs at end of each day's work to cover exposed roofing and insulation with a course of roofing sheet securely in place with joints and edges sealed.

2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing.

3. Remove temporary plugs from roof drains at end of each day.

4. Remove and discard temporary seals before beginning work on adjoining roofing.

1.10 WARRANTY

A. Manufacturer's Warranty: Roof System Manufacturer's standard form in which Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within warranty period, as follows.

1. Form of Warranty: Manufacturer's standard warranty form.

2. Scope of Warranty: Work of this Section and including sheet metal details and termination details installed by the roof system Installer and approved by the Roof System Manufacturer.

3. Warranty Period: 20 years from date of completion.

B. Manufacturer Inspection Services: By manufacturer's technical representative, to report maintenance responsibilities to Owner necessary for preservation of Owner's warranty rights. The cost of manufacturer's inspections is included in the Contract Sum.

1. Inspections to occur in following years: 2, 5, 10, and 15 following completion.

C. Installer Warranty: Installer's warranty signed by Installer, as follows.

1. Form of Warranty: Form acceptable to Roofing Manufacturer and Owner.

2. Scope of Warranty: Work of this Section.

3. Warranty Period: 5 years from date of completion.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

A. Basis of Design: The roof system specified in this Section is based upon products of Tremco CPG Incorporated. Provide specified products or pre-approved equivalent products.

B. Source Limitations: Obtain components for roofing system from same manufacturer as membrane roofing or manufacturer approved by membrane roofing manufacturer.

2.02 PERFORMANCE REQUIREMENTS

A. General Performance: Installed membrane roofing and base flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Membrane roofing and base flashings shall remain watertight.

1. Accelerated Weathering: Roofing system shall withstand 2000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.

2. Impact Resistance: Roof membrane shall resist impact damage when tested according to ASTM D3746/D3746M, ASTM D4272/D4272M, or the "Resistance to Foot Traffic Test" in FM Approvals 4470.

B. Flashings and Fastening: Provide base flashings, perimeter flashings, detail flashings and component materials and installation techniques that comply with requirements and recommendations of the following:

1. NRCA Roofing Manual (Sixth Edition) for construction details and recommendations.

2. SMACNA Architectural Sheet Metal Manual (Seventh Edition) for construction details.

C. Exterior Fire-Test Exposure: ASTM E 108, Class A; for application and roof slopes indicated, as determined by testing identical membrane roofing materials by a qualified testing agency. Materials shall be identified with appropriate markings of applicable testing agency.

D. Energy Performance: Roofing system shall have an initial solar reflectance index of not less than 0.70 and an emissivity of not less than 0.75 when tested according to CRRC-1.

2.03 MATERIALS, GENERAL

A. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roof membrane manufacturer based on testing and field experience.

2.04 ROOFING MEMBRANE MATERIALS

A. Base-Ply Sheet:

1. SBS/RET/Urethane-modified asphalt coated composite fiberglass mat and fiberglass scrim reinforced high strength sheet, smooth surfaced, ASTM D6163 Type III Grade S.

   a. Basis of design product: POWERply Endure 100 Smooth.

   b. Tensile Strength at 77 deg. F (25 deg. C), minimum, ASTM D5147: Machine direction 190 lbf/in (33 kN/m) ; cross machine direction 190 lbf/in (33 kN/m).

   c. Tear Strength at 77 deg. F (25 deg. C), minimum, ASTM D5147: Machine direction 320 lbf (1420 N); cross machine direction 320 lbf (1420 N).

   d. Elongation at 77 deg. F (25 deg. C), minimum, ASTM D5147: Machine direction, 7 percent; cross machine direction, 4 percent.

   e. Low Temperature Flex, maximum, ASTM D5147: -40 deg. F (-40 deg. C).

   f. Thickness, minimum, ASTM D5147: 0.090 inch (2.3 mm).

B. SBS Modified Bituminous Membrane Granular-Surfaced Cap Sheet:

1. SBS/RET/Urethane-modified asphalt-coated glass-fiber-reinforced high-tensile strength sheet, white granular surfaced, ASTM D6163 Type III Grade G.

   a. Basis of design product: POWERply Endure 100 FR.

   b. Tensile Strength at 77 deg. F (25 deg. C), minimum, ASTM D5147: Machine direction 185 lbf/in (32 kN/m); Cross machine direction 210 lbf/in (35 kN/m).

   c. Tear Strength at 77 deg. F (25 deg. C), minimum, ASTM D5147: Machine direction, 325 lbf (1445 N); Cross machine direction 325 lbf (1445 N).

   d. Elongation at 77 deg. F (25 deg. C), minimum, ASTM D5147: Machine direction 6 percent; Cross machine direction 8 percent.

   e. Low Temperature Flex, maximum, ASTM D5147: Machine Direction, -40 deg. F (-40 deg. C); Cross machine direction -35 deg. F (-37 deg.C).

   f. Thickness, minimum, ASTM D5147: 0.130 inch (3.3 mm).

C. Flashing Sheet:

1. Thermoplastic PVC/TPA sheet, internally fabric reinforced, Energy Star qualified, CRRC listed, and California Title 24 Energy Code compliant, ASTM D4434 Type IV.

a. Basis of design product: TPA Single Ply Roof Membrane.

b. Tensile Strength at 0 deg. F (-18 deg. C), minimum, ASTM D751: 300 lbf/in (1330 N).

c. Tear Strength at 77 deg. F (25 deg. C), minimum, ASTM D751: 100 lbf (440 N).

d. Elongation at 0 deg. F (-18 deg. C), minimum at fabric break, ASTM D751: 25 percent machine direction, 25 percent cross-machine direction.

e. Minimum Thickness, nominal, ASTM D751: 0.045 in (1.1 mm).

f. Color: White.

g. Solar Reflectance Index (SRI), ASTM E1980: 108 (White, initial) 84 (White, 3-year aged).

h. Recycled Content, minimum: 25 percent pre-consumer.

2.05 COLD-APPLIED ADHESIVE MATERIALS

A. General: Adhesive and sealant materials recommended by roofing system manufacturer for intended use and compatible with roofing membrane.

1. Liquid-type auxiliary materials shall comply with VOC limits of authorities having jurisdiction.

B. Modified Bituminous Base-Ply and Cap Sheet Adhesive:

1. Cold-applied roofing adhesive and surfacer, one-part, formulated for compatibility and use with specified roofing membranes and flashings.

a. Basis of design product: POWERply Standard Cold Adhesive.

b. Volatile Organic Compounds (VOC), maximum, ASTM D6511: 250 g/L.

c. Nonvolatile Content, minimum, ASTM D6511: 72 percent.

d. Flash Point, minimum, ASTM D93: 100 deg F (38 deg C).

C. Flashing Sheet Adhesive:

1. Bonding adhesive, contact-type solvent-based low VOC, for bonding TPA non-fleece-backed single ply membranes and flashings to substrates.

a. Basis of design product: TPA LV Single Ply Bonding Adhesive.

b. VOC, maximum, ASTM D3960: 200 g/L.

D. Asphalt Primer:

1. Asphalt primer, water-based, polymer modified.

a. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 2 g/L.

b. Color: Brown/black.

2.06 AUXILIARY ROOFING MATERIALS

A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with roofing membrane.

B. Asphalt Roofing Cement / Mastic:

1. Roof Cement, Asphalt-Based: ASTM D4586, Type II, Class I, fibrated roof cement formulated for use in installation and repair of asphalt ply and modified bitumen roofing plies and flashings; UL-classified for fire resistance.

a. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 190 g/L.

b. Non-Volatile Matter, ASTM D4586: 85 percent.

c. Resistance to sag ASTM D4586: 1/8 in. (3 mm).

C. Stripping Adhesive / Sealer:

1. Cold-applied roofing surfacing adhesive, one-part white solar reflective low-volatile polymeric, formulated for compatibility and use with specified roofing membranes and flashings.

a. Volatile Organic Compounds (VOC), maximum, ASTM D6511: 250 g/L.

b. Nonvolatile content, minimum ASTM D6511: 70 percent.

D. Stripping Reinforcing Fabric:

1. Woven Glass Fiber Mesh, Vinyl-Coated: Non-shrinking, non-rotting, vinyl-coated woven glass mesh for reinforcing flashing seams, membrane laps, and other roof system detailing.

a. Tensile strength, 70 deg. F, min ASTM D146: Warp, 65 lbf/in (285 N); fill, 75 lbf/in (310 N).

E. Fluid-Applied Flashing Materials:

1. Polyurethane-modified methyl methacrylate reinforced roof coating system base coat, two-part moisture-curing for use with a compatible top coat.

   a. Combustion Characteristics, UL790: Maintains combustion characteristics of existing roof system.

   b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 0 g/L.

   c. Tensile Strength, ASTM D5147: 175 lbf/in (31 N/mm).

   d. Elongation, Reinforced, ASTM D5147: 40 percent.

   e. Crack Bridging, ASTM D5147: Pass - 2 mm.

   f. Hardness, Shore A, minimum, ASTM D2240: 93.

   g. Minimum Thickness, Reinforced Base Coat: 80 mils (2.0 mm) wet total: Apply 40 mils (1.0 mm) wet, plus 40 mils (1.0 mm) wet over reinforcing fabric.

2. Polyurethane-modified methyl methacrylate roof coating system top coat, two-component 0 VOC, UV resistant, for application over compatible base coat.

   a. Combustion Characteristics, UL 790: Maintains combustion characteristics of existing roof system.

   b. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 0 g/L.

   c. Tensile Strength, ASTM D5147: 175 lbf/in (30 N/mm).

   d. Elongation, Reinforced, ASTM D5147: 40 percent.

   e. Crack Bridging, ASTM D5147: Pass, 2 mm.

   f. Hardness, Shore A, minimum, ASTM D2240: 93.

   g. Solar Reflectance Index (SRI), minimum, ASTM E1980: 95.

   h. Minimum Thickness: 32 mils (0.81 mm) wet over cured base coat.

3. Polyester Reinforcing and Protection Fabric: 100 percent stitch-bonded mildew-resistant polyester fabric intended for reinforcement of compatible fluid-applied membranes and flashings.

   a. Tensile Strength, Minimum, ASTM D1682: 50 lbf (23 kg) avg..

b. Elongation, Minimum, ASTM D1682: 60 percent.

c. Tear Strength, Minimum, ASTM D1117: 16 lbf (7.3 kg) avg..

d. Weight: 3 oz./sq. yd (102 g/sq. m).

F. Joint Sealant: Elastomeric joint sealant compatible with roofing materials, with movement capability appropriate for application.

1. Joint Sealant, Polyurethane: ASTM C920, Type S, Grade NS, Class 50 single-component moisture curing sealant, formulated for compatibility and use in dynamic and static joints; paintable.

a. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 40 g/L.

b. Hardness, Shore A, ASTM C661: 40.

c. Adhesion to Concrete, ASTM C794: 35 pli.

d. Tensile Strength, ASTM D412: 350 psi (2410 kPa).

e. Color: White.

G. Miscellaneous Accessories: Provide miscellaneous accessories recommended by roofing system manufacturer.

2.07 ROOF INSULATION MATERIALS

A. Roof Insulation, General: Preformed roof insulation boards manufactured or approved by roofing manufacturer, selected from manufacturer's standard sizes suitable for application, of thicknesses indicated.

1. Provide preformed saddles, crickets, tapered edge strips, and other insulation shapes where indicated for sloping to drain.

B. Roof Insulation:

1. Board Insulation, Polyisocyanurate: CFC- and HCFC- free, with recycled content glass-fiber mat facer on both major surfaces, ASTM C1289 Type II Class 1.

a. Compressive Strength, ASTM D1621: Grade 2: 20 psi (138 kPa).

b. Conditioned Thermal Resistance at 75 deg. F (24 deg. C): 14.4 at 2.5 inches (50.8 mm) thick.

2.08 ROOF INSULATION ACCESSORIES

A. Insulation Cover Board:

1. Board Insulation, Cellulosic-fiber: With water-resistant binders, non-asphaltic primer coated on four sides and chemically treated for deterioration, ASTM C208, Type II, Grades 1 and 2.

a. Compressive strength, ASTM C165: 15 lbf/sq. in.

b. Thermal resistance at 75 deg. F (24 deg C.) ASTM C518: R 1.3.

c. Recycled content, pre-consumer: 20 percent.

d. Rapidly renewable content: 6 percent.

B. Insulation Cant Strips: ASTM C208, Type II, Grade 1, cellulosic-fiber insulation board.

C. Tapered Edge Strips: ASTM C208, Type II, Grade 1, cellulosic-fiber insulation board.

D. Insulation Fasteners: Factory-coated steel fasteners and metal plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roof insulation and cover boards to substrate, and acceptable to roofing system manufacturer.

2.09 SURFACING MATERIALS

A. Acrylic Emulsion Coating Material:

1. Acrylic Roof Coating, Highly-Reflective Elastomeric: ASTM D6083, applied as base coat plus finish coat over prepared and primed roof surfaces.

a. Basis of design product: Solargard 6083 Base and Top Coat.

b. Solar Reflectance Index (SRI), white, ASTM E1980: 105 initial; 100 aged.

c. Volatile Organic Compounds (VOC), maximum, ASTM D3960: 50 g/L.

d. Tensile Strength at 73 deg. F (23 deg. C), minimum, ASTM D2370: 250 psi (1700 kPa).

e. Elongation at 73 deg. F (23 deg. C), minimum, ASTM D2370: 350 percent.

f. Flexibility at -15 deg F (-26 deg C), ASTM D522: Pass 1/2 inch mandrel bend after 1000 hrs. accelerated weathering.

g. Solids by weight, minimum ASTM D1644: 60 percent.

h. Solids by volume, minimum ASTM D2697: 50 percent.

i. Color, Top Coat: White.

j. Minimum Thickness over BUR and MB: 24 mils (0.60 mm) wet each coat for base and finish coats.

2.10 WALKWAYS

A. Walkway Material:

1. Walkway pads, ceramic-granule-surfaced reinforced asphaltic composition slip-resisting pads, manufactured as a traffic pad for foot traffic, 1/2 inch (13 mm) thick minimum.

a. Flexural Strength at max. load, minimum, ASTM C203: 218 psi (1.5 kPa).

b. Granule adhesion (weight loss), maximum, ASTM D4977: 1.1 gram.

c. Impact Resistance at 77 deg. F (25 deg. C), ASTM D3746: No Damage to Roof.

d. Pad Size: 36 by 48 inch (914 by 1220 mm).

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with the following requirements and other conditions affecting performance of roofing system:

1. Verify that roof openings and penetrations are in place and curbs are set and braced and that roof drain bodies are securely clamped in place.

2. Steel Roof Deck:

a. Verify that surface plane flatness and fastening of steel roof deck complies with requirements in Division 05 Section "Steel Decking."

b. Verify that deck is securely fastened with no projecting fasteners and with no adjacent units in excess of 1/16 inch (1.6 mm) out of plane relative to adjoining deck.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing installation according to roofing system manufacturer's written instructions. Remove sharp projections.

B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.

3.03 INSTALLATION, GENERAL

A. Install roofing system in accordance with manufacturer's written instructions, approved shop drawings, and Contract Documents.

B. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.

3.04 ROOFING INSTALLATION DETAILS

A. NRCA Installation Details: Install roofing system in accordance with applicable NRCA Manual Plates and NRCA recommendations; modify as required to comply with manufacturer's approved details and perimeter fastening requirements.

3.05 INSULATION INSTALLATION

A. Comply with roofing manufacturer's written instructions for installing roof insulation.

B. Coordinate installing membrane roofing system components, so insulation is not exposed to precipitation or left exposed at the end of the workday.

C. Cant Strips: Install and secure preformed 45-degree cant strips at junctures of built-up roofing with vertical surfaces or angle changes greater than 45 degrees.

D. Tapered Crickets: Install tapered crickets under area of roofing to conform to slopes indicated.

E. Install insulation with long joints of insulation in a continuous straight line with end joints staggered between rows, abutting edges and ends between boards. Fill gaps exceeding 1/4 inch (6 mm) with insulation.

   1. Cut and fit insulation within 1/4 inch (6 mm) of nailers, projections, and penetrations.

F. Install insulation under area of roofing to achieve required thickness. Where overall insulation thickness is 2.7 inches (70 mm) or greater, install two or more layers with joints of each succeeding layer staggered from joints of previous layer a minimum of 6 inches (150 mm) in each direction.

G. Trim surface of insulation where necessary at roof drains so completed surface is flush and does not restrict flow of water.

H. Mechanically Fastened Insulation Application Method: Fasten insulation to deck using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to deck type.

1. Fasten insulation to resist uplift pressure at corners, perimeter, and field of roof.

I. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches (150 mm) in each direction. Loosely butt cover boards together. Tape joints if required by roofing manufacturer.

1. Fasten insulation to resist uplift pressure at corners, perimeter, and field of roof.

3.06 COLD-APPLIED ROOFING MEMBRANE INSTALLATION, GENERAL

A. Start installation of roofing membrane in presence of roofing system manufacturer's technical personnel.

B. Cooperate with testing agencies engaged or required to perform services for installing roofing system.

C. Coordinate installation of roofing system so insulation and other components of the roofing membrane system not permanently exposed are not subjected to precipitation or left uncovered at the end of the workday or when rain is forecast.

1. Provide tie-offs at end of each day's work to cover exposed roofing membrane sheets and insulation with a course of coated felt set in compatible roofing cement/mastic, with joints and edges sealed.

2. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing.

3. Remove temporary plugs from roof drains at end of each day.

4. Remove and discard temporary seals before beginning work on adjoining roofing.

D. Substrate-Joint Penetrations: Prevent roofing asphalt and adhesives from penetrating substrate joints, entering building, or damaging roofing system components or adjacent building construction.

3.07 BASE-PLY SHEET INSTALLATION

A. Install lapped modified bituminous roofing membrane base-ply sheet according to roofing manufacturer's written instructions, starting at low point of roofing system. Extend roofing membrane sheets over and terminate beyond cants, installing as follows:

1. Adhere to substrate in cold-applied adhesive.

2. Install an additional ply sheet in cold-applied adhesive through waterways and over hips and ridges.

3.08 SBS-MODIFIED BITUMINOUS MEMBRANE INSTALLATION

A. Install modified bituminous roofing membrane cap sheet according to roofing manufacturer's written instructions, starting at low point of roofing system. Extend roofing membrane sheets over and terminate beyond cants, installing as follows:

1. Unroll roofing membrane sheets and allow them to relax for the minimum time period required by manufacturer.

2. Embed each sheet in cold-applied membrane adhesive applied at rate required by roofing manufacturer.

B. Laps: Accurately align roofing membrane sheets, without stretching, and maintain uniform side and end laps. Stagger end laps. Install roofing membrane sheets so side and end laps shed water. Completely bond and seal laps, leaving no voids.

1. Repair tears and voids in laps and lapped seams not completely sealed.

2. Granular Cap Sheet Laps: Apply roofing granules to cover exuded bead at laps.

3.09 FLASHING AND STRIPPING INSTALLATION

A. Base Flashing Installation, General: Install base flashing over cant strips and other sloped and vertical surfaces, at roof edges, and at penetrations through roof; secure to substrates according to roofing system manufacturer's written instructions, and as follows:

1. Extend base flashing up curb and walls and 6 inches onto field of built-up roofing.

2. Prime substrates with primer if required by roofing system manufacturer.

B. Flashing Sheet Installation: Adhere flashing sheet to substrate in cold-applied adhesive. Apply cold-applied flashing sheet adhesive to back of flashing sheet if recommended by roofing manufacturer.

1. Flashing Sheet Top Termination: Mechanically fasten top of base flashing securely at terminations and perimeter of roofing.

a. Seal top termination of base flashing with a metal termination bar and a continuous bead of joint sealant.

b. Elastomeric Flashing Sheet: Heat weld vertical flashing joints. Seal bottom termination of base flashing with a five-course application of elastomeric adhesive and fiberglass reinforcement.

C. Fluid-Applied Flashing Application: Apply base coat with embedded fabric reinforcement and top coat at penetrations and wind screen supports in accordance with manufacturer's written instructions.

1. Apply base coat to achieve minimum wet mil coating thickness indicated in Part 2 product listing unless greater thickness is recommended by manufacturer.

2. Apply topcoat over flashing base coat and spread coating evenly to achieve minimum wet mil coating thickness indicated in Part 2 product listing unless greater thickness is recommended by manufacturer.

D. Install stripping, according to roofing manufacturer's written instructions, where metal flanges and edgings are set on modified bituminous membrane roofing.

E. Flashing-Sheet Stripping: Install two ply stripping in a continuous coating of compatible mastic/adhesive sealer, as recommended by roofing manufacturer, and extend onto roofing membrane. Apply number of courses recommended by manufacturer.

F. Roof Drains: Set metal flashing in bed of compatible mastic/adhesive sealer on completed ply system. Cover metal flashing with two stripping plies and extend a minimum of 12 inches and 24 inches beyond edge of metal flashing onto field of roofing membrane. Install cap sheet and clamp roofing membrane, metal flashing, and stripping into roof-drain clamping ring.

3.10 SURFACING AND COATING INSTALLATION

A. Complete a water test over the finished ply system.

1. Run water through cricket lines to insure positive drainage. Correct any ponding that will stand more than 24 hours after water testing.

2. Plug roof drains and fill bowl and drain sumps with water for 30 minutes. Check interior of building for any roof leaks.

B. Acrylic Emulsion Coating:

1. Prime surfaces as recommended by the manufacturer.

2. Apply acrylic emulsion coating to prepared roofing membrane and base flashings, with number of coats, thickness of application, and application method as recommended in writing by coating manufacturer.

3.11 WALKWAY INSTALLATION

A. Walkways, General: Install walkways according to roofing manufacturer's written instructions at locations indicated on the drawings.

1. Install walkways as follows:

   a. Clean roof system where walkways pads are to be installed.

   b. Set walkway pads in manufacturer's recommended, compatible acrylic adhesive.

3.12 FIELD QUALITY CONTROL

A. Roofing Inspector: Contractor shall engage a qualified roofing inspector, at no additional cost to OCTA, to perform roof tests and inspections and to prepare test reports.

   1. Engage a qualified roofing inspector for daily inspections to perform roof tests and inspections and to prepare start up, interim and final reports. Roofing Inspector's quality assurance inspections shall comply with criteria established in NRCA's "Quality Control and Quality-assurance Guidelines for the Application of Membrane Roofing Systems."

B. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation at commencement and upon completion.

   1. Notify Architect and Owner 48 hours in advance of date and time of inspection.

C. Repair or remove and replace components of built-up roofing where test results or inspections indicate that they do not comply with specified requirements.

   1. Additional testing and inspecting, at Contractor's expense, will be performed to determine if replaced or additional work complies with specified requirements.

3.13 PROTECTING AND CLEANING

A. Protect roofing system from damage and wear during remainder of construction period. When remaining construction will not affect or endanger roofing, inspect roofing for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.

B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at time of Substantial Completion and according to warranty requirements.

C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION 07 52 16.13

SECTION 07 92 13

ELASTOMERIC JOINT SEALANTS

PART 1 - GENERAL

1.01 GENERAL REQUIREMENTS

A. This Specification shall be read as a whole by all parties concerned.

1.02 SYSTEM DESCRIPTION

A. This specification describes the elastomeric joint sealant for use inside the Bus Wash Bays, at all existing stainless-steel panels joints, at all joints between the stainless-steel wall panels and the CMU masonry walls, and where the existing CMU masonry walls and stainless-steel wall panels meet at the existing slab-on-grade. Joint sealants will have exposure to aggressive chemicals inside the Bus Wash Bays.

1.03 REFERENCES

A. The following standards are applicable to this section:
- (ASTM C920) General Testing Standards
- (ASTM D412) Tensile Strength & Elongation
- (ASTM D2240) Shore A Hardness

1.04 QUALITY ASSURANCE

A. Manufacturing qualifications: The manufacturer of the specified product shall be ISO 9001 certified and have in existence a recognized ongoing quality assurance program independently audited on a regular basis.

B. Contractor qualifications: Contractor shall be qualified in the field of concrete repair and protection with a successful track record of 5 years or more. Contractor shall maintain qualified personnel who have received product training by a manufacturer's representative.

C. Store and apply materials in accordance with all safety requirements, taking into consideration weather conditions, as specified by manufacturer or as modified by applicable rules and regulations of authorities having jurisdiction. Consult Material Safety Data Sheets for complete handling recommendations.

1.05 DELIVERY, STORAGE AND HANDLING

A. All materials must be delivered in original, unopened containers with the manufacturer's name, labels, product identification, and batch numbers. Damaged material or unsealed pails must be removed from the site immediately.

B. Store all materials off the ground and protect them from rain, freezing or excessive heat until ready for use.

C. Store and handle the specified product as recommended by the manufacturer.

1.06 JOB CONDITIONS

A. Environmental Conditions: Do not apply material if it is raining or snowing or if such conditions appear to be imminent. Minimum application temperature 40ºF (5ºC) and rising.
B. Protection: Precautions should be taken to avoid damage to packaging

1.07 SUBMITTALS

A. Submit manufacturer's actual literature including: Product Data Sheets and appropriate Material Safety Data Sheets (MSDS).

1.08 WARRANTY

A. Provide a written warranty from the manufacturer against defects of materials for a period of one (1) year, beginning with date of substantial completion of the project

PART 2 - PRODUCTS

2.01 MANUFACTURER

A. Sika Duoflex NS, by Sika Corporation, is considered to conform to the requirements of this specification.

2.02 MATERIALS

A. Epoxy Primer shall be Sika Duoflex 5050 Primer, a two component, low viscosity, adhesion-promoting, epoxy primer.
B. Joint Sealant shall be Sika Duoflex NS, a two component, non-sag, polysulfide joint sealant manufactured by Sika Corp

2.03 PERFORMANCE CRITERIA

A. Typical Properties:
1. Aspect: Polysulfide Sealant
2. Comply with the following test methods:

a.	General Testing Standard, ASTM C920	Class 25
b.	Elongation	500%-550%
c.	Shore A Hardness	25-30
d.	Tensile Strength	150-200 psi

PART 3 - EXECUTION

3.01 SURFACE PREPARATION

A. All joint surfaces must be clean, sound, dry and frost-free. Joint walls must be free of oils, grease, paints, coatings, sealers, curing compound residues, and any other foreign matter that might prevent adhesion. Ideally this should be accomplished by mechanical means (e.g. sandblasting, abrasive grinding, etc.). Bond breaker tape or backer rod must be used in bottom of joint to prevent bond.

B. Proper joint design for moving joints is 2:1 width to depth ratio, with a recommended 1/4" (6 mm) minimum and 1/2" (13 mm) maximum depth of sealant. For non-moving joints, the width to depth ratio can vary.

C. For maximum adhesion, including in submerged or immersed applications, the use of Sika® Duoflex 5050 Primer is necessary. A uniform glossy sheen after priming indicates adequate primer. Some surfaces, such as porous concrete, may require two coats. Primer must be tack-free before applying sealant. Sealant must be applied on the same day as primer. Primed areas left overnight should be re-primed.

3.02 MIXING AND APPLICATION

A. Pour entire contents of Component B into pail of Component A and mix using a low-speed drill (100-300 rpm) and Sika mixing paddle. Mix for 3-5 minutes to achieve uniform color and consistency. Scrape down sides of pail periodically. Avoid entrapment of air during mixing.

B. Mixed material must be used within the pot life parameters given. Do not attempt to thin or use material that has started to harden. The individual components are formulated, manufactured, and shipped to be used together.

C. When mixed in cold weather (<50°F), do not force the mixing paddle to the bottom of the pail. After adding Component B in Component A, mix the top 1/2 to 3/4 of the pail in the first minute of mixing. After scraping down the sides of the pail, mix again for another minute. The paddle should reach the bottom of the pail between the first and second minute of mixing. Scrape down the sides of the pail a second time and then mix for an additional 2-3 minutes until sealant is well blended.

D. Recommended application temperatures 40 to 100°F (4 to 38°C). Pre-conditioning units to approximately 70°F (21°C) is necessary when working at the far ends of the application range. Move pre-conditioned units to work areas just prior to application.

E. Apply sealant only to clean, sound, dry, and frost-free substrates. Sika® Duoflex NS should be applied into joints when joint slot is at mid-point of its designed expansion and contraction.

F. To place, load directly into bulk gun or use a follower plate loading system. Place nozzle of gun into bottom of joint and fill entire joint. Keeping the nozzle deep in the sealant, continue with a steady flow of sealant preceding nozzle to avoid air entrapment. Also, avoid overlapping of sealant since this also entraps air. Dry tool as required.

3.03 CLEANING

A. The uncured material can be cleaned from tools with solvent. The cured sealant can only be removed mechanically.

B. Leave finished work and work area in a neat, clean condition without evidence of spillovers onto adjacent areas.

END OF SECTION 07 92 13

SECTION 09 96 00

HIGH PERFORMANCE COATINGS

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section includes surface preparation and the application of paint systems on existing and new substrates as defined by the Contract Documents. The substrates include:

1. Carbon Steel.
2. Hot-Dip Galvanized Steel.
3. Galvanized Metal Deck
4. CMU (Concrete Masonry Units).

1.03 DEFINITIONS

A. Definitions of gloss levels below are from "MPI Architectural Painting Specification Manual" (hereafter, "MPI Manual").

1. Gloss Level 3, Eggshell finish: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees.
2. Gloss Level 4, Satin finish: 20 to 35 units at 60 degrees and minimum 35 units at 85 degrees.
3. Actual gloss levels may differ by manufacturers. Please refer to Manufacturers Product Data Sheets/Technical Data Sheets for actual gloss categorization.

B. Blocking: Two painted surfaces sticking together such as a painted door sticking to a painted jamb.

C. ASTM: ASTM International develops international standards for materials, products, systems, and services used in construction, manufacturing, and transportation: www.astm.org.

D. CARB: California Air Resources Board District is defined as the counties outside of SCAQMD.

E. CRGI: Coatings Research Group Inc. is an international association of paint and coatings manufacturers dedicated to the benefits of shared research and development: crgiconnect.com.

F. DFT: Dry Film Thickness.

G. DTM: Direct to metal. A coating that can be applied directly to a metal surface; refer to manufacturer's product information for surface preparation and application instructions.

H. EPR: Environmental Performance Rating. Master Painters Institute's formula that relates VOC, Performance of Category, Gloss and Appropriate specified use. Higher values equate to greater eco-efficiency.

I. HAP: Hazardous Air Pollutant: According to the United States Environmental Protection Agency (EPA), Hazardous air pollutants, also known as toxic air pollutants or air toxics, are those pollutants that cause or may cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental and ecological effects: www.epa.gov.

J. ISO: International Organization for Standardization

K. MPI: Master Painters Institute. An organization that establishes architectural paint standards and quality assurance programs in North America: www.paintinfo.com.

L. NACE: National Association of Corrosion Engineers www.nace.org.

M. OTC: Refers to the Ozone Transmission Commission.

N. PDCA: Painting & Decorating Contractors of America: www.pdca.org.

O. PDS: Product Data Sheet.

P. SCAQMD: South Coast Air Quality Management District is defined as most of Los Angeles, Orange, Riverside, and San Bernardino counties in California.

Q. SDS: Safety Data Sheet.

R. SSPC: The Society for Protective Coatings. Surface preparation standards and specifications. www.sspc.org.

S. TDS: Technical Data Sheet.

1.04 DEFINITIONS FOR SERVICE ENVIRONMENT

A. Service Environment: The Service Environment is the condition to which the successfully installed coatings system specified will be exposed.

B. Mild Service Environment (Exterior Open Canopy Roof Structure): Outdoor weathering, mild industrial fumes and normal humidity with mold and mildew conditions.

C. Severe Service Environment (Bus Wash Bays): Frequent fumes and spills of strong chemicals (Alkalis, and Solvents) high humidity, moisture conditions and frequent chemical cleaning.

1.05 ACTION SUBMITTALS

A. Product Data (PDS/TDS & SDS): For each type of product. Include preparation requirements and application instructions.

B. Samples for Initial Selection: For each type of topcoat product.

C. Samples for Verification: For each type of paint system and in each color and actual gloss level for topcoat.

1. Contractor to submit samples on rigid backing, no smaller than 7 inches X 10 inches (177 X 254 mm) or larger than 8.5 X 11 inches (216 X 280 mm).
2. Label each Sample for project, architect, general contractor, painting contractor, paint color name and number, paint brand name, “P” number if applicable, and application area.

D. Product List: For each product indicated, include the following:

1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
2. Submit physical properties data and appropriate test results for each proposed product.
3. VOC content.
4. Refer to Specification Section 3.05 for list of paints for each substrate.

1.06 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials, from the same product run, that match products installed and that are packaged with protective covering for storage and identified with labels describing contents for single component products. All two-component products supplied will be un-catalyzed.

1.07 QUALITY ASSURANCE

A. Installer Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, and whose work has resulted in applications with a record of successful in-service performance.

B. Obtain block fillers and primers for each coating system from the same manufacturer as the finish coats.

C. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1.08 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label.

B. Store materials in accordance with manufacturer’s written instructions and acceptable ranges published in their PDS/TDS and SDS sheets.

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

1.09 SAFETY

A. All jobsite safety procedures shall comply with OSHA and EPA standards, as well as any other local, state and project requirements.

B. Please refer to Safety Data Sheets (SDS) for each specific product to ensure all proper PPE and safety requirements are being met for the job by the contractor.

C. Additional project specific safety procedures may exist in other project documents including those outlined in Division 1.

1.10 FIELD CONDITIONS

A. Coatings shall be applied only when air and surface temperatures between 50- and 105-degrees Fahrenheit (10 and 41 degrees Celsius).

B. Do not apply coatings when relative humidity exceeds 85 percent.

C. Do not apply coatings when surface temperatures are less than 5 degrees F (3 degrees C) above the dew point; or to damp or wet surfaces.

D. Painting contractors shall follow proper painting practices in accordance with SSPC-PA1 and ensure environmental conditions are within range of acceptability as documented in manufacturers Product Data Sheets/Technical Data Sheet (PDS/TDS).

E. Field conditions shall be verified at the start of each day, and at maximum three-hour intervals thereafter to the end of the shift.

1.11 INSPECTION AND TESTS

A. Contractor shall coordinate with painting manufacturer for required inspections and tests (related to surface preparation and painting application) of paint systems to be accepted (with warranty); costs of such inspections and test are to be included by Contractor within original contract bid (resulting to no additional cost to OCTA); supplementary inspections/oversight by OCTA shall not replace aforementioned inspections and tests.

B. OCTA and inspection staff shall have access during working hours to all parts and areas of the Work to facilitate inspections.

1.12 WARRANTY

A. Warrant this section of work for a period of a minimum of one (1) year against defects and/or deficiencies from the date of Substantial Completion.

B. Promptly correct any defects or deficiencies which become apparent within the warranty period to the satisfaction of the OCTA and at no expense to OCTA

PART 2 – PRODUCTS

2.01 MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide products listed from:

1. Carboline – Contact: Mario Baca – (562) 646-8929, mario.baca@carboline
2. PPG – Contact: Susan Giampietro – (949)410-2452, giampietro@ppg.com
3. Sherwin-Williams – Contact: Rocky M Berlanga – (657) 269-0922, rocky.m.berlanga@sherwin.com
4. Do not mix products from different manufacturers.

B. Products: Subject to compliance with requirements, provide product listed in 3.05A and 3.05B for the paint category indicated.

2.02 PAINT, GENERAL

A. Material Compatibility: Systems could fail if paints used for individual coats are incompatible. Paint systems match primers and topcoats and take compatibility into consideration.

1. Provide materials for use, within each paint system, that are compatible with one another, and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing.

2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

B. VOC Content: Paints and coatings to be applied at Project Site shall comply with applicable VOC limits of the South Coast Air Quality Management District Rule 1113: Architectural Coatings, exclusive of colorants added to tint bases, as calculated in accordance with 40 CFR 59 Subpart D (EPA Method 24), as follows:

1. Flat Coatings: 50 g/L.
2. Nonflat Coatings: 50 g/L.
3. Nonflat – High Gloss Coatings (default Nonflat): 50 g/L.
4. Floor Coatings: 50 g/L.
5. Industrial Maintenance (IM) Coatings: 100 g/L.
6. Pre-Treatment Wash Primers: 420 g/L.
7. Primers, Sealers, and Undercoaters: 100 g/L.
8. Rust Preventative Coatings: 100 g/L.
9. Waterproofing Concrete/Masonry Sealers: 100 g/L.
10. Zinc-Rich IM Primers 100g/L.
11. All Shop-Primed Metal to be coated in accordance with applicable federal, state, and local regulations.

C. Colors: Match existing colors. Contractor shall submit proposed colors to the Owner and Architect for review and acceptance.

2.03 SOURCE QUALITY CONTROL

A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:

1. Owner may engage the services of a qualified testing agency to sample paint materials. Contractor shall be notified in advance and may be present when samples are taken. If paint materials have already been delivered to the Project site, samples shall be taken at Project site.
2. Samples will be provided in new, unopened sealed containers tinted to the colors specified and certified as valid materials by the testing agency.
3. Testing agency may perform tests for compliance with product requirements.
4. Owner may direct Contractor to stop applying coatings if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials.
5. Contractor shall comply with requirements to use compatible products and systems as described in 2.02.A. Contractor shall remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

2.04 QUALITY ASSURANCE

A. For the painting of the Bus Wash Bays' replacement open-web steel joists and roof deck soffit, and for the Exterior Canopy Roof's existing open-web steel joists, structural steel beams and roof deck soffit, the Contractor shall provide verification of conformance with this specification, referenced standards and related documents. This verification to be performed by a third party, at the expense of the Contractor, minimum NACE Level 1 Certified Coatings Inspector at the expense of the Contractor.

B. Contractor shall provide documentation verifying inspector's certification is both valid and current.

C. The following standards and notes for compliance and verification of coatings shall apply to the document. These guidelines are some of the most applicable standards but are in no way the only standards that may apply to the referenced project.

1. SSPC-PA1: Shop, Field, and Maintenance Painting of Steel
   Description: This specification covers procedures for the painting of steel surfaces. The scope of this specification is rather broad, covering both specific as well as general requirements for the application of paint. This specification does not provide detailed descriptions of surface preparation, pretreatments, or selection of primers and finish coats. This specification does provide detailed coverage of the procedures and methods for application after the selection of the coating materials has been made.

2. SSPC-PA2: Procedure for Determining Conformance to Dry Coating Thickness Requirements
   Description: This standard describes a procedure for determining shop or field conformance to a specified coating dry film thickness (DFT) range on ferrous and non-ferrous metal substrates using nondestructive coating thickness gauges (magnetic and eddy current) described in ASTM D7091. The procedures for adjustment and measurement acquisition for two types of gauges: "magnetic pull-off" (Type 1) and "electronic" (Type 2) are described in ASTM D7091.

3. SSPC-PA11: Protecting Edges, Crevices, and Irregular Steel Surfaces by Stripe Coating
   Description: This guide discusses the technique called "stripe coating" or "striping" as a way of providing extra corrosion protection measures on edges, outside corners, crevices, bolt heads, welds, and other irregular steel surfaces, including optional surface preparation techniques for sharp edges to improve coating performance. Some details, including the advantages and limitations of specific methods of obtaining additional coating thickness, are described to assist the specification writer in assuring that the project specification will address these details.

4. SSPC-PA COM: Commentary on all PA Guidelines (Paint Application)
   Description: This commentary is for information only and is not part of the standards and guides in this chapter. Its purpose is to present a general description of the sections that comprise this chapter. The documents in this section focus on aspects of the coating application process. They provide requirements and guidance procedures for applying coatings to both steel and concrete substrates, measuring film thickness on steel and concrete substrates after coating application, safety considerations for coating applicators, and requirements for coating application for specialized services.

5. SSPC-SP1: Solvent Cleaning
   Description: Solvents such as water, xylol, toluol etc., are used to remove solvent-soluble foreign matter from the surface of ferrous metals. Rags and solvents must be replenished frequently to avoid spreading the contaminant rather than removing it. Low-pressure (1500 - 4000 psi) high volume (3 - 5 gal/min.) water washing with appropriate cleaning chemicals is a recognized "solvent cleaning" method. All surfaces should be cleaned per this specification prior to using hand tools or blast equipment. As a note of caution – solvents which leave a residue such as mineral spirits, naphtha, lacquer thinner etc. must not be used as they will lead to adhesion issues and premature coating failure.

6. SSPC-SP2: Hand Tool Cleaning
   Description: Hand tool cleaning removes all loose mill scale, rust, paint, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Mill scale, rust, and paint are considered adherent if they cannot be removed by “lifting” with a dull putty knife.

7. SSPC-SP3: Power Tool Cleaning
   Description: Power tool cleaning removes all loose mill scale, rust, paint, and other detrimental foreign matter. It is not intended that adherent mill scale, rust, and paint be removed by this process. Mill scale, rust, and paint are considered adherent if they cannot be removed by “lifting” with a dull putty knife.

8. SSPC-SP6 / NACE #3 NACE No. 3/SSPC-SP 6: Commercial Blast Cleaning
   Description: When viewed without magnification, the surface shall be free from visible oil, grease, dust, dirt, mill scale, rust, coating, oxides, corrosion products, and other foreign matter. Random staining shall be limited to no more than 33% of each unit area of surface and may consist of light shadows, slight streaks, or minor discolorations caused by stains of rust, stains of mill scale, or stains of previously applied coatings.

9. SSPC-SP11: Power Tool Cleaning to Bare Metal (with a 1 mil profile)
   Description: A steel surface cleaned with power tools to bare metal, when viewed without magnification, shall be free from visible oil, grease, dirt, dust, coating, oxides, mill scale, corrosion products, and other foreign matter. Slight residues of rust and paint may also be left in the bottom of the pits if

the original surface is pitted. The surface profile roughness shall be a minimum of 25.4 µm (1.0 mil) as measured in accordance with Method C of ASTM D 4417 or other mutually agreed upon method. The peaks and valleys on the surface shall form a continuous pattern with no smooth, “non-profiled” spots in between.

10. SSPC SSPC-SP13 / NACE#6 – Surface Preparation of Concrete. Description: This standard gives requirements for surface preparation of concrete by mechanical, chemical, or thermal methods prior to the application of bonded protective coating or lining systems.
The requirements of this standard are applicable to all types of cementitious surfaces including cast-in-place concrete floors and walls, precast slabs, masonry walls, and shotcrete surfaces. An acceptable prepared concrete surface should be free of contaminants, laitance, loosely adhering concrete, and dust, and should provide a sound, uniform substrate suitable for the application of protective coating or lining systems. When required, a minimum concrete surface strength, maximum surface moisture content, and surface profile range should be specified in the project specifications.

11. SSPC-SP16 Brush Off Blast SSPC-SP16, Cleaning of Coated and Uncoated Galvanized Steel, Stainless Steel and Non-Ferrous Metals. Definition: A brush-off blast cleaned non-ferrous metal surface, when viewed without magnification, shall be free of all visible oil, grease, dirt, dust, metal oxides (corrosion products), and other foreign matter. Intact, tightly adherent coating is permitted to remain. A coating is considered tightly adherent if it cannot be removed by lifting with a dull putty knife. Bare metal substrates shall have a minimum profile of 19 micrometers (0.75 mil). Surface preparation using this standard is used to uniformly roughen and clean the bare substrate and to roughen the surface of intact coatings on these metals prior to coating application. Substrates that may be prepared by this method include, but are not limited to, galvanized surfaces, stainless steel, copper, aluminum, and brass. For the purpose of this standard, the zinc metal layer of hot-dip galvanized steel is considered to be the substrate, rather than the underlying steel.

12. ASTM D3276: Standard Guide for Painting Inspectors (Metal Substrates)
Description: These standard states that unless otherwise publicized by the coating manufacturer; the minimum surface temperature for coating application is usually 5°C (40°F). It may be as low as -18°C (0°F) for cold-curing one or two-component systems or 10°C (50°F) for conventional two-component systems. Coating specifications may further state that coating should not be undertaken when the temperature is dropping and within 3°C (5°F) of the lower limit. Also, unless otherwise stated by the coating manufacturer; the maximum surface temperature for coating application is typically 50ºC (125ºF), unless otherwise clearly specified. A surface that is too hot may cause the coating solvents to evaporate so fast that application is difficult, blistering takes place, or a porous film result. Also of note, coatings should only be applied to a substrate when that substrate is at least 3°C (5°F)

above the determined dew point in order to prevent moisture on the surface from being coated.

13. ASTM D4285: Blotter Test
Description: Standard Test Method for Indicating Oil or Water in Compressed Air. This requires an absorbent collector, such as white absorbent paper, cloth on a rigid backing, or a non-absorbent collector 6 mm (1/4in.) made of transparent plastic. Center the collector in the discharging air stream within 61 cm (24 in.) of the discharge point for one minute. Conduct the test on the discharging air as close to the use point as possible and after the required inline oil and water separators. Use the blotter test to check for any visible traces of oil or water in compressed air for abrasive blasting or spray coating application. According to ASTM D 4285, any indication of oil discoloration on the collector shall be cause for rejection of the compressed air for use in abrasive blast cleaning, air blast cleaning, and coating application operations.

14. ISO 8502-3: Dust Assessment Test on Prepared Surface
Description: Tests for the assessment of surface cleanliness—Part 3: Assessment of dust on steel surfaces prepared for painting (pressure-sensitive tape method) (Geneva, Switzerland: ISO). Unless otherwise specified; the maximum allowable dust rating shall be level 3.

15. ASTM-D4417: Standard Test Methods for Field Measurement of Surface Profile of Blast Cleaned Steel:
Description: This standard describes three methods for profile assessment or measurement, one of which could be a visual or tactile comparison method. The other two methods measure the peak-to-valley height in different ways. The three methods listed in ASTM-D4417 include:

    1. Method A:
    The blasted surface is visually compared to standards prepared with various surface profile depths and the range determined.
    2. Method B:
    Profile depth is measured using a fine pointed probe at several locations and the arithmetic mean determined.
    3. Method C:
    “Replica Tape” produced by the “Testex Corporation” is impressed into the blast cleaned surface forming a reverse image of the profile and the maximum peak to valley distance measured with a micrometer. It is suggested that Methods B or C be used to perform these tests as they are less subjective than Method A and are quantitative tests. To this point, the method to be used (B or C) must be agreed upon prior to project commencement to avoid conflict between differing results between the 2 methods.

PART 3 - EXECUTION

3.01 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Verify environmental conditions are within coating manufacturer's specified range. Environmental conditions shall be monitored at 4 points throughout each shift. Once at beginning, once at end, and two additional times in between. Recording must be taken at area where work is being performed.

C. Each set of environmental readings shall consist of:

1. Relative humidity. Unless otherwise stated; relative humidity must not exceed 85%.
2. Ambient Air Temperature.
3. Dew Point.
4. Δ - (+/-Difference between surface temperature and dew point)
   Surface must be a minimum of 5°F / 3°C above dew point

D. Dust levels remaining on surface shall be verified in accordance with ISO 8502-3. A dust level 3 or cleaner shall be deemed as acceptable.

E. Surface profile shall be verified in accordance with ASTM D4417. Surface profile ranges must be within ranges listed in manufacturers published data.

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

G. DFT ranges per coat must fall within manufacturer's recommended ranges. Measurements shall be taken in accordance with SSPC-PA2.

3.02 SURFACE PREPARATION

A. Comply with all project specifications and project drawings pertaining to surface preparation of the substrate being coated.

B. Remove plates, machined surfaces, and similar items already in place that are not coated. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and coating.

C. Clean substrates of substances that could impair bond of coatings, including dirt, oil, grease, and incompatible paints and encapsulants.

D. Remove incompatible primers and re-prime substrate with compatible primers as required to produce coating systems indicated.

3.03 APPLICATION

A. Contractor Qualifications: The relevant Contractor shall be qualified in the field of High-Performance Coatings with a successful track record of 5 years or more. Contractors shall maintain qualified personnel who have received product training from a manufacturer's representative.

B. Apply high-performance coatings according to manufacturer's written instructions.

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

D. Coat back sides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.

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

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

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

G. All welds, rivets, bolts, threaded areas and edges shall be "stripe-coated" in advance of coating application.

H. Apply all coatings according to manufacturer's written instructions producing surface films at DFT thicknesses within manufacturer's recommended DFT ranges.

I. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.

J. Thinning should be avoided unless required to aid in application. If thinning is performed use the minimum amount required to achieve desired application consistency and not to exceed manufacturers published instructions.

K. Use only the thinner listed in the coating manufacturer's published documents. Caution must be taken when selecting the thinner as thinners are often different from clean-up solvents.

3.04 CLEANING AND PROTECTION

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

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

C. Protect work of other trades against damage from coating operation. Correct damage by cleaning, repairing, replacing, and recoating, as approved by Architect, and leave in an undamaged condition.

D. Upon completion of construction activities of other trades, touch up and restore damaged or defaced coated surfaces.

3.05 HIGH-PERFORMANCE COATING SYSTEMS

A. EXISTING EXTERIOR CANOPY ROOF (OPEN STANDALONE CANOPY STRUCTURE)

1. Existing Ferrous Metal (Open web roof joists and W-beams):

   a. Surface Prep: Existing open web steel joists SSPC-SP6 commercial blast clean, and SSPC-SP11 power tool cleaning to bare metal for the joist's panel point connections. Existing steel W beams SSPC-SP6 commercial blast clean.
   b. Stripe Coat all Surfaces that are Typically Stripe Coated – SSPC-PA11.
   c. Full Prime on site:
      i. Carboline Paints: Carbomastic 615 MC, Mils 5 – 10.
      ii. PPG Paints: Amerlock 400 VOC Fast Dry, High Solids Semi-Gloss Epoxy Coating, Applied Dry Film Thickness: 4.0 – 8.0 mils minimum,
      iii. Sherwin-Williams Paints: Macropoxy 646-100, Mils 5-10.
   d. Intermediate: N/A
   e. Topcoat:
      i. Carboline Paints: Carboxane 2100 FC, Mils: 3-7.
      ii. PPG Paints: PSX -805 Satin or PSX 700 Gloss Polysiloxane Applied Dry Film Thickness: 4.0 – 8.0 mils minimum.
      iii. Sherwin-Williams Paints: Sher-Loxane 800, Mils 3-7.
   f. Do not mix products from different paint manufacturers.

2. Existing 1.5-inch-deep roof deck, hot dip galvanized:

   a. Surface Prep: SSPC-SP6 commercial blast clean.
   b. Stripe Coat all Surfaces that are Typically Stripe Coated – SSPC-PA11.
   c. Primer:
      i. Carboline Paints: Rustbond PS, Mils: 1-2.

ii. PPG Paints: Amerlock 400 VOC Fast Dry, High Solids Semi-Gloss Epoxy Coating, Applied Dry Film Thickness: 4.0 – 8.0 mils minimum
iii. Sherwin-Williams Paints: Macropoxy 646-100, Mils 1-2.

d. Intermediate: N/A
e. Topcoat:
i. Carboline Paints: Carboxane 2100 FC, Mils: 3-7.
ii. PPG Paints: PSX -805 Satin or PSX 700 Gloss Polysiloxane Applied Dry Film Thickness: 4.0 – 8.0 mils minimum.
iii. Sherwin-Williams Paints: Sher-Loxane 800, Mils 3-7.
f. Do not mix products from different paint manufacturers.

B. INTERIOR BUS WASH BAYS

1. Existing Ferrous Metal that remains (perimeter steel angles/channels for roof deck connection to existing concrete masonry walls):

a. SSPC Environmental Zone 3C – Chemical atmospheric exposure, alkaline (pH 10.0 to 12.0)
b. Surface Prep: SSPC SP6 commercial blast clean.
c. Stripe Coat all Surfaces that are Typically Stripe Coated – SSPC-PA11.
d. Primer,
i. Carboline Paints: Carbomastic 615 MC, Mils 5 – 10.
ii. PPG Paints: Amerlock 400 VOC Fast Dry, High Solids Semi-Gloss Epoxy Coating, Applied Dry Film Thickness: 4.0 – 8.0 mils min.
iii. Sherwin-Williams Paints: Macropoxy 646-100, Mils 5-10.
e. Intermediate: N/A
f. Topcoat:
i. Carboline Paints: Carboxane 2100 FC, Mils: 3-7.
ii. PPG Paints: PSX -805 Satin or PSX 700 Gloss Polysiloxane Applied Dry Film Thickness: 4.0 – 8.0 mils min.
iii. Sherwin-Williams Paints: Sher-Loxane 800, Mils 3-7.
g. Do not mix products from different paint manufacturers.

2. New Galvanized Steel (open-web joists and roof deck):

a. SSPC Environmental Zone 3C – Chemical atmospheric exposure, alkaline (pH 10.0 to 12.0)
b. Surface Prep: New hot dip galvanized open web steel joists and new hot dip galvanized steel roof deck SSPC-SP16 Brush Off Blast Cleaning of Coated and Uncoated Galvanized Steel.
c. Stripe Coat all Surfaces that are Typically Stripe Coated – SSPC-PA11.
d. Primer:
i. Carboline Paints: Rustbond PS, Mils: 1-2.
ii. PPG Paints: Amerlock 400 VOC Fast Dry, High Solids Semi-Gloss Epoxy Coating, Applied Dry Film Thickness: 4.0 – 8.0 mils min.
iii. Sherwin-Williams Paints: Macropoxy 646-100, Mils 1-2.
e. Intermediate: N/A
f. Topcoat:
i. Carboline Paints: Carboxane 2100 FC, Mils: 3-7.

ii. PPG Paints: PSX -805 Satin or PSX 700 Gloss Polysiloxane Applied Dry Film Thickness: 4.0 – 8.0 mils min.
iii. Sherwin-Williams Paints: Sher-Loxane 800, Mils 3-7

g. Do not mix products from different paint manufacturers.

3. Existing Concrete Masonry Walls:

a. SSPC Environmental Zone 3C – Chemical atmospheric exposure, alkaline (pH 10.0 to 12.0)
b. Surface Prep: SSPC-SP13. Surface Preparation of Concrete
c. Caulk: Caulk at base of CMU walls. (Seal the joint at slab on grade and at the stainless-steel wall panels per Specification 07 92 13).
d. Primer:
   i. Carboline Paints: Carboguard 890 VOC, Mils: 5-7.
   ii. PPG Paints: Amerlock 400 VOC Fast Dry, High Solids Semi-Gloss Epoxy Coating, Applied Dry Film Thickness: 4.0 – 8.0 mils min.
   iii. Sherwin-Williams Paints: Duraplate 6000, Mils 5-7.
e. Intermediate: N/A
f. Topcoat:
   i. Carboline Paints: Carboguard 890 VOC, Mils: 5-7.
   ii. PPG Paints: Amerlock 400 VOC Fast Dry, High Solids Semi-Gloss Epoxy Coating, Applied Dry Film Thickness: 4.0 – 8.0 mils min.
   iii. Sherwin-Williams Paints: Duraplate 6000, Mils 5-7.
g. Do not mix products from different paint manufacturers.
h. Do not paint the existing stainless-steel wall panels. Refer to keynote 11 sheet S-221.

3.06 FIELD QUALITY CONTROL

A. Owner reserves the right to invoke the following test procedure at any time and as often as Owner deems necessary during the period when paint is being applied:

1. The Contractor shall engage a qualified independent testing agency to observe and sample in-situ paint installations. This verification to be performed by a third party, minimum NACE Level 1 Certified Coatings Inspector. Samples of material shall be taken, identified, sealed, and certified in the presence of Contractor.
2. Owner may direct Contractor to stop painting if in-situ test results show the coatings installed by the Contractor does not comply with specified requirements. Contractor shall remove noncomplying paint from Project site, pay for testing, and repaint surfaces previously coated with the noncomplying paint. If necessary, Contractor shall be required to remove noncomplying paint from previously painted surfaces if, on repainting with specified paint, the two coatings are incompatible.

3.07 PROTECTION

A. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing, or replacing, and repainting, as approved by Architect.

B. Protect surrounding OCTA facilities from environmental effects from the painting operations. Surrounding OCTA facilities shall always remain operational.

C. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.

D. After the work of other trades is complete, touch up and restore damaged or defaced painted surfaces.

END OF SECTION 09 96 00

SECTION 26 05 19

LOW-VOLTAGE ELECTRICAL POWER CONDUCTORS AND CABLES

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Copper building wire.
   2. Fire-alarm wire and cable.
   3. Connectors and splices.

1.02 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Product Schedule: Indicate type, use, location, and termination locations.

PART 2 - PRODUCTS

2.01 COPPER BUILDING WIRE

A. Description: Flexible, insulated and uninsulated, drawn copper current-carrying conductor with an overall insulation layer or jacket, or both, rated 600 V or less.

B. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

   1. General Cable; Prysmian Group North America.
   2. Service Wire Co.
   3. Southwire Company, LLC.

C. Standards:
   1. Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.
   2. Conductor and Cable Marking: Comply with wire and cable marking according to UL's "Wire and Cable Marking and Application Guide."

D. Conductors: Copper, complying with ASTM B3 for bare annealed copper and with ASTM B8 for stranded conductors.

E. Conductor Insulation:

1. Type THHN and Type THWN-2: Comply with UL 83.
2. Type THW and Type THW-2: Comply with NEMA WC-70/ICEA S-95-658 and UL 83.
3. Type XHHW-2: Comply with UL 44.

2.02 FIRE-ALARM WIRE AND CABLE

A. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

1. Allied Wire & Cable Inc.
2. Genesis Cable Products; Honeywell International, Inc.
3. West Penn Wire; brand of Belden, Inc.

B. General Wire and Cable Requirements: NRTL listed and labeled as complying with NFPA 70, Article 760.
1.

C. Signaling Line Circuits: Twisted, shielded pair, not less than No. 16 AWG.
1. Circuit Integrity Cable: Twisted shielded pair, NFPA 70, Article 760, Classification CI, for power-limited fire-alarm signal service Type FPL. NRTL listed and labeled as complying with UL 1424 and UL 2196 for a two-hour rating.

D. Non-Power-Limited Circuits: Solid-copper conductors with 600 V rated, 75 deg C, color-coded insulation, and complying with requirements in UL 2196 for a two-hour rating.
1. Low-Voltage Circuits: No. 16 AWG, minimum, in pathway.
2. Line-Voltage Circuits: No. 12 AWG, minimum, in pathway.

2.03 CONNECTORS AND SPLICES

A. Description: Factory-fabricated connectors, splices, and lugs of size, ampacity rating, material, type, and class for application and service indicated; listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and use.

B. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:

1. Hubbell Utility Solutions; Hubbell Incorporated.
2. ILSCO.
3. O-Z/Gedney; brand of Emerson Electric Co., Automation Solutions, Appleton Group.

C. Jacketed Cable Connectors: For steel and aluminum jacketed cables, zinc die-cast with set screws, designed to connect conductors specified in this Section.

D. Lugs: One piece, seamless, designed to terminate conductors specified in this Section.
   1. Material: Copper.
   2. Type: One hole with standard barrels.
   3. Termination: Compression.

PART 3 - EXECUTION

3.01 CONDUCTOR MATERIAL APPLICATIONS

A. Branch Circuits:
   1. Copper. Solid for No. 12 AWG and smaller; stranded for No. 10 AWG and larger.

B. Power-Limited Fire Alarm and Control: Solid for No. 12 AWG and smaller.

3.02 CONDUCTOR INSULATION AND MULTICONDUCTOR CABLE APPLICATIONS AND WIRING METHODS

A. Feeders Concealed in Ceilings, Walls, Partitions, and Crawlspaces: Type THHN/THWN-2, single conductors in raceway.

B. Cord Drops and Portable Appliance Connections: Type SO, hard service cord with stainless steel, wire-mesh, strain relief device at terminations to suit application.

3.03 INSTALLATION, GENERAL

A. Conceal cables in finished walls, ceilings, and floors unless otherwise indicated.

B. Complete raceway installation between conductor and cable termination points according to Section 26 05 33 "Raceways and Boxes for Electrical Systems" prior to pulling conductors and cables.

C. Use manufacturer-approved pulling compound or lubricant where necessary; compound used must not deteriorate conductor or insulation. Do not exceed manufacturer's recommended maximum pulling tensions and sidewall pressure values.

D. Use pulling means, including fish tape, cable, rope, and basket-weave wire/cable grips, that will not damage cables or raceway.

E. Install exposed cables parallel and perpendicular to surfaces of exposed structural members and follow surface contours where possible.

F. Support cables according to Structural Drawings, plan 5/S-503.

3.04 CONNECTIONS

A. Tighten electrical connectors and terminals according to manufacturer's published torque-tightening values. If manufacturer's torque values are not indicated, use those specified in UL 486A-486B.

B. Make splices, terminations, and taps that are compatible with conductor material and that possess equivalent or better mechanical strength and insulation ratings than unspliced conductors.
   1. Use oxide inhibitor in each splice, termination, and tap for aluminum conductors.

C. Wiring at Outlets: Install conductor at each outlet, with at least 6 inches of slack.

3.05 IDENTIFICATION

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

3.06 FIELD QUALITY CONTROL

A. Tests and Inspections:
   1. After installing conductors and cables and before electrical circuitry has been energized, test conductors feeding the following critical equipment and services for compliance with requirements:

   2. Perform each of the following visual and electrical tests:

      a. Inspect exposed sections of conductor and cable for physical damage and correct connection according to the single-line diagram.
      b. Test bolted connections for high resistance using one of the following:

         1) A low-resistance ohmmeter.
         2) Calibrated torque wrench.
         3) Thermographic survey.

      c. Inspect compression-applied connectors for correct cable match and indentation.
      d. Inspect for correct identification.
      e. Inspect cable jacket and condition.
      f. Insulation-resistance test on each conductor for ground and adjacent conductors. Apply a potential of 500 V(dc) for 300 V rated cable and 1000 V(dc) for 600 V rated cable for a one-minute duration.
      g. Continuity test on each conductor and cable.
      h. Uniform resistance of parallel conductors.

B. Cables shall be considered defective if they do not pass tests and inspections.

C. Prepare test and inspection reports to record the following:

1. Procedures used.
2. Results that comply with requirements.
3. Results that do not comply with requirements, and corrective action taken to achieve compliance with requirements.

END OF SECTION 26 05 19

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SECTION 26 05 26

GROUNDING AND BONDING FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.01 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.02 SUMMARY

A. Section includes grounding and bonding systems and equipment.

B. Section includes grounding and bonding systems and equipment, plus the following special applications:

1. Ground bonding common with lighting system.

2. Ground bonding common with steel enclosures.

1.03 ACTION SUBMITTALS

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

1.04 INFORMATIONAL SUBMITTALS

A. Coordination Drawings: Plans showing dimensioned locations of grounding features specified in "Field Quality Control" Article, including the following:

1. Grounding arrangements and connections for separately derived systems.

B. Qualification Data: For testing agency and testing agency's field supervisor.

C. Field quality-control reports.

1.05 QUALITY ASSURANCE

A. Testing Agency Qualifications: Certified by NETA.

PART 2 - PRODUCTS

2.01 SYSTEM DESCRIPTION

A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.

B. Comply with UL 467 for grounding and bonding materials and equipment.

2.02 CONDUCTORS

A. Insulated Conductors: Copper wire or cable insulated for 600 V unless otherwise required by applicable Code or authorities having jurisdiction.

2.03 CONNECTORS

A. Listed and labeled by an NRTL acceptable to authorities having jurisdiction for applications in which used and for specific types, sizes, and combinations of conductors and other items connected.

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

C. Beam Clamps: Mechanical type, terminal, ground wire access from four directions, with dual, tin-plated or silicon bronze bolts.

D. Cable-to-Cable Connectors: Compression type, copper or copper alloy.

E. Conduit Hubs: Mechanical type, terminal with threaded hub.

F. Signal Reference Grid Clamp: Mechanical type, stamped-steel terminal with hex head screw.

G. Straps: Solid copper, copper lugs. Rated for 600 A.

PART 3 - EXECUTION

3.01 APPLICATIONS

A. Conductors: Install solid conductor for No. 8 AWG and smaller, and stranded conductors for No. 6 AWG and larger unless otherwise indicated.

B. Grounding Conductors: Green-colored insulation with continuous yellow stripe.

C. Isolated Grounding Conductors: Green-colored insulation with more than one continuous yellow stripe. On feeders with isolated ground, identify grounding conductor where visible to normal inspection, with alternating bands of green and yellow tape, with at least three bands of green and two bands of yellow.

D. Existing Grounding Bus: Installed in electrical equipment rooms, in rooms housing service equipment. Brush and clean prior to making any connections.

E. Conductor Terminations and Connections:

1. Pipe and Equipment Grounding Conductor Terminations: Bolted connectors.

2. Connections to Structural Steel: Welded connectors.

3.02 GROUNDING AT THE SERVICE

A. Equipment grounding conductors and grounding electrode conductors shall be connected to the ground bus. Install a main bonding jumper between the neutral and ground buses.

3.03 EQUIPMENT GROUNDING

A. Install insulated equipment grounding conductors with all feeders and branch circuits.

B. Install insulated equipment grounding conductors with the following items, in addition to those required by NFPA 70:

1. Feeders and branch circuits.

2. Lighting circuits.

3. Receptacle circuits.

4. Single-phase motor and appliance branch circuits.

5. Three-phase motor and appliance branch circuits.

6. Flexible raceway runs.

C. Isolated Equipment Enclosure Circuits: For designated equipment supplied by a branch circuit or feeder, isolate equipment enclosure from supply circuit raceway with a nonmetallic raceway fitting listed for the purpose. Install fitting where raceway enters enclosure and install a separate insulated equipment grounding conductor. Isolate conductor from raceway and from panelboard grounding terminals. Terminate at equipment grounding conductor terminal of the applicable derived system or service unless otherwise indicated.

3.04 INSTALLATION

A. Grounding Conductors: Route along shortest and straightest paths possible unless otherwise indicated or required by Code. Avoid obstructing access or placing conductors where they may be subjected to strain, impact, or damage.

B. Ground Bonding Common with Lightning Protection System: Comply with NFPA 780 and UL 96 when interconnecting with lightning protection system. Bond electrical power system ground directly to lightning protection system grounding conductor at closest point to electrical service grounding electrode. Use bonding conductor sized same as system grounding electrode conductor and install in conduit.

C. Bonding Straps and Jumpers: Install in locations accessible for inspection and maintenance except where routed through short lengths of conduit.

1. Bonding to Structure: Bond straps directly to basic structure, taking care not to penetrate any adjacent parts.

2. Bonding to Equipment Mounted on Vibration Isolation Hangers and Supports: Install bonding so vibration is not transmitted to rigidly mounted equipment.

3. Use exothermic-welded connectors for outdoor locations; if a disconnect-type connection is required, use a bolted clamp.

D. Bonding Interior Metal Ducts: Bond metal air ducts to equipment grounding conductors of associated fans, blowers, electric heaters, and air cleaners. Install tinned bonding jumper to bond across flexible duct connections to achieve continuity.

1. Grounding for Steel Building Structure: Use exothermic-welded connectors for outdoor locations.

E. See the Evaluations for discussion on ground rings.

F. Existing Electrical Room Ground Ring: Ground separately derived power source to existing ground ring.

1. Install insulated copper conductor not less than No. 2/0 AWG or as indicated on the plan drawings.

3.05 FIELD QUALITY CONTROL

A. Testing Agency: Engage a qualified testing agency to perform tests and inspections. Provide test reports to engineer of record for review and approval.

B. Tests and Inspections:

1. After installing grounding system but before permanent electrical circuits have been energized, test for compliance with requirements.

2. Inspect physical and mechanical condition. Verify tightness of accessible, bolted, electrical connections with a calibrated torque wrench according to manufacturer's written instructions.

3. Test completed grounding system at each location where a maximum ground-resistance level is specified, at service disconnect enclosure grounding terminal at existing ground ring in the electrical rooms. Make tests at ground rods before any conductors are connected.

    a. Measure ground resistance no fewer than two full days after last trace of precipitation and without soil being moistened by any means other than natural drainage or seepage and without chemical treatment or other artificial means of reducing natural ground resistance.
    b. Perform tests by fall-of-potential method according to IEEE 81.

C. Grounding system shall be considered defective if it does not pass tests and inspections. Report deficiencies to the Engineer of Record.

D. Prepare test and inspection reports and submit to the Engineer of Record.

E. Report measured ground resistances that exceed the following values:

1. Power and Lighting Equipment or System with Capacity of 500 kVA and Less: 5 ohms.

2. Power and Lighting Equipment or System with Capacity of 500 to 1000 kVA: 5 ohms.

3. Power Distribution Units or Panelboards Serving Electronic Equipment: 3 ohm(s).

4. Substations and Roof Mounted Equipment: 5 ohms.

F. Excessive Ground Resistance: If resistance to ground exceeds specified values, notify Architect promptly and include recommendations to reduce ground resistance.

END OF SECTION 26 05 26

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SECTION 26 05 33

RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Type EMT-S raceways and elbows.
   2. Type FMC-S raceways.
   3. Type LFMC raceways.
   4. Fittings for conduit, tubing, and cable.
   5. Threaded metal joint compound.
   6. Cabinets, cutout boxes, junction boxes, pull boxes, and miscellaneous enclosures.
   7. Cover plates for device boxes.
   8. Hoods for outlet boxes.

B. Related Requirements

   1. Section 260519 "Low-Voltage for Electrical Power Conductors and Cables" for nonmetallic conduit with conductors (Type NUCC).

PART 2 - PRODUCTS

2.01 TYPE EMT-S RACEWAYS AND ELBOWS

A. Steel Electrical Metal Tubing (EMT-S) and Elbows:
   1. Applicable Standards:

      a. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

      b. General Characteristics:

         1) Reference Standards: UL 797 and UL Category Control Number FJMX.
         2) Material: Steel.
         3) Exterior Coating: Zinc Alternate corrosion-resistant coating.
         4) Interior Coating: Zinc with organic top coating.

c. Options:

1) Minimum Trade Size: 3/4 inch.

2.02 TYPE FMC-S RACEWAYS

A. Steel Flexible Metal Conduit (FMC-S):
1. Applicable Standards:

a. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

b. General Characteristics:

1) Reference Standard: UL 1 and UL Category Control Number DXUZ.
2) Material: Steel.

c. Options:

1) Minimum Trade Size: 3/4 inch.

2.03 TYPE FMT RACEWAYS

A. Steel Flexible Metallic Tubing (FMT):
1. Applicable Standards:

a. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

b. General Characteristics:

1) Reference Standard: UL 1652 and UL Category Control Number ILJW.

c. Options:

1) Minimum Trade Size: 3/4 inch.

2.04 TYPE LFMC RACEWAYS

A. Steel Liquidtight Flexible Metal Conduit (LFMC-S):
1. Applicable Standards:

a. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

b. General Characteristics:

1) Reference Standard: UL 360 and UL Category Control Number DXHR.
2) Material: Steel.

c. Options:

1) Minimum Trade Size: 3/4 inch (21 mm).

2.05 FITTINGS FOR CONDUIT, TUBING, AND CABLE

A. Fittings for Type ERMC, Type IMC, Type PVC, Type EPEC, and Type RTRC Raceways:
1. Applicable Standards:

a. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

b. General Characteristics:

1) Reference Standards: UL 514B and UL Category Control Number DWTT.
2) Material: Die cast.
3) Coupling Method: Raintight compression coupling with distinctive color gland nut.

c. Options:
1) Expansion and Deflection Fittings: UL 651 with flexible external bonding jumper.

B. Fittings for Type EMT Raceways:
1. Applicable Standards:

a. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

b. General Characteristics:

1) Reference Standards: UL 514B and UL Category Control Number FKAV.
2) Material: Die cast.
3) Coupling Method: Raintight compression coupling with distinctive color gland nut.

c. Options:

1) Conduit Fittings for Hazardous (Classified) Locations: UL 1203.

2) Expansion and Deflection Fittings: UL 651 with flexible external bonding jumper.

C. Fittings for Type FMC Raceways:
1. Applicable Standards:

a. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

b. General Characteristics:

1) Reference Standards: UL 514B and UL Category Control Number ILNR.

D. Fittings for Type LFMC and Type LFNC Raceways:
1. Applicable Standards:

a. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

b. General Characteristics:

1) Reference Standards: UL 514B and UL Category Control Number DXAS.

2.06 WIREWAYS AND AUXILIARY GUTTERS

A. Metal Wireways and Auxiliary Gutters:
1. Applicable Standards:

a. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

b. General Characteristics:

1) Reference Standards: UL 870 and UL Category Control Number ZOYX.
2) Fittings and Accessories: Include covers, couplings, offsets, elbows, expansion joints, adapters, hold-down straps, end caps, and other fittings to match and mate with wireways as required for complete system.
3) Finish: Manufacturer's standard enamel finish.

2.07 METALLIC OUTLET BOXES, DEVICE BOXES, RINGS, AND COVERS

A. Metallic Outlet Boxes:
1. Description: Box having pryout openings, knockouts, threaded entries, or hubs in either the sides of the back, or both, for entrance of conduit, conduit or cable

fittings, or cables, with provisions for mounting outlet box cover, but without provisions for mounting wiring device directly to box.

2. Applicable Standards:

    a. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

    b. General Characteristics:

        1) Reference Standards: UL 514A and UL Category Control Number QCIT.

B. Metallic Conduit Bodies:

1. Description: Means for providing access to interior of conduit or tubing system through one or more removable covers at junction or terminal point. In the United States, conduit bodies are listed in accordance with outlet box requirements.
2. Applicable Standards:

    a. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

    b. General Characteristics:

        1) Reference Standards: UL 514A and UL Category Control Number QCIT.

C. Metallic Device Boxes:

1. Description: Box with provisions for mounting wiring device directly to box.
2. Applicable Standards:

    a. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

    b. General Characteristics:

        1) Reference Standards: UL 514A and UL Category Control Number QCIT.

D. Metallic Extension Rings:

1. Description: Ring intended to extend sides of outlet box or device box to increase box depth, volume, or both.
2. Applicable Standards:

    a. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

    b. General Characteristics:

        1) Reference Standards: UL 514A and UL Category Control Number QCIT.

2.08 CABINETS, CUTOUT BOXES, JUNCTION BOXES, PULL BOXES, AND MISCELLANEOUS ENCLOSURES

A. Indoor Sheet Metal Cutout Boxes:
   1. Description: Enclosure that has swinging doors or covers secured directly to and telescoping with walls of enclosure.
   2. Applicable Standards:

      a. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

      b. General Characteristics:

         1) Reference Standards: UL Category Control Number CYIV.

            a) Non-Environmental Characteristics: UL 50.
            b) Environmental Characteristics: UL 50E.

      c. Options:

         1) Degree of Protection: Type 4X.

B. Indoor Sheet Metal Junction and Pull Boxes:
   1. Description: Box with a blank cover that serves the purpose of joining different runs of raceway or cable.
   2. Applicable Standards:

      a. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

      b. General Characteristics:

         1) Reference Standards: UL Category Control Number BGUZ.

            a) Non-Environmental Characteristics: UL 50.
            b) Environmental Characteristics: UL 50E.

      c. Options:

         1) Degree of Protection: Type 1.

2.09 COVER PLATES FOR DEVICES BOXES

A. Metallic Cover Plates for Device Boxes:
   1. Applicable Standards:

      a. Regulatory Requirements: Listed and labeled in accordance with NFPA 70 and marked for intended location and use.

b. General Characteristics:

1) Reference Standards: UL 514D and UL Category Control Numbers QCIT and QCMZ.
2) Wallplate-Securing Screws: Metal with head color to match wallplate finish.

PART 3 - EXECUTION

3.01 SELECTION OF RACEWAYS

A. Unless more stringent requirements are specified in Contract Documents or manufacturers' written instructions, comply with NFPA 70 for selection of raceways. Consult Architect for resolution of conflicting requirements.

B. Outdoors:
1. Exposed Conduit: ERMC.
2. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.

C. Indoors:
1. Exposed and Subject to Physical Damage: EMT. Raceway locations include the following:

a. Loading docks.

b. Corridors used for traffic of mechanized carts, forklifts, and pallet-handling units.

c. Mechanical rooms.

d. Gymnasiums.
2. Exposed, Not Subject to Physical Damage: EMT.
3. Damp or Wet Locations: EMT.
4. Connection to Vibrating Equipment (Including Transformers and Hydraulic, Pneumatic, Electric Solenoid, or Motor-Driven Equipment): LFMC.

D. Stub-ups to Above Recessed Ceilings: Provide EMT, IMC, or ERMC for raceways.

E. Raceway Fittings: Select fittings in accordance with NEMA FB 2.10 guidelines.
1. ERMC and IMC: Provide threaded type fittings unless otherwise indicated.

3.02 SELECTION OF BOXES AND ENCLOSURES

A. Unless more stringent requirements are specified in Contract Documents or manufacturers' written instructions, comply with NFPA 70 for selection of boxes and enclosures. Consult Architect for resolution of conflicting requirements.

B. Degree of Protection:
   1. Outdoors:
      a. Type 3R unless otherwise indicated.
      b. Locations Exposed to Hosedown: Type 6P.
      c. Locations Subject to Potential Flooding: Type 6P.
      d. Locations Aboveground Where Mechanism Must Operate When Ice Covered: Type 3S.
   2. Indoors:
      a. Type 1 unless otherwise indicated.
      b. Damp or Dusty Locations: Type 12.
      c. Surface Mounted in Kitchens and Other Locations Exposed to Oil or Coolants: Type 12.
      d. Locations Exposed to Hosedown: Type 6P.

C. Exposed Boxes Installed Less Than 6.5 ft. (2 m) Above Floor:
   1. Boxes with knockouts or unprotected openings are prohibited.
   2. Provide exposed cover. Flat covers with angled mounting slots or knockouts are prohibited.

3.03 INSTALLATION OF RACEWAYS

A. Installation Standards:
   1. Unless more stringent requirements are specified in Contract Documents or manufacturers' written instructions, comply with NFPA 70 for installation of raceways. Consult Architect for resolution of conflicting requirements.
   2. Comply with NFPA 70 limitations for types of raceways allowed in specific occupancies and number of floors.
   3. Comply with NECA NEIS 101 for installation of steel raceways.
   4. Install raceways square to the enclosure and terminate at enclosures without hubs with locknuts on both sides of enclosure wall. Install locknuts hand tight, plus one-quarter turn more.
   5. Raceway Terminations at Locations Subject to Moisture or Vibration:
      a. Provide insulating bushings to protect conductors, including conductors smaller than No. 4 AWG. Install insulated throat metal grounding bushings on service conduits].

B. General Requirements for Installation of Raceways:
   1. Complete raceway installation before starting conductor installation.

2. Install no more than equivalent of three 90-degree bends in conduit run except for control wiring conduits, for which no more than equivalent of three 90-degree fewer bends are permitted. Support within 12 inch (300 mm) of changes in direction.
3. Make bends in raceway using large-radius preformed ells except for parallel bends. Field bending must be in accordance with NFPA 70 minimum radii requirements. Provide only equipment specifically designed for material and size involved.
4. Conceal conduit within finished walls, ceilings, and floors unless otherwise indicated. Install conduits parallel or perpendicular to building lines.
5. Support conduit within 12 inch (300 mm) of enclosures to which attached.
6. Install raceway sealing fittings at accessible locations in accordance with NFPA 70 and fill them with listed sealing compound. For concealed raceways, install fitting in flush steel box with blank cover plate having finish similar to that of adjacent plates or surfaces. Install raceway sealing fittings in accordance with NFPA 70.
7. Install devices to seal raceway interiors at accessible locations. Locate seals so no fittings or boxes are between the seal and the following changes of environments. Seal interior of raceways at the following points:

    a. Where conduits pass from warm to cold locations, such as boundaries of refrigerated spaces.

    b. Where an underground service raceway enters a building or structure.

    c. Conduit extending from interior to exterior of building.

    d. Conduit extending into pressurized duct and equipment.

    e. Conduit extending into pressurized zones that are automatically controlled to maintain different pressure set points.

    f. Where otherwise required by NFPA 70.
8. Do not install raceways or electrical items on "explosion-relief" walls or rotating equipment.
9. Do not install conduits within 2 inch (50 mm) of the bottom side of a metal deck roof.
10. Keep raceways at least 6 inch (150 mm) away from parallel runs of flues and steam or hot-water pipes. Install horizontal raceway runs above water and steam piping.
11. Cut conduit perpendicular to the length. For conduits 2 inch (53 mm) trade size and larger, use roll cutter or a guide to make cut straight and perpendicular to the length. Ream inside of conduit to remove burrs.
12. Install pull wires in empty raceways. Provide polypropylene or monofilament plastic line with not less than 200 lb (90 kg) tensile strength. Leave at least 12 inch (300 mm) of slack at both ends of pull wire. Cap underground raceways designated as spare above grade alongside raceways in use.

C. Requirements for Installation of Specific Raceway Types:
   1. Types EMT-S, ERMC-S, and FMC-S:

      a. Do not install aluminum raceways or fittings in contact with concrete or earth.
   2. Types FMC, LFMC, and LFNC:

      a. Comply with NEMA RV 3. Provide a maximum of 36 inch (915 mm) of flexible conduit for equipment subject to vibration, noise transmission, or movement; and for transformers and motors.

D. Raceway Fittings: Install fittings in accordance with NEMA FB 2.10 guidelines.
   1. EMT: Provide compression, cast-metal fittings. Comply with NEMA FB 2.10.
   2. Flexible Conduit: Provide only fittings listed for use with flexible conduit type. Comply with NEMA FB 2.20.

E. Expansion-Joint Fittings:
   1. Install type and quantity of fittings that accommodate temperature change listed for the following locations:

      a. Outdoor Locations Not Exposed to Direct Sunlight: 125 deg F (70 deg C) temperature change.

      b. Outdoor Locations Exposed to Direct Sunlight: 155 deg F (86 deg C) temperature change.

      c. Indoor Spaces Connected with Outdoors without Physical Separation: 125 deg F (70 deg C) temperature change.

      d. Attics: 135 deg F (75 deg C) temperature change.
   2. Install fitting(s) that provide expansion and contraction for at least 0.00041 inch per foot of length of straight run per deg F (0.06 mm per meter of length of straight run per deg C) of temperature change for PVC conduits. Install fitting(s) that provide expansion and contraction for at least 0.000078 inch per foot of length of straight run per deg F (0.0115 mm per meter of length of straight run per deg C) of temperature change for metal conduits.
   3. Install expansion fittings at locations where conduits cross building or structure expansion joints.
   4. Install expansion-joint fitting with position, mounting, and piston setting selected in accordance with manufacturer's written instructions for conditions at specific location at time of installation. Install conduit supports to allow for expansion movement.

3.04 INSTALLATION OF SURFACE RACEWAYS

A. Install surface raceways only where indicated on Drawings.

B. Install surface raceway with a minimum 2 inch (50 mm) radius control at bend points.

C. Secure surface raceway with screws or other anchor-type devices at intervals not exceeding 48 inch (1200) mm) and with no less than two supports per straight raceway section. Support surface raceway in accordance with manufacturer's written instructions. Tape and glue are unacceptable support methods.

3.05 INSTALLATION OF BOXES AND ENCLOSURES

A. Provide boxes in wiring and raceway systems wherever required for pulling of wires, making connections, and mounting of devices or fixtures.

B. Mount boxes at heights indicated on Drawings. If mounting heights of boxes are not individually indicated, give priority to ADA requirements. Install boxes with height measured to center of box unless otherwise indicated.

C. Locate boxes so that cover or plate will not span different building finishes.

D. Support boxes in recessed ceilings independent of ceiling tiles and ceiling grid.

E. Support boxes of three gangs or more from more than one side by spanning two framing members or mounting on brackets specifically designed for purpose.

F. Fasten junction and pull boxes to, or support from, building structure. Do not support boxes by conduits.

G. Set metal floor boxes level and flush with finished floor surface.

H. Set nonmetallic floor boxes level. Trim after installation to fit flush with finished floor surface.

I. Do not rely on locknuts to penetrate nonconductive coatings on enclosures. Remove coatings in the locknut area prior to assembling conduit to enclosure to ensure a continuous ground path.

J. Boxes and Enclosures in Areas or Walls with Acoustical Requirements:
   1. Seal openings and knockouts in back and sides of boxes and enclosures with acoustically rated putty.
   2. Provide gaskets for wall plates and covers.

3.06 PROTECTION

A. Protect coatings, finishes, and cabinets from damage and deterioration.
   1. Repair damage to galvanized finishes with zinc-rich paint recommended by manufacturer.
   2. Repair damage to PVC coatings or paint finishes with matching touchup coating recommended by manufacturer.

3.07 CLEANING

A. Boxes: Remove construction dust and debris from device boxes, outlet boxes, and floor-mounted enclosures before installing wall plates, covers, and hoods.

END OF SECTION 26 05 33

SECTION IX: LIST OF DRAWINGS - EXHIBIT C

LIST OF DRAWINGS

By this reference, the following drawings are incorporated in this Invitation For Bids.

GENERAL

G-001 COVER SHEET
G-002 GENERAL NOTES
G-003 GENERAL NOTES

ARCHITECTURAL

A-121 BUS WASH – BRAKE DYNO BUILDING AND CANOPY FLOOR PLAN
A-122 BUS WASH ENLARGED PLAN
A-131 BUS WASH – BRAKE DYNO BUILDING ROOF DEMOLITION PLAN
A-231 BUS WASH – BRAKE DYNO BUILDING ROOF CONSTRUCTION PLAN
A-301 BUS WASH – BRAKE DYNO BUILDING DEMOLITION AND NEW ROOF SECTIONS
A-501 DETAILS

STRUCTURAL

S-001 GENERAL NOTES
S-221 ROOF FRAMING PLAN
S-300 JOIST ELEVATION AND SECTION
S-500 SECTIONS AND DETAILS
S-501 SECTIONS AND DETAILS
S-502 SECTIONS AND DETAILS
S-503 PLAN, SECTIONS AND DETAILS
S-600 TYPICAL PROTECT-IN-PLACE EQUIPMENT PHOTOS
S-601 TYPICAL (E) JOIST PHOTOS
S-602 WALK THRU MIDDLE BAY PHOTOS
S-603 WALK THRU PHOTOS
S-604 NORTH-SOUTH BUS WASH WALLS & SPACES OPPOSITE PHOTOS
S-605 EXTERIOR CANOPY PHOTOS

MECHANICAL

M-001 NOTES, LEGEND AND ABBREVIATIONS
M-221 BUS WASH – BRAKE DYNO BUILDING AND CANOPY FLOOR PLAN
M-231 BUS WASH – BRAKE DYNO BUILDING ROOF PLAN

ELECTRICAL

E-001 GENERAL NOTES ABBREVIATIONS, SYMBOLS AND SHEET INDEX
E-002 PANEL SCHEDULES, LIGHT FIXTURE SCHEDULE & WIRING DIAGRAM
E-101 BUS WASH – BRAKE DYNO BUILDING – ROOF – POWER PLAN
E-102 BUS WASH – BRAKE DYNO BUILDING LIGHTING PLAN
E-103 BUS WASH – BRAKE DYNO BUILDING PHOTO DETAILS
E-104 ELECTRICAL DETAILS
E-105 PHOTOMETRICS
E-106 TITLE 24 COMPLIANCE FORMS

ORANGE COUNTY TRANSPORTATION AUTHORITY

OCTA

BUILDING REPAIRS AT SANTA ANA BUS BASE

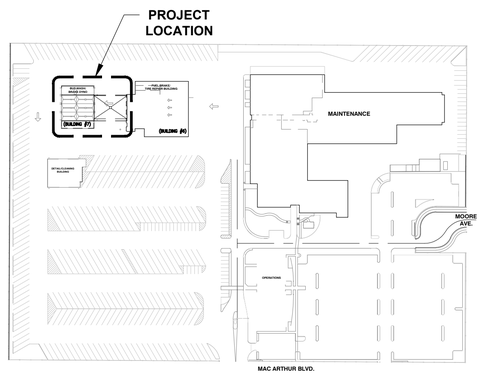
4301 W. MACARTHUR BLVD., SANTA ANA CA 92704

CONTRACT NO. C-4-2093

SYMBOLS

- 1 — KeyNote Symbol
- 101 — Door Reference
- TA-10 — Toilet Accessories Symbol
- ROOM NAME 101 — Room Name / Room Number
- D — Window Reference
- 1 — Revision / Delta Number
- PE-1 — Finish Symbol / Exterior Finish Material Number
- P-3 — Finish Symbol / Interior Finish Material Number
- X / A-5## — Section Number / Sheet Number / Section Cut Line
- # / A-5## — Detail Number / Sheet Number
- 4M / 4 MS2 — Wall Type Symbol / Wall Type Number
- Grid Letter
- Grid Number
- Grid Line
- 1 / 2 / 3 / 4 / # — Interior Elevation Sheet Number
- Elevation Number
- X / A-2## — Exterior Elevation Number / Sheet Number
- T.O.P. — Elevation Description / Datum Symbol

FACILITY SITE



FACILITY MAP

SCOPE OF WORK

THE SCOPE OF WORK LISTED BELOW IS INTENDED TO AS GENERAL OVERVIEW, AND IS NOT INTENDED TO BE A COMPREHENSIVE LIST. REFER TO THE CONTRACT DRAWINGS AND PROJECT SPECIFICATIONS FOR DEFINTION OF THE COMPLETE SCOPE OF WORK.

1. PRIOR TO TEMPORARILY CLOSING THE BUS WASH BAYS, THE CONTRACTOR SHALL ARRANGE FOR TEMPORARY MOBILE BUS WASHING SERVICE ON SITE. REFER TO THE GENERAL NOTES FOR FURTHER DETAIL.
2. PROVIDE TEMPORARY BRACING FOR CMU WALLS PER STRUCTURAL DRAWINGS. SEE DETAIL 1/ S-300.
3. ABOVE THE BUS WASH BAYS, PERFORM CONTROLLED DEMOLITION & DECONSTRUCTION OF THE EXISTING ROOF JOISTS AND ROOF DECK, CONTRACTOR SHALL REINFORCE DAMAGED EXISTING JOIST PANEL POINT CONNECTIONS AS REQUIRED FOR HOISTING PRIOR TO REMOVAL. AFTER DECONSTRUCTION IS COMPLETED, THE CONTRACTOR SHALL REMOVE THE EXISTING OCTA-OWNED TEMPORARY ROOF SHORING. THE CONTRACTOR SHALL DELIVER/RETURN THIS SHORING TO A SALVAGE/RECYLING YARD TO BE DETERMINED BY MUTUAL AGREEMENT BETWEEN OCTA AND THE CONTRACTOR. ALL SALVAGE AND/OR RECYCLING COST CREDITS SHALL BE RETURNED TO OCTA.
4. INSTALL REPLACEMENT ROOF JOISTS AND ROOF DECK. HOT-DIP GALVANIZE ALL JOISTS AND DECK IN THE SHOP.
5. ALONG LINES B & C, THE CONTRACTOR SHALL FIELD VERIFY THE (E) DECK DETAILS ACROSS THE (E) CMU WALL AND PROPOSE THE NEW TO (E) DECK LAP LOCATION AND DETAILS FOR ON SITE CONFIRMATION WITH THE SEOR. REFER TO DETAILS 3/ S-500, 9/ S-500 AND 3/ S-501. INFILL WITH NON-SHRINK GROUT (SIKAGROUT 212 NONSHRINK, OR EQUAL) THE JOIST SEAT WALL POCKETS (DETAILS 3 & 9/ S-500) TO EMULATE THE EXISTING GROUT CONDITIONS.
6. MAKE SSPC PRESCRIBED SURFACE PREPARATION FOR THE HIGH-PERFORMANCE PAINT SYSTEM PRESCRIBED BY SPEC 09 96 00 . INSIDE THE BUS WASH BAY THIS INCLUDES THE UNDERSIDE OF NEW STEEL DECK AND ALL EXPOSED SURFACES OF STEEL MEMBERS (BOTH NEW AND EXISTING STEEL MEMBERS), AND THE EXPOSED CMU WALL SURFACES. AT THE EXTERIOR CANOPY ROOF THIS INCLUDES ALL STEEL MEMBERS AND THE UNDERSIDE OF STEEL DECK.
7. UNLESS NOTED OTHERWISE, PROTECT-IN-PLACE ALL BUS WASH BAYS EQUIPMENT, FIRE PROTECTION LINES, AND OTHER EQUIPMENT WITHIN THE BUS WASH BAYS. SEE PLAN 5/ S-503. PROTECT-IN-PLACE THE (E) TRENCH DRAINS (PHOTO 5/ S-601) CONTRACTOR SHALL SUBMIT PROPOSED PROCEDURES FOR ENGINEERING REVIEW AND ACCEPTANCE. ROOF SUSPENDED M.E.P. ITEMS AND FIRE PROTECTION LINES SHALL BE TEMPORARILY SHORED PRIOR TO ROOF DECK/JOIST DECONSTRUCTION. RE-SUPPORT LIKE-IN-KIND AFTER REPLACEMENT ROOF STRUCTURE IS COMPLETED. SEE PLAN 5/ S-503.
8. INSTALL NEW SBS MODIFIED BITUMINOUS MEMBRANE ROOFING WITH NEW ROOF COVER BOARD OVER NEW RIGID BOARD MECHANICALLY ATTACHED TO METAL DECK. SEE ARCHITECTURAL DRAWINGS.
9. ELECTRICAL CONTRACTOR TO PERFORM A BUILDING POWER SHUTDOWN AND PERFORM LOCK-OUT TAG-OUT ON ALL ELECTRICAL DATA EQUIPMENT. UPON COMPLETION OF STRUCTURAL RESTORATION, THE CONTRACTOR SHALL OPEN ALL EQUIPMENT, VACUUM, DUST AND CLEAR ANY FOREIGN DEBRIS, TEST ALL CIRCUIT BREAKERS, AND RESTORE POWER TO NORMAL CONDITIONS. ALL OUTAGE SHALL BE COORDINATED WITH THE OCTA PROJECT MANAGER.
10. ELECTRICAL CONTRACTOR SHALL DISCONNECT AND REMOVE EXISTING JOIST MOUNTED LIGHT FIXTURES IN THE BUS WASH AREA COMPLETE TO INCLUDE CONDUIT AND WIRING. REINSTALL NEW LED LIGHTS PER THE CONTRACT DOCUMENTS. REINSTALL CONDUIT UTILIZING THE JOIST MEMBERS. ALL CONDUIT SHALL BE SUPPORTED AT 10'-0" O.C. MAXIMUM. REWIRE AND TERMINATE LIGHT FIXTURES TO MATCH EXISTING OPERATIONAL CONDITIONS.
11. AIR DRYER SHROUDS (HOUSING) SHALL BE REPAIRED/REPLACED AND BE APPLIED WITH HIGH-PERFORMANCE PAINT. REFER TO ELECTRICAL SHEETS E-101 AND E-103.
12. WITHIN THE BUS WASH BAYS, EXISTING ELECTRICAL CONDUITS SUPPORTED FROM EXISTING STRUCTURAL JOISTS SHALL BE DISCONNECTED, SHORED, PROTECTED AND SECURED IN PLACE. CONTRACTOR SHALL PROVIDE MEANS AND METHODS FOR ENGINEERING REVIEW AND APPROVAL. SEE PLAN 5/ S-503.
13. REMOVE AND REPLACE THE BUS WASH PNEUMATICS SYSTEM, INCLUDING THE METALLIC CONTROL BOXES WHICH ARE IN VARIOUS STATES OF CORROSION.
14. AT THE BUS WASH BAYS INSTALL NEW ROOF VENTILATION FANS AND NEW LED LIGHTS AS DEFINED BY THE CONTRACT MECHANICAL AND ELECTRICAL DOCUMENTS.
15. THE EXTERIOR CANOPY ROOF STRUCTURE EAST OF THE BUS WASH ENTRANCE IS ALSO PART OF THE SCOPE OF WORK, WITH SURFACE PREPARATION AS REQUIRED FOR A HIGH-PERFORMANCE PAINT SYSTEM TO THE JOISTS, BEAMS, AND UNDERSIDE OF STEEL ROOF DECK. PHASE THE CANOPY ROOF WORK TO MAINTAIN OPERATIONS FOR BUILDING 6 (FUEL / BRAKE / TIRE REPAIR) EAST OF THE CANOPY ROOF.
16. CONTRACTOR SHALL PROVIDE PROTECTION TO THE EXISTING LIGHT FIXTURES ON THE EXTERIOR (OPEN) CANOPY ROOF STRUCTURE. CONTRACTOR MEANS AND METHODS FOR ENGINEEERING REVIEW AND ACCEPTANCE. CLEAN FIXTURE/LENS, AND RESTORE CIRCUITS TO MATCH OPERATIONAL CONDITIONS.

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LICENSED ARCHITECT — JOHN JOSEPH SILVERI — 15573 — REN. 7-31-25 — STATE OF CALIFORNIA

IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
-	2/13/24	PS&E	

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA
COVER SHEET

CONTRACTOR NO.	C-4-2093
DESIGN BY:	SU
DRAWN BY:	CN
CHECKED BY:	JR
DATE	02-09-2024
SCALE	AS NOTED
SHEET	G-001

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

OCTA

IDS GROUP - FILE LOCATION: \\IDS-FS1\SHARED\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\01 ARCH\20X5002_G001_COVER SHEET PLOT DATE: 2/7/2024 2:03:55 PM USER: CALI.NGUYEN

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\01 ARCH\20X5002_G-002-GENERAL NOTES PLOT DATE: 1/30/2024 1:38:36 PM USER: DION.VAZQUEZ

GENERAL NOTES

1. GENERAL CONSTRUCTION NOTES

1. DRAWINGS AND SPECIFICATIONS ARE PROPERTY OF IDS GROUP, INC. USE BY OWNER, CONTRACTOR, AND ALL OTHER ENTITIES ARE LIMITED FOR SINGLE USE AS APPLICABLE TO THIS SPECIFIC PROJECT SOLELY. DUPLICATION BY ANY MEANS FOR USE ON ANY OTHER PROJECT OR SITE IS PROHIBITED UNDER COPYRIGHT LAWS WITHOUT THE EXPRESS WRITTEN CONSENT OF IDS GROUP.
2. ALL REQUIRED NOTIFICATIONS AND/OR WORK INFORMATION BY THE CONTRACTOR TO THE OWNER AND/OR ARCHITECT ARE TO BE IN WRITING WITH ISSUE DATE.
3. NO CHANGES ARE TO BE MADE TO THE CONTRACT DOCUMENTS WITHOUT THE WRITTEN CONSENT OF THE ARCHITECT/ ENGINEER OF RECORD WHOSE SIGNATURE APPEARS HEREON.
4. DIMENSIONS AS INDICATED ON THE DRAWINGS ARE THE DIMENSIONS TO BE USED FOR CONSTRUCTION. DO NOT SCALE THE DRAWINGS.
5. CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES PROCEDURES, AND FOR COORDINATING ALL PORTIONS OF THE WORK UNDER THE CONTRACT.
6. CONTRACTOR IS SOLELY RESPONSIBLE FOR ALL ASPECTS OF JOBSITE SAFETY. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE STATE CONSTRUCTION SAFETY ORDERS ENFORCED BY THE STATE OF CALIFORNIA, DIVISION OF INDUSTRIAL SAFETY.
7. CONTRACTOR IS RESPONSIBLE FOR ALL PHASING OF THE WORK, CREATING TEMPORARY BARRICADES, AND SEPARATE PROTECTED ACCESS POINTS FOR SAFE PASSAGE BY CONSTRUCTION TEAM, PUBLIC, AND/ OR SPECIFIC TENANTS.
8. CONTRACTOR TO PROVIDE USE OF TEMPORARY UTILITIES REQUIRED BY THE OWNER TO BE OPERATIONAL DURING CONSTRUCTION. CONTRACTOR SHALL COORDINATE SCHEDULING OF SHUT OFF SERVICES WITH LOCAL UTILITY COMPANIES AND FACILITY MANAGEMENT/ ENGINEERING SERVICES.
9. NO FRAMING OF ANY TYPE IS TO BE CONCEALED PRIOR TO INSPECTION BY GOVERNING AGENCIES.
10. CONTRACTOR TO COMPLY WITH CODES, ORDINANCES, RULES, AND REGULATIONS OF PUBLIC AUTHORITIES GOVERNING THE WORK.
11. CONTRACTOR SHALL PROVIDE STRICT DISCIPLINE AND GOOD ORDER AMONG THE CONTRACTOR'S EMPLOYEES AND OTHER PERSONS CARRYING OUT THE WORK. CONTRACTOR SHALL NOT PERMIT EMPLOYMENT OF UNFIT PERSONS OR PERSONS NOT PROPERLY SKILLED IN TASKS ASSIGNED TO THEM.
12. CONTRACTOR SHALL KEEP PROJECT SITE AND SURROUNDING AREAS FREE FROM ACCUMULATION OF WASTE MATERIAL AND RUBBISH CAUSES BY OPERATIONS UNDER THE CONTRACT.
13. CONTRACTOR TO DEVELOP AND ENFORCE COVID-19 PROTOCOLS FOR ALL PERSONAL ENTERING THE JOB SITE OR ASSOCIATED AREAS. GUIDELINES SHALL BE MADE AVAILABLE TO OWNER AND ARCHITECT/ ENGINEER OF RECORD. STANDARDS DEVELOPED BY STATE AND LOCAL JURISDICTIONS SHALL BE BENCHMARK OF MINIMUM STANDARDS.
14. PERSONS WHO SHOW SIGNS OF RESPIRATORY SYMPTOMS ASSOCIATED WITH COVID-19 OR OTHER HIGHLY CONTAGIOUS DISEASES SHALL BE SENT HOME OR TO HOSPITAL IMMEDIATELY. CONTRACTOR TO NOTIFY THE OWNER WITHIN 48 HOURS.
15. CONTRACTOR SHALL OBTAIN ALL CITY BUSINESS LICENSES AND INPECTIONS REQUIRED TO PERFORM THE WORK.
16. CONTRACTOR TO REVIEW DOCUMENTS, VERIFY DIMENSIONS, RECORD EXISTING FIELD CONDITIONS, AND CONFIRM THAT THE WORK IS CONSTRUCTIBLE AS SHOWN. REPORT IN WRITING ANY CONFLICTS OR OMISSIONS TO THE ARCHITECT FOR CLARIFICATION PRIOR TO PERFORMING ANY WORK IN QUESTION.
17. CONTRACTOR SHALL CONFIRM AND CONDUCT ANY OWNER OR LOCAL JURISDICTIONAL REQUIREMENTS REGULATING CONSTRUCTION OPERATIONS. THIS CAN INCLUDE DEFINED WORKDAYS/ HOURS, DELIVERY HOURS, NOISE LEVELS, STAGING AREA, VISUAL SCREENING REQUIREMENTS, AND/OR USE OF PLACEMENT OF TEMPORARY BARRICADES.
18. THE CONTRACTOR SHALL FURNSISH ALL LABOR, MATERIAL, TOOLS, AND EQUIPMENT TO PROVIDE A COMPLETE AND FINISHED PRODUCT. ALL MATERIALS SHALL BE NEW, UNLESS NOTED OTHERWISE.
19. ALL WORK PERTAINING TO THIS PROJECT SHALL BE DONE IN ACCORDANCE WITH THESE DRAWINGS, THE SPECIFICATIONS, THE CONCTRACT DOCUMENTS, AND THE LOCAL AGENCY OF JURISDICTION BUILDING CODE REQUIREMENTS.
20. THE CONTRACTOR SHALL INFORM THE PROJECT ENGINEER 72 HOURS BEFORE STARTING CONSTRUCTION WORK.
21. THE CONTRACTOR SHALL PROVIDE ALL BARICADES, WARNING SIGNS, AND OTHER PROTECTIVE DEVICES, AND TAKE ALL NECESSARY PRECAUTIONARY MEASURES TO PROTECT ALL PERSONNEL, PROPERTY AND THE WORK SITE. THE CONTRACTOR SHALL POST ADVANCE CONSTRUCTION WARNING SIGNS.
22. DUST CONTROL SHALL BE REQUIRED DURING CONSTRUCTION. DUST SHALL BE CONTROLLED BY WATERING.
23. DEMOLITION NECESSARY FOR COMPLETION OF CONSTRUCTION SHALL BE A PART OF THIS PROJECT. MATERIAL REMOVED DURING CONSTRUCTION SHALL BE LEGALLY DISPOSED OFF SITE.
24. ALL DRAINAGE FROM NEW CONSTRUCTION SHALL MERGE WITH EXISTING DRAINAGE COURSES AND FLOW PATTERNS ON THE SITE.
25. THE CONTRACTOR IS REQUIRED AND RESPONSIBLE TO TAKE ALL PRECAUTIONARY MEASURES TO LOCATE ALL UTILITY LINES AND STRUCTURES ABOVE AND BELOW GROUND, WHETHER SHOWN OR NOT SHOWN ON THESE DRAWINGS. THE CONTRACTOR IS RESPONSIBLE TO PROTECT ALL EXISTING UTILITIES FROM DAMAGE. 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 WORK.
26. ALL WORK SHALL BE COMPLETED BETWEEN THE HOURS OF 7:00 A.M. AND 4:00 P.M.
27. THE CONTRACTOR SHALL REPORT TO THE PROJECT ENGINEER 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 THEIR BID. CONTRACTOR SHALL INCLUDE DEMOLITION, ALTERATION, RELOCATION, REHABILITATION, ANDCONSTRUCTION OF WORK SHOWN ON THE DRAWINGS AND SPECIFICATIONS. IN CASE OF DISCREPANCIES, CONTRACTOR SHALL OBTAIN CLARIFICATION FROM THE PROJECT ENGINEER. SUBMITTAL OF BID INDICATES CONTRACTOR IS AWARE OF SITE AND WORK CONDITIONS AND UNDERSTANDS THE WORK REQUIRED BY THE CONTRACT.
28. ON SITE VERIFICATION OF ALL DIMENSIONS AND CONDITIONS SHALL BE RESPONSIBILITY OF THE CONTRACTOR. NOTIFY PROJECT ENGINEER OF ANY DISCREPANCY BEFORE STARTING WORK.
29. THE PROJECT ENGINEER'S REVIEW OF SHOP DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR DEVIATION FROM THE DRAWINGS AND SPECIFICATIONS, UNLESS HE HAS IN WRITING INFORMED THE PROJECT ENGINEER OF SUCH DEVIATIONS AT THE TIME OF SUBMISSION, AND HAS RECEIVED CLARIFICATIONS FROM THE PROJECT ENGINEER; NOR SHALL IT RELIEVE HIM FROM RESPONSIBILITY FOR ERRORS IN THE SHOP DRAWINGS.
30. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY POWER, WATER, AND TOILET FACILITIES FOR THE USE OF HIS WORKERS, AS REQUIRED TO COMPLETE THE PROJECT.
31. APPROVED DRAWINGS AND CONSTRUCTION DOCUMENTS SHALL BE KEPT IN A PLAN BOX AND SHALL NOT BE USED BY THE CONTRACTOR OR ITS WORKERS. THE CONTRACTOR SHALL ALSO MAINTAIN ONE SET OF COMPLETE DRAWINGS WITH REVISIONS, ADDENDA, AND APPROVED CHANGE ORDERS AT THE WORK SITE.
32. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE WORK WHILE THE JOB IS IN PROGRESS AND UNTIL COMPLETED.
33. THE GENERAL 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.
34. CONTRACTOR SHALL COMPLY WITH ALL LOCAL CODE REGULATIONS AND STATE DEPARTMENT OF INDUSTRIAL RELATIONS, DIVISION OF INDUSTRIAL SAFETY (O.S.H.A.) REQUIREMENTS.
35. CONSTRUCTION DOCUMENTS INCLUDE DRAWINGS AND SPECIFICATIONS. ONE DOES NOT OVERRULE THE OTHER. IF DISCREPANCIES ARE FOUND, CONTRACTOR SHALL NOTIFY THE ARCHITECT OF RECORD IN WRITING. ARCHITECT IS SOLELY RESPONSIBLE FOR COORDINATING WITH ENGINEERS TO RESOLVE THE DISCREPANCIES AND WILL ISSUE WRITTEN RESPONSE. CONTRACTOR IS RESPONSIBLE TO KEEP ON SITE AT LEAST ONE CURRENT HARD COPY SET OF EACH DOCUMENT.
36. FOR SUBSTITUTIONS PROCEDURES, REFER TO SPECIFICATIONS.
37. SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND SIMILAR SUBMITTALS ARE NOT CONTRACT DOCUMENTS. THEIR PURPOSE IS TO DEMONSTRATE HOW THE CONTRACTOR PROPOSES TO CONFORM TO THE DESIGN INTENT EXPRESSED IN THE CONSTRUCTION DOCUMENTS. REVIEW BY THE ARCHITECT/ ENGINEER OF RECORD IS SUBJECT TO LIMITATIONS.
38. ARCHITECT'S REVIEW AND APPROVAL OF SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND SUBMITTALS DOES NOT RELIEVE CONTRACTOR FROM THEIR RESPONSIBILITY OF MEETING THE REQUIREMENTS CONTAINED WITHIN THE CONTRACT DOCUMENTS, MANUFACTURER'S INSTRUCTIONS, AND/OR INDUSTRY-SPECIFIC BEST PRACTICES.
39. CONTRACTOR SHALL NOT COMMENCE, NOR PERFORM, ANY PORTION OF THE WORK THAT REQUIRES SUBMITTAL AND REVIEW BY ARCHITECT OF SHOP DRAWINGS, PRODUCT DATA, SAMPLES, AND SIMILAR SUBMITTALS UNTIL RESPECTIVE WRITTEN SUBMITTAL HAS BEEN APPROVED BY THE ARCHITECT AND SUBMITTED BACK TO THE GENERAL CONTRACTOR.
40. ARCHITECT/ ENGINEER REVIEW OF SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES ARE FOR THE LIMITED PURPOSE OF CHECKING FOR CONFORMANCE WITH THE DESIGN INTENT EXPRESSED IN THE CONSTRUCTION DOCUMENTS. THE REVIEW OF SUCH SUBMITTALS IS NOT CONDUCTED FOR THE PURPOSE OF DETERMINING ACCURACY OR COMPLETENESS OF THE DRAWINGS OR DETAILS. A/E REVIEW DOES NOT INCLUDE CONFIRMING DIMENSIONS, QUANTITIES, OR SUBSTANTIATING INSTALLATION INSTRUCTIONS OR PERFORMANCE OF EQUIPMENT OR SYSTEM(S). ALL AFOREMENTIONED ITEMS REMAIN THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE WITH THE DRAWING SET AND TO BRING ANY INCONSISTENCIES TO THE ATTENTION OF THE ARCHITECT.
41. ARCHITECT HAS THE AUTHORITY TO REJECT WORK THAT DOES NOT CONFORM TO THE CONTRACT DOCUMENTS AND HAS THE AUTHORITY TO REQUIRE INSPECTION OR TESTING OF THE WORK WHETHER OR NOT THE WORK IS FABRICATED, INSTALLED, OR COMPLETED.
42. IT IS RECOGNIZED THAT THE A/E PROFESSIONAL(S) DO NOT HAVE THE AUTHORITY TO STOP WORK NOR CONTINUE OPERATIONS AT A JOB SITE. THIS DIRECTIVE IS ONLY AVAILABLE TO OWNER, CONTRACTOR, AND BUILDING INSPECTOR. IF A/E PROFESSIONAL(S) BECOMES AWARE OF NON-CONFORMING WORK OR UNSAFE CONDITIONS, THEY WILL NOTIFY CONTRACTOR AND OWNER AS QUICKLY AS DEEMED NECESSSARY.
43. CONTRACTOR SHALL MAKE AVAILABLE AND MAINTAIN IN GOOD ORDER, AT THE PROJECT SITE, THE CONTRACT DOCUMENTS, INCLUDING CHANGE ORDERS, CONSTRUCTION CHANGE DIRECTIVES, AND OTHER MODIFICATIONS AND MARKED CURRENT TO INDICATE PROGRESS AND PROVIDE A "AS-BUILT" RECORD OF COMPLETED WORK.
44. CONTRACTOR TO COORDINATE WITH OWNER ON SCHEDULING TIME AND LOCATIONS FOR DELIVERIES, BUILDING ACCESS, USE OF BUILDING SERVICES, ALL ASSOCIATED FACILITIES, AND USE OF ELEVATORS, WHERE THEY OCCUR. CONTRACTOR SHALL COORDINATE WORK WITH OTHER CONTRACTS. MINIMIZE DISTURBANCE OF BUILDING FUNCTIONS AND OCCUPANTS, INCLUDING TRASH REMOVAL ACCESS.
45. OWNER SHALL PROVIDE WORK NOTED "BY OTHERS" OR "NIC" UNDER A SEPARATE CONTRACT. CONTRACTOR TO INCLUDE "BY OTHER" AND "NIC" INTO SCHEDULE REQUIREMENTS FOR CONSTRUCTION PROGRESS SCHEDULE AND COORDINATE TO ASSURE ORDERLY SEQUENCE OF INSTALLATION.
46. THE CONTRACTOR IS RESPONSIBLE FOR CUTTING, FITTING, OR PATCHING REQUIRED TO COMPLETE THE WORK AND/OR TO MAKE ITS PARTS FIT TOGETHER PROPERLY. ALL AREAS REQUIRING CUTTING, FITTING, OR PATCHING SHALL BE RESTORED TO THE ORIGINAL CONDITION OR MADE TO MATCH NEW.

2. EXISTING CONDITIONS NOTES

1. ALL WORK SHALL CONFORM TO CONTRACT DOCUMENTS. NO CHANGES TO THE CONTRACT DOCUMENTS SHALL BE MADE WITHOUT WRITTEN APPROVAL OF THE ARCHITECT. WHERE MORE INFORMATION IS NEEDED TO DO THE WORK, OR WHEN AN INTERPRETATION OF THE CONTRACT DOCUMENTS REQUIRES CLARIFICATION, THE CONTRACTOR SHALL, BEFORE PROCEEDING WITH WORK, REFER THE MATTER, IN WRITING TO THE ARCHITECT THROUGH AN R.F.I. THE ARCHITECT WILL FURNISH THE INFORMATION OR INTERPRETATION IN THE FORM OF SUPPLEMENTAL INFORMATION, OTHER WRITTEN FORM, OR BY DRAWING.
2. WHERE ONLY PART OF THE WORK IS INDICATED, SIMILAR PARTS SHALL BE CONSIDERED REPETITIONS. WHERE ANY DETAIL IS SHOWN AND THE COMPONENTS ARE DESCRIBED ELSEWHERE, SIMILAR DETAILS SHALL BE CONSTRUCTED AS DESCRIBED IN THE ORIGINAL DETAILS.
3. DRAWINGS ARE GENERIC IN NATURE. CONTRACTOR SHALL FULLY COORDINATE ALL ASPECTS OF THE WORK TO BE PERFORMED. DETAILS ARE NOT INTENDED TO SHOW METHOD AND MANNER OF ACCOMPLISHING THE WORK.
4. ALL DIMENSIONS ORIGINATING AT, CONNECTED TO, OR CONTINUING THROUGH EXISTING CONDITIONS, INCLUDING PREVIOUS PHASES, MUST BE COORDINATED AND FIELD VERIFIED BY THE CONTRACTOR PRIOR TO FABRICATION INSTALLATION, AND CONSTRUCTION OF BUILDING ELEMENTS OR SYSTEMS.
5. CONTRACTORS SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND ALL EXISTING CONDITIONS AT THE SITE BEFORE COMMENCING WORK AND REPORT ANY DISCREPANCIES IN WRITING TO THE ARCHITECT AND OWNER.
6. SHOULD A CONFLICT BE DISCOVERED WITHIN THE CONTRACT DOCUMENTS, THE CONTRACTOR SHALL BE DEEMED TO HAVE INCLUDED IN HIS WORK THE HIGHEST QUALITY WAY OF DOING THE WORK UNLESS HE HAS, IN WRITING, REQUESTED AND OBTAINED A DECISION FROM THE ARCHITECT AND OWNER.

3. CONTRACTOR OBLIGATIONS

1. CONTRACTOR FOR THE PROJECT SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED BUILDING PERMITS PRIOR TO COMMENCING WORK. SEE 15. PERMITS AS APPLIES.
2. CONTRACTOR IS RESPONSIBLE TO MAINTAIN AND SUPPORT SUSTAINABLE PRACTICES.
3. THE CONTRACTOR SHALL INSURE THAT ALL WORK IS DONE IN A PROFESSIONAL WORK-MAN-LIKE MANNER BY SKILLED MECHANICS AND SHALL REPLACE ANY NEW AND/OR EXISTING MATERIALS OR ITEMS INDICATED TO REMAIN DAMAGED BY ANY CAUSE DURING CONSTRUCTION.
4. THE CONTRACTOR AND/OR SUBCONTRACTOR SHALL, PRIOR TO THE SUBMISSION OF THEIR BID OR PERFORMANCE OF WORK, NOTIFY THE OWNER OF ANY WORK CALLED OUT ON THE DRAWINGS OR IN THE SPECIFICATIONS IN THEIR TRADE THAT CANNOT BE FULLY GUARANTEED OR WARRANTED FROM DEFECTIVE WORKMANSHIP OR MATERIAL DEFECTS.
5. THE CONTRACTOR SHALL NOTIFY THE ARCHITECT IF DETAILS ARE CONSIDERED UNSOUND, UNSAFE, NOT WATERPROOF, OR NOT WITHIN CUSTOMARY TRADE PRACTICE. IF WORK IS PERFORMED, IT WILL BE ASSUMED THAT THERE IS NO OBJECTIONS TO THE DETAIL. DETAILS ARE INTENDED TO SHOW END RESULT OF DESIGN, MINOR MODIFICATIONS MAY BE REQUIRED TO SUIT JOB CONDITIONS AND CURRENT TRADE PRACTICE AND SHALL BE INCLUDED AS PART OF THIS PROJECT.
6. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL FINISHES AT POINT OF CONNECTIONS FOR ALL WORK (ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL) FINISHES WILL MATCH THOSE SPECIFIED OR EXISTING IN LINE, TEXTURE AND FINISH. SPOT PAINTING IS NOT ACCEPTABLE. NEW FINISHES SHALL BE FROM CORNER TO CORNER, FLOOR TO CEILING, ETC.
7. UNLESS OTHERWISE NOTED, ALL MATERIALS SHALL BE NEW AND OF GOOD QUALITY. WHERE EXISTING MATERIALS ARE INDICATED TO BE SALVAGED, CONTRACTOR SHALL INVENTORY, CLEAN,BOX PROTECT, AND STORE ITEMS FOR REUSE ON THE PROJECT. ITEMS NOT REUSED SHALL BE RETURNED TO OWNER.
8. COORDINATION: THE GENERAL AND EACH SUB-CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION AND COORDINATION WITH OTHER SUB-CONTRACTORS TO ASSURE COMPLIANCE WITH DRAWINGS AND SPECIFICATIONS, AND THE ACCURATE LOCATION OF ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL BUILDING ELEMENTS. THEIR REQUIRED OPENINGS CLEARANCES SUPPORT SYSTEMS ARE ALL INTERCONNECTED AND COORDINATED.
9. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE WORK OF ALL TRADES AND FOR BEING AWARE OF ALL CONDITIONS THAT AFFECT THEIR WORK. NOTIFY OWNER, IN WRITING, WITHIN 3 WORKING DAYS OF AWARD OF CONTRACT, OF THE PROPOSED DELIVERY SCHEDULE, OF ANY EQUIPMENT, FINISHES OR MATERIAL, FOR WHICH THAT SCHEDULE WILL PREVENT THE INSTALLATION FROM BEING COMPLETED AT THE TIME OF THE SCHEDULED PROJECT COMPLETION.
10. COORDINATION OF WORK:
    - THE CONTRACTOR SHALL PROVIDE AND COORDINATE THE EXACT DIMENSIONS SIZES AND POSITIONS OF ALL SYSTEMS, EQUIPMENT, MOUNTING, AND ATTACHMENTS RELATING TO THE WORK.
    - THE CONTRACTOR SHALL PROVIDE AND COORDINATE ALL DIMENSIONS SIZES AND POSITIONS OF OPENINGS IN SLABS AND WALLS NECESSARY TO THE INSTALLATION OF THE WORK.
    - ALL EQUIPMENT, CONTROLS AND TERMINATIONS SHALL BE POSITIONED FOR SAFE, DIRECT AND EASY ACCESS.
11. THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS OF EXISTING SITE. THE CONTRACTOR SHALL REPORT TO THE ARCHITECT ALL CONDITIONS WHICH PREVENT THE PROPER EXECUTION OF ITS WORK. THE DRAWINGS SHALL NOT BE SCALED.
12. CONSTRUCTION SHALL COMPLY WITH APPLICABLE EDITION OF CALIFORNIA BUILDING CODE, ALL APPLICABLE LOCAL, STATE AND FEDERAL CODES, ORDINANCES, LAWS, REGULATIONS AND PROTECTIVE COVENANTS GOVERNING THE WORK. IN CASE OF CONFLICTS, THE MORE STRINGENT REQUIREMENT SHALL GOVERN.
13. GENERAL CONTRACTOR TO ARRANGE INSPECTIONS AS NECESSARY OR REQUIRED.
14. ALL CONTRACTOR'S WORK SHALL BE OF THE QUALITY TO PASS INSPECTIONS BY LOCAL AND STATE AUTHORITIES, LENDING INSTITUTIONS, THE ARCHITECT AND HIS ENGINEERS, INSPECTOR OF RECORD, AND OWNER. ANY ONE OR ALL OF THE ABOVE MENTIONED INSPECTORS MAY INSPECT TRADE(S) AT ANY TIME, AND ANY CORRECTIONS NEEDED TO MEET THE REQUIRED QUALITY OF CONSTRUCTION SHALL BE DONE IMMEDIATELY AFTER NOTIFYING THE ARCHITECT AND THE OWNER FOR APPROVAL.
15. THE CONTRACTOR/SUB CONTRACTORS SHALL INSPECT THE SITE PRIOR TO START OF CONSTRUCTION AND NOTIFY OWNER AND THE ARCHITECT OF ANY EXISTING CONDITIONS THAT MAY AFFECT THE WORK INCLUDING ELEMENTS THAT MAY BE SUBJECT TO DAMAGE DURING DEMOLITION AND RENOVATION. THE CONTRACTOR SHALL FIELD VERIFY EXISTING DIMENSIONS, PRIOR TO START OF CONSTRUCTION AND NOTIFY OWNER AND ARCHITECT OF ANY DISCREPANCIES BETWEEN THE EXISTING DIMENSIONS AND THE DRAWING DIMENSIONS THAT MAY AFFECT THE WORK. THE CONTRACTOR SHALL OBTAIN DIRECTION FROM OWNER ON RESOLUTION OF THE DISCREPANCIES BETWEEN THE EXISTING CONDITIONS AND DIMENSIONS AND DRAWINGS PRIOR TO STARTING ANY WORK THAT MAY BE AFFECTED BY SUCH DISCREPANCIES.
16. CLEANUP: TYPICALLY EACH SUBCONTRACTOR IS HELD RESPONSIBLE FOR CLEANUP OF THE WORK OF THEIR TRADE BY THE GENERAL CONTRACTOR. HOWEVER, THE GENERAL CONTRACTOR SHALL BE HELD SOLELY RESPONSIBLE FOR CONTINUOUS CLEANUP AS THE JOB PROGRESSES, AND FINAL CLEANUP UPON SUBSTANTIAL COMPLETION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING UP AND REMOVING FROM THE JOB SITE ALL TRASH AND DEBRIS, IMMEDIATELY UPON COMPLETION OF HIS DAILY WORK. CONTINUOUS CLEANUP SHALL KEEP THE JOB FREE AT ALL TIMES FROM UNREASONABLE BUILDUP OF DEBRIS, WRAPPERS, CONTAINERS, WASTE MATERIALS, ETC., WHICH MAY CAUSE ACCIDENTS, UNDUE HARDSHIP ON THE TRADESMAN, AND WORK PROGRESS. FINAL CLEANUP INCLUDES CLEANING OF ALL SURFACES TO A 'LIKE NEW' CONDITION AND PREPARING THE BUILDING FOR ITS INTENDED USE.
17. THE CONTRACTOR SHALL AT ALL TIMES MAINTAIN THE SITE AND ADJACENT AREAS IN A CLEAN, NEAT, AND ORDERLY MANNER. THE CONTRACTOR SHALL BE RESPONSIBLE ONLY FOR DEBRIS THAT IS A RESULT OF THE WORK, INCLUDING ANY THAT MAY RESULT FROM THE WORKERS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING HIS OWN REFUSE CONTAINERS AND SHALL AT NO TIME USE THE BUILDING REFUSE CONTAINERS.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE WHILE THE JOB IS IN PROGRESS AND UNTIL THE JOB IS COMPLETED.
19. CONTRACTOR SHALL PROVIDE A PORTABLE FIRE EXTINGUISHER WITH A RATING OF NOT LESS THAN 2-A OR 2-10BC WITHIN 75 FEET OF TRAVEL DISTANCE TO ALL PORTIONS OF THE BUILD OUT AREA DURING CONSTRUCTION.
20. OBTAIN ALL CAL / OSHA CONSTRUCTION ACTIVITY PERMITS, PRIOR TO OBTAINING THE BUILDING PERMIT, AS REQUIRED BY AND IN ACCORDANCE WITH APPLICABLE CODES.

4. DIMENSIONS

1. OVERALL DIMENSIONS ARE TO FACE OF METAL STUDS, AND/OR NOMINAL FACE OF MASONRY UNLESS NOTED OTHERWISE.
2. ELEVATIONS AND VERTICAL DIMENSIONS ARE TO TOP OF FINISH MATERIAL. THICKNESS OF ALL DECKING FINISH MATERIAL MUST BE FULLY COORDINATED.
3. GRID LINES REPRESENT THE EXISTING STRUCTURE AND MAY VARY IN THE FIELD. NOTIFY THE ARCHITECT IN WRITING PRIOR TO THE COMMENCEMENT OF WORK OF ANY DISCREPANCIES IN THE DIMENSIONS.
4. DO NOT SCALE DRAWINGS.

LICENSED ARCHITECT
JOHN JOSEPH SILBER
No. C 15573
REN. 7-31-25
STATE OF CALIFORNIA

IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT #: 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	--	PS&E

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA
GENERAL NOTES

CONTRACTOR NO.	C-4-2093
DESIGN BY:	J.S.
DRAWN BY:	D.V.
CHECKED BY:	S.U.
DATE	02-09-2024
SCALE	AS NOTED
SHEET	G-002

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

OCTA

GENERAL NOTES

5. RATED ASSEMBLY PENETRATIONS

1. MECHANICAL DUCTS, ETC. PENETRATING FIRE-RATED CEILINGS AND FIRE WALLS SHALL BE CORRESPONDINGLY RATED OR DAMPERED. CABINETS, ELECTRICAL PANELS, LIGHTS, ETC. RECESSED INTO FIRE RATED WALLS OR CEILINGS SHALL BE BACKED WITH CORRESPONDING FIRE-RESISTIVE CONSTRUCTION AS REQUIRED TO MAINTAIN THE INTEGRITY OF THE FIRE PROTECTION.

2. FIRE RESISTIVE ASSEMBLIES FOR PROTECTION OF OPENINGS SHALL COMPLY WITH CBC. PENETRATION OF FIRE RATED ASSEMBLIES WHICH REQUIRE OPENING PROTECTION SHALL BE FIRE STOPPED. FIRE STOPPING SHALL BE IDENTICAL TO AN APPROVED UNDERWRITERS LABORATORIES (UL) LISTED ASSEMBLY WITH AN "F" OF "T" RATING. PENETRATIONS MUST ALSO CONSIST OF APPROVED MATERIALS FOR THROUGH WALL PENETRATIONS FIRE STOP SYSTEMS AS PRESCRIBED IN CBC STANDARD 7-5 FIRE RATING FOR FIRE STOP SYSTEMS SHALL BE EQUAL TO THE ASSEMBLY PENETRATED.

3. SHAFT ENCLOSURES: OPENINGS EXTENDING VERTICALLY THROUGH FLOORS SHALL BE ENCLOSED IN A SHAFT OF 1-HOUR FIRE-RESISTIVE CONSTRUCTION. SHAFTS SHALL INCLUDE A GYPSUM BOARD HORIZONTAL TERMINATION AT BOTTOM, ENGINEERED BY GENERAL CONTRACTOR. PROTECTION FOR STAIRWAYS SHALL BE AS SPECIFIED IN CODE OF JURISDICTION.

6. DISSIMILAR METALS

1. ALL DISSIMILAR METALS SHALL BE EFFECTIVELY ISOLATED.

7. SIGNAGE

1. FURNISH AND INSTALL SUPPORTS AND OTHER NECESSARY FINISH MATERIALS FOR A COMPLETE SIGNAGE INSTALLATION.

2. ACCESSIBLE SIGNAGE / IDENTIFICATION

   1. THE INTERNATIONAL SYMBOL OF ACCESSIBILITY SHALL BE THE STANDARD USED TO IDENTIFY FACILITIES THAT ARE ACCESSIBLE TO AND USEABLE BY PHYSICALLY DISABLED PERSONS.

   2. LETTERS AND NUMBERS ON SIGNS HAVE A WIDTH TO HEIGHT RATIO OF BETWEEN 3:5 AND 1:1 AND STROKE WIDTH TO HEIGHT RATIO OF BETWEEN 1:5 AND 1:10.

   3. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND, EITHER LIGHT CHARACTERS ON A DARK BACKGROUND OR DARK CHARACTERS ON A LIGHT BACKGROUND.

   4. ALL BUILDING ENTRANCES THAT ARE ACCESSIBLE TO AND USABLE BY PHYSICALLY HANDICAPPED PERSONS SHALL BE IDENTIFIED WITH AT LEAST ONE STANDARD SIGN AND WITH ADDITIONAL DIRECTIONAL SIGNS AS REQUIRED TO BE VISIBLE TO PERSONS ALONG APPROACHING PEDESTRIAN WAYS.

   5. ALL SANITARY FACILITIES WILL BE PROVIDED WITH APPROPRIATE IDENTIFICATION SYMBOLS.

3. AREA AND OCCUPANCY SIGNAGE REQUIREMENTS OCCUPANT LOAD SIGN SHALL BE POSTED IN EACH CLASSROOM, ASSEMBLY ROOM OR SIMILAR PURPOSE ROOM HAVING AN OCCUPANT LOAD OF 50 OR MORE.

8. COORDINATION OF DEVICES

1. EXACT LOCATIONS AND HEIGHTS OF ELECTRICAL, LOW VOLTAGE, MECHANICAL AND PLUMBING DEVICES, INCLUDING BUT NOT LIMITED TO SMOKE DETECTORS, PULL STATIONS, SWITCHES, OUTLETS, PHONE JACKS, AND THERMOSTATS, INCLUDING ALL SHALL BE COORDINATED BY THE CONTRACTOR PER THE APPLICABLE CODE FOR ALIGNMENT AND COORDINATION WITH EACH OTHER AND OTHER BUILDING FEATURES PRIOR TO INSTALLATION.

2. THE EXISTING BUS WASH SYSTEM COMPONENTS AND EQUIPMENT SHALL REMAIN AND BE AND PROTECTED IN PLACE.

9. INSTRUMENTS OF SERVICE

1. THE INSTRUMENTS OF SERVICES ARE ANY EXPRESSION, WHETHER TANGIBLE OR INTANGIBLE, OF CREATIVE WORKED PERFORMED BY A DESIGN PROFESSIONAL FOR A PROJECT, SUCH AS:
   - MODELS
   - SKETCHES AND DRAWINGS
   - SPECIFICATIONS

   THE INSTRUMENTS OF SERVICE ARE ALSO KNOWN AS DESIGN DOCUMENTS AND CONSTRUCTION DOCUMENTS.

   ACCORDING TO THE ARCHITECT'S PRACTICE ACT, BUSINESS AND PROFESSIONS CODE SECTION 5536.4, NO PERSON MAY USE AN ARCHITECT'S INSTRUMENTS OF SERVICES, AS THOSE PROFESSIONAL SERVICES ARE DESCRIBED IN PARAGRAPH (2) OF SUBDIVISION (B) OF SECTION 5500.1, WITHOUT THE CONSENT OF THE ARCHITECT IN A WRITTEN CONTRACT, WRITTEN AGREEMENT, OR WRITTEN LICENSE SPECIFICALLY AUTHORIZING THAT USE.

   THE PLANS AND SPECIFICATIONS ARE COMPLIMENTARY AND INTENDED TO CONVEY THE DESIGN INTENT OF THE PROJECT. THEY ARE NOT INTENDED TO SUPPLANT THE GENERAL CONTRACTOR'S CONSTRUCTION EXPERTISE, AND, IN FACT, RELY ON THE CONTRACTOR TO CLARIFY AND/OR OBTAIN ANY ELEMENTS OF NEEDED INFORMATION PRIOR TO THE SUBMISSION OF A BID. THE CONTRACTOR'S BID SHALL BE ASSUMED TO INCLUDE THE SUFFICIENT COSTS TO CONSTRUCT ALL WORK SHOWN ON THE DOCUMENTS, WHETHER OR NOT ADEQUATELY DESCRIBED IN THE DOCUMENTS, IN ORDER TO PROVIDE THE OWNER A SAFE, COMPLETE AND FULLY FUNCTIONAL PROJECT.

2. THE SCOPE OF THIS PROJECT IS AS GENERALLY DEPICTED IN THESE INSTRUMENTS OF SERVICE AS PART OF THE CONTRACT DOCUMENTS. WORK INCLUDING: POINTS OF CONNECTION, NOT SPECIFICALLY DEPICTED, THAT NEED TO BE MADE ARE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR. ALL WORK PERFORMED EVEN IN REMOTE AREAS OF THE BUILDING OR SITE, PERTAINING TO THIS PROJECT SHALL COMPLY WITH THE INTENT OF CONTRACT DOCUMENTS.

3. THESE CONTRACT DOCUMENTS COVER THE FURNISHING AND INSTALLATION OF MATERIALS AND WORK AS CALLED FOR ON THE DRAWINGS OR IN THE SPECIFICATIONS (OR IN BOTH) WHICH ARE BOUND SEPARATELY AND ARE A PART OF THE CONTRACT. IT SHALL BE THE RESPONSIBILITY OF EACH CONTRACTOR TO CHECK WITH THE ARCHITECTURAL DRAWINGS BEFORE FINALIZING THEIR BID AND BEFORE THE INSTALLATION OF THEIR WORK. ANY DISCREPANCY BETWEEN THE ARCHITECTURAL AND THE CONSULTING ENGINEER(S) DRAWINGS SHALL BE BROUGHT TO THE ARCHITECTS ATTENTION BY WRITTEN REQUEST FOR CLARIFICATION. ANY WORK INSTALLED IN CONFLICT WITH THE ARCHITECTURAL DRAWINGS SHALL BE CORRECTED BY THE CONTRACTOR AT HIS OWN EXPENSE AND AT NO EXPENSE TO THE OWNER OR ARCHITECT.

4. GENERAL REQUIREMENTS, DESCRIBING THE PROJECT'S ADMINISTRATIVE REQUIREMENTS AND THE PHYSICAL ASPECTS OF CONSTRUCTION, ARE PROVIDED WITHIN EACH PROFESSIONAL DISCIPLINE'S PROJECT SPECIFICATION AND GENERAL NOTATION. GENERAL REQUIREMENTS ARE NOT LIMITED TO THE INSTRUMENT OF SERVICES AND MAY EXTEND TO THE CONTRACT DOCUMENTS AND OWNER REQUIREMENTS.

5. THE PROJECT SPECIFICATIONS CONSISTING OF THE WRITTEN REQUIREMENTS FOR MATERIAL, EQUIPMENT, SYSTEMS, STANDARDS, AND WORKMANSHIP FOR THE WORK, AND PERFORMANCE OF RELATED SERVICES ARE CONTAINED WITHIN EACH OF THE ARCHITECT AND THE ARCHITECT'S INSTRUMENT OF SERVICES. REFER TO GENERAL NOTES FOR ADDITIONAL PROJECT STANDARDS INFORMATION. DOCUMENTS INDICATED AS 'REFERENCE DOCUMENT' ARE NOT CONSIDERED INSTRUMENTS OF SERVICES AND ARE BEING ISSUED TO PROVIDE ASSISTANCE DURING THE REGULATORY AGENCY CONTRACT DOCUMENT REVIEW.

6. REFER TO LIFE SAFETY AND ACCESSIBILITY DIAGRAMS THAT INDICATE PROVISIONS WITHIN EXISTING CONDITIONS.

7. THESE DRAWINGS ARE BASED ON FIELD OBSERVATION AND/OR DOCUMENTS FURNISHED BY THE OWNER. THE ARCHITECT SHALL BE NOTIFIED IMMEDIATELY BY THE CONTRACTOR OF ANY DISCREPANCIES OR OTHER QUESTIONS PERTAINING TO THE CONTRACT DOCUMENTS. IF OBVIOUS OMISSIONS OR CONTRADICTORY SITUATIONS IN THE CONTRACT DOCUMENTS ARE DISCOVERED TO EXIST, THEY SHOULD BE IMMEDIATELY CALLED TO THE ATTENTION OF ARCHITECT FOR CLARIFICATION.

8. ALL DIMENSIONS TAKE PRECEDENCE OVER SCALE UNLESS OTHERWISE NOTED BY A PLUS/MINUS DIMENSION. CONTRACTOR SHALL CHECK ACCURACY OF DIMENSIONS ON PLANS WITH ACTUAL FIELD DIMENSIONS. THE CONTRACTOR SHALL REPORT TO THE ARCHITECT ALL CONDITIONS WHICH PREVENT THE PROPER EXECUTION OF ITS WORK. CONTRACTOR SHALL NOT START ANY CONSTRUCTION OR ANY OFF-SITE FABRICATION OF MATERIALS UNTIL THE DRAWINGS DIMENSIONS ARE VERIFIED WITH ACTUAL FIELD CONDITIONS. DO NOT SCALE DRAWINGS.

9. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE RESULTS OF ANY ERRORS, DISCREPANCIES OR OMISSIONS THAT THE CONTRACTOR FAILED TO NOTIFY THE ARCHITECT OF BEFORE CONSTRUCTION AND/OR FABRICATION OF THE WORK.

10. WORK INCLUDES DEMOLITION, REMOVAL, AND REINSTALLATION WHERE REQUIRED. REMOVE, REVISE, RELOCATE AND REINSTALL AS REQUIRED.

11. IT IS NOT THE RESPONSIBILITY OF THE ARCHITECT OR GENERAL CONTRACTOR TO ENSURE THAT AREAS OF THE BUILDING, NOT DESCRIBED WITHIN THE SCOPE OF THIS PROJECT, COMPLY WITH CURRENT BUILDING CODES. IT IS THE RESPONSIBILITY OF THE OWNER TO MAINTAIN THE BUILDING, SO AS TO PROVIDE FOR THE SAFETY AND COMFORT OF THE OCCUPANTS. THIS INCLUDES ALL LIFE SAFETY FEATURES SUCH AS FIRE ALARM, FIRE-SPRINKLERS, NURSE CALL, EXIT ENCLOSURE, ACCESSIBILITY, ETC.. THIS ALSO INCLUDES MAINTAINING THE BUILDING FREE OF HAZARDOUS MATERIALS I.E., CHEMICALS AS DESCRIBED BY STATE OR FEDERAL AGENCIES AS 'HAZARDOUS' INCLUDING ASBESTOS.

10. HAZARDOUS MATERIALS

1. THE REMOVAL OF HAZARDOUS MATERIALS IS NOT INTENDED TO BE INCLUDED AS PART OF THIS PROJECT UNLESS SPECIFICALLY NOTED OTHERWISE.

2. IF HAZARDOUS MATERIALS ARE DISCOVERED DURING THE COURSE OF CONSTRUCTION, THE CONTRACTOR SHALL STOP ALL AFFECTED WORK AND NOTIFY THE OWNER AND ARCHITECT IMMEDIATELY.

3. OWNER ACKNOWLEDGES THAT IDS GROUP SHALL HAVE NO RESPONSIBILITY FOR THE DISCOVERY, PRESENCE, HANDLING, REMOVAL, DISPOSAL OR EXPOSURE OF PERSONS TO HAZARDOUS SUBSTANCES, MATERIALS, AND WASTES IN ANY FORM AT PROJECT SITE, INCLUDING BUT NOT LIMITED TO: ASBESTOS, ASBESTOS PRODUCTS, OR OTHER TOXIC SUBSTANCES.

4. THE OWNER ACKNOWLEDGES THAT IT ACCEPTS RESPONSIBILITY FOR NOTIFYING THE APPROPRIATE FEDERAL, STATE, AND AUTHORITIES HAVING JURISDICTION FOR ANY DEMOLITION, CONSTRUCTION, OR REPAIR WORK.

5. CONTRACTOR TO REFER TO ASBESTOS / LEAD REPORT FOR ADDITIONAL INFORMATION.

11. FIELD APPLICATION OF PEDESTRIAN PROTECTION

CONSTRUCTION ACTIVITIES INCLUDING ADDITIONS, ALTERATIONS, AND DEMOLITIONS SHALL PROVIDE PEDESTRIAN PROTECTION PURSUANT TO SECTION 3306 OF THE CALIFORNIA BUILDING CODE. TO DETERMINE THE TYPE OF PROTECTION REQUIRED FOR PEDESTRIANS, MEASURE THE ULTIMATE HEIGHT OF CONSTRUCTION WITH CONSIDERATION FOR BUILDING SETBACKS AND PROJECTIONS FROM THE BUILDING. FOR SLOPING SITES, MEASURE THE HEIGHT OF THE BUILDING FROM CONSTRUCTION EDGE OF THE WALKWAY AND THE SETBACK DISTANCE BETWEEN THE WALKWAY AND THE BUILDING LINE.

BELOW ARE REQUIREMENTS TO BE ADDRESSED IN THE DESIGN OF PEDESTRIAN PROTECTIONS:

1. WALKWAYS SHALL PROVIDE SUFFICIENT WIDTH WITH THE MINIMUM OF 4 FT. CLEAR.

2. DIRECTIONAL BARRICADES SHELL BE PROVIDED AS NEEDED WHERE THE WALKWAY EXTENDS INTO THE STREET.

3. CONSTRUCTION RAILINGS SHALL BE AT LEAST 42 INCHES IN HEIGHT.

4. BARRIERS SHALL BE A MINIMUM OF 8 FT. IN HEIGHT AND BE DESIGNED TO RESIST LOADS REQUIRED.

5. SUCH PROTECTION SHALL BE MAINTAINED IN PLACE AND KEPT IN GOOD ORDER. UNTIL WORK IS COMPLETED.

6. WHENEVER A WALKWAY MUST EXTEND INTO THE ROADWAY, A RAILING IS REQUIRED ON THE STREET SIDE.

12. CODES

1. ALL CONSTRUCTION, ALSO REFERRED TO AS 'THE WORK' AND/OR 'WORK', SHALL COMPLY WITH THE APPLICABLE CODES AS ADOPTED BY THE REGIONAL, STATE, AND NATIONAL AUTHORITIES HAVING JURISDICTION.

13. PERMITS

1. THE CONTRACTOR SHALL PROCURE ALL PERMITS AND LICENSES REQUIRED FOR THE COMPLETION OF THE WORK. THE COST OF THESE NOTICES, PERMITS, AND LICENSES IS INCIDENTAL TO OTHER ITEMS OF WORK AND NO ADDITIONAL PAYMENT WILL BE MADE FOR COSTS INCURRED IN OBTAINING NOTICES, PERMITS, AND LICENSES OR IN CONFORMING TO THE REQUIREMENTS THEREOF.

14. COORDINATION & VERIFICATION

1. THE DRAWINGS ARE DIVIDED INTO SEPARATE SHEETS AND THE PROJECT MANUAL INTO SEPARATE SECTIONS FOR GENERAL CONVENIENCE ONLY. SHEET DESIGNATION OR NUMBERS SHALL NOT BE CONSIDERED TO LIMIT AREAS OF THE WORK OR RESPONSIBILITY OF TRADES. COORDINATE THE WORK SHOWN ON THE DRAWINGS AND IN THE PROJECT MANUAL IN ORDER TO COMPLETE THE PROJECT TO SATISFY INTENT.

2. VERIFY ALL SIZES OF, AND PREPARE WORK FOR, EQUIPMENT OF OTHERS. GENERAL CONTRACTOR SHALL COORDINATE WORK ON THIS CONTRACT WITH ITEMS OF WORK NOT IN CONTRACT (N.I.C.) OR WORK FURNISHED BY OTHERS.

3. LOCATIONS AND SIZES OF EQUIPMENT ARE BASED ON AVAILABLE INFORMATION. PROVIDE AND COORDINATE THE EXACT DIMENSIONS, SIZES, AND POSITIONS.

4. PROVIDE AND COORDINATE THE EXACT DIMENSIONS, SIZES, AND POSITIONS OF OPENINGS IN SLABS AND WALLS NECESSARY FOR THE INSTALLATION OF THE WORK.

5. PROVIDE REINFORCING STEEL, MESH, AND DOWELS REQUIRED BY THE STRUCTURAL GENERAL NOTES AND STRUCTURAL DRAWINGS FOR ARCHITECTURAL DETAILS INDICATED ON THE ARCHITECTURAL DRAWINGS.

6. QUANTITIES INDICATED ON THE DRAWINGS ARE APPROXIMATE. CONTRACTOR SHALL VERIFY QUANTITIES AND INCLUDE ACCURATE QUANTITIES AS PART OF THE WORK.

7. NOTES AND DETAILS: SPECIFIC NOTES OR KEYNOTES ON DETAILS APPLY TO SIMILAR CONDITIONS ON OTHER DETAILS ON ALL DRAWINGS UNLESS SPECIFICALLY NOTED OTHERWISE.

15. UTILITIES AND DEMOLITION

1. THE DRAWINGS SHOW DIAGRAMMATICALLY THE APPROXIMATE LOCATION OF UTILITIES WHERE INFORMATION IS AVAILABLE, BUT THE DRAWINGS ARE NOT EXACT AS TO THE QUANTITY, EXTENT OR LOCATION.

2. PREPARE SURFACES OF FLOOR AREAS WHICH HAVE FINISHES DEMOLISHED TO RECEIVE NEW FINISH MATERIAL AS SPECIFIED.

3. FOR ADDITIONAL DEMOLITION REQUIREMENTS, SEE SPECIFICATIONS.

16. TEMPORARY MOBILE BUS WASHING

1. OCTA WILL DESIGNATE A LOCATION ON THE SANTA ANA BUS BASE SITE FOR TEMPORARY MOBILE BUS WASHING OPERATIONS, DURING BUS WASHING OPERATIONS DELINEATORS SHALL BE PLACED ALONG THE SIDES BUS WASHING MAT FOOTPRINT (FURTHER DISCUSSED BELOW).

2. MOBILE BUS WASHING COMPANIES TYPICALLY USE THEIR OWN WATER SUPPLY (TRUCK OR TRAILER) WITH TREATED WATER SUCH AS DEIONIZED WATER TO FACILITATE WASHING OPERATIONS AND REDUCE SPOTS. THERE IS HOWEVER A WATER SUPPLY ONSITE AT SANTA ANA BUS BASE IF NEEDED; HOWEVER, THE WATER IS NOT TREATED (RO OR DEIONIZED) TO FACILITATE WASHING OPERATIONS.

3. EXTERIOR BUS WASH ONLY; OCTA PERSONNEL VACUUM AND CLEAN BUS INTERIORS AS PART OF ITS BUS FUELING OPERATIONS.

4. FRONT, BACK, SIDES OF BUS MUST BE WASHED; WHEELS OF BUS MUST BEWASHED; EXTERIOR SIDE OF FRONTAL, REAR, AND SIDES UPPER FAIRINGS MUST ALSO BE WASHED; TOP OF BUS HORIZONTAL SURFACES EXCLUDED.

5. TOTAL NUMBER OF BUSES IS 137, ALL 137 BUSES MUST BE WASHED. TEMPORARY MOBILE BUS WASHING OPERATIONS MUST BE PERFORMED DURING THE TIME WINDOW FOR WASHING BUSES WHICH IS 6:00 P.M. TO 2 A.M., MONDAY THROUGH FRIDAY. WASHING 25 TO 30 BUSES PER DAY, MONDAY THROUGH FRIDAY, DURING THE TIME WINDOW FOR WASHING BUSES WOULD BE AN ACCEPTABLE SOLUTION.

6. TEMPORARY MOBILE BUSH WASHING OPERATIONS MUST USE A WASHING MAT WITH PERIMETER CONTAINMENT FOR RECOVERY OF BUSH WASHING OPERATIONS RUN-OFF. THE WASHING MAT MUST BE SET UP AND REMOVED AT COMPLETION OF EACH DAY'S BUS WASHING TIME WINDOW. CONTAINED AND RECOVERED WATER FROM MOBILE BUS WASHING OPERATIONS MAY BE DISPOSED IN THE CLARIFIER AT THE SANTA ANA BUS BASE, SOME MOBILE BUS WASHING COMPANIES DISPOSE OF THEIR RECOVERED WATER OFFSITE AS PART OF THEIR NORMAL MOBILE FLEET WASHING OPERATIONS.

LICENSED ARCHITECT
JOHN JOSEPH SILBER
C 15573
REN. 7-31-25
STATE OF CALIFORNIA

IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
-	2/13/24	PS&E	

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA

GENERAL NOTES

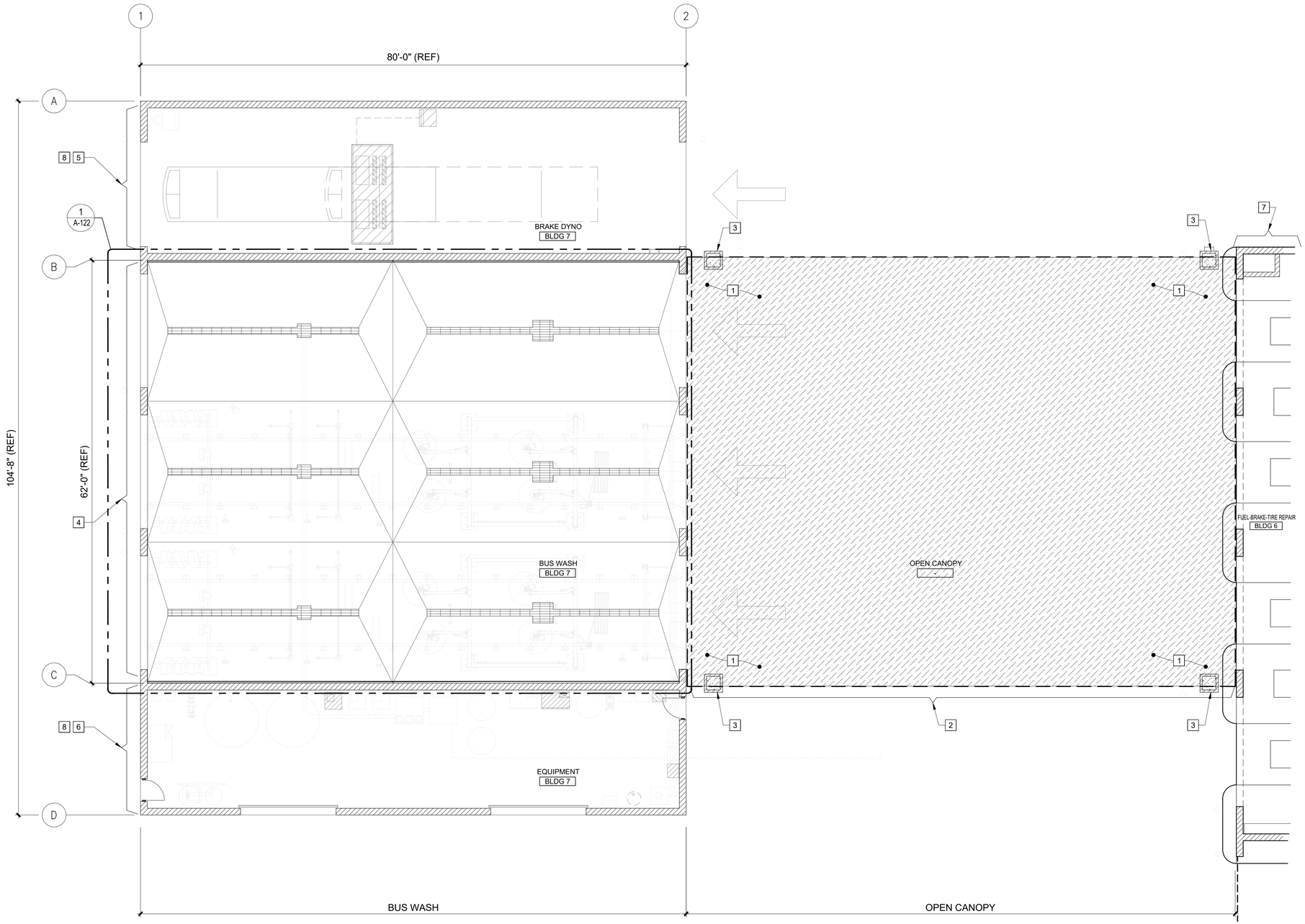
CONTRACTOR NO.	C-X-XXXX
DESIGN BY:	J.S.
DRAWN BY:	D.V.
CHECKED BY:	S.U.
DATE	02-09-2024
SCALE	AS NOTED
SHEET	G-003

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

OCTA

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\01 ARCH\20X5002_G-003-GENERAL NOTES PLOT DATE: 1/30/2024 11:23:39 AM USER: DION.VAZQUEZ

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\01 ARCH\20X5002_A-121_DEMO PLAN PLOT DATE: 1/30/2024 11:14:02 AM USER: DION.VAZQUEZ



DUST MITIGATION NOTES

1. DUST CONTROL: THE GENERAL CONTRACTOR SHALL MAINTAIN CONTINUOUS DUST ABATEMENT PROCEDURES INCLUDING VACUUMING AND TRASH REMOVAL. THE JOB SITE SHALL BE LEFT CLEAN AND ORDERLY AT THE END OF EACH DAY.

2. NO CONSTRUCTION MATERIAL OR DEBRIS SHALL ENTER / LEAVE THE BUILDING DURING TYPICAL BUSINESS HOURS OF OPERATION. COORDINATE WITH FACILITY MANAGER / OCTA REPRESENTATIVE.

3. CONTAIN CONSTRUCTION WASTE WITHIN DEMOLITION ZONE BEFORE TRANSPORT IN TIGHTLY COVERED CONTAINERS.

4. VACUUM WORK AREA (MINIMUM DAILY).

5. REMOVE TEMPORARY WORK BARRIER / DUST CONTROLS CAREFULLY TO MINIMIZE SPREADING DIRT AND DEBRIS ASSOCIATED WITH CONSTRUCTION.

EXISTING DEMO KEYNOTES

1. EXISTING CONCRETE SLAB ON GRADE TO REMAIN. PROTECT-IN-PLACE. CONTRACTOR TO COVER AND SEAL TIGHT DURING CONSTRUCTION REPAIRS, TYPICAL THROUGHOUT.
2. EXISTING OPEN CANOPY TO REMAIN. PROTECT -IN-PLACE. SEE SHEET A-131 FOR ADDITIONAL INFORMATION
3. EXISTING CANOPY COLUMN TO REMAIN. PROTECT-IN-PLACE.
4. EXISTING BUILDING 7 BUS WASH BAYS. PROTECT-IN-PLACE. SEE SHEET A-122 FOR ADDITIONAL INFORMATION
5. EXISTING BUILDING 7 BUS BRAKE DYNO BAY (NIC) PROTECT-IN-PLACE.
6. EXISTING EQUIPMENT ROOM (NIC) PROTECT-IN-PLACE.
7. EXISTING (FUEL-BRAKE-TIRE REPAIR) BUILDING 6 ROOF TO REMAIN. (NIC) MAINTENANCE VEHICLE ACCESS DURING CONSTRUCTION REPAIR PROJECT.
8. CONTRACTOR TO SEAL TIGHT DURING DEMOLITION AND CONSTRUCTION.

LEGEND

EXISTING CANOPY CONCRETE SLAB ON GRADE TO REMAIN (PROTECT-IN-PLACE)

IDS
IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500 FAX: 949-387-0800
IDS PROJECT # 20X050.02

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	2/13/24	-	PS&E

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA

BUS WASH - BRAKE DYNO BUILDING AND CANOPY FLOOR PLAN

CONTRACTOR NO.	C-X-XXXX
DESIGN BY:	J.S.
DRAWN BY:	D.V.
CHECKED BY:	S.U.
DATE	02-09-2024
SCALE	AS NOTED
SHEET	A-121

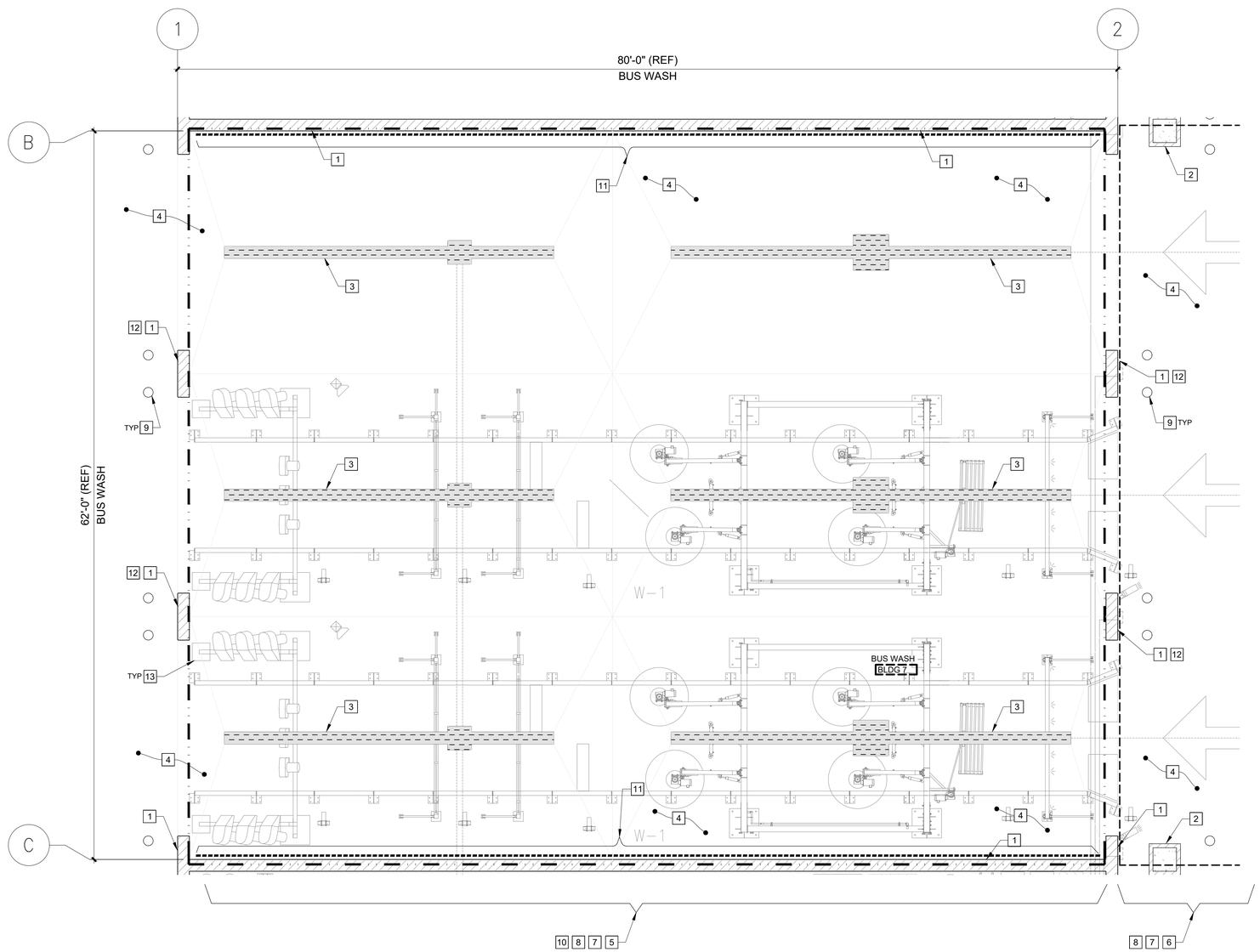
550 South Main Street
Orange, CA 92668
714/560/OCTA

LICENSED ARCHITECT
JOHN JOSEPH SILBER
15573
REN. 7-31-25
STATE OF CALIFORNIA

OCTA

BUS WASH - BRAKE DYNO BUILDING AND CANOPY FLOOR PLAN | 1/8" = 1'-0" | 1

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\01 ARCH\20X5002_A-122_DEMO PLAN PLOT DATE: 1/30/2024 11:13:10 AM USER: DION.VAZQUEZ



BUS WASH ENLARGED PLAN | 3/16" = 1'-0" | 1

GENERAL NOTES

1. FIELD VERIFY ALL EXISTING CONDITIONS & IDENTIFY EXACT SCOPE OF WORK PRIOR TO REMOVAL OF EXISTING CONDITIONS. CONTACT ARCHITECT & OCTA REPRESENTATIVE IF THERE ARE ANY DISCREPANCIES.
2. THE GENERAL CONTRACTOR SHALL COORDINATE DEMOLITION OF HVAC/MECHANICAL, AND ELECTRICAL SCOPE OF WORK WITH ENGINEERS DRAWINGS.
3. THE GENERAL CONTRACTOR SHALL ALLOW FOR ADDITIONAL DEMOLITION THAT MAY NOT BE SHOWN, BUT MAY BE REQUIRED TO ACHIEVE THE FINISHED RESULT, AS SHOWN ON THE DRAWINGS.
4. PRIOR TO START OF DEMOLITION WORK, GENERAL CONTRACTOR SHALL PROVIDE A PROTECTIVE BARRIER PER OCTA REPRESENTATIVE AND LOCAL CITY REQUIREMENTS.
5. PROTECT IN PLACE ALL EXISTING FLOOR STRUCTURAL SYSTEM, INCLUDING ANY FIRE-PROOFING. DO NOT DISTURB OR DAMAGE ANY EXISTING STRUCTURAL ELEMENTS.
6. ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CALIFORNIA FIRE CODE, 2019 EDITION, SECTION 1.1.3 (INCLUDING ARTICLE 87). ALL DEMOLITION WORK SHALL BE IN ACCORDANCE WITH THE CALIFORNIA BUILDING CODE, 2019 EDITION, CHAPTER 33.
7. THE CONTRACTOR SHALL RESTORE TO ITS ORIGINAL CONDITION ANY EXISTING WORK DAMAGED DURING DEMOLITION BUT INDICATED TO REMAIN. ALL DIFFUSERS & RETURN GRILLES SHALL BE COVERED PRIOR TO ANY WORK. COORDINATE WITH BUILDING ENGINEER AND OCTA REPRESENTATIVE.
8. EXISTING EXTERIOR SHELL WINDOW SYSTEM, WALLS, AND COLUMNS TO REMAIN AS SHOWN; PROTECT IN PLACE DURING DEMOLITION.
9. REMOVE ALL DEBRIS. NO DEBRIS SHALL BE LEFT OR REMAIN IN THE PASSAGEWAY DURING CONSTRUCTION. CONTRUCTION DEBRIS REMOVAL IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.

KEYNOTES

1. EXISTING CMU WALLS WITH PARTIAL HEIGHT STEEL PANELS AT NORTH AND SOUTH WALLS TO REMAIN. PROTECT IN PLACE. APPLY HIGH-PERFORMACE ON CMU WALLS ONLY AT BUSH WASH BAY AFTER STRUCTURAL WORK IS COMPLETED.
2. EXISTING CANOPY COLUMN TO REMAIN. PROTECT-IN-PLACE.
3. EXISTING TRENCH TO REMAIN. PROTECT-IN-PLACE. CONTRACTOR TO COVER TRENCH SEAL TIGHT DURING CONSTRUCTION STRUCTURAL REPAIRS TO PREVENT ANY DEBRIS, FOREIGN OBJECTS OR LIQUIDS IN THE TRENCH SYSTEM.
4. EXISTING CONCRETE SLAB ON GRADE TO REMAIN. PROTECT IN PLACE. CONTRACTOR TO COVER AND SEAL TIGHT DURING CONSTRUCTION REPAIRS, TYPICAL THROUGHOUT.
5. COORDINATE WITH OTHER TRADES TO PROTECT EXISTING BUS WASH SYSTEM AND ASSOCIATED, PIPING, CONTROLS, HVAC, WATER PIPING, COMPRESSED AIR PIPING AND ALL MISCELLANEOUS APPURTENANCES. PROTECT-IN-PLACE. REFER TO SHEET M-221 PPING FOR ADDITIONAL INFORMATION. REFER TO ELECTRICAL SHEETS E-102 FOR ELECTRICAL POWER SYSTEM.
6. OPEN CANOPY ABOVE. SEE SHEET A-131 FOR ADDITIONAL INFORMATION.
7. REFER TO STRUCTURAL SHEET S-221 FOR STRUCTURE REPAIRS.
8. EXISTING FIRE SPRINKLER SYSTEM TO REMAIN. PROTECT-IN-PLACE.
9. EXISTING BOLLARD TO REMAIN. PROTECT-IN-PLACE.
10. REFER TO ELECTRICAL SHEET E-102 FOR LIGHTING SYSTEM.
11. EXISTING STANLESS STEEL WALL PANEL TO REMAIN. PROTECT IN PLACE. COVER PANELS DURING CONSTRUCTION. CONTRACTOR TO CLEAN PANELS AFTER ROOF INSTALLATION. SEE SHEET S-221 FOR ADDITIONAL INFORMATION.
12. REFER TO SHEET S-221 AND S-300 FOR TEMPORARY SHORING SYSTEM.
13. REFER TO SHEETS E-101 AND E-103 FOR AIR DRYERS SCOPE AND ADDITIONAL INFORMATION

IDS
IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-9800 FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	–	PS3&E

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA
BUS WASH ENLARGED PLAN

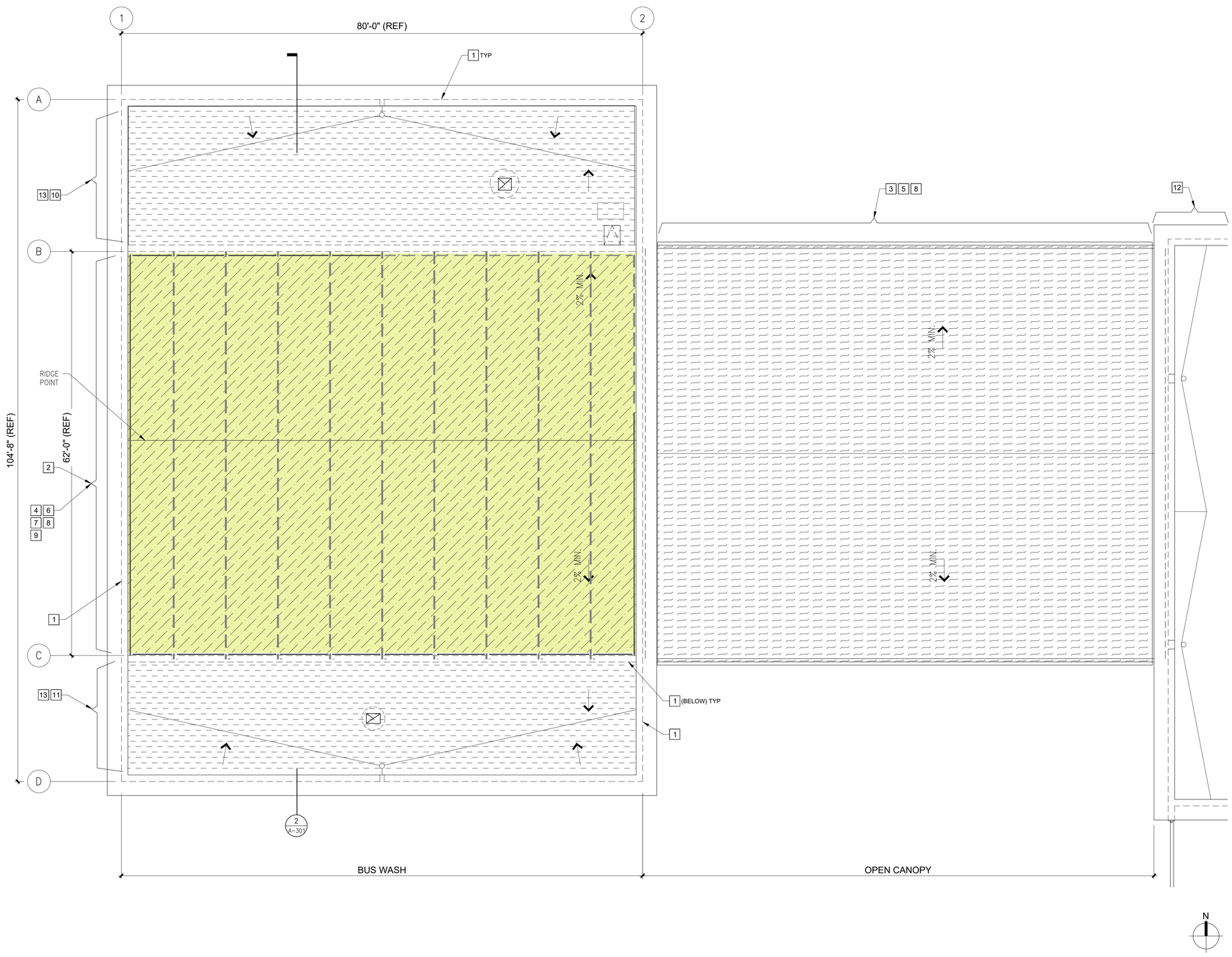
CONTRACTOR NO.	C-X-XXXX
DESIGN BY:	J.S.
DRAWN BY:	D.V.
CHECKED BY:	S.U.
DATE	02-09-2024
SCALE	AS NOTED
SHEET	A-122

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

LICENSED ARCHITECT
JOSEPH SILVER
C-15573
REN. 7-31-25
STATE OF CALIFORNIA

OCTA

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\01 ARCH\20X5002_A-131_DEMO ROOF PLAN PLOT DATE: 1/30/2024 11:12:48 AM USER: DION.VAZQUEZ



EXISTING DEMO KEYNOTES

1. EXISTING CMU WALL TO REMAIN. PROTECT-IN-PLACE.
2. REMOVE EXISTING BUS WASH BAYS ROOF AND REFER TO STRUCTURAL SHEET S-221 FOR ROOF TRUSS REMOVAL AND INSTALLATION.
3. EXISTING OPEN CANOPY TO REMAIN. PROTECT IN PLACE.
4. REFER TO STRUCTURAL SHEET S-221 FOR STRUCTURE REPAIRS.
5. REMOVE EXISTING PAINT COATING AND RUST WITH COMMERCIAL ABRASIVE BLASTING AND PREPARE SURFACE FOR HIGH-PERFORMANCE COATING. ON ROOF STRUCTURE, ROOF DECK.
6. COORDINATE WITH OTHER TRADES TO PROTECT EXISTING BUS WASH SYSTEM AND ASSOCIATED, PIPING, CONTROLS, HVAC, WATER PIPING, COMPRESSED AIR PIPING AND ALL MISCELLANEOUS APPURTENANCES. PROTECT-IN-PLACE. REFER TO SHEET M-221 PPING FOR ADDITIONAL INFORMATION. REFER TO ELECTRICAL SHEETS E-102 FOR ELECTRICAL POWER SYSTEM.
7. REFER TO ELECTRICAL SHEET E-102 FOR LIGHTING SYSTEM.
8. EXISTING FIRE SPRINKLER SYSTEM TO REMAIN. PROTECT-IN-PLACE. REFER TO SHEET A-122 FOR ADDITIONAL INFORMATION.
9. EXISTING BUILDING 7 BUS WASH BAYS.
10. EXISTING BUILDING 7 BUS BRAKE DYNO BAY (NIC)
11. EXISTING EQUIPMENT ROOM (NIC)
12. EXISTING (FUEL-BRAKE-TIRE REPAIR) BUILDING 6 ROOF TO REMAIN. (NIC) MAINTAIN VEHICLE ACCESS DURING CONSTRUCTION REPAIR PROJECT.
13. CONTRACTOR TO COVER EXISTING ROOF (PROTECT-IN-PLACE), ROOF EXHAUST, ROOF HATCH, ROOF DRAINS, AND DOWNSPOUT DURING CONSTRUCTION/DEMOLITION. TYPICAL THROUGHOUT.

LEGEND:

- EXISTING CANOPY TO REMAIN (PROTECT IN PLACE)
- BLDG 7 BUS WASH BAYS - REMOVE EXISTING ROOF, METAL DECK AND JOISTS.
- EQUIPMENT ROOM AND BRAKE DYNO BAY (NIC)
- EXHAUST FAN
- ROOF SLOPE
- ROOF HATCH

LICENSED ARCHITECT
JOHN JOSEPH SILVERI
C-15573
REN. 7-31-25
STATE OF CALIFORNIA

IDS
IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	-	PS&E

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA

BUS WASH - BRAKE DYNO BUILDING
ROOF DEMOLITION PLAN

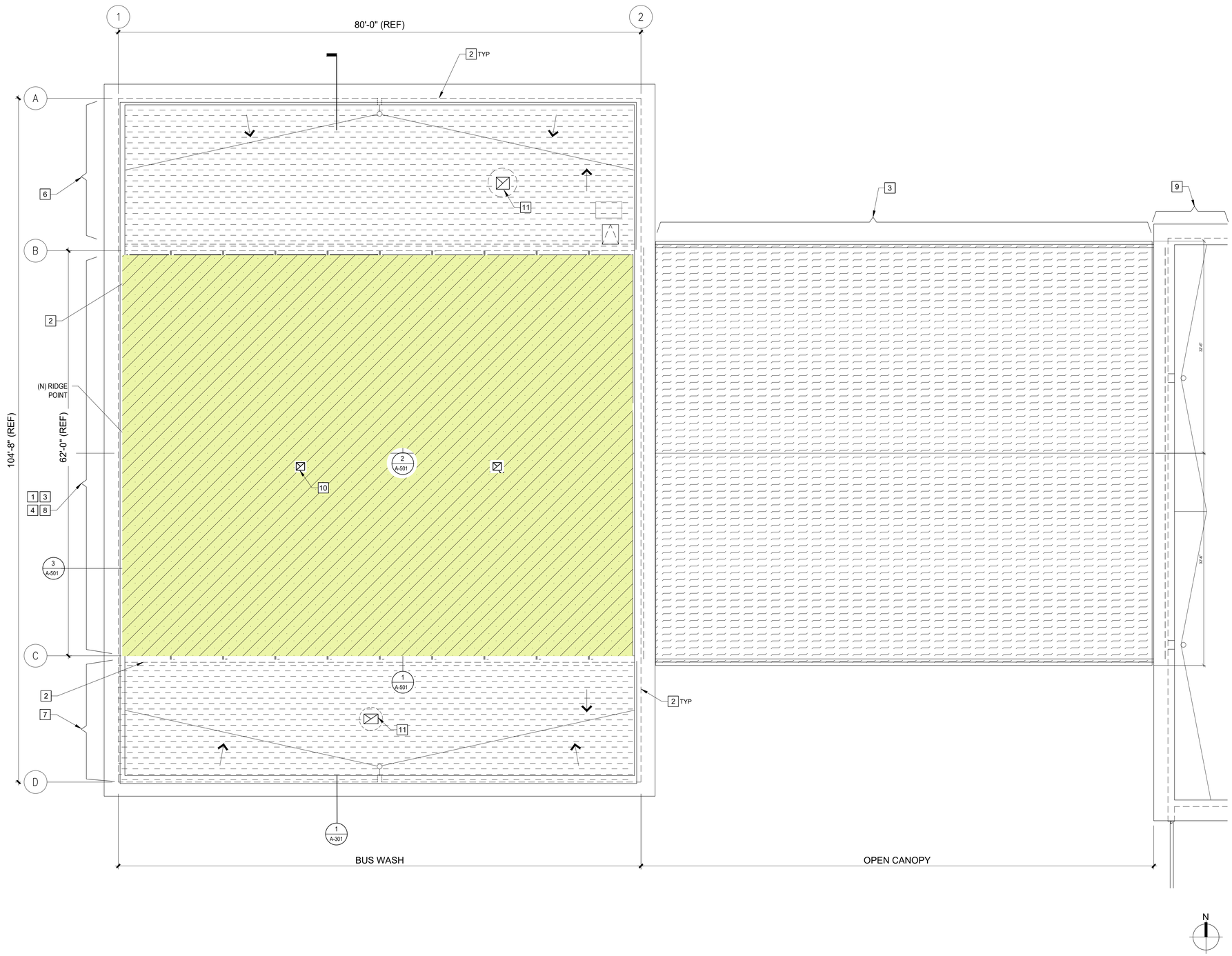
CONTRACTOR NO.	C-X-XXXX
DESIGN BY:	J.S.
DRAWN BY:	D.V.
CHECKED BY:	S.U.
DATE	02-09-2024
SCALE	AS NOTED
SHEET	A-131

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

OCTA

BUS WASH - BRAKE BUILDING DYNO ROOF DEMOLITION PLAN | 3/16" = 1'-0" | 1

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\01 ARCH\20X5002_A-231_NEW ROOF PLAN PLOT DATE: 2/1/2024 10:25:16 AM USER: DION.VAZQUEZ



KEYNOTES

1. NEW BUILT-UP ROOF - WITH SBS MODIFIED BITUMINOUS MEMBRANE COLD APPLICATION OVER NEW TAPPERED RIGID, ATTACH TAPPERED RIGID ATTACHED TO METAL DECK.
2. EXISTING CMU WALL BELOW TO REMAIN. PROTECT-IN-PLACE.
3. REFER TO STRUCTURAL SHEET S-221 FOR HIGH PERFOMANCE COATING AT EXISTING CANOPY.
4. REFER TO ELECTRICAL SHEET E-102 FOR LIGHTING SCOPE
5. CONTRACTOR TO PROTECT ALL EXISTING BUS WASH APPURTENCES, LIGHTING, FIRE PROTECTION, CONDUITS, AND (SUPPORT/SHORT) AS REQUIRED AND COORDINATE WITH OTHER TRADES.
6. EXISTING BUILDING 7 BUS BRAKE DYNO BAY (NIC) PROTECT-IN-PLACE.
7. EXISTING EQUIPMENT ROOM (NIC) PROTECT-IN-PLACE.
8. CONTRACTOR TO SEAL TIGHT DURING CONSTRUCTION.
9. EXISTING (FUEL-BRAKE-TIRE REPAIR) BUILDING 6 (NIC) PROTECT-IN-PLACE.
10. ROOF MOUNTED EXHAUST FAN, SEE DETAIL 6/A-105 AND COORDINATE WITH MECHANICAL SHEET M- 231 AND ELECTRICAL SHEET E-102 FOR ADDITIONAL INFORMATION.
11. EXISTING EXHAUST FAN TO REMAIN. (NIC)

LEGEND:

- EXISTING CANOPY TO REMAIN (PROTECT IN PLACE)
- BLDG 7 BUS WASH BAYS - NEW ROOF, NEW METAL DECK AND NEW JOIST.
- EQUIPMENT ROOM AND BRAKE DYNO BAY (NIC)
- EXHAUST FAN
- ROOF SLOPE
- ROOF HATCH

IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	–	PS&E

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA

BUS WASH - BRAKE DYNO BUILDING ROOF CONSTRUCTION PLAN

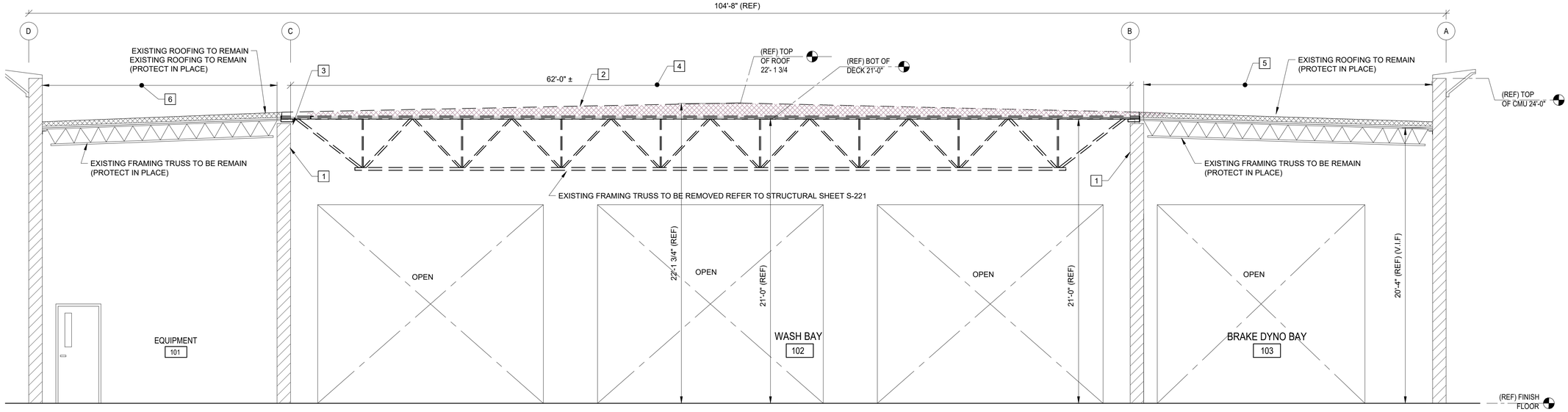
CONTRACTOR NO.	C-4-2093
DESIGN BY:	J.S.
DRAWN BY:	D.V.
CHECKED BY:	S.U.
DATE	02-09-2024
SCALE	AS NOTED
SHEET	A-231

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

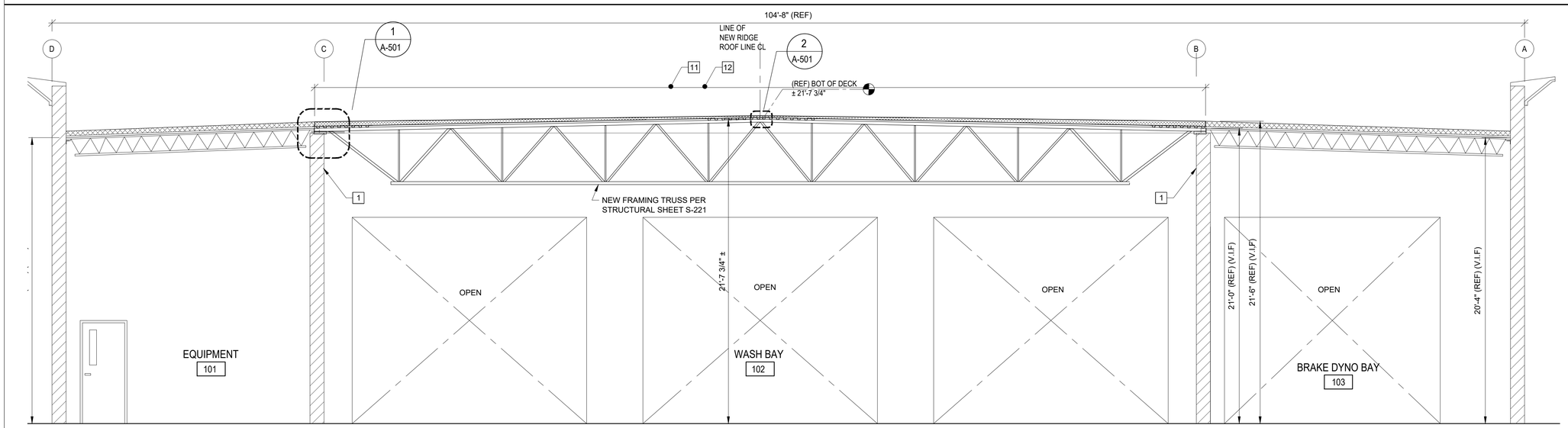
LICENSED ARCHITECT
JOSEPH SIEBERT
15573
REN. 7-31-25
STATE OF CALIFORNIA

OCTA

BUS WASH - BRAKE DYNO BUILDING ROOF CONSTRUCTION PLAN | 3/16" = 1'-0" | 1



DEMOLITION ROOF BUILDING SECTION | 1/4" = 1'-0" | 2



NEW ROOF BUILDING SECTION | 1/4" = 1'-0" | 1

DEMOLITION KEYNOTES

1. EXISTING CMU WALL BELOW TO REMAIN. PROTECT-IN-PLACE.
2. REMOVE EXISTING BUS WASH BAYS ROOF AS REQUIRED FOR STRUCTURAL ROOF TRUSS REMOVAL AND INSTALLATION.
3. REFER TO STRUCTURAL SHEET S-221 FOR STRUCTURE REPAIRS.
4. EXISTING BUILDING 7 BUS WASH BAYS.
5. EXISTING BUILDING 7 BUS BRAKE DYNO BAY (NIC)
6. EXISTING EQUIPMENT ROOM (NIC)
7. POWER CONDUITS, LIGHTING CONDUITS, AND WASH EQUIPMENT PIPING NOT SHOWN FOR CLARITY. REFER TO ELECTRICAL AND PIPING FOR ADDITIONAL INFORMATION.

KEYNOTES

11. NEW BUILT-UP ROOF, SEE SHEETS A-231 & A-501.
12. REFER TO STRUCTURAL SHEETS S-221 & S-300 FOR METAL DECK, ROOF TRUSS INSTALLATION, AND HIGH PERFOMANCE COATING.

LICENSED ARCHITECT
JOHN JOSEPH SILBER
15573
REN. 7-31-25
STATE OF CALIFORNIA

IDS
IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949.387.9800 FAX: 949.387.0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	--	PS&E

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA

BUS WASH - BRAKE DYNO BUILDING
DEMOLITION AND NEW ROOF SECTIONS

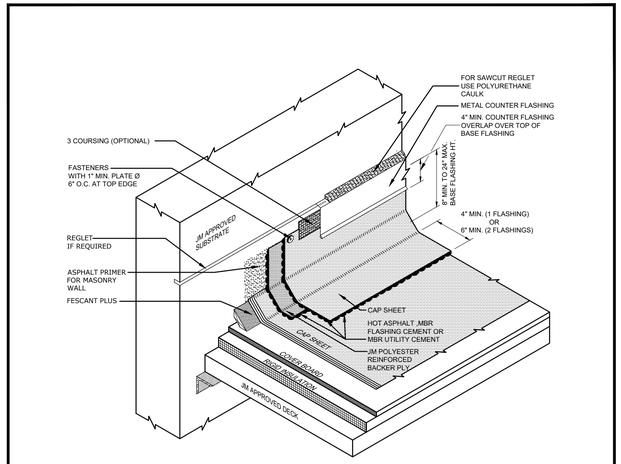
CONTRACTOR NO.	C-X-XXXX
DESIGN BY:	J.S.
DRAWN BY:	D.V.
CHECKED BY:	S.U.
DATE	02-09-2024
SCALE	AS NOTED
SHEET	A-301

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

OCTA

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\01 ARCH\20X5002_A-301_ROOF SECTIONS PLOT DATE: 1/30/2024 11:02:07 AM USER: DION.VAZQUEZ

ROOF POTHOLE @ COL. GRID "C" PHOTO | N.T.S. | 5



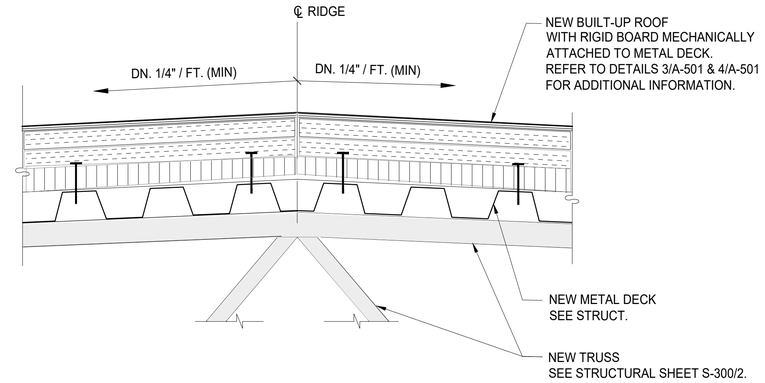
NOTES:

1. REFER TO JOHNS MANVILLE WEBSITE (www.jm.com) FOR MOST UP-TO-DATE INFORMATION.
2. JM POLYESTER REINFORCED BACKER PLY INCLUDES DYNABASE PR OR DYNALASTIC 180 S.
3. MASONRY SUBSTRATES REQUIRE PRIMING WITH ASPHALT PRIMER PRIOR TO BACKER PLY INSTALLATION. WOOD SUBSTRATES REQUIRE A MECHANICALLY FASTENED BACKER PLY FASTENED 9" O.C. IN BOTH DIRECTIONS.
4. METAL COUNTER FLASHING IS RECOMMENDED FOR ALL INSTALLATIONS AND IS REQUIRED FOR ALL GUARANTEES 15 YEARS OR LONGER. A 3 COURSING OF PERMAFLASH MAY BE USED TO SEAL THE TOP EDGE OF THE FLASHING ON 10 YEAR NDL'S IN LIEU OF METAL COUNTER FLASHING.
5. VERTICAL JOINTS ARE TO BE OVERLAPPED 4" MINIMUM FOR ALL APPLICATIONS. 3 COURSING WITH MBR UTILITY CEMENT AND FABRIC OR JM MBR FLASHING CEMENT IS RECOMMENDED ON ALL VERTICAL FLASHING LAPS AND INSIDE/OUTSIDE CORNERS EXTENDING PAST LEADING EDGE OF CANT STRIP.
6. ANY CARPENTRY, METAL WORK, OR MASONRY CONSTRUCTION SHOULD BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH LOCAL CODE REQUIREMENTS AND/OR PROJECT SPECIFICATIONS. THESE COMPONENTS SHOULD BE REVIEWED AND APPROVED BY A LICENSED DESIGN PROFESSIONAL.
7. PLEASE SEE BITUMINOUS FLASHING SPECIFICATIONS FOR A FULL DESCRIPTION OF INSTALLATION INSTRUCTIONS AND REQUIREMENTS WHICH ARE CONSIDERED A PART OF THIS DETAIL.

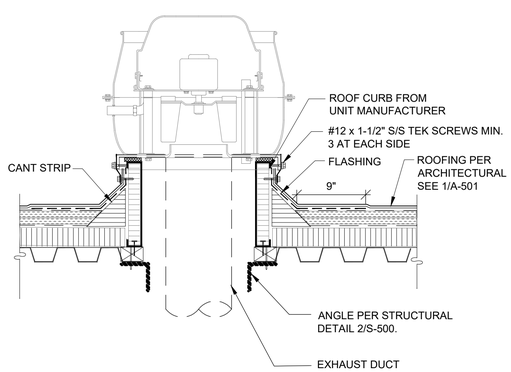
DRAWING NO.	BASE FLASHING FOR LOAD BEARING WALL W/ COUNTERFLASHING	
BIT-1 (LB) FLASHING WALL	MEMBRANE TYPE: BUR	Johns Manville is a manufacturer of commercial roofing products and offers this general conceptual information to you as a courtesy. This complimentary assistance is not to be used or relied upon by anyone as a substitute for professional engineering design and documentation required by building code, contract, or applicable law. By accepting these comments you agree they do not constitute any representations, endorsements of, or an assumption by Johns Manville of any liability for either the adequacy of the design of this building or any other material not supplied by Johns Manville.
SCALE: N.T.S / ISSUE DATE: 02-06-19	MAXIMUM GUARANTEE TERM:	

OR APPROVED EQUAL

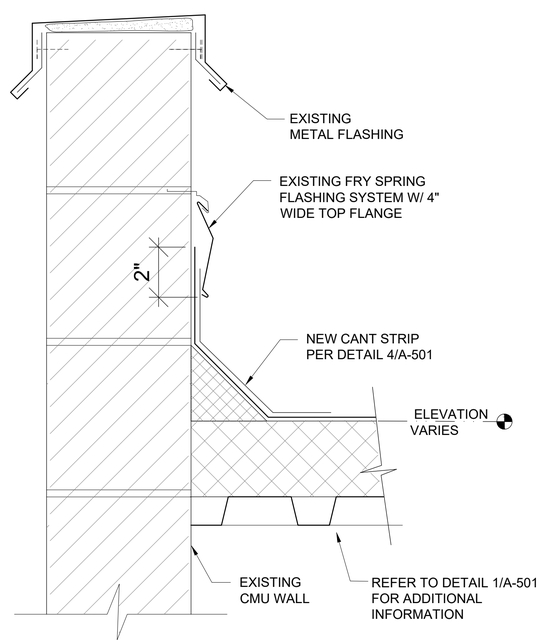
ROOF CANT DETAIL | N.T.S. | 4



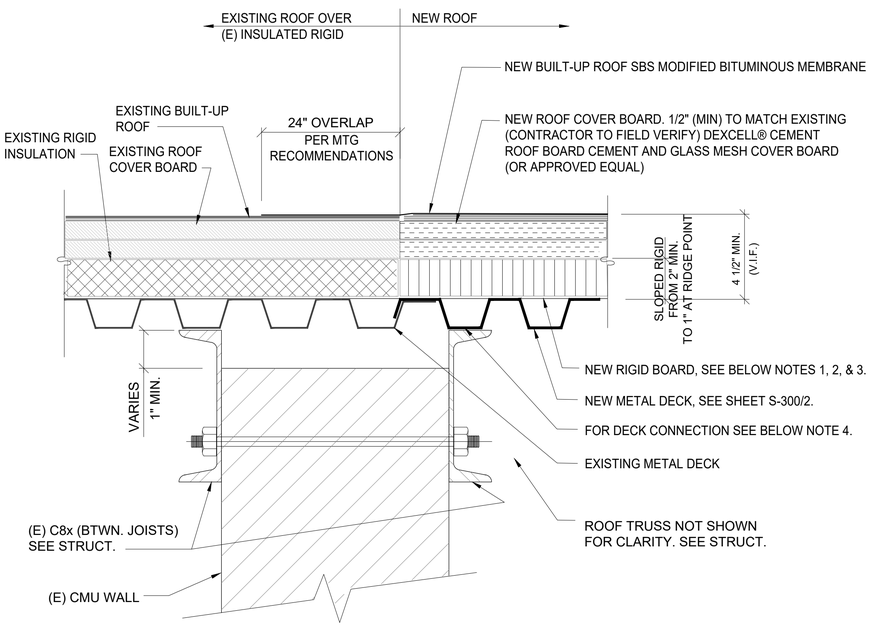
NEW ROOF RIDGE DETAIL | N.T.S. | 2



ROOF PENETRATION DETAIL | N.T.S. | 6



ROOF CANT DETAIL | N.T.S. | 3



NOTES:

1. RIGID BOARD SHALL BE ATTACHED TO METAL DECK PER MANUFACTURERS RECOMMENDATIONS.
2. RIGID BOARD WITH NO INSULATION RATING VALUE. FLAT & TAPERED ENRGY 3® POLYISOCYANURATE ROOF INSULATION (OR APPROVED EQUAL).
3. ROOF ASSEMBLY SHALL MEET 1 HOUR FIRE RATING.
4. REFER TO STRUCTURAL SHEET S-501/3 FOR EXISTING METAL DECK CONNECTION TO NEW METAL DECK.

NEW ROOF TO EXISTING ROOF CONNECTION DETAIL | N.T.S. | 1

LICENSED ARCHITECT
JOHN JOSEPH SILBER
C 15573
REN. 7-31-25
STATE OF CALIFORNIA

IDS GROUP
1 PETERS CANYON ROAD, SUITE 150
IRVINE, CA 92606
TEL. 949-387-8500 FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
-	2/13/24	PS&E	

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA
BUS WASH - BRAKE DYNO BUILDING
DETAILS

CONTRACTOR NO.	C-4-2093
DESIGN BY:	J.S.
DRAWN BY:	D.V.
CHECKED BY:	S.U.
DATE	02-09-2024
SCALE	AS NOTED
SHEET	A-501

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

OCTA

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\01 ARCH\20X5002_A-501_DETAILS PLOT DATE: 2/1/2024 11:10:03 AM USER: DION.VAZQUEZ

ABBREVIATIONS

@	AT	M.E.P.	MECHANICAL, ELECTRICAL AND PLUMBING
&	AND		
A.B.	ANCHOR BOLT	MEZZ.	MEZZANINE
ABV.	ABOVE	MFR.	MANUFACTURER
ADD'L. (ADDL.)	ADDITIONAL	MIN.	MINIMUM
ADJ.	ADJACENT	MISC.	MISCELLANEOUS
ALT.	ALTERNATE	MTL.	METAL
APPRX. (APPROX.)	APPROXIMATE(LY)		
ARCH.	ARCHITECT(URAL)		
ASD	ALLOWABLE STRESS DESIGN	(N)	NEW
		N.O.(#)	NUMBER
BLDG.	BUILDING	N.S.	NEAR SIDE
BLW.	BELOW	N.T.S.	NOT TO SCALE
BM.	BEAM		
B.O.C.	BOTTOM OF CONCRETE		
B.O.D.	BOTTOM OF DECK	O/C (O.C.)	ON CENTER
B.O.F.	BOTTOM OF FOOTING	O.D.	OUTSIDE DIAMETER
BOT. (B)	BOTTOM	O.H.	OPPOSITE HAND
BRCG.	BRACING	OPNG.	OPENING
BRDG.	BRIDGE (ING)	OPP.	OPPOSITE
BRG.	BEARING	O.W.J.	OPEN WEB JOIST
BTWN.	BETWEEN		
		PCF	POUNDS PER CU.FT.
		PL.	PLATE
CAMB. (C)	CAMBER(ED)	P.P.	PARTIAL-PENETRATION
CBC	CALIFORNIA BUILDING CODE		
CANT.	CANTILEVER(ED)	P.S.F.	POUNDS PER SQUARE FOOT
C.N.	CUBIC FEET (FOOT)	P.S.I.	POUNDS PER SQUARE INCH
C.I.P.	CAST-IN-PLACE		
C.I.D.H.	CAST-IN-DRILLED HOLE		
C.J.	CONTROL JOINT; CONSTRUCTION JOINT	QT.	QUANTITY
C.L. (℄)	CENTER LINE	RAD.(R)	RADIUS
CLG.	CEILING	REF.	REFERENCE
CLR.	CLEAR	REINF.	REINFORCEMENT (ING)
CMU	CONCRETE MASONRY UNITS	REQ'D. (REQD.)	REQUIRED
COL.	COLUMN	RF.	ROOF
CONC.	CONCRETE	R.T.	ROUGH OPENING
CONN.	CONNECTION		
CONST.	CONSTRUCTION	S.A.D.	SEE ARCHITECTURAL DRAWINGS
CONT.	CONTINUOUS		
CTR.	CENTER(ED)	SCH.	SCHEDULE
C.P.	CUBIC YARD	SEOR	STRUCTURAL ENGINEER OF RECORD
DBA	DEFORMED BAR ANCHOR	SEP.	SEPARATION
DBL.	DOUBLE	SHT.	SHEET
DEPT.	DEPARTMENT	SIM.	SIMILAR
DIA. (Ø)	DIAMETER	SKW.	SKEW(ED)
DIAG.	DIAGONAL	SMS	SHEET METAL SCREW
DIAPH.	DIAPHRAGM	S.O.G.	SLAB-ON-GRADE
DIM.	DIMENSION	SPEC.	SPECIFICATION
DN.	DOWN	SQ.	SQUARE
DO	DITTO (REPEAT)	S.S.	STAINLESS STEEL
DWG. (DWGS.)	DRAWING(S)	SSPC	THE SOCIETY FOR PROTECTIVE COATINGS (STEEL STRUCTURES PAINTING COUNCIL)
DWL.	DOWEL		
EA.	EACH		
E.F.	EACH FACE	STD.	STANDARD
E.J.	EXPANSION JOINT	STAGG.	STAGGER(ED)
EL.	ELEVATION	STIFF.	STIFFENER
ELEC.	ELECTRICAL	STIR.	STIRRUP
EMB.	EMBED(MENT)	STL.	STEEL
ENG.	ENGINEER	STRUC(T).	STRUCTURAL
EQ.	EQUAL	SUSP.	SUSPENDED
EQPT.	EQUIPMENT	SYMM.	SYMMETRICAL
EQUIV.	EQUIVALENT		
EXP.	EXPANSION	T&B	TOP AND BOTTOM
EXIST. (E)	EXISTING	TEMP.	TEMPORARY
EXT.	EXTERIOR	THK.	THICK(NESS)
		T.N.	
		T.O.	TOP OF
FDN.	FOUNDATION	T.O.C.	TOP OF CONCRETE
FIN.	FINISH(ED)	T.O.S.	TOP OF STEEL;
FLR.	FLOOR	T.O.W.	TOP OF WALL
F.O.C.	FACE OF CONCRETE	TRANS.	TRANSVERSE
F.O.M.	FACE OF MASONRY	TYP.	TYPICAL
F.O.W.	FACE OF WALL		
F.S.	FAR SIDE	U.N.G.	UNLESS OTHERWISE NOTED
FT. (')	FOOT (FEET)	UTL.	UTILITY
FTG.	FOOTING		
F.V.	FIELD VERIFY	VERT. (V)	VERTICAL
		V.I.F.	VERIFY IN FIELD
GA.	GAUGE		
GALV.	GALVANIZE(D)	W/	WITH
GRD.	GRADE	(W)	WIDE; WIDTH
GYP.	GYPSUM		
HDG	HOT DIP GALVANIZED		
HDR.	HEADER		
HGR.	HANGER		
HORIZ.	(H) HORIZONTAL		
H.S.	HEADED STUD		
H.S.B.	HIGH STRENGTH BOLT		
HT.	HEIGHT		
I.D.	INSIDE DIAMETER		
IN.	(") INCH(ES)		
INFO.	INFORMATION		
J-X	JOIST		
JT.	JOINT		
K	KIPS; 1000		
LAT.	LATERAL		
LB (#)	POUND		
L.F.	LINEAL FEET (FOOT)		
LLH	LONG LEG HORIZONTAL		
LLV	LONG LEG VERTICAL		
LRFD	LOAD AND RESISTANCE FACTOR DESIGN		
LT.WT.	LIGHT WEIGHT		
MAX.	MAXIMUM		
MFG.	MANUFACTURER		
M.B.	MACHINE BOLT		
MECH.	MECHANICAL		

STEEL DECK

1. STEEL DECK SHALL BE MANUFACTURED BY VERCO MANUFACTURING CO. (IAPMO ER-0217) OR APPROVED EQUAL.
2. STEEL DECK SHALL BE FORMED FROM STEEL PER ASTM A653 SS GRADE 33 (MIN.)
3. STEEL DECK SHALL BE HOT-DIP GALVANIZED.
4. FORM STEEL DECK UNITS IN LENGTHS TO SPAN 3 OR MORE SUPPORTS, WITH BUTTED OR NESTED 2" END LAPS, AND MINIMUM 2" END BEARING ON SUPPORTING MEMBERS UNLESS OTHERWISE NOTED.
5. PUDDLE WELDS TO SECURE STEEL DECK TO SUPPORTING MEMBERS SHALL BE 1/2" EFFECTIVE DIAMETER FUSION WELDS UNLESS OTHERWISE NOTED.
6. ALL WELDING SHALL CONFORM TO AWS AND SHALL BE PERFORMED BY CERTIFIED WELDERS USING E-70XX ELECTRODES.
7. ALL WELDS OF STEEL DECK SHALL BE TOUCHED UP WITH A ZINC-RICH PAINT.
8. STEEL DECK SOFFIT SHALL BE PAINTED IN THE FIELD PER SPECIFICATION SECTION 09 96 00. SEE DECK DETAILS ON SHEET S-501. INFILL PAINT GAPS BETWEEN STEEL DECK RIBS AND JOIST TOP CHORD PER DETAIL 9/S-501.
9. LAP NEW AND EXISTING STEEL DECK. SEE DETAILS 3 &12/ S-500 AND 3/ S-501.

SHOP DRAWINGS, SUBMITTALS AND REVIEW BY THE ENGINEER

1. SHOP DRAWINGS ARE NOT CONTRACT DOCUMENTS AND MAY NOT BE USED AS A BASIS FOR CONSTRUCTING THE WORK IN A MANNER DIFFERENT FROM WHAT IS SHOWN IN THE CONTRACT DOCUMENTS. THE PURPOSE OF THE SHOP DRAWING REVIEW BY THE ENGINEER IS TO HELP THE CONTRACTOR UNDERSTAND AND IMPLEMENT THE DESIGN SHOWN ON THE DRAWINGS AND DESCRIBED IN THE SPECIFICATIONS. IF DEVIATIONS, DISCREPANCIES OR CONFLICTS BETWEEN THE SHOP DRAWINGS AND THE CONTRACT DOCUMENTS ARE DISCOVERED EITHER PRIOR TO OR AFTER THE SHOP DRAWINGS ARE REVIEWED BY THE ENGINEER, THE CONTRACT DOCUMENTS SHALL CONTROL AND SHALL BE FOLLOWED.
2. SHOP DRAWINGS ARE REVIEWED BY THE ENGINEER SOLELY TO AID IN ASSESSING THE CONTRACTOR'S GENERAL CONFORMANCE WITH THE DESIGN REQUIREMENTS AND INTENT. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTABILITY, COMPATIBILITY WITH THE RELATED COMPONENTS OR ASSEMBLIES, DIMENSIONS, QUANTITIES, WEIGHTS OR GAUGES, AND THE LIKE. THE CONTRACTOR IS NOT RELIEVED FROM COMPLIANCE WITH THE CONTRACT DOCUMENTS, OR FROM ANY CODE OR OTHER LEGAL REQUIREMENTS. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONFIRMING AND COORDINATING ALL DIMENSIONS; FOR CONSTRUCTION MEANS & METHODS AND SAFETY PRECAUTIONS; AND FOR ANY DEVIATIONS FROM THE PLANS AND SPECIFICATIONS NOT CLEARLY IDENTIFIED BY THE ENGINEER.

STRUCTURAL STEEL

1. THE CONTRACTOR SHALL SUBMIT ALL STRUCTURAL STEEL AND MISCELLANEOUS STEEL SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.
2. MATERIAL TEST OR REPORTS FOR HOT-ROLLED STRUCTURAL SHAPES, PLATES, AND BARS SHALL BE MADE IN ACCORDANCE WITH ASTM A6. FOR SHEET MATERIAL, TEST SHALL BE MADE IN ACCORDANCE WITH ASTM A568. FOR TUBING AND PIPE, SUCH TEST SHALL BE MADE IN ACCORDANCE WITH REQUIREMENTS OF THE APPLICABLE ASTM STANDARDS.
3. STEEL MATERIALS SHALL CONFORM TO THE FOLLOWING, UNLESS OTHERWISE NOTED:
   A. ANGLES, PLATES AND BARS: ASTM A36 (Fy=36ksi, Fu=58ksi)
   B. THREADED RODS: ASTM A36
   C. NUTS: ASTM A563
   D. WASHERS: ASTM F436
4. ALL WELDING OF STEEL SHALL CONFORM TO AWS D1.1 AND SHALL BE PERFORMED BY AWS CERTIFIED WELDERS USING E-70XX LOW HYDROGEN MOISTURE RESISTING ELECTRODES UNLESS OTHERWISE NOTED.
5. USE THE MINIMUM SIZE OF WELDS IN ACCORDANCE WITH AISC MANUAL OF STEEL CONSTRUCTION AT STEEL TO STEEL JOINTS UNLESS A LARGER WELDING SIZE IS SPECIFIED ON THE PLANS.
6. DIAMETER OF BOLT HOLE SHALL BE $\frac{1}{16}$" LARGER THAN THE BOLT'S DIAMETER UNLESS OTHERWISE NOTED.
7. WHERE LENGTH OF WELDING IS NOT SHOWN, IT SHALL BE FULL LENGTH OF JOINT. ALL BUTT WELDS SHALL BE COMPLETE PENETRATION WELDS UNLESS OTHERWISE NOTED.
8. HOT-DIP GALVANIZE ALL STEEL, UNLESS OTHERWISE NOTED.
9. UNDER NO CIRCUMSTANCES SHALL DRAWINGS BE SCALED OR REFERENCE ELECTRONIC BUILDING INFORMATION BE USED TO DETERMINE ELEVATIONS OR DIMENSIONS.

DESIGN CRITERIA

DESIGN CONFORMS TO 2022 CBC (CALIFORNIA BUILDING CODE) THE EXISTING CORRODED 48LH ROOF JOISTS AND STEEL ROOF DECK ARE TO BE REPLACED OVER THE BUS WASH BAY, SUCH THAT THERE IS NO NET CHANGE TO THE EXISTING LATERAL FORCE RESISTING SYSTEM.

1. LIVE LOADS:
   A. ROOF: 20 PSF (REDUCIBLE)
2. DEAD LOADS: SEE DETAIL 2/ S-300.
3. WIND ANALYSIS: WIND LOADS ARE BASED ON CBC WITH THE FOLLOWING FACTORS:
   EXPOSURE B (URBAN OR SUBURBAN AREA)
   RISK CATEGORY II
   ASCE 7-16 WIND SPEED V = 95 MPH
4. SEISMIC ANALYSIS: EQUIVALENT LATERAL FORCE PROCEDURE

   SITE CLASS D-DEFAULT
   SEISMIC DESIGN CATEGORY D
   RISK CATEGORY II
   S_{DS} = 1.057 g
5. TEMPORARY WALL BRACING LOADS DETERMINED BY ASCE 37 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION". SEISMIC RECURRENCE 2-PERCENT IN ONE YEAR (50-YEAR EARTHQUAKE) S_S = 1.322 TIMES 0.2 = 0.264. F_a=1.2. S_{DS} = 0.32 WIND LOAD (FOR PERIOD OF SIX WEEKS TO ONE YEAR) = 0.8 TIMES 95 MPH = 76 MPH.

STEEL JOIST

1. ALL STEEL JOISTS SHALL COMPLY WITH THE LATEST VERSION OF THE STEEL JOIST INSTITUTE'S STANDARD SPECIFICATION FOR K-SERIES, LH-SERIES, AND DLH SERIES OPEN WEB STEEL JOISTS AND FOR JOIST GIRDERS (AMERICAN NATIONAL STANDARD SJI 100-2020).
2. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND STRUCTURAL CALCULATIONS TO THE SEOR FOR REVIEW PRIOR TO FABRICATION. ASD SERVICE DESIGN LOADS ARE DEFINED BY DETAIL 2/ S-300.
3. THE CONTRACTOR SHALL DETERMINE THE NUMBER OF ROWS AND TYPE OF JOIST BRIDGING NECESSARY FOR ERECTION STABILITY AND RESISTANCE TO NET WIND UPLIFT.
4. CONTRACTOR SHALL SURVEY AND FIELD MEASURE THE EXISTING CONDITIONS PRIOR TO FABRICATION. SEE JOIST SEAT DETAILS 3&9/S-501 LAP WITH (E) DECK PER DETAIL 7/S501.
5. THE STEEL JOISTS SHALL BE HOT-DIP GALVANIZED FOR PROTECTION ABOVE THE BUS WASH. MID-SPAN FIELD BOLTED SPLICE IS PRESUMED TO BE REQUIRED TO ALLOW FOR THIS.
6. HIGH-PERFORMANCE PAINT SYSTEM WILL BE APPLIED IN THE FIELD PER SPECIFICATION 09 96 00.

POST-INSTALLED ANCHORAGE IN MASONRY

1. POST-INSTALLED MECHANICAL ANCHORS (HOT-DIP GALVANIZED OR STAINLESS STEEL) INTO MASONRY SHALL BE SIMPSON STRONG BOLT 2 (IAPMO-ER-240), HILTI KWIK-BOLT TZ (ICC ESR-3785), OR EQUAL. INSTALL ANCHORS IN CONFORMANCE WITH THE ICC REPORT AND MANUFACTURER'S SPECIFICATIONS. COMPLY WITH ACI 530 AND CBC.
2. POST-INSTALLED ADHESIVE ANCHORS (HOT-DIP GALVANIZED OR STAINLESS STEEL) SHALL USE HILTI HIT HY200 V3 PER ICC ESR-4878, OR SIMPSON SET-XP (IAPMO ER-265) OR EQUAL FOR ROD DIAMETERS LESS THAN ¾ INCH.
3. ALL HOLES SHALL BE DRILLED PER MANUFACTURER'S RECOMMENDATIONS. CORE DRILLED HOLES ARE NOT PERMITTED.
4. CONTRACTOR SHALL DETERMINE LOCATION OF EXISTING REINFORCING STEEL PRIOR TO DRILLING FOR ANCHORS, AND DRILL THE ANCHOR HOLES TO CLEAR THE REINFORCING STEEL PER THESE NOTES. NO REINFORCING STEEL SHALL BE NICKED, CUT OR DAMAGED IN ANY WAY. DAMAGED REINFORCING WILL BE REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST. IF THE LOCATION OF ANCHORS MUST BE MOVED SLIGHTLY TO ACCOMMODATE THE LOCATION OF EXISTING REINFORCING STEEL, THE CONTRACTOR SHALL PREPARED A SLIGHTLY MODIFIED DESIGN OF THE ITEM TO BE ANCHORED AND SUBMIT TO THE ENGINEER FOR APPROVAL PRIOR TO FABRICATION. THE MODIFIED DESIGN SUGGESTED BY THE CONTRACTOR SHALL INVOLVE THE ABSOLUTE MINIMUM RELOCATION OF ANCHORS TO MEET THE DETAILS AND REQUIREMENTS HEREIN, AND SHALL BE BASED ON A TEMPLATE BY THE CONTRACTOR WHICH ACCURATELY PORTRAYS THE POSITION OF THE ANCHORS.
5. MAINTAIN A MINIMUM CLEARANCE OF 1-INCH BETWEEN THE REINFORCEMENT AND THE POST-INSTALLED ANCHOR.
6. ANCHORS SHALL BE INSTALLED A MINIMUM OF 1-3/8 INCH FROM ANY VERTICAL MORTAR JOINT.
7. ANCHOR LOCATIONS ARE LIMITED TO ONE PER MASONRY CELL, WITH A MINIMUM SPACING OF 8 INCHES ON CENTER.
8. EMBEDMENT SHALL BE MEASURED FROM THE OUTSIDE FACE OF THE CONCRETE MASONRY UNIT.
9. STAINLESS STEEL ANCHORS SHALL BE PROVIDED FOR EXTERIOR EXPOSURES.
10. CONTINUOUS SPECIAL INSPECTION IS REQUIRED.

ANCHOR DIAMETER (INCH)	MIN. EMBED "A" (INCH)	MIN. EDGE DISTANCE "B" (INCH)	TEST - MIN. TENSION LOAD (LBS)	TEST - MIN. TORQUE (FT-LBS) *
1/4"	1.125"	4"	242 LB	4 FT-LB
		12"	242 LB	
	2"	4"	864 LB	
		12"	864 LB	
3/8"	1.625"	4"	514 LB	15 FT-LB
		12"	546 LB	
	2.5"	4"	1252 LB	
		12"	1252 LB	
1/2"	2.25"	4"	1004 LB	20 FT-LB
		12"	1066 LB	
	3.5"	4"	1448 LB	
		12"	1448 LB	
5/8"	2.75"	4"	1302 LB	65 FT-LB
		12"	1384 LB	
	4"	4"	1998 LB	
		12"	2070 LB	
3/4"	3.25"	4"	1658 LB	120 FT-LB
		12"	1658 LB	
	4.375"	4"	2632 LB	
		12"	2632 LB	

* ANCHORS MUST ATTAIN SPECIFIED TORQUE WITHIN ONE-HALF TURN OF THE NUT.

11. CONTRACTOR SHALL BE RESPONSIBLE FOR SPECIAL INSPECTIONS PER CBC 1704.4. TEST POST-INSTALLED ANCHORS IN ACCORDANCE WITH THE CRITERIA SET FORTH IN THE ICC ESR REPORT OR IAPMO-ER REPORT.

EXISTING DRAWINGS

1. EXISTING RECORD DRAWINGS DATED 10/11/2006 BY BOYLE ENGINEERING CORPORATION (JOB # C-0-0917) WERE PROVIDED BY OCTA. A PORTION OF THE DRAWINGS ARE RELEVANT FOR THIS BUILDING REPAIRS AT SANTA ANA BUS BASE PROJECT, AND INCLUDE STRUCTURAL DRAWINGS 7S-1 TO 7S-4 AND DS-1 TO DS-4.

SHORING

1. THE EXISTING ROOF JOISTS HAVE TEMPORARY SHORING INSTALLED BY OCTA UNDER A SEPARATE CONTRACT. AFTER DECONSTRUCTION OF THE EXISTING ROOF JOISTS AND ROOF DECK, THE CONTRACTOR SHALL REMOVE THE EXISTING OCTA-OWNED TEMPORARY ROOF SHORING. THE CONTRACTOR SHALL DELIVER/RETURN THIS SHORING TO A SALVAGE/RECYCLING YARD TO BE DETERMINED BY MUTUAL AGREEMENT BETWEEN OCTA AND THE CONTRACTOR. ALL SALVAGE AND/OR RECYCLING COST CREDITS SHALL BE RETURNED TO OCTA.
2. SEE DETAIL 1/ S-300 FOR TEMPORARY WALL LATERAL BRACING REQUIREMENTS PRIOR TO DECONSTRUCTION.
3. THE EXISTING ROOF SUPPORTED BUS WASH BAYS CONDUITS, PIPES, AND RELATED ITEMS WILL GENERALLY REQUIRE TEMPORARY SHORING BY THE CONTRACTOR TO ALLOW FOR THE EXISTING JOISTS TO BE DECONSTRUCTED AND REPLACED WITH NEW JOISTS. SEE PLAN 5/ S-503.
4. BIDDERS ARE ENCOURAGED TO ATTEND A PRE-BID JOB WALK TO OBSERVE THE EXISTING CONDITIONS AND ITEMS REQUIRING TEMPORARY SHORING AND RE-SUPPORT FROM THE NEW ROOF FRAMING ABOVE THE BUS WASH BAYS.

STRUCTURAL STEEL WELDING

1. ALL WELDING SHALL BE IN CONFORMANCE WITH THE AWS D1.1.
2. ALL WELDING MUST BE APPROVED BY AN AWS CERTIFIED INSPECTOR APPROVED BY OCTA.
3. ALL WELDING OF STEEL SHALL CONFORM TO AWS D1.1 AND SHALL BE PERFORMED BY AWS CERTIFIED WELDERS USING E-70XX LOW HYDROGEN MOISTURE RESISTING ELECTRODES UNLESS OTHERWISE NOTED.
4. USE THE MINIMUM SIZE OF WELDING IN ACCORDANCE WITH AISC MANUAL OF STEEL CONSTRUCTION AT STEEL-TO-STEEL JOINTS UNLESS A LARGER WELDING SIZE IS SPECIFIED ON THE PLANS.
5. WHERE LENGTH OF WELDING IS NOT SHOWN, IT SHALL BE FULL LENGTH OF JOINT. ALL BUTT WELDS SHALL BE COMPLETE PENETRATION WELDS UNLESS OTHERWISE NOTED.
6. THE CONTRACTOR SHALL PROVIDE WELDING PROCEDURE SPECIFICATION (WPS) AND DETAILED SEQUENCE OF WELDING SKETCH FOR REVIEW PRIOR TO STARTING FABRICATION. THE SEQUENCE OF WELDING SHALL BE PLANNED TO MINIMIZE LOCKED IN STRESSES AND DISTORTION. EACH WPS SHALL BE STAMPED WITH AN AWS INSPECTOR'S STAMP INDICATING THAT INSPECTOR'S CERTIFICATION THAT THE WPS CONFORMS TO AWS D1.1 AND ALL REQUIREMENTS SET FORTH IN THE DRAWINGS AND SPECIFICATIONS. EACH WPS SHALL BE FORMATTED TO FIT ON LETTER SIZED PAPER BUT SHALL BE SUBMITTED ON THE UPPER PORTION OF LEGAL SIZED PAPER ALLOWING FOR AWS INSPECTOR, CONTRACTOR REVIEW, AND DESIGNER REVIEW STAMPS TO BE PLACED ON THE BLANK BOTTOM PORTION OF EACH LEGAL SIZED SHEET.
7. COMPLETE PENETRATION GROOVE WELDS SHALL HAVE A FILLER METAL WITH CHARPY V-NOTCH TOUGHNESS OF 20 FT/LBS AVERAGE AT -20 DEGREES FAHRENHEIT.
8. ALL COMPLETE AND PARTIAL PENETRATION WELDS WHICH ARE EXPOSED TO VIEW SHALL BE GROUND SMOOTH AND FLUSH WITH FINISH SURFACE OF STEEL. HOLES SHALL BE FILLED WITH WELD METAL AND SMOOTHED BY GRINDING OR FILING.
9. FINISH GROOVE PREPARATION THERMAL CUTS BY GRINDING.
10. WELDS SHALL BE TERMINATED AT THE END OF A JOINT IN A MANNER THAT WILL ENSURE SOUND WELDS. THIS SHALL BE DONE BY USE OF EXTENSION BARS AND RUN OFF TABS IF NECESSARY.
11. TO ASSURE THE PROPER AMPERAGE AND VOLTAGE OF THE WELDING PROCESS, A HAND HELD CALIBRATED AMP AND VOLT METER SHALL BE USED. AMPERAGE AND VOLTAGE SHALL BE MEASURED AT THE ARC WITH THIS EQUIPMENT. TRAVEL SPEED AND ELECTRODE STICK OUT SHALL BE VERIFIED TO BE IN COMPLIANCE WITH THE ELECTRODE MANUFACTURER'S RECOMMENDATIONS AND WITH THE APPROVED WELDING PROCEDURE SPECIFICATION.

REGISTERED PROFESSIONAL ENGINEER
JOHN L. HILTON
No. 3680
STRUCTURAL
STATE OF CALIFORNIA
DATE SIGNED: 2-09-24

IDS GROUP
IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20#050.02

MARK	DATE	BY	REVISIONS
	2/13/24	I	PSQE

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA
GENERAL NOTES

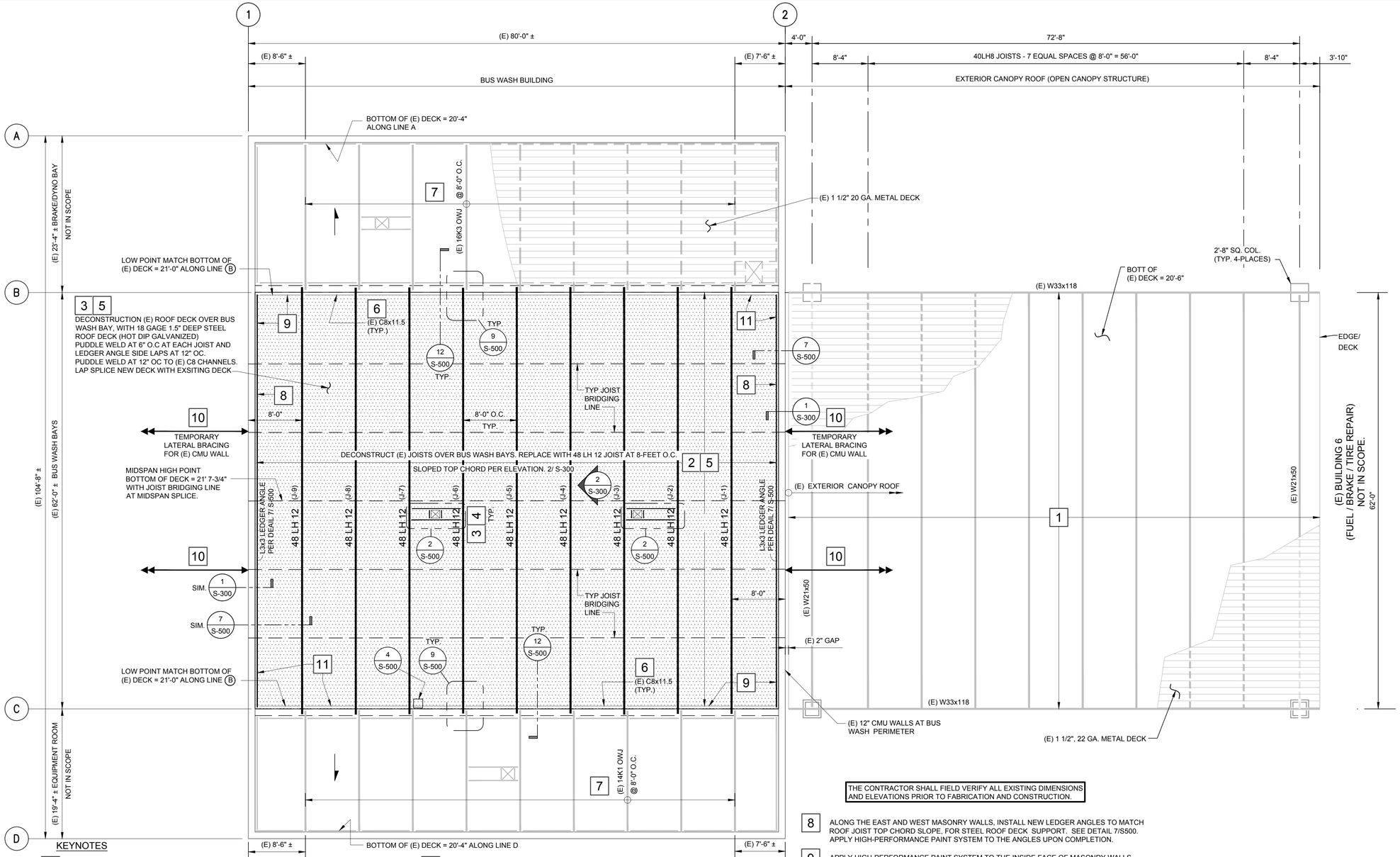
CONTRACTOR NO.	C-4-2093
DESIGN BY:	SU
DRAWN BY:	CB
CHECKED BY:	JR
DATE	02-09-2024
SCALE	NONE
SHEET	S-001

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

OCTA

IDS GROUP - FILE LOCATION: \\IDS-FS1\SHARED\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\03 STRUCT\S-1_S001_GENERAL NOTES PLOT DATE: 2/5/2024 2:54:05 PM USER: CALI.NGUYEN

IDS GROUP - FILE LOCATION: \\IDS-FS1\SHARED\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\03 STRUCT\S-1_S221_ROOF FRAMING PLAN PLOT DATE: 9/10/2021 5:52:45 PM USER: CALI.NGUYEN



THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND ELEVATIONS PRIOR TO FABRICATION AND CONSTRUCTION.

KEYNOTES

1. EXTERIOR CANOPY ROOF (OPEN CANOPY STRUCTURE): PROTECT ALL EQUIPMENT IN PLACE, UNLESS NOTED OTHERWISE BY THE CONTRACT DRAWINGS. CONTRACTOR SHALL SUBMIT WORK PHASING PLAN TO OCTA FOR REVIEW AND ACCEPTANCE, AS THE (E) BUILDING 6 (FUEL / BRAKE / TIRE REPAIRS, EAST OF THE REPAIRS PROJECT) SHALL REMAIN OPERATIONAL DURING THE BUILDING REPAIRS PROJECT. SEE PHOTO SHEET S-605. FIELD INSPECT (E) JOIST PANEL POINT CONNECTIONS FOR CORROSION DAMAGE. MARK AND NOTIFY OCTA WHERE CORROSION DAMAGE IS OBSERVED. SURFACE PREPARATION AND HIGH-PERFORMANCE PAINT SYSTEM PER SPECIFICATION 09 96 00.

2. PROTECT EXISTING EQUIPMENT IN PLACE, UNLESS NOTED OTHERWISE BY THE ELECTRICAL, MECHANICAL OR ARCH'L DRAWINGS. SEE PLAN 5/ S-503 FOR SCHEMATIC LAYOUT OF (E) ROOF SUPPORTED M.E.P LINES.

3. ABOVE THE BUS WASH BAYS, PERFORM CONTROLLED DEMOLITION & DECONSTRUCTION OF THE EXISTING ROOF JOISTS AND ROOF DECK, CONTRACTOR SHALL REINFORCE DAMAGED EXISTING JOIST PANEL POINT CONNECTIONS AS REQUIRED PRIOR TO HOISTING FOR REMOVAL. NOTE THERE IS (E) SHORING INSTALLED BY OCTA FOR THE (E) JOISTS. AFTER DEMOLITION COMPLETED, THE CONTRACTOR SHALL DECONSTRUCT OCTA'S EXISTING ROOF SHORING AND DELIVER TO RECYCLE/SALVAGE FACILITY (ACCEPTABLE TO OCTA) FOR COST/CREDIT RESIDUAL VALUE PAYABLE TO OCTA. SEE KEYNOTE 10 AND DETAIL 1/S-300 FOR TEMP WALL BRACING.

4. BUS WASH BAYS. SEE DETAIL 2/S-300. INSTALL REPLACEMENT 48LH ROOF JOISTS WITH JOIST BRIDGING LINES PER THE JOIST MFG AS NECESSARY FOR ERECTION STABILITY AND WIND LOAD UPLIFT RESISTANCE. FIELD BOLTED SPLICE JOINTS AT MIDSPAN WITH JOIST BRIDGING ALONG SPLICE LINE. SPLICE INTENDED TO ENABLE HOT -DIP GALVANIZING OF THE JOISTS IN A GALVANIZING SHOP. FIELD APPLY HIGH PERFORMANCE PAINT SYSTEM PER SPECIFICATION 09 96 00 INCLUDING TO ALL JOISTS AND TO MISCELLANEOUS STRUCTURAL STEEL PERIMETER ANGLES/CHANNELS, BOLTS, WELDS, CLIPS AND BRIDGING.

5. BUS WASH BAYS. INSTALL NEW STEEL ROOF DECK AS NOTED BY THE TYPICAL DETAILS ON SHEET S-501. HOT-DIP GALVANIZE IN THE SHOP. FIELD APPLY HIGH PERFORMANCE PAINT SYSTEM PER SPECIFICATION 09 96 00. SEE ARCHITECTURAL DRAWINGS FOR REPLACEMENT ROOFING SYSTEM ABOVE AND MATING WITH EXISTING ROOF ALONG LINES B & C. REFER TO MECHANICAL & ARCHITECTURAL DRAWINGS FOR LOCATION OF ROOF VENTS, AND DETAIL 2/ S-500 FOR OPENING FRAMING.

6. INSPECT THE CONDITION OF THE C8 CHANNELS AND BOLTS INSIDE THE BUS WASH BAYS ONLY, AS THESE ARE REQUIRED FOR WIND AND SEISMIC LOAD TRANSFER. SEE SECTIONS 3/ S-500 &12/ S-500. APPLY HIGH-PERFORMANCE PAINT SYSTEM TO THESE C8 (ALONG SOUTH SIDE OF LINE B AND NORTH SIDE OF LINE C) PER SPECIFICATION 09 96 00.

7. MAINTAIN (E) ROOFING SYSTEM OVER EQUIPMENT ROOM AND BRAKE DYNO BAY. MAINTAIN OCTA ACCESS TO THESE SPACES.

8. ALONG THE EAST AND WEST MASONRY WALLS, INSTALL NEW LEDGER ANGLES TO MATCH ROOF JOIST TOP CHORD SLOPE, FOR STEEL ROOF DECK SUPPORT. SEE DETAIL 7/S500. APPLY HIGH-PERFORMANCE PAINT SYSTEM TO THE ANGLES UPON COMPLETION.

9. APPLY HIGH-PERFORMANCE PAINT SYSTEM TO THE INSIDE FACE OF MASONRY WALLS INCLUDING ANY MISCELLANEOUS (E) STEEL MEMBERS ALONG THE CMU WALLS (REFERENCE SAMPLE PHOTO 2/ S-604) FACING THE BUS WASH SPACE. REFURBISH THE (E) STAINLESS STEEL WALL PANELS PER KEYNOTE 11, BUT DO NOT PAINT.

10. PRIOR TO REMOVING THE EXISTING STEEL ROOF DECK, INSTALL TEMPORARY LATERAL OUT-OF-PLANE BRACING FOR EAST AND WEST CMU WALLS . SEE DETAIL 1/ S-300. ALIGN THE BRACE AT/NEAR THE CENTER OF WALL DIRECTLY ABOVE THE WALL JAMBS IN-BETWEEN THE BUS WASH BAYS WALL OPENINGS. THE ASSOCIATED BRACE SYMBOL ⟷ IS NOT INTENDED TO INDICATE THE SCALE.

11. S.S. WALL PANELS. AT THE INSIDE FACE OF THE BUS WASH BAYS PERIMETER, INSTALL JOINT SEALANT AT ALL STAINLESS STEEL WALL PANEL JOINTS ALONG LINES B & C (PHOTO 9/ S-601), INCLUDING THE TOP JOINT AT THE MASONRY WALL AND THE BOTTOM JOINT AT THE CONCRETE SLAB ON GRADE. BEYOND THE S.S. WALL PANELS AND ALONG LINES 1 & 2, INSTALL JOINT SEALANT WHERE THE MASONRY WALLS MEET THE CONCRETE SLAB ON GRADE. SEE SPECIFICATION SECTION 07 92 13 FOR SEALANT TYPE. REFURBISH THE (E) S.S. WALL PANELS WITH THE INTENT OF REMOVING VISIBLE STAINS AND DISCOLORATIONS BY CLEANING WITH A NON-ABRASIVE CLEANER SUCH AS 3M STAINLESS STEEL CLEANER AND POLISH (OR EQUIVALENT). FOLLOW THE RECOMMEDATIONS OF THE CLEANER MANUFACTURER. FOR ADDITIONAL INFORMATION, REFER TO ASTM STP538-EB "CLEANING STAINLESS STEEL", AND "THE CARE AND CLEANING OF STAINLESS STEEL" BY SSINA (STAINLESS STEEL INDUSTRY OF NORTH AMERICA).

SCALE: 1/8"=1'-0"
8 4 0 8 16
SCALE IN FEET

ROOF FRAMING PLAN | 1/8"=1'-0" | 1

IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	--	PS&E

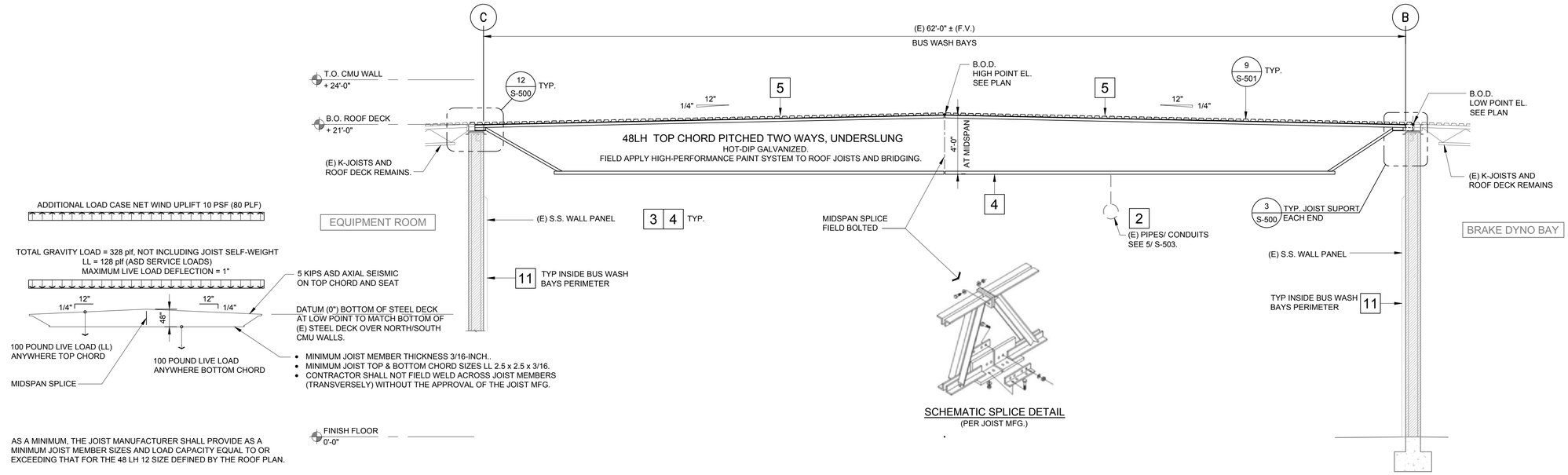
BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA
ROOF FRAMING PLAN

CONTRACTOR NO.	C-4-2093
DESIGN BY:	SU
DRAWN BY:	CN
CHECKED BY:	JR
DATE	02-09-2024
SCALE	AS NOTE
SHEET	S-221

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

REGISTERED PROFESSIONAL ENGINEER
JAMES T. HILLIER
No. 3680
STRUCTURAL
STATE OF CALIFORNIA
DATE SIGNED: 2-09-24

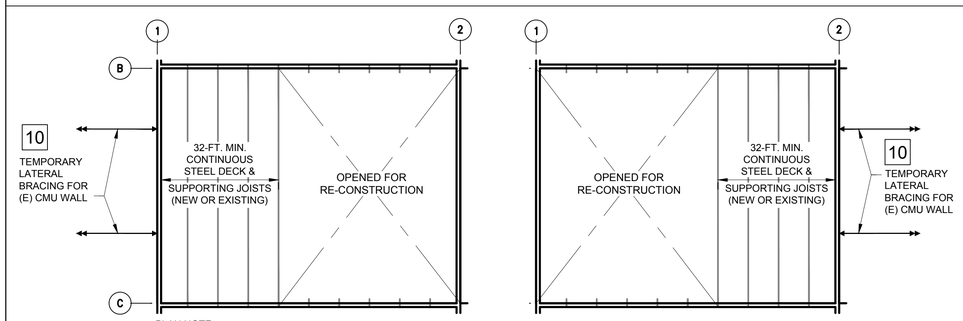
OCTA



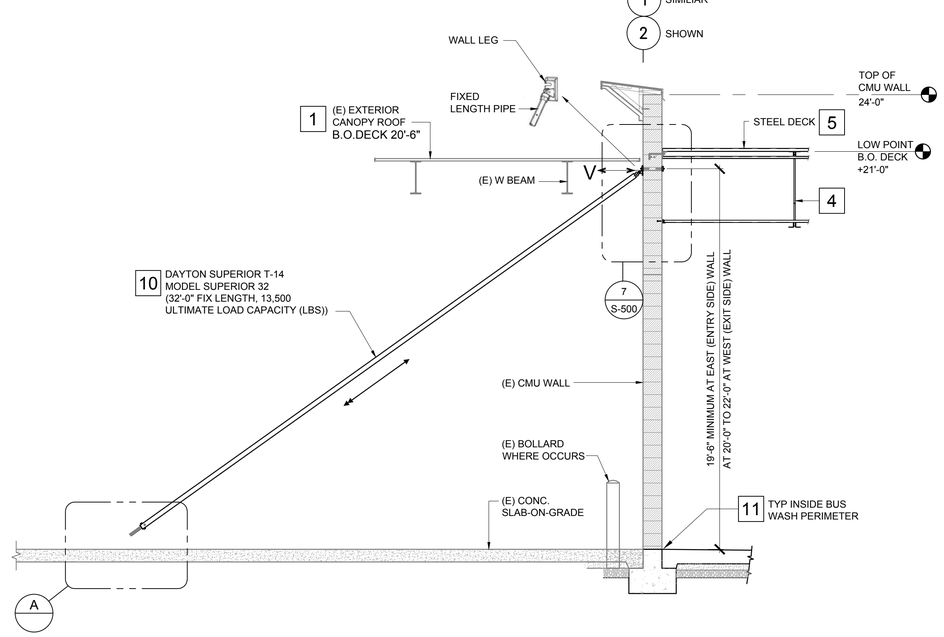
BUS WASH BAYS ROOF JOIST DETAIL | 1/4" = 1'-0" | 2

SHEET NOTE:

SEE PLAN S-221 FOR KEYNOTES



PLAN NOTE:
CONTRACTOR'S OPTION TO REDUCE TOTAL NUMBER OF WALL BRACES: SEQUENTIALLY DEMOLISH EXISTING ROOF CONCURRENT WITH CONSTRUCTION OF REPLACEMENT ROOF JOISTS AND ROOF DECK. TEMPORARY BRACING FOR EAST OR WEST CMU WALL ONLY REQUIRED WHEN LESS THAN FOUR ROOF JOISTS SUPPORTING 32 FOOT OF STEEL ROOF DECK DIAPHRAGM ATTACHING TO THE CMU WALL IN QUESTION.



DAYTON SUPERIOR
Superior 32 (B12A / B32R13R Brace)
TECHNICAL DATA SHEET

DESCRIPTION
The Superior 32 (B12A) Super Tie-up Wall Braces are all steel, heavy duty wall braces made out of 5.5" diameter tube.

If you require an extension for your job, a 5 or 10 foot pipe brace extension is available.

A Pipe-Brace Coupler can also be purchased to connect two braces for more intense jobs.

APPLICATION
The Superior 32 (B12A) Super Brace is designed to quickly and easily align and brace tilt up wall panels.

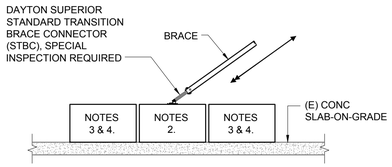
FEATURES
- 32' long with a fixed length allowing for +/- 9" of adjustability.
- Maximum capacity is 13,500 lbs.
- Note: the ultimate capacity of the bracing systems is dependent upon the wall anchorage system used to connect the braces to the wall panels. Contractor's option to use less braces and should always be verified prior to installation.

TECHNICAL DATA

Brace Type	Part #	Description	Max Capacity Lbs	Weight Lbs	Price Each
32' Fixed Brace (Extension Sold Separately)	14-0000	Fixed 32' Brace w/ 2" Adjustability	13,500	130	$1,000
Extension Sold Separately					
Extension Pipe Brace 10'	14-0010	Fixed 10' Brace w/ 2" Adjustability	13,500	50	$700
Extension Pipe Brace 5'	14-0005	Fixed 5' Brace w/ 2" Adjustability	13,500	25	$700
Coupler Pipe Brace	14-0020	Fixed 5' Brace w/ 2" Adjustability	13,500	50	$700

RELATED PRODUCTS
- T14 Extension
- Superior 32HS (B12HS) Extension
- Superior 32-HS (B12HS) Extension
- Superior 32-HS-R (B12) Extension
- T20 X Pipe Brace Extension for the Superior 32 (B12 & B12X)
- T20 Pipe Brace Extension Coupler for the Superior 32 (B12 & B12X)

Part #	Part Description	Price
14-0000	Superior 32 (B12A/B32R13R) Fixed Round Brace	$1,000
14-0010	Extendable Brace: Superior 32 + 10 Extension (Extension Sold Separately)	$700
14-0005	Extendable Brace: Superior 32 + 5 Extension (Extension Sold Separately)	$700
14-0020	Extendable Brace: Superior 32 + 10 + 5 Extension (Extension Sold Separately)	$700
14-0040	Extendable Brace: Superior 32 + 10 + 10 (Extension Sold Separately)	$700
14-0030	Extendable Brace: Superior 32 + 20 Extension (Extension Sold Separately)	$700
14-0050	T14 X Pipe Brace Extension for Superior 32 (B12A/B12X Brace)	$0
14-0060	T20 X Pipe Brace Extension for Superior 32 (B12A/B12X Brace)	$0
14-0070	T20 Coupler for Superior 32 (B12A/B12X Brace)	$0



NOTES:
1. CONTRACTOR'S OPTION TO PROVIDE PRECAST CONCRETE DEADMEN ASSEMBLY.
2. MINIMUM 8000 POUND BLOCK CONNECTED TO BRACE FOR UPLIFT RESISTANCE.
3. BRACE HORIZONTAL COMPONENT OF 8000 POUNDS SHALL BE RESISTED IN FRICTION BY ADDITIONAL PRECAST CONCRETE DEADMEN IN FRONT OF AND BEHIND THE UPLIFT BLOCK.
4. ASSUMING A CONCRETE TO CONCRETE FRICTION COEFFICIENT OF 0.8, WITH A 25-PERCENT REDUCTION. FOR WET CONDITIONS, PLUS A 1.25 FACTOR OF SAFETY. PARALLEL TO THE BRACE, THIS WILL REQUIRE 16,700 POUNDS IN FRONT OF AND BEHIND THE UPLIFT BLOCK.
5. CONTRACTOR SHALL SUBMIT PROPOSED PRECAST DETAILS TO THE SEOR FOR REVIEW AND ACCEPTANCE.

A PRECAST CONCRETE DEADMEN ANCHORAGE

V = ULTIMATE (LRFD) HORIZONTAL LOAD 8000 POUNDS SEISMIC, WHICH IS EQUIVALENT TO 5600 POUNDS SERVICE UNFACTORED (ASD) LOAD SEISMIC.
SEISMIC LOADING CONTROLS OVER WIND LOADING.
TEMP. BRACE LOADS DETERMINED BY ASCE 37 "DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION.

TEMPORARY WALL BRACE DETAILS | 1/4" = 1'-0" | 1

REGISTERED PROFESSIONAL ENGINEER
JAMES T. HILLIARD
No. 3680
STRUCTURAL
STATE OF CALIFORNIA
DATE SIGNED: 2-09-24

IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	-	PS&E

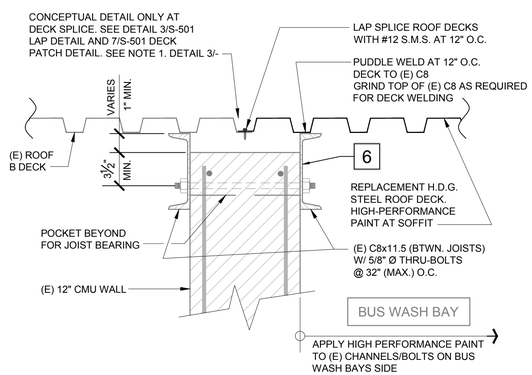
BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA
JOIST ELEVATION AND SECTION

CONTRACTOR NO.	C-4-2093
DESIGN BY:	SU
DRAWN BY:	CN
CHECKED BY:	-
DATE	02-09-2024
SCALE	AS NOTE
SHEET	S-300

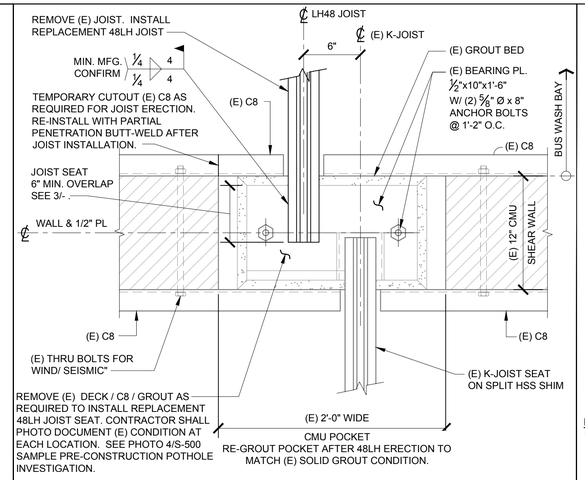
550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA

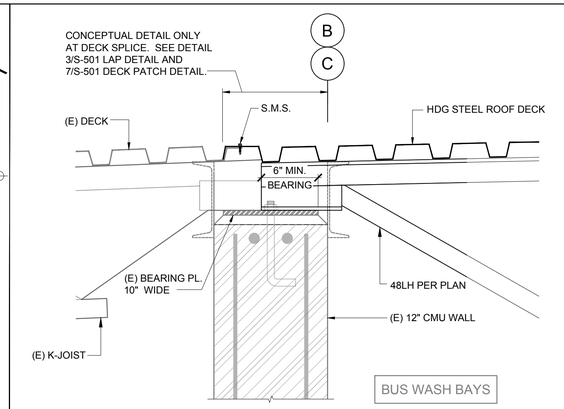
IDS GROUP - FILE LOCATION: \\IDS-FS1\SHARED\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\03 STRUC\7S-1_S300_ TRUSS ELEV PLOT DATE: 9/10/2021 5:52:45 PM USER: CALI NGUYEN



SECTION ALONG NORTH & SOUTH BUS WASH WALLS | N.TS. | 12

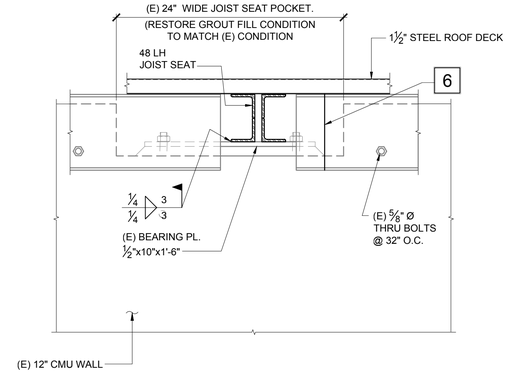


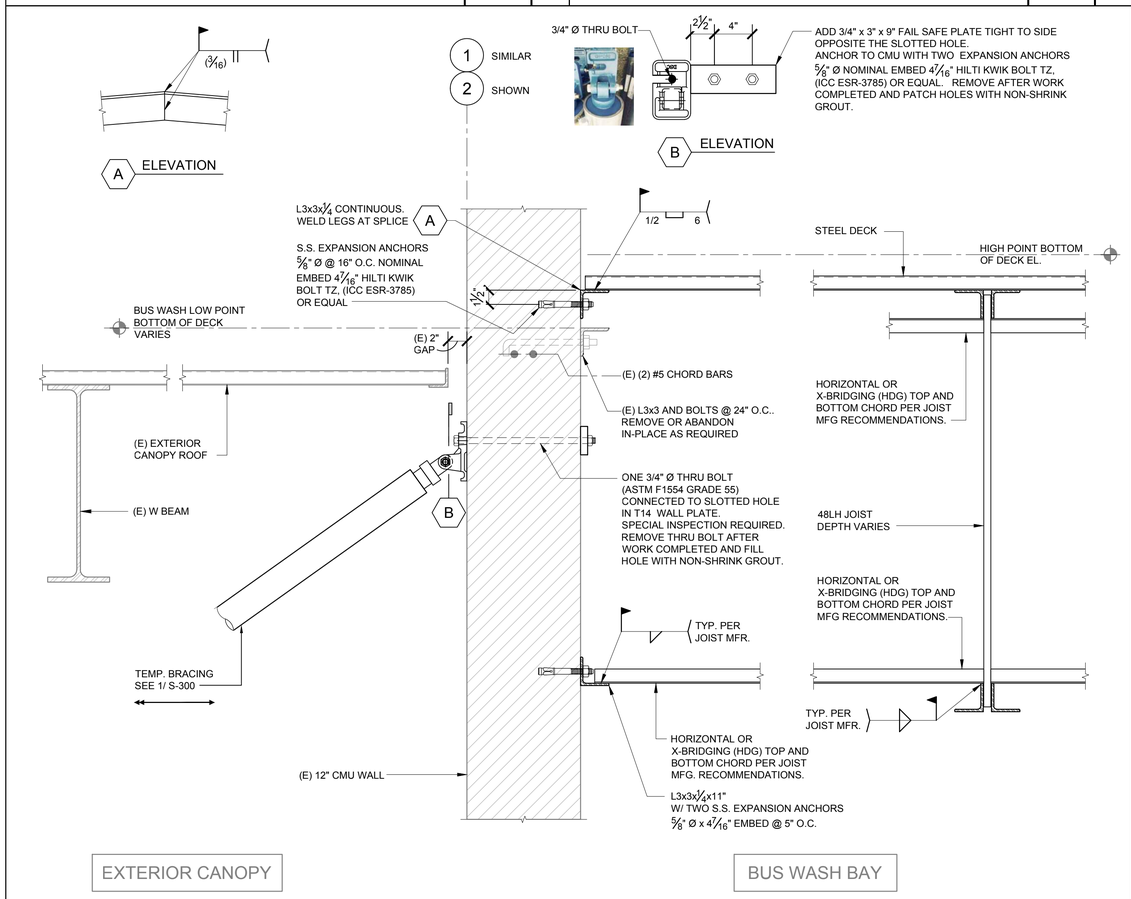
JOIST SEAT PLAN DETAIL | N,T,S, | 9



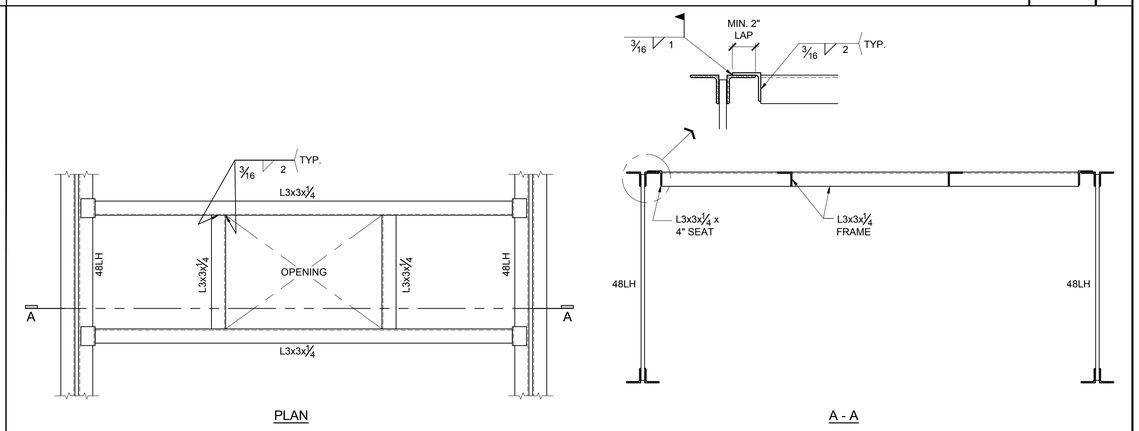
NOTE:
1. FIELD VERIFY THE EXISTING AND NEW STEEL DECKS ARE LAPPED ACROSS THE CMU WALLS ALONGLINES B & C. AT THE 48LH JOIST SEATS, PATCH THE HOLE IN THE STEEL DECK PER DETAIL 7/S-501. FIELD INSPECT THE LAP OF THE NEW TO EXISTING ROOFING (DETAIL 1/A-501). IT IS CRITICAL TO PREVENT MOISTURE PENETRATION DOWN INTO THE (E) CMU WALL.

NEW 48LH JOIST SEAT ELEVATION | N.TS. | 3





BUS WASH BAY EDGE ANGLE/ BRIDGING | N.TS. | 7



NOTE:
1. DIMENSIONS AND LOCATIONS PER ARCH'L/ MECHANICAL PLANS

TYPICAL ROOF OPENING FRAMING | N.TS. | 2

SHEET NOTE:
SEE PLAN S-221 FOR KEYNOTES

APPLY HIGH PERFORMANCE PAINT TO ALL STEEL, BOLTS, WELDS. TYPICAL THIS SHEET.

POTHOLE @ (E) JOIST SEAT | N.TS. | 4

REGISTERED PROFESSIONAL ENGINEER JAMES I. RILEY No. 9680 STRUCTURAL STATE OF CALIFORNIA
DATE SIGNED: 2-09-24

IDS GROUP
IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	I	PS0&E

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA
SECTIONS AND DETAILS

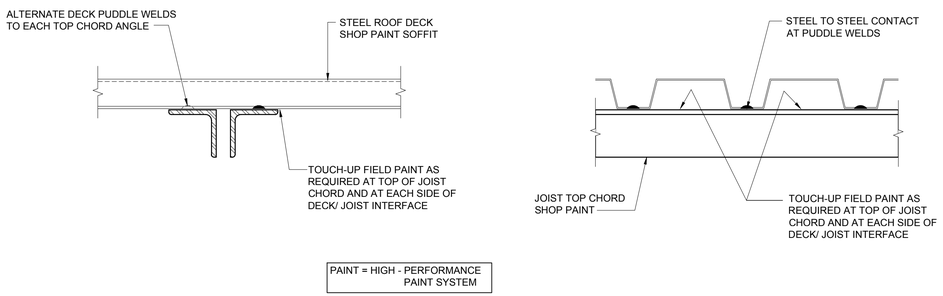
CONTRACTOR NO.	C-4-2093
DESIGN BY:	SU
DRAWN BY:	CN
CHECKED BY:	JR
DATE	02-09-2024
SCALE	AS NOTE
SHEET	S-500

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

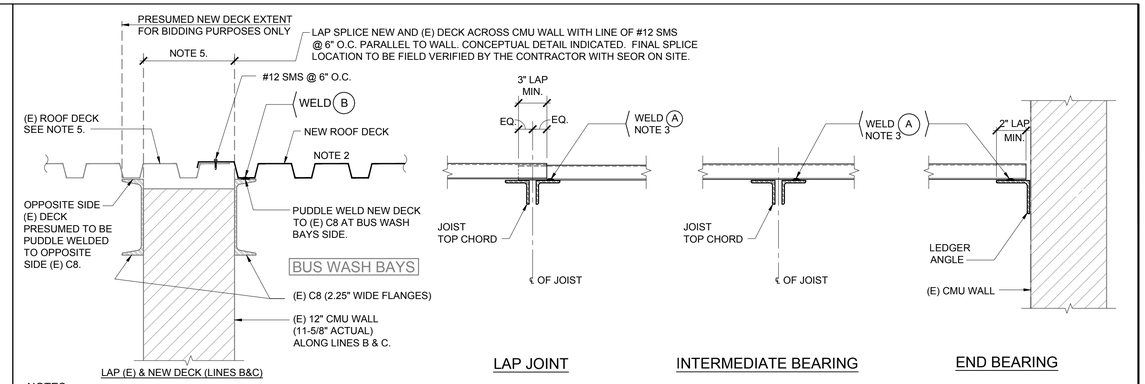
OCTA

IDS GROUP - FILE LOCATION: \\IDS-FS1\SHARED\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\03 STRUC\7S-1_S500_ TRUSS ELEV PLOT DATE: 2/5/2024 2:54:17 PM USER: CALI.NGUYEN

IDS GROUP - FILE LOCATION: \\IDS-FS1\SHARED\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\03 STRUC\7S-1_S501_ DETAIL PLOT DATE: 2/5/2024 2:54:20 PM USER: CALI.NGUYEN



DECK GAP TOUCH-UP PAINT DETAIL — SCALE 9



NOTES:
1. SEE 2/- FOR CONNECTION INFORMATION.
2. THE FIRST SHEET OF STEEL DECKING ADJACENT TO LINES B & C SHALL BE EITHER A 36" OR 30" SHEET.
3. ALTERNATE DECK ATTACHMENT ACROSS JOIST DOUBLE ANGLE TOP CHORD.
4. AT NEW 48LH JOIST SEATS, PATCH DECK NOTCH PER DETAIL 7/S-501 SIMILAR.
5. CONTRACTOR FIELD VERIFY (E) DECK RIB LAYOUT (6" MODULE) ACROSS CMU WALL.

TYP. STL. DECK TO STL. BM. CONN. — NT.S. 3

NOTES:

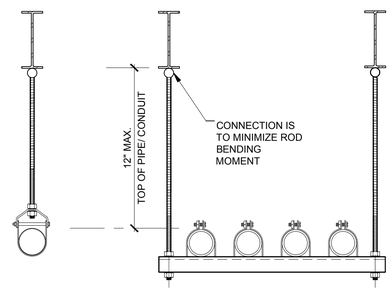
A. DESIGN OF PIPING AND CONDUIT DISTRIBUTION SYSTEMS AND ATTACHMENTS FOR THE SEISMIC FORCES AND RELATIVE DISPLACEMENTS OF SECTION 13.3, ASCE 7-16 SHALL NOT BE REQUIRED WHERE ONE OF THE FOLLOWING CONDITIONS APPLY:
   1. TRAPEZE ASSEMBLIES ARE USED TO SUPPORT THE DISTRIBUTION SYSTEM WHERBY NO SINGLE PIPE/ CONDUIT EXCEEDS THE LIMITS SET FORTH IN 3A, OR 3B BELOW AND THE TOTAL WEIGHT OF THE CONDUIT/ PIPING SUPPORTED BY THE TRAPEZE ASSEMBLIES IS LESS THAN 10 LB/FT.
   2. THE PIPING IS SUPPORTED BY HANGERS AND EACH HANGER IN THE PIPING RUNS IS 12 IN. OR LESS IN LENGTH FROM THE TOP OF THE PIPE TO THE SUPPORTING STRUCTURE. WHERE PIPES ARE SUPPORTED ON A TRAPEZE, THE TRAPEZE SHALL BE SUPPORTED BY HANGERS HAVING A LENGTH OF 12 IN. OR LESS. WHERE ROD HANGERS ARE USED, THEY SHALL BE EQUIPPED WITH SWIVELS EYE NUTS, OR OTHER DEVICES TO PREVENT BENDING IN THE ROD.
   3. PIPING HAVING AN R_P IN TABLE 13.6-1 ASCE 7-16 OR 4.5 OR GREATER IS USED AND PROVISIONS ARE MADE TO AVOID IMPACT WITH OTHER STRUCTURAL OR NONSTRUCTURAL COMPONENTS OR TO PROTECT THE CONDUIT/ PIPING IN THE EVENT OF SUCH IMPACT AND WHERE THE FOLLOWING SIZE REQUIREMENT ARE SATISFIED:
      a. FOR SEISMIC DESIGN CATEGORIES D, E, OR F WHERE I_P = 1.0 , THE CONDUIT IS LESS THAN 2.5-INCH TRADE SIZE.
      b. FOR SEISMIC DESIGN CATEGORIES D, E, OR F WHERE LP=1.0, THE NOMINAL PIPE SIZE SHALL BE 3 IN. OR LESS.

B. PROVIDE SEISMIC BRACING AS REQUIRED PER OSHPD PRE-APPROVED SYSTEM, SUCH AS MASON WEST, INC. "SEISMIC RESTRAINT GUIDELINES FOR SUSPENDED DISTRIBUTION SYSTEMS" OPM-0043 , OR EATON/TOLCO OPM-0052, OR EQUIVALENT SYSTEM.

C. REFER TO ASCE7-16 SECTIONS 13.6.5 AND 13.6.7 FOR DISTRIBUTION SYSTEMS (PIPES, CONDUITS, ETC.) FOR EXCEPTIONS TO THE SEISMIC BRACING REQUIREMENTS. USE I_P=1.0 AND SEISMIC DESIGN CATEGORY D.

D. SWIVEL CONNECTIONS FOR ROD-SUPPORTED SYSTEMS.
   1. IN ACCORDANCE WITH ASCE 7-16 CHAPTER 13.6, ALL SYSTEMS SUPPORTED BY RODS WITH A LENGTH OF 12 INCHES OR LESS MEASURED FROM THE TOP OF SYSTEMS ITEM (I.E. TOP OF PIPE, CONDUIT, DUCT) TO THE STRUCTURE CONNECTION POINT ABOVE SHALL BE CONNECTED TO THE STRUCTURE WITH A SWIVEL, EYE NUT OR OTHER DEVICE TO PREVENT BENDING IN THE ROD DURING EARTHQUAKE SWAY MOTIONS.
   2. THE CONTRACTOR SHALL SELECT A SWIVEL OR OTHER DEVICE AS DESCRIBED BY THE CODE AND SUBMIT TO THE SEOR FOR APPROVAL PRIOR TO PROCUREMENT AND INSTALLATION. THE DEVICE USED BY THE CONTRACTOR SHALL BE A MANUFACTURED ITEM WITH PUBLISHED VALUES FOR ALLOWABLE FORCES THAT CAN BE APPLIED TO THE DEVICE. NO "CONTRACTOR FABRICATED" ITEMS WILL BE ACCEPTED. EXAMPLES OF THE TYPES OF DEVICES THAT WILL BE ACCEPTED INCLUDE THE UNISTRUT PRODUCTS M2037, M2050, M2137 AND M2150, AS APPROPRIATE TO MATCH THE SIZE OF THE ROD.

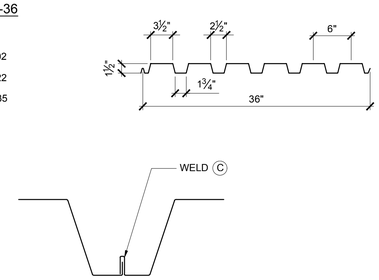
E. SEISMIC BRACING NOTES FOR UTILITY PIPING AND CONDUITS
   1. PIPING THAT ARE SUPPORTED BY HANGERS THAT ARE 12 INCHES OR LESS IN LENGTH MEASURED FROM THE TOP OF THE PIPE TO THE SUPPORTING STRUCTURE ABOVE ARE EXCLUDED FROM THESE SEISMIC BRACING REQUIREMENTS. WHERE ROD HANGERS ARE USED AND THEY ARE 12 INCHES OR LESS IN LENGTH MEASURED FROM THE TOP OF THE PIPE TO THE SUPPORTING STRUCTURE ABOVE, THEY SHALL BE EQUIPPED WITH SWIVELS, EYE NUTS OR OTHER APPROVED ITEMS AS DESCRIBED IN THE NOTES.



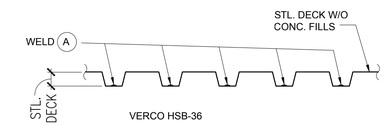
CRITERIA WHEN SEISMIC BRACING IS NOT REQUIRED FOR DISTRIBUTION SYSTEMS — N.T.S. 8

VERCO HSB-36

18 GA.
I (in.^{4}/ft.) = 0.302
+S (in.^{3}/ft.) = 0.322
-S (in.^{3}/ft.) = 0.335



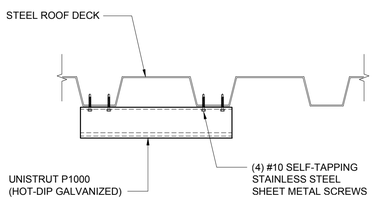
TYP. STL. DECK SECTION PROPERTIES — N.T.S. 5



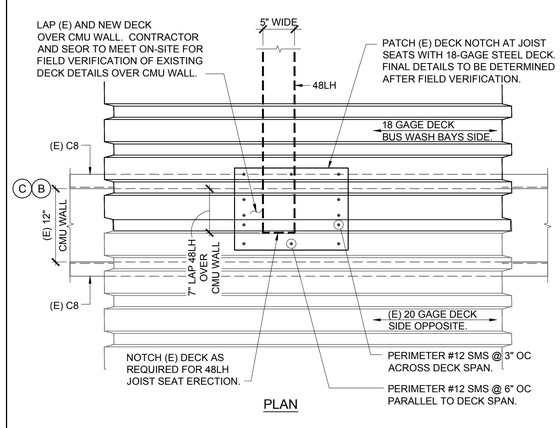
STL. DECK TYPE	STEEL STL. DECK WELD SCHEDULE					
	A		B @ (E) C8		TOP SEAM WELD C	
	SIZE & TYPE	LOCATION	SIZE & TYPE	SPACING	SIZE & TYPE	SPACING
CASE A	½" EFF. Ø	EA. BOTTOM FLUTE	½" EFF. Ø	12"	1½" LONG	12"

NOTES:
1. SEE 3/- FOR CONNECTION INFORMATION.
2. SEE 5/- FOR DECK PROFILE.

TYP. STL. DECK CONN. TO STL. BM — N.T.S. 2

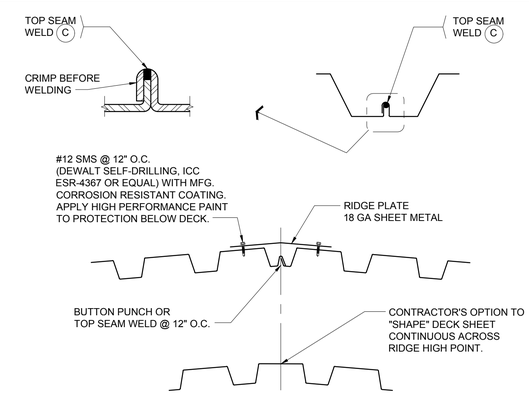


UNISTRUT SCREW TO METAL DECK — N.T.S. 10



PLAN

TYP DECK PATCH AT 48LH SEAT — N.T.S. 7



RIDGE DETAIL

NOTE:
1. SEE 2- FOR WELDING INFORMATION.

TYP. STL. DECK SIDE LAP CONN. — N.T.S. 4

SHEET NOTE:
SEE PLAN S-221 FOR KEYNOTES

REGISTERED PROFESSIONAL ENGINEER — JAMES L. HILLIARD — No. 3680 — STRUCTURAL — STATE OF CALIFORNIA
DATE SIGNED: 2-09-24

IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	I	PS&E

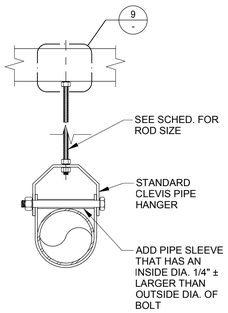
BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA
SECTIONS AND DETAILS

CONTRACTOR NO.	C-4-2093
DESIGN BY:	SE
DRAWN BY:	CN
CHECKED BY:	JR
DATE	02-09-2024
SCALE	AS NOTE
SHEET	S-501

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

OCTA

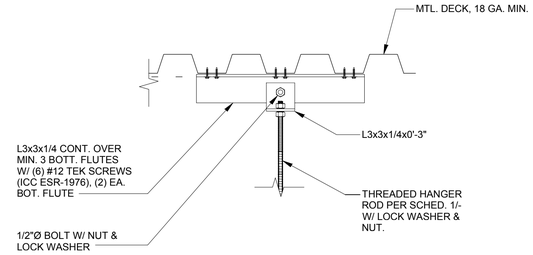
NO DETAIL ON THIS SHEET SHALL BE USED FOR FIRE SPRINKLER SYSTEM



CLEVIS HANGERS

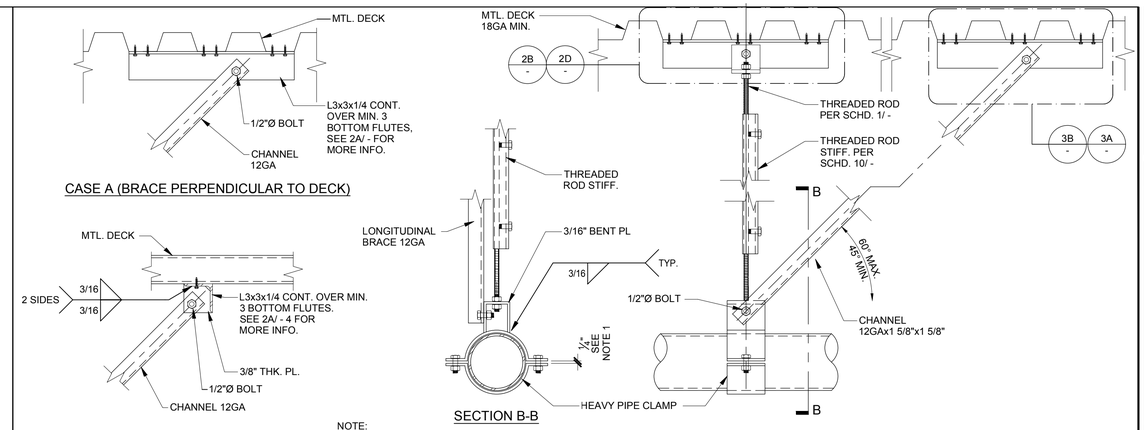
HANGER ROD ANCHORAGE SCHEDULE		
PIPE SIZE NOMINAL DIAMETER	HANGER ROD SPACING	HANGER ROD SIZE
1/2"Ø	6'-0"	3/8"
3/4"Ø	7'-0"	3/8"
1"Ø	7'-0"	3/8"
1 1/4"Ø	9'-0"	3/8"
1 1/2"Ø	10'-0"	3/8"
2"Ø	10'-0"	3/8"
2 1/2"Ø	10'-0"	1/2"
3"Ø	10'-0"	1/2"
3 1/2"Ø	10'-0"	5/8"
4"Ø	10'-0"	5/8"
5"Ø	10'-0"	5/8"
6"Ø	10'-0"	3/4"
8"Ø	10'-0"	3/4"

HANGER ROD SCHEDULE | SCALE | 12



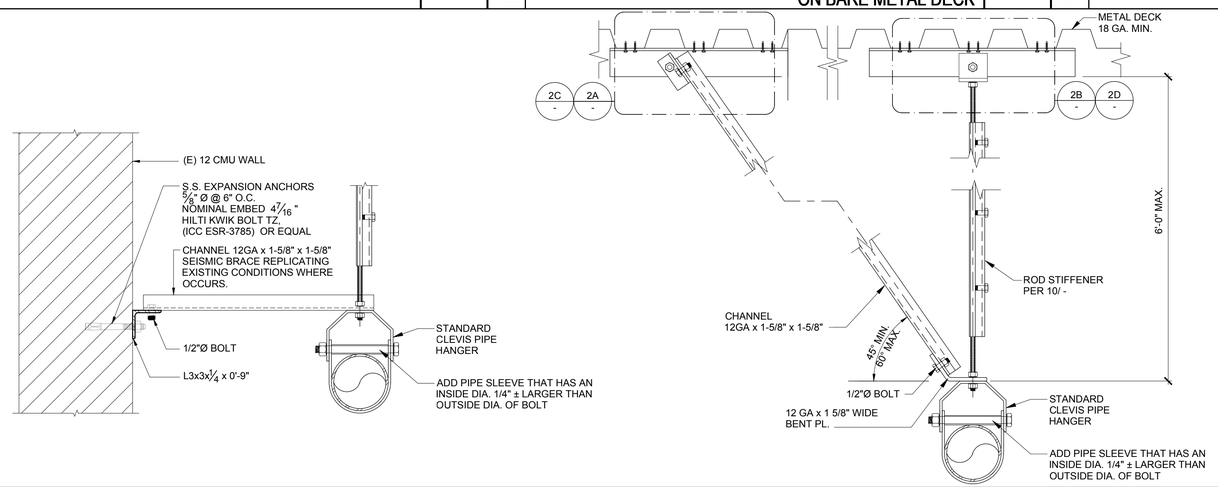
NOTE:
HANGER ROD ATTACHED TO BARE METAL DECK IS LIMITED TO SUPPORT NOMINAL 4"Ø PIPE OR LESS WITH HANGER SPACING 10'-0"O.C. OR LESS.

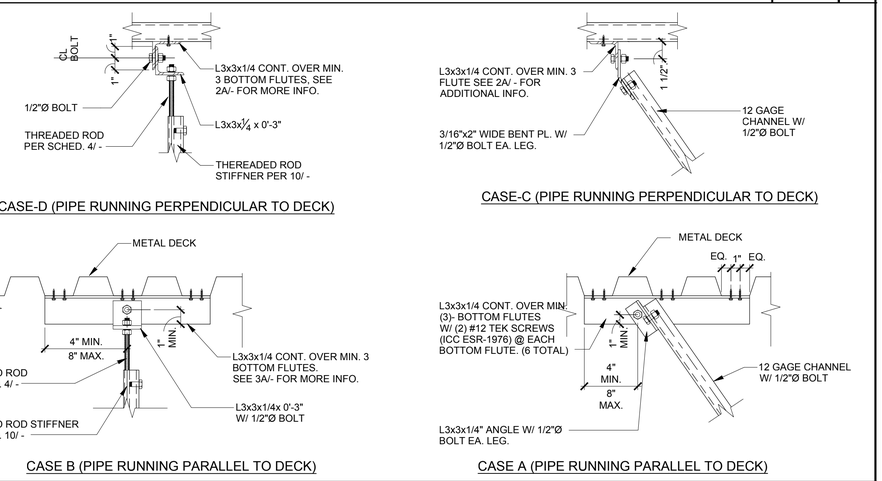
PIPE HANGER FOR 4"Ø PIPE OR LESS ON BARE METAL DECK | SCALE | 9



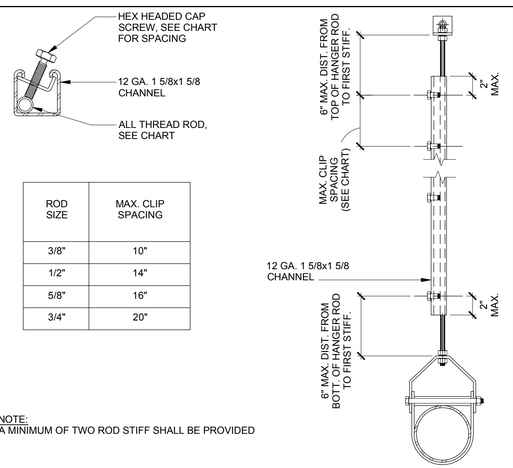
NOTE:
1. SEISMIC FORCES ARE RESISTED BY FRICTION CREATED BY TIGHTLY BOLTING THE HEAVY PIPE CLAMPS. TO ASSURE ADEQUATE FRICTION, THE PIPE CLAMP BOLTS SHALL BE MANUALLY TIGHTENED USING FULL STRENGTH APPLIED TO A 15 INCH MINIMUM WRENCH HANDLE. THE 1/4 INCH GAP IS REQUIRED TO ASSURE THAT THE FULL CLAMPING FORCE IS APPLIED TO THE PIPE BY PREVENTING CONTACT OF MATING CLAMP SURFACES.

TYPICAL LONGITUDINAL PIPE/CONDUIT BRACING AT HEADER BEAM | N.T.S. | 3





TRANSVERSE PIPE/CONDUIT BRACING AT BARE METAL DECK | N.T.S. | 2



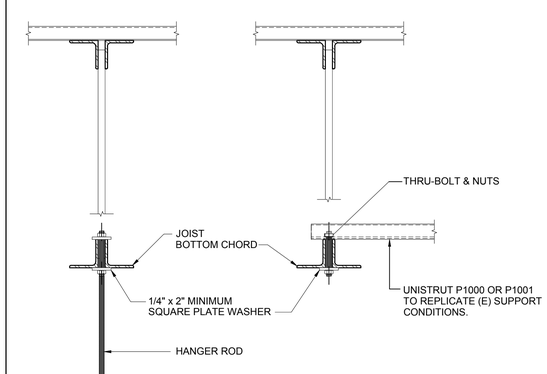
ROD SIZE	MAX. CLIP SPACING
3/8"	10"
1/2"	14"
5/8"	16"
3/4"	20"

NOTE:
A MINIMUM OF TWO ROD STIFF SHALL BE PROVIDED

TYP. THREADED ROD STIFFNER | SCALE | 10

TRANSVERSE AND LONGITUDINAL BRACE SCHEDULE							
PIPE SIZE	PIPE TRANS. BRACE SPACING (FT.)	PIPE LONG. BRACE SPACING (FT.)	CONDUIT TRANS. BRACE SPACING (FT.)	CONDUIT LONG. BRACE SPACING (FT.)	VERT. ROD SIZE	BARE MTL. DECK TRANS. BRACE DETAILS	BARE MTL. DECK LONG. BRACE DETAILS
1/2"Ø	12.0	24.0	20.0	20.0	3/8"	DETAIL 2/-	DETAIL 3/-
3/4"Ø	14.0	28.0	20.0	20.0	3/8"	DETAIL 2/-	DETAIL 3/-
1"Ø	14.0	28.0	20.0	20.0	3/8"	DETAIL 2/-	DETAIL 3/-
1 1/4"Ø	18.0	36.0	20.0	20.0	3/8"	DETAIL 2/-	DETAIL 3/-
1 1/2"Ø	18.0	36.0	20.0	20.0	3/8"	DETAIL 2/-	DETAIL 3/-
2"Ø	20.0	40.0	20.0	20.0	3/8"	DETAIL 2/-	DETAIL 3/-
2 1/2"Ø	20.0	40.0	20.0	20.0	1/2"	DETAIL 2/-	DETAIL 3/-
3"Ø	30.0	60.0	20.0	20.0	1/2"	DETAIL 2/-	
3 1/2"Ø	30.0	60.0	20.0	20.0	5/8"		
4"Ø	30.0	60.0	20.0	20.0	5/8"		
5"Ø	40.0	80.0	NA	NA	5/8"		
6"Ø	40.0	80.0	NA	NA	3/4"		
8"Ø	40.0	80.0	NA	NA	3/4"		

TYPICAL TRANSVERSE AND LONGITUDINAL PIPE/CONDUIT BRACING SCHEDULE | N.T.S. | 4



HANGER DETAIL | N.T.S. | 1

SHEET NOTES:
1. USE SS304 STAINLESS STEEL SHEET METAL SCREWS (HILTI ICC ESR-4786) (OR EQUAL)
2. USE ALL HOT DIP GALVANIZED STEEL U.N.O.
3. (E) FIRE SPRINKLER LINES LESS THAN 2.5-INCH DIAMETER DO NOT REQUIRE SEISMIC BRACING, PER NFPA-13.

REGISTERED PROFESSIONAL ENGINEER
JOHN L. HILTI
No. 3680
STRUCTURAL
STATE OF CALIFORNIA
DATE SIGNED: 2-09-24

IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	I	PSSE

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA
SECTIONS AND DETAILS

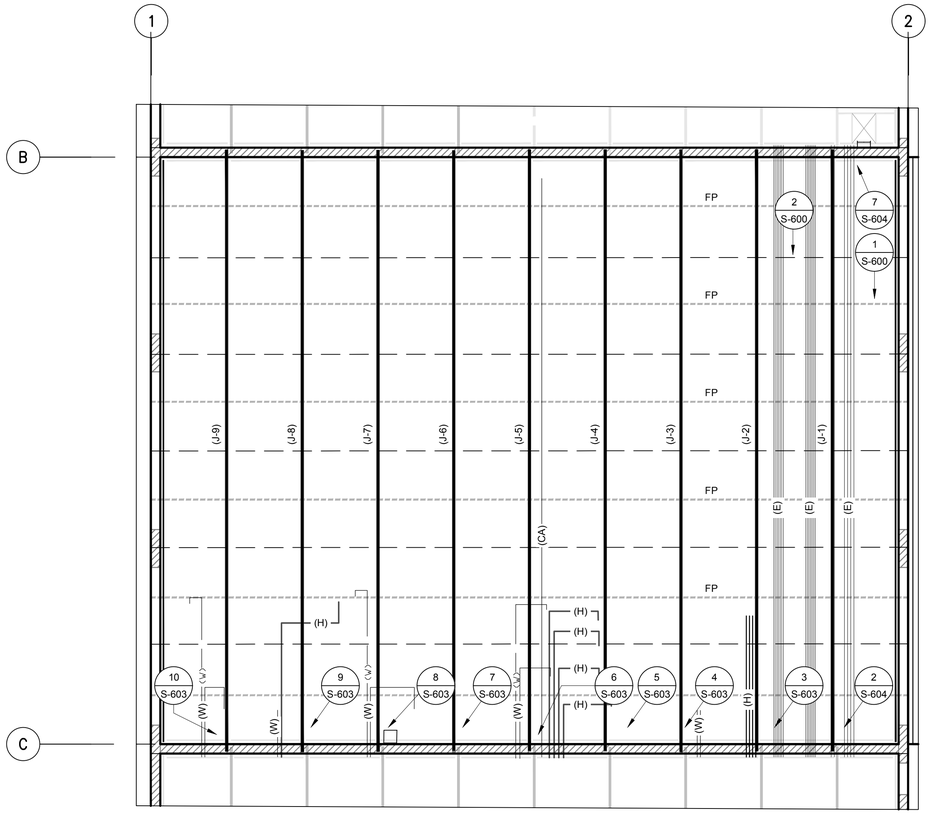
CONTRACTOR NO.	C-4-2093
DESIGN BY:	SU
DRAWN BY:	CN
CHECKED BY:	JR
DATE	02-09-2024
SCALE	AS NOTE
SHEET	S-502

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

OCTA

IDS GROUP - FILE LOCATION: \\IDS-FS1\SHARED\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\03 STRUC\7S-1_S502_ DETAIL PLOT DATE: 2/5/2024 2:54:23 PM USER: CALI.NGUYEN

IDS GROUP - FILE LOCATION: \\IDS-FS1\SHARED\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\03 STRUC\7S-1_S503_ DETAIL PLOT DATE: 2/5/2024 2:54:28 PM USER: CALI.NGUYEN



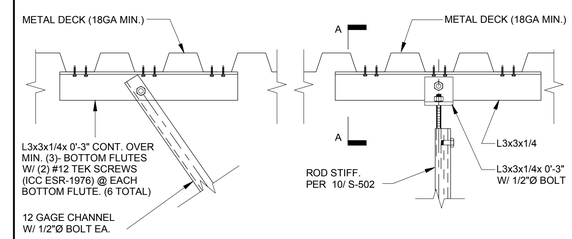
NOTES:
1. PRIOR TO ROOF DEMOLITION, THE CONTRACTOR SHALL SURVEY AND PHOTO DOCUMENT THE (E) GRAVITY SUPPORT AND SEISMIC BRACE (IF ANY) DETAILS FOR ROOF SUPPORTED ITEMS TO REMAIN IN PLACE. CONTRACTOR SHALL PROVIDE TEMPORARY SHORING FOR THE (E) MEP CONDUITS, PIPES AND OTHER ITEMS AS CONTRACTOR'S MEANS AND METHODS. THE CONTRACTOR SHALL SUBMIT TO OCTA AND THE ARCHITECT/ENGINEER FOR REVIEW AND ACCEPTANCE THE CONTRACTOR'S PROPOSED TEMPORARY SHORING/SUPPORT MEANS AND METHODS DETAILS & PROCEDURES FOR ALL EXISTING ROOF SUPPORTED CONDUITS, PIPING AND ALL OTHER ASSOCIATED BUS WASH PIPING & APPURTENANCES.
2. RESUPPORT (E) MEP ELEMENTS WITH HOT-DIP GALVANIZED STEEL OR STAINLESS STEEL COMPONENTS, PER THE TYPICAL DETAILS ON SHEETS S-502 & S-503, OR ALTERNATELY BY OPM MANUAL TYPICAL DETAILS PER DETAIL 8/ S-501 NOTE B.
3. SEE PHOTO SHEETS S-600 THRU S-604 FOR EXISTING CONDITIONS AT THE BUS WASH BAYS AND ADJACENT SPACES.

(E) OVERHEAD LINE (F.V.)

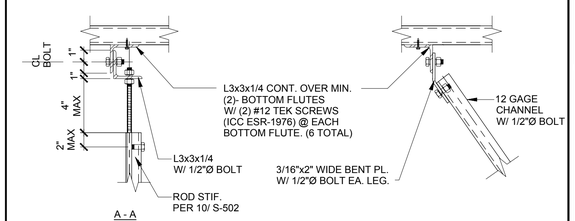
- (E) OVERHEAD ELECTRICAL
- (D OVERHEAD DETERGENT
- (W) OVERHEAD WATER
- (H) OVERHEAD HYDRAULIC
- (CA) OVERHEAD COMPRESSED AIR

FP = FIRE PROTECTION BRANCH LINE.

BUS WASH BAYS EXISTING OVERHEAD PIPING- CONDUIT PLAN — N.T.S. — 5

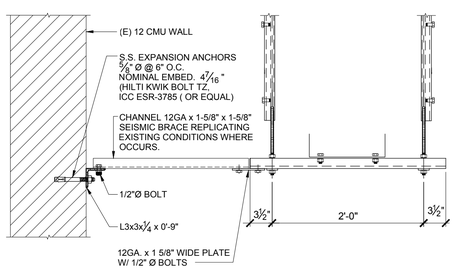


BRACE PERPENDICULAR TO DECK SPAN



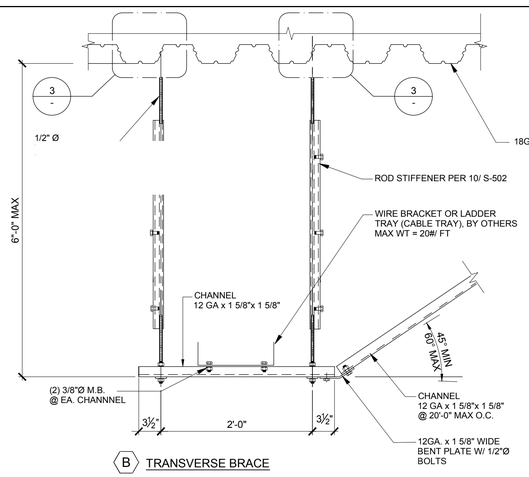
BRACE PARALLEL TO DECK SPAN

CABLE TRAY BRACING AT BARE METAL DECK — N.T.S. — 2

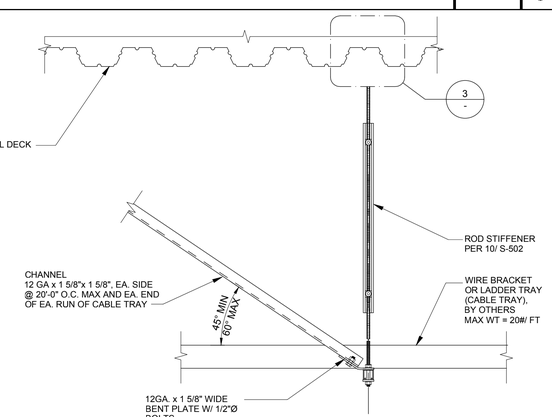


C BRACE TO (E) CMU WALL OPTION
SEE B/ - FOR REMAIN INFO.

NOTES:
1. IT IS ACCEPTABLE TO SUPPORT CONDUIT(S) IN LIEU OF CABLE TRAY SHOWN, BUT THE TOTAL WEIGHT OF THE CONDUITS/CONTENTS SHALL NOT EXCEED 20#/ FT.
2. PROVIDE TRAPEZE GRAVITY SUPPORTS AT 10'-0" ON CENTER MAX.



B TRANSVERSE BRACE



A LONGITUDINAL BRACE

TRANSVERSE AND LONGITUDINAL CABLE TRAY OR CONDUIT TRAPEZE AT BARE METAL DECK — N.T.S. — 4

SHEET NOTES:
1. USE SS304 STAINLESS STEEL SHEET METAL SCREWS HILTI (ICC ESR-4786) OR EQUAL
2. USE ALL HOT DIP GALVANIZED STEEL U.N.O.

REGISTERED PROFESSIONAL ENGINEER
JAMES L. HILTY
No. 3680
STRUCTURAL
STATE OF CALIFORNIA
DATE SIGNED: 2-09-24

IDS
IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20X050.02

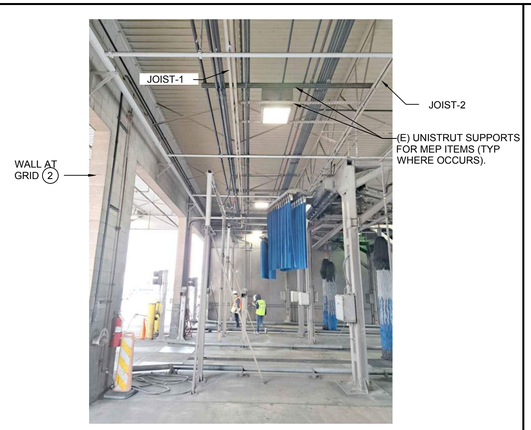
MARK	DATE	BY	REVISIONS
	2/13/24	I	PS&E

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA
PLAN, SECTIONS AND DETAILS

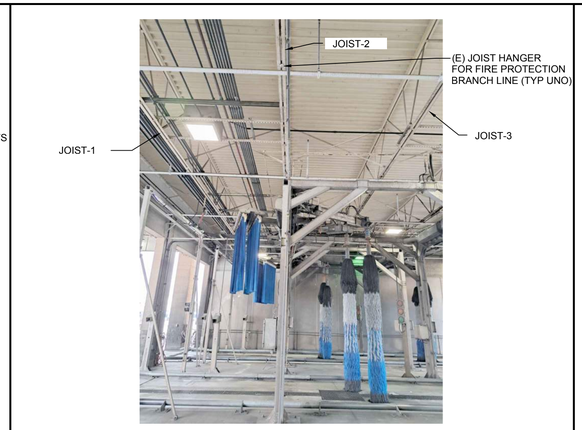
CONTRACTOR NO.	C-4-2093
DESIGN BY:	SU
DRAWN BY:	CN
CHECKED BY:	JR
DATE	02-09-2024
SCALE	AS NOTE
SHEET	S-503

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

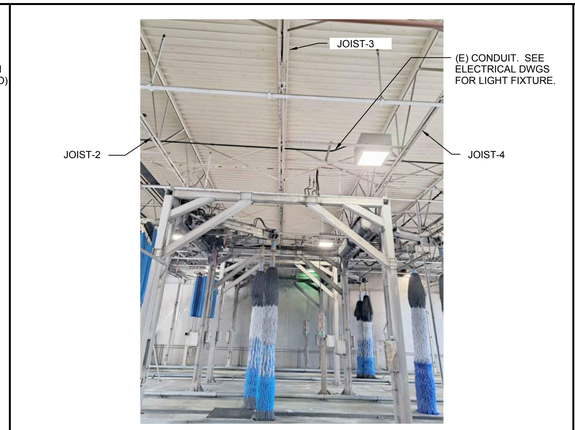
OCTA



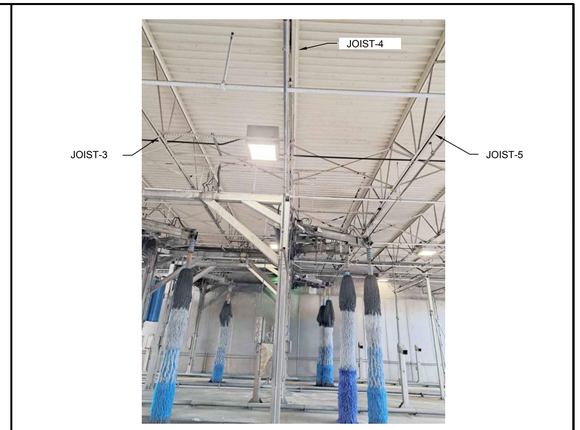
BUS WASH BAYS EQUIPMENT AT EAST ENTRY | 1



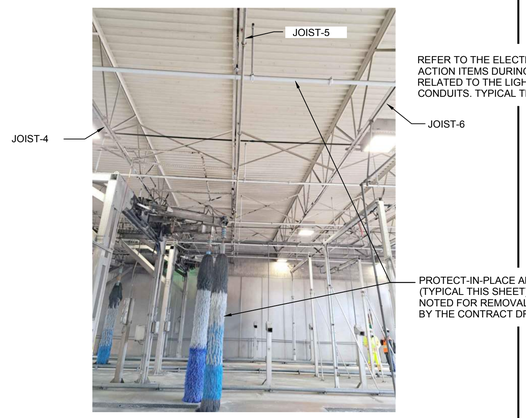
BUS WASH BAYS EQUIPMENT NEAR EAST ENTRY | 2



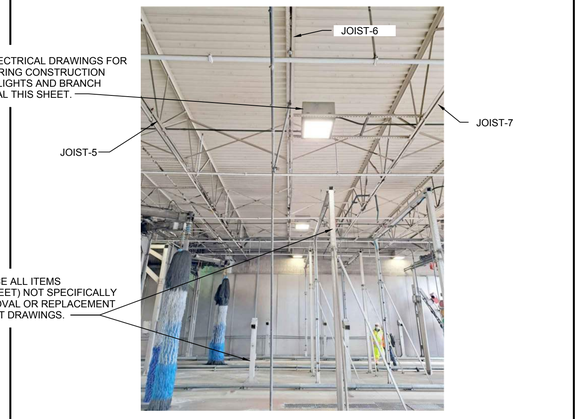
BUS WASH BAYS EQUIPMENT LOOKING SOUTH | 3



BUS WASH BAYS EQUIPMENT LOOKING SOUTH | 4



BUS WASH BAYS EQUIPMENT LOOKING SOUTH | 5

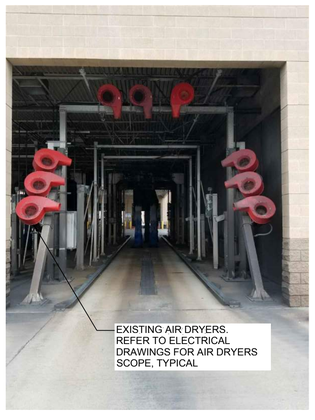


BUS WASH BAYS EQUIPMENT LOOKING SOUTH | 6

BUS WASH BAYS EQUIPMENT LOOKING SOUTH | 7

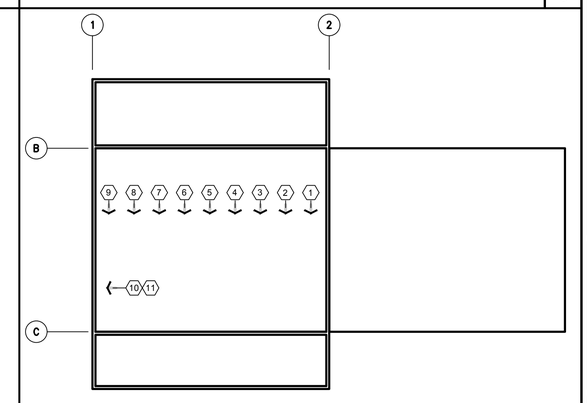
BUS WASH BAYS EQUIPMENT NEAR WEST EXIT | 8

BUS WASH BAYS EQUIPMENT AT WEST EXIT | 9



TYP. (E) AIR DRYERS AT WEST END EXIT | 10

TYP. (E) AIR DRYERS AT WEST END EXIT | 11



KEY PLAN

REGISTERED PROFESSIONAL ENGINEER
JOHN T. HILLER
No. 3680
STRUCTURAL
STATE OF CALIFORNIA
DATE SIGNED: 2-09-24

IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	--	PSSE

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA

TYPICAL PROTECT-IN-PLACE EQUIPMENT PHOTOS

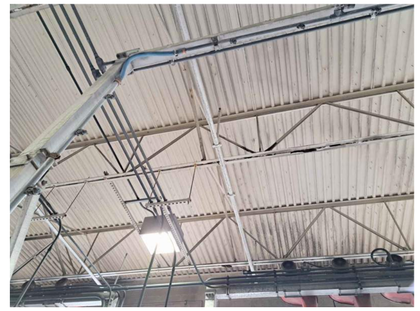
CONTRACTOR NO.	C-4-2093
DESIGN BY:	SU
DRAWN BY:	CN
CHECKED BY:	JR
DATE	02-09-2024
SCALE	----
SHEET	S-600

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

OCTA

IDS GROUP - FILE LOCATION: \\IDS-FS1\SHARED\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\03 STRUC\7S-1_S600 PHOTOS PLOT DATE: 2/5/2024 2:54:35 PM USER: CALI.NGUYEN

REFER TO THE ELECTRICAL DRAWINGS FOR ACTION ITEMS DURING CONSTRUCTION RELATED TO THE LIGHTS AND BRANCH CONDUITS. TYPICAL THIS SHEET.

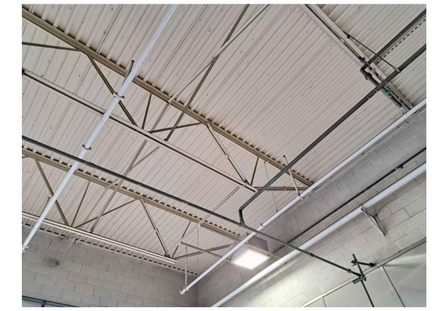


PROTECT-IN-PLACE ALL ITEMS (TYPICAL THIS SHEET) NOT SPECIFICALLY NOTED FOR REMOVAL OR REPLACEMENT BY THE CONTRACT DRAWINGS.

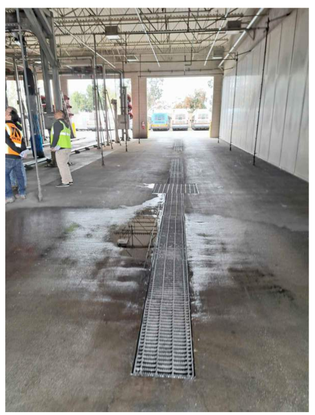
TYP (E) JOIST SOUTH END AT LINE C | 1

TYP (E) JOIST LOOKING WEST | 2

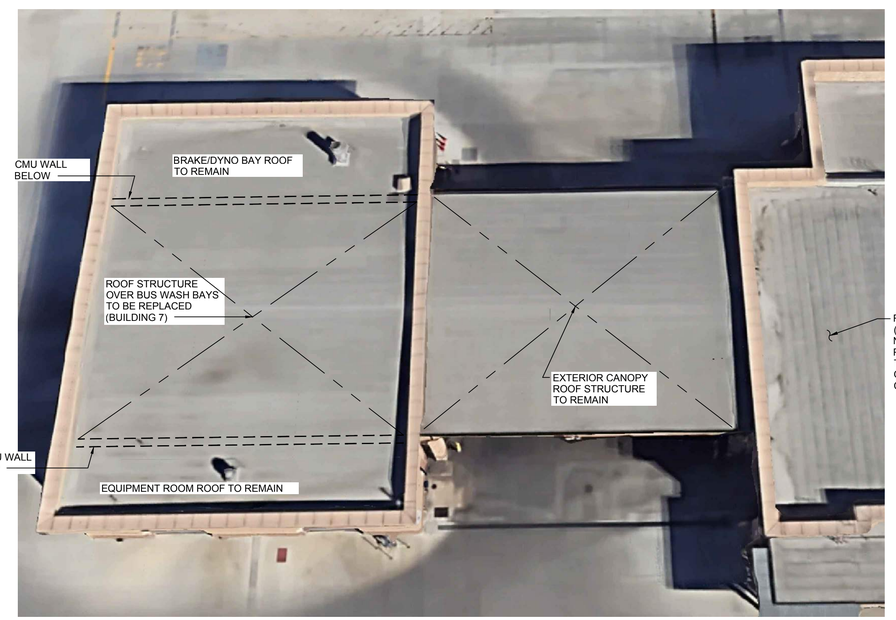
TYP (E) JOIST LOOKING WEST | 3



TYP (E) JOIST NORTH END AT LINE B | 4



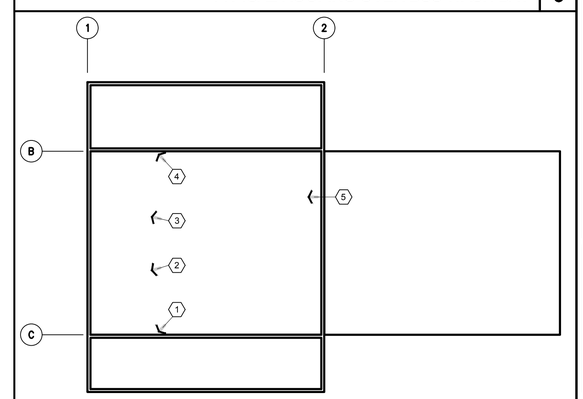
TYPICAL (E) TRENCH SEAL/PROTECT IN PLACE | 5



NOTE:
1. THE REFERENCES TO BUILDING 6 AND BUILDING 7 ARE REPEATED FROM THE EXISTING DRAWINGS

(E) ROOF PLAN | 11

TYPICAL ROOFING OVER BUS WASH BAY | 8



KEY PLAN

TYPICAL (E) S.S. WALL PANEL FOR REFURBISHMENT | 9

REGISTERED PROFESSIONAL ENGINEER
JAMES T. HILLIARD
No. 3680
STRUCTURAL
STATE OF CALIFORNIA
DATE SIGNED: 2-09-24

IDS
IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	--	PSSE

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA
TYPICAL (E) JOIST PHOTOS

CONTRACTOR NO.	C-4-2093
DESIGN BY:	SU
DRAWN BY:	CA
CHECKED BY:	JR
DATE	02-09-2024
SCALE	----
SHEET	S-601

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

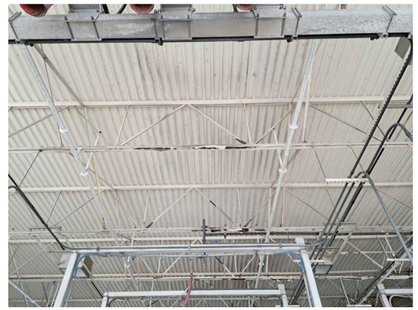
OCTA

IDS GROUP - FILE LOCATION: \\IDS-FS1\SHARED\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\03 STRUCT\S-1_S601 PHOTOS PLOT DATE: 2/5/2024 2:54:41 PM USER: CALI.NGUYEN

EXISTING AIR DRYERS.
REFER TO ELECTRICAL
DRAWINGS FOR AIR DRYERS
SCOPE, TYPICAL

PHOTO #1: MIDDLE BAY AT WEST END EXIT | 1

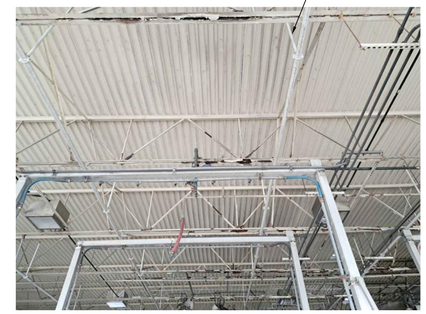
REFER TO THE ELECTRICAL DRAWINGS FOR
ACTION ITEMS DURING CONSTRUCTION
RELATED TO THE LIGHTS AND BRANCH
CONDUITS. TYPICAL THIS SHEET.



PROTECT-IN-PLACE ALL ITEMS
(TYPICAL THIS SHEET) NOT SPECIFICALLY
NOTED FOR REMOVAL OR REPLACEMENT
BY THE CONTRACT DRAWINGS.

WALK THRU PHOTO #2: | 2

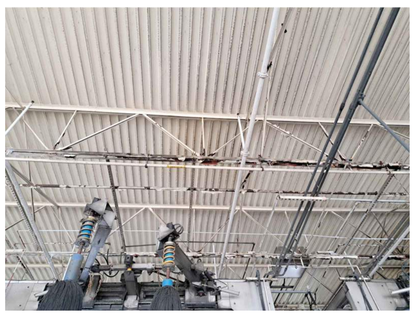
(E) JOIST HANGER
FOR MISCELLANEOUS
LINES (TYP UNO)



WALK THRU PHOTO #3: | 3

(E) JOIST HANGER
FOR MISCELLANEOUS
LINES (TYP UNO)

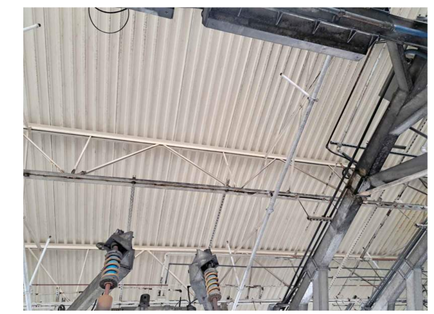
WALK THRU PHOTO #4: | 4



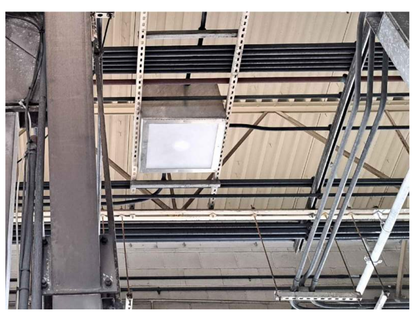
WALK THRU PHOTO #5: | 5

WALK THRU PHOTO #6: | 6

WALK THRU PHOTO #7: | 7

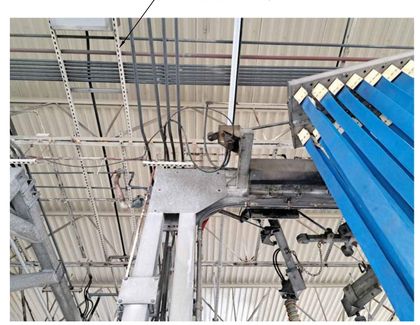


WALK THRU PHOTO #8: | 8



WALK THRU PHOTO #9: | 9

(E) UNISTRUT SUPPORTS
FOR MEP ITEMS (TYP
WHERE OCCURS).



WALK THRU PHOTO #10: | 10

WALK THRU PHOTO #11 | 11

PHOTO #12: MIDDLE BAY AT EAST END ENTRY | 12

SEE SHEET S-603 FOR KEY PLAN

REGISTERED PROFESSIONAL ENGINEER
JOHN T. HILL
No. 3680
STRUCTURAL
STATE OF CALIFORNIA
DATE SIGNED: 2-09-24

IDS
IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	--	PSSE

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA

WALK THRU MIDDLE BAY PHOTOS

CONTRACTOR NO.	C-4-2093
DESIGN BY:	SU
DRAWN BY:	CN
CHECKED BY:	JR
DATE	02-09-2024
SCALE	
SHEET	S-602

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

OCTA

IDS GROUP - FILE LOCATION: \\IDS-FS1\SHARED\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\03 STRUC\7S-1_S602 PHOTOS PLOT DATE: 2/5/2024 2:54:49 PM USER: CALI.NGUYEN

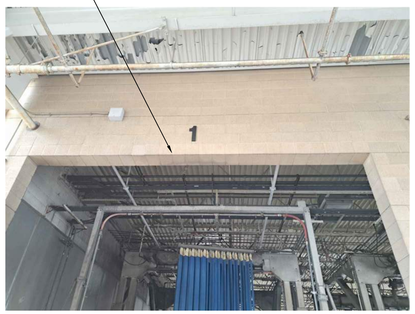
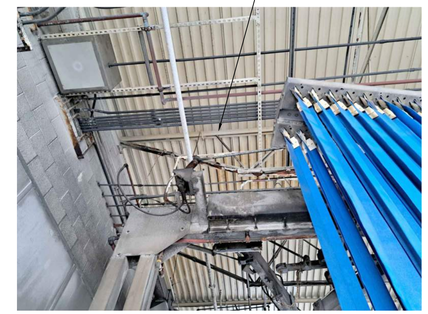
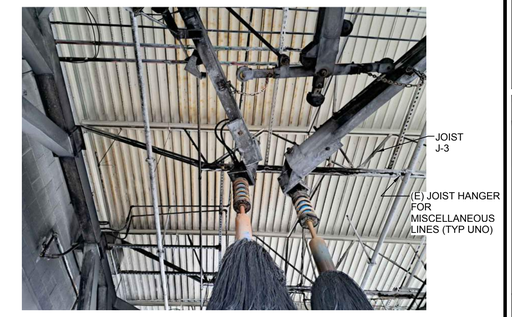


PHOTO #1: SOUTH BAY AT EAST END ENTRY | 1

WALK THRU PHOTO #2: | 2



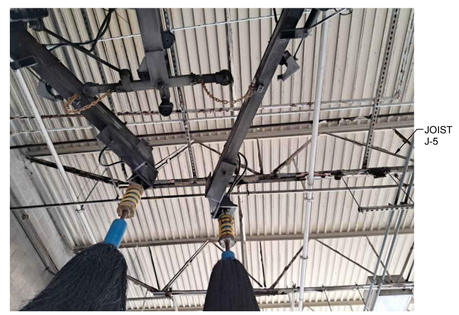
WALK THRU PHOTO #3: | 3



WALK THRU PHOTO #4: | 4

WALK THRU PHOTO #5: | 5

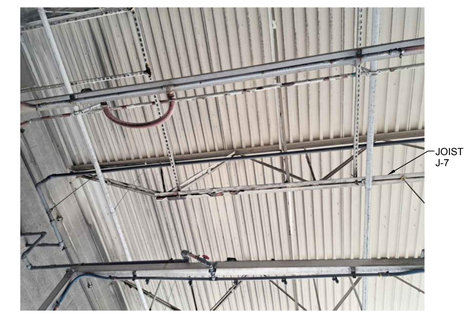
REFER TO THE ELECTRICAL DRAWINGS FOR
ACTION ITEMS DURING CONSTRUCTION
RELATED TO THE LIGHTS AND BRANCH
CONDUITS. TYPICAL THIS SHEET.



WALK THRU PHOTO #6: | 6

WALK THRU PHOTO #7: | 7

PROTECT-IN-PLACE ALL ITEMS
(TYPICAL THIS SHEET) NOT SPECIFICALLY
NOTED FOR REMOVAL OR REPLACEMENT
BY THE CONTRACT DRAWINGS.



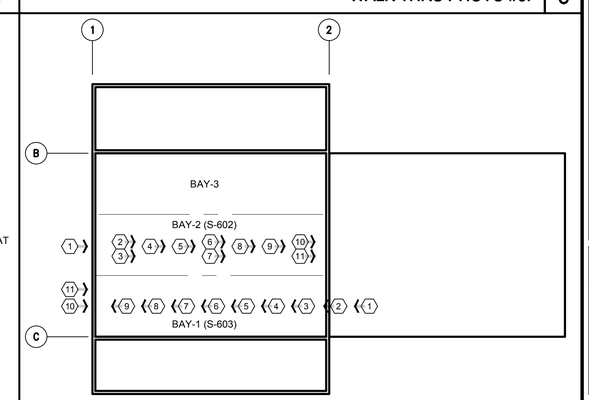
WALK THRU PHOTO #8: | 8

WALK THRU PHOTO #9: | 9

WALK THRU PHOTO #10: | 10

10 SEE PLAN S-221 & SECTION 1/ S-300.
ALIGN THE BRACE AT / NEAR THE CENTER OF WALL
DIRECTLY ABOVE THE WALL JAMBS IN-BETWEEN THE
BUS WASH BAYS WALL OPENINGS.

PHOTO #11: SOUTH BAY AT WEST EXIT | 11



KEY PLAN

FOR SHEET S-602
FOR SHEET S-603

REGISTERED PROFESSIONAL ENGINEER
JAMES T. HILLIER
No. 3680
STRUCTURAL
STATE OF CALIFORNIA
DATE SIGNED: 2-09-24

IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	--	PSSE

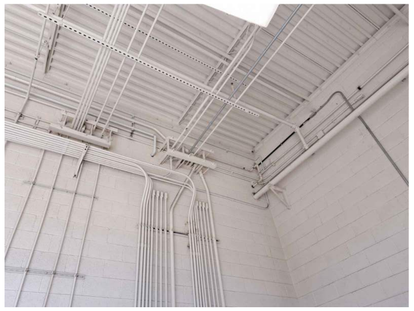
BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA
WALK THRU PHOTOS

CONTRACTOR NO.	C-4-2093
DESIGN BY:	SU
DRAWN BY:	CN
CHECKED BY:	JR
DATE	02-09-2024
SCALE	----
SHEET	S-603

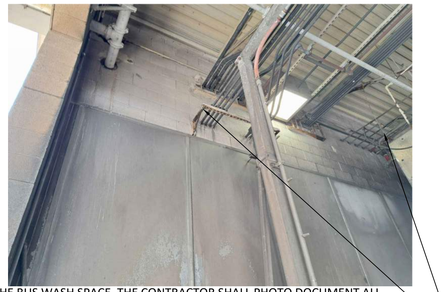
550 South Main Street
Orange, CA 92668
714/560/OCTA

OCTA

IDS GROUP - FILE LOCATION: \\IDS-FS1\SHARED\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\03 STRUC\7S-1_S603 PHOTOS PLOT DATE: 2/5/2024 2:54:57 PM USER: CALI.NGUYEN

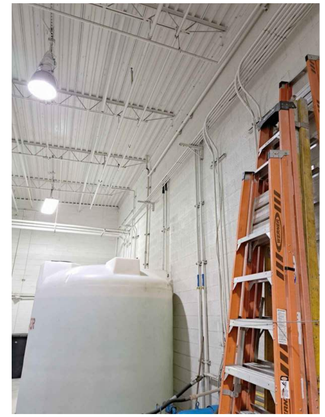


EQUIPMENT ROOM OPP SIDE AT N.E. CORNER | 1

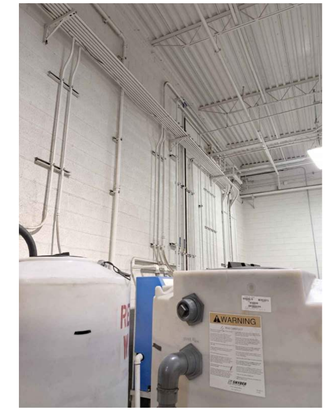


WITHIN THE BUS WASH SPACE, THE CONTRACTOR SHALL PHOTO DOCUMENT ALL EXISTING MISCELLANEOUS STEEL AT OPENINGS AT THE CMU WALL SURFACES TO BE PAINTED. THIS EXISTING MISCELLANEOUS STEEL SHALL BE PAINTED TO MATCH. COMPLY WITH SPECIFICATION 09 96 00 FOR STEEL SURFACE PREPARATION AND STEEL PAINTING.

BUS WASH PROTECT IN PLACE AT S.E. CORNER | 2



EQUIPMENT ROOM LINE C LOOKING WEST | 3



EQUIPMENT ROOM LINE C LOOKING EAST | 4

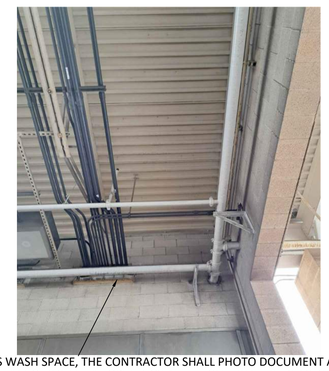
BUS WASH PROTECT IN PLACE AT N.W. CORNER | 5

REFER TO THE ELECTRICAL DRAWINGS FOR ACTION ITEMS DURING CONSTRUCTION RELATED TO THE LIGHTS AND BRANCH CONDUITS. TYPICAL THIS SHEET.

PROTECT-IN-PLACE ALL ITEMS (TYPICAL THIS SHEET) NOT SPECIFICALLY NOTED FOR REMOVAL OR REPLACEMENT BY THE CONTRACT DRAWINGS.

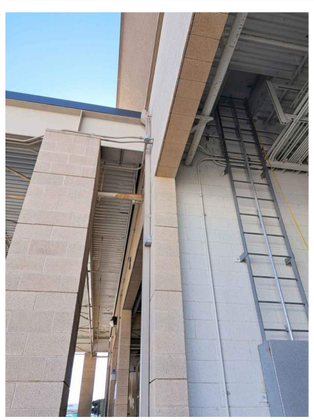
BUS WASH PROTECT IN PLACE NORTH WALL | 6

BUS WASH PROTECT IN PLACE NORTH WALL | 7



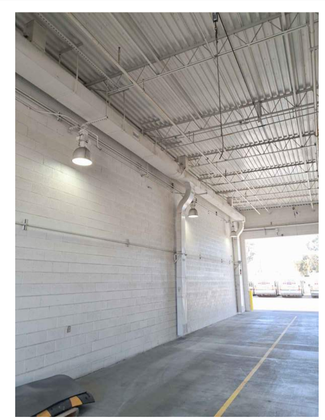
WITHIN THE BUS WASH SPACE, THE CONTRACTOR SHALL PHOTO DOCUMENT ALL EXISTING MISCELLANEOUS STEEL AT OPENINGS AT THE CMU WALL SURFACES TO BE PAINTED. THIS EXISTING MISCELLANEOUS STEEL SHALL BE PAINTED TO MATCH. COMPLY WITH SPECIFICATION 09 96 00 FOR STEEL SURFACE PREPARATION AND STEEL PAINTING.

BUS WASH PROTECT IN PLACE AT N.E. CORNER | 8

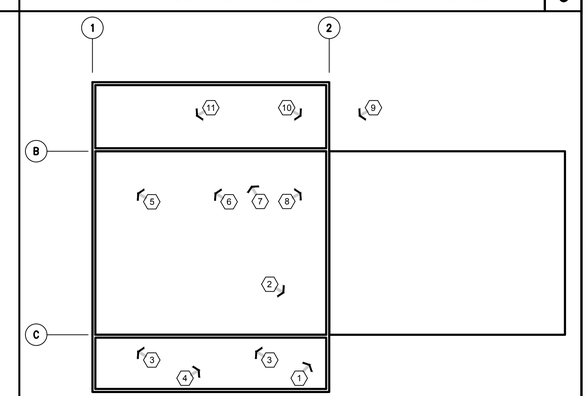


BRAKE DYNO BAY LINE B AT EAST ENTRY | 9

BRAKE DYNO BAY LINE B AT S.E. CORNER | 10



BRAKE DYNO BAY LINE B LOOKING WEST | 11



KEY PLAN

REGISTERED PROFESSIONAL ENGINEER
J. HILTON
No. 3680
STRUCTURAL
STATE OF CALIFORNIA
DATE SIGNED: 2-09-24

IDS
IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
--	2/13/24	--	PS&E

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA

NORTH-SOUTH BUS WASH WALLS & SPACES OPPOSITE PHOTOS

CONTRACTOR NO.	C-4-2093
DESIGN BY:	SU
DRAWN BY:	CN
CHECKED BY:	JR
DATE	02-09-2024
SCALE	----
SHEET	S-604

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

OCTA

IDS GROUP - FILE LOCATION: \\IDS-FS1\SHARED\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\03 STRUC\7S-1_S604 PHOTOS PLOT DATE: 2/5/2024 2:55:05 PM USER: CALI.NGUYEN

EXT CANOPY LOOKING WEST AT BUS WASH | 1

PROTECT-IN-PLACE ALL ITEMS (TYPICAL THIS SHEET) NOT SPECIFICALLY NOTED FOR REMOVAL OR REPLACEMENT BY THE CONTRACT DRAWINGS.

EQUIPMENT PROTECT IN PLACE EXAMPLE | 2

EXISTING BUILDING 6 (FUEL / BRAKE / TIRE REPAIR) NOT IN SCOPE, TO REMAIN OPERATIONAL.

EXT CANOPY ROOF LOOKING EAST | 3

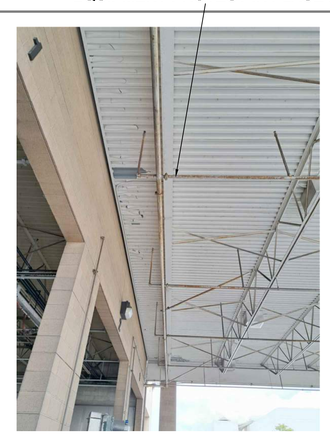
REFER TO THE ELECTRICAL DRAWINGS FOR ACTION ITEMS DURING CONSTRUCTION RELATED TO THE LIGHTS AND BRANCH CONDUITS. TYPICAL THIS SHEET.

10 SEE PLAN S-221 & SECTION 1/ S-300.

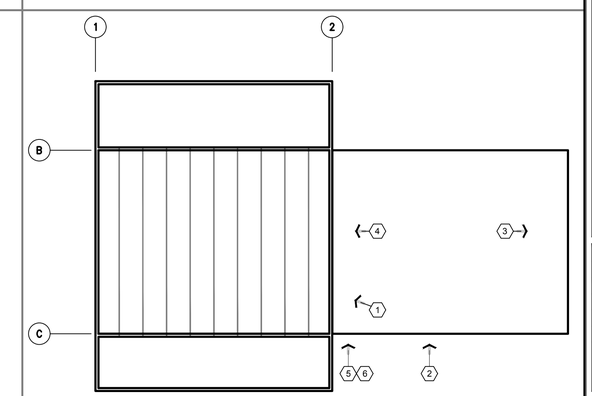
ALIGN THE BRACE AT / NEAR THE CENTER OF WALL DIRECTLY ABOVE THE WALL JAMBS IN-BETWEEN THE BUS WASH BAYS WALL OPENINGS.

EXT CANOPY LOOKING WEST AT BUS WASH | 4

EXT CANOPY EXP JT AT BUS WASH | 5



EXT CANOPY EXP JT AT BUS WASH | 6



KEY PLAN

REGISTERED PROFESSIONAL ENGINEER
JOHN L. HILL
No. 3680
STRUCTURAL
STATE OF CALIFORNIA
DATE SIGNED: 2-09-24

IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	--	PS&E

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA

EXTERIOR CANOPY PHOTOS

CONTRACTOR NO.	C-4-2093
DESIGN BY:	SU
DRAWN BY:	CN
CHECKED BY:	JR
DATE	02-09-2024
SCALE	----
SHEET	S-605

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

OCTA

IDS GROUP - FILE LOCATION: \\IDS-FS1\SHARED\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\03 STRUC\7S-1_S605 PHOTOS PLOT DATE: 2/5/2024 2:55:10 PM USER: CALI.NGUYEN

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\04 MECH\20X5002_M-001_NOTES PLOT DATE: 2/2/2024 4:00:01 PM USER: DION.VAZQUEZ

GENERAL CONSTRUCTION NOTES

1. PROVIDE SHOP DRAWINGS AND EQUIPMENT SUBMITTALS TO THE OWNER'S REPRESENTATIVE FOR REVIEW PRIOR TO BEING SUBMITTED TO THE PROJECT ENGINEER.
2. PROVIDE COMPLETE AND PROPERLY FUNCTIONING CONTROL SYSTEM FOR THIS PROJECT.
3. COORDINATE THE INSTALLATION OF THE WORK WITH EACH TRADE. IF DURING THE COURSE OF THE WORK, THE CONTRACTOR EXPERIENCES A PROBLEM RELATIVE TO THE DOCUMENTS, THE LOCAL APPLICABLE CODES AND GOVERNING DOCUMENTS, OR THE WORK CANNOT BE INSTALLED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS FOR ANY REASON, NOTIFY ENGINEER FOR DIRECTION PRIOR TO EXECUTION OF THIS WORK. THE CONTRACTOR MAY BE RESPONSIBLE FOR REMOVING, AT NO ADDITIONAL COMPENSATION, ANY WORK INSTALLED, PRIOR TO RECEIVING DIRECTION FROM THE OWNER'S REPRESENTATIVE, IN VIOLATION OF THE CONTRACT DOCUMENTS OR APPLICABLE CODES.
4. SYMBOLS SHOWN ON THE DRAWINGS AND IN THE SCHEDULES INDICATE THE TYPE OF EQUIPMENT ONLY. REVIEW DRAWINGS TO DETERMINE THE EXACT QUANTITIES REQUIRED FOR EACH EQUIPMENT TYPE.
5. EMPLOY "CLEAN CONSTRUCTION" METHODS TO KEEP THE WORK AREA AND SYSTEMS FREE OF DUST, DIRT AND DEBRIS. DUCT OPENINGS, DIFFUSERS, GRILLES AND REGISTERS SHALL BE SEALED WITH VISQUEEN IN ANY AREA OF THE PROJECT WHERE DUST GENERATING CONSTRUCTION ACTIVITIES OCCUR, INCLUDING THE PREPARATION OF WALL BOARD, PREPARATION, GRINDING OR FINISHING OF CONCRETE WORK OR ANY OTHER SIMILAR ACTIVITY. IF SIMILAR REWORK OF A PREVIOUSLY FINISHED AREA IS REQUIRED, AIR HANDLING UNITS AND FAN COILS SERVING THAT AREA SHALL BE SHUT DOWN, AND ALL GRILLES, REGISTERS, DIFFUSERS AND DUCT OPENINGS IN THAT AREA, WHETHER ABOVE OR BELOW THE CEILING, SHALL BE SEALED WITH VISQUEEN TO PREVENT INFILTRATION OF DUST, DIRT AND DEBRIS INTO THE AIR DISTRIBUTION SYSTEM.
6. PROVIDE CORING, TRENCHING, CUTTING AND PATCHING AS REQUIRED TO PERFORM THE WORK FOR THIS PROJECT.
7. CUTTING, BORING, SAWCUTTING, OR DRILLING THROUGH NEW OR EXISTING STRUCTURAL ELEMENTS TO BE DONE ONLY WHEN SO DETAILED IN THE DRAWINGS OR ACCEPTED BY THE ARCHITECT AND STRUCTURAL ENGINEER WITH THE APPROVAL OF THE AHJ.
8. PERFORM WORK IN ACCORDANCE WITH CURRENT AND APPLICABLE LOCAL CODES AND REGULATIONS AND AS REQUIRED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ).
9. INSTALL EQUIPMENT IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS.
10. PROVIDE EQUIPMENT SUITABLE FOR THE INTENDED PURPOSE.
11. PERFORM SYSTEM COMMISSIONING, CLEANING, SERVICING, BALANCING, TESTING, AND CERTIFICATION REQUIRED BY THE DOCUMENTS, CODE, LOCAL AUTHORITY HAVING JURISDICTION, AND AS RECOMMENDED BY THE EQUIPMENT MANUFACTURERS, PRIOR TO OCCUPANCY.
12. UPON COMPLETION OF TESTING, OPERATE EQUIPMENT TO VERIFY THAT SYSTEMS FUNCTION PROPERLY. AFTER VERIFYING THE PROPER OPERATION, DEMONSTRATE THE OPERATION OF SYSTEMS AND EQUIPMENT TO THE OWNERS REPRESENTATIVES.

APPLICABLE CODES AND STANDARDS

2022 CALIFORNIA 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 (CEC), PART 6, TITLE 24 C.C.R.
2022 CALIFORNIA FIRE CODE, PART 9, TITLE 24 C.C.R.
2022 CALIFORNIA GREEN BUILDING STANDARDS CODE, PART 11, TITLE 24 C.C.R.
2022 CALIFORNIA REFERENCED STANDARDS, PART 12, TITLE 24 C.C.R.

*CALIFORNIA ADMINISTRATIVE CODE, PART 1, CHAPTER 10, ADMINISTRATIVE REGULATIONS FOR THE CALIFORNIA ENERGY COMMISSION (CEC).

LEGEND & ABBREVIATIONS

SYMBOL	ABB.	DESCRIPTION
	SAD	SUPPLY AIR DUCT
	RAD	RETURN AIR DUCT
	OSA	OUTSIDE AIR
	EAD	EXHAUST AIR DUCT
	CA	COMBUSTION AIR
	(L)	LINED DUCTWORK
	CD	CEILING DIFFUSER
	RG	RETURN GRILLE
	EG	EXHAUST GRILLE
	TG	TRANSFER GRILLE
	SWS	SIDEWALL SUPPLY REGISTER
	SWG	SIDEWALL RETURN GRILL
	SWR	SIDEWALL EXHAUST REGISTER
	FC	FLEXIBLE CONNECTION
	MVD	MANUAL VOLUME DAMPER
	QBD	QUADRANT BALANCING DAMPER
	OBD	OPPOSED BALANCING DAMPER
DL	DL	DOOR LOUVER
UC	UC	UNDERCUT DOOR
T	T'STAT	ROOM THERMOSTAT
C	CO2	CARBON DIOXIDE SENSOR
H	H	HUMIDISTAT
	S.A.	SUPPLY AIR
	R.A.	RETURN AIR
	E.A.	EXHAUST AIR
	T.A.	TRANSFER AIR
	O.S.A.	OUTSIDE AIR
	TYP.	TYPICAL
	SFD	COMBINATION SMOKE-FIRE DAMPER
	MBD	MOTORIZED BACKDRAFT DAMPER
	HVAC	HEATING, VENTILATION, AND AIR CONDITIONING
	VAV	VARIABLE AIR VOLUME FLOW
	CAV	CONSTANT AIR VOLUME FLOW
	DCV	DEMAND CONTROL VENTILATION
	ECM	ELECTRONICALLY COMMUTATED MOTOR
	S/S	STAINLESS STEEL
	AC	AIR CONDITIONING UNIT
	AP	ACCESS PANEL
	B.D.D.	BACK DRAFT DAMPER
	CB	CIRCUIT BREAKER
	CFM	CUBIC FEET PER MINUTE
	CONC.	CONCRETE
	COND.	CONDENSATE
	D.B.	DRY BULB
	DN.	DOWN
	ENT.	ENTERING
	EF	EXHAUST FAN
	E.S.P.	EXTERNAL STATIC PRESSURE (INCHES OF WATER)
	TYP.	TYPICAL
	A.F.F	ABOVE FINISHED FLOOR
	FLA.	FULL LOAD AMPS
	FT.	FEET
	GC	GENERAL CONTRACTOR
	HP	HORSEPOWER
	BHP	BRAKE HORSEPOWER
	IN.	INCHES
	KW	KILOWATTS
	L.R.A.	LOCKED ROTOR AMPS
	M.C.A.	MINIMUM CIRCUIT AMPS
	R.L.A.	RATED LOAD AMPS
	M.O.C.P.	MAX. OVER CURRENT PROTECT. AMPS
	PH	PHASE
	FD	FUSED DISCONNECT
	NFD	NON-FUSED DISCONNECT
	PRESS.	PRESSURE
	RPM	REVOLUTIONS PER MINUTE
	MIN.	MINIMUM
	B.O.D.	BOTTOM OF SHEET METAL DUCT
	A.F.F.	ABOVE FINISHED FLOOR
	UTR	UP THRU ROOF
	DTR	DOWN THRU ROOF
	— RL—	REFRIGERANT LIQUID
	— RS—	REFRIGERANT SUCTION

MECHANICAL SHEET INDEX

S.No.	SHEET NUMBER	SHEET TITLE	SCALE
1	M-001	NOTES, LEGEND AND ABBREVIATION	NO SCALE
2	M-221	BUS WASH - BRAKE DYNO BUILDING AND CANOPY FLOOR PLAN	1/8" = 1'-0"
3	M-231	BUS WASH - BRAKE DYNO BUILDING ROOF PLAN	1/8" = 1'-0"

SPECIFICATIONS

PNEUMATIC TUBING:

A. CHEMICAL RESISTANT PTFE.
B. FLEXIBLE, SMOOTH.
C. SEMI-CLEAR WITH COLORED STRIPES - ONE COLOR PER FUNCTION
D. 180 PSI @ 72°F MAX PRESSURE
E. 500°F MAX TEMP
F. 3/8" OD/ 1/4"ID; 1/2" OD/ 3/8" ID
G. END CONNECTION TO MATCH EXISTING (COMPRESSION)
H. INSTALLATIONS PER MANUFACTURERS RECOMMENDATIONS WITH ALLOWANCE FOR EXPANSION AND MOVEMENT. DO NOT EXCEED MAX BEND RADIUS.
I. INSTALL IN CONTINUOUS LENGTHS WITHOUT SPLICES.

EXHAUST FAN:

A. CONFIGURATION: CENTRIFUGAL ROOF UPBLAST VENTILATOR.
B. HOUSING: REMOVABLE SPUN ALUMINUM; SQUARE, ONE-PIECE ALUMINUM BASE WITH VENTURI INLET CONE.
   1. UPBLAST UNITS: PROVIDE SPUN-ALUMINUM DISCHARGE BAFFLE TO DIRECT DISCHARGE AIR UPWARD, WITH RAIN AND SNOW DRAINS.
C. FAN WHEELS: ALUMINUM HUB AND WHEEL WITH BACKWARD-INCLINED BLADES.
D. ACCESSORIES:
   1. DISCONNECT SWITCH: NONFUSIBLE TYPE, WITH THERMAL-OVERLOAD PROTECTION MOUNTED INSIDE FAN HOUSING, FACTORY WIRED THROUGH AN INTERNAL ALUMINUM CONDUIT.
   2. BIRD SCREENS: REMOVABLE, 1/2-INCH MESH, ALUMINUM OR BRASS WIRE.
   3. DAMPERS: COUNTERBALANCED, PARALLEL-BLADE, BACKDRAFT DAMPERS MOUNTED IN CURB BASE; FACTORY SET TO CLOSE WHEN FAN STOPS.
   4. SPARK-RESISTANT, ALL-ALUMINUM WHEEL CONSTRUCTION.
E. PREFABRICATED ROOF CURBS: GALVANIZED STEEL; MITERED AND WELDED CORNERS; 1-1/2-INCH-THICK, RIGID, FIBERGLASS INSULATION ADHERED TO INSIDE WALLS; AND 1-1/2-INCH WOOD NAILER. SIZE AS REQUIRED TO SUIT ROOF OPENING AND FAN BASE.
   1. CONFIGURATION: MANUFACTURED TO ACCOMMODATE ROOF SLOPE.
   2. OVERALL HEIGHT: 8 INCHES.
   3. PITCH MOUNTING: MANUFACTURE CURB FOR ROOF SLOPE.
   4. METAL LINER: GALVANIZED STEEL.

HUMIDISTAT:

1. DESCRIPTION:
   a. TWO-POSITION CONTROL.
   b. FIELD-ADJUSTABLE SET POINT.
   c. LISTED AND LABELED AS DEFINED IN NFPA 70, BY A QUALIFIED TESTING AGENCY, AND MARKED FOR INTENDED LOCATION AND APPLICATION.
2. PERFORMANCE:
   a. RELATIVE HUMIDITY RANGE: 10 TO 90 PERCENT.
   b. RELATIVE HUMIDITY DIFFERENTIAL: 5 PERCENT.
   c. AMBIENT TEMPERATURE: 40 TO 135 DEG F.
   d. VOLTAGE: 24-V AC.
   e. PILOT DUTY: 60 VA.
   f. SWITCH TYPE: SPDT SNAP SWITCH.
3. CONSTRUCTION:
   a. ENCLOSURE: PLASTIC, NEMA 250, TYPE 1.
   b. ELECTRICAL CONNECTIONS: CABLE, 6 INCHES LONG.

PNEUMATIC CONTROL BOX:

A. POLYCARBONATE HINGED ACCESS ENCLOSURE WITH LOCKABLE LATCH
B. NEMA 4X RATER
C. MINIMUM DIMENSION 18" X 16" X 10"

FAN SCHEDULE

TAG	STATUS	MAKE	MODEL	TYPE	DRIVE	LOCATION	SERVICE	PERFORMANCE							ELECTRICAL				PHYSICAL					ANCHORAGE DETAIL	REMARKS
								CFM	SP " WG	RPM	TIP SPEED	BHP	EFF. %	SONES	HP	V	PH	HZ	ROOF OPENING INCHES	L INCHES	W INCHES	H* INCHES	WEIGHT (LBS)		
EF 1	NEW	GREENHECK	CUE-090-G	UPBLAST	DIRECT	ROOF	GENERAL EXHAUST	500	0.25	1,300	-	1/25	43	5.5	1/25	115	1	60	12.5X12.5	22	22	25	31	2 M-231	1 2 3
EF 2	NEW	GREENHECK	CUE-090-G	UPBLAST	DIRECT	ROOF	GENERAL EXHAUST	500	0.25	1,300	-	1/25	43	5.5	1/25	115	1	60	12.5X12.5	22	22	25	31	2 M-231	1 2 3

REMARKS:

1. FURNISH WITH FACTORY "VARI-GREEN" ELECTRONICALLY COMMUTATED MOTOR (ECM) WITH ELECTRONIC SPEED (BALANCE) DIAL AND DISCONNECT SWITCH.
2. PROVIDE INSULATED 12"H 18 GA. GALVANIZED STEEL FACTORY ROOF CURB W/ WOOD NAILER, LIGHTWEIGHT GRAVITY TYPE BACKDRAFT DAMPER AND DAMPER TRAY.
3. 12" HIGH FACTORY ROOF CURB SHALL BE ATTACHED TO TOP OF SHAPED LEVEL WOODEN FIELD CURB.

* HEIGHT INCLUDE 12" HIGH FACTOR CURB

REGISTERED PROFESSIONAL ENGINEER
DARREN B. SMITH
No. 30841
Exp. 12/31/24
MECHANICAL
STATE OF CALIFORNIA

IDS
IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT #: 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	-	PSAE

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA

NOTES, LEGEND AND ABBREVIATIONS

CONTRACTOR NO.	C-4-2093
DESIGN BY:	AZ
DRAWN BY:	AZ
CHECKED BY:	AB
DATE	02-09-2024
SCALE	AS NOTED
SHEET	M-001

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

OCTA

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\04 MECH\20X5002_M-221_FP PLOT DATE: 2/2/2024 4:00:16 PM USER: DION.VAZQUEZ

REPLACE (4)3/8" AND (2)1/4" PNEUMATIC TUBING FROM CONTROL PANEL INTERNAL TO CONTROL ARM DEVICES.

EXISTING METAL PANEL TO BE REPLACED WITH NEMA 4X RATED PLASTIC CORROSION RESISTANT PANEL.

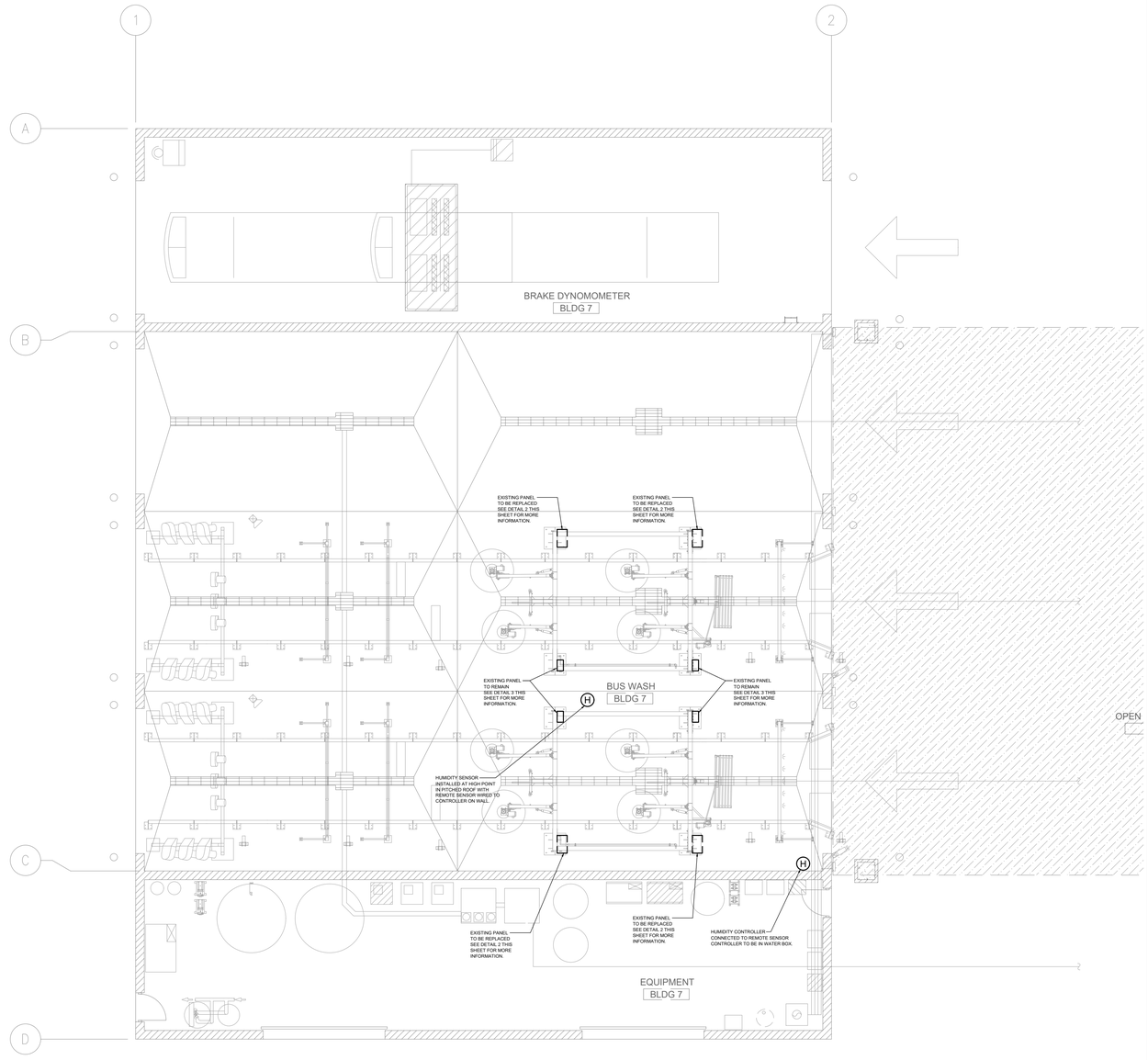
REPLACE (1)1/2" PNEUMATIC TUBING FROM CONTROL PANEL TO COMPRESSED AIR PIPE.

PANEL CONDITION 1 SCOPE | 1/8" = 1'-0" | 2

REPLACE (1)1/4" AND (2)3/8" PNEUMATIC TUBING FROM CONTROL PANEL TO CONTROL ARM DEVICE.

REPLACE (1)1/2" PNEUMATIC TUBING FROM CONTROL PANEL TO COMPRESSED AIR PIPE.

PANEL CONDITION 2 SCOPE | 1/8" = 1'-0" | 3



BUS WASH - BRAKE DYNO BUILDING AND CANOPY FLOOR PLAN | 1/8" = 1'-0" | 1

GENERAL NOTES

1. ALL EXISTING OVERHEAD PIPING IS TO BE PROTECTED IN PLACE. SEE STRUCTURAL FOR NEW SUPPORT DETAILS.
2. ROUTE ALL NEW TUBING FROM EXISTING CONTROL DEVICES IN PANEL TO CONTROL ARM DEVICE SIMILAR TO EXISTING ROUTING AN D SUPPORT.

IDS
IDS GROUP
1 PETERS CANYON ROAD, SUITE 150
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	–	PS&E

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA

BUS WASH - BRAKE DYNO BUILDING AND CANOPY FLOOR PLAN

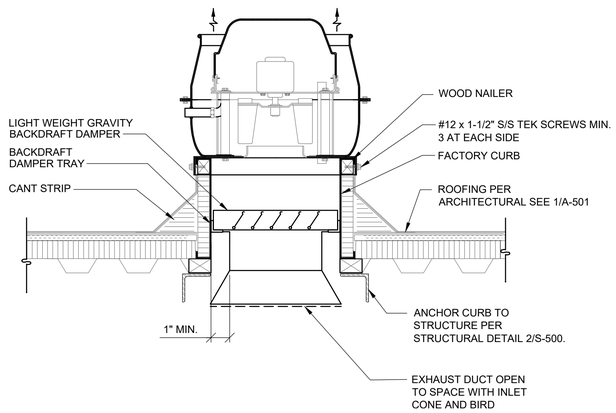
CONTRACTOR NO.	C-4-2093
DESIGN BY:	AZ
DRAWN BY:	AZ
CHECKED BY:	AB
DATE	02-09-2024
SCALE	AS NOTED
SHEET	M-221

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

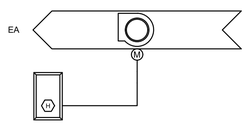
REGISTERED PROFESSIONAL ENGINEER
DARREN B. SMITH
No. 30841
Exp. 12/31/24
MECHANICAL
STATE OF CALIFORNIA

OCTA

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\04 MECH\20X5002_M-231_RF PLOT DATE: 2/2/2024 4:00:24 PM USER: DION.VAZQUEZ



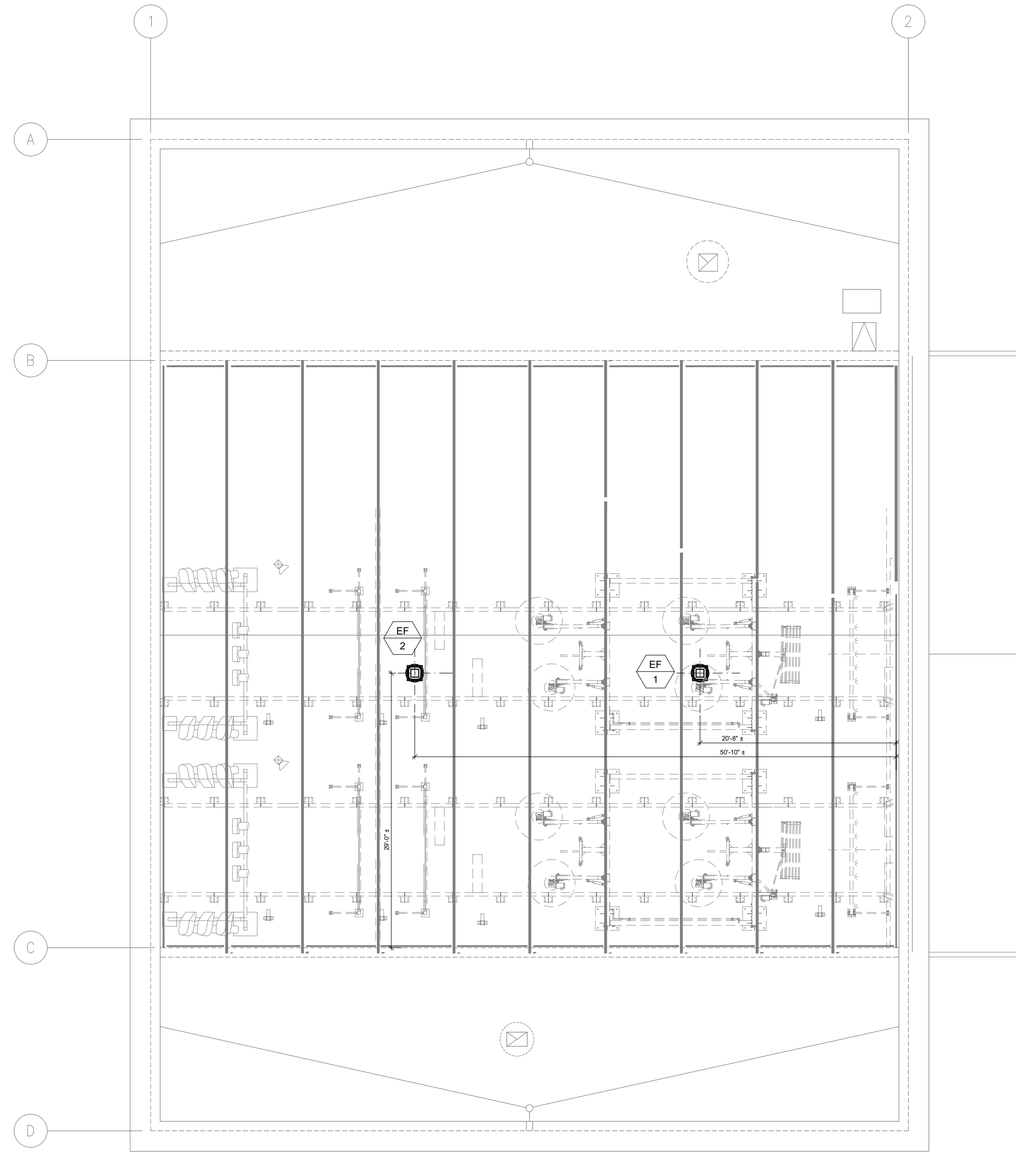
EXHAUST FAN MOUNTING DETAIL | N.T.S. | 2



1. Exhaust Fan - On/Off

Run Conditions:
The exhaust fan shall run whenever a mounted humidistat measures high moisture/humidity (above 60% (ADJ.)) in the ceiling cavity and run until moisture content returns to acceptable levels.

EXHAUST FAN CONTROL DIAGRAM | 1/8" = 1'-0" | 3



BUS WASH - BRAKE DYNO BUILDING ROOF PLAN | 1/8" = 1'-0" | 1

IDS
IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	–	PS&E

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA

BUS WASH - BRAKE DYNO BUILDING
ROOF PLAN

CONTRACTOR NO.	C-4-2093
DESIGN BY:	AZ
DRAWN BY:	AZ
CHECKED BY:	DS
DATE	02-09-2024
SCALE	AS NOTED
SHEET	M-231

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

REGISTERED PROFESSIONAL ENGINEER
DARREN B. SMYTH
No. 30841
Exp. 12/31/24
MECHANICAL
STATE OF CALIFORNIA

OCTA

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\05 ELEC\20X050.02-E-001 GENERAL NOTES, SYMBOL LIST SHEET INDEX PLOT DATE: 2/7/2024 4:16:49
PM USER: JESUS.SORIANO

GENERAL NOTES

1. SYMBOLS ARE NOT NECESSARILY USED IN THIS PROJECT.
2. IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY. THE ENGINEER RESERVES THE RIGHT TO ALLOW OTHER METHODS AND MATERIALS NOT REFLECTED HEREIN. THE CONTRACTOR SHALL BE RESPONSIBLE TO REQUEST THE ENGINEER WAIVE THE STANDARDS TO ALLOW ALTERNATE MEANS AND METHODS PRIOR TO BEGINNING THE PROJECT. CONTRACT DOCUMENT REVISIONS TO ACCOMMODATE INSTALLED CONDITIONS, WITHOUT PRIOR APPROVAL, WILL RESULT IN ADDITIONAL DESIGN CHARGES TO THE CONTRACTOR.
3. ELECTRICAL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER IN ACCORDANCE WITH THE NECA INSTALLATION STANDARDS TO THE SATISFACTION OF THE ARCHITECT AND ENGINEER.
4. WORK, MATERIALS AND EQUIPMENT SHALL CONFORM TO THE CURRENTLY ACCEPTED EDITION OF APPLICABLE NATIONAL, STATE AND CITY CODES AND ORDINANCES.
5. ELECTRICAL SYSTEM COMPONENTS SHALL BE LISTED OR LABELED BY UL OR OTHER RECOGNIZED TESTING FACILITY AS ALLOWED BY AUTHORITY HAVING JURISDICTION.
6. WHERE AN APPARENT DISCREPANCY EXISTS BETWEEN THE REQUIREMENTS OF THE GENERAL NOTES AND INFORMATION PORTRAYED IN THE ELECTRICAL DRAWINGS, THE CONTRACTOR SHALL INCLUDE IN HIS BID THE COST OF THE GREATER QUALITY OR QUANTITY.
7. CONTRACTOR IS ENCOURAGED TO VISIT JOB SITE PRIOR TO BID AND VERIFY EXISTING CONDITIONS. CONTRACTOR SHALL INCLUDE IN BASE BID COSTS REQUIRED FOR PERMITS AND INSPECTIONS.
8. CONTRACTOR SHALL VERIFY, WITH OWNER'S REPRESENTATIVE PRIOR TO SUBMITTING BID, ALLOWABLE WORKING HOURS, EMPLOYEE PARKING AREAS, MATERIAL DELIVERY, STORAGE REQUIREMENTS, DEMOLITION AND REMOVAL OF CONSTRUCTION DEBRIS, AS WELL AS DAILY CLEAN UP REQUIREMENTS. INCLUDE COSTS IN BID FOR DUST BARRIERS, DUMPSTERS ETC. AS REQUIRED FOR THE DURATION OF THE PROJECT. PERFORM WORK AS DIRECTED BY OWNER'S REPRESENTATIVE AND ARCHITECT.
9. ELECTRICAL SYSTEMS SHALL BE TESTED FOR PROPER OPERATION. IF TESTS SHOW THAT WORK IS DEFECTIVE, CONTRACTOR SHALL MAKE NECESSARY CORRECTIONS.
10. CONTRACTOR SHALL GUARANTEE WORK AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP WHICH MAY OCCUR UNDER NORMAL USE FOR A PERIOD OF ONE YEAR AFTER OWNER'S ACCEPTANCE. DEFECTS SHALL BE PROMPTLY CORRECTED BY CONTRACTOR WITHOUT ADDITIONAL CHARGE TO OWNER.
11. PROVIDE AS-BUILT DRAWINGS TO OCTA PROJECT MANAGER. DRAWINGS SHALL INCLUDE ACCURATE CONDUIT AND DEVICE LOCATIONS DIMENSIONED FROM PERMANENT LANDMARKS SUCH AS BUILDING WALLS.
12. DO NOT SCALE ELECTRICAL DRAWINGS. VERIFY EXACT LOCATION OF ALL DEVICES, JUNCTION BOXES, LIGHTING FIXTURES, WITH ARCHITECTURAL AND INTERIOR DESIGN DRAWINGS PRIOR TO INSTALLATION. CONTRACTOR SHALL VERIFY THE EXACT LOCATION OF MECHANICAL EQUIPMENT AND OTHER EQUIPMENT REQUIRING ELECTRICAL CONNECTION PRIOR TO ROUGH-IN. EVERY OUTLET HEIGHT SHALL BE VERIFIED ON EACH WALL WITH THE INTERIOR PLANNING AND DESIGN DRAWINGS. COORDINATE WITH CABINET SHOP DRAWINGS TO ENSURE PROPER HEIGHT AND LOCATION WITH RESPECT TO MILLWORK, EQUIPMENT.
13. THESE DRAWINGS INDICATE THE FINISHED REQUIREMENTS FOR THE ELECTRICAL SYSTEMS, EQUIPMENT, LIGHTING FIXTURES, OUTLETS AND DEVICES. DUE TO STRUCTURAL CONDITIONS, MECHANICAL DUCT, PIPING CONFLICTS, OR OTHER LEGITIMATE REASONS, THE CONTRACTOR MAY DESIRE TO INSTALL THE WORK INDICATED IN A MANNER DIFFERENT FROM THAT SHOWN. SUCH CHANGES SHALL BE PRESENTED TO THE OWNER'S REPRESENTATIVE FOR REVIEW AND APPROVAL PRIOR TO PROCEEDING. UPON APPROVAL, THE WORK SHALL BE PERFORMED AND THE AS-BUILT DRAWINGS SHALL BE REVISED TO ACCURATELY REFLECT THE WORK AS ACTUALLY INSTALLED.
14. PROVIDE DEDICATED NEUTRAL FOR EACH NEW CIRCUIT. HOME RUN CONDUCTORS MAY BE COMBINED INTO ONE CONDUIT. NO RACEWAY OR CABLE SHALL CONTAIN MORE THAN NINE (9) CURRENT CARRYING CONDUCTORS. WHERE MULTIPLE CONDUCTORS IN EXCESS OF THREE (3) ARE INDICATED ON THESE DRAWINGS, THEY HAVE BEEN DERATED AS REQUIRED BY NEC ARTICLE 310 REQUIREMENTS.
15. PROVIDE APPROVED EXPANSION FITTINGS WHERE RACEWAYS CROSS BUILDING EXPANSION JOINTS. PROVIDE BONDING JUMPER(S) SIZED PER CODE WHERE REQUIRED. PROVIDE FITTINGS REQUIRED FOR A COMPLETE INSTALLATION. REFER TO ARCHITECTURAL DRAWINGS FOR EXPANSION JOINT LOCATION(S).
16. CONTRACTOR SHALL PROVIDE PULL CORDS IN ALL EMPTY CONDUITS. WHERE MORE THAN ONE CONDUIT TERMINATES IN A JUNCTION BOX, THE CONTRACTOR SHALL IDENTIFY EACH CONDUIT AND JUNCTION BOX IN A MANNER ALLOWING IDENTIFICATION AFTER WALL FINISHES HAVE BEEN APPLIED.
17. CONTRACTOR SHALL PROVIDE RACEWAY SYSTEMS INDICATED ON THE DRAWING PER NEC REQUIREMENTS AND GENERAL NOTES. ANY DEVIATION FROM THE WIRING METHODS INDICATED SHALL BE ALLOWED ONLY BY SPECIFIC WRITTEN APPROVAL FROM EITHER THE ARCHITECT, ENGINEER OR OWNER. CONTRACTOR'S BID SHALL INCLUDE COSTS FOR RACEWAY SYSTEMS AS SPECIFIED UNLESS SPECIFIC WRITTEN APPROVAL FOR AN ALTERNATIVE WIRING METHOD IS OBTAINED FROM EITHER THE ARCHITECT, ENGINEER OR OWNER AND IS SUBMITTED AS PART OF CONTRACTOR'S FORMAL BID PROPOSAL.
18. CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECT SIZE AND INSTALLATION OF OUTLET, PULL AND JUNCTION BOXES IN ACCORDANCE WITH NEC 314-16. BOXES SHALL BE MINIMUM 4" SQUARE BY 1-1/2" DEEP OR AS INDICATED ON THE DRAWINGS. BOXES SHALL BE RECESSED WITH COVER PLATE TO SUIT THE INTENDED APPLICATION.
19. REFER TO THE ARCHITECTURAL REFLECTED CEILING PLAN(S) FOR EXACT LOCATION OF CEILING MOUNTED LIGHTING FIXTURES. ARCHITECTURAL DRAWINGS SHALL GOVERN IN CASE OF CONFLICT WITH THESE DRAWINGS.
20. PRIOR TO INSTALLATION, CONTRACTOR SHALL REVIEW THE COMPLETE SET OF CONSTRUCTION DOCUMENTS FOR CONFLICTS WITH OTHER TRADES. CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WORK WITH OTHER TRADES TO AVOID CONFLICT DURING INSTALLATION. CONTRACTOR SHALL MAKE MINOR ADJUSTMENTS IN EQUIPMENT LOCATION AND ROUTING AS NECESSARY.
21. CONTRACTOR SHALL BE RESPONSIBLE TO PROPERLY CUT AND PATCH EXISTING CONSTRUCTION AS REQUIRED TO INSTALL NEW ELECTRICAL WORK PATCHING SHALL BE OF THE SAME MATERIALS, WORKMANSHIP AND FINISH AS THE EXISTING WORK AND SHALL ACCURATELY MATCH SURROUNDING WORK TO THE SATISFACTION OF THE OCTA PROJECT MANAGER.
22. ELECTRICAL EQUIPMENT SHALL HAVE SUFFICIENT GUTTER SPACE AND LUGS TO ACCOMMODATE QUANTITY AND SIZE OF CONDUCTORS REQUIRED. CONTRACTORS SHALL PROVIDE EQUIPMENT WITH OVERSIZED ENCLOSURES WHERE REQUIRED.

ELECTRICAL SYMBOL LIST

SINGLE LINE DIAGRAM

	CIRCUIT BREAKER
	UTILITY COMPANY SERVICE CABLE TERMINATION
	FUSE
	FUSED DISCONNECT SWITCH
	SWITCH
TVSS	TRANSIENT VOLTAGE SURGE SUPPRESSOR
	CURRENT TRANSFORMER (CT)
	POTENTIAL TRANSFORMER
	GROUNDING ELECTRODE
M	UTILITY COMPANY POWER METER
#	MOTOR (# INDICATED HP)
M	CUSTOMER OWNED POWER METER
G	GENERATOR
ST	SHUNT TRIP
GFPD	GROUND FAULT PROTECTION DEVICE
	TRANSFER SWITCH ATS OR MTS AND NUMBER OF POLES AS NOTED
	CONTACTOR (NORMALLY OPEN)
	CONTACTOR (NORMALLY CLOSED)
	TIME SWITCH
	CONTROL SWITCH
	PUSH BUTTON
T AC-1	THERMOSTAT OUTLET AT +54" (HVAC UNIT DESIGNATION)
	ENCLOSED CIRCUIT BREAKER
R	RELAY
C	CONTACTOR

LIGHTING

	LIGHT FIXTURE
	LINEAR LED FIXTURE SUSPENDED OR PENDANT
	LED WALL MOUNT FIXTURE
	LINEAR LED STRIP FIXTURE
	DOWN LIGHT
	PENDANT FIXTURE
H	LED WALL MOUNTED LIGHT FIXTURE
	LED WALL SCONCE
	LED WALL WASHER
	MONO-POINT LIGHT FIXTURE
	PARKING LOT POLE MOUNTED LIGHT FIXTURE
	BOLLARD LIGHT FIXTURE
	EXIT SIGN - CEILING MOUNTED (SHADE INDICATES FACE)
H	EXIT SIGN - WALL MOUNTED (SHADE INDICATES FACE)
	EXIT SIGN - W/ARROWS INDICATE DIRECTION
	EMERGENCY BUG EYE FIXTURE WITH 90 MIN BATTERY BACKUP
A 1b	LIGHTING FIXTURE NOTATION A, 1, b INDICATES: A = FIXTURE TYPE, REFER TO SCHEDULE 1 = CIRCUIT NUMBER b = SWITCH CONTROLLING FIXTURE ab =BI-LEVEL/DUAL SWITCH CONTROL
	HALF SHADED LINEAR LED OR SOLID DOWNLIGHT FIXTURE FURNISHED ON EMERGENCY POWER.
$ D,K $ abcd 2,3,4	WALL SWITCH, +48" OR AS NOTED: SUBSCRIPTS AT SYMBOL INDICATE THE FOLLOWING: 2 - DOUBLE POLE (20A, 120/277V) 3 - THREE WAY (20A, 120/277V) 4 - FOUR WAY (20A, 120/277V) D - DIMMER SWITCH (20A, 120/277V) K - KEY OPERATED (20A, 120/277V) M - MOTOR STARTING SWITCH (20A, 120/277V) P - PILOT LIGHT (20A, 120/277V) R - REMOTE CONTROL SWITCH (20A, 120/277V) T - TIMER SWITCH (0-60 MIN.) (20A, 120/277V)
OS	OCCUPANCY SENSOR - CEILING
OS	OCCUPANCY SENSOR - WALL MOUNTED
OS D	OCCUPANCY SENSOR w/DIMMER- WALL MOUNTED
LC	LIGHTING CONTACTOR
PC	PHOTOCELL
PP	LIGHTING CONTROL POWER PACK

ELECTRICAL SYMBOL LIST (CONT'D)

POWER

	SINGLE RECEPTACLE, NEMA 5-15R, 20A, 125V, MOUNT CENTER OF OUTLET AT 18" AFF UON
	DUPLEX RECEPTACLE, NEMA 5-15R, 20A, 125V RATED, MOUNT CENTER OF OUTLET AT 18" AFF UON
	DEDICATED DUPLEX RECEPTACLE, NEMA 5-20R, 20A, 125V RATED MOUNT CENTER OF OUTLET AT 18" AFF UON
G	DEDICATED DUPLEX RECEPTACLE, NEMA 5-20R, 20A, 125V, GFCI TYPE, RATED MOUNT CENTER OF OUTLET AT 18" AFF UON
C	DUPLEX RECEPTACLE / HALF-SWITCHED "C" INDICATES CONTROLLED VIA MOTION SENSOR/TIME CLOCK, MOUNT CENTER OF OUTLET AT 18" AFF UON
	DUPLEX RECEPTACLE NEMA 5-15R 125V RATED MOUNTED 6" ABOVE COUNTER SPLASH
	DUPLEX RECEPTACLE NEMA 5-20R, 15A, 125V GFCI TYPE, MOUNTED 6" ABOVE COUNTER SPLASH
	QUADPLEX RECEPTACLE, NEMA 5-15R, 20A, 125V, MOUNT CENTER OF OUTLET AT 18" AFF UON
	SPECIAL RECEPTACLE 480V RATED w/GROUND AS NOTED
	SPECIAL RECEPTACLE. 250V RATED WITH GROUND AS NOTED
	DUPLEX RECEPTACLE NEMA 5-20R, 15A, 125V - FLUSH MOUNT CEILING
	DUPLEX RECEPTACLE NEMA 5-20R, 15A, 125V - FLUSH MOUNT CEILING
	POWER FLOOR OUTLET WITH DEVICE AS INDICATED
	COMBINATION POWER / DATA FLOOR OUTLET AS INDICATED
	COMBINATION POWER / DATA FLOOR OUTLET NOTED SUITABLE FOR CONCRETE FLOORS NOTED SUITABLE FOR TYPE 5 CONSTRUCTION
	COMBINATION USB/DUPLEX NEMA 5-15R, 125V, MOUNTED 18" AFF UON
	COMBINATION USB/DUPLEX NEMA 5-15R, 125V, MOUNTED 6" ABOVE COUNTER
J	JUNCTION BOX
J	JUNCTION BOX - WALL MOUNT
J	JUNCTION BOX - FLUSH FLOOR MOUNT
	DUAL CHANNEL RACEWAY WITH COVER, DUPLEX AND DATA RECEPTACLES AS NOTED
PB	PULLBOX - EXTERIOR OR INTERIOR AS INDICATED
	LIGHTING AND APPLIANCE PANELBOARD - SURFACE MOUNT
	LIGHTING AND APPLIANCE PANELBOARD - FLUSH MOUNT
	SWITCHBOARD OR DISTRIBUTION BOARD
ATS	AUTOMATIC TRANSFER SWITCH
VFD	VARIABLE FREQUENCY DRIVE
	METER SERVICE PEDESTAL
	PUSH BUTTON CONTROL STATION
$ M	SINGLE MANUAL MOTOR RATED SWITCH (1HP)
	NON-FUSED DISCONNECT SWITCH (WITH SEALTITE RACEWAY CONNECTION
F	FUSED DISCONNECT SWITCH
	MOTOR CONTROLLER OR STARTER

SIGNAL

	COMBINATION TELE/DATA OUTLET AT +18"
	TELEPHONE OUTLET AT +18"
	DATA OUTLET AT +18"
	TELE/DATA OUTLET MOUNTED 6" ABOVE COUNTER SPLASH
	TELEPHONE OUTLET MOUNTED 6" ABOVE COUNTER SPLASH
	DATA OUTLET MOUNTED 6" ABOVE COUNTER SPLASH
	TELE/DATA CEILING OUTLET
	DATA CEILING OUTLET
CR	CARD READER
S	CEILING MOUNTED SPEAKER
C	CAMERA (CCTV)
	FLUSH FLOOR BOX WITH COMBINATION TELE/DATA OUTLET
TV	TELEVISION OUTLET
TS	TIME SWITCH
T	POWER TRANSFORMER. SIZE AND TYPE NOTED ON PLANS AND SPECIFICATIONS
	TELEPHONE BACKBOARD

FIRE ALARM

FACP	FIRE ALARM CONTROL PANEL 120V
FATC	FIRE ALARM TERMINAL CABINET
ANN	FIRE ALARM ANNUNCIATOR
FS	FLOW SWITCH
TS	TAMPER SWITCH
DD	DUCT MOUNTED SMOKE DETECTOR
CFSD	COMBINATION SMOKE FIRE DAMPER
	FIRE ALARM PULL STATION
DH	ELECTROMAGNETIC DOOR HOLDER
	WALL MOUNTED FIRE ALARM HORN SPEAKER DEVICE "CD" INDICATES CANDELA; "db" INDICATES DECIBEL LEVEL
15cd 30cd 75cd	WALL MOUNTED HORN STROBE DEVICE "cd" INDICATES CANDELA; "db" INDICATES DECIBEL LEVEL
	WALL MOUNTED STROBE DEVICE "cd" INDICATES CANDELA
	CEILING MOUNTED STROBE DEVICE "CD" INDICATES CANDELA
SD	FIRE ALARM SMOKE DETECTOR DEVICE
	HEAT DETECTOR
CO	CARBON MONOXIDE DETECTOR
	FIRE ALARM BELL MOUNTED +90"A.F.F. PER NFPA72 18.4.8.1

MISCELLANEOUS

UNIT #	MECHANICAL EQUIPMENT TAG
# SHEET	DIAGRAM TAG
1	KEYNOTE PLAN SYMBOL
1	DEMOLITION KEYNOTE PLAN SYMBOL
1	REVISION SYMBOL
XXX	FEEDER SCHEDULED EQUIPMENT
XXXX	ELECTRICAL EQUIPMENT TAG

WIRING

	CONDUIT ROUTED EXPOSED
	CONDUIT ROUTED UNDER FLOOR/UNDERGROUND
	RACEWAY CONCEALED IN WALL OR CEILING 1/2"C, 2#12 AND 1#12 GND - TYPICAL U.N.O.
	RACEWAY TURNED UP 1/2"C, 2#12 AND 1#12 GND - TYPICAL U.N.O.
	RACEWAY TURNED DOWN 1/2"C, 2#12 AND 1#12 GND - TYPICAL U.N.O.
	MIN. 3/4"C- HOMERUN TO PANELBOARD
	CONDUIT CAP-OFF
	LOW VOLTAGE WIRING

APPLICABLE CODES

- 2022 CALIFORNIA ELECTRICAL CODE (CEC) PART 3, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)
- 2020 NATIONAL ELECTRICAL CODE (NEC) NFPA 70
- 2022 CALIFORNIA ADMINISTRATIVE CODE (CAC) PART 1, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)
- 2022 CALIFORNIA BUILDING CODE (CBC) PART 2, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)
- 2022 CALIFORNIA MECHANICAL CODE (CMC) PART 4, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)
- 2022 CALIFORNIA PLUMBING CODE (CPC) PART 5, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)
- 2022 CALIFORNIA ENERGY CODE (CEC) PART 6, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)
- 2022 CALIFORNIA FIRE CODE (CFC) PART 9, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)
- 2022 CALIFORNIA GREEN BUILDING CODE (CGBC) PART 11, TITLE 24, CALIFORNIA CODE OF REGULATIONS (CCR)

STANDARD ABBREVIATIONS

- A -	
A	AMPERE
AB	ABOVE BACK SPLASH
ADA	AMERICANS W/DISABILITIES ACT
A.F.F.	ABOVE FINISHED FLOOR
AF	ARC FAULT
AHU	AIR HANDLING UNIT
AMP	FUSE
AFG	ABOVE FINISHED GRADE
AIC	AMPERE INTERRUPTING CAPACITY
AL	ALUMINUM
ARCH'L	ARCHITECTURAL AS AMP SWITCH
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
- B -	
BC	BARE COPPER
BLDG	BUILDING BLDG
- C -	
C	CONDUIT
CAB	CABINET
CAT	CATALOG/CATEGORY
CB	CIRCUIT BREAKER
CKT	CIRCUIT
CLG	CEILING
CO	CONDUIT ONLY
CC	COMM COMMUNICATION
CU	COPPER
CTEP	CALIFORNIA TYPE EVALUATION PROGRAM
- D -	
DEMO.(D)	DEMOLITION/DEMOLISH
DISC.	DISCONNECT
DN	DOWN
DWG	DRAWING
- E -	
EA	EACH
EF	EXHAUST FAN
EG	EQUIPMENT GROUND
ELEC.	ELECTRICAL
ELEV	ELEVATOR
EM	EMERGENCY
EMT	ELECTRICAL METALLIC TUBING
EQUIP	EQUIPMENT
(E)	EXISTING
EVCS	ELECTRICAL VEHICLE CHARGING STATION
- F -	
FBO	FURNISHED BY OTHERS
FF	FINISHED FLOOR
FIXT	FIXTURE
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE METALLIC CONDUIT(STEEL)
FLUOR	FLUORESCENT
FT	FEET OR FOOT
- G -	
GFA	GROUND FAULT ALARM
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
GND	GROUND
- H -	
HP	HORSEPOWER
HVAC	HEATING, VENTILATING & AIR CONDITIONING
- I -	
IBC	INTERNATIONAL BUILDING CODE
IMC	INTERMEDIATE METAL CONDUIT
IN	INCH(ES)
IRC	INTERNATIONAL RESIDENTIAL CODE
ISC	SHORT CIRCUIT AMPERES
- J -	
JB, J-BOX	JUNCTION BOX
- K -	
KCMIL & MCM	THOUSAND CIRCULAR MILS
KVA	KILOVOLT AMPERE
KW	KILOWATT
- L -	
LTG	LIGHTING
LRA	LOCK RUNNING AMPS
LOTO	LOCK OUT TAG OUT
- M -	
MAX.	MAXIMUM
MCA	MAXIMUM CIRCUIT AMP
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MECH.	MECHANICAL
MIN.	MINIMUM
MLO	MAIN LUGS ONLY
MTD	MOUNTED
- N -	
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRICAL CODE
NECA	NATIONAL ELECTRICAL CONTRACTOR'S ASSOCIATION
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
NEUT	NEUTRAL
NFC	NATIONAL FIRE CODE
NF	NON-FUSIBLE
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
(N)	NEW
- O -	
OCPD	OVER CURRENT PROTECTION DEVICE
- P -	
P	POLE
PH	PHASE
PNL	PANEL
PV	PHOTOVOLTAIC
PVC	POLYVINYL CHLORIDE
PWR	POWER
- Q -	
QTY	QUANTITY
- R -	
(R)	RELOCATE
RECEP	RECEPTACLE
REQ'D	REQUIRED
RGS	RIGID GALVANIZED STEEL
RSC	RIGID STEEL CONDUIT
- S -	
SCHED	SCHEDULE
SECT	SECTION
SP	SINGLE POLE
SN	SOLID NEUTRAL
SPEC	SPECIFICATION
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCH GEAR
SYS	SYSTEM
- T -	
TEMP	TEMPORARY
TELE	TELEPHONE
T-STAT	THERMOSTAT
TTB	TELEPHONE TERMINAL BACKBOARD
TTC	TELEPHONE TERMINAL CABINET
TYP.	TYPICAL
- U -	
UBC	UNIFORM BUILDING CODE
UL	UNDERWRITERS LABORATORY
U.N.O.	UNLESS NOTED OTHERWISE
- V -	
V	VOLT OR VOLTAGE
VA	VOLT AMPERE
VD	VOLTAGE DROP
VFD	VARIABLE FREQUENCY DRIVE
VP	VAPOR PROOF
- W -	
W	WATT, WIRE
WP	WEATHERPROOF, NEMA 3R
- X -	
XFMR	TRANSFORMER

SHEET INDEX

SHEET NUMBER	SHEET TITLE
E-001	GENERAL NOTES ABBREVIATIONS, SYMBOLS AND SHEET INDEX
E-002	PANEL SCHEDULES, LIGHT FIXTURE SCHEDULE & WIRING DIAGRAM
E-101	BUS WASH - BRAKE DYNO BUILDING- ROOF - POWER PLAN
E-102	BUS WASH - BRAKE DYNO BUILDING - LIGHTING PLAN
E-103	BUS WASH - BRAKE-DYNO BUILDING PHOTO DETAILS
E-104	ELECTRICAL DETAILS
E-105	PHOTOMETRICS
E-106	TITLE 24 COMPLIANCE FORMS

REGISTERED PROFESSIONAL ENGINEER STEVEN M. COLLINS No. E22808 Exp. 06-30-24 ELECTRICAL STATE OF CALIFORNIA
DATE SIGNED 02/13/24

IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # : 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	I	PS&E

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA

GENERAL NOTES ABBREVIATIONS, SYMBOLS AND SHEET INDEX

CONTRACTOR NO.	C-4-2093
DESIGN BY:	BK
DRAWN BY:	BK
CHECKED BY:	SC
DATE	02-09-2024
SCALE	NONE
SHEET	E-001

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

OCTA

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\05 ELEC\20X050.02-E-002 PANEL SCHEDULES PLOT DATE: 2/7/2024 4:19:06 PM USER: JESUS.SORIANO

FIXTURE NOTES

1. FIXTURES SHALL INCLUDE ALL ACCESSORIES FOR INSTALLATION AS REQUIRED BY CALIFORNIA AND LOCAL ELECTRICAL CODES.
2. PRIOR TO THE RELEASE OF THE LIGHTING FIXTURE ORDER, THE PARTY RESPONSIBLE FOR FIXTURE PROCUREMENT (TYPICALLY THE CONTRACTOR) SHALL:
   VERIFY ALL FIXTURES SHALL HAVE APPROPRIATE UL, ETL OR OTHER RECOGNIZED AND ACCEPTED TESTING AGENCY FOR DRY, DAMP, OR WET LOCATION INSTALLATION AS REQUIRED BY CALIFORNIA AND LOCAL ELECTRICAL CODES.
   VERIFY ALL INTEGRAL OR REMOTE DRIVERS ARE RECOGNIZED BY UL, ETL OR OTHER RECOGNIZED TESTING AGENCY. REMOTE DRIVERS SHALL BE LISTED AS AN "ASSEMBLY" TO OPERATE WITH THE LUMINAIRE
   WORK WITH THE CONTRACTOR TO VERIFY ITEMS OUTLINED IN SECTION 5 BELOW
3. PRIOR TO THE RELEASE OF THE LIGHTING FIXTURE ORDER, CONTRACTOR SHALL WORK WITH THE LIGHTING PROCUREMENT AGENT TO: IDENTIFY INSULATED CEILING AREAS AND PROVIDE IC RATED HOUSING OPTIONS FOR FIXTURES TO BE INSTALLED IN THESE CONDITIONS. CONTRACTOR SHALL NOTIFY THE LIGHTING DESIGNER IF AN IC OPTION IS NOT AVAILABLE FOR THE SPECIFIED FIXTURE(S)
4. LAMPS OR LED LIGHT ENGINES SHALL BE INSTALLED AS OUTLINED IN THE FIXTURE SCHEDULE BELOW.
5. THE OWNER AND LIGHTING DESIGNER SHALL APPROVE FIXTURE SUBSTITUTIONS PRIOR TO BID.

Latest revisions in **BOLD**

LIGHT FIXTURE SCHEDULE

TYPE	DESCRIPTION	LOCATION	MANUFACTURER & CATALOG #	MOUNTING	TOTAL WATTS	VOLTS	REMARKS
A	VCL CANOPY LIGHT LED LOW GLARE IMPACT RESISTANCE POLYCARBONATE FIXTURE WITH IP66 RATING. 0-10V DRIVER INTEGRAL OCCUPANCY SENSOR	BUS WASH CANOPY	VISION ENGINEERING TYPE VCL-L1-40K-OC	SURFACE	60	277	SURFACE MOUNT TO STEEL STRUCTURE FRAME

LIGHT FIXTURE SCHEDULE | NO SCALE | 2

PANELBOARD '7LA'

MAIN: 208/120VOLT,3-PH,4-WIRE & GND — FEED TYPE: — MAIN BREAKER: 100A — MOUNTING: SURFACE
BUS: 1 SEC.: SINGLE LUGS — ENCL.: NEMA 1 — BUS: 100A — MIN A.I.C. RATING: 10K

LOAD VA	LOAD DESCRIPTION	OUTLETS M	OUTLETS R	OUTLETS L	CB / P	CKT #	PHASE	CKT #	CB / P	OUTLETS L	OUTLETS R	OUTLETS M	LOAD DESCRIPTION	LOAD VA
360	(E) RECEPTACLES				20/1	1	A	2	20/1	17			(E) BD-2 CONTROL CONSOLE	200
720	(E) RECEPTACLES				20/1	3	B	4	20/1	0			(E) W-4 WATER SOFTNER	1600
720	(E) RECEPTACLES				20/1	5	C	6	20/1	0			(E) PANEL LCP7A	200
360	(E) RECEPTACLES				20/1	7	A	8	20/1	17			(E) LNGDCP-4	200
720	(E) RECEPTACLES				20/1	9	B	10	20/1	0			(E) CAMERA	100
720	(E) RECEPTACLES				20/1	11	C	12	20/1	0			(E) COOLING DOOR EAST	300
360	(E) RECEPTACLES DC-7				20/1	13	A	14	20/1	0			(E) COOLING DOOR WEST	300
200	(E) TIME CLOCK EF 7-1				20/1	15	B	16	20/1	0			(E) SHUNT TRIP UNIT	100
1500	(E) AP3				20/1	17	C	18	20/1	0			(E) SHERIFF CONTAINER	180
0	SPARE (OFF POSITION)				50/2	19	A	20	20/1	0			(E) SUMP PUMPS (OFF POSITION)	1920
0						21	B	22	20/1	0			**(N) EF-1 & 2 ROOF BUS WASH**	**100**
	SPACE					23	C	24	20/1	0			(E) DOG TRAINING	300
1440	(E) DRYER				15/3	25	A	26	20/1	0			(E) DRYER (OFF POSITION)	1500
1440						27	B	28	20/1	0			(E) WATER HEAT	200
1440						29	C	30	20/2	0			(E) WASHING MACH.	1000
	SPACE					31	A	32		0				1000
	SPACE					33	B	34		0			(E) BUS WASH SMP PUMPS	1000
	SPACE					35	C	36	20/3	0				1000
	SPACE					37	A	38		0				1000
	SPACE					39	B	40		0			SPACE	
	SPACE					41	C	42		0			SPACE	

PHASE	A	B	C		PANEL TOTAL	
PHASE TOTAL CONNECTED VA:	8640	6180	7360		22.2	KVA
CONTINUOUS LOAD @125%: (5660)	1350	2050	3675		7.1	KVA
KITCHEN EQUIP. @ 65% (0)	0	0	0		0.0	KVA
LARGEST MOTOR @125%: (0)	0	0	0		0.0	KVA
HVAC @ 100% (0)	0	0	0		0.0	KVA
GEN. RECEPT. DEMAND (0)	0	0	0		0.0	KVA
REMAINING @100%	7560	4540	4420		16.5	KVA
PANEL TOTAL W/ DEMAND:	8910	6590	8095		23.6	KVA
FULL LOAD AMPS:	74	55	67		65.5	AMPS

PANEL LOCATION: BREAK DYNO BLDG 7
FED BY: DB7

100.0% (NET GEN. REC. DEMAND FACTOR)

(E) PANELBOARD '7HA'

MAIN: 480/277VOLT,3-PH,4-WIRE & GND — FEED TYPE: — MAIN BREAKER: 125A — MOUNTING: SURFACE
BUS: 1 SEC.: SINGLE LUGS — ENCL.: NEMA 1 — BUS: 100A — MIN A.I.C. RATING: 18K

LOAD VA	LOAD DESCRIPTION	OUTLETS M	OUTLETS R	OUTLETS L	CB / P	CKT #	PHASE	CKT #	CB / P	OUTLETS L	OUTLETS R	OUTLETS M	LOAD DESCRIPTION	LOAD VA
1000	SPARE (OFF POSITION)				20/1	1	A	2	20/1	17			(E) WALL LTS	200
1000	SPARE (OFF POSITION)				20/1	3	B	4	20/1	0			(E) WALL LTS	200
1000	SPARE (OFF POSITION)				20/1	5	C	6	20/1	0			(E) WALL LTS	200
1000	(E) BRAKE DYNO LTS				20/1	7	A	8	20/1	17			(E) CANOPY LTS	600
	(E) BRAKE DYNO LTS				20/1	9	B	10	20/1	0			(E) CANOPY LTS	600
960	(E) BUS WASH LTS				20/1	11	C	12	20/1	0			(E) CANOPY LTS	600
	SPARE				20/1	13	A	14	20/1	0			(E) CANOPY LTS	600
	SPARE				20/1	15	B	16	20/1	0			SPARE (OFF POSITION)	
	SPARE				20/1	17	C	18	20/1	0			SPARE (OFF POSITION)	
	SPARE (OFF POSITION)				20/1	19	A	20	20/1	0			SPARE (OFF POSITION)	
	SPARE (OFF POSITION)				20/1	21	B	22	20/1	0			SPARE (OFF POSITION)	
	SPARE (OFF POSITION)				20/1	23	C	24	20/1	0			SPARE (OFF POSITION)	
	SPARE (OFF POSITION)				20/1	25	A	26	40/3	0				3500
	SPARE (OFF POSITION)				20/1	27	B	28		0			(E) W-3 R/O SYSTEM	3500
	SPARE (OFF POSITION)				20/1	29	C	30		0				3500
500	(E) EQUIPMENT LTS				20/1	31	A	32	50/3	0				8000
500	(E) EQUIPMENT LTS				20/1	33	B	34		0			(E) W-5 PRESSURE WASHER	8000
	SPACE					35	C	36		0				8000
	SPACE					37	A	38		0				8000
	SPARE				20/1	39	B	40	50/3	0			(E) PANEL 7LA VIA XFMR 7TA	8000
	SPACE					41	C	42		0				8000

PHASE	A	B	C		PANEL TOTAL	
PHASE TOTAL CONNECTED VA:	23400	21800	22260		67.5	KVA
CONTINUOUS LOAD @125%: (4960)	3000	1000	2200		6.2	KVA
KITCHEN EQUIP. @ 65% (0)	0	0	0		0.0	KVA
LARGEST MOTOR @125%: (0)	0	0	0		0.0	KVA
HVAC @ 100% (0)	0	0	0		0.0	KVA
GEN. RECEPT. DEMAND (0)	0	0	0		0.0	KVA
REMAINING @100%	21000	21000	20500		62.5	KVA
PANEL TOTAL W/ DEMAND:	24000	22000	22700		68.7	KVA
FULL LOAD AMPS:	87	79	82		82.6	AMPS

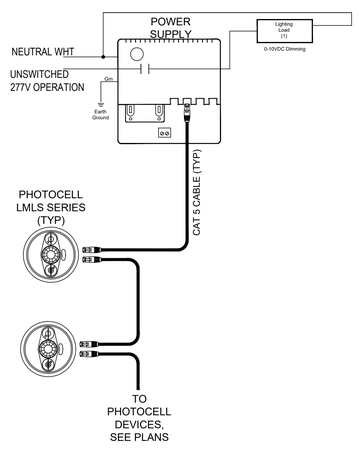
PANEL LOCATION: BREAK DYNO BLDG 7
FED BY: DB7

100.0% (NET GEN. REC. DEMAND FACTOR)

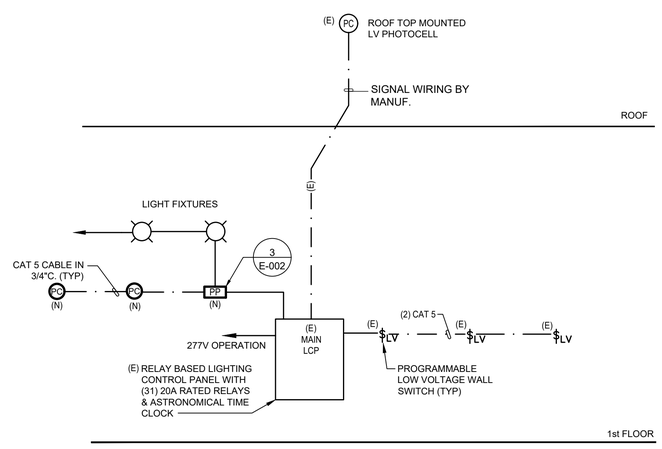
PANEL SCHEDULES | NO SCALE | 1

ID: LCP 9
Location: LCP 7A
Supply Circuit: Voltage: 277V Normal

Relay	Line Feed	Zone	Type	Voltage	Source	Description	Relay	Line Feed	Zone	Type	Voltage	Source	Description
1	7HA 7		NC	277V	Normal	(E) BRAKE DYNO LTS	2	7HA 9		NC	277V	Normal	(E) BRAKE DYNO LTS
3	7HA 11		NC	277V	Normal	(E) WASH BAY LTS	4	SPARE		NC	277V	Normal	
5	SPARE		NC	277V	Normal		6	SPARE		NC	277V	Normal	
7	7HA 31		NC	277V	Normal	(E) EQUIP LTS	8	7HA 33		NC	277V	Normal	(E) EQUIPMENT LTS
9	7HA 8		NC	277V	Normal	(E) CANOPY LTS	10	7HA 10		NC	277V	Normal	(E) CANOPY LTS
11	7HA 12		NC	277V	Normal	(E) CANOPY LTS	12	7HA 14		NC	277V	Normal	(E) CANOPY LTS
13	7HA 2		NC	277V	Normal	(E) WALL LTS	14	7HA 4		NC	277V	Normal	(E) WALL LTS
15	7HA 6		NC	277V	Normal	(E) WALL LTS	16	-		NC	277V	Normal	



PHOTOCELL CONTROL WIRING DIAGRAM | NO SCALE | 3



LIGHTING CONTROL DIAGRAM | NO SCALE | 1

REGISTERED PROFESSIONAL ENGINEER STEVEN M. COLLINS No. E22808 Exp. 09-30-24 ELECTRICAL STATE OF CALIFORNIA
DATE SIGNED 02/13/24

IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT #: 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	-	PSSE

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA

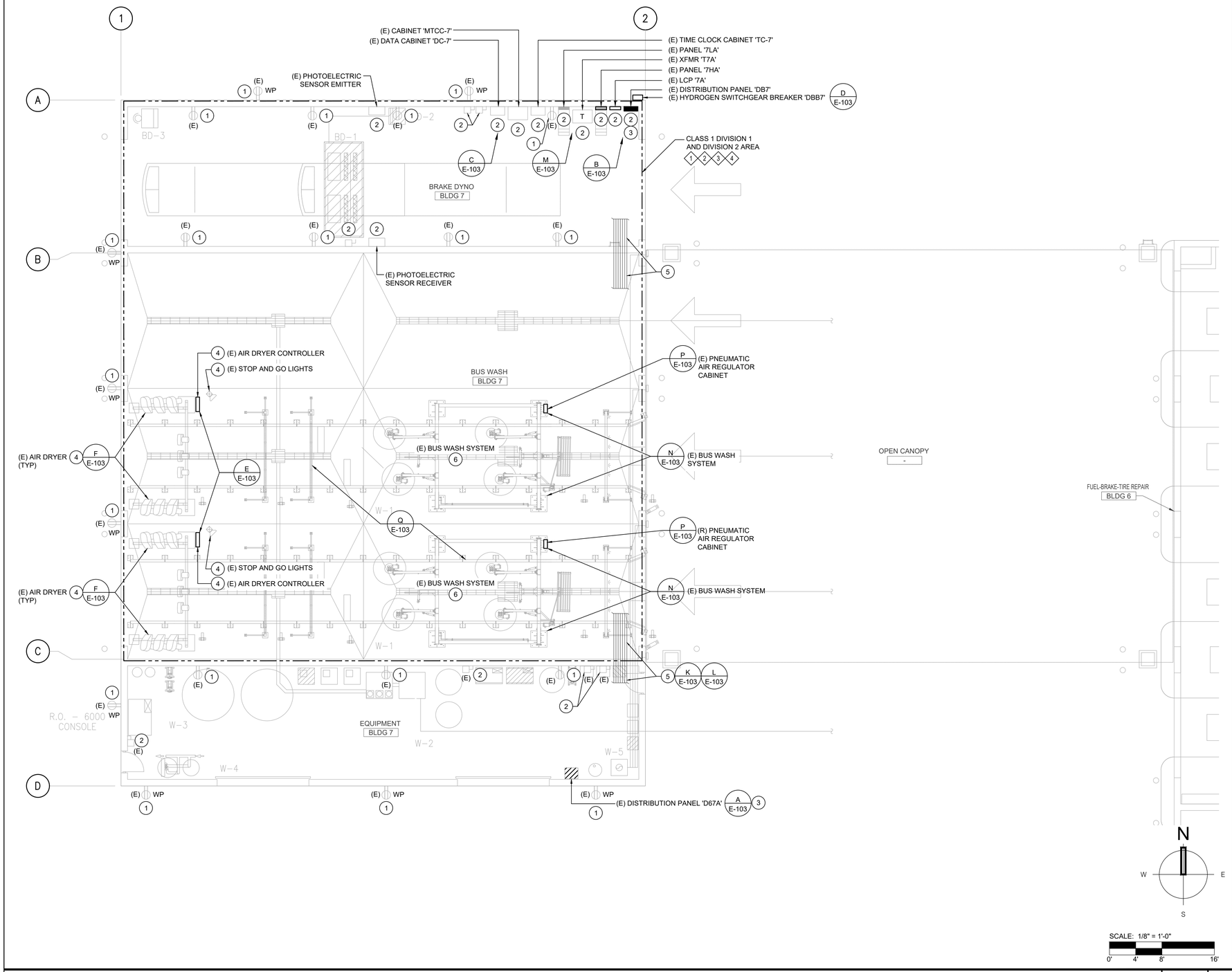
PANEL SCHEDULES, LIGHT FIXTURE SCHEDULE & WIRING DIAGRAM

CONTRACTOR NO.	C-4-2093
DESIGN BY:	BK
DRAWN BY:	BK
CHECKED BY:	SC
DATE	02-09-2024
SCALE	NONE
SHEET	E-002

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

OCTA

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\05 ELEC\20X050.02-E-101 BUS WASH - DYNO BUILDING - POWER PLOT DATE: 2/7/2024 4:19:16 PM
USER: JESUS.SORIANO



BUS WASH - BRAKE DYNO BUILDING- ROOF - POWER PLAN | 1/8" = 1'-0" | 1

GENERAL NOTES

1. DURING THE PROJECT RENOVATION AND ABRASIVE BLASTING, ALL POWER SHALL BE DE-ENERGIZED AND PERFORM LOCK-OUT TAG-OUT ON THE EXISTING DISTRIBUTION EQUIPMENT. CONTRACTOR SHALL COORDINATE AND NOTIFY A MINIMUM OF 5 WORKING DAYS TO ORCHESTRATE SHUTDOWN.
2. EXISTING VEHICLE DYNO SYSTEM SHALL REMAIN AS IS AND PROTECTED IN PLACE. CONTRACTOR SHALL SUBMIT MEANS AND METHODS.
3. EXISTING BUILDING ELECTRICAL DISTRIBUTION EQUIPMENT SHALL REMAIN AS IS. ALL CIRCUITRY SHALL BE SURVEY, VERIFIED, AND RESTORED TO ORIGINAL OPERATIONAL PROCEDURES UPON COMPLETION OF STRUCTURAL RESTORATION.

BUILDING AREA CLASSIFICATION NOTES

1. EXISTING AREA IS CLASS 1, DIVISION 2 RATED UP TO 18" ABOVE FLOOR.
2. EXISTING AREA IS CLASS 1, DIVISION 2 RATED FOR THE UNDERSIDE OF THE FLOOR DECK AND DOWN 18".
3. TRENCHES BELOW FLOOR LEVEL SHALL BE CLASS 1 DIVISION 1 RATED.
4. EXPLOSION PROOF SEALS FOR CONDUITS ENTERING AND EXITING THIS AREA SHALL NOT BE DISTURBED.

KEYNOTES

1. CONTRACTOR TO PROTECT IN PLACE POWER RECEPTACLE AS REQUIRED. RESTORE UPON COMPLETION OF STRUCTURAL RENOVATION WORK.
2. CONTRACTOR TO PROTECT IN PLACE ELECTRICAL EQUIPMENT, PERFORM LOCK-OUT TAG-OUT, AND RESTORE UPON COMPLETION OF STRUCTURAL RENOVATION WORK.
3. CONTRACTOR TO PERFORM POWER SHUT DOWN AND LOCK-OUT TAG-OUT PER OTCA STANDARDS.
4. CONTRACTOR SHALL REPAIR/REPLACE CORRODED SHROUDS (HOUSING) OF EXISTING AIR DRYERS, WITH THE INTENT OF REMOVING CORROSION AND FILLING GAPS/CAVITIES RESULTING FROM CORROSION; PREPARE SURFACE OF ALL AIR DRYER SHROUDS, THEN APPLY OWNER-APPROVED HIGH-PERFORMANCE PAINT. REFURBISH EXISTING STOP/GO LIGHTS AND EXISTING AIR DRYER CONTROL PANELS, WITH THE INTENT OF REMOVING VISIBLE STAINS AND DISCOLORATIONS BY CLEANING WITH OWNER-APPROVED NON-ABRASIVE CLEANER(S). VACUUM INTERIOR OF EXISTING AIR DRYER CONTROL PANELS, AND TEST FOR OPERATIONAL CONDITION TO MATCH EXISTING.
5. CONTRACTOR SHALL SURVEY ALL EXISTING CONDUIT AND EXISTING CIRCUITRY, DISCONNECT FROM EXISTING JOIST MEMBERS, PROTECT AND SHORE IN PLACE. RESTORE SUPPORTS AND ANCHORAGE TO NEW JOISTS UPON COMPLETION OF RESTORATION WORK.
6. EXISTING BUS WASH SYSTEM ELECTRICAL COMPONENTS, MOTORS, CONTROLLERS, ETC. SHALL REMAIN. PROTECT IN PLACE WITH HEAVY DUTY PLASTIC. ANY DISTURBANCE OR DISCONNECTION WORK REQUIRED WILL BE COORDINATED WITH THE OCTA PROJECT MANAGER AND BUS WASH TECHNICIAN FOR BUS WASH PROCEDURES AND RESTORATION REQUIREMENTS.

IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT #: 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	-	PSSE

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA

BUS WASH - BRAKE DYNO BUILDING- ROOF - POWER PLAN

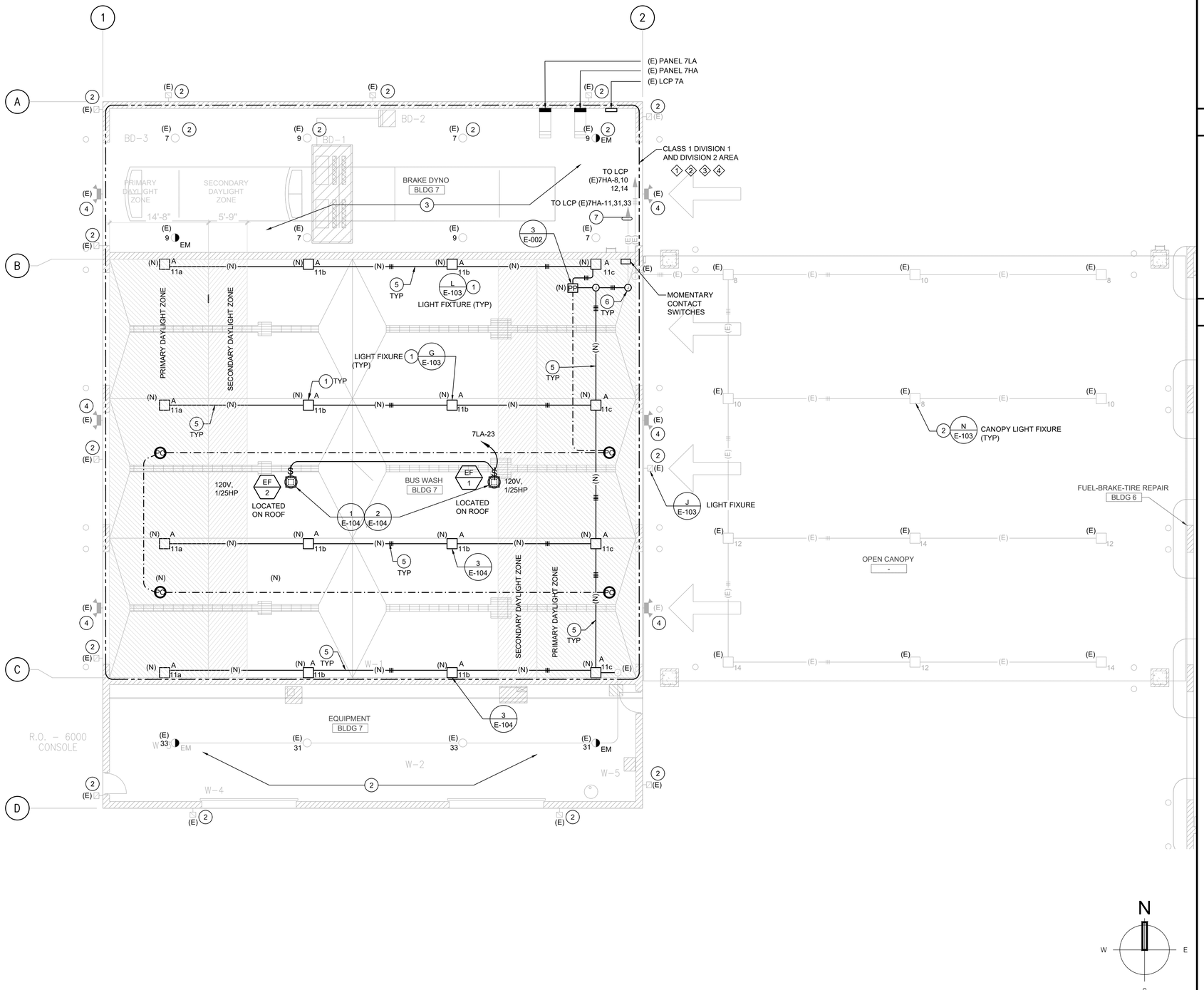
CONTRACTOR NO.	C-4-2093
DESIGN BY:	BK
DRAWN BY:	BK
CHECKED BY:	SC
DATE	02-09-2024
SCALE	SEE SHEET
SHEET	E-101

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

REGISTERED PROFESSIONAL ENGINEER
STEVEN M. COLLINS
No. E22808
Exp. 06-30-24
ELECTRICAL
STATE OF CALIFORNIA
DATE SIGNED 02/13/24

OCTA

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\05 ELEC\20X050.02-E-102 BUS WASH - DYNO BUILDING PLOT DATE: 2/7/2024 4:19:22 PM USER: JESUS.SORIANO



GENERAL NOTES

1. DURING THE PROJECT RENOVATION AND ABRASIVE BLASTING, ALL POWER SHALL BE DE-ENERGIZED AND PERFORM LOCK-OUT TAG-OUT ON THE EXISTING DISTRIBUTION EQUIPMENT. CONTRACTOR SHALL COORDINATE AND NOTIFY A MINIMUM OF 5 WORKING DAYS TO ORCHESTRATE SHUTDOWN.
2. EXISTING VEHICLE DYNO SYSTEM SHALL REMAIN AS IS AND PROTECTED IN PLACE. CONTRACTOR SHALL SUBMIT MEANS AND METHODS.
3. EXISTING BUILDING ELECTRICAL DISTRIBUTION EQUIPMENT SHALL REMAIN AS IS. ALL CIRCUITRY SHALL BE SURVEY, VERIFIED, AND RESTORED TO ORIGINAL OPERATIONAL PROCEDURES UPON COMPLETION OF STRUCTURAL RESTORATION.

BUILDING AREA CLASSIFICATION NOTES

1. THIS AREA IS CLASS 1, DIVISION 2 RATED UP TO 18" ABOVE FLOOR.
2. THIS AREA IS CLASS 1, DIVISION 2 RATED FOR THE UNDERSIDE OF THE FLOOR DECK AND DOWN 18".
3. TRENCHES BELOW FLOOR LEVEL SHALL BE CLASS 1, DIVISION 1 RATED.
4. EXPLOSION PROOF SEALS FOR CONDUITS ENTERING AND EXITING THIS AREA SHALL NOT BE DISTURBED.

KEYNOTES

1. DISCONNECT, REMOVE AND INSTALL NEW LIGHT FIXTURE. REFER TO LIGHT FIXTURE SCHEDULE FOR FIXTURE REQUIREMENTS.
2. CONTRACTOR TO PROTECT LIGHT FIXTURE IN PLACE.
3. CONTRACTOR TO PROTECT IN PLACE METHANE AND CO DETECTION SYSTEM.
4. CONTRACTOR TO PROTECT IN PLACE EXISTING NOTIFICATION BEACONS.
5. PROVIDE NEW EMT CONDUIT AND WIRING. CONDUIT SHALL BE SUPPORTED FROM THE NEW STRUCTURAL JOIST UTILIZING UNISTRUT AND CONDUIT CLAMPS.
6. INTERCEPT EXISTING CONDUIT, PRESERVE CIRCUITS, INSTALL A INTERCEPT J-BOX. EXTEND NEW CONDUIT WITH NEW WIRING TO LIGHT FIXTURES.
7. DISCONNECT AND REMOVE UNUSED CONTROLS.

IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT #: 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	-	PSSE

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA

BUS WASH - BRAKE DYNO BUILDING - LIGHTING PLAN

CONTRACTOR NO.	C-4-2093
DESIGN BY:	BK
DRAWN BY:	BK
CHECKED BY:	SC
DATE	02-09-2024
SCALE	SEE SHEET
SHEET	E-102

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

SCALE: 1/8" = 1'-0"
0' 4' 8' 16'

REGISTERED PROFESSIONAL ENGINEER
STEVEN M. COLLINS
No. E22808
Exp. 09-30-24
ELECTRICAL
STATE OF CALIFORNIA
DATE SIGNED 02/13/24

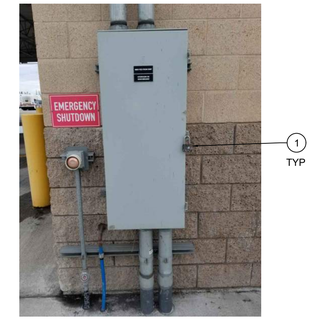
OCTA

BUS WASH - BRAKE DYNO BUILDING - LIGHTING PLAN | 1/8" = 1'-0" | 1

PHOTO DETAIL | NO SCALE | Q

PHOTO DETAIL | NO SCALE | M

PHOTO DETAIL | NO SCALE | H



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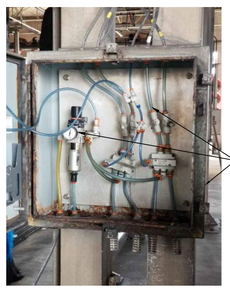

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PHOTO DETAIL | NO SCALE | L

TYPICAL LIGHT FIXTURE

PHOTO DETAIL | NO SCALE | G

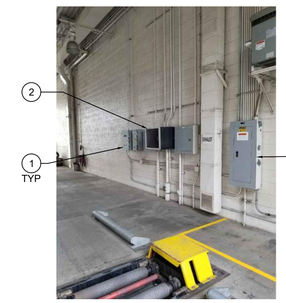
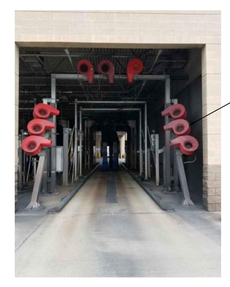


PHOTO DETAIL | NO SCALE | C

PHOTO DETAIL | NO SCALE | O

PHOTO DETAIL | NO SCALE | K



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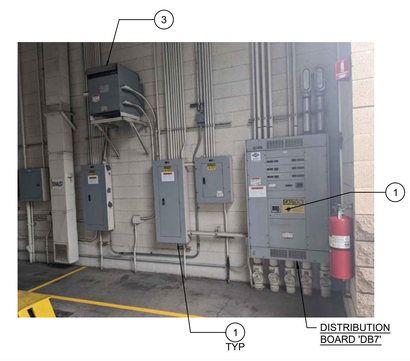

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PHOTO DETAIL | NO SCALE | N

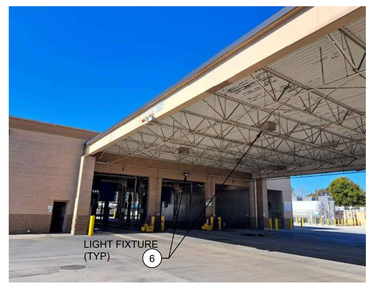


PHOTO DETAIL | NO SCALE | J

TYPICAL AIR DRYER CONTROL PANEL

PHOTO DETAIL | NO SCALE | E

DISTRIBUTION BOARD 'DB7A'

PHOTO DETAIL | NO SCALE | A

GENERAL NOTES

1. ELECTRICAL CONTRACTOR PERFORM A BUILDING POWER SHUTDOWN AND PERFORM LOCK-OUT TAG-OUT ON ALL ELECTRICAL DATA EQUIPMENT. UPON COMPLETION OF STRUCTURAL RESTORATION, THE CONTRACTOR SHALL OPEN ALL EQUIPMENT, VACUUM, DUST AND CLEAR ANY FOREIGN DEBRIS, TEST ALL CIRCUIT BREAKERS, AND RESTORE POWER TO NORMAL CONDITIONS. ALL OUTAGE SHALL BE COORDINATED WITH THE OCTA PROJECT MANAGER.
2. ALL POWER OUTAGES SHALL BE SCHEDULED A MINIMUM OF TWO WEEKS WITH THE OCTA PROJECT MANAGER PRIOR TO DE-ENERGIZING.
3. DATA SERVER CABINETS SHALL BE WRAPPED IN A PLASTIC COVER AND SECURELY SUPPORTED TO STAY IN TACT DURING CONSTRUCTION. COORDINATE ALL INTERRUPTIONS OF OPERATION WITH OCTA PROJECT MANAGER TWO WEEKS PRIOR TO DISRUPTION.
4. CONTRACTOR SHALL CLEAN, VACUUM, DUST, AND REMOVE ALL CONSTRUCTION DEBRIS, INSPECT, AND DETERMINE SAFE PRIOR TO RE-ENERGIZING ELECTRICAL & DATA SERVICES.

KEY NOTES

1. CONTRACTOR SHALL PERFORM LOCKOUT TAGOUT ON EXISTING EQUIPMENT AND PROTECT IN PLACE. ANY EQUIPMENT VENTILATION SHALL BE TAPED TO PREVENT DUST ENTERING EQUIPMENT. TYPICAL FOR ALL BUS WASH BUILDING ELECTRICAL DISTRIBUTION AND TRANSFORMER EQUIPMENT.
2. PROVIDE A HEAVY DUTY PLASTIC COVERING PROTECTING DATA CABINET.
3. PROTECT TRANSFORMER OPENINGS WITH HEAVY DUTY PLASTIC. REMOVE UPON COMPLETION OF STRUCTURAL RESTORATION. RESTORE POWER TO ORIGINAL OPERATING CONDITIONS.
4. CONTRACTOR SHALL REPAIR/REPLACE CORRODED SHROUDS (HOUSING) OF EXISTING AIR DRYERS, WITH THE INTENT OF REMOVING CORROSION AND FILLING GAPS/CAVITIES RESULTING FROM CORROSION; PREPARE SURFACE OF ALL AIR DRYER SHROUDS, THEN APPLY OWNER-APPROVED HIGH-PERFORMANCE PAINT. REFURBISH EXISTING STOP/GO LIGHTS AND EXISTING AIR DRYER CONTROL PANELS, WITH THE INTENT OF REMOVING VISIBLE STAINS AND DISCOLORATIONS BY CLEANING WITH OWNER-APPROVED NON-ABRASIVE CLEANER(S). VACUUM INTERIOR OF EXISTING AIR DRYER CONTROL PANELS, AND TEST FOR OPERATIONAL CONDITION TO MATCH EXISTING.
5. DISCONNECT, REMOVE, AND REPLACE FIXTURE, AND REINSTALL UPON COMPLETION OF STRUCTURAL RESTORATION WORK. PROVIDE NEW MOUNTING HARDWARE AND FASTENERS. REINSTALL CIRCUITRY TO MATCH EXISTING CONDITIONS.
6. EXISTING LIGHT FIXTURE TO REMAIN & PROTECTED IN PLACE. CONTRACTOR SHALL PROVIDE PROTECTION TO THE EXISTING LIGHT FIXTURES ON CANOPY. PROVIDE HEAVY DUTY PLASTIC COVER DURING STRUCTURAL TREATMENT. REMOVE ALL PROTECT MATERIAL UPON COMPLETION, CLEAN FIXTURE/LENS, AND RESTORE CIRCUITS TO MATCH OPERATIONAL CONDITIONS.
7. DISCONNECT AND REMOVE LIGHT FIXTURE, ASSOCIATED SUPPORTS, WIRE/CONDUIT COMPLETE. .
8. CONTRACTOR SHALL REMOVE ANY ELECTRICAL CONDUIT SYSTEM FROM EXISTING JOIST MEMBERS. FIELD VERIFY AND DOCUMENT EXISTING CONDITION & LOCATIONS. ANY REMOVAL OR INTERRUPTION OF THE EXISTING BUS WASH SYSTEM SHALL BE RESTORED TO MATCH EXISTING CONDITIONS. ALL BUS WASH SYSTEM ELECTRICAL MOTORS, HYDRAULICS/PIPING, CONTROLLERS, STOP/GO LIGHTS, ETC. SHALL BE PROTECTED IN PLACE.
9. CONTRACTOR SHALL REMOVE AND REPLACE EXISTING PNEUMATIC AIR REGULATOR CABINET. PROVIDE A NEW NEMA 3R HINGE ENCLOSURE TO MATCH EXISTING SIZE AND INSTALL PER BUS WASH TECHNICIANS DIRECTION. AIR REGULATOR, PNEUMATIC TUBING TO BE REMOVE AND REPLACED. FIELD VERIFY EXACT LOCATIONS AND CONDITIONS. ANY REMOVAL OR INTERRUPTION OF THE EXISTING BUS WASH SYSTEM SHALL BE RESTORED TO MATCH EXISTING CONDITIONS. COORDINATE WITH OCTA PROJECT MANAGER.

IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # : 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	I	PSSE

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA

BUS WASH - BRAKE-DYNO BUILDING
PHOTO DETAILS

CONTRACTOR NO.	C-4-2093
DESIGN BY:	BK
DRAWN BY:	BK
CHECKED BY:	SC
DATE	02-09-2024
SCALE	NONE
SHEET	E-103

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

REGISTERED PROFESSIONAL ENGINEER
STEVEN M. COLLINS
No. E22808
Exp. 09-30-24
ELECTRICAL
STATE OF CALIFORNIA
DATE SIGNED 02/13/24

OCTA

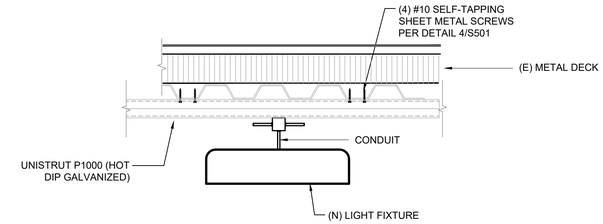
IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\05 ELEC\20X050.02-E-103 BUS WASH - DYNO BUILDING PHOTOS ONLY PLOT DATE: 2/7/2024 4:19:30 PM
USER: JESUS.SORIANO

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\05 ELEC\20X050.02-E-104 ELECTRICAL DETAILS PLOT DATE: 2/7/2024 4:19:36 PM USER: JESUS.SORIANO

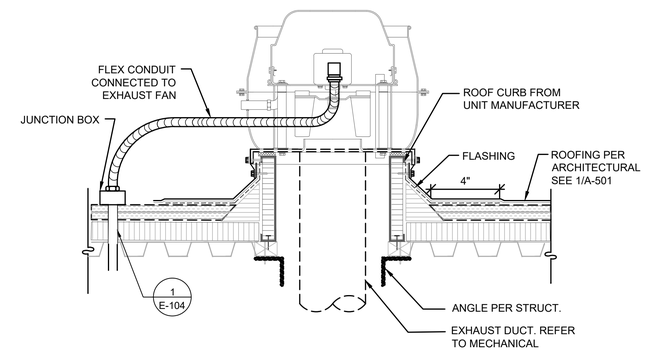
NOT USED | NO SCALE | 8

NOT USED | NO SCALE | 7

NOT USED | NO SCALE | 5



LIGHT FIXTURE MOUNTING DETAIL | NO SCALE | 3



EXHAUST FAN DETAIL | NO SCALE | 2

NOTES:

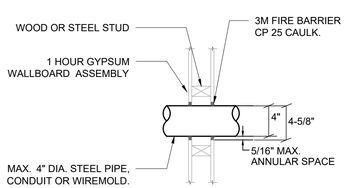
1. WALL ASSEMBLY - THE 1,2,3 OR 4 HR FIRE -RATED GYPSUM WALL BOARD/STUD WALL ASSEMBLY SHALL BE CONSTRUCTED OF THE MATERIALS AND IN THE MANNER DESCRIBED IN THE INDIVIDUAL U300 OR U400 SERIES WALL OR PARTITION DESIGN IN THE UL FIRE RESISTANCE DIRECTORY AND SHALL INCLUDE THE FOLLOWING CONSTRUCTION FEATURES :

   a. STUDS - WALL FRAMING MAY CONSIST OR EITHER WOOD STUDS (MAX.2 HR FIRE RATED ASSEMBLIES) OR STEEL CHANNEL STUDS. WOOD STUDS TO CONSIST OF NOM 2 BY 4 IN. LUMBER SPACED IN 18 IN. OC WIT NOM 2 BY 4 IN. LUMBER AND PLATES AND CROSS BRACES. STEEL STUDS TO BE MIN 3-8/8 IN. WIDE BY 1-3/8 IN. DEEP CHANNELS SPACED MAX 24 IN. CC .

   b. WALLBOARD, GYPSUM - NOM 1/2 OR 8/8 IN.THICK , 4 FT.WIDE WITH SQUARE OR TAPERED EDGES. THE GYPSUM WALLBOARD RYPS, THICKNESS,NUMBER OF LAYERS, FASTENER TYPE AND SHEET ORIENTATION SHALL BE SPECIFIED IN THE INDIVIDUAL U300 OR U400 SERIES DESIGN IN THE UL FIRE RESISTANCE DIRECTORY . MAX DIA. OF OPENING IS 13-1/2 IN.

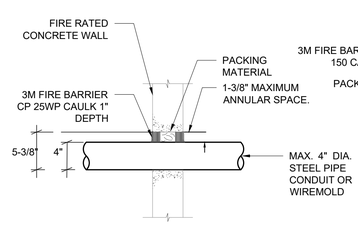
2. PIPE OR CONDUIT - NOM 12 IN.DIAM(OR SMALLER) SCHEDULE 10(OR HAVIER)STEEL PIPE NOM 6 IN.DIAM(OR SMALLER) STEEL CONDUIT, NOM 4 IN. DIA. (OR SMALLER) STEEL ELECTRIC METALLIC TUBING OR TYPE L OR (OR HEAVIER) COPPER TUBING NOM1 IN.DIAM (OR SMALLER) FLEXIBLE STEEL CONDUIT . WHEN COPPER PIPE OR FLEXIBLE STEEL CONDUIT IS USED , MAX F RATING OF FIRE STOP SYSTEM (ITEM STRUCTURED USING STEEL CHANNEL STUDS. A MAX OF ONE PIPE OR CONDUIT IS PERMITTED IN THE FIRE STOP SYSTEM. PIPE OR CONDUIT TO BE INSTALLED NEAR CENTER OF STUD CAVITY WIDTH AND TO BE RIGIDLY SUPPORTED ON BOTH SIDES OF WALL ASSEMBLY

3. FILL, VOID OR CAVITY MATERIAL - CAULK - CAULK FILL MATERIAL INSTALLED TO COMPLETELY FILL ANNULAR SPACE BETWEEN PIPE OR CONDUIT AND GYPSUM WALLBOARD AND WITH A MIN 1/4 IN. DIA. BOARD OF CAULK APPLIED TO PERIMETER OF PIPE OR CONDUIT AT ITS EGREES FROM THE WALL. CAULK INSTALLED SYMMETRICALLY ON BOTH SIDES OF WALL ASSEMBLY. THE HOURLY F RATING OF THE FIRE-STOP SYSTEM IS DEPENDENT UPON THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS SHOWN IN THE FOLLOWING TABLE. THE HOURLY T RATING OF THE FIRE-STOP SYSTEM IS DEPENDENT UPON THE TYPE OR SIZE OF THE PIPE OR CONDUIT AND THE HOURLY FIRE RATING OF THE WALL ASSEMBLY IN WHICH IT IS INSTALLED, AS TABULATED BELOW :



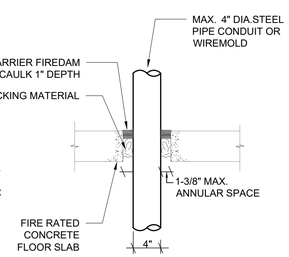
UL #WL1001

PENETRATION THRU GYPSUM BOARD WALL
NO SCALE



UL #CAJ1044

PENETRATION THRU CONCRETE WALL
NO SCALE



UL #CAJ1017

PENETRATION THRU CONCRETE FLOOR
NO SCALE

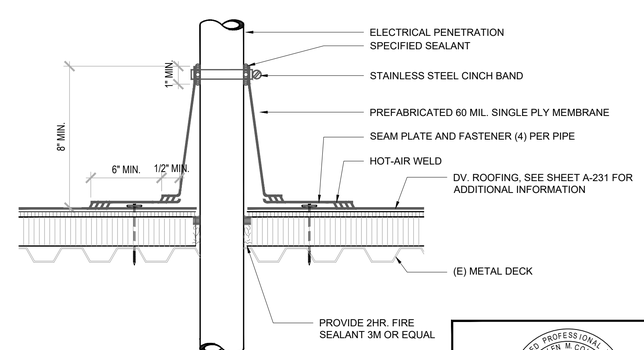
PENETRATION SHALL BE SPACED AT 2'-0" MIN AND THE PENETRATION SIZE SHALL NOT EXCEED 4" IN DIAMETER.

SYSTEM NO. WL1001 (FORMERLY SYSTEM NO. 147)
F RATINGS - 1,2,3, AND 4 HR (SEE ITEMS 2 AND 3)
T RATINGS - 0,1,2,3, AND 4 HR (SEE ITEM 3)
L RATING AT AMBIENT - LESS THAN 1 CFM/SQ FT (SEE ITEM 3)
L RATING AT 400 F - LESS THAN 1 CFM/SQ FT (SEE ITEM 3)

MAX PIPE OR CONDUIT DIA. (INCHES)	ANULAR SPACE IN.	F RATING H.R.	T RATING H.R.
1	0" - 3/16"	1 OR 2	0 + 1 OR 2
1	1/4" TO 1/2"	3 OR 4	3 OR 4
4	0" TO 1/4"	1 OR 2	0
6	1/4" TO 1/2"	3 OR 4	0
12	3/16" TO 3/8"	1 OR 2	0

CP-25 WS + (NOTE: L RATINGS APPLY WHEN TYPE CP-25 WS+ CAULK IS USED.)
+ WHEN COPPER PIPE IS USED , T RATING IS O NOM.
MINNESSOTA MINING & MFG. CO. - TYPES CP-25 S/L, CP-25 N/8 , CP-25 WS,

2 HR FIRE RATED CONDUIT PENETATION DETAIL | NO SCALE | 4



CONDUIT PENETRATION THRU ROOF DETAIL | NO SCALE | 1

REGISTERED PROFESSIONAL ENGINEER
STEVEN M. COLLYER
No. E22808
Exp. 06-30-24
ELECTRICAL
STATE OF CALIFORNIA
DATE SIGNED 02/13/24

IDS
IDS GROUP
1 PETERS CANYON ROAD, SUITE 150
IRVINE, CA 92606
TEL. 949-387-8500, FAX: 949-387-0800
IDS PROJECT #: 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	–	PS&E

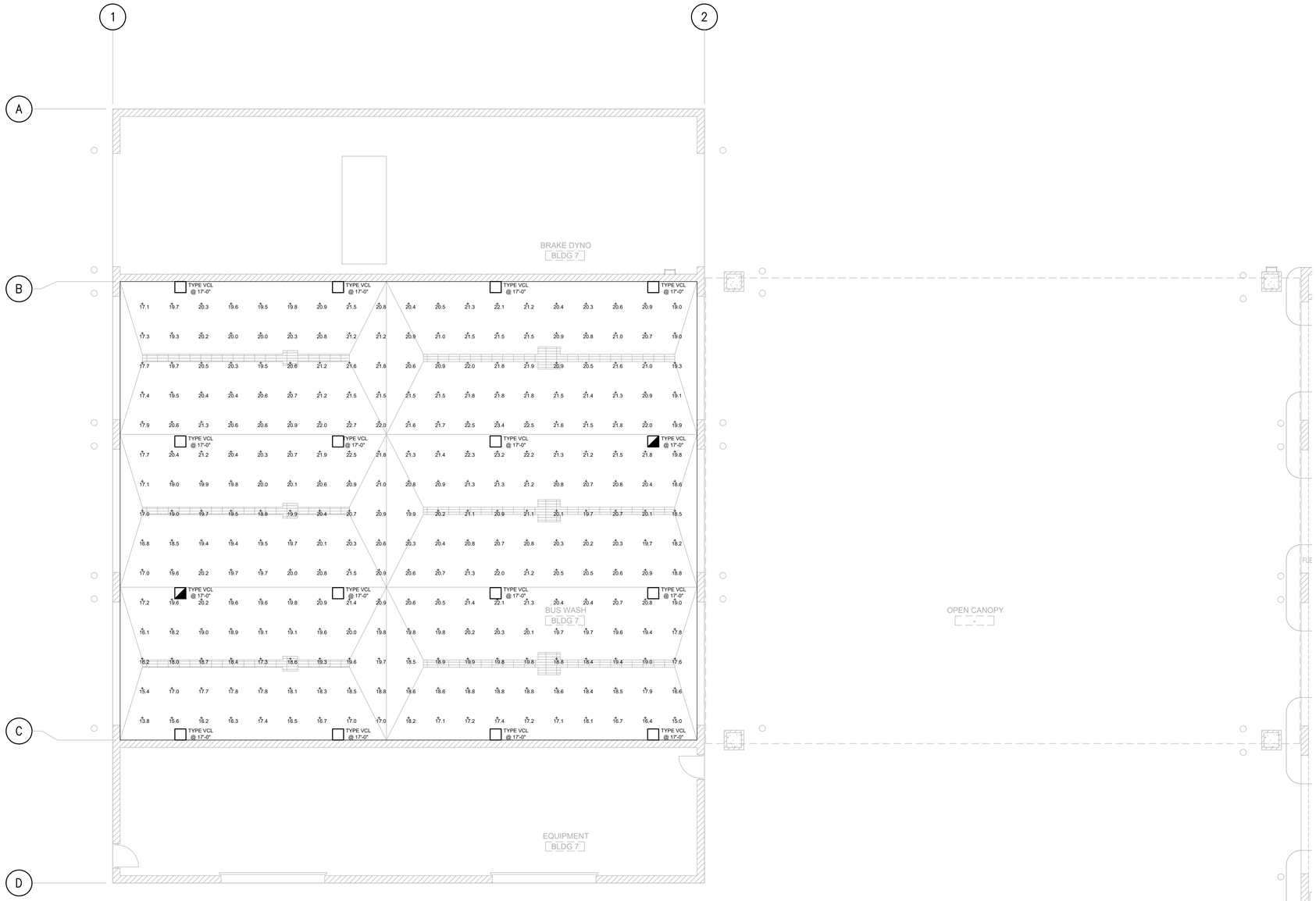
BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA
ELECTRICAL DETAILS

CONTRACTOR NO.	C-4-2093
DESIGN BY:	BK
DRAWN BY:	BK
CHECKED BY:	SC
DATE	02-09-2024
SCALE	NONE
SHEET	E-104

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

OCTA

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\05 ELEC\20X050.02-E-105 PHOTOMETRICS FILE PLOT DATE: 2/7/2024 4:19:41 PM USER: JESUS.SORIANO



Schedule

Symbol	Label	Image	QTY	Manufacturer	Catalog	Description	Number Lamps	Lamp Output	LLF	Input Power
	A		16	Vision Engineering	VCL-L1-110D-40K-WH	LED Luminaire	1	9930	0.8	60.53

Statistics

Description	Symbol	Avg	Max	Min	Max/Min	Avg/Min
Bus Wash Area	+	19.9 fc	23.4 fc	13.8 fc	1.7:1	1.4:1

IDS
IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # 20X050.02

MARK	DATE	BY	REVISIONS
	2/13/24	–	PSSE

BUILDING REPAIRS AT SANTA ANA BUS BASE

4301 W. MACARTHUR BLVD., SANTA ANA, CA

PHOTOMETRICS

CONTRACTOR NO.	C-4-2093
DESIGN BY:	BK
DRAWN BY:	BK
CHECKED BY:	SC
DATE	02-09-2024
SCALE	NONE
SHEET	E-105

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

REGISTERED PROFESSIONAL ENGINEER
STEVEN M. COLLINS
No. E22808
Exp. 06/30/24
ELECTRICAL
STATE OF CALIFORNIA
DATE SIGNED 02/13/24

OCTA

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	OCTA Santa Ana Bus Base	**Report Page:**	**(Page 3 of 7)**
Project Address:	550 South Main Street	**Date Prepared:**	6/29/2023

F. INDOOR LIGHTING FIXTURE SCHEDULE

This table includes all planned permanent and portable lighting other than dwelling unit/ hotel/ motel room lighting. Multifamily dwelling unit and hotel/motel room lighting is documented in Table T. If using Table T to document lighting in multifamily common use areas providing shared provisions for living, eating, cooking or sanitation, those luminaires are not included here.

Designed Wattage: Unconditioned Spaces

01	02	03	04	05	06	07	08	09	10	
Name or Item Tag	Complete Luminaire Description	Modular (Track) Fixture	Small Aperture & Color Change[1]	Watts per luminaire[2]	How is Wattage determined	Total Number of Luminaires	Excluded per 140.6(a)3 / 170.2(e)2C	Design Watts	Field Inspector	
									Pass	Fail
A	TYPE A Pendant LED	No	NA	60.5	Mfr. Spec	16	No	968	☐	☐
							Total Designed Watts: UNCONDITIONED SPACES	968		

[1]FOOTNOTE: Design Watts for small aperture and color changing luminaires which qualify per 140.6(a)4B / 170.2(e)2D is adjusted to be 75% /80% of their rated wattage. Table F automatically makes this adjustment, the permit applicant should enter full rated wattage in column 05.

[2]Authority Having Jurisdiction may ask for Luminaire cut sheets to confirm wattage used for compliance per 130.0(c) / 160.5(b). Wattage used must be the maximum rated for the luminaire, not the lamp.

G. MODULAR LIGHTING SYSTEMS

This section does not apply to this project.

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

This table includes lighting controls for conditioned and unconditioned spaces.

Building Level Controls

01	02	03	
Mandatory Demand Response 110.12(c)	Shut-off controls 130.1(c) / 160.5(b)4C	Field Inspector	
		Pass	Fail
NA < 4,000W subject to multilevel	Whole Building Auto Time Switch	☐	☐

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	OCTA Santa Ana Bus Base	**Report Page:**	**(Page 2 of 7)**
Project Address:	550 South Main Street	**Date Prepared:**	6/29/2023

C. COMPLIANCE RESULTS

If any cell on this table says "DOES NOT COMPLY" or "COMPLIES with Exceptional Conditions" refer to Table D. for guidance.

Lighting in conditioned and unconditioned spaces must not be combined for compliance per 140.6(b)1 / 170.2(e)	Allowed Lighting Power per 140.6(b) / 170.2(e) (Watts)						≥	Adjusted Lighting Power per 140.6(a) / 170.2(e) (Watts)				Compliance Results
	01	02	03	04		05		06	07		08	09
	Complete Building 140.6(c)1	Area Category 140.6(c)2 / 170.2(e)4	Area Category Additional 140.6(c)2G / 170.2(e)4Av (+)	Tailored 140.6(c)3 / 170.2(e)4B (+)	=	**Total Allowed** (Watts)		Total Designed (Watts)	Adjustments PAF Lighting Control Credits 140.6(a)2 / 170.2(e)1B (-)	=	**Total Adjusted** (Watts) *Includes Adjustments	**05 must be >= 08 140.6 / 170.2(e)**
	(See Table I)	(See Table I)	(See Table J)	(See Table K)				(See Table F)	(See Table P)			
Conditioned					=		≥			=		
Unconditioned		2,653.8	0		=	2,654	≥	968	0	=	968	COMPLIES
Controls Compliance (See Table H for Details)												COMPLIES
Rated Power Reduction Compliance (See Table Q for Details)												

D. EXCEPTIONAL CONDITIONS

This table is auto-filled with uneditable comments because of selections made or data entered in tables throughout the form.

E. ADDITIONAL REMARKS

This table includes remarks made by the permit applicant to the Authority Having Jurisdiction.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	OCTA Santa Ana Bus Base	**Report Page:**	**(Page 1 of 7)**
Project Address:	550 South Main Street	**Date Prepared:**	6/29/2023

This document is used to demonstrate compliance with requirements in 110.9, 110.12(c), 130.0, 130.1, 140.6 and 141.0(b)2 for indoor lighting scopes using the prescriptive path for nonresidential and hotel/motel occupancies. It is also used to document compliance with requirements in 160.5, 170.2(e) and 180.2(b)4 for indoor lighting scopes using the prescriptive path for multifamily occupancies. Multifamily includes dormitory and senior living facilities.

A. GENERAL INFORMATION

01	Project Location (city)	Orange	04	Total Conditioned Floor Area (ft^2)	0
02	Climate Zone	8	05	Total Unconditioned Floor Area (ft^2)	4,825
03	Occupancy Types Within Project (select all that apply):		06	# of Stories (Habitable Above Grade)	1

B. PROJECT SCOPE

This table includes any lighting systems that are within the scope of the permit application and are demonstrating compliance using the prescriptive path outlined in 140.6 / 170.2(e) or 141.0(b)2 / 180.2(b)4 for alterations.

Scope of Work	Conditioned Spaces		Unconditioned Spaces	
01	02	03	04	05
My Project Consists of (check all that apply):	Calculation Method	Area (ft^2)	Calculation Method	Area (ft^2)
☐ New Lighting System				
☐ New Lighting System - Parking Garage				
☒ Altered Lighting System	Area Category Method	0	Area Category Method	4825
Total Area of Work (ft^2)	0		4825	

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	OCTA Santa Ana Bus Base	**Report Page:**	**(Page 6 of 7)**
Project Address:	550 South Main Street	**Date Prepared:**	6/29/2023

T. DWELLING UNIT LIGHTING

This section does not apply to this project.

U. DECLARATION OF REQUIRED CERTIFICATES OF INSTALLATION

Form/Title
NRCI-LTI-E - Must be submitted for all buildings

V. DECLARATION OF REQUIRED CERTIFICATES OF ACCEPTANCE

There are no NRCA forms required for this project.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	OCTA Santa Ana Bus Base	**Report Page:**	**(Page 5 of 7)**
Project Address:	550 South Main Street	**Date Prepared:**	6/29/2023

L. ADDITIONAL LIGHTING ALLOWANCE: TAILORED WALL DISPLAY

This section does not apply to this project.

M. ADDITIONAL LIGHTING ALLOWANCE: TAILORED FLOOR AND TASK LIGHTING

This section does not apply to this project.

N. ADDITIONAL LIGHTING ALLOWANCE: TAILORED DECORATIVE /SPECIAL EFFECTS

This section does not apply to this project.

O. ADDITIONAL LIGHTING ALLOWANCE: TAILORED VERY VALUABLE MERCHANDISE

This section does not apply to this project.

P. POWER ADJUSTMENT: LIGHTING CONTROL CREDIT (POWER ADJUSTMENT FACTOR (PAF))

This section does not apply to this project.

Q. RATED POWER REDUCTION COMPLIANCE FOR ONE-FOR-ONE ALTERATIONS

This section does not apply to this project.

R. 80% LIGHTING POWER FOR ALL ALTERATIONS - CONTROLS EXCEPTIONS

This section does not apply to this project.

S. DAYLIGHT DESIGN POWER ADJUSTMENT FACTOR (PAF)

This section does not apply to this project.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	OCTA Santa Ana Bus Base	**Report Page:**	**(Page 4 of 7)**
Project Address:	550 South Main Street	**Date Prepared:**	6/29/2023

H. INDOOR LIGHTING CONTROLS (Not including PAFs)

Area Level Controls

04	05	06	07	08	09	10	11	12	
Area Description	Complete Building or Area Category Primary Function Area	Manual Area Controls 130.1(a) / 160.5(b)4A	Multi-Level Controls 130.1(b) / 160.5(b)4B	Shut-Off Controls 130.1(c) // 160.5(b)4C	Primary/Skylit Daylighting 130.1(d) / 160.5(b)4D	Secondary Daylighting 130.1(d) / 160.5(b)4D	Interlocked Systems 140.6(a)1/ 170.2(e)2A	Field Inspector	
								Pass	Fail
					13				
					Plan Sheet Showing Daylit Zones:				

I. LIGHTING POWER ALLOWANCE: COMPLETE BUILDING OR AREA CATEGORY METHODS

Each area complying using the Complete Building or Area Category Methods per 140.6(b) are included in this table. Column 06 indicates if additional lighting power allowances per 140.6(c) or adjustments per 140.6(a) are being used .

Unconditioned Spaces

01	02	03	04	05	06	
Area Description	Complete Building or Area Category Primary Function Area	Allowed Density (W/ft^2)	Area (ft^2)	Allowed Wattage (Watts)	Additional Allowance / Adjustment	
					Area Category	PAF
Bus Wash	Auto Repair	0.55	4,825	2,653.8	No	No
		TOTALS:	4,825	2,653.8	See Tables J, or P for detail	

J. ADDITIONAL ALLOWANCE: AREA CATEGORY METHOD QUALIFYING LIGHTING SYSTEM

This section does not apply to this project.

K. TAILORED METHOD GENERAL LIGHTING POWER ALLOWANCE

This section does not apply to this project.

STATE OF CALIFORNIA
Indoor Lighting
CALIFORNIA ENERGY COMMISSION

CERTIFICATE OF COMPLIANCE			**NRCC-LTI-E**
Project Name:	OCTA Santa Ana Bus Base	**Report Page:**	**(Page 7 of 7)**
Project Address:	550 South Main Street	**Date Prepared:**	6/29/2023

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

I certify that this Certificate of Compliance documentation is accurate and complete.

Documentation Author Name: IDS Group	Documentation Author Signature:
Company: IDS	Signature Date:
Address: 1 Peters Canyon Rd	CEA/ HERS Certification Identification (if applicable): 6C24-CF7C-D36D-0EDC-CFB8-E73A-8B4C-7293-7AFC-43B9-C787-1BBE-0E5E-2785-F916-64D5
City/State/Zip: Irvine CA 92606	Phone: 949-387-8500

RESPONSIBLE PERSON'S DECLARATION STATEMENT

I certify the following under penalty of perjury, under the laws of the State of California:

1. The information provided on this Certificate of Compliance is true and correct.
2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer)
3. The energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the California Code of Regulations.
4. The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.
5. I will ensure that a completed signed copy of this Certificate of Compliance shall be made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Designer Name: Steven M Collins	Responsible Designer Signature:
Company: IDS Group Inc.	Date Signed: 2023-06-29
Address: 1 Peters Canyon Rd. Ste. 130	License: E22808
City/State/Zip: Irvine CA 92606	Phone: 9493878500

REGISTERED PROFESSIONAL ENGINEER
STEVEN M. COLLINS
No. E22808
Exp. 06-30-24
ELECTRICAL
STATE OF CALIFORNIA
DATE SIGNED 02/13/24

IDS
IDS GROUP
1 PETERS CANYON ROAD, SUITE 130
IRVINE, CA 92606
TEL: 949-387-8500, FAX: 949-387-0800
IDS PROJECT # : 200050.02

MARK	DATE	BY	REVISIONS
	2/13/24	I	PSSAE

BUILDING REPAIRS AT SANTA ANA BUS BASE
4301 W. MACARTHUR BLVD., SANTA ANA, CA
TITLE 24 COMPLIANCE FORMS

CONTRACTOR NO.	C-4-2093
DESIGN BY:	BK
DRAWN BY:	BK
CHECKED BY:	SC
DATE	02-09-2024
SCALE	NONE
SHEET	E-106

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

OCTA

IDS GROUP - FILE LOCATION: S:\PROJECTS\2020\SHARED\20X050.02 OCTA - BUILDING REPAIRS AT SANTA ANA BUS BASE\05 CAD\05 ELEC\20X050.02-E-106 T-24 PLOT DATE: 2/7/2024 4:19:48 PM USER: JESUS.SORIANO

SECTION X: HEALTH, SAFETY AND ENVIRONMENTAL REQUIREMENTS

SECTION X

LEVEL 3 HEALTH, SAFETY AND ENVIRONMENTAL (HSE) SPECIFICATIONS

REQUIRED HSE SUBMITTAL SUMMARY

The contractor shall submit copies of the items listed below for contract scope work on OCTA projects and property. Copies shall be provided prior to contractor's mobilization onto OCTA projects and property. Contractor shall provide compliant written Health, Safety & Environmental (HSE) submittals within 30 days of the contract notice to proceed.

HSE submittals shall comply with the 1988 Drug Free Workplace Act, or the Department of Transportation (DOT), or the Federal Transportation Administration (FTA) requirements (according to OCTA procurement funding guidelines) and comply with the California Code of Regulations (CCR) Title 8 regulatory standards.

Contractor's established written programs/plans shall comply with CCR Title 8 regulatory standards. All HSE related programs/plans submitted to OCTA for acceptance shall be prepared and submitted by a qualified HSE professional who is recognized by an organization of industry standard (i.e., CSP, CIH, CHST, CHMM, etc.) and is experienced in developing compliant written HSE programs. The site safety HSE representative shall participate in the HSE submittal process.

1. Contractor shall provide a copy of Company's Injury Illness Prevention Program in accordance with CCR Title 8, Section 3203.

2. Contractor shall provide a copy of their Company HSE Policy/Procedure Manual, in compliance with CCR Title 8 Standards for awarded scope.

3. Contractor shall provide a copy of their Policy or Substance Abuse Prevention Program.

4. Contractor shall provide a copy of their Hazard Communication Program and SDS Management Program in compliance with CCR Title 8, Section 5194, Hazard Communication Standard.

5. On-Site HSE Representative:
   <u>On Facility Modification Projects</u>, The Contractor shall submit a resume of the designated on-site qualified HSE Representative. The HSE Representative shall possess a current certification from the Board of Certified Safety Professionals (BCSP), plus five (5) years construction or scope agreement HSE experience enforcing HSE compliance on heavy or industrial construction project sites, the last two years of which have been administering HSE in the construction or scope discipline for which the Contractor is contracting with the Authority. The designated HSE Representative shall participate in all HSE related submittals through completion of scope.

   <u>On Capital Programs</u>, The Contractor's on-site qualified HSE Representative shall be a Certified Safety Professional (CSP) with current standing from the Board of Certified Safety Professionals (BCSP) or a Construction Health and Safety Technician (CHST) with current standing from the (BCSP) or a Certified Industrial

Hygienist (CIH) with current standing from the American Board of Industrial Hygiene (ABIH), or an equal professional HSE Certificate of standing from The National Examination Board in Occupational Safety and Health (NEBOSH), that is acceptable to the Authority. The Contractor's on-site HSE Representative(s) shall provide a resume and have a minimum of seven (7) years heavy construction experience in administering HSE programs on heavy construction project sites, the last two years of which have been administering HSE in the construction/scope discipline for which Contractor is contracting with the Authority.

6. A Detailed Site Specific HSE Work Implementation Plan:
   This plan shall be prepared and submitted by a recognized HSE professional experienced in developing compliant written HSE programs. Indicate the methods and procedures, and include the sequence of tasks as listed on the project schedule, include the hazards, tools and equipment, and the safe work practices to mitigate the hazards in a format acceptable OCTA. Specify safety measures in accordance with applicable Cal/OSHA standards, South Coast Air Quality Management District (SCAQMD) rules, National Fire Protection Association (NFPA), National Electric Code (NEC), American National Standards Institute (ANSI) codes and regulations, job hazard analysis, policies, procedures, HSE training requirements and known and potential hazards of Contractor's scope. Plans shall be prepared as specified above, and may require if necessary a professional engineer licensed to practice in the state of California, when so required by the provisions of the California Board for Professional Engineer and Surveyors.

PART I – GENERAL

1.0 GENERAL HEALTH, SAFETY AND ENVIRONMENTAL REQUIREMENTS

A. The Contractor, its subcontractors, suppliers, and employees have the obligation to comply with all Authority health, safety and environmental compliance department (HSEC) requirements of this safety specification, project site requirements, and bus yard safety rules, as well as all federal, state, and local regulations pertaining to scope of work or agreements with the Authority including California Department of Transportation safety requirements and special provisions. Additionally, manufacturer requirements are considered incorporated by reference, as applicable, to this scope of work.

B. Observance of unsafe acts or conditions, serious violation of health and safety standards, non-conformance of Authority HSEC requirements, or disregard for the intent of these safety specifications to protect people and property, by Contractor may be reason for termination of scope or agreements with the Authority, at the sole discretion of the Authority.

C. The Authority HSEC requirements, and references contained within this scope of work shall not be considered all-inclusive as to the hazards that might be encountered. Safe work practices shall be pre-planned and performed, and safe conditions shall be maintained during the course of this work scope.

D. The Contractor shall specifically acknowledge that it has primary responsibility to prevent and correct all health, safety and environmental hazards for which it and its employees, or its subcontractors (and their employees) are responsible. The Contractor shall further acknowledge their expertise in recognition and prevention of hazards in the operations for which they are responsible, that the Authority may not have such expertise, and is relying upon the Contractor for such expertise. The Authority retains the right to notify the Contractor of potential hazards and request the Contractor to evaluate and, as necessary, to eliminate those hazards.

E. The Contractor shall provide all necessary tools, equipment, and related safety protective devices to execute the scope of work in compliance with the Authority's HSEC requirements, CCR Title 8 Standards, and recognized safe work practices.

F. The Contractor shall instruct all its employees, and all associated sub-contractors under contract with the Contractor who works on Authority projects in the following; recognition, identification, and avoidance of unsafe acts and/or conditions applicable to its work.

PART II – SPECIFIC REQUIREMENTS

2.0 While these safety specifications are intended to promote safe work practices, Contractors are reminded of their obligation to comply with all federal (Code of Federal Regulations (CFR) Sections 1926 & 1910 Standards), state (CCR Title 8 Standards), local and municipal safety regulations, and Authority health, safety and environmental requirements applicable to their project scope. Failure to comply with these standards may be cause for termination of scope or agreements with the Authority, at the sole discretion of the Authority.

2.1 REQUIRED DOCUMENTATION / REPORTING REQUIREMENTS

The Contractor at a minimum shall provide the following documents to the Authority's Project Manager. Items A through E below shall be submitted and accepted by the Authority's Project Manager prior to Contractor mobilization. Item F upon each occurrence, and for items G through K, contractor shall verify the following documentation is in place, prior to and during contract scope and make the same available to the Authority upon request within 72 hours.

Contractor's established written programs/plans shall comply with CCR Title 8 regulatory standards. All new programs/plans shall be prepared and submitted by a qualified HSE professional who is recognized by an organization of industry standard (i.e., CSP, CIH, CHST, STS, CHMM, etc.) and is experienced in developing compliant written HSE programs. The site safety HSE representative shall participate in the scope submittal process.

A. A Comprehensive Project Specific Health, Safety, and Environmental (HSE) Work Plan.

a. The Contractor shall develop a site project plan that may include, but is not limited to: Permits, Evacuation, Emergency Plan, Roles and

Responsibilities, Scope and Construction Activity Details, Constructability Review, Contractor Coordination Process, Safe Work Methods, Hazard Identification & Risk Control, First Aid and Injury Management, Emergency Procedures, Public Protection, Authority and Contractor Site Rules, Incident Reporting and Investigation, Specialized Work or Licensing, Training and Orientation Requirements, Chemical Management, and Subcontractor Management.

b. A Detailed Site Specific HSE Implementation Plan: This plan shall be prepared and submitted by a recognized HSE professional (current BCSP Certification in good standing, i.e., CSP, CHST, OHST) experienced in developing compliant written HSE programs, acceptable to OCTA. Indicate the methods and procedures, and include the sequence of tasks as listed on the project schedule, include the hazards, tools and equipment, and the safe work practices to mitigate the hazards in a format acceptable OCTA. Specify safety measures in accordance with applicable Cal/OSHA standards, SCAQMD rules, NFPA, NEC, ANSI codes and regulations, job hazard analysis, policies, procedures, HSE training requirements and known and potential hazards of Contractor's scope. Plans shall be prepared as specified above, and may require if necessary a professional engineer licensed to practice in the state of California, when so required by the provisions of the California Board for Professional Engineer and Surveyors.

B. Contractor shall provide a copy of their Company HSE Policy/Procedure Manual, in compliance with CCR Title 8 Standards for awarded scope.

C. Contractor shall provide a copy of Company's Injury Illness Prevention Program in accordance with CCR Title 8, Section 3203.

D. Contractor shall provide a copy of their Policy or Substance Abuse Prevention Program that complies with the 1988 Drug Free Workplace Act.

E. Contractor shall provide the resume and qualifications/certifications of assigned project designated Onsite HSE Representative for this scope as identified in section 2.3 of this specification.

F. Accident/Incident investigation report within 24 hours of event (immediate verbal notification to Authority Project Manager, followed by Written Report).

The following required documentation shall be provided to the Authority's Project Manager, upon Authority request, within 72 hours.

G. A copy of Contractor weekly site safety inspection report with status of corrections, upon request, within 72 hours.

H. Contractor shall provide a copy of the Contractors and subcontractors competent person list (submit to Authority Project Manager, upon Authority request, within 72 hours).

I. Contractors and subcontractors training records for qualified equipment operators, electrical worker certification (NFPA 70E), confined space training, HAZWOPER training, and similar personnel safety training certificates as applicable to the agreement scope and as requested by the OCTA Project Manager and/or HSEC department, upon Authority request, within 72 hours and prior to starting or during the scope activity (submit to Project Manager).

J. A monthly report that includes number of workers on project, a list of subcontractors, work hours (month, year to date, & project cumulative) of each contractor, labor designation, OSHA Recordable injuries and illnesses segregated by medical treatment cases, restricted workday cases, number of restricted days, lost workday cases, and number of lost work days, and recordable incident rate. Contractor shall provide to the Authority, upon request, within 72 hours.

K. TRAINING DOCUMENTATION

To ensure that each employee is qualified to perform their assigned work, when applicable to scope work, Contractor shall verify training documentation is in place, prior to and during contract scope, and make available to the Authority, upon request, within 72 hours. Training may be required by the Authority or CCR Title 8 Standards and required for activity on Authority's property and/or Authority projects. Contractor shall provide to Authority, upon request, within 72 hours.

2.2 HAZARD COMMUNICATION (CCR Title 8, Section 5194)

A. Contractor shall comply with CCR Title 8, Section 5194 Hazard Communication Standard. Prior to chemical use on Authority property and/or project work areas the Contractor shall provide to the Authority Project Manager copies of Safety Data Sheet (SDS) for all applicable products used, if any.

B. All chemicals including paint, solvents, detergents and similar substances shall comply with SCAQMD Rules 103, 1113, and 1171.

2.3 DESIGNATED HEALTH, SAFETY, ENVIRONMENTAL (HSE) REPRESENTATIVE

A. Before beginning on-site activities, the Contractor shall designate an On-site HSE Representative. This person shall be a Competent or Qualified Individual as defined by the Occupational, Safety, and Health Administration (OSHA), familiar with applicable CCR Title 8 Standards, and has the authority to affect changes in work procedures that may have associated cost, schedule and budget impacts.

B. The Contractor's on-site qualified HSE Representative for all Authority projects is subject to acceptance by the Authority Project Manager and the HSEC Department Manager. All contact information of the On-site HSE Representative (name, phone, and fax and pager/cell phone number) shall be provided to the Authority Project Manager.

QUALIFICATIONS – On Capital Programs, the Contractor shall submit a resume of the full time, on-site qualified HSE Representative(s) who reports directly to the Contractor's Project Manager or Superintendent, and who is responsible for HSE oversight for field operations on the project no later than ten (10) days after receipt of Notice to Proceed, and prior to mobilization. The Contractor's On-site HSE Representative(s) shall have a minimum of seven (7) years heavy construction experience in administering HSE programs on heavy construction project sites, the last two years of which have been administering HSE in the construction discipline for which Contractor is contracting with the Authority. The Contractor's On-site HSE Representative shall be a Certified Safety Professional (CSP) with current standing from the Board of Certified Safety Professionals (BCSP), or a Construction Health and Safety Technician (CHST) with current standing from the BCSP or a Certified Industrial Hygienist (CIH) with current standing from the American Board of Industrial Hygiene (ABIH), or an equal professional HSE Certificate of standing from The National Examination Board in Occupational Safety and Health (NEBOSH), that is acceptable to the Authority. The Contractor's On-site HSE Representatives(s) shall be on site during all operational hours. The On-site HSE Representative(s) shall set up, carry forward and aggressively and effectively maintain the project specific safety program and IIPP covering all phases of the work. If at any time the Contractor wishes to replace their On-site HSE Representative(s), the Contractor must provide written notice thirty (30) days prior to change of personnel to the Authority. The Contractor shall take all precautions and follow all procedures for the safety of, and shall provide all protection to prevent injury to, all persons involved in any way in the scope work and all other persons, including, without limitation, the employees, agents, guests, visitors, invitees and licensees of the Authority who may be involved. This requirement applies continuously and is not limited to normal working hours. The designated HSE Representative shall participate in all HSE related submittals. The Authority reserves the right to allow for an exception to modify these minimum qualification requirements for unforeseen circumstances, at the sole discretion of the Authority Project Manager and HSEC Department Manager.

On Facility Modification Projects, the Contractor shall submit a resume of the full time qualified on-site HSE Representative who reports directly to the Contractor's Project Manager or Superintendent, and who is responsible for safety oversight for field operations on the project no later than ten (10) days after receipt of Notice to Proceed, and prior to mobilization. The Contractor's On-Site HSE Representative shall hold a current certification from the BCSP, plus five (5) years construction or scope HSE experience enforcing HSE compliance on heavy construction or industrial construction project sites, the last two years of which have been administering HSE in the construction or scope discipline for which Contractor is contracting with the Authority. The Contractor's On-site HSE Representative(s) shall be on site during all operational hours. The designated HSE Representative shall participate in all HSE related submittals. The Authority reserves the right to allow for an exception and to modify these minimum qualification requirements for unforeseen circumstances, at the sole discretion of the Authority Project Manager and HSEC Department Manager.

1. Capital Programs may include, but are not limited to, projects involving demolition and construction of; heavy construction, rail projects, highway projects, parking lots and structures, fuel stations, building construction, facility modifications, bus base construction, EPA/DTSC remediation, AQMD air or soil monitoring, fuel tank removal or modification, major bus base modifications, handling potential hazardous waste projects, and similar projects as deemed a Capital Program at the sole discretion by the Authority.

2. Facility Modification Projects may include, but are not limited to, projects involving minor demolition and construction or improvement projects for transportation centers, bus base sites and/or building modifications, equipment and/or building upgrades, and similar projects as deemed a Facility Modification Project at the sole discretion by the Authority.

3. Competent Individual means an individual who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees and/or property, and who has authorization to take prompt corrective measures to eliminate them.

4. Qualified Individual means an individual who by possession of a recognized degree, certificate, certification or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems relating to the subject matter, the work, or the project.

C. The Contractor shall designate a Competent Individual for each task, as required by Cal-OSHA standards or laws. The task Competent Individual shall be responsible for the prevention of accidents. If the Authority or any public agency with jurisdiction notifies the Contractor of any claimed dangerous condition at the site that is within the Contractor’s care, custody or control, the Contractor shall take immediate action to rectify the condition at no additional cost to the Authority. The Contractor shall be responsible for the payment of all fines levied against the Authority for deficiencies relating to the Contractor’s supervision or conduct and/or control of the scope agreement.

D. On Facility Modification Projects, the Authority Project Manager reserves the right to require the Contractor to provide one additional full-time safety representative with qualifications as identified in section 2.3 (C), above whenever the number of individuals from the Contractor, its subcontractors, suppliers, and vendors meets or exceeds 15 workers, there are multiple scope work sites, or as warranted by the scope of work at the sole discretion by the Authority.

E. On Capital Programs, the Authority's Project Manager reserves the right to require the Contractor to provide one additional full-time safety representative with qualifications as identified in item 2.3 (C) above whenever the number of individuals from the Contractor, its subcontractors, suppliers, and vendors meets or exceeds 50 workers, or is warranted by the scope of work.

2.4 SITE HSE ORIENTATION

The Contractor shall conduct and document a project site safety orientation for all Contractor personnel, subcontractors, suppliers, vendors, and new employees assigned to the project prior to performing any work on Authority projects, a copy of the HSE orientation attendance list shall be provided to the Authority Project Manager. The safety orientation, at a minimum, shall include, as applicable, Personal Protection Equipment (PPE) requirements, eye protection, ANSI class 2 reflective vests, designated smoking, eating, and parking areas, traffic speed limit and routing, cell phone policy, and barricade requirements. When required by scope, additional orientation shall include fall protection, energy isolation lock-out/tag-out (LOTO), confined space, hot work permit, security requirements, and similar project safety requirements.

2.5 INCIDENT NOTIFICATION AND INVESTIGATION

A. The Authority shall be promptly notified of any of the following types of incidents:

   1. Damage to Authority property (or incidents involving third party property damage);

   2. Reportable and/or recordable injuries (as defined by the U. S. Occupational Safety and Health Administration);

   3. Incidents impacting the environment, i.e. spills or releases on Authority property.

B. Notifications shall be made to Authority representatives, employees and/or agents. This includes incidents occurring to contractors, vendors, visitors, or members of the general public that arise from the performance of Authority contract work. An initial immediate verbal notification, followed by a written incident investigation report shall be submitted to Authority's Project Manager within 24 hours of the incident.

   A final written incident investigative report shall be submitted within seven (7) calendar days, and include the following information. The current status of anyone injured, photos of the incident area, detailed description of what happened, the contributing factors that led to the incident occurrence, a copy of the company policy or procedure associated with the incident and evaluation of effectiveness, copy of the task planning documentation, and the corrective action initiated to prevent recurrence. This information shall be considered the minimum elements required for a comprehensive incident report acceptable to OCTA.

C. A Serious Injury, Serious Incident, OSHA Recordable Injury / Illness, or Significant Near Miss shall require a formal incident review at the discretion of the Authority's Project Manager. The incident review shall be conducted within seven (7) calendar days of the incident. This review shall require a senior executive from the Contractors' organization to participate in the presentation. The serious incident presentation shall include action taken for the welfare of

the injured, a status report of the injured, causation factors leading to the incident, a root cause analysis, and a detailed recovery plan that identifies corrective actions to prevent a similar incident, and actions to enhance safety awareness.

1. Serious Injury: includes an injury or illness to one or more employees, occurring in a place of employment or in connection with any employment, which requires inpatient hospitalization for a period in excess of twenty-four hours for other than medical observation, or in which an employee suffers the loss of any member of the body, or suffers any serious degree of physical disfigurement.

2. Serious Incident: includes property damage of $500.00 or more, an incident requiring emergency services (local fire, paramedics and ambulance response), news media or OCTA media relations response, and/or incidents involving other agencies (Cal/OSHA, EPA, AQMD, DTSC, etc.) notification or representation.

3. OSHA Recordable Injury / Illness: includes and injury / illness resulting in medical treatment beyond First Aid, an injury / illness which requires restricted duty, or an injury / illness resulting in days away from work.

4. Significant Near Miss Incident; includes incidents where no property was damaged and no personal injury sustained, but where, given a slight shift in time or position, damage and/or injury easily could have occurred.

2.6 REGULAR INSPECTIONS & THIRD PARTY INSPECTIONS

A. Frequent and regular inspections of the project jobsite shall be made by the Contractor's On-site HSE Representative, or another Competent Individual designated by the Contractor. Unsafe acts and/or conditions noted during inspections shall be corrected immediately.

B. The Contractor is advised that representatives of regulatory agencies (i.e., CAL-OSHA, EPA, SCAQMD, etc.), upon proper identification, are entitled to access onto Authority property and projects. The Authority Project Manager shall be notified of their arrival as soon as possible.

2.7 ENVIROMENTAL REQUIREMENTS

A. The Contractor shall comply with Federal, State, county, municipal, and other local laws and regulations pertaining to the environment, including noise, aesthetics, air quality, water quality, contaminated soils, hazardous waste, storm water, and resources of archaeological significance. Expense of compliance with these laws and regulations is considered included in the agreement. Contractor shall provide water used for dust control, or for pre-wetting areas to be paved, as required; no payment will be made by OCTA for this water.

B. The Contractor shall prevent pollution of storm drains, rivers, streams, irrigation ditches, and reservoirs with sediment or other harmful materials. Fuels, oils,

bitumen, calcium chloride, cement, or other contaminants that would contribute to water pollution shall not be dumped into or placed where they will leach into storm drains, rivers, streams, irrigation ditches, or reservoirs. If operating equipment in streambeds or in and around open waters, protect the quality of ground water, wetlands, and surface waters.

C. The Contractor shall protect adjacent properties and water resources from erosion and sediment damage throughout the duration of the contract. Contractor shall comply with applicable NPDES permits and Storm Water Pollution Prevention Plan (SWPPP) requirements.

D. Contractor shall comply with all applicable EPA, Cal EPA, Cal Recycle, DTSC, SCAQMD, local, state, county and city standards, rules and regulations for hazardous and special waste handling, recycling and/ disposal. At a minimum, Contractor shall ensure compliance where applicable with SCAQMD Rule 1166, CCR Title 8, Section 5192, 29 CFR Subpart 1910.120, 49 CFR Part 172, Subpart H, 40 CFR Subpart 265.16 and CCR Title 22 Section 6625.16. Contractor shall provide OCTA a schedule of all hazardous waste and special or industrial waste disposal dates in advance of transport date. Only authorized OCTA personnel shall sign manifests for OCTA generated wastes. Contractor shall ensure that only current registered transporters are used for disposal of hazardous waste and industrial wastes. The Contractor shall obtain approval from OCTA for the disposal site locations in advance of scheduled transport date.

E. If the Contractor encounters on the site material reasonably believed to be asbestos, polychlorinated biphenyl (PCB) or other Hazardous Substance (as defined in California Health and Safety Code, and all regulations pursuant thereto) which has not been rendered harmless, the Contractor shall immediately stop work in that area affected and report the condition to the Authority in writing. The work in the affected area shall not thereafter be resumed except by written agreement of the Authority and Contractor if in fact the material is asbestos or polychlorinated biphenyl (PCB) or other hazardous substance and has not been rendered harmless. The work in the affected area shall be resumed in the absence of asbestos or polychlorinated biphenyl (PCB) or other hazardous substance, or when it has been rendered harmless, by written agreement of the Authority and the Contractor, or in accordance with a final determination by an Environmental Consultant employed by the Authority.

F. The Contractor shall not permit any hazardous substances to be brought onto or stored at the Project Site or used in the construction of the work, except for specified materials and commonly used construction materials for which there are no reasonable substitutes. All such materials shall be handled in accordance with all manufacturers' guidelines, warnings and recommendations and in full compliance with all applicable laws. All notices required to be given with respect to such materials shall be given by the Contractor. The Contractor shall not intentionally release or dispose of hazardous substances at the Project Site or into the soil, drains, surface or ground water, or air, nor shall the Contractor allow any Sub-Contractor, subcontractor or supplier or any other person for whose acts the Contractor or any subcontractor, vendor or supplier may be liable, to do so. For purposes of Contract Documents, "hazardous

substance" means any substance or material which has been determined or during the time of performance of the work is determined to be capable of posing a risk of injury to health, safety, property or the environment by any federal, state or local governmental authority.

2.8 VEHICLE AND ROADWAY SAFETY REQUIREMENTS

A. The Contractor shall ensure that all Contractor vehicles, including those of its subcontractors, suppliers, vendors and employees are parked in designated parking areas, are identified by company name and/or logo, and comply with traffic routes, and posted traffic signs in areas other than the employee parking lots.

B. Personal vehicles belonging to Contractor employees shall not be parked on the traveled way or shoulders including any section closed to public traffic, or areas of the community that may cause interference or complaints

C. The Contractor shall comply with California Department of Transportation safety requirements and special provisions when working on highway projects.

D. The Contractor shall conform to American Traffic Safety Services Association (Quality Standard for Work Zone Control Devices 1992).

2.9 LANGUAGE REQUIREMENTS

For safety reasons, the Contractor shall ensure employees that do not read, or understand English, shall be within visual and hearing range of a bilingual supervisor or responsible designee at all times when on the Authority property or projects.

2.10 PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING

Contractors, and all associated subcontractors, vendors and suppliers are required to provide their own personal protective equipment (PPE), including eye, head, foot, and hand protection, respirators, reflective safety vests, and all other PPE required to perform their work safely on Authority projects.

A. RESPIRATORS (CCR Title 8, Section 5144) - The required documentation for training and respirator use shall be provided to the Authority's Project Manager upon request within 72 hours. All compliance documentation as required by CCR Title 8, Section 5144, Respiratory Protective Equipment.

B. EYE PROTECTION – The Authority requires eye protection on construction projects and work areas that meet ANSI Z-87.1 Standards.

C. BUS BASE – Minimum PPE required includes but is not limited to; Eye protection, class 2 reflective vest, steel toe or construction type footwear that meets ANSI Z41 1991 are recommended.

D. CONSTRUCTION PROJECTS - Minimum PPE required includes but is not limited to; hard hat, eye protection, hand protection, class 2 reflective vest, safety toe footwear that meets ANSI Z41 1991 are recommended.

E. HARD HATS: Approved hard hat that meet ANSI Z89. 1 (latest revision). Hard hats should be affixed with the company/agency logo and/or name. The bill shall be worn forward. Metal hard hats and cowboy style are forbidden on Authority projects.

F. FOOTWEAR: Enclosed leather that covers the ankles, such as a construction type boot. Employees shall not wear casual dress shoes, open toe, sneakers, sandals, canvas-type shoes, or other shoes that have thin soles or heels that are higher than normal in construction work areas. Safety toe footwear that meets ANSI Z41 1991 are recommended on construction sites and in operating facilities.

G. CLOTHING/SHIRTS: minimum or waist length shirts with sleeves (4" minimum).

H. CLOTHING/TROUSERS: Cover the entire leg. If flare-legged trousers are worn, the trouser bottoms must be tied to prevent catching. No sweat pants, or trousers with holes.

2.11 AERIAL DEVICES (CCR Title 8, Section 3648)

Aerial devices are defined in CCR Title 8 as any vehicle-mounted or self-propelled device, telescoping extensible or articulating, or both, which is primarily designed to position personnel. If aerial devices are to be used, the required documentation in CCR Title 8, Section 3648 shall be provided to the Authority's Project Manager, upon request, within 72 hours.

2.12 CONFINED SPACE ENTRY (CCR Title 8, Section 5157)

Before any employee will be allowed to enter a confined space, the required documentation as required by CCR Title 8, Section 5157 shall be provided to the Authority's Project Manager, upon request, within 72 hours.

A. RECOMMENDED: a copy of the most recent calibration record for each air monitoring unit, 3-gas monitor or "sniffer" to be used by the Entry Supervisor prior to entering permit-required confined spaces.

2.13 CRANES

A. Crane activity shall comply with 29 CFR 1926.550, CCR Title 8 Standards, manufacture's recommendations and requirements, applicable American Society of Mechanical Engineers (ASME), and ANSI Standards. In addition, Contractor shall comply with the following requirements: Prior to using mobile cranes, the Contractor shall provide to the Authority Project Manager, items I,

2 & 3 of the following documentation a minimum of seven (7) days prior to activity, and item 4 on each day of crane activity.

1. Cranes require a submittal of the annual certification, and copy of the cranes most recent quarterly inspection.

2. A copy of each crane operator's qualification (NCCCO or equivalent) of company-authorized crane operators that have been properly trained in the equipment's use and limitations. Operator certification as required by CCR Title 8, Section 5006.1.

3. A rigging plan is required for all lifts. Critical lifts require an engineered plan designed by a registered professional engineer licensed in the State of California.

4. Contractor shall provide the name and qualifications of each "Qualified Rigger" as defined by OSHA.

5. Rigging scope activity shall comply with 29 CFR Subparts1926.250, 1929.753 and CCR Title 8 Standards.

6. All rigging equipment shall be free from defects, in good operating condition and maintained in a safe condition.

7. Rigging equipment shall be inspected by a designated, competent employee prior to initial use on the project, prior to each use, and documented inspections performed regularly. Records shall be kept on jobsite of each of these inspections by contractor and be made available to the Authority upon request within 72 hours.

8. Only one (1) sling eye should be in a hook, for multiple slings a shackle shall be used to prevent separation of slings, and prevent stress on weak points of the hook.

9. Contractor shall prepare a documented daily crane inspection report.

B. Pick and carry with rubber tired cranes is forbidden on Authority projects.

C. Engineered Critical Lifts

A critical lifts is established where any one of the following conditions are created:

1. Where in the crane's current configuration at any point during the lift, a gross load weight exceeds 75% of the capacity of the crane.

2. A gross weight equal to, or greater than 10 tons.

3. Lifts over buildings, equipment, public roadways, structures, or power lines.

4. A single lift where two or more cranes are used, including tandem lifts and tailing cranes.

5. Lifts made in close proximity of power lines, as defined by CCR Title 8 voltage clearance specifications.

6. Lifts involving helicopters, and specialized or unique and complex rigging equipment.

7. Hoisting of suspended work platforms.

8. Static tower crane erection and dismantlement.

9. Making lifts below the ground level where the crane is positioned.
   Note: Where the below the ground lift is minimal (evaluated by California registered professional engineer), a critical lift plan may not be required.

D. Critical Lift Plan

Where a critical lift will be performed, a written critical lift plan shall be submitted to the Authority Project Manager prior to commencing with the lift. The written plan shall include the following:

1. Crane manufacturer, capacity, and all specifications for the configuration to be used for the lift.

2. Load chart data for the crane to be used to make the lift. Total calculated weight of the load to be lifted including all rigging and other deductions consistent with the manufacturer's load chart.

3. Engineering data shall be provided on the hook assembly (manufacture's certification or independent laboratory testing and load testing within the past 60 days), below-the hook rigging, and all specialized below-the-hook lifting devices.

4. Diagrams of the lift that provides geometrical conditions of the load, rigging, and all crane positions during the lift. The drawing shall provide the following:

   A. Locations of all components to be lifted prior, during and after the lift is completed.

   B. Radius points.

   C. Swing patterns.

D. In the event that the lift must be aborted, positions where the load may be safely landed.

E. Areas where any personnel, public, and vehicles must be evacuated during the lift.

5. Potential ground loading for each point of contact by the crane in selected locations in which the crane will perform the critical lift.

6. Soil and subsurface data and information pertaining to the location on which the crane used for the critical lift will be positioned. This information shall be procured from an authoritative source such as a geotechnical engineer or a professional civil engineer registered in the state of California.

   Note: *This information may be available from the Authority for selected locations on some projects.*

7. An engineer shall use the data provided in #5 and #6 above to verify and confirm the following:

   A. That the soil and subsurface conditions are capable of supporting all loads imposed during the critical lift.

   B. That the designs of cribbing and other supports used under the crane load points are appropriate to safely transfer such loads.

8. Signature and stamp on the plan by a California registered professional engineer, evidencing review of the plan as meeting the requirements that all loads and load information and calculations contained in the plan are approved, acceptable and safe to perform.

9. Operator qualifications.

10. Method by which communication will be provided to the crane operator. (Designated signal person, two-way radio, hard wire phone system, etc.).

11. A critical lift hazard analysis which identifies the particular hazards (including weather, wind, obstructions, etc.) associated with the lift and the means and methods to reduce, mitigate, or eliminate the hazards.

12. Emergency action plan.

13. Documentation of lift and pre-job meeting shall be conducted by Contractor's Project Manager.

The written plan shall be submitted 7 days prior to any critical lift for review by the Authority Project Manager and the Authority HSEC department. No critical lifts shall be conducted prior to such review.

E. OVERHEAD CRANES

Before using the Authority overhead cranes, each Contractor shall designate a limited number of employees to attend a training session on the use and limitations of overhead cranes with designated Authority personnel.

2.14 DEMOLITION OPERATIONS (CCR Title 8, Section 1734)

Before starting demolition activities the required documentation shall be provided to the Authority's Project Manager, upon request, within 72 hours. Contractor shall provide all compliance documentation as required by CCR Title 8 Article 31.

A. The Contractor shall be responsible for visiting and examining the project site to assess and personally determine the extent of demolition, associated work, debris removal, disposal and general work to be done under this section.

B. The Contractor shall take possession of all demolished materials, except as noted otherwise in the Contract Documents, and be responsible for disposing of them in accordance with applicable laws and regulations. On-site burning or burial of demolition materials will not be permitted.

C. Provide continuous noise and dust abatement as required, preventing disturbances and nuisances to the public, workers, and the occupants of adjacent premises and the surrounding areas. Dampen areas affected by demolition operation as necessary to prevent dust nuisance.

D. Site demolition plan: Indicate methods, procedures, equipment, and structures to be employed. Specify safety measures in accordance with applicable codes including signs, barriers, and temporary walkways. Plans shall be prepared by a qualified person (CSP, CIH, CHST, CHMM, etc.), or as necessary by a professional engineer licensed to practice in the State of California, when so required by the provisions of the California Board for Professional Engineer and Surveyors.

E. Equipment, haul routes, and disposal sites to be used in the demolition and disposal work. Copy of manifests showing delivery of disposed materials in accordance with the plan and permit conditions. Certification that all demolished materials removed from the site have been disposed of in accordance with applicable laws and regulations.

2.15 EXCAVATION OPERATIONS (CCR Title 8, Section 1541)

Before starting excavation activities more than 5 feet deep into which people shall enter, the required documentation shall be provided to the Authority's Project Manager, upon request, within 72 hours. All compliance documentation shall comply with the following CCR Title 8, Section 1541 requirements:

A. A copy of the Contractor's Excavation Permit.

B. Attention is directed to the applicable sections of the Labor Code concerning trench excavation safety plans, "Trench Safety." Excavation for any trench 5 feet or more in depth shall not begin until the Contractor has received approval from the Engineer of the Contractor's detailed plan for worker protection from the hazards of caving ground during the excavation of that trench and any design calculations used in the preparation of the detailed plan. Excavations 20 feet or greater shall be engineered and plan stamped by a California registered professional engineer.

C. The detailed plan shall show the details of the design of shoring, bracing, sloping or other provisions to be made for worker protection during the excavation. No plan shall allow the use of shoring, sloping or a protective system less effective than that required by the Construction Safety Orders of the Division of Occupational Safety and Health. If the plan complies with the shoring system standards established by the Construction Safety Orders, the plan shall be submitted at least five (5) days before the Contractor intends to begin excavation for the trench.

D. Excavations and trenches shall be inspected by a "Competent Person" daily and after every rainfall to determine if they are safe. Daily inspections shall be recorded. Documentation is to be kept on site and available for review upon request.

E. Excavations are considered class 'C' soil unless documented testing in accordance with 29 CFR Subpart P, Section 1926.650 and CCR Title 8 Standards supports a class 'B' soil classification and is confirmed and stamped by a California registered professional engineer. In no case will excavations be classified as class 'A' soil.

2.16 FALL PROTECTION (CCR Title 8, Sections 1669-1671)

The following standards are required when performing work on Authority property. The required documentation shall be provided to the Authority's Project Manager, upon request, within 72 hours.

A. Fall protection is required for workers exposed to falls in excess of six (6) feet.

B. When conventional fall protections methods are impractical or create a greater hazard, a written plan in conformance with CCR Title 8, Article 24, shall be submitted to the Authority a minimum of seven (7) days in advance of the scheduled activity.

2.17 FORKLIFTS, BACKHOES AND OTHER INDUSTRIAL TRACTORS (CCR Title 8, Section 3664)

CCR Title 8 defines backhoes as "industrial tractors". All compliance documentation shall be provided as required by CCR Title 8, Section 3664. The following required documentation shall be provided to the Authority's Project Manager, upon request, within 72 hours:

A. A copy of each operator's certificate or a list of company-authorized industrial tractor operators that have been properly trained in the equipment's use and limitations. Please state which equipment, and model each operator has been authorized to operate (i.e. forklifts, backhoe, bulldozer, front-end loader, etc.).

2.18 ELECTRICAL OPERATIONS

HIGH VOLTAGE (CCR Title 8, Sections 2700-2974)

Any work on electrical equipment defined by OSHA as high-voltage, at or above 600 volts, requires specialized training certifications and personal protective equipment. Before any high-voltage work commences, the Authority Project Manger must be notified and must provide approval. The following required NFPA 70E certification and a certificate of training from a recognized organization of a two day high voltage safety training course shall be provided to the Authority's Project Manager, upon request, within 72 hours:

A. A list of the name(s) of the company-designated high voltage Qualified Electrical Worker(s)

LOW VOLTAGE (CCR Title 8, Sections 2299-2599)

Only qualified persons shall work on electrical equipment or systems.

A. Electrical Certification of Training; Contractor employees working on or around electrical panels, wiring, motors, electrical energy sources or similar electrical devices shall have attended a NFPA 70E, Electrical Safety Course and provide to the OCTA Project Manager a copy of employees' NFPA 70E qualification certificate of training for each employee assigned to electrical tasks on OCTA property or projects.

2.19 POWDER-ACTUATED TOOLS (CCR Title 8, Section 1685)

Before using tools such as "Hilti guns" or other powder-actuated tools, the following required documentation shall be provided to the Authority's Project Manager, upon request, within 72 hours.

A. A copy of each qualified person's valid operator card.

2.20 SCAFFOLDS (CCR Title 8, Sections 1635.1-1677)

Scaffold erection shall be in compliance with CCR Title 8 Standards. All compliance documentation shall be provided as required by CCR Title 8, Sections 1635.1-1677. In addition, the Contractor shall comply with the following additional requirements.

A. All scaffolds on Authority project shall be inspected by a competent person qualified for scaffolds in accordance with CCR Title 8 Standards.

B. Contractor shall arrange for a third party inspection, at least quarterly, by a credentialed professional (insurance carrier, scaffold manufacturer representative, or similar) in addition to the contractors daily self inspections.

C. A proper scaffold inspection and tagging system shall be maintained identifying compliance status (Example: Green/safe, Yellow/modified-fall protection required, Red/unsafe-do not use).

D. Contractor shall have a fall protection plan that meets CCR Title 8 Standards for scaffold erectors, an erection/dismantling plan shall be submitted to Authority Project Manager for review prior to start of activity.

E. Scaffold erection/dismantling shall install handrails beginning on the first level above ground erected, and erectors shall plan erection and dismantling in a manner to maximize handrail protection and minimize employees at unprotected areas.

2.21 WARNING SIGNS AND DEVICES

Signs, signals, and/or barricades shall be visible at all times when and where a hazard exists. Overhead tasks, roofing tasks, excavations, roadwork activity, demolition work, and other recognized hazards shall have guardrail protection, warning barricades, or similar protective measures acceptable to the Authority's Project Manager. Signs, signals, and/or barricades shall be removed when the hazard no longer exists.

2.22 STEEL ERECTION

Steel Erection scope activity shall comply with 29 CFR Subpart R, Section 1926.750, and CCR Title 8 Standards. In addition to OSHA Standards, Contractor shall comply with the following requirements.

A. Erection planning should incorporate installation methods using aerial devices (man-lifts) and elevated work platforms (scissor lift) to minimize fall hazards of climbing steel where possible. A detailed written job safety analysis (JSA) shall identify installation methods, equipment, and control methods to minimize potential fall hazards.

B. The Contractor shall not allow any employee to walk the steel unprotected from falls. Contractor employees must be tied-off and "coon" the beam until safety cables are provided to which employees shall use 100% tie-off protection. Two lanyards are required to ensure 100% tie-off protection.

C. A safe means of access to the level being worked shall be planned. Climbing and sliding down columns are not considered safe access and are forbidden on Authority projects.

D. A qualified rigger shall inspect the rigging prior to each shift and each lift.

E. Multiple lift rigging (Christmas Treeing) lifts are forbidden on Authority property and controlled projects.

2.23 AUDITS

A. The Authority may make periodic patrols of the project site as a part of its normal security and safety program. The Contractor shall not be relieved of its aforesaid responsibilities and the Authority shall not assume same, nor shall it be deemed to have assumed, any responsibility otherwise imposed upon the Contractor, as a result of safety patrols by the Authority.

B. The Authority may audit the Contractor's safety program for HSE compliance at various intervals of the project, at the sole discretion of the Authority. Elements may include, but are not limited to: OSHA injury & illness records and logs, Job Safety Analysis and safety plans, equipment operator licenses and training records, incident reports, meeting minutes, engineered plans, safety meeting records, crane and rigging plans, equipment inspection records, qualifications of and interviews with key Contractor management personnel, and other similar information. The Contractor shall support and cooperate with these audits at no additional compensation or schedule impacts with this contract.

2.24 RAILWAY SAFETY PRECAUTIONS

A. Work on operating railways shall be in compliance with 49 CFR, Part 214, CCR Title 8 Standards, and the Southern California Regional Rail Authority (SCRRA).

B. New construction rail projects require that all employers and contractors are responsible to assure employees are trained and understand on-track safety procedures, and follow roadway worker rules identified in 49 CFR, Part 214, CCR Title 8, SCRRA, the California Department of Transportation (CalTrans), and OCTA HSE Construction Management Requirements (i.e., item E references).

C. Minimum PPE for workers include hard hat, safety glasses, orange (i.e., rail company approved color) class 2 reflective vest, safety toe footwear that meets ANSI Z41 1991 (lace-up type over the ankle) and hearing protection (on person and worn as necessary).

2.25 FINES

The Contractor shall be responsible for the payment of all fines levied against the Authority for HSE violations arising from or related to activities over which Contractor has responsibility per the contract..

2.26 COMPLIANCE COSTS

Compliance with Health, Safety and Environmental Compliance identified in these aforementioned Authority Safety Specifications shall be at the expense of the Contractor, and included in Bid Documents to the Authority for the Contractor's scope. The Authority shall incur no additional cost or schedule impacts by Contractor, for compliance with California Construction Safety Orders, CCR Title 8 Standards, Federal OSHA Standards, and the Authority Safety Specifications for the protection of persons and property.

2.27 REFERENCES

A. CCR Title 8 Standards (Cal/OSHA)
B. CFR Including 1910 and 1926 Standards
C. NFPA, NEC, ANSI, NIOSH Standards
D. USACE Construction Quality Management Manuel (EM-385-1-1)
E. Construction Industry Institute (CII)
F. OCTA Construction Management Procedures Manual
G. OCTA Yard Safety Rules

END OF DOCUMENT

BID BOOKLET INVITATION FOR BID (IFB) 4-2093
BOOK 2 OF 2

BUILDING REPAIRS AT SANTA ANA BUS BASE

OCTA

ORANGE COUNTY TRANSPORTATION AUTHORITY
550 South Main Street
P.O. Box 14184
Orange, CA 92863-1584
(714) 560-6282

Key IFB Dates

Issue Date:	**March 11, 2024**
Pre-Bid Conference/Site Visit:	**March 19, 2024**
Questions/Approved Equal Submittal:	**March 22, 2024**
Bids Submittal Date:	**April 8, 2024**

FEDERAL TRANSIT ADMINISTRATION FUNDED PROJECT

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)*

Federal Forms:

	DBE Participation Commitment Form *Information required for all DBE subcontractors (no minimum dollar threshold), signed, dated*
	Bidders Certificate Regarding "Buy America" Requirements *Signed, dated. (Select one option only)*
	Certification of Restrictions on Lobbying (bids over $100,000) *Signed, dated*
	Disclosure of Lobbying Activities *Check box at top of the form if no reportable activities and complete Section 16 (signature, date, name, title and telephone number)*
	Disclosure of Lobbying Activities Continuation Sheet *Use if additional space is required to complete information*

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

THE FOLLOWING DOCUMENTS ARE PART OF THE BID AND DUE NO LATER THAN 4:00 PM ON THE 2ND BUSINESS DAY AFTER THE BID DUE DATE.

	DBE Letter of Acknowledgement and Commitment for each DBE Listed on the Form *Acknowledgement of scope of work and dollar value, signed and dated*
	DBE Information - Good Faith Efforts *Include all information to document and substantiate Good Faith Efforts*
	Bidders List *List all firms, DBE and non-DBE, that bid or were solicited for quotes*

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 4-2093**, **"BUILDING REPAIRS 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 Allowance	Lump Sum Price
1	Allowance - Mobile Bus Washing Services	$100,000.00
2	Allowance - Unidentified Structural Related Repairs	$35,000.00
3	Base Work- Building Repairs at Santa Ana Bus Base	$_____
	Total Lump Sum 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. If awarded a contract resulting from this bid, bidder will cooperate with the Authority in meeting commitments and goals with regard to the maximum utilization of DBE firms and will use its best efforts to ensure that DBE firms shall have the maximum practicable opportunity to compete for subcontract work under such contract.

12. 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) 4-2093**, **"BUILDING REPAIRS 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 4-2093, "BUILDING REPAIRS 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__.

_____

_____

PRINCIPAL	SURETY
_____	_____
(Principal Name) (Seal)	(Surety Name) (Seal)
By: _____	By: _____
(Signature)	(Signature)

_____	_____
(Print Name and Title)	(Print Name and Title)
By: _____	By: _____
(Signature)	(Signature)
_____	_____
(Print Name and Title)	(Print Name and Title)
Principal Address and Telephone:	Surety Address and Telephone:
_____	_____
_____	_____
_____	_____
_____	_____

Affix Corporate Seals
Attach Notary Acknowledgments for All Signatures
Attach Power-of-Attorney if Executed by Attorney-in-Fact

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 that the security company's printed standard form contains all of the security stipulations that protect the Authority in the above bond 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 4-2093, "BUILDING REPAIRS 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 Declaration to be Executed by Bidder and Submitted with Bid

To the Orange County Transportation Authority
The undersigned declares:

I am the _____ of _____, the party making the foregoing bid. In accordance with Title 23 United States Code Section 112 and Public Contract Code Section, 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. The bid is genuine and not collusive or sham. 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. 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. All statements contained in the bid are true. 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, and has not paid, and will not pay, any person or entity for such purpose.

Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____ (date), at _____ (city), _____ (state).

Name of Bidder:_____

Signature:_____

Date:_____

DBE PARTICIPATION COMMITMENT FORM

THIS FORM MUST BE COMPLETED AND SUBMITTED WITH THE BID AS A CONDITION OF DBE RESPONSIVENESS

NOTE: Refer to instructions on the reverse side of this form.

Bidder to Complete this Section

1. IFB No.: _____

2. Project Name/Description: _____

3. Prime Bidder Name: _____

4. Contract DBE Goal %: _____

5. Bidder's Total Bid Price _____

Required DBE Commitment Information

6. DBE Firm (Name and Address)	**7.** DBE Certification Number	**8.** Description of Scope of Services/Work	**9.** Bid Item (#)	**10.** Dollar Value ($) of Participation	**11.** Dollar Value ($) of Eligible DBE Participation/ Commitment

Note: **As a condition of responsiveness, the bidder is required to submit no later than 4:00 p.m. on the 2nd business day after the bid due date a DBE Letter of Acknowledgement and Commitment signed and dated from each DBE listed in Column 6 acknowledging that the DBE is participating in the contract for the specified dollar value ($) and scope of work.**

The dollar amount and scope committed in the DBE Letter of Acknowledgement and Commitment and the amount/scope shown on this form MUST match identically.

12. Total Dollar Value ($) of Eligible DBE Participation

$ _____

13. Eligible DBE Participation Represented as a Percentage (%) of Bidder's Total Bid Price

_____%

Bidder Assurance: The bidder certifies that information on this form is complete and accurate, that it has verified the listed DBE(s) certification status and is only crediting eligible DBE participation towards meeting the contract DBE goal.

_____	_____	_____
14. Preparer's Name (Print)	15. Preparer's Signature	16. Preparer's Title
_____	_(___)_____	_____
17. Date	18. Telephone No.	19. Email Address

INSTRUCTIONS - DBE Participation Commitment Form

Bidder is required to ensure all information is complete and accurate:

20. **IFB No.** - Enter the IFB Number.
21. **Project Name/Description** - Enter the name and/or description of the project.
22. **Prime Bidder Name** - Enter the bidder's firm name.
23. **Contract DBE Goal %** - Enter the contract DBE goal percentage.
24. **Bidder's Total Bid Price –** Enter the bidder's total bid price.
25. **DBE Firm** – Enter name and address of the proposed DBE firm. Identify all DBE firms being claimed for credit, regardless of tier.
26. **DBE Certification Number -** Enter the DBE's certification identification number. All DBEs must have a valid DBE certification at time of bid opening.
27. **Description of Scope of Services/Work –** Enter the scope of services/work for each DBE firm listed to participate on this contract.
28. **Bid Item (#) -** Enter bid item number.
29. **Dollar Value ($) of Participation -** Enter the total dollar value of participation for each listed DBE firm.
30. **Dollar Value ($) of Eligible DBE Participation/Commitment** - Enter the dollar value of participation eligible to count towards meeting the contract DBE goal. This value should exclude work performed by lower tier subcontractors and account for the DBE's capacity based on their certification type in conformance with the DBE crediting provisions set forth in Title 49 CFR Part 26.55.
31. **Total Dollar Value ($) of Eligible DBE Participation -** Enter the sum of all eligible participation listed in column 11.
32. **Eligible DBE Participation Represented as a Percentage (%) of Bidder's Total Bid Price -** Enter the corresponding percentage of the total eligible DBE participation that the bidder is counting towards the bidder's DBE goal commitment (Formula: Item (12) Total Value of Eligible DBE Participation / Item (5) Bidder's Total Bid Price = Bidder's DBE Goal Commitment Percent (%)).
33. **Preparer's Name (Print)** - Clearly enter the name of the authorized person preparing the form on behalf of the bidder.
34. **Preparer's Signature** - Authorized person's signature.
35. **Preparer's Title** - Enter the position/title of the authorized person signing the form on behalf of the bidder.
36. **Date** - Enter the date the form is signed.
37. **Telephone No.** - Enter the area code and telephone number of the authorized person signing the form on behalf of the bidder.
38. **Email Address -** Enter the email address of the authorized person signing the form on behalf of the bidder.

NOTE: A firm is only eligible to count towards DBE participation in the NAICS codes contained within its California Unified Certification Program (CUCP) DBE Profile. Bidders are to verify that listed DBE's certification contains the NAICS codes relevant to the scope they are being listed to perform.

DBE LETTER OF ACKNOWLEDGMENT AND COMMITMENT

1. IFB NO.:_____

2. Project Name/Description:_____

3. Bidder:_____

4. DBE Commitment Information

(A) Description of work to be performed by DBE firm (include bid item number on the DBE Participation Commitment Form as applicable):

_____

_____

_____

(B) Dollar value of this work $ _____

5. DBE ACKNOWLEDGMENT*

I acknowledge that my firm has been listed by the Bidder named above, and is committed, to perform the scope and portion of work (A and B) stated above.

DBE Firm's Name:_____

Name:_____

Signature:_____

Title:_____

Telephone:_____

*If the bidder does not receive award of the prime contract, any and all representations in this letter of Acknowledgment and Commitment shall be null and void.

This form may be used to fulfill the DBE Participation Commitment Letter requirement as stated in the IFB.

INSTRUCTIONS - DBE LETTER OF ACKNOWLEDGMENT AND COMMITMENT

Bidder is required to ensure all information is complete and accurate:

1. IFB No. - Enter the IFB Number.
2. Project Name/Description - Enter the name and/or description of the project.
3. Bidder Name - Enter the bidder's firm name.
4A. Description of work - Scope of work to be performed that will be credited towards DBE participation. To include bid item number on the DBE Participation Commitment Form as applicable.
4B. Dollar Value - Enter the total dollar value of participation for the DBE firm.
5. DBE Acknowledgement – DBE to provide firm name, authorized person's name, signature, title, and telephone number if they have been notified that they were listed for the scope and value reflected in #4.

NOTE: If the bidder does not receive award of the prime contract, any and all representations in the letter of Acknowledgment and Commitment shall be null and void.

DBE INFORMATION - GOOD FAITH EFFORTS

IFB No: _____ Bid Opening Date _____

The Orange County Transportation Authority (Authority) established a Disadvantaged Business Enterprise (DBE) goal of _____% for this contract. The information provided herein shows that a good faith effort was made by _____(Bidder).

Bidder shall submit the following information to document adequate good faith efforts to the Authority no later than 4:00 p.m. on the 2nd business day after the Authority's bid due date, or as otherwise specified in the solicitation. Although not required, bidder should submit the following information even if the "DBE Participation Commitment Form" indicates that the bidder has met the DBE goal. This will protect the bidder's eligibility for award of the contract if Authority determines that the bidder failed to meet the goal for various reasons, e.g., a DBE firm was not certified at bid opening, or the bidder made a mathematical error.

Submittal of only the form may not provide sufficient documentation to demonstrate that adequate good faith efforts were made.

The following good faith efforts items (A through H) shall be performed prior to bid submission. Bidder to complete the following items in sufficient detail to effectively demonstrate that good faith efforts were undertaken to meet the established DBE goal:

I. Items of Work the Bidder Made Available to DBE Firms; a description of work items and approximate dollar amounts made available to DBE firms by the bidder, value of work items as a percentage of total contract work, breakdown of bid items or larger scopes of contract work (including those items normally performed by the bidder with its own forces) into economically feasible units to facilitate DBE participation sufficient to meet the DBE contract goal. It is the bidder's responsibility to demonstrate that sufficient work was made available to facilitate DBE participation as follows (Provide documents that sufficiently evidence the efforts detailed below):

Description of Work Item	Bidder Normally Performs (Y/N)	Unbundled from Larger Scope (Y/N) If Yes, List Scope and/or Bid Item (#)	Amount ($)	Percentage of Contract

J. Solicitation Effort Documentation; the names and dates of written notices sent to certified DBEs soliciting bids for this project and the dates and methods used to following up initial solicitations to determine with certainty whether the DBEs were interested (attach all copies of solicitation, telephone records, fax confirmations, email communications, etc.), amount of DBEs to repond, documentation to demonstrate the DBE firms were provided information about the contract (location of project, contract number, bid date, items of work made available and contact information) in the Invitation to Bid from the bidder, the bidder solicited through all reasonable means (e.g. attendance at pre-bid meetings, advertising and written notices) the interest of all certified DBEs who have the capability to perform the work of the contract, bidder to provide proof of aforementioned items, and DBEs in the market area for the work identified in 'Item A' as follows:

DBE Firm	Contact Name/Title	Method of Solicitation	Date of Initial Solicitation	Date of Follow-Up Solicitation	Response/ Interested in Bidding

(Note: Solicitations should occur at a minimum no later than 14 calendar days prior to the Authority's bid due date and follow up to the solicitation should allow DBE firms reasonable time to respond). DBE firms solicited must be advised if the original bid date has been extended.

K. Rejected DBE Bid Documentation; the names, addresses, phone numbers, and amount of rejected DBE firms, the reasons for the bidder's rejection of the DBE firms, the firms selected and accepted for that work (attach all copies of quotes from the firms involved inclusive of a detailed cost breakdown if opted to self-perform work) and the price difference for each DBE if the selected firms is not a DBE, include an explanation of quote(s) rejected.

L. Publication Efforts Made to Advertise the Projects to Solicit DBE Participation; names and dates of each publication in which a request for DBE participation for this project was placed by the bidder (attach copies of advertisements or proof of publications). Publications should be placed at a minimum 14 calendar days before the Authority's bid due date. If bid due date is extended, bidder is to re-advertise new bid due date.

Publications	Type of Publication (Trade/General/ Minority/Focus)	Dates of Advertisement	Duration of Advertisement	Readvertisement (Bid-Due Date Extension)

M. Agencies, Organizations, or Groups Contacted to Provide Assistance in Contracting, Recruiting, and Using DBEs; the names of agencies, organizations or groups contacted to provide assistance in contacting, recruiting and using DBE firms (Attach copies of requests to agencies, responses received and efforts made by the bidder in response).

N. Efforts to Provide Information About the Plans, Specifications, and Contract Requirements; efforts made to assist interested DBEs in obtaining necessary materials, or related assistance or services, bidder to provide evidence of effort.

O. Assistance with Lines of Credit, Insurance, and/or other Services; efforts made to assist interested DBEs in obtainting bonding, lines of credit or insurance, and any technical assistance or information related to the plans, specifications and requirements for the work which was provided to DBEs, bidder to provide a list of any assistance provided to prospective and bided DBEs:

P. Additional Data to Support a Demonstration of Good Faith Efforts; in determining whether a bidder made adequate good faith efforts, the Authority will take into account the performance of other bidders in meeting the DBE contract goal. Attach any additional information to support demonstration of good faith in this section:

NOTE: USE ADDITIONAL SHEETS AS NECESSARY TO DEMONSTRATE RESPONSIVENESS.

Bidders List

The Department of Transportation requires the Authority to create and maintain a "Bidders List" containing information about all firms (DBE and Non-DBE) that bid, propose or quote on the Authority's DOT-assisted contracts, in accordance with 49 CFR Part 26.11. The "Bidders List" is intended to be a count of all firms that are participating, or attempting to participate, on DOT-assisted contracts, whether successful or unsuccessful in their attempt to obtain a contract.
The bidder is to complete all requested information for every firm who submitted a bid, proposal or quote, including the primary bidder, and submit this information to the Authority no later than 4:00 p.m. on the 2nd business day after the Authority's bid due date, or as otherwise specified in the solicitation. The Authority will utilize this information to assist in the Authority's DBE goal-setting process.

Prime Name and Location	Type of Work/Services/Materials Provided: NAICS/WCC	Subcontract Amount	Percentage of Bid Item Sub-contracted	Contractor License No. / DIR Reg Number	DBE (Y/N) / DBE Certification ID	Phone: / E-mail:	Annual Gross Receipts
Prime Bidder:							☐ Less than $1 million
							☐ Less than $5 million
Contact Name:							☐ Less than $10 million
							☐ Less than $15 million
Address:							☐ More than $15 million
							Age of Firm: _____yrs.

Subcontractor Name and Location	Type of Work/Services/Materials Provided: NAICS/WCC	Subcontract Amount	Percentage of Bid Item Sub-contracted	Contractor License No. / DIR Reg Number	DBE (Y/N) / DBE Certification ID	Phone: / E-mail:	Annual Gross Receipts
Firm Name:							☐ Less than $1 million
							☐ Less than $5 million
Contact Name:							☐ Less than $10 million
							☐ Less than $15 million
Address:							☐ More than $15 million
							Age of Firm: _____yrs.

Subcontractor Name and Location	Type of Work/Services/Materials Provided:	Subcontract Amount	Percentage of Bid Item Sub-contracted	Contractor License No.	DBE (Y/N)	Phone:	Annual Gross Receipts
	NAICS/WCC			DIR Reg Number	DBE Certification ID	E-mail:	
Firm Name:							☐ Less than $1 million
							☐ Less than $5 million
Contact Name:							☐ Less than $10 million
							☐ Less than $15 million
Address:							☐ More than $15 million
							Age of Firm: _____yrs.
Firm Name:							☐ Less than $1 million
							☐ Less than $5 million
Contact Name:							☐ Less than $10 million
							☐ Less than $15 million
Address:							☐ More than $15 million
							Age of Firm: _____yrs.
Name:							☐ Less than $1 million
							☐ Less than $5 million
Contact Name:							☐ Less than $10 million
							☐ Less than $15 million
Address:							☐ More than $15 million
							Age of Firm: _____yrs.

NOTE: USE ADDITIONAL SHEETS AS NECESSARY TO DEMONSTRATE RESPONSIVENESS TO THE BIDDERS LIST REQUIREMENTS.

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:

3. 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
4. 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: _____

BIDDER'S CERTIFICATE REGARDING "BUY AMERICA" REQUIREMENTS FOR STEEL, IRON, OR MANUFACTURED PRODUCTS

In order to demonstrate compliance with the Buy America Requirements, Bidder shall complete only one of the two statements below:

The _____
Firm name/principal

hereby certifies that it **will comply** with the requirements of 49 U.S.C. Section 5323(j), and the applicable regulations in 49 CFR Part 661.

_____
Signature

_____
Name

_____
Title

_____
Date

Or:

The _____
Firm name/principal

hereby certifies that it **cannot comply** with the requirements of 49 U.S.C. Section 5323(j), but may qualify for an exception to the requirement pursuant to 49 U.S.C. Section 5323(j)(2), as amended, and the applicable regulations in 49 CFR Part 661.7.

_____
Signature

_____
Name

_____
Title

_____
Date

Revised: 07/28/2023

CERTIFICATION
LIMITATION ON PAYMENTS TO INFLUENCE CERTAIN FEDERAL TRANSACTIONS

A. DEFINITIONS

1. Authority, as used in this clause, means the Orange County Transportation Authority, acting on behalf of the Orange County Transit District.

2. Covered Federal action, as used in this clause, means any of the following Federal actions:

   a. The awarding of any Federal contract.

   b. The making of any Federal grant.

   c. The making of any Federal loan.

   d. The entering into of any cooperative agreement.

   e. The extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

3. Indian tribe and tribal organization, as used in this clause, have the meaning provided in Section 450b of the Indian self-determination and Education Assistance Act (25 U.S.C. 450) and include Alaskan Natives.

4. Influencing or attempting to influence, as used in this clause, means making, with the intent to influence, any communication to or appearance before an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any covered Federal action.

5. Local government, as used in this clause, means a unit of government in a State and, if chartered, established, or other were recognized by a State for the performance of a governmental duty, including a local public authority, a special district, an intrastate district, a council of governments, a sponsor group representative organization, and any other instrumentality of a local government.

6. Officer or employee of an agency, as used in this clause, includes the following individuals who are employed by an agency:

   a. An individual who is appointed to a position in the Government under title 5, United States code, including a position under a temporary appointment.

   b. A member of the uniformed services, as defined in the subsection

101(3), Title 37, United States Code.

c. A special Government employee, as defined in Section 202, Title 18, United States Code.

d. An individual who is a member of a Federal advisory committee, as defined by the Federal Advisory Committee Act, Title 5, United States Code, Appendix section 3.

7. Person, as used in this clause, means an individual, corporation, company, association, authority, firm, partnership, society, State, and local government, regardless of whether such entity is operated for profit, or not for profit. This term excludes an Indian tribe, tribal organization or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

8. Reasonable compensation, as used in this clause, means with respect to a regularly employed officer of employee of any person, compensation that is consistent with the normal compensation for such officer or employee for work that is not furnished to, not funded by, or not furnished in cooperation with the Federal Government.

9. Reasonable payment, as used in this clause means, with respect to professional and other technical services, a payment in an amount that is consistent with the amount normally paid for such services in the private sector.

10. Recipient, as used in this clause, includes the CONSULTANT and all subcontractors. This term excludes an Indian tribe, tribal organization, or any other Indian organization with respect to expenditures specifically permitted by other Federal law.

11. Regularly employed, as used in this clause, means, with respect to an officer or employee of a person requesting or receiving by such person for at least 130 working days within one year immediately preceding the date of the submission that initiates agency consideration of such person for receipt of such contract. An officer or employee who is employed by such person for less than 130 working days within one year immediately preceding the date of the submission that initiates agency consideration of such person shall be considered to be regularly employed as soon as he or she is employed by such person for 130 working days.

12. State, as used in this clause, means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, a territory or possession of the United States, an agency or instrumentality of a State, and a multi-State regional or interstate entity having governmental duties and powers.

B. PROHIBITIONS

1. Section 1352 of Title 31, United States Code, among other things, prohibits a recipient of a Federal contract, grant, loan or cooperative agreement from using appropriated funds to pay any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with any of the following covered Federal actions: the awarding of any Federal contract; the making of any Federal grant; the making of any Federal loan; the entering into of any cooperative agreement; or, the modification of any Federal contract, grant, loan, or cooperative agreement.

2. The Act also requires consultant to furnish a disclosure if any funds other than Federal appropriated funds (including profit or fee received under a covered Federal transaction) have been paid, or will be paid, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a Federal contract, grant, loan or cooperative agreement.

3. The prohibitions of the Act do not apply under the following conditions:

   a. Agency and legislative liaison by own employees.

      (1) The prohibition on the use of appropriated funds, in subparagraph C.1. of this clause, does not apply in the case of payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action if the payment is for agency and legislative liaison activities not directly related to a covered Federal action.

      (2) For purposes of paragraph C.3.a.(1) of this clause, providing any information specifically requested by an agency or Congress is permitted at any time.

      (3) The following agency and legislative liaison activities are permitted any time where they are not related to a specific solicitation for any covered Federal action:

      Discussing with an agency (including individual demonstrations) the qualities and characteristics of the person's products or services, conditions or terms of sale, and service capabilities.

      Technical discussions and other activities regarding the application of adaptation of the person's products or services for an agency's use.

(4) The following agency and legislative liaison activities are permitted where they are prior to formal solicitation of any covered Federal action:

Providing any information not specifically requested but necessary for an agency to make an informed decision about initiation of a covered Federal action;

Technical discussions regarding the preparation of an unsolicited proposal prior to its official submission; and,

Capability presentations by persons seeking awards from an agency pursuant to the provisions of the Small Business Act, as amended by Public Law 95-507, and subsequent amendments.

(5) Only those services expressly authorized by paragraph C.3.a.(1) of this clause are permitted under this clause.

b. Professional and technical services

(1) The prohibition on the use of appropriated funds, in subparagraph C.1. of this clause, does not apply in the case of:

A payment of reasonable compensation made to an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of covered Federal action, if payment is for professional or technical services rendered directly in the preparation, submission, or negotiation of any bid, proposal, or application for that Federal action or for meeting requirements imposed by or pursuant to law as condition for receiving that Federal action.

Any reasonable payment to a person, other than an officer or employee of a person requesting or receiving a covered Federal action or an extension, continuation, renewal, amendment, or modification of a covered Federal action if the payment is for professional or technical services rendered directly in the preparation, submission or negotiation of any bid, proposal, or application or that Federal action or for meeting requirements imposed by or pursuant to law as a condition for receiving that Federal action. Persons other than officers or employees of a person requesting or receiving a covered Federal action include contractors and trade associations.

(2) For purposes of paragraph C.3.a.(1) of this clause, professional and technical services shall be limited to advise and analysis directly applying any professional or technical discipline. For

example, drafting of a legal document accompanying a bid or proposal is allowable. Similarly, technical advice provided by an engineer on the performance or operational capability of a piece of equipment rendered directly in the negotiation of a contract is allowable. However, communications with the intent to influence made by a professional (such as a licensed lawyer) or a technical person (such as a licensed accountant) are not allowable under this section unless they provide advice and analysis directly applying their professional or technical expertise and unless the advice or analysis is rendered directly and solely in the preparation, submission, or negotiation of a covered Federal action. Thus, for example, communications with the intent to influence made by a lawyer that do not provide legal advice or analysis directly and solely related to the legal aspects of his or her client's proposal, but generally advocate one proposal over another are not allowable under this section because the lawyer is not providing professional legal services. Similarly, communications with the intent to influence made by an engineer providing an engineering analysis prior to the preparation or submission of a bid or proposal are not allowable under this section since the engineer is providing technical services but not directly in the preparation, submission, or negotiation of a covered Federal action.

(3) Requirements imposed by or pursuant to law as a condition for receiving a covered Federal award include those required by law or regulation and any other requirements in the actual award documents.

(4) Only those services expressly authorized by paragraph C.3.a.(1) and (2) of this clause are permitted under this clause.

(5) The reporting requirements of FAR 3.803(a) shall not apply with respect to payments of reasonable compensation made to regularly employed officers or employees of a person.

c. Disclosure

(1) The consultant who requests or receives from an agency a Federal contract shall file with that agency a disclosure form OMB standard form LLL, Disclosure of Lobbying Activities, (Attachment to the bid package) if such person has made or had agreed to made any payment using non appropriated funds (to include profits from any covered Federal action), which would be prohibited under subparagraph B.1. of this clause, if paid for with appropriated funds.

(2) The consultant shall file a disclosure form at the end of each calendar quarter in which there occurs any event that materially affects the accuracy of the information contained in any disclosure form previously filed by such person under subparagraph II.A. of this clause. An event that materially affects the accuracy of the information reported includes:

A cumulative increase of $25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal action; or

A change in the person(s) or individual(s) influencing or attempting to influence a covered Federal action; or

A change in the officer(s), employee(s), or Member(s) contacted to influence or attempt to influence a covered Federal action.

(3) The consultant shall require the submittal of a certification, and if required, a disclosure form by any person who requests or receives any subcontract exceeding $100,000 under the Federal contract.

(4) All subcontractor disclosure forms (but not certifications) shall be forwarded from tier to tier until received by the prime consultant. The prime consultant shall submit all disclosures to the District at the end of the calendar quarter in which the disclosure form is submitted by the subcontractor. Each subcontractor certification shall be retained in the subcontract file of the awarding consultant.

d. Agreement

The consultant agrees not to make any payment prohibited by this clause.

e. Penalties

(1) Any person who makes an expenditure prohibited under paragraph a) of this clause or who fails to file or amend the disclosure form to be filed or amended by paragraph d) of this clause shall be subject to civil penalties as provided for by 31 U.S.C. 1352. An imposition of a civil penalty does not prevent the Government from seeking any other remedy that may be applicable.

(2) Consultants may relay without liability on the representation made by their subcontractors in the certification and disclosure

forms.

f. Cost Allowability:

Nothing in this clause is to be interpreted to make allowable or reasonable any costs, which will otherwise be unallowable or unreasonable. Conversely, costs made specifically unallowable by the requirements in this clause will not be made allowable under any other provisions.

CERTIFICATION OF RESTRICTIONS ON LOBBYING

I, _____ , hereby certify on behalf (name of bidder/offeror) of

_____ that:
(Firm name)

1. No Federal appropriated funds have been paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer of employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds, other than Federal appropriated funds, have been paid or will be paid to any person for influencing or attempting to influence making lobbying contracts to an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit the attached Standard Form-LLL, "Disclosure of Lobbying Activities", in accordance with its instructions.

3. If bidder/offeror does not have any reportable activities to disclose, they shall check the box entitled “No Reportable Activities” on the attached Standard Form-LLL “Disclosure of Lobbying Activities” and complete Section 16 of the form. The certifying official shall sign and date the form, print his/her name, title and telephone number.

4. The undersigned shall require that the language of this certification be included in all subcontracts, and that all subcontractors shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance is placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The bidder/offeror, _____, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the bidder/offeror understands and agrees that the provisions of 31 U.S.C. 3801, et seq. apply to this certification and disclosure, if any.

Executed this _____day of _____,202___

By _____
(Signature of authorized official)

_____
(Title of authorized official)

☐ **NO REPORTABLE ACTIVITIES** *(Bidder/Offeror required to complete Section 16 below.)*

DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OMB 003480045

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action:
☐ a. contract
b. grant
c. cooperative agreement
d. loan
e. loan guarantee
f. loan insurance

2. Status of Federal Action:
☐ a. bid/offer application
b. initial award
c. post-award

3. Report Type:
☐ a. initial filing
b. material changes

For Material Change Only:
year _____ quarter _____
date of last report _____

4. Name and Address of Reporting Entity:
☐ Prime ☐ Subawardee
Tier _____, *if known*:

Congressional District, *if known*:

5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:

Congressional District, *if known*:

6. Federal Department/Agency:

7. Federal Program Name/Description:

CFDA number, *if applicable*: _____

8. Federal Action Number, *if known*:

9. Award Amount, *if known*:

$

10. a. Name and Address of Lobbying Entity (if individual, last name, first name, MI)

b. Individuals Performing Services (including address if different from No 10a) (last name, first name, MI):

(attach Continuation Sheet(s) SF - LLL - A if necessary)

11. Amount of Payment (check all that apply):

$_____ ☐ actual ☐ planned

12. Forum of Payment (check all that apply):
☐ a. cash
☐ b. in-kind; specify nature: _____
value: _____

13. Type of Payment (check all that apply):
☐ a. retainer
☐ b. one-time fee
☐ c. commission
☐ d. contingent fee
☐ e. deferred
☐ f. other specify: _____

14. Brief Description of Services Performed or to be Performed and Date(s) of Service, including officer(s), employee(s) or Member(s) contracted for Payment indicated in Item, 11:

(attach Continuation Sheet(s) SF-LLL-A if necessary)

15. Continuation Sheet(s) SF-LLL-A attached: ☐ Yes ☐ No

16. Information requested through this form is authorized by Code 31 U.S.C. Section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than $10,000.00 and not more than $100,000.00 for each such failure.

Signature: _____

Print name: _____

Title: _____

Telephone No: _____ Date: _____

Federal Use Only

Authorized for Local Reproduction
Standard Form - LLL

Approved by OMB 003480045

INSTRUCTIONS FOR COMPLETION OF SF-LLL DISCLOSURE OF LOBBYING ACTIVITIES

This DISCLOSURE FORMS SHALL BE COMPLETED BY the reporting entity, whether Subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to title 31 U.S.C. section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with a covered Federal action. Use the SF-LLL-A Continuation Sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.

2. Identify the status of the covered Federal action.

3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.

4. Enter the full name, address, city, state and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is, or expects to be a prime or subaward recipient. Identify the tier of the subawardee e.g., the first subawardee of the prime is the first tier. Subawards include but are not limited to subcontracts, subgrants and contract awards under grants.

5. If the organization filing the report in item 4 checks "Subawardee" then enter the full name, address city, state, and zip code of the prime Federal recipient. Include Congressional District.

6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency, name if known. For example, Department of Transportation, United State Coast Guard.

7. Enter the Federal program name for description of the covered Federal action (item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.

8. Enter the most appropriate Federal identifying number available for the Federal action identified in item 1 (e.g. Request for Proposal (RFP) number, Invitation for Bid (IFB) number, grant announcement number, the contract, grant, or loan award number, the application/ proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP DE-90-001."

9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in item 4 or 5.

10. (a) Enter the full name, address, city, state, and zip code of the lobbying entity engaged by the reporting entity identified in item 4 to influence the covered Federal action.

    (b) Enter the full names of the individual(s) performing services, and include full address if different from 10 (a.). Enter Last Name, First Name, and Middle Initial (MI).

11. Enter the amount of compensation paid or reasonably expected to be paid by the reporting entity (item 4) to the lobbying entity (item 10). Indicate whether the payment has been made (actual) or will be made (planned). Check all boxes that apply. If this is a material change report, enter the cumulative amount of payment made or planned to be made.

12. Check the appropriate box (es). Check all boxes that apply. If payment is made through an in-kind contribution, specify the nature and value of the in-kind payment.

13. Check the appropriate box (es). Check all boxes that apply. If other, specify nature.

14. Provide a specific and detailed description of the services that the lobbyist has performed, or will be expected to perform, and the date(s) of any services rendered. Include all preparatory and related activity, not just time spent in actual contact with Federal officials. Identify the Federal official(s) or employee(s) contacted or the officer(s), employee(s), or Member(s) of Congress that were contacted.

15. Check whether or not a SF-LLL-A Continuation Sheet(s) is attached.

16. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

Public reporting burden for this collection for information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Office of Management and Budget Paperwork Reduction Project (0348-0446), Washington, D.C. 20503.

Approved by
OMB
003480045

DISCLOSURE OF LOBBYING ACTIVITIES CONTINUATION SHEET

Reporting Entity:_____ **Page** _____ **of** _____

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