Bid Opening: Thursday, May 14, 2020 at 3:00 P.M.
(Bid opening date did not change)

PROJECT PLANS
1. REPLACE:
Sheet 07 (E-1) with Attachment A - revised Sheet 07 (E-1) dated 5/8/2020.

CONTRACT BIDDING DOCUMENTS SPECIFICATIONS AND STANDARD DRAWINGS
2. REPLACE:
The Table of Contents (pages iii and iv) with Attachment B - revised Table of Contents (pages iii and iv).
3. REPLACE:
Page C-7 to C-9 Bidding Sheets in SECTION C – PROPOSAL with Attachment C.
   - Bid Item No. 8 – Bid item description was changed from “REMOVE AND RELOCATE STREET LIGHT” to “REMOVE STREET LIGHT AND RELOCATE BANNER”.
   - The quantities were revised for bid Items No. 17 - Asphalt Concrete (PG 64-10, Type A), No. 18 - Asphalt Concrete (PG 64-10, Type C2)”, and No. 19 - Crushed Aggregate Base.

4. ADD:
Attachment D – Bid Proposal Federal Forms Cover Sheet to the end of Section C – PROPOSAL (Page C-29).
5. REPLACE:
Appendix II Cover Sheet with Attachment E – Appendix II Cover Sheet “Required Federal Forms and Disadvantaged Business Enterprise Forms”.
6. REPLACE:
Pages xviii to xxvii of Appendix II with Attachment F – Appendix II “Required Federal Forms and Disadvantaged Business Enterprise Forms”.
7. REPLACE:

8. ADD:
SECTION E – CITY GENERAL PROVISIONS. MODIFICATIONS TO STANDARD SPECIFICATIONS: add Divisions VI - Structures, VIII – Miscellaneous Construction, and IX – Traffic Control Facilities as shown in Attachment H.

9. CHANGE:
Change SECTION F – SPECIAL PROVISIONS. GENERAL ITEMS – Demolition and Utilities Signing and Striping as follows:

- Pg. F-12: Change BID ITEM 8 from REMOVE AND RELOCATE STREET LIGHT to "REMOVE STREET LIGHT AND RELOCATE BANNER".
- Pg. F-12: Replace the paragraph A. SCOPE with the following:

**A. SCOPE**
The scope of work under these bid items shall include all labor, materials, equipment, incidentals, and completion of all work for removal of existing poles and foundations of electrical equipment and the associated repairs, the relocation of banners and mountings, and for removal of traffic striping, pavement markings, and markers, furnish and installation of pavement delineation (striping), pavement markings, pavement markers, object markers, as shown on the signing and striping plans and details, as required in accordance with the plans, as specified in these special provisions, and as directed by the Engineer.

- Pg. F-14: B. MATERIALS AND METHODS; second to last paragraph, change REMOVE AND RELOCATE STREET LIGHT to "REMOVE STREET LIGHT AND RELOCATE BANNER".

- Pg. F-15: B. MATERIALS AND METHODS; change the last paragraph deleting the last sentence as follows: Removal of existing street light shall conform to the provisions in Section 86-7.01, “Removing Electrical Equipment,” of the State Standard Specifications unless otherwise noted herein. Relocating and reinstalling of the removed street light shall conform to the provisions in Section 86-7.02, "Removing Electrical Equipment," of the State Standard Specifications unless otherwise noted herein.

- Pg. F-16: C. MEASUREMENT AND PAYMENT; change the sixth paragraph as follows: Measurement and payment for REMOVE AND RELOCATE STREET LIGHT..., change to “Measurement and payment for REMOVE STREET LIGHT AND RELOCATE BANNER”....

10. CHANGE:
Change SECTION F – SPECIAL PROVISIONS. GENERAL ITEMS – REMOVE AND RELOCATE TREE as follows:

- Pg. F-21: Change the first paragraph of A. SCOPE as follows:

**A. SCOPE**
The scope of work for these bid items shall include all labor, materials, equipment, incidentals, including to repair and reconnect irrigation lines, and for completing all work involved for removing and disposal of all natural and artificial objectionable materials from within the right-of-way in construction areas/roads and as shown on the plans, as specified in these special provisions, and as directed by the Engineer.

- Pg. F-23: C. MEASUREMENT AND PAYMENT; change the second to the last paragraph, second sentence as follows:

*Payment shall include full compensation for furnishing all labor, materials,*
For tools, equipment, transportation, removal, relocation, and incidentals, including repairing, extending and reconnecting irrigation lines as needed, and for doing all the work involved to accomplish REMOVE AND RELOCATE TREE as shown on the Plans, as specified in the Caltrans Standard Specifications, and these Special Provisions, and as directed by the City Representative.

11. ADD:
SECTION F – SPECIAL PROVISIONS. GENERAL ITEMS – TRAFFIC/ELECTRICAL IMPROVEMENTS; on Pg-F-41, under D. SUBMITTALS; add the following:
- Contractor to submit LED fixture types used for the safety lighting
- Contractor to submit Model 2070 Controller
- Contractor to submit Battery Backup System
- Contractor to submit Model 332L Controller Cabinet
- Contractor to submit Activated Blank-Out Sign

Question and Answers

12. RFI #1:
Question: When you look at the project plans for construction pg. 8 it references an R3-1 Activated Blank out sign. I do not see anywhere in the specs where it calls that out. Can you provide more info on that?

Answer: This has been addressed with Addendum No. 2.

13. RFI #2:
Question: You also call out for the Model 2070 controller assembly with Battery Backup System, Model 332L Cabinet. I don’t see any specs for the unit that is to be used. Do you have a specific model you are looking at?

Answer: The City of Goleta has used a McCain 2070 for similar installations in the past. A McCain 2070 controller or approved equal would be acceptable. See Addendum No. 2 for required submittals.

14. RFI #3:
Question: In the specs it calls out for RRFB system and when you look at the project plans for construction pg. 11 there are two drawings one with a luminaire pole and a square post. The one on the luminaire it has the following detail “Luminaire mast arm at southwest corner to be orientated perpendicular to LED Enhanced sign Mast arm. See Sheet 7 for detail. Is the sW11-2 sign supposed to be an LED enhanced sign? I assume sheet 7 is page 7? Also is the system to be Solar or Line powered?

Answer: Pole B on Sheet 7 (E-1) in the median is intended to be a square post per the detail on Sheet 11. The SW11-2 sign is not intended to be a LED enhanced sign. Sheet 7 is page 7. System is to be line powered. Sheet E-1 has been modified with Addendum No. 2.

15. RFI #4:
Question: Regarding the Luminaire will you be putting an LED luminaire up?

Answer: Yes, the luminaire will be LED as specified in the Bid Documents.

Approved by __________________________
Charles W. Ebeling, PE, TE
Public Works Director
This contract shall be in conformance with CALTRANS STANDARD SPECIFICATIONS, 2015 EDITION (including amendments current as of the date of the Notice Inviting Sealed Bids, which are incorporated by reference) and supplemented with the Standard Specifications for Public Works Construction, 2015 Edition, (SSPWC or Greenbook 2015).

**SECTION**

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C. PROPOSAL .................................................................................................. C-1
   BIDDING SHEET .......................................................................................... C-5

D. CONTRACT .................................................................................................. D-1
   1. CONTRACT ............................................................................................ D-3
   2. PERFORMANCE BOND FORM ............................................................... D-11
   3. PAYMENT BOND FORM ........................................................................ D-17

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   Section 2 – [not used] See Notice Inviting Sealed Bids and Bidding Instructions
   Section 3 – Contract Award and Execution ............................................. E-7
   Section 4 – Scope of Work ....................................................................... E-8
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   Section 6 – Control of Materials ............................................................... E-24
   Section 7 – Legal Relations and Responsibility to the Public .................. E-28
   Section 8 – Prosecution and Progress ....................................................... E-32
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F. CITY SPECIAL PROVISIONS ...................................................................... F-1
G. FEDERAL REQUIREMENTS ........................................................................ G-1

APPENDICES
I. Federal Davis Bacon Wage Rates
II. Required Federal Forms and Disadvantaged Business Enterprise Forms
III. Sample Notifications
## BASE BID SCHEDULE

<table>
<thead>
<tr>
<th>ITEM NO</th>
<th>DESCRIPTION</th>
<th>UNIT</th>
<th>QTY</th>
<th>UNIT PRICE</th>
<th>TOTAL</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>Mobilization, Demobilization, Bonds and Insurance</td>
<td>LS</td>
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<tr>
<td>2</td>
<td>Temporary Water Pollution Control</td>
<td>LS</td>
<td>1</td>
<td>$</td>
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<td>3</td>
<td>Construction Surveying</td>
<td>LS</td>
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<tr>
<td>4</td>
<td>Traffic Control, Postings, and Notifications</td>
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<tr>
<td>5</td>
<td>Remove Striping, Pavement Marking and Markers</td>
<td>SF</td>
<td>350</td>
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<tr>
<td>6</td>
<td>Remove Existing Sign and Post</td>
<td>EA</td>
<td>5</td>
<td>$</td>
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<tr>
<td>7</td>
<td>Remove Existing Pole and Foundation (Beacon)</td>
<td>EA</td>
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<tr>
<td>8</td>
<td>Remove Street Light and Relocate Banner</td>
<td>EA</td>
<td>1</td>
<td>$</td>
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<tr>
<td>9</td>
<td>Remove and Relocate Tree</td>
<td>EA</td>
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<td>$</td>
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<tr>
<td>10</td>
<td>Remove Existing PCC Curb and Gutter</td>
<td>LF</td>
<td>150</td>
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<td>11</td>
<td>Remove Existing PCC Curb</td>
<td>LF</td>
<td>82</td>
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<td>12</td>
<td>Remove AC and Aggregate Base</td>
<td>SF</td>
<td>1,395</td>
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<td>13</td>
<td>Remove Existing PCC Sidewalk, Curb Ramp, and Base</td>
<td>SF</td>
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<td>14</td>
<td>Remove PCC Longitudinal Gutter</td>
<td>SF</td>
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<td>15</td>
<td>Clear and Grub</td>
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<td>Grind AC Pavement (2&quot; Min)</td>
<td>SF</td>
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<td>Asphalt Concrete (PG 64-10, Type A)</td>
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<td>Asphalt Concrete (PG 64-10, Type C2)</td>
<td>TO</td>
<td>18</td>
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<tr>
<td>19</td>
<td>Crushed Aggregate Base</td>
<td>CY</td>
<td>126</td>
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<td>$</td>
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<td>20</td>
<td>Native Soil (6&quot;)</td>
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<td>21</td>
<td>Concrete Curb (Type A1-6) - 6&quot; Curb</td>
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<td>Concrete Curb and Gutter (Type A2-6) - 6&quot; Curb</td>
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<td>23</td>
<td>6&quot; Retaining Curb</td>
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<td>24</td>
<td>1' Retaining Curb</td>
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<td>25</td>
<td>PCC Cross Gutter</td>
<td>SF</td>
<td>146</td>
<td>$</td>
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# BIDDING SHEET (Page 3 of 3)

<table>
<thead>
<tr>
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<th>QTY</th>
<th>UNIT PRICE</th>
<th>TOTAL</th>
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<td>PCC Sidewalk (4&quot; Thick) and Base</td>
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<tr>
<td>27</td>
<td>PCC ADA Ramp</td>
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<td>28</td>
<td>PCC ADA Ramp Flare</td>
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<td>Commercial Driveway</td>
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<tr>
<td>30</td>
<td>PHB System</td>
<td>LS</td>
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</tr>
<tr>
<td>31</td>
<td>RRFB System</td>
<td>LS</td>
<td>1</td>
<td>$</td>
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</tr>
<tr>
<td>32</td>
<td>Pedestrian Push Button</td>
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<td>4</td>
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<td>$</td>
</tr>
<tr>
<td>33</td>
<td>Model 2070 Controller Assembly with Battery Back-up System, Model 332L Cabinet</td>
<td>EA</td>
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<td>$</td>
<td>$</td>
</tr>
<tr>
<td>34</td>
<td>Type III BF Service</td>
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<td>35</td>
<td>Traffic Signal Pull Box</td>
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<td>9</td>
<td>$</td>
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<tr>
<td>36</td>
<td>Sign and Post</td>
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<td>37</td>
<td>Reflective Pavement Markers</td>
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<td>38</td>
<td>Red Curb</td>
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<td>Thermoplastic Yellow Continental Crosswalk</td>
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<td>White Line (Detail 12)</td>
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<td>White Line (Detail 39)</td>
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<td>Thermoplastic Limit Line</td>
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<td>43</td>
<td>White Yield Pavement Markings (Thermoplastic)</td>
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<td>&quot;STOP&quot; Pavement Marking</td>
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<td>&quot;BIKE&quot; Pavement Marking</td>
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</table>

**TOTAL BASE BID**

$  

(Total Bid in Words)

______________________________
Company Name of Bidder

C-9
FEDERAL FORMS MUST BE COMPLETED AND SUBMITTED WITH BID PROPOSAL
(Included in Appendix II – “Federal Forms due with Bid Proposal”)

- Equal Employment Opportunity Certification
- Public Contract Code Statements
- Noncollusion Affidavit
- Debarment and Suspension Certification
- Nonlobbying Certification for Federal-Aid Contracts
- Disclosure of Lobbying Activities
  - Instructions for Completing of SF-LLL, Disclosure of Lobbying Activities

(DBE) FORMS MUST BE COMPLETED AND SUBMITTED FOR BID PROPOSAL NO LATER THAN 3:00 P.M. (LOCAL TIME) ON THE FOURTH BUSINESS DAY AFTER BID OPENING

- Bidder’s List of Subcontractors (DBE and Non-DBE), Exhibit 12-B
- Construction Contract DBE Commitment, Exhibit 15-G
  - Instructions – Local Agency Bidder DBE Commitment (Construction Contracts)
- DBE Information – Good Faith Efforts, Exhibit 15-H
APPENDIX II

Required Federal Forms and Disadvantaged Business Enterprise Forms

- Exhibit 12-B
- Exhibit 15-G
- Exhibit 15-H
- Exhibit 17-O
- Federal Forms due with Bid Proposal
EQUAL EMPLOYMENT OPPORTUNITY CERTIFICATION

The bidder__________________________________________________________, proposed subcontractor ____________________________________________, hereby certifies that he has ___ , has not ____, participated in a previous contract or subcontract subject to the equal opportunity clauses, as required by Executive Orders 10925, 11114, or 11246, and that, where required, he has filed with the Joint Reporting Committee, the Director of the Office of Federal Contract Compliance, a Federal Government contracting or administering agency, or the former President's Committee on Equal Employment Opportunity, all reports due under the applicable filing requirements.

Note: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor (41 CFR 60-1.7(b) (1)), and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts which are exempt from the equal opportunity clause are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of $10,000 or under are exempt.)

Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.

Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b) (1) prevents the award of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.
Public Contract Code Section 10285.1 Statement

In conformance with Public Contract Code Section 10285.1 (Chapter 376, Stats. 1985), the bidder hereby declares
under penalty of perjury under the laws of the State of California that the bidder has ___ , has not ___ been convicted
within the preceding three years of any offenses referred to in that section, including any charge of fraud, bribery,
collusion, conspiracy, or any other act in violation of any state or Federal antitrust law in connection with the bidding
upon, award of, or performance of, any public works contract, as defined in Public Contract Code Section 1101,
with any public entity, as defined in Public Contract Code Section 1100, including the Regents of the University of
California or the Trustees of the California State University. The term “bidder” is understood to include any partner,
member, officer, director, responsible managing officer, or responsible managing employee thereof, as referred to
in Section 10285.1.

Note: The bidder must place a checkmark after "has" or "has not" in one of the blank spaces provided. The above
Statement is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute
signature of this Statement. Bidders are cautioned that making a false certification may subject the certifier
to criminal prosecution.

Public Contract Code Section 10162 Questionnaire

In conformance with Public Contract Code Section 10162, the Bidder shall complete, under penalty of perjury, the
following questionnaire:
Has the bidder, any officer of the bidder, or any employee of the bidder who has a proprietary interest in the bidder,
ever been disqualified, removed, or otherwise prevented from bidding on, or completing a federal, state, or local
government project because of a violation of law or a safety regulation?

Yes _____  No _____

If the answer is yes, explain the circumstances in the following space.
In conformance with Public Contract Code Section 10232, the Contractor, hereby states under penalty of perjury, that no more than one final unappealable finding of contempt of court by a federal court has been issued against the Contractor within the immediately preceding two-year period because of the Contractor's failure to comply with an order of a federal court which orders the Contractor to comply with an order of the National Labor Relations Board.

Note:  The above Statement and Questionnaire are part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Statement and Questionnaire. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.
Noncollusion Affidavit
(Title 23 United States Code Section 112 and Public Contract Code Section 7106)

To the CITY / COUNTY of ________________________________

DEPARTMENT OF PUBLIC WORKS.

In conformance with Title 23 United States Code Section 112 and Public Contract Code 7106 the bidder declares that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

Note: The above Non-collusion Affidavit is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Non-collusion Affidavit. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.
The bidder, under penalty of perjury, certifies that, except as noted below, he/she or any other person associated therewith in the capacity of owner, partner, director, officer, manager:

- is not currently under suspension, debarment, voluntary exclusion, or determination of ineligibility by any Federal agency;
- has not been suspended, debarred, voluntarily excluded or determined ineligible by any Federal agency within the past 3 years;
- does not have a proposed debarment pending; and
- has not been indicted, convicted, or had a civil judgment rendered against it by a court of competent jurisdiction in any matter involving fraud or official misconduct within the past 3 years.

If there are any exceptions to this certification, insert the exceptions in the following space.

Exceptions will not necessarily result in denial of award, but will be considered in determining bidder responsibility. For any exception noted above, indicate below to whom it applies, initiating agency, and dates of action.

Notes: Providing false information may result in criminal prosecution or administrative sanctions. The above certification is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Certification.
The prospective participant certifies, by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

(I) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal 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 an officer or employee of any Federal 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 Standard Form-LLL, "Disclosure of Lobbying Activities," in conformance with its instructions.

This certification is a material representation of fact upon which reliance was 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 a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The prospective participant also agrees by submitting his or her bid or proposal that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed $100,000 and that all such subrecipients shall certify and disclose accordingly.
**ATTACHMENT F**
Federal Forms required with Bid Proposal

**DISCLOSURE OF LOBBYING ACTIVITIES**
COMPLETE THIS FORM TO DISCLOSE LOBBYING ACTIVITIES PURSUANT TO 31 U.S.C. 1352

<table>
<thead>
<tr>
<th>1. Type of Federal Action:</th>
<th>2. Status of Federal Action:</th>
<th>3. Report Type:</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. contract</td>
<td>a. bid/offer/application</td>
<td>a. initial</td>
</tr>
<tr>
<td>b. grant</td>
<td>b. initial award</td>
<td>b. material change</td>
</tr>
<tr>
<td>c. cooperative agreement</td>
<td>c. post-award</td>
<td></td>
</tr>
<tr>
<td>d. loan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. loan guarantee</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. loan insurance</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For Material Change Only:
- year ___
- quarter ___
- date of last report ___

<table>
<thead>
<tr>
<th>4. Name and Address of Reporting Entity</th>
<th>5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prime</td>
<td>Subawardee</td>
</tr>
<tr>
<td>Tier _____, if known</td>
<td>Tier _____, if known</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>6. Federal Department/Agency:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>7. Federal Program Name/Description:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>8. Federal Action Number, if known:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>9. Award Amount, if known:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>10. a. Name and Address of Lobby Entity (If individual, last name, first name, MI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI)</td>
</tr>
</tbody>
</table>

(attach Continuation Sheet(s) if necessary)

<table>
<thead>
<tr>
<th>11. Amount of Payment (check all that apply)</th>
<th>12. Form of Payment (check all that apply):</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ ___________ □ actual □ planned</td>
<td>a. cash □</td>
</tr>
<tr>
<td></td>
<td>b. in-kind; specify: nature _________</td>
</tr>
<tr>
<td></td>
<td>value _________</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>13. Type of Payment (check all that apply)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. retainer</td>
</tr>
<tr>
<td>b. one-time fee</td>
</tr>
<tr>
<td>c. commission</td>
</tr>
<tr>
<td>d. contingent fee</td>
</tr>
<tr>
<td>e. deferred</td>
</tr>
<tr>
<td>f. other, specify ________________________</td>
</tr>
</tbody>
</table>

14. Brief Description of Services Performed or to be performed and Date(s) of Service, including officer(s), employee(s), or member(s) contacted, for Payment Indicated in Item 11:

(attach Continuation Sheet(s) if necessary)

<table>
<thead>
<tr>
<th>15. Continuation Sheet(s) attached:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes □ No □</td>
</tr>
</tbody>
</table>

16. Information requested through this form is authorized by Title 31 U.S.C. Section 1352. This disclosure of lobbying reliance was placed by the tier above when his transaction was made or entered into. This disclosure is required pursuant to 31 U.S.C. 1352. This information will be reported to Congress semiannually 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 and not more than $100,000 for each such failure.

Signature: _____________________________
Print Name: ____________________________
Title: _________________________________
Telephone No.: _________________________ Date: __________

Authorized for Local Reproduction
### ATTACHMENT F
Federal Forms required with Bid Proposal

<table>
<thead>
<tr>
<th>Federal Use Only:</th>
<th>Standard Form - LLL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Standard Form LLL Rev. 09-12-97</td>
</tr>
</tbody>
</table>
This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the 
initiation or receipt of covered Federal action or a material change to previous filing pursuant to title 31 U.S.C. section 
1352. The filing of a form is required for such payment or agreement to make payment to 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. Attach a continuation 
sheet for additional information if the space on the form is inadequate. Complete all items that apply for both the initial 
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, if known.

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

7. Enter the Federal program name or description for 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 identification 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 commitments 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 influenced 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. 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. 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 officer(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 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 of information is estimated to average 30 minutes per response, including time 
for reviewing instruction, 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 this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, D.C. 20503.
ATTACHMENT G

"General Decision Number: CA20200014 04/17/2020

Superseded General Decision Number: CA20190014

State: California

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

County: Santa Barbara County in California.

BUILDING, DREDGING (does not include hopper dredge work), HEAVY (does not include water well drilling), AND HIGHWAY CONSTRUCTION PROJECTS

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.80 for calendar year 2020 applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2015. If this contract is covered by the EO, the contractor must pay all workers in any classification listed on this wage determination at least $10.80 per hour (or the applicable wage rate listed on this wage determination, if it is higher) for all hours spent performing on the contract in calendar year 2020. If this contract is covered by the EO and a classification considered necessary for performance of work on the contract does not appear on this wage determination, the contractor must pay workers in that classification at least the wage rate determined through the conformance process set forth in 29 CFR 5.5(a)(1)(ii) (or the EO minimum wage rate, if it is higher than the conformed wage rate). The EO minimum wage rate will be adjusted annually. Please note that this EO applies to the above-mentioned types of contracts entered into by the federal government that are subject to the Davis-Bacon Act itself, but it does not apply to contracts subject only to the Davis-Bacon Related Acts, including those set forth at 29 CFR 5.1(a)(2)-(60). Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

<table>
<thead>
<tr>
<th>Modification Number</th>
<th>Publication Date</th>
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<tbody>
<tr>
<td>0</td>
<td>01/03/2020</td>
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<tr>
<td>1</td>
<td>01/10/2020</td>
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<tr>
<td>2</td>
<td>01/31/2020</td>
</tr>
<tr>
<td>3</td>
<td>03/06/2020</td>
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<tr>
<td>4</td>
<td>03/13/2020</td>
</tr>
<tr>
<td>5</td>
<td>04/17/2020</td>
</tr>
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</table>

ASBE0005-002 09/01/2019

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos Workers/Insulator (Includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems)......$ 43.77</td>
<td>22.48</td>
</tr>
<tr>
<td>Fire Stop Technician (Application of Firestopping Materials for wall openings and penetrations in walls,</td>
<td></td>
</tr>
</tbody>
</table>

Rates | Fringes |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos Workers/Insulator (Includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems)......$ 43.77</td>
<td>22.48</td>
</tr>
<tr>
<td>Fire Stop Technician (Application of Firestopping Materials for wall openings and penetrations in walls,</td>
<td></td>
</tr>
</tbody>
</table>

Rates | Fringes |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos Workers/Insulator (Includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems)......$ 43.77</td>
<td>22.48</td>
</tr>
<tr>
<td>Fire Stop Technician (Application of Firestopping Materials for wall openings and penetrations in walls,</td>
<td></td>
</tr>
</tbody>
</table>

Rates | Fringes |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Asbestos Workers/Insulator (Includes the application of all insulating materials, protective coverings, coatings, and finishes to all types of mechanical systems)......$ 43.77</td>
<td>22.48</td>
</tr>
<tr>
<td>Fire Stop Technician (Application of Firestopping Materials for wall openings and penetrations in walls,</td>
<td></td>
</tr>
<tr>
<td>Rate</td>
<td>Fringes</td>
</tr>
<tr>
<td>------</td>
<td>---------</td>
</tr>
<tr>
<td>Attchment G</td>
<td></td>
</tr>
<tr>
<td>Floors, ceilings and curtain walls</td>
<td>$28.92 18.73</td>
</tr>
<tr>
<td>Asbestos removal worker/hazardous material handler (includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging and disposing of all insulation materials from mechanical systems, whether they contain asbestos or not)</td>
<td>$20.63 12.17</td>
</tr>
<tr>
<td>Boilermaker</td>
<td>$44.07 33.52</td>
</tr>
<tr>
<td>Bricklayer; Marble Setter</td>
<td>$40.55 18.10</td>
</tr>
<tr>
<td>Marble Finisher</td>
<td>$33.43 14.11</td>
</tr>
<tr>
<td>Tile Finisher</td>
<td>$28.23 12.65</td>
</tr>
<tr>
<td>Terrazzo Finisher</td>
<td>$31.25 13.41</td>
</tr>
<tr>
<td>Terrazzo Worker/Setter</td>
<td>$38.39 14.18</td>
</tr>
<tr>
<td>Tile Layer</td>
<td>$40.07 18.36</td>
</tr>
<tr>
<td>Carpenter</td>
<td></td>
</tr>
<tr>
<td>(1) Carpenter, Cabinet Installer, Insulation Installer, Hardwood Floor Worker and acoustical installer</td>
<td>$41.84 19.17</td>
</tr>
<tr>
<td>(2) Millwright</td>
<td>$42.91 19.17</td>
</tr>
<tr>
<td>(3) Piledrivermen/Derrick Bargeman, Bridge or Dock Carpenter, Heavy Framer, Rock Bargeman or Scowman</td>
<td></td>
</tr>
</tbody>
</table>
ATTACHMENT G

Rockslinger, Shinger
(Commercial)................... $ 42.54  19.17
(4) Pneumatic Nailer,
Power Stapler................... $ 40.09  19.17
(5) Sawfiler................... $ 39.83  19.17
(6) Scaffold Builder........... $ 31.60  19.17
(7) Table Power Saw
Operator....................... $ 40.93  19.17

FOOTNOTE: Work of forming in the construction of open cut sewers or storm drains, on operations in which horizontal lagging is used in conjunction with steel H-Beams driven or placed in pre-drilled holes, for that portion of a lagged trench against which concrete is poured, namely, as a substitute for back forms (which work is performed by piledrivers): $0.13 per hour additional.

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CARP0409-002 07/01/2016

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diver</td>
<td></td>
</tr>
<tr>
<td>(1) Wet</td>
<td>$ 712.48</td>
</tr>
<tr>
<td>(2) Standby</td>
<td>$ 356.24</td>
</tr>
<tr>
<td>(3) Tender</td>
<td>$ 348.24</td>
</tr>
<tr>
<td>(4) Assistant Tender</td>
<td>$ 324.24</td>
</tr>
</tbody>
</table>

Amounts in "Rates' column are per day

------------

CARP0409-005 07/01/2015

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drywall</td>
<td></td>
</tr>
<tr>
<td>DRYWALL INSTALLER/LATHER.... $ 37.35</td>
<td>11.08</td>
</tr>
<tr>
<td>STOCKER/SCRAPPER.............. $ 10.00</td>
<td>7.17</td>
</tr>
</tbody>
</table>

------------

CARP0409-008 08/01/2010

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Modular Furniture Installer.... $ 17.00</td>
<td>7.41</td>
</tr>
</tbody>
</table>

------------

ELEC0413-001 01/01/2020

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricians:...................$ 43.92</td>
<td>3%+20.53</td>
</tr>
</tbody>
</table>

CABLE SPLICERS: $2.00 additional per hour.

ALL WORK AT VANDENBERG AFB: $3.75 additional per hour.

FOOTNOTE: Work from trusses, swinging scaffolds, open ladders, scaffolds, bosun's chairs, stacks, or the maintenance of towers or open platforms where the worker is subject to a direct fall or where the worker has to work from a ladder or other support from a platform within 5 ft. of any direct fall a distance of 50 ft. from the ground floor or supporting structure: double the regular straight-time rate of pay. Safety nets, if used, will not invalidate this.
ATTACHMENT G

COMMUNICATIONS AND SYSTEMS WORK

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>$36.72</td>
<td>3%+13.71</td>
</tr>
</tbody>
</table>

SCOPE OF WORK:
Installation, testing, service and maintenance of systems utilizing the transmission and/or transference of voice, sound, vision and digital for commercial, educational, security and entertainment purposes for the following: TV monitoring and surveillance, background-foreground music, intercom and telephone interconnect, inventory control systems, microwave transmission, multi-media, multiplex, nurse call systems, radio page, school intercom and sound, burglar alarms, fire alarm (see last paragraph below) and low voltage master clock systems in commercial buildings. Communication Systems that transmit or receive information and/or control systems that are intrinsic to the above listed systems; inclusion or exclusion of terminations and testings of conductors determined by their function; excluding all other data systems or multiple systems which include control function or power supply; excluding installation of raceway systems, conduit systems, line voltage work, and energy management systems. Does not cover work performed at China Lake Naval Ordnance Test Station. Fire alarm work shall be performed at the current inside wireman total cost package.

---------------------------------------------

ELEC1245-001 01/01/2020

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>$58.09</td>
<td>19.74</td>
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<tr>
<td>$46.40</td>
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<td>$35.47</td>
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<td>$51.87</td>
<td>18.79</td>
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ELEV0018-001 01/01/2020

<table>
<thead>
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<th>Fringes</th>
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</thead>
<tbody>
<tr>
<td>$57.40</td>
<td>34.765+a+b</td>
</tr>
</tbody>
</table>

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

---

ENGI0012-003 07/01/2018

<table>
<thead>
<tr>
<th>OPERATOR: Power Equipment (All Other Work)</th>
<th>Rates</th>
<th>Fringes</th>
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</thead>
<tbody>
<tr>
<td>GROUP 1 ...........................$ 45.30</td>
<td>25.25</td>
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<tr>
<td>GROUP 2 ...........................$ 46.08</td>
<td>25.25</td>
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</tr>
<tr>
<td>GROUP 3 ...........................$ 46.37</td>
<td>25.25</td>
<td></td>
</tr>
<tr>
<td>GROUP 4 ...........................$ 47.86</td>
<td>25.25</td>
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</tr>
<tr>
<td>GROUP 5 ...........................$ 48.96</td>
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</tr>
<tr>
<td>GROUP 6 ...........................$ 48.08</td>
<td>25.25</td>
<td></td>
</tr>
<tr>
<td>GROUP 8 ...........................$ 48.19</td>
<td>25.25</td>
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</tr>
<tr>
<td>GROUP 9 ...........................$ 49.29</td>
<td>25.25</td>
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</tr>
<tr>
<td>GROUP 10 .........................$ 48.31</td>
<td>25.25</td>
<td></td>
</tr>
<tr>
<td>GROUP 11 .........................$ 49.41</td>
<td>25.25</td>
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</tr>
<tr>
<td>GROUP 12 .........................$ 48.48</td>
<td>25.25</td>
<td></td>
</tr>
<tr>
<td>GROUP 13 .........................$ 48.58</td>
<td>25.25</td>
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</tr>
<tr>
<td>GROUP 14 .........................$ 48.61</td>
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</tr>
<tr>
<td>GROUP 15 .........................$ 48.69</td>
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<td>GROUP 16 .........................$ 48.81</td>
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<td>GROUP 17 .........................$ 48.98</td>
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<td>GROUP 18 .........................$ 49.08</td>
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<td>GROUP 19 .........................$ 49.19</td>
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<td>GROUP 20 .........................$ 49.31</td>
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<tr>
<td>GROUP 21 .........................$ 49.48</td>
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<td>GROUP 22 .........................$ 49.58</td>
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<td>GROUP 24 .........................$ 49.81</td>
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<tr>
<td>GROUP 25 .........................$ 49.98</td>
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<table>
<thead>
<tr>
<th>OPERATOR: Power Equipment (Cranes, Piledriving &amp; Hoisting)</th>
<th>Rates</th>
<th>Fringes</th>
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<td>GROUP 1 ...........................$ 46.65</td>
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<td>GROUP 2 ...........................$ 47.43</td>
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PREMIUM PAY:
$3.75 per hour shall be paid on all Power Equipment Operator work on the following Military Bases: China Lake Naval Reserve, Vandenberg AFB, Point Arguello, Seely Naval Base,
ATTACHMENT G

Fort Irwin, Nebo Annex Marine Base, Marine Corp Logistics
Base Yermo, Edwards AFB, 29 Palms Marine Base and Camp
Pendleton

Workers required to suit up and work in a hazardous material
environment: $2.00 per hour additional. Combination mixer
and compressor operator on gunite work shall be classified
as a concrete mobile mixer operator.

SEE ZONE DEFINITIONS AFTER CLASSIFICATIONS

POWER EQUIPMENT OPERATORS CLASSIFICATIONS

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

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

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

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

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

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

GROUP 9: Heavy Duty Repairman

GROUP 10: Drilling machine operator, Bucket or auger types
ATTACHMENT G

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

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

GROUP 12: Auto grader operator; Automatic slip form operator; Drilling machine operator, bucket or auger types (Calweld, auger 200 CA or similar types - Watson, auger 6000 or similar types - Hughes Super Duty, auger 200 or similar types - drilling depth of 175' maximum); Hoe ram or similar with compressor; Mass excavator operator less than 750 cu. yards; Mechanical finishing machine operator; Mobile form traveler operator; Motor patrol operator (multi-engine); Pipe mobile machine operator; Rubber-tired earth-moving equipment operator (multiple engine, Euclid, Caterpillar and similar type, over 50 cu. yds. struck); Rubber-tired self-loading scraper operator (paddle-wheel-auger type self-loading - two (2) or more units)

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

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

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

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

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

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

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

GROUP 20: Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps and similar types in any combination, excluding compaction units - single engine, over 50 yds. struck); Rubber-tired earth-moving equipment operator, operating in tandem (scrapers, belly dumps, and similar types in any combination, excluding compaction units - multiple engine, Euclid, Caterpillar and similar, over 25 yds. and up to 50 yds. struck)

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

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

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

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

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

CRANES, PILEDRIVING AND HOISTING EQUIPMENT CLASSIFICATIONS

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

GROUP 2: Truck crane oiler
ATTACHMENT G

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

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

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

GROUP 6: Bridge crane operator; Cretor crane operator; Hoist operator (Chicago boom and similar type); Lift mobile operator; Lift slab machine operator (Vagtborg and similar types); Material hoist and/or manlift operator; Polar gantry crane operator; Self Climbing scaffold (or similar type); Shovel, backhoe, dragline, clamshell operator (over 3/4 yd. and up to 5 cu. yds. mrc); Tugger hoist operator

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

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

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

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

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

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

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

TUNNEL CLASSIFICATIONS
ATTACHMENT G

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

GROUP 2: Power-driven jumbo form setter operator

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

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

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

GROUP 6: Heavy Duty Repairman

GROUP 7: Tunnel mole boring machine operator

ENGINEERS ZONES

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

That area within the following Boundary: Begin in San Bernardino County, approximately 3 miles NE of the intersection of I-15 and the California State line at that point which is the NW corner of Section 1, T17N, R14E, San Bernardino Meridian. Continue W in a straight line to that point which is the SW corner of the northwest quarter of Section 6, T27S, R42E, Mt. Diablo Meridian. Continue North to the intersection with the Inyo County Boundary at that point which is the NE corner of the western half of the northern quarter of Section 6, T25S, R42E, MDM. Continue W along the Inyo and San Bernardino County boundary until the intersection with Kern County, as that point which is the SE corner of Section 34, T24S, R40E, MDM. Continue W along the Inyo and Kern County boundary until the intersection with Tulare County, at that point which is the SW corner of the SE quarter of Section 32, T24S, R37E, MDM. Continue W along the Kern and Tulare County boundary, until that point which is the NW corner of T25S, R32E, MDM. Continue S following R32E lines to the NW corner of T31S, R32E, MDM. Continue W to the NW corner of T31S, R31E, MDM. Continue S to the SW corner of T31S, R31E, MDM. Continue W to SW corner of SE quarter of Section 34, T32S, R30E, MDM. Continue S to SW corner of T11N, R17W, SBM. Continue E along south boundary of T11N, SBM to SW corner of T11N, R7W, SBM. Continue S to SW corner of T9N, R7W, SBM. Continue E along south boundary of T9N, SBM to SW corner of T9N, R1E, SBM. Continue S along west boundary of R1E, SBM to Riverside County line at the SW corner of T15, R1E, SBM. Continue E along south boundary of T15, SBM (Riverside County Line) to SW corner of T15, R10E, SBM. Continue S along west boundary of R10E, SBM to Imperial County line at the SW corner of T8S, R10E, SBM.
ATTACHMENT G

Continue W along Imperial and Riverside county line to NW corner of T9S, R9E, SBM. Continue S along the boundary between Imperial and San Diego Counties, along the west edge of R9E, SBM to the south boundary of Imperial County/California state line. Follow the California state line west to Arizona state line, then north to Nevada state line, then continuing NW back to start at the point which is the NW corner of Section 1, T17N, R14E, SBM

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

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

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

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

REMAINING AREA NOT DEFINED ABOVE RECEIVES BASE RATE

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<td>(1) Leverman...........</td>
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<tr>
<td>(2) Dredge dozer.......</td>
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<tr>
<td>(3) Deckmate...........</td>
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<tr>
<td>(4) Winch operator (stern winch on dredge).....</td>
</tr>
<tr>
<td>(5) Fireman-Oiler, Deckhand, Bargeman, Leveehand.........</td>
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<td>(6) Barge Mate...........</td>
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<tr>
<td>Fence Erector............</td>
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<td>Ornamental, Reinforcing and Structural........</td>
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**PREMIUM PAY:**

$6.00 additional per hour at the following locations:

China Lake Naval Test Station, Chocolate Mountains Naval Reserve-Niland,

$4.00 additional per hour at the following locations:

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

$2.00 additional per hour at the following locations:

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

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ATTACHMENT G

GROUP 2
$ 40.51
19.07

GROUP 3
$ 40.97
19.07

GROUP 4
$ 41.66
19.07

LABORER

GROUP 1
$ 35.24
20.09

GROUP 2
$ 35.79
20.09

GROUP 3
$ 36.34
20.09

GROUP 4
$ 37.89
20.09

GROUP 5
$ 38.24
20.09

LABORER CLASSIFICATIONS

GROUP 1: Cleaning and handling of panel forms; Concrete screeding for rough strike-off; Concrete, water curing; Demolition laborer, the cleaning of brick if performed by a worker performing any other phase of demolition work, and the cleaning of lumber; Fire watcher, limber, brush loader, pile and debris handler; Flag person; Gas, oil and/or water pipeline laborer; Laborer, asphalt-rubber material loader; Laborer, general or construction; Laborer, general clean-up; Laborer, landscaping; Laborer, jetting; Laborer, temporary water and air lines; Material hose operator (walls, slabs, floors and decks); Plugging, filling of shee bolt holes; Dry packing of concrete; Railroad maintenance, repair track person and road beds; Streetcar and railroad construction track laborers; Rigging and signaling; Scaler; Slip form raiser; Tar and mortar; Tool crib or tool house laborer; Traffic control by any method; Window cleaner; Wire mesh pulling - all concrete pouring operations

GROUP 2: Asphalt shoveler; Cement dumper (on 1 yd. or larger mixer and handling bulk cement); Cesspool digger and installer; Chucktender; Chute handler, pouring concrete, the handling of the chute from ready mix trucks, such as walls, slabs, decks, floors, foundation, footings, curbs, gutters and sidewalks; Concrete curer, impervious membrane and form oiler; Cutting torch operator (demolition); Fine grader, highways and street paving, airport, runways and similar type heavy construction; Gas, oil and/or water pipeline wrapper - pot tender and form person; Guinea chaser; Headerboard person - asphalt; Laborer, packing rod steel and pans; Membrane vapor barrier installer; Power broom sweeper (small); Riprap stonepaver, placing stone or wet sacked concrete; Roto scraper and tiller; Sandblaster (pot tender); Septic tank digger and installer(lead); Tank scaler and cleaner; Tree climber, faller, chain saw operator, Pittsburgh chipper and similar type brush shredder; Underground laborer, including caisson bellerower

GROUP 3: Buggymobile person; Concrete cutting torch; Concrete pile cutter; Driller, jackhammer, 2-1/2 ft. drill steel or longer; Dri-pak-it machine; Gas, oil and/or water pipeline wrapper, 6-in. pipe and over, by any method, inside and out; High scaler (including drilling of same); Hydro seeder and similar type; Impact wrench multi-plate; Kettle person, pot person and workers applying asphalt, lay-kold, creosote, lime caustic and similar type materials ("applying" means applying, dipping, brushing or handling of such materials for pipe wrapping and waterproofing); Operator of pneumatic, gas, electric tools, vibrating machine, pavement breaker, air blasting, come-alongs, and similar mechanical tools not separately classified herein; Pipelayer's backup person, coating, grouting, making of joints, sealing, caulking, diapering and including rubber gasket joints, pointing and any and all other services;
ATTACHMENT G

Rock slinger; Rotary scarifier or multiple head concrete chipping scarifier; Steel headerboard and guideline setter; Tamper, Barko, Wacker and similar type; Trenching machine, hand-propelled

GROUP 4: Asphalt raker, lute person, ironer, asphalt dump person, and asphalt spreader boxes (all types); Concrete core cutter (walls, floors or ceilings), grinder or sander; Concrete saw person, cutting walls or flat work, scoring old or new concrete; Crubber, shorer, lagging, sheeting and trench bracing, hand-guided lagging hammer; Head rock slinger; Laborer, asphalt rubber distributor boot person; Laser beam in connection with laborers' work; Oversize concrete vibrator operator, 70 lbs. and over; Pipelayer performing all services in the laying and installation of pipe from the point of receiving pipe in the ditch until completion of operation, including any and all forms of tubular material, whether pipe, metallic or non-metallic, conduit and any other stationary type of tubular device used for the conveying of any substance or element, whether water, sewage, solid gas, air, or other product whatsoever and without regard to the nature of material from which the tubular material is fabricated; No-joint pipe and stripping of same; Prefabricated manhole installer; Sandblaster (nozzle person), water blasting, Porta Shot-Blast

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

TUNNEL LABORER CLASSIFICATIONS

GROUP 1: Batch plant laborer; Changehouse person; Dump person; Dump person (outside); Swamper (brake person and switch person on tunnel work); Tunnel materials handling person; Nipper; Pot tender, using mastic or other materials (for example, but not by way of limitation, shotcrete, etc.);

GROUP 2: Bull gang mucker, track person; Chucktender, Cablerender; Concrete crew, including rodder and spreader; Loading and unloading agitator cars; Vibrator person, jack hammer, pneumatic tools (except driller)

GROUP 3: Blaster, driller, powder person; Chemical grout jet person; Cherry picker person; Grout gun person; Grout mixer person; Grout pump person; Jackleg miner; Jumbo person; Kemper and other pneumatic concrete placer operator; Miner, tunnel (hand or machine); Nozzle person; Operating of troweling and/or grouting machines; Powder person (primer house); Primer person; Sandblaster; Shotcrete person; Steel form raiser and setter; Timber person, retimber person, wood or steel; Tunnel Concrete finisher

GROUP 4: Diamond driller; Sandblaster; Shaft and raise work

----------------------------------------------
LABO0220-004 07/01/2018  
Rates Fringes
Brick Tender ..................$ 32.26 18.40

LAB00300-005 01/01/2018

Rates   Fringes

Asbestos Removal Laborer........$ 33.19  17.78

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

LAB00345-001 07/01/2019

Rates   Fringes

LABORER (GUNITE)

GROUP 1..................$ 44.05  18.42
GROUP 2..................$ 43.10  18.42
GROUP 3..................$ 39.56  18.42

FOOTNOTE: GUNITE PREMIUM PAY: Workers working from a Bos'n's Chair or suspended from a rope or cable shall receive 40 cents per hour above the foregoing applicable classification rates. Workers doing gunite and/or shotcrete work in a tunnel shall receive 35 cents per hour above the foregoing applicable classification rates, paid on a portal-to-portal basis. Any work performed on, in or above any smoke stack, silo, storage elevator or similar type of structure, when such structure is in excess of 75'-0" above base level and which work must be performed in whole or in part more than 75'-0" above base level, that work performed above the 75'-0" level shall be compensated for at 35 cents per hour above the applicable classification wage rate.

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Rodmen, Nozzlemen

GROUP 2: Gunmen

GROUP 3: Reboundmen

LAB01184-001 07/01/2019

Rates   Fringes

Laborers: (HORIZONTAL DIRECTIONAL DRILLING)

   (1) Drilling Crew Laborer...$ 36.70  15.05
   (2) Vehicle Operator/Hauler.$ 36.87  15.05
   (3) Horizontal Directional Drill Operator..............$ 38.72  15.05
   (4) Electronic Tracking Locator.......................$ 40.72  15.05

Laborers: (STRIPING/SLURRY SEAL)

   GROUP 1..................$ 37.91  18.06
LABORERS - STRIPING CLASSIFICATIONS

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

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

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

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

-----------------------------------------------------------------------------------
LAB01414-003 08/07/2019

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>LABORER</td>
<td></td>
</tr>
<tr>
<td>PLASTER CLEAN-UP LABORER... $34.82</td>
<td>20.02</td>
</tr>
<tr>
<td>PLASTER TENDER........... $37.37</td>
<td>20.02</td>
</tr>
</tbody>
</table>

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

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

-----------------------------------------------------------------------------------
PAIN0036-002 07/01/2019

<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Painters: (Including Lead Abatement)</td>
<td></td>
</tr>
<tr>
<td>(1) Journeyman Painter...... $30.04</td>
<td>16.03</td>
</tr>
</tbody>
</table>
(2) Repaint................ $25.40 15.87 
(3) Iron & Steel.......... $32.12 16.03 
(4) High Iron & Steel.... $34.12 16.03 
(5) All Other Work....... $30.04 16.03 

REPAIINT:
Repaint of any structure with the exception of work involving the aerospace industry, breweries, commercial recreational facilities, hotels which operate commercial establishments as part of hotel service, and sports facilities, tenant improvement work not included in conjunction with the construction of the building and all repainting of tenant improvement projects.

HIGH IRON & STEEL:
Aerial towers, towers, radio towers, smoke stacks, flag poles (any flag poles that can be finished from the ground with a ladder excluded), elevated water towers, steeples and domes in their entirety and any other extremely high and hazardous work, cooning steel, bos’n chair, or other similar devices, painting in other high hazardous work shall be classified as high iron & steel

---------------------------------------------
PAIN0036-008 10/01/2019

Rates Fringes

DRYWALL FINISHER/TAPER........... $42.18 19.52

---------------------------------------------
PAIN0036-015 01/01/2020

Rates Fringes

GLAZIER......................... $43.45 23.39

FOOTNOTE: Additional $1.25 per hour for work in a condor, from the third (3rd) floor and up. Additional $1.25 per hour for work on the outside of the building from a swing stage or any suspended contrivance, from the ground up

---------------------------------------------
PAIN1247-002 01/01/2020

Rates Fringes

SOFT FLOOR LAYER............... $37.55 13.78

---------------------------------------------
PLAS0200-006 08/07/2019

Rates Fringes

PLASTERER......................... $43.73 16.03

VANDENBURG AFB: $3.00 additional per hour.

---------------------------------------------
PLAS0500-002 07/01/2019

Rates Fringes

CEMENT MASON/CONCRETE FINISHER... $37.00 25.53

---------------------------------------------
PLUM0016-004 09/01/2018
<table>
<thead>
<tr>
<th>Rates</th>
<th>Fringes</th>
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<tbody>
<tr>
<td>PLUMBER/PIPEFITTER</td>
<td></td>
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<tr>
<td>Plumber and Pipefitter</td>
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<tr>
<td>All other work except work on new additions and remodeling of bars, restaurant, stores and commercial buildings not to exceed 5,000 sq. ft. of floor space and work on strip malls, light commercial, tenant improvement and remodel</td>
<td>$50.13</td>
</tr>
<tr>
<td>Vandenburg Air Force Base...</td>
<td>$54.63</td>
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<tr>
<td>Work ONLY on new additions and remodeling of bars, restaurants, stores and commercial buildings not to exceed 5,000 sq. ft. of floor space</td>
<td>$48.58</td>
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<tr>
<td>Work ONLY on strip malls, light commercial, tenant improvement and remodel</td>
<td>$37.10</td>
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<td>PLUM0345-001 09/01/2019</td>
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<tr>
<td>PLUMBER</td>
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<tr>
<td>Landscape/Irrigation Fitter</td>
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<tr>
<td>Sewer &amp; Storm Drain Work...</td>
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<td>ROOF0036-002 08/01/2019</td>
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<tr>
<td>ROOFER</td>
<td>$39.52</td>
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<td></td>
<td>17.47</td>
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<tr>
<td>FOOTNOTE: Pitch premium: Work on which employees are exposed to pitch fumes or required to handle pitch, pitch base or pitch impregnated products, or any material containing coal tar pitch, the entire roofing crew shall receive $1.75 per hour &quot;pitch premium&quot; pay.</td>
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<td>* SFCA0669-014 04/01/2020</td>
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<tr>
<td>SPRINKLER FITTER</td>
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<tr>
<td>SHEE0273-002 08/01/2018</td>
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<td></td>
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<tr>
<td>SHEET METAL WORKER</td>
<td>$43.88</td>
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</tbody>
</table>

Rates Fringes

TRUCK DRIVER
GROUP 1.………………...$ 31.59 29.59
GROUP 2.………………...$ 31.74 29.59
GROUP 3.………………...$ 31.87 29.59
GROUP 4.………………...$ 32.06 29.59
GROUP 5.………………...$ 32.09 29.59
GROUP 6.………………...$ 32.12 29.59
GROUP 7.………………...$ 32.37 29.59
GROUP 8.………………...$ 32.62 29.59
GROUP 9.………………...$ 32.82 29.59
GROUP 10.………………...$ 33.12 29.59
GROUP 11.………………...$ 33.62 29.59
GROUP 12.………………...$ 34.05 29.59

WORK ON ALL MILITARY BASES:
PREMIUM PAY: $3.00 per hour additional.
[29 palms Marine Base, Camp Roberts, China Lake, Edwards AFB,
El Centro Naval Facility, Fort Irwin, Marine Corps
Logistics Base at Nebo & Yermo, Mountain Warfare Training
Center, Bridgeport, Point Arguello, Point Conception,
Vandenberg AFB]

TRUCK DRIVERS CLASSIFICATIONS

GROUP 1: Truck driver

GROUP 2: Driver of vehicle or combination of vehicles - 2
axles; Traffic control pilot car excluding moving heavy
equipment permit load; Truck mounted broom

GROUP 3: Driver of vehicle or combination of vehicles - 3
axles; Boot person; Cement mason distribution truck; Fuel
truck driver; Water truck - 2 axle; Dump truck, less than
16 yds. water level; Erosion control driver

GROUP 4: Driver of transit mix truck, under 3 yds.; Dumpcrete
truck, less than 6-1/2 yds. water level

GROUP 5: Water truck, 3 or more axles; Truck greaser and tire
person ($0.50 additional for tire person); Pipeline and
utility working truck driver, including winch truck and
plastic fusion, limited to pipeline and utility work;
Slurry truck driver

GROUP 6: Transit mix truck, 3 yds. or more; Dumpcrete truck,
6-1/2 yds. water level and over; Vehicle or combination of
vehicles - 4 or more axles; Oil spreader truck; Dump truck,
16 yds. to 25 yds. water level

GROUP 7: A Frame, Swedish crane or similar; Forklift driver;
Ross carrier driver

GROUP 8: Dump truck, 25 yds. to 49 yds. water level; Truck
repair person; Water pull - single engine; Welder

GROUP 9: Truck repair person/welder; Low bed driver, 9 axles
or over
ATTACHMENT G

GROUP 10: Dump truck - 50 yds. or more water level; Water pull - single engine with attachment

GROUP 11: Water pull - twin engine; Water pull - twin engine with attachments; Winch truck driver - $1.25 additional when operating winch or similar special attachments

GROUP 12: Boom Truck 17K and above

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

Note: Executive Order (EO) 13706, Establishing Paid Sick Leave for Federal Contractors applies to all contracts subject to the Davis-Bacon Act for which the contract is awarded (and any solicitation was issued) on or after January 1, 2017. If this contract is covered by the EO, the contractor must provide employees with 1 hour of paid sick leave for every 30 hours they work, up to 56 hours of paid sick leave each year. Employees must be permitted to use paid sick leave for their own illness, injury or other health-related needs, including preventive care; to assist a family member (or person who is like family to the employee) who is ill, injured, or has other health-related needs, including preventive care; or for reasons resulting from, or to assist a family member (or person who is like family to the employee) who is a victim of, domestic violence, sexual assault, or stalking. Additional information on contractor requirements and worker protections under the EO is available at www.dol.gov/whd/govcontracts.

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

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

Union Rate Identifiers

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

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

Survey Rate Identifiers

Classifications listed under the "SU" identifier indicate that no one rate prevailed for this classification in the survey and the published rate is derived by computing a weighted average rate based on all the rates reported in the survey for that classification. As this weighted average rate includes all rates reported in the survey, it may include both union and non-union rates. Example: SULA2012-007 5/13/2014. SU indicates the rates are survey rates based on a weighted average calculation of rates and are not majority rates. LA indicates the State of Louisiana. 2012 is the year of survey on which these classifications and rates are based. The next number, 007 in the example, is an internal number used in producing the wage determination. 5/13/2014 indicates the survey completion date for the classifications and rates under that identifier.

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

Union Average Rate Identifiers

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

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

----------------------------------------------------------------------------------------------------------------------

WAGE DETERMINATION APPEALS PROCESS

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

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

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

With regard to any other matter not yet ripe for the formal process described here, initial contact should be with the Branch of Construction Wage Determinations. Write to:

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

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

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

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

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

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

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

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END OF GENERAL DECISION"
DIVISION VI STRUCTURES
56 SIGNS
Add to section 56-4.01A:
Comply with Santa Barbara County Detail 7-050.

Add to section 56-4.01B:
Post for roadside sign must be square, galvanized, perforated steel.

DIVISION VIII MISCELLANEOUS CONSTRUCTION
73 CONCRETE CURBS AND SIDEWALKS

Add before the 1st paragraph in section 73-3.03:
Before placing concrete, verify that forms and site constraints allow the required dimensioning and slopes shown. Immediately notify the Engineer if you encounter site conditions that will not accommodate the design details. Modifications ordered by the Engineer are change order work.

Replace surfacing damaged by your activities. Replacement material must be of equal or better quality than material replaced.

Cut the outline of surfacing to be removed:
1. Using a power-driven saw
2. On a neat line
3. To a 0.17-foot minimum depth

HMA for replacing removed asphalt concrete surfacing and facilities must comply with section 39. You may use minor HMA if authorized.

DIVISION IX TRAFFIC CONTROL FACILITIES
86 ELECTRICAL SYSTEMS

Add to the end of the 1st paragraph of the RSS for section 86-1.01:
This work is shown on plan sheets labeled E. The work involved in each bid item is shown on a sheet with a title matching the bid item.

Pedestrian Hybrid Beacon (PHB) signal work must be performed at the following location:
1. Kingston Avenue at Calle Real

Rectangular Rapid Flashing Beacon (RRFB) work must be performed at the following location:
1. Chapel Street at Hollister Avenue

**Add to the list in the 5th paragraph of the RSS for section 86-1.03:**

14. Controller assembly, each type

**Add to section 86-2.03B:**

The bottom of the base plate must be flush with finished grade.

**Add to section 86-2.04A:**

The sign mounting hardware must be installed at the locations shown.

**Add to section 86-2.05A:**

Conduit installed underground must be Type 1 or Type 3.

**Add to section 86-2.05B:**

The conduit in a foundation and between a foundation and the nearest pull box must be Type 3.

**Add to section 86-2.05C:**

If Type 3 conduit is placed in a trench, not in the pavement or under concrete sidewalk, after the bedding material is placed and the conduit is installed, backfill the trench to not less than 4 inches above the conduit with minor concrete under section 90-2, except the concrete must contain not less than 421 pounds of cementitious material per cubic yard. Backfill the remaining trench to finished grade with backfill material.

After conductors have been installed, the ends of the conduits must be sealed with an authorized type of sealing compound.

At those locations where conduit is required to be installed under pavement and underground facilities designated as high priority subsurface installation under Govt Code § 4216 et seq. exist, conduit must be placed by the trenching in pavement method under section 86-2.05C.

At other locations where conduit is required to be installed under pavement and if a delay to vehicles will not exceed 5 minutes, conduit may be installed by the trenching in pavement method.

**Replace the 3rd paragraph in section 86-2.06A(2) of the RSS for section 86-2.06 with:**

In a ground or sidewalk area, embed the bottom of a pull box in crushed rock.
Replace "Reserved" in section 86-2.06B of the RSS for section 86-2.06 with:

**86-2.06B(1) General**

**86-2.06B(1)(a) Summary**

Section 86-2.06B includes specifications for installing non-traffic-rated pull boxes.

**86-2.06B(1)(b) Submittals**

Before shipping pull boxes to the job site, submit a list of materials used to fabricate the pull boxes to METS. Include:

1. Contract number
2. Manufacturer's name
3. Manufacturer's installation instructions
4. Your contact information

Submit reports for pull boxes from an NRTL-accredited laboratory.

Before installing a pull box and cover, submit the manufacturer's replacement warranty for them.

**86-2.06B(1)(c) Quality Control and Assurance**

**86-2.06B(1)(c)(i) Functional Testing**

The pull box and cover must be tested under ANSI/SCTE 77, "Specification for Underground Enclosure Integrity."

**86-2.06B(1)(c)(ii) Warranty**

Provide a 2-year manufacturer's replacement warranty for the pull box and cover. The warranty period starts on the date of Contract acceptance.

Deliver replacement parts within 5 business days after you receive notification of a failed pull box, cover, or both to the City of Goleta's Corporation Yard at:

6735 Hollister Ave,
Goleta, CA 93117

**86-2.06B(2) Materials**

The pull box and cover must comply with ANSI/SCTE 77, "Specification for Underground Enclosure Integrity," for tier 22 load rating and must be gray or brown.

A pull box extension must be made of the same material as the pull box and attached to the box to maintain the minimum combined depths.

Include recesses for a hanger if a transformer or other device must be placed in a pull box.

The bolts, nuts, and washers must be a captive design.

The captive bolt must be capable of withstanding a torque from 55 to 60 ft-lb and a minimum pull-out strength of 750 lb. Perform the test with the cover in place and the bolts torqued. The pull box and cover must not be damaged while performing the test.

Hardware must be stainless steel with 18 percent chromium and 8 percent nickel content.

Galvanize ferrous metal parts under section 75-1.05.

The manufacturer's instructions must include:
1. Quantity and size of entries that can be made without degrading the strength of the pull box below the tier 22 load rating
2. Locations where side entries cannot be made
3. Acceptable method for creating the entry

The tier 22 load rating must be labeled or stenciled by the manufacturer on the inside and outside of the pull box and on the underside of the cover.

86-2.06B(3) Construction
Do not install a pull box in curb ramps or driveways.

A pull box for a post or a pole standard must be located within 5 feet of the standard. Place the pull box adjacent to the back of the curb or edge of the shoulder. If this is impractical, place the pull box in a suitable, protected, and accessible location.

Add to section 86-2.08A:
. Secure conductors and cables to the projecting end of the conduit in pull boxes.

Signal interconnect cable must be the 6-pair type with stranded tinned copper no. 20 conductors.

Replace the 1st paragraph of section 86-2.09E with:
Splices must be insulated by "Method B."

Delete the 6th and 7th paragraphs of section 86-2.09E.

Add to section 86-2.11A:
Circuit breakers must be the cable-in/cable-out type mounted on non-energized clips. All circuit breakers must be mounted vertically with the up position of the handle being the "ON" position.

Each service must be provided with up to 2 main circuit breakers that will disconnect ungrounded service entrance conductors. Where the "Main" circuit breaker consists of 2 circuit breakers as described, each of the circuit breakers must have a minimum interrupting capacity of 10,000 A, rms.

Replace 7th and 8th paragraphs of section 86-2.11A with:

Replace section 86-3.01A and 86-3.01B with:
86-3.01 PEDESTRIAN HYBRID BEACON (PHB) SIGNAL CONTROLLER UNIT
86-3.01A General
86-3.01A(1) Summary
The controller unit must be able to run PHB signal phase as shown on the plan. The hardware and software must be furnished by the Contractor.
ATTACHMENT H
RECTANGULAR RAPID FLASHING BEACONS (RRFB) AT CHAPEL / PEDESTRIAN HYBRID BEACON (PHB) AT
KINGSTON

86-3.01A(2) Submittals
Submit the controller cut sheets, diagrams and product data.
Submit 3 controller assembly user and operator manuals for each signalized location as an informational submittal. Each manual must include a master item index that describes the purpose and a brief description to the directory. The index must include an overall description of the controller assembly and its associated equipment and cables with illustrative block diagrams, manufacturer contact information, technical data specifications, a parts list, part descriptions, and settings. The manuals must include fault diagnostic and repair procedures and procedures for preventative maintenance in order to maintain controller assembly performance parameters.
Submit warranty documentation as an informational submittal before installing controller assembly.
Furnish a 1 year replacement warranty from the manufacturer of the controller assembly against any defects or failures. The effective date of the warranty is the date of acceptance of the installation. Furnish replacement parts within 10 days after receipt of the failed parts. The County does not pay for the replacement. Deliver replacement parts to City of Goleta’s Corporation Yard at:

6735 Hollister Ave,
Goleta, CA 93117

86-3.01A(3) Training
Provide a minimum of 2 days of training by a certified manufacturer's representative for up to 10 City employees selected by the Engineer. The content of the training must include instructions for installing, programming, adjusting, calibrating, and maintaining the controller assembly.
Furnish materials and equipment for the training. Notify the Engineer 15 days before the training. The time and location of the training must be agreed upon by you and the Engineer. If no agreement can be reached, the Engineer determines the time and location.

Add to section 86-3.04:
Cabinet must be Model 332L and consist of a housing (B), a mounting cage 1, and the following listed equipment. The equipment must comply with chapter 6 of TEES.

1. Service panel no. 1
2. Power distribution assembly no. 3
3. Input file (I file)
4. C1 harness
5. Controller and equipment shelves
6. Dual fan assembly with thermostatic control
7. Mechanical armature-type relays
8. Input panel

Each power distribution assembly must include the following equipment:

1. Two duplex NEMA 5-15R controller receptacle (rear mount)
2. One 30 A, 1-pole, 120 V(ac) main circuit breaker
3. Three 15 A, 1-pole, 120 V(ac) circuit breaker
4. One duplex GFCI NEMA 15 A, receptacle (front mount)

Furnish maximum 3 shelves. Each shelf must be attached to the tops of 2 supporting angles with 4 screws. Supporting angles must extend from the front to the back rails. The front of the shelf must abut the front member of the mounting cage. Arrange shelves as shown. The angles must be designed to support a minimum of 50 pounds each. The horizontal side of each angle must be a minimum of 3 inches. The angles must be vertically adjustable.

Furnish 3 terminal blocks. Terminal blocks must comply with Chapter 6 of TEES, except the screw size must be 8-32.

Furnish a maintenance manual or a combined maintenance and operation manual for all controller units, auxiliary equipment, vehicle detector sensor units, control units, and amplifiers. Submit manual when the controllers are delivered for testing or, if ordered by the Engineer, before purchasing. The manual must include the following:

1. Specifications
2. Design characteristics
3. General operation theory
4. Function of all controls
5. Troubleshooting procedure (diagnostic routine)
6. Block circuit diagram
7. Geographical layout of components
8. Schematic diagrams
9. List of replaceable component parts with stock numbers

Replace section 86-4.01D(1)(c)(ii) with:

86-4.01D(1)(c)(ii) Warranty

The manufacturer must provide a written warranty against defects in materials and workmanship for LED signal modules for a minimum period of 48 months after installation of LED signal modules. Replacement LED signal modules must be provided within 15 days after receipt of failed LED modules at your expense. The City of Goleta pays for shipping the failed modules to you. All warranty documentation must be submitted to the Engineer before installation. Replacement LED signal modules must be delivered to City of Goleta’s Corporation Yard.

6735 Hollister Ave,
Goleta, CA 93117

Add to section 86-4.01D(2)(a):

LED signal module must be manufactured for 12-inch circular sections.

Replace section 86-4.03H with:

86-4.03H LED Countdown Pedestrian Signal Face Modules
86-4.03H(1) General
86-4.03H(1)(a) Summary

Section 86-4.03H includes specifications for installing a LED countdown PSF module into a standard Type A pedestrian signal housing. Comply with TEES.

86-4.03H(1)(b) Definitions

Not Used
86-4.03H(1)(c) Submittals
Before shipping LED countdown PSF modules to the job site, submit all modules and the following items to METS:

1. Delivery form with Contract number and contact information
2. Installation manual and schematic wiring diagram
3. Product information, including manufacturer's name and month and year of manufacture
4. List of model, lot, and serial numbers

Submit documentation of the manufacturer's production QA, including test data showing the modules comply with the following requirements:

1. Luminous intensity as shown in the table titled "Luminance Values."
2. Power factor after burn-in.
3. Test current flow measurements in amperes after burn-in. The measured values must comply with the design qualification figures. Record the measured ampere values with rated voltage on the product labels.

Submit the manufacturer's warranty before installing LED countdown PSF modules.

86-4.03H(1)(d) Quality Control and Assurance
86-4.03H(1)(d)(i) General
The Engineer rejects a module if a visual inspection reveals any of the following defects:

1. Exterior physical damage
2. Assembly anomalies
3. Scratches
4. Abrasions
5. Cracks
6. Chips
7. Discoloration
8. Other surface defects

The City of Goleta may tests LED countdown PSF modules under ANSI/ASQ Z1.4 and California Test 606. The module submitted for testing must be representative of typical production units. Comply with testing requirements for electrical material and equipment under section 86-2.14.

86-4.03H(1)(d)(ii) Warranty
Provide a 5-year manufacturer's replacement warranty against defects or failures. The warranty period starts on the date of Contract acceptance. Furnish replacement parts within 15 days after notification of a failed module. The City of Goleta does not pay for replacement modules. Deliver replacement modules to the City of Goleta’s Corporation Yard at:

6735 Hollister Ave,
Goleta, CA 93117

86-4.03H(2) Materials
A LED countdown PSF module must:

1. Use LED as the light source.
2. Be made of material complying with ASTM D 3935.
3. Be designed to mount behind or to replace face plates of a standard Type A housing as specified in the ITE publication *Equipment and Material Standards*, chapter 3, "Pedestrian Traffic Control Signal Indications," and the *California MUTCD*.

4. Have a minimum power consumption of 10 W for the "Upraised Hand."

5. Have internal components supported such that they withstand mechanical shock and vibration from high winds and other sources.

6. Use the required color and be the ultra-bright type rated for 100,000 hours of continuous operation for a temperature range from -40 to +74 degrees C.

7. Have replaceable signal lamp optical units.

8. Fit into the housing of a pedestrian signal section without modification.

9. Be a single, self-contained device that does not require on-site assembly for installation.

10. Have the following information permanently marked on the back of the module:
   10.1. Manufacturer's name
   10.2. Trademark
   10.3. Model number
   10.4. Serial number
   10.5. Lot number
   10.6. Month and year of manufacture
   10.7. Required operating characteristics, including:
       10.7.1. Rated voltage
       10.7.2. Power consumption
       10.7.3. Volt-ampere
       10.7.4. Power factor

11. Have prominent and permanent vertical markings for accurate indexing and orientation within the signal housing if a specific mounting orientation is required. Markings must be a minimum of 1 inch in height and include an up arrow and the word "up" or "top."

The circuit board and the power supply must be contained inside of the LED countdown PSF module. The circuit board must comply with TEES, chapter 1, section 6.

The enclosure containing the power supply or the electronic components of the module, except the lens, must be made of UL 94 V-0 flame-retardant material.

Each symbol must be at least 9 inches high and 5-1/4 inches wide. The lens' signal output for the "Walking Person" and "Upraised Hand" symbols and the countdown display must not exceed a ratio of 5 to 1 for the highest and lowest luminance values. The symbols must comply with ITE publication *Equipment and Material Standards*, chapter 3, "Pedestrian Traffic Control Signal Indications," and the *California MUTCD*. The 2-digit countdown timer, "Upraised Hand," and "Walking Person" indications must be electronically isolated from each other. The 3 indications must not share a power supply or interconnect circuitry.

The module must maintain an average luminance value for at least 5 years of continuous signal operation for a temperature range from -40 to +74 degrees C.

The module must operate over the specified ambient temperature and voltage range and be readable both day and night at distances up to the full width of the area to be crossed. Upon initial testing at 25 degrees C, the module must have at least the luminance values shown in the following table:
### Luminance Values

<table>
<thead>
<tr>
<th>PSF module symbol</th>
<th>Luminance</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Upraised Hand&quot; and 2-digit countdown timer</td>
<td>1,094 fL</td>
</tr>
<tr>
<td>&quot;Walking Person&quot;</td>
<td>1,547 fL</td>
</tr>
</tbody>
</table>

The color output of the module must comply with chromaticity requirements in section 5.3 of ITE publication *Equipment and Material Standards* chapter 3, "Pedestrian Traffic Control Signal Indications."

When operating over a temperature range from -40 to +74 degrees C, the measured chromaticity coordinates of the module must comply with the following requirements for 5 years after Contract acceptance:

<table>
<thead>
<tr>
<th>Chromaticity Standards (CIE Chart)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Upraised Hand&quot; and 2-digit countdown timer (portland orange)</td>
</tr>
<tr>
<td>$0.600 \leq X \leq 0.659$</td>
</tr>
<tr>
<td>$Y: \text{Not greater than} 0.390 \text{ or less than} 0.331 \text{ or less than} 0.990 - X$</td>
</tr>
<tr>
<td>&quot;Walking Person&quot; (lunar white)</td>
</tr>
<tr>
<td>$X: \text{Not less than} 0.280 \text{ or greater than} 0.400$</td>
</tr>
<tr>
<td>$Y: \text{Not less than} 0.0483 + 0.7917<em>X \text{ or greater than} 0.0983 + 0.7917</em>X$</td>
</tr>
</tbody>
</table>

The module must not exceed the power consumption requirements shown in the following table:

<table>
<thead>
<tr>
<th>Maximum Power Consumption Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSF module display</td>
</tr>
<tr>
<td>&quot;Upraised Hand&quot;</td>
</tr>
<tr>
<td>&quot;Walking Person&quot;</td>
</tr>
<tr>
<td>2-digit countdown timer</td>
</tr>
</tbody>
</table>

The wiring and terminal block must comply with section 13.02 of ITE publication *Equipment and Material Standards*, chapter 2, "Vehicle Traffic Control Signal Heads." The PSF module must have spade lugs and 3 secured, jacketed copper wires that comply with NEC and are:

1. Color coded
2. 3 feet long
3. 600 V(ac)
4. 20 AWG minimum stranded
5. Rated for service at +105 degrees C

The module must operate:

1. At a frequency of $60 \pm 3$ Hz over a voltage range from 95 to 135 V(ac) without flicker perceptible to the unaided eye. Fluctuations of the line voltage must have no visible effect on the luminous intensity of the indications. The rated voltage for measurements must be 120 V(ac).
2. With currently-used City of Goleta controller assemblies, including solid-state load switches, flashers, and conflict monitors. Comply with TEES, chapters 3 and 6. If an alternating current...
of 20 mA or less is applied to the unit, the voltage read across the 2 leads must not exceed 15 V(ac).

3. With a smart control and regulation mode that exhibits countdown displays automatically adjusted to the traffic controller's programmed intervals.

The countdown PSF module must operate during the pedestrian change interval. The module must begin counting down when the flashing "Upraised Hand" interval turns on, counting down to 0 and turning off when the steady "Upraised Hand" interval turns on.

The module's on-board circuitry must:

1. Include voltage surge protection to withstand high-repetition noise transients. The voltage surge protection must comply with NEMA Standard TS, section 2.1.6.
2. Comply with Class A emission limits for electronic noise under 47 CFR 15, subpart B.

The module must provide a power factor of 0.90 or greater.

The total harmonic distortion from a current and voltage induced in an alternating-current power line by a PSF module must not exceed 20 percent at an operating temperature of 25 degrees C.

The module's circuitry must prevent light emission perceptible to the unaided eye when a voltage of 50 V(ac) or less is applied to the unit.

When power is applied to the module, light emission must occur within 90 ms.

86-4.03H(3) Construction
Use LED countdown PSF modules from the same manufacturer.

Install the module in a standard Type A pedestrian signal housing. Special tools must not be required for installing the modules.

The installation of the module into the pedestrian signal face must require only the removal of the lens, reflector, and existing LED module.

86-4.03H(4) Payment
Not Used

Replace "Reserved" in section 86-5.03 of the RSS with:

86-5.03A General
86-5.03A(1) Summary
Section 86-5.03 includes specifications for installing accessible pedestrian signals (APS). Comply with TEES.

86-5.03A(2) Definitions
accessible pedestrian signal: Accessible pedestrian signal as defined in the California MUTCD.

accessible walk indication: Activated audible and vibrotactile action during the walk interval.

ambient sound level: Background sound level in dB at a given location.

ambient sound sensing microphone: Microphone that measures the ambient sound level in dB and automatically adjusts the APS speaker's volume.
**APS assembly:** Assembly that includes a pushbutton to actuate the APS components.

**Audible speech walk message:** Audible prerecorded message that communicates to pedestrians which street has the walk interval.

**Programming mechanism:** Device to program the APS' operation.

**Pushbutton information message:** Pushbutton information message as defined in the *California MUTCD*.

**Pushbutton locator tone:** Pushbutton locator tone as defined in the *California MUTCD*.

**Vibrotactile pedestrian device:** Vibrotactile pedestrian device as defined in the *California MUTCD*.

### 86-5.03A(3) Submittals

Before shipping the APS units to the job site, submit the units with the following to METS:

1. Delivery form including Contract number and your contact information
2. Manufacturer's name
3. Model, lot, and serial numbers
4. Month and year of manufacture
5. Wiring diagram
6. Product data
7. Programming mechanism if not integral to the APS

Submit 2 APS user and operator manuals for each signalized location as informational submittals. Each manual must have a master item index that includes:

1. Descriptions of the APS and its associated equipment and cables
2. Illustrative block diagrams
3. Manufacturer’s contact information
4. Technical data specifications
5. Parts list, descriptions, and settings
6. Fault diagnostic and repair procedures
7. Preventative maintenance procedures for maintaining APS performance parameters

Submit the manufacturer's warranty documentation as an informational submittal before installing the APS.

Submit a record of completed field tests, the APS' final configuration, audible sound level and threshold, and a list of all parameter settings.

### 86-5.03A(4) Quality Control and Assurance

#### 86-5.03A(4)(a) General

The APS must be compatible with the City of Goleta's controller assembly.

The power to the APS must be connected to the pedestrian signal's terminal blocks.

#### 86-5.03A(4)(b) Functional Testing

Perform 2 field tests on the APS: (1) when traffic is noisy during peak traffic hours and (2) when traffic is quiet during off-peak hours. Notify the Engineer 15 days before testing the APS.
86-5.03A(4)(c) Warranty
The APS must have a 2-year manufacturer's warranty against any defects or failures. The 2-year warranty period starts at Contract acceptance. Deliver a replacement within 10 days after you receive notification of a failed APS. The City of Goleta does not pay for the replacement. Deliver the replacement to the City of Goleta's Corporation Yard at:

6735 Hollister Ave,
Goleta, CA 93117

86-5.03A(4)(d) Training

Provide a minimum of 8 hours of training by a certified manufacturer's representative for up to 10 City employees selected by the Engineer. The training must include instruction in installing, programming, adjusting, calibrating, and maintaining the APS.

Furnish materials and equipment for the training.

86-5.03B Materials
The housing for the APS assembly must be made of corrosion-resistant material. Theftproof bolts used for mounting the APS housing to the standard must be stainless steel with a chromium content of 17 percent and a nickel content of 8 percent.

The color of metallic housing must match color no. 33538 of FED-STD-595.
The color of plastic housing must match color no. 17038, 27038, or 37038 of FED-STD-595.
The APS assembly must be rainproof and shockproof in any weather condition.
The APS assembly must include:

1. Pushbutton actuator with a minimum diameter of 2 inches. If a mechanical switch is used, it must have:
   1.1. Operating force of 3.5 lb
   1.2. Maximum pretravel of 5/64 inch
   1.3. Minimum overtravel of 1/32 inch
   1.4. Differential travel from 0.002 to 0.04 inch
2. Vibrotactile device on the pushbutton or on the arrow.
3. Enclosure with an ambient-sound-level-sensing microphone and weatherproof speaker. The enclosure must:
   3.1 Weigh less than 7 lb.
   3.2 Measure less than 16 by 6 by 5 inches.
   3.3 Fit the signal standard.
   3.4 Have a wiring hole with a diameter not exceeding 1-1/8 inches.
   3.5 Be attached to the pole with 2 screws with a diameter from 1/4 to 3/8 inch suitable for use in tapped holes. The clear space between any 2 holes in the post must be at least twice the diameter of the larger hole.
4. Pushbutton sign.

The APS speakers and electronic equipment must be installed inside the APS assembly's enclosure. The speaker grills must be located on the surface of the enclosure.

Speakers must not interfere with the housing or its mounting hardware.
The conductor cable between the APS assembly and the pedestrian signal head must be a no. 9, 20-conductor cable complying with MIL-W-16878D. The wiring must comply with section 13.02 of ITE publication *Equipment and Material Standards* chapter 2, "Vehicle Traffic Control Signal Heads," and be NEC rated for service at +105 degrees C.

The APS must:

1. Include a mechanism for enabling and disabling its operation.
2. Have electronic switches, a potentiometer, or a handheld device for controlling and programming the volume level and messaging. Deliver any handheld programming device to the Engineer.
3. Provide information using:
   2.1 Audible speech message that plays when the pushbutton is actuated. The message must include the name of the street to be crossed. The APS must have at least 5 audible message options. The Engineer selects the message. The message must have a percussive tone consisting of multiple frequencies with a dominant component of 880 Hz. If the tone is selected as the message, it must repeat 8 to 10 ticks per second.
   2.2. Pushbutton locator tone that clicks or beeps. The pushbutton must produce the locator tone at an interval of 1 tone per second. Each tone must have a maximum duration of 0.15 second. The tone volume must adjust in response to the ambient sound level and be audible up to 12 feet from the pushbutton or to the building line, whichever is less.
3. Have a pushbutton that remains functional during an APS failure.

For signalized intersections, the APS must:

1. Have a pushbutton that when actuated activates the pedestrian walk signal's timing during an APS failure.
2. Provide information using:
   2.1. Audible speech walk message. The message must be activated from the beginning of the walk interval and repeated for its duration. An example of the message is "Peachtree. Walk sign is on to cross Peachtree."
   2.2. Pushbutton information message that provides the name of the street to be crossed. The message must play when the pushbutton is actuated. An example of the message is "Wait to cross Howard at Grand. Wait."
3. Have a functional pushbutton that activates the pedestrian walk signal whenever actuated, even if the audible speech walk message, the pushbutton information message, the pushbutton locator tone, and the vibrating surface features are disabled.

**86-5.03C Construction**

Arrange to have a manufacturer's representative at the job site when the APS is installed, modified, connected, or reconnected. The APS must not interfere with the City of Goleta controller assembly, the signal installation on signal standards, the pedestrian signal heads, or the terminal compartment blocks. The APS electronic control equipment must reside inside the APS assembly and the standard pedestrian signal head.

You are responsible for the compatibility of the components and for making the necessary calibration adjustments to deliver the performance specified. Furnish the equipment and hardware, and then set up, calibrate, and verify the performance of the APS.

Point arrows on the pushbutton signs in the same direction as the corresponding crosswalk. Attach the sign to the APS assembly.
Upon successful installation of the APS, disable the APS function if it is not required immediately.

Do not install an APS on a standard smaller than Type 1.

86-5.03D  Payment

Not Used

Replace section 86-6.02 with:

86-6.02  LED LUMINAIRES
86-6.02A  General
86-6.02A(1)  Summary
Section 86-6.02 includes specifications for installing LED luminaires.

86-6.02A(2)  Definitions

CALiPER: Commercially Available LED Product Evaluation and Reporting. A U.S. DOE program that individually tests and provides unbiased information on the performance of commercially-available LED luminaires and lights.

correlated color temperature: Absolute temperature in kelvin of a blackbody whose chromaticity most nearly resembles that of the light source.

house side lumens: Lumens from a luminaire directed to light up areas between the fixture and the pole, such as sidewalks at intersection or areas off the shoulders on freeways.


junction temperature: Temperature of the electronic junction of the LED device. The junction temperature is critical in determining photometric performance, estimating operational life, and preventing catastrophic failure of the LED.

L70: Extrapolated life in hours of the luminaire when the luminous output depreciates 30 percent from initial values.

LM-79: Test method from the Illumination Engineering Society of North America specifying test conditions, measurements, and report format for testing solid state lighting devices, including LED luminaires.

LM-80: Test method from the Illumination Engineering Society of North America specifying test conditions, measurements, and report format for testing and estimating the long-term performance of LEDs for general lighting purposes.

National Voluntary Laboratory Accreditation Program (NVLAP): U.S. DOE program that accredits independent testing laboratories.

power factor: Ratio of the real power component to the complex power component.

street side lumens: Lumens from a luminaire directed to light up areas between the fixture and the roadway, such as traveled ways and freeway lanes.

surge protection device (SPD): Subsystem or component that protects the unit against short-duration voltage and current surges.
**ATTACHMENT H**

**RECTANGULAR RAPID FLASHING BEACONS (RRFB) AT CHAPEL / PEDESTRIAN HYBRID BEACON (PHB) AT KINGSTON**

**total harmonic distortion:** Ratio of the rms value of the sum of the squared individual harmonic amplitudes to the rms value of the fundamental frequency of a complex waveform.

**86-6.02A(3) Submittals**

Submit a sample luminaire to METS for testing after the manufacturer's testing is completed. Include the manufacturer's test data.

Product submittals must include:

1. LED luminaire checklist.
2. Product specification sheets, including:
   2.1. Maximum power in watts.
   2.2. Maximum designed junction temperature.
   2.3. Heat sink area in square inches.
   2.4. Designed junction to ambient thermal resistance calculation with thermal resistance components clearly defined.
   2.5. L70 in hours when extrapolated for the average nighttime operating temperature.
3. LM-79 and LM-80 compliant test reports from a CALiPER-qualified or NVLAP-approved testing laboratory for the specific model submitted.
5. Initial and depreciated isofootcandle diagrams showing the specified minimum illuminance for the particular application. The diagrams must be calibrated to feet and show a 40 by 40 foot grid. The diagrams must be calibrated to the mounting height specified for that particular application. The depreciated isofootcandle diagrams must be calculated at the minimum operational life.
7. Test report showing mechanical vibration test results as tested under California Test 611 or equal.
8. Data sheets from the LED manufacturer that include information on life expectancy based on junction temperature.
9. Data sheets from the power supply manufacturer that include life expectancy information.

Submit documentation of a production QA performed by the luminaire manufacturer that:

1. Ensures the minimum specified performance level
2. Includes a documented process for resolving problems

Submit the QA documentation as an informational submittal.

Submit the manufacturer’s warranty documentation as an informational submittal before installing LED luminaires.

**86-6.02A(4) Quality Control and Assurance**

**86-6.02A(4)(a) General**

The City of Goleta may test random samples of the luminaires under section 86-2.14A. The City of Goleta may tests luminaires under California Test 678 and may test any parameters specified in section 86-6.01.

Fit 1 sample luminaire with a thermistor or thermocouple temperature sensor. A temperature sensor must be mounted on the:

1. LED solder pad as close to the LED as possible
2. Power supply case
3. Light bar or modular system as close to the center of the module as possible

Other configurations must have at least 5 sensors per luminaire. The Engineer provides advice on sensor location. Thermocouples must be either Type K or C. Thermistors must be a negative-temperature-coefficient type with a nominal resistance of 20 kΩ. Use the appropriate thermocouple wire. The leads must be a minimum of 6 feet. Submit documentation with the test unit describing the type of sensor used.

Before performing any testing, energize the sample luminaires for a minimum of 24 hours at 100 percent on-time duty cycle and a temperature of +70 degrees F.

Depreciate the luminaire lighting's performance for the minimum operating life by using the LED manufacturer's data or the data from the LM-80 test report, whichever results in a higher lumen depreciation.

Failure of the luminaire that renders the unit noncompliant with section 86-6.02 specifications is cause for rejection.

86-6.02A(4)(b) Warranty
Provide a 7-year manufacturer's warranty against any defects or failures. The warranty period begins on the date of Contract acceptance. Furnish a replacement luminaire within 10 days after receipt of the failed luminaire. The City of Goleta does not pay for the replacement. Deliver replacement luminaires to the City of Goleta's Corporation Yard at:

6735 Hollister Ave,
Goleta, CA 93117

86-6.02B Materials
86-6.02B(1) General
The luminaire must include an assembly that uses LEDs as the light source. The assembly must include a housing, an LED array, and an electronic driver. The luminaire must:

1. Be UL listed under UL 1598 for luminaires in wet locations or an equivalent standard from a recognized testing laboratory
2. Have a minimum operational life of 63,000 hours
3. Operate at an average operating time of 11.5 hours per night
4. Be designed to operate at an average nighttime operating temperature of 70 degrees F
5. Have an operating temperature range from -40 to +130 degrees F
6. Be defined by the following applications:

<table>
<thead>
<tr>
<th>Application</th>
<th>Replaces</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadway 1</td>
<td>200 W high-pressure sodium luminaire mounted at 34 ft</td>
</tr>
<tr>
<td>Roadway 2</td>
<td>310 W high-pressure sodium luminaire mounted at 40 ft</td>
</tr>
<tr>
<td>Roadway 3</td>
<td>310 W high-pressure sodium luminaire mounted at 40 ft with back side control</td>
</tr>
<tr>
<td>Roadway 4</td>
<td>400 W high-pressure sodium luminaire mounted at 40 ft</td>
</tr>
</tbody>
</table>
The individual LEDs must be connected such that a catastrophic loss or a failure of 1 LED does not result in the loss of more than 20 percent of the luminous output of the luminaire.

**86-6.02B(2) Luminaire Identification**

Each luminaire must have the following identification permanently marked inside the unit and outside of its packaging box:

1. Manufacturer's name
2. Trademark
3. Model number
4. Serial number
5. Month and year of manufacture
6. Lot number
7. Contract number
8. Rated voltage
9. Rated wattage
10. Rated power in VA

**86-6.02B(3) Electrical Requirements**

The luminaire must operate from a 60 ± 3 Hz AC power source. The fluctuations of line voltage must have no visible effect on the luminous output. The operating voltage may range from 120 to 480 V(ac). The luminaire must operate over the entire voltage range or the voltage range must be selected from either of the following options:

1. Luminaire must operate over a voltage range of 95 to 277 V(ac). The operating voltages for this option are 120 V(ac) and 240 V(ac).
2. Luminaire must operate over a voltage range of 347 to 480 V(ac). The operating voltage for this option is 480 V(ac).

The power factor of the luminaire must be 0.90 or greater. The total harmonic distortion, current, and voltage induced into an AC power line by a luminaire must not exceed 20 percent. The maximum power consumption allowed for the luminaire must be as shown in the following table:

<table>
<thead>
<tr>
<th>Application</th>
<th>Maximum consumption (watts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roadway 1</td>
<td>165</td>
</tr>
<tr>
<td>Roadway 2</td>
<td>235</td>
</tr>
<tr>
<td>Roadway 3</td>
<td>235</td>
</tr>
<tr>
<td>Roadway 4</td>
<td>300</td>
</tr>
</tbody>
</table>

**86-6.02B(4) Surge Suppression and Electromagnetic Interference**

The luminaire's on-board circuitry must include an SPD to withstand high repetition noise transients caused by utility line switching, nearby lightning strikes, and other interferences. The SPD must protect the luminaire from damage and failure due to transient voltages and currents as defined in Tables 1 and 4 of ANSI/IEEE C64.41.2 for location category C-High. The SPD must comply with UL 1449. The SPD must be tested under ANSI/IEEE C62.45 based on ANSI/IEEE C62.41.2 definitions for standard and optional waveforms for location category C-High.

The luminaires and associated on-board circuitry must comply with the Class A emission limits under 47 CFR 15, subpart B, for the emission of electronic noise.
86-6.02B(5) Compatibility
The luminaire must be operationally compatible with currently-used lighting control systems and photoelectric controls.

86-6.02B(6) Photometric Requirements
The luminaire must maintain a minimum illuminance level throughout the minimum operating life. The L70 of the luminaire must be the minimum operating life or greater. The measurements
must be calibrated to standard photopic calibrations. The minimum maintained illuminance values measured at a point must be as shown in the following table:

<table>
<thead>
<tr>
<th>Application</th>
<th>Mounting height (ft)</th>
<th>Minimum maintained illuminance (fc)</th>
<th>Light pattern figure</th>
</tr>
</thead>
</table>
| Roadway 1   | 34                   | 0.15                                | Pattern defined by an ellipse with the equation: $\frac{x^2}{(82)^2} + \frac{(y - 20)^2}{(52)^2} = 1$  
where:  
$x =$ direction longitudinal to the roadway  
y = direction transverse to the roadway and the luminaire is offset from the center of the pattern by 20 feet to the house side of the pattern. |
| Roadway 2   | 40                   | 0.2                                 | Pattern defined by an ellipse with the equation: $\frac{x^2}{(82)^2} + \frac{(y - 20)^2}{(52)^2} = 1$  
where:  
$x =$ direction longitudinal to the roadway  
y = direction transverse to the roadway and the luminaire is offset from the center of the pattern by 20 feet to the house side of the pattern. |
| Roadway 3   | 40                   | 0.2                                 | Pattern defined by an ellipse with the equation: $\frac{x^2}{(82)^2} + \frac{(y - 20)^2}{(52)^2} = 1$  
for $y \geq 0$ (street side)  
where:  
$x =$ direction longitudinal to the roadway  
y = direction transverse to the roadway and the luminaire is offset from the center of the pattern by 20 feet to the house side of the pattern. |
| Roadway 4   | 40                   | 0.2                                 | Pattern defined by an ellipse with the equation: $\frac{x^2}{(92)^2} + \frac{(y - 23)^2}{(55)^2} = 1$  
where:  
$x =$ direction longitudinal to the roadway  
y = direction transverse to the roadway and the luminaire is offset from the center of the pattern by 23 feet to the house side of the pattern. |

The luminaire must have a correlated color temperature range from 3,500 to 6,500 K. The color rendering index must be 65 or greater.

The luminaire must not allow more than:

1. 10 percent of the rated lumens to project above 80 degrees from vertical
2. 2.5 percent of the rated lumens to project above 90 degrees from vertical

86-6.02B(7) Thermal Management

The passive thermal management of the heat generated by the LEDs must have enough capacity to ensure proper operation of the luminaire over the minimum operation life. The LED maximum junction temperature for the minimum operation life must not exceed 221 degrees F.

The junction-to-ambient thermal resistance must be 95 degrees F per watt or less. The use of fans or other mechanical devices is not allowed. The heat sink material must be aluminum or other material of equal or lower thermal resistance.

The luminaire must contain circuitry that automatically reduces the power to the LEDs so the maximum junction temperature is not exceeded when the ambient outside temperature is 100 degrees F or greater.

86-6.02B(8) Physical and Mechanical Requirements

The luminaire must:

1. Be a single, self-contained device not requiring job-site assembly for installation
2. Have an integral power supply
3. Weigh no more than 35 lb
4. Have a maximum-effective projected area of 1.4 sq ft when viewed from either side or end
5. Have a housing color that matches color number from 26152 to 26440, from 36231 to 36375, or 36440 of FED-STD-595.

The housing must be fabricated from materials designed to withstand a 3,000-hour salt spray test under ASTM B 117. All aluminum used in housings and brackets must be made of a marine-grade alloy with less than 0.2 percent copper. All exposed aluminum must be anodized.

Each refractor or lens must be made from UV-inhibited high-impact plastic such as acrylic or polycarbonate or heat- and impact-resistant glass and be resistant to scratching. Polymeric materials except lenses of enclosures containing either the power supply or electronic components of the luminaire must be made of UL94VO flame retardant materials. The housing’s paint must comply with section 86-2.16. A chromate conversion undercoating must be used underneath a thermoplastic polyester powder coat.

Provide each housing with a slip fitter capable of mounting on a 2-inch pipe tenon. This slip fitter must fit on mast arms with outside diameters from 1-5/8 to 2-3/8 inches. The slip fitter must be capable of being adjusted a minimum of ±5 degrees from the axis of the tenon in a minimum of 5 steps: +5, +2.5, 0, -2.5, -5. The clamping brackets of the slip fitter must not bottom out on the housing bosses when adjusted within the designed angular range. No part of the slip fitter's mounting brackets must develop a permanent set in excess of 1/32 inch when the bracket's two or four 3/8-inch-diameter cap screws are tightened to 10 ft-lb. Two sets of cap screws may be furnished to allow the slip fitter to be mounted on the pipe tenon in the acceptable range without the cap screws bottoming out in the threaded holes. The cap screws and the clamping brackets must be made of corrosion-resistant materials or treated to prevent galvanic reactions and be compatible with the luminaire housing and the mast arm.

The LED luminaire must be assembled and manufactured such that its internal components are adequately supported to withstand mechanical shock and vibration from high winds and other sources. When tested under California Test 611, the luminaire to be mounted horizontally on the
mast arm must be capable of withstanding the following cyclic loading for a minimum of 2 million cycles without failure of any luminaire part:

### Cyclic Loading

<table>
<thead>
<tr>
<th>Plane</th>
<th>Power supply</th>
<th>Minimum peak acceleration level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical</td>
<td>Installed</td>
<td>3.0 g peak-to-peak sinusoidal loading (same as 1.5 g peak)</td>
</tr>
<tr>
<td>Horizontal</td>
<td>Installed</td>
<td>1.5 g peak-to-peak sinusoidal loading (same as 0.75 g peak)</td>
</tr>
</tbody>
</table>

*aPerpendicular to the direction of the mast arm*

The housing must be designed to prevent the buildup of water on top of the housing. Exposed heat sink fins must be oriented to allow water to freely run off of the luminaire and carry dust and other accumulated debris away from the unit. The optical assembly of the luminaire must be protected against dust and moisture intrusion to at least an ANSI/IEC rating of IP66. The power supply enclosure must be protected to at least an ANSI/IEC rating of IP43.

Furnish each mounted luminaire with an ANSI C136.10-compliant, locking-type photocontrol receptacle and a raintight shorting cap. The receptacle must comply with section 86-6.11A.

When the components are mounted on a down-opening door, the door must be hinged and secured to the luminaire housing separately from the refractor or flat lens frame. The door must be secured to the housing such that accidental opening is prevented. A safety cable must mechanically connect the door to the housing.

Field wires connected to the luminaire must terminate on a barrier-type terminal block secured to the housing. The terminal screws must be captive and equipped with wire grips for conductors up to no. 6. Each terminal position must be clearly identified.

The power supply must be rated for outdoor operation and have at least an ANSI/IEC rating of IP65.

The power supply must be rated for a minimum operational life equal to the minimum operational life of the luminaire or greater.

The power supply case temperature must have a self rise of 77 degrees F or less above ambient temperature in free air with no additional heat sinks.

The power supply must have 2 leads to accept standard 0-10 V(dc). The dimming control must be compatible with IEC 60929. If the control leads are open or the analog control signal is lost, the circuit must default to 100-percent power.

Conductors and terminals must be identified.

### 86-6.02C Construction

Not Used

### 86-6.02D Payment

Not Used
**86-6.14 BLANK-OUT SIGNS**

**86-6.14A General**

**86-6.14A(1) Summary**
This work includes installing a R3-1 blank-out sign.

**86-6.14A(2) Definitions**

**ASTM:** (American Society for Testing and Materials) An international organization providing uniform standards for products, materials, and testing which establish an acceptable quality, reliability, and tolerances used in various industries.

**LED:** (light emitting diode) An electronic device (diode) emitting light when a voltage is applied.

**LED module:** An assembly of the blank-out sign consisting of the LED bulb, electronic driver for the LED bulb, power inverter (alternating current to direct current) and step-down transformer.

**NEMA:** (National Electrical Manufacturers Association) A manufacturing association providing technical standards, policies, regulatory advise to the legislature, the electrical equipment industry and the medical imaging industry.

**Special tools:** Tools that are not readily available in a local hardware store or requires special order.

**86-6.14A(3) Quality Control and Assurance**

**86-6.14A(3)(a) Submittals**
You must submit a work plan with the manufacturer's data sheet as an action submittal 15 days prior to installation. The manufacturer's data sheet must include parts list, installation guide, and maintenance guide.

You must submit all necessary documents as an informational submittal for proof-of-warranty before installation.

**86-6.14A(3)(b) Warranty**
The manufacturer must provide a written warranty against defects in material and workmanship of the blank-out sign for a minimum period of 12 months after installation of blank-out sign. The replacement blank-out sign must be provided within 15 days after receipt of failed blank-out sign at no cost to the City of Goleta, except the cost of shipping the failed blank-out sign.

You must submit to the manufacturer all necessary warranty forms to initiate the warranty period. The replacement blank-out sign must be delivered to City of Goleta at 6735 Hollister Ave, Goleta, CA 93117.

**86-6.14A(3)(c) Department Acceptance**
Before shipping blank-out sign to the job site, submit the following to the City of Goleta:

1. The delivery form must include contact information
2. A copy of this specification
3. A copy of the manufacturer's data sheet

Delays resulting from submittal of non-compliant material do not relieve you from executing the contract within the allotted time. Non-compliant material will be rejected. You must resubmit new blank-out sign for retesting and pick up the failed unit within one week of notification. You must
provide new blank-out sign and allow a minimum of 30 days for the retest. You must pay for all shipping and handling costs related to testing and retesting. Delays resulting from resubmittal and retesting are your responsibility and no extra time will be allowed.

86-6.14B Materials
86-6.14B(1) General
The operating temperature for all electronic components including the LED bulb must be between 40 and 165 degree F. You must not use forced-air mechanism to cool the inside of the sign. Ventilation louvers with removable filter may be allowed.

Lens and enclosure material must comply with the ASTM specifications for that material.

The enclosure of the blank-out sign, except lenses, must be made of UL94VO flame-retardant material.

86-6.14B(2) Light sources
The light source of the blank-out sign must be from LED bulbs forming a symbol with the following characteristics:

1. Be weather tight and connect directly to electrical wiring
2. Be capable of replacing each individual LED bulb
3. Have manufacturer's name, trademark, model number, serial number, lot number, month and year of manufacture, and required operating characteristics, including rated voltage, power consumption, and volt-ampere, permanently marked on the back of the module
4. Be high intensity AlInGaP or InGaN technology
5. Be rated for 100,000 hours of continuous operation
6. Have an average luminous intensity of at least 1,547 foot-lambert throughout the operational lifecycle and operating temperature range.
7. The arrow must be lunar white with measured chromatically coordinates as follows:
   \[ x: \text{not less than } 0.270, \text{nor greater than } 0.330 \]
   \[ y: \text{not less than } 0.272, \text{nor greater than } 0.355 \]
8. The color of the other symbols must be as follows:

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Color</th>
<th>Wavelength</th>
</tr>
</thead>
<tbody>
<tr>
<td>circle</td>
<td>red</td>
<td>700-635 nm</td>
</tr>
<tr>
<td>slash</td>
<td>red</td>
<td>700-635 nm</td>
</tr>
</tbody>
</table>

The blank-out sign must have an operational lifecycle rating of 48 months. During the operational lifecycle, the LED module must meet all parameters of this specification.

Each individual LED bulb must be wired so a catastrophic loss or failure of one LED bulb will result in a loss of not more than 5 percent of the blank-out sign's light output. The failure of an individual LED bulb in a string must not result in the loss of an entire string or other indication.

The blank-out sign must:

1. Operate at a frequency of 60 ± 3 Hz, over a voltage range from 95 to 135 V(ac), without perceptible flicker to the unaided eye. Fluctuations of line voltage must have no visible effect on luminous intensity of the indications. The rated voltage must be 120 V(ac).
2. Be compatible with controller assembly, including solid-state load switch, flasher, and conflict monitor.

The blank-out sign must provide a power factor of 0.90 or greater.

When power is applied to blank-out sign, light emission must occur within 1 second.

Internal components must be adequately supported to withstand mechanical shock and vibration from high winds and other sources.

The drive current will be limited to about 75 percent of the LED bulb’s rated maximum.

The blank-out sign must be visible at a distance of 2,100 feet.

86-6.14B(3) Dimmer
The blank-out sign must have a dimming feature. The dimmer is a two level design (bright and dim) allowing the LED bulb to normally operate at full intensity. When the dimmer is active, the power to the LED bulb is reduced by approximately 50% which reduces the intensity. The dimmer will incorporate a failsafe feature where the LED bulb will continue operating at its full intensity in the event of a dimmer relay or resistor failure. The dimmer will have the capability to be controlled locally by an optional photoelectric unit mounted on the enclosure, or by an external 120 V(ac) signal.

86-6.14B(4) Lenses
The lens must be fabricated from a nominal 0.120 inch thick matte finish polycarbonate polymer.

86-6.14B(5) Enclosures
The enclosure must be a NEMA 3R. The enclosure must be constructed from aluminum. The enclosure must have a minimum thickness of 0.090 inches. The side of the enclosure where the mounting bracket is located must have a 0.125 inches thick reinforcement plate welded on the inside of the enclosure for additional strength when mounting the sign. This reinforcement area must withstand loads greater than 6,600 lbs. All exposed seams must be continuously welded using Gas Metal Arc Welding (also known as GMAW) or Gas Tungsten Arc Welding (also known as GTAW) to ensure a watertight seal. Weep holes must be incorporated in the bottom of the enclosure to prevent buildup of condensation. Weep holes must be of a design to prevent the infiltration of insects or debris. The viewable area must meet the requirement in CAMUTCD. All exposed seams must be sealed to be watertight. The enclosure must use a neoprene gasket strip to ensure a watertight seal between the door and the lens. The visor must be retained with #10 stainless steel hardware.

86-6.14B(6) Finishes
The standard finish for the NEMA 3R enclosure is powder coated satin black on all external surface. The black mounting board for the LED bulbs must be finished in a flat black powder coat. The inside surface of the visor must be powder coated flat black and the outside surface of the visor must be powder coated the selected color of the enclosure body.

86-6.14B(7) Hardware
All hardware must be stainless steel to prevent corrosion.

The door latch and keeper must be turn-lock style or similar locking mechanism which does not require tools to open the enclosure.

The hinge must be stainless steel and a full-length continuous piano hinge style construction.
86-6.14B(8) Mounting brackets
Mounting bracket must support the weight of the blank-out sign. The mounting bracket must be constructed of ductile iron, galvanized steel, bronze, aluminum Type AC-84B, no. 380 or manufacturer's recommended type of material.

86-6.14B(10) Conduit and conductors
The conduit and conductors must comply with Section 86-2.

86-6.14B(11) Terminal blocks
The terminal block may be light duty and must comply with Section 86-3.04D(4) except a minimum of 6 positions are required.

86-6.14C Construction
You cannot begin work until the work plan, warranty submittal, and departmental acceptance are approved.

You are not allowed to use special tools to install the blank-out sign on the Type 1 standard.

You must install the mounting bracket as specified in Section 86-4.04, paragraph 2, 5, 6 and 7.

You must install a terminal block in the back panel for ease of accessibility and must be used for field connection.

The minimum horizontal clearance between any part of the blank-out sign and the face of curb is 24 inches.

You must install the blank-out sign as shown.

You must install the conduit and conductors as specified in Section 86-1 and in Section 86-2. You must wire the conductors in the controller cabinets as specified in Section 86-3.04C and as shown.

86-6.14D Payment
Not used