SALINAS MUNICIPAL AIRPORT
SPECIFICATIONS
FOR
RUNWAY 13-31 AND RUNWAY 8-26 REHABILITATION
SALINAS MUNICIPAL AIRPORT IMPROVEMENTS
AIP No. 3-06-0206-27
CITY PROJECT NO. 9275

CITY OF SALINAS
200 Lincoln Avenue
Salinas, CA 93901

MARCH 2018

MEMBERS OF THE CITY COUNCIL

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S. McShane

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James E. Sandoval, P.E.	Public Works Assistant Director/ City Engineer
Brett J. Godown	Airport Manager
Frank Aguayo, P.E.	Senior Civil Engineer
Kevin Flynn	Project Manager-KHA

For use in conjunction with DESIGN STANDARDS, STANDARD SPECIFICATIONS AND STANDARD PLANS, 2008 Edition, City of Salinas Public Works Department.

APPROVED FOR CONSTRUCTION

JAMES E. SANDOVAL, P.E. **DATE**
PUBLIC WORKS ASSISTANT
DIRECTOR/CITY ENGINEER
RCE 55160 EXPIRES 06-30-2018

DESIGNED BY:

REGISTERED PROFESSIONAL ENGINEER
ROBERT J. HAMILTON
C 76981
CIVIL
STATE OF CALIFORNIA

3/1/18

ROBERT J. HAMILTON, P.E. **DATE**

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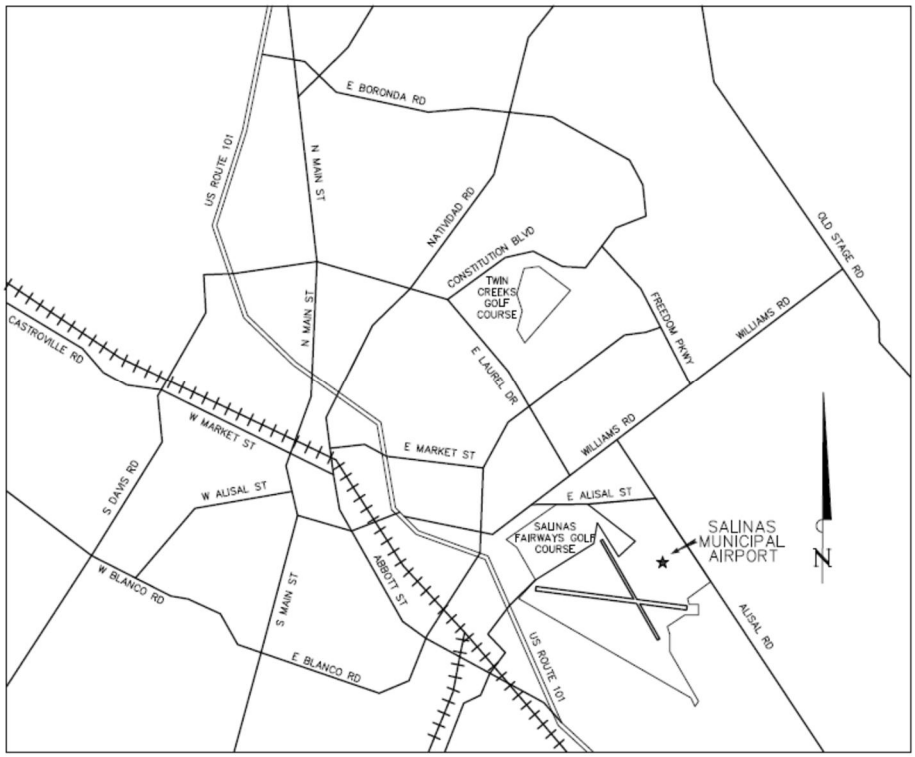

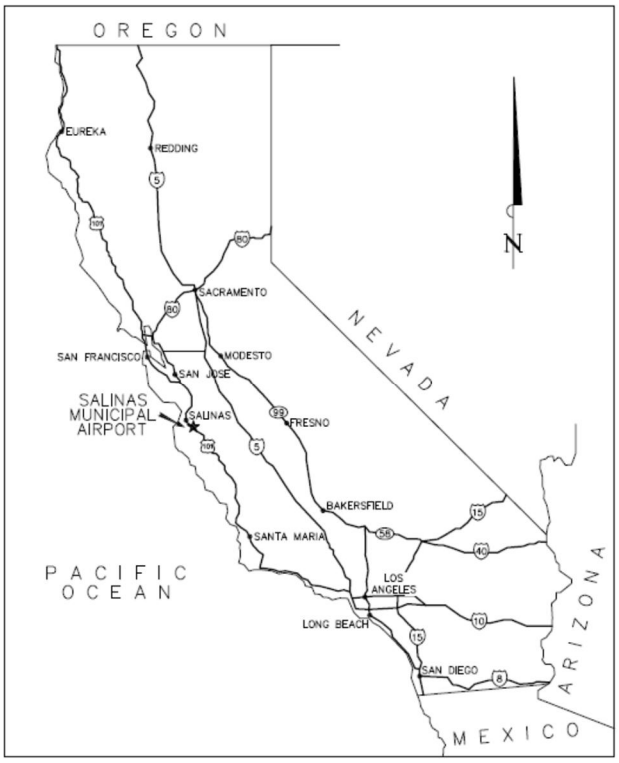

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NOTICE TO BIDDERS

Notice is hereby given that the City Council of the City of Salinas, County of Monterey, State of California, hereby invites sealed Proposals of Bids for the following work to be done according to Plans and Specifications on file, adopted therefore, to wit:

RUNWAY 13-31 AND RUNWAY 8-26 REHABILITATION
AIP No. 3-06-0206-27
CITY PROJECT NO. 9275

Sealed Proposals for the above-mentioned work shall be received at the office of the City Clerk, City Hall, Salinas, California, until **2:00 pm**, in which the City Clerk's Office shall determine if Bid submittal time had expired by confirming the official time as shown on the City's computer system, on ***April 24, 2018*** at which time they shall be publicly opened and read aloud at **2:00 pm** in the **Rotunda Conference Room** of the Salinas City Hall at 200 Lincoln Avenue, Salinas, California. **It is the Bidder's responsibility to ensure that said Bid is received by the City Clerk, at the City Clerk's Office, prior to the aforementioned designated date and time.**

Disability-related modification or accommodation, including auxiliary aids or services, may be requested by any person with a disability who requires a modification or accommodation in order to participate in any meetings for this project. Requests should be referred to the City Clerk's Office at 200 Lincoln Avenue, Salinas, 831-758-7381, as soon as possible but by no later than 5 p.m. of the last business day prior to the scheduled meeting. Hearing impaired or TTY/TDD text telephone users may contact the City by dialing 711 for the California Relay Service (CRS) or by telephoning any other service providers' CRS telephone number.

There will be a non-mandatory Pre-Bid meeting at 10:00 am on April 10, 2018 at the Airport Terminal Building, City of Salinas Municipal Airport, 30 Mortensen Avenue, Salinas, CA. This meeting is to inform Bidders of required Disadvantaged Business Enterprise (DBE) participation, Insurance requirements, and subcontracting. Also, the Contractors may ask questions regarding the project, scope of work, plans and specifications. Subsequent to the meeting a tour of the Project site will be made for those wishing to attend.

In accordance with California Public Contract Code 20103.5 when federal funds are involved in local agency contracts, ***no bid shall be invalidated by the failure of the bidder to be licensed in California at the time of bid opening. However, at the time of award the selected contractor shall be properly licensed in accordance with laws of the State and the City of Salinas.*** Contractor shall possess a Type "A" license prior to award of Contract or other license qualifying the bidder to bid as a prime Contractor, prior to award of Contract as approved by Council.

DISADVANTAGED BUSINESS ENTERPRISE (DBE): The requirements of 49 CFR Part 26, Regulations of the U.S. Department of Transportation, apply to this contract. It is the policy of the City of Salinas to practice nondiscrimination based on race, color, sex or national origin in the award or performance of this contract. All firms qualifying under this solicitation are encouraged to submit bids/proposals. Award of this contract will be conditioned upon satisfying the requirements of this bid specification. These requirements apply to all bidders, including those who qualify as a Disadvantaged Business Enterprise.

The City of Salinas has established a DBE contract goal for this contract. The Bidder/Offeror shall make good faith efforts, as defined in Appendix A, 49 CFR Part 26, to subcontract 11.35% of the dollar value of the prime contract to certified DBE firms as defined in 49 CFR Part 26.

All bidders shall submit the following information with their proposal on the forms provided:

(1) The names and addresses of DBE firms that will participate in the contract;
(2) A description of the work that each DBE firm will perform;
(3) The dollar amount of the participation of each DBE firm listed under (1)
(4) Written statement from Bidder or Offeror that attests their commitment to use the DBE firm(s) listed under (1) to meet the Owner's project goal; and
(5) If Bidder or Offeror cannot meet the advertised project DBE goal, evidence of good faith efforts undertaken by the Bidder or Offeror as described in appendix A to 49 CFR part 26.

The City of Salinas reserves the right to reject any or all Proposals and to waive any informality in Proposals received. **By submitting a bid, it is assumed that the Contractor has inspected the site and the bid submitted reflects that the Contractor is satisfied as to the existing conditions, said conditions being reflected in the bid.**

Each bid shall be in accordance with the Plans and Specifications adopted therefore, submitted on the Proposal form furnished and accompanied by a certified or cashier's check or bidder's bond made payable to the City of Salinas, for an amount equal to at least ***five percent (5%)*** of that amount of the bid, such guaranty to be forfeited should the bidder to whom the Contract is awarded fail to enter into the Contract within ***fifteen (15)*** days after notification of the award of Contract to the bidder and shall diligently prosecute the work to completion on or before the expiration of **seventy-five (75) calendar days** for the overall project ***inclusive of all Additive Alternatives,*** after said notification.

In order to facilitate the Salinas Air Show held during September 2018; the work shall be scheduled so that construction activities will not be permitted from September 26th 2018 through October 3rd 2018, inclusive.

For any moneys earned by the Contractor and withheld by the City of Salinas to ensure the performance of the Contract, the Contractor may, at his/her request and expense, substitute securities equivalent to the amount withheld in the form and manner and subject to the conditions provided in Section 22300 of the Public Contracts Code of the State of California, and the City Disadvantaged Business Enterprise (DBE) Program, prompt payment provisions.

A contractor or subcontractor shall not be qualified to bid on, be listed in a bid proposal, subject to the requirements of Section 4104 of the Public Contract Code, or engage in the performance of any contract for public work, as defined in this chapter, unless currently registered and qualified to perform public work pursuant to Section 1725.5 . It is not a violation of this section for an unregistered contractor to submit a bid that is authorized by Section 7029.1 of the Business and Professions Code or by Section 10164 or 20103.5 of the Public Contract Code, provided the contractor is registered to perform public work pursuant to Section 1725.5 at the time the contract is awarded.

All Contractors (prime and subs) must possess and maintain such registration with the Department of Industrial Relations (DIR) in order to be awarded and to perform work on public works projects. The following is the link to DIR's Contractor Registration searchable database: https://efiling.dir.ca.gov/PWCR/Search.action

A bid shall not be accepted nor any contractor or subcontract entered into without proof of the contractor or subcontractor's current registration to perform public work pursuant to Labor Code Section 1771.1.

This project is subject to compliance monitoring and enforcement by the Department of Industrial Relations.

Additionally, all contractors and subcontractors must furnish certified payroll records directly to the Labor Commissioner (aka Division of Labor Standards Enforcement) on a weekly basis and in the format prescribed by the DIR, which may include electronic submission.

Bidders will be responsible for printing or obtaining on their own accord, hard copies of the Bid Proposal Package, Plans, Specifications, Prospective Bidders List, and any addenda and notifications for their use in submitting a Bid.

Bidders are required to register as a Prospective Bidder for this project on the Planet Bids Vendor Portal website when submitting a Bid and shall maintain their status as "Bidder" throughout the Bid process; Bidders that fail to do so shall be disqualified. Prospective Bidders are permitted to access and download all information and documents available for the project on the Planet Bids website. Only registered **Prospective Bidders** for the particular City of Salinas project will automatically receive updates, notifications, and addenda when issued, however, it is the Bidders' responsibility to the ensure that the forgoing have been received.

Bidders can register as a Prospective Bidder in two ways: (1) Bidders are encouraged to register for **FREE** through **Planet Bids Vendor Portal for the City of Salinas** at https://www.planetbids.com/portal/portal.cfm?CompanyID=22949,
but (2) may also register to Planet Bids' website directly for a **FEE** at https://vendorline.com/register
and sign up for City of Salinas' bid opportunities. The link "View Current Construction Projects Out for Bid" on the City of Salinas website listed below will take you to the registration page on the Planet Bids Vendor Portal for the City of Salinas website:
https://www.cityofsalinas.org/our-city-services/public-works/engineering/construction-projects

All Plans and Specifications are available for viewing at the Public Works Department Office at City Hall and available for download on PlanetBids through the City of Salinas website,
https://www.cityofsalinas.org/our-city-services/public-works/engineering/construction-projects

For assistance in downloading the documents, contact Planet Bids online or at 818-992-1771.

All questions regarding this project shall be submitted to the City of Salinas through the project page on the Planet Bids website, 9 calendar days prior to bid opening date. Questions received after the date stated here shall not be answered. All registered Prospective Bidders for this project will receive an email notification once a response to a question has been posted on the Planet Bids web site.

STANDARD SPECIFICATIONS, DESIGN STANDARDS AND STANDARD PLANS, City of Salinas, Development and Engineering Services Department, 2008 Edition, may be purchased from the Development and Engineering Services Department by payment of **$45.00** (tax included) per set, or may be purchased by mail order for **$53.00** (tax, shipping, and handling included); or may be downloaded on the City of Salinas website at no charge at: **https://www.cityofsalinas.org/our-city-services/public-works** under the 'Public Works Helpful Documents' heading**.**

ENGINEER'S ESTIMATE OF QUANTITIES

BASE BID

Item No.	SPEC No.	DESCRIPTION	UNIT	QUANTITY
1	GP-105-2.1	MOBILIZATION\DEMOBILIZATION (5% MAX OF BASE BID)	LS	1

Item No.	SPEC No.	DESCRIPTION	UNIT	QUANTITY
2	P-101-5.2	PAINT REMOVAL	SF	101,700
3	P-110-3.1	CONTRACTOR QUALITY CON-TROL (2% MAX OF BASE BID)	LS	1
4	P-110-3.2	CONSTRUCTION SURVEY AND STAKING	LS	1
5	P-148-4.1	AIRFIELD CONSTRUCTION AREA CONTROL	LS	1
6	P-148-4.2	SWEEPERS AND FOD CONTROL	LS	1
7	P-156-5.1	PREPARE AND IMPLEMENT THE BEST MANAGENEMT PLAN AND MEASURES	LS	1
8	P-411-5.1	HOT POURED CRACK SEALING	LF	49,200
9	P-608-8.1	EMULSIFIED ASPHALT SEAL COAT (WITH AGGREGATE & CFME FRICTION TESTING)	SY	102,000
10	P-620-5.1	RUNWAY AND TAXIWAY PAINT-ING	SF	101,700
11	P-620-5.2	TEMPORARY MARKING	SF	57,922

ADDITIVE ALTERNATIVE No. 1

Item No.	SPEC No.	DESCRIPTION	UNIT	QUANTITY
12	GP-105-2.1	MOBILIZATION\DEMOBILIZATION (5% MAX OF ADD ALT NO. 1)	LS	1
13	P-101-5.2	PAINT REMOVAL	SF	(710)
14	P-110-3.1	CONTRACTOR'S QUALITY CON-TROL (2% MAX OF ADD ALT NO. 1)	LS	1
15	P-120-4.1	SAW CUT	LF	500
16	P-152-4.1	UNCLASSIFIED EXCAVTION	CY	560
17	P-153-6.1	CONTROLLED LOW-STRENGTH MATERIAL	CY	560

Item No.	SPEC No.	DESCRIPTION	UNIT	QUANTITY
18	P-401-8.1a	BITUMINOUS SURFACE COURSE	TON	480
19	P-603-5.1	BITUMINOUS TACK COAT	GAL	130
20	P-605-5.1	ASPHALT COLD JOINT ADHESIVE	LF	405
21	FIXED PRICE	UTILITY INVESTIGATION	AL	1

ADDITIVE ALTERNATIVE No. 2

Item No.	SPEC No.	DESCRIPTION	UNIT	QUANTITY
22	GP-105-2.1	MOBILIZATION\DEMOBILIZATION (5% MAX OF ADD ALT NO. 2)	LS	1
23	P-101-5.2	PAINT REMOVAL	SF	(700)
24	P-101-5.3	COLD MILLING, 0-3 INCHES	SY	1,460
25	P-110-3.1	CONTRACTOR'S QUALITY CON-TROL (2% MAX OF ADD ALT NO. 2)	LS	1
26	P-120-4.1	SAW CUT	LF	425
27	P-401-8.1a	BITUMINOUS SURFACE COURSE	TON	230
28	P-603-5.1	BITUMINOUS TACK COAT	GAL	220
29	P-605-5.1	ASPHALT COLD JOINT ADHESIVE	LF	425
30	P-608-8.1	EMULSIFIED ASPHALT SEAL COAT (WITH AGGREGATE & CFME FRICTION TESTING)	SY	(1,460)

ADDITIVE ALTERNATIVE No. 3

Item No.	SPEC No.	DESCRIPTION	UNIT	QUANTITY
31	GP-105-2.1	MOBILIZATION\DEMOBILIZATION (5% MAX OF ADD ALT NO. 3)	LS	1
32	P-101-5.2	PAINT REMOVAL	SF	121,100

Item No.	SPEC No.	DESCRIPTION	UNIT	QUANTITY
33	P-110-3.1	CONTRACTOR QUALITY CONTROL (2% MAX OF ADD ALT NO. 3)	LS	1
34	P-110-3.2	CONSTRUCTION SURVEY AND STAKING	LS	1
35	P-148-4.1	AIRFIELD CONSTRUCTION AREA CONTROL	LS	1
36	P-148-4.2	SWEEPERS AND FOD CONTROL	LS	1
37	P-156-5.1	PREPARE AND IMPLEMENT THE BEST MANAGENEMT PLAN AND MEASURES	LS	1
38	P-411-5.1	HOT POURED CRACK SEALING	LF	57,500
39	P-608-8.1	EMULSIFIED ASPHALT SEAL COAT (WITH AGGREGATE & CFME FRICTION TESTING)	SY	116,400
40	P-620-5.1	RUNWAY AND TAXIWAY PAINTING	SF	107,100
41	P-620-5.2	TEMPORARY MARKING	SF	58,300

ADDITIVE ALTERNATIVE No. 4

Item No.	SPEC No.	DESCRIPTION	UNIT	QUANTITY
42	GP-105-2.1	MOBILIZATION\DEMOBILIZATION (5% MAX OF ADD ALT NO. 4)	LS	1
43	P-101-5.2	PAINT REMOVAL	SF	(4,111)
44	P-101-5.3	COLD MILLING, 0-3 INCHES	SY	6,150
45	P-110-3.1	CONTRACTOR'S QUALITY CONTROL (2% MAX OF ADD ALT NO. 4)	LS	1
46	P-120-4.1	SAW CUT	LF	1,350
47	P-208-5.1	PROCESSED MISCELLANEOUS BASE	SY	725
48	P-401-8.1a	BITUMINOUS SURFACE COURSE	TON	990

Item No.	SPEC No.	DESCRIPTION	UNIT	QUANTITY
49	P-602-5.1	BITUMINOUS PRIME COAT	GAL	915
50	P-603-5.1	BITUMINOUS TACK COAT	GAL	930
51	P-605-5.1	ASPHALT COLD JOINT ADHESIVE	LF	1,350
52	P-608-8.1	EMULSIFIED ASPHALT SEAL COAT (WITH AGGREGATE & CFME FRICTION TESTING)	SY	(6,150)

NOTE: For Bid package to be VALID: (1) the Bidder must submit all completely executed and signed Federal and City of Salinas forms; (2) the Contractor and all Subcontractors shall have valid, current and active Contractor's license(s) for the classification(s) of work performed; and (3) the Contractor and all Subcontractors must possess and maintain a Public Works Contractor Registration with the Department of Industrial Relations pursuant to Labor Code section 1725.5, and the license(s) must be valid at the time Contract is awarded and throughout the Contract as approved by Council.

All prospective Contractors may use the website *http://www.cslb.ca.gov/contractors/default.asp* to check each Subcontractor's license status and expiration dates and the DIR's Contractor Registration searchable database https://efiling.dir.ca.gov/PWCR/Search.action to verify each Subcontractor's registration status.

The list of Subcontractor(s) shall be submitted by the bidder together with the Proposal. Use the form supplied in the Contract documents. If no such list is submitted, it shall be assumed that the Contractor shall do all the work herein specified.

In lieu of conflicting portions of "Section 2-1.05 Proposal Forms" of the Standard Specifications, the following shall apply:

Only Bids, composed of the above listed items shall be considered for Award. Any and all Addenda to the Plans and Specifications shall be issued electronically on-line through the Planet Bids Vendor Portal website and <u>ONLY</u> to Bidders who are registered Prospective Bidders for this project on-line at the Planet Bids Vendor Portal website. The City shall not be responsible for issuance of said Addenda to non-registered Plan holders.

The successful bidder and all Subcontractors must have a valid City of Salinas business license before the commencement of work.

All wage scales shall be in accordance with applicable determinations made by the Director of the Department of Industrial Relations of the State of California, as provided by Article 2, Chapter 1, Division 2, Part 7 of the Labor Code of the State of California, commencing with Section 1771. In accordance with Section 1773.2 of the said Labor Code, copies of the aforesaid determinations of the Director of the Department of Industrial Relations are available on the website address: http://www.dir.ca.gov/OPRL/DPreWageDetermination.htm. **It shall be mandatory for any Contractor to whom a Contract is awarded to pay not less than the applicable prevailing wage rate to all workers employed for the execution of the Contract and employ apprentices pursuant to Section 1777.5 of the California Labor Code.**

The Federal minimum wage rates for this project as predetermined by the United States Secretary of Labor are set forth in these Special Provisions. Addenda to modify the Federal minimum wage rates, if necessary, shall be issued to holders of these Specifications. Future effective general prevailing wage rates that have been predetermined and are on file with the California Department of Industrial Relations are referenced but not printed in the general prevailing wage rates.

If there is a difference between the minimum wage rates predetermined by the Secretary of Labor and the general prevailing wage rates determined by the Director of the California Department of Industrial Relations for similar classifications of labor, the Contractor and subcontractors shall pay not less than the higher wage rate. The Department will not accept lower State wage rates not specifically included in the Federal minimum wage determinations. This includes "helper" (or other classifications based on hours of experience) or any other classification not appearing in the Federal wage determinations. Where Federal wage determinations do not contain the State wage rate determination otherwise available for use by the Contractor and subcontractors, the Contractor and subcontractors shall pay not less than the Federal minimum wage rate that most closely approximates the duties of the employees in question.

The U.S. Department of Transportation (DOT) provides a toll-free “hotline” service to report bid-rigging activities. Bid-rigging activities can be reported Mondays through Fridays, between 8:00 a.m. and 5:00 p.m., Eastern Time, Telephone No. 1-800-424-9071. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the “hotline” to report these activities. The “hotline” is part of the DOT’s continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

NOTICE OF REQUIREMENT FOR AFFIRMATIVE ACTION TO ENSURE EQUAL EMPLOYMENT OPPORTUNITY:

1. The Offeror's or Bidder’s attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

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

   Timetables

Goals for minority participation for each trade	(28.9%)
Goals for female participation in each trade	(6.9%)

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

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

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

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

4. As used in this notice and in the contract resulting from this solicitation, the "covered area" is State of California, County of Monterey, City of Salinas.

TRADE RESTRICTION CERTIFICATION:

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror –

1) is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (USTR);

2) has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the USTR; and

3) has not entered into any subcontract for any product to be used on the Federal project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18 USC Section 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to an Offeror or subcontractor:

1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR or
2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list or
3) who incorporates in the public works project any product of a foreign country on such USTR list.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The Contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by USTR, unless the Offeror has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration (FAA) may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

TITLE VI SOLICITATION NOTICE:

The City of Salinas, in accordance with the provisions of Title VI of the Civil Rights Act of 1964 (78 Stat. 252, 42 USC §§ 2000d to 2000d-4) and the Regulations, hereby notifies all bidders or offerors that it will affirmatively ensure that any contract entered into pursuant to this advertisement, disadvantaged business enterprises will be afforded full and fair opportunity to submit bids in response to this invitation and will not be discriminated against on the grounds of race, color, or national origin in consideration for an award.

CERTIFICATION OF OFFERER/BIDDER REGARDING DEBARMENT:

By submitting a bid/proposal under this solicitation, the bidder or offeror certifies that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.

BUY AMERICAN PREFERENCE:

The Contractor agrees to comply with 49 USC § 50101, which provides that Federal funds may not be obligated unless all steel and manufactured goods used in AIP funded projects are produced in the United States, unless the Federal Aviation Administration has issued a waiver for the product; the product is listed as an Excepted Article, Material Or Supply in Federal Acquisition Regulation subpart 25.108; or is included in the FAA Nationwide Buy American Waivers Issued list.

A bidder or offeror must complete and submit the Buy America certification included herein with their bid or offer. The Owner will reject as nonresponsive any bid or offer that does not include a completed Certificate of Buy American Compliance.

LOBBYING AND INFLUENCING FEDERAL EMPLOYEES:

Contractors that apply or bid for an award of $100,000 or more must certify that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant, or another award covered by 31 USC 1352. The Contractor must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award.

PROCUREMENT OF RECOVERED MATERIALS:

Contractor and subcontractor agree to comply with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, and the regulatory provisions of 40 CFR Part 247. In the performance of this contract and to the extent practicable, the Contractor and subcontractors are to use products containing the highest percentage of recovered materials for items designated by the Environmental Protection Agency (EPA) under 40 CFR Part 247 whenever:

1) The contract requires procurement of $10,000 or more of a designated item during the fiscal year; or
2) The contractor has procured $10,000 or more of a designated item using Federal funding during the previous fiscal year.

The list of EPA-designated items is available at www.epa.gov/smm/comprehensive-procurement-guidelines-construction-products.

Section 6002(c) establishes exceptions to the preference for recovery of EPA-designated products if the contractor can demonstrate the item is:

a) Not reasonably available within a timeframe providing for compliance with the contract performance schedule;
b) Fails to meet reasonable contract performance requirements; or
c) Is only available at an unreasonable price.

By order of the Council of the City of Salinas, Monterey County, California.

Dated: _____ _____

Patricia M. Barajas, City Clerk
City of Salinas, California

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PART A –
BID CONTRACT DOCUMENTS

CONTRACT DOCUMENTS TO BE SUBMITTED WITH BID ON BID OPENING DATE

PROPOSAL

FOR

RUNWAY 13-31 AND RUNWAY 8-26 REHABILITATION
AIP No. 3-06-0206-27
CITY PROJECT NO. 9275

SALINAS, CALIFORNIA

FROM:

NAME OF BIDDER:_____

BUSINESS ADDRESS:_____
(Street Address)

CITY: _____ STATE: _____ ZIP:_____

PHONE: _____

RESIDENCE ADDRESS: _____

CITY: _____ STATE: _____ ZIP:_____

PHONE: _____

Honorable Mayor of City Council
City of Salinas
Salinas, California

Gentlemen/Ladies:

Pursuant to the foregoing Notice to Bidders, the undersigned hereby proposes and binds himself/herself on award by the City Council under this Proposal to execute in accordance with such award, a Contract with necessary bonds of which this Proposal, the Notice to Bidders and the Plans and the Specifications adopted ***March 20, 2018***, shall be a part, to furnish any and all required labor, material, and services for performing and completing the work set forth in the said Specifications and shown on the Plans accompanying them, within the time hereinafter set forth and at the prices named in this Proposal as follows:

All of the Proposal items below shall include all labor, materials, tools, equipment, and incidental costs for each item complete, or complete-in-place, per Plans and Specifications.

RUNWAY 13-31 AND RUNWAY 8-26 REHABILITATION
AIP No. 3-06-0206-27
CITY PROJECT NO. 9275

BASE BID

Item No.	SPEC No.	DESCRIPTION	UNIT	QUAN-TITY	UNIT PRICE	EXTENDED TOTAL
1	GP-105-2.1	MOBILIZATION\DEMOBILIZATION (5% MAX OF BASE BID)	LS	1		
2	P-101-5.2	PAINT REMOVAL	SF	101,700		
3	P-110-3.1	CONTRACTOR QUALITY CON-TROL (2% MAX OF BASE BID)	LS	1		
4	P-110-3.2	CONSTRUCTION SURVEY AND STAKING	LS	1		
5	P-148-4.1	AIRFIELD CONSTRUCTION AREA CONTROL	LS	1		
6	P-148-4.2	SWEEPERS AND FOD CONTROL	LS	1		
7	P-156-5.1	PREPARE AND IMPLEMENT THE BEST MANAGENEMT PLAN AND MEASURES	LS	1		
8	P-411-5.1	HOT POURED CRACK SEALING	LF	49,200		
9	P-608-8.1	EMULSIFIED ASPHALT SEAL COAT (WITH AGGREGATE & CFME FRICTION TESTING)	SY	102,000		
10	P-620-5.1	RUNWAY AND TAXIWAY PAINT-ING	SF	101,700		
11	P-620-5.2	TEMPORARY MARKING	SF	57,922		

Total Bid for Base Bid – (Items 1 to 11) for Comparison Only

_____ (In Words) Dollars

_____ (In Numbers) Dollars

ADDITIVE ALTERNATIVE NO. 1

Item No.	SPEC No.	DESCRIPTION	UNIT	QUAN-TITY	UNIT PRICE	EXTENDED TOTAL
12	GP-105-2.1	MOBILIZATION\DEMOBILI-ZATION (5% MAX OF ADD ALT NO. 1)	LS	1		
13	P-101-5.2	PAINT REMOVAL	SF	(710)		
14	P-110-3.1	CONTRACTOR'S QUALITY CONTROL (2% MAX OF ADD ALT NO. 1)	LS	1		
15	P-120-4.1	SAW CUT	LF	500		
16	P-152-4.1	UNCLASSIFIED EXCAVTION	CY	560		
17	P-153-6.1	CONTROLLED LOW-STRENGTH MATERIAL	CY	560		
18	P-401-8.1a	BITUMINOUS SURFACE COURSE	TON	480		
19	P-603-5.1	BITUMINOUS TACK COAT	GAL	130		
20	P-605-5.1	ASPHALT COLD JOINT AD-HESIVE	LF	405		
21	FIXED PRICE	UTILITY INVESTIGATION	AL	1	$10,000	$10,000

Total Bid for Additive Alternative No. 1 – (Items 12 to 21) for Comparison Only

_____ (In Words) Dollars

_____ (In Numbers) Dollars

ADDITIVE ALTERNATIVE NO. 2

Item No.	SPEC No.	DESCRIPTION	UNIT	QUAN-TITY	UNIT PRICE	EXTENDED TOTAL
22	GP-105-2.1	MOBILIZATION\DEMOBILIZATION (5% MAX OF ADD ALT NO. 2)	LS	1		
23	P-101-5.2	PAINT REMOVAL	SF	(700)		
24	P-101-5.3	COLD MILLING, 0-3 INCHES	SY	1,460		
25	P-110-3.1	CONTRACTOR'S QUALITY CON-TROL (2% MAX OF ADD ALT NO. 2)	LS	1		
26	P-120-4.1	SAW CUT	LF	425		
27	P-401-8.1a	BITUMINOUS SURFACE COURSE	TON	230		
28	P-603-5.1	BITUMINOUS TACK COAT	GAL	220		
29	P-605-5.1	ASPHALT COLD JOINT ADHESIVE	LF	425		
30	P-608-8.1	EMULSIFIED ASPHALT SEAL COAT (WITH AGGREGATE & CFME FRICTION TESTING)	SY	(1,460)		

Total Bid for Additive Alternative No. 2 – (Items 22 to 30) for Comparison Only

_____ (In Words) Dollars

_____ (In Numbers) Dollars

ADDITIVE ALTERNATIVE NO. 3

Item No.	SPEC No.	DESCRIPTION	UNIT	QUAN-TITY	UNIT PRICE	EXTENDED TOTAL
31	GP-105-2.1	MOBILIZATION\DEMOBILI-ZATION (5% MAX OF ADD ALT NO. 3)	LS	1		
32	P-101-5.2	PAINT REMOVAL	SF	121,100		
33	P-110-3.1	CONTRACTOR QUALITY CONTROL (2% MAX OF ADD ALT NO. 3)	LS	1		
34	P-110-3.2	CONSTRUCTION SURVEY AND STAKING	LS	1		
35	P-148-4.1	AIRFIELD CONSTRUCTION AREA CONTROL	LS	1		
36	P-148-4.2	SWEEPERS AND FOD CON-TROL	LS	1		
37	P-156-5.1	PREPARE AND IMPLEMENT THE BEST MANAGENEMT PLAN AND MEASURES	LS	1		
38	P-411-5.1	HOT POURED CRACK SEAL-ING	LF	57,500		
39	P-608-8.1	EMULSIFIED ASPHALT SEAL COAT (WITH AGGRE-GATE & CFME FRICTION TESTING)	SY	116,400		
40	P-620-5.1	RUNWAY AND TAXIWAY PAINTING	SF	107,100		
41	P-620-5.2	TEMPORARY MARKING	SF	58,300		

Total Bid for Additive Alternative No. 3 – (Items 31 to 41) for Comparison Only

_____ **(**In Words) Dollars

_____ (In Numbers) Dollars

ADDITIVE ALTERNATIVE NO. 4

Item No.	SPEC No.	DESCRIPTION	UNIT	QUANTITY	UNIT PRICE	EXTENDED TOTAL
42	GP-105-2.1	MOBILIZATION\DEMOBILIZATION (5% MAX OF ADD ALT NO. 4)	LS	1		
43	P-101-5.2	PAINT REMOVAL	SF	(4,111)		
44	P-101-5.3	COLD MILLING, 0-3 INCHES	SY	6,150		
45	P-110-3.1	CONTRACTOR'S QUALITY CON-TROL (2% MAX OF ADD ALT NO. 4)	LS	1		
46	P-120-4.1	SAW CUT	LF	1,350		
47	P-208-5.1	PROCESSED MISCELLANEOUS BASE	SY	725		
48	P-401-8.1a	BITUMINOUS SURFACE COURSE	TON	990		
49	P-602-5.1	BITUMINOUS PRIME COAT	GAL	915		
50	P-603-5.1	BITUMINOUS TACK COAT	GAL	930		
51	P-605-5.1	ASPHALT COLD JOINT ADHESIVE	LF	1,350		
52	P-608-8.1	EMULSIFIED ASPHALT SEAL COAT (WITH AGGREGATE & CFME FRICTION TESTING)	SY	(6,150)		

Total Bid for Additive Alternative No. 4 – (Items 42 to 52) for Comparison Only

_____ (In Words) Dollars

_____ (In Numbers) Dollars

Total Bid for Base Bid plus Additive Alternative No.'s 1 through 4 inclusive– for Comparison Only

_____ (In Words) Dollars

_____ (In Numbers) Dollars

NOTE: The City reserves the right to award the project to the lowest responsible, responsive bidder with the lowest possible bid for the Base Bid or for the Base Bid plus any combinations of the Additive Alternatives. The

basis of award will be the lowest total of all the bid items for the Base Bid. The City further reserves the right to award or reject the Bid, or any of its item(s), in any combination it chooses, depending on available funds. The City also reserves the right to award the Base Bid plus any combination of additive alternatives within 120 calendar days of the Bid Opening date, depending on available funds. Furthermore, the City reserves the right to award any combination of the additive alternates within 120 calendar days of the first award, while maintaining the original bid amounts.

It is expressly understood and agreed that this Bid shall have the following documents completed, all of which are incorporated into and made a part hereof. **This information shall be submitted with your Proposal on Bid opening date:**

1. **Completely executed Proposal, signed and dated;**
2. **Signed Addendum, if any;**
3. **Bidder's Bond;**
4. **Bidder's Statement of Financial Responsibility Technical Ability and Experience;**
5. **Bidder's Statement of Subcontractors Part 1;**
6. **Insurance Certification;**
7. **Completely executed and signed Federal forms: Public Contract Code Section 10285.1 Statement, Contractor's Certification of Nonsegregated Facilities, Tax Certifications, Non-Collusion Declaration, Debarment and Suspension Certification, Nonlobbying Certification for Federal-Aid Contracts, and Buy American Certification;**

The lowest and second lowest ranked project Bidders shall submit the following forms, fully completed, to the Public Works Department, City of Salinas within 5 working days after Bid opening date and/or when the lowest responsible Bidder is known. The documents to be completed and submitted are the following:

1. **Equal Employment Opportunity Certification;**
2. **Local Agency Bidder - DBE - Information Sheet;**
3. **DBE Information - Good Faith Efforts;**
4. **Bidders List for the City of Salinas Public Works Department. The Prime Contractor shall submit original(s). All Subcontractor(s) shall submit original(s) or faxed copy;**
5. **Non-Collusion Declaration of Subcontractors;**
6. **Bidder's Statement of Subcontractors Part II**

Failure to comply with these requirements may result in the forfeiture of the bidders' rank in the bid process.

In addition to the subcontractors required to be listed in conformance with the Standard Specifications, the Contractor shall submit a list of the name, address, license number & from which State/expiration date, and the portion of the work that will be done by each Subcontractor. All prospective Contractors may use the website http://www.cslb.ca.gov/ to check each Subcontractor's license status and expiration dates.

The list of subcontractor(s) shall be submitted together with the Proposal by the bidder. Use the form supplied in the Contract documents. If no such list is submitted, it will be assumed that the Contractor will do all the work herein specified.

"All prospective Bidders may use Caltrans' DBE listing which is available on the website address **www.dot.ca.gov/hq/bep/ or the Bidders List for the City of Salinas Public Works Department DBE Bidders list.**"

In case of discrepancy between the item price and the total set forth for a unit basis item, the item price shall prevail, provided, however, if the amount set forth as an item price is ambiguous, unintelligible or uncertain for any cause, or is omitted, or is the same amount as the entry in the "Total" column, then the amount set forth in the "Total" column for the item shall prevail and shall be divided by the estimated quantity for the item and the price thus obtained shall be the item price.

Also, the award of the contract, if it be awarded, will be to the lowest responsible bidder whose proposal complies with all the requirements prescribed and who has met the goal for DBE participation or has demonstrated, to the satisfaction of the City of Salinas, adequate good faith efforts to do so. Meeting the goal for DBE participation or demonstrating to the satisfaction of the City, adequate good faith efforts to do so is a condition for being eligible for award of contract.

Except as may otherwise be provided herein, all work to be done under this Contract shall conform to the applicable requirements of the Technical Specifications; the General Provisions; the Plans; and the STANDARD SPECIFICATIONS, DESIGN STANDARDS AND STANDARD PLANS **Error! Reference source not found.** Edition, City of Salinas, Public Works Department, herein referred to as the Standard Specifications.

There shall be no compensation payable adjustment for asphalt concrete for this project.

The undersigned understands that the quantities given are approximate only, being given as a basis for the comparison of bids, and the City of Salinas does not, expressly or by implication, agree that the actual amount of work will correspond therewith, but reserves the right to increase or decrease the amount of any portion of the work, or to omit portions of the work, as may be deemed necessary or advisable by the City Engineer without claim for damage or loss of anticipated profit and that payment will be made only on the basis of the actual quantities of work performed.

In accordance with the Specifications, the undersigned agrees to so plan the work and to prosecute it with such diligence that said work shall be commenced within ***fifteen (15)*** calendar days after execution of the Contract on behalf of the City Council and the receipt of a notice from the City Council to proceed with the work and shall after date of said notification, be completed on or before the expiration of the following:

Forty (40) calendar days for the Base Bid,
plus **no additional calendar days** if Additive Alternative No. 1 is awarded,
plus **no additional calendar days** if Additive Alternative No. 2 is awarded,
plus an additional **thirty-five (35) calendar days** if Additive Alternative No. 3 is awarded,
plus **no additional calendar days** if Additive Alternative No. 4 is awarded along with Additive Alternative No. 3. If Additive Alternative No. 4 is awarded separately from Additive Alternative No. 3, an additional **fourteen (14) calendar days** shall be awarded for Additive Alternative No. 4.

In order to facilitate the Salinas Air Show held during September 2018; the work shall be scheduled so that no construction activities will be permitted from September 26th 2018 through October 3rd 2018, inclusive.

The undersigned further agrees that all work to be done under this Contract shall be done in accordance with the provisions of that certain form of Agreement attached hereto and hereby made a part of these Specifications.

The undersigned agrees, if awarded the Contract, that there shall be paid by the undersigned and by all Subcontractors under him/her, to all laborers, workmen and mechanics employed in the execution of such Contract or any Subcontract there under, not less than the general prevailing rate of per diem wages, and rates for overtime and legal holidays in the locality in which the work is to be performed, as ascertained and determined, pursuant to the state statute thereto applicable, by the City Council, the schedule thereof

being set forth in the advertisement for bids and in the Specifications for said work.

Enclosed herein is a (bidder's bond, certified check, or cashier check) for not less than ***five percent (5%)*** of the total amount of the Proposal and the undersigned agrees that, in case of his/her default in executing the Contract and the necessary bonds after award and due notice thereof, the said check or bond and the money payable thereon shall become and remain the property of the City of Salinas as liquidated damages.

All questions about the meaning or intent of the Contract documents shall be submitted to the City Engineer in writing. Replies will be issued by Addenda mailed or delivered to all parties recorded by City Engineer as having received the bidding documents. **QUESTIONS RECEIVED LESS THAN 9 CALENDAR DAYS PRIOR TO THE DATE OF THE OPENING BIDS WILL NOT BE ANSWERED.** Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

Any and all Addenda to the Plans and/or Specifications shall be signed and attached hereto this Proposal.

For any money earned by the Undersigned and withheld by the City of Salinas, to insure the performance of the Contract, the Undersigned may, at his/her request and expense, substitute securities equivalent to the amount withheld in the form and manner and subject to the conditions provided in Section 22300 of the Public Contracts Code of the State of California, and the City Disadvantaged Business Enterprise (DBE) Program, prompt payment provisions.

Licensed in accordance with an act providing for the registration of Contractors,

License No. _____. Expiration Date _____.

DIR Registration No. _____. Expiration Date _____.

(If bidder is a joint venture, each member shall specify license number, expiration date, and statement regarding representations made).

(If an individual, so state. If a firm or co-partnership, state the firm name and give the names of all individuals/ co-partners composing the firm. If a corporation, state legal names of corporation, also names of President, Secretary, Treasurer, and Manager thereof).

_____

_____

_____
Business Address

Signature of Bidder _____
(Signature in Blue Ink)

Dated: _____ 20 _____

BIDDER'S STATEMENT OF FINANCIAL RESPONSIBILITY, TECHNICAL ABILITY AND EXPERIENCE

(This form must be completed and submitted with this Bid)

The Bidder is required to state what work of a similar character to that included in the proposed Contract he/she has successfully performed and give references which will enable the City Council to judge his/her responsibility, experience, skill and business standing.

The undersigned submits herewith a statement of his/her financial responsibility.

The undersigned submits below a statement of the work of a similar character to that included in the Proposed Contract which he/she has successfully performed. (Include the type of work, name, and phone number of all references).

TYPE	NAME	PHONE NUMBER

SIGNED _____

(SIGNATURE IN BLUE INK)

Attach Notary Acknowledgment if signature is not the same as the Proposal signature(s)

INSURANCE CERTIFICATION

(This certification shall be completed and submitted with the proposed Bid)

By signing below I hereby certify that _____
(Insert company name)

is currently insured by an insurance company that is an **"Authorized"** carrier by the Insurance Commissioner of the California State Department of Insurance to transact the business of insurance in the State of California, and shall be written by insurers with a current A.M. Best Rating of "A-" or better, and a financial size of "VII" or greater. Said insurance will expire on _____

I further hereby certify that, as the signer of this Bid proposal, I have read and understand the City's insurance requirements as described in the section entitled "Certificate of Insurance" within these specifications and that proof of insurance will be required before the Public Works contract is recommended for award. Such proof shall be provided on an ISO Accord 25(s) from and an endorsement naming the City of Salinas as additionally insured is on the ISO CG 20 10 11 85 form or any other comparable endorsement, which does not further limit coverage, and which may be approved and accepted by the City's Risk Management staff.

_____
(Print Name)

Signature of Bidder: _____
(Signature in Blue Ink) (Date)

Attach Notary Acknowledgment if signature is not the same as the Proposal signature(s)

PUBLIC CONTRACT CODE SECTION 10285.1 STATEMENT

(This form shall be completed and submitted with this Bid)

In conformance with the Provisions in the 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 3 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 shall place a check mark 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.

I declare under penalty or perjury under the laws of the State of California that the foregoing is true and correct.

SIGNED_____
(signature in blue ink)

Attach Notary Acknowledgment if signature is not the same as the Proposal signature(s).

PUBLIC CONTRACT CODE SECTION 10162 QUESTIONNAIRE

(This form shall be completed and submitted with this Bid)

In accordance with the Provisions in the Public Contract 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 in the circumstances in the following space.

I declare under penalty or perjury under the laws of the State of California that the foregoing is true and correct.

SIGNED_____
(signature in blue ink)

Attach Notary Acknowledgment if signature is not the same as the Proposal signature(s).

PUBLIC CONTRACT SECTION 10232 STATEMENT

(This form shall be completed and submitted with this Bid)

In accordance with the Provisions in the Public Contract Code Section 10232, the Contractor, hereby states under penalty or 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 2 year period because of the Contractor's failure to comply with an order of 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.

I declare under penalty or perjury under the laws of the State of California that the foregoing is true and correct.

SIGNED_____
(signature in blue ink)

Attach Notary Acknowledgment if signature is not the same as the Proposal signature(s).

CERTIFICATION OF NONSEGREGATED FACILITIES

(This form shall be completed and submitted with this Bid)

The federally-assisted construction contractor certifies that she or he does not maintain or provide, for his employees, any segregated facilities at any of his establishments and that she or he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. The federally-assisted construction contractor certifies that she or he will not maintain or provide, for his employees, segregated facilities at any of his establishments and that she or he will not permit his employees to perform their services at any location under his control where segregated facilities are maintained. The federally-assisted construction contractor agrees that a breach of this certification is a violation of the Equal Opportunity Clause in this contract.

As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms, and washrooms, restaurants and other eating areas, time clocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directives or are, in fact, segregated on the basis of race, color, religion, or national origin because of habit, local custom, or any other reason. The federally-assisted construction contractor agrees that (except where she or he has obtained identical certifications from proposed subcontractors for specific time periods) she or he will obtain identical certifications from proposed subcontractors prior to the award of subcontracts exceeding $10,000 which are not exempt from the provisions of the Equal Opportunity Clause and that she or he will retain such certifications in his files.

Certification - The information above is true and complete to the best of my knowledge and belief.

_____

Name and Title of Signer (Please type)

_____ _____

Signature Date

NOTE: The penalty for making false statements in offers is prescribed in 18 U.S.C. 1001.

Attach Notary Acknowledgment if signature is not the same as the Proposal signature(s).

NON-COLLUSION DECLARATION OF CONTRACTOR

(This information may be submitted with your Proposal. If it is not, and you are the apparent low Bidder, it shall be submitted and received by the Public Works Department no later than 5 working days after Bid opening date)

State of_____,
County of_____, } SS

_____, being first duly sworn, deposes and says that:
I am the *(Owner, partner, officer, representative, or agent)* _____ of _____,
the party making the foregoing Bid:
The bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The bid is genuine and not collusive or sham. The bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The bidder has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bidder. All statements contained in the bid are true. The bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.
Any person executing this declaration on behalf of a bidder that is a corporation, partnership, joint venture, limited liability company, limited liability partnership, or any other entity, hereby represents that he or she has full power to execute, and does execute, this declaration on behalf of the bidder.
I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct and that this declaration is executed on _____[date], at _____[city], _____[state].

Signed _____
(signature in blue ink)

_____
Title

Subscribed and sworn before me
this_____day of_____, 20_____

_____
Title

My commission expires_____, 20_____

Attach Notary Acknowledgment if signature is not the same as the Proposal signature(s).

CERTIFICATION OF OFFERER/BIDDER REGARDING DEBARMENT

(This form shall be completed and submitted with this Bid)

By submitting a bid/proposal under this solicitation, the bidder or offeror certifies that neither it nor its principals are presently debarred or suspended by any Federal department or agency from participation in this transaction.

By submitting this bid/proposal the bidder or offeror further agrees in administering each lower tier subcontract that exceeds $25,000 as a "covered transaction", the bidder or offeror shall verify each lower tier participant of a "covered transaction" under the project is not presently debarred or otherwise disqualified from participation in this federally assisted project. The successful bidder shall accomplish this by:

1. Checking the System for Award Management at website: http://www.sam.gov
2. Collecting a certification statement similar to the Certificate Regarding Debarment and Suspension (Bidder or Offeror), in the first paragraph above.
3. Inserting a clause or condition in the covered transaction with the lower tier contract.

By submitting this bid/proposal the bidder or offeror understands that if the FAA later determines that a lower tier participant failed to disclose to a higher tier participant that it was excluded or disqualified at the time it entered the covered transaction, the FAA may pursue any available remedies, including suspension and debarment of the non-compliant participant.

DATE_____ SIGNED BY _____

PRINT NAME _____

COMPANY _____

Attach Notary Acknowledgment if signature is not the same as the Proposal signature(s).

LOBBYING AND INFLUENCING FEDERAL EMPLOYEES

(This form shall be completed and submitted with this Bid)

The bidder or offeror certifies by signing and submitting this bid or proposal, to the best of his or her knowledge and belief, that:

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Bidder or Offeror, to any person for influencing or attempting to influence an officer or employee of an 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 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 Form to Report Lobbying," in accordance with its instructions.

(3) The undersigned shall require that the language of this certification be included in the award documents for all sub-awards at all tiers (including subcontracts, sub-grants, and contracts under grants, loans, and cooperative agreements) and that all sub-recipients shall certify and disclose accordingly.

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.

DATE _____ SIGNED BY _____

Attach Notary Acknowledgment if signature is not the same as the Proposal signature(s).

CERTIFICATE OF BUY AMERICAN COMPLIANCE FOR MANUFACTURED PRODUCTS

(Non-building construction projects, equipment acquisition projects)

(This certification shall be completed and submitted with the proposed bid)

As a matter of bid responsiveness, the bidder or offeror must complete, sign, date, and submit this certification statement with their proposal. The bidder or offeror must indicate how they intend to comply with 49 USC § 50101 by selecting one on the following certification statements. These statements are mutually exclusive. Bidder must select one or the other (not both) by inserting a checkmark (√) or the letter "X".

☐ Bidder or offeror hereby certifies that it will comply with 49 USC § 50101 by:

a) Only installing steel and manufactured products produced in the United States, or;
b) Installing manufactured products for which the FAA has issued a waiver as indicated by inclusion on the current FAA Nationwide Buy American Waivers Issued listing, or;
c) Installing products listed as an Excepted Article, Material or Supply in Federal Acquisition Regulation Subpart 25.108.

By selecting this certification statement, the bidder or offeror agrees:

1. To provide to the Owner evidence that documents the source and origin of the steel and manufactured product.
2. To faithfully comply with providing US domestic product
3. To furnish US domestic product for any waiver request that the FAA rejects
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

☐ The bidder or offeror hereby certifies it cannot comply with the 100% Buy American Preferences of 49 USC § 50101(a) but may qualify for either a Type 3 or Type 4 waiver under 49 USC § 50101(b). By selecting this certification statement, the apparent bidder or offeror with the apparent low bid agrees:

1. To the submit to the Owner within 15 calendar days of the bid opening, a formal waiver request and required documentation that support the type of waiver being requested.
2. That failure to submit the required documentation within the specified timeframe is cause for a non-responsive determination may result in rejection of the proposal.
3. To faithfully comply with providing US domestic products at or above the approved US domestic content percentage as approved by the FAA.
4. To refrain from seeking a waiver request after establishment of the contract, unless extenuating circumstances emerge that the FAA determines justified.

Required Documentation

Type 3 Waiver - The cost of the item components and subcomponents produced in the United States is more that 60% of the cost of all components and subcomponents of the "item". The required documentation for a type 3 waiver is:

a) Listing of all product components and subcomponents that are not comprised of 100% US domestic content (Excludes products listed on the FAA Nationwide Buy American Waivers Issued listing and products excluded by Federal Acquisition Regulation Subpart 25.108; products of unknown origin must be considered as non-domestic products in their entirety)
b) Cost of non-domestic components and subcomponents, excluding labor costs associated with final assembly at place of manufacture.
c) Percentage of non-domestic component and subcomponent cost as compared to total "item" component and subcomponent costs, excluding labor costs associated with final assembly at place of manufacture.

Type 4 Waiver – Total cost of project using US domestic source product exceeds the total project cost using non-domestic product by 25%. The required documentation for a type 4 of waiver is:

a) Detailed cost information for total project using US domestic product
b) Detailed cost information for total project using non-domestic product

False Statements: Per 49 USC § 47126, this certification concerns a matter within the jurisdiction of the Federal Aviation Administration and the making of a false, fictitious or fraudulent certification may render the maker subject to prosecution under Title 18, United States Code.

Date	Signature
Company Name	Title

Attach Notary Acknowledgment if signature is not the same as the Proposal signature(s).

CERTIFICATION OF OFFERER/BIDDER REGARDING TAX DELINQUENCY AND FELONY CONVICTIONS

(This form shall be completed and submitted with this Bid)

The applicant must complete the following two certification statements. The applicant must indicate its current status as it relates to tax delinquency and felony conviction by inserting a checkmark (✓) in the space following the applicable response. The applicant agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification in all lower tier subcontracts.

Certifications

1) The applicant represents that it is ( ) is not ( ) a corporation that has any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.
2) The applicant represents that it is ( ) is not ( ) is not a corporation that was convicted of a criminal violation under any Federal law within the preceding 24 months.

Note

If an applicant responds in the affirmative to either of the above representations, the applicant is ineligible to receive an award unless the sponsor has received notification from the agency suspension and debarment official (SDO) that the SDO has considered suspension or debarment and determined that further action is not required to protect the Government's interests. The applicant therefore must provide information to the owner about its tax liability or conviction to the Owner, who will then notify the FAA Airports District Office, which will then notify the agency's SDO to facilitate completion of the required considerations before award decisions are made.

Term Definitions

Felony conviction: Felony conviction means a conviction within the preceding twenty-four (24) months of a felony criminal violation under any Federal law and includes conviction of an offense defined in a section of the U.S. code that specifically classifies the offense as a felony and conviction of an offense that is classified as a felony under 18 U.S.C. § 3559.

Tax Delinquency: A tax delinquency is any unpaid Federal tax liability that has been assessed, for which all judicial and administrative remedies have been exhausted, or have lapsed, and that is not being paid in a timely manner pursuant to an agreement with the authority responsible for collecting the tax liability.

DATE_____ SIGNED BY _____

PRINT NAME _____

COMPANY _____

Attach Notary Acknowledgment if signature is not the same as the Proposal signature(s).

BIDDER'S STATEMENT OF SUBCONTRACTORS – PART I

(This form shall be completed and submitted with this Bid)

No Subcontractors, other than those listed hereon, shall be allowed to perform work under this Contract. Substituting a Subcontractor in place of a Subcontractor listed in the original Bid is prohibited, violators, may at the Agency's discretion, result in cancellation of the Bid.

The Contractor and all Subcontractors shall have valid Contractor's licenses for the classification of work performed, prior to submittal or award of Bid**.**

NO.	TYPE OF WORK	SUBCONTRACTOR	CITY	DIR Registration No.	LICENSE NO./ STATE	DBE
						☐Yes ☐ No
						☐Yes ☐ No
						☐Yes ☐ No
						☐Yes ☐ No
						☐Yes ☐ No
						☐Yes ☐ No
						☐Yes ☐ No
						☐Yes ☐ No
						☐Yes ☐ No
						☐Yes ☐ No
						☐Yes ☐ No
						☐Yes ☐ No
						☐Yes ☐ No
						☐Yes ☐ No
						☐Yes ☐ No

SIGNED_____

(signature in blue ink)

Attach Notary Acknowledgment if signature is not the same as the Proposal signature(s).

CONTRACT DOCUMENTS/FORMS TO BE SUBMITTED TO THE CITY WITHIN 5 WORKING DAYS AFTER BID OPENING DATE

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BIDDER'S STATEMENT OF SUBCONTRACTORS – PART II

(This information may be submitted with your Proposal. If it is not, and you are the apparent low Bidder or the second low Bidder, it shall be submitted and received by the Public Works Department no later than 5 working days after Bid opening date)

The undersigned submits herewith a list of Subcontractors whom he/she proposes to employ on the work, with the proper firm name and business address of each.

If no list submitted, it shall be assumed that the Contractor shall do all the work as specified.

No Subcontractors, other than those listed in Bidders Statement of Subcontractors – Part I, shall be allowed to perform work under this Contract. Substituting a Subcontractor in place of a Subcontractor listed in the original Bid is prohibited, violators, may at the Agency's discretion, result in cancellation of the Bid.

The Contractor and all Subcontractors shall have valid Contractor's licenses for the classification of work performed, prior to submittal or award of Bid. **All prospective Contractors may use the website https://www2.cslb.ca.gov/OnlineServices/CheckLicense/LicenseRequest.asp to check each Subcontractor's license status and expiration dates.**

Subcontractor: ___________________________ License No./State: ______________

DIR Registration No. __________________DIR Reg. No. Expiration Date ____________________

Address: ___________________________ City:___________________ Zip: __________

Description of Work: ____

Telephone: ____________ Fax: _____________ e-mail Address: ________________________

Bid Item No. & % of each:____

DBE: ☐Yes ☐No

Subcontractor: ___________________________ License No./State: ______________

DIR Registration No. __________________DIR Reg. No. Expiration Date ____________________

Address: ___________________________ City:___________________ Zip: __________

Description of Work: ____

Telephone: ____________ Fax: _____________ e-mail Address: ________________________

Bid Item No. & % of each:____

DBE: ☐Yes ☐No

Subcontractor: ___________________________ License No./State: ______________

DIR Registration No. __________________DIR Reg. No. Expiration Date ____________________

Address: ___________________________ City:___________________ Zip: __________

Description of Work: ____

Telephone: ____________ Fax: _____________ e-mail Address: ________________________

Bid Item No. & % of each:____

DBE: ☐Yes ☐No

BIDDER'S STATEMENT OF SUBCONTRACTORS – PART I I – cont.

Subcontractor:____ License No./State:_________________
DIR Registration No. ______________________DIR Reg. No. Expiration Date ________________________
Address:_________________________________ City: ______________________ Zip:_____________
Description of Work:____
Telephone:________________ Fax: _______________ e-mail Address: _____________________________
Bid Item No. & % of each: ____
DBE: ☐Yes ☐No

Subcontractor:____ License No./State:_________________
DIR Registration No. ______________________DIR Reg. No. Expiration Date ________________________
Address:_________________________________ City: ______________________ Zip:_____________
Description of Work:____
Telephone:________________ Fax: _______________ e-mail Address: _____________________________
Bid Item No. & % of each: ____
DBE: ☐Yes ☐No

Subcontractor:____ License No./State:_________________
DIR Registration No. ______________________DIR Reg. No. Expiration Date ________________________
Address:_________________________________ City: ______________________ Zip:_____________
Description of Work:____
Telephone:________________ Fax: _______________ e-mail Address: _____________________________
Bid Item No. & % of each: ____
DBE: ☐Yes ☐No

Subcontractor:____ License No./State:_________________
DIR Registration No. ______________________DIR Reg. No. Expiration Date ________________________
Address:_________________________________ City: ______________________ Zip:_____________
Description of Work:____
Telephone:________________ Fax: _______________ e-mail Address: _____________________________
Bid Item No. & % of each: ____
DBE: ☐Yes ☐No

Contractor shall provide all Subcontractor information requested above.

SIGNED:______________________________________

Attach Notary Acknowledgment if signature is not the same as the Proposal signature(s)

EQUAL EMPLOYMENT OPPORTUNITY CERTIFICATION

(This information may be submitted with your Proposal. If it is not, and you are the apparent low Bidder or the second low Bidder, it shall be submitted and received by the Public Works Department no later <u>than 5 working days</u> after Bid opening date.)

The Bidder_____, proposed Subcontractor_____, hereby certifies that he/she 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/she 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 filling 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 shall 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 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.

I declare under penalty or perjury under the laws of the State of California that the foregoing is true and correct.

SIGNED_____
(Signature in blue ink)

Attach Notary Acknowledgment if signature is not the same as the Proposal signature(s).

12-4-89

NON-COLLUSION DECLARATION OF SUBCONTRACTOR

(This information may be submitted with your Proposal. If it is not, and you are the apparent low Bidder, it shall be submitted and received by the Public Works Department no later than 5 working days after Bid opening date)

State of_____,
County of_____, } SS

_____, being first duly sworn, deposes and says that:
He/she is *(Owner, partner, officer, representative, or agent)* of _____,
hereinafter referred to as the "Subcontractor";

He/she is fully informed respecting the preparation and contents of the subcontractor's Proposal submitted by the Subcontractor to _____,
the Contractor for certain work in connection with the _____
_____*(City or County and State);*
The proposal is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation. The proposal is genuine and not collusive or sham. The Subcontractor has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid. The Subcontractor has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or to refrain from bidding. The Subcontractor 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. All statements contained in the proposal are true. The Subcontractor has not, directly or indirectly, submitted his or her proposal price or any breakdown thereof, or the contents thereof or divulged information or data relative thereto, to any corporation, partnership, company, association, organization, bid depository, or to any member or agent thereof, to effectuate a collusive or sham bid, and has not paid, and will not pay, any person or entity for such purpose.

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

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

Signed _____
(signature in blue ink)

_____
Title

Subscribed and sworn before me
this_____day of_____, 20_____

_____
Title

My commission expires_____, 20_____

Attach Notary Acknowledgment if signature is not the same as the Proposal signature(s).

LOCAL AGENCY BIDDER - DBE - INFORMATION SHEET

(This information may be submitted with your Proposal. If it is not, and you are the apparent low Bidder or the second low Bidder, it shall be submitted and received by the Public Works Department no later than <u>5 working days</u> after Bid opening date.)

This information may be submitted with your Bid Proposal. If it is not, and you are the apparent low Bidder or the second or third low Bidder, it shall be submitted and received as specified in the Special Provisions. Failure to submit the required DBE information shall be grounds for finding the Proposal nonresponsive.

CO.-RTE.-K.P.:_____

CONTRACT NO.:_____

BID AMOUNT: $ _____

BID OPENING DATE:_____

BIDDER'S NAME:_____

DBE GOAL FROM CONTRACT:_____

DBE PRIME CONTRACTOR CERTIFICATION [1]:_____

CONTRACT ITEM NO.	ITEM OF WORK AND DESCRIPTION OR SERVICES TO BE SUBCONTRACTED OR MATERIALS TO BE PROVIDED [2]	DBE CERT. NO.	NAME OF DBEs (Must be certified on the date Bids are opened - include DBE address and phone number)	DOLLAR AMOUNT DBE [3]
IMPORTANT: Identify all DBE firms being claimed for credit, regardless of tier. Copies of the DBE quotes are required. Names of the First Tier DBE Subcontractors and their respective item(s) of work listed above shall be consistent with the names and items of work in the "List of Subcontractors" submitted with your Bid pursuant to the Subcontractors Listing Law and the Special Provisions.			**Total Claimed Participation**	$_____ _____%

1. DBE prime Contractors shall enter their DBE certification number. DBE prime Contractors shall indicate all work to be performed by DBEs including work performed by its own forces. 2. If 100% of item is not to be performed or furnished by DBE, describe exact portion of item to be performed or furnished by DBE.	_____ (Signature of Bidder in blue ink) _____ Date (Area Code) Tel. No. _____ Person to Contact (Please Type or Print)

CT Bidder – DBE information (Rev 6/29/00)

Attach Notary Acknowledgment if signature is not the same as the Proposal signature(s).

DBE INFORMATION - GOOD FAITH EFFORTS

(This information may be submitted with your Proposal. If it is not, and you are the apparent low Bidder or the second low Bidder, it shall be submitted and received by the Public Works Department no later than 5 working days after Bid opening date.)

City Project No. _____ Bid Opening Date _____

The **City of Salinas** has established a Disadvantaged Business Enterprise (DBE) - Race Neutral goal of 11.35% for this project. The information provided herein shows that a good faith effort was made.

A. The names and dates of each publication in which a request for DBE participation for this project was placed by the Bidder (please attach copies of advertisements or proofs of publication):

Publications	Dates of Advertisement

B. The names and dates of written notices sent to certified DBEs soliciting Bids for this project and the dates and methods used for following up initial solicitations to determine with certainty whether the DBEs were interested (please attach copies of solicitations, telephone records, fax confirmations, etc.):

Names of DBEs Solicited,	Date of Initial Solicitation,	Follow Up Methods and Dates

C. The items of work which the Bidder made available to DBE firms, including, where appropriate, any breaking down of the Contract work items (including those items normally performed by the Bidder with its own forces) into economically feasible units to facilitate DBE participation. It is the Bidder's responsibility to demonstrate that sufficient work to facilitate DBE participation was made available to DBE firms.

Items of Work	Breakdown of Items

D. The names, addresses and phone numbers of rejected DBE firms, the reasons for the Bidder's rejection of the DBEs, and the firms selected for that work (please attach copies of quotes from the firms involved):

Names, addresses and phone numbers of rejected DBEs and the reasons for the Bidder's rejection of the DBEs: _____

_____

_____

_____

_____

_____

_____

Names, addresses and phone numbers of firms selected for the work above: _____

_____

_____

_____

_____

_____

_____

E. Efforts made to assist interested DBEs in obtaining bonding, lines of credit or insurance, and any technical assistance or information related to the Plans, Specifications, and requirements for the work which was provided to DBEs: _____

_____

_____

_____

_____

_____

_____

F. Efforts made to assist interested DBEs in obtaining necessary equipment, supplies, materials, or related assistance or services, excluding supplies and equipment the DBE Subcontractor purchases or leases from the prime Contractor or its affiliate:

G. The names of agencies, organizations or groups contacted to provide assistance in contacting, recruiting and using DBE firms (please attach copies of requests to agencies and any responses received, i.e., lists, Internet page download, etc.):

Name of Agency/Organization	Method/Date of Contact	Results

H. Any additional data to support a demonstration of Good Faith Efforts (use additional sheets if necessary):

I declare under penalty or perjury under the laws of the State of California that the foregoing is true and correct.

SIGNED_____
(Signature in blue ink)

Attach Notary Acknowledgment if signature is not the same as the Proposal signature(s).

BIDDER'S LIST
FOR
THE CITY OF SALINAS
PUBLIC WORKS DEPARTMENT

(This information may be submitted with your proposal. If it is not, and you are the apparent low Bidder or the second low Bidder, it must be submitted and received by the Public Works Department no later than 5 working days after Bid opening date.)

All Bidders are required to provide the following information for all DBE and non-DBE contractors, who provided a proposal, Bid, quote, or were contacted by the proposed prime. This information is also required from the proposed prime contractor, and must be submitted with their Bid/proposal. In order for the City of Salinas to conform with Federally-Mandated DBE Program Bidders List, it will use this information to maintain and update a "Bidders List" to assist in the overall annual goal DBE goal setting process.

Firm Name: _____ Phone: _____

Address: _____ Fax: _____

License No.: _____

DIR Registration No.: _____ Exp. Date: _____

Contact Person & Title: _____ No. of Years in Business: _____

Is the firm currently certified as a DBE under the new regulations (49 CFR Part 26)? ☐Yes ☐No

Type of work/services/materials provided by firm: _____

_____

What was you firm's Gross Annual receipts for last year?

_____ Less than $1 Million

_____ Less than $5 Million

_____ Less than $10 Million

_____ Less than $15 Million

_____ More than $15 Million

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

SIGNED: _____

This form may be copied as needed to report all Bidders (DBEs and non-DBEs) information.

Revision Date 03/19/03

PART B –
SUCCESSFUL BIDDER'S CONTRACT DOCUMENTS TO BE SUBMITTED AFTER PROJECT IS AWARDED

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GENERAL INSTRUCTIONS TO LOW BIDDER

BIDDER'S SIGNATURES

(A) The Bidder shall sign two documents included in the Bid Documents:

1. Bid
2. Bidder's Security

(B) The name of the Bidder shall be typewritten or printed below the signature line. The type of legal entity shall be included in the name of the Bidder (Examples: individual, sole proprietorship, general partnership, limited partnership, corporation).

(C) The name and title of all individuals signing for the entity shall be typewritten or printed below the signature line. **All signatures shall be notarized with a notary acknowledgment.**

(D) The Bidder shall provide evidence that the individual signing the document is authorized to bind the legal entity of the Bidder. The notarization does not constitute such proof unless the Bidder is signing as an individual.

(E) If the Bidder is a corporation, proof of authorization shall be established (pursuant to Corporations Code Section 313) if one of the corporate officers listed in column A below and one of the corporate officers listed in column B below both sign the documents.

A		B
Chairman of the Board, Or President, Or Vice President,	AND	Secretary, or Assistant Secretary, or Chief Financial Officer, or Assistant Treasurer

For any other combination of signatures of corporate officers, a copy of the Board minutes, resolution, or articles of incorporation may be submitted to prove that the individuals have the authority to bind the corporation.

(F) If the Bidder is any legal entity other than an individual or corporation, documentation must be submitted which establishes that the individuals have the legal authority to bind the legal entity of the Bidder.

(G) If the legal entity is a Limited Partnership, a Certificate of Limited Partnership (State form LP-1) is sufficient to establish the authority of a single General Partner to bind the Limited Partnership.

(H) If the Bidder is a General Partnership, a Certificate of General Partnership or General Partnership agreement is sufficient to establish the names of all general partners of a General Partnership.

(I) All general partners must sign the documents, unless proof is submitted which authorizes an individual partner to bind the other general partners.

(J) If the individual signing the document is signing as a sole proprietorship, either a Fictitious Business Name Statement or a City of Salinas business License is sufficient to establish the authority of an individual to bind a sole proprietorship.

(K) If the individual or individuals signing the documents are signing on behalf of an entity other than the Bidder, and that other entity is authorized to bind the legal entity of the Bidder, then documentation must

be submitted which establishes that the individuals have the authority to bind the other entity, and that the other entity has the authority to bind the legal entity of the Bidder.

BIDDER'S/CONTRACTOR'S SECURITY

All bidder's security (including bidder's bond, faithful performance bond, labor and materials bond, and any other required bond) shall be in one of the following forms:

a. Cash

b. Cashier's check made payable to the City

c. A certified check made payable to the City

A bond executed by an admitted surety insurer, made payable to the City in the form of the bonds in the Contract documents. The Power of attorney for the attorney-in-fact of the surety must be current, contain an authorization to bind for at least minimum dollar amount of the bond, and be attached to the bond. **The signature of the attorney-in-fact must be notarized.**

BOND OF FAITHFUL PERFORMANCE

(To be completed and submitted after project award)

RUNWAY 13-31 AND RUNWAY 8-26 REHABILITATION
AIP No. 3-06-0206-27
CITY PROJECT NO. 9275

WHEREAS, said Principal is required under the terms of said Contract to furnish a Bond for the faithful performance of said Contract;

Now, therefore, We, the Principal and_____as

Surety, are held and firmly bounded to the City of Salinas, Monterey County, California, in the penal sum of

_____

($_____)Dollars, lawful money of the United States, being not less than ***100%*** of the estimated Contract cost of the work, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if the above bound Principal, his/her or its heirs, executors, administrators, successors or assigns, shall in all things stand to and abide by, and well and truly keep and faithfully perform the covenants, conditions, and agreements in the said Contract and any alterations made as therein provided, on his/her or their part, to be kept and performed at the time and in the manner therein specified, and in all respects according to their true intent and meaning, and shall indemnify and save harmless the City of Salinas, its officers and agents, as therein stipulated, then this obligation shall become null and void; otherwise it shall be and remain in full force and virtue.

As a condition precedent to the satisfactory completion of the said Contract the above obligation in the amount of not less than ***10%*** of the estimated Contract cost, shall hold good for a period of ***1 year*** after the completion acceptance of the said work, during which time if the above bound Principal, his/her or its heirs, executors, administrators, successors or assigns shall fail to make full complete and satisfactory repair and replacements or totally protect the said City of Salinas from loss or damage made evident during said period of ***1 year*** from the date of acceptance of said work, and resulting from or caused by defective materials or faulty workmanship in the prosecution of the work done, the above obligation in the amount of not less than ***10%*** of the total bid Proposal cost shall remain in full force and virtue, otherwise the above obligation shall be void. However, nothing in this paragraph to the contrary notwithstanding, the obligation of the Surety hereunder shall continue so long as any obligation of the Principal remains.

For any moneys earned by the Principal and withheld by the City of Salinas to ensure the performance of the Contract, the Principal may, at his/her request and expense, substitute securities equivalent to the amount withheld in the form and manner and subject to the conditions provided in Section 22300 of the Public Contracts Code of the State of California.

And the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration and addition to the terms of the Contract or to the work to be performed thereunder or the Specifications accompanying the same shall in any wise affect its obligations on this bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contractor or to the work or to the Specifications.

IN WITNESS WHEREOF the above bond parties have executed this instrument under their seals this _____day of _____, 20_____, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative; pursuant to authority of its governing body.

Principal Name: _____

Address: _____

_____

(Attach Notary Acknowledgment) By: _____
(Signature in blue ink)

By: _____
(Signature in blue ink)

Surety Name: _____

Address: _____

_____

(Attach Notary Acknowledgment) By: _____
(Signature in blue ink)

By: _____
(Signature in blue ink)

PAYMENT BOND
(LABOR AND MATERIAL BOND)

(To be completed and submitted after project award)

KNOW ALL MEN BY THESE PRESENT, that WHEREAS, the City Council of the City of Salinas, Monterey County, State of California, by Resolution No. _____ (N.C.S.)

passed _____, 20_____, has been awarded to_____

_____ hereinafter designated as

"Principal," a Contract for constructing

RUNWAY 13-31 AND RUNWAY 8-26 REHABILITATION
AIP No. 3-06-0206-27
CITY PROJECT NO. 9275

WHEREAS, said Principal is required to furnish a bond in connection and with said Contract, providing that if said Principal, or any of his/her or its Subcontractors, shall fail to pay for any materials, provisions, provender or other supplies or teams used in, upon, for or about the performance of the work Contracted to be done, or for any work or labor done thereon of any kind, the Surety of this bond will pay the same to the extend hereinafter set forth;

NOW, THEREFORE, WE, the Principal and_____as

Surety, are held and firmly bounded to the City of Salinas, Monterey County, California, in the penal sum of

_____

($_____)Dollars, lawful money of the United States, being not less than ***100%*** of the estimated Contract cost of the work, for the payment of which sum well and truly to be made, we bind ourselves, our heirs, executors, administrators and successors, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION IS SUCH, that if said Principal, his/her or its heirs, executors or administrators, successors or assigns, shall fail to pay for any materials, provisions, provender, or other supplies or teams used in, upon, for or about the performance of the work Contracted to be done, or for any work or labor thereon of any respect to such work or labor, as required by the provisions of Division 2, Part 1, Chapter 5 of the Public Contracts Code of the State of California, and provided that the persons, companies or other supplies, teams, appliances or power used in, upon, for or about the performance of the work contracted to be executed or performed, or any person, company or corporation renting or hiring teams or implements or machinery of power for or contributing to said work to be done, or any person who performs work or labor upon same, or any person who supplies both work and materials therefore, shall have complied with the provisions of said Government Code, then said Surety will pay the same in or to an amount not exceeding the amount hereinabove set forth, and also will pay in case suit is brought upon this bond, such reasonable attorney's fee as shall be fixed by the court, awarded and taxed as in the above-mentioned Code provided.

This bond shall inure to the benefit of any and all persons, companies and corporations entitled to file claims under said Government Code, so as to give a right to action to them or their assigns in any suit brought upon this bond.

And the said Surety, for value received, hereby stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the Specifications accompanying the same shall in anyway affect its obligations of this bond and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the Contract or to the work or to the Specifications.

IN WITNESS WHEREOF the above bond parties have executed this instrument under their seals this _____day of _____, 20_____, the name and corporate seal of each corporate party being hereto affixed and these presents duly signed by its undersigned representative; pursuant to authority of its governing body.

Principal Name: _____

Address: _____

_____

(Attach Notary Acknowledgment) By: _____
(Signature in blue ink)

By: _____
(Signature in blue ink)

Surety Name: _____

Address: _____

_____

(Attach Notary Acknowledgment) By: _____
(Signature in blue ink)

By: _____
(Signature in blue ink)

CITY OF SALINAS
(831) 758-7381
200 Lincoln Avenue
Salinas, CA 93901

CERTIFICATE OF INSURANCE

(This form is for informational purposes only. Contractor shall provide the original Certificate of Insurance issued by the insurance company and a copy of the insurance policy.) (To be completed and submitted after project is awarded).

This Certifies to CITY OF SALINAS, Attention: CITY CLERK that the following described policies have been issued to:

1. Insured: _____

2. Address: _____

_____

_____

3. Description of work (show name and/or number if any): _____

_____

_____

POLICIES & INSURERS	LIMITS Bodily Injury/Property Damage	POLICY NUMBER	EFFECTIVE DATE	POLICY FORM
4. Worker's Compensation _____ (Insurer)		Employer's Liability: Statutory		
5. Comprehensive General Occurrence or _____ (Insurer)	$ _____ Each Person $ _____ Each Occurrence $ _____ Combined single limit	$ _____ Each Occurrence $ _____ Aggregate		_____ Claims or Occurrence _____ Claims made * basis
6. Comprehensive Vehicle Liability _____ (Insurer)	$ _____ Each Person $ _____ Each Occurrence $ _____ Combined single limit	$ _____ Each Occurrence		_____ Claims or Occurrence _____ Claims made * basis

7. Contractor shall, throughout the duration of this Agreement maintain comprehensive general liability and property damage insurance, or commercial general liability insurance, covering all operations of the Contractor, its agents and employees, performed in connection with this Agreement including but not limited to premises and automobile.

8. All insurance companies affording coverage to the Contractor shall be required to add the City of Salinas as an additional "insured" under the insurance policy.

9. Contractor shall maintain the following minimum limits:

   Contractor shall at all times during the term of this Agreement maintain in effect a policy or policies having an A.M Best rating of A-Class VIII or better for bodily injury liability, personal injury, advertising injury and property damage, including product liability insurance with limits on the Declarations Page but not less than One Million and 00/100 Dollars ($1,000,000.00) per occurrence and Two Million and 00/100 Dollars ($2,000,000) in the general aggregate and products/completed operations aggregate insuring against any and all liability of the insured with respect to premises and products/completed operations. Liability coverage shall also include coverage for underground work and/or construction performed (if applicable). The coverage afforded to the additional insureds under the Contractor's policy shall be primary insurance and non-contributory. If coverage is on a claims-made basis, the Contractor shall maintain "tail coverage" no less than ten (10) years after the expiration date of the policy or policies. Any policy or policies carrying a deductible of more than $25,000.00 may be subject to review by the City of the Contractor's financials.

10. UMBRELLA OR EXCESS: Contractor shall provide limits on the Declarations Page but not less than Two Million and 00/100 Dollars ($2,000,000) per occurrence and Two Million and 00/100 ($2,000,000) in the aggregate on a follow - form basis having an A.M Best rating of A-Class VIII or better.

11. AUTO LIABILITY: Contractor shall provide limits on the Declarations Page but not less than One Million and 00/100 ($1,000,000.00) combined single limit for bodily injury and property damage having an A.M Best rating of A - Class VIII or better. Automobile Liability Symbol 1 (any auto), if the Company owns automobiles. An entity without autos shall have "Non -owned and Hired" coverage (Auto Symbols 8 & 9). The City and its elected and appointed officers, boards, commissions, agents and employees shall be named as Additional Insured.

12. WORKERS' COMPENSATION: Contractor shall provide Workers' Compensation Insurance sufficient to meet its statutory obligation and to provide benefits for employees with claims of bodily injury or occupational disease (including resulting death) as required by the State of California and Employer's Liability Insurance for One Million and 00/100 Dollars ($1,000,000). Waiver of Subrogation for Workers' Compensation in favor of the City of Salinas is required.

13. PROFESSIONAL LIABILITY: Contractor shall provide Professional Liability limits on the Declarations Page but not less than One Million and 00/100 Dollars ($1,000,000) per claim and One Million and 00/100 Dollars ($1,000,000) in the aggregate having an A.M Best rating of A-Class VIII or better.

    The insurance shall include a Waiver of Subrogation in favor of the City. For the avoidance of doubt, Contractor agrees that it presently releases all claims against the City that may arise in the future within the scope of the required subrogation waiver.

14. All insurance companies affording coverage shall provide 30 calendar day written notice by certified or registered mail to the Legal Department of the City of Salinas should the policy be canceled or reduced in coverage before the expiration date. For the purposes of this notice requirement, any material change prior to expiration shall be considered cancellation.

15. Contractor shall provide evidence of compliance with the insurance requirements listed above by providing a certificate of insurance, in a form satisfactory to the Legal Department concurrently with the submittal of this Agreement. A statement on the insurance certificate which states that the insurance company "will endeavor" to notify the certificate holder, "but failure to mail such notice shall impose no obligation or liability of any kind upon the Company, its agents or representatives" does not satisfy the requirements of subsection (11) herein. The Contractor shall ensure that the authorized representative of the insurance company strikes the above quoted language from the certificate. The insurance certificate shall also state the unpaid limits of the policy.

16. In addition, Contractor also accepts to provide commercial general liability (CGL) endorsement forms CG 20 10 11 85. An acceptable alternative would be the use of two ISO forms together: The CG 20 10 04 13 ("ongoing operations") and the CG 20 37 04 13 ("completed operations"). The City may also accept any other comparable endorsement, which does not further limit coverage and which may be approved and accepted by the City's Risk Management staff.

17. Contractor shall provide a substitute certificate of insurance no later than 30 calendar days prior to the policy expiration date. Failure by the Contractor to provide such a substitution and extend the policy expiration date shall be considered a default by Contractor and may subject the Contractor to a Stop Work Notice until the Contractor has cured the default.

18. Maintenance of insurance by the Contractor as specified in the Agreement shall in no way be interpreted as relieving the Contractor of any responsibility whatsoever and the Contractor may carry, at its own expense, such additional insurance as it deems necessary.

19. All policies in effect, above and endorsements below, shall not be canceled, limited, or allowed to expire without renewal until after 30 calendar days written notice has been given to the LEGAL DEPARTMENT OF THE CITY OF SALINAS.

    The following coverage or conditions are to be in effect:

    A. Products and Completed Operations

    B. (City of Salinas) named as Additional Insured

    C. Cross Liability Clause

    D. Primary and Non-Contributory wording

    E. X, C, U Hazards Included

    F. Personal Injury

20. Authorized signature may be the agents if agent has placed insurance through an agency with the insurer. If insurance is brokered, authorized signature shall be that of official of insurer.

NOTE: All content of this form must be adhered to, although, this format is for informational purposes only.

AGREEMENT

(To be completed and submitted for project award)

THIS AGREEMENT, made and entered into this _____ day of _____, 20_____, by and between CITY OF SALINAS, a municipal corporation of the State of California, hereinafter called "City", and _____hereinafter called "Contractor",

W I T N E S S E T H

FIRST: Contractor hereby covenants and agrees to furnish and provide all labor, materials, tools, appliances, equipment, plant and transportation, and all other things required or necessary to be furnished, provide or done, and build, erect, construct and complete the work at the time and in the manner provided, and in strict accordance with, the Plans and Specifications therefore, for

RUNWAY 13-31 AND RUNWAY 8-26 REHABILITATION
AIP No. 3-06-0206-27
CITY PROJECT NO. 9275

adopted by the Council of the City of Salinas on _____, 20_____, and identified by the signature of Contractor and the signature of the Mayor of the City of Salinas.

SECOND: It is expressly understood and agreed that this Contract consists of the following documents, all of which are incorporated into this agreement and made a part hereof as fully and completely as if set forth herein verbatim, to wit:

- **a. Notice Inviting Sealed Proposals;**
- **b. Signed and executed Bid and Proposal of Contractor, and if any signed Addendum, as accepted by City;**
- **c. Bidder's Statement of Financial Responsibility, Technical Ability and Experience;**
- **d. Bidder's Statement of Subcontractors – Part I;**
- **e. Bidder's Statement of Subcontractors – Part II;**
- **f. Insurance Certification;**
- **g. Completely executed and signed all required Federal, State, and City of Salinas forms;**
- **h. Instructions to Successful Bidder and General conditions;**
- **i. Bond of Faithful Performance;**
- **j. Payment Bond (Labor and Materials Bond);**
- **k. Certificate of Insurance;**
- **l. The aforesaid Plans and Specifications;**
- **m. Design Standards and Standard Specifications and Standard Plans,** Error! Reference source not found. **Edition, or as amended, or otherwise indicated in the specifications; and**
- **n. this Agreement.**

THIRD: That said Contractor agrees to receive and accept the following prices as full compensation for furnishing all materials and for doing all the work embraced and contemplated in this Agreement and as set forth in the Proposal adopted by the City of Salinas, a true copy thereof hereto attached; also, for all loss or damage arising out of the nature of said work or from the action of the elements or from any unforeseen difficulties or

obstructions which may arise or be encountered in the prosecution of the work until the acceptance thereof by the City of Salinas and for all risk connected with the work, and for well and faithfully completing the work, and the whole thereof, in the manner and according to the said Plans and Specifications and the provisions of this agreement, and the requirements of the City Engineer under them, to wit: The prices as set forth in the Proposal of said Contractor for the work to be constructed and completed under this Agreement, which prices shall be considered as though repeated herein.

The Contractor and City hereby agree that the Contractor shall perform the work, and be paid the amount of bid

items No._____ as specified in the Proposal of the Contractor, for the total price

of _____

($_____) Dollars.

The undersigned Contractor further agrees to so plan the work and to prosecute it with such diligence that said work, and all of it, shall be completed on or before the expiration of the time specified in the Proposal after execution of the Contract on behalf of the City of Salinas and the receipt from the City of Salinas of a notice to proceed with the work.

FOURTH: The City of Salinas hereby promise and agrees with said Contractor to employ, and does hereby employ, said Contractor to provide the materials and to do the work according to the terms and conditions herein contained and referred to, for the price aforesaid, and hereby Contracts to pay the same at the time, in the manner and upon the conditions set forth in the Specifications and the said parties, for themselves, their heirs, executors, administrators, successors, and assigns, do hereby agree to the full performance of the covenants herein contained.

FIFTH: No interest in this agreement shall be transferred by the Contractor to any other party, and any such transfer shall cause the annulment of this Contract, so far as the City of Salinas is concerned. All rights of action, however, for any breach of this Contract are reserved to City.

SIXTH: The Contractor shall keep harmless and indemnify the City of Salinas, its officers and employees and agents, from all loss, damage, cost or expense that arises or is set up for infringement of patent rights of anyone for use by the City of Salinas, its officers, employees or agents, or articles supplied by the Contractor under this Contract of which he/she is not entitled to use or sell. Contractor agrees to, at his/her own cost and expense, defend in court the City, its officers, agents and employees, in any action which may be commenced or maintained against them or any of the, on account of any claimed infringement of patent rights, arising out of this agreement.

Contractor shall indemnify and save the City of Salinas and its officers, agents, and employees harmless against all claims for damages to person or property arising out of Contractor's execution of the work, or otherwise by the conduct of the Contractor or its employees, agents, Subcontractors, or others (including the active and passive negligence of the City, its officers, agents, and employees) in connection with the execution of the work covered by this Contract and any and all costs, expenses, attorney's fees and liability incurred by the City, its officers, agents, and employees) in connection with the execution of the work covered by this Contract and any and all costs, expenses, attorneys' fees and liability incurred by the City, its officers, agents, or employees in defending against such claims, whether the same proceed to judgment or not, except only those claims arising from the sole negligence or willful conduct of the City, its officers, agents, or employees. Further, Contractor at its own expense shall, upon written request by the City, defend any such suit or action brought against the City, its officers, agents, or employees.

Contractor shall reimburse the City of Salinas for all costs and expense (including but not limited to fees and charge of architects, engineers, attorneys, and other professional and court costs) incurred by the City in enforcing the provisions of this Section.

SEVENTH: The Contractor agrees to immediately repair and replace all defective material and workmanship discovered within ***1 year*** after acceptance of final payment by Contractor and to indemnify said City of Salinas against all loss and damage occasioned by any such defect, discovered within said ***1 year***, even though the damage

or loss may not be ascertained until after the expiration thereof. Provided, however, that if such failure of the Contractor to perform should not, by reasonable diligence, be discoverable or discovered within said ***1 year***, then the obligation of the Contractor to repair and replace said defective material or workmanship shall continue until one year after the actual discovery thereof.

EIGHTH: The Contractor agrees at all times during the progress of the work to carry with insurance carriers approved by the City of Salinas full coverage workmen's compensation and public liability insurance in the form and to the extent called for in Section 7-1.12 of both the State Standard Specifications, State of California, May 2006, and the Design Standards and Standard Specifications, Public Works Department City of Salinas, 2008 Edition. Certificates of Insurance must specify whether coverage is on a "claims occurrence" or "claims made" form. If the policy is "claims made", Contractor will be required to obtain a bond which must remain in effect until ***12 months*** following work completions.

Contractor shall also advise the insurance carrier to inform the city of the unpaid limits of the policy. Such insurance policy shall contain an endorsement that the same shall not be canceled nor the amount of coverage be reduced until at least ***30 days*** after receipt by the City of Salinas by certified or registered mail of a written notice of such cancellation or reduction in coverage.

It is acknowledged by the parties to this agreement that insurance coverage required to be provided by the Contractor or any other party in favor of the City/additional insured is intended to apply first on a primary and non-contributing basis in relation to any other insurance of self-insurance (primary or excess) available to the City and any employee of the City. The Contractor agrees to have its policies endorsed accordingly. In addition, Contractor also accepts to provide commercial general liability (CGL) endorsement form *CG 20 10 11 85*. An acceptable alternative would be the use of two ISO forms together: the *CG 20 10 07 04* ("ongoing operations") and the *CG 20 37 10 01* ("completed operations"). The City may also accept any other comparable endorsement, which does not further limit coverage and which may be approved and accepted by the City's Legal Department staff.

NINTH: Contractor agrees to comply with all applicable federal, state, and municipal laws and regulations, including but not limited to California Labor Code Division 2, Part 7, Chapter 1.

Apprenticeship utilization: The contractor agrees to comply with the Department of Apprenticeship Standards of the California Labor Code Section 1777.5, and the following:

> Prior to commencing work on the awarded contract, the Contractor shall submit contract award information (form DAS 140) to an applicable apprenticeship program that can supply apprentices to the site of the public work. **A copy of this information shall also be provided to the City of Salinas.**
>
> The ratio of work performed by apprentices to journeyman employed in a particular craft or trade on the public work shall be no less than on hour of apprentice work for every five hours of journeyman work.
>
> **At the end of each month of work on the contract, the Contractor and Subcontractors shall submit a record of utilization of apprentices for the previous months work.**
>
> **Within 60 days after concluding work on the contract, each contractor and subcontractor shall submit to the City of Salinas and to the apprenticeship program a verified statement of the journeyman and apprentice hours performed on the contract.**

IN WITNESS WHEREOF, City has caused this instrument to be executed and its corporate name and seal to be hereunto attached by its Mayor, pursuant to resolution theretofore duly adopted by the Council of the City of Salinas, and Contractor has caused this instrument to be executed, the day and year first hereinabove written.

CITY OF SALINAS, A Municipal Corporation

ATTEST:

BY _____

Mayor

City Clerk _____

_____

_____

_____

(Attach Notary Acknowledgment)

Contractor *(signature in blue ink)*

NOTE: Please refer to the "General Instructions to Low Bidder" for specific signature requirements.

I hereby approved the form of the foregoing Contract this_____day of

_____, 20_____.

_____

Attorney for the City of Salinas

Checked by the City Engineer on _____

_____

City Engineer

ALL SIGNATURES SHALL BE NOTARIZED EXCEPT THOSE OF CITY OFFICIALS'

EXTRACT OF PUBLIC WORKS CONTRACT AWARD (D.A.S. 13)

STATE OF CALIFORNIA - DEPARTMENT OF INDUSTRIAL RELATIONS
DIVISION OF APPRENTICESHIP STANDARDS

TO: California Department of Industrial Relations
Division of Apprenticeship Standards
P.O. Box 420603
San Francisco California 94142

FROM: AWARDING AGENCY

EXTRACT OF PUBLIC WORKS CONTRACT AWARD

8340060000
CITY OF SALINAS
Development and Engineering Services Department
200 Lincoln Avenue
Salinas, CA 93901

A CONTRACT TO PERFORM PUBLIC WORKS UNDER LABOR CODE SECTION 1777.5 HAS BEEN AWARDED TO:

2. NAME OF GENERAL CONTRACTOR		3. CONTRACTOR'S LICENSE NO
4. MAIL ADDRESS (STREET NUMBER OR P.O. BOX)	5. CITY	
	6. ZIP CODE	7. TELEPHONE NUMBER
8. ADDRESS OR LOCATION OF PUBLIC WORKS SITE (INCLUDE CITY AND/OR COUNTY)		
9. CONTRACT OR PROJECT NUMBER	10. DOLLAR AMOUNT OF CONTRACT AWARD $	
11. STARTING DATE (ESTIMATED OR ACTUAL) MONTH DAY YEAR / / (USE NUMBERS)	12. COMPLETION DATE (ESTIMATED OR ACTUAL) MONTH DAY YEAR / / / (USE NUMBERS)	
13. TYPE OF CONSTRUCTION (HIGHWAY, SCHOOL, HOSPITAL, ETC.)	14. ☐ NEW CONSTRUCTION ☐ ALTERATIONS	
15. CLASSIFICATION OR TYPE OF WORKER (CARPENTER, PLUMBER, ETC.) THAT WILL BE EMPLOYED BY THE CONTRACTOR(S)		
16. **Is language included in the Contract Award to effectuate the provision of section 1777.5, as required by the Labor Code?**	☐ Yes	☐ No
Is language included in the Contract Award to effectuate the provisions of Section 1776, as required by the Labor Code?	☐ Yes	☐ No
17. SIGNATURE	18. TITLE	19. DATE
20. PRINTED OR TYPED NAME		21. TELEPHONE NUMBERS

Duplication of this form is permissible

DAS 13 (rev. 5/01)

PUBLIC WORKS CONTRACT AWARD INFORMATION (D.A.S. 140)

PUBLIC WORKS CONTRACT AWARD INFORMATION

Contract award information must be sent to your Apprenticeship Committee if you are approved to train. If you are not approved to train, you must send the information (which may be this form) to ALL applicable Apprenticeship Committees in your craft or trade in the area of the site of the public work. Go to: http://www.dir.ca.gov/das/PublicWorksForms.htm for information about programs in your area and trade. You may also consult your local Division of Apprenticeship Standards (DAS) office whose telephone number may be found in your local directory under California, State of, Industrial Relations, Division of Apprenticeship Standards.

Do not send this form to the Division of Apprenticeship Standards.

NAME OF YOUR COMPANY	CONTRACTOR'S STATE LICENSE NO
MAILING ADDRESS- NUMBER & STREET, CITY, ZIP CODE	AREA CODE & TELEPHONE NO.
NAME & ADDRESS OF PUBLIC WORKS PROJECT	DATE YOUR CONTRACT EXECUTED
	DATE OF EXPECTED OR ACTUAL START OF PROJECT
NAME & ADDRESS OF PUBLIC AGENCY AWARDING CONTRACT	ESTIMATED NUMBER OF JOURNEYMEN HOURS
	OCCUPATION OF APPRENTICE
THIS FORM IS BEING SENT TO: (NAME & ADDRESS OF APPRENTICESHIP PROGRAM(S))	ESTIMATED NUMBER OF APPRENTICE HOURS
	APPROXIMATE DATES TO BE EMPLOYED

This is not a request for dispatch of apprentices.

Contractors must make a separate request for actual dispatch, in accordance with Section 230.1(a) California Code of Regulations

Check One Of The Boxes Below

1. ☐ We are already approved to train apprentices by the _____ Apprenticeship Committee. We will employ and train under their Standards. Enter name of the Committee

2. ☐ We will comply with the standards of _____ Apprenticeship Committee for the duration of this job only. Enter name of the Committee

3. ☐ We will employ and train apprentices in accordance with the California Apprenticeship Council regulations, including § 230.1 (c) which requires that apprentices employed on public projects can only be assigned to perform work of the craft or trade to which the apprentice is registered and that the apprentices must at all times work with or under the direct supervision of journeyman/men.

Signature _____ *Date* _____

Typed Name _____

Title _____

State of California - Department of Industrial Relations DIVISION OF APPRENTICESHIP STANDARDS

DAS 140 (REV. 1/04)

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PART C –
CITY OF SALINAS FORMS AND MEMORANDUM DOCUMENTS

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INSTRUCTIONS FOR PREPARATION OF STATEMENT OF COMPLIANCE

This statement of compliance meets needs of state and federal payroll requirements to pay fringe benefits in addition to payment of the minimum rates. The Contractor's obligation to pay fringe benefits may be met by payment of the fringes to the various pre-approved Plans, funds or programs or by making these payments directly to the employees as part of their weekly wage payments.

The Contractor shall show on the face of his or her payroll all monies paid to the employees whether as basic rates or total hourly wage amount in lieu of fringes. The Contractor shall report in the statement of compliance that he or she is paying to others fringes required by the Contract and not paid directly to the employees in lieu of fringes. Detailed instructions follow:

Contractors who pay all required fringe benefits:

A Contractor who pays fringe benefits to approved Plans, funds or programs in amounts not less than were determined in the applicable wage decisions shall continue to show on the face of his or her payroll the basic hourly rate and overtime rate paid to his or her employees, just as he or she has always done. Such a Contractor shall check paragraph 4(a) of the statement to indicate that he or she is also paying to approved Plans, funds or programs within the times required for receipt of those sums, not less than the amount predetermined as fringe benefits for each craft. Any exception shall be noted on Section 4(c).

Contractors who pay no fringe benefits:

A Contractor who does not pay fringe benefits to an approved Plan shall pay a like amount to the employee. This payment can be reported by inserting in the straight time hourly rate column of his or her payroll an amount not less than the predetermined rate for each classification plus the amount of fringe benefits determined for each classification in the applicable wage decision. Inasmuch as it is not necessary to pay time and a half on wages paid in lieu of fringes, the overtime rate shall be not less than one and one-half the basic predetermined rate, plus the required cash in lieu of fringes at the straight time rate. To simplify computation of overtime, the straight time basic rate and payment in lieu of fringes be separately stated in the hourly rate column, thus $14.56/5.11. In addition the Contractor shall check paragraph 4(b) of the statement to indicate that he or she is paying fringe benefits directly to his or her employees. Any exceptions shall be noted in Section 4(c).

Use of Section 4(c), Exceptions:

Any Contractor who is making payment to approved Plans, funds or programs in amounts less than the wage determination requires if obligated to pay the deficiency directly to the employees as wages in lieu of fringes.

Any exceptions to Section 4(a) and 4(b), whichever the Contractor may check shall be entered in Section 4(c). Enter in the Exception column the craft and enter in the Explanation column the hourly amount paid the employees as wages in lieu of fringes and the hourly amount paid to Plans, funds or programs as fringes.

STATEMENT OF COMPLIANCE

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

STATEMENT OF COMPLIANCE

CEM-2503 (REV 8/96)

CONTRACTOR/SUBCONTRACTOR	CONTRACT NUMBER
FIRST DAY AND DATE OF PAY PERIOD	LAST DAY AND DATE OF PAY PERIOD

I do hereby certify under penalty of perjury:

(1) That I pay or supervise payment to employees of the above-referenced contractor on the above-referenced contract. All persons employed on said project for the above-referenced time period have been paid their full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said contractor from the full weekly wages earned by any person and that no deductions have been made either directly or indirectly from the full wages earned by any person other than permissible deductions.

(2) That any payrolls otherwise under this control required to be submitted for the above period are correct and complete; that the wage rates for laborers or mechanics contained therein are not less that the applicable wages rates:

(a) ☐ Specified in the applicable wage determination incorporated into the contract;

(b) ☐ Determined by the Director of Industrial Relations for the county or counties in which the work is performed;

that the classification set forth therein for each laborer or mechanic conform with the work he or she performed.

(3) That any apprentices employed in the above period are duly registered in a bona fide apprenticeship program registered with a State apprenticeship agency.

(4) That fringe benefits as listed in the contract:

(a) ☐ Have been or will be paid to the approved plan(s), fund(s), or program(s) for the benefit of listed employee(s), except as noted below.

(b) ☐ Have been paid directly to the listed employee(s), except as noted below.

(c) ☐ See exceptions noted below.

EXCEPTION CRAFT	EXPLANATION

REMARKS:

NAME (PLEASE PRINT.)	TITLE
SIGNATURE	DATE

On federally-funded projects, permissible deductions are defined in Regulation, Part 3 (29 CFR, Subtitle A), issued by the Secretary of Labor under the Copland Act, as amended (48 Sat. 948 63 Stat. 108,72 State. 967;76 Stat 357:40 U. S. C. 276c).

Also, the willful falsification of any of the above statements may subject the contractor or subcontractor to civil or criminal prosecution (See Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code).

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 263-2041 or TDD (916) 263-2044 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

CEM2503

California Department of Transportation • Construction Manual • July 2004

CITY OF SALINAS
FRINGE BENEFIT STATEMENT

CONTRACTOR/SUBCONTRACTOR (Please Print)	CONTRACT NUMBER	FEDERAL AID PROJECT NUMBER	DATE

TO: RESIDENT ENGINEER/DISTRICT LABOR COMPLIANCE OFFICER	BUSINESS ADDRESS

The following information (as shown or referenced on wage rate determinations) paid to or on behalf of employees in various crafts or classifications is used to check payrolls or applied to force account work on the above contract.

THIS FORM MUST BE COMPLETED AND SUBMITTED WITH THE FIRST CERTIFIED PAYROLL, OR WHEN THERE HAVE BEEN ANY CHANGES.

CLASSIFICATION	FRINGE BENEFIT HOURLY AMOUNT		NAME AND ADDRESS OF PLAN, FUND, OR PROGRAM
Effective Date	Vacation	$	
	Health & Welfare	$	
	Pension	$	
Subsistence and /or Travel Pay:	Apprentice	$	
$	Other	$	
CLASSIFICATION	FRINGE BENEFIT HOURLY AMOUNT		NAME AND ADDRESS OF PLAN, FUND, OR PROGRAM
Effective Date	Vacation	$	
	Health & Welfare	$	
	Pension	$	
Subsistence and /or Travel Pay:	Apprentice	$	
$	Other	$	
CLASSIFICATION	FRINGE BENEFIT HOURLY AMOUNT		NAME AND ADDRESS OF PLAN, FUND, OR PROGRAM
Effective Date	Vacation	$	
	Health & Welfare	$	
	Pension	$	
Subsistence and /or Travel Pay:	Apprentice	$	
$	Other	$	

I certify under penalty of perjury that fringe benefits are paid to the approved Plans, Funds, or Programs as listed above.

NAME AND TITLE (Please Print)

SIGNATURE	BUSINESS TELEPHONE NUMBER

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 263-2041 or TDD (916) 263-2044 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

CA DOT FORM
CEM2501 (Rev. 8/94)

CITY OF SALINAS PUBLIC WORKS PAYROLL REPORTING FORM

PAGE_____OF_____

NAME OF CONTRACTOR OR SUBCONTRACTOR
CONTRACTOR'S LICENSE NO.
SPECIALTY LICENSE NO.
ADDRESS
SELF-INSURED CERTIFICATE NO.
PROJECT OR CONTRACT NO.
PAYROLL NO.
FOR WEEK ENDING
WORKERS COMPENSATION POLICY NO.
PROJECT AND LOCATION NO.

(1)	(2)	(3)		(4) DAY							(5)	(6)	(7)		(8)							(9)	
NAME, ADDRESS AND SOCIAL SECURITY NUMBER OF EMPLOYEE	NO. OF WITHHOLDING EXEMPTIONS	WORK CLASSIFICATION		M	T	W	TH	F	S	S	TOTAL HOURS	HOURLY RATE OR PAY	GROSS AMOUNT EARNED		DEDUCTIONS, CONTRIBUTIONS AND PAYMENTS							NET WAGES PAID FOR WEEK	CHECK NO.
				DATE																			
				HOURS WORKED EACH DAY																			
			S										THIS PROJECT	ALL PROJECTS	FED. TAX	FICA (SOC. SEC.)	STATE TAX	SDI	VAC./ HOL.	HEALTH & WELF.	PENSION		
															TRAING.	FUND ADMIN.	DUES	TRV/ SUBS.	SAVINGS	OTHER*	TOTAL DEDUCTIONS		
			O																				
			S										THIS PROJECT	ALL PROJECTS	FED. TAX	FICA (SOC. SEC.)	STATE TAX	SDI	VAC./ HOL.	HEALTH & WELF.	PENSION		
															TRAING.	FUND ADMIN.	DUES	TRV/ SUBS.	SAVINGS	OTHER*	TOTAL DEDUCTIONS		
			O																				
			S										THIS PROJECT	ALL PROJECTS	FED. TAX	FICA (SOC. SEC.)	STATE TAX	SDI	VAC./ HOL.	HEALTH & WELF.	PENSION		
															TRAING.	FUND ADMIN.	DUES	TRV/ SUBS.	SAVINGS	OTHER*	TOTAL DEDUCTIONS		
			O																				
			S										THIS PROJECT	ALL PROJECTS	FED. TAX	FICA (SOC. SEC.)	STATE TAX	SDI	VAC./ HOL.	HEALTH & WELF.	PENSION		
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S = STRAIGHT TIME
O = OVERTIME
SDI = STATE DISABILITY INSURANCE

* OTHER = Any other deductions, contributions and/or payments whether or not included or required by prevailing wage determinations shall be separately listed. Use extra sheet if necessary.

CERTIFICATION shall be completed
REVISION DATE: 05/01/03

PW14

PUBLIC WORKS DEPARTMENT BID PROTEST

City of Salinas

Bidder's Attention is directed to the "CITY OF SALINAS SPECIAL PROVISIONS SECTION 2 PROPOSAL REQUIREMENTS AND CONDITIONS" Section 2-1.05

Today's Date _____

Project Title: _____ Bid Opening Date _____

Contractor (or Subcontractor): _____

Contact Name _____ Phone# _____

Address: _____

City: _____ State: _____ Zip: _____

Chapter 12-39. - Bid protests of the City Code provides: Any contractor who has submitted a bid but is not the apparent lowest responsible bidder on a city contract may file a protest. The bid protest shall be filed with the city clerk within **three working days** of the bid opening. The city council shall hear the bid protest prior to adopting a resolution authorizing the bid award and execution of the contract. In cases where the contract is not executed by the city pursuant to city council resolution, the bid protest shall be heard by the city council prior to the time the city issues a notice to proceed or the appropriate city official executes the contract on behalf of the city. The protesting party may protest the bid award for the city's or successful bidder's failure to comply with the requirements of this article, the bid documents or any other applicable provision of this Code. The city council shall sustain a bid protest only if it finds evidence that award of the bid would violate the Code or other applicable law. The decision of the council shall be final.

The Contractor listed above wishes to protest one or more of the bid processes used to make the determination of the lowest responsible bidder. The following is a statement that describes the circumstances and the issues under protest. (Additional sheet(s) can be attached as needed)

Please be as specific as possible:

The following is a statement that clearly describes the remedy being recommended by the above contractor. (Additional sheets can be attached as needed.)

Please be as specific as possible:

I certify that the information contained in this form is true and correct, to the best of my knowledge, (Please include this statement on all pages with an authorized signature.)

_____ _____

Signature in blue ink **Name** (Please Print)

_____ _____

Title or Position (Please Print) Date

Number of Pages_____ (including those attached)

CITY OF SALINAS NOTICE OF POTENTIAL CLAIM

FOR CITY USE ONLY	
Received by _____ (For Resident Engineer)	Date _____

DC-CEM-6201 (REV 7/00)

TO _____ (*Resident Engineer*) CONTRACT NUMBER _____ DATE _____

The particular circumstances of this potential claim are described in detail as follows:

The reasons for which I believe additional compensation may be due:

The nature of the costs involved and the amount of the potential claim are described as follows:
(If accurate cost figures are not available, provide an estimate, or describe the types of expenses involved)

The undersigned originator (Contractor or Subcontractor as appropriate) certifies that the above statements are made in full cognizance of the California False Claims Act, Government Code sections 12650-12655. The undersigned further understands and agrees that this potential claim to be further considered unless resolved, shall be restated as a claim in response to the States proposed final estimate in accordance with Section 9-1.07B of the Standard Specifications.

_____
SUBCONTRACTOR or CONTRACTOR
(Circle One)

_____
(Authorized Representative)

For subcontractor notice of potential claim

This notice of potential claim is acknowledged and forwarded by

PRIME CONTRACTOR

_____
(Authorized Representative)

CEM-6201 (REV. 7/00)

PART D –
AIRPORT IMPROVEMENT PROGRAM REQUIREMENTS

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AIRPORT IMPROVEMENT PROGRAM REQUIREMENTS

1. **AIRPORT IMPROVEMENT PROGRAM PROJECT.** Work in this contract is being undertaken and accomplished by the owner, in accordance with the terms and conditions of a grant agreement between the owner and the United States, under the Airport and Airway Improvement Act of 1982 (84 Stat. 219) and Part 152 of the Federal Aviation Regulations (14 CFR Part 152), pursuant to which the United States has agreed to pay a certain percentage of the costs of the project that are determined to be allowable project costs under that Act. The United States is not a party to this contract and no reference in this contract to the Federal Aviation Administration hereinafter referred to as FAA, or any representative thereof, or to any rights granted to the FAA or any representative thereof, or the United States, by the contract, makes the United States a party to this contract.

2. **CONSENT TO ASSIGNMENT.** The contractor shall obtain the prior written consent of the owner to any proposed assignment of any interest in or part of this contract.

3. **CONVICT LABOR.** No convict labor may be employed under this contract.

4. **FAA INSPECTION OF REVIEW.** The contractor shall allow any authorized representative of the FAA to inspect and review any work or materials used in the performance of this contract.

5. **SUBCONTRACTS.** The contractor shall insert in each of his subcontracts the provisions contained in preceding paragraphs 1, 3, 4, 6, 7, 8, 9, 10, 11, 12, 13, and 14, and also a clause requiring the subcontractor to include these provisions in any lower tier subcontracts which they may enter into, together with a clause requiring this insertion in any further subcontracts that may in turn be made.

6. **PROVISIONS FOR ALL AIRPORT IMPROVEMENT PROGRAM CONSTRUCTION CONTRACTS.**

a. Civil Rights Act of 1964, Title VI – Contractor Contractual Requirements

During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

(1) Compliance with Regulations. The Contractor (hereinafter includes consultants) will comply with the Title VI List of Pertinent Nondiscrimination Acts and Authorities, as they may be amended from time to time, which are herein incorporated by reference and made a part of this contract.

(2) Nondiscrimination. The Contractor, with regard to the work performed by it during the contract, will not discriminate on the grounds of race, color, or national origin in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The Contractor will not participate directly or indirectly in the discrimination prohibited by the Nondiscrimination Acts and Authorities, including employment practices when the contract covers any activity, project, or program set forth in Appendix B of 49 CFR part 21.

(3) Solicitations for Subcontracts, Including Procurements of Materials and Equipment. In all solicitations, either by competitive bidding or negotiation made by the Contractor for work to be performed under a subcontract, including procurements of materials, or leases of equipment, each

potential subcontractor or supplier will be notified by the Contractor of the contractor's obligations under this contract and the Nondiscrimination Acts and Authorities on the grounds of race, color, or national origin.

(4) Information and Reports. The Contractor will provide all information and reports required by the Acts, the Regulations, and directives issued pursuant thereto and will permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the sponsor or the Federal Aviation Administration to be pertinent to ascertain compliance with such Nondiscrimination Acts and Authorities and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish the information, the Contractor will so certify to the sponsor or the Federal Aviation Administration, as appropriate, and will set forth what efforts it has made to obtain the information.

(5) Sanctions for Noncompliance. In the event of a Contractor's noncompliance with the non-discrimination provisions of this contract, the sponsor will impose such contract sanctions as it or the Federal Aviation Administration may determine to be appropriate, including, but not limited to:

a. Withholding payments to the Contractor under the contract until the Contractor complies; and/or

b. Cancelling, terminating, or suspending a contract, in whole or in part.

(6) Incorporation of Provisions. The Contractor will include the provisions of paragraphs one through six in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Acts, the Regulations, and directives issued pursuant thereto. The Contractor will take action with respect to any subcontract or procurement as the sponsor or the Federal Aviation Administration may direct as a means of enforcing such provisions including sanctions for noncompliance. Provided, that if the Contractor becomes involved in, or is threatened with litigation by a subcontractor, or supplier because of such direction, the Contractor may request the sponsor to enter into any litigation to protect the interests of the sponsor. In addition, the Contractor may request the United States to enter into the litigation to protect the interests of the United States.

c. Airport and Airway Improvement Act of 1982, Section 520 - General Civil Rights Provisions

The Contractor agrees to comply with pertinent statutes, Executive Orders and such rules as are promulgated to ensure that no person shall, on the grounds of race, creed, color, national origin, sex, age, or disability be excluded from participating in any activity conducted with or benefiting from Federal assistance.

This provision binds the Contractor and subcontractors from the bid solicitation period through the completion of the contract. This provision is in addition to that required by Title VI of the Civil Rights Act of 1964.

d. Lobbying and Influencing Federal Employees

(1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the Bidder or Offeror, to any person for influencing or attempting to influence an officer or employee of an 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 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 Form to Report Lobbying," in accordance with its instructions.

e. Access to Records and Reports

The Contractor must maintain an acceptable cost accounting system. The Contractor agrees to provide the Owner, the Federal Aviation Administration and the Comptroller General of the United States or any of their duly authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to the specific contract for the purpose of making audit, examination, excerpts and transcriptions. The Contractor agrees to maintain all books, records and reports required under this contract for a period of not less than three years after final payment is made and all pending matters are closed.

f. Disadvantaged Business Enterprises

(1) Contract Assurance (§26.13) - The Contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor shall carry out applicable requirements of 49 CFR part 26 in the award and administration of Department of Transportation-assisted contracts. Failure by the Contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the Owner deems appropriate, which may include, but is not limited to:

1) Withholding monthly progress payments;
2) Assessing sanctions;
3) Liquidated damages; and/or
4) Disqualifying the Contractor from future bidding as non-responsible.

(2) Prompt Payment (§26.29) - The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than ***seven (7)*** days from the receipt of each payment the prime contractor receives from ***City of Salinas.*** The prime contractor agrees further to return retainage payments to each subcontractor within ***seven (7)*** days after the subcontractor's work is satisfactorily completed. Any delay or postponement of payment from the above referenced time frame may occur only for good cause following written approval of the ***City of Salinas.*** This clause applies to both DBE and non-DBE subcontractors.

g. Energy Conservation Requirements

Contractor and Subcontractor agree to comply with mandatory standards and policies relating to energy efficiency as contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act (42 USC 6201et seq).

h. Breach of Contract Terms

Any violation or breach of terms of this contract on the part of the contractor or their subcontractors may result in the suspension or termination of this contract or such other action that may be necessary to enforce the rights of the parties of this agreement.

Owner will provide the contractor written notice that describes the nature of the breach and corrective actions the contractor must undertake in order to avoid termination of the contract. Owner reserves the right to withhold payments to Contractor until such time the Contractor corrects the breach or the Owner elects to terminate the contract. The Owner's notice will identify a specific date by which the contractor must correct the breach. Owner may proceed with termination of the contract if the contractor fails to correct the breach by the deadline indicated in the Owner's notice.

The duties and obligations imposed by the Contract Documents and the rights and remedies available thereunder shall be in addition to and not a limitation of any duties, obligations, rights and remedies otherwise imposed or available by law.

i. Rights to Inventions

Contracts or agreements that include the performance of experimental, developmental, or research work must provide for the rights of the Federal Government and the Owner in any resulting invention as established by 37 CFR part 401, Rights to Inventions Made by Non-profit Organizations and Small Business Firms under Government Grants, Contracts, and Cooperative Agreements. This contract incorporates by reference the patent and inventions rights as specified within 37 CFR §401.14. Contractor must include this requirement in all sub-tier contracts involving experimental, developmental, or research work.

j. Trade Restriction Clause

By submission of an offer, the Offeror certifies that with respect to this solicitation and any resultant contract, the Offeror –

1) is not owned or controlled by one or more citizens of a foreign country included in the list of countries that discriminate against U.S. firms as published by the Office of the United States Trade Representative (USTR);

2) has not knowingly entered into any contract or subcontract for this project with a person that is a citizen or national of a foreign country included on the list of countries that discriminate against U.S. firms as published by the USTR; and

3) has not entered into any subcontract for any product to be used on the Federal project that is produced in a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR.

This certification concerns a matter within the jurisdiction of an agency of the United States of America and the making of a false, fictitious, or fraudulent certification may render the maker subject to prosecution under Title 18 USC Section 1001.

The Offeror/Contractor must provide immediate written notice to the Owner if the Offeror/Contractor learns that its certification or that of a subcontractor was erroneous when submitted or has become erroneous by reason of changed circumstances. The Contractor must require subcontractors provide immediate written notice to the Contractor if at any time it learns that its certification was erroneous by reason of changed circumstances.

Unless the restrictions of this clause are waived by the Secretary of Transportation in accordance with 49 CFR 30.17, no contract shall be awarded to an Offeror or subcontractor:

1) who is owned or controlled by one or more citizens or nationals of a foreign country included on the list of countries that discriminate against U.S. firms published by the USTR or

2) whose subcontractors are owned or controlled by one or more citizens or nationals of a foreign country on such USTR list or
3) who incorporates in the public works project any product of a foreign country on such USTR list.

Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render, in good faith, the certification required by this provision. The knowledge and information of a contractor is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

The Offeror agrees that, if awarded a contract resulting from this solicitation, it will incorporate this provision for certification without modification in all lower tier subcontracts. The Contractor may rely on the certification of a prospective subcontractor that it is not a firm from a foreign country included on the list of countries that discriminate against U.S. firms as published by USTR, unless the Offeror has knowledge that the certification is erroneous.

This certification is a material representation of fact upon which reliance was placed when making an award. If it is later determined that the Contractor or subcontractor knowingly rendered an erroneous certification, the Federal Aviation Administration (FAA) may direct through the Owner cancellation of the contract or subcontract for default at no cost to the Owner or the FAA.

k. Veteran's Preference

In the employment of labor (excluding executive, administrative, and supervisory positions), the Contractor and all sub-tier contractors must give preference to covered veterans as defined within Title 49 United States Code Section 47112. Covered veterans include Vietnam-era veterans, Persian Gulf veterans, Afghanistan-Iraq war veterans, disabled veterans, and small business concerns (as defined by 15 USC 632) owned and controlled by disabled veterans. This preference only applies when there are covered veterans readily available and qualified to perform the work to which the employment relates.

7. DAVIS BACON REQUIREMENTS.

1. Minimum Wages

(i) All laborers and mechanics employed or working upon the site of the work will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by the Secretary of Labor under the Copeland Act (29 CFR Part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalent thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics

shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein: *Provided*, that the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classification and wage rates conformed under (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can easily be seen by the workers.

(ii) (A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

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

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

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

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

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

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

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

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

2. Withholding.

The Federal Aviation Administration or the Sponsor shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of work, all or part of the wages required by the contract, the Federal Aviation Administration may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.

3. Payrolls and Basic Records.

(i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual costs incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of

apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

(ii) (A) The contractor shall submit weekly for each week in which and contract work is performed, a copy of all payrolls to the FAA if the agency is party to the contract, but if the agency is not such a party, the contractor will submit the payrolls to the applicant, sponsor, or owner as the case may be for transmission to the FAA. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 C.F.R. 5.5(a)(3)(i) except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identified number for each employee (e.g., the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH-347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime Contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the FAA if the agency is a party to the contract, but if the agency is not such a party, the contractor will submit them to the applicant, sponsor, or owner as the case may be for transmission to the FAA, the contractor, or Wage and Hour Division prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the sponsoring government agency (or the applicant, sponsor, or owner).

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

(1) That the payroll for the payroll period contains the information required to be maintained under § 5.5(a)(3)(ii) of Regulations, 29 CFR part 5 the appropriate information is being maintained under § 5.5(a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete.

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

(D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 231 of Title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (3)(i) of this section available for inspection, copying or transcription by authorized representatives of the Sponsor, the Federal Aviation Administration or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make

them available, the Federal agency may, after written notice to the contractor, sponsor, applicant or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

4. Apprentices and Trainees.

(i) Apprentices. Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

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

greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

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

5. Compliance with Copeland Act Requirements.

The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

6. Subcontracts.

The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR Part 5.5(a)(1) through (10) and such other clauses as the Federal Aviation Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR Part 5.5.

7. Contract Termination: Debarment.

A breach of the contract clauses in paragraph 1 through 10 of this section may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

8. Compliance with Davis-Bacon and Related Act Requirements.

All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR Parts 1, 3, and 5 are herein incorporated by reference in this contract.

9. Disputes Concerning Labor Standards.

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

10. Certification of Eligibility.

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

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

8. <u>EQUAL OPPORTUNITY CLAUSE</u>

a. During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive considerations for employment without regard to race, color, religion, sex, or national origin.

(3) The contractor will send to each labor union or representative of workers with which she/he has a collective bargaining agreement or other contract or understanding, a notice to be provided advising the said labor union or workers' representatives of the contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, as amended, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the administering agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

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

(7) The contractor will include the portion of the sentence immediately preceding paragraph (1) and the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the administering agency may direct as a means of enforcing such provision, including sanctions for noncompliance: *Provided, however*, that in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction by the administering agency the contractor may request the United States to enter into such litigation to protect the interests of the United States.

9. STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS

1. As used in these specifications:

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

b. "Director" means Director, Office of Federal Contract Compliance Programs (OFCCP), U.S. Department of Labor, or any person to whom the Director delegates authority;

c. "Employer identification number" means the Federal social security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941;

d. "Minority" includes:

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

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

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

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

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

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

4. The contractor shall implement the specific affirmative action standards provided in paragraphs 18.7a through 18.7p of these specifications. The goals set forth in the solicitation from which this contract resulted are expressed as percentages of the total hours of employment and training of minority and female utilization the contractor should reasonably be able to achieve in each construction trade in which it has employees in the covered area. Covered construction contractors performing construction work in a geographical area where they do not have a Federal or federally assisted construction contract shall apply the minority and female goals established for the geographical area where the work is being performed. Goals are published periodically in the Federal Register in notice form, and such notices may be obtained from any Office of Federal Contract Compliance Programs office or from Federal procurement contracting officers. The contractor is expected to make substantially uniform progress in meeting its goals in each craft during the period specified.

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

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

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

a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the contractor's employees are assigned to work. The contractor, where possible, will assign two or more women to each construction project. The contractor shall specifically ensure that all foremen, superintendents, and other onsite supervisory

personnel are aware of and carry out the contractor's obligation to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

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

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

d. Provide immediate written notification to the Director when the union or unions with which the contractor has a collective bargaining agreement has not referred to the contractor a minority person or female sent by the contractor, or when the contractor has other information that the union referral process has impeded the contractor's efforts to meet its obligations.

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

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

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

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

i. Direct its recruitment efforts, both oral and written, to minority, female, and community organizations, to schools with minority and female students; and to minority and female recruitment and training organizations serving the contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or

other training by any recruitment source, the contractor shall send written notification to organizations, such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable provide after school, summer, and vacation employment to minority and female youth both on the site and in other areas of a contractor's workforce.

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

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

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

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

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

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

8. Contractors are encouraged to participate in voluntary associations, which assist in fulfilling one or more of their affirmative action obligations (18.7a through 18.7p). The efforts of a contractor association, joint contractor union, contractor community, or other similar groups of which the contractor is a member and participant, may be asserted as fulfilling any one or more of its obligations under 18.7a through 18.7p of these specifications provided that the contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are reflected in the contractor's minority and female workforce participation, makes a good faith effort to meet its individual goals and timetables, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the contractor. The obligation to comply, however, is the contractor's and failure of such a group to fulfill an obligation shall not be a defense for the contractor's noncompliance.

9. A single goal for minorities and a separate single goal for women have been established. The contractor, however, is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, if the particular group is employed in a substantially disparate manner (for example, even though the contractor has achieved its goals for women generally,) the contractor may be in violation of the Executive Order if a specific minority group of women is underutilized.

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

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

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

13. The contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in paragraph 18.7 of these specifications, so as to achieve maximum results from its efforts to ensure equal employment opportunity. If the contractor fails to comply with the requirements of the Executive Order, the implementing regulations, or these specifications, the Director shall proceed in accordance with 41 CFR 60-4.8.

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

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

10. TERMINATION OF CONTRACT FOR DEFAULT

Section 80-09 of FAA General Provisions establishes conditions, rights, and remedies associated with Owner termination of this contract due to default of the Contractor

11. TERMINATION OF CONTRACT FOR CONVENIENCE

The Owner may terminate this contract in whole or in part at any time by providing written notice to the Contractor. Such action may be without cause and without prejudice to any other right or remedy of Owner. Upon receipt of a written notice of termination, except as explicitly directed by the Owner, the Contractor shall immediately proceed with the following obligations regardless of any delay in determining or adjusting amounts due under this clause:

1) Contractor must immediately discontinue work as specified in the written notice.

2) Terminate all subcontracts to the extent they relate to the work terminated under the notice.

3) Discontinue orders for materials and services except as directed by the written notice.

4) Deliver to the Owner all fabricated and partially fabricated parts, completed and partially completed work, supplies, equipment and materials acquired prior to termination of the work, and as directed in the written notice.

5) Complete performance of the work not terminated by the notice.

6) Take action as directed by the Owner to protect and preserve property and work related to this contract that Owner will take possession.

Owner agrees to pay Contractor for:

1) completed and acceptable work executed in accordance with the contract documents prior to the effective date of termination;

2) documented expenses sustained prior to the effective date of termination in performing work and furnishing labor, materials, or equipment as required by the contract documents in connection with uncompleted work;

3) reasonable and substantiated claims, costs, and damages incurred in settlement of terminated contracts with Subcontractors and Suppliers; and

4) reasonable and substantiated expenses to the Contractor directly attributable to Owner's termination action.

Owner will not pay Contractor for loss of anticipated profits or revenue or other economic loss arising out of or resulting from the Owner's termination action.
The rights and remedies this clause provides are in addition to any other rights and remedies provided by law or under this contract.

12. CONTRACT WORKHOURS AND SAFETY STANDARDS ACT REQUIREMENTS 29 CFR PART 5

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

b. Violation; Liability for Unpaid Wages; Liquidated Damages. In the event of any violation of the clause set forth in paragraph (1) of this clause, the Contractor and any subcontractor responsible therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this clause, in the sum of $10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this clause.

c. Withholding for Unpaid Wages and Liquidated Damages. The Federal Aviation Administration (FAA) or the Owner shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this clause.

d. Subcontractors. The Contractor or subcontractor shall insert in any subcontracts the clauses set forth in paragraphs (1) through (4) and also a clause requiring the subcontractor to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance

by any subcontractor or lower tier subcontractor with the clauses set forth in paragraphs (1) through (4) of this clause.

13. CLEAN AIR AND WATER POLLUTION CONTROL

Contractor agrees to comply with all applicable standards, orders, and regulations issued pursuant to the Clean Air Act (42 USC § 740-7671q) and the Federal Water Pollution Control Act as amended (33 USC § 1251-1387). The Contractor agrees to report any violation to the Owner immediately upon discovery. The Owner assumes responsibility for notifying the Environmental Protection Agency (EPA) and the Federal Aviation Administration.

Contractor must include this requirement in all subcontracts that exceeds $150,000.

14. TEXTING WHILE DRIVING

In accordance with Executive Order 13513, "Federal Leadership on Reducing Text Messaging While Driving", (10/1/2009) and DOT Order 3902.10, "Text Messaging While Driving", (12/30/2009), the Federal Aviation Administration encourages recipients of Federal grant funds to adopt and enforce safety policies that decrease crashes by distracted drivers, including policies to ban text messaging while driving when performing work related to a grant or subgrant.

In support of this initiative, the Owner encourages the Contractor to promote policies and initiatives for its employees and other work personnel that decrease crashes by distracted drivers, including policies that ban text messaging while driving motor vehicles while performing work activities associated with the project. The Contractor must include the substance of this clause in all sub-tier contracts exceeding $3,500 that involve driving a motor vehicle in performance of work activities associated with the project.

15. CERTIFICATES OF SUBSTANTIAL COMPLETION; CERTIFICATE OF COMPLETION; AND CONTRACTOR'S AFFIDAVIT REGARDING SETTLEMENT OF CLAIMS

The Contractor shall be required to furnish the Owner with sworn affidavits attesting that all subcontractors, employees, materials suppliers, mechanics, etc. have been paid in full, for all debts incurred by the Contractor for work on this Contract. The Contractor shall furnish an original notarized copy of the "Contractor's Affidavit regarding settlement of claims". Final payment shall only be made after the Contractor's Affidavit Regarding Settlement of Claims and the Contractor's Certificate of Completion are received, and the Engineer has issued the Certificate of Substantial Completion. The above Contractor's affidavit regarding settlement of claims shall be submitted on the form provided in this specification.

Only upon receipt of the above documents and upon Final Acceptance, will the Contractor receive full payment for the entire amount of this Contract, less previous progress payments as provided for in the General Provisions of the specifications.

SALINAS MUNICIPAL AIRPORT
SALINAS, CALIFORNIA
RUNWAY 13-31 AND RUNWAY 8-26 REHABILITATION
AIP PROJECT NO. 3-06-0206-27
CITY PROJECT NO. 9275

CERTIFICATE OF SUBSTANTIAL COMPLETION

(To be completed by Engineer/Architect)
I hereby certify that _____ has substantially completed the work under
(Name of Contractor)

Project Nos.: 3-06-0206-27

Project Name: RUNWAY 13-31 AND RUNWAY 8-26 REHABILITATION

in accordance with the contract documents and bid specifications, and all activities required by the contractor under the contract have been substantially completed as of _____ _____(Date).

Firm Name: _____

_____
(Name)

_____
(Title)

_____
(Signature) (Date)

SALINAS MUNICIPAL AIRPORT
SALINAS, CALIFORNIA
RUNWAY 13-31 AND RUNWAY 8-26 REHABILITATION
AIP PROJECT NO. 3-06-0206-27
CITY PROJECT NO. 9275

CERTIFICATE OF COMPLETION

(To be Completed by Contractor)

I hereby certify that all goods and/or services required by the **CITY OF SALINAS** have been delivered in accordance with the contract documents and bid specifications, and all activities required by the contractor under the contract have been completed as of _____ _____ (Date).

Firm Name: _____

Principal: _____
(Name)

_____
(Title)

_____
(Signature) (Date)

SALINAS MUNICIPAL AIRPORT
SALINAS, CALIFORNIA
RUNWAY 13-31 AND RUNWAY 8-26 REHABILITATION
AIP PROJECT NO. 3-06-0206-27
CITY PROJECT NO. 9275

CONTRACTOR'S AFFIDAVIT REGARDING SETTLEMENT OF CLAIMS

Gentlemen:

This is to certify that all lawful claims for materials, rental of equipment and labor used in connection with the construction of the above project, whether by subcontractor or claimant in person, have been duly discharged.

The undersigned, for the consideration of $_____, as set out in the final pay estimate, as full and complete payment under the terms of the contract, hereby waives and relinquishes any and all further claims or right of lien under, in connection with, or as a result of the above described project. The undersigned further agrees to indemnify and save harmless THE CITY OF SALINAS, KIMLEY-HORN AND ASSOCIATES, INC., their employees, agents or representatives, against any and all liens, claims of liens, suits, actions, damages, charges and expenses whatsoever, which said Owner and Engineer may suffer arising out of the failure or the undersigned to pay for all labor performances and materials furnished for the performance of said installation.

Signed and dated at _____, this _____day of_____, 20_____.

By:_____

(STATE OF CALIFORNIA)

(COUNTY OF _____)

The foregoing instrument was subscribed and sworn to before me this _____day of _____, 20_____.

(Notary Public)

(My Commission Expires)

DAVIS-BACON PREVAILING WAGE AND SALARY RANGE

U.S. DEPARTMENT OF LABOR NOTICE TO ALL EMPLOYEES

NOTICE TO ALL EMPLOYEES

Working on Federal or Federally Financed Construction Projects

MINIMUM WAGES

You must be paid not less than the wage rate in the schedule posted with this Notice for the kind of work you perform.

OVERTIME

You must be paid not less than one and one-half times your basic rate of pay for all hours worked over 40 a week. There are some exceptions.

APPRENTICES

Apprentice rates apply only to apprentices properly registered under approved Federal or State apprenticeship programs.

PROPER PAY

If you do not receive proper pay, contact the Contracting Officer listed below:

Leticia Altamirano
Public Works Department
City of Salinas
(831) 758-7979

or you may contact the nearest office of the Wage and Hour Division, U.S. Department of Labor. The Wage and Hour Division has offices in several hundred communities throughout the country. They are listed in the U.S. Government section of most telephone directories under:
U.S. Department of Labor
Employment Standards Administration

WH Publication 1321
Revised January 1986
☆ U.S. GOVERNMENT PRINTING OFFICE: 1988-209-866

U.S. Department of Labor
Employment Standards Administration
Wage and Hour Division

U.S. DEPARTMENT OF LABOR GENERAL WAGE DECISION

http://www.wdol.gov/index.html

General Decision Number: CA180029 02/09/2018 CA29

Superseded General Decision Number: CA20170029

State: California

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

Counties: Alameda, Calaveras, Contra Costa, Fresno, Kings, Madera, Mariposa, Merced, Monterey, San Benito, San Francisco, San Joaquin, San Mateo, Santa Clara, Santa Cruz, Stanislaus and Tuolumne Counties in California.

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

Note: Under Executive Order (EO) 13658, an hourly minimum wage of $10.35 for calendar year 2018 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 $10.35 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 2018. 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.

Modification Number	Publication Date
0	01/05/2018
1	01/12/2018
2	01/19/2018
3	01/26/2018
4	02/09/2018

ASBE0016-004 01/01/2017

AREA 1: CALAVERAS, FRESNO, KINGS, MADERA, MARIPOSA, MERCED, MONTEREY, SAN BENITO, SAN JOAQUIN, SANTA CRUZ, STANISLAUS & TOULMNE COUNTIES

AREA 2: ALAMEDA, CONTRA COSTA, SAN FRANSICO, SAN MATEO & SANTA CLARA COUNTIES

	Rates	Fringes
Asbestos Removal worker/hazardous material handler (Includes preparation, wetting, stripping, removal, scrapping, vacuuming, bagging and disposing of all insulation materials from mechanical systems, whether they contain asbestos or not)		
Area 1	$ 28.20	8.95
Area 2	$ 32.98	8.95

ASBE0016-008 08/01/2017

AREA 1: ALAMEDA, CONTRA COSTA, MONTEREY, SAN BENITO, SAN FRANSICO, SAN MATEO, SANTA CLARA, & SANTA CRUZ

AREA 2: CALAVERAS, COLUSA, FRESNO, KINGS, MADERA, MARIPOSA, MERCED, SAN JOAQUIN, STANISLAU, & TUOLUMNE

	Rates	Fringes
Asbestos Workers/Insulator (Includes the application of all insulating materials, Protective Coverings, Coatings, and Finishes to all types of mechanical systems)		
Area 1	$ 65.36	23.11
Area 2	$ 49.46	23.11

BOIL0549-001 10/01/2016

AREA 1: ALAMEDA, CONTRA COSTA, SAN FRANCISCO, SAN MATEO & SANTA CLARA COUNTIES

AREA 2: REMAINING COUNTIES

	Rates	Fringes
BOILERMAKER		
Area 1	$ 43.28	37.91
Area 2	$ 39.68	35.71

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* BRCA0003-001 08/01/2017

                                  Rates          Fringes

MARBLE FINISHER.................$ 32.60            15.31
----------------------------------------------------------------
* BRCA0003-003 08/01/2017

                                  Rates          Fringes

MARBLE MASON....................$ 44.60            26.83
----------------------------------------------------------------
 BRCA0003-005 05/01/2017

                                  Rates          Fringes

BRICKLAYER
     ( 1) Fresno, Kings,
     Madera, Mariposa, Merced....$ 38.45            21.22
     ( 7) San Francisco, San
     Mateo.......................$ 42.34            25.83
     ( 8) Alameda, Contra
     Costa, San Benito, Santa
     Clara.......................$ 44.16            21.71
     ( 9) Calaveras, San
     Joaquin, Stanislaus,
     Toulumne....................$ 39.66            20.76
     (16) Monterey, Santa Cruz...$ 39.51            23.49
----------------------------------------------------------------
 BRCA0003-008 09/01/2017

                                  Rates          Fringes

TERRAZZO FINISHER...............$ 35.14            16.87
TERRAZZO WORKER/SETTER..........$ 44.11            26.36
----------------------------------------------------------------
* BRCA0003-011 10/01/2017

AREA 1: Alameda, Contra Costa, Monterey, San Benito, San
Francisco, San Mateo, Santa Clara, Santa Cruz

AREA 2: Calaveras, San Joaquin, Stanislaus, Tuolumne

AREA 3: Fresno, Kings, Madera, Mariposa, Merced


                                  Rates          Fringes

TILE FINISHER
     Area 1......................$ 27.48            14.85
     Area 2......................$ 25.60            14.30
     Area 3......................$ 24.77            14.18
Tile Layer
     Area 1......................$ 45.80            16.89
     Area 2......................$ 42.67            16.81
     Area 3......................$ 36.20            16.28
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CARP0022-001 07/01/2017

San Francisco County

	Rates	Fringes
Carpenters		
Bridge Builder/Highway Carpenter	$ 46.40	28.71
Hardwood Floorlayer, Shingler, Power Saw Operator, Steel Scaffold & Steel Shoring Erector, Saw Filer	$ 46.55	28.71
Journeyman Carpenter	$ 46.40	28.71
Millwright	$ 46.50	30.30

CARP0034-001 07/01/2017

	Rates	Fringes
Diver		
Assistant Tender, ROV Tender/Technician	$ 45.65	31.91
Diver standby	$ 50.61	31.91
Diver Tender	$ 49.82	31.91
Diver wet	$ 95.17	31.91
Manifold Operator (mixed gas)	$ 54.82	31.91
Manifold Operator (Standby)	$ 49.82	31.91

DEPTH PAY (Surface Diving):
050 to 100 ft $2.00 per foot
101 to 150 ft $3.00 per foot
151 to 220 ft $4.00 per foot

SATURATION DIVING:
The standby rate shall apply until saturation starts. The saturation diving rate applies when divers are under pressure continuously until work task and decompression are complete. The diver rate shall be paid for all saturation hours.

DIVING IN ENCLOSURES:
Where it is necessary for Divers to enter pipes or tunnels, or other enclosures where there is no vertical ascent, the following premium shall be paid: Distance traveled from entrance 26 feet to 300 feet: $1.00 per foot. When it is necessary for a diver to enter any pipe, tunnel or other enclosure less than 48" in height, the premium will be $1.00 per foot.

WORK IN COMBINATION OF CLASSIFICATIONS:
Employees working in any combination of classifications within the diving crew (except dive supervisor) in a shift are paid in the classification with the highest rate for that shift.

CARP0034-003 07/01/2017

	Rates	Fringes
Piledriver	$ 46.65	31.91

CARP0035-007 07/01/2017

AREA 1: Alameda, Contra Costa, San Francisco, San Mateo, Santa Clara counties

AREA 2: Monterey, San Benito, Santa Cruz Counties

AREA 3: Calaveras, Fresno, Kings, Madera, Mariposa, Merced, San Joaquin, Stanislaus, Tuolumne Counties

	Rates	Fringes
Modular Furniture Installer		
Area 1		
Installer I	$ 25.61	20.42
Installer II	$ 22.18	20.42
Lead Installer	$ 29.06	20.92
Master Installer	$ 33.28	20.92
Area 2		
Installer I	$ 22.96	20.42
Installer II	$ 20.01	20.42
Lead Installer	$ 25.93	20.92
Master Installer	$ 29.56	20.92
Area 3		
Installer I	$ 22.01	20.42
Installer II	$ 19.24	20.42
Lead Installer	$ 24.81	20.92
Master Installer	$ 31.83	20.92

CARP0035-008 08/01/2017

AREA 1: Alameda, Contra Costa, San Francisco, San Mateo, Santa Clara counties

AREA 2: Monterey, San Benito, Santa Cruz Counties

AREA 3: San Joaquin

AREA 4: Calaveras, Fresno, Kings, Madera, Mariposa, Merced, Stanislaus, Tuolumne Counties

	Rates	Fringes
Drywall Installers/Lathers:		
Area 1	$ 46.40	29.15
Area 2	$ 40.52	29.15
Area 3	$ 41.02	29.15

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     Area 4.....................$ 39.67            29.15
Drywall Stocker/Scrapper
     Area 1.....................$ 23.20            16.88
     Area 2.....................$ 20.26            16.88
     Area 3.....................$ 20.51            16.88
     Area 4.....................$ 19.84            16.88
----------------------------------------------------------------
 CARP0152-001 07/01/2017

Contra Costa County

                                  Rates          Fringes

Carpenters
     Bridge Builder/Highway
     Carpenter..................$ 46.40            28.71
     Hardwood Floorlayer,
     Shingler, Power Saw
     Operator, Steel Scaffold &
     Steel Shoring Erector, Saw
     Filer......................$ 46.55            28.71
     Journeyman Carpenter........$ 46.40            28.71
     Millwright.................$ 46.50            28.71
----------------------------------------------------------------
 CARP0152-002 07/01/2017

San Joaquin County

                                  Rates          Fringes

Carpenters
     Bridge Builder/Highway
     Carpenter..................$ 46.40            28.71
     Hardwood Floorlayer,
     Shingler, Power Saw
     Operator, Steel Scaffold &
     Steel Shoring Erector, Saw
     Filer......................$ 40.67            28.71
     Journeyman Carpenter........$ 40.52            28.71
     Millwright.................$ 43.02            30.30
----------------------------------------------------------------
 CARP0152-004 07/01/2017

Calaveras, Mariposa, Merced, Stanislaus and Tuolumne Counties

                                  Rates          Fringes

Carpenters
     Bridge Builder/Highway
     Carpenter..................$ 46.40            28.71
     Hardwood Floorlayer,
     Shingler, Power Saw
     Operator, Steel Scaffold &
     Steel Shoring Erector, Saw
     Filer......................$ 39.32            28.71
     Journeyman Carpenter........$ 39.17            28.71
     Millwright.................$ 41.67            30.30
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 CARP0217-001 07/01/2017

San Mateo County

                                  Rates          Fringes

Carpenters
     Bridge Builder/Highway
     Carpenter...................$ 46.40            28.71
     Hardwood Floorlayer,
     Shingler, Power Saw
     Operator, Steel Scaffold &
     Steel Shoring Erector, Saw
     Filer.......................$ 46.55            28.71
     Journeyman Carpenter........$ 46.40            28.71
     Millwright..................$ 46.50            30.30
----------------------------------------------------------------
 CARP0405-001 07/01/2017

Santa Clara County

                                  Rates          Fringes

Carpenters
     Bridge Builder/Highway
     Carpenter...................$ 46.40            28.71
     Hardwood Floorlayer,
     Shingler, Power Saw
     Operator, Steel Scaffold &
     Steel Shoring Erector, Saw
     Filer.......................$ 46.55            28.71
     Journeyman Carpenter........$ 46.40            28.71
     Millwright..................$ 46.50            30.30
----------------------------------------------------------------
 CARP0405-002 07/01/2017

San Benito County

                                  Rates          Fringes

Carpenters
     Bridge Builder/Highway
     Carpenter...................$ 46.40            28.71
     Hardwood Floorlayer,
     Shingler, Power Saw
     Operator, Steel Scaffold &
     Steel Shoring Erector, Saw
     Filer.......................$ 40.58            28.71
     Journeyman Carpenter........$ 40.52            28.71
     Millwright..................$ 43.02            30.30
----------------------------------------------------------------
 CARP0505-001 07/01/2017

Santa Cruz County

                                  Rates          Fringes
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Carpenters
     Bridge Builder/Highway
     Carpenter...................$ 46.40            28.71
     Hardwood Floorlayer,
     Shingler, Power Saw
     Operator, Steel Scaffold &
     Steel Shoring Erector, Saw
     Filer.......................$ 40.67            28.71
     Journeyman Carpenter........$ 40.52            28.71
     Millwright..................$ 43.02            30.30
----------------------------------------------------------------
 CARP0605-001 07/01/2017

Monterey County

                                   Rates          Fringes

Carpenters
     Bridge Builder/Highway
     Carpenter...................$ 46.40            28.71
     Hardwood Floorlayer,
     Shingler, Power Saw
     Operator, Steel Scaffold &
     Steel Shoring Erector, Saw
     Filer.......................$ 40.67            28.71
     Journeyman Carpenter........$ 40.52            28.71
     Millwright..................$ 43.02            30.30
----------------------------------------------------------------
 CARP0701-001 07/01/2017

Fresno and Madera Counties

                                   Rates          Fringes

Carpenters
     Bridge Builder/Highway
     Carpenter...................$ 46.40            28.71
     Hardwood Floorlayer,
     Shingler, Power Saw
     Operator, Steel Scaffold &
     Steel Shoring Erector, Saw
     Filer.......................$ 39.32            28.71
     Journeyman Carpenter........$ 39.17            28.71
     Millwright..................$ 41.67            30.30
----------------------------------------------------------------
 CARP0713-001 07/01/2017

Alameda County

                                   Rates          Fringes

Carpenters
     Bridge Builder/Highway
     Carpenter...................$ 46.40            28.71
     Hardwood Floorlayer,
     Shingler, Power Saw
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     Operator, Steel Scaffold &
     Steel Shoring Erector, Saw
     Filer.......................$ 46.55            28.71
     Journeyman Carpenter........$ 46.40            28.71
     Millwright..................$ 46.50            30.30
-----------------------------------------------------------------
 CARP1109-001 07/01/2017

Kings County

                                  Rates          Fringes

Carpenters
     Bridge Builder/Highway
     Carpenter...................$ 46.40            28.71
     Hardwood Floorlayer,
     Shingler, Power Saw
     Operator, Steel Scaffold &
     Steel Shoring Erector, Saw
     Filer.......................$ 39.32            28.71
     Journeyman Carpenter........$ 39.17            28.71
     Millwright..................$ 41.67            30.30
-----------------------------------------------------------------
 ELEC0006-004 12/01/2016

SAN FRANCISCO COUNTY

                                  Rates          Fringes

Sound & Communications
     Installer...................$ 35.57         3%+18.05
     Technician..................$ 40.50         3%+18.05

  SCOPE OF WORK:  Including any data system whose only function
  is to transmit or  receive information; excluding all other
  data systems or  multiple systems which include control
  function or power supply;  inclusion or exclusion of
  terminations and testings of  conductors determined by
  their function; excluding fire alarm  work when installed
  in raceways (including wire and cable  pulling) and when
  performed on new or major remodel building  projects or
  jobs for which the conductors for the fire alarm system are
  installed in conduit; excluding installation of raceway
  systems, line voltage work, industrial work, life-safety
  systems (all buildings having floors located more than 75'
  above the lowest floor level having building access);
  excluding energy management systems.

  FOOTNOTE:   Fire alarm work when installed in raceways
  (including wire and cable pulling), on projects which
  involve new or major remodel building construction, for
  which the conductors for the fire alarm system are
  installed in the conduit, shall be performed by the inside
  electrician.

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 ELEC0006-007 06/01/2017
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SAN FRANCISCO COUNTY

	Rates	Fringes
ELECTRICIAN.....	$ 66.00	3%+43.40

ELEC0100-002 09/01/2017

FRESNO, KINGS, AND MADERA COUNTIES

	Rates	Fringes
ELECTRICIAN.....	$ 37.00	21.91

ELEC0100-005 12/01/2016

FRESNO, KINGS, MADERA

	Rates	Fringes
Communications System		
Installer.....	$ 30.64	3%+17.86
Technician.....	$ 34.89	3%+17.86

SCOPE OF WORK

Includes the installation testing, service and maintenance, of the following systems which utilize the transmission and/or transference of voice, sound, vision and digital for commercial, education, 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 system, radio page, school intercom and sound, burglar alarms, and low voltage master clock systems.

A. SOUND AND VOICE TRANSMISSION/TRANSFERENCE SYSTEMS Background foreground music, Intercom and telephone interconnect systems, Telephone systems Nurse call systems, Radio page systems, School intercom and sound systems, Burglar alarm systems, Low voltage, master clock systems, Multi-media/multiplex systems, Sound and musical entertainment systems, RF systems, Antennas and Wave Guide,

B. FIRE ALARM SYSTEMS Installation, wire pulling and testing

C. TELEVISION AND VIDEO SYSTEMS Television monitoring and surveillance systems Video security systems, Video entertainment systems, Video educational systems, Microwave transmission systems, CATV and CCTV

D. SECURITY SYSTEMS Perimeter security systems Vibration sensor systems Card access systems Access control systems, Sonar/infrared monitoring equipment

E. COMMUNICATIONS SYSTEMS THAT TRANSMIT OR RECEIVE

INFORMATION AND/OR CONTROL SYSTEMS THAT ARE INTRINSIC TO THE ABOVE LISTED SYSTEMS SCADA (Supervisory Control and Data Acquisition) PCM (Pulse Code Modulation) Inventory Control Systems, Digital Data Systems Broadband and Baseband and Carriers Point of Sale Systems, VSAT Data Systems Data Communication Systems RF and Remote Control Systems, Fiber Optic Data Systems

WORK EXCLUDED Raceway systems are not covered (excluding Ladder-Rack for the purpose of the above listed systems). Chases and/or nipples (not to exceed 10 feet) may be installed on open wiring systems. Energy management systems. SCADA (Supervisory Control and Data Acquisition) when not intrinsic to the above listed systems (in the scope). Fire alarm systems when installed in raceways (including wire and cable pulling) shall be performed at the electrician wage rate, when either of the following two (2) conditions apply:
1. The project involves new or major remodel building trades construction.
2. The conductors for the fire alarm system are installed in conduit.

ELEC0234-001 12/25/2017

MONTEREY, SAN BENITO AND SANTA CRUZ COUNTIES

	Rates	Fringes
ELECTRICIAN		
Zone A	$ 44.65	24.44
Zone B	$ 49.67	25.47

Zone A: All of Santa Cruz, Monterey, and San Benito Counties within 25 air miles of Highway 1 and Dolan Road in Moss Landing, and an area extending 5 miles east and west of Highway 101 South to the San Luis Obispo County Line

Zone B: Any area outside of Zone A

ELEC0234-003 12/01/2016

MONTEREY, SAN BENITO, AND SANTA CRUZ COUNTIES

	Rates	Fringes
Sound & Communications		
Installer	$ 35.07	18.60
Technician	$ 37.94	16.30

SCOPE OF WORK: Including any data system whose only function is to transmit or receive information; excluding all other data systems or multiple systems which include control function or power supply; inclusion or exclusion of terminations and testings of conductors determined by

their function; excluding fire alarm work when installed in raceways (including wire and cable pulling) and when performed on new or major remodel building projects or jobs for which the conductors for the fire alarm system are installed in conduit; excluding installation of raceway systems, line voltage work, industrial work, life-safety systems (all buildings having floors located more than 75' above the lowest floor level having building access); excluding energy management systems.

FOOTNOTE: Fire alarm work when installed in raceways (including wire and cable pulling), on projects which involve new or major remodel building construction, for which the conductors for the fire alarm system are installed in the conduit, shall be performed by the inside electrician.

ELEC0302-001 02/27/2017

CONTRA COSTA COUNTY

	Rates	Fringes
CABLE SPLICER	$ 54.92	26.75
ELECTRICIAN	$ 48.51	26.56

ELEC0302-003 12/01/2016

CONTRA COSTA COUNTY

	Rates	Fringes
Sound & Communications		
Installer	$ 35.07	18.05
Technician	$ 39.93	18.20

SCOPE OF WORK: Including any data system whose only function is to transmit or receive information; excluding all other data systems or multiple systems which include control function or power supply; inclusion or exclusion of terminations and testings of conductors determined by their function; excluding fire alarm work when installed in raceways (including wire and cable pulling) and when performed on new or major remodel building projects or jobs for which the conductors for the fire alarm system are installed in conduit; excluding installation of raceway systems, line voltage work, industrial work, life-safety systems (all buildings having floors located more than 75' above the lowest floor level having building access); excluding energy management systems.

FOOTNOTE: Fire alarm work when installed in raceways (including wire and cable pulling), on projects which involve new or major remodel building construction, for which the conductors for the fire alarm system are installed in the conduit, shall be performed by the inside

electrician.

ELEC0332-001 05/29/2017

SANTA CLARA COUNTY

	Rates	Fringes
CABLE SPLICER	$ 69.60	34.318
ELECTRICIAN	$ 60.52	34.046

FOOTNOTES: Work under compressed air or where gas masks are required, orwork on ladders, scaffolds, stacks, "Bosun's chairs," or other structures and where the workers are not protected by permanent guard rails at a distance of 40 to 60 ft. from the ground or supporting structures: to be paid one and one-half times the straight-time rate of pay. Work on structures of 60 ft. or over (as described above): to be paid twice the straight-time rate of pay.

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* ELEC0332-003 12/01/2017

SANTA CLARA COUNTY

	Rates	Fringes
Sound & Communications		
Installer	$ 38.02	18.69
Technician	$ 43.72	18.86

SCOPE OF WORK: Including any data system whose only function is to transmit or receive information; excluding all other data systems or multiple systems which include control function or power supply; inclusion or exclusion of terminations and testings of conductors determined by their function; excluding fire alarm work when installed in raceways (including wire and cable pulling) and when performed on new or major remodel building projects or jobs for which the conductors for the fire alarm system are installed in conduit; excluding installation of raceway systems, line voltage work, industrial work, life-safety systems (all buildings having floors located more than 75' above the lowest floor level having building access); excluding energy management systems.

FOOTNOTE: Fire alarm work when installed in raceways (including wire and cable pulling), on projects which involve new or major remodel building construction, for which the conductors for the fire alarm system are installed in the conduit, shall be performed by the inside electrician.

ELEC0595-001 06/01/2017

ALAMEDA COUNTY

	Rates	Fringes
CABLE SPLICER	$ 59.91	3%+34.10
ELECTRICIAN	$ 53.25	3%+34.10

ELEC0595-002 06/01/2017

CALAVERAS AND SAN JOAQUIN COUNTIES

	Rates	Fringes
CABLE SPLICER	$ 41.40	3%+28.83
ELECTRICIAN		
(1) Tunnel work	$ 38.86	3%+28.83
(2) All other work	$ 36.00	3%+28.83

ELEC0595-006 12/01/2016

ALAMEDA COUNTY

	Rates	Fringes
Sound & Communications		
Installer	$ 35.07	3%+17.86
Technician	$ 39.93	3%+17.86

SCOPE OF WORK: Including any data system whose only function is to transmit or receive information; excluding all other data systems or multiple systems which include control function or power supply; inclusion or exclusion of terminations and testings of conductors determined by their function; excluding fire alarm work when installed in raceways (including wire and cable pulling) and when performed on new or major remodel building projects or jobs for which the conductors for the fire alarm system are installed in conduit; excluding installation of raceway systems, line voltage work, industrial work, life-safety systems (all buildings having floors located more than 75' above the lowest floor level having building access); excluding energy management systems.

FOOTNOTE: Fire alarm work when installed in raceways (including wire and cable pulling), on projects which involve new or major remodel building construction, for which the conductors for the fire alarm system are installed in the conduit, shall be performed by the inside electrician.

ELEC0595-008 12/01/2016

CALAVERAS AND SAN JOAQUIN COUNTIES

	Rates	Fringes

```
Communications System
     Installer...................$ 30.64         3%+17.86
     Technician..................$ 34.89         3%+17.86

  SCOPE OF WORK:  Including any data system whose only function
  is to transmit or  receive information; excluding all other
  data systems or  multiple systems which include control
  function or power supply;  inclusion or exclusion of
  terminations and testings of  conductors determined by
  their function; excluding fire alarm  work when installed
  in raceways (including wire and cable  pulling) and when
  performed on new or major remodel building  projects or
  jobs for which the conductors for the fire alarm system are
  installed in conduit; excluding installation of raceway
  systems, line voltage work, industrial work, life-safety
  systems (all buildings having floors located more than 75'
  above the lowest floor level having building access);
  excluding energy management systems.

  FOOTNOTE:  Fire alarm work when installed in raceways
  (including wire and cable pulling), on projects which
  involve new or major remodel building construction, for
  which the conductors for the fire alarm system are
  installed in the conduit, shall be performed by the inside
  electrician.

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 ELEC0617-001 06/01/2017

SAN MATEO COUNTY

                                  Rates          Fringes

ELECTRICIAN.....................$ 57.00            33.59
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 ELEC0617-003 12/01/2017

SAN MATEO COUNTY

                                  Rates          Fringes

Sound & Communications
     Installer...................$ 38.02            19.27
     Technician..................$ 43.72            19.27

  SCOPE OF WORK:  Including any data system whose only function
  is to transmit or  receive information; excluding all other
  data systems or  multiple systems which include control
  function or power supply;  inclusion or exclusion of
  terminations and testings of  conductors determined by
  their function; excluding fire alarm  work when installed
  in raceways (including wire and cable  pulling) and when
  performed on new or major remodel building  projects or
  jobs for which the conductors for the fire alarm system are
  installed in conduit; excluding installation of raceway
  systems, line voltage work, industrial work, life-safety
  systems (all buildings having floors located more than 75'
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above the lowest floor level having building access); excluding energy management systems.

FOOTNOTE: Fire alarm work when installed in raceways (including wire and cable pulling), on projects which involve new or major remodel building construction, for which the conductors for the fire alarm system are installed in the conduit, shall be performed by the inside electrician.

ELEC0684-001 12/01/2017

MARIPOSA, MERCED, STANISLAUS AND TUOLUMNE COUNTIES

	Rates	Fringes
ELECTRICIAN	$ 37.00	3%+21.33

CABLE SPLICER = 110% of Journeyman Electrician

ELEC0684-004 12/01/2016

MARIPOSA, MERCED, STANISLAUS AND TUOLUMNE COUNTIES

	Rates	Fringes
Communications System		
Installer	$ 30.64	3%+17.86
Technician	$ 34.89	3%+17.86

SCOPE OF WORK: Including any data system whose only function is to transmit or receive information; excluding all other data systems or multiple systems which include control function or power supply; inclusion or exclusion of terminations and testings of conductors determined by their function; excluding fire alarm work when installed in raceways (including wire and cable pulling) and when performed on new or major remodel building projects or jobs for which the conductors for the fire alarm system are installed in conduit; excluding installation of raceway systems, line voltage work, industrial work, life-safety systems (all buildings having floors located more than 75' above the lowest floor level having building access); excluding energy management systems.

FOOTNOTE: Fire alarm work when installed in raceways (including wire and cable pulling), on projects which involve new or major remodel building construction, for which the conductors for the fire alarm system are installed in the conduit, shall be performed by the inside electrician.

ELEC1245-001 06/01/2017

	Rates	Fringes

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LINE CONSTRUCTION
     (1) Lineman; Cable splicer..$ 55.49            16.62
     (2) Equipment specialist
     (operates crawler
     tractors, commercial motor
     vehicles, backhoes,
     trenchers, cranes (50 tons
     and below), overhead &
     underground distribution
     line   equipment)...........$ 44.32         3%+17.65
     (3) Groundman...............$ 33.89         3%+17.65
     (4) Powderman...............$ 49.55         3%+17.65

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

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 ELEV0008-001 01/01/2018

                                   Rates          Fringes

ELEVATOR MECHANIC...............$ 65.45           32.645

FOOTNOTE:
  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.
  PAID HOLIDAYS: New Years Day, Memorial Day, Independence Day,
  Labor Day, Veterans Day, Thanksgiving Day, Friday after
  Thanksgiving, and Christmas Day.

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 ENGI0003-008 07/01/2017

                                   Rates          Fringes

Dredging: (DREDGING:
CLAMSHELL & DIPPER DREDGING;
HYDRAULIC SUCTION DREDGING:)
     AREA 1:
      (1) Leverman...............$ 44.77            31.25
      (2) Dredge Dozer; Heavy
      duty repairman.............$ 39.81            31.25
      (3) Booster Pump
      Operator; Deck
      Engineer; Deck mate;
      Dredge Tender; Winch
      Operator...................$ 38.69            31.25
      (4) Bargeman; Deckhand;
      Fireman; Leveehand; Oiler..$ 35.39            31.25
     AREA 2:
      (1) Leverman...............$ 46.77            31.25
      (2) Dredge Dozer; Heavy
      duty repairman.............$ 41.81            31.25
      (3) Booster Pump
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      Operator; Deck
      Engineer; Deck mate;
      Dredge Tender; Winch
      Operator...................$ 40.69           31.25
      (4) Bargeman; Deckhand;
      Fireman; Leveehand; Oiler..$ 37.39           31.25

AREA DESCRIPTIONS

  AREA 1: ALAMEDA,BUTTE, CONTRA COSTA, KINGS, MARIN, MERCED,
  NAPA, SACRAMENTO, SAN BENITO, SAN FRANCISCO, SAN JOAQUIN,
  SAN MATEO, SANTA CLARA, SANTA CRUZ, SOLANO, STANISLAUS,
  SUTTER, YOLO, AND YUBA COUNTIES

AREA 2:  MODOC COUNTY

  THE REMAINGING COUNTIES ARE SPLIT BETWEEN AREA 1 AND AREA 2
  AS NOTED BELOW:

ALPINE COUNTY:
Area 1:  Northernmost part
Area 2:  Remainder

CALAVERAS COUNTY:
Area 1: Remainder
Area 2: Eastern part

COLUSA COUNTY:
Area 1:  Eastern part
Area 2:  Remainder

ELDORADO COUNTY:
Area 1:  North Central part
Area 2:  Remainder

FRESNO COUNTY:
Area 1: Remainder
Area 2: Eastern part

GLENN COUNTY:
Area 1:  Eastern part
Area 2: Remainder

LASSEN COUNTY:
  Area 1:  Western part along the Southern portion of border
  with Shasta County
Area 2:  Remainder

MADERA COUNTY:
Area 1: Except Eastern part
Area 2: Eastern part

MARIPOSA COUNTY
Area 1: Except Eastern part
Area 2: Eastern part

MONTERREY COUNTY
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Area 1: Except Southwestern part
Area 2: Southwestern part

NEVADA COUNTY:
Area 1: All but the Northern portion along the border of Sierra County
Area 2: Remainder

PLACER COUNTY:
Area 1: Al but the Central portion
Area 2: Remainder

PLUMAS COUNTY:
Area 1: Western portion
Area 2: Remainder

SHASTA COUNTY:
Area 1: All but the Northeastern corner
Area 2: Remainder

SIERRA COUNTY:
Area 1: Western part
Area 2: Remainder

SISKIYOU COUNTY:
Area 1: Central part
Area 2: Remainder

SONOMA COUNTY:
Area 1: All but the Northwestern corner
Area 2: Remainder

TEHAMA COUNTY:
Area 1: All but the Western border with Mendocino & Trinity Counties
Area 2: Remainder

TRINITY COUNTY:
Area 1: East Central part and the Northeastern border with Shasta County
Area 2: Remainder

TUOLUMNE COUNTY:
Area 1: Except Eastern part
Area 2: Eastern part

ENGI0003-018 06/26/2017

"AREA 1" WAGE RATES ARE LISTED BELOW

"AREA 2" RECEIVES AN ADDITIONAL $2.00 PER HOUR ABOVE AREA 1 RATES.

SEE AREA DEFINITIONS BELOW

	Rates	Fringes
OPERATOR: Power Equipment (AREA 1:)		
GROUP 1	$ 44.67	30.39
GROUP 2	$ 43.14	30.39
GROUP 3	$ 41.66	30.39
GROUP 4	$ 40.28	30.39
GROUP 5	$ 39.01	30.39
GROUP 6	$ 37.69	30.39
GROUP 7	$ 36.55	30.39
GROUP 8	$ 35.41	30.39
GROUP 8-A	$ 33.20	30.39
OPERATOR: Power Equipment (Cranes and Attachments - AREA 1:)		
GROUP 1		
Cranes	$ 46.30	30.39
Oiler	$ 36.63	30.39
Truck crane oiler	$ 39.20	30.39
GROUP 2		
Cranes	$ 43.79	30.39
Oiler	$ 36.36	30.39
Truck crane oiler	$ 38.98	30.39
GROUP 3		
Cranes	$ 42.05	30.39
Hydraulic	$ 38.32	30.39
Oiler	$ 36.14	30.39
Truck Crane Oiler	$ 38.71	30.39
GROUP 4		
Cranes	$ 39.01	30.39
OPERATOR: Power Equipment (Piledriving - AREA 1:)		
GROUP 1		
Lifting devices	$ 45.89	30.39
Oiler	$ 36.63	30.39
Truck crane oiler	$ 39.20	30.39
GROUP 2		
Lifting devices	$ 44.07	30.39
Oiler	$ 36.36	30.39
Truck Crane Oiler	$ 38.98	30.39
GROUP 3		
Lifting devices	$ 42.39	30.39
Oiler	$ 36.14	30.39
Truck Crane Oiler	$ 38.71	30.39
GROUP 4		
Lifting devices	$ 40.62	30.39
GROUP 5		
Lifting devices	$ 39.32	30.39
GROUP 6		
Lifting devices	$ 37.98	30.39
OPERATOR: Power Equipment (Steel Erection - AREA 1:)		
GROUP 1		
Cranes	$ 46.30	30.39
Oiler	$ 36.63	30.39
Truck Crane Oiler	$ 39.20	30.39

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     GROUP 2
      Cranes.....................$ 43.79            30.39
      Oiler......................$ 36.36            30.39
      Truck Crane Oiler..........$ 38.98            30.39
     GROUP 3
      Cranes.....................$ 42.05            30.39
      Hydraulic..................$ 38.32            30.39
      Oiler......................$ 36.14            30.39
      Truck Crane Oiler..........$ 38.71            30.39
     GROUP 4
      Cranes.....................$ 39.01            30.39
     GROUP 5
      Cranes.....................$ 35.13            30.39
OPERATOR:  Power Equipment
(Tunnel and Underground Work
- AREA 1:)
     SHAFTS, STOPES, RAISES:
      GROUP 1....................$ 40.77            30.39
      GROUP 1-A..................$ 43.24            30.39
      GROUP 2....................$ 39.51            30.39
      GROUP 3....................$ 38.18            30.39
      GROUP 4....................$ 37.04            30.39
      GROUP 5....................$ 35.90            30.39
     UNDERGROUND:
      GROUP 1....................$ 40.67            30.39
      GROUP 1-A..................$ 43.14            30.39
      GROUP 2....................$ 39.41            30.39
      GROUP 3....................$ 38.08            30.39
      GROUP 4....................$ 36.94            30.39
      GROUP 5....................$ 35.80            30.39

  FOOTNOTE: Work suspended by ropes or cables, or work on a
  Yo-Yo Cat: $.60 per hour additional.


  POWER EQUIPMENT OPERATOR CLASSIFICATIONS

  GROUP 1: Operator of helicopter (when used in erection work);
  Hydraulic excavator, 7 cu. yds. and over; Power shovels,
  over 7 cu. yds.

  GROUP 2: Highline cableway; Hydraulic excavator, 3-1/2 cu.
  yds. up to 7 cu. yds.; Licensed construction work boat
  operator, on site; Power blade operator (finish); Power
  shovels, over 1 cu. yd. up to and including 7 cu. yds.
  m.r.c.

  GROUP 3: Asphalt milling machine; Cable backhoe; Combination
  backhoe and loader over 3/4 cu. yds.; Continuous flight tie
  back machine assistant to engineer or mechanic; Crane
  mounted continuous flight tie back machine, tonnage to
  apply; Crane mounted drill attachment, tonnage to apply;
  Dozer, slope brd; Gradall; Hydraulic excavator, up to 3 1/2
  cu. yds.; Loader 4 cu. yds. and over; Long reach excavator;
  Multiple engine scraper (when used as push pull); Power
  shovels, up to and including 1 cu. yd.; Pre-stress wire
  wrapping machine; Side boom cat, 572 or larger; Track
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loader 4 cu. yds. and over; Wheel excavator (up to and including 750 cu. yds. per hour)

GROUP 4: Asphalt plant engineer/box person; Chicago boom; Combination backhoe and loader up to and including 3/4 cu. yd.; Concrete batch plant (wet or dry); Dozer and/or push cat; Pull- type elevating loader; Gradesetter, grade checker (GPS, mechanical or otherwise); Grooving and grinding machine; Heading shield operator; Heavy-duty drilling equipment, Hughes, LDH, Watson 3000 or similar; Heavy-duty repairperson and/or welder; Lime spreader; Loader under 4 cu. yds.; Lubrication and service engineer (mobile and grease rack); Mechanical finishers or spreader machine (asphalt, Barber-Greene and similar); Miller Formless M-9000 slope paver or similar; Portable crushing and screening plants; Power blade support; Roller operator, asphalt; Rubber-tired scraper, self-loading (paddle-wheels, etc.); Rubber- tired earthmoving equipment (scrapers); Slip form paver (concrete); Small tractor with drag; Soil stabilizer (P & H or equal); Spider plow and spider puller; Tubex pile rig; Unlicensed constuction work boat operator, on site; Timber skidder; Track loader up to 4 yds.; Tractor-drawn scraper; Tractor, compressor drill combination; Welder; Woods-Mixer (and other similar Pugmill equipment)

GROUP 5: Cast-in-place pipe laying machine; Combination slusher and motor operator; Concrete conveyor or concrete pump, truck or equipment mounted; Concrete conveyor, building site; Concrete pump or pumpcrete gun; Drilling equipment, Watson 2000, Texoma 700 or similar; Drilling and boring machinery, horizontal (not to apply to waterliners, wagon drills or jackhammers); Concrete mixer/all; Person and/or material hoist; Mechanical finishers (concrete) (Clary, Johnson, Bidwell Bridge Deck or similar types); Mechanical burm, curb and/or curb and gutter machine, concrete or asphalt); Mine or shaft hoist; Portable crusher; Power jumbo operator (setting slip-forms, etc., in tunnels); Screed (automatic or manual); Self-propelled compactor with dozer; Tractor with boom D6 or smaller; Trenching machine, maximum digging capacity over 5 ft. depth; Vermeer T-600B rock cutter or similar

GROUP 6: Armor-Coater (or similar); Ballast jack tamper; Boom- type backfilling machine; Assistant plant engineer; Bridge and/or gantry crane; Chemical grouting machine, truck-mounted; Chip spreading machine operator; Concrete saw (self-propelled unit on streets, highways, airports and canals); Deck engineer; Drilling equipment Texoma 600, Hughes 200 Series or similar up to and including 30 ft. m.r.c.; Drill doctor; Helicopter radio operator; Hydro-hammer or similar; Line master; Skidsteer loader, Bobcat larger than 743 series or similar (with attachments); Locomotive; Lull hi-lift or similar; Oiler, truck mounted equipment; Pavement breaker, truck-mounted, with compressor combination; Paving fabric installation and/or laying machine; Pipe bending machine (pipelines

only); Pipe wrapping machine (tractor propelled and supported); Screed (except asphaltic concrete paving); Self- propelled pipeline wrapping machine; Tractor; Self-loading chipper; Concrete barrier moving machine

GROUP 7: Ballast regulator; Boom truck or dual-purpose A-frame truck, non-rotating - under 15 tons; Cary lift or similar; Combination slurry mixer and/or cleaner; Drilling equipment, 20 ft. and under m.r.c.; Firetender (hot plant); Grouting machine operator; Highline cableway signalperson; Stationary belt loader (Kolman or similar); Lift slab machine (Vagtborg and similar types); Maginnes internal full slab vibrator; Material hoist (1 drum); Mechanical trench shield; Pavement breaker with or without compressor combination); Pipe cleaning machine (tractor propelled and supported); Post driver; Roller (except asphalt); Chip Seal; Self-propelled automatically applied concrete curing mahcine (on streets, highways, airports and canals); Self-propelled compactor (without dozer); Signalperson; Slip-form pumps (lifting device for concrete forms); Tie spacer; Tower mobile; Trenching machine, maximum digging capacity up to and including 5 ft. depth; Truck- type loader

GROUP 8: Bit sharpener; Boiler tender; Box operator; Brakeperson; Combination mixer and compressor (shotcrete/gunite); Compressor operator; Deckhand; Fire tender; Forklift (under 20 ft.); Generator; Gunite/shotcrete equipment operator; Hydraulic monitor; Ken seal machine (or similar); Mixermobile; Oiler; Pump operator; Refrigeration plant; Reservoir-debris tug (self-propelled floating); Ross Carrier (construction site); Rotomist operator; Self-propelled tape machine; Shuttlecar; Self-propelled power sweeper operator (includes vacuum sweeper); Slusher operator; Surface heater; Switchperson; Tar pot firetender; Tugger hoist, single drum; Vacuum cooling plant; Welding machine (powered other than by electricity)

GROUP 8-A: Elevator operator; Skidsteer loader-Bobcat 743 series or smaller, and similar (without attachments); Mini excavator under 25 H.P. (backhoe-trencher); Tub grinder wood chipper

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ALL CRANES AND ATTACHMENTS

GROUP 1: Clamshell and dragline over 7 cu. yds.; Crane, over 100 tons; Derrick, over 100 tons; Derrick barge pedestal-mounted, over 100 tons; Self-propelled boom-type lifting device, over 100 tons

GROUP 2: Clamshell and dragline over 1 cu. yd. up to and including 7 cu. yds.; Crane, over 45 tons up to and including 100 tons; Derrick barge, 100 tons and under; Self-propelled boom-type lifting device, over 45 tons; Tower crane

GROUP 3: Clamshell and dragline up to and including 1 cu. yd.; Cranes 45 tons and under; Self-propelled boom-type lifting device 45 tons and under;

GROUP 4: Boom Truck or dual purpose A-frame truck, non-rotating over 15 tons; Truck-mounted rotating telescopic boom type lifting device, Manitex or similar (boom truck) over 15 tons; Truck-mounted rotating telescopic boom type lifting device, Manitex or similar (boom truck) - under 15 tons;

PILEDRIVERS

GROUP 1: Derrick barge pedestal mounted over 100 tons; Clamshell over 7 cu. yds.; Self-propelled boom-type lifting device over 100 tons; Truck crane or crawler, land or barge mounted over 100 tons

GROUP 2: Derrick barge pedestal mounted 45 tons to and including 100 tons; Clamshell up to and including 7 cu. yds.; Self-propelled boom-type lifting device over 45 tons; Truck crane or crawler, land or barge mounted, over 45 tons up to and including 100 tons; Fundex F-12 hydraulic pile rig

GROUP 3: Derrick barge pedestal mounted under 45 tons; Self-propelled boom-type lifting device 45 tons and under; Skid/scow piledriver, any tonnage; Truck crane or crawler, land or barge mounted 45 tons and under

GROUP 4: Assistant operator in lieu of assistant to engineer; Forklift, 10 tons and over; Heavy-duty repairperson/welder

GROUP 5: Deck engineer

GROUP 6: Deckhand; Fire tender

STEEL ERECTORS

GROUP 1: Crane over 100 tons; Derrick over 100 tons; Self-propelled boom-type lifting device over 100 tons

GROUP 2: Crane over 45 tons to 100 tons; Derrick under 100 tons; Self-propelled boom-type lifting device over 45 tons to 100 tons; Tower crane

GROUP 3: Crane, 45 tons and under; Self-propelled boom-type lifting device, 45 tons and under

GROUP 4: Chicago boom; Forklift, 10 tons and over; Heavy-duty repair person/welder

GROUP 5: Boom cat

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TUNNEL AND UNDERGROUND WORK

GROUP 1-A: Tunnel bore machine operator, 20' diameter or more

GROUP 1: Heading shield operator; Heavy-duty repairperson; Mucking machine (rubber tired, rail or track type); Raised bore operator (tunnels); Tunnel mole bore operator

GROUP 2: Combination slusher and motor operator; Concrete pump or pumpcrete gun; Power jumbo operator

GROUP 3: Drill doctor; Mine or shaft hoist

GROUP 4: Combination slurry mixer cleaner; Grouting Machine operator; Motorman

GROUP 5: Bit Sharpener; Brakeman; Combination mixer and compressor (gunite); Compressor operator; Oiler; Pump operator; Slusher operator

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AREA DESCRIPTIONS:

POWER EQUIPMENT OPERATORS, CRANES AND ATTACHMENTS,TUNNEL AND UNDERGROUND [These areas do not apply to Piledrivers and Steel Erectors]

AREA 1: ALAMEDA, BUTTE, CONTRA COSTA, KINGS, MARIN, MERCED, NAPA, SACRAMENTO, SAN BENITO, SAN FRANCISCO, SAN JOAQUIN, SAN MATEO, SANTA CLARA, SANTA CRUZ, SOLANO, STANISLAUS, SUTTER, YOLO, AND YUBA COUNTIES

AREA 2 - MODOC COUNTY

THE REMAINING COUNTIES ARE SPLIT BETWEEN AREA 1 AND AREA 2 AS NOTED BELOW:

ALPINE COUNTY:
Area 1: Northernmost part
Area 2: Remainder

CALAVERAS COUNTY:
Area 1: Except Eastern part
Area 2: Eastern part

COLUSA COUNTY:
Area 1: Eastern part
Area 2: Remainder

DEL NORTE COUNTY:
Area 1: Extreme Southwestern corner
Area 2: Remainder

ELDORADO COUNTY:
Area 1: North Central part
Area 2: Remainder

FRESNO COUNTY
Area 1: Except Eastern part
Area 2: Eastern part

GLENN COUNTY:
Area 1: Eastern part
Area 2: Remainder

HUMBOLDT COUNTY:
Area 1: Except Eastern and Southwestern parts
Area 2: Remainder

LAKE COUNTY:
Area 1: Southern part
Area 2: Remainder

LASSEN COUNTY:
Area 1: Western part along the Southern portion of border with Shasta County
Area 2: Remainder

MADERA COUNTY
Area 1: Remainder
Area 2: Eastern part

MARIPOSA COUNTY
Area 1: Remainder
Area 2: Eastern part

MENDOCINO COUNTY:
Area 1: Central and Southeastern parts
Area 2: Remainder

MONTEREY COUNTY
Area 1: Remainder
Area 2: Southwestern part

NEVADA COUNTY:
Area 1: All but the Northern portion along the border of Sierra County
Area 2: Remainder

PLACER COUNTY:
Area 1: All but the Central portion
Area 2: Remainder

PLUMAS COUNTY:
Area 1: Western portion
Area 2: Remainder

SHASTA COUNTY:
Area 1: All but the Northeastern corner

Area 2: Remainder

SIERRA COUNTY:
Area 1: Western part
Area 2: Remainder

SISKIYOU COUNTY:
Area 1: Central part
Area 2: Remainder

SONOMA COUNTY:
Area 1: All but the Northwestern corner
Area 2: Reaminder

TEHAMA COUNTY:
Area 1: All but the Western border with mendocino & Trinity Counties
Area 2: Remainder

TRINITY COUNTY:
Area 1: East Central part and the Northeaster border with Shasta County
Area 2: Remainder

TULARE COUNTY;
Area 1: Remainder
Area 2: Eastern part

TUOLUMNE COUNTY:
Area 1: Remainder
Area 2: Eastern Part

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SEE AREA DESCRIPTIONS BELOW

	Rates	Fringes
OPERATOR: Power Equipment (LANDSCAPE WORK ONLY)		
GROUP 1		
AREA 1	$ 34.05	28.73
AREA 2	$ 36.05	28.73
GROUP 2		
AREA 1	$ 30.45	28.73
AREA 2	$ 32.45	28.73
GROUP 3		
AREA 1	$ 25.84	28.73
AREA 2	$ 27.84	28.73

GROUP DESCRIPTIONS:

GROUP 1: Landscape Finish Grade Operator: All finish grade work regardless of equipment used, and all equipment with a rating more than 65 HP.

GROUP 2: Landscape Operator up to 65 HP: All equipment with a manufacturer's rating of 65 HP or less except equipment covered by Group 1 or Group 3. The following equipment shall be included except when used for finish work as long as manufacturer's rating is 65 HP or less: A-Frame and Winch Truck, Backhoe, Forklift, Hydragraphic Seeder Machine, Roller, Rubber-Tired and Track Earthmoving Equipment, Skiploader, Straw Blowers, and Trencher 31 HP up to 65 HP.

GROUP 3: Landscae Utility Operator: Small Rubber-Tired Tractor, Trencher Under 31 HP.

AREA DESCRIPTIONS:

AREA 1: ALAMEDA, BUTTE, CONTRA COSTA, KINGS, MARIN, MERCED, NAPA, SACRAMENTO, SAN BENITO, SAN FRANCISCO, SAN JOAQUIN, SAN MATEO, SANTA CLARA, SANTA CRUZ, SOLANO, STANISLAUS, SUTTER, YOLO, AND YUBA COUNTIES

AREA 2 - MODOC COUNTY

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Area 1: Northernmost part
Area 2: Remainder

CALAVERAS COUNTY:
Area 1: Except Eastern part
Area 2: Eastern part

COLUSA COUNTY:
Area 1: Eastern part
Area 2: Remainder

DEL NORTE COUNTY:
Area 1: Extreme Southwestern corner
Area 2: Remainder

ELDORADO COUNTY:
Area 1: North Central part
Area 2: Remainder

FRESNO COUNTY
Area 1: Except Eastern part
Area 2: Eastern part

GLENN COUNTY:
Area 1: Eastern part
Area 2: Remainder

HUMBOLDT COUNTY:
Area 1: Except Eastern and Southwestern parts
Area 2: Remainder

LAKE COUNTY:
Area 1: Southern part
Area 2: Remainder

LASSEN COUNTY:
Area 1: Western part along the Southern portion of border with Shasta County
Area 2: Remainder

MADERA COUNTY
Area 1: Remainder
Area 2: Eastern part

MARIPOSA COUNTY
Area 1: Remainder
Area 2: Eastern part

MENDOCINO COUNTY:
Area 1: Central and Southeastern parts
Area 2: Remainder

MONTEREY COUNTY
Area 1: Remainder
Area 2: Southwestern part

NEVADA COUNTY:
Area 1: All but the Northern portion along the border of Sierra County
Area 2: Remainder

PLACER COUNTY:
Area 1: All but the Central portion
Area 2: Remainder

PLUMAS COUNTY:
Area 1: Western portion
Area 2: Remainder

SHASTA COUNTY:
Area 1: All but the Northeastern corner
Area 2: Remainder

SIERRA COUNTY:
Area 1: Western part
Area 2: Remainder

SISKIYOU COUNTY:
Area 1: Central part
Area 2: Remainder

SONOMA COUNTY:
Area 1: All but the Northwestern corner
Area 2: Reaminder

TEHAMA COUNTY:
Area 1: All but the Western border with mendocino & Trinity Counties

Area 2: Remainder

TRINITY COUNTY:
  Area 1: East Central part and the Northeaster border with
  Shasta County
Area 2: Remainder

TULARE COUNTY;
Area 1: Remainder
Area 2: Eastern part

TUOLUMNE COUNTY:
Area 1: Remainder
Area 2: Eastern Part

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	Rates	Fringes
Ironworkers:		
Fence Erector	$ 29.58	21.59
Ornamental, Reinforcing and Structural	$ 36.00	30.15

PREMIUM PAY:

$6.00 additional per hour at the following locations:

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

$4.00 additional per hour at the following locations:

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

$2.00 additional per hour at the following locations:

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

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AREA "A" - ALAMEDA, CONTRA COSTA, SAN FRANCISCO, SAN MATEO AND SANTA CLARA COUNTIES

AREA "B" - CALAVERAS, FRESNO, KINGS, MADERA, MARIPOSA, MERCED, MONTEREY, SAN BENITO, SAN JOAQUIN, STANISLAUS, AND TUOLUMNE COUNTIES

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                                  Rates          Fringes

Asbestos Removal Laborer
     All Counties................$ 23.00           11.31
LABORER (Lead Removal)
     Area A......................$ 30.70           22.17
     Area B......................$ 29.70           22.17

  ASBESTOS REMOVAL-SCOPE OF WORK: Site mobilization; initial
  site clean-up; site preparation; removal of
  asbestos-containing materials from walls and ceilings; or
  from pipes, boilers and mechanical systems only if they are
  being scrapped; encapsulation, enclosure and disposal of
  asbestos-containing materials by hand or with equipment or
  machinery; scaffolding; fabrication of temporary wooden
  barriers; and assembly of decontamination stations.

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 LABO0073-002 06/26/2017

CALAVERAS AND SAN JOAQUIN COUNTIES

                                  Rates          Fringes

LABORER (TRAFFIC CONTROL/LANE
CLOSURE)
     Escort Driver, Flag Person..$ 28.54           22.17
     Traffic Control Person I....$ 28.84           22.17
     Traffic Control Person II...$ 26.34           22.17

  TRAFFIC CONTROL PERSON I: Layout of traffic control, crash
  cushions, construction area and roadside signage.

  TRAFFIC CONTROL PERSON II: Installation and removal of
  temporary/permanent signs, markers, delineators and crash
  cushions.

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 LABO0073-003 07/01/2017

SAN JOAQUIN COUNTY

                                  Rates          Fringes

LABORER
     Mason Tender-Brick..........$ 30.45           21.04
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 LABO0073-005 06/26/2017

                                  Rates          Fringes

Tunnel and Shaft Laborers:
     GROUP 1.....................$ 36.60           21.72
     GROUP 2.....................$ 36.37           21.72
     GROUP 3.....................$ 36.12           21.72
     GROUP 4.....................$ 35.67           21.72
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     GROUP 5.....................$ 35.13            21.72
     Shotcrete Specialist........$ 37.12            21.72

TUNNEL AND SHAFT CLASSIFICATIONS

  GROUP 1: Diamond driller; Groundmen; Gunite and shotcrete
  nozzlemen

  GROUP 2: Rodmen; Shaft work & raise (below actual or
  excavated ground level)

  GROUP 3: Bit grinder; Blaster, driller, powdermen, heading;
  Cherry pickermen - where car is lifted; Concrete finisher
  in tunnel; Concrete screedman; Grout pumpman and potman;
  Gunite & shotcrete gunman & potman; Headermen; High
  pressure nozzleman; Miner - tunnel, including top and
  bottom man on shaft and raise work; Nipper; Nozzleman on
  slick line; Sandblaster - potman, Robotic Shotcrete Placer,
  Segment Erector, Tunnel Muck Hauler, Steel Form raiser and
  setter; Timberman, retimberman (wood or steel or substitute
  materials therefore); Tugger (for tunnel laborer work);
  Cable tender; Chuck tender; Powderman - primer house

  GROUP 4: Vibrator operator, pavement breaker; Bull gang -
  muckers, trackmen; Concrete crew - includes rodding and
  spreading, Dumpmen (any method)

  GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman

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 LABO0073-007 06/27/2017

CALAVERAS AND SAN JOAQUIN COUNTIES

                                   Rates          Fringes

LABORER (CONSTRUCTION CRAFT
LABORERS)
     Construction Specialist
     Group.......................$ 29.49            22.38
     GROUP 1.....................$ 28.79            22.38
     GROUP 1-a...................$ 29.01            22.38
     GROUP 1-c...................$ 28.84            22.38
     GROUP 1-e...................$ 29.34            22.38
     GROUP 1-f...................$ 29.37            22.38
     GROUP 2.....................$ 28.64            22.38
     GROUP 3.....................$ 28.54            22.38
     GROUP 4.....................$ 22.23            22.38
  See groups 1-b and 1-d under laborer classifications.
LABORER (GARDENERS,
HORTICULTURAL & LANDSCAPE
LABORERS)
     (1) New Construction........$ 28.54            22.31
     (2) Establishment Warranty
     Period......................$ 22.23            22.31
LABORER (GUNITE)
     GROUP 1.....................$ 29.75            22.31
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     GROUP 2.....................$ 29.25            22.31
     GROUP 3.....................$ 28.66            22.31
     GROUP 4.....................$ 28.54            22.31
LABORER (WRECKING)
     GROUP 1.....................$ 28.79            22.31
     GROUP 2.....................$ 28.64            22.31
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FOOTNOTES:

Laborers working off or with or from bos'n chairs, swinging scaffolds, belts shall receive $0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below.

LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and bucker; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster;

Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive $4.00 per day above Group 1 wage rates. "Sewer cleaner" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shal receive $5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive $ .25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not

listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions:
A: at demolition site for the salvage of the material.
B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.
C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection".

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Structural Nozzleman

GROUP 2: Nozzleman, Gunman, Potman, Groundman

GROUP 3: Reboundman

GROUP 4: Gunite laborer

WRECKING WORK LABORER CLASSIFICATIONS

GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials)

GROUP 2: Semi-skilled wrecker (salvaging of other building materials)

LABO0073-009 07/01/2017

CALAVERAS AND SAN JOAQUIN COUNTIES

	Rates	Fringes
LABORER (Plaster Tender).....	$ 31.02	22.52

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

LABO0261-003 06/26/2017

SAN FRANCISCO AND SAN MATEO COUNTIES

	Rates	Fringes
LABORER (TRAFFIC CONTROL/LANE CLOSURE)		
Escort Driver, Flag Person..	$ 29.54	22.17
Traffic Control Person I....	$ 29.84	22.17
Traffic Control Person II...	$ 27.34	22.17

TRAFFIC CONTROL PERSON I: Layout of traffic control, crash cushions, construction area and roadside signage.

TRAFFIC CONTROL PERSON II: Installation and removal of temporary/permanent signs, markers, delineators and crash cushions.

LABO0261-005 06/26/2017

SAN FRANCISCO AND SAN MATEO COUNTIES

	Rates	Fringes
Tunnel and Shaft Laborers:		
GROUP 1.....	$ 36.60	21.72
GROUP 2.....	$ 36.37	21.72
GROUP 3.....	$ 36.12	21.72
GROUP 4.....	$ 35.67	21.72
GROUP 5.....	$ 35.13	21.72
Shotcrete Specialist.....	$ 37.12	21.72

TUNNEL AND SHAFT CLASSIFICATIONS

GROUP 1: Diamond driller; Groundmen; Gunite and shotcrete nozzlemen

GROUP 2: Rodmen; Shaft work & raise (below actual or excavated ground level)

GROUP 3: Bit grinder; Blaster, driller, powdermen, heading; Cherry pickermen - where car is lifted; Concrete finisher in tunnel; Concrete screedman; Grout pumpman and potman; Gunite & shotcrete gunman & potman; Headermen; High pressure nozzleman; Miner - tunnel, including top and bottom man on shaft and raise work; Nipper; Nozzleman on slick line; Sandblaster - potman, Robotic Shotcrete Placer, Segment Erector, Tunnel Muck Hauler, Steel Form raiser and setter; Timberman, retimberman (wood or steel or substitute materials therefore); Tugger (for tunnel laborer work); Cable tender; Chuck tender; Powderman - primer house

GROUP 4: Vibrator operator, pavement breaker; Bull gang - muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method)

GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman

LABO0261-009 06/26/2017

SAN FRANCISCO, AND SAN MATEO COUNTIES

	Rates	Fringes
LABORER (CONSTRUCTION CRAFT LABORERS - AREA A:)		
Construction Specialist Group	$ 30.49	22.38
GROUP 1	$ 29.79	22.38
GROUP 1-a	$ 30.01	22.38
GROUP 1-c	$ 29.84	22.38
GROUP 1-e	$ 30.34	22.38
GROUP 1-f	$ 30.37	22.38
GROUP 2	$ 29.64	22.38
GROUP 3	$ 29.54	22.38
GROUP 4	$ 23.23	22.38
See groups 1-b and 1-d under laborer classifications.		
LABORER (GARDENERS, HORTICULTURAL & LANDSCAPE LABORERS - AREA A:)		
(1) New Construction	$ 29.54	22.31
(2) Establishment Warranty Period	$ 23.23	22.31
LABORER (WRECKING - AREA A:)		
GROUP 1	$ 29.79	22.31
GROUP 2	$ 29.64	22.31
Laborers: (GUNITE - AREA A:)		
GROUP 1	$ 30.75	22.31
GROUP 2	$ 30.25	22.31
GROUP 3	$ 29.66	22.31
GROUP 4	$ 29.54	22.31

FOOTNOTES:

Laborers working off or with or from bos'n chairs, swinging scaffolds, belts shall receive $0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below.

LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small

trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and bucker; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive $4.00 per day above Group 1 wage rates. "Sewer cleaner" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shal receive $5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers'

work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive $ .25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions:
A: at demolition site for the salvage of the material.
B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.
C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection".

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Structural Nozzleman

GROUP 2: Nozzleman, Gunman, Potman, Groundman

GROUP 3: Reboundman

GROUP 4: Gunite laborer

WRECKING WORK LABORER CLASSIFICATIONS

GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials)

GROUP 2: Semi-skilled wrecker (salvaging of other building materials)

LABO0261-011 05/01/2017

SAN FRANCISCO AND SAN MATEO COUNTIES:

	Rates	Fringes
MASON TENDER, BRICK.....	$ 33.18	21.49

FOOTNOTES: Underground work such as sewers, manholes, catch basins, sewer pipes, telephone conduits, tunnels and cut trenches: $5.00 per day additional. Work in live sewage: $2.50 per day additional.

LABO0261-014 07/01/2017

SAN FRANCISCO AND SAN MATEO COUNTIES:

	Rates	Fringes
PLASTER TENDER.....	$ 34.70	23.11

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

LABO0270-003 06/26/2017

AREA A: SANTA CLARA

AREA B: MONTEREY, SAN BENITO AND SANTA CRUZ COUNTIES

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                                  Rates          Fringes

LABORER (TRAFFIC CONTROL/LANE
CLOSURE)
     Escort Driver, Flag Person
      Area A.....................$ 29.54            22.17
      Area B.....................$ 28.54            22.17
     Traffic Control Person I
      Area A.....................$ 29.84            22.17
      Area B.....................$ 28.84            22.17
     Traffic Control Person II
      Area A.....................$ 27.34            22.17
      Area B.....................$ 26.34            22.17

  TRAFFIC CONTROL PERSON I: Layout of traffic control, crash
  cushions, construction area and roadside signage.

  TRAFFIC CONTROL PERSON II: Installation and removal of
  temporary/permanent signs, markers, delineators and crash
  cushions.

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 LABO0270-004 06/26/2017

MONTEREY, SAN BENITO, SANTA CLARA, AND SANTA CRUZ COUNTIES

                                  Rates          Fringes

Tunnel and Shaft Laborers:
     GROUP 1....................$ 36.60            24.83
     GROUP 2....................$ 36.37            24.83
     GROUP 3....................$ 36.12            24.83
     GROUP 4....................$ 35.67            24.83
     GROUP 5....................$ 35.13            24.83
     Shotcrete Specialist.......$ 37.12            24.83

TUNNEL AND SHAFT CLASSIFICATIONS

  GROUP 1: Diamond driller; Groundmen; Gunite and shotcrete
  nozzlemen

  GROUP 2: Rodmen; Shaft work & raise (below actual or
  excavated ground level)

  GROUP 3: Bit grinder; Blaster, driller, powdermen, heading;
  Cherry pickermen - where car is lifted; Concrete finisher
  in tunnel; Concrete screedman; Grout pumpman and potman;
  Gunite & shotcrete gunman & potman; Headermen; High
  pressure nozzleman; Miner - tunnel, including top and
  bottom man on shaft and raise work; Nipper; Nozzleman on
  slick line; Sandblaster - potman, Robotic Shotcrete Placer,
  Segment Erector, Tunnel Muck Hauler, Steel Form raiser and
  setter; Timberman, retimberman (wood or steel or substitute
  materials therefore); Tugger (for tunnel laborer work);
  Cable tender; Chuck tender; Powderman - primer house
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GROUP 4: Vibrator operator, pavement breaker; Bull gang - muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method)

GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman

LABO0270-005 07/01/2017

MONTEREY AND SAN BENITO COUNTIES

	Rates	Fringes
LABORER		
Mason Tender-Brick	$ 30.45	21.04

LABO0270-007 06/27/2017

MONTEREY, SAN BENITO, AND SANTA CRUZ, COUNTIES

	Rates	Fringes
LABORER (CONSTRUCTION CRAFT LABORERS - AREA B)		
Construction Specialist Group	$ 29.49	22.38
GROUP 1	$ 28.79	22.38
GROUP 1-a	$ 29.01	22.38
GROUP 1-c	$ 28.84	22.38
GROUP 1-e	$ 29.34	22.38
GROUP 1-f	$ 29.37	22.38
GROUP 2	$ 28.64	22.38
GROUP 3	$ 28.54	22.38
GROUP 4	$ 22.23	22.38
See groups 1-b and 1-d under laborer classifications.		
LABORER (GARDENERS, HORTICULTURAL & LANDSCAPE LABORERS - AREA B)		
(1) New Construction	$ 28.54	22.31
(2) Establishment Warranty Period	$ 22.23	22.31
LABORER (GUNITE - AREA B)		
GROUP 1	$ 29.75	22.31
GROUP 2	$ 29.25	22.31
GROUP 3	$ 28.66	22.31
GROUP 4	$ 28.54	22.31
LABORER (WRECKING - AREA B)		
GROUP 1	$ 28.79	22.31
GROUP 2	$ 28.64	22.31

FOOTNOTES:

Laborers working off or with or from bos'n chairs, swinging scaffolds, belts shall receive $0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below.

LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and bucker; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive $4.00 per day above Group 1 wage rates. "Sewer cleaner" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shal receive $5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive $ .25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and

washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions:
A: at demolition site for the salvage of the material.
B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.
C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection".

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Structural Nozzleman

GROUP 2: Nozzleman, Gunman, Potman, Groundman

GROUP 3: Reboundman

GROUP 4: Gunite laborer

WRECKING WORK LABORER CLASSIFICATIONS

GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials)

GROUP 2: Semi-skilled wrecker (salvaging of other building materials)

LABO0270-010 06/26/2017

SANTA CLARA COUNTY

	Rates	Fringes
LABORER (CONSTRUCTION CRAFT LABORERS - AREA A:)		
Construction Specialist Group	$ 30.49	22.38
GROUP 1	$ 29.79	22.38
GROUP 1-a	$ 30.01	22.38
GROUP 1-c	$ 29.84	22.38
GROUP 1-e	$ 30.34	22.38
GROUP 1-f	$ 30.37	22.38
GROUP 2	$ 29.64	22.38
GROUP 3	$ 29.54	22.38
GROUP 4	$ 23.23	22.38

See groups 1-b and 1-d under laborer classifications.

LABORER (GARDENERS, HORTICULTURAL & LANDSCAPE

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LABORERS - AREA A:)
     (1) New Construction........$ 29.54            22.31
     (2) Establishment Warranty
     Period......................$ 23.23            22.31
LABORER (GUNITE - AREA A:)
     GROUP 1.....................$ 30.75            22.31
     GROUP 2.....................$ 30.25            22.31
     GROUP 3.....................$ 29.66            22.31
     GROUP 4.....................$ 29.54            22.31
LABORER (WRECKING - AREA A:)
     GROUP 1.....................$ 29.79            22.31
     GROUP 2.....................$ 29.64            22.31

FOOTNOTES:
  Laborers working off or with or from bos'n chairs, swinging
  scaffolds, belts shall receive $0.25 per hour above the
  applicable wage rate.  This shall not apply to workers
  entitled to receive the wage rate set forth in Group 1-a
  below.

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LABORER CLASSIFICATIONS

  CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker;
  Chainsaw; Laser beam in connection with laborers' work;
  Cast-in- place manhole form setter; Pressure pipelayer;
  Davis trencher - 300 or similar type (and all small
  trenchers); Blaster; Diamond driller; Multiple unit drill;
  Hydraulic drill

  GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker
  and similar type tampers; Buggymobile; Caulker, bander,
  pipewrapper, conduit layer, plastic pipelayer; Certified
  hazardous waste worker including Leade Abatement;
  Compactors of all types; Concrete and magnesite mixer, 1/2
  yd. and under; Concrete pan work; Concrete sander; Concrete
  saw; Cribber and/or shoring; Cut granite curb setter;
  Dri-pak-it machine; Faller, logloader and bucker; Form
  raiser, slip forms; Green cutter; Headerboard, Hubsetter,
  aligner, by any method; High pressure blow pipe (1-1/2" or
  over, 100 lbs. pressure/over); Hydro seeder and similar
  type; Jackhammer operator; Jacking of pipe over 12 inches;
  Jackson and similar type compactor; Kettle tender, pot and
  worker applying asphalt, lay-kold, creosote, lime, caustic
  and similar type materials (applying means applying,
  dipping or handling of such materials); Lagging, sheeting,
  whaling, bracing, trenchjacking, lagging hammer; Magnesite,
  epoxyresin, fiberglass, mastic worker (wet or dry); No
  joint pipe and stripping of same, including repair of
  voids; Pavement breaker and spader, including tool grinder;
  Perma curb; Pipelayer (including grade checking in
  connection with pipelaying); Precast-manhole setter;
  Pressure pipe tester; Post hole digger, air, gas and
  electric; Power broom sweeper; Power tampers of all types
  (except as shown in Group 2); Ram set gun and stud gun;
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Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive $4.00 per day above Group 1 wage rates. "Sewer cleaner" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shal receive $5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive $ .25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew;

High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions:
A: at demolition site for the salvage of the material.
B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.
C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection".

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Structural Nozzleman

GROUP 2: Nozzleman, Gunman, Potman, Groundman

GROUP 3: Reboundman

GROUP 4: Gunite laborer

WRECKING WORK LABORER CLASSIFICATIONS

GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials)

GROUP 2: Semi-skilled wrecker (salvaging of other building materials)

LABO0270-011 07/01/2017

MONTEREY, SAN BENITO, SANTA CRUZ, SANTA CLARA COUNTIES

	Rates	Fringes
LABORER (Plaster Tender).....	$ 34.70	21.22

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

LABO0294-001 07/01/2017

FRESNO, KINGS AND MADERA COUNTIES

	Rates	Fringes
LABORER (Brick)		
Mason Tender-Brick.....	$ 30.45	21.04

LABO0294-002 06/26/2017

FRESNO, KINGS, AND MADERA COUNTIES

	Rates	Fringes
LABORER (TRAFFIC CONTROL/LANE CLOSURE)		
Escort Driver, Flag Person..	$ 28.54	22.17
Traffic Control Person I....	$ 28.84	22.17
Traffic Control Person II...	$ 26.34	22.17

TRAFFIC CONTROL PERSON I: Layout of traffic control, crash cushions, construction area and roadside signage.

TRAFFIC CONTROL PERSON II: Installation and removal of temporary/permanent signs, markers, delineators and crash cushions.

LABO0294-005 06/26/2017

FRESNO, KINGS, AND MADERA COUNTIES

	Rates	Fringes
Tunnel and Shaft Laborers:		
GROUP 1.....	$ 36.60	24.83
GROUP 2.....	$ 36.37	24.83
GROUP 3.....	$ 36.12	24.83
GROUP 4.....	$ 35.67	24.83
GROUP 5.....	$ 35.13	24.83
Shotcrete Specialist.....	$ 37.12	24.83

TUNNEL AND SHAFT CLASSIFICATIONS

GROUP 1: Diamond driller; Groundmen; Gunite and shotcrete nozzlemen

GROUP 2: Rodmen; Shaft work & raise (below actual or excavated ground level)

GROUP 3: Bit grinder; Blaster, driller, powdermen, heading; Cherry pickermen - where car is lifted; Concrete finisher in tunnel; Concrete screedman; Grout pumpman and potman; Gunite & shotcrete gunman & potman; Headermen; High pressure nozzleman; Miner - tunnel, including top and bottom man on shaft and raise work; Nipper; Nozzleman on slick line; Sandblaster - potman, Robotic Shotcrete Placer, Segment Erector, Tunnel Muck Hauler, Steel Form raiser and setter; Timberman, retimberman (wood or steel or substitute materials therefore); Tugger (for tunnel laborer work); Cable tender; Chuck tender; Powderman - primer house

GROUP 4: Vibrator operator, pavement breaker; Bull gang - muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method)

GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman

LABO0294-008 06/30/2017

FRESNO, KINGS, AND MADERA COUNTIES

	Rates	Fringes
LABORER (CONSTRUCTION CRAFT LABORERS - AREA B:)		
Construction Specialist Group	$ 29.49	22.38
GROUP 1	$ 28.79	22.38
GROUP 1-a	$ 29.01	22.38
GROUP 1-c	$ 28.84	22.38
GROUP 1-e	$ 29.34	22.38
GROUP 1-f	$ 29.37	22.38
GROUP 2	$ 28.64	22.38
GROUP 3	$ 28.54	22.38
GROUP 4	$ 22.23	22.38
See groups 1-b and 1-d under laborer classifications.		
LABORER (GARDENERS, HORTICULTURAL & LANDSCAPE LABORERS - AREA B:)		
(1) New Construction	$ 28.54	22.31
(2) Establishment Warranty Period	$ 22.23	22.31
LABORER (GUNITE - AREA B:)		
GROUP 1	$ 29.75	22.31
GROUP 2	$ 29.25	22.31
GROUP 3	$ 28.66	22.31
GROUP 4	$ 28.54	22.31
LABORER (WRECKING - AREA B:)		
GROUP 1	$ 28.79	22.31
GROUP 2	$ 28.64	22.31

FOOTNOTES:

Laborers working off or with or from bos'n chairs, swinging scaffolds, belts shall receive $0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below.

LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and bucker; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types

regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive $4.00 per day above Group 1 wage rates. "Sewer cleaner" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shal receive $5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive $ .25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair

track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions:
A: at demolition site for the salvage of the material.
B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.
C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection".

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Structural Nozzleman

GROUP 2: Nozzleman, Gunman, Potman, Groundman

GROUP 3: Reboundman

GROUP 4: Gunite laborer

WRECKING WORK LABORER CLASSIFICATIONS

GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials)

GROUP 2: Semi-skilled wrecker (salvaging of other building materials)

LABO0294-010 07/01/2017

CALAVERAS, FRESNO, KINGS, MADERA, MARIPOSA, MERCED, SAN JOAQUIN, STANISLAUS & TUOLUMNE

	Rates	Fringes
Plasterer tender.....	$ 31.02	22.52

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

LABO0294-011 07/01/2017

FRESNO, KINGS, AND MADERA COUNTIES

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                                  Rates          Fringes

LABORER (Plaster Tender).........$ 31.02            22.52

Work on a swing stage scaffold: $1.00 per hour additional.
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 LABO0304-002 06/26/2017

ALAMEDA COUNTY

                                  Rates          Fringes

LABORER (TRAFFIC CONTROL/LANE
CLOSURE)
     Escort Driver, Flag Person..$ 29.54            22.17
     Traffic Control Person I....$ 29.84            22.17
     Traffic Control Person II...$ 27.34            22.17

  TRAFFIC CONTROL PERSON I: Layout of traffic control, crash
  cushions, construction area and roadside signage.

  TRAFFIC CONTROL PERSON II: Installation and removal of
  temporary/permanent signs, markers, delineators and crash
  cushions.

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 LABO0304-003 06/26/2017

ALAMEDA COUNTY

                                  Rates          Fringes

Tunnel and Shaft Laborers:
     GROUP 1.....................$ 36.60            24.83
     GROUP 2.....................$ 36.37            24.83
     GROUP 3.....................$ 36.12            24.83
     GROUP 4.....................$ 35.67            24.83
     GROUP 5.....................$ 35.13            24.83
     Shotcrete Specialist........$ 37.12            24.83

TUNNEL AND SHAFT CLASSIFICATIONS

  GROUP 1: Diamond driller; Groundmen; Gunite and shotcrete
  nozzlemen

  GROUP 2: Rodmen; Shaft work & raise (below actual or
  excavated ground level)

  GROUP 3: Bit grinder; Blaster, driller, powdermen, heading;
  Cherry pickermen - where car is lifted; Concrete finisher
  in tunnel; Concrete screedman; Grout pumpman and potman;
  Gunite & shotcrete gunman & potman; Headermen; High
  pressure nozzleman; Miner - tunnel, including top and
  bottom man on shaft and raise work; Nipper; Nozzleman on
  slick line; Sandblaster - potman, Robotic Shotcrete Placer,
  Segment Erector, Tunnel Muck Hauler, Steel Form raiser and
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setter; Timberman, retimberman (wood or steel or substitute materials therefore); Tugger (for tunnel laborer work); Cable tender; Chuck tender; Powderman - primer house

GROUP 4: Vibrator operator, pavement breaker; Bull gang - muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method)

GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman

LABO0304-004 06/27/2017

ALAMEDA COUNTY

	Rates	Fringes
LABORER (CONSTRUCTION CRAFT LABORERS - AREA A:)		
Construction Specialist Group	$ 30.49	22.38
GROUP 1	$ 29.79	22.38
GROUP 1-a	$ 30.01	22.38
GROUP 1-c	$ 29.84	22.38
GROUP 1-e	$ 30.34	22.38
GROUP 1-f	$ 30.37	22.38
GROUP 2	$ 29.64	22.38
GROUP 3	$ 29.54	22.38
GROUP 4	$ 23.23	22.38
See groups 1-b and 1-d under laborer classifications.		
LABORER (GARDENERS, HORTICULTURAL & LANDSCAPE LABORERS - AREA A:)		
(1) New Construction	$ 29.54	22.31
(2) Establishment Warranty Period	$ 23.23	22.31
LABORER (GUNITE - AREA A:)		
GROUP 1	$ 30.75	22.31
GROUP 2	$ 30.25	22.31
GROUP 3	$ 29.66	22.31
GROUP 4	$ 29.54	22.31
LABORER (WRECKING - AREA A:)		
GROUP 1	$ 29.79	22.31
GROUP 2	$ 29.64	22.31

FOOTNOTES:

Laborers working off or with or from bos'n chairs, swinging scaffolds, belts shall receive $0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below.

LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and bucker; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive $4.00 per day above Group 1 wage rates. "Sewer cleaner" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer

manholes shal receive $5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive $ .25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions:
A: at demolition site for the salvage of the material.
B: at the conclusion of a job where the material is to be

salvaged and stocked to be reused on another job.
C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection".

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Structural Nozzleman

GROUP 2: Nozzleman, Gunman, Potman, Groundman

GROUP 3: Reboundman

GROUP 4: Gunite laborer

WRECKING WORK LABORER CLASSIFICATIONS

GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials)

GROUP 2: Semi-skilled wrecker (salvaging of other building materials)

LABO0304-005 05/01/2017

ALAMEDA COUNTY

	Rates	Fringes
Brick Tender	$ 33.18	21.49

FOOTNOTES: Work on jobs where heat-protective clothing is required: $2.00 per hour additional. Work at grinders: $.25 per hour additional. Manhole work: $2.00 per day additional.

LABO0304-008 07/01/2017

ALAMEDA AND CONTRA COSTA COUNTIES:

	Rates	Fringes
Plasterer tender	$ 34.70	23.11

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

LABO0324-002 06/26/2017

CONTRA COSTA COUNTY

	Rates	Fringes
LABORER (TRAFFIC CONTROL/LANE CLOSURE)		
Escort Driver, Flag Person..	$ 29.54	22.17
Traffic Control Person I....	$ 29.84	22.17
Traffic Control Person II...	$ 27.34	22.17

TRAFFIC CONTROL PERSON I: Layout of traffic control, crash cushions, construction area and roadside signage.

TRAFFIC CONTROL PERSON II: Installation and removal of temporary/permanent signs, markers, delineators and crash cushions.

LABO0324-006 06/26/2017

CONTRA COSTA COUNTY

	Rates	Fringes
Tunnel and Shaft Laborers:		
GROUP 1.....	$ 36.60	21.72
GROUP 2.....	$ 36.37	21.72
GROUP 3.....	$ 36.12	21.72
GROUP 4.....	$ 35.67	21.72
GROUP 5.....	$ 35.13	21.72
Shotcrete Specialist.....	$ 37.12	21.72

TUNNEL AND SHAFT CLASSIFICATIONS

GROUP 1: Diamond driller; Groundmen; Gunite and shotcrete nozzlemen

GROUP 2: Rodmen; Shaft work & raise (below actual or excavated ground level)

GROUP 3: Bit grinder; Blaster, driller, powdermen, heading; Cherry pickermen - where car is lifted; Concrete finisher in tunnel; Concrete screedman; Grout pumpman and potman; Gunite & shotcrete gunman & potman; Headermen; High pressure nozzleman; Miner - tunnel, including top and bottom man on shaft and raise work; Nipper; Nozzleman on slick line; Sandblaster - potman, Robotic Shotcrete Placer, Segment Erector, Tunnel Muck Hauler, Steel Form raiser and setter; Timberman, retimberman (wood or steel or substitute materials therefore); Tugger (for tunnel laborer work); Cable tender; Chuck tender; Powderman - primer house

GROUP 4: Vibrator operator, pavement breaker; Bull gang - muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method)

GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman

LABO0324-012 06/27/2017

CONTRA COSTA COUNTY

	Rates	Fringes
LABORER (CONSTRUCTION CRAFT LABORERS - AREA A:)		
Construction Specialist Group	$ 30.49	22.38
GROUP 1	$ 29.79	22.38
GROUP 1-a	$ 30.01	22.38
GROUP 1-c	$ 29.84	22.38
GROUP 1-e	$ 30.34	22.38
GROUP 1-f	$ 30.37	22.38
GROUP 1-g	$ 29.99	22.38
GROUP 2	$ 29.64	22.38
GROUP 3	$ 29.54	22.38
GROUP 4	$ 23.23	22.38
See groups 1-b and 1-d under laborer classifications.		
LABORER (GARDENERS, HORTICULURAL & LANDSCAPE LABORERS - AREA A:)		
(1) New Construction	$ 29.54	22.31
(2) Establishment Warranty Period	$ 23.23	22.31
LABORER (GUNITE - AREA A:)		
GROUP 1	$ 30.75	22.31
GROUP 2	$ 30.25	22.31
GROUP 3	$ 29.66	22.31
GROUP 4	$ 29.54	22.31
LABORER (WRECKING - AREA A:)		
GROUP 1	$ 29.79	22.31
GROUP 2	$ 29.64	22.31

FOOTNOTES:

Laborers working off or with or from bos'n chairs, swinging scaffolds, belts shall receive $0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below.

LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander,

pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and bucker; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive $4.00 per day above Group 1 wage rates. "Sewer cleaner" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shal receive $5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive $ .25 per hour above their regular rate for all work

performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 1-g, CONTRA COSTA COUNTY: Pipelayer (including grade checking in connection with pipelaying); Caulker; Bander; Pipewrapper; Conduit layer; Plastic pipe layer; Pressure pipe tester; No joint pipe and stripping of same, including repair of voids; Precast manhole setters, cast in place manhole form setters

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions:
A: at demolition site for the salvage of the material.
B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.
C: for the cleaning of salvage material at the jobsite or

temporary jobsite yard.

The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection".

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Structural Nozzleman

GROUP 2: Nozzleman, Gunman, Potman, Groundman

GROUP 3: Reboundman

GROUP 4: Gunite laborer

WRECKING WORK LABORER CLASSIFICATIONS

GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials)

GROUP 2: Semi-skilled wrecker (salvaging of other building materials)

GROUP 1-g, CONTRA COSTA COUNTY: Pipelayer (including grade checking in connection with pipelaying); Caulker; Bander; Pipewrapper; Conduit layer; Plastic pipe layer; Pressure pipe tester; No joint pipe and stripping of same, including repair of voids; Precast manhole setters, cast in place manhole form setters

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LABO0324-014 05/01/2017

CONTRA COSTA COUNTY:

	Rates	Fringes
Brick Tender	$ 33.18	21.49

FOOTNOTES: Work on jobs where heat-protective clothing is required: $2.00 per hour additional. Work at grinders: $.25 per hour additional. Manhole work: $2.00 per day additional.

LABO0324-018 07/01/2017

ALAMEDA AND CONTRA COSTA COUNTIES:

	Rates	Fringes
Plasterer tender	$ 34.70	23.11

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

LABO1130-002 06/26/2017

MARIPOSA, MERCED, STANISLAUS, AND TUOLUMNE COUNTIES

	Rates	Fringes
LABORER (TRAFFIC CONTROL/LANE CLOSURE)		
Escort Driver, Flag Person..	$ 28.54	22.17
Traffic Control Person I....	$ 28.84	22.17
Traffic Control Person II...	$ 26.34	22.17

TRAFFIC CONTROL PERSON I: Layout of traffic control, crash cushions, construction area and roadside signage.

TRAFFIC CONTROL PERSON II: Installation and removal of temporary/permanent signs, markers, delineators and crash cushions.

LABO1130-003 06/26/2017

MARIPOSA, MERCED, STANISLAUS, AND TUOLUMNE COUNTIES

	Rates	Fringes
Tunnel and Shaft Laborers:		
GROUP 1.....	$ 36.60	24.83
GROUP 2.....	$ 36.37	24.83
GROUP 3.....	$ 36.12	24.83
GROUP 4.....	$ 35.67	24.83
GROUP 5.....	$ 35.13	24.83
Shotcrete Specialist.....	$ 37.12	24.83

TUNNEL AND SHAFT CLASSIFICATIONS

GROUP 1: Diamond driller; Groundmen; Gunite and shotcrete nozzlemen

GROUP 2: Rodmen; Shaft work & raise (below actual or excavated ground level)

GROUP 3: Bit grinder; Blaster, driller, powdermen, heading; Cherry pickermen - where car is lifted; Concrete finisher in tunnel; Concrete screedman; Grout pumpman and potman; Gunite & shotcrete gunman & potman; Headermen; High pressure nozzleman; Miner - tunnel, including top and bottom man on shaft and raise work; Nipper; Nozzleman on slick line; Sandblaster - potman, Robotic Shotcrete Placer, Segment Erector, Tunnel Muck Hauler, Steel Form raiser and setter; Timberman, retimberman (wood or steel or substitute materials therefore); Tugger (for tunnel laborer work); Cable tender; Chuck tender; Powderman - primer house

GROUP 4: Vibrator operator, pavement breaker; Bull gang - muckers, trackmen; Concrete crew - includes rodding and spreading, Dumpmen (any method)

GROUP 5: Grout crew; Reboundman; Swamper/ Brakeman

LABO1130-005 07/01/2017

MARIPOSA, MERCED, STANISLAUS AND TUOLUMNE COUNTIES

	Rates	Fringes
LABORER		
Mason Tender-Brick	$ 30.45	21.04

LABO1130-007 06/26/2017

MARIPOSA, MERCED, STANISLAUS, AND TUOLUMNE , COUNTIES

	Rates	Fringes
LABORER (CONSTRUCTION CRAFT LABORERS - AREA B:)		
Construction Specialist Group	$ 29.49	22.38
GROUP 1	$ 28.79	22.38
GROUP 1-a	$ 29.01	22.38
GROUP 1-c	$ 28.84	22.38
GROUP 1-e	$ 29.34	22.38
GROUP 1-f	$ 29.37	22.38
GROUP 2	$ 28.64	22.38
GROUP 3	$ 28.54	22.38
GROUP 4	$ 22.23	22.38
See groups 1-b and 1-d under laborer classifications.		
LABORER (GARDENERS, HORTICULTURAL & LANDSCAPE LABORERS - AREA B:)		
(1) New Construction	$ 28.54	22.31
(2) Establishment Warranty Period	$ 22.23	22.31
LABORER (GUNITE - AREA B:)		
GROUP 1	$ 29.75	22.31
GROUP 2	$ 29.25	22.31
GROUP 3	$ 28.66	22.31
GROUP 4	$ 28.54	22.31
LABORER (WRECKING - AREA B:)		
GROUP 1	$ 28.79	22.31
GROUP 2	$ 28.64	22.31

FOOTNOTES:

Laborers working off or with or from bos'n chairs, swinging scaffolds, belts shall receive $0.25 per hour above the applicable wage rate. This shall not apply to workers entitled to receive the wage rate set forth in Group 1-a below.

LABORER CLASSIFICATIONS

CONSTRUCTION SPECIALIST GROUP: Asphalt ironer and raker; Chainsaw; Laser beam in connection with laborers' work; Cast-in- place manhole form setter; Pressure pipelayer; Davis trencher - 300 or similar type (and all small trenchers); Blaster; Diamond driller; Multiple unit drill; Hydraulic drill

GROUP 1: Asphalt spreader boxes (all types); Barko, Wacker and similar type tampers; Buggymobile; Caulker, bander, pipewrapper, conduit layer, plastic pipelayer; Certified hazardous waste worker including Leade Abatement; Compactors of all types; Concrete and magnesite mixer, 1/2 yd. and under; Concrete pan work; Concrete sander; Concrete saw; Cribber and/or shoring; Cut granite curb setter; Dri-pak-it machine; Faller, logloader and bucker; Form raiser, slip forms; Green cutter; Headerboard, Hubsetter, aligner, by any method; High pressure blow pipe (1-1/2" or over, 100 lbs. pressure/over); Hydro seeder and similar type; Jackhammer operator; Jacking of pipe over 12 inches; Jackson and similar type compactor; Kettle tender, pot and worker applying asphalt, lay-kold, creosote, lime, caustic and similar type materials (applying means applying, dipping or handling of such materials); Lagging, sheeting, whaling, bracing, trenchjacking, lagging hammer; Magnesite, epoxyresin, fiberglass, mastic worker (wet or dry); No joint pipe and stripping of same, including repair of voids; Pavement breaker and spader, including tool grinder; Perma curb; Pipelayer (including grade checking in connection with pipelaying); Precast-manhole setter; Pressure pipe tester; Post hole digger, air, gas and electric; Power broom sweeper; Power tampers of all types (except as shown in Group 2); Ram set gun and stud gun; Riprap stonepaver and rock-slinger, including placing of sacked concrete and/or sand (wet or dry) and gabions and similar type; Rotary scarifier or multiple head concrete chipping scarifier; Roto and Ditch Witch; Rototiller; Sandblaster, pot, gun, nozzle operators; Signalling and rigging; Tank cleaner; Tree climber; Turbo blaster; Vibrascreed, bull float in connection with laborers' work; Vibrator; Hazardous waste worker (lead removal); Asbestos and mold removal worker

GROUP 1-a: Joy drill model TWM-2A; Gardner-Denver model DH143 and similar type drills; Track driller; Jack leg driller; Wagon driller; Mechanical drillers, all types regardless of type or method of power; Mechanical pipe layers, all types regardless of type or method of power; Blaster and powder; All work of loading, placing and blasting of all powder and explosives of whatever type regardless of method used for such loading and placing; High scalers (including drilling of same); Tree topper; Bit grinder

GROUP 1-b: Sewer cleaners shall receive $4.00 per day above Group 1 wage rates. "Sewer cleaner" means any worker who handles or comes in contact with raw sewage in small diameter sewers. Those who work inside recently active, large diameter sewers, and all recently active sewer manholes shal receive $5.00 per day above Group 1 wage rates.

GROUP 1-c: Burning and welding in connection with laborers' work; Synthetic thermoplastics and similar type welding

GROUP 1-d: Maintenance and repair track and road beds. All employees performing work covered herein shall receive $ .25 per hour above their regular rate for all work performed on underground structures not specifically covered herein. This paragraph shall not be construed to apply to work below ground level in open cut. It shall apply to cut and cover work of subway construction after the temporary cover has been placed.

GROUP 1-e: Work on and/or in bell hole footings and shafts thereof, and work on and in deep footings. (A deep footing is a hole 15 feet or more in depth.) In the event the depth of the footing is unknown at the commencement of excavation, and the final depth exceeds 15 feet, the deep footing wage rate would apply to all employees for each and every day worked on or in the excavation of the footing from the date of inception.

GROUP 1-f: Wire winding machine in connection with guniting or shot crete

GROUP 2: Asphalt shoveler; Cement dumper and handling dry cement or gypsum; Choke-setter and rigger (clearing work); Concrete bucket dumper and chute; Concrete chipping and grinding; Concrete laborer (wet or dry); Driller tender, chuck tender, nipper; Guinea chaser (stake), grout crew; High pressure nozzle, adductor; Hydraulic monitor (over 100 lbs. pressure); Loading and unloading, carrying and hauling of all rods and materials for use in reinforcing concrete construction; Pittsburgh chipper and similar type brush shredders; Sloper; Single foot, hand-held, pneumatic tamper; All pneumatic, air, gas and electric tools not listed in Groups 1 through 1-f; Jacking of pipe - under 12 inches

GROUP 3: Construction laborers, including bridge and general laborer; Dump, load spotter; Flag person; Fire watcher; Fence erector; Guardrail erector; Gardener, horticultural and landscape laborer; Jetting; Limber, brush loader and piler; Pavement marker (button setter); Maintenance, repair track and road beds; Streetcar and railroad construction track laborer; Temporary air and water lines, Victaulic or similar; Tool room attendant (jobsite only)

GROUP 4: Final clean-up work of debris, grounds and building including but not limited to: street cleaner; cleaning and

washing windows; brick cleaner (jobsite only); material cleaner (jobsite only). The classification "material cleaner" is to be utilized under the following conditions:
A: at demolition site for the salvage of the material.
B: at the conclusion of a job where the material is to be salvaged and stocked to be reused on another job.
C: for the cleaning of salvage material at the jobsite or temporary jobsite yard.

The material cleaner classification should not be used in the performance of "form stripping, cleaning and oiling and moving to the next point of erection".

GUNITE LABORER CLASSIFICATIONS

GROUP 1: Structural Nozzleman

GROUP 2: Nozzleman, Gunman, Potman, Groundman

GROUP 3: Reboundman

GROUP 4: Gunite laborer

WRECKING WORK LABORER CLASSIFICATIONS

GROUP 1: Skilled wrecker (removing and salvaging of sash, windows and materials)

GROUP 2: Semi-skilled wrecker (salvaging of other building materials)

LABO1130-008 07/01/2017

CALAVERAS, FRESNO, KINGS, MADERA, MARIPOSA, MERCED, SAN JOAQUIN, STANISLAUS & TUOLUMNE

	Rates	Fringes
Plasterer tender.....	$ 31.02	22.52

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

LABO1130-009 07/01/2017

MARIPOSA, MERCED, STANISLAUS, AND TUOLUMNE COUNTIES

	Rates	Fringes
LABORER (Plaster Tender).....	$ 31.02	22.52

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

PAIN0016-001 01/01/2018

ALAMEDA, CONTRA COSTA, MONTEREY, SAN BENITO, SAN MATEO, SANTA CLARA, AND SANTA CRUZ COUNTIES

	Rates	Fringes
Painters:.....	$ 40.62	23.83

PREMIUMS:

EXOTIC MATERIALS - $0.75 additional per hour.
SPRAY WORK: - $0.50 additional per hour.
INDUSTRIAL PAINTING - $0.25 additional per hour
[Work on industrial buildings used for the manufacture and processing of goods for sale or service; steel construction (bridges), stacks, towers, tanks, and similar structures]

HIGH WORK:
over 50 feet - $2.00 per hour additional
100 to 180 feet - $4.00 per hour additional
Over 180 feet - $6.00 per houir additional

PAIN0016-003 01/01/2018

AREA 1: ALAMEDA, CONTRA COSTA, SAN FRANCISCO, SAN MATEO & SANTA CLARA COUNTIES

AREA 2: CALAVERAS, MARIPOA, MERCED, MONTEREY, SAN BENITO, SAN JOAQUIN, SANTA CRUZ, STANISLAUS & TUOLUMNE COUNTIES

	Rates	Fringes
Drywall Finisher/Taper		
AREA 1.....	$ 45.16	26.74
AREA 2.....	$ 41.03	25.34

PAIN0016-012 01/01/2018

ALAMEDA, CONTRA COSTA, MARIPOSA, MERCED, MONTEREY, SAN BENITO, SAN FRANCISCO, SAN MATEO, SANTA CLARA AND SANTA CRUZ COUNTIES

	Rates	Fringes
SOFT FLOOR LAYER.....	$ 48.00	26.03

PAIN0016-015 01/01/2018

CALAVERAS, MARIPOSA, MERCED, SAN JOAQUIN, STANISLAUS & TUOLUMNE COUNTIES

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                                   Rates          Fringes

PAINTER
     Brush.......................$ 32.91            19.26

FOOTNOTES:
SPRAY/SANDBLAST: $0.50 additional per hour.
EXOTIC MATERIALS: $1.00 additional per hour.
  HIGH TIME:  Over 50 ft above ground or water level $2.00
  additional per hour.  100 to 180 ft above ground or water
  level $4.00 additional per hour.  Over 180 ft above ground
  or water level $6.00 additional per hour.

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 PAIN0016-022 01/01/2018

SAN FRANCISCO COUNTY

                                   Rates          Fringes

PAINTER.........................$ 44.24            23.83
-----------------------------------------------------------------
 PAIN0169-001 01/01/2018

FRESNO, KINGS, MADERA, MARIPOSA AND MERCED COUNTIES:

                                   Rates          Fringes

GLAZIER.........................$ 35.00            26.26
-----------------------------------------------------------------
 PAIN0169-005 01/01/2018

ALAMEDA CONTRA COSTA, MONTEREY, SAN BENITO, SAN FRANCISCO, SAN
MATEO, SANTA CLARA & SANTA CRUZ COUNTIES


                                   Rates          Fringes

GLAZIER.........................$ 46.13            28.04
-----------------------------------------------------------------
 PAIN0294-004 01/01/2018

FRESNO, KINGS AND MADERA COUNTIES

                                   Rates          Fringes

PAINTER
     Brush, Roller...............$ 29.78            18.11
     Drywall Finisher/Taper......$ 34.87            23.68

FOOTNOTE:
  Spray Painters & Paperhangers recive $1.00 additional per
  hour. Painters doing Drywall Patching receive $1.25
  additional per hour.  Lead Abaters & Sandblasters receive
  $1.50 additional per hour.  High Time - over 30 feet (does
  not include work from a lift) $0.75 per hour additional.
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PAIN0294-005 01/01/2018

FRESNO, KINGS & MADERA

	Rates	Fringes
SOFT FLOOR LAYER.....	$ 31.49	20.48

PAIN0767-001 01/01/2018

CALAVERAS, SAN JOAQUIN, STANISLAUS AND TUOLUMNE COUNTIES:

	Rates	Fringes
GLAZIER.....	$ 34.57	28.25

PAID HOLIDAYS: New Year's Day, Martin Luther King, Jr. Day, President's Day, Memorial Day, Independence Day, Labor Day, Veteran's Day, Thanksgiving Day, and Christmas Day.

Employee rquired to wear a body harness shall receive $1.50 per hour above the basic hourly rate at any elevation.

PAIN1176-001 01/01/2017

HIGHWAY IMPR0VEMENT

	Rates	Fringes
Parking Lot Striping/Highway Marking:		
GROUP 1.....	$ 34.41	16.31
GROUP 2.....	$ 29.25	16.31
GROUP 3.....	$ 29.59	16.31

CLASSIFICATIONS

GROUP 1: Striper: Layout and application of painted traffic stripes and marking; hot thermo plastic; tape, traffic stripes and markings

GROUP 2: Gamecourt & Playground Installer

GROUP 3: Protective Coating, Pavement Sealing

PAIN1237-003 01/01/2018

CALAVERAS; SAN JOAQUIN COUNTIES; STANISLAUS AND TUOLUMNE COUNTIES:

	Rates	Fringes
SOFT FLOOR LAYER.....	$ 34.81	21.51

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 PLAS0066-002 07/01/2017

ALAMEDA, CONTRA COSTA, SAN MATEO AND SAN FRANCISCO COUNTIES:

                                  Rates          Fringes

PLASTERER.......................$ 40.51            27.13
----------------------------------------------------------------
 PLAS0300-001 07/01/2014

                                  Rates          Fringes

PLASTERER
     AREA 188:  Fresno...........$ 29.44            22.26
     AREA 224:  San Benito,
     Santa Clara, Santa Cruz.....$ 31.59            22.26
     AREA 295:  Calaveras & San
     Joaquin Couonties...........$ 31.41            22.26
     AREA 337:  Monterey County..$ 30.52            22.26
     AREA 429:  Mariposa,
     Merced, Stanislaus,
     Tuolumne Counties...........$ 31.41            22.26
----------------------------------------------------------------
 PLAS0300-005 07/01/2017

                                  Rates          Fringes

CEMENT MASON/CONCRETE FINISHER...$ 39.20            19.71
----------------------------------------------------------------
 PLUM0038-001 07/01/2017

SAN FRANCISCO COUNTY

                                  Rates          Fringes

PLUMBER (Plumber,
Steamfitter, Refrigeration
Fitter).........................$ 70.00            43.24
----------------------------------------------------------------
 PLUM0038-005 07/01/2017

SAN FRANCISCO COUNTY

                                  Rates          Fringes

Landscape/Irrigation Fitter
(Underground/Utility Fitter).....$ 59.50            38.24
----------------------------------------------------------------
 PLUM0062-001 01/01/2017

MONTEREY AND SANTA CRUZ COUNTIES

                                  Rates          Fringes

PLUMBER & STEAMFITTER...........$ 41.90            29.59
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PLUM0159-001 07/01/2017

CONTRA COSTA COUNTY

	Rates	Fringes
Plumber and steamfitter		
(1) Refrigeration	$ 56.92	35.94
(2) All other work	$ 55.92	34.44

PLUM0246-001 01/01/2017

FRESNO, KINGS & MADERA COUNTIES

	Rates	Fringes
PLUMBER & STEAMFITTER	$ 38.40	29.39

PLUM0246-004 01/01/2017

FRESNO, MERCED & SAN JOAQUIN COUNIES

	Rates	Fringes
PLUMBER (PIPE TRADESMAN)	$ 13.00	10.74

PIPE TRADESMAN SCOPE OF WORK:
Installation of corrugated metal piping for drainage, as well as installation of corrugated metal piping for culverts in connection with storm sewers and drains; Grouting, dry packing and diapering of joints, holes or chases including paving over joints, in piping; Temporary piping for dirt work for building site preparation; Operating jack hammers, pavement breakers, chipping guns, concrete saws and spades to cut holes, chases and channels for piping systems; Digging, grading, backfilling and ground preparation for all types of pipe to all points of the jobsite; Ground preparation including ground leveling, layout and planting of shrubbery, trees and ground cover, including watering, mowing, edging, pruning and fertilizing, the breaking of concrete, digging, backfilling and tamping for the preparation and completion of all work in connection with lawn sprinkler and landscaping; Loading, unloading and distributing materials at jobsite; Putting away materials in storage bins in jobsite secure storage area; Demolition of piping and fixtures for remodeling and additions; Setting up and tearing down work benches, ladders and job shacks; Clean-up and sweeping of jobsite; Pipe wrapping and waterproofing where tar or similar material is applied for protection of buried piping; Flagman

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PLUM0342-001 07/01/2017

ALAMEDA & CONTRA COSTA COUNTIES

	Rates	Fringes

PIPEFITTER
CONTRA COSTA COUNTY.....$ 58.10 42.45
PLUMBER, PIPEFITTER,
STEAMFITTER
ALAMEDA COUNTY.....$ 58.10 42.45

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* PLUM0355-004 07/01/2017

ALAMEDA, CALAVERAS, CONTRA COSTA, FRESNO, KINGS, MADERA, MARIPOSA, MERCED, MONTEREY, SAN BENITO, SAN JOAQUIN, SAN MATEO, SANTA CLARA, SANTA CRUZ, STANISLAUS, AND TUOLUMNE COUNTIES:

	Rates	Fringes
Underground Utility Worker /Landscape Fitter	$ 26.85	15.05

PLUM0393-001 07/01/2017

SAN BENITO AND SANTA CLARA COUNTIES

	Rates	Fringes
PLUMBER/PIPEFITTER	$ 60.91	39.58

PLUM0442-001 01/01/2017

CALAVERAS, MARIPOSA, MERCED, SAN JOAQUIN, STANISLAUS & TUOLUMNE COUNTIES

	Rates	Fringes
PLUMBER & STEAMFITTER	$ 40.00	28.39

PLUM0467-001 07/01/2017

SAN MATEO COUNTY

	Rates	Fringes
Plumber/Pipefitter/Steamfitter	$ 62.70	34.21

ROOF0027-002 01/01/2017

FRESNO, KINGS, AND MADERA COUNTIES

	Rates	Fringes
ROOFER	$ 26.01	14.21

FOOTNOTE: Work with pitch, pitch base of pitch impregnated products or any material containing coal tar pitch, on any building old or new, where both asphalt and pitchers are used in the application of a built-up roof or tear off:

$2.00 per hour additional.

ROOF0040-002 08/01/2017

SAN FRANCISCO & SAN MATEO COUNTIES:

	Rates	Fringes
ROOFER	$ 37.88	18.22

ROOF0081-001 08/01/2017

ALAMEDA AND CONTRA COSTA COUNTIES:

	Rates	Fringes
Roofer	$ 38.20	16.81

ROOF0081-004 08/01/2017

CALAVERAS, MARIPOSA, MERCED, SAN JOAQUIN, STANISLAUS AND TUOLUMNE COUNTIES:

	Rates	Fringes
ROOFER	$ 38.20	16.81

ROOF0095-002 08/01/2017

MONTEREY, SAN BENITO, SANTA CLARA, AND SANTA CRUZ COUNTIES:

	Rates	Fringes
ROOFER		
Journeyman	$ 41.56	17.47
Kettle person (2 kettles); Bitumastic, Enameler, Coal Tar, Pitch and Mastic worker	$ 42.36	16.42

SFCA0483-001 07/31/2017

ALAMEDA, CONTRA COSTA, SAN FRANCISCO, SAN MATEO AND SANTA CLARA COUNTIES:

	Rates	Fringes
SPRINKLER FITTER (FIRE)	$ 61.92	28.57

SFCA0669-011 04/01/2017

CALAVERAS, FRESNO, KINGS, MADERA, MARIPOSA, MERCED, MONTEREY, SAN BENITO, SAN JOAQUIN, SANTA CRUZ, STANISLAUS AND TUOLUMNE COUNTIES:

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                                   Rates          Fringes

SPRINKLER FITTER................$ 37.20            15.84
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 SHEE0104-001 01/01/2018

AREA 1: ALAMEDA, CONTRA COSTA, SAN FRANCISCO, SAN MATEO, SANTA
CLARA

AREA 2: MONTEREY & SAN BENITO

AREA 3: SANTA CRUZ


                                   Rates          Fringes

SHEET METAL WORKER
     AREA 1:
      Mechanical Contracts
      under $200,000.............$ 50.29            37.16
      All Other Work.............$ 57.09            37.79
     AREA 2......................$ 46.97            32.08
     AREA 3......................$ 49.31            29.61
----------------------------------------------------------------
 SHEE0104-003 07/01/2017

CALAVERAS AND SAN JOAQUIN COUNTIES:

                                   Rates          Fringes

SHEET METAL WORKER..............$ 39.74            31.50
----------------------------------------------------------------
 SHEE0104-005 07/01/2017

MARIPOSA, MERCED, STANISLAUS AND TUOLUMNE COUNTIES:

                                   Rates          Fringes

SHEET METAL WORKER (Excluding
metal deck and siding)..........$ 37.67            34.10
----------------------------------------------------------------
 SHEE0104-007 07/01/2017

FRESNO, KINGS, AND MADERA COUNTIES:

                                   Rates          Fringes

SHEET METAL WORKER..............$ 37.49            34.45
----------------------------------------------------------------
 SHEE0104-015 07/01/2017

ALAMEDA, CONTRA COSTA, MONTEREY, SAN BENITO, SAN FRANCISCO, SAN
MATEO, SANTA CLARA AND SANTA CRUZ COUNTIES:
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	Rates	Fringes
SHEET METAL WORKER (Metal Decking and Siding only)	$ 37.53	32.10

SHEE0104-018 07/01/2017

CALAVERAS, FRESNO, KINGS, MADERA, MARIPOSA, MERCED, SAN JOAQUIN, STANISLAUS AND TUOLUMNE COUNTIES:

	Rates	Fringes
Sheet metal worker (Metal decking and siding only)	$ 37.53	32.10

TEAM0094-001 07/01/2017

	Rates	Fringes
Truck drivers:		
GROUP 1	$ 30.72	27.47
GROUP 2	$ 31.02	27.47
GROUP 3	$ 31.32	27.47
GROUP 4	$ 31.67	27.47
GROUP 5	$ 32.02	27.47

FOOTNOTES:

Articulated dump truck; Bulk cement spreader (with or without auger); Dumpcrete truck; Skid truck (debris box); Dry pre-batch concrete mix trucks; Dumpster or similar type; Slurry truck: Use dump truck yardage rate.

Heater planer; Asphalt burner; Scarifier burner; Industrial lift truck (mechanical tailgate); Utility and clean-up truck: Use appropriate rate for the power unit or the equipment utilized.

TRUCK DRIVER CLASSIFICATIONS

GROUP 1: Dump trucks, under 6 yds.; Single unit flat rack (2-axle unit); Nipper truck (when flat rack truck is used appropriate flat rack shall apply); Concrete pump truck (when flat rack truck is used appropriate flat rack shall apply); Concrete pump machine; Fork lift and lift jitneys; Fuel and/or grease truck driver or fuel person; Snow buggy; Steam cleaning; Bus or personhaul driver; Escort or pilot car driver; Pickup truck; Teamster oiler/greaser and/or serviceperson; Hook tender (including loading and unloading); Team driver; Tool room attendant (refineries)

GROUP 2: Dump trucks, 6 yds. and under 8 yds.; Transit mixers, through 10 yds.; Water trucks, under 7,000 gals.; Jetting trucks, under 7,000 gals.; Single-unit flat rack (3-axle unit); Highbed heavy duty transport; Scissor truck; Rubber-tired muck car (not self-loaded); Rubber-tired truck jumbo; Winch truck and "A" frame drivers; Combination winch

truck with hoist; Road oil truck or bootperson; Buggymobile; Ross, Hyster and similar straddle carriers; Small rubber-tired tractor

GROUP 3: Dump trucks, 8 yds. and including 24 yds.; Transit mixers, over 10 yds.; Water trucks, 7,000 gals. and over; Jetting trucks, 7,000 gals. and over; Vacuum trucks under 7500 gals. Trucks towing tilt bed or flat bed pull trailers; Lowbed heavy duty transport; Heavy duty transport tiller person; Self- propelled street sweeper with self-contained refuse bin; Boom truck - hydro-lift or Swedish type extension or retracting crane; P.B. or similar type self-loading truck; Tire repairperson; Combination bootperson and road oiler; Dry distribution truck (A bootperson when employed on such equipment, shall receive the rate specified for the classification of road oil trucks or bootperson); Ammonia nitrate distributor, driver and mixer; Snow Go and/or plow

GROUP 4: Dump trucks, over 25 yds. and under 65 yds.; Water pulls - DW 10's, 20's, 21's and other similar equipment when pulling Aqua/pak or water tank trailers; Helicopter pilots (when transporting men and materials); Lowbedk Heavy Duty Transport up to including 7 axles; DW10's, 20's, 21's and other similar Cat type, Terra Cobra, LeTourneau Pulls, Tournorocker, Euclid and similar type equipment when pulling fuel and/or grease tank trailers or other miscellaneous trailers; Vacuum Trucks 7500 gals and over and truck repairman

GROUP 5: Dump trucks, 65 yds. and over; Holland hauler; Low bed Heavy Duty Transport over 7 axles

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

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

PART E –
SPECIAL PROVISION

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CITY OF SALINAS
PUBLIC WORKS DEPARTMENT

RUNWAY 13-31 AND RUNWAY 8-26 REHABILITATION
AIP No. 3-06-0206-27
CITY PROJECT NO. 9275

SECTION 1
SPECIFICATIONS AND PLANS

All work to be done under this Contract shall conform to the applicable requirements of the Technical Specifications, Cited Standards for Materials and Testing, Cited FAA Advisory Circulars, the General Provisions, and the City of Salinas, Public Works Department, Design Standards and Standard Specifications 2008, herein referred to as the Standard Specifications.

In the event of conflict between the Standard Specifications and these Special Provisions, the latter shall take precedence over and be used in lieu of such conflicting portions. The listing of certain salient sections from the Standard Specifications and these Special Provisions shall not in any way relieve the Contractor of complying with each and every section of the Standard Specifications.

This project is funded by the Federal Aviation Administration (FAA) and FAA General Provisions and Technical Specifications are included as part of the contract documents. The following is the order of precedence of the Contract Documents:

1. Technical Specifications, including Civil and Electrical.
2. Cited Standards for Materials and Testing.
3. Cited FAA Advisory Circulars.
4. General Provisions.
5. The Special Provisions.
6. The Plans.
7. The City of Salinas, Public Works Department, Design Standards and Standard Specifications, 2008.
8. The City of Salinas, Public Works Department, Standard Plans, 2008.

Wherever in the Special Provisions, Notice to Contractors, Proposal, Contract or other Contract documents the following terms are used, the intent and meaning shall be interpreted as follows:

State - City of Salinas

Department of Transportation - City of Salinas

Director - City of Salinas

Division of Highways - City of Salinas

Engineer - City Engineer

Local Public Agency - City of Salinas

Owner - City of Salinas

SECTION 2
PROPOSAL REQUIREMENTS AND CONDITIONS

2-1.01 GENERAL

The Bidder's attention is directed to the provisions in Section 2, "Proposal Requirements and Conditions", of the Standard Specifications and these Special Provisions for the requirements and conditions which he/she must observe in the preparations of the Proposal form and the submission of the bid. The City reserves the right to award or withhold award of the project.

In addition to the Subcontractors required to be listed in conformance with the Provisions in Section 2-1.054, "Required Listing of Proposed Subcontractors", of the City of Salinas Standard Specifications, each Proposal shall have listed therein the portion of work that shall be done by each Subcontractor listed. A sheet for listing the Subcontractors is included in the Proposal.

The form of Bidder's Bond mentioned in the last paragraph within the Provisions in Section 2 1.07, "Proposal Guaranty", of the City of Salinas Standard Specifications shall be found following the signature page of the Proposal.

In conformance with Public Contract Code Section 7106, a Noncollusion Declaration is included in Part A of the Contract Documents. Signing the Proposal shall also constitute signature of the Noncollusion Declaration.

The Contractor, sub recipient or Subcontractor shall not discriminate on the basis of a person's political or religious affiliation or belief, non-affiliation or non-belief, race, color, age, sex, sexual orientation, disability, marital, military status (past or present), and national origin in the performance of this Contract. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT assisted Contracts. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as the recipient deems appropriate. Each Subcontract signed by the Bidder shall include this assurance.

2-1.02 FEDERAL LOBBYING RESTRICTIONS (USE THIS SECTION FOR ALL PROJECTS)

Per the Provisions in Section 1352, Title 31, United States Code prohibits Federal funds from being expended by the recipient or any lower tier sub recipient of a Federal-Aid Contract to pay for any person for influencing or attempting to influence a Federal agency or Congress in connection with the awarding of any Federal-Aid Contract, the making of any Federal grant or loan, or the entering into of any cooperative agreement.

If any funds other than Federal funds have been paid for the same purposes in connection with this Federal-Aid Contract, the recipient shall submit an executed certification and, if required, submit a completed disclosure form as part of the Bid documents.

A certification for Federal-Aid Contracts regarding payment of funds to lobby Congress or a Federal agency is included in the Proposal. Standard Form - LLL, "Disclosure of Lobbying Activities", with instructions for completion of the Standard Form is also included in the Proposal. Signing the Proposal shall constitute signature of the Certification.

The above referenced certification and disclosure of lobbying activities shall be included in each Subcontract and any lower-tier Contracts exceeding $100,000. All disclosure forms, but not certifications, shall be forwarded from tier to tier until received by the City Engineer.

The Contractor, Subcontractors, and any lower-tier Contractors shall file a disclosure form at the end of each calendar quarter in which there occurs any event that requires disclosure or that materially affects the accuracy of the information contained in any disclosure form previously filed by the Contractor, Subcontractors and any lower-tier Contractors. An event that materially affects the accuracy of the information reported includes:

(1) A cumulative increase if $25,000 or more in the amount paid or expected to be paid for influencing or attempting to influence a covered Federal Action; or

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

(3) A change in the officer(s), employees(s), or member(s) contacted to influence or attempt to influence a covered Federal Action.

2-1.03 SUBCONTRACTING AND DISADVANTAGED BUSINESS ENTERPRISE (DBE)

This project is subject to the Provisions in Part 26, Title 49, Code of Federal Regulations entitled "Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs". The Regulations in their entirety are incorporated herein by this reference.

The Contractor, sub recipient or Subcontractor shall not discriminate on the basis of a person's political or religious affiliation or belief, non-affiliation or non-belief, race, color, age, sex, sexual orientation, and national origin in the performance of this Contract. The Contractor shall carry out applicable requirements of the Provisions in 49 CFR Part 26 in the award and administration of DOT assisted Contracts. Failure by the Contractor to carry out these requirements is a material breach of this Contract, which may result in the termination of this Contract or such other remedy as the recipient deems appropriate. Each Subcontract signed by the Bidder shall include this assurance.

Bidders shall be fully informed respecting the requirements of the Regulations and the Department's Disadvantaged Business Enterprise (DBE) program developed pursuant to the Regulations; particular attention is directed to the following matters:

A. A DBE shall be a small business concern as defined pursuant to the Provisions in Section 3 of U.S. Small Business Act and relevant regulations promulgated pursuant thereto;

B. A DBE may participate as a prime Contractor, Subcontractor, joint venture partner with a prime or Subcontractor, vendor of material or supplies, or as a trucking company;

C. A DBE Bidder, not Bidding as a joint venture with a non-DBE, shall be required to document one or a combination of the following:

   1. The Bidder shall meet the goal by performing work with its own forces;

   2. The Bidder shall meet the goal through work performed by DBE Subcontractors, suppliers or trucking companies;

   3. The Bidder, prior to Bidding, made adequate Good Faith Effort for Local Hire to meet the goal.

D. A DBE joint venture partner shall be responsible for specific Contract items of work, or portions thereof. Responsibility means actually performing, managing, and supervising the work with its own forces. The DBE joint venture partner shall share in the capital contribution, control, management, risks, and profits of the joint venture. The DBE joint venturer shall submit the joint venture agreement with the Proposal or the DBE Information form required in the Section entitled "Submission of DBE Information" of these Special Provisions;

E. A DBE shall perform a commercially useful function, i.e., shall be responsible for the execution of a distinct element of the work and shall carry out its responsibility by actually performing, managing, and supervising the work;

F. DBE's shall be certified by either the California Department of Transportation, or by a participating agency which certifies in conformance with the Provisions in Title 49, Code of Federal Regulations, Part 26, as of the date of Bid opening. It is the Contractor's responsibility to verify that DBE's are certified. Listings of certified DBE's are available from the following sources:

1. The Department's DBE Directory, which is published quarterly. This Directory may be obtained from the Department of Transportation, Materiel Operations Branch, Publication Distribution Unit, 1900 Royal Oaks Drive, Sacramento, California 95815, Telephone: (916) 445-3520;

2. The Department's Electronic Information Bulletin Board Service, which is accessible by modem and is updated weekly. The Bulletin Board may be accessed by first contacting the Department's Business Enterprise Program at Telephone: (916) 227-8937 and obtaining a user identification and password;

3. The Department's web site at http://www.dot.ca.gov/hq/bep/index.htm;

G. Credit for materials or supplies purchased from DBE's shall be as follows:

1. If the materials or supplies are obtained from a DBE manufacturer, 100% of the cost of the materials or supplies shall count toward the DBE goal. A DBE manufacturer is a firm that operates or maintains a factory or establishment that produces, on the premises, the materials, supplies, articles, or equipment required under the Contract and of the general character described by the Specifications;

2. If the materials or supplies are purchased from a DBE regular dealer, 60% of the cost of the materials or supplies shall count toward the DBE goal. A DBE regular dealer is a firm that owns, operates, or maintains a store, warehouse, or other establishment in which the materials, supplies, articles or equipment of the general character described by the Specifications and required under the Contract are bought, kept in stock, and regularly sold or leased to the public in the usual course of business. To be a DBE regular dealer, the firm shall be an established, regular business that engages, as its principal business and under its own name, in the purchase and sale or lease of the products in question. A person may be a DBE regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating, or maintaining a place of business as provided in this paragraph (G.2) if the person both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by a long-term lease agreement and not on an ad hoc or Contract-by-Contract basis. Packagers, brokers, manufacturers' representatives, or other persons who arrange or expedite transactions are not DBE regular dealers within the meaning of this paragraph (G.2);

3. Credit for materials or supplies purchased from a DBE which is neither a manufacturer nor a regular dealer shall be limited to the entire amount of fees or commissions charged for assistance in the procurement of the materials and supplies, or fees or transportation charges for the delivery of materials or supplies required on a job site, provided the fees are reasonable and not excessive as compared with fees charged for similar services.

H. Credit for DBE trucking companies shall be as follows:

1. The DBE shall be responsible for the management and supervision of the entire trucking operation for which it is responsible on a particular Contract, and there cannot be a contrived arrangement for the purpose of meeting the DBE goal;

2. The DBE shall itself own and operate at least 1 fully licensed, insured, and operational truck used on the Contract;

3. The DBE receives credit for the total value of the transportation services it provides on the Contract using trucks its owns, insures, and operates using drivers it employs;

4. The DBE may lease trucks from another DBE firm, including an Engineer-operator who is certified as a DBE. The DBE who leases trucks from another DBE receives credit for the total value of the transportation services the lessee DBE provides on the Contract;

5. The DBE may also lease trucks from a non-DBE firm, including a City Engineer-operator. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement. The DBE does not receive credit for the total value of the transportation services provided by the lessee, since these services are not provided by a DBE;

6. For the purposes of this paragraph H, a lease shall indicate that the DBE has exclusive use of and control over the truck. This does not preclude the leased truck from working for others during the term of the lease with the consent of the DBE, so long as the lease gives the DBE absolute priority for use of the leased truck. Leased trucks shall display the name and identification number of the DBE.

I. Noncompliance by the Contractor with the requirements of the regulations constitutes a breach of this Contract and may result in termination of the Contract or other appropriate remedy for a breach of this Contract;

J. Bidders are encouraged to use services offered by financial institutions owned and controlled by DBE's.

2-1.03A DBE GOAL FOR THIS PROJECT

The City of Salinas has established a goal of 11.35% for Disadvantaged Business Enterprise (DBE) - Race Neutral participation for this project.

2-1.03B SUBMISSION OF DBE INFORMATION

The required DBE information shall be submitted on the "LOCAL AGENCY BIDDER - DBE INFORMATION" form included in the Proposal. If the DBE information is not submitted with the Bid, the DBE Information form shall be removed from the documents prior to submitting the Bid.
It is the Bidder's responsibility to make enough work available to DBE's and to select those portions of the work or material needs consistent with the available DBE's to meet the goal for DBE participation or to provide information to establish that, prior to Bidding, the Bidder made adequate Good Faith Efforts to do so.

If DBE information is not submitted with the Bid, the apparent successful Bidder (low Bidder) or the second low Bidder shall submit DBE information to the City of Salinas of Salinas, Public Works Department, 200 Lincoln Avenue, Salinas, CA, 93901, so the information is received by the City of Salinas no later than 5:00 p.m. on the fifth day, not including Saturdays, Sundays, and legal holidays, following the Bid opening.

DBE information sent by U.S. Postal Service certified mail with return receipt and certificate of mailing and mailed on or before the third day, not including Saturdays, Sundays, and legal holidays, following the Bid opening shall be accepted even if it is received after the fifth day following the Bid opening. Failure to submit the required DBE information by the time specified shall be grounds for finding the Bid or Proposal nonresponsive. Other Bidders need not submit DBE information unless requested to do so by the City of Salinas.

The Bidder's DBE information shall establish that Good Faith Efforts to meet the DBE goal have been made. To establish Good Faith Efforts, the Bidder shall demonstrate that the goal shall be met or that, prior to Bidding, adequate Good Faith Efforts to meet the goal were made.

Bidders are cautioned that even though their submittal indicates they shall meet the stated DBE goal, their submittal should also include their adequate Good Faith Efforts information along with their DBE goal information to protect their eligibility for award of the Contract in the event the City of Salinas, in its review, finds that the goal has not been met.

The Bidder's DBE information shall include the names, addresses, and phone numbers of DBE firms that shall participate, with a complete description of work or supplies to be provided by each, the dollar value of each DBE transaction, and a written confirmation from the DBE that it is participating in the Contract. A copy of the DBE's quote shall serve as written confirmation that the DBE is participating in the Contract. When 100% of a Contract item of work is not to be performed or furnished by a DBE, a description of the exact portion of that work to be performed or furnished by that DBE shall be included in the DBE information, including the planned location of that work. The work that a DBE prime Contractor has committed to performing with its own forces as well as the work that it has committed to be performed by DBE Subcontractors, suppliers, and trucking companies shall count toward the goal.

The information necessary to establish the Bidder's adequate Good Faith Efforts to meet the DBE goal should include:

A. The names and dates of each publication in which a request for DBE participation for this project was placed by the Bidder;

B. The names and dates of written notices sent to certified DBEs soliciting Bids for this project and the dates and methods used for following up initial solicitations to determine with certainty whether the DBE's were interested;

C. The items of work which the Bidder made available to DBE firms, including, where appropriate, any breaking down of the Contract work items (including those items normally performed by the Bidder with its own forces) into economically feasible units to facilitate DBE participation. It is the Bidder's responsibility to demonstrate that sufficient work to meet the DBE goal was made available to DBE firms;

D. The names, addresses, and phone numbers of rejected DBE firms, the firms selected for that work, and the reasons for the Bidder's choice;

E. Efforts made to assist interested DBE's in obtaining bonding, lines of credit or insurance, and any technical assistance or information related to the Plans, Specifications, and requirements for the work which was provided to DBE's;

F. Efforts made to assist interested DBE's in obtaining necessary equipment, supplies, materials, or related assistance or services, excluding supplies and equipment the DBE Subcontractor purchases or leases from the prime Contractor or its affiliate;

G. The names of agencies contacted to provide assistance in contacting, recruiting and using DBE firms;

H. Any additional data to support a demonstration of Good Faith Efforts.

The award of the Contract, if it be awarded, shall be to the lowest responsible Bidder whose Proposal complies with all the requirements prescribed and who has met the goal for DBE participation or has demonstrated, to the satisfaction of the City Engineer, adequate Good Faith Efforts to do so. Meeting the goal for DBE participation or demonstrating to the satisfaction of the City Engineer, adequate Good Faith Efforts to do so is a condition for being eligible for award of Contract.

2-1.03C SUBCONTRACTOR AND DBE RECORDS

The Contractor shall maintain records showing the name and business address of each first-tier Subcontractor. The records shall also show the name and business address of every DBE Subcontractor, DBE vendor of materials, and DBE trucking company, regardless of tier. The records shall show the date of payment and the total dollar figure paid to all of these firms. DBE prime Contractors shall also show the date of work performed by their own forces along with the corresponding dollar value of the work.

Upon completion of the Contract, a summary of these records shall be prepared on Form CEM-2402 (F) and certified correct by the Contractor or the Contractor's authorized representative, and shall be furnished to the City Engineer. The form shall be furnished to the City Engineer within **90 days** from the date of Contract acceptance and $10,000 shall be withheld from payment until the Form CEM-2402 (F) is submitted. The amount shall be returned to the Contractor when a satisfactory Form CEM-2402 (F) is submitted.

Prior to the fifteenth of each month, the Contractor shall submit documentation to the City Engineer showing the amount paid to DBE trucking companies listed in the Contractor's DBE information. This monthly documentation shall indicate the portion of the revenue paid to DBE trucking companies which is claimed toward DBE participation. The Contractor shall also obtain and submit documentation to the City Engineer showing the amount paid by DBE trucking companies to all firms, including City Engineer-operators, for the leasing of trucks. The DBE who leases trucks from a non-DBE is entitled to credit only for the fee or commission it receives as a result of the lease arrangement. The records shall confirm that the amount of credit claimed toward DBE participation conforms with the Provisions in Section 2-1.02.

The Contractor shall also obtain and submit documentation to the City Engineer showing the truck number, City Engineer's name, California Highway Patrol CA number, and if applicable, the DBE certification number of the City Engineer of the truck for all trucks used during that month for which DBE participation shall be claimed. This documentation shall be submitted on Form CEM-2404 (F).

2-1.03D DBE CERTIFICATION STATUS

If a DBE Subcontractor is decertified during the life of the project, the decertified Subcontractor shall notify the Contractor in writing with the date of decertification. If a Subcontractor becomes a certified DBE during the life of the project, the Subcontractor shall notify the Contractor in writing with the date of certification. The Contractor shall furnish the written documentation to the City Engineer.

Upon completion of the Contract, Form CEM-2403 (F) indicating the DBE's existing certification status shall be signed and certified correct by the Contractor. The certified form shall be furnished to the City Engineer within **90 days** from the date of Contract acceptance.

2-1.03E PERFORMANCE OF DBE SUBCONTRACTORS AND SUPPLIERS

The DBE's listed by the Contractor in response to the Provisions of these Special Provisions, which are determined by the City of Salinas to be certified DBE's, shall perform the work and supply the materials for which they are listed, unless the Contractor has received prior written authorization to perform the work with other forces or to obtain the materials from other sources.

Authorization to use other forces or sources of materials may be requested for the following reasons:

A. The listed DBE, after having had a reasonable opportunity to do so, fails or refuses to execute a written Contract, when such written Contract, based upon the general terms, conditions, Plans and Specifications for the project, or on the terms of such Subcontractor's or supplier's written Bid, is presented by the Contractor;

B. The listed DBE becomes bankrupt or insolvent;

C. The listed DBE fails or refuses to perform the Subcontract or furnish the listed materials;

D. The Contractor stipulated that a bond was a condition of executing a Subcontract and the listed DBE Subcontractor fails or refuses to meet the bond requirements of the Contractor;

E. The work performed by the listed Subcontractor is substantially unsatisfactory and is not in substantial conformance with the Plans and Specifications, or the Subcontractor is substantially delaying or disrupting the progress of the work;

F. It would be in the best interest of the City of Salinas.

The Contractor shall not be entitled to any payment for such work or material unless it is performed or supplied by the listed DBE or by other forces (including those of the Contractor) pursuant to prior written authorization of the City Engineer.

(This form is for informational purposes only. Contractor shall complete form on-line and submit signed copy to the City Engineer.)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

FINAL REPORT - UTILIZATION OF DISADVANTAGED BUSINESS ENTERPRISES FIRST-TIER SUBCONTRACTORS

CEM-2402F (REV. 7/2012)

Lock Data on Form

ADA Notice

For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

CONTRACT NUMBER	COUNTY	ROUTE	POST MILES	FEDERAL AID PROJECT NUMBER	ADMINISTERING AGENCY	CONTRACT COMPLETION DATE

PRIME CONTRACTOR	BUSINESS ADDRESS	ESTIMATED CONTRACT AMOUNT
		$

ITEM NO.	DESCRIPTION OF WORK PERFORMED AND MATERIALS PROVIDED	COMPANY NAME AND BUSINESS ADDRESS	DBE CERT. NUMBER	CONTRACT PAYMENTS NON-DBE	CONTRACT PAYMENTS DBE	CONTRACT PAYMENTS UDBE	DATE WORK COMPLETE	DATE OF FINAL PAYMENT
				$	$	$		
				$	$	$		
				$	$	$		
				$	$	$		
				$	$	$		
				$	$	$		
				$	$	$		
				$	$	$		
				$	$	$		
				$	$	$		
			TOTAL	$	$	$		

ORIGINAL COMMITMENT

$ _____

DBE/UDBE

List all First Tier Subcontractors, Disadvantaged Business Enterprises (DBEs) and underutilized DBEs (UDBEs) regardless of tier, whether or not the firms were originally listed for goal credit. If actual UDBE utilization (or item of work) was different than that approved at the time of award, provide comments on the following page after the instructions. List actual amount paid to each entity.

I CERTIFY THAT THE ABOVE INFORMATION IS COMPLETE AND CORRECT

CONTRACTOR REPRESENTATIVE'S SIGNATURE	BUSINESS PHONE NUMBER	DATE

I CERTIFY THAT THE CONTRACTING RECORDS AND ON-SITE PERFORMANCE OF THE DBE(S) HAS BEEN MONITORED

RESIDENT ENGINEER'S SIGNATURE	BUSINESS PHONE NUMBER	DATE

COPY DISTRIBUTION - Caltrans contracts: **Original** - District Construction; **Copy** - Contractor; **Copy** - Resident Engineer; **Copy** - OBEO - email smallbusinessadvocate@dot.ca.gov or FAX to (916) 324-1949

COPY DISTRIBUTION - Local Agency contracts: **Original** - Local Agency Resident Engineer (submitted with the Report of Expenditures); **Copy** - District Local Assistance Engineer; **Copy** - Local Agency file

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

DISADVANTAGED BUSINESS ENTERPRISES (DBE) CERTIFICATION STATUS CHANGE

CEM-2403F (REV 7/2012)

ADA Notice

For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

Lock Data on Form

CONTRACT NUMBER	COUNTY	ROUTE	POST MILES	ADMINISTERING AGENCY	CONTRACT COMPLETION DATE

PRIME CONTRACTOR	BUSINESS ADDRESS	ESTIMATED CONTRACT AMOUNT
		$

The Contractor: List all DBE's with change in certification status (certified/decertified) while in your employ, whether or not firms were originally listed for goal credit. Attach DBE certification/decertification letter in accordance with the Special Provisions.

CONTRACT ITEM NO.	FIRM NAME AND BUSINESS ADDRESS	BUSINESS PHONE	CERTIFICATION NUMBER	AMOUNT PAID WHILE CERTIFIED	CERTIFICATION/ DECERTIFICATION DATE Letter attached
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐
					☐

COMMENTS:

I CERTIFY THAT THE ABOVE INFORMATION IS COMPLETE AND CORRECT

CONTRACTOR REPRESENTATIVE'S SIGNATURE	TITLE	BUSINESS PHONE NUMBER	DATE

TO THE BEST OF MY KNOWLEDGE, THE ABOVE INFORMATION IS COMPLETE AND CORRECT

RESIDENT ENGINEERING'S SIGNATURE	BUSINESS PHONE NUMBER	DATE

COPY DISTRIBUTION: **Original - OBEO - email smallbusinessadvocate@dot.ca.gov or FAX to (916) 324-1949** **Copy - Contractor** **Copy - District Construction** **Copy - Resident Engineer**

(This form is for informational purposes only. Contractor shall complete form on-line and submit signed copy to the City Engineer.)

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

MONTHLY DBE/UDBE TRUCKING VERIFICATION

CEM-2404F (REV 7/2012)

Lock Data on Form

CONTRACT NO.	MONTH	YEAR

Trucking Company or Owner Operator	DBE Cert. No. (if certified)	Company Name and Address Telephone Number	Truck No.	CA No.	Amount paid to DBE and UDBE Truckers	Amount paid to DBE and UDBE for lease arrangement with non-DBE and UDBE	Date Paid	Transportation Arrangement (√ all that apply)
					$	$		☐ Lease ☐ Non-DBE ☐ DBE ☐ UDBE
					$	$		☐ Lease ☐ Non-DBE ☐ DBE ☐ UDBE
					$	$		☐ Lease ☐ Non-DBE ☐ DBE ☐ UDBE
					$	$		☐ Lease ☐ Non-DBE ☐ DBE ☐ UDBE
					$	$		☐ Lease ☐ Non-DBE ☐ DBE ☐ UDBE
					$	$		☐ Lease ☐ Non-DBE ☐ DBE ☐ UDBE
					$	$		☐ Lease ☐ Non-DBE ☐ DBE ☐ UDBE
					$	$		☐ Lease ☐ Non-DBE ☐ DBE ☐ UDBE
					$	$		☐ Lease ☐ Non-DBE ☐ DBE ☐ UDBE
				TOTAL AMOUNT PAID	$ 0.00	$ 0.00		

PRIME CONTRACTOR	BUSINESS ADDRESS	BUSINESS PHONE NUMBER

** Upon request all lease agreements must be made available, in accordance with the special provisions.*

I CERTIFY THAT THE ABOVE INFORMATION IS COMPLETE AND CORRECT

CONTRACTOR REPRESENTATIVE'S SIGNATURE	TITLE	DATE

COPY DISTRIBUTION: ORIGINAL - RESIDENT ENGINEER COPY - OBEO - smallbusinessadvocate@dot.ca.gov or FAX to (916) 324-1949

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

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2-1.03F SUBCONTRACTING

Pursuant to the Provisions in Section 1777.1 of the Labor Code, the Labor Commissioner publishes and distributes a list of Contractors ineligible to perform work as a Subcontractor on a Public Works project. This list of debarred Contractors is available from the Department of Industrial Relations web site at http://www.dir.ca.gov/dir/DLSE/Debar.html.

The Provisions in the third paragraph of Section 8-1.01, "Subcontracting", of the State Standard Specifications, that the Contractor shall perform with the Contractor's own organization Contract work amounting to not less than 50% of the original Contract price, is not changed by the Federal-Aid requirement specified under "Required Contract Provisions Federal-Aid Construction Contracts" of these Special Provisions that the Contractor perform not less than 30% of the original Contract work with the Contractor's own organization.

Each Subcontract and any lower tier Subcontract that may in turn be made shall include the "Required Contract Provisions Federal-Aid Construction Contracts" of these Special Provisions.

This requirement shall be enforced as follows:

Noncompliance shall be corrected. Payment for Subcontracted work involved shall be withheld from progress payments due, or to become due, until correction is made. Failure to comply may result in termination of the Contract.

2-1.04 EXAMINATION OF PLANS, SPECIFICATIONS, CONTRACT AND SITE OF WORK

The Bidder shall examine carefully the site of work contemplated, the Plans and Specifications, and the Proposal and Contract Forms therefore. The submission of a bid shall be conclusive evidence that the bidder has investigated and is satisfied as to the conditions to be encountered, as to the character, quality, and scope of work to be performed, the quantities of materials to be furnished and as to the requirements of the Proposal, Plans, Specifications and the Contract.

All questions about the meaning or intent of the Contract Documents shall be submitted to the City Engineer in writing. Replies will be issued by Addenda mailed or delivered to all parties recorded by City Engineer as having received the bidding documents. **Questions received less than *8 calendar days* prior to the date of the opening of bids will not be answered.** Only questions answered by formal written Addenda will be binding. Oral and other interpretations or clarifications will be without legal effect.

Bidder is cautioned to make such independent investigation and examination as he/she deems necessary to satisfy himself/herself as to conditions to be encountered in the performance of the work and with respect to possible local material sources, the quality and quantity of material available from such property, and the type and extent of processing that may be required in order to produce material conforming to the requirements of these Special Provisions.

Where the City has made investigations of subsurface conditions in areas where work is to be performed under the Contract, or in other areas, some of which may constitute possible local material sources, bidders or Contractors may, upon written request, inspect the records of the City as to such investigations subject to and upon the conditions hereinafter set forth. Such inspection of records may be made at the office of the City Engineer, Public Works Department, City of Salinas.

The records of such investigations are not a part of the Contract and are shown solely for the convenience of the bidder or Contractor. It is expressly understood and agreed that the City assumes no responsibility whatsoever in respect to the sufficiency or accuracy of the investigations thus made, the records thereof, or of the interpretations set forth therein or made by the City in its use thereof and there is no warranty or

guaranty, either expressed or implied, that the conditions indicated by such investigations or records thereof are representative of those existing throughout such areas, or any part thereof, or that unlocked-for developments may not occur, that materials other than, or in proportions different from those indicated may not be encountered. Cross sections and soils investigation report if performed are available at the Development & Engineering Services counter for review.

When a log of test borings or other record of geotechnical data obtained by the City's investigation of subsurface conditions is included with the Contract Plans, it is expressly understood and agreed that said record does not constitute a part of the Contract, represents only the opinion of the City as to the character of the materials or the conditions encountered by it in its investigations, is included in the Plans only for the convenience of bidders and its use is subject to all of the conditions and limitations set forth in this section.

In some instances, the information from such subsurface investigations considered by the City to be of possible interest to bidders or Contractors has been compiled as "Materials Information" is not a part of the Contract and is furnished solely for the convenience of bidders and Contractors. It is understood and agreed that the fact that the City has compiled the information from such investigations as "Materials Information" and has exhibited or furnished to the bidders or Contractors such "Materials Information" shall not be construed as a warranty or guaranty, express or implied as to the completeness or accuracy of such compilations and the use of such "Materials Information" shall be subject to all of the conditions and limitations set forth in this Section 2-1.01 and Section 6-2 "Local Materials", of the Standard Specifications.

When contour maps were used in the design of the project, the bidders may inspect such maps, and if available may obtain copies for their use, ***at their expense***.

The availability or use of information described within the Provisions in Section 2-1.01 is not to be construed in any way as a waiver of the Provisions of the first paragraph of the State Standard Specification in Section 2-1.01 of these Special Provisions and the Bidder is cautioned to make such independent investigation and examination as he/she deems necessary to satisfy himself/herself as to conditions to be encountered in the performance of the work and with respect to possible local material sources, the quality and quantity of material available from such property and the type and extent of processing that may be required in order to produce material conforming to the requirements of these Special Provisions.

No information derived from inspection of records of investigation or compilation thereof made by the City of Salinas or from the City Engineer, or his/her assistants, shall in any way relieve the Bidder or Contractor from any risk or from properly fulfilling the terms of the Contract.

2-1.05 BID PROTEST FEE

Bid protests are limited to “Bidders” as defined in the Contract Documents. Any Bid protest must be submitted in writing to The City Clerk before 5 o’clock p.m. (as determined by the clock in the City Clerk’s Office) within 3 working days after Bid opening.

(a) Any protest of the proposed award of bid to the bidder deemed the lowest responsible bidder must be submitted in writing to the City no later than 5:00 P.M. within 3 working days following the date of the bid opening. If a bidder protests more than one bid, the bidder shall file a separate protest as to each bid being protested, complying with this section.

(b) The initial protest document must contain a complete statement of the basis for the protest. The protest must refer to the specific portion of the document or the specific statute that forms the basis for the protest. The protest must include the name, address and telephone number of the person representing the protesting party. The protest must be signed and submitted under penalty of perjury.

(c) The party filing the protest must concurrently transmit a copy of the initial protest document and any attached documentation to the bidder whose bid is being protested, as well as to all other parties with a direct financial interest that may be adversely affected by the outcome of the protest. Such parties shall include all other Bidders who appear to have a reasonable prospect of receiving an award depending upon the outcome of the protest. Faxed or emailed copies are acceptable, with confirmation of receipt by the bidder or person to whom it was sent.

(d) The protestor must have actually submitted a bid on the Project or have been specifically excluded from submitting a bid due to an action by the City. A subcontractor of a party submitting a bid on this Project may not submit a bid protest. A party may not rely on the bid protest submitted by another bidder, but must timely pursue its own protest.

(e) The City Council shall hear the bid protest prior to adopting a resolution authorizing the bid award and execution of the contract. In cases where the contract is not executed by the City pursuant to City Council Resolution, the bid protest shall be heard by the City Council prior to the time the City issues a notice to proceed or the appropriate City official executes the contract on behalf of the City. The decision of the Council shall be final.

(f) The protestor shall also submit a non-refundable fee of $1,000.00 per protest via certified check made payable to the City of Salinas to reimburse its costs in reviewing and investigating the bid protest. Any protest submitted without the fee shall be returned without further action by the City.

(g) Any protest not complying with this section shall be returned without further action by the City.

(h) The procedure and time limits set forth in this paragraph are mandatory and are Bidder's sole and exclusive remedy in the event of bid protest. Bidder's failure to comply with these procedures shall constitute a waiver of any right to further pursue the bid protest, including filing a Government Code Claim or any legal proceedings.

2-1.06 DEWATERING

In the event that dewatering of construction site becomes necessary, the Contractor's attention is directed to the provisions in Section 2-1.03, "Examination of Plans, Specifications Contract and Site of Work" of the Standard Specifications and these Special Provisions.

In trench excavation, appropriate dewatering techniques may be utilized if necessary to lower the ground water levels and to stabilize excavation. Methods used shall be such that there is no danger of pumping soil from excavation., or adjacent areas, during dewatering. The water level shall be lowered at least to an elevation one (1) foot below bottom of the pipe invert. This level shall be maintained continuous during construction until after backfilling has been completed up to the original groundwater elevation.

Water pumped during the dewatering operations shall be discharged in accordance with the Clean Water Act (NPDES permit) in a manner such that there is no hazard to the public, the Owner, airport users, aircraft operations, and a minimum of traffic interference.

The dewatering methods used shall be the responsibility of the Contractor, but subject to approval of the City Engineer.

Payment for dewatering, if required, shall be borne by the Contractor and no additional compensation shall be allowed therefore.

SECTION 3
AWARD AND EXECUTION OF CONTRACT

The Contractor's attention is directed to the Provisions in Section 3, "Award and Execution of Contract", of the City of Salinas Standard Specifications and Section 2 the "Proposal Requirements and Conditions", of these Special Provisions for the requirements and conditions concerning award and execution of the Contract.

The award of the Contract, if it be awarded, shall be to the lowest responsible Bidder whose Proposal complies with all the requirements prescribed and who has met the goal for DBE participation or has demonstrated, to the satisfaction of the City of Salinas, adequate good faith efforts to do so. Meeting the goal for DBE participation or demonstrating to the satisfaction of the City of Salinas, adequate good faith efforts to do so is a condition for being eligible for award of Contract.

Certificates of Insurance shall be furnished by the Contractor and shall be returned with the signed Contract and Contract bonds within ***15 calendar days*** after receipt. The Notice to Proceed with the work **shall not** be issued by the City Clerk's office until all such documents are submitted.

The Contractor shall have ***15 calendar days*** immediately following award of Contract (not notice to proceed) to furnish materials submittals.

In determining the lowest "responsible" Bidder, consideration shall be given to the general competency of Contractor in regards to the work covered by the Proposal. To this end each Proposal shall be supported by the "Bidder's Statement of Financial Responsibility, Technical Ability, and Experience" on the form(s) found herein. Failure of the Bidder to provide requested information in a complete and accurate manner shall be considered non-responsive resulting in rejection of the Bid. Additionally, the City of Salinas reserves the right to disqualify or refuse to consider a Proposal if a Bidder is in default for any of the following reasons:

a) Lack of competency and adequate machinery, plant and other equipment, as revealed by the documents requested;

b) Uncompleted work, which in the judgment of the City Engineer, might hinder or prevent the prompt completion of additional work if awarded;

c) Failure to comply with any regulation of the City of Salinas; and

d) Default under previous Contracts.

If awarded, this Contract shall be awarded to the responsible Bidder submitting the lowest Bid who meets the financial, technical, and City of Salinas requirements. The City of Salinas reserves the right to withhold award of Bid for ***120 calendar days*** from the Bid opening date.

SECTION 4
BEGINNING OF WORK, TIME OF COMPLETION, LIQUIDATED DAMAGES AND TEMPORARY SUSPENSION OF WORK

The Contractor's attention is directed to the Provisions of Section 8, "Prosecution and Progress", Section 8-1.03, "Beginning of Work", Section 8-1.06, "Time Completion", of the City of Salinas Standard Specifications and also Section 8-1.07, "Liquidated Damages", of the State Standard Specifications and the following Provisions:

The Contractor shall so plan the work and to prosecute it with such diligence that said work shall be commenced within ***15 calendar days*** after execution of the Contract on behalf of the City Council and the receipt of a notice from the City Engineer to proceed with the work and shall be completed on or before the expiration of: **seventy-five (75) calendar days** for overall project inclusive of all additive alternatives, after date of said notification. The breakdown of the project is as follows:

forty (40) calendar days for the Base Bid,
plus **no additional calendar days** if Additive Alternative No. 1 is awarded,
plus **no additional calendar days** if Additive Alternative No. 2 is awarded,
plus an additional **thirty-five (35) calendar days** if Additive Alternative No. 3 is awarded,
plus **no additional calendar days** if Additive Alternative No. 4 is awarded along with Additive Alternative No. 3. If Additive Alternative No. 4 is awarded separately from Additive Alternative No. 3, an additional **fourteen (14) calendar days** shall be awarded for Additive Alternative No. 4.

The work shall be scheduled so that no construction activities will take place from September 26th through October 3rd 2018 inclusive, and that no construction work within the AOA will be permitted after the project completion date.

A working day shall be any day other than a legal holiday, or designated non-work day on which the normal working forces of the Contractor should proceed with regular work for at least **6 hours** toward completion of the Contract. **If the Contractor schedules work on designated non-work day(s) such as holidays, the Contractor shall reimburse the City of Salinas for inspection services rendered by the City of Salinas.**

The Contractor shall pay to the City of Salinas the sum of **$1,000.00 per day** for each and every calendar days delay in finishing the work in excess of the time of completion prescribed above.

Before work may begin, a pre-construction conference shall be held at the office of the City Engineer for the purpose of discussing with the Contractor the scope of work, Contract Plans, Specifications, existing conditions, materials to be ordered, equipment to be used, and all essential matters pertaining to the prosecution of and the satisfactory completion of the project as required. The Contractor's representative at this conference shall include all major superintendents for the work and may include major Subcontractors.

The first paragraph within the Provisions in Section 8-1.03 of the State Standard Specifications is amended by adding the following:

> The Contractor shall notify the City Engineer, in writing, of his/her intent to begin work at least ***5 calendar days*** in advance before work is begun for this project. The notice shall be delivered to the office of the City Engineer and shall specify the date the Contractor intends to start. If the project has more than one location of work, a separate notice shall be given for each location.

The first indented paragraph of the third paragraph within the Provisions in Section 8-1.03 of the is amended to read:

> Notice in writing of the Contractor's intention to start work prior to approval, specifying the date on which he/she intends to start, shall be given to the City Engineer at least ***5 calendar days*** in advance.

The Contractor shall immediately comply with written order of the City Engineer to suspend work wholly or in part in accordance with the Provisions in Section 8-1.05 of the State Standard Specifications and these Special Provisions.

4-1.01 PROMPT PROGRESS PAYMENT TO SUBCONTRACTORS

A prime Contractor or Subcontractor shall pay any Subcontractor not later than ***7 calendar days*** of receipt of each progress payment in accordance with the Provision in Section 7108.5 of the California Business and Professions Code concerning prompt payment to Subcontractors. The ***7 calendar days*** is applicable unless a longer period is agreed to in writing between the Contractor and the City Engineer. Any delay or postponement of payment over ***30 calendar days*** may take place only for good cause and with the City Engineer prior written approval. Any violation of Section 7108.5 shall subject the violating Contractor or Subcontractor to the penalties, sanction, and other remedies of that Section. Federal law (49CFR26.29) require than any delay or postponement of payment over ***30 calendar day*** of receipt of each payment may take place only for good cause and with the agency's prior written approval. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the prime Contractor or Subcontractor in the event of a dispute involving late payment or nonpayment by the prime Contractor, deficient subcontract performance, or noncompliance by a Subcontractor. This Provision applies to both Contractors and Subcontractors.

4-1.02 PROMPT PAYMENT OF FUNDS WITHHELD TO SUBCONTRACTORS

The City of Salinas shall hold retainage from the prime Contractor and shall make prompt and regular incremental acceptances of portions, as determined by the City of Salinas, of the Contract work, and pay retainage to the prime Contractor based on these acceptances. The prime Contractor, or Subcontractor, shall return all monies withheld in retention from a Subcontractor within 30 calendar days after receiving payment of work satisfactorily completed an accepted including incremental acceptances of portions of the Contract work by the City of Salinas. Federal law (49CFR26.29) requires that any delay or postponement of payment over 30 calendar days may take place only for good cause and with the City Engineer prior written approval. Any violation of this provision shall subject the violating prime Contractor or Subcontractor to the penalties, sanctions, and other remedies specified in Section 7108.5 of the Business and Professions Code. These requirements shall not be construed to limit or impair any contractual, administrative, or judicial remedies otherwise available to the prime Contractor or Subcontractor in the event of a dispute involving late payment or nonpayment by the prime Contractor, deficient subcontract performance, or noncompliance by a Subcontractor. This Provision applies to both Contractors and Subcontractors. This provision applies to both DBE and non-DBE Contractors and Subcontractors.

SECTION 5
GENERAL

SECTION 5-1 MISCELLANEOUS

5-1.01 LABOR NONDISCRIMINATION

Attention is directed to the following Notice that is required by Chapter 5 of Division 4 of Title 2, California Code of Regulations and the City's Federal Mandated Disadvantage Business Enterprise (DBE) Program.

NOTICE OF REQUIREMENT FOR NONDISCRIMINATION PROGRAM
(GOV. CODE, SECTION 12990)

Your attention is called to the "Nondiscrimination Clause", set forth in the Provisions in Section 7 1.01A(4), "Labor Nondiscrimination", of the City of Salinas Standard Specifications, which is applicable to all nonexempt State Contracts and Subcontracts, and to the "Standard California Nondiscrimination Construction Contract Specifications" set forth therein. The Specifications are applicable to all nonexempt state construction Contracts and Subcontracts of **$5,000 or more**.

Furthermore, the prime contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of DOT-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as recipient (i.e. the City of Salinas) deems appropriate.

5-1.02 WAGE DETERMINATION

All wage scales shall be in accordance with applicable determinations made by the Director of the Department of Industrial Relations of the State of California, as provided by Article 2, Chapter 1, Division 2, Part 7 of the Labor Code of the State of California, commencing with Section 1771. In accordance with Section 1773.2 of the said Labor Code, copies of the aforesaid determinations of the Director of the Department of Industrial Relations are available on the website address http://www.dir.ca.gov/dlsr/. They shall apply to the Construction Contract and all Subcontractors thereunder.

The Federal minimum wage rates for this project as predetermined by the United States Secretary of Labor are set forth in these Specifications. Addenda to modify the Federal minimum wage rates, if necessary, shall be issued to holders of these Specifications. Future effective general prevailing wage rates that have

been predetermined and are on file with the California Department of Industrial Relations are referenced but not printed in the general prevailing wage rates.

If there is a difference between the minimum wage rates predetermined by the Secretary of Labor and the general prevailing wage rates determined by the Director of the California Department of Industrial Relations for similar classifications of labor, the Contractor and Subcontractors shall pay not less than the higher wage rate. The City of Salinas shall not accept lower State wage rates not specifically included in the Federal minimum wage determinations. This includes “helper” (or other classifications based on hours of experience) or any other classifications not appearing in the Federal wage determinations. Where Federal wage determinations do not contain the State wage rate determination otherwise available for use by the Contractor and Subcontractors, the Contractor and Subcontractors shall pay not less than the Federal minimum wage rate which most closely approximates the duties of the employees in question.

The wage rates determined by the Director of Industrial Relations and published in the Department of Transportation publication entitled General Prevailing Wage Rates refer to expiration dates. If the published wage rate does not refer to a predetermined wage rate to be paid after the expiration date, said published rate of wage shall be in effect for the like of this Contract. If the published wage rate refers to a predetermined wage rate to become effective upon expiration of the published wage rate and the predetermined wage rate is on file with the Department of Industrial Relations, such predetermined wage rate shall become effective on the date following the expiration date and shall apply to this Contract in the same manner as if it had been published in said publication. If the predetermined wage rate refers to one or more additional expiration dates with additional predetermined wage rates, which expiration dates occur during the life of this Contract, each successive predetermined wage rate shall apply to this Contract on the date following the expiration date of the previous wage rate. If the last of such predetermined wage rates expires during the life of this Contract, such wage rate shall apply to the balance of the Contract.

Reference second paragraph on page 45 of Standard Specifications... Delete 6th sentence found on bottom of page; The "Statement of Compliance" shall be on forms furnished by the Department or on any form with identical wording and substitute the following sentences:

The "Statement of Compliance" and "Payroll Report" shall be on forms furnished by the City. Reduces copies of the “Statement of Compliance” and “Payroll Report” forms are attached in Part “D” of these Specifications. **No other forms shall be accepted.**

The U.S. Department of Transportation (DOT) provides a toll-free “hotline” service to report Bid rigging activities. Bid rigging activities can be reported Mondays through Fridays, between 8:00 a.m. and 5:00 p.m., eastern time, Telephone No. 1-800-424-9071. Anyone with knowledge of possible Bid rigging, Bidder collusion, or other fraudulent activities should use the “hotline” to report these activities. The “hotline” is part of the DOT’s continuing effort to identify and investigate highway construction Contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information shall be treated confidentially and caller anonymity shall be respected.

5-1.03 SOUND CONTROL REQUIREMENTS

The Contractor shall comply with all local sound control and noise level rules, regulations and ordinances which apply to any work performed pursuant to the Contract.

Each internal combustion engine, used for any purpose on the job or related to the job, shall be equipped with a muffler of a type recommended by the manufacturer. No internal combustion engine shall be operated on the project without said muffler.

Full compensation for conforming to the requirements of this section shall be considered as included in the prices paid for the various Contract items of work involved and no additional compensation will be allowed therefore.

5-1.04 WORK TO BE DONE BY OTHERS

Miscellaneous items of work not included under the various Proposal items and as shown on the Plans, "N.I.C." and/or "By Others", will be done by others and are not a part of this Contract.

No additional compensation will be afforded for scheduling or rescheduling of work to allow for the work by others. And no time extension will be granted if the Contractor's overall progress is impeded by the work of others.

Work to be done by others may include, but is not limited to the following:

1. Relocations and adjustments of utility company facilities shall be performed by various utility companies, if necessary and as required.

5-1.05 DISCREPANCIES

Should the Contractor at any time discover any discrepancy or mistake in a drawing or Specification, any variation between dimension on drawings and measurements at site, or any lack of dimensions or other information, he/she shall report at once to the Engineer for correction and shall not proceed with work affected thereby until such correction has been made.

5-1.06 PERMITS AND LICENSES

Attention is directed to Section 7-1.04, Permits and Licenses, of the Standard Specifications and these Special Provisions.

The Contractor and approved subcontractor shall obtain all necessary licenses (a valid City of Salinas business license), permits and City of Salinas Transportation permit if necessary, (including State Permit), prior to beginning of construction.

Should the permit require **specialty testing** in addition to the implementation of the Contractor's Quality Control Program as identified in the General Provisions, the Contractor shall, at his/her own expense, provide a certified laboratory that will submit written test results and reports to the City Engineer for review and approval. Payment for specialty testing and surveying including results and reports shall be included in the Contract unit price paid for various items of work as listed in the Proposal and no additional compensation shall be allowed therefore.

The Contractor shall abide by the conditions of the Caltrans encroachment permit and the State Division of Mines Permit on file with the City Engineer (if applicable)

The City of Salinas will provide the appropriate Quality Assurance (QA) material testing for this project, if applicable.

The Contractor shall comply with all requirements of the Division of Industrial Safety, and the Department of Industrial Relations.

A "no fee" building permit may be issued. The Contractor shall obtain the permit form Development and Permit Services, a division of Engineering and Transportation Department, prior to construction.

The City will not provide the construction staking for this project, it is the Contractor's responsibility to provide all construction staking and to verify the existing control points prior to construction activities.

5-1.07 COMPENSATION ADJUSTMENTS FOR PRICE INDEX FLUCTUATIONS FOR ASPHALT CONCRETE

There shall be no compensation adjustments for paving asphalt price fluctuations for asphalt concrete for this project.

5-1.08 INCREASE OR DECREASE QUANTITY

Delete Section 4-1.03B of the Standard Specifications in its entirety. **The City reserves the right to increase or decrease the quantity specified in the Proposal, as deemed necessary, in accordance with the General Provisions, and to eliminate any item or work without the adjustment of Contract Unit Prices.**

5-1.09 ITEMS NOT LISTED

Items of labor and materials which are not specifically listed in the Proposal and these Special Provisions as pay items, but which are shown and/or mentioned on the Plans or are required to be done to complete the overall project, shall be considered included in other pay items, and no additional compensation will be allowed therefore.

5-1.10 LEGAL RELATIONS AND RESPONSIBILITIES AND MAINTAINING TRAFFIC

The Contractor's attention is directed to Section 7 of the Standard Specifications.

The Contractor's attention is directed to the Provisions in Section 7-1.01G, "Water Pollution", of the City of Salinas Standard Specifications. The Contractor shall submit a Storm Water Pollution Prevention Plan (SWPPP) in accordance with NPDES requirements for review and approval by the City Engineer. Acceptable pollution control protection around existing area drains shall be the placement of filter fabric securely anchored around each catch basin. If no pay item is provided in the Contract for the work required for the SWPPP submittals and implementation, then payment for the SWPPP, and compliance with NPDES requirements shall be as included in the prices paid for the various Contract items of work as listed in the Proposal and no additional compensation shall be allowed therefore.

The Contractor shall comply with the requirements of CAL-OSHA, the applicable provisions of local, state, and federal regulations governing the project work.

For Traffic Maintenance, the Contractor's attention is directed to Section 7-1.08, "Public Convenience" and 7-1.09, "Flagging Costs", of the Standard Specifications and these Special Provisions. Nothing in these Special Provisions shall be construed as relieving the Contractor from his/her responsibility as provided in said Section 7-1.09. Contractor shall provide delineators for traffic safety:

A. Whenever immediate action is required to prevent impending injury, death, or property damage, and precautions which are the Contractor's responsibility have not been taken and are not expected to be taken, the City may, after reasonable attempts to notify the Contractor, cause such precautions to be taken and shall charge the cost thereof against the Contractor, or may deduct such cost from any amount due or becoming due from the City. City action or inaction under such circumstances shall not be construed as relieving the Contractor of his/her surety from liability.

B. The Contractor shall notify the Police, Fire, Traffic, Monterey-Salinas Transit, Engineering Department of jurisdictional agencies involved, affected property owners and businesses, and news media (radio, TV, newspaper) at least ***48 hours*** in advance of any work that will delay traffic. The Contractor shall cooperate with local authorities relative to handling traffic though the area and shall make his/her own arrangements relative to keeping the working area clear of parked vehicles.

   The Contractor shall also be responsible for compliance with additional public safety requirements which may arise during construction. He/she shall exercise special caution against dangerous conditions and shall provide, install and maintain temporary barricades and fencing as may be necessary to protect the public. All construction traffic control devices shall be in place and operational prior to beginning work or different phases throughout the contract. During construction and within the area of work barricades, signs, lights, flashers and other safety devices shall be used by the Contractor to direct vehicular and pedestrian traffic. During any day between 9:00 a.m. and 3:30 p.m., the Contractor may limit traffic to one lane in each direction with approved traffic control measures, unless otherwise directed by the City Engineer.

During construction and within the area of work barricades, signs, lights, flashers and other safety devices shall be used by the Contractor to direct vehicular and pedestrian traffic. Unless otherwise directed by the City Engineer, the Contractor shall maintain pedestrian and two-way vehicular traffic on the streets at all times. **Closing of any streets will not be allowed.** Traffic safety devices shall be in good repair at all times. Traffic safety devices in need of repair or paint shall be removed immediately from the project on order of the Project Inspector. Upon completion of work, the Contractor shall promptly remove all signs and warning devices.

C. The Contractor's special attention is directed to Section 10 of the Standard Specifications regarding dust control requirements. The Contractor shall abate dust nuisance by cleaning, sweeping, and sprinkling with water, or other means as necessary during all phases of construction including weekends, holidays and any other times as necessary. No mud or cement slurry resulting from saw cutting is to be washed into catch basins. Cleanup expenses to the City at job site due to the Contractor's failure to comply with the provisions in the Standard Specifications and these Special Provisions will be charged to the Contractor. The use of water which may result in mud on public streets will not be permitted as substitute for sweeping or other materials. Payment for dust control shall be considered as included in the various pay items and no additional compensation shall be allowed therefore.

D. Personal vehicles of the Contractor’s employees shall not be parked on the traveled way or shoulders, including any section closed to public traffic.

Whenever vehicles or equipment are parked within six feet of a traffic lane, the shoulder area shall be closed with florescent traffic cones or portable delineators place on a taper in advance of the parked vehicles or equipment and along the roadway at 25-foot intervals to a point not less than 25 feet past the last vehicles or piece of equipment. A minimum of 9 cones or portable delineators shall be used for the taper. A C23 (Road Work Ahead) or C24 (Shoulder Work Ahead) sign shall be mounted on a telescoping flag tree with flags. The flag tree shall be place where as directed by the City Engineer.

All traffic cones used on the project shall conform to the requirements for fluorescent traffic cones in said Section 7-1.092. The top of fluorescent traffic cones used in the work during the hours of darkness as defined in Division 1, Section 280, of the California Vehicle Code, shall be covered by a 7-inch flexible vinyl reflective cone sleeve. The provisions in Section 7-1.095, "Flagging Costs", of the Standard Specifications are amended to provide that the entire cost of furnishing all flagmen will be borne by the Contractor.

E. Where work is to be performed on private properties (removal and construction of walks, driveway, etc.), the City Engineer will obtain written permission for right-of-entry from the respective owner prior to performing the work. No work shall be commenced by the Contractor until such permission has been granted and until notified by the City Engineer. The Contractor shall be responsible for any and all property damage and public liability resulting from his/her operation on said private properties.

F. Unless otherwise directed by the City Engineer, the Contractor shall at all times maintain vehicular and pedestrian access to all properties fronting City streets. The Resident City Engineer shall determine if temporary driveways will be necessary within the limits of work during construction. Traffic shall be maintained on one-half of the street at all times. The Contractor's special attention is directed to Section 10 of the Standard Specifications regarding dust control requirements. The Contractor shall abate dust nuisance by cleaning, sweeping, and sprinkling with water, or other means as necessary during all phases of construction including weekends, holidays and any other times as necessary. Cleanup expenses to the City at various job sites due to the Contractor's failure to comply with the provisions in the Standard Specifications and these Special Provisions will be charged to the Contractor. The use of water which may result in mud on public streets will not be permitted as substitute for sweeping or other materials. Payment for dust control shall be considered as included in the various pay items and no additional compensation shall be allowed therefore.

G. The Contractor shall provide necessary safeguards and shall exercise caution against injury or defacement of any existing site improvements and plantings. The Contractor shall be responsible for any damage resulting from his/her operations and shall repair or replace such damage at his/her own expense. No trucks or vehicles of any kind shall be allowed to pass over area unless adequate protection is provided. Unless designated otherwise, all existing improvements shall be repaired or replaced, in kind, at the Contractors expense.

   Temporary ramps, backfill, or covers for incomplete trenching/backfill operations shall also be furnished by the Contractor at the end of each day's work for the protection of vehicular and pedestrian traffic.

   The Contractor shall be responsible for any damage to the work which occurs before final acceptance. He/she is to securely cover all openings into the systems and protect all apparatus, equipment or appliance, both before and after being set in place, to prevent obstructions in the pipes and breakage, misuse or disfigurement of the apparatus, equipment or appliance. Contractor shall be responsible for damage to all existing utilities, whether or not they are indicated on the drawings.

H. Contractor shall provide delineators for traffic safety until such time as all cat tracking has been performed. Cat tracking shall be completed within 8 hours of completed paving/resurfacing at the respective location, and shall be maintained in a legible and traffic safety manner by the Contractor until final striping or pavement markings are in place.

I. Payment - The cost of furnishing all flagmen and police officers, and maintaining traffic as described herein and under the provisions in Section 7-1.08, "Public Convenience"," 7-1.09, "Public Safety," and Section 12-2.02, "Flagging Costs", and for complying with the provisions of these Special Provisions shall be included in the various items of work listed in the proposal, and no additional compensation shall be allowed therefore.

5-1.11 INSPECTIONS AND CONTROL OF WORK

In all cases where inspection of the work is required and/or where portions of the work are specified to be performed under the direction and/or inspection of the City Engineer, the Contractor shall notify the City Engineer at least 48 hours in advance of the time such inspection and/or direction is required.

The Contractor's attention is directed to Section 5-1.08 of the Standard Specifications. In addition to the requirements of said section, the Contractor's representative shall notify the Engineer daily of the following day's proposed work schedule in order to plan for appropriate inspections. The Contractor's Representative shall also submit a Daily Report of the day's construction activity for review and approval. The daily report shall contain the name of all personnel and equipment, including all subcontractors, at work that day.

All work and materials shall be subject to inspection at all times by representatives of the City engineer.

Contractor shall verify all measurements at site, and shall be responsible for correctness of same. No extra compensation will be allowed because of difference between work shown on drawings and measurement at site.

If City Engineer's inspector finds that materials and/or equipment do not conform with these Specifications, the Contractor shall, within ***three (3) days*** after being notified by the City Engineer, remove said material from premises; if said material has been installed, entire expense of removing and replacing same, including any cutting and patching that may be necessary, shall be borne by the Contractor.

The Contractor's Representative shall also submit a daily Report of the day's construction activity for review and approval. The daily report shall contain the name, *classification and detailed task listing,* of all personnel and equipment, including all subcontractors, at work that day

Payment for submitting the Contractor's daily report and notification of the next day work schedule under this section shall be considered included in the various contract prices, and no additional compensation shall be allowed therefore.

5-1.12 CLOSING OF UNINSPECTED WORK

Contractor shall not allow nor cause any of his work to be covered or enclosed until it has been inspected and approved by the City Engineer. Should any of his work be enclosed or covered before such inspection and approval he shall uncover the work at his own expense and after inspection make all repairs necessary to restore his work to its original condition. Cost of uncovering and making repairs where non-inspected work has been closed in shall be borne by the Contractor.

5-1.13 COORDINATION AND COOPERATION

The Contractor shall be required to cooperate and work harmoniously with Utility Companies, affected property owners and tenants, other Contractors, and the City of Salinas during the execution of this Contract; coordinating all activities to prevent unnecessary conflicts, delays, and disruptions to the progress of the project.

Prior to any work, the Contractor shall submit a schedule for his/her work reflecting coordination with other Contractors, if any, and utility companies. All work shall be coordinated to minimize delays to the overall progress of the work.

The construction progress schedule under Section 8-1.04 of the Standard Specifications is required of this Contract and such schedule shall show the coordination between the Contractor and utility companies to minimize delays to the overall progress of the work.

5-1.14 OPEN AND/OR TRENCH EXCAVATIONS DEEPER THAN FOUR FEET BELOW THE SURFACE

The Contractor shall promptly and before the following conditions are disturbed, notify the City Engineer in writing of any:

1. Material that the Contractor believes may be material that is hazardous waste, as defined in Section 25117 of the Health and Safety Code, that is required to be removed to a Class I, Class II or Class III disposal site in accordance with the existing law.
2. Subsurface or latent physical conditions at the site differing from those indicated.
3. Unknown physical conditions at the site of any unusual nature, different materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract.

Should the conditions materially differ or do involve hazardous waste, any additional work will be at Section 4-1.03D "Extra Work" of the Standard Specifications.

Your attention is directed to Section 9-1.10 "Arbitration", of the Standard Specifications. In the event of a dispute as to whether the conditions materially differ or do involve hazardous waste, the Contractor shall continue to proceed with all work to be performed under the Contract and shall retain all rights provided either by Contract or by law which pertain to the resolution of any dispute or protest.

5-1.15 GRAFFITI

The Contractor shall remove **all graffiti** from any equipment and/or structures (any type), new or existing within the limits of project within ***24 hours*** daily throughout the contract. The contractor **shall not** bring any equipment to the project site with graffiti on it.

Payment for graffiti, if required, shall be borne by the Contractor and no additional compensation shall be allowed therefore.

5-1.16 BUY AMERICAN REQUIREMENTS

The successful bidder must comply with Title 49 U.S.C. Section 50101. Unless otherwise formally approved by the Federal Aviation Administration (FAA), all acquired steel and manufactured products installed under the AIP assisted project must be produced in the United States. Section of 50101(b) permits conditional waivers of this preference. Specifically, the FAA will consider a waiver if the bidder can demonstrate:

(1) Applying subsection 50101(a) is inconsistent with the public interest;

(2) The steel and goods produced in the United States are not produced in a sufficient and reasonably available amount or are not of a satisfactory quality;

(3) The cost of components and subcomponents produced in the United States is more than 60 percent of the cost of all components and final assembly occurs within the United States

(4) The inclusion of domestic material will increase the cost of the overall project by more than 25 percent.

As a condition of bid responsiveness, Bidder must indicate on the Buy American certification whether it intends to meet Buy American requirements by only installing 100% United States made steel and manufactured products or if they intend to request a permissible waiver to Buy America preferences.

Waivers determinations addressed under exceptions (1) and (2) will generally be made as part of the bid solicitation. Bidder may not request a waiver under exceptions (1) or (2).

The successful bidder that desires a waiver under exception (3) shall make the request by selecting the appropriate certification statement and complying with the following conditions:

- For equipment and material the FAA has already issued a waiver to AIP Buy American preferences as indicated on the current FAA Buy American conformance list, bidder shall submit a listing of specific equipment and material it proposes to install on the project prior to the issuance of a Notice-to-Proceed.
- For equipment and material the FAA has not previously issued a waiver to Buy American preferences, the bidder identified with the apparent low bid agrees to prepare and submit to the owner a waiver request and component calculation information within 15 calendar days of the date of the notice of apparent award of contract.

The successful bidder that desires a waiver under exception (4) shall make the request by selecting the appropriate certification statement and complying with the following conditions:

- Provide detailed proposal costs using domestic product(s) and the overall project cost.
- Provide detailed alternate proposal costs of the non-domestic product(s) and the overall project cost.
- If the proposal with domestic product(s) is more than 25% of the proposal with non-domestic product(s), the bidder may request a waiver under exception (4).

Bidder is hereby advised that Owner approval of any requested waiver is contingent upon approval by the FAA.

SECTION 6
SAFETY AND HEALTH

6-1.01 CONTRACTOR'S RESPONSIBILITY FOR SAFETY

The Contractor certifies that he is experienced and qualified to anticipate and meet the safety and health requirements of this Project. For informational purposes only the Contractor shall submit to the City a copy of his Injury

and Illness Prevention Program. The Contractor shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work. This requirement will apply continuously ***24 hours a day*** every day until final acceptance of the Work and shall not be limited to normal working hours. The duties of the City, Engineer and Inspector do not include review of the adequacy of the Contractor's safety measures in, on, or about the site and vicinity.

A. Safety Officer: The Contractor shall designate a fully trained and responsible member of his organization at the site whose duty shall be prevention of hazards and accidents and who shall have the authority to direct work for the Contractor.

B. Safety Supervisor: The Contractor shall designate Safety Supervisors for each work site. One Safety Supervisor may be the Safety Officer. The other Safety Supervisors shall work for the Safety Officer. Each shall be fully trained for the type of work being performed and shall have authority to direct the Contractor's work.

6-1.02 SAFETY MEASURES

The Contractor shall comply with all laws, ordinances, codes, rules, regulations and lawful orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. The Contractor shall maintain copies of all documents mentioned or referenced in this Section readily available at the site until the work is completed. In the event the Contractor fails to observe any of the necessary safety provisions, the Owner may stop the work and direct the Contractor to comply with the applicable provisions, or may order the necessary work to be done by others. All impacts, both monetary and time-related, associated with stoppage of the work in order to comply with the City's directives pertaining to safety requirements, and all costs of having the necessary work done by others shall be borne by the Contractor.

6-1.03 CONFINED SPACE SAFETY

Work performed in or about wastewater (sewage) facilities, including but not limited to manholes, pipes, tanks, basins, and structures, carries with it the high potential for exposure of workers and other persons to hazardous conditions. The Contractor is required to be especially alert to these conditions. These conditions may include, but are not be limited to, exposure to hydrogen sulfide, carbon dioxide, methane, carbon monoxide and other gases; exposure to atmospheres containing insufficient oxygen to support human life; exposure to wastewater (sewage) which may contain bacteriological, chemical, and other constituents harmful to humans; working in conditions where engulfment or entrapment of personnel may occur (such as in trench excavation); and working in structures with uneven or slippery surfaces and with difficult and limited access. Many of these environments are classified as "confined spaces" in the Federal National Institute of Occupational Safety and Health (NIOSH) regulations and/or the State of California's General Industrial Safety Orders. The Contractor shall be fully familiar with, and shall strictly adhere to and comply with, the applicable sections of these documents pertaining to confined spaces. In the event of a conflict between applicable requirements, the more restrictive shall apply. Solely as an aid to the Contractor, and without assuming any liability for their completeness or for determining if they are the regulations that are currently in effect, the Owner has included excerpts form the State of California General Industry Safety Orders which the City believe are applicable to the Works. These excerpts consist of State of California, Administrative Code, Title 8, General Industry Safety Orders, Articles 107 and 108 are found at the end of these Specifications (provided by the Owner).

6-1.04 PERSONAL HYGIENE

Persons involved in the work may be exposed to disease-producing organisms in wastewater (sewage). The Contractor shall require his/her personnel to observe proper hygienic precautions, including washing of hands and other exposed portions of the body with disinfecting soap and water before eating or smoking. Contractor shall provide Port-a-Potty for all workers at his/her expense.

6-1.05 PUBLIC SAFETY AND CONVENIENCE

The Contractor shall conduct his/her work so as to insure the least possible obstruction to traffic and inconvenience to the general public in the vicinity of the work and to insure the protection of persons and property. No road or street shall be closed to the public except with the permission of the City Engineer and the proper governmental authority. Fire hydrants on or adjacent to the work shall be accessible to fire-fighting equipment. Temporary provisions shall be made by the Contractor to insure the use of sidewalks, private and public driveways and proper functioning of gutters, sewer inlets, drainage ditches and culverts, irrigation ditches and natural water courses.

6-1.06 WARNINGS AND BARRICADES

The Contractor shall provide and maintain barricades, guards, temporary bridges and walkways, watchmen, night lights and danger signals illuminated from sunset to sunrise, and all other necessary appliances and safeguards to protect the Work, life, property, the public, excavations, equipment and materials. Barricades for use outside the AOA shall be of substantial construction and shall be painted such as to increase their visibility at night. Suitable warning signs shall be placed and illuminated at night as to show in advance where construction, barricades, or detours exist. Guard rails shall be provided for bridges or walkways over or adjoining excavations, shafts and other openings and locations where injury may occur. Barricades for use within the AOA shall be as specified on the Plans.

6-1.07 FIRE PREVENTION

A. Fire Extinguishers and Hoses: The Contractor shall furnish and maintain fully charged fire extinguishers of the appropriate type, supplemented with temporary fire hoses wherever an adequate water supply exists, at the places where burning, welding or other operations that may cause a fire are being performed.

B. Flammable, Hazardous, or Toxic Materials: Solvents, gasoline, and other hazardous materials may be in the wastewater (sewage), and therefore, the work site may be hazardous to open flame, sparks, or unventilated occupancy. The Contractor shall take measures to insure his personnel observe proper safety precautions when working in these areas. Only a working supply of flammable, hazardous or toxic materials shall be permitted in or on any of the permanent structures and improvements, and shall be removed there from at the end of each day's operations. The Contractor shall store flammable, hazardous or toxic materials and waste separate from the Work and stored materials for the Works in a manner that prevents spontaneous combustion or dispersion, and none shall be placed in any sewer or drain piping nor buried on the City's or other property. The Contractor shall maintain a current and up-to-date copy of all laws, ordinances, codes, rules, regulations and lawful orders of any regulatory authority having jurisdiction of control over flammable, hazardous or toxic materials and, at his/her expense, shall comply with said laws, ordinances, codes, rules, regulations and lawful orders.

6-1.08 SAFETY HELMETS, CLOTHING AND EQUIPMENT

The Contractor shall not permit any person for whom he/she is responsible or liable to enter or remain on the site of the Work unless the person is equipped with and wearing a safety helmet and other protective clothing and safety equipment as required and shall discharge from the site all persons not so equipped. The Contractor shall post conspicuous signs at the appropriate locations warning the public and persons engaged upon the Work of this requirement.

6-1.09 HAZARDOUS AREAS

The Contractor shall not permit or allow any person or persons to enter any pipe or space containing hazardous or noxious substances or gases, or where there is an insufficient amount of oxygen to sustain life and consciousness, or any other hazardous area unless equipped with lawful and appropriate safety equipment and life supporting apparatus, and unless those entering are continually monitored and guarded by and in communication with other persons outside the space or area who are equipped in the same way, can give an alarm to others for assistance, and initiate immediate rescue operations in the event of mishap.

6-1.10 EMERGENCIES

A. Work During an Emergency**:** The Contractor shall perform any and all operations and shall furnish any materials and equipment necessary during an emergency endangering life or, property and, in all cases, shall notify the City Engineer of the emergency as soon as practicable, but shall not wait for instruction before proceeding to properly protect both life and property. Any additional compensation or extension of Contract Time by the Contractor on account of an emergency shall be applied for to the City.

B. Representatives for Emergencies: The Contractor shall file with the Owner a written list giving names, addresses, and telephone numbers of at least two of his/her representatives who can be contacted at any time in case of emergency. The representatives shall be fully authorized and equipped to correct unsafe or inconvenient conditions on short notice. The Contractor shall promptly notify the Owner of all changes in the listing.

6-1.11 SUBMITTALS

Prior to receiving Notice to Proceed, the Contractor shall submit to the City Engineer the following:

1) Best Management Practices Plan;
2) Construction Operation Safety Plan;
3) a copy of his/her Injury and Illness Prevention Program Manual;
4) a list of safety equipment he/she will maintain on site;
5) the name of his/her Safety Officer and Safety Supervisor(s) who will be responsible for maintaining safety at each work site; and
6) a description of any job-specific measures he/she will be using which are not contained in his/her manual.

The City shall not review these materials, but shall maintain these materials for record purposes.

6-1.12 IMPLEMENTATION

It is the Contractor's responsibility to follow his/her own safety program and provide one or more designated Safety Supervisor(s) at each work site.

6-1.13 PAYMENT

No separate payment will be made for maintaining safety and health and it shall be considered as included in the prices paid for the various Contract items of work as listed in the Proposal and no additional compensation shall be allowed therefore.

SECTION 7
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SECTION 8
MATERIALS

SECTION 8-1 MISCELLANEOUS

8-1.01 GENERAL

Attention is directed to the Provisions in Section 6, "Control of Materials", of the State Standard Specifications and these Special Provisions.

All materials required to complete the work under this Contract shall be furnished by the Contractor except when otherwise specified herein. **Contractor shall provide a schedule of value for all lump sum items of work as listed in the Proposal. The schedule of values shall be used for any addition and/or deletion to that particular item of work.**

8-1.02 RELATIVE COMPACTION/MATERIAL TESTING

Wherever relative compaction is specified to be determined by Test Method No. Calif. 216 or Test Method No. Calif. 312, the relative compaction shall be determined by Test Method No. 231 in accordance within the Provisions in Section 6-3 of the State Standard Specifications. All tests and frequency of tests shall be in accordance with the Technical Specifications, the Standard Specifications and the CalTrans Construction Manual. Your attention is directed to the Provisions in Section 5-1.06, **"PERMITS AND LICENSE"**, concerning special testing. Any necessary materials and/or special testing including testing results and reports will be the Contractor sole responsibility, no additional measurement or compensation will be provided for said materials and testing it shall be considered as included in the prices paid for the various Contract items of work as listed in the Proposal and no additional compensation shall be allowed therefore.

8-1.03 SUBSTITUTIONS

Reference in these Specifications to any article, device, product, material, fixture, form or type of construction by name, make or catalog number is to be interpreted only as establishing a standard of quality, and not to be construed as limiting competition. In such cases, the Contractor may, at his/her option, use any article, device, product, material, fixture, form, or type of construction equal to that specified. The City Engineer is the final judge of acceptability of proposed substitute and the Contractor proposing substitution shall furnish, at his/her expense, any data, samples, test, etc., as required by the City Engineer to determine quality of the proposed substitutions.

In addition, all proposed substitutions **shall** be:

1. Submitted within ***35 calendar days*** following award of the Contract as approved by City Council;
2. Proven to the City Engineer to be equal or superior to the specified item in all respects; and
3. Accompanied by shop drawings and/or complete descriptive information.

All dimensional or functional changes, or changes to other work which is required by, or are a result of, an acceptable substitution shall be the sole and complete responsibility of the Contractor and shall be made at no additional cost to the City of Salinas.

The Contractor shall make no substitutions of materials or equipment without written approval of the City Engineer.

SECTION 9
DESCRIPTION OF PROJECT

The work, in general, shall include furnishing of all labor, materials, tools, equipment and incidentals required for construction in accordance with the plans and these specification for the work herein, for the RUNWAY 13-31 AND RUNWAY 8-26 REHABILITATION, and is more fully described as follows:

In general, the work includes but is not limited to:

Base Bid: Asphalt Pavement Crack Seal and Slurry of Runway 13-31

Additive Alternative No. 1: Full Depth Pavement Trench Repair Runway 8-26

Additive Alternative No. 2: Mill and Overlay of Portion of Taxiway D

Additive Alternative No. 3: Asphalt Pavement Crack Seal and Slurry of Runway 8-26

Additive Alternative No. 4: Mill and Overlay of Portions of Taxiway J, Taxiway D, Taxiway G, and Taxiway P

Such other items or details not mentioned above, but that are required by the Plans, Standard Specifications, or these Special Provisions shall be performed, placed, constructed, and/or installed for a complete project. Payment shall be included in the various items of work and no additional compensation shall be made.

Except for authorized changes in the work, payment for said complete-in-place finished work or improvement will be made only on the basis of the Contract item of work listed in the Proposal. All other work, including the furnishing of labor, materials, tools, equipment and incidentals, provided for in these Specifications and Contract, or required for the proper completion of the work as a whole, for which no separate payment has been provided shall be an obligation of the Contractor and payment therefore shall be considered included in the price paid for the various items of work listed in the Proposal and no additional compensation shall be made.

SECTION 10
CONSTRUCTION DETAILS

SECTION 10-1 GENERAL

10-1.01 ORDER OF WORK

Order of work shall conform to the Provisions in Section 5-1.05 "Order of Work", of the State Standard Specifications and these Special Provisions.

All work under this project shall be scheduled, coordinated and executed as necessary to permit construction to be completed within the constraints of the project and to allow for the . To allow for the Salinas Air Show, all work shall be scheduled so that no construction activities will take place between September 20th 2016 and September 27th 2016, and that no construction work within the AOA will be permitted after the project completion date. The Contractor and utility companies shall coordinate and schedule their operations to minimize disruptions or delays.

All operations shall be coordinated to eliminate any possibility of damage, or unnecessary removal, replacements and/or modifications to existing facilities or to facilities constructed under this Project.

10-1.02 FINAL INSPECTION AND CLEANUP

At the completion of the work, a final inspection will be made by the City's Engineer. The Contractor will be responsible for final cleanup of the project area in accordance of the Provisions with Section 4-1.02 of the State Standard Specifications.

10-1.03 WORKMANSHIP

All work performed under this Contract shall be of the highest quality of the trade and the Contractor shall employ only workers who are skilled and thoroughly familiar with the type of improvements proposed.

10-1.04 PROGRESS SCHEDULE

A progress schedule shall be prepared by the Contractor for this Contract and shall conform to the provisions in Section 8-1.04 "Progress Schedule" of the State Standard Specifications and shall be delivered to the City Engineer at the pre-construction meeting. **No work shall begin until the Progress Schedule has been approved by the City Engineer.**

Such progress schedule (as identified in Section 100-04 of the General Provisions) shall show coordination of major portions of the work including utility relocations/adjustments and other related work by others.

The Contractor shall schedule operations in cooperation with the Airport, and other Contractors and the utility companies to avoid unnecessary conflicts, delays, and disruptions to the progress of this project.

10-1.05 OBSTRUCTIONS

Attention is directed to Section 8-1.10, “Utility and Non-Highway Facilities”, and Section 15, Existing Highway Facilities, of the State Standard Specifications and these Special Provisions.

The fifth through eighth paragraphs in Section 8-1.10, "Utility and Non-Highway Facilities", of the State Standard Specifications are amended to read:

> If the Contractor cannot locate an underground facility whose presence is indicated on the plans or in the special provisions, the Contractor shall so notify the Engineer in writing. If the facility for which the notice is given is in a substantially different location from that indicated on the plans or in the special provisions, the additional cost of locating the facility will not be paid for as extra work.
>
> If the Contractor discovers underground main or trunk lines not indicated on the plans or in the special provisions, the Contractor shall immediately give the Engineer, the Airport, and the Utility Company written notification of the existence of those facilities. The main or trunk lines shall be located and protected from damage as directed by the Engineer, and the cost of that work will not be paid for as extra work. The Contractor shall, if directed by the Engineer, repair any damage which may occur to the main or trunk lines, the cost of the repair work will not be paid for as extra work. Damage due to the Contractor's failure to exercise reasonable care shall be repaired at the Contractor's cost and expense.
>
> Where it is determined by the Engineer that the rearrangement of an underground facility is essential in order to accommodate the highway improvement and the plans and specifications do not provide that the facility is to be rearranged, the Engineer will provide for the rearrangement of the facility by other forces or the rearrangement shall be performed by the Contractor and will be paid for as extra work as provided in Section 4-1.03D.
>
> When ordered by the Engineer in writing, the Contractor shall rearrange any utility or other non-highway facility necessary to be rearranged as a part of the improvements, and that work will not be paid for as extra work.

The tenth and eleventh paragraphs in Section 8-1.10, "Utility and Non-Highway Facilities", of the State Standard Specifications are amended to read:

> The Contractor shall immediately notify the Engineer of any delays to the Contractor's operations as a direct result of underground main or trunk line facilities which were not indicated on the plans or in the special provisions or were located in a position substantially different from that indicated on the plans or in the special provisions, or as a direct result of utility or other non-highway facilities not being rearranged as herein provided (other than delays in connection with rearrangements made to facilitate the Contractor's construction operations or delays due to a strike or labor dispute). These delays will not be considered right of way delays within the meaning of Section 8-1.09, "Right of Way Delays," and compensation for the delay will not be determined in conformance with the provisions in Section 8-1.09.
>
> Any delays to the Contractor's operations as a direct result of utility or other non-highway facilities not being rearranged as provided in this Section 8-1.10, due to a strike or labor dispute, will not entitle the

Contractor to an extension of time as provided in Section 8-1.07, "Liquidated Damages." The Contractor shall be entitled to no compensation for that delay.

10-1.06 COST AND EXPENSE OF UTILITY DETERMINATION

The Contractor shall provide a Utility Locate Company and coordinate with the Airport, the FAA, and utility companies to locate and mark all utility mains, services, and service laterals including utility depths, within the project area. Contractor shall make full determination of all underground utilities in order to prevent damage or disruption to the existing services during construction. The Contractor shall contact the Regional Notification Center (USA) at least ***48 hours*** before starting any excavation. The toll free number to call is: **811, 1-800-227-2600 or 1-800-642-2444.**

The Contractor is hereby notified that some utility conflicts may exist at the start of construction. The Contractor shall be prepared to schedule his/her work around these conflicts. The utility companies where applicable, have been advised to work in close cooperation with the Contractor. The Contractor shall not be granted time extensions for utility delays and no extra payment will be made for utility delays.

The utilities shown on the Plans are for reference only and are based on Airport and utility company records. Known conflicts have been investigated and approximate cover indicated on Plans, if any. The Contractor shall prosecute the work exercising reasonable care not to damage any such facilities. **If the Contractor, while performing the work, discovers facilities not identified on the Plans, he/she shall immediately notify the utility company and the City's Engineer in writing within *72 hours*.**

The Contractor's attention is directed to the existence of certain underground facilities that may require special precautions to be taken by the Contractor to protect the health, safety and welfare of workers and of the public. Facilities requiring special precautions include, but are not limited to: natural gas pipelines; underground telephone, cable TV and electric supply system conductors or cables either directly buried or in duct or conduit, FAA underground communications and Navigational Aid facilities, and Airport underground electrical and communication facilities. The Contractor shall notify the City Engineer at least ***24 hours*** prior to performing any work in the vicinity of such facilities.

Repair of pipes due to accidental or convenience removals (including equipment conflicts) shall be at the expense of the Contractor and no additional compensation will be allowed.

Payment for providing a Utility Locate Company and coordinating with the Airport, the FAA, and utility companies to locate and mark all utility mains, services, and service laterals including utility depths, within the project area, shall be as included in the price paid for all items listed in the Proposal and no additional compensation will be made.

Contractor shall adhere to all USA-North rules and regulations. Contractor shall be responsible for protecting all utility facilities (MH lids, water valves, gas valves, etc).

10-1.07 UNDERGROUND OBSTRUCTIONS

Other than utility work identified on the Plans, the removal and relocation of all underground obstructions, including but not limited to sprinkler systems, water mains or electrical conduits shall also be the responsibility of the Contractor and no additional compensation will be allowed therefore.

Repair of pipes, electrical conduits and other appurtenances due to accidental or convenience removals shall be at the sole expense of the Contractor.

10-1.08 EXAMINATION OF SITE

Before submitting a Bid, each Bidder shall carefully examine the Plans and Specifications relating hereto. He/she shall also visit the site of the proposed work and shall fully inform himself/herself as to all the existing conditions

relating to the construction and related labor so that he/she may fully understand the facilities, difficulties, restrictions attendant on the execution of the work, limitations applying to the work, and he/she shall estimate and include in his/her Bid a sum sufficient to cover the cost of all items which are required to attain the completed conditions contemplated in the project.

10-1.09 SUBMITTALS/DRAWINGS OF RECORD/CRITERIA FOR FURNISHING PLANS AND SPECIFICATIONS TO CONTRACTOR

The Contractor shall review, stamp, and sign with his/her approval and submit, with promptness and in orderly sequence so as to cause no delay in the work or in the work of any Contractor, all shop drawings and samples required by the Contract Documents or subsequently by the City Engineer as covered by modifications. Shop drawings and samples shall be properly identified as specified, or as the City Engineer may require. At the time of submission, the Contractor shall especially inform the City Engineer in writing of any deviation in the shop drawings or samples from the requirements of the Contract Documents (the mere inclusion of the information is not sufficient notice).

Shop drawings, including manufacturer's literature, catalog cuts, or other printed material shall be entitled with the name of the product on each sheet and shall otherwise be identified by listing the particular Division, Section Article or reference of the work pertaining thereto. Differing items shall not be submitted on the same sheet.

For all shop drawings, submit one reproducible copy with one print of each drawing, rolled in a mailing tube and fully protected for shipment. Provide a clear space of sufficient size for stamping and comments on each shop drawing. For the purpose of these Specifications, a reproducible copy shall mean the original tracing or a legible copy on vellum or mylar.

The City Engineer shall annotate and stamp the reproducible and shall forward same to the Contractor’s printer, who shall make and return three prints plus the original tracing to the City Engineer. Additional prints required by the Contractor shall be forwarded to the Contractor. The cost of printing and mailing are the responsibility of the Contractor and no additional compensation shall be allowed therefore.

Unless otherwise specified, for standard manufactured items, submit six copies of manufacture's catalog or data sheets for each submission, showing illustrations of the item to be furnished, scaled details, sized, dimensions, performance characteristics, wiring diagrams, controls and other pertinent information. Two copies of a submission shall be returned to the Contractor approved by the City Engineer as noted on the documents. The City Engineer will retain one copy and the remaining copies will be distributed to the City Inspector.

The foregoing procedure does not preclude informal reviews of shop drawings prepared by the fabricator for reinforcing steel, miscellaneous iron, structural steel, by the Structural Engineer or for mechanical and electrical components by the Mechanical and Electrical Engineer. No distribution of shop drawings and setting drawings, except as noted, shall be permitted.

By approving and submitting shop drawings and samples, the Contractor thereby represents that he/she has determined and verified all field measurements, field construction criteria, materials, catalog number and similar data, or shall do so, and that he/she has checked and coordinated each shop drawing and sample with the requirements of the work and the Contract Documents.

Allow two weeks minimum for review. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. Allow one week for reprocessing each submittal.

No extension of Contract time will be authorized because of failure to transmit submittals sufficiently in advance of the work to permit processing.

The City Engineer shall review and approve any shop drawings and samples with reasonable promptness so as to cause no delay, but only for conformance with the design concept of the project and with the information given in the Contract Documents. The City Engineer's approval of a separate item shall not indicate approval of an assembly in which the item functions.

The Contractor shall make any corrections required by the City Engineer and shall resubmit the required number of corrected copies of shop drawings or new samples until approved. The Contractor shall direct specific attention in writing or on resubmitted shop drawings to revisions other than the correction requested by the City Engineer on previous submissions. Corrected shop drawings shall be resubmitted in the same manner as called for above.

The City Engineer's approval of shop drawings or samples shall not relieve the Contractor of responsibility for any deviation from the requirements of the Contract Documents unless the Contractor has specifically informed the City Engineer in writing of such deviation at the time of the submission, and the City Engineer has given written approval to the specified deviation; nor shall the City Engineer's approval relieve the Contractor form responsibility for errors or omissions in the shop drawings or samples.

No portion of the work requiring a shop drawing submission, including ordering of materials, shall be commenced until the submission has be approved by the City Engineer. All such portions of the work shall be in accordance with approved shop drawings and samples. Any work placed without submittals being made shall be replaced by Contractor at his/her own expense, if directed by the City Engineer. Whenever work is specified to conform to approved samples on file in the office of the City Engineer, conformance shall be required in all respects and the City Engineer's decision in respect to such conformity shall be final.

Where Specifications require manufacturer's printed installation directions, submit duplicate copies of such directions for approval.

The Contractor shall provide and maintain an up-to-date complete "**RECORD DRAWING**" record on a separate set of construction Plans which shall show every change from the original drawings and Specifications. Prints for this purpose may be obtained from the City Engineer. This set of drawings is to be kept on the site and to be used only as a record set.

These Plans shall also serve as work progress sheets, and the Contractor shall make neat and legible annotations thereon daily as the work proceeds, showing the work as actually installed. These drawings shall be available at all times for inspection and to be kept in a location designated by the City Engineer.

At the project pre-construction meeting, the City Engineer shall furnish **two sets** of the Plans and Specifications to the Contractor and **an additional set** for each of the listed Subcontractors. If additional sets are requested, the Contractor will be **charged for any extra sets** requiring reproduction and binding at the rate specified in the Notice to Bidders.

On or before the date of final inspection, the Contractor shall deliver the corrected and completed "**RECORD DRAWING**" to the City Engineer. Contractor shall furnish in duplicate two binders of all manufacturers' literature brochures, manuals, parts list, instructions, etc., for all electrical and mechanical equipment as required to be furnished and installed by the Contractor. Submissions of this literature in a haphazard method will not be acceptable. **Failure to submit "RECORD DRAWING" shall be cause to withhold final payment and not accept the project.**

Record Plans are required under Section 10-1.13 and may be recorded and submitted on a CD or DVD.

The **"Record Drawing"** shall be accurate and up-to-date with approval of the City Engineer before each progress payment shall be made.

10-1.10 WATERING

Watering, if any, shall conform to the provisions in Section 17, "Watering" of the Standard Specifications, except that full compensation for developing water supply shall be considered as included in the prices paid for the various Contract items of work involving the use of water and no separate payment will be made. Where applicable, City of Salinas Code Chapter 36A Water Conservation will take priority.

10-1.11 CONSTRUCTION EASEMENTS

Any work to be done on private properties or requiring access through private properties **shall not** be done until the City has acquired easements or right-of-entry from the property owner. Prior to starting such work, the Contractor shall verify with the City Engineer that such authority has been granted.

The Contractor will confine his/her operations within the limitations of construction easements or limits as shown on the drawings. If the Contractor's operations result in damage to plantings or any other privately-owned facility outside the limitations of the construction easements or public right-of-way, the Contractor shall, at his/her expense, repair such damage or indemnify the owner of the damaged property.

If the Contractor negotiates with property owners for use of land for construction operations outside the limits of the construction easements, he/she shall do so at his/her own risk and the City will assume no liability for such use of private property. All agreements between the Contractor and private property owners shall be in writing. The Contractor shall commence no work outside the construction easements until copies of such agreements are furnished to the City.

10-1.12 PARTIAL PAYMENTS AND RETENTION

The Contractor's attention is directed to Section 9-1.06 Partial Payments of the City's Standard Specifications.

The City shall retain **5%** of such estimated value of the work done and **5%** of the value of materials so estimated to have been furnished and delivered and unused and furnished and stored as aforesaid as part security for the fulfillment of the Contract by the Contractor.

The Contractor shall submit Subcontractor and/or suppliers waiver of liens as required under Civil Code Article 8122-8138. The waiver shall be "conditional" before payment and "unconditional" after payment on forms set forth in the statute.

As provided in Section 22300 of the Public Contract Code and Section 10263 of the Government Code, Contractor may request that any retention to be withheld during the course of a project is paid to an escrow agent at the Contractor's expense. Should the Contractor make such request, it will be required that an appropriate Escrow Agreement as provided in said government codes be fully executed prior to any payment of retention withheld or to be withheld. The City Engineer or his/her delegate, is authorized to execute said Escrow Agreement on behalf of the City.

10-1.13 CONSTRUCTION SURVEYS AND STAKING

The City of Salinas shall only provide the horizontal and vertical control points as identified on the Horizontal and Vertical Control Plan. The Contractor shall be responsible for providing the appropriate construction staking to establish lines and grades as necessary to permit satisfactory completion of the Contract work by the Contractor. Payment for all necessary construction staking shall be as included in the price paid for item Construction Survey and Staking listed in the Proposal.

10-1.14 CONSTRUCTION STAKING REQUEST

Construction staking requests do not apply for this contract.

The Contractor shall preserve and maintain the existing control points, and shall lay out there from the work he/she is to perform under the Contract. The Engineer may, at his own discretion, make periodic checks of the grades

and alignment set by the Contractor. The Contractor shall be held responsible for the conformance of the completed work to the lines, grades and benchmarks, and any construction not in accordance with the established grades and/or alignment shall be replaced without additional cost to the Owner.

10-1.15 LINES AND GRADES

The Contractor shall establish lines and grades necessary to permit satisfactory completion of the Contract work. The following controls shall be placed as a minimum, for the work under this Contract:

1. Pipes - One reference point shall be set at each end of mains and laterals and at 25' intervals for pipe centerline. Each point shall be for both horizontal and vertical control.
2. Pavement lines and grades - The pavement edges shall be provided at 25' intervals, at grade breaks, and at 10' or 20' intervals on vertical curves and on radii returns.
3. Street structural Sections - Control points shall be provided for the centerline of the roadway at 50' intervals, at curves and grade breaks, and at 10' or 25' intervals on vertical curves.

These points shall be for control of sub grade and proposed centerline grade as shown on the Plans.

The City Engineer shall provide no additional reference points for the described work other than the control points identified on the Plans. The Contractor shall preserve and maintain these control points, and shall lay out the work he/she is to perform under the Contract from there. The Contractor shall be held responsible for the conformance of the completed work to the lines, grades, and benchmarks established.

10-1.16 RESTAKING

All replacement or restoration of control points when performed by the City Engineer will be charged against the Contractor.

10-1.17 MATERIAL TESTING

The City of Salinas will provide the appropriate quality assurance material testing and acceptance testing for the project. The Contractor shall provide a Contractor Quality Control Program as specified in Section 100 of the General Provisions.

Payment for re-testing of failed test will be the Contractor's responsibility.

10-1.18 ARBITRATION

Your attention is directed to Section 9-1.10 "Arbitration," of the Standard Specifications. In the event of a dispute as to whether the conditions materially differ or do involve hazardous waste, the Contractor shall continue to proceed with all work to be performed under the Contract and shall retain all rights provided either by Contract or by law which pertain to the resolution of any dispute or protest.

The last paragraph in Section 9-1.10, "Arbitration", of the Standard Specifications is amended to read:

> Arbitration shall be initiated by a Complaint in Arbitration made in compliance with the requirements of said regulations. A Complaint in Arbitration by the Contractor shall be made not later than ***180 calendar days*** after the date of service in person or by mail on the Contractor of the final written decision by the Department of the claim.

10-1.19 NOTICE OF POTENTIAL CLAIM

Section 9-1.04 "Notice of Potential Claim", of the Standard Specifications is amended to read:

> Section 9-1.04 Notice of Potential Claim – The Contractor shall not be entitled to the payment of any additional compensation for any act, or failure to act, by the City Engineer, including

failure or refusal to issue a change order, or for the happening of any event, thing, occurrence, or other cause, unless he/she shall have given the City Engineer due written notice of potential claim as hereinafter specified. Compliance with this section shall not be a prerequisite as to matters within the scope of the protest provisions in Section 4-1.03, "Changes", or Section 8-1.06, "Time of Completion", or the notice provisions in Section 5-1.116, "Differing Site Conditions", or Section 8-1.07, "Liquidated Damages", or Section 8-1.10, "Utility and Non-Highway Facilities", nor to any claim which is based on difference in measurements or errors of computation as to Contract quantities.

The written notice of potential claim shall be submitted to the City Engineer prior to the time that the Contractor performs the work giving rise to the potential claim for additional compensation, if based on an act or failure to act by the City Engineer, or in all other cases within ***15 calendar days*** after the happening of the event, things, occurrence, or other cause, giving rise to the potential claim.

The written notice of potential claim shall be submitted on Form CEM-6021 furnished by the Department (See Part C of these specifications) and shall be certified with reference to the California False Claims Act, Government Code Sections 12650 – 12655. The notice shall set forth the reasons for which the Contractor believes additional compensation will or may be due and the nature of the costs involved. Unless the amount of the potential claim has been stated in the written notice, the Contractor shall, within **15 days** of submitting said notice, furnish an estimate of the cost of the affected work and impacts, if any, on project completion. Said estimate of costs may be changed or updated by the Contractor when conditions have changed. When the affected work is completed, the Contractor shall submit substantiation of his/her actual costs. Failure to do so shall be sufficient cause for denial of any claim subsequently filed on the basis of said notice of potential claim.

It is the intention of this section that differences between the parties arising under and by virtue of the Contract are brought to the attention of the City Engineer at the earliest possible time in order that such matters may be settled, if possible, or other appropriate action promptly taken. The Contractor hereby agrees that he/she shall have no right to additional compensation for any claim that may be based on such act, failure to act, event, thing or occurrence for which no written notice of potential claim as herein required was filed.

Should the Contractor, in connection with or subsequent to the assertion of a potential claim, request inspection and copying of documents or records in the possession of the City that pertain to the potential claim, Contractor shall make its records of the project, as deemed by the City to be pertinent to the potential claim, available to the City for inspection and copying.

Submission of a claim, properly certified, with all required supporting documentation, and written rejection or denial of all or part of the claim by owner, is a condition precedent to any action, proceeding, litigation, suit or demand for arbitration by Contractor.

10-1.20 CLAIMS

Submission of a claim, properly certified with all required supporting documentation, and written rejection or denial of all or part of the claim by the City Engineer, is a condition precedent to any action, proceeding, litigation, suitor demand for arbitration by Contractor. The Contractor's attention is directed to the Provisions in Section 9-1.07B, "Final Payment and Claims", of the State Standard Specifications. Delete the fifth paragraph entirely and insert the following:

"The City of Salinas Council shall make the final determination of any claims which remain in dispute after completion of claim review by the Development and Engineering Services Department administering the Contract. The Director of Development and Engineering Services Department shall review such claims and make a written recommendation thereon. The Contractor may meet with the Director of Development and Engineering Services Department to make a presentation in support of such claims".

Payment shall be borne by the Contractor and no additional compensation shall be allowed therefore.

10-1.21 PUBLIC CONTRACTS CODE 9204 PUBLIC WORKS PROJECT

Contract Dispute Procedures
Sections 9204(e) and (g) of the California Public Contract Code ("PCC") provides that the text or a summary of PCC 9204, effective January 1, 2017, shall be included in the plans and specifications for any public works projects that may give rise to a claim under this section and that Section 9204 applies to contracts for public works projects entered into on or after January 1, 2017. In accordance therewith, City of Salinas hereby provides notice and includes the statutory text:

10-1.21A GENERAL

(a) The Legislature finds and declares that it is in the best interests of the state and its citizens to ensure that all construction business performed on a public works project in the state that is complete and not in dispute is paid in full and in a timely manner.
(b) Notwithstanding any other law, including, but not limited to, Article 7.1 (commencing with Section 10240) of Chapter 1 of Part 2, Chapter 10 (commencing with Section 19100) of Part 2, and Article 1.5 (commencing with Section 20104) of Chapter 1 of Part 3, this section shall apply to any claim by a contractor in connection with a public works project.
(c) For purposes of this section:
(1) "Claim" means a separate demand by a contractor sent by registered mail or certified mail with return receipt requested, for one or more of the following:
(A) A time extension, including, without limitation, for relief from damages or penalties for delay assessed by a public entity under a contract for a public works project.
(B) Payment by the public entity of money or damages arising from work done by, or on behalf of, the contractor pursuant to the contract for a public works project and payment for which is not otherwise expressly provided or to which the claimant is not otherwise entitled.
(C) Payment of an amount that is disputed by the public entity.
(2) "Contractor" means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who has entered into a direct contract with a public entity for a public works project.
(3) (A) "Public entity" means, without limitation, except as provided in subparagraph (B), a state agency, department, office, division, bureau, board, or commission, the California State University, the University of California, a city, including a charter city, county, including a charter county, city and county, including a charter city and county, district, special district, public authority, political subdivision, public corporation, or nonprofit transit corporation wholly owned by a public agency and formed to carry out the purposes of the public agency.
(B) "Public entity" shall not include the following:
(i) The Department of Water Resources as to any project under the jurisdiction of that department.
(ii) The Department of Transportation as to any project under the jurisdiction of that department.
(iii) The Department of Parks and Recreation as to any project under the jurisdiction of that department.
(iv) The Department of Corrections and Rehabilitation with respect to any project under its jurisdiction pursuant to Chapter 11 (commencing with Section 7000) of Title 7 of Part 3 of the Penal Code.
(v) The Military Department as to any project under the jurisdiction of that department.
(vi) The Department of General Services as to all other projects.
(vii) The High-Speed Rail Authority.

(4) “Public works project” means the erection, construction, alteration, repair, or improvement of any public structure, building, road, or other public improvement of any kind.
(5) “Subcontractor” means any type of contractor within the meaning of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code who either is in direct contract with a contractor or is a lower tier subcontractor.
(d) (1) (A) Upon receipt of a claim pursuant to this section, the public entity to which the claim applies shall conduct a reasonable review of the claim and, within a period not to exceed 45 days, shall provide the claimant a written statement identifying what portion of the claim is disputed and what portion is undisputed. Upon receipt of a claim, a public entity and a contractor may, by mutual agreement, extend the time period provided in this subdivision.
(B) The claimant shall furnish reasonable documentation to support the claim.
(C) If the public entity needs approval from its governing body to provide the claimant a written statement identifying the disputed portion and the undisputed portion of the claim, and the governing body does not meet within the 45 days or within the mutually agreed to extension of time following receipt of a claim sent by registered mail or certified mail, return receipt requested, the public entity shall have up to three days following the next duly publicly noticed meeting of the governing body after the 45-day period, or extension, expires to provide the claimant a written statement identifying the disputed portion and the undisputed portion.
(D) Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. If the public entity fails to issue a written statement, paragraph (3) shall apply.
(2) (A) If the claimant disputes the public entity’s written response, or if the public entity fails to respond to a claim issued pursuant to this section within the time prescribed, the claimant may demand in writing an informal conference to meet and confer for settlement of the issues in dispute. Upon receipt of a demand in writing sent by registered mail or certified mail, return receipt requested, the public entity shall schedule a meet and confer conference within 30 days for settlement of the dispute.
(B) Within 10 business days following the conclusion of the meet and confer conference, if the claim or any portion of the claim remains in dispute, the public entity shall provide the claimant a written statement identifying the portion of the claim that remains in dispute and the portion that is undisputed. Any payment due on an undisputed portion of the claim shall be processed and made within 60 days after the public entity issues its written statement. Any disputed portion of the claim, as identified by the contractor in writing, shall be submitted to nonbinding mediation, with the public entity and the claimant sharing the associated costs equally. The public entity and claimant shall mutually agree to a mediator within 10 business days after the disputed portion of the claim has been identified in writing. If the parties cannot agree upon a mediator, each party shall select a mediator and those mediators shall select a qualified neutral third party to mediate with regard to the disputed portion of the claim. Each party shall bear the fees and costs charged by its respective mediator in connection with the selection of the neutral mediator. If mediation is unsuccessful, the parts of the claim remaining in dispute shall be subject to applicable procedures outside this section.
(C) For purposes of this section, mediation includes any nonbinding process, including, but not limited to, neutral evaluation or a dispute review board, in which an independent third party or board assists the parties in dispute resolution through negotiation or by issuance of an evaluation. Any mediation utilized shall conform to the timeframes in this section.
(D) Unless otherwise agreed to by the public entity and the contractor in writing, the mediation conducted pursuant to this section shall excuse any further obligation under Section 20104.4 to mediate after litigation has been commenced.
(E) This section does not preclude a public entity from requiring arbitration of disputes under private arbitration or the Public Works Contract Arbitration Program, if mediation under this section does not resolve the parties’ dispute.

(3) Failure by the public entity to respond to a claim from a contractor within the time periods described in this subdivision or to otherwise meet the time requirements of this section shall result in the claim being deemed rejected in its entirety. A claim that is denied by reason of the public entity's failure to have responded to a claim, or its failure to otherwise meet the time requirements of this section, shall not constitute an adverse finding with regard to the merits of the claim or the responsibility or qualifications of the claimant.
(4) Amounts not paid in a timely manner as required by this section shall bear interest at 7 percent per annum.
(5) If a subcontractor or a lower tier subcontractor lacks legal standing to assert a claim against a public entity because privity of contract does not exist, the contractor may present to the public entity a claim on behalf of a subcontractor or lower tier subcontractor. A subcontractor may request in writing, either on his or her own behalf or on behalf of a lower tier subcontractor, that the contractor present a claim for work which was performed by the subcontractor or by a lower tier subcontractor on behalf of the subcontractor. The subcontractor requesting that the claim be presented to the public entity shall furnish reasonable documentation to support the claim. Within 45 days of receipt of this written request, the contractor shall notify the subcontractor in writing as to whether the contractor presented the claim to the public entity and, if the original contractor did not present the claim, provide the subcontractor with a statement of the reasons for not having done so.
(e) The text of this section or a summary of it shall be set forth in the plans or specifications for any public works project that may give rise to a claim under this section.
(f) A waiver of the rights granted by this section is void and contrary to public policy, provided, however, that (1) upon receipt of a claim, the parties may mutually agree to waive, in writing, mediation and proceed directly to the commencement of a civil action or binding arbitration, as applicable; and (2) a public entity may prescribe reasonable change order, claim, and dispute resolution procedures and requirements in addition to the provisions of this section, so long as the contractual provisions do not conflict with or otherwise impair the timeframes and procedures set forth in this section.
(g) This section applies to contracts entered into on or after January 1, 2017.
(h) Nothing in this section shall impose liability upon a public entity that makes loans or grants available through a competitive application process, for the failure of an awardee to meet its contractual obligations.
(i) This section shall remain in effect only until January 1, 2020, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2020, deletes or extends that date."

10-1.22 CONSTRUCTION AREA SIGNS

The base material of construction area signs shall not be plywood and shall be in accordance with the Provisions in Section 12-3.06 of the State Standard Specifications and these Special Provisions.

The base material of construction area signs shall not be plywood and shall be in accordance with Section 12-3.06 of the Standard Specifications and these Special Provisions, with Type III illumination.

Payment shall be as included in the price paid for all items listed in the Proposal and no additional compensation will be made.

10-1.23 PROTECTION OF SITE AND PUBLIC SAFETY

The Contractor shall take all necessary precautions to prevent damage to the adjacent fencing, roadway, buildings and other existing improvements, etc., during the progress of his/her work and shall be required to make any repairs resulting from his/her negligence and no additional compensation shall be made.

Attention is directed to Section 7-1.08 "Public Convenience" and 7-1.09 "Public Safety" of the Standard Specifications and these Special Provisions. Safe and adequate pedestrian zones and crossing of work shall be maintained at all times unless otherwise approved by the City Engineer.

10-1.24 DUST CONTROL

Dust Control shall be as specified in Section 10 of the State Standard Specifications, except as herein modified.

Payment for dust control shall be considered as included in the prices paid for the various Contract items of work as listed in the proposal and no additional compensation shall be allowed therefore.

10-1.25 EXISTING HIGHWAY FACILITIES

The work performed in connection with various existing highway facilities, including removals, repairs, disposal, salvage, relocation and/or reconstruction shall conform to the provisions in Section 15, "Existing Highway Facilities", of the Standard Specifications and these Special Provisions.

Miscellaneous items of work not specifically included in the Proposal's item of works which are shown and/or mentioned on the Plans or are necessary, whether shown or not, for the construction of various improvements, including all removals, modifications shall be considered as included in prices paid for the various Contract items of work listed in the Proposal and no additional compensation shall be allowed therefore.

10-1.26 SCHEDULE OF VALUES

The Schedule of Values shall conform to the Provisions in Section 86-1.03, of the City of Salinas Standard Specifications and these Special Provisions.

The Contractor shall furnish a Schedule of Values for each Contract Lump Sum item of work described within these Special Provisions and where noted in these Special Provisions.

The Schedule of Values shall be submitted to the City Engineer for approval within ***15 calendar days*** after the Contract has been approved. The Schedule of Values shall be approved, in writing, by the City Engineer before any partial payment for any of the lump sum items of work shall be made.

10-1.27 PRESERVATION OF PROPERTY

The Contractors attention is directed to the Provisions in Section 7 1.11, “Preservation of Property”, of the State Standard Specifications, the Technical Specifications, the General Provisions, the Plans, and these Special Provisions.

Existing trees, shrubs, and other plants, that are not to be removed, and are injured or damaged by reason of the Contractor’s operations, shall be replaced by the Contractor in accordance with the requirements within the Provisions in Section 20 4.07, “Replacement”, of the State Standard Specifications.

Damaged or injured plants shall be removed and disposed of outside the City of Salinas right-of-way in accordance with the Provisions in Section 7 l.13 of the State Standard Specifications. At the option of the Contractor, removed trees and shrubs may be reduced to chips. The chipped material shall be spread within the highway right-of-way at locations designated by the City Engineer.

Replacement planting of injured or damaged trees, shrubs, and other plants shall be completed not less than ***20 working days*** prior to acceptance of the Contract. Replacement trees, shrubs, and other plants shall be watered as necessary to maintain the trees, shrubs, and other plants in a healthy condition.

10-1.28 STORM WATER POLLUTION PREVENTION PLAN

The Contractor shall prepared and submit to the City Engineer for review and approval, a Storm Water Pollution Prevention Plan (SWPPP). As part of the SWPPP submittal the Contractor shall prepare a

Water Pollution Control Program (WPCP) showing the Best Management Practice (BMP's) for this project. The Contractor shall be responsible for providing a Qualified SWPPP Developer (QSD); the QSD shall be responsible for developing the SWPPP in accordance with General Permit Order No. 2009-0009-DWQ. The Contractor shall be responsible for obtaining General Permit coverage and for all associated fees. The Contractor shall file all Permit Registration Documents (PRDs) required by the General Permit. The Contractor shall be responsible for providing a Qualified SWPPP Practitioner (QSP); the OSP shall be responsible for overseeing the implementation and inspection of the BMP's. The Contractor shall provide and designate a Data Submitter who will be responsible for posting and editing forms on the State Water Board's Stormwater Multi-Application & Report Tracking (SMART) system website.

The General Permit can be obtained from: http://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.shtml

Water pollution control work shall conform at a minimum, to the requirements within the General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities Order No. 2009-0009-DWQ, the Provisions in Section 7 1.01G, "Water Pollution", of the State Standard Specifications, the City of Salinas Standard Plan No. 59 and 59A, Specifications Item P-156, and these Special Provisions.

In addition water pollution control work shall at a minimum conform to the requirements in the Construction Contractor's Guide and Specifications of the Caltrans Storm Water Quality Handbooks, dated March 2003, and addenda thereto issued up to and including the date of advertisement of the project, hereafter referred to as the "Handbook". Copies of the Handbook may be obtained from the **Department of Transportation, Material Operations Branch, Publication Distribution Unit, 1900 Royal Oaks Drive, Sacramento, California, 95815, Telephone: (916) 445 3520.**

The Contractor shall become fully informed of, and comply with the applicable Provisions of the Handbook and Federal, State, City of Salinas, and local regulations that govern the Contractor's operations and storm water discharges from both the project site and areas of disturbance outside the project limits during construction.

Unless arrangements for disturbance of areas outside the project limits are made by the City Engineer and made part of the Contract, it is expressly agreed that the City of Salinas assumes no responsibility to the Contractor or property owner whatsoever with respect to any arrangements made between the Contractor and the property owner to allow disturbance of areas outside the project limits.

The Contractor shall be responsible for the costs and for any liability imposed by law as a result of the Contractor's failure to comply with the requirements set forth within the Provisions in Section "Prepare Storm Water Pollution Prevention Plan" including, but not limited to, compliance with the applicable Provisions of the Handbook and Federal, State and local regulations. For the purposes of this paragraph, costs and liabilities include but are not limited to fines, penalties, and damages whether assessed against the State or the Contractor, including those levied under the Federal Clean Water Act and the State Porter Cologne Water Quality Act.

In addition to any remedy authorized by law, so much of the money due the Contractor under the Contract that shall be considered necessary by the Development and Engineering Services Department may be retained by the State of California until disposition has been made of the costs and liabilities.

The retention of money due the Contractor shall be subject to the following:

1. The Development and Engineering Services Department shall give the Contractor ***30 calendar days*** notice of its intention to retain funds from any partial payment which may become due to the Contractor prior to acceptance of the Contract. Retention of funds from any payment made after acceptance of the Contract may be made without prior notice to the Contractor.

2. No retention of additional amounts out of partial payments shall be made if the amount to be retained does not exceed the amount being withheld from partial payments pursuant to the Provisions in Section 9 1.06, "Partial Payments", of the City of Salinas Standard Specifications.

3. If the Development and Engineering Services Department has retained funds and it is subsequently determined that the State is not subject to the costs and liabilities in connection with the matter for which the retention was made, the Development and Engineering Services Department shall be liable for interest on the amount retained at the legal rate of interest for the period of the retention.

Conformance with the requirements of the Provisions in Section 7-1.01G, "Water Pollution Control", of the City of Salinas Standard Specifications shall not relieve the Contractor from the Contractor's responsibilities, as provided in the Provisions in Section 7 1.11, "Preservation of Property", and Section 7 1.12, "Responsibility for Damage", of the State Standard Specifications.

I. WATER POLLUTION CONTROL PROGRAM PREPARATION, APPROVAL AND UPDATES: As part of the water pollution control work, a Water Pollution Control Plan, hereafter referred to as the "WPCP", is required for this Contract and shall be prepared by the Contractor. The Contractor shall submit a Best Management Practice Plan for approval. The BMP plan must be in compliance with the NPDES General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities Order No. 2009-0009-DWQ requirements and the City of Salinas Best Management Practice Standard Plan No.'s 59 and 59A. The WPCP shall conform to the requirements in the Provisions in Section 7 1.01G, "Water Pollution", State Standard Specifications, the requirements in the Handbook, these Special Provisions the Technical Specifications, and the Construction General Permit Order No. R3-2012-0005; NPDES Permit No. CA 0049981.

No work having potential to cause water pollution, as determined by the City Engineer, shall be performed until the City Engineer has approved the WPCP.

Within ***15 calendar days*** after the approval of the Contract, the Contractor shall **submit 6 copies of the WPCP** to the City Engineer. The Contractor shall allow ***7 calendar days*** for the City Engineer to review the WPCP. If revisions are required, as determined by the City Engineer, the Contractor shall revise and resubmit the WPCP within ***7 calendar days*** of receipt of the City Engineer's comments and shall allow ***7 calendar days*** for the City Engineer to review the revisions. Upon the City Engineer's approval of the WPCP, 3 additional copies of the WPCP incorporating the required changes shall be submitted to the City Engineer. Minor changes or clarifications to the initial submittal may be made and attached as amendments to the WPCP. In order to allow construction activities to proceed, the City Engineer may conditionally approve the WPCP while minor revisions or amendments are being completed.

The objectives of the WPCP shall be to identify pollution sources that may adversely affect the quality of storm water discharges associated with the project and to identify, construct, implement, and maintain water pollution control measures, hereafter referred to as control measures, to reduce to the extent feasible pollutants in storm water discharges from the construction site during construction under this Contract.

The WPCP shall incorporate control measures in the following categories:

1. Soil stabilization practices;
2. Sediment control practices;
3. Sediment tracking control practices;
4. Wind erosion control practices; and
5. Non-storm water management and waste management and disposal control practices.

Specific objectives and minimum requirements for each category of control measures are contained in the Handbook.

The Contractor shall consider the objectives and minimum requirements presented in the Handbook for each of the above categories. When minimum requirements are listed for any category, the Contractor shall incorporate into the WPCP and implement on the project, 1 or more of the listed minimum controls required in order to meet the pollution control objectives for the category. In addition, the Contractor shall consider other control measures presented in the Handbook and shall incorporate into the WPCP and implement on the project the control

measures necessary to meet the objectives of the WPCP. The Contractor shall document the selection process in accordance with the procedure specified in the Handbook.

The following Contract items of work, as shown on the project Plans, shall be incorporated into the WPCP as critical temporary control measures, 203016 (Erosion Control Type D). The Contractor shall consider other control measures to supplement these critical temporary control measures when necessary to meet the pollution control objectives of the WPCP.

The following Contract items of work, as shown on the project Plans, shall be incorporated into the WPCP as permanent post-construction control measures with temporary silt fence. These control measures shall be utilized as construction period control measures. Attention is directed to the Provisions in "Order of Work" of these Special Provisions. The Contractor shall consider other control measures to supplement these permanent, post-construction control measures when necessary to meet the pollution control objectives of the WPCP. The Contractor shall maintain and protect the permanent control measures throughout the duration of the project and shall restore these controls to the lines and grades shown on the Plans prior to acceptance of the project.

The WPCP shall include, but not be limited to, the following items as described in the Handbook:

1. Project description and Contractor's certification;
2. Project information;
3. Pollution sources, control measures, and water pollution control Plans; and
4. Amendments, if any.

The Contractor shall amend the WPCP, graphically and in narrative form, whenever there is a change in construction activities or operations which may affect the discharge of significant quantities of pollutants to surface waters, ground waters, municipal storm drain systems, or when deemed necessary by the City Engineer. The WPCP shall also be amended if the WPCP has not achieved the objective of reducing pollutants in storm water discharges. Amendments shall show additional control measures or revised operations, including those in areas not shown in the initially approved WPCP, which are required on the project to control water pollution effectively. Amendments to the WPCP shall be submitted for review and approved by the City Engineer in the same manner specified for the initially approved WPCP. Amendments shall be dated and attached to the on-site WPCP document.

The Contractor shall keep a copy of the WPCP, together with updates, revisions, and amendments at the project site.

II. WPCP IMPLEMENTATION: Upon approval of the WPCP, the Contractor shall be responsible throughout the duration of the project for installing, constructing, inspecting, and maintaining the control measures included in the WPCP and any amendments thereto and for removing and disposing of temporary control measures in accordance with the General Permit, and for all posting and editing of documents through the SMART system. Unless otherwise directed by the City Engineer or specified in these Special Provisions, the Contractor's responsibility for WPCP implementation shall continue throughout any temporary suspension of work ordered in accordance with the Provisions in Section 8 1.05, "Temporary Suspension of Work", of the State Standard Specifications. Requirements for installation, construction, inspection, maintenance, removal and disposal of control measures are specified in the Handbook and these Special Provisions.

Soil stabilization practices and sediment control measures, including minimum requirements, shall be provided.

Implementation of soil stabilization practices and sediment control measures for soil-disturbed areas of the project site shall be completed, except as provided for below, no later than ***14 consecutive calendar days*** prior to the beginning of the winter season or upon start of applicable construction activities for projects which begin either during or within ***14 consecutive calendar days*** of the winter season.

Throughout the winter season, the active, soil-disturbed area of the project site shall be no more than 2.5 acres. The City Engineer may approve, on a case-by-case basis, expansions of the active, soil-disturbed area limit. The Contractor shall demonstrate the ability and preparedness to fully deploy soil stabilization practices and sediment

control measures to protect soil-disturbed areas of the project site before the onset of precipitation. The Contractor shall maintain a quantity of soil stabilization and sediment control materials on site equal to **125%** of that sufficient to protect unprotected, soil-disturbed areas on the project site and shall maintain a detailed plan for the mobilization of sufficient labor and equipment to fully deploy control measures required to protect unprotected, soil-disturbed areas on the project site prior to the onset of precipitation. The Contractor shall include a current inventory of control measure materials and the detailed mobilization Plan as part of the WPCP.

Throughout the winter season, soil-disturbed areas of the project site shall be considered to be nonactive whenever soil-disturbing activities are expected to be discontinued for a period of ***20 or more calendar days*** and the areas are fully protected. Areas that shall become nonactive either during the winter season or within ***20 calendar days*** thereof shall be fully protected with soil stabilization practices and sediment control measures within ***10 calendar days*** of the discontinuance of soil disturbing activities or prior to the onset of precipitation, whichever is first to occur.

Throughout the winter season, active soil-disturbed areas of the project site shall be fully protected at the end of each day with soil stabilization practices and sediment control measures unless fair weather is predicted through the following workday. The Contractor on a daily basis shall monitor the weather forecast. The National Weather Service forecast shall be used, or an alternative weather forecast proposed by the Contractor may be used if approved by the City Engineer. If precipitation is predicted prior to the end of the following workday, construction scheduling shall be modified, as required, and the Contractor shall deploy functioning control measures prior to the onset of the precipitation.

The Contractor shall implement, year-round and throughout the duration of the project, control measures included in the WPCP for sediment tracking, wind erosion, nonstorm water management and waste management and disposal. This specific project shall require that Contractor prevent any concrete, cement slurry of soil or other material to go into the Storm Sewer system. After pouring concrete for foundation and trench, Drum truck shoot and other concrete instruments shall be cleaned in a contained area and disposed of in a proper location.

The City Engineer may order the suspension of construction operations, which create water pollution if the Contractor fails to conform to the requirements of this Section "Water Pollution Control" as determined by the City Engineer.

III. MAINTENANCE: To ensure the proper implementation and functioning of control measures, the Contractor shall regularly inspect and maintain the construction site for the control measures identified in the WPCP. The Contractor shall identify corrective actions and time frames to address any deficient measures or reinitiate any measures that have been discontinued.

The construction site inspection checklist provided in the Handbook shall be used to ensure that the necessary measures are being properly implemented, and to ensure that the control measures are functioning adequately. The Contractor shall submit one copy of each site inspection record to the City Engineer.

During the winter season, inspections of the construction site shall be conducted by the Contractor to identify deficient measures, as follows:

1. Prior to a forecast storm;
2. After all precipitation, which causes runoff capable of carrying sediment from the construction site;
3. At **24 hour** intervals during extended precipitation events; and
4. Routinely, at a minimum of once every 2 weeks.
5. As Required by the General Permit Order No. R3-2012-0005.

If the Contractor or the City Engineer identifies a deficiency in the deployment or functioning of an identified control measure, the deficiency shall be corrected by the Contractor immediately, or by a later date and time if requested by the Contractor and approved by the City Engineer in writing, but not later than the onset of subsequent precipitation events. The correction of deficiencies shall be at no additional cost to the City of Salinas.

IV. SWPPP: The Contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP) before beginning of work and submit to the City Engineer for review and approval. The SWPPP shall be developed in accordance with the following:

1. State Water Resources Control Board (SWRCB) Order No. R3-2012-0005, National Pollutant Discharge Elimination System (NPDES) Permit No. CA0049981, Waste Discharge Requirements (WDR's) for Discharges of Storm Water Runoff Associated with Construction Activity (General Permit).

The SWPPP and BMPs referenced are from the following sources:

The Contractor shall use the CASCA Construction Stormwater Handbook and the San Francisco RWQCB Erosions and Sediment Control Field Manual in the preparation of the SWPPP.

Prior to issuance of the Notice to Proceed, the Contractor shall provide proof of submittal of **Permit Registration Documents** to the Regional Water Quality Control Board (RWQCB) to comply with the General Permit Order No. R3-2012-0005.

V. PAYMENT: Payment for full compensation for conforming to the requirements of this Section and shall include all labor, materials, tools, equipment, Best Management Practice Plan, and other appurtenances required for a complete-in-place Storm Water Prevention Plan as indicated within these Special Provisions and as shown on the Plans. Payment shall be included in the Contract unit price paid per Lump Sum for "IMPLEMENT THE STORM WATER POLLUTION PREVENTION PLAN AND MEASURES" as listed in the Proposal and no additional compensation shall be allowed therefore. **The Contractor shall provide a schedule of values for this item.**

The City Engineer shall retain an amount equal to **25%** of the estimated value of the Contract work performed during estimate periods in which the Contractor fails to conform to the requirements of the Provisions in the Section "Storm Water Pollution Prevention Plan" as determined by the City Engineer.

Retentions for failure to conform to the requirements of the Provisions in the Section "Water Pollution Control" shall be in addition to the other retentions provided for in the Contract. The amounts retained for failure of the Contractor to conform to the requirements of this Section shall be released for payment on the next monthly estimate for partial payment following the date that a WPCP has been implemented and maintained, and water pollution is adequately controlled, as determined by the City Engineer.

10-1.29 MOBILIZATION

Delete Section 11 of the Standard Specifications in its entirety and insert the following:

Mobilization shall conform to the Provisions in the Technical Specifications Section-105 Mobilization\Demobilization.

10-1.30 CLEAN UP

Throughout all phases of construction including suspension of work, and until final acceptance of the project by the City of Salinas Council, the Contractor shall keep the work site clean and free from rubbish and debris. The contractor shall also abate dust nuisance by cleaning, sweeping and sprinkling with water, or other means as necessary. The use of water resulting in mud on public street and or City right-of-way shall not be permitted as a substitute for sweeping or other methods.

Failure of the Contractor to comply with the City Engineer's clean up orders may result in an order to suspend the work until the condition is corrected. **No additional compensation shall be allowed therefore as a result of such suspension.**

SECTION 11
ITEMS OF WORK

SECTION 11-1 GENERAL

All items of work listed in the Proposal Section shall conform to the Technical Specifications, the General Provisions, the Plans, the City of Salinas Standard Specifications, and these Special Provisions.

The Contractor shall refrain from using diesel fuel or solvents of any kind for cleaning tools and equipment in such a manner as to permit spillage of parkways or other improved areas.

SECTION 11-2 REMOVAL AND DISPOSAL/SALVAGE OF EXISTING FACILITIES

11-2.01 GENERAL

The Contractor shall remove all appurtenances as shown on Plans. All removed material shall become the property of the Contractor (unless noted otherwise on the Plans for salvage) and shall be disposed of as provided in Section 7-1.13, "Disposal of Materials Outside the Highway Right-of-Way", of the Standard Specifications.

The Contract unit price paid for the work required, complete-in-place, in accordance with the Plans, the Technical Specifications, the General Provisions, the Standard Specifications and these Special Provisions and the Cited FAA Technical Provisions shall include full compensation for furnishing all labor, materials, tools, equipment, and incidentals, and for doing all the work involved in removing and disposal of various items of materials.

The respective utility companies at their expense, if any, with the proposed improvements under this Contract shall execute all removals, installations, and relocations of underground and aboveground utilities in direct conflict.

All accidental or convenience removals of existing facilities by the Contractor shall be at the <u>expense of the Contractor</u>, and no additional compensation shall be allowed therefore.

Where Bid item for "Existing Facilities" are not included in the Proposal, the work shall be considered as included in the price paid for the various Contract items of work as listed in the Proposal and no additional compensation shall be allowed therefore.

11-2.02 REMOVAL OF ASBESTOS AND HAZARDOUS SUBSTANCES

If applicable, when the presence of asbestos or hazardous substances are not shown on the Plans or indicated in the Special Provisions and the Contractor encounters materials which the Contractor reasonably believes to be asbestos or a hazardous substance as defined in the Provisions in Section 25914.1 of the Health and Safety Code, and the asbestos or hazardous substance has not been rendered harmless, the Contractor may continue work in unaffected areas reasonably believed to be safe. The Contractor shall immediately cease work in the affected area and report the condition to the City Engineer in writing immediately.

In conformance with the Provisions in Section 25914.1 of the Health and Safety Code, removal of asbestos or hazardous substances including exploratory work to identify and determine the extent of the asbestos or hazardous substance shall be performed by separate Contract.

If delay of work in the area delays the current controlling operation, the delay shall be considered a right-of-way delay and the Contractor shall be compensated for the delay in conformance with the Provisions in Section 8-1.09, "Right-of-Way Delays", of the State Standard Specifications.

SECTION 12
MEASUREMENT AND PAYMENT

Except for authorized changes in the work, payment for complete-in-place finished work or improvement shall be made only on the basis of the Contract items of work listed in the Proposal. All other work including the furnishing of labor, materials, tools, equipments and incidentals, provided for in these Specifications and Contract, or required for the proper completion of the work as a whole, for which no separate payment has been provided shall be a supplementary obligation for the Contractor and payment therefore shall be considered included in the prices paid for the various items of work and no additional compensation shall be made.

The Contractor shall submit the progress payment pay request to the Engineer for review and approval. The Engineer will review it within seven (7) calendar days of receipt. The Engineer shall either deny and return the progress payment pay request to the Contractor for correction, or recommend approval and forward it to the Agency for processing. The required attachments to the monthly progress payment pay request shall include:

a. **Certified Payroll Reports**: All current payroll reports and statement of compliance for the Contractors and all subcontractors (to be completed through the date of pay invoice)
b. **Daily Reports**: All current Daily Reports for the Contractor and all subcontractors and owner operators. Daily reports shall contain the name, classification and detailed task listing of all personnel and equipment, including all subcontractors and owner operators (to be completed through the date of pay application)
c. **Record Drawings**: Record drawings shall be complete and current at the time of the monthly pay application. The Engineer in conjunction with the Contractor shall review the current Record Drawings at the time the progress payment request is submitted. If the Engineer determines that the Record Drawings are not complete or current, the Engineer will suspend further review of the pay request until the Contractor updates and/or corrects the Record Drawings. The review and subsequent processing of the payment request will not re-commence until the Engineer determines that the Contractor has corrected the Record Drawings and they are complete and current
d. **Quantity Calculations**: Certified quantity calculations to justify all pay quantities and amount requested
e. **Monthly Schedule**: The contractor shall submit an updated, revised construction schedule to the Engineer with each pay application
f. **Unconditional Waiver of Lien Releases**: The contractor shall submit Subcontractor and/or supplier's waiver of liens as required under Civil Code Article 8122-8138. The waiver shall be "conditional" before payment and "unconditional" after payment on forms set forth in the statute.

Failure to provide any of the documents as listed above will result in the Engineer returning the monthly pay application to the Contractor with no action.

SECTION 13
FINAL CLEANUP

At the completion of the work, a final inspection shall be made by the City Engineer. The Contractor shall be responsible for final cleanup of the project area in accordance of the Provisions of Section 4-1.02 of the Standard Specifications.

SECTION 14
PROJECT CLOSE OUT DOCUMENTS

Prior to final payment the Contractor will be required to sign the Contractor's Affidavit Regarding Settlement of Claims document attached herein to hold the City harmless from any and all claims arising out of the Contract.

END OF SALINAS SPECIAL PROVISIONS SECTION

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TECHNICAL SPECIFICATIONS

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Part 1 – General Provisions

Section 10 Definition of Terms

Whenever the following terms are used in these specifications, in the contract, or in any documents or other instruments pertaining to construction where these specifications govern, the intent and meaning shall be interpreted as follows:

10-01 AASHTO. The American Association of State Highway and Transportation Officials, the successor association to AASHO.

10-02 Access road. The right-of-way, the roadway and all improvements constructed thereon connecting the airport to a public highway.

10-03 Advertisement. A public announcement, as required by local law, inviting bids for work to be performed and materials to be furnished.

10-04 Airport Improvement Program (AIP). A grant-in-aid program, administered by the Federal Aviation Administration (FAA).

10-05 Air operations area (AOA). For the purpose of these specifications, the term air operations area (AOA) shall mean any area of the airport used or intended to be used for the landing, takeoff, or surface maneuvering of aircraft. An air operation area shall include such paved or unpaved areas that are used or intended to be used for the unobstructed movement of aircraft in addition to its associated runway, taxiway, or apron.

10-06 Airport. Airport means an area of land or water which is used or intended to be used for the landing and takeoff of aircraft; an appurtenant area used or intended to be used for airport buildings or other airport facilities or rights of way; and airport buildings and facilities located in any of these areas, and includes a heliport.

10-07 ASTM International (ASTM). Formerly known as the American Society for Testing and Materials (ASTM).

10-08 Award. The Owner's notice to the successful bidder of the acceptance of the submitted bid.

10-09 Bidder. Any individual, partnership, firm, or corporation, acting directly or through a duly authorized representative, who submits a proposal for the work contemplated.

10-10 Building area. An area on the airport to be used, considered, or intended to be used for airport buildings or other airport facilities or rights-of-way together with all airport buildings and facilities located thereon.

10-11 Calendar day. Every day shown on the calendar.

10-12 Change order. A written order to the Contractor covering changes in the plans, specifications, or proposal quantities and establishing the basis of payment and contract time adjustment, if any, for the work affected by such changes. The work, covered by a change order, must be within the scope of the contract.

10-13 Contract. The written agreement covering the work to be performed. The awarded contract shall include, but is not limited to: Advertisement, Contract Form, Proposal, Performance Bond, Payment Bond, any required insurance certificates, Specifications, Plans, and any addenda issued to bidders.

10-14 Contract item (pay item). A specific unit of work for which a price is provided in the contract.

10-15 Contract time. The number of calendar days or working days, stated in the proposal, allowed for completion of the contract, including authorized time extensions. If a calendar date of completion is stated in the proposal, in lieu of a number of calendar or working days, the contract shall be completed by that date.

10-16 Contractor. The individual, partnership, firm, or corporation primarily liable for the acceptable performance of the work contracted and for the payment of all legal debts pertaining to the work who acts directly or through lawful agents or employees to complete the contract work.

10-17 Contractor's laboratory. The Contractor's quality control organization in accordance with the Contractor Quality Control Program.

10-18 Construction Safety and Phasing Plan (CSPP). The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.

10-19 Drainage system. The system of pipes, ditches, and structures by which surface or subsurface waters are collected and conducted from the airport area.

10-20 Engineer. The individual, partnership, firm, or corporation duly authorized by the Owner to be responsible for engineering observation of the contract work and acting directly or through an authorized representative.

10-21 Equipment. All machinery, together with the necessary supplies for upkeep and maintenance, and also all tools and apparatus necessary for the proper construction and acceptable completion of the work.

10-22 Extra work. An item of work not provided for in the awarded contract as previously modified by change order or supplemental agreement, but which is found by the Engineer to be necessary to complete the work within the intended scope of the contract as previously modified.

10-23 FAA. The Federal Aviation Administration of the U.S. Department of Transportation. When used to designate a person, FAA shall mean the Administrator or his or her duly authorized representative.

10-24 Federal specifications. The Federal Specifications and Standards, Commercial Item Descriptions, and supplements, amendments, and indices thereto are prepared and issued by the General Services Administration of the Federal Government.

10-25 Force account. Force account work is planning, engineering, or construction work done by the Sponsor's employees.

10-26 Inspector. An authorized representative of the Engineer assigned to make all necessary observations and/or tests of the work performed or being performed, or of the materials furnished or being furnished by the Contractor.

10-27 Intention of terms. Whenever, in these specifications or on the plans, the words "directed," "required," "permitted," "ordered," "designated," "prescribed," or words of like import are used, it shall be understood that the direction, requirement, permission, order, designation, or prescription of the Engineer is intended; and similarly, the words "approved," "acceptable," "satisfactory," or words of like import, shall mean approved by, or acceptable to, or satisfactory to the Engineer, subject in each case to the final determination of the Owner.

Any reference to a specific requirement of a numbered paragraph of the contract specifications or a cited standard shall be interpreted to include all general requirements of the entire section, specification item, or cited standard that may be pertinent to such specific reference.

10-28 Laboratory. The official testing laboratories of the Owner or such other laboratories as may be designated by the Engineer. Also referred to as "Engineer's Laboratory" or "quality assurance laboratory."

10-29 Lighting. A system of fixtures providing or controlling the light sources used on or near the airport or within the airport buildings. The field lighting includes all luminous signals, markers, floodlights, and illuminating devices used on or near the airport or to aid in the operation of aircraft landing at, taking off from, or taxiing on the airport surface.

10-30 Major and minor contract items. A major contract item shall be any item that is listed in the proposal, the total cost of which is equal to or greater than 20% of the total amount of the award contract. All other items shall be considered minor contract items.

10-31 Materials. Any substance specified for use in the construction of the contract work.

10-32 Notice to Proceed (NTP). A written notice to the Contractor to begin the actual contract work on a previously agreed to date. If applicable, the Notice to Proceed shall state the date on which the contract time begins.

10-33 Owner. The term "Owner" shall mean the party of the first part or the contracting agency signatory to the contract. Where the term "Owner" is capitalized in this document, it shall mean airport Sponsor only.

10-34 Passenger Facility Charge (PFC). Per 14 CFR Part 158 and 49 USC § 40117, a PFC is a charge imposed by a public agency on passengers enplaned at a commercial service airport it controls."

10-35 Pavement. The combined surface course, base course, and subbase course, if any, considered as a single unit.

10-36 Payment bond. The approved form of security furnished by the Contractor and his or her surety as a guaranty that the Contractor will pay in full all bills and accounts for materials and labor used in the construction of the work.

10-37 Performance bond. The approved form of security furnished by the Contractor and his or her surety as a guaranty that the Contractor will complete the work in accordance with the terms of the contract.

10-38 Plans. The official drawings or exact reproductions which show the location, character, dimensions and details of the airport and the work to be done and which are to be considered as a part of the contract, supplementary to the specifications.

10-39 Project. The agreed scope of work for accomplishing specific airport development with respect to a particular airport.

10-40 Proposal. The written offer of the bidder (when submitted on the approved proposal form) to perform the contemplated work and furnish the necessary materials in accordance with the provisions of the plans and specifications.

10-41 Proposal guaranty. The security furnished with a proposal to guarantee that the bidder will enter into a contract if his or her proposal is accepted by the Owner.

10-42 Runway. The area on the airport prepared for the landing and takeoff of aircraft.

10-43 Specifications. A part of the contract containing the written directions and requirements for completing the contract work. Standards for specifying materials or testing which are cited in the contract specifications by reference shall have the same force and effect as if included in the contract physically.

10-44 Sponsor. A Sponsor is defined in 49 USC § 47102(24) as a public agency that submits to the FAA for an AIP grant; or a private Owner of a public-use airport that submits to the FAA an application for an AIP grant for the airport.

10-45 Structures. Airport facilities such as bridges; culverts; catch basins, inlets, retaining walls, cribbing; storm and sanitary sewer lines; water lines; underdrains; electrical ducts, manholes, handholes, lighting fixtures and bases; transformers; flexible and rigid pavements; navigational aids; buildings; vaults; and, other manmade features of the airport that may be encountered in the work and not otherwise classified herein.

10-46 Subgrade. The soil that forms the pavement foundation.

10-47 Superintendent. The Contractor's executive representative who is present on the work during progress, authorized to receive and fulfill instructions from the Engineer, and who shall supervise and direct the construction.

10-48 Supplemental agreement. A written agreement between the Contractor and the Owner covering (1) work that would increase or decrease the total amount of the awarded contract, or any major contract item, by more than 25%, such increased or decreased work being within the scope of the originally awarded contract; or (2) work that is not within the scope of the originally awarded contract.

10-49 Surety. The corporation, partnership, or individual, other than the Contractor, executing payment or performance bonds that are furnished to the Owner by the Contractor.

10-50 Taxiway. For the purpose of this document, the term taxiway means the portion of the air operations area of an airport that has been designated by competent airport authority for movement of aircraft to and from the airport's runways, aircraft parking areas, and terminal areas.

10-51 Work. The furnishing of all labor, materials, tools, equipment, and incidentals necessary or convenient to the Contractor's performance of all duties and obligations imposed by the contract, plans, and specifications.

10-52 Working day. A working day shall be any day other than a legal holiday, Saturday, or Sunday on which the normal working forces of the Contractor may proceed with regular work for at least six (6) hours toward completion of the contract. When work is suspended for causes beyond the Contractor's control, it will not be counted as a working day. Saturdays, Sundays and holidays on which the Contractor's forces engage in regular work will be considered as working days.

END OF SECTION 10

Section 20 Proposal Requirements and Conditions

20-01 Advertisement (Notice to Bidders).

The Owner has published the advertisement at such places and at such times as are required by local law or ordinances. The published advertisement states the time and place for submitting sealed proposals; a description of the proposed work; instructions to bidders as to obtaining proposal forms, plans, and specifications; proposal guaranty required; and the Owner's right to reject any and all bids.

20-02 Qualification of bidders. Each bidder shall furnish the Owner satisfactory evidence of his or her competency to perform the proposed work. Such evidence of competency, unless otherwise specified, shall consist of statements covering the bidder's past experience on similar work, a list of equipment that would be available for the work, and a list of key personnel that would be available. In addition, each bidder shall furnish the Owner satisfactory evidence of his or her financial responsibility. Such evidence of financial responsibility, unless otherwise specified, shall consist of a confidential statement or report of the bidder's financial resources and liabilities as of the last calendar year or the bidder's last fiscal year. Such statements or reports shall be certified by a public accountant. At the time of submitting such financial statements or reports, the bidder shall further certify whether his or her financial responsibility is approximately the same as stated or reported by the public accountant. If the bidder's financial responsibility has changed, the bidder shall qualify the public accountant's statement or report to reflect the bidder's true financial condition at the time such qualified statement or report is submitted to the Owner.

Each bidder shall submit "evidence of competency" and "evidence of financial responsibility" to the Owner at the time of bid opening.

20-03 Contents of proposal forms. The Owner shall furnish bidders with proposal forms. All papers bound with or attached to the proposal forms are necessary parts and must not be detached.

The plans, specifications, and other documents designated in the proposal form shall be considered a part of the proposal whether attached or not.

20-04 Issuance of proposal forms. The Owner reserves the right to refuse to issue a proposal form to a prospective bidder should such bidder be in default for any of the following reasons:

a. Failure to comply with any prequalification regulations of the Owner, if such regulations are cited, or otherwise included, in the proposal as a requirement for bidding.

b. Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts in force with the Owner at the time the Owner issues the proposal to a prospective bidder.

c. Documented record of Contractor default under previous contracts with the Owner.

d. Documented record of unsatisfactory work on previous contracts with the Owner.

20-05 Interpretation of estimated proposal quantities. An estimate of quantities of work to be done and materials to be furnished under these specifications is given in the proposal. It is the result of careful calculations and is believed to be correct. It is given only as a basis for comparison of proposals and the award of the contract. The Owner does not expressly, or by implication, agree that the actual quantities involved will correspond exactly therewith; nor shall the bidder plead misunderstanding or deception because of such estimates of quantities, or of the character, location, or other conditions pertaining to the work. Payment to the Contractor will be made only for the actual quantities of work performed or

materials furnished in accordance with the plans and specifications. It is understood that the quantities may be increased or decreased as hereinafter provided in the subsection 40-02 titled ALTERATION OF WORK AND QUANTITIES of Section 40 without in any way invalidating the unit bid prices.

Mobilization/Demobilization shall be measured and paid for under Specification Item G-105

Implementation of the Construction Operational Safety Plan is to be included in other bid items.

20-06 Examination of plans, specifications, and site. The bidder is expected to carefully examine the site of the proposed work, the proposal, plans, specifications, and contract forms. Bidders shall satisfy themselves as to the character, quality, and quantities of work to be performed, materials to be furnished, and as to the requirements of the proposed contract. The submission of a proposal shall be prima facie evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the proposed contract, plans, and specifications.

Boring logs and other records of subsurface investigations and tests are available for inspection of bidders. It is understood and agreed that such subsurface information, whether included in the plans, specifications, or otherwise made available to the bidder, was obtained and is intended for the Owner's design and estimating purposes only. Such information has been made available for the convenience of all bidders. It is further understood and agreed that each bidder is solely responsible for all assumptions, deductions, or conclusions which the bidder may make or obtain from his or her examination of the boring logs and other records of subsurface investigations and tests that are furnished by the Owner.

20-07 Preparation of proposal. The bidder shall submit his or her proposal on the forms furnished by the Owner. All blank spaces in the proposal forms must be correctly filled in where indicated for each and every item for which a quantity is given. The bidder shall state the price (written in ink or typed) both in words and numerals for which they propose to do for each pay item furnished in the proposal. In case of conflict between words and numerals, the words, unless obviously incorrect, shall govern.

The bidder shall sign the proposal correctly and in ink. If the proposal is made by an individual, his or her name and post office address must be shown. If made by a partnership, the name and post office address of each member of the partnership must be shown. If made by a corporation, the person signing the proposal shall give the name of the state under the laws of which the corporation was chartered and the name, titles, and business address of the president, secretary, and the treasurer. Anyone signing a proposal as an agent shall file evidence of his or her authority to do so and that the signature is binding upon the firm or corporation.

20-08 Responsive and responsible bidder. A responsive bid conforms to all significant terms and conditions contained in the Sponsor's invitation for bid. It is the Sponsor's responsibility to decide if the exceptions taken by a bidder to the solicitation are material or not and the extent of deviation it is willing to accept.

A responsible bidder has the ability to perform successfully under the terms and conditions of a proposed procurement, as defined in 49 CFR § 18.36(b)(8). This includes such matters as Contractor integrity, compliance with public policy, record of past performance, and financial and technical resources.

20-09 Irregular proposals. Proposals shall be considered irregular for the following reasons:

a. If the proposal is on a form other than that furnished by the Owner, or if the Owner's form is altered, or if any part of the proposal form is detached.

b. If there are unauthorized additions, conditional or alternate pay items, or irregularities of any kind that make the proposal incomplete, indefinite, or otherwise ambiguous.

c. If the proposal does not contain a unit price for each pay item listed in the proposal, except in the case of authorized alternate pay items, for which the bidder is not required to furnish a unit price.

d. If the proposal contains unit prices that are obviously unbalanced.

e. If the proposal is not accompanied by the proposal guaranty specified by the Owner.

The Owner reserves the right to reject any irregular proposal and the right to waive technicalities if such waiver is in the best interest of the Owner and conforms to local laws and ordinances pertaining to the letting of construction contracts.

20-10 Bid guarantee. Each separate proposal shall be accompanied by a certified check, or other specified acceptable collateral, in the amount specified in the proposal form. Such check, or collateral, shall be made payable to the Owner. The Surety on the Proposal Bond shall be a corporate Surety authorized under the laws of the State of California to do business in California and to write that type of bond through a resident agent of the corporation.

20-11 Delivery of proposal. Each proposal submitted shall be placed in a sealed envelope plainly marked with the project number, location of airport, and name and business address of the bidder on the outside. When sent by mail, preferably registered, the sealed proposal, marked as indicated above, should be enclosed in an additional envelope. No proposal will be considered unless received at the place specified in the advertisement or as modified by Addendum before the time specified for opening all bids. Proposals received after the bid opening time shall be returned to the bidder unopened.

20-12 Withdrawal or revision of proposals. A bidder may withdraw or revise (by withdrawal of one proposal and submission of another) a proposal provided that the bidder's request for withdrawal is received by the Owner in writing or by email before the time specified for opening bids. Revised proposals must be received at the place specified in the advertisement before the time specified for opening all bids.

20-13 Public opening of proposals. Proposals shall be opened, and read, publicly at the time and place specified in the advertisement. Bidders, their authorized agents, and other interested persons are invited to attend. Proposals that have been withdrawn (by written or telegraphic request) or received after the time specified for opening bids shall be returned to the bidder unopened.

20-14 Disqualification of bidders. A bidder shall be considered disqualified for any of the following reasons:

a. Submitting more than one proposal from the same partnership, firm, or corporation under the same or different name.

b. Evidence of collusion among bidders. Bidders participating in such collusion shall be disqualified as bidders for any future work of the Owner until any such participating bidder has been reinstated by the Owner as a qualified bidder.

c. If the bidder is considered to be in "default" for any reason specified in the subsection 20-04 titled ISSUANCE OF PROPOSAL FORMS of this section.

END OF SECTION 20

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Section 30 Award and Execution of Contract

30-01 Consideration of proposals. After the proposals are publicly opened and read, they will be compared on the basis of the summation of the products obtained by multiplying the estimated quantities shown in the proposal by the unit bid prices. If a bidder's proposal contains a discrepancy between unit bid prices and extended bid prices, the unit price shall govern.

Until the award of a contract is made, the Owner reserves the right to reject a bidder's proposal for any of the following reasons:

a. If the proposal is irregular as specified in the subsection 20-09 titled IRREGULAR PROPOSALS of Section 20.

b. If the bidder is disqualified for any of the reasons specified in the subsection 20-14 titled DISQUALIFICATION OF BIDDERS of Section 20.

In addition, until the award of a contract is made, the Owner reserves the right to reject any or all proposals, waive technicalities, if such waiver is in the best interest of the Owner and is in conformance with applicable state and local laws or regulations pertaining to the letting of construction contracts; advertise for new proposals; or proceed with the work otherwise. All such actions shall promote the Owner's best interests.

30-02 Award of contract. The award of a contract, if it is to be awarded, shall be made within **120** calendar days of the date specified for publicly opening proposals, unless otherwise specified herein.

Award of the contract shall be made by the Owner to the lowest, qualified bidder whose proposal conforms to the cited requirements of the Owner.

No award shall be made until the FAA has concurred in the Owner's recommendation to make such award and has approved the Owner's proposed contract to the extent that such concurrence and approval are required by 49 CFR Part 18.

30-03 Cancellation of award. The Owner reserves the right to cancel the award without liability to the bidder, except return of proposal guaranty, at any time before a contract has been fully executed by all parties and is approved by the Owner in accordance with the subsection 30-07 titled APPROVAL OF CONTRACT of this section.

30-04 Return of proposal guaranty. All proposal guaranties, except those of the two lowest bidders, will be returned immediately after the Owner has made a comparison of bids as specified in the subsection 30-01 titled CONSIDERATION OF PROPOSALS of this section. Proposal guaranties of the two lowest bidders will be retained by the Owner until such time as an award is made, at which time, the unsuccessful bidder's proposal guaranty will be returned. The successful bidder's proposal guaranty will be returned as soon as the Owner receives the contract bonds as specified in the subsection 30-05 titled REQUIREMENTS OF CONTRACT BONDS of this section.

30-05 Requirements of contract bonds. At the time of the execution of the contract, the successful bidder shall furnish the Owner a surety bond or bonds that have been fully executed by the bidder and the surety guaranteeing the performance of the work and the payment of all legal debts that may be incurred by reason of the Contractor's performance of the work. The surety and the form of the bond or bonds shall be acceptable to the Owner. Unless otherwise specified in this subsection, the surety bond or bonds shall be in a sum equal to the full amount of the contract.

30-06 Execution of contract. The successful bidder shall sign (execute) the necessary agreements for entering into the contract and return the signed contract to the Owner, along with the fully executed surety bond or bonds specified in the subsection 30-05 titled REQUIREMENTS OF CONTRACT BONDS of this section, within 15 calendar days from the date mailed or otherwise delivered to the successful bidder.

30-07 Approval of contract. Upon receipt of the contract and contract bond or bonds that have been executed by the successful bidder, the Owner shall complete the execution of the contract in accordance with local laws or ordinances, and return the fully executed contract to the Contractor. Delivery of the fully executed contract to the Contractor shall constitute the Owner's approval to be bound by the successful bidder's proposal and the terms of the contract.

30-08 Failure to execute contract. Failure of the successful bidder to execute the contract and furnish an acceptable surety bond or bonds within the 15 calendar day period specified in the subsection 30-06 titled EXECUTION OF CONTRACT of this section shall be just cause for cancellation of the award and forfeiture of the proposal guaranty, not as a penalty, but as liquidation of damages to the Owner.

END OF SECTION 30

Section 40 Scope of Work

40-01 Intent of contract. The intent of the contract is to provide for construction and completion, in every detail, of the work described. It is further intended that the Contractor shall furnish all labor, materials, equipment, tools, transportation, and supplies required to complete the work in accordance with the plans, specifications, and terms of the contract.

All labor, materials, tools, equipment and services shall be furnished and work performed and completed subject to the approval of the Owner or its authorized representatives.

All taxes of any nature whatsoever shall be included in the overall cost of the Project. The Contractor shall be prohibited from making any further claims for taxes.

The Contractor shall carefully study and compare all plans, drawings, details and specifications and other instructions and shall at once report any error, inconsistency or omission which Contractor or as subcontractor may discover. While it is believed that much of the information pertaining to conditions which may affect the cost of the work will be shown on the Plans, Drawings, Details or indicated in the Specifications. The Owner does not warrant the completeness or the accuracy of such information. The Contractor shall ascertain the existence of any conditions affecting the cost of the work that would have been disclosed by reasonable examination of the site.

The Contractor shall be liable to the Owner for any damage resulting from any errors or deficiencies in the Contract Documents or instructions furnished by the Owner or its Agent if said errors or deficiencies were or could have been discoverable by reasonable inspection prior to the commencement of construction.

40-02 Alteration of work and quantities. The Owner reserves and shall have the right to make such alterations in the work as may be necessary or desirable to complete the work originally intended in an acceptable manner. Unless otherwise specified herein, the Engineer shall be and is hereby authorized to make such alterations in the work as may increase or decrease the originally awarded contract quantities, provided that the aggregate of such alterations does not change the total contract cost or the total cost of any major contract item by more than 25% (total cost being based on the unit prices and estimated quantities in the awarded contract). Alterations that do not exceed the 25% limitation shall not invalidate the contract nor release the surety, and the Contractor agrees to accept payment for such alterations as if the altered work had been a part of the original contract. These alterations that are for work within the general scope of the contract shall be covered by “Change Orders” issued by the Engineer. Change orders for altered work shall include extensions of contract time where, in the Engineer’s opinion, such extensions are commensurate with the amount and difficulty of added work.

Should the aggregate amount of altered work exceed the 25% limitation hereinbefore specified, such excess altered work shall be covered by supplemental agreement. If the Owner and the Contractor are unable to agree on a unit adjustment for any contract item that requires a supplemental agreement, the Owner reserves the right to terminate the contract with respect to the item and make other arrangements for its completion.

Supplemental agreements shall be approved by the FAA and shall include all applicable Federal contract provisions for procurement and contracting required under AIP. Supplemental agreements shall also require consent of the Contractor’s surety and separate performance and payment bonds.

40-03 Omitted items. The Engineer may, in the Owner's best interest, omit from the work any contract item, except major contract items. Major contract items may be omitted by a supplemental agreement. Such omission of contract items shall not invalidate any other contract provision or requirement.

Should a contract item be omitted or otherwise ordered to be non-performed, the Contractor shall be paid for all work performed toward completion of such item prior to the date of the order to omit such item. Payment for work performed shall be in accordance with the subsection 90-04 titled PAYMENT FOR OMITTED ITEMS of Section 90.

40-04 Extra work. Should acceptable completion of the contract require the Contractor to perform an item of work for which no basis of payment has been provided in the original contract or previously issued change orders or supplemental agreements, the same shall be called "Extra Work." Extra Work that is within the general scope of the contract shall be covered by written change order. Change orders for such Extra Work shall contain agreed unit prices for performing the change order work in accordance with the requirements specified in the order, and shall contain any adjustment to the contract time that, in the Engineer's opinion, is necessary for completion of such Extra Work.

When determined by the Engineer to be in the Owner's best interest, the Engineer may order the Contractor to proceed with Extra Work as provided in the subsection 90-05 titled PAYMENT FOR EXTRA WORK of Section 90. Extra Work that is necessary for acceptable completion of the project, but is not within the general scope of the work covered by the original contract shall be covered by a Supplemental Agreement as defined in the subsection 10-48 titled SUPPLEMENTAL AGREEMENT of Section 10.

Any claim for payment of Extra Work that is not covered by written agreement (change order or supplemental agreement) shall be rejected by the Owner.

40-05 Maintenance of traffic. It is the explicit intention of the contract that the safety of aircraft, as well as the Contractor's equipment and personnel, is the most important consideration.

a. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas (AOAs) of the airport with respect to his or her own operations and the operations of all subcontractors as specified in the subsection 80-04 titled LIMITATION OF OPERATIONS of Section 80. It is further understood and agreed that the Contractor shall provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport as specified in the subsection 70-15 titled CONTRACTOR'S RESPONSIBILITY FOR UTILITY SERVICE AND FACILITIES OF OTHERS in Section 70.

b. With respect to his or her own operations and the operations of all subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying personnel, equipment, vehicles, storage areas, and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the airport.

c. When the contract requires the maintenance of vehicular traffic on an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans, and specifications, the Contractor shall keep such road, street, or highway open to all traffic and shall provide such maintenance as may be required to accommodate traffic. The Contractor shall be responsible for the repair of any damage caused by the Contractor's equipment and personnel. The Contractor shall furnish, erect, and maintain barricades, warning signs, flag person, and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices (MUTCD) (http://mutcd.fhwa.dot.gov/), unless otherwise specified. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways.

The Contractor shall make his/her own estimate of all labor, materials, equipment, and incidentals necessary for providing the maintenance of aircraft and vehicular traffic as specified in this subsection.

The cost of maintaining the aircraft and vehicular traffic specified in this subsection shall not be measured or paid for directly, but shall be included in the various contract items.

40-06 Removal of existing structures. All existing structures encountered within the established lines, grades, or grading sections shall be removed by the Contractor, unless such existing structures are otherwise specified to be relocated, adjusted up or down, salvaged, abandoned in place, reused in the work or to remain in place. The cost of removing such existing structures shall not be measured or paid for directly, but shall be included in the various contract items.

Should the Contractor encounter an existing structure (above or below ground) in the work for which the disposition is not indicated on the plans, the Engineer shall be notified prior to disturbing such structure. The disposition of existing structures so encountered shall be immediately determined by the Engineer in accordance with the provisions of the contract.

Except as provided in the subsection 40-07 titled RIGHTS IN AND USE OF MATERIALS FOUND IN THE WORK of this section, it is intended that all existing materials or structures that may be encountered (within the lines, grades, or grading sections established for completion of the work) shall be used in the work as otherwise provided for in the contract and shall remain the property of the Owner when so used in the work.

40-07 Rights in and use of materials found in the work. Should the Contractor encounter any material such as (but not restricted to) sand, stone, gravel, slag, or concrete slabs within the established lines, grades, or grading sections, the use of which is intended by the terms of the contract to be either embankment or waste, the Contractor may at his or her option either:

a. Use such material in another contract item, providing such use is approved by the Engineer and is in conformance with the contract specifications applicable to such use; or,

b. Remove such material from the site, upon written approval of the Engineer; or

c. Use such material for the Contractor's own temporary construction on site; or,

d. Use such material as intended by the terms of the contract.

Should the Contractor wish to exercise option a., b., or c., the Contractor shall request the Engineer's approval in advance of such use.

Should the Engineer approve the Contractor's request to exercise option a., b., or c., the Contractor shall be paid for the excavation or removal of such material at the applicable contract price. The Contractor shall replace, at his or her own expense, such removed or excavated material with an agreed equal volume of material that is acceptable for use in constructing embankment, backfills, or otherwise to the extent that such replacement material is needed to complete the contract work. The Contractor shall not be charged for use of such material used in the work or removed from the site.

Should the Engineer approve the Contractor's exercise of option a., the Contractor shall be paid, at the applicable contract price, for furnishing and installing such material in accordance with requirements of the contract item in which the material is used.

It is understood and agreed that the Contractor shall make no claim for delays by reason of his or her exercise of option a., b., or c.

The Contractor shall not excavate, remove, or otherwise disturb any material, structure, or part of a structure which is located outside the lines, grades, or grading sections established for the work, except where such excavation or removal is provided for in the contract, plans, or specifications.

40-08 Final cleanup. Upon completion of the work and before acceptance and final payment will be made, the Contractor shall remove from the site all machinery, equipment, surplus and discarded materials, rubbish, temporary structures, and stumps or portions of trees. The Contractor shall cut all brush and woods within the limits indicated and shall leave the site in a neat and presentable condition. Material cleared from the site and deposited on adjacent property will not be considered as having been disposed of satisfactorily, unless the Contractor has obtained the written permission of such property Owner.

END OF SECTION 40

Section 50 Control of Work

50-01 Authority of the Engineer. The Engineer shall decide any and all questions which may arise as to the quality and acceptability of materials furnished, work performed, and as to the manner of performance and rate of progress of the work. The Engineer shall decide all questions that may arise as to the interpretation of the specifications or plans relating to the work. The Engineer shall determine the amount and quality of the several kinds of work performed and materials furnished which are to be paid for the under contract.

The Engineer does not have the authority to accept pavements that do not conform to FAA specification requirements.

50-02 Conformity with plans and specifications. All work and all materials furnished shall be in reasonably close conformity with the lines, grades, grading sections, cross-sections, dimensions, material requirements, and testing requirements that are specified (including specified tolerances) in the contract, plans or specifications.

If the Engineer finds the materials furnished, work performed, or the finished product not within reasonably close conformity with the plans and specifications but that the portion of the work affected will, in his or her opinion, result in a finished product having a level of safety, economy, durability, and workmanship acceptable to the Owner, the Engineer will advise the Owner of his or her determination that the affected work be accepted and remain in place. In this event, the Engineer will document the determination and recommend to the Owner a basis of acceptance that will provide for an adjustment in the contract price for the affected portion of the work. The Engineer's determination and recommended contract price adjustments will be based on sound engineering judgment and such tests or retests of the affected work as are, in the Engineer's opinion, needed. Changes in the contract price shall be covered by contract change order or supplemental agreement as applicable.

If the Engineer finds the materials furnished, work performed, or the finished product are not in reasonably close conformity with the plans and specifications and have resulted in an unacceptable finished product, the affected work or materials shall be removed and replaced or otherwise corrected by and at the expense of the Contractor in accordance with the Engineer's written orders.

For the purpose of this subsection, the term "reasonably close conformity" shall not be construed as waiving the Contractor's responsibility to complete the work in accordance with the contract, plans, and specifications. The term shall not be construed as waiving the Engineer's responsibility to insist on strict compliance with the requirements of the contract, plans, and specifications during the Contractor's execution of the work, when, in the Engineer's opinion, such compliance is essential to provide an acceptable finished portion of the work.

For the purpose of this subsection, the term "reasonably close conformity" is also intended to provide the Engineer with the authority, after consultation with the FAA, to use sound engineering judgment in his or her determinations as to acceptance of work that is not in strict conformity, but will provide a finished product equal to or better than that intended by the requirements of the contract, plans and specifications.

The Engineer will not be responsible for the Contractor's means, methods, techniques, sequences, or procedures of construction or the safety precautions incident thereto.

50-03 Coordination of contract, plans, and specifications. The contract, plans, specifications, and all referenced standards cited are essential parts of the contract requirements. A requirement occurring in one is as binding as though occurring in all. They are intended to be complementary and to describe and

provide for a complete work. In case of discrepancy, calculated dimensions will govern over scaled dimensions; contract technical specifications shall govern over contract general provisions, plans, cited standards for materials or testing, and cited advisory circulars (ACs); contract general provisions shall govern over plans, cited standards for materials or testing, and cited ACs; plans shall govern over cited standards for materials or testing and cited ACs. If any paragraphs contained in the Special Provisions conflict with General Provisions or Technical Specifications, the Special Provisions shall govern.

From time to time, discrepancies within cited testing standards occur due to the timing of the change, edits, and/or replacement of the standards. If the Contractor discovers any apparent discrepancy within standard test methods, the Contractor shall immediately ask the Engineer for an interpretation and decision, and such decision shall be final.

LIST OF SPECIAL PROVISIONS

In case of a discrepancy between the Plans and the Specifications, the following is the order of precedence of the Contract Documents:

1. The Technical Specifications, including Civil and Electrical.
2. The Special Provision
3. Cited Standards for Materials and Testing.
4. Cited FAA Advisory Circulars.
5. General Provisions.
6. The Plans.
7. The City of Salinas, Department of Development and Engineering Services, Design Standards and Standard Specifications, 2008.
8. The City of Salinas, Department of Development and Engineering Services, Standard Plans, 2008.
9. Caltrans Standard Specifications.

50-04 Cooperation of Contractor. The Contractor will be supplied with two copies each of the plans and specifications. The Contractor shall have available on the work at all times one copy each of the plans and specifications. Additional copies of plans and specifications may be obtained by the Contractor for the cost of reproduction.

The Contractor shall give constant attention to the work to facilitate the progress thereof, and shall cooperate with the Engineer and his or her inspectors and with other contractors in every way possible. The Contractor shall have a competent superintendent on the work at all times who is fully authorized as his or her agent on the work. The superintendent shall be capable of reading and thoroughly understanding the plans and specifications and shall receive and fulfill instructions from the Engineer or his or her authorized representative.

50-05 Cooperation between contractors. The Owner reserves the right to contract for and perform other or additional work on or near the work covered by this contract.

When separate contracts are let within the limits of any one project, each Contractor shall conduct the work so as not to interfere with or hinder the progress of completion of the work being performed by other Contractors. Contractors working on the same project shall cooperate with each other as directed.

Each Contractor involved shall assume all liability, financial or otherwise, in connection with his or her contract and shall protect and save harmless the Owner from any and all damages or claims that may arise because of inconvenience, delays, or loss experienced because of the presence and operations of other Contractors working within the limits of the same project.

The Contractor shall arrange his or her work and shall place and dispose of the materials being used so as not to interfere with the operations of the other Contractors within the limits of the same project. The Contractor shall join his or her work with that of the others in an acceptable manner and shall perform it in proper sequence to that of the others.

50-06 Construction layout and stakes. The Engineer shall establish horizontal and vertical control only. The Contractor must establish all layout required for the construction of the work. Such stakes and markings as the Engineer may set for either their own or the Contractor's guidance shall be preserved by the Contractor. In case of negligence on the part of the Contractor, or their employees, resulting in the destruction of such stakes or markings, an amount equal to the cost of replacing the same may be deducted from subsequent estimates due the Contractor at the discretion of the Engineer.

The Contractor will be required to furnish all lines, grades and measurements from the control points necessary for the proper execution and control of the work contracted for under these specifications.

The Contractor must give copies of survey notes to the Engineer for each area of construction and for each placement of material as specified to allow the Engineer to make periodic checks for conformance with plan grades, alignments and grade tolerances required by the applicable material specifications. All surveys must be provided to the Engineer prior to commencing work items that will cover or disturb the survey staking as set by the Contractor's surveyor. Survey(s) and notes shall be provided in the following format(s): Microsoft Word (.docx) and Autodesk AutoCAD (.dwg), 2013 or greater**.** In the case of error, on the part of the Contractor, their surveyor, employees or subcontractors, resulting in established grades, alignment or grade tolerances that do not concur with those specified or shown on the plans, the Contractor is solely responsible for correction, removal, replacement and all associated costs at no additional cost to the Owner.

Construction Staking and Layout includes but is not limited to:

a. Clearing and Grubbing perimeter staking

b. Rough Grade slope stakes at 100-foot (30-m) stations

c. Drainage Swales slope stakes and flow line blue tops at 50-foot (15-m) stations

Subgrade blue tops at 25-foot (7.5-m) stations and 25-foot (7.5-m) offset distance (maximum) for the following section locations:

a. Runway – minimum five (5) per station

b. Taxiways – minimum three (3) per station

c. Holding apron areas – minimum three (3) per station

d. Roadways – minimum three (3) per station

Base Course blue tops at 25-foot (7.5-m) stations and 25-foot (7.5-m) offset distance (maximum) for the following section locations:

a. Runway – minimum five (5) per station

b. Taxiways – minimum three (3) per station

c. Holding apron areas – minimum three (3) per station

Pavement areas:

a. Edge of Pavement hubs and tacks (for stringline by Contractor) at 100-foot (30-m) stations.

b. Between Lifts at 25-foot (7.5-m) stations for the following section locations:

(1) Runways – each paving lane width

(2) Taxiways – each paving lane width

(3) Holding areas – each paving lane width

c. After finish paving operations at 50-foot (15-m) stations:

(1) All paved areas – Edge of each paving lane prior to next paving lot

d. Shoulder and safety area blue tops at 50-foot (15-m) stations and at all break points with maximum of 50-foot (15-m) offsets.

e. Fence lines at 100-foot (30-m) stations minimum.

f. Electrical and Communications System locations, lines and grades including but not limited to duct runs, connections, fixtures, signs, lights, Visual Approach Slope Indicators (VASIs), Precision Approach Path Indicators (PAPIs), Runway End Identifier Lighting (REIL), Wind Cones, Distance Markers (signs), pull boxes and manholes.

g. Drain lines, cut stakes and alignment on 25-foot (7.5-m) stations, inlet and manholes.

h. Painting and Striping layout (pinned with 1.5 inch PK nails) marked for paint Contractor. (All nails shall be removed after painting).

i. Laser, or other automatic control devices, shall be checked with temporary control point or grade hub at a minimum of once per 400 feet (120 m) per pass (that is, paving lane).

The establishment of Survey Control and/or reestablishment of survey control shall be by a State Licensed Land Surveyor.

Controls and stakes disturbed or suspect of having been disturbed shall be checked and/or reset as directed by the Engineer without additional cost to the Owner.

50-07 Automatically controlled equipment. Whenever batching or mixing plant equipment is required to be operated automatically under the contract and a breakdown or malfunction of the automatic controls occurs, the equipment may be operated manually or by other methods for a period 48 hours following the breakdown or malfunction, provided this method of operations will produce results which conform to all other requirements of the contract.

50-08 Authority and duties of inspectors. Inspectors shall be authorized to inspect all work done and all material furnished. Such inspection may extend to all or any part of the work and to the preparation, fabrication, or manufacture of the materials to be used. Inspectors are not authorized to revoke, alter, or waive any provision of the contract. Inspectors are not authorized to issue instructions contrary to the plans and specifications or to act as foreman for the Contractor.

Inspectors are authorized to notify the Contractor or his or her representatives of any failure of the work or materials to conform to the requirements of the contract, plans, or specifications and to reject such nonconforming materials in question until such issues can be referred to the Engineer for a decision.

50-09 Inspection of the work. All materials and each part or detail of the work shall be subject to inspection. The Engineer shall be allowed access to all parts of the work and shall be furnished with such information and assistance by the Contractor as is required to make a complete and detailed inspection.

If the Engineer requests it, the Contractor, at any time before acceptance of the work, shall remove or uncover such portions of the finished work as may be directed. After examination, the Contractor shall restore said portions of the work to the standard required by the specifications. Should the work thus exposed or examined prove acceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be paid for as extra work; but should the work so exposed or examined prove unacceptable, the uncovering, or removing, and the replacing of the covering or making good of the parts removed will be at the Contractor's expense.

Any work done or materials used without supervision or inspection by an authorized representative of the Owner may be ordered removed and replaced at the Contractor's expense unless the Owner's representative failed to inspect after having been given reasonable notice in writing that the work was to be performed.

Should the contract work include relocation, adjustment, or any other modification to existing facilities, not the property of the (contract) Owner, authorized representatives of the Owners of such facilities shall have the right to inspect such work. Such inspection shall in no sense make any facility owner a party to the contract, and shall in no way interfere with the rights of the parties to this contract.

50-10 Removal of unacceptable and unauthorized work. All work that does not conform to the requirements of the contract, plans, and specifications will be considered unacceptable, unless otherwise determined acceptable by the Engineer as provided in the subsection 50-02 titled CONFORMITY WITH PLANS AND SPECIFICATIONS of this section.

Unacceptable work, whether the result of poor workmanship, use of defective materials, damage through carelessness, or any other cause found to exist prior to the final acceptance of the work, shall be removed immediately and replaced in an acceptable manner in accordance with the provisions of the subsection 70-14 titled CONTRACTOR'S RESPONSIBILITY FOR WORK of Section 70.

No removal work made under provision of this subsection shall be done without lines and grades having been established by the Engineer. Work done contrary to the instructions of the Engineer, work done beyond the lines shown on the plans or as established by the Engineer, except as herein specified, or any extra work done without authority, will be considered as unauthorized and will not be paid for under the provisions of the contract. Work so done may be ordered removed or replaced at the Contractor's expense.

Upon failure on the part of the Contractor to comply with any order of the Engineer made under the provisions of this subsection, the Engineer will have authority to cause unacceptable work to be remedied or removed and replaced and unauthorized work to be removed and to deduct the costs incurred by the Owner from any monies due or to become due the Contractor.

50-11 Load restrictions. The Contractor shall comply with all legal load restrictions in the hauling of materials on public roads beyond the limits of the work. A special permit will not relieve the Contractor of liability for damage that may result from the moving of material or equipment.

The operation of equipment of such weight or so loaded as to cause damage to structures or to any other type of construction will not be permitted. Hauling of materials over the base course or surface course under construction shall be limited as directed. No loads will be permitted on a concrete pavement, base, or structure before the expiration of the curing period. The Contractor shall be responsible for all damage done by his or her hauling equipment and shall correct such damage at his or her own expense.

50-12 Maintenance during construction. The Contractor shall maintain the work during construction and until the work is accepted. Maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and forces so that the work is maintained in satisfactory condition at all times.

In the case of a contract for the placing of a course upon a course or subgrade previously constructed, the Contractor shall maintain the previous course or subgrade during all construction operations.

All costs of maintenance work during construction and before the project is accepted shall be included in the unit prices bid on the various contract items, and the Contractor will not be paid an additional amount for such work.

50-13 Failure to maintain the work. Should the Contractor at any time fail to maintain the work as provided in the subsection 50-12 titled MAINTENANCE DURING CONSTRUCTION of this section, the Engineer shall immediately notify the Contractor of such noncompliance. Such notification shall

specify a reasonable time within which the Contractor shall be required to remedy such unsatisfactory maintenance condition. The time specified will give due consideration to the exigency that exists.

Should the Contractor fail to respond to the Engineer's notification, the Owner may suspend any work necessary for the Owner to correct such unsatisfactory maintenance condition, depending on the exigency that exists. Any maintenance cost incurred by the Owner, shall be deducted from monies due or to become due the Contractor.

50-14 Partial acceptance. If at any time during the execution of the project the Contractor substantially completes a usable unit or portion of the work, the occupancy of which will benefit the Owner, the Contractor may request the Engineer to make final inspection of that unit. If the Engineer finds upon inspection that the unit has been satisfactorily completed in compliance with the contract, the Engineer may accept it as being complete, and the Contractor may be relieved of further responsibility for that unit. Such partial acceptance and beneficial occupancy by the Owner shall not void or alter any provision of the contract.

50-15 Final acceptance. Upon due notice from the Contractor of presumptive completion of the entire project, the Engineer and Owner will make an inspection. If all construction provided for and contemplated by the contract is found to be complete in accordance with the contract, plans, and specifications, such inspection shall constitute the final inspection. The Engineer shall notify the Contractor in writing of final acceptance as of the date of the final inspection.

If, however, the inspection discloses any work, in whole or in part, as being unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of same and the Contractor shall immediately comply with and execute such instructions. Upon correction of the work, another inspection will be made which shall constitute the final inspection, provided the work has been satisfactorily completed. In such event, the Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

50-16 Claims for adjustment and disputes. If for any reason the Contractor deems that additional compensation is due for work or materials not clearly provided for in the contract, plans, or specifications or previously authorized as extra work, the Contractor shall notify the Engineer in writing of his or her intention to claim such additional compensation before the Contractor begins the work on which the Contractor bases the claim. If such notification is not given or the Engineer is not afforded proper opportunity by the Contractor for keeping strict account of actual cost as required, then the Contractor hereby agrees to waive any claim for such additional compensation. Such notice by the Contractor and the fact that the Engineer has kept account of the cost of the work shall not in any way be construed as proving or substantiating the validity of the claim. When the work on which the claim for additional compensation is based has been completed, the Contractor shall, within 10 calendar days, submit a written claim to the Engineer who will present it to the Owner for consideration in accordance with local laws or ordinances.

Nothing in this subsection shall be construed as a waiver of the Contractor's right to dispute final payment based on differences in measurements or computations.

50-17 Cost reduction incentive. The provisions of this subsection will apply only to contracts awarded to the lowest bidder pursuant to competitive bidding.

On projects with original contract amounts in excess of $100,000, the Contractor may submit to the Engineer, in writing, proposals for modifying the plans, specifications or other requirements of the contract for the sole purpose of reducing the cost of construction. The cost reduction proposal shall not impair, in any manner, the essential functions or characteristics of the project, including but not limited to service life, economy of operation, ease of maintenance, desired appearance, design and safety standards. This provision shall not apply unless the proposal submitted is specifically identified by the Contractor as being presented for consideration as a value engineering proposal.

Not eligible for cost reduction proposals are changes in the basic design of a pavement type, runway and taxiway lighting, visual aids, hydraulic capacity of drainage facilities, or changes in grade or alignment that reduce the geometric standards of the project.

As a minimum, the following information shall be submitted by the Contractor with each proposal:

a. A description of both existing contract requirements for performing the work and the proposed changes, with a discussion of the comparative advantages and disadvantages of each.

b. An itemization of the contract requirements that must be changed if the proposal is adopted.

c. A detailed estimate of the cost of performing the work under the existing contract and under the proposed changes.

d. A statement of the time by which a change order adopting the proposal must be issued.

e. A statement of the effect adoption of the proposal will have on the time for completion of the contract.

f. The contract items of work affected by the proposed changes, including any quantity variation attributable to them.

The Contractor may withdraw, in whole or in part, any cost reduction proposal not accepted by the Engineer, within the period specified in the proposal. The provisions of this subsection shall not be construed to require the Engineer to consider any cost reduction proposal that may be submitted.

The Contractor shall continue to perform the work in accordance with the requirements of the contract until a change order incorporating the cost reduction proposal has been issued. If a change order has not been issued by the date upon which the Contractor's cost reduction proposal specifies that a decision should be made, or such other date as the Contractor may subsequently have requested in writing, such cost reduction proposal shall be deemed rejected.

The Engineer shall be the sole judge of the acceptability of a cost reduction proposal and of the estimated net savings from the adoption of all or any part of such proposal. In determining the estimated net savings, the Engineer may disregard the contract bid prices if, in the Engineer's judgment such prices do not represent a fair measure of the value of the work to be performed or deleted.

The Owner may require the Contractor to share in the Owner's costs of investigating a cost reduction proposal submitted by the Contractor as a condition of considering such proposal. Where such a condition is imposed, the Contractor shall acknowledge acceptance of it in writing. Such acceptance shall constitute full authority for the Owner to deduct the cost of investigating a cost reduction proposal from amounts payable to the Contractor under the contract.

If the Contractor's cost reduction proposal is accepted in whole or in part, such acceptance will be by a contract change order that shall specifically state that it is executed pursuant to this subsection. Such change order shall incorporate the changes in the plans and specifications which are necessary to permit the cost reduction proposal or such part of it as has been accepted and shall include any conditions upon which the Engineer's approval is based. The change order shall also set forth the estimated net savings attributable to the cost reduction proposal. The net savings shall be determined as the difference in costs between the original contract costs for the involved work items and the costs occurring as a result of the proposed change. The change order shall also establish the net savings agreed upon and shall provide for adjustment in the contract price that will divide the net savings equally between the Contractor and the Owner.

The Contractor's 50% share of the net savings shall constitute full compensation to the Contractor for the cost reduction proposal and the performance of the work.

Acceptance of the cost-reduction proposal and performance of the cost-reduction work shall not extend the time of completion of the contract unless specifically provided for in the contract change order.

END OF SECTION 50

Section 60 Control of Materials

60-01 Source of supply and quality requirements. The materials used in the work shall conform to the requirements of the contract, plans, and specifications. Unless otherwise specified, such materials that are manufactured or processed shall be new (as compared to used or reprocessed).

In order to expedite the inspection and testing of materials, the Contractor shall furnish complete statements to the Engineer as to the origin, composition, and manufacture of all materials to be used in the work. Such statements shall be furnished promptly after execution of the contract but, in all cases, prior to delivery of such materials.

At the Engineer's option, materials may be approved at the source of supply before delivery is stated. If it is found after trial that sources of supply for previously approved materials do not produce specified products, the Contractor shall furnish materials from other sources.

The Contractor shall furnish airport lighting equipment that conforms to the requirements of cited materials specifications. In addition, where an FAA specification for airport lighting equipment is cited in the plans or specifications, the Contractor shall furnish such equipment that is:

a. Listed in advisory circular (AC) 150/5345-53, Airport Lighting Equipment Certification Program, and Addendum that is in effect on the date of advertisement; and,

b. Produced by the manufacturer as listed in the Addendum cited above for the certified equipment part number.

The following airport lighting equipment is required for this contract and is to be furnished by the Contractor in accordance with the requirements of this subsection: Refer to the Plans for the airfield electrical items required.

60-02 Samples, tests, and cited specifications. Unless otherwise designated, all materials used in the work shall be inspected, tested, and approved by the Engineer before incorporation in the work. Any work in which untested materials are used without approval or written permission of the Engineer shall be performed at the Contractor's risk. Materials found to be unacceptable and unauthorized will not be paid for and, if directed by the Engineer, shall be removed at the Contractor's expense.

Unless otherwise designated, quality assurance tests in accordance with the cited standard methods of ASTM, American Association of State Highway and Transportation Officials (AASHTO), Federal Specifications, Commercial Item Descriptions, and all other cited methods, which are current on the date of advertisement for bids, will be made by and at the expense of the Engineer.

The testing organizations performing on-site quality assurance field tests shall have copies of all referenced standards on the construction site for use by all technicians and other personnel, including the Contractor's representative at his or her request. Unless otherwise designated, samples for quality assurance will be taken by a qualified representative of the Engineer. All materials being used are subject to inspection, test, or rejection at any time prior to or during incorporation into the work. Copies of all tests will be furnished to the Contractor's representative at their request after review and approval of the Engineer.

The Contractor shall employ a testing organization to perform all Contractor required Quality Control tests. The Contractor shall submit to the Engineer resumes on all testing organizations and individual persons who will be performing the tests. The Engineer will determine if such persons are qualified. All the test data shall be reported to the Engineer after the results are known. A legible, handwritten copy of

all test data shall be given to the Engineer daily, along with printed reports, in an approved format, on a weekly basis. After completion of the project, and prior to final payment, the Contractor shall submit a final report to the Engineer showing all test data reports, plus an analysis of all results showing ranges, averages, and corrective action taken on all failing tests. The final report from the Contractor shall be furnished in a .pdf viewable format.

60-03 Certification of compliance. The Engineer may permit the use, prior to sampling and testing, of certain materials or assemblies when accompanied by manufacturer's certificates of compliance stating that such materials or assemblies fully comply with the requirements of the contract. The certificate shall be signed by the manufacturer. Each lot of such materials or assemblies delivered to the work must be accompanied by a certificate of compliance in which the lot is clearly identified.

Materials or assemblies used on the basis of certificates of compliance may be sampled and tested at any time and if found not to be in conformity with contract requirements will be subject to rejection whether in place or not.

The form and distribution of certificates of compliance shall be as approved by the Engineer.

When a material or assembly is specified by "brand name or equal" and the Contractor elects to furnish the specified "brand name," the Contractor shall be required to furnish the manufacturer's certificate of compliance for each lot of such material or assembly delivered to the work. Such certificate of compliance shall clearly identify each lot delivered and shall certify as to:

a. Conformance to the specified performance, testing, quality or dimensional requirements; and,

b. Suitability of the material or assembly for the use intended in the contract work.

Should the Contractor propose to furnish an "or equal" material or assembly, the Contractor shall furnish the manufacturer's certificates of compliance as hereinbefore described for the specified brand name material or assembly. However, the Engineer shall be the sole judge as to whether the proposed "or equal" is suitable for use in the work.

The Engineer reserves the right to refuse permission for use of materials or assemblies on the basis of certificates of compliance.

60-04 Plant inspection. The Engineer or his or her authorized representative may inspect, at its source, any specified material or assembly to be used in the work. Manufacturing plants may be inspected from time to time for the purpose of determining compliance with specified manufacturing methods or materials to be used in the work and to obtain samples required for acceptance of the material or assembly.

Should the Engineer conduct plant inspections, the following conditions shall exist:

a. The Engineer shall have the cooperation and assistance of the Contractor and the producer with whom the Engineer has contracted for materials.

b. The Engineer shall have full entry at all reasonable times to such parts of the plant that concern the manufacture or production of the materials being furnished.

c. If required by the Engineer, the Contractor shall arrange for adequate office or working space that may be reasonably needed for conducting plant inspections. Office or working space should be conveniently located with respect to the plant.

It is understood and agreed that the Owner shall have the right to retest any material that has been tested and approved at the source of supply after it has been delivered to the site. The Engineer shall have the right to reject only material which, when retested, does not meet the requirements of the contract, plans, or specifications.

60-05 Engineer's field office. There is no requirement for the Contractor to furnish a field office for the Engineer.

60-06 Storage of materials. Materials shall be so stored as to assure the preservation of their quality and fitness for the work. Stored materials, even though approved before storage, may again be inspected prior to their use in the work. Stored materials shall be located to facilitate their prompt inspection. The Contractor shall coordinate the storage of all materials with the Engineer. Materials to be stored on airport property shall not create an obstruction to air navigation nor shall they interfere with the free and unobstructed movement of aircraft. Unless otherwise shown on the plans, the storage of materials and the location of the Contractor's plant and parked equipment or vehicles shall be as directed by the Engineer. Private property shall not be used for storage purposes without written permission of the Owner or lessee of such property. The Contractor shall make all arrangements and bear all expenses for the storage of materials on private property. Upon request, the Contractor shall furnish the Engineer a copy of the property Owner's permission.

All storage sites on private or airport property shall be restored to their original condition by the Contractor at his or her entire expense, except as otherwise agreed to (in writing) by the Owner or lessee of the property.

60-07 Unacceptable materials. Any material or assembly that does not conform to the requirements of the contract, plans, or specifications shall be considered unacceptable and shall be rejected. The Contractor shall remove any rejected material or assembly from the site of the work, unless otherwise instructed by the Engineer.

Rejected material or assembly, the defects of which have been corrected by the Contractor, shall not be returned to the site of the work until such time as the Engineer has approved its use in the work.

60-08 Owner furnished materials. The Contractor shall furnish all materials required to complete the work, except those specified, if any, to be furnished by the Owner. Owner-furnished materials shall be made available to the Contractor at the location specified.

All costs of handling, transportation from the specified location to the site of work, storage, and installing Owner-furnished materials shall be included in the unit price bid for the contract item in which such Owner-furnished material is used.

After any Owner-furnished material has been delivered to the location specified, the Contractor shall be responsible for any demurrage, damage, loss, or other deficiencies that may occur during the Contractor's handling, storage, or use of such Owner-furnished material. The Owner will deduct from any monies due or to become due the Contractor any cost incurred by the Owner in making good such loss due to the Contractor's handling, storage, or use of Owner-furnished materials.

END OF SECTION 60

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Section 70 Legal Regulations and Responsibility to Public

70-01 Laws to be observed. The Contractor shall keep fully informed of all Federal and state laws, all local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the work, or which in any way affect the conduct of the work. The Contractor shall at all times observe and comply with all such laws, ordinances, regulations, orders, and decrees; and shall protect and indemnify the Owner and all his or her officers, agents, or servants against any claim or liability arising from or based on the violation of any such law, ordinance, regulation, order, or decree, whether by the Contractor or the Contractor's employees.

70-02 Permits, licenses, and taxes. The Contractor shall procure all permits and licenses, pay all charges, fees, and taxes, and give all notices necessary and incidental to the due and lawful execution of the work.

70-03 Patented devices, materials, and processes. If the Contractor is required or desires to use any design, device, material, or process covered by letters of patent or copyright, the Contractor shall provide for such use by suitable legal agreement with the Patentee or Owner. The Contractor and the surety shall indemnify and hold harmless the Owner, any third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the Owner for any costs, expenses, and damages which it may be obliged to pay by reason of an infringement, at any time during the execution or after the completion of the work.

70-04 Restoration of surfaces disturbed by others. The Owner reserves the right to authorize the construction, reconstruction, or maintenance of any public or private utility service, FAA or National Oceanic and Atmospheric Administration (NOAA) facility, or a utility service of another government agency at any time during the progress of the work. To the extent that such construction, reconstruction, or maintenance has been coordinated with the Owner, such authorized work (by others) is indicated as follows:

Owner (Utility or Other Facility)
Location (See Plan Sheet No.)
Person to Contact (Name, Title, Address and Phone)

Except as listed above, the Contractor shall not permit any individual, firm, or corporation to excavate or otherwise disturb such utility services or facilities located within the limits of the work without the written permission of the Engineer.

Should the Owner of public or private utility service, FAA, or NOAA facility, or a utility service of another government agency be authorized to construct, reconstruct, or maintain such utility service or facility during the progress of the work, the Contractor shall cooperate with such Owners by arranging and performing the work in this contract to facilitate such construction, reconstruction or maintenance by others whether or not such work by others is listed above. When ordered as extra work by the Engineer, the Contractor shall make all necessary repairs to the work which are due to such authorized work by others, unless otherwise provided for in the contract, plans, or specifications. It is understood and agreed that the Contractor shall not be entitled to make any claim for damages due to such authorized work by others or for any delay to the work resulting from such authorized work.

70-05 Federal aid participation. For Airport Improvement Program (AIP) contracts, the United States Government has agreed to reimburse the Owner for some portion of the contract costs. Such

reimbursement is made from time to time upon the Owner's request to the FAA. In consideration of the United States Government's (FAA's) agreement with the Owner, the Owner has included provisions in this contract pursuant to the requirements of Title 49 of the USC and the Rules and Regulations of the FAA that pertain to the work.

As required by the USC, the contract work is subject to the inspection and approval of duly authorized representatives of the FAA Administrator, and is further subject to those provisions of the rules and regulations that are cited in the contract, plans, or specifications.

No requirement of the USC, the rules and regulations implementing the USC, or this contract shall be construed as making the Federal Government a party to the contract nor will any such requirement interfere, in any way, with the rights of either party to the contract.

70-06 Sanitary, health, and safety provisions. The Contractor shall provide and maintain in a neat, sanitary condition such accommodations for the use of his or her employees as may be necessary to comply with the requirements of the state and local Board of Health, or of other bodies or tribunals having jurisdiction.

Attention is directed to Federal, state, and local laws, rules and regulations concerning construction safety and health standards. The Contractor shall not require any worker to work in surroundings or under conditions that are unsanitary, hazardous, or dangerous to his or her health or safety.

70-07 Public convenience and safety. The Contractor shall control his or her operations and those of his or her subcontractors and all suppliers, to assure the least inconvenience to the traveling public. Under all circumstances, safety shall be the most important consideration.

The Contractor shall maintain the free and unobstructed movement of aircraft and vehicular traffic with respect to his or her own operations and those of his or her subcontractors and all suppliers in accordance with the subsection 40-05 titled MAINTENANCE OF TRAFFIC of Section 40 hereinbefore specified and shall limit such operations for the convenience and safety of the traveling public as specified in the subsection 80-04 titled LIMITATION OF OPERATIONS of Section 80 hereinafter.

70-08 Barricades, warning signs, and hazard markings. The Contractor shall furnish, erect, and maintain all barricades, warning signs, and markings for hazards necessary to protect the public and the work. When used during periods of darkness, such barricades, warning signs, and hazard markings shall be suitably illuminated. Unless otherwise specified, barricades, warning signs, and markings for hazards that are in the air operations area (AOAs) shall be a maximum of 18 inches (0.5 m) high. Unless otherwise specified, barricades shall be spaced not more than 4 feet (1.2 m) apart. Barricades, warning signs, and markings shall be paid for under subsection 40-05.

For vehicular and pedestrian traffic, the Contractor shall furnish, erect, and maintain barricades, warning signs, lights and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices.

When the work requires closing an air operations area of the airport or portion of such area, the Contractor shall furnish, erect, and maintain temporary markings and associated lighting conforming to the requirements of advisory circular (AC) 150/5340-1L, Standards for Airport Markings.

The Contractor shall furnish, erect, and maintain markings and associated lighting of open trenches, excavations, temporary stock piles, and the Contractor's parked construction equipment that may be hazardous to the operation of emergency fire-rescue or maintenance vehicles on the airport in reasonable conformance to AC 150/5370-2F, Operational Safety on Airports During Construction.

The Contractor shall identify each motorized vehicle or piece of construction equipment in reasonable conformance to AC 150/5370-2F.

The Contractor shall furnish and erect all barricades, warning signs, and markings for hazards prior to commencing work that requires such erection and shall maintain the barricades, warning signs, and markings for hazards until their removal is directed by the Engineer.

Open-flame type lights shall not be permitted.

70-09 Use of explosives. When the use of explosives is necessary for the execution of the work, the Contractor shall exercise the utmost care not to endanger life or property, including new work. The Contractor shall be responsible for all damage resulting from the use of explosives.

All explosives shall be stored in a secure manner in compliance with all laws and ordinances, and all such storage places shall be clearly marked. Where no local laws or ordinances apply, storage shall be provided satisfactory to the Engineer and, in general, not closer than 1,000 feet (300 m) from the work or from any building, road, or other place of human occupancy.

The Contractor shall notify each property Owner and public utility company having structures or facilities in proximity to the site of the work of his or her intention to use explosives. Such notice shall be given sufficiently in advance to enable them to take such steps as they may deem necessary to protect their property from injury.

The use of electrical blasting caps shall not be permitted on or within 1,000 feet (300 m) of the airport property.

70-10 Protection and restoration of property and landscape. The Contractor shall be responsible for the preservation of all public and private property, and shall protect carefully from disturbance or damage all land monuments and property markers until the Engineer has witnessed or otherwise referenced their location and shall not move them until directed.

The Contractor shall be responsible for all damage or injury to property of any character, during the execution of the work, resulting from any act, omission, neglect, or misconduct in manner or method of executing the work, or at any time due to defective work or materials, and said responsibility shall not be released until the project has been completed and accepted.

When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or in consequence of the non-execution thereof by the Contractor, the Contractor shall restore, at his or her own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.

70-11 Responsibility for damage claims. The Contractor shall indemnify and save harmless the Engineer and the Owner and their officers, and employees from all suits, actions, or claims, of any character, brought because of any injuries or damage received or sustained by any person, persons, or property on account of the operations of the Contractor; or on account of or in consequence of any neglect in safeguarding the work; or through use of unacceptable materials in constructing the work; or because of any act or omission, neglect, or misconduct of said Contractor; or because of any claims or amounts recovered from any infringements of patent, trademark, or copyright; or from any claims or amounts arising or recovered under the “Workmen’s Compensation Act,” or any other law, ordinance, order, or decree. Money due the Contractor under and by virtue of his or her contract considered necessary by the Owner for such purpose may be retained for the use of the Owner or, in case no money is due, his or her surety may be held until such suits, actions, or claims for injuries or damages shall have been settled and suitable evidence to that effect furnished to the Owner, except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that he or she is adequately protected by public liability and property damage insurance.

70-12 Third party beneficiary clause. It is specifically agreed between the parties executing the contract that it is not intended by any of the provisions of any part of the contract to create for the public or any member thereof, a third party beneficiary or to authorize anyone not a party to the contract to maintain a suit for personal injuries or property damage pursuant to the terms or provisions of the contract.

70-13 Opening sections of the work to traffic. Should it be necessary for the Contractor to complete portions of the contract work for the beneficial occupancy of the Owner prior to completion of the entire contract, such "phasing" of the work shall be specified herein and indicated on the plans. When so specified, the Contractor shall complete such portions of the work on or before the date specified or as otherwise specified. The Contractor shall make his or her own estimate of the difficulties involved in arranging the work to permit such beneficial occupancy by the Owner as described below:

Completion General Sequence:

1. Phase 1A
2. Phase 1B
3. Phase 2

Upon completion of any portion of the work listed above, such portion shall be accepted by the Owner in accordance with the subsection 50-14 titled PARTIAL ACCEPTANCE of Section 50.

No portion of the work may be opened by the Contractor for public use until ordered by the Engineer in writing. Should it become necessary to open a portion of the work to public traffic on a temporary or intermittent basis, such openings shall be made when, in the opinion of the Engineer, such portion of the work is in an acceptable condition to support the intended traffic. Temporary or intermittent openings are considered to be inherent in the work and shall not constitute either acceptance of the portion of the work so opened or a waiver of any provision of the contract. Any damage to the portion of the work so opened that is not attributable to traffic which is permitted by the Owner shall be repaired by the Contractor at his or her expense.

The Contractor shall make his or her own estimate of the inherent difficulties involved in completing the work under the conditions herein described and shall not claim any added compensation by reason of delay or increased cost due to opening a portion of the contract work.

Contractor shall be required to conform to safety standards contained AC 150/5370-2 (see Special Provisions).

Contractor shall refer to the approved Construction Safety Phasing Plan (CSPP) to identify barricade requirements and other safety requirements prior to opening up sections of work to traffic.

70-14 Contractor's responsibility for work. Until the Engineer's final written acceptance of the entire completed work, excepting only those portions of the work accepted in accordance with the subsection 50-14 titled PARTIAL ACCEPTANCE of Section 50, the Contractor shall have the charge and care thereof and shall take every precaution against injury or damage to any part due to the action of the elements or from any other cause, whether arising from the execution or from the non-execution of the work. The Contractor shall rebuild, repair, restore, and make good all injuries or damages to any portion of the work occasioned by any of the above causes before final acceptance and shall bear the expense thereof except damage to the work due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God such as earthquake, tidal wave, tornado, hurricane or other cataclysmic phenomenon of nature, or acts of the public enemy or of government authorities.

If the work is suspended for any cause whatever, the Contractor shall be responsible for the work and shall take such precautions necessary to prevent damage to the work. The Contractor shall provide for normal drainage and shall erect necessary temporary structures, signs, or other facilities at his or her

expense. During such period of suspension of work, the Contractor shall properly and continuously maintain in an acceptable growing condition all living material in newly established planting, seeding, and sodding furnished under the contract, and shall take adequate precautions to protect new tree growth and other important vegetative growth against injury.

70-15 Contractor's responsibility for utility service and facilities of others. As provided in the subsection 70-04 titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section, the Contractor shall cooperate with the Owner of any public or private utility service, FAA or NOAA, or a utility service of another government agency that may be authorized by the Owner to construct, reconstruct or maintain such utility services or facilities during the progress of the work. In addition, the Contractor shall control their operations to prevent the unscheduled interruption of such utility services and facilities.

To the extent that such public or private utility services, FAA, or NOAA facilities, or utility services of another governmental agency are known to exist within the limits of the contract work, the approximate locations have been indicated on the plans and the Owners are indicated as follows:

It is understood and agreed that the Owner does not guarantee the accuracy or the completeness of the location information relating to existing utility services, facilities, or structures that may be shown on the plans or encountered in the work. Any inaccuracy or omission in such information shall not relieve the Contractor of the responsibility to protect such existing features from damage or unscheduled interruption of service.

It is further understood and agreed that the Contractor shall, upon execution of the contract, notify the Owners of all utility services or other facilities of his or her plan of operations. Such notification shall be in writing addressed to THE PERSON TO CONTACT as provided in this subsection and subsection 70-04 titled RESTORATION OF SURFACES DISTURBED BY OTHERS of this section. A copy of each notification shall be given to the Engineer.

In addition to the general written notification provided, it shall be the responsibility of the Contractor to keep such individual Owners advised of changes in their plan of operations that would affect such Owners.

Prior to beginning the work in the general vicinity of an existing utility service or facility, the Contractor shall again notify each such Owner of their plan of operation. If, in the Contractor's opinion, the Owner's assistance is needed to locate the utility service or facility or the presence of a representative of the Owner is desirable to observe the work, such advice should be included in the notification. Such notification shall be given by the most expeditious means to reach the utility owner's PERSON TO CONTACT no later than two normal business days prior to the Contractor's commencement of operations in such general vicinity. The Contractor shall furnish a written summary of the notification to the Engineer.

The Contractor's failure to give the two days' notice shall be cause for the Owner to suspend the Contractor's operations in the general vicinity of a utility service or facility.

Where the outside limits of an underground utility service have been located and staked on the ground, the Contractor shall be required to use hand excavation methods within 3 feet (1 m) of such outside limits at such points as may be required to ensure protection from damage due to the Contractor's operations.

Should the Contractor damage or interrupt the operation of a utility service or facility by accident or otherwise, the Contractor shall immediately notify the proper authority and the Engineer and shall take all reasonable measures to prevent further damage or interruption of service. The Contractor, in such events, shall cooperate with the utility service or facility owner and the Engineer continuously until such damage has been repaired and service restored to the satisfaction of the utility or facility owner.

The Contractor shall bear all costs of damage and restoration of service to any utility service or facility due to their operations whether due to negligence or accident. The Owner reserves the right to deduct such costs from any monies due or which may become due the Contractor, or his or her surety.

70-15.1 FAA facilities and cable runs. The Contractor is hereby advised that the construction limits of the project include existing facilities and buried cable runs that are owned, operated and maintained by the FAA. The Contractor, during the execution of the project work, shall comply with the following:

a. The Contractor shall permit FAA maintenance personnel the right of access to the project work site for purposes of inspecting and maintaining all existing FAA owned facilities.

b. The Contractor shall provide notice to the FAA Air Traffic Organization (ATO)/Technical Operations/System Support Center (SSC) Point-of-Contact through the airport manager a minimum of seven (7) calendar days prior to commencement of construction activities in order to permit sufficient time to locate and mark existing buried cables and to schedule any required facility outages.

c. If execution of the project work requires a facility outage, the Contractor shall contact the FAA Point-of-Contact a minimum of 72 hours prior to the time of the required outage.

d. Any damage to FAA cables, access roads, or FAA facilities during construction caused by the Contractor's equipment or personnel whether by negligence or accident will require the Contractor to repair or replace the damaged cables, access road, or FAA facilities to FAA requirements. The Contractor shall not bear the cost to repair damage to underground facilities or utilities improperly located by the FAA.

e. If the project work requires the cutting or splicing of FAA owned cables, the FAA Point-of-Contact shall be contacted a minimum of 72 hours prior to the time the cable work commences. The FAA reserves the right to have a FAA representative on site to observe the splicing of the cables as a condition of acceptance. All cable splices are to be accomplished in accordance with FAA specifications and require approval by the FAA Point-of-Contact as a condition of acceptance by the Owner. The Contractor is hereby advised that FAA restricts the location of where splices may be installed. If a cable splice is required in a location that is not permitted by FAA, the Contractor shall furnish and install a sufficient length of new cable that eliminates the need for any splice.

70-16 Furnishing rights-of-way. The Owner will be responsible for furnishing all rights-of-way upon which the work is to be constructed in advance of the Contractor's operations.

70-17 Personal liability of public officials. In carrying out any of the contract provisions or in exercising any power or authority granted by this contract, there shall be no liability upon the Engineer, his or her authorized representatives, or any officials of the Owner either personally or as an official of the Owner. It is understood that in such matters they act solely as agents and representatives of the Owner.

70-18 No waiver of legal rights. Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of final acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or stopped from recovering from the Contractor or his or her surety, or both, such overpayment as may be sustained, or by failure on the part of the Contractor to fulfill his or her obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

The Contractor, without prejudice to the terms of the contract, shall be liable to the Owner for latent defects, fraud, or such gross mistakes as may amount to fraud, or as regards the Owner's rights under any warranty or guaranty.

70-19 Environmental protection. The Contractor shall comply with all Federal, state, and local laws and regulations controlling pollution of the environment. The Contractor shall take necessary precautions to

prevent pollution of streams, lakes, ponds, and reservoirs with fuels, oils, bitumens, chemicals, or other harmful materials and to prevent pollution of the atmosphere from particulate and gaseous matter.

70-20 Archaeological and historical findings. Unless otherwise specified in this subsection, the Contractor is advised that the site of the work is not within any property, district, or site, and does not contain any building, structure, or object listed in the current National Register of Historic Places published by the United States Department of Interior.

Should the Contractor encounter, during his or her operations, any building, part of a building, structure, or object that is incongruous with its surroundings, the Contractor shall immediately cease operations in that location and notify the Engineer. The Engineer will immediately investigate the Contractor's finding and the Owner will direct the Contractor to either resume operations or to suspend operations as directed.

Should the Owner order suspension of the Contractor's operations in order to protect an archaeological or historical finding, or order the Contractor to perform extra work, such shall be covered by an appropriate contract change order or supplemental agreement as provided in the subsection 40-04 titled EXTRA WORK of Section 40 and the subsection 90-05 titled PAYMENT FOR EXTRA WORK of Section 90. If appropriate, the contract change order or supplemental agreement shall include an extension of contract time in accordance with the subsection 80-07 titled DETERMINATION AND EXTENSION OF CONTRACT TIME of Section 80.

END OF SECTION 70

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Section 80 Execution and Progress

80-01 Subletting of contract. The Owner will not recognize any subcontractor on the work. The Contractor shall at all times when work is in progress be represented either in person, by a qualified superintendent, or by other designated, qualified representative who is duly authorized to receive and execute orders of the Engineer.

The Contractor shall provide copies of all subcontracts to the Engineer. The Contractor shall perform, with his organization, an amount of work equal to at least **60** percent of the total contract cost.

Should the Contractor elect to assign his or her contract, said assignment shall be concurred in by the surety, shall be presented for the consideration and approval of the Owner, and shall be consummated only on the written approval of the Owner.

80-02 Notice to proceed. The notice to proceed shall state the date on which it is expected the Contractor will begin the construction and from which date contract time will be charged. The Contractor shall begin the work to be performed under the contract within 10 days of the date set by the Engineer in the written notice to proceed, but in any event, the Contractor shall notify the Engineer at least 24 hours in advance of the time actual construction operations will begin. The Contractor shall not commence any actual construction prior to the date on which the notice to proceed is issued by the Owner.

80-03 Execution and progress. Unless otherwise specified, the Contractor shall submit their progress schedule for the Engineer's approval within 10 days after the effective date of the notice to proceed. The Contractor's progress schedule, when approved by the Engineer, may be used to establish major construction operations and to check on the progress of the work. The Contractor shall provide sufficient materials, equipment, and labor to guarantee the completion of the project in accordance with the plans and specifications within the time set forth in the proposal.

If the Contractor falls significantly behind the submitted schedule, the Contractor shall, upon the Engineer's request, submit a revised schedule for completion of the work within the contract time and modify their operations to provide such additional materials, equipment, and labor necessary to meet the revised schedule. Should the execution of the work be discontinued for any reason, the Contractor shall notify the Engineer at least 24 hours in advance of resuming operations.

The Contractor shall not commence any actual construction prior to the date on which the notice to proceed is issued by the Owner.

80-04 Limitation of operations. The Contractor shall control his or her operations and the operations of his or her subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the airport.

When the work requires the Contractor to conduct his or her operations within an AOA of the airport, the work shall be coordinated with airport operations (through the Engineer) at least 48 hours prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the Engineer and until the necessary temporary marking and associated lighting is in place as provided in the subsection 70-08 titled BARRICADES, WARNING SIGNS, AND HAZARD MARKINGS of Section 70.

When the contract work requires the Contractor to work within an AOA of the airport on an intermittent basis (intermittent opening and closing of the AOA), the Contractor shall maintain constant communications as specified; immediately obey all instructions to vacate the AOA; immediately obey all

instructions to resume work in such AOA. Failure to maintain the specified communications or to obey instructions shall be cause for suspension of the Contractor's operations in the AOA until the satisfactory conditions are provided. The following AOA cannot be closed to operating aircraft to permit the Contractor's operations on a continuous basis and will therefore be closed to aircraft operations intermittently as follows:

AOA: All areas bounded by the perimeter fence of Salinas Municipal Airport.

Time periods AOA can be closed: Refer to Phase Plans for work area limits and associated closure periods.

Type of communications required when working in an AOA:

a) Continuous and direct communications with Salinas Municipal Airport using cellular phones.

   The Contractors superintendant(s) shall carry cellular phones at all times while construction operations are in progress. The Contractor shall provide the Airport with the superintendant(s) cell phone numbers prior to the start of any construction activities;

b) Continuous monitoring of communications with Salinas Municipal Airport Air Traffic Control Tower (ATCT). The Contractor shall provided a minimum of four (4) VHF Air Band Transceivers for monitoring ATCT communications. The transceivers shall be model IC-A6 by ICOM. The Contractor superintendent and flaggers shall monitor communications with the ATCT at all times during construction activities. Upon completion of the project the Contractor shall hand over the VHF Air Band Transceivers including all changers, to the Airport. The Airport will retain ownership of the transceivers upon project completion. If during the construction operations the transceivers are damaged or abused, the Contractor shall replaced the equipment in kind and at the Contractor's sole cost. No additional compensation or payment will be made for providing and handing over ownership of the transceivers upon project completion, they shall be deemed included in the various bid items.

Control authority: Salinas Municipal Airport (SNS)

Contractor shall be required to conform to safety standards contained in AC 150/5370-2G, Operational Safety on Airports During Construction (see Special Provisions).

80-04.1 Operational safety on airport during construction. All Contractors' operations shall be conducted in accordance with the project Construction Safety and Phasing Plan (CSPP) and the provisions set forth within the current version of AC 150/5370-2. The CSPP, provided under separate cover, conveys minimum requirements for operational safety on the airport during construction activities. The Contractor shall prepare and submit a Safety Plan Compliance Document that details how it proposes to comply with the requirements presented within the CSPP.

The Contractor shall implement all necessary safety plan measures prior to commencement of any work activity. The Contractor shall conduct routine checks to assure compliance with the safety plan measures.

The Contractor is responsible to the Owner for the conduct of all subcontractors it employs on the project. The Contractor shall assure that all subcontractors are made aware of the requirements of the CSPP and that they implement and maintain all necessary measures.

No deviation or modifications may be made to the approved CSPP unless approved in writing by the Owner or Engineer.

80-05 Character of workers, methods, and equipment. The Contractor shall, at all times, employ sufficient labor and equipment for prosecuting the work to full completion in the manner and time required by the contract, plans, and specifications.

All workers shall have sufficient skill and experience to perform properly the work assigned to them. Workers engaged in special work or skilled work shall have sufficient experience in such work and in the operation of the equipment required to perform the work satisfactorily.

Any person employed by the Contractor or by any subcontractor who violates any operational regulations or operational safety requirements and, in the opinion of the Engineer, does not perform his work in a proper and skillful manner or is intemperate or disorderly shall, at the written request of the Engineer, be removed forthwith by the Contractor or subcontractor employing such person, and shall not be employed again in any portion of the work without approval of the Engineer.

Should the Contractor fail to remove such persons or person, or fail to furnish suitable and sufficient personnel for the proper execution of the work, the Engineer may suspend the work by written notice until compliance with such orders.

All equipment that is proposed to be used on the work shall be of sufficient size and in such mechanical condition as to meet requirements of the work and to produce a satisfactory quality of work. Equipment used on any portion of the work shall be such that no injury to previously completed work, adjacent property, or existing airport facilities will result from its use.

When the methods and equipment to be used by the Contractor in accomplishing the work are not prescribed in the contract, the Contractor is free to use any methods or equipment that will accomplish the work in conformity with the requirements of the contract, plans, and specifications.

When the contract specifies the use of certain methods and equipment, such methods and equipment shall be used unless others are authorized by the Engineer. If the Contractor desires to use a method or type of equipment other than specified in the contract, the Contractor may request authority from the Engineer to do so. The request shall be in writing and shall include a full description of the methods and equipment proposed and of the reasons for desiring to make the change. If approval is given, it will be on the condition that the Contractor will be fully responsible for producing work in conformity with contract requirements. If, after trial use of the substituted methods or equipment, the Engineer determines that the work produced does not meet contract requirements, the Contractor shall discontinue the use of the substitute method or equipment and shall complete the remaining work with the specified methods and equipment. The Contractor shall remove any deficient work and replace it with work of specified quality, or take such other corrective action as the Engineer may direct. No change will be made in basis of payment for the contract items involved nor in contract time as a result of authorizing a change in methods or equipment under this subsection.

80-06 Temporary suspension of the work. The Owner shall have the authority to suspend the work wholly, or in part, for such period or periods as the Owner may deem necessary, due to unsuitable weather, or such other conditions as are considered unfavorable for the execution of the work, or for such time as is necessary due to the failure on the part of the Contractor to carry out orders given or perform any or all provisions of the contract.

In the event that the Contractor is ordered by the Owner, in writing, to suspend work for some unforeseen cause not otherwise provided for in the contract and over which the Contractor has no control, the Contractor may be reimbursed for actual money expended on the work during the period of shutdown. No allowance will be made for anticipated profits. The period of shutdown shall be computed from the effective date of the Engineer’s order to suspend work to the effective date of the Engineer’s order to resume the work. Claims for such compensation shall be filed with the Engineer within the time period stated in the Engineer’s order to resume work. The Contractor shall submit with his or her claim information substantiating the amount shown on the claim. The Engineer will forward the Contractor’s claim to the Owner for consideration in accordance with local laws or ordinances. No provision of this article shall be construed as entitling the Contractor to compensation for delays due to inclement weather,

for suspensions made at the request of the Owner, or for any other delay provided for in the contract, plans, or specifications.

If it should become necessary to suspend work for an indefinite period, the Contractor shall store all materials in such manner that they will not become an obstruction nor become damaged in any way. The Contractor shall take every precaution to prevent damage or deterioration of the work performed and provide for normal drainage of the work. The Contractor shall erect temporary structures where necessary to provide for traffic on, to, or from the airport.

80-07 Determination and extension of contract time. The number of calendar or working days allowed for completion of the work shall be stated in the proposal and contract and shall be known as the CONTRACT TIME.

Should the contract time require extension for reasons beyond the Contractor's control, it shall be adjusted as follows:

a. CONTRACT TIME based on CALENDAR DAYS shall be calculated weekly by the Engineer. The Engineer will furnish the Contractor a copy of his or her weekly statement of the number of working days charged against the contract time during the week and the number of working days currently specified for completion of the contract (the original contract time plus the number of working days, if any, that have been included in approved CHANGE ORDERS or SUPPLEMENTAL AGREEMENTS covering EXTRA WORK).

The Engineer shall base his or her weekly statement of contract time charged on the following considerations:

(1) No time shall be charged for days on which the Contractor is unable to proceed with the principal item of work under construction at the time for at least six (6) hours with the normal work force employed on such principal item. Should the normal work force be on a double-shift, 12 hours shall be used. Should the normal work force be on a triple-shift, 18 hours shall apply. Conditions beyond the Contractor's control such as strikes, lockouts, unusual delays in transportation, temporary suspension of the principal item of work under construction or temporary suspension of the entire work which have been ordered by the Owner for reasons not the fault of the Contractor, shall not be charged against the contract time.

(2) The Engineer will not make charges against the contract time prior to the effective date of the notice to proceed.

(3) The Engineer will begin charges against the contract time on the first working day after the effective date of the notice to proceed.

(4) The Engineer will not make charges against the contract time after the date of final acceptance as defined in the subsection 50-15 titled FINAL ACCEPTANCE of Section 50.

(5) The Contractor will be allowed one (1) week in which to file a written protest setting forth his or her objections to the Engineer's weekly statement. If no objection is filed within such specified time, the weekly statement shall be considered as acceptable to the Contractor.

The contract time (stated in the proposal) is based on the originally estimated quantities as described in the subsection 20-05 titled INTERPRETATION OF ESTIMATED PROPOSAL QUANTITIES of Section 20. Should the satisfactory completion of the contract require performance of work in greater quantities than those estimated in the proposal, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in contract time shall not consider either the cost of work or the extension of contract time that has been covered by change order or supplemental agreement and shall be made at the time of final payment.

b. Contract Time based on calendar days shall consist of the number of calendar days stated in the contract counting from the effective date of the notice to proceed and including all Saturdays, Sundays, holidays, and non-work days. All calendar days elapsing between the effective dates of the Owner's orders to suspend and resume all work, due to causes not the fault of the Contractor, shall be excluded.

At the time of final payment, the contract time shall be increased in the same proportion as the cost of the actually completed quantities bears to the cost of the originally estimated quantities in the proposal. Such increase in the contract time shall not consider either cost of work or the extension of contract time that has been covered by a change order or supplemental agreement. Charges against the contract time will cease as of the date of final acceptance.

c. When the contract time is a specified completion date, it shall be the date on which all contract work shall be substantially complete.

If the Contractor finds it impossible for reasons beyond his or her control to complete the work within the contract time as specified, or as extended in accordance with the provisions of this subsection, the Contractor may, at any time prior to the expiration of the contract time as extended, make a written request to the Owner for an extension of time setting forth the reasons which the Contractor believes will justify the granting of his or her request. Requests for extension of time on calendar day projects, caused by inclement weather, shall be supported with National Weather Bureau data showing the actual amount of inclement weather exceeded what could normally be expected during the contract period. The Contractor's plea that insufficient time was specified is not a valid reason for extension of time. If the supporting documentation justify the work was delayed because of conditions beyond the control and without the fault of the Contractor, the Owner may extend the time for completion by a change order that adjusts the contract time or completion date. The extended time for completion shall then be in full force and effect, the same as though it were the original time for completion.

80-08 Failure to complete on time. For each calendar day or working day, as specified in the contract, that any work remains uncompleted after the contract time (including all extensions and adjustments as provided in the subsection 80-07 titled DETERMINATION AND EXTENSION OF CONTRACT TIME of this Section) the sum specified in the contract and proposal as liquidated damages will be deducted from any money due or to become due the Contractor or his or her surety. Such deducted sums shall not be deducted as a penalty but shall be considered as liquidation of a reasonable portion of damages including but not limited to additional engineering services that will be incurred by the Owner should the Contractor fail to complete the work in the time provided in their contract.

Schedule	Liquidated Damages Cost	Allowed Construction Time
Base Bid	$1,000 per day or any part thereof.	40 Calendar Days For Phase 1A and 1B
Additive Alternative No. 1	$1,000 per day or any part thereof.	No additional Calendar Days added to the Construction Time if Add Alt No. 1 is awarded
Additive Alternative No. 2	$1,000 per day or any part thereof.	No additional Calendar Days added to the Construction Time if Add Alt No. 2 is awarded
Additive Alternative No. 3	$1,000 per day or any part thereof.	An additional 35 Calendar Days is added to the Construction time if Add Alt No. 3 is awarded

Additive Alternative No. 4	$1,000 per day or any part thereof.	No additional Calendar Days added to the Construction Time if Add Alt No. 4 is awarded concurrently with Add Alt. No 3. If Add Alt No. 4 is awarded separately from Add No. 3, 14 Calendar Days shall be awarded to the Construction Time
Runways 8-26 and Runway 13-31 Nightly Closures	$500 per minute or any part thereof for the first 10 minutes; $1,000 per minute or any part thereof for all subsequent minutes.	Nightly Closure (9:30PM to 5:30AM)

Permitting the Contractor to continue and finish the work or any part of it after the time fixed for its completion, or after the date to which the time for completion may have been extended, will in no way operate as a wavier on the part of the Owner of any of its rights under the contract.

80-09 Default and termination of contract. The Contractor shall be considered in default of his or her contract and such default will be considered as cause for the Owner to terminate the contract for any of the following reasons if the Contractor:

a. Fails to begin the work under the contract within the time specified in the Notice to Proceed, or

b. Fails to perform the work or fails to provide sufficient workers, equipment and/or materials to assure completion of work in accordance with the terms of the contract, or

c. Performs the work unsuitably or neglects or refuses to remove materials or to perform anew such work as may be rejected as unacceptable and unsuitable, or

d. Discontinues the execution of the work, or

e. Fails to resume work which has been discontinued within a reasonable time after notice to do so, or

f. Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency, or

g. Allows any final judgment to stand against the Contractor unsatisfied for a period of 10 days, or

h. Makes an assignment for the benefit of creditors, or

i. For any other cause whatsoever, fails to carry on the work in an acceptable manner.

Should the Engineer consider the Contractor in default of the contract for any reason above, the Engineer shall immediately give written notice to the Contractor and the Contractor's surety as to the reasons for considering the Contractor in default and the Owner's intentions to terminate the contract.

If the Contractor or surety, within a period of 10 days after such notice, does not proceed in accordance therewith, then the Owner will, upon written notification from the Engineer of the facts of such delay, neglect, or default and the Contractor's failure to comply with such notice, have full power and authority without violating the contract, to take the execution of the work out of the hands of the Contractor. The Owner may appropriate or use any or all materials and equipment that have been mobilized for use in the work and are acceptable and may enter into an agreement for the completion of said contract according to

the terms and provisions thereof, or use such other methods as in the opinion of the Engineer will be required for the completion of said contract in an acceptable manner.

All costs and charges incurred by the Owner, together with the cost of completing the work under contract, will be deducted from any monies due or which may become due the Contractor. If such expense exceeds the sum which would have been payable under the contract, then the Contractor and the surety shall be liable and shall pay to the Owner the amount of such excess.

80-10 Termination for national emergencies. The Owner shall terminate the contract or portion thereof by written notice when the Contractor is prevented from proceeding with the construction contract as a direct result of an Executive Order of the President with respect to the execution of war or in the interest of national defense.

When the contract, or any portion thereof, is terminated before completion of all items of work in the contract, payment will be made for the actual number of units or items of work completed at the contract price or as mutually agreed for items of work partially completed or not started. No claims or loss of anticipated profits shall be considered.

Reimbursement for organization of the work, and other overhead expenses, (when not otherwise included in the contract) and moving equipment and materials to and from the job will be considered, the intent being that an equitable settlement will be made with the Contractor.

Acceptable materials, obtained or ordered by the Contractor for the work and that are not incorporated in the work shall, at the option of the Contractor, be purchased from the Contractor at actual cost as shown by receipted bills and actual cost records at such points of delivery as may be designated by the Engineer.

Termination of the contract or a portion thereof shall neither relieve the Contractor of his or her responsibilities for the completed work nor shall it relieve his or her surety of its obligation for and concerning any just claim arising out of the work performed.

80-11 Work area, storage area and sequence of operations. The Contractor shall obtain approval from the Engineer prior to beginning any work in all areas of the airport. No operating runway, taxiway, or air operations area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate his or her work in such a manner as to ensure safety and a minimum of hindrance to flight operations. All Contractor equipment and material stockpiles shall be stored outside the the runway and taxiway Object Free Area (OFA). No equipment will be allowed to park within the approach area of an active runway at any time. No equipment shall be within the Object Free Zone (OFZ) of an active runway at any time.

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Section 90 Measurement and Payment

90-01 Measurement of quantities. All work completed under the contract will be measured by the Engineer, or his or her authorized representatives, using United States Customary Units of Measurement or the International System of Units.

The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice.

Unless otherwise specified, longitudinal measurements for area computations will be made horizontally, and no deductions will be made for individual fixtures (or leave-outs) having an area of 9 square feet (0.8 square meters) or less. Unless otherwise specified, transverse measurements for area computations will be the neat dimensions shown on the plans or ordered in writing by the Engineer.

Structures will be measured according to neat lines shown on the plans or as altered to fit field conditions.

Unless otherwise specified, all contract items which are measured by the linear foot such as electrical ducts, conduits, pipe culverts, underdrains, and similar items shall be measured parallel to the base or foundation upon which such items are placed.

In computing volumes of excavation the average end area method or other acceptable methods will be used.

The thickness of plates and galvanized sheet used in the manufacture of corrugated metal pipe, metal plate pipe culverts and arches, and metal cribbing will be specified and measured in decimal fraction of inch.

The term “ton” will mean the short ton consisting of 2,000 lb (907 km) avoirdupois. All materials that are measured or proportioned by weights shall be weighed on accurate, approved scales by competent, qualified personnel at locations designed by the Engineer. If material is shipped by rail, the car weight may be accepted provided that only the actual weight of material is paid for. However, car weights will not be acceptable for material to be passed through mixing plants. Trucks used to haul material being paid for by weight shall be weighed empty daily at such times as the Engineer directs, and each truck shall bear a plainly legible identification mark.

Materials to be measured by volume in the hauling vehicle shall be hauled in approved vehicles and measured therein at the point of delivery. Vehicles for this purpose may be of any size or type acceptable for the materials hauled, provided that the body is of such shape that the actual contents may be readily and accurately determined. All vehicles shall be loaded to at least their water level capacity, and all loads shall be leveled when the vehicles arrive at the point of delivery.

When requested by the Contractor and approved by the Engineer in writing, material specified to be measured by the cubic yard (cubic meter) may be weighed, and such weights will be converted to cubic yards (cubic meters) for payment purposes. Factors for conversion from weight measurement to volume measurement will be determined by the Engineer and shall be agreed to by the Contractor before such method of measurement of pay quantities is used.

Bituminous materials will be measured by the gallon (liter) or ton (kg). When measured by volume, such volumes will be measured at 60°F (16°C) or will be corrected to the volume at 60°F (16°C) using ASTM D1250 for asphalts or ASTM D633 for tars.

Net certified scale weights or weights based on certified volumes in the case of rail shipments will be used as a basis of measurement, subject to correction when bituminous material has been lost from the car or the distributor, wasted, or otherwise not incorporated in the work.

When bituminous materials are shipped by truck or transport, net certified weights by volume, subject to correction for loss or foaming, may be used for computing quantities.

Cement will be measured by the ton (kg) or hundredweight (km).

Timber will be measured by the thousand feet board measure (MFBM) actually incorporated in the structure. Measurement will be based on nominal widths and thicknesses and the extreme length of each piece.

The term “lump sum” when used as an item of payment will mean complete payment for the work described in the contract.

When a complete structure or structural unit (in effect, “lump sum” work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories.

Rental of equipment will be measured by time in hours of actual working time and necessary traveling time of the equipment within the limits of the work. Special equipment ordered by the Engineer in connection with force account work will be measured as agreed in the change order or supplemental agreement authorizing such force account work as provided in the subsection 90-05 titled PAYMENT FOR EXTRA WORK of this section.

When standard manufactured items are specified such as fence, wire, plates, rolled shapes, pipe conduit, etc., and these items are identified by gauge, unit weight, section dimensions, etc., such identification will be considered to be nominal weights or dimensions. Unless more stringently controlled by tolerances in cited specifications, manufacturing tolerances established by the industries involved will be accepted.

Scales for weighing materials which are required to be proportioned or measured and paid for by weight shall be furnished, erected, and maintained by the Contractor, or be certified permanently installed commercial scales.

Scales shall be accurate within 1/2% of the correct weight throughout the range of use. The Contractor shall have the scales checked under the observation of the inspector before beginning work and at such other times as requested. The intervals shall be uniform in spacing throughout the graduated or marked length of the beam or dial and shall not exceed one-tenth of 1% of the nominal rated capacity of the scale, but not less than 1 pound (454 grams). The use of spring balances will not be permitted.

Beams, dials, platforms, and other scale equipment shall be so arranged that the operator and the inspector can safely and conveniently view them.

Scale installations shall have available ten standard 50-pound (2.3 km) weights for testing the weighing equipment or suitable weights and devices for other approved equipment.

Scales must be tested for accuracy and serviced before use at a new site. Platform scales shall be installed and maintained with the platform level and rigid bulkheads at each end.

Scales “overweighing” (indicating more than correct weight) will not be permitted to operate, and all materials received subsequent to the last previous correct weighting-accuracy test will be reduced by the percentage of error in excess of one-half of 1%.

In the event inspection reveals the scales have been underweighing (indicating less than correct weight), they shall be adjusted, and no additional payment to the Contractor will be allowed for materials previously weighed and recorded.

All costs in connection with furnishing, installing, certifying, testing, and maintaining scales; for furnishing check weights and scale house; and for all other items specified in this subsection, for the

weighing of materials for proportioning or payment, shall be included in the unit contract prices for the various items of the project.

When the estimated quantities for a specific portion of the work are designated as the pay quantities in the contract, they shall be the final quantities for which payment for such specific portion of the work will be made, unless the dimensions of said portions of the work shown on the plans are revised by the Engineer. If revised dimensions result in an increase or decrease in the quantities of such work, the final quantities for payment will be revised in the amount represented by the authorized changes in the dimensions.

90-02 Scope of payment. The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials, for performing all work under the contract in a complete and acceptable manner, and for all risk, loss, damage, or expense of whatever character arising out of the nature of the work or the execution thereof, subject to the provisions of the subsection 70-18 titled NO WAIVER OF LEGAL RIGHTS of Section 70.

When the "basis of payment" subsection of a technical specification requires that the contract price (price bid) include compensation for certain work or material essential to the item, this same work or material will not also be measured for payment under any other contract item which may appear elsewhere in the contract, plans, or specifications.

90-03 Compensation for altered quantities. When the accepted quantities of work vary from the quantities in the proposal, the Contractor shall accept as payment in full, so far as contract items are concerned, payment at the original contract price for the accepted quantities of work actually completed and accepted. No allowance, except as provided for in the subsection 40-02 titled ALTERATION OF WORK AND QUANTITIES of Section 40 will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor which results directly from such alterations or indirectly from his or her unbalanced allocation of overhead and profit among the contract items, or from any other cause.

90-04 Payment for omitted items. As specified in the subsection 40-03 titled OMITTED ITEMS of Section 40, the Engineer shall have the right to omit from the work (order nonperformance) any contract item, except major contract items, in the best interest of the Owner.

Should the Engineer omit or order nonperformance of a contract item or portion of such item from the work, the Contractor shall accept payment in full at the contract prices for any work actually completed and acceptable prior to the Engineer's order to omit or non-perform such contract item.

Acceptable materials ordered by the Contractor or delivered on the work prior to the date of the Engineer's order will be paid for at the actual cost to the Contractor and shall thereupon become the property of the Owner.

In addition to the reimbursement hereinbefore provided, the Contractor shall be reimbursed for all actual costs incurred for the purpose of performing the omitted contract item prior to the date of the Engineer's order. Such additional costs incurred by the Contractor must be directly related to the deleted contract item and shall be supported by certified statements by the Contractor as to the nature the amount of such costs.

90-05 Payment for extra work. Extra work, performed in accordance with the subsection 40-04 titled EXTRA WORK of Section 40, will be paid for at the contract prices or agreed prices specified in the change order or supplemental agreement authorizing the extra work. When the change order or supplemental agreement authorizing the extra work requires that it be done by force account, such force account shall be measured and paid for based on expended labor, equipment, and materials plus a negotiated and agreed upon allowance for overhead and profit.

a. **Miscellaneous**. No additional allowance will be made for general superintendence, the use of small tools, or other costs for which no specific allowance is herein provided.

b. **Comparison of Record**. The Contractor and the Engineer shall compare records of the cost of force account work at the end of each day. Agreement shall be indicated by signature of the Contractor and the Engineer or their duly authorized representatives.

c. **Statement**. No payment will be made for work performed on a force account basis until the Contractor has furnished the Engineer with duplicate itemized statements of the cost of such force account work detailed as follows:

(1) Name, classification, date, daily hours, total hours, rate and extension for each laborer and foreman.

(2) Designation, dates, daily hours, total hours, rental rate, and extension for each unit of machinery and equipment.

(3) Quantities of materials, prices, and extensions.

(4) Transportation of materials.

(5) Cost of property damage, liability and workman's compensation insurance premiums, unemployment insurance contributions, and social security tax.

Statements shall be accompanied and supported by a receipted invoice for all materials used and transportation charges. However, if materials used on the force account work are not specifically purchased for such work but are taken from the Contractor's stock, then in lieu of the invoices the Contractor shall furnish an affidavit certifying that such materials were taken from his/her stock, that the quantity claimed was actually used, and that the price and transportation claimed represent the actual cost to the Contractor.

90-06 Partial payments. Partial payments will be made to the Contractor at least once each month as the work progresses. Said payments will be based upon estimates, prepared by the Engineer, of the value of the work performed and materials complete and in place, in accordance with the contract, plans, and specifications. Such partial payments may also include the delivered actual cost of those materials stockpiled and stored in accordance with the subsection 90-07 titled PAYMENT FOR MATERIALS ON HAND of this section. No partial payment will be made when the amount due to the Contractor since the last estimate amounts to less than five hundred dollars.

The Contractor shall submit the progress payment pay application to the Engineer for review and approval. The Engineer shall review it within seven (7) calendar days of receipt. The Engineer shall either deny and return the progress payment pay application to the Contractor for correction, or recommend approval and forward it to the Owner for processing. The required attachments to the monthly progress payment pay applications shall include:

a. Certified Payroll Reports: All current payroll reports and statement of compliance for the Contractor and all subcontractors (to be completed through the date of the pay application; duplicate originals are required).

b. Record Drawings: Record drawings shall be complete and current at the time of the monthly pay application. The Engineer in conjunction with the Contractor, shall review the current Record Drawings at the time the payment application is submitted. If the Engineer determines that the Record Drawings are not compete or current, the Engineer will suspend further review of the pay application until the Contractor updates and/or corrects the Record Drawings. The review and subsequent processing of the pay application will not re- commence until the Engineer determines that the Contractor has corrected the Record Drawings and they are complete and current.

c. Quantity Calculations: Certified quantity calculations to justify all pay quantities and amount requested.

d. Monthly Schedule: The Contractor shall submit an updated, revised CPM schedule to the Engineer with each pay application.

Failure to provide any of the documents as listed above will result in the Engineer returning the monthly pay application to the Contractor with no action.

From the total of the amount determined to be payable on a partial payment, 10 percent of such total amount will be deducted and retained by the Owner until the final payment is made, except as may be provided (at the Contractor's option) in the subsection titled PAYMENT OF WITHHELD FUNDS of this section. The balance (90 percent) of the amount payable, less all previous payments, shall be certified for payment. Should the Contractor exercise his/her option, as provided in the subsection titled PAYMENT OF WITHHELD FUNDS of this section, no such 10 percent retainage shall be deducted.

When not less than 95 percent of the work has been completed, the Engineer may, at the Owner's discretion and with the consent of the surety, prepare an estimate from which will be retained an amount not less than twice the contract value or estimated cost, whichever is greater, of the work remaining to be done. The remainder, less all previous payments and deductions, will then be certified for payment to the Contractor.

It is understood and agreed that the Contractor shall not be entitled to demand or receive partial payment based on quantities of work in excess of those provided in the proposal or covered by approved change orders or supplemental agreements, except when such excess quantities have been determined by the Engineer to be a part of the final quantity for the item of work in question.

No partial payment shall bind the Owner to the acceptance of any materials or work in place as to quality or quantity. All partial payments are subject to correction at the time of final payment as provided in the subsection 90-09 titled ACCEPTANCE AND FINAL PAYMENT of this section.

The Contractor shall deliver to the Owner a complete release of all claims for labor and material arising out of this contract before the final payment is made. If any subcontractor or supplier fails to furnish such a release in full, the Contractor may furnish a bond or other collateral satisfactory to the Owner to indemnify the Owner against any potential lien or other such claim. The bond or collateral shall include all costs, expenses, and attorney fees the Owner may be compelled to pay in discharging any such lien or claim.

90-07 Payment for materials on hand. Partial payments may be made to the extent of the delivered cost of materials to be incorporated in the work, provided that such materials meet the requirements of the contract, plans, and specifications and are delivered to acceptable sites on the airport property or at other sites in the vicinity that are acceptable to the Owner. Such delivered costs of stored or stockpiled materials may be included in the next partial payment after the following conditions are met:

a. The material has been stored or stockpiled in a manner acceptable to the Engineer at or on an approved site.

b. The Contractor has furnished the Engineer with acceptable evidence of the quantity and quality of such stored or stockpiled materials.

c. The Contractor has furnished the Engineer with satisfactory evidence that the material and transportation costs have been paid.

d. The Contractor has furnished the Owner legal title (free of liens or encumbrances of any kind) to the material so stored or stockpiled.

e. The Contractor has furnished the Owner evidence that the material so stored or stockpiled is insured against loss by damage to or disappearance of such materials at any time prior to use in the work.

It is understood and agreed that the transfer of title and the Owner's payment for such stored or stockpiled materials shall in no way relieve the Contractor of his or her responsibility for furnishing and placing such materials in accordance with the requirements of the contract, plans, and specifications.

In no case will the amount of partial payments for materials on hand exceed the contract price for such materials or the contract price for the contract item in which the material is intended to be used.

No partial payment will be made for stored or stockpiled living or perishable plant materials.

The Contractor shall bear all costs associated with the partial payment of stored or stockpiled materials in accordance with the provisions of this subsection.

90-08 Payment of withheld funds. At the Contractor's option, if an Owner withholds retainage in accordance with the methods described in subsection 90-06 PARTIAL PAYMENTS, the Contractor may request that the Owner deposit the retainage into an escrow account. The Owner's deposit of retainage into an escrow account is subject to the following conditions:

a. The Contractor shall bear all expenses of establishing and maintaining an escrow account and escrow agreement acceptable to the Owner.

b. The Contractor shall deposit to and maintain in such escrow only those securities or bank certificates of deposit as are acceptable to the Owner and having a value not less than the retainage that would otherwise be withheld from partial payment.

c. The Contractor shall enter into an escrow agreement satisfactory to the Owner.

d. The Contractor shall obtain the written consent of the surety to such agreement.

90-09 Acceptance and final payment. When the contract work has been accepted in accordance with the requirements of the subsection 50-15 titled FINAL ACCEPTANCE of Section 50, the Engineer will prepare the final estimate of the items of work actually performed. The Contractor shall approve the Engineer's final estimate or advise the Engineer of the Contractor's objections to the final estimate which are based on disputes in measurements or computations of the final quantities to be paid under the contract as amended by change order or supplemental agreement. The Contractor and the Engineer shall resolve all disputes (if any) in the measurement and computation of final quantities to be paid within 30 calendar days of the Contractor's receipt of the Engineer's final estimate. If, after such 30-day period, a dispute still exists, the Contractor may approve the Engineer's estimate under protest of the quantities in dispute, and such disputed quantities shall be considered by the Owner as a claim in accordance with the subsection 50-16 titled CLAIMS FOR ADJUSTMENT AND DISPUTES of Section 50.

After the Contractor has approved, or approved under protest, the Engineer's final estimate, and after the Engineer's receipt of the project closeout documentation required in subsection 90-11 Project Closeout, final payment will be processed based on the entire sum, or the undisputed sum in case of approval under protest, determined to be due the Contractor less all previous payments and all amounts to be deducted under the provisions of the contract. All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

If the Contractor has filed a claim for additional compensation under the provisions of the subsection 50-16 titled CLAIMS FOR ADJUSTMENTS AND DISPUTES of Section 50 or under the provisions of this subsection, such claims will be considered by the Owner in accordance with local laws or ordinances. Upon final adjudication of such claims, any additional payment determined to be due the Contractor will be paid pursuant to a supplemental final estimate.

90-10 Construction warranty.

a. In addition to any other warranties in this contract, the Contractor warrants that work performed under this contract conforms to the contract requirements and is free of any defect in equipment, material, workmanship, or design furnished, or performed by the Contractor or any subcontractor or supplier at any tier.

b. This warranty shall continue for a period of one year from the date of final acceptance of the work. If the Owner takes possession of any part of the work before final acceptance, this warranty shall continue for a period of one year from the date the Owner takes possession. However, this will not relieve the Contractor from corrective items required by the final acceptance of the project work.

c. The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to Owner real or personal property, when that damage is the result of:

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defect of equipment, material, workmanship, or design furnished by the Contractor.

d. The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for one year from the date of repair or replacement.

e. The Owner will notify the Contractor, in writing, within **7** days after the discovery of any failure, defect, or damage.

f. If the Contractor fails to remedy any failure, defect, or damage within **14** days after receipt of notice, the Owner shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

g. With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall: (1) Obtain all warranties that would be given in normal commercial practice; (2) Require all warranties to be executed, in writing, for the benefit of the Owner, as directed by the Owner, and (3) Enforce all warranties for the benefit of the Owner.

h. This warranty shall not limit the Owner's rights with respect to latent defects, gross mistakes, or fraud.

90-11 Project closeout. Approval of final payment to the Contractor is contingent upon completion and submittal of the items listed below. The final payment will not be approved until the Engineer approves the Contractor's final submittal. The Contractor shall:

a. Provide two (2) copies of all manufacturers warranties specified for materials, equipment, and installations.

b. Provide weekly payroll records (not previously received) from the general Contractor and all subcontractors.

c. Complete final cleanup in accordance with subsection 40-08, FINAL CLEANUP.

d. Complete all punch list items identified during the Final Inspection.

e. Provide complete release of all claims for labor and material arising out of the Contract.

f. Provide a certified statement signed by the subcontractors, indicating actual amounts paid to the Disadvantaged Business Enterprise (DBE) subcontractors and/or suppliers associated with the project.

g. When applicable per state requirements, return copies of sales tax completion forms.

h. Manufacturer's certifications for all items incorporated in the work.

i. All required record drawings, as-built drawings or as-constructed drawings.

j. Project Operation and Maintenance (O&M) Manual.

k. Security for Construction Warranty.

l. Equipment commissioning documentation submitted, if required.

END OF SECTION 90

Section 100 Contractor Quality Control Program

100-01 General. When the specification requires a Contractor Quality Control Program, the Contractor shall establish, provide, and maintain an effective Quality Control Program that details the methods and procedures that will be taken to assure that all materials and completed construction required by this contract conform to contract plans, technical specifications and other requirements, whether manufactured by the Contractor, or procured from subcontractors or vendors. Although guidelines are established and certain minimum requirements are specified here and elsewhere in the contract technical specifications, the Contractor shall assume full responsibility for accomplishing the stated purpose.

The intent of this section is to enable the Contractor to establish a necessary level of control that will:

a. Adequately provide for the production of acceptable quality materials.

b. Provide sufficient information to assure both the Contractor and the Engineer that the specification requirements can be met.

c. Allow the Contractor as much latitude as possible to develop his or her own standard of control.

The Contractor shall be prepared to discuss and present, at the preconstruction conference, their understanding of the quality control requirements. The Contractor shall not begin any construction or production of materials to be incorporated into the completed work until the Quality Control Program has been reviewed and accepted by the Engineer. No partial payment will be made for materials subject to specific quality control requirements until the Quality Control Program has been reviewed.

The quality control requirements contained in this section and elsewhere in the contract technical specifications are in addition to and separate from the acceptance testing requirements. Acceptance testing requirements are the responsibility of the Engineer.

Paving projects over $500,000 shall have a Quality Control (QC)/Quality Assurance (QA) workshop with the Engineer, Contractor, subcontractors, testing laboratories, and Owner's representative at start of construction. The workshop shall address QC and QA requirements of the project specifications. The Contractor shall coordinate with the Airport and the Engineer on time and location of the QC/QA workshop.

100-02 Description of program.

a. General description. The Contractor shall establish a Quality Control Program to perform quality control inspection and testing of all items of work required by the technical specifications, including those performed by subcontractors. This Quality Control Program shall ensure conformance to applicable specifications and plans with respect to materials, workmanship, construction, finish, and functional performance. The Quality Control Program shall be effective for control of all construction work performed under this Contract and shall specifically include surveillance and tests required by the technical specifications, in addition to other requirements of this section and any other activities deemed necessary by the Contractor to establish an effective level of quality control.

b. Quality Control Program. The Contractor shall describe the Quality Control Program in a written document that shall be reviewed and approved by the Engineer prior to the start of any production, construction, or off-site fabrication. The written Quality Control Program shall be submitted to the Engineer for review and approval at least **10** calendar days before the **pre-construction conference**. The Contractor's Quality Control Plan and Quality Control testing laboratory must be approved in writing by the Engineer prior to the Notice to Proceed (NTP).

The Quality Control Program shall be organized to address, as a minimum, the following items:

a. Quality control organization

b. Project progress schedule

c. Submittals schedule

d. Inspection requirements

e. Quality control testing plan

f. Documentation of quality control activities

g. Requirements for corrective action when quality control and/or acceptance criteria are not met

h. Technician and inspection staffing levels and identification of designated personnel for each type of construction operation: (at a minimum the following shall be addressed: asphalt pavement removal, cold planning, and pavement marking obliteration; storm drain pipe and structure installation; water line installation; utility installation; excavations; formation of embankment-in-place; installation of geogrid; retaining wall construction; grading; asphalt concrete paving; EMAS installation; Portland Cement Concrete placement; saw cutting; sealing of joints; electrical duct bank and conduit installation, and compaction of trenches; installation, testing and commissioning of navigation aids; installation and testing of conductor, ground wires and counterpoise; installation and testing of airfield signs and edge lighting; installation of pavement markings; fence installation).

The Contractor is encouraged to add any additional elements to the Quality Control Program that is deemed necessary to adequately control all production and/or construction processes required by this contract.

100-03 Quality control organization. The Contractor Quality Control Program shall be implemented by the establishment of a separate quality control organization. An organizational chart shall be developed to show all quality control personnel and how these personnel integrate with other management/production and construction functions and personnel.

The organizational chart shall identify all quality control staff by name and function, and shall indicate the total staff required to implement all elements of the Quality Control Program, including inspection and testing for each item of work. If necessary, different technicians can be used for specific inspection and testing functions for different items of work. If an outside organization or independent testing laboratory is used for implementation of all or part of the Quality Control Program, the personnel assigned shall be subject to the qualification requirements of paragraph 100-03a and 100-03b. The organizational chart shall indicate which personnel are Contractor employees and which are provided by an outside organization.

The quality control organization shall, as a minimum, consist of the following personnel:

a. Program Administrator. The Program Administrator shall be a full-time employee of the Contractor, or a consultant engaged by the Contractor. The Program Administrator shall have a minimum of five (5) years of experience in airport and/or highway construction and shall have had prior quality control experience on a project of comparable size and scope as the contract.

Additional qualifications for the Program Administrator shall include at least one of the following requirements:

(1) Professional Engineer with one (1) year of airport paving experience.

(2) Engineer-in-training with two (2) years of airport paving experience.

(3) An individual with three (3) years of highway and/or airport paving experience, with a Bachelor of Science Degree in Civil Engineering, Civil Engineering Technology or Construction.

(4) Construction materials technician certified at Level III by the National Institute for Certification in Engineering Technologies (NICET).

(5) Highway materials technician certified at Level III by NICET.

(6) Highway construction technician certified at Level III by NICET.

(7) A NICET certified engineering technician in Civil Engineering Technology with five (5) years of highway and/or airport paving experience.

The Program Administrator shall have full authority to institute any and all actions necessary for the successful implementation of the Quality Control Program to ensure compliance with the contract plans and technical specifications. The Program Administrator shall report directly to a responsible officer of the construction firm. The Program Administrator may supervise the Quality Control Program on more than one project provided that person can be at the job site within two (2) hours after being notified of a problem.

b. Quality control technicians. A sufficient number of quality control technicians necessary to adequately implement the Quality Control Program shall be provided. These personnel shall be either Engineers, engineering technicians, or experienced craftsman with qualifications in the appropriate field equivalent to NICET Level II or higher construction materials technician or highway construction technician and shall have a minimum of two (2) years of experience in their area of expertise.

The quality control technicians shall report directly to the Program Administrator and shall perform the following functions:

(1) Inspection of all materials, construction, plant, and equipment for conformance to the technical specifications, and as required by subsection 100-06.

(2) Performance of all quality control tests as required by the technical specifications and subsection 100-07.

(3) Performance of density tests for the Engineer when required by the technical specifications.

Certification at an equivalent level, by a state or nationally recognized organization will be acceptable in lieu of NICET certification.

c. Staffing levels. The Contractor shall provide sufficient qualified quality control personnel to monitor each work activity at all times. Where material is being produced in a plant for incorporation into the work, separate plant and field technicians shall be provided at each plant and field placement location. The scheduling and coordinating of all inspection and testing must match the type and pace of work activity. The Quality Control Program shall state where different technicians will be required for different work elements.

100-04 Project progress schedule. The Contractor shall submit a coordinated construction schedule for all work activities. The schedule shall be prepared as a network diagram in Critical Path Method (CPM), Program Evaluation and Review Technique (PERT), or other format, or as otherwise specified in the contract. As a minimum, it shall provide information on the sequence of work activities, milestone dates, and activity duration.

The Contractor shall maintain the work schedule and provide an update and analysis of the progress schedule on a twice monthly basis, or as otherwise specified in the contract. Submission of the work schedule shall not relieve the Contractor of overall responsibility for scheduling, sequencing, and coordinating all work to comply with the requirements of the contract.

100-05 Submittals schedule. The Contractor shall submit a detailed listing of all submittals (for example, mix designs, material certifications) and shop drawings required by the technical specifications. The listing can be developed in a spreadsheet format and shall include:

a. Specification item number

b. Item description

c. Description of submittal

d. Specification paragraph requiring submittal

e. Scheduled date of submittal

100-06 Inspection requirements. Quality control inspection functions shall be organized to provide inspections for all definable features of work, as detailed below. All inspections shall be documented by the Contractor as specified by subsection 100-07.

Inspections shall be performed daily to ensure continuing compliance with contract requirements until completion of the particular feature of work. These shall include the following minimum requirements:

a. During plant operation for material production, quality control test results and periodic inspections shall be used to ensure the quality of aggregates and other mix components, and to adjust and control mix proportioning to meet the approved mix design and other requirements of the technical specifications. All equipment used in proportioning and mixing shall be inspected to ensure its proper operating condition. The Quality Control Program shall detail how these and other quality control functions will be accomplished and used.

b. During field operations, quality control test results and periodic inspections shall be used to ensure the quality of all materials and workmanship. All equipment used in placing, finishing, and compacting shall be inspected to ensure its proper operating condition and to ensure that all such operations are in conformance to the technical specifications and are within the plan dimensions, lines, grades, and tolerances specified. The Program shall document how these and other quality control functions will be accomplished and used.

100-07 Quality control testing plan. As a part of the overall Quality Control Program, the Contractor shall implement a quality control testing plan, as required by the technical specifications. The testing plan shall include the minimum tests and test frequencies required by each technical specification Item, as well as any additional quality control tests that the Contractor deems necessary to adequately control production and/or construction processes.

The testing plan can be developed in a spreadsheet fashion and shall, as a minimum, include the following:

a. Specification item number (for example, P-401)

b. Item description (for example, Plant Mix Bituminous Pavements)

c. Test type (for example, gradation, grade, asphalt content)

d. Test standard (for example, ASTM or American Association of State Highway and Transportation Officials (AASHTO) test number, as applicable)

e. Test frequency (for example, as required by technical specifications or minimum frequency when requirements are not stated)

f. Responsibility (for example, plant technician)

g. Control requirements (for example, target, permissible deviations)

The testing plan shall contain a statistically-based procedure of random sampling for acquiring test samples in accordance with ASTM D3665. The Engineer shall be provided the opportunity to witness quality control sampling and testing.

All quality control test results shall be documented by the Contractor as required by subsection 100-08.

100-08 Documentation. The Contractor shall maintain current quality control records of all inspections and tests performed. These records shall include factual evidence that the required inspections or tests have been performed, including type and number of inspections or tests involved; results of inspections or tests; nature of defects, deviations, causes for rejection, etc.; proposed remedial action; and corrective actions taken.

These records must cover both conforming and defective or deficient features, and must include a statement that all supplies and materials incorporated in the work are in full compliance with the terms of the contract. Legible copies of these records shall be furnished to the Engineer daily. The records shall cover all work placed subsequent to the previously furnished records and shall be verified and signed by the Contractor's Program Administrator.

Specific Contractor quality control records required for the contract shall include, but are not necessarily limited to, the following records:

a. Daily inspection reports. Each Contractor quality control technician shall maintain a daily log of all inspections performed for both Contractor and subcontractor operations. These technician's daily reports shall provide factual evidence that continuous quality control inspections have been performed and shall, as a minimum, include the following:

(1) Technical specification item number and description

(2) Compliance with approved submittals

(3) Proper storage of materials and equipment

(4) Proper operation of all equipment

(5) Adherence to plans and technical specifications

(6) Review of quality control tests

(7) Safety inspection.

The daily inspection reports shall identify inspections conducted, results of inspections, location and nature of defects found, causes for rejection, and remedial or corrective actions taken or proposed.

The daily inspection reports shall be signed by the responsible quality control technician and the Program Administrator. The Engineer shall be provided at least one copy of each daily inspection report on the work day following the day of record.

b. Daily test reports. The Contractor shall be responsible for establishing a system that will record all quality control test results. Daily test reports shall document the following information:

(1) Technical specification item number and description

(2) Test designation

(3) Location

(4) Date of test

(5) Control requirements

(6) Test results

(7) Causes for rejection

(8) Recommended remedial actions

(9) Retests

Test results from each day's work period shall be submitted to the Engineer prior to the start of the next day's work period. When required by the technical specifications, the Contractor shall maintain statistical quality control charts. The daily test reports shall be signed by the responsible quality control technician and the Program Administrator.

100-09 Corrective action requirements. The Quality Control Program shall indicate the appropriate action to be taken when a process is deemed, or believed, to be out of control (out of tolerance) and detail what action will be taken to bring the process into control. The requirements for corrective action shall include both general requirements for operation of the Quality Control Program as a whole, and for individual items of work contained in the technical specifications.

The Quality Control Program shall detail how the results of quality control inspections and tests will be used for determining the need for corrective action and shall contain clear sets of rules to gauge when a process is out of control and the type of correction to be taken to regain process control.

When applicable or required by the technical specifications, the Contractor shall establish and use statistical quality control charts for individual quality control tests. The requirements for corrective action shall be linked to the control charts.

100-10 Surveillance by the Engineer. All items of material and equipment shall be subject to surveillance by the Engineer at the point of production, manufacture or shipment to determine if the Contractor, producer, manufacturer or shipper maintains an adequate quality control system in conformance with the requirements detailed here and the applicable technical specifications and plans. In addition, all items of materials, equipment and work in place shall be subject to surveillance by the Engineer at the site for the same purpose.

Surveillance by the Engineer does not relieve the Contractor of performing quality control inspections of either on-site or off-site Contractor's or subcontractor's work.

100-11 Noncompliance.

a. The Engineer will notify the Contractor of any noncompliance with any of the foregoing requirements. The Contractor shall, after receipt of such notice, immediately take corrective action. Any notice, when delivered by the Engineer or his or her authorized representative to the Contractor or his or her authorized representative at the site of the work, shall be considered sufficient notice.

b. In cases where quality control activities do not comply with either the Contractor Quality Control Program or the contract provisions, or where the Contractor fails to properly operate and maintain an effective Quality Control Program, as determined by the Engineer, the Engineer may:

(1) Order the Contractor to replace ineffective or unqualified quality control personnel or subcontractors.

(2) Order the Contractor to stop operations until appropriate corrective actions are taken.

END OF SECTION 100

Section 105 Mobilization

105-1 Description. This item shall consist of work and operations, but is not limited to, work and operations necessary for the movement of personnel, equipment, material and supplies to and from the project site for work on the project except as provided in the contract as separate pay items.

Mobilization/Demobilization shall consist of preparatory work and operations, including: the installation of the staging area(s); the installation of all temporary utilities to the staging area(s); the establishment of site access including all temporary asphalt and concrete pavement entrances; the establishment of site field offices and buildings; the movement of personnel, equipment, materials, supplies and incidentals to the project site; the establishment of the Quality Assurance (QA) Testing Laboratory; the establishment of the contractor's haul roads, and other facilities necessary for the performance of the Work; other necessary preparatory work and operations prior to the commencement of the work; and for necessary work and costs in completing the construction and demobilizing from the site. Demobilization shall include: removal of temporary utilities to the staging areas; removal of temporary field offices; removal of all temporary facilities and improvements install to permit the progress of the work including temporary pavements, fencing, access gates, and signs; demobilization of equipment; and the clean-up and restoration of the construction staging areas.

105-1.1 Posted notices. Prior to commencement of construction activities the Contractor must post the following documents in a prominent and accessible place where they may be easily viewed by all employees of the prime Contractor and by all employees of subcontractors engaged by the prime Contractor: Equal Employment Opportunity (EEO) Poster "Equal Employment Opportunity is the Law" in accordance with the Office of Federal Contract Compliance Programs Executive Order 11246, as amended; Davis Bacon Wage Poster (WH 1321) - DOL "Notice to All Employees" Poster; and Applicable Davis-Bacon Wage Rate Determination. These notices must remain posted until final acceptance of the work by the Owner.

105-2 Basis of measurement and payment. Mobilization/Demobilization shall be measured for payment by the lump sum as a single complete unit of work. No additional measurement will be made should the Owner issue more than one (1) Notice to Proceed. No additional measurement will be made if a discontinuity in contract time occurs as a result of multiple Notices to Proceed. No additional measurement will be made should the Owner award any or all of the Additive Alternate Bids, if applicable. Mobilization\Demobilization shall not exceed five (5) percent of the total bid price for the base bid and/or for each of the additive alternative bids.

Based upon the contract lump sum price for "Mobilization" partial payments will be allowed as follows:

a. With first pay request, 50%.

b. When 50% or more of the original contract is earned, an additional 40%.

c. After Final Inspection, Staging area clean-up and delivery of all Project Closeout materials as required by 90-11, the final 10%.

If the price bid for Mobilization/Demobilization exceeds five (5) percent of the total bid for the base bid or the additive alternative(s) if applicable, any excess will be paid to the Contractor upon substantial completion of the project.

Payment will be made under:

Item GP-105-2.1 Mobilization\Demobilization (Max 5% of Bid) – per lump sum

END OF SECTION 105

Section 110 Method of Estimating Percentage of Material Within Specification Limits (PWL)

110-01 General. When the specifications provide for acceptance of material based on the method of estimating percentage of material within specification limits (PWL), the PWL will be determined in accordance with this section. All test results for a lot will be analyzed statistically to determine the total estimated percent of the lot that is within specification limits. The PWL is computed using the sample average (X) and sample standard deviation (S_n) of the specified number (n) of sublots for the lot and the specification tolerance limits, L for lower and U for upper, for the particular acceptance parameter. From these values, the respective Quality index, Q_L for Lower Quality Index and/or Q_U for Upper Quality Index, is computed and the PWL for the lot for the specified n is determined from Table 1. All specification limits specified in the technical sections shall be absolute values. Test results used in the calculations shall be to the significant figure given in the test procedure.

There is some degree of uncertainty (risk) in the measurement for acceptance because only a small fraction of production material (the population) is sampled and tested. This uncertainty exists because all portions of the production material have the same probability to be randomly sampled. The Contractor's risk is the probability that material produced at the acceptable quality level is rejected or subjected to a pay adjustment. The Owner's risk is the probability that material produced at the rejectable quality level is accepted.

It is the intent of this section to inform the Contractor that, in order to consistently offset the Contractor's risk for material evaluated, production quality (using population average and population standard deviation) must be maintained at the acceptable quality specified or higher. In all cases, it is the responsibility of the Contractor to produce at quality levels that will meet the specified acceptance criteria when sampled and tested at the frequencies specified.

110-02 Method for computing PWL. The computational sequence for computing PWL is as follows:

a. Divide the lot into n sublots in accordance with the acceptance requirements of the specification.

b. Locate the random sampling position within the sublot in accordance with the requirements of the specification.

c. Make a measurement at each location, or take a test portion and make the measurement on the test portion in accordance with the testing requirements of the specification.

d. Find the sample average (X) for all sublot values within the lot by using the following formula:

$$\mathbf{X = (x_1 + x_2 + x_3 + \ldots x_n) / n}$$

Where: X = Sample average of all sublot values within a lot

x_1, x_2 = Individual sublot values

n = Number of sublots

e. Find the sample standard deviation (S_n) by use of the following formula:

$$\mathbf{S_n = [(d_1^2 + d_2^2 + d_3^2 + \ldots d_n^2)/(n-1)]^{1/2}}$$

Where: S_n = Sample standard deviation of the number of sublot values in the set

d_1, d_2 = Deviations of the individual sublot values x_1, x_2, … from the average value X

that is: $d_1 = (x_1 - X)$, $d_2 = (x_2 - X)$ … $d_n = (x_n - X)$

n = Number of sublots

f. For single sided specification limits (that is, L only), compute the Lower Quality Index Q_L by use of the following formula:

$$\mathbf{Q_L = (X - L) / S_n}$$

Where: L = specification lower tolerance limit

Estimate the percentage of material within limits (PWL) by entering Table 1 with Q_L, using the column appropriate to the total number (n) of measurements. If the value of Q_L falls between values shown on the table, use the next higher value of PWL.

g. For double-sided specification limits (that is, L and U), compute the Quality Indexes Q_L and Q_U by use of the following formulas:

$$\mathbf{Q_L = (X - L) / S_n}$$
and
$$\mathbf{Q_U = (U - X) / S_n}$$

Where: L and U = specification lower and upper tolerance limits

Estimate the percentage of material between the lower (L) and upper (U) tolerance limits (PWL) by entering Table 1 separately with Q_L and Q_U, using the column appropriate to the total number (n) of measurements, and determining the percent of material above P_L and percent of material below P_U for each tolerance limit. If the values of Q_L fall between values shown on the table, use the next higher value of P_L or P_U. Determine the PWL by use of the following formula:

$$\mathbf{PWL = (P_U + P_L) - 100}$$

Where: P_L = percent within lower specification limit

P_U = percent within upper specification limit

EXAMPLE OF PWL CALCULATION

Project: Example Project

Test Item: Item P-401, Lot A.

A. PWL Determination for Mat Density.

1. Density of four random cores taken from Lot A.

A-1 = 96.60

A-2 = 97.55

A-3 = 99.30

A-4 = 98.35

n = 4

2. Calculate average density for the lot.

$X = (x_1 + x_2 + x_3 + \ldots x_n) / n$

$X = (96.60 + 97.55 + 99.30 + 98.35) / 4$

$X = 97.95\%$ density

3. Calculate the standard deviation for the lot.

$S_n = [((96.60 - 97.95)^2 + (97.55 - 97.95)^2 + (99.30 - 97.95)^2 + (98.35 - 97.95)^2)) / (4 - 1)]^{1/2}$

$S_n = [(1.82 + 0.16 + 1.82 + 0.16) / 3]^{1/2}$

$S_n = 1.15$

4. Calculate the Lower Quality Index Q_L for the lot. (L=96.3)

$Q_L = (X - L) / S_n$

$Q_L = (97.95 - 96.30) / 1.15$

$Q_L = 1.4348$

5. Determine PWL by entering Table 1 with $Q_L = 1.44$ and n= 4.

PWL = 98

B. PWL Determination for Air Voids.

1. Air Voids of four random samples taken from Lot A.

A-1 = 5.00

A-2 = 3.74

A-3 = 2.30

A-4 = 3.25

2. Calculate the average air voids for the lot.

$X = (x_1 + x_2 + x_3 \ldots n) / n$

$X = (5.00 + 3.74 + 2.30 + 3.25) / 4$

$X = 3.57\%$

3. Calculate the standard deviation S_n for the lot.

$S_n = [((3.57 - 5.00)^2 + (3.57 - 3.74)^2 + (3.57 - 2.30)^2 + (3.57 - 3.25)^2) / (4 - 1)]^{1/2}$

$S_n = [(2.04 + 0.03 + 1.62 + 0.10) / 3]^{1/2}$

$S_n = 1.12$

4. Calculate the Lower Quality Index Q_L for the lot. (L= 2.0)

$Q_L = (X - L) / S_n$

$Q_L = (3.57 - 2.00) / 1.12$

$Q_L = 1.3992$

5. Determine P_L by entering Table 1 with $Q_L = 1.41$ and n = 4.

$P_L = 97$

6. Calculate the Upper Quality Index Q_U for the lot. (U= 5.0)

$Q_U = (U - X) / S_n$

$Q_U = (5.00 - 3.57) / 1.12$

$Q_U = 1.2702$

7. Determine P_U by entering Table 1 with $Q_U = 1.29$ and n = 4.

$P_U = 93$

8. Calculate Air Voids PWL

$PWL = (P_L + P_U) - 100$

$PWL = (97 + 93) - 100 = 90$

EXAMPLE OF OUTLIER CALCULATION (REFERENCE ASTM E178)

Project: Example Project

Test Item: Item P-401, Lot A.

A. Outlier Determination for Mat Density.

1. Density of four random cores taken from Lot A arranged in descending order.

A-3 = 99.30
A-4 = 98.35
A-2 = 97.55
A-1 = 96.60

2. Use n=4 and upper 5% significance level of to find the critical value for test criterion = 1.463.

3. Use average density, standard deviation, and test criterion value to evaluate density measurements.

a. For measurements greater than the average:

If (measurement - average)/(standard deviation) is less than test criterion, then the measurement is not considered an outlier

For A-3, check if (99.30 - 97.95) / 1.15 is greater than 1.463.

Since 1.174 is less than 1.463, the value is not an outlier.

b. For measurements less than the average:

If (average - measurement)/(standard deviation) is less than test criterion, then the measurement is not considered an outlier.

For A-1, check if (97.95 - 96.60) / 1.15 is greater than 1.463.

Since 1.435 is less than 1.463, the value is not an outlier.

Note: In this example, a measurement would be considered an outlier if the density were:

Greater than (97.95 + 1.463 × 1.15) = 99.63%

OR

less than (97.95 - 1.463 × 1.15) = 96.27%.

Table 1. Table for Estimating Percent of Lot Within Limits (PWL)

Percent Within Limits (P_L and P_U)	Positive Values of Q (Q_L and Q_U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
99	1.1541	1.4700	1.6714	1.8008	1.8888	1.9520	1.9994	2.0362
98	1.1524	1.4400	1.6016	1.6982	1.7612	1.8053	1.8379	1.8630
97	1.1496	1.4100	1.5427	1.6181	1.6661	1.6993	1.7235	1.7420
96	1.1456	1.3800	1.4897	1.5497	1.5871	1.6127	1.6313	1.6454
95	1.1405	1.3500	1.4407	1.4887	1.5181	1.5381	1.5525	1.5635
94	1.1342	1.3200	1.3946	1.4329	1.4561	1.4717	1.4829	1.4914
93	1.1269	1.2900	1.3508	1.3810	1.3991	1.4112	1.4199	1.4265
92	1.1184	1.2600	1.3088	1.3323	1.3461	1.3554	1.3620	1.3670
91	1.1089	1.2300	1.2683	1.2860	1.2964	1.3032	1.3081	1.3118
90	1.0982	1.2000	1.2290	1.2419	1.2492	1.2541	1.2576	1.2602
89	1.0864	1.1700	1.1909	1.1995	1.2043	1.2075	1.2098	1.2115
88	1.0736	1.1400	1.1537	1.1587	1.1613	1.1630	1.1643	1.1653
87	1.0597	1.1100	1.1173	1.1192	1.1199	1.1204	1.1208	1.1212
86	1.0448	1.0800	1.0817	1.0808	1.0800	1.0794	1.0791	1.0789
85	1.0288	1.0500	1.0467	1.0435	1.0413	1.0399	1.0389	1.0382
84	1.0119	1.0200	1.0124	1.0071	1.0037	1.0015	1.0000	0.9990
83	0.9939	0.9900	0.9785	0.9715	0.9671	0.9643	0.9624	0.9610
82	0.9749	0.9600	0.9452	0.9367	0.9315	0.9281	0.9258	0.9241
81	0.9550	0.9300	0.9123	0.9025	0.8966	0.8928	0.8901	0.8882
80	0.9342	0.9000	0.8799	0.8690	0.8625	0.8583	0.8554	0.8533
79	0.9124	0.8700	0.8478	0.8360	0.8291	0.8245	0.8214	0.8192
78	0.8897	0.8400	0.8160	0.8036	0.7962	0.7915	0.7882	0.7858
77	0.8662	0.8100	0.7846	0.7716	0.7640	0.7590	0.7556	0.7531
76	0.8417	0.7800	0.7535	0.7401	0.7322	0.7271	0.7236	0.7211
75	0.8165	0.7500	0.7226	0.7089	0.7009	0.6958	0.6922	0.6896
74	0.7904	0.7200	0.6921	0.6781	0.6701	0.6649	0.6613	0.6587
73	0.7636	0.6900	0.6617	0.6477	0.6396	0.6344	0.6308	0.6282
72	0.7360	0.6600	0.6316	0.6176	0.6095	0.6044	0.6008	0.5982
71	0.7077	0.6300	0.6016	0.5878	0.5798	0.5747	0.5712	0.5686
70	0.6787	0.6000	0.5719	0.5582	0.5504	0.5454	0.5419	0.5394
69	0.6490	0.5700	0.5423	0.5290	0.5213	0.5164	0.5130	0.5105
68	0.6187	0.5400	0.5129	0.4999	0.4924	0.4877	0.4844	0.4820
67	0.5878	0.5100	0.4836	0.4710	0.4638	0.4592	0.4560	0.4537
66	0.5563	0.4800	0.4545	0.4424	0.4355	0.4310	0.4280	0.4257
65	0.5242	0.4500	0.4255	0.4139	0.4073	0.4030	0.4001	0.3980
64	0.4916	0.4200	0.3967	0.3856	0.3793	0.3753	0.3725	0.3705
63	0.4586	0.3900	0.3679	0.3575	0.3515	0.3477	0.3451	0.3432
62	0.4251	0.3600	0.3392	0.3295	0.3239	0.3203	0.3179	0.3161
61	0.3911	0.3300	0.3107	0.3016	0.2964	0.2931	0.2908	0.2892
60	0.3568	0.3000	0.2822	0.2738	0.2691	0.2660	0.2639	0.2624
59	0.3222	0.2700	0.2537	0.2461	0.2418	0.2391	0.2372	0.2358
58	0.2872	0.2400	0.2254	0.2186	0.2147	0.2122	0.2105	0.2093
57	0.2519	0.2100	0.1971	0.1911	0.1877	0.1855	0.1840	0.1829
56	0.2164	0.1800	0.1688	0.1636	0.1607	0.1588	0.1575	0.1566
55	0.1806	0.1500	0.1406	0.1363	0.1338	0.1322	0.1312	0.1304
54	0.1447	0.1200	0.1125	0.1090	0.1070	0.1057	0.1049	0.1042
53	0.1087	0.0900	0.0843	0.0817	0.0802	0.0793	0.0786	0.0781
52	0.0725	0.0600	0.0562	0.0544	0.0534	0.0528	0.0524	0.0521
51	0.0363	0.0300	0.0281	0.0272	0.0267	0.0264	0.0262	0.0260
50	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Percent Within Limits (P_L and P_U)	Negative Values of Q (Q_L and Q_U)							
	n=3	n=4	n=5	n=6	n=7	n=8	n=9	n=10
49	-0.0363	-0.0300	-0.0281	-0.0272	-0.0267	-0.0264	-0.0262	-0.0260
48	-0.0725	-0.0600	-0.0562	-0.0544	-0.0534	-0.0528	-0.0524	-0.0521
47	-0.1087	-0.0900	-0.0843	-0.0817	-0.0802	-0.0793	-0.0786	-0.0781
46	-0.1447	-0.1200	-0.1125	-0.1090	-0.1070	-0.1057	-0.1049	-0.1042
45	-0.1806	-0.1500	-0.1406	-0.1363	-0.1338	-0.1322	-0.1312	-0.1304
44	-0.2164	-0.1800	-0.1688	-0.1636	-0.1607	-0.1588	-0.1575	-0.1566
43	-0.2519	-0.2100	-0.1971	-0.1911	-0.1877	-0.1855	-0.1840	-0.1829
42	-0.2872	-0.2400	-0.2254	-0.2186	-0.2147	-0.2122	-0.2105	-0.2093
41	-0.3222	-0.2700	-0.2537	-0.2461	-0.2418	-0.2391	-0.2372	-0.2358
40	-0.3568	-0.3000	-0.2822	-0.2738	-0.2691	-0.2660	-0.2639	-0.2624
39	-0.3911	-0.3300	-0.3107	-0.3016	-0.2964	-0.2931	-0.2908	-0.2892
38	-0.4251	-0.3600	-0.3392	-0.3295	-0.3239	-0.3203	-0.3179	-0.3161
37	-0.4586	-0.3900	-0.3679	-0.3575	-0.3515	-0.3477	-0.3451	-0.3432
36	-0.4916	-0.4200	-0.3967	-0.3856	-0.3793	-0.3753	-0.3725	-0.3705
35	-0.5242	-0.4500	-0.4255	-0.4139	-0.4073	-0.4030	-0.4001	-0.3980
34	-0.5563	-0.4800	-0.4545	-0.4424	-0.4355	-0.4310	-0.4280	-0.4257
33	-0.5878	-0.5100	-0.4836	-0.4710	-0.4638	-0.4592	-0.4560	-0.4537
32	-0.6187	-0.5400	-0.5129	-0.4999	-0.4924	-0.4877	-0.4844	-0.4820
31	-0.6490	-0.5700	-0.5423	-0.5290	-0.5213	-0.5164	-0.5130	-0.5105
30	-0.6787	-0.6000	-0.5719	-0.5582	-0.5504	-0.5454	-0.5419	-0.5394
29	-0.7077	-0.6300	-0.6016	-0.5878	-0.5798	-0.5747	-0.5712	-0.5686
28	-0.7360	-0.6600	-0.6316	-0.6176	-0.6095	-0.6044	-0.6008	-0.5982
27	-0.7636	-0.6900	-0.6617	-0.6477	-0.6396	-0.6344	-0.6308	-0.6282
26	-0.7904	-0.7200	-0.6921	-0.6781	-0.6701	-0.6649	-0.6613	-0.6587
25	-0.8165	-0.7500	-0.7226	-0.7089	-0.7009	-0.6958	-0.6922	-0.6896
24	-0.8417	-0.7800	-0.7535	-0.7401	-0.7322	-0.7271	-0.7236	-0.7211
23	-0.8662	-0.8100	-0.7846	-0.7716	-0.7640	-0.7590	-0.7556	-0.7531
22	-0.8897	-0.8400	-0.8160	-0.8036	-0.7962	-0.7915	-0.7882	-0.7858
21	-0.9124	-0.8700	-0.8478	-0.8360	-0.8291	-0.8245	-0.8214	-0.8192
20	-0.9342	-0.9000	-0.8799	-0.8690	-0.8625	-0.8583	-0.8554	-0.8533
19	-0.9550	-0.9300	-0.9123	-0.9025	-0.8966	-0.8928	-0.8901	-0.8882
18	-0.9749	-0.9600	-0.9452	-0.9367	-0.9315	-0.9281	-0.9258	-0.9241
17	-0.9939	-0.9900	-0.9785	-0.9715	-0.9671	-0.9643	-0.9624	-0.9610
16	-1.0119	-1.0200	-1.0124	-1.0071	-1.0037	-1.0015	-1.0000	-0.9990
15	-1.0288	-1.0500	-1.0467	-1.0435	-1.0413	-1.0399	-1.0389	-1.0382
14	-1.0448	-1.0800	-1.0817	-1.0808	-1.0800	-1.0794	-1.0791	-1.0789
13	-1.0597	-1.1100	-1.1173	-1.1192	-1.1199	-1.1204	-1.1208	-1.1212
12	-1.0736	-1.1400	-1.1537	-1.1587	-1.1613	-1.1630	-1.1643	-1.1653
11	-1.0864	-1.1700	-1.1909	-1.1995	-1.2043	-1.2075	-1.2098	-1.2115
10	-1.0982	-1.2000	-1.2290	-1.2419	-1.2492	-1.2541	-1.2576	-1.2602
9	-1.1089	-1.2300	-1.2683	-1.2860	-1.2964	-1.3032	-1.3081	-1.3118
8	-1.1184	-1.2600	-1.3088	-1.3323	-1.3461	-1.3554	-1.3620	-1.3670
7	-1.1269	-1.2900	-1.3508	-1.3810	-1.3991	-1.4112	-1.4199	-1.4265
6	-1.1342	-1.3200	-1.3946	-1.4329	-1.4561	-1.4717	-1.4829	-1.4914
5	-1.1405	-1.3500	-1.4407	-1.4887	-1.5181	-1.5381	-1.5525	-1.5635
4	-1.1456	-1.3800	-1.4897	-1.5497	-1.5871	-1.6127	-1.6313	-1.6454
3	-1.1496	-1.4100	-1.5427	-1.6181	-1.6661	-1.6993	-1.7235	-1.7420
2	-1.1524	-1.4400	-1.6016	-1.6982	-1.7612	-1.8053	-1.8379	-1.8630
1	-1.1541	-1.4700	-1.6714	-1.8008	-1.8888	-1.9520	-1.9994	-2.0362

END OF SECTION 110

Part 2 – Earthwork

Item P-101 Surface Preparation

DESCRIPTION

101-1.1 This item shall consist of preparation of existing pavement surfaces for overlay, surface treatments, removal of existing pavement, and other miscellaneous items. The work shall be accomplished in accordance with these specifications and the applicable drawings.

EQUIPMENT

101-2.1 All equipment shall be specified here and in the following paragraphs or approved by the Engineer. The equipment shall not cause damage to the pavement to remain in place.

CONSTRUCTION

101-3.1 Removal of existing pavement.

a. Concrete pavement. The existing concrete pavement to be removed shall be freed from the pavement to remain by sawing through the complete depth of the slab one foot (30 cm) inside the perimeter of the final removal limits or outside the dowels, whichever is greater when the limits of removal are located on the joints. The pavement between the perimeter of the pavement removal and the saw cut shall be carefully broken up and removed using hand-held jackhammers, weighing 30 pounds (14 kg) or less, or other light-duty equipment which will not cause distress in the pavement which is to remain in place. The Contractor shall have the option of sawing through the dowels at the joint, removing the pavement and installing new dowels. Where the perimeter of the removal limits is not located on the joint and there are no dowels present, then the perimeter shall be saw cut the full depth of the pavement. The pavement inside the saw cut shall be removed by methods suitable to the Engineer which will not cause distress in the pavement which is to remain in place. If the material is to be wasted on the airport site, it shall be reduced to a maximum size designated by the Engineer. The Contractor's removal operation shall not cause damage to cables, utility ducts, pipelines, or drainage structures under the pavement. Concrete slabs that are damaged by under breaking shall be removed. Any damage shall be repaired at the Contractor's expense.

b. Asphalt concrete pavement. Asphalt concrete pavement to be removed shall be cut to the full depth of the bituminous material around the perimeter of the area to be removed. The pavement shall be removed so the joint for each layer of pavement replacement is offset 1 foot (30 cm) from the joint in the preceding layer. This does not apply if the removed pavement is to be replaced with concrete or soil. Removed asphalt will become the property of the Contractor and shall be disposed of off-site in accordance with local rules and regulations.

101-3.2 Preparation of joints and cracks. Remove all vegetation and debris from cracks to a minimum depth of 1 inch (25 mm). If extensive vegetation exists treat the specific area with a concentrated solution of a water-based herbicide approved by the Engineer. Fill all cracks, ignoring hairline cracks (< 1/4 inch (6 mm) wide) with a crack sealant per ASTM D6690. Wider cracks (over 1-1/2 inch wide (38 mm)), along with soft or sunken spots, indicate that the pavement or the pavement base should be repaired or

replaced as stated below. Any excess joint or crack sealer on the surface of the pavement shall also be removed from the pavement surface.

Cracks and joints may be filled with a mixture of emulsified asphalt and aggregate. The aggregate shall consist of limestone, volcanic ash, sand, or other material that will cure to form a hard substance. The combined gradation shall be as shown in the following table.

Gradation

Sieve Size	Percent Passing
No. 4	100
No. 8	90-100
No. 16	65-90
No. 30	40-60
No. 50	25-42
No. 100	15-30
No. 200	10-20

Up to 3% cement can be added to accelerate the set time. The mixture shall not contain more than 20% natural sand without approval in writing from the Engineer.

The proportions of asphalt emulsion and aggregate shall be determined in the field and may be varied to facilitate construction requirements. Normally, these proportions will be approximately one part asphalt emulsion to five parts aggregate by volume. The material shall be poured or placed into the joints or cracks and compacted to form a voidless mass. The joint or crack shall be filled within 0 to 1/8 inches (0-3 mm) of the surface. Any material spilled outside the width of the joint shall be removed from the pavement surface prior to constructing the overlay. Where concrete overlays are to be constructed, only the excess joint material on the pavement surface and vegetation in the joints need to be removed.

101-3.3 Removal of paint and rubber. All paint and rubber over 1 foot (30 cm) wide that will affect the bond of the new overlay shall be removed from the surface of the existing pavement. Chemicals, high-pressure water, heater scarifier (asphaltic concrete only), cold milling, or sandblasting may be used. Any methods used shall not cause major damage to the pavement. Major damage is defined as changing the properties of the pavement or removing pavement over 1/8 inch (3 mm) deep. If chemicals are used, they shall comply with the state's environmental protection regulations. No material shall be deposited on the runway shoulders. All wastes shall be disposed of in areas indicated in this specification or shown on the plans.

101-3.4 Concrete spall or failed asphaltic concrete pavement repair.

a. Repair of concrete spalls in areas to be overlaid with asphalt. The Contractors shall repair all spalled concrete as shown on the plans or as directed by the Engineer. The perimeter of the repair shall be saw cut a minimum of 2 inches (50 mm) outside the affected area and 2 inches (50 mm) deep. The deteriorated material shall be removed to a depth where the existing material is firm or cannot be easily removed with a geologist pick. The removed area shall be filled with asphaltic concrete with a minimum Marshall stability of 1,200 lbs (544 kg) and maximum flow of 20 (units of 0.01 in). The material shall be compacted with equipment approved by the Engineer until the material is dense and no movement or marks are visible. The material shall not be placed in lifts over 4 inches (100 mm) in depth. This method of repair applies only to pavement to be overlaid.

b. Asphaltic concrete pavement repair. The failed areas shall be removed as specified in paragraph 101-3.1b. All failed material including surface, base course, subbase course, and subgrade shall be

removed. The base course and subbase shall be replaced if it has been infiltrated with clay, silt, or other material affecting the load-bearing capacity. Materials and methods of construction shall comply with the other applicable sections of this specification.

101-3.5 Cold milling. Milling shall be performed with a power-operated milling machine or grinder, capable of producing a finished surface that provides a good bond to the new overlay. The milling machine or grinder shall operate without tearing or gouging the under laying surface. The milling machine or grinder shall be equipped with automatic grade and slope controls. All millings shall be removed and disposed off Airport property, unless otherwise specified. If the Contractor mills or grinds deeper or wider than the plans specify, the Contractor shall replace the material that was removed with new material at no additional cost to the Owner.

101-3.6. Preparation of asphalt pavement surfaces. Existing asphalt pavements indicated to be treated with a surface treatment shall be prepared as follows:

a. Patch asphalt pavement surfaces that have been softened by petroleum derivatives or have failed due to any other cause. Remove damaged pavement to the full depth of the damage and replace with new asphalt concrete similar to that of the existing pavement in accordance with paragraph 101-3.4.

b. Repair joints and cracks in accordance with paragraph 101-3.2.

c. Remove oil or grease that has not penetrated the asphalt pavement by scraping or by scrubbing with a detergent, then wash thoroughly with clean water. After cleaning, treat these areas with an oil spot primer.

d. Clean pavement surface immediately prior to placing the surface treatment by sweeping, flushing well with water leaving no standing water, or a combination of both, so that it is free of dust, dirt, grease, vegetation, oil or any type of objectionable surface film.

101-3.7 Maintenance. The Contractor shall perform all maintenance work necessary to keep the pavement in a satisfactory condition until the full section is complete and accepted by the Engineer. The surface shall be kept clean and free from foreign material. The pavement shall be properly drained at all times. If cleaning is necessary or if the pavement becomes disturbed, any work repairs necessary shall be performed at the Contractor's expense.

101-3.8 Preparation of Joints in Rigid Pavement. Not used.

101-3.9 Preparation of Cracks in Flexible Pavement.

101-3.9.1 Preparation of Crack. Widen crack with router by removing a minimum of 1/16 inch (2 mm) from each side of crack. Immediately before sealing, joints will be blown out with a hot air lance combined with oil and water-free compressed air.

101-3.9.2 Removal of Existing Sealant. Existing sealants will be removed by routing**.** Following routing any remaining debris will be removed by use of a hot lance combined with oil and water-free compressed air.

METHOD OF MEASUREMENT

101-4.1 Joint and crack repair. No separate measurement will be made for the preparation of cracks in flexible pavements. It hsall be considered incidental to the construction of the Item to which it pertains.

101-4.2 Paint removal. The unit of measurement for paint and rubber removal shall be the square foot (meter).

101-4.3 Cold milling. The unit of measure for cold milling shall be 0-3 inches of milling per square yard (square meter). The location of the cold milling shall be determined and agreed to by the Engineer and the

Contractor prior to beginning the work. If the initial cut doesn't meet the depth requirements and surface correction is required, the Contractor shall re-mill the area and will be paid only once for the total area of milling.

BASIS OF PAYMENT

101-5.1 Payment. Payment shall be made at contract unit price for the unit of measurement as specified above. This price shall be full compensation for furnishing all materials and for all preparation, hauling, and placing of the material and for all labor, equipment, tools, and incidentals necessary to complete this item.

Item P 101-5.1	Joint and Crack Repair – Not Used
Item P 101-5.2	Paint Removal – per square foot
Item P-101-5.3	Cold Milling, 0-3 inches – per square yard

MATERIAL REQUIREMENTS

ASTM D6690	Standard Specification For Joint And Crack Sealants, Hot Applied, For Concrete And Asphalt Pavements

END OF ITEM P-101

New Item P-110 Contractor Quality Control

DESCRIPTION

110-1.1 General. This item shall consist of all work necessary to ensure quality control of the Contractor's work during construction in accordance with General Provision Specification Section 100 and the Civil and Electrical Technical Specifications.

The Contractor shall be responsible to conduct all quality control testing, inspections, and reporting as indicated in these Specifications, and for all pay item, as well as any other test, inspections and reporting not specifically listed, but necessary to adequately control the work to the satisfaction of the Engineer. The Engineer's quality acceptance test results will be made available to the Contractor upon request. The Contractor shall not depend on the Engineer's quality acceptance for the Contractor's Quality Control Program.

The Contractor shall submit his plan for Quality Control Testing and Inspection as required in General Provisions, Section 100, for review and approval to the Engineer at least five (5) working days prior to the Pre-Construction Conference. The Engineer's Field Offices will not be occupied by the Contractor's Quality Control staff.

110-1.2 Construction Survey and Staking. The Contractor shall provide the appropriate construction survey and staking to establish lines and grades as necessary to permit satisfactory completion of the Contract work by the Contractor in accordance with the Contract Documents. This task shall also include but is not limited to the following: (i) providing all necessary data for the production and submittal of record/as-built drawings. The Contractor shall be responsible for production and submittal of all record drawings; and (ii) to provide all necessary as-built information to enable all final permits, inspections, sign-offs and certificates to be issued by all necessary jurisdictions.

METHOD OF MEASUREMENT

110-2.1 General. Measurement for Contractor Quality Control to be paid for will be determined by the lump sum unit price.

110-2.2 Construction Survey and Staking. Construction Survey and staking shall be measured for payment by the lump sum as a single complete unit of work.

110-2.3 Computations for Contractor Monthly Pay Application. Monthly progress payments will be calculated by dividing the lump sum unit price by the contract time in months.

BASIS OF PAYMENT

110-3.1 Contractor Quality Control will be paid for at the lump sum price bid for the base bid and each additive alternate bid, (where listed in the Bid Proposal). Contractor Quality Control shall not exceed two (2) percent of the total bid price for the base bid and each additive alternate bid, (where listed in the Bid Proposal). This lump sum price shall constitute full compensation for furnishing all technicians, inspectors, testing equipment and field vehicles. All other labor, equipment, materials, tools and incidentals necessary to accomplish this item is to be included under item P-100 Mobilization/Demobilization.

110-3.2 Construction Survey and Staking will be paid for at the lump sum price bid for the base bid and each alternate bid, (where listed in the Bid Proposal). This lump sum price shall constitute full compensation for furnishing all technicians, inspectors, equipment, and field vehicles; for all other labor, equipment, materials, tools and incidentals necessary to accomplish this work item for the base bid and all additive alternate bids. Computations for Contractor monthly pay applications for progress payments will be calculated by dividing the lump sum unit price by the contract time in months.

Payment will be made under:

P-110-3.1	Contractor Quality Control - per Lump Sum
P-110-3.2	Construction Survey and Staking - per Lump Sum

END OF ITEM P-110

New Item P-120 Pavement Saw Cutting

DESCRIPTION

120-1.1 GENERAL. This item includes saw cutting the existing pavement, where new asphalt pavements are required to match existing asphalt pavements, and as indicated on the Plans. This item also includes clean-up of the pavement that is saw cut.

The existing pavement depths are shown at the pavement core locations on the Plans if available. The pavement cores show the approximate depth of the existing asphalt. The depths shown are representative of the depth at each specific core location only, and may not represent the depth between core locations.

Approximate lengths of saw cutting are shown on the Plans. The exact length of each saw cut will be laid out in the field by the Contractor and approved by the Engineer prior to performing the work. The Contractor shall perform each saw cut to the length required to complete the work.

CONSTRUCTION METHODS

120-2.1 Existing asphalt pavement to be milled or fully removed shall be saw cut by a device capable of making a neat, straight, smooth and vertical cut without damaging adjacent and below pavement that is not to be removed. The acceptability of the cutting device and manner of operation shall be to the satisfaction of the Engineer. Pavement saw cutting shall be required at match lines to existing pavement that is to remain.

Existing asphalt pavements that are to be matched shall be trimmed to a neat true line, with straight vertical edges free from irregularities using a saw specifically designed for this purpose. The Contractor shall protect the saw cut edge from damage until the finished surface has been completed. Edges which are damaged, in the opinion of the Engineer, shall be re-sawn the entire length of the matching joint prior to placing the finished surface.

Objects, surfaces, and items, including underground utilities designated to remain shall be carefully avoided and left undisturbed. Any damage to these items shall be the sole responsibility of the Contractor, and shall be repaired to the satisfaction of the Engineer at the Contractor's sole expense.

The existing pavement shall be saw cut to coordinate with the proposed sequence of construction. The saw cut vertical edges shall be coated with bituminous tack coat immediately prior to constructing the new abutting bituminous surface course.

Saw cutting is not required where asphalt pavement will be milled or pulverized, except as specifically called out in the plans or where the existing pavement to remain will be damaged by the pavement removal process. The Contractor should note that all pavement edges adjacent to milled or pulverized surfaces will be examined for smoothness and vertical line. If, in the opinion of the Engineer, the milled edge lacks sufficient smoothness and/or it is not a true vertical edge, the Contractor shall be required to trim said edges with a saw cut to meet the requirements of this section.

METHOD OF MEASUREMENT

120-3.1 Saw cutting shall be measured in linear feet of full depth saw cut performed, completed, and approved and only for the length as indicated on the plans.

BASIS OF PAYMENT

120-4.1 Payment for asphalt pavement saw cutting shall be made at the unit price bid per linear foot of saw cut called for in the plans and shall be compensation in full for the completion of the saw cut including all labor, materials, equipment, and all incidentals necessary to perform the saw cutting.

Payment will be made under:

Item P-120-4.1 Saw Cut — per liner foot

END OF ITEM P-120

Item P-151 Clearing and Grubbing

DESCRIPTION

151-1.1 This item shall consist of clearing or clearing and grubbing, including the disposal of materials, for all areas within the limits designated on the plans or as required by the Engineer.

a. Clearing shall consist of the cutting and removal of all trees, stumps, brush, logs, hedges, the removal of fences and other loose or projecting material from the designated areas. The grubbing of stumps and roots will not be required.

b. Clearing and grubbing shall consist of clearing the surface of the ground of the designated areas of all trees, stumps, down timber, logs, snags, brush, undergrowth, hedges, heavy growth of grass or weeds, fences, structures, debris, and rubbish of any nature, natural obstructions or such material which in the opinion of the Engineer is unsuitable for the foundation of strips, pavements, or other required structures, including the grubbing of stumps, roots, matted roots, foundations, and the disposal from the project of all spoil materials resulting from clearing and grubbing.

CONSTRUCTION METHODS

151-2.1 General. The areas denoted on the plans to be cleared or cleared and grubbed shall be staked on the ground by the Engineer. The clearing and grubbing shall be done at a satisfactory distance in advance of the grading operations.

All spoil materials removed by clearing or by clearing and grubbing shall be disposed of outside the Airport's limits at the Contractor's responsibility, except when otherwise directed by the Engineer. Burning of material is NOT permitted. As far as practicable, waste concrete and masonry shall be placed on slopes of embankments or channels. When embankments are constructed of such material, this material shall be placed in accordance with requirements for formation of embankments. Any broken concrete or masonry that cannot be used in construction and all other materials not considered suitable for use elsewhere, shall be disposed of by the Contractor. In no case shall any discarded materials be left in windrows or piles adjacent to or within the airport limits. The manner and location of disposal of materials shall be subject to the approval of the Engineer and shall not create an unsightly or objectionable view. When the Contractor is required to locate a disposal area outside the airport property limits, the Contractor shall obtain and file with the Engineer permission in writing from the property owner for the use of private property for this purpose.

Blasting shall not be allowed.

The removal of existing structure and utilities required to permit orderly progress of work shall be accomplished by local agencies, unless otherwise shown on the plans. Whenever a telephone or telegraph pole, pipeline, conduit, sewer, roadway, or other utility is encountered and must be removed or relocated, the Contractor shall advise the Engineer who will notify the proper local authority or owner to secure prompt action.

151-2.2 Clearing. Not used

151-2.3 Clearing and grubbing. In areas designated to be cleared and grubbed, all stumps, roots, buried logs, brush, grass, and other unsatisfactory materials shall be removed, except where embankments exceeding 3-1/2 feet (105 cm) in depth will be constructed outside of paved areas. For embankments

constructed outside of paved areas, all unsatisfactory materials shall be removed, but sound trees, stumps, and brush can be cut off flush with the original ground and allowed to remain. Tap roots and other projections over 1-1/2 inches (38 mm) in diameter shall be grubbed out to a depth of at least 18 inches (0.5 m) below the finished subgrade or slope elevation.

Any buildings and miscellaneous structures that are shown on the plans to be removed shall be demolished or removed, and all materials shall be disposed of by removal from the site. The cost of removal is incidental to this item. The remaining or existing foundations, wells, cesspools, and like structures shall be destroyed by breaking down the materials of which the foundations, wells, cesspools, etc., are built to a depth at least 2 feet (60 cm) below the existing surrounding ground. Any broken concrete, blocks, or other objectionable material that cannot be used in backfill shall be removed and disposed of at the Contractor's expense. The holes or openings shall be backfilled with acceptable material and properly compacted.

All holes under embankment areas remaining after the grubbing operation shall have the sides of the holes flattened to facilitate filling with acceptable material and compacting as required in Item P-152. The same procedure shall be applied to all holes remaining after grubbing in areas where the depth of holes exceeds the depth of the proposed excavation.

METHOD OF MEASUREMENT

151-3.1 Clearing and grubbing shall be considered incidental to the construction of the Item which it pertains and no separate measurements or payments shall be made.

END OF ITEM P-151

New Item P-148 Airfield Construction Area Control

DESCRIPTION

148-1 GENERAL. This item shall consist of developing and submitting for review a Construction Operation Safety Plan, and for furnishing, installing, maintaining, adjusting, and removing construction signs, barricades, warning lights, and furnishing gate guards, flagging operations, project radios, furnishing, operating and maintaining sweepers and FOD Control, managing and providing all labor, equipment, and materials required to close the runway as required, and providing items as requested for safety and security at locations shown on the Plans, as specified in these Specifications, and as directed by the Engineer.

MATERIALS AND CONSTRUCTION REQUIREMENTS

148-2.1 BARRICADES. Barricades shall be placed at the locations shown on the Plans and/or as directed by the Engineer. Prior to starting work on each phase of the project, the Contractor shall prepare and submit a proposed barricade layout plan, barricade placement and removal schedule, and temporary storage location(s) for approval by the Engineer.

These additional requirements shall be followed:

a. Barricades required on all phases of the project shall be installed, maintained and repositioned as needed and as directed by the Engineer. Barricades shall only be in place while construction activities are underway and a portion of the taxiway or runway is closed to traffic other than construction activities. All barricades must be removed from traffic areas prior to opening those areas to traffic.

b. Barricades shall be positioned outside of the area of construction as shown on the Plans unless otherwise directed by the Engineer.

c. All barricades located outside the air operations area (AOA) and used for directing vehicular traffic shall be as approved by the Engineer for use in work zone traffic control.

d. Barricades shall be properly secured and inspected regularly by the Contractor to ensure that the barricades remain in-place and that all lights are operational. Inspections shall be conducted daily prior to the end of each shift allowing enough time for all barricades and lights to be repaired and fully operational at the end of the shift.

e. Barricades shall be spaced as outlined on the plans or as directed by the Engineer.

f. Barricades used on the airfield side of construction shall be low profile type 1. The Contractor shall submit to the Engineer shop drawings or manufacture's cut sheets for the specific barricade type that will be used, for review prior to use on the airfield.

   Low Profile Type 1 barricades shall be of the 10-inch high x 96-inch long portable plastic water ballasted type equipped with reflective striping (on both sides) and flashing or steady burn battery or solar powered red lights. The Type 1 barricades shall be furnished in orange and white and be

installed so that the colors alternate on adjacent barricades. Type 1 barricades shall be weighted with water to resist movement by jet blast. Each barricade shall have two lights.

Barricades used on the landside, adjacent to open roadways or as shown on the plans, shall be Caltrans Barricades, Type II.

All barricades shall remain the property of the Contractor and be removed from the Airport by the Contractor upon completion of the Work.

g. The Contractor shall maintain a 15 percent reserve in the number of barricades maintained at the project site. These reserve barricades shall be used by the Contractor only when and as directed by the Engineer or Airport Operations. No additional measurement or payment will be made for the maintenance and use of reserve barricades on the project site.

h. All maintenance work required to keep barricades, warning lights/ batteries, etc. in good operating condition shall be provided by the Contractor at the Contractor's sole expense.

i. Contractor shall maintain barricades 24 hours a day and over non work periods. If more than two adjacent lights on the barricades fail the contractor shall immediately repair or replace the lights with operational units. Response times to calls concerning barricade maintenance shall be less than 20 minutes.

i. All unused barricade lights shall be turned off during daylight hours. Lights on barricades used during weekend closures shall be operating.

148-2.2 BARRICADE LIGHTS. Flashing barricade lights shall be placed on each barricade. Barricade lights shall be in accordance with the current requirements of ITE Standards for Flashing and Steady Burning Warning Lights, Type A, as shown below:

Warning Lights	**Type A Low Intensity**
Flashing Rate Per Minute	55 to 75
Flash Duration[1]	10%
Minimum Effective Intensity[2]	5 Candles
Minimum Beam Candle Power[2]	-----
Hours of Operations	Dusk to Dawn
Diameter of Lens	7 inches Minimum

[1] Length of time that instantaneous intensity shall be equal to or greater than effective intensity.

[2] These values shall be maintained within an angle of 9 degrees on each side of the vertical axis and 5 degrees above and below the horizontal axis.

Barricade lights shall be solar or battery-operated and be housed in a weatherproof enclosure. Lights shall be equipped with a solar switch which shall turn the light on at dusk and off at dawn. All barricade lights used on the AOA shall be red.

Barricade lights shall be secured to the constructed signs, barricade or support by tamper-proof bolts.

148-2.3 LIGHTED "X" RUNWAY CLOSURE SIGNALS.

The Contractor shall provide the required number of Lighted "X" Runway Closure Signals as identified on the plans. The runway closure signals shall meet the requirements of AC 150/5345-55 and the requirements as shown on the plans. The Lighted "X" Runway Closure Signals provided shall be new units. The Lighted "X" Runway Closure Signals shall be mobile units with trailer hitches to accommodate ease of movement and set-up.

The Contractor shall install and set-up prior for each runway closure the Lighted X Runway Closure Signals as shown on the plans and directed by the Engineer. The maintenance and servicing of the Lighted X Runway Closure Signals shall be the responsibility of the Contractor. Maintenance and servicing includes, but is not limited to, providing fuel, checking fuel and fluid levels, and repairing / replacing bulbs. Contractor shall install and remove the Lighted X Runway Closure Signals at the start and end of each runway closure after approval to occupy the runway is granted by the Airport. This includes all work, including the extended closures and the nightly closures. At the completion of the project, two (2) of the Owner provided Lighted "X" Runway Closure Signals shall be serviced and returned to the Airport.

148-2.4 CONTRACTOR HAUL ROUTES. All Contractor's haul routes shall be clearly marked with traffic cones, traffic barricades with yellow flashing lights, and other traffic control devices, as shown on the Plans and/or as directed by the Engineer. Prior to starting work on each phase of the project, the Contractor shall prepare and submit a proposed haul route layout and marking plan for approval by the Engineer. All haul routes must be approved by the Engineer prior to use by the Contractor. Haul route cones shall only be in place while construction activities are underway. The Contractor shall set up the cones at the beginning of each work period and take them down prior to the end that period.

148-2.5 GATE GUARDS. The Contractor shall furnish trained personnel, approved by the Owner, at the entrances to secure areas whenever these entrances are in use. All gates guards shall be required to obtain Air Operations Area (AOA) security training and security badges.

All Airport perimeter gates (new and/or existing) that are used by the Contractor for access to the AOA and are designed a controlled access gate shall require a gate guard at all times the gate is in use. The controlled access gate shall be closed and locked (with a lock provided by the Owner) during off-hours, when construction is not in progress, and when the gate guards are not at the station. The Contractor shall be responsible for controlling access through the controlled access gate by means of a manual barrier gate with minimum 16-foot arm. All gate guards shall have communications equipment in the form of local area code cell phones for direct communications with SNS personnel should any problems or questions arise.

A minimum of one gate guard shall be provided at each AOA controlled access gate. Guards shall review and log in each person and vehicle entering the AOA. Guards shall check the equipment and vehicles entering the AOA.

148-2.6 FLAGGING. The Contractor shall furnish competent, trained and adequately equipped flagging personnel during construction working hours to maintain a safe flow of construction and non-construction

traffic, and to control the construction crossing of the Taxiways. Flaggers shall be positioned on each side of any active aircraft movement area crossing to clear equipment across the taxiway when no aircraft traffic is present. Flaggers shall be responsible for direct communications with the Air Traffic Control Tower (ATCT) and indirect communications in the form of local area cell phones with SNS personnel. Flaggers shall request permission from the ATCT for any construction traffic needing to cross the active taxiway in either direction. Flaggers shall at all time monitor ATCT ground frequency communications in order to receive directions from the ATCT. All Flaggers shall be training in and familiar with the Aeronautical Information Manual Chapter 4, Section 2 concerning aircraft Radio Communications Phraseology and Techniques with an operating ATCT.

Aircraft traffic and other airport vehicles shall be given priority and have the right-of-way at all times. Construction equipment shall be held at the Taxiway Object Free Area (OFA) limit while aircraft approach and pass. Flaggers shall not permit construction vehicles and/or equipment to enter the Taxiway OFA without an assured exit from the Taxiway OFA. Flaggers shall not permit construction vehicles and/or equipment to enter the Taxiway OFA when an aircraft is approaching and within 500-feet of the controlled crossing. Construction vehicles, equipment or personnel shall not be permitted to park, stall or idle within the Taxiway OFA and shall when permission is granted from the ATCT expedite the crossing of the active Taxiway.

148-2.7 VEHICLE MONITORS. All vehicles operating in the AOA must be properly marked and lighted in accordance with the requirements for marking and identifying vehicles identified in AC 150/5210-5, Painting, Marking, and Lighting of Vehicles Used on an Airport. All vehicles operating in the AOA must be equipped with a properly trained driver; a properly trained driver is defined an individual who has attended the Airport security and airfield driving training. Any vehicles operating on the Airport without a properly trained driver shall be under the direct escort of a vehicle monitor. Vehicle monitors shall move about the project site to make sure that all construction traffic is operating within designated areas. Vehicle monitors shall comply with the following criteria:

- Possess a valid State of California driver's license,
- Attend the SNS security training and obtain AOA security badging
- Monitor's vehicle shall be clearly marked with the company name and logo, and lighted in accordance with AC150/5210-5
- Attend operations and communications training provided by SNS
- Attend all project pre-phasing meetings and all contractor's safety meetings

The Contractor shall provide the number of monitors required to adequately monitor areas under construction and all haul routes. The Contractor should also note that the more spread-out the construction activities are, the more monitors will be necessary to provide adequate coverage. If at any time, at the Engineer's sole determination, the Contractor is not providing sufficient monitoring of the work areas, the Engineer shall require that additional monitors be provided by the Contractor at the Contractor's sole expense. Adequate, sufficient monitoring shall be considered control maintained of all workers within the designated work areas with zero infractions of open airfield surfaces.

148-2.8 FOD CONTROL AND SWEEPERS. Contractor shall maintain a clean work site at all time within the AOA and contractor yards. Contractor shall provide for a minimum of two (2) operational primary sweepers at all times during construction activities, and one (1) back-up sweeper capable of arriving at the airport within thirty (30) minutes if necessary. All sweepers shall be Tymco® model 600 heavy-duty sweepers. Back up sweepers should be provided in case a sweeper is taken out of service due to maintenance issues or mechanical malfunction and shall be of similar type and power as the primary sweepers. Sweepers shall maintain all haul routes in a clean condition with no tracking of material onto or

around the haul route. A sweeper shall be stationed and operating at all active taxiway and runway crossings and shall be in radio communication with the lead flagger at this crossing.

Foreign Object Debris (FOD) is a major concern on an active airfield. As such the contractor shall minimize the potential for FOD by maintaining a clean work area and patrolling the complete area and removing anything that could cause FOD. Loose trash, construction debris, small pebbles, etc are unacceptable within the airfield area.

148-2.9 SAFETY. The Contractor shall follow the guidelines and procedures contained in Federal Aviation Administration Advisory Circular 150/5370-2F "Operational Safety on Airports During Construction"; and other applicable Sections of these Specifications.

The Contractor shall acquaint its supervisors and employees of the Airport activity and operations that are inherent to this active air carrier Airport and shall conduct its construction activities to conform to all routine requirements and emergency air traffic requirements and guidelines on safety specified in these Specifications.

All vehicles that are authorized to operate on the Airport shall display in full view above the vehicle a 3'x3' or larger orange and white checkerboard flag, each checkerboard color being 1' square. Any vehicle operating in the active AOA during the hours of darkness shall be equipped with a flashing amber (yellow) dome light, mounted on top of the vehicle and of such intensity to conform to local codes for maintenance and emergency vehicles.

All vehicles that are required to cross active runways, instrument or approach clear zones, active taxiways or aprons shall do so under the direct control of the Air Traffic Control Tower or shall be escorted by a vehicle in contact with the Air Traffic Control Tower. All aircraft traffic shall have priority over the Contractor's traffic.

No runway, taxiway, apron or airport roadway shall be closed without written approval of the Airport. The Airport will issue "Notices to Airmen" (NOTAM) and other necessary advisories to airport services or tenants. The Contractor shall provide a minimum of 72 hours notice of the requested closing to the Airport and Engineer, who will coordinate the request with the FAA ATCT.

Open-flame welding or torch-cutting operations shall be prohibited. All vehicles are to be parked and serviced behind the building restriction line or in an area designed by the Engineer.

Open trenches, excavations, and stockpiled material at the construction site shall be prominently marked with orange flags and lighted by flashing yellow light units (acceptable to the Airport and the FAA) during hours of restricted visibility/darkness. Under no circumstances are flare pots to be used.

Stockpiled material shall be constrained in a manner to prevent movement resulting from aircraft blast or wind conditions. Material should not be stored near aircraft turning areas or movement areas.

Debris, waste and loose material capable of causing damage to aircraft or being ingested in jet engines are not allowed on active aircraft movement areas. The Contractor shall remove it immediately and continuously during construction.

148-2.10 SECURITY. Contractor shall comply with all security requirements specified herein and comply with all applicable Federal safety and security regulations. The Contractor shall appoint and designate to the Engineer in writing the name of its Chief of Security. The Chief of Security shall represent the Contractor on the safety and security requirements of the project.

The Airport is operated in strict compliance with Federal Aviation Regulation – Part 107, which prohibits unauthorized persons or vehicles in the AOA. Equipment and personnel will be restricted to the work area

defined on the plans. Any violations by Contractor's or Subcontractor's personnel will subject the Contractor to penalties imposed by the FAA and SNS.

The Contractor shall comply with all security requirements specified herein.

Access to the Site. The Contractor's access to the site shall be as shown on the Plans. No other access points shall be allowed unless approved by the Engineer. All access points shall be secured (i.e. locked gate) or manned by a gate guard. All manned access points shall have a physical barrier that must be moved or otherwise operated by the guard to allow vehicles to pass through the access point. Contractor traffic authorized to enter the site shall be escorted by Contractor personnel in accordance with these Specifications, and the FAA Advisory Circular 150/5370-2F, and the Airport's "Airport Operational Safety and Security Requirements" and other "Security Instructions" included elsewhere herein. The Contractor shall maintain traffic control to and from the various areas of the Work. The Contractor shall immediately clean any debris deposited along any route used as a result of its construction traffic. Directional signing at the access point and along the delivery route to the storage area or Work site shall be as directed by the Engineer.

The Contractor must maintain a sign-in sheet, kept on a daily basis, recording the names and company of all employees working on the job site. A copy shall be given to Airport Operations and the Engineer each day.

Materials Delivered to the Site. Delivery vehicles for Contractor's material orders shall be escorted by the Contractor to the delivery site.

Inspection. If the United States Department of Homeland Security raises the security threat, or if required by the Airport, FAA, or Transportation Security Administration, at any time during the course of the Work, trained Contractor supplied personnel shall search all vehicles associated with the project entering the AOA or Work site.

The Contractor shall provide a sufficient quantity of inspection staff as to cause no delay in the through put of materials and deliveries to the project site. The Contractor shall assume in his bid that a High level of security will be in place for more than one-half of the project duration.

Identification – Contractor Provided Escorts. All construction personnel operating a vehicle or self-propelled construction equipment within the AOA including Subcontractors assigned to the project, shall be required to attend the Airport security and airfield driving training provided by SNS.

In addition, the following personnel shall be required to attend the Airport security and airfield driving training: all gate guards, all flaggers, and the Contractor's superintendent and assistant superintendents. The Contractor's superintendent and assistant superintendent will be responsible for assuring that no breeches of the Airport security program occur. Escorted vehicles shall not be left unattended by the Contractor. Each person or vehicle entering the Air Operations Area under the escort of the Contractor shall carry the full coverage of liability and property damage.

Identification – Escorted Personnel. The Contractor shall maintain a master list of construction personnel working within the AOA under escort and it shall be made available for the Airport's examination during construction hours. In accordance with FAA FAR 107.11 (f), employees assigned to work within the AOA for this project must successfully complete a security and personal background check prior to gaining access to the AOA. The Contractor shall be responsible for performing all security and personal background checks required on the Contractor's and Sub-contractor's employees requiring "escorted" AOA access. The Contractor shall be responsible for assuring that all of his employees have background checks performed dating back ten (10) years. The Contractor and Sub-contractors shall provide to SNS a letter verifying ten (10) year background on all their employees working within the AOA. Each employee will be required to complete a ten (10) year employment history form and any gaps in employment for more than 12-months

shall be explained. The Contractor is responsible for verifying and documenting the employment history and maintaining this information on file for inspection by the Airport.

In addition, all Contractor and Sub-contractor employees are required to complete a disqualification crimes list form. All questions must be answered "yes" or "no". Applicants for escorted may be subject to criminal history records check and fingerprinting. The completed form shall be submitted to the SNS Airport Operations along with a copy of the employee's approved contractor security badge.

The Contractor shall issue photo identification "Approved Contractor" badges for all escorted employees. A sample badge shall be submitted to the Airport for review and approval prior to issuing any "Approved Contractor" badges. The "Approved Contractor" badges shall at a minimum contain a sequential numbering system, recent photo identification with full name, company name, date of issuance, AIP number, an expire date of December 1st 2016. Badges must be surrendered upon termination of the employee and/or this contract. The Contractor shall maintain an up to date record of all badge holders showing name, address, sex, height, weight, eye color, and badge number. The Contractor will be required to furnish this list to Airport Operations upon request.

All Contractor and Subcontractor personnel working under escort within the AOA shall wear in a prominent location the "Approved Contractor" badge. The Contractor shall be responsible for distribution and control of the "Approved Contractor" badges. All badges shall be returned to the Airport at the end of the project.

All construction personnel in the AOA shall wear a uniform shirt/jacket and hard hats that will clearly identify them as being construction personnel authorized to work/have access in the AOA. All construction personnel shall display their SNS security badge or Contractor issued "Approved Contractor" badge at all times within the AOA.

Identification – Vehicles. The Contractor, through the Contractor's Chief of Security, shall establish and maintain a list of vehicles authorized to operate on the Airport. Vehicles delivering materials to the construction site shall sign in with the Contractor's gate security personnel. Contractor's personnel operating vehicles and/or equipment within the AOA shall complete a driver training class presented by the airport to familiarize them of the allowable haul routes, speed limits, non-movement areas, and open airfield areas.

The personal vehicles of Contractor's employees are not allowed on the airfield at any time, the Contractor shall ensure that adequate off-site parking is available.

The Contractor shall be responsible for the protection of the construction site, and all work, materials, equipment, and existing facilities thereon, against vandals and other unauthorized persons. Security measures shall include such additional security fencing, barricades, lighting, and other measures as the Contractor may deem necessary to protect the site.

148-2.11 RUNWAY CLOSURES. Contractor shall coordinate all runway closure needs with the Engineer and SNS. All closures shall be identified on the Contractor's construction schedule – base line schedule and all updates. A minimum of 72 hours prior notification in addition to the schedule data is required to be provided to the Airport for all runway closures. No closure shall commence until cleared and approved by the Airport.

Runway closures are required for all work to be performed within the Runway Object Free Zone (OFZ). No work shall be allowed within the Runway OFZ without a runway closure.

Nightly Runway Closures: This type of closure requires the contractor to close Runway 8-26 or 13-31 each night between the hours identified on the plans, and re-open each morning at or before the designed opening time. Closure activities shall include but not be limited to, setting up runway closure Lighted X signals at the both ends of the runway, setting up type 1 low profile barricades as indicated on the drawings or as directed by the Engineer, and coordinating with the Airport on the turning off of all NAVID's, runway approach lighting, taxiway and runway sign circuit systems, and runway and taxiway edge lighting systems. Maintenance and fueling of the Lighted X signals shall be the responsibility of the Contractor.

148-2.12 PROJECT RADIOS. The Contractor shall provide a minimum of four (4) hand-held VHF Air Band Transceivers to facilitate direct communications between the Contractor's flaggers, and the ATCT and monitoring ATCT communications by the Contractor's shift superintendents. The radios shall be model IC-A6 by Icom Inc.©. The Contractor shall also provide a BC-121N multi-charger with BC-124 AC adapter and AD-101 charger adapter. The Contractor shall acquire the radios by purchase and upon completion of the project all radios including the charger and ancillary items, shall be serviced and repaired/replaced at the Contractor's sole expense if required, and turned over to the Airport.

148-2.13 OPENING INSPECTIONS. When the Contractor requests to open an individual phase of Work, or a closed runway that are scheduled to be re-opened to aircraft traffic, the Engineer and Airport will conduct an inspection of each construction area before allowing the closed area to be opened to aircraft traffic. The conditions which the Engineer shall consider potentially hazardous and which must be corrected prior to reopening the runway include but are not limited to, the following:

1. Trenches, holes, or excavations, mounds or piles of earth, temporary stockpiles, construction materials, temporary structures, or other objects within the Runway ORZ.
2. Un-marked or un-lighted holes, trenches or excavations near any Runway OFZ.
3. Mounds or piles of earth, temporary stockpiles, construction materials, temporary structures, or other objects on or in the vicinity of any open runway or taxiway object free area.
4. Vehicles or equipment (whether operating or idle) on any open apron, taxiway, or in any related safety.
5. Vehicles, equipment, excavations, stockpiles, or other materials which could impinge upon Navigational Aid (NAVAID) critical areas and degrade or otherwise interfere with electronic signals from radios or electronic NAVAIDs or interfere with visual NAVAID facilities.
6. Objects (whether marked/flagged or not) or activities anywhere on or in the vicinity of the airport which could be distracting, confusing, or alarming to pilots during aircraft operations.
7. Un-flagged or un-lighted construction vehicles and equipment in the vicinity of an active runway, taxiway or apron.
8. Misleading or malfunctioning obstruction lights or barricade lights.
9. Inadequate, confusing, or misleading (to user pilots) marking/lighting of any open apron, runway, taxiway, or in any related safety, approach or departure area.
10. Water, dirt, debris, or other transient accumulation that temporarily obscures pavement marking, pavement edges, or derogates the visibility of runway/taxiways marking, lighting or of construction and maintenance areas. There is zero tolerance for foreign object debris.
11. Inadequate or improper methods of marking, barricading, or lighting of temporarily closed portions of the AOA including unlighted or missing construction and barricade lights.
12. Construction materials, trash or other materials with foreign object debris (FOD) potential, whether on aprons, runways, taxiways, service road, public streets or related safety areas. The

Engineer will be watchful for FOD that can be ingested into aircraft engines. Such items include rock, aggregate, soil, loose polyethylene and other light materials capable of being blown onto aircraft movement areas by wind.

13. Construction/maintenance activities or materials that could hamper Airport Rescue and Fire-Fighting (ARFF) vehicle access from ARFF stations to all parts of the runway/taxiway system, runway approach and departure areas, or aircraft parking locations.
14. The time allowances for all work is inclusive of the Contractor moving onto the site, performing work activities, performing all clean-up, having the work area and haul routes inspected and approved by the Engineer, and moving off the site. The Contractor shall provide adequate lighting in the opinion of the Engineer, for the needs of the inspection personnel.
15. A Runway does not pass inspection must remain closed until such time cleanup is performed and approved by the Engineer and accepted by the Airport. The official "Opening Time" will be that time when the temporary runway closure signals are removed from the Runway OFZ.

METHOD OF MEASUREMENT

148-3.1 Airfield Construction Area control shall be measured by the lump sum and shall include the Contractor developing and submit for review a “Construction Operation Safety Plan”, and for furnishing installing, removing, storage, maintenance, and reinstalling, as needed, barricades, cones, barricade lights, providing trained vehicle monitors, instigating and maintaining the “Approved Contractor” badging system, flaggers, gate guards, Chief of Security, temporary vehicle traffic control pavement markings, and all other trained personnel to provide the requirements of this item.

148-3.2 Sweepers and FOD Control shall be measured by the lump sum and shall include furnishings, maintaining, and operating sweepers and conducting regular FOD checks.

148-3.3 No separate measurement for Lighted X Runway Closure Signals will be made, they shall be considered a subsidiary obligation of the Contractor covered under other items in this section. The Contractor shall be responsible for: purchase or obtain, install as required to close runways during construction, maintain throughout use, service at end of project to restore to new condition, and turn over to airport. Upon completion of the work, the two (2) lighted X runway closure signals shall be returned to the airport; the stand-by X’s shall remain the property of the Contractor.

148-3.4 Contractor Project Radios will not be measured separately, they shall be considered a subsidiary obligation of the Contractor covered under the other contract items.

BASIS OF PAYMENT

148-4.1 Payment for airfield construction area control, including furnishing installing, removing, storage, maintenance, and reinstalling, as needed, barricades, runway closure markings, cones, barricade lights, providing trained vehicle monitors, flaggers, gate guards, Chief of Security, temporary vehicle traffic control pavement markings, and all other trained personnel to provide the requirements of this item shall be made at the lump sum price bid. The price bid shall be full compensation for furnishing all materials, and for all labor, equipment, tools, and incidentals necessary to complete construction safety and

security. Partial payments for construction safety and security under this item will be made in accordance with the following provisions:

a. The first partial payment for airfield traffic control will be made at 25-percent of the lump sum price bid, at such time that: (1) the project submittals required (P-401 Job Mix Formula, Contractor's Quality Control Plan, project CPM schedule) are provided and to the satisfaction of the Engineer; (2) the barricades have been delivered to the Work Site; and (3) Contractor's personnel have received SNS security badges and all necessary security driver and operations training as defined in these Specifications.

b. The remaining partial payments for construction safety and security will be made on each monthly progress pay at a rate of 75-percent of the lump sum price bid divided by the number of months established for the duration of the Work.

148-4.2 Sweepers and FOD Control shall be paid for per the contract unit price per lump sum and shall include furnishing, maintaining, operating the required number of operational sweepers plus any backups and conducting regular FOD checks. Payment shall be based on satisfactory compliance and paid on a prorated monthly basis of the lump sum amount evenly distributed over the construction duration. Failure to maintain the required number of sweepers and adequately clean the area may cause a month's payment to be withheld.

Payment will be under:

Item P-148-4.1 Airfield Construction Area Control – per Lump Sum.

Item P-148-4.2 Sweepers and FOD Control – per Lump Sum

END OF ITEM P-148

Item P-152 Excavation, Subgrade, and Embankment

DESCRIPTION

152-1.1 This item covers excavation, disposal, placement, and compaction of all materials within the limits of the work required to construct safety areas, runways, taxiways, aprons, and intermediate areas as well as other areas for drainage, building construction, parking, or other purposes in accordance with these specifications and in conformity to the dimensions and typical sections shown on the plans.

152-1.2 Classification. All material excavated shall be classified as defined below:

a. Unclassified excavation. Unclassified excavation shall consist of the excavation and disposal of all material, regardless of its nature.

Unclassified excavation shall include the removal and disposal off airport property at a facility licensed to accept the material of**:** existing asphalt pavement, base, treated base, subbase, rock, treated subgrades, and subgrade material that must be excavated as part of the work as shown on the Plans. All work and materials associated with this excavation and disposal will be classified and paid for under the unclassified excavation bid item of this Specification. Unclassified excavation shall include all solid rock in ledges, in bedded deposits, in unstratified masses, and conglomerate deposits which are so firmly cemented they cannot be removed without blasting or using rippers.

b. Rock excavation. Not Used.

c. Muck excavation. Not used

d. Drainage excavation. Not used.

e. Borrow excavation. Not Used.

152-1.3 Unsuitable excavation. Any material containing vegetable or organic matter, such as muck, peat, organic silt, or sod, and material designated by the Engineer as unsuitable subgrade, shall be considered unsuitable for use in the construction. Material, suitable for topsoil may be used on the embankment slope when approved by the Engineer.

All unsuitable material excavated shall be backfilled, as required by the Engineer or as shown on the Plans, with suitable material and compacted as specified herein.

All unsuitable excavation material shall become the property of the Contractor and be properly disposed of off airport property at a licensed facility in accordance with Ferderal, State and local laws and ordinances. The contractor shall abide by all applicable federal, state, and local laws and regulations when handling, removing, protecting in-place, and disposing of (off airport property at a licensed facility) all unsuitable excavated materials encountered in the work.

152-1.4 Subgrade stabilization. Subgrade stabilization methods are optional, and their usage shall be at the sole discretion of the Engineer. This item shall consist of one or a combination of the following materials:

a. Crushed aggregate base. If crushed aggregate base material is used for stabilization, the material shall conform to the provisions in Item P-208 “Crushed Aggregate Base Course” as applicable.

b. Geogrid reinforcement material. If geogrid reinforcement material is used for stabilization, the material shall conform to the provisions in Item P-159 "Geogrid Reinforcement Material."

Depending on the field conditions, the Engineer reserves the option to stabilize or eliminate the stabilization of any area. The Engineer also reserves the option to select any one or a combination of the above materials and methods to stabilize any one area.

CONSTRUCTION METHODS

152-2.1 General. Before beginning excavation, grading, and embankment operations in any area, the area shall be completely cleared and grubbed in accordance with Item P-151.

The suitability of material to be placed in embankments shall be subject to approval by the Engineer. All unsuitable material shall be disposed of in waste areas shown on the plans. All waste areas shall be graded to allow positive drainage of the area and of adjacent areas. The surface elevation of waste areas shall not extend above the surface elevation of adjacent usable areas of the airport, unless specified on the plans or approved by the Engineer.

When the Contractor's excavating operations encounter artifacts of historical or archaeological significance, the operations shall be temporarily discontinued and the Engineer notified per subsection 70-20. At the direction of the Engineer, the Contractor shall excavate the site in such a manner as to preserve the artifacts encountered and allow for their removal. Such excavation will be paid for as extra work.

Those areas outside of the limits of the pavement areas where the top layer of soil material has become compacted by hauling or other Contractor activities shall be scarified and disked to a depth of 4 inches (100 mm), to loosen and pulverize the soil.

If it is necessary to interrupt existing surface drainage, sewers or under-drainage, conduits, utilities, or similar underground structures, the Contractor shall be responsible for and shall take all necessary precautions to preserve them or provide temporary services. When such facilities are encountered, the Contractor shall notify the Engineer, who shall arrange for their removal if necessary. The Contractor, at his or her expense, shall satisfactorily repair or pay the cost of all damage to such facilities or structures that may result from any of the Contractor's operations during the period of the contract.

152-2.2 Excavation. No excavation shall be started until the work has been staked out by the Contractor and the Engineer has obtained from the Contractor, the survey notes of the elevations and measurements of the ground surface. All areas to be excavated shall be stripped of vegetation and topsoil. Topsoil shall be stockpiled for future use in areas designated on the plans or by the Engineer. All suitable excavated material shall be used in the formation of embankment, subgrade, or other purposes shown on the plans. All unsuitable material shall be disposed of as shown on the plans.

When the volume of the excavation exceeds that required to construct the embankments to the grades indicated, the excess shall be used to grade the areas of ultimate development or disposed as directed by the Engineer. When the volume of excavation is not sufficient for constructing the embankments to the grades indicated, the deficiency shall be obtained from borrow areas.

The grade shall be maintained so that the surface is well drained at all times. When necessary, temporary drains and drainage ditches shall be installed to intercept or divert surface water that may affect the work.

a. Selective grading. When selective grading is indicated on the plans, the more suitable material designated by the Engineer shall be used in constructing the embankment or in capping the pavement subgrade. If, at the time of excavation, it is not possible to place this material in its final location, it shall be stockpiled in approved areas so that it can be measured for payment as specified in paragraph 152-3.3.

b. Undercutting. Rock, shale, hardpan, loose rock, boulders, or other material unsatisfactory for safety areas, subgrades, roads, shoulders, or any areas intended for turf shall be excavated to a minimum depth of 12 inches (300 mm) below the subgrade or to the depth specified by the Engineer. Muck, peat, matted roots, or other yielding material, unsatisfactory for subgrade foundation, shall be removed to the depth specified. Unsuitable materials shall be disposed off the airport. The cost is incidental to this item.This excavated material shall be paid for at the contract unit price per cubic yard (per cubic meter) for unclassified excavation. The excavated area shall be backfilled with suitable material obtained from the grading operations or borrow areas and compacted to specified densities. The necessary backfill will constitute a part of the embankment. Where rock cuts are made, backfill with select material. Any pockets created in the rock surface shall be drained in accordance with the details shown on the plans.

c. Overbreak. Overbreak, including slides, is that portion of any material displaced or loosened beyond the finished work as planned or authorized by the Engineer. All overbreak shall be graded or removed by the Contractor and disposed of as directed by the Engineer. The Engineer shall determine if the displacement of such material was unavoidable and his or her decision shall be final. Payment will not be made for the removal and disposal of overbreak that the Engineer determines as avoidable. Unavoidable overbreak will be classified as "Unclassified Excavation."

d. Removal of utilities. The removal of existing structures and utilities required to permit the orderly progress of work will be accomplished by someone other than the Contractor; for example, the utility unless otherwise shown on the plans. All existing foundations shall be excavated at least 2 feet (60 cm) below the top of subgrade or as indicated on the plans, and the material disposed of as directed by the Engineer. All foundations thus excavated shall be backfilled with suitable material and compacted as specified.

e. Compaction requirements. The subgrade under areas to be paved shall be compacted to a depth of 6 inches and to a density of not less than 95 percent of the maximum density as determined by ASTM D 1557. The material to be compacted shall be within ±2% of optimum moisture content before being rolled to obtain the prescribed compaction (except for expansive soils).

The in-place field density shall be determined in accordance with ASTM D1556 or ASTM D2167. Stones or rock fragments larger than 4 inches (100 mm) in their greatest dimension will not be permitted in the top 6 inches (150 mm) of the subgrade. The finished grading operations, conforming to the typical cross-section, shall be completed and maintained at least 1,000 feet (300 m) ahead of the paving operations or as directed by the Engineer.

All loose or protruding rocks on the back slopes of cuts shall be pried loose or otherwise removed to the slope finished grade line. All cut-and-fill slopes shall be uniformly dressed to the slope, cross-section, and alignment shown on the plans or as directed by the Engineer.

Blasting shall not be allowed.

152-2.3 Borrow excavation. Not used.

152-2.4 Drainage excavation. Not used.

152-2.5 Preparation of embankment area. Not used.

152-2.6 Formation of embankments. Not used.

152-2.7 Finishing and protection of subgrade. After the subgrade is substantially complete, the Contractor shall remove any soft or other unstable material over the full width of the subgrade that will not compact properly. All low areas, holes or depressions in the subgrade shall be brought to grade with suitable select material. Scarifying, blading, rolling and other methods shall be performed to provide a thoroughly compacted subgrade shaped to the lines and grades shown on the plans.

Grading of the subgrade shall be performed so that it will drain readily. The Contractor shall protect the subgrade from damage and limit hauling over the finished subgrade to only traffic essential for construction purposes. All ruts or rough places that develop in the completed subgrade shall be graded and recompacted.

No subbase, base, or surface course shall be placed on the subgrade until the subgrade has been approved by the Engineer.

152-2.8 Haul. All hauling will be considered a necessary and incidental part of the work. The Contractor shall include the cost in the contract unit price for the pay of items of work involved. No payment will be made separately or directly for hauling on any part of the work.

152-2.9 Tolerances. In those areas upon which a subbase or base course is to be placed, the top of the subgrade shall be of such smoothness that, when tested with a 12-foot (3.7-m) straightedge applied parallel and at right angles to the centerline, it shall not show any deviation in excess of 1/2 inch (12 mm), or shall not be more than 0.05 feet (15 mm) from true grade as established by grade hubs. Any deviation in excess of these amounts shall be corrected by loosening, adding, or removing materials; reshaping; and recompacting.

On safety areas, intermediate and other designated areas, the surface shall be of such smoothness that it will not vary more than 0.10 feet (3 mm) from true grade as established by grade hubs. Any deviation in excess of this amount shall be corrected by loosening, adding or removing materials, and reshaping.

152-2.10 Topsoil. Not used.

METHOD OF MEASUREMENT

152-3.1 The quantity of excavation to be paid for shall be the number of cubic yards (cubic meters) measured in its original position. Measurement shall not include the quantity of materials excavated without authorization beyond normal slope lines, or the quantity of material used for purposes other than those directed. Rock excavation if required, shall not be measured separately, it shall be considered included in the unit price for unclassified excavation.

BASIS OF PAYMENT

152-4.1 "Unclassified excavation" payment shall be made at the contract unit price per cubic yard (cubic meter). This price shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be under:

Item P-152-4.1 Unclassified Excavation – per cubic yard (cubic meter)

TESTING REQUIREMENTS

ASTM D698	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))
ASTM D1556	Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method

ASTM D1557	Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2700 kN-m/m^3))
ASTM D2167	Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method
ASTM D6938	Standard Test Methods for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

END OF ITEM P-152

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ITEM P-153 CONTROLLED LOW-STRENGTH MATERIAL (CLSM)

DESCRIPTION

153-1.1 This item shall consist of furnishing, transporting, and placing a controlled low-strength material (CLSM) as flowable backfill in trenches or at other locations shown on the plans or as directed by the Engineer.

MATERIALS

153-2.1 Materials.

a. Portland cement. Portland cement shall conform to the requirements of ASTM C150 Type **I**. If for any reason, cement becomes partially set or contains lumps of caked cement, it shall be rejected. Cement salvaged from discarded or used bags shall not be used.

b. Fly ash. Fly ash shall conform to ASTM C618, Class C or F.

c. Fine aggregate (sand). Fine aggregate shall conform to the requirements of ASTM C33 except for aggregate gradation. Any aggregate gradation which produces performance characteristics of the CLSM specified here will be accepted, except as follows.

Sieve Size	Percent Passing by weight
3/4 inch (19 mm)	100
No. 200 (0.075 mm)	0 - 12

d. Water. Water used in mixing shall be potable and free of oil, salt, acid, alkali, sugar, vegetable matter, or other substances injurious to the finished product.

MIX DESIGN

153-3.1 Proportions. The Contractor shall submit, to the Engineer, a mix design including the proportions and source of aggregate, fly ash, cement, water, and approved admixtures. No CLSM mixture shall be produced for payment until the Engineer has given written approval of the proportions. The proportions shall be prepared by a laboratory and shall remain in effect for the duration of the project. Laboratory costs are incidental to this item. The proportions shall establish a single percentage or weight for aggregate, fly ash, cement, water, and any admixtures proposed.

a. Compressive strength. CLSM shall be designed to achieve a 28-day compressive strength of 100 to 200 psi (690 to 1379 kPa) when tested in accordance with ASTM D4832. There should be no significant strength gain after 28 days.

b. Consistency. CLSM should be designed to achieve a consistency that will produce an approximate 8-inch (200 mm) diameter circular-type spread without segregation when tested by: (1) filling a 3-inch inside diameter by 6-inch length flow cylinder (non-absorbent pipe) (2) strike off of the flow cylinder and start of lift within five seconds of filling and (3) by steady upward pull, lift the cylinder in a time period of between two and four seconds. Adjustments of the material proportions should be made to achieve proper solid suspension and flowable characteristics, however the theoretical yield shall be maintained at one cubic yard (cubic meter) for the given batch weights.

CONSTRUCTION METHODS

153-4.1 Placement.

a. Placement. CLSM may be placed by any reasonable means from a mixing unit into the space to be filled. Agitation is required during transportation and waiting time. Placement shall be performed so structures or pipes are not displaced from their final position and intrusion of CLSM into unwanted areas is avoided. The material shall be brought up uniformly to the fill line shown on the plans or as directed by the Engineer. Each placement of CLSM shall be as continuous an operation as possible. If CLSM is placed in more than one layer, the base layer shall be free of surface water and loose foreign material prior to placement of the next layer.

b. Limitations of placement. CLSM shall not be placed on frozen ground. Mixing and placing may begin when the air or ground temperature is at least 35°F (2°C) and rising. At the time of placement, CLSM shall have a temperature of at least 40°F (4°C). Mixing and placement shall stop when the air temperature is 40°F (4°C) and falling or when the anticipated air or ground temperature will be 35°F (2°C) or less in the 24 hour period following proposed placement.

153-4.2 Curing and protection

a. Curing. The air in contact with the CLSM shall be maintained at temperatures above freezing for a minimum of 72 hours. If the CLSM is subjected to temperatures below 32°F (0°C), the material may be rejected by the Engineer if damage to the material is observed.

b. Protection. The CLSM shall not be subject to loads and shall remain undisturbed by construction activities for a period of 48 hours or until a compressive strength of 15 psi (105 kPa) is obtained. The Contractor shall be responsible for providing evidence to the Engineer that the material has reached the desired strength. Acceptable evidence shall be based upon compressive tests made in accordance with paragraph 153-3.1a.

153-4.3 Acceptance. Acceptance of CLSM delivered and placed as shown on the plans or as directed by the Engineer shall be based upon mix design approval and batch tickets provided by the Contractor to confirm that the delivered material conforms to the mix design. The Contractor shall verify by additional testing, each 1,000 cubic yards (765 m^3) of material used. Verification shall include confirmation of material proportions and tests of compressive strength to confirm that the material meets the original mix design and the requirements of CLSM as defined in this specification. Adjustments shall be made as necessary to the proportions and materials prior to further production.

METHOD OF MEASUREMENT

153-5.1 Measurement. Controlled low-strength material shall be measured by the number of cubic yards (cubic meters) as computed from the neatline plan and section, adjusted for the quantities for any embedments, and as specified, completed, and accepted.

BASIS OF PAYMENT

153-6.1 Payment. Accepted quantities of controlled low-strength material shall be paid for at the contract unit price per cubic yard (cubic meter). Payment shall be full compensation for all materials, equipment, labor, and incidentals required to complete the work as specified.

Payment will be under:

Item P-153-6.1 Controlled Low-Strength Material – per cubic yard (cubic meter)

TESTING REQUIREMENTS

ASTM D4832	Standard Test Method for Preparation and Testing of Controlled Low-Strength Material (CLSM) Test Cylinders

MATERIAL REQUIREMENTS

ASTM C33	Standard Specification for Concrete Aggregates
ASTM C150	Standard Specification for Portland Cement
ASTM C618	Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete
ASTM C595	Standard Specification for Blended Hydraulic Cements

END OF ITEM P-153

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Item P-156 Temporary Air and Water Pollution, Soil Erosion, and Siltation Control

DESCRIPTION

156-1.1 This item shall consist of temporary control measures as shown on the plans or as ordered by the Engineer during the life of a contract to control water pollution, soil erosion, and siltation through the use of silt fences, berms, dikes, dams, sediment basins, fiber mats, gravel, mulches, grasses, slope drains, and other erosion control devices or methods.

The temporary erosion control measures contained herein shall be coordinated with the permanent erosion control measures specified as part of this contract to the extent practical to assure economical, effective, and continuous erosion control throughout the construction period.

Temporary control may include work outside the construction limits such as borrow pit operations, equipment and material storage sites, waste areas, and temporary plant sites.

Temporary control measures shall be design, installed and maintained to minimize the creation of wildlife attractants that have the potential to attract hazardous wildlife on or near public-use airports.

The Contractor shall develop a Best Managament Plan (BMP) in accordance with the City of Salinas Public Works Stormwater Standards.

MATERIALS

156-2.1 Grass. Grass that will not compete with the grasses sown later for permanent cover per Item T-901shall be a quick-growing species (such as ryegrass, Italian ryegrass, or cereal grasses) suitable to the area providing a temporary cover. Selected grass species shall not create a wildlife attractant.

156-2.2 Mulches. Mulches may be hay, straw, fiber mats, netting, bark, wood chips, or other suitable material reasonably clean and free of noxious weeds and deleterious materials per ItemT-908. Mulches shall not create a wildlife attractant.

156-2.3 Fertilizer. Fertilizer shall be a standard commercial grade and shall conform to all Federal and state regulations and to the standards of the Association of Official Agricultural Chemists.

156-2.4 Slope drains. Slope drains may be constructed of pipe, fiber mats, rubble, Portland cement concrete, bituminous concrete, or other materials that will adequately control erosion.

156-2.5 Silt fence. The silt fence shall consist of polymeric filaments which are formed into a stable network such that filaments retain their relative positions. Synthetic filter fabric shall contain ultraviolet ray inhibitors and stabilizers to provide a minimum of six months of expected usable construction life. Silt fence shall meet the requirements of ASTM D6461.

156-2.6 Other. All other materials shall meet commercial grade standards and shall be approved by the Engineer before being incorporated into the project.

CONSTRUCTION REQUIREMENTS

156-3.1 General. In the event of conflict between these requirements and pollution control laws, rules, or regulations of other Federal, state, or local agencies, the more restrictive laws, rules, or regulations shall apply.

The Engineer shall be responsible for assuring compliance to the extent that construction practices, construction operations, and construction work are involved.

156-3.2 Schedule. Prior to the start of construction, the Contractor shall submit schedules for accomplishment of temporary and permanent erosion control work for clearing and grubbing; grading; construction; paving; and structures at watercourses. The Contractor shall also submit a proposed method of erosion and dust control on haul roads and borrow pits and a plan for disposal of waste materials. Work shall not be started until the erosion control schedules and methods of operation for the applicable construction have been accepted by the Engineer.

156-3.3 Construction details. The Contractor will be required to incorporate all permanent erosion control features into the project at the earliest practicable time as outlined in the accepted schedule. Except where future construction operations will damage slopes, the Contractor shall perform the permanent seeding and mulching and other specified slope protection work in stages, as soon as substantial areas of exposed slopes can be made available. Temporary erosion and pollution control measures will be used to correct conditions that develop during construction that were not foreseen during the design stage; that are needed prior to installation of permanent control features; or that are needed temporarily to control erosion that develops during normal construction practices, but are not associated with permanent control features on the project.

Where erosion may be a problem, clearing and grubbing operations should be scheduled and performed so that grading operations and permanent erosion control features can follow immediately if project conditions permit; otherwise, temporary erosion control measures may be required.

The Engineer shall limit the area of clearing and grubbing, excavation, borrow, and embankment operations in progress, commensurate with the Contractor's capability and progress in keeping the finish grading, mulching, seeding, and other such permanent control measures current with the accepted schedule. If seasonal limitations make such coordination unrealistic, temporary erosion control measures shall be taken immediately to the extent feasible and justified as directed by the Engineer.

The Contractor shall provide immediate permanent or temporary pollution control measures to minimize contamination of adjacent streams or other watercourses, lakes, ponds, or other areas of water impoundment as directed by the Engineer. If temporary erosion and pollution control measures are required due to the Contractor's negligence, carelessness, or failure to install permanent controls as a part of the work as scheduled or directed by the Engineer, the work shall be performed by the Contractor and the cost shall be incidental to this item.

The Engineer may increase or decrease the area of erodible earth material that can be exposed at any time based on an analysis of project conditions.

The erosion control features installed by the Contractor shall be acceptably maintained by the Contractor during the construction period.

Whenever construction equipment must cross watercourses at frequent intervals, temporary structures should be provided.

Pollutants such as fuels, lubricants, bitumen, raw sewage, wash water from concrete mixing operations, and other harmful materials shall not be discharged into any waterways, impoundments or into natural or manmade channels.

156-3.4 Installation, maintenance and removal of silt fences. Silt fences shall extend a minimum of 16 inches (41 cm) and a maximum of 34 inches (86 cm) above the ground surface. Posts shall be set no more than 10 feet (3 m) on center. Filter fabric shall be cut from a continuous roll to the length required minimizing joints where possible. When joints are necessary, the fabric shall be spliced at a support post with a minimum 12-inch (300-mm) overlap and securely sealed. A trench shall be excavated approximately 4 inches (100 mm) deep by 4 inches (100 mm) wide on the upslope side of the silt fence.

The trench shall be backfilled and the soil compacted over the silt fence fabric. The Contractor shall remove and dispose of silt that accumulates during construction and prior to establishment of permanent erosion control. The fence shall be maintained in good working condition until permanent erosion control is established. Silt fence shall be removed upon approval of the Engineer.

METHOD OF MEASUREMENT

156-4.1 Temporary erosion and pollution control work required will be performed as scheduled or directed by the Engineer. Completed and accepted work will be measured by the lump sum as a single complete unit of work.

156-4.2 Control work performed for protection of construction areas outside the construction limits, such as borrow and waste areas, haul roads, equipment and material storage sites, and temporary plant sites, will not be measured and paid for directly but shall be considered as a subsidiary obligation of the Contractor.

BASIS OF PAYMENT

156-5.1 Accepted quantities of temporary water pollution, soil erosion, and siltation control work ordered by the Engineer and measured as provided in paragraph 156-4.1 will be paid for under:

Item P-156-5.1	Prepare and Implement the Best Management Plan and Measures – per Lump Sum

Where other directed work falls within the specifications for a work item that has a contract price, the units of work shall be measured and paid for at the contract unit price bid for the various items.

Temporary control features not covered by contract items that are ordered by the Engineer will be paid for in accordance with Section 90-05 Payment for Extra work.

MATERIAL REQUIREMENTS

ASTM D6461	Standard Specification for Silt Fence Materials
AC 150/5200-33	Hazardous Wildlife Attractants

END OF ITEM P-156

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Part 3 – Flexible Base Courses

Item P-208 Aggregate Base Course

208-1.1 This item shall consist of a crushed aggregate base course composed of course aggregate bonded with fine aggregate base. It shall be constructed on a prepared subgrade or subbase course per these specifications and shall conform to the dimensions and typical cross-section shown on the plans.

MATERIALS

208-2.1 Aggregate base. The aggregate base material shall consist of both fine and coarse aggregate. Material shall be clean, sound, durable particles and fragments of stone or gravel, crushed stone, or crushed gravel mixed or blended with sand, screenings, or other similar materials produced from approved sources. The aggregate shall be free from lumps of clay, organic matter, and other objectionable materials or coatings.

Crushed aggregate shall consist of clean, sound, durable stones and rock crushed to specified size and shall be free from excess soft or disintegrated pieces, dirt, or other objectionable matter. The method used to produce the crushed gravel shall result in the fractured particles in the finished product as nearly constant and uniform as practicable.

The coarse aggregate portion, defined as the portion retained on the No. 4 sieve, shall not have a loss of greater than 50% when tested per ASTM C131. The sodium sulfate soundness loss shall not exceed 12%, or the magnesium sulfate soundness loss shall not exceed 18%, after five cycles, when tested in accordance with ASTM C88. The aggregate shall have at least 60% by weight of particles with at least two fractured faces and 75% with at least one fractured face per ASTM D5821. The area of each face shall be equal to at least 75% of the smallest mid-sectional area of the piece. When two fractured faces are contiguous, the angle between the planes of fractures shall be at least 30 degrees to count as two fractured faces. The aggregate shall contain no more than 15%, by weight, of flat, elongated, or flat and elongated particles per ASTM D4791. A flat particle is one having a ratio of width to thickness greater than three (3); an elongated particle is one having a ratio of length to width greater than three (3).

The fine aggregate portion, defined as the portion passing the No. 4 sieve, produced in crushing operations shall be incorporated in the base material to the extent permitted by the gradation requirements.

a. Sampling and testing for initial aggregate base requirements. Samples shall be taken by the Contractor in the presence of the Engineer. Material shall meet the requirements in paragraph 208-2.1 and 208-2.2. This sampling and testing will be the basis for approval of the aggregate base quality requirements. Testing for verification of the gradation shall be done by the Contractor's Quality Control team on a daily basis (one work shift equates to a lot up to a maximum of 4,000 square yards) and at a minimum of two samples per lot.

208-2.2 Gradation requirement. The gradation of the aggregate base material shall meet the requirements of the gradation given in the following table when tested per ASTM C117 and ASTM C136. The gradation shall be well graded from coarse to fine as defined by ASTM D2487 and shall not vary from the lower limit on one sieve to the high limit on an adjacent sieve or vice versa. The fraction of material passing the No. 200 (0.075 mm) sieve shall not exceed one-half the fraction passing the No. 40 (0.45 mm) sieve. The portion of the filler and binder, including any blended material, passing the No. 40

(0.45 mm) sieve shall have a liquid limit not more than 25 and a plasticity index not more than five (5) when tested per ASTM D4318.

Requirements for Gradation of Aggregate Base

Sieve Size	Design Range Percentage by Weight	Contractor's Final Gradation	Job Control Grading Band Tolerances for Contractor's Final Gradation Percent
2 inch (50 mm)	--		0
1-1/2 inch (38 mm)	100		±5
1 inch (25 mm)	70-100		±8
3/4 inch (19 mm)	55-85		±8
No. 4 (4.75 mm)	30-60		±8
No. 40 (0.45 mm)	10-30		±5
No. 200 (0.075 mm)	5-15		±3

The "Job Control Grading Band Tolerances for Contractor's Final Gradation" in the table shall be applied to "Contractor's Final Gradation" to establish a job control grading band. The full tolerance still applies if application of the tolerances results in a job control grading band outside the design range.

a. Sampling and testing for gradation. The Contractor shall take at least two aggregate base samples per lot to check the final gradation. Sampling shall be per ASTM D75. The lot will be consistent with the lot size used for density. The samples shall be taken from the in-place, un-compacted material in the presence of the Engineer. Sampling points and intervals will be designated by the Engineer.

208-2.4 PROCESSED MISCELLANEOUS BASE. Processed miscellaneous base shall consist of cold milled asphalt concrete obtained through the asphalt pavement removal of the existing bituminous pavement. The material retained on the No. 4 (4.75 mm) sieve shall contain no more than 75 percent gravel particles defined as gravel composed entirely of particles that have no more than one fractured face. The material shall be free of any detrimental quantity of deleterious material as defined as soft, friable, thin, elongated, or laminated pieces, disintegrated material, organic matter, oil, alkali, or other deleterious substance.

Cold milled material shall only be produced through the operation of a machine specifically designed for cold milling asphalt pavements. Processed miscellaneous base shall not be produced by the operation of self propelled drum hammers ("stompers"), breakers, steel padded rollers, or by ripping or excavation equipment.

The contractor shall collect samples of the cold milled material in the presence of the Engineer for gradation and sand equivalent testing per 1,000 square yards of surface area completed. The contractor shall not place any subsequent lift of material until all gradation and sand equivalent testing has been performed and reported by the contractor's quality control lab and accepted by the Engineer. Compaction testing shall per paragraphs 208-3.5 and 208-3.6.

Grading of processed miscellaneous base shall be uniformly graded and shall conform to the gradation outline in the following table.

Requirements for Gradation of Processed Miscellaneous Base

Sieve Designation	Percentage by weight passing sieves
2 inch (50.0 mm)	100
1-1/2 inch (37.0 mm)	100
1 inch (25.0 mm)	100
3/4 inch (13.0 mm)	85-100
3/8 inch (9.5 mm)	55-80
No. 4 (4.75 mm)	35-60
No. 30 (0.60 mm)	10-30
No. 200 (0.075 mm)	2-9
ASTM C 131 Grading	B

If, after testing, the milled material does not conform to the gradation specified in the table above, a maximum of 35 percent rock product defined as crushed rock, rock dust, gravel sand, or any combination thereof that is clean, hard, sound, durable, uniform in quality, and free from any detrimental quantity of soft, friable, thin, elongated, or laminated pieces, disintegrated material, organic matter, oil, alkali, or other deleterious substances. The Contractor shall determine the amount of rock material to be blended. The rock products shall be uniformly spread and blended over the area requiring correction of gradation. The equipment used for blending the material shall be the same equipment used to pulverize the material initially.

When there is a difference in specific gravity (bulk saturated surface dry conforming to ASTM C 127) of 0.2 or more between that portion retained and that portion passing the number 4 sieve, a modified grading will be required. The grading will be modified in accordance with California Test 105.

Quality requirements for this material shall conform to the requirements of the following table.

Requirements for Testing Properties of Processed Miscellaneous Base

Test	Test Method No.	Requirement
R-value[1]	California 301	78 minimum
Sand Equivalent	California 217	35 minimum
Percentage Wear		
100 revolutions		15 maximum
500 revolutions		52 maximum

1. The R-value requirement may be waived provided the material has an SE of 40 or more.

The Engineer may waive the percentage wear requirements provided the material has a minimum durability of 35 in accordance with California Test 229.

CONSTRUCTION METHODS

208-3.1 Operations in pits and quarries. All work involved in clearing and stripping pits and quarries, including handling of unsuitable material, shall be performed by the Contractor. All material shall be handled in a manner that shall secure a uniform and satisfactory base product. The base course material shall be obtained from sources that have been approved by the Engineer.

208-3.2 Preparing underlying subgrade and/or subbase. The underlying subgrade and/or subbase shall be checked and accepted by the Engineer before base course placing and spreading operations begin. Re-proof rolling of the subgrade or proof rolling of the subbase in accordance with P-152, at the Contractor's expense, may be required by the Engineer if the Contractor fails to ensure proper drainage or protect the subgrade and/or subbase. Any ruts or soft, yielding areas due to improper drainage conditions, hauling, or any other cause, shall be corrected before the base course is placed. To ensure proper drainage, the spreading of the base shall begin along the centerline of the pavement on a crowned section or on the high side of the pavement with a one-way slope.

208-3.3 Production. The aggregate shall be uniformly blended and, when at a satisfactory moisture content per paragraph 208-3.5, the approved material may be transported directly to the spreading equipment.

208-3.4 Placing. The aggregate base material shall be placed and spread on the prepared underlying subgrade and/or subbase and compacted in layers to the thickness shown on the plans. Work shall progress without interruption. The material shall be deposited and spread in lanes in a uniform layer without segregation to such loose depth that, when compacted, the layer shall have the specified thickness. The aggregate base course shall be constructed in layers of uniform thickness of not less than 3 inches (75 mm) nor more than 6 inches (150 mm) of compacted thickness. The aggregate as spread shall be of uniform grading with no pockets of fine or coarse materials. The aggregate, unless otherwise permitted by the Engineer, shall not be spread more than 2,000 square yards (1700 sq m) in advance of the rolling. Any necessary sprinkling shall be kept within these limits. Care shall be taken to prevent cutting into the underlying layer during spreading. No material shall be placed in snow or on a soft, muddy, or frozen course. The aggregate base material shall be spread by spreader boxes or other approved devices. This equipment shall have positive thickness controls that spread the aggregate in the required amount to avoid or minimize the need for hand manipulation. Dumping from vehicles that require re-handling shall not be permitted. Hauling over the uncompacted base course shall not be permitted.

When more than one layer is required, the construction procedure described here shall apply similarly to each layer.

208-3.5 Compaction. Immediately upon completion of the spreading operations, compact each layer of the base course, as specified, with approved compaction equipment. The number, type, and weight of rollers shall be sufficient to compact the material to the required density. The moisture content of the material during placing operations shall be within ±1 percentage points of the optimum moisture content as determined by ASTM **D698**. If nuclear density machines are used for density determination, the field density shall be determined in accordance with ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated per ASTM D6938.

208-3.6 Acceptance sampling and testing for density. Aggregate base course shall be accepted for density on a lot basis. A lot will consist of one day's production if it does not exceed 2400 square yards (2000 sq m). A lot will consist of one-half day's production if a day's production is between 2400 and 4800 square yards (2000 and 4000 sq m). The Contractor's laboratory shall perform all density tests in the Engineer's presence and provide the test results upon completion to the Engineer for acceptance.

Each lot shall be divided into two equal sublots. One test shall be made for each sublot and shall consist of the average of two random locations for density determination. Sampling locations will be determined by the Engineer on a random basis per ASTM D3665.

Each lot shall be accepted for density when the field density is at least 100% of the maximum density of laboratory specimens compacted and tested per ASTM **D698**. The in-place field density shall be determined per ASTM D6938 using Procedure A, the direct transmission method, and ASTM D6938 shall be used to determine the moisture content of the material. The machine shall be calibrated in accordance with ASTM D6938. If the specified density is not attained, the entire lot shall be reworked and/or recompacted and two additional random tests made. This procedure shall be followed until the specified density is reached.

208-3.7 Surface tolerances. After the course has been compacted, the surface shall be tested for smoothness and accuracy of grade and crown. Any portion lacking the required smoothness or failing in accuracy of grade or crown shall be scarified to a depth of at least 3 inches (75 mm), reshaped and recompacted to grade until the required smoothness and accuracy are obtained and approved by the Engineer. Any deviation in surface tolerances shall be corrected by the Contractor at the Contractor's expense. The smoothness and accuracy requirements specified here apply only to the top layer when base course is constructed in more than one layer.

a. Smoothness. The finished surface shall not vary more than 3/8 inch (9 mm) when tested with a 12-foot (3.7-m) straightedge applied parallel with and at right angles to the centerline. The straightedge shall be moved continuously forward at half the length of the 12-foot (3.7-m) straightedge for the full length of each line on a 50-foot (15-m) grid.

b. Accuracy. The grade and crown shall be measured on a 50-foot (15-m) grid and shall be within +0 and -1/2 inch (12 mm) of the specified grade.

208-3.8 Thickness control. The thickness of the base course shall be within +0 and -1/2 inch (12 mm) of the specified thickness as determined by surveys taken by the Contractor and verified by the Engineer. The surveys shall be required before and after placement of the base. The survey interval shall be on a maximum grid of 25-feet, and supplemented by additions survey poimts at all grade breaks or as directed by the Engineer. Where the thickness is deficient by more than 1/2 inch (12 mm), the Contractor shall correct such areas at no additional cost by scarifying to a depth of at least 3 inches (75 mm), adding new material of proper gradation, and the material shall be blended and recompacted to grade. The Contractor shall replace, at his expense, base material where depth tests have been taken.

208-3.9 Protection. Perform construction when the atmospheric temperature is above 35°F (2°C). When the temperature falls below 35°F (2°C), protect all completed areas by approved methods against detrimental effects of freezing. Correct completed areas damaged by freezing, rainfall, or other weather conditions to meet specified requirements. When the aggregates contain frozen materials or when the underlying course is frozen or wet, the construction shall be stopped. Hauling equipment may be routed over completed portions of the base course, provided no damage results. Equipment shall be routed over the full width of the base course to avoid rutting or uneven compaction. The Engineer will stop all hauling over completed or partially completed base course when, in the Engineer's opinion, such hauling is causing damage. Any damage to the base course shall be repaired by the Contractor at the Contractor's expense.

208-3.10 Maintenance. The Contractor shall maintain the base course in a satisfactory condition until the full pavement section is completed and accepted by the Engineer. The surface shall be kept clean and free from foreign material and properly drained at all times. Maintenance shall include immediate repairs to any defects and shall be repeated as often as necessary to keep the area intact. Any base course that is not paved over prior to the onset of winter shall be retested to verify that it still complies with the requirements of this specification. Any area of base course that is damaged shall be reworked or replaced as necessary to comply with this specification.

Equipment used in the construction of an adjoining section may be routed over completed base course, if no damage results and the equipment is routed over the full width of the base course to avoid rutting or uneven compaction.

The Contractor shall remove all survey and grade hubs from the base courses prior to placing any bituminous surface course.

METHOD OF MEASUREMENT

208-4.1 The quantity of for processed miscellaneous base shall be measured by the number of square yards (square meters) of material actually constructed and accepted by the Engineer as complying with the plans and specifications. Base materials shall not be included in any other excavation quantities.

208-4.4 When the volume of the millings from the cold planning exceeds that required for the processed miscellaneous base course, the excess shall be disposed of off Airport property. No separate measurement or payment shall be made for the hauling and disposal of millings derived from the cold planning of existing pavement; it shall be considered as a subsidiary obligation of the Contractor covered under the other contract items.

BASIS OF PAYMENT

208-5.1 Payment shall be made at the contract unit price per cubic yard (cubic meter) for aggregate base course. This price shall be full compensation for furnishing all materials and for all operations, hauling, placing, and compacting of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-208-5.1 Processed Miscellaneous Base - per square yard (square meter)

TESTING REQUIREMENTS

ASTM C29 Standard Test Method for Bulk Density ("Unit Weight") and Voids in Aggregate

ASTM C88 Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate

ASTM C117 Standard Test Method for Materials Finer than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing

ASTM C131 Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine

ASTM C136 Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates

ASTM D75 Standard Practice for Sampling Aggregates

ASTM D422 Standard Test Method for Particle-Size Analysis of Soils

ASTM D698 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400 ft-lbf/ft^3 (600 kN-m/m^3))

ASTM D1556 Standard Test Method for Density and Unit Weight of Soil in Place by the Sand-Cone Method

ASTM D1557 Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Modified Effort (56,000 ft-lbf/ft^3 (2700 kN-m/m^3))

ASTM D2167 Standard Test Method for Density and Unit Weight of Soil in Place by the Rubber Balloon Method

ASTM D3665 Standard Practice for Random Sampling of Construction Materials

ASTM D4318 Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils

ASTM D4718 Standard Practice for Correction of Unit Weight and Water Content for Soils Containing Oversize Particles

ASTM D4791 Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate

ASTM D5821 Standard Test Method for Determining the Percentage of Fractured Particles in Coarse Aggregate

ASTM D6938 Standard Test Method for In-Place Density and Water Content of Soil and Soil-Aggregate by Nuclear Methods (Shallow Depth)

END OF ITEM P-208

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Part 4 – Rigid Base Courses

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Part 5 – Flexible Surface Courses

Item P-401 Hot Mix Asphalt (HMA) Pavements

DESCRIPTION

401-1.1 This item shall consist of pavement courses composed of mineral aggregate and asphalt cement binder (asphalt binder) mixed in a central mixing plant and placed on a prepared course in accordance with these specifications and shall conform to the lines, grades, thicknesses, and typical cross-sections shown on the plans. Each course shall be constructed to the depth, typical section, and elevation required by the plans and shall be rolled, finished, and approved before the placement of the next course.

MATERIALS

401-2.1 Aggregate. Aggregates shall consist of crushed stone, crushed gravel, screenings, natural sand and mineral filler, as required. The aggregates should be free of ferrous sulfides, such as pyrite, that would cause "rust" staining that can bleed through pavement markings. The portion retained on the No. 4 (4.75 mm) sieve is coarse aggregate. The portion passing the No. 4 (4.75 mm) sieve and retained on the No. 200 (0.075 mm) sieve is fine aggregate, and the portion passing the No. 200 (0.075 mm) sieve is mineral filler.

The Contractor shall prevent the inclusion of any aggregates containing ferrous sulfides or iron oxides in the mix. All aggregates to be used in the asphalt pavement shall be tested for ferrous sulfides and iron oxides content. The test procedure shall require the immersion of samples of the aggregates in a lime slurry to identify staining particles. If a blue-green gelatinous precipitate forms within five (5) to ten (10) minutes, rapidly changing to a brown color on exposure to air and light, the aggregate shall be deemed unacceptable. Aggregates observed to have no brown gelatinous precipitate forms shall be deemed acceptable.

a. Coarse aggregate. Coarse aggregate shall consist of sound, tough, durable particles, free from films of matter that would prevent thorough coating and bonding with the bituminous material and free from organic matter and other deleterious substances. The percentage of wear shall not be greater than 40% when tested in accordance with ASTM C131. The sodium sulfate soundness loss shall not exceed 12%, or the magnesium sulfate soundness loss shall not exceed 18%, after five cycles, when tested in accordance with ASTM C88. Clay lumps and friable particles shall not exceed 1.0% when tested in accordance with ASTM C142.

Aggregate shall contain at least **75** percent by weight of individual pieces having two or more fractured faces and **85** percent by weight having at least one fractured face. The area of each face shall be equal to at least 75% of the smallest midsectional area of the piece. When two fractured faces are contiguous, the angle between the planes of fractures shall be at least 30 degrees to count as two fractured faces. Fractured faces shall be achieved by crushing.

The aggregate shall not contain more than a total of 8%, by weight, of flat particles, elongated particles, and flat and elongated particles, when tested in accordance with ASTM D4791 with a value of 5:1.

All coarse aggregate to be used in the work shall have a minimum cleanliness value (CV) of 75 as determined by California Test 227.

The contractor shall ensure: 1) that all course aggregate to be used in the work meets the minimum CV; and 2) that all course aggregates to be used in the work shall be washed.

b. Fine aggregate. Fine aggregate shall consist of clean, sound, tough, durable, angular shaped particles produced by crushing stone, slag, or gravel that meets the requirements for wear and soundness specified for coarse aggregate. The aggregate particles shall be free from coatings of clay, silt, or other objectionable matter.

The fine aggregate, including any blended material for the fine aggregate, shall have a plasticity index of not more than six (6) and a liquid limit of not more than 25 when tested in accordance with ASTM D4318.

The soundness loss shall not exceed 10% when sodium sulfate is used or 15% when magnesium sulfate is used, after five cycles, when tested per ASTM C88.

Clay lumps and friable particles shall not exceed 1.0%, by weight, when tested in accordance with ASTM C142.

Natural (non-manufactured) sand may be used to obtain the gradation of the aggregate blend or to improve the workability of the mix. The amount of sand to be added will be adjusted to produce mixtures conforming to requirements of this specification. The fine aggregate shall not contain more than 15% natural sand by weight of total aggregates. If used, the natural sand shall meet the requirements of ASTM D1073 and shall have a plasticity index of not more than six (6) and a liquid limit of not more than 25 when tested in accordance with ASTM D4318.

The aggregate shall have sand equivalent values of **45** or greater when tested in accordance with ASTM D2419.

Fine aggregate to be used in the work shall be washed prior to incorporation into the mix.

c. Sampling. ASTM D75 shall be used in sampling coarse and fine aggregate, and ASTM C183 shall be used in sampling mineral filler.

d. Verification testing. The Contractor shall provide representative samples (min 50lbs) of the aggregates and mineral filler if applicable, to be used in the hot mixed asphalt for verification testing. The samples shall be provided to the Engineer's testing laboratory and prior to submitting the Job Mix Formula. If an aggregate source is changed during the project, the contractor shall submit representabive samples of the new aggregates prior to incorporation into the project. All aggregate samples shall be processed the same way as the aggregate to be used in the work, and all aggregate verification testing costs performed by the Engineer shall be borne by the Contractor.

401-2.2 Mineral filler. If filler, in addition to that naturally present in the aggregate, is necessary, it shall meet the requirements of ASTM D242.

401-2.3 Asphalt cement binder. Asphalt cement binder shall conform to ASTM D6373 Performance Grade (PG) **76-22 polymer modified (PM)**. A certificate of compliance from the manufacturer shall be included with the mix design submittal.

A PG Plus Test shall be provided by the manufacture showing that the asphalt cement binder has been properly modified. This test shall show the asphalt cement binder has a minimum elastic recovery of 70% per ASTM D6084. Use of polyphosphoric acid (PPA) to modify PG asphalt cement binder properties is prohibited for mixtures containing limestone, limestone as an aggregate blend component, or limestone as a constituent in crushed gravel aggregate. This prohibition also applies to the use of PPA as a cross-linking agent for polymer modification.

The supplier's certified test report with test data indicating grade certification for the asphalt binder shall be provided to the Engineer for each load at the time of delivery to the mix plant. A certified test report

with test data indicating grade certification for the asphalt binder shall also be provided to the Engineer for any modification of the asphalt binder after delivery to the mix plant and before use in the HMA.**401-2.4 Preliminary material acceptance.** Prior to delivery of materials to the job site and prior to submittal of the Job Mix Formula, the Contractor shall submit certified test reports to the Engineer for the following materials:

a. Coarse aggregate:

(1) Percent of wear

(2) Soundness

(3) Clay lumps and friable particles

(4) Percent fractured faces

(5) Flat and elongated particles

(6) Cleanliness value (CV)

(7) Lime slurry test for ferrous sulfides amd iron oxides

b. Fine aggregate:

(1) Liquid limit and Plasticity index

(2) Soundness

(3) Clay lumps and friable particles

(4) Percent natural sand

(5) Sand equivalent

(6) Lime Slurry test for ferrous sulfides amd iron oxides

c. Mineral filler.

d. Asphalt binder. Test results for asphalt binder shall include temperature/viscosity charts for mixing and compaction temperatures.

The certifications shall show the appropriate ASTM tests for each material, the test results, and a statement that the material meets the specification requirement.

The Engineer may request samples for testing, prior to and during production, to verify the quality of the materials and to ensure conformance with the applicable specifications.

Prior to delivery of materials to the job site the Contractor shall submit to the Engineer a certification of compliance that all aggregates to be used in the work are washed prior to incorporation into the HMA mix.

401-2.5 Anti-stripping agent. Any anti-stripping agent or additive if required shall be heat stable, shall not change the asphalt cement viscosity beyond specifications, shall contain no harmful ingredients, shall be added in recommended proportion by approved method, and shall be a material approved by the California Department of Transportation (Caltrans). If anti-stripping agent is to be used, the Contractor shall provide product and manufacture/supplier information on the intended anti-stripping agent with the JMF submittal.

COMPOSITION

401-3.1 Composition of mixture. The HMA mix shall be composed of a mixture of well-graded aggregate, filler and anti-strip agent if required, and asphalt binder. The several aggregate fractions shall be sized, handled in separate size groups, and combined in such proportions that the resulting mixture meets the grading requirements of the job mix formula (JMF).

401-3.2 Job mix formula (JMF). No hot-mixed asphalt (HMA) for payment shall be produced until a JMF has been approved in writing by the Engineer. The asphalt mix-design and JMF shall be prepared by an accredited laboratory that meets the requirements of paragraph 401-3.4. The HMA shall be designed using procedures contained in the Asphalt Institute MS-2 Mix Design Manual, 7th Edition. Samples shall be prepared at various asphalt contents and compacted using the gyratory compactor in accordance with ASTM D6925.

Tensile strength ratio (TSR) of the composite mixture, as determined by ASTM D4867, shall not be less than 75 when tested at a saturation of 70-80% or an anti-stripping agent shall be added to the HMA, as necessary, to produce a TSR of not less than 75 when tested at a saturation of 70-80%. If an anti-strip agent is required, it shall be provided by the Contractor at no additional cost to the Owner.

The JMF shall be submitted in writing by the Contractor at least 20 days prior to the start of paving operations. The JMF shall be developed within three (3) months of the submittal date using aggregates currently being produced.

The submitted JMF shall be stamped and sealed by the responsible and currently registered California Professional Engineer from the laboratory developing the JMF, and shall include the following items as a minimum:

a. Percent passing each sieve size for total combined gradation, individual gradation of all aggregate stockpiles and percent by weight of each stockpile used in the job mix formula.

b. Percent of asphalt cement.

c. Asphalt performance grade and type of modifier if used.

d. Number of gyrations.

e. Laboratory mixing temperature.

f. Laboratory compaction temperature.

g. Temperature-viscosity relationship of the PG asphalt cement binder showing acceptable range of mixing and compaction temperatures; and for modified binders include supplier recommended mixing and compaction temperatures.

h. Plot of the combined gradation on a 0.45 power gradation curve.

i. Graphical plots of air voids, voids in the mineral aggregate, and unit weight versus asphalt content.

j. Specific Gravity and absorption of each aggregate.

k. Percent natural sand.

l. Percent fractured faces.

m. Percent by weight of flat particles**,** elongated particles, and flat and elongated particles (and criteria).

n. Tensile Strength Ratio (TSR).

o. Anti-strip agent (if required).

p. Date the JMF was developed. Mix designs that are not dated or which are from a prior construction season shall not be accepted.

q. Cleanliness Value (CV) of aggregate.

r. Asphalt film thickness.

s. The extraction oven calibration testing certification for the mix design, used for determining the asphalt content per paragraph 401-6.3a.

t. Dust to asphalt ratio (using effective asphalt content).

u. Calibration verification for the gyratory compactor used in developing the mix design. The calibration shall: i) have been performed no more than three (3) months prior to the JMF submittal date; and ii) shall be performed if the gyratory compactor has been transported to a new location for developing the JMF.

v. The firm's name and contact information for the independent testing organization performing the calibration of the contractor provided laboratory equipment per paragraph 401-5.1 below.

The Contractor shall submit to the Engineer the results of verification testing of three (3) asphalt samples prepared at the optimum asphalt content. The average of the results of this testing shall indicate conformance with the JMF requirements specified in Tables 1 and 3.

When the project requires asphalt mixtures of differing aggregate gradations, a separate JMF and the results of JMF verification testing shall be submitted for each mix.

The JMF for each mixture shall be in effect until a modification is approved in writing by the Engineer. Should a change in sources of materials be made, a new JMF must be submitted within 15 days and approved by the Engineer in writing before the new material is used. After the initial production JMF has been approved by the Engineer and a new or modified JMF is required for whatever reason, the subsequent cost of the Engineer's approval of the new or modified JMF, including a new test strip when required by the engineer, will be borne by the Contractor. There will be no time extension given or considerations for extra costs associated with the stoppage of production paving or restart of production paving due to the time needed for the Engineer to approve the initial, new or modified JMF.

The Gyratory Design Criteria applicable to the project shall meet the criteria specified in Table 1.

Table 1. Gyratory Compaction Criteria

Test Property	Value
Number of compactor gyrations	75
Air voids (%)	3.5
Film thickness, minimum	8 microns
Voids filled with asphalt	65-78
Dust to effective asphalt content ratio	0.6 – 1.2
Percent voids in mineral aggregate, minimum	See Table 2

Table 2. Minimum Percent Voids In Mineral Aggregate (VMA)

Aggregate (See Table 3)	Minimum VMA
Gradation 2	15.0%

The mineral aggregate shall be of such size that the percentage composition by weight, as determined by laboratory sieves, will conform to the gradation or gradations specified in Table 3 when tested in accordance with ASTM C136 and ASTM C117.

The gradations in Table 3 represent the limits that shall determine the suitability of aggregate for use from the sources of supply; be well graded from coarse to fine and shall not vary from the low limit on one sieve to the high limit on the adjacent sieve, or vice versa.

Table 3. Aggregate - HMA Pavements

Sieve Size	Percentage by Weight Passing Sieve
	Gradation 2
1 inch (25 mm)	--
3/4 inch (19 mm)	100
1/2 inch (12 mm)	79-99
3/8 inch (9 mm)	68-88
No. 4 (4.75 mm)	48-68
No. 8 (2.36 mm)	33-53
No. 16 (1.18 mm)	20-40
No. 30 (0.60 mm)	14-30
No. 50 (0.30 mm)	9-21
No. 100 (0.15 mm)	6-16
No. 200 (0.075 mm)	3-6
Asphalt Percent:	
Asphalt Percent:	5.0-7.5

The aggregate gradations shown are based on aggregates of uniform specific gravity. The percentages passing the various sieves shall be corrected when aggregates of varying specific gravities are used, as indicated in the Asphalt Institute MS-2 Mix Design Manual, 7th Edition.

401-3.3 Reclaimed asphalt pavement (RAP). RAP shall not be used.

401-3.4 Job mix formula (JMF) laboratory. The Contractor's laboratory used to develop the JMF shall be accredited in accordance with ASTM D3666. The laboratory accreditation must be current and listed on the accrediting authority's website. All test methods required for developing the JMF must be listed on the lab accreditation. A copy of the laboratory's current accreditation and accredited test methods shall be submitted to the Engineer prior to start of the JMF submittal.

401-3.5 Test section. A test section is not requried.

Table 4. Surface Temperature Limitations of Underlying Course

Mat Thickness	Base Temperature (Minimum)	
	°F	**°C**
3 inches (7.5 cm) or greater	40	4
Greater than 2 inches (50 mm) but less than 3 inches (7.5 cm)	45	7

401-4.2 HMA plant. Plants used for the preparation of HMA shall conform to the requirements of American Association of State Highway and Transportation Officials (AASHTO) M156 with the following changes:

Requirements for all plants include:

a. Truck scales. The HMA shall be weighed on approved scales furnished by the Contractor, or on certified public scales at the Contractor's expense. Scales shall be inspected and sealed as often as the Engineer deems necessary to assure their accuracy. Scales shall conform to the requirements of the General Provisions, subsection 90-01.

In lieu of scales, and as approved by the Engineer, HMA weight may be determined by the use of an electronic weighing system equipped with an automatic printer that weighs the total HMA production and as often thereafter as requested by the Engineer.

b. Testing facilities. The Contractor shall ensure laboratory facilities are provided at the plant for the use of the Engineer. The lab shall have sufficient space and equipment so that both testing representatives (Engineer's and Contractor's) can operate efficiently. The lab shall meet the requirements of ASTM D3666 including all necessary equipment, materials, calibrations, current reference standards to comply with the specifications and a masonry saw with diamond blade for trimming pavement cores and samples.

The plant testing laboratory shall have a floor space area of not less than 200 square feet (18.5 sq m), with a ceiling height of not less than 7-1/2 feet (2 m). The laboratory shall be weather tight, sufficiently heated in cold weather, air-conditioned in hot weather to maintain temperatures for testing purposes of 70°F ±5°F (21°C ±2.3°C). The plant testing laboratory shall be located on the plant site to provide an unobstructed view, from one of its windows, of the trucks being loaded with the plant mix materials. In addition, the facility shall include the minimum:

(1) Adequate artificial lighting.

(2) Electrical outlets sufficient in number and capacity for operating the required testing equipment and drying samples.

(3) A minimum of two (2) Underwriter's Laboratories approved fire extinguishers of the appropriate types and class.

(4) Work benches for testing.

(5) Desk with chairs and file cabinet.

(6) Sanitary facilities convenient to testing laboratory.

(7) Exhaust fan to outside air.

(8) Sink with running water.

Failure to provide the specified facilities shall be sufficient cause for disapproving HMA plant operations.

Laboratory facilities shall be kept clean, and all equipment shall be maintained in proper working condition. The Engineer shall be permitted unrestricted access to inspect the Contractor's laboratory facility and witness quality control activities. The Engineer will advise the Contractor in writing of any noted deficiencies concerning the laboratory facility, equipment, supplies, or quality control testing personnel and procedures. When the deficiencies are serious enough to be adversely affecting the test results, the incorporation of the materials into the work shall be suspended immediately and will not be permitted to resume until the deficiencies are satisfactorily corrected. No addition compensation will be made nor additional contract time allowed for the suspension of paving operations due to deficiencies concerning the laboratory facility, equipment, supplies, or testing personnel and procedures.

c. Inspection of plant. The Engineer, or Engineer's authorized representative, shall have access, at all times, to all areas of the plant for checking adequacy of equipment; inspecting operation of the plant: verifying weights, proportions, and material properties; and checking the temperatures maintained in the preparation of the mixtures.

d. Storage bins and surge bins. The HMA stored in storage and surge bins shall meet the same requirements as HMA loaded directly into trucks and may be permitted under the following conditions:

(1) Stored in non-insulated bins for a period of time not to exceed three (3) hours.

(2) Stored in insulated bins for a period of time not to exceed eight (8) hours.

If the Engineer determines that there is an excessive amount of heat loss, segregation, or oxidation of the HMA due to temporary storage, no temporary storage will be allowed.

401-4.3 Hauling equipment. Trucks used for hauling HMA shall have tight, clean, and smooth metal beds. To prevent the HMA from sticking to the truck beds, the truck beds shall be lightly coated with a minimum amount of paraffin oil, lime solution, or other material approved by the Engineer. Petroleum products shall not be used for coating truck beds. Each truck shall have a suitable cover to protect the mixture from adverse weather. When necessary, to ensure that the mixture will be delivered to the site at the specified temperature, truck beds shall be insulated or heated and covers shall be securely fastened.

401-4.3.1 Material transfer vehicle (MTV). Material transfer vehicles are not required.

401-4.4 HMA pavers. HMA pavers shall be self-propelled with an activated heated screed, capable of spreading and finishing courses of HMA that will meet the specified thickness, smoothness, and grade. The paver shall have sufficient power to propel itself and the hauling equipment without adversely affecting the finished surface.

The paver shall have a receiving hopper of sufficient capacity to permit a uniform spreading operation. The hopper shall be equipped with a distribution system to place the HMA uniformly in front of the screed without segregation. The screed shall effectively produce a finished surface of the required evenness and texture without tearing, shoving, or gouging the mixture.

If, during construction, it is found that the spreading and finishing equipment in use leaves tracks or indented areas, or produces other blemishes in the pavement that are not satisfactorily corrected by the scheduled operations, the use of such equipment shall be discontinued and satisfactory equipment shall be provided by the Contractor.

401-4.4.1 Automatic grade controls. The HMA paver shall be equipped with a control system capable of automatically maintaining the specified screed elevation. The control system shall be automatically actuated from either a reference line and/or through a system of mechanical sensors or sensor-directed mechanisms or devices that will maintain the paver screed at a predetermined transverse slope and at the proper elevation to obtain the required surface. The transverse slope controller shall be capable of maintaining the screed at the desired slope within ±0.1%.

The controls shall be capable of working in conjunction with any of the following attachments:

a. Ski-type device of not less than 30 feet (9 m) in length.

b. Taut string-line (wire) set to grade.

c. Short ski or shoe.

d. Laser control.

401-4.5 Rollers. Rollers of the vibratory, steel wheel, and pneumatic-tired type shall be used. They shall be in good condition, capable of operating at slow speeds to avoid displacement of the HMA. The number, type, and weight of rollers shall be sufficient to compact the HMA to the required density while it is still in a workable condition.

All rollers shall be specifically designed and suitable for compacting HMA concrete and shall be properly used. Rollers that impair the stability of any layer of a pavement structure or underlying soils shall not be used. Depressions in pavement surfaces caused by rollers shall be repaired by the Contractor at their own expense.

The use of equipment that causes crushing of the aggregate will not be permitted.

401-4.6. Density device. The Contractor shall have on site a density gauge during all paving operations in order to assist in the determination of the optimum rolling pattern, type of roller and frequencies, as well as to monitor the effect of the rolling operations during production paving. The Contractor shall also supply a qualified technician during all paving operations to calibrate the gauge and obtain accurate density readings for all new HMA. These densities shall be supplied to the Engineer upon request at any time during construction and shall be recorded in technician's field notes.The technician field notes shall also record the following information: the rolling pattern employed, all types of rollers used along with the speed of rolling, and the frequency and amplitude employed on the vibratory steel wheel rollers. The Engineer shall be provided a copy of these fields notes at the end of every paving shift. No separate payment will be made for supplying the density gauge, field notes, and technician.

401-4.7 Preparation of asphalt binder. The asphalt binder shall be heated in a manner that will avoid local overheating and provide a continuous supply of the asphalt binder to the mixer at a uniform temperature. The temperature of unmodified asphalt binder delivered to the mixer shall be sufficient to provide a suitable viscosity for adequate coating of the aggregate particles, but shall not exceed 325°F (160°C) when added to the aggregate. The temperature of modified asphalt binder shall be in accordance with the supplier's suggested mixing temperature range but no more than 350°F (175°C) when added to the aggregate.

401-4.8 Preparation of mineral aggregate. The aggregate for the HMA shall be heated and dried. The maximum temperature and rate of heating shall be such that no damage occurs to the aggregates. The temperature of the aggregate and mineral filler shall not exceed 350°F (175°C) when the asphalt binder is added. Particular care shall be taken that aggregates high in calcium or magnesium content are not damaged by overheating. The temperature shall not be lower than is required to obtain complete coating and uniform distribution on the aggregate particles and to provide a mixture of satisfactory workability.

401-4.9 Preparation of HMA. The aggregates and the asphalt binder shall be weighed or metered and introduced into the mixer in the amount specified by the JMF. The combined materials shall be mixed until the aggregate obtains a uniform coating of asphalt binder and is thoroughly distributed throughout the mixture. Wet mixing time shall be the shortest time that will produce a satisfactory mixture, but not less than 25 seconds for batch plants. The wet mixing time for all plants shall be established by the Contractor, based on the procedure for determining the percentage of coated particles described in ASTM D2489, for each individual plant and for each type of aggregate used. The wet mixing time will be set to achieve 95% of coated particles. For continuous mix plants, the minimum mixing time shall be

determined by dividing the weight of its contents at operating level by the weight of the mixture delivered per second by the mixer. The moisture content of all HMA upon discharge shall not exceed 0.5%.

401-4.10 Preparation of the underlying surface. Immediately before placing the HMA, the underlying course shall be cleaned of all dust and debris. A tack coat shall be applied in accordance with Item P-603, if shown on the plans.

401-4.11 Laydown plan, transporting, placing, and finishing. Prior to the placement of the HMA, the Contractor shall prepare a laydown plan for approval by the Engineer. This is to minimize the number of cold joints in the pavement. The laydown plan shall include the sequence of paving laydown by stations, width of lanes, temporary ramp locations, and laydown temperature. The laydown plan shall also include estimated time of completion for each portion of the work (that is, milling, paving, rolling, cooling, etc.). Modifications to the laydown plan shall be approved by the Engineer.

The HMA shall be transported from the mixing plant to the site in vehicles conforming to the requirements of paragraph 401-4.3. Deliveries shall be scheduled so that placing and compacting of HMA is uniform with minimum stopping and starting of the paver. Hauling over freshly placed material shall not be permitted until the material has been compacted, as specified, and allowed to cool to atmospheric temperature.

The alignment and elevation of the paver shall be regulated from outside reference lines established for this purpose for the first lift of all runway and taxiway pavements. Successive lifts of HMA surface course may be placed using a ski, or laser control per paragraph 401-4.4.1, provided grades of the first lift of HMA surface course meet the tolerances of paragraphs 401-5.2b(6) as verified by a survey. Contractor shall survey each lift of HMA surface course and certify to Engineer that every lot of each lift meets the grade tolerances of paragraph 401-5.2b(6) before the next lift can be placed.

The initial placement and compaction of the HMA shall occur at a temperature suitable for obtaining density, surface smoothness, and other specified requirements but not less than 250°F (121°C).

Edges of existing HMA pavement abutting the new work shall be saw cut and carefully removed as shown on the drawings and coated with asphalt tack coat before new material is placed against it.

Upon arrival, the HMA shall be placed to the full width by a HMA paver. It shall be struck off in a uniform layer of such depth that, when the work is completed, it shall have the required thickness and conform to the grade and contour indicated. The speed of the paver shall be regulated to eliminate pulling and tearing of the HMA mat. Unless otherwise permitted, placement of the HMA shall begin along the centerline of a crowned section or on the high side of areas with a one-way slope. The HMA shall be placed in consecutive adjacent strips having a minimum width of **12.5 (3.81)** feet (m) except where edge lanes require less width to complete the area. Additional screed sections shall not be attached to widen paver to meet the minimum lane width requirements specified above unless additional auger sections are added to match. The longitudinal joint in one course shall offset the longitudinal joint in the course immediately below by at least 1 foot (30 cm), in addition the longitudinal joint in a new course shall offset the longitudinal joint in the existing pavement immediately below by at least 1 foot (30 cm) if applicable; however, the joint in the surface top course shall be at the centerline of crowned pavements. Transverse joints in one course shall be offset by at least 10 feet (3 m) from transverse joints in the previous course.

Transverse joints in adjacent lanes shall be offset a minimum of 10 feet (3 m).

On areas where irregularities or unavoidable obstacles make the use of mechanical spreading and finishing equipment impractical, the HMA may be spread and luted by hand tools.

Areas of segregation in the surface course, as determined by the Engineer, shall be removed and replaced at the Contractor's expense. The area shall be removed by saw cutting and milling a minimum of 2 inches

(50 mm) deep. The area to be removed and replaced shall be a minimum width of the paver and a minimum of 10 feet (3 m) long.

401-4.12 Compaction of HMA. After placing, the HMA shall be thoroughly and uniformly compacted by power rollers. The surface shall be compacted as soon as possible when the HMA has attained sufficient stability so that the rolling does not cause undue displacement, cracking or shoving. The sequence of rolling operations and the type of rollers used shall be at the discretion of the Contractor. The speed of the roller shall, at all times, be sufficiently slow to avoid displacement of the hot mixture and be effective in compaction. Any displacement occurring as a result of reversing the direction of the roller, or from any other cause, shall be corrected at once.

Sufficient rollers shall be furnished to handle the output of the plant. Rolling shall continue until the surface is of uniform texture, true to grade and cross-section, and the required field density is obtained. To prevent adhesion of the HMA to the roller, the wheels shall be equipped with a scraper and kept properly moistened but excessive water will not be permitted.

In areas not accessible to the roller, the mixture shall be thoroughly compacted with approved power driven tampers. Tampers shall weigh not less than 275 pounds (125 kg), have a tamping plate width not less than 15 inches (38 cm), be rated at not less than 4,200 vibrations per minute, and be suitably equipped with a standard tamping plate wetting device.

Any HMA that becomes loose and broken, mixed with dirt, contains check-cracking, or in any way defective shall be removed and replaced with fresh hot mixture and immediately compacted to conform to the surrounding area. This work shall be done at the Contractor's expense. Skin patching shall not be allowed.

401-4.13 Joints. The formation of all joints shall be made in such a manner as to ensure a continuous bond between the courses and obtain the required density. All joints shall have the same texture as other sections of the course and meet the requirements for smoothness and grade.

The roller shall not pass over the unprotected end of the freshly laid HMA except when necessary to form a transverse joint. When necessary to form a transverse joint, it shall be made by means of placing a bulkhead or by tapering the course. The tapered edge shall be cut back to its full depth and width on a straight line to expose a vertical face prior to placing the adjacent lane. In both methods, all contact surfaces shall be coated with an asphalt tack coat before placing any fresh HMA against the joint.

Longitudinal joints which have been left exposed for more than four (4) hours; the paving mat surface temperature has cooled to less than 175°F (80°C**)**; or are irregular, damaged, uncompacted or otherwise defective shall be cut back 3 inches (75 mm) to 6 inches (150 mm) to expose a clean, sound, uniform vertical surface for the full depth of the course. All cutback material shall be removed from the project. Asphalt tack coat or other product approved by the Engineer shall be applied to the clean, dry joint, prior to placing any additional fresh HMA against the joint. Any laitance produced from cutting joints shall be removed by vacuuming and washing. The cost of this work shall be considered incidental to the cost of the HMA.

401-4.14 Saw-cut grooving. If shown on the plans, saw cut grooves shall be provided as specified in Item P-621.

401-4.15 Diamond grinding. When required, diamond grinding shall be accomplished by sawing with saw blades impregnated with industrial diamond abrasive. The saw blades shall be assembled in a cutting head mounted on a machine designed specifically for diamond grinding that will produce the required

texture and smoothness level without damage to the pavement. The saw blades shall be 1/8-inch (3-mm) wide and there shall be a minimum of 55 to 60 blades per 12 inches (300 mm) of cutting head width; the actual number of blades will be determined by the Contractor and depend on the hardness of the aggregate. Each machine shall be capable of cutting a path at least 3 feet (0.9 m) wide. Equipment that causes ravels, aggregate fractures, spalls or disturbance to the pavement will not be permitted. The depth of grinding shall not exceed 1/2 inch (13mm) and all areas in which diamond grinding has been performed will be subject to the final pavement thickness tolerances specified. Grinding will be tapered in all directions to provide smooth transitions to areas not requiring grinding. Areas that have been ground will be sealed with a P-608 surface treatment as directed by the Engineer. It may be necessary to seal a larger area to avoid surface treatment creating any conflict with runway or taxiway markings.

401-4.16 Nighttime paving requirements. Paving during nighttime construction shall require the following:

a. All paving machines, rollers, distribution trucks and other vehicles required by the Contractor for his operations shall be equipped with artificial illumination sufficient to safely complete the work.

b. Minimum illumination level shall be twenty (20) horizontal foot-candles and maintained in the following areas:

(1) An area of 30 feet (9 m) wide by 30 feet (9 m) long immediately behind the paving machines during the operations of the machines.

(2) An area 15 feet (4.5 m) wide by 30 feet (9 m) long immediately in front and back of all rolling equipment, during operation of the equipment.

(3) An area 15 feet (4.5 m) wide by 15 feet (4.5 m) long at any point where an area is being tack coated prior to the placement of pavement.

c. As partial fulfillment of the above requirements, the Contractor shall furnish and use, complete artificial lighting units with a minimum capacity of 3,000 watt electric beam lights, affixed to all equipment in such a way to direct illumination on the area under construction.

d. A lighting plan must be submitted by the Contractor and approved by the Engineer prior to the start of any nighttime work.

If the Contractor places any out of specification mix in the project work area, the Contractor shall be required to remove it at its own expense, to the satisfaction of the Engineer. If the Contractor has to continue placing non-payment HMA, as directed by the Engineer, to make the surfaces safe for aircraft operations, the Contractor shall do so to the satisfaction of the Engineer. It is the Contractor's responsibility to leave the facilities to be paved in a safe condition ready for aircraft operations. No consideration for extended closure time of the area being paved will be given. As a first order of work for the next paving shift, the Contractor shall remove all out of specification material and replace with approved material to the satisfaction of the Engineer. When the above situations occur, there will be no consideration given for additional construction time or payment for extra costs.

MATERIAL ACCEPTANCE

401-5.1 Acceptance sampling and testing. Unless otherwise specified, all acceptance sampling and testing necessary to determine conformance with the requirements specified in this section will be performed by the Engineer at no cost to the Contractor except that coring as required in this section shall be completed and paid for by the Contractor.

Testing organizations performing these tests shall be accredited in accordance with ASTM D3666. The laboratory accreditation must be current and listed on the accrediting authority's website. All test

methods required for acceptance sampling and testing must be listed on the lab accreditation. A copy of the laboratory's current accreditation and accredited test methods shall be submitted to the Engineer prior to start of construction. All equipment in Contractor furnished laboratories shall be calibrated by an independent testing organization prior to the start of paving operations at the Contractor's expense. The Contractor shall, at no addition cost and to the satisfaction of the Engineer, provide the Engineer with the following: 1) evidence of the Contractor furnished laboratories equipment calibration to include but not be limited to a copy of all calibration certifications for the subject equipment; 2) calibration verification for the gyratory compactor to be used for quality assurance testing, the gyratory compactor calibration shall have been performed no more than three (3) months prior to the start of paving operations and shall be performed if the gyratory compactor has been transported or moved to a new location; and 3) written confirmation in the form of a letter signed and sealed by a California registered Professional Engineer from the independent testing organization stating that all equipment has been calibrated in accordance with the appropriate standards and identifying said standards. The organization performing the independent testing of the Contractor's laboratory equipment shall be acceptable to the Engineer and the Engineer's decision shall be final. If the Contractor fails to provide an independent testing organization acceptable to the Engineer, the Engineer shall employ the services of an appropriated qualified organization and all costs for said services shall be borne by the Contractor.

a. Hot mixed asphalt. Plant-produced HMA shall be tested for air voids on a lot basis. Sampling shall be from material deposited into trucks at the plant or from trucks at the job site. Samples shall be taken in accordance with ASTM D979.

A standard lot shall be equal to one day's production or 2000 tons (1814 metric tons) whichever is smaller. If the day's production is expected to exceed 2000 tons (1814 metric tons), but less than 4000 tons (3628 metric tons), the lot size shall be 1/2 day's production. If the day's production exceeds 4000 tons (3628 metric tons), the lot size shall be an equal sized fraction of the day's production, but shall not exceed 2000 tons (1814 metric tons).

Where more than one plant is simultaneously producing HMA for the job, the lot sizes shall apply separately for each plant.

(1) Sampling. Each lot will consist of four equal sublots. Sufficient HMA for preparation of test specimens for all testing will be sampled by the Engineer on a random basis, in accordance with the procedures contained in ASTM D3665. Samples will be taken in accordance with ASTM D979.

The sample of HMA may be put in a covered metal tin and placed in an oven for not less than 30 minutes nor more than 60 minutes to stabilize to compaction temperature. The compaction temperature of the specimens shall be as specified in the JMF.

(2) Testing. Air voids will be determined by the Engineer in accordance with ASTM D3203. One set of laboratory compacted specimens will be prepared for each sublot in accordance with ASTM D6925 at the number of gyrations required by paragraph 401-3.2, Table 1. Each set of laboratory compacted specimens will consist of three test specimens prepared from the same sample**.**

Prior to testing, the bulk specific gravity of each test specimen shall be measured by the Engineer in accordance with ASTM D2726 using the procedure for laboratory-prepared thoroughly dry specimens for use in computing air voids and pavement density.

For air voids determination, the theoretical maximum specific gravity of the mixture shall be measured one time for each sublot in accordance with ASTM D2041. The value used in the air voids computation for each sublot shall be based on theoretical maximum specific gravity measurement for the sublot.

(3) Acceptance. Acceptance of plant produced HMA for air voids shall be determined by the Engineer in accordance with the requirements of paragraph 401-5.2b.

b. In-place HMA. HMA placed in the field shall be tested for mat and joint density on a lot basis. A standard lot shall be equal to one day's production or 2000 tons (1814 metric tons) whichever is smaller. If the day's production is expected to exceed 2000 tons (1814 metric tons), but less than 4000 tons (3628 metric tons), the lot size shall be 1/2 day's production. If the day's production exceeds 4000 tons (3628 metric tons), the lot size shall be an equal sized fraction of the day's production, but shall not exceed 2000 tons (1814 metric tons).

(1) Mat density. The lot size shall be the same as that indicated in paragraph 401-5.1a and shall be divided into four equal sublots. One core of finished, compacted HMA shall be taken by the Contractor from each sublot. Core locations will be determined by the Engineer on a random basis in accordance with procedures contained in ASTM D3665. Cores for mat density shall not be taken closer than one foot (30 cm) from a transverse or longitudinal joint.

(2) Joint density. The lot size shall be the total length of longitudinal joints constructed by a lot of HMA as defined in paragraph 401-5.1a. The lot shall be divided into four equal sublots. One core of finished, compacted HMA shall be taken by the Contractor from each sublot. Core locations will be determined by the Engineer on a random basis in accordance with procedures contained in ASTM D3665. All cores for joint density shall be taken centered on the joint. The minimum core diameter for joint density determination shall be 5 inches (125 mm).

(3) Sampling. Samples shall be neatly cut with a diamond core drill bit. Samples will be taken in accordance with ASTM D979. The minimum diameter of the sample shall be 5 inches (125 mm). Samples that are clearly defective, as a result of sampling, shall be discarded and another sample taken. The Contractor shall furnish all tools, labor, and materials for cutting samples, cleaning, and filling the cored pavement. Cored pavement shall be cleaned and core holes shall be filled in a manner acceptable to the Engineer and within one day after sampling. Laitance produced by the coring operation shall be removed immediately.

The top most lift of HMA shall be completely bonded to the underlying layer. If any of the cores reveal that the surface is not bonded to the layer immediately below the surface then additional cores shall be taken as directed by the Engineer in accordance with paragraph 401-5.1b to determine the extent of any delamination. All delaminated areas shall be completely removed by milling to the limits and depth and replaced as directed by the Engineer at no additional cost.

(4) Testing. The bulk specific gravity of each cored sample will be measured by the Engineer in accordance with ASTM D2726. Samples will be taken in accordance with ASTM D979. The percent compaction (density) of each sample will be determined by dividing the bulk specific gravity of each sublot sample by the average bulk specific gravity of all laboratory prepared specimens for the lot, as determined in paragraph 401-5.1a(2). The bulk specific gravity used to determine the joint density at joints formed between different lots shall be the lowest of the bulk specific gravity values from the two different lots.

(5) Acceptance. Acceptance of field placed HMA for mat density will be determined by the Engineer in accordance with the requirements of paragraph 401-5.2b(1). Acceptance for joint density will be determined by the Engineer in accordance with the requirements of paragraph 401-5.2b(3).

c. Partial lots. When operational conditions cause a lot to be terminated before the specified number of tests have been made for the lot, or when the Contractor and Engineer agree in writing to allow overages or other minor tonnage placements to be considered as partial lots, the following procedure will be used to adjust the lot size and the number of tests for the lot.

The last batch produced where production is halted will be sampled, and its properties shall be considered as representative of the particular sublot from which it was taken. In addition, an agreed to minor placement will be sampled, and its properties shall be considered as representative of the particular

sublot from which it was taken. Where three sublots are produced, they shall constitute a lot. Where one or two sublots are produced, they shall be incorporated into the next lot, and the total number of sublots shall be used in the acceptance plan calculation, that is, n = 5 or n = 6, for example. Partial lots at the end of asphalt production on the project shall be included with the previous lot. The lot size for field placed material shall correspond to that of the plant material, except that, in no cases, shall less than three (3) cored samples be obtained, that is, n = 3.

401-5.2 Acceptance criteria.

a. General. Acceptance will be based on the following characteristics of the HMA and completed pavement as well as the implementation of the Contractor Quality Control Program and test results:

(1) Air voids

(2) Mat density

(3) Joint density

(4) Thickness

(5) Smoothness

(6) Grade

Mat density and air voids will be evaluated for acceptance in accordance with paragraph 401-5.2b(1). Joint density will be evaluated for acceptance in accordance with paragraph 401-5.2b(3).

Thickness will be evaluated by the Engineer for compliance in accordance with paragraph 401-5.2b(4). Acceptance for smoothness will be based on the criteria contained in paragraph 401-5.2b(5). Acceptance for grade will be based on the criteria contained in paragraph 401-5.2b(7).

The Engineer may at any time, reject and require the Contractor to dispose of any batch of HMA which is rendered unfit for use due to contamination, segregation, incomplete coating of aggregate, or improper mix temperature. Such rejection may be based on only visual inspection or temperature measurements. In the event of such rejection, the Contractor may take a representative sample of the rejected material in the presence of the Engineer, and if it can be demonstrated in the laboratory, in the presence of the Engineer, that such material was erroneously rejected, payment will be made for the material at the contract unit price.

b. Acceptance criteria.

(1) Mat density and air voids. Acceptance of each lot of plant produced material for mat density and air voids shall be based on the percentage of material within specification limits (PWL). If the PWL of the lot equals or exceeds 90%, the lot shall be acceptable. Acceptance and payment shall be determined in accordance with paragraph 401-8.1.

(3) Joint density. Acceptance of each lot of plant produced HMA for joint density shall be based on the PWL. If the PWL of the lot is equal to or exceeds 90%, the lot shall be considered acceptable. If the PWL is less than 90%, the Contractor shall evaluate the reason and act accordingly. If the PWL is less than 80%, the Contractor shall cease operations and until the reason for poor compaction has been determined. If the PWL is less than 71%, the pay factor for the lot used to complete the joint shall be reduced by five (5) percentage points. This lot pay factor reduction shall be incorporated and evaluated in accordance with paragraph 401-8.1.

(4) Thickness. Thickness of each lift of surface course shall be evaluated by the Engineer for compliance to the requirements shown on the plans. Measurements of thickness shall be made by the

Engineer using the cores extracted for each sublot for density measurement. The maximum allowable deficiency at any point shall not be more than 1/4 inch (6 mm) less than the thickness indicated for the lift. Average thickness of lift, or combined lifts, shall not be less than the indicated thickness. Where the thickness tolerances are not met, the lot or sublot shall be corrected by the Contractor at his expense by removing the deficient area and replacing with new pavement. The Contractor, at his expense, may take additional cores as approved by the Engineer to circumscribe the deficient area.

(5) Smoothness. The final surface shall be free from roller marks. After the final rolling, but not later than 24 hours after placement, the surface of each lot shall be tested in both longitudinal and transverse directions for smoothness to reveal all surface irregularities exceeding the tolerances specified. The Contractor shall furnish paving equipment and employ methods that produce a surface for each pavement lot having an average profile index meeting the requirements of paragraph 401-8.1d when evaluated with a profilograph; and the finished surface course of the pavement shall not vary more than 1/4 inch (6mm) when evaluated with a 12-foot (3.7m) straightedge. The contractor shall provide a 12-foot (3.7m) straightedge for the sole use of the Engineer and for the duration of the project. When the surface course smoothness exceeds specification tolerances which cannot be corrected by diamond grinding of the surface course, full depth removal and replacement of surface course corrections shall be to the limit of the longitudinal placement. Corrections involving diamond grinding will be subject to the final pavement thickness tolerances specified. The Contractor shall apply a surface treatment per Item P-608 or P-609 to all areas that have been subject to grinding as directed by the Engineer.

(a) Transverse measurements. Transverse measurements will be taken for each lot placed. Transverse measurements will be taken perpendicular to the pavement centerline each 50 feet (15m) or more often as determined by the Engineer.

(i) Testing shall be continuous across all joints, starting with one-half the length of the straightedge at the edge of pavement section being tested and then moved ahead one-half the length of the straightedge for each successive measurement. Smoothness readings will not be made across grade changes or cross slope transitions; at these transition areas, the straightedge position shall be adjusted to measure surface smoothness and not design grade or cross slope transitions. The amount of surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between these two high points. High spots on final surface course > 1/4 inch (6mm) in transverse direction shall be corrected with diamond grinding per paragraph 401-4.15 or by removing and replacing full depth of surface course. Grinding will be tapered in all directions to provide smooth transitions to areas not requiring grinding. The area corrected by grinding should not exceed 10% of the total area and these areas shall be retested after grinding.

(ii) The joint between lots shall be tested separately to facilitate smoothness between lots. The amount of surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface, with half the straightedge on one side of the joint and the other half of the straightedge on the other side of the joint. Measure the maximum gap between the straightedge and the pavement surface in the area between these two high points. One measurement shall be taken at the joint every 50 feet (15m) or more often if directed by the Engineer. Deviations on final surface course > 1/4 inch (6mm) in transverse direction shall be corrected with diamond grinding per paragraph 401-4.15 or by removing and replacing full depth of surface course. Each measurement shall be recorded and a copy of the data shall be furnished to the Engineer at the end of each days testing.

(b) Longitudinal measurements. Longitudinal measurements will be taken for each lot placed. Longitudinal tests will be parallel to the centerline of paving; at the center of paving lanes when widths of paving lanes are less than 20 feet (6m); and at the third points of paving lanes when widths of paving lanes are 20 ft (6m) or greater.

(i) Longitudinal Short Sections. Longitudinal Short Sections are when the longitudinal lot length is less than 200 feet (60m) and areas not requiring a profilograph. When approved by the Engineer, the first and last 15 feet (4.5m) of the lot can also be considered as short sections for smoothness. The finished surface shall not vary more than 1/4 inch (6mm) when evaluated with a 12-foot (3.7m) straightedge. Smoothness readings will not be made across grade changes or cross slope transitions; at these transition areas, the straightedge position shall be adjusted to measure surface smoothness and not design grade or cross slope transitions. Testing shall be continuous across all joints, starting with one-half the length of the straightedge at the edge of pavement section being tested and then moved ahead one-half the length of the straightedge for each successive measurement. The amount of surface irregularity shall be determined by placing the freestanding (unleveled) straightedge on the pavement surface and allowing it to rest upon the two highest spots covered by its length, and measuring the maximum gap between the straightedge and the pavement surface in the area between these two high points. Deviations on final surface course > 1/4 inch (6mm) in longitudinal direction will be corrected with diamond grinding per paragraph 401-4.15 or by removing and replacing full depth of surface course. Grinding will be tapered in all directions to provide smooth transitions to areas not requiring grinding. The area corrected by grinding should not exceed 10% of the total area and these areas shall be retested after grinding.

Smoothness testing indicated in the above paragraphs shall be performed within 24 hours of placement of material. The primary purpose of smoothness testing is to identify areas that may be prone to ponding of water which could lead to hydroplaning of aircraft. If the contractor's machines and/or methods are producing significant areas that need corrective actions then production should be stopped until corrective measures can be implemented. If corrective measures are not implemented and when directed by the Engineer, production shall be stopped until corrective measures can be implemented.

(6) Grade. Grade shall be evaluated on the first day of placement and then as a minimum, every **paving shift** to allow adjustments to paving operations if measurements do not meet specification requirements. The Contractor must submit the survey data to the Engineer by the following day after measurements have been taken. The finished surface of the pavement shall not vary from the gradeline elevations and cross-sections shown on the plans by more than 1/2 inch (12 mm). The finished grade of each lot will be determined by running levels at intervals of 50 feet (15 m) or less longitudinally and all breaks in grade transversely (not to exceed 50 feet (15 m)) to determine the elevation of the completed pavement. The Contractor shall pay the cost of surveying of the level runs that shall be performed by a registered California licensed surveyor. The documentation, stamped and signed by a licensed surveyor, shall be provided by the Contractor to the Engineer. The lot size shall be **2,000** square yards (m^2). When more than 15% of all the measurements within a lot are outside the specified tolerance, or if any one shot within the lot deviates 3/4 inch (19 mm) or more from planned grade, the Contractor shall remove the deficient area to the depth of the final course plus 1/2 inch (12 mm) of pavement and replace with new material. Skin patching shall not be permitted. Isolated high points may be ground off provided the course thickness complies with the thickness specified on the plans. The surface of the ground pavement shall have a texture consisting of grooves between 0.090 and 0.130 inches (2 and 3.5 mm) wide. The peaks and ridges shall be approximately 1/32 inch (1 mm) higher than the bottom of the grooves. The pavement shall be left in a clean condition. The removal of all of the slurry resulting from the grinding operation shall be continuous The grinding operation should be controlled so the residue from the operation does not flow across other lanes of pavement. High point grinding will be limited to 15 square yards (12.5 m^2). Areas in excess of 15 square yards (12.5 m^2) will require removal and replacement of the pavement in accordance with the limitations noted above. The Contractor shall apply a surface treatment per P-608 to all areas that have been subject to grinding.

c. Percentage of material within specification limits (PWL). The PWL shall be determined in accordance with procedures specified in Section 110 of the General Provisions. The specification tolerance limits (L) for lower and (U) for upper are contained in Table 5.

Table 5. Gyratory Acceptance Limits For Air Voids, Density

TEST PROPERTY	Specification Tolerance	
	L	U
Air Voids Total Mix (%)	2	5
Mat Density (%)	96.3	101.3
Joint Density (%)	93.3	-

d. Outliers. All individual tests for mat density and air voids shall be checked for outliers (test criterion) in accordance with ASTM E178, at a significance level of 5%. Outliers shall be discarded, and the PWL shall be determined using the remaining test values.The criteria in Table 5 is based on production processes which have a variability with the following standard deviations: Surface Course Mat Density (%), 1.30; Base Course Mat Density (%), 1.55; Joint Density (%), 2.1.

The Contractor should note that (1) 90 PWL is achieved when consistently producing a surface course with an average mat density of at least 98% with 1.30% or less variability, (2) 90 PWL is achieved when consistently producing a base course with an average mat density of at least 97.5% with 1.55% or less variability, and (3) 90 PWL is achieved when consistently producing joints with an average joint density of at least 96% with 2.1% or less variability.

401-5.3 Resampling pavement for mat density.

a. General. Resampling of a lot of pavement will only be allowed for mat density, and then, only if the Contractor requests same, in writing, within 48 hours after receiving the written test results from the Engineer. A retest will consist of all the sampling and testing procedures contained in paragraphs 401-5.1b and 401-5.2b(1). Only one resampling per lot will be permitted.

(1) A redefined PWL shall be calculated for the resampled lot. The number of tests used to calculate the redefined PWL shall include the initial tests made for that lot plus the retests.

(2) The cost for resampling and retesting shall be borne by the Contractor.

b. Payment for resampled lots. The redefined PWL for a resampled lot shall be used to calculate the payment for that lot in accordance with Table 6.

c. Outliers. Check for outliers in accordance with ASTM E178, at a significance level of 5%.

401-5.4 Leveling course. Any course used for trueing and leveling shall meet the aggregate gradation in Table 3, paragraph 401-3.2. The trueing and leveling course shall meet the requirements of paragraph 401-3.2, 401-5.2b(1) for air voids, but shall not be subject to the density requirements of paragraph 401-5.2b(1) for mat density and 401-5.2b(3) for joint density. The leveling course shall be compacted with the same effort used to achieve density of the test section. The trueing and leveling course shall not exceed the maximum lift thickness associated with each gradation in Table 3, paragraph 401-3.2. The leveling course is the first variable thickness lift of an overlay placed prior to subsequent courses.

CONTRACTOR QUALITY CONTROL

401-6.1 General. The Contractor shall develop a Quality Control Program in accordance with Section 100 of the General Provisions. The program shall address all elements that affect the quality of the pavement including, but not limited to:

a. Mix design

b. Aggregate grading

c. Quality of materials

d. Stockpile management

e. Proportioning

f. Mixing and transportation

g. Placing and finishing

h. Joints

i. Compaction

j. Surface smoothness

k. Personnel

l. Laydown plan

m. CV of the aggregate

n. Lift thickness

o. Grade

p. Rolling pattern

q. VMA

The Contractor shall perform quality control sampling, testing, and inspection during all phases of the work and shall perform them at a rate sufficient to ensure that the work conforms to the contract requirements, and at minimum test frequencies required by paragraph 401-6.3 and Section 100 of the General Provisions. As a part of the process for approving the Contractor's plan, the Engineer may require the Contractor's technician to perform testing of samples to demonstrate an acceptable level of performance.

No partial payment will be made for materials that are subject to specific quality control requirements without an approved Quality Control Program.

401-6.2 Contractor testing laboratory. The lab shall meet the requirements of ASTM D3666 including all necessary equipment, materials, and current reference standards to comply with the specifications.

401-6.3 Quality control testing. The Contractor shall perform all quality control tests necessary to control the production and construction processes applicable to these specifications and as set forth in the approved Quality Control Program. The testing program shall include, but not necessarily be limited to, tests for the control of asphalt content, aggregate gradation, temperatures, aggregate moisture, field compaction, and surface smoothness. A Quality Control Testing Plan shall be developed as part of the Quality Control Program.

a. Asphalt content. A minimum of two asphalt content tests shall be performed per lot in accordance with ASTM D6307 or ASTM D2172 if the correction factor in ASTM D6307 is greater than 1.0. The asphalt content for the lot will be determined by averaging the test results.

b. Gradation. Aggregate gradations shall be determined a minimum of twice per lot from mechanical analysis of extracted aggregate in accordance with ASTM D5444, ASTM C136, and ASTM C117.

c. Moisture content of aggregate. The moisture content of aggregate used for production shall be determined a minimum of once per lot in accordance with ASTM C566.

d. Moisture content of HMA. The moisture content shall be determined once per lot in accordance with ASTM D1461.

e. Temperatures. Temperatures shall be checked, at least four times per lot, at necessary locations to determine the temperatures of the dryer, the asphalt binder in the storage tank, the HMA at the plant, and the HMA at the job site.

f. In-place density monitoring. The Contractor shall conduct any necessary testing to ensure that the specified density is being achieved. A nuclear gauge may be used to monitor the pavement density in accordance with ASTM D2950.

g. Additional testing. Any additional testing that the Contractor deems necessary to control the process may be performed at the Contractor's option.

h. Monitoring. The Engineer reserves the right to monitor any or all of the above testing.

401-6.4 Sampling. When directed by the Engineer, the Contractor shall sample and test any material that appears inconsistent with similar material being sampled, unless such material is voluntarily removed and replaced or deficiencies corrected by the Contractor. All sampling shall be in accordance with standard procedures specified.

401-6.5 Control charts. The Contractor shall maintain linear control charts both for individual measurements and range (that is, difference between highest and lowest measurements) for aggregate gradation, asphalt content, and VMA. The VMA for each sublot will be calculated and monitored by the Quality Control laboratory.

Control charts shall be posted in a location satisfactory to the Engineer and shall be kept current. As a minimum, the control charts shall identify the project number, the contract item number, the test number, each test parameter, the Action and Suspension Limits applicable to each test parameter, and the Contractor's test results. The Contractor shall use the control charts as part of a process control system for identifying potential problems and assignable causes before they occur. If the Contractor's projected data during production indicates a problem and the Contractor is not taking satisfactory corrective action, the Engineer may suspend production or acceptance of the material.

a. Individual measurements. Control charts for individual measurements shall be established to maintain process control within tolerance for aggregate gradation, asphalt content, and VMA. The control charts shall use the job mix formula target values as indicators of central tendency for the following test parameters with associated Action and Suspension Limits:

Control Chart Limits For Individual Measurements		
Sieve	**Action Limit**	**Suspension Limit**
3/4 inch (19 mm)	±6%	±9%
1/2 inch (12 mm)	±6%	±9%
3/8 inch (9 mm)	±6%	±9%
No. 4 (4.75 mm)	±6%	±9%
No. 16 (1.18 mm)	±5%	±7.5%
No. 50 (0.30 mm)	±3%	±4.5%
No. 200 (0.075 mm)	±2%	±3%
Asphalt Content	±0.45%	±0.70%
VMA	-1.00%	-1.50%

b. Range. Control charts for range shall be established to control process variability for the test parameters and Suspension Limits listed below. The range shall be computed for each lot as the

difference between the two test results for each control parameter. The Suspension Limits specified below are based on a sample size of n = 2. Should the Contractor elect to perform more than two tests per lot, the Suspension Limits shall be adjusted by multiplying the Suspension Limit by 1.18 for n = 3 and by 1.27 for n = 4.

Control Chart Limits Based On Range (Based On n = 2)	
Sieve	**Suspension Limit**
1/2 inch (12 mm)	11%
3/8 inch (9 mm)	11%
No. 4 (4.75 mm)	11%
No. 16 (1.18 mm)	9%
No. 50 (0.30 mm)	6%
No. 200 (0.075 mm)	3.5%
Asphalt Content	0.8%

c. Corrective Action. The Contractor Quality Control Program shall indicate that appropriate action shall be taken when the process is believed to be out of tolerance. The Plan shall contain sets of rules to gauge when a process is out of control and detail what action will be taken to bring the process into control. As a minimum, a process shall be deemed out of control and production stopped and corrective action taken, if:

(1) One point falls outside the Suspension Limit line for individual measurements or range; or

(2) Two points in a row fall outside the Action Limit line for individual measurements.

401-6.6 Quality control reports. The Contractor shall maintain records and shall submit reports of quality control activities daily, in accordance with the Contractor Quality Control Program described in General Provisions, Section 100.

METHOD OF MEASUREMENT

401-7.1 Measurement. HMA shall be measured by the number of tons (kg) of HMA used in the accepted work. Recorded batch weights or truck scale weights will be used to determine the basis for the tonnage.

BASIS OF PAYMENT

401-8.1 Payment. Payment for a lot of HMA meeting all acceptance criteria as specified in paragraph 401-5.2 shall be made based on results of tests for smoothness, mat density and air voids. Payment for acceptable lots shall be adjusted according to paragraph 401-8.1a for mat density and air voids and 401-8.1c for smoothness, subject to the limitation that:

a. The total project payment for plant mix bituminous concrete pavement shall not exceed **100** percent of the product of the contract unit price and the total number of tons (kg) of HMA used in the accepted work (See Note 1 under Table 6).

b. The price shall be compensation for furnishing all materials, for all preparation, mixing, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

c. Basis of adjusted payment. The pay factor for each individual lot shall be calculated in accordance with Table 6. A pay factor shall be calculated for both mat density and air voids. The lot pay factor shall be the higher of the two values when calculations for both mat density and air voids are 100% or higher. The lot pay factor shall be the product of the two values when only one of the calculations for either mat density or air voids is 100% or higher. The lot pay factor shall be the lower of the two values when calculations for both mat density and air voids are less than 100%. If PWL for joint density is less than 71 percent then the lot pay factor shall be reduced by 5% but be no higher than 95%.

For each lot accepted, the adjusted contract unit price shall be the product of the lot pay factor for the lot and the contract unit price. Payment shall be subject to the total project payment limitation specified in paragraph 401-8.1. Payment in excess of 100% for accepted lots of HMA shall be used to offset payment for accepted lots of bituminous concrete pavement that achieve a lot pay factor less than 100%.

Table 6. Price adjustment schedule[1]

Percentage of material within specification limits (PWL)	Lot pay factor (percent of contract unit price)
93 – 100	103
90 – 93	PWL + 10
70 – 89	0.125 PWL + 88.75
40 – 69	0.75 PWL + 45
Below 40	Reject [2]

[1] Although it is theoretically possible to achieve a pay factor of 103% for each lot, actual payment above 100% shall be subject to the total project payment limitation specified in paragraph 401-8.1.

[2] The lot shall be removed and replaced. However, the Engineer may decide to allow the rejected lot to remain. In that case, if the Engineer and Contractor agree in writing that the lot shall not be removed, it shall be paid for at 50% of the contract unit price and the total project payment shall be reduced by the amount withheld for the rejected lot.

HMA placed above the specified grade shall not be included in the quantities for payment.

401-8.1.1. Payment. Payment will be made under:

Item P-401-8.1.1 Bituminous Surface Course - per ton (kg)

TESTING REQUIREMENTS

ASTM C29 Standard Test Method for Bulk Density (“Unit Weight”) and Voids in Aggregate

ASTM C88 Standard Test Method for Soundness of Aggregates by Use of Sodium Sulfate or Magnesium Sulfate

ASTM C117 Standard Test Method for Materials Finer than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing

ASTM C127 Standard Test Method for Density, Relative Density (Specific Gravity) and Absorption of Coarse Aggregate

ASTM C131	Standard Test Method for Resistance to Degradation of Small-Size Coarse Aggregate by Abrasion and Impact in the Los Angeles Machine
ASTM C136	Standard Test Method for Sieve or Screen Analysis of Fine and Coarse Aggregates
ASTM C183	Standard Practice for Sampling and the Amount of Testing of Hydraulic Cement
ASTM C566	Standard Test Method for Total Evaporable Moisture Content of Aggregate by Drying
ASTM D75	Standard Practice for Sampling Aggregates
ASTM D979	Standard Practice for Sampling Bituminous Paving Mixtures
ASTM D1073	Standard Specification for Fine Aggregate for Bituminous Paving Mixtures
ASTM D2172	Standard Test Method for Quantitative Extraction of Bitumen from Bituminous Paving Mixtures
ASTM D1461	Standard Test Method for Moisture or Volatile Distillates in Bituminous Paving Mixtures
ASTM D2041	Standard Test Method for Theoretical Maximum Specific Gravity and Density of Bituminous Paving Mixtures
ASTM D2419	Standard Test Method for Sand Equivalent Value of Soils and Fine Aggregate
ASTM D2489	Standard Practice for Estimating Degree of Particle Coating of Bituminous-Aggregate Mixtures
ASTM D2726	Standard Test Method for Bulk Specific Gravity and Density of Non-Absorptive Compacted Bituminous Mixtures
ASTM D2950	Standard Test Method for Density of Bituminous Concrete in Place by Nuclear Methods
ASTM D3203	Standard Test Method for Percent Air Voids in Compacted Dense and Open Bituminous Paving Mixtures
ASTM D3665	Standard Practice for Random Sampling of Construction Materials
ASTM D3666	Standard Specification for Minimum Requirements for Agencies Testing and Inspecting Road and Paving Materials
ASTM D4318	Standard Test Methods for Liquid Limit, Plastic Limit, and Plasticity Index of Soils
ASTM D4791	Standard Test Method for Flat Particles, Elongated Particles, or Flat and Elongated Particles in Coarse Aggregate
ASTM D4867	Standard Test Method for Effect of Moisture on Asphalt Concrete Paving Mixtures
ASTM D5444	Standard Test Method for Mechanical Size Analysis of Extracted Aggregate
ASTM D6084	Standard Test Method for Elastic Recovery of Bituminous Materials by Ductilometer
ASTM D6307	Standard Test Method for Asphalt Content of Hot Mix Asphalt by Ignition Method

ASTM D6752	Standard Test Method for Bulk Specific Gravity and Density of Compacted Bituminous Mixtures Using Automatic Vacuum Sealing Method
ASTM D6926	Standard Practice for Preparation of Bituminous Specimens Using Marshall Apparatus
ASTM D6925	Standard Test Method for Preparation and Determination of the Relative Density of Hot Mix Asphalt (HMA) Specimens by Means of the SuperPave Gyratory Compactor.
ASTM E11	Standard Specification for Woven Wire Test Sieve Cloth and Test Sieves
ASTM E178	Standard Practice for Dealing with Outlying Observations
ASTM E1274	Standard Test Method for Measuring Pavement Roughness Using a Profilograph
AASHTO T030	Standard Method of Test for Mechanical Analysis of Extracted Aggregate
AASHTO T110	Standard Method of Test for Moisture or Volatile Distillates in Hot Mix Asphalt (HMA)
AASHTO T275	Standard Method of Test for Bulk Specific Gravity (Gmb) of Compacted Hot Mix Asphalt (HMA) Using Paraffin-Coated Specimens
AASHTO M156	Standard Specification for Requirements for Mixing Plants for Hot-Mixed, Hot-Laid Bituminous Paving Mixtures.
AASHTO T329	Standard Method of Test for Moisture Content of Hot Mix Asphalt (HMA) by Oven Method
Asphalt Institute Handbook MS-26,	Asphalt Binder
Asphalt Institute MS-2	Mix Design Manual, 7th Edition

MATERIAL REQUIREMENTS

ASTM D242	Standard Specification for Mineral Filler for Bituminous Paving Mixtures
ASTM D946	Standard Specification for Penetration-Graded Asphalt Cement for Use in Pavement Construction
ASTM D3381	Standard Specification for Viscosity-Graded Asphalt Cement for Use in Pavement Construction
ASTM D4552	Standard Practice for Classifying Hot-Mix Recycling Agents
ASTM D6373	Standard Specification for Performance Graded Asphalt Binder

END OF ITEM P-401

New Item P-411 Hot Poured Crack Sealing

DESCRIPTION

411-1.1 DESCRIPTION. This item shall consist of cleaning, preparing and sealing random cracks in existing asphalt pavement, as specified herein, and as directed by the Engineer.

MATERIALS

411-2.1 CRACK SEALANT. Crack sealant shall be a hot-poured low-modulus rubberized asphalt similar and equal to W.R. Meadows XLM – "Sealtight CR90"; or Brewer Cite – "Brewer Flex Poly X"; Owens Corning – "Trugard Crack Sealant"; or Sealmaster – "Crack Master 3405".
Sealant shall be sampled and tested in accordance with the appropriate AASHTO specification at the expense of the supplier, and certified test results shall be provided for each lot or batch from which sealant is supplied.

Sealant packaged in containers shall be labeled in accordance with AASHTO M 301-85 Section 5. Bulk shipments of sealant shall be accompanied by documents providing the name of the manufacturer, trade name of the sealant, batch or lot number, pouring temperature, and safe heating temperature. Mixing of more than one lot or batch within a bulk shipment of sealant will not be permitted.

411-2.2 COLD PATCH. Cold patch shall not be used on this project.

CONSTRUCTION METHODS

411-3.1 GENERAL. Joint and crack sealing shall be accomplished by first cleaning the joints and cracks followed by the installation of the specified sealant material. The sealant shall be brought level with the surface of the crack.

411-3.2 WEATHER LIMITATIONS. Crack sealant shall not be placed during wet or inclement weather, or on wet surfaces.

The atmospheric temperature shall be 40ºF and rising before the crack sealant is placed.

Crack sealant shall only be applied when the wind conditions are such that a satisfactory seal can be achieved.

411-3.3 JOINT AND CRACK PREPARATION. Cracks shall be thoroughly cleaned by hot airblasting, routing or brushing to provide intact bonding surfaces which are free from all dust, moisture or other contaminents.

411-3.4 MATERIAL PREPARATION. The following two temperatures are to be monitored at all times:

- **Recommended application temperature.** The temperature of the material at the nozzle shall be 380º F unless otherwise recommended by the manufacturer.

- **Safe heating temperature.** The maximum temperature that the material can be heated to before experiencing a breakdown in its formulation (400ºF).

Prior to heating the sealant material, the kettle operator shall be advised of its safe heating temperature. Should any material become overheated it shall be discarded.

Carbon buildup shall be cleaned off the melting vat walls before an asphalt kettle can be used. In addition, all temperature gauges on the unit shall be calibrated to display exact temperatures. An ASTM 11F or equivalent

thermometer shall be available for verifying material temperatures in the kettle and measuring material temperatures at the nozzle.

Initial heating of hot-applied materials shall begin early so that the material is ready by the time the normal work operations are to begin. The heating oil temperature shall be kept no more than 50 to 75 deg F. above the safe heating temperature of the material, depending on the material manufacturer's recommendations. The sealant material temperature must remain below the recommended pouring temperature and the agitator shall be started as soon as possible.

411-3.5 MATERIAL APPLICATION. Hot-pour application shall commence once the material has reached the recommended application temperature and the first few cracks have been prepared.

Apply the material with the nozzle in the crack channel, so that the channel is filled from the bottom up and air is not trapped beneath the material. The material shall be applied in a continuous motion, making sure to fill the channel to the proper level. Reapply material to crack segments where material has sunk into the crack or an insufficient amount was furnished in the previous pass. During idle periods, material is to be recirculated through the wand into the melting vat. Repeated re-heating may result in material degradation or gelling in the melter. Should this occur, the sealant must be immediately removed and discarded.

411-3.6 ASPHALT KETTLE CLEANOUT. At the end of each day's work, the applicator system lines on the asphalt kettle must be purged of hot-pour material. In addition, if nonreheatable materials are being used, material left in the melting vat must be removed. In any case, the amount of material in the melting vat will be closely monitored to assure that as little material as possible remains when work is finished for the day.

When using reheatable materials, the applicator lines can be purged of material using either reverse flow or air cleanout procedures. Thorough cleaning can be accomplished using reverse flow procedures followed by solvent flushing procedures.

When using nonreheatable materials, as much material as possible should be placed in the cracks in the pavement. Any leftover material must be discharged into containers for subsequent disposal. Solvent may then be added and circulated through the system to flush it of any excess material.

In any case, kettles and applicator lines shall be cleaned in accordance with the manufacturer's recommendations.

METHOD OF MEASUREMENT

411-4.1 Hot Poured Crack Sealing will be measured by the linear foot.

BASIS OF PAYMENT

411-5.1 The accepted quantity of sealing cracks in asphalt pavement, measured as provided above, will be paid for at the contract unit price per linear foot, The price bid shall be full compensation for furnishing all materials, labor, equipment, tools, and incidentals necessary to complete the hot poured crack sealing in place.

Payment will be made under:

Item P-411-5.1 Hot Poured Crack Sealing -- per linear foot

END OF ITEM P-411

Part 6 – Rigid Pavement

NOT USED

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Part 7 – Miscellaneous

Item P-602 Bituminous Prime Coat

DESCRIPTION

602-1.1 This item shall consist of an application of bituminous material on the prepared base course in accordance with these specifications and in reasonably close conformity to the lines shown on the plans.

MATERIALS

602-2.1 Bituminous material. The bituminous material shall be an emulsified asphalt indicated in ASTM D3628 as a bituminous application for prime coat appropriate to local conditions or as designated by the Engineer.

CONSTRUCTION METHODS

602-3.1 Weather limitations. The prime coat shall be applied only when the existing surface is dry; the atmospheric temperature is 50°F (10°C) or above, and the temperature has not been below 35°F (2°C) for the 12 hours prior to application; and when the weather is not foggy or rainy. The temperature requirements may be waived when directed by the Engineer.

602-3.2 Equipment. The equipment shall include a self-powered pressure bituminous material distributor and equipment for heating bituminous material.

Provide a distributor with pneumatic tires of such size and number that the load produced on the base surface does not exceed 65.0 psi (4.5 kg/sq cm) of tire width to prevent rutting, shoving or otherwise damaging the base, surface or other layers in the pavement structure. Design and equip the distributor to spray the bituminous material in a uniform coverage at the specified temperature, at readily determined and controlled rates from 0.05 to 2.0 gallons per square yard (0.23 to 9.05 L/square meter), with a pressure range of 25 to 75 psi (172.4 to 517.1 kPa) and with an allowable variation from the specified rate of not more than ±5%, and at variable widths. Include with the distributor equipment a separate power unit for the bitumen pump, full-circulation spray bars, tachometer, pressure gauges, volume-measuring devices, adequate heaters for heating of materials to the proper application temperature, a thermometer for reading the temperature of tank contents, and a hand hose attachment suitable for applying bituminous material manually to areas inaccessible to the distributor. Equip the distributor to circulate and agitate the bituminous material during the heating process. If the distributor is not equipped with an operable quick shutoff valve, the prime operations shall be started and stopped on building paper. The Contractor shall remove blotting sand prior to asphalt concrete lay down operations at no additional expense to the Owner.

A power broom and power blower suitable for cleaning the surfaces to which the bituminous coat is to be applied shall be provided.

602-3.3 Application of bituminous material. Immediately before applying the prime coat, the full width of the surface to be primed shall be swept with a power broom to remove all loose dirt and other objectionable material.

The bituminous material shall be uniformly applied with a bituminous distributor at the rate of 0.15 to 0.30 gallons per square yard (0.68 to 1.36 liters per square meter) depending on the base course surface

texture. The type of bituminous material and application rate shall be approved by the Engineer prior to application.

Following application of the bituminous material and prior to application of the succeeding layer of pavement, allow the bituminous coat to cure and to obtain evaporation of any volatiles or moisture. Maintain the coated surface until the succeeding layer of pavement is placed, by protecting the surface against damage and by repairing and recoating deficient areas. Allow the prime coat to cure without being disturbed for a period of at least 48 hours or longer, as may be necessary to attain penetration into the treated course. Furnish and spread enough sand to effectively blot up and cure excess bituminous material. Keep traffic off surfaces freshly treated with bituminous material. Provide sufficient warning signs and barricades so that traffic will not travel over freshly treated surfaces.

602-3.4 Trial applications. Before providing the complete bituminous coat, the Contractor shall apply three lengths of at least 100 feet (30 m) for the full width of the distributor bar to evaluate the amount of bituminous material that can be satisfactorily applied with the equipment. Apply three different trial application rates of bituminous materials within the application range specified in paragraph 602-3.3. Other trial applications will be made using various amounts of material as deemed necessary by the Engineer.

602-3.5 Bituminous material Contractor's responsibility. The Contractor shall provide a statement of source and character of the proposed bituminous material which must be submitted to and approved by the Engineer before any shipment of bituminous materials to the project. The Contractor shall furnish vendor's certified test reports for each carload, or equivalent, of bituminous material shipped to the project. The test reports shall be provided to and approved by the Engineer before the bituminous material is applied. If the bituminous material does not meet the specifications, it shall be replaced at the Contractor's expense. Furnishing the vendor's certified test report for the bituminous material shall not be interpreted as basis for final acceptance.

602-3.6 Freight and weigh bills. The Contractor shall submit waybills and delivery tickets during the progress of the work. Before the final estimate is allowed, file with the Engineer certified waybills and certified delivery tickets for all bituminous materials used in the construction of the pavement covered by the contract. Do not remove bituminous material from storage until the initial outage and temperature measurements have been taken. The delivery or storage units will not be released until the final outage has been taken.

METHOD OF MEASUREMENT

602-4.1 The bituminous material for prime coat shall be measured by the gallon (liter). Volume shall be corrected to the volume at 60°F (16°C) in accordance with ASTM D1250. The bituminous material paid for will be the measured quantities used in the accepted work, provided that the measured quantities are not 10% over the specified application rate. Any amount of bituminous material more than 10% over the specified application rate for each application will be deducted from the measured quantities, except for irregular areas where hand spraying of the bituminous material is necessary. Water added to emulsified asphalt will not be measured for payment.

BASIS OF PAYMENT

602-5.1 Payment shall be made at the contract unit price per gallon (liter) for bituminous prime coat. This price shall be full compensation for furnishing all materials and for all preparation, delivering, and applying the materials, and for all labor, equipment, tools, and incidentals necessary to complete this item.

Payment will be made under:

Item P-602-5.1	Bituminous Prime Coat - per gallon (liter)

TESTING REQUIREMENTS

ASTM D1250	Standard Guide for Use of the Petroleum Measurement Tables

MATERIAL REQUIREMENTS

ASTM D977	Standard Specification for Emulsified Asphalt
ASTM D2028	Standard Specification for Cutback Asphalt (Rapid-Curing Type)
ASTM D2397	Standard Specification for Cationic Emulsified Asphalt
ASTM D3628	Standard Practice for Selection and Use of Emulsified Asphalts

END OF ITEM P-602

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Item P-603 Bituminous Tack Coat

DESCRIPTION

603-1.1 This item shall consist of preparing and treating a bituminous or concrete surface with bituminous material in accordance with these specifications and in reasonably close conformity to the lines shown on the plans.

MATERIALS

603-2.1 Bituminous materials. The bituminous material shall be an emulsified asphalt indicated in ASTM D3628 as a bituminous application for tack coat appropriate to local conditions or as designated by the Engineer.

CONSTRUCTION METHODS

603-3.1 Weather limitations. The tack coat shall be applied only when the existing surface is dry and the atmospheric temperature is 50°F (10°C) or above; the temperature has not been below 35°F (2°C) for the 12 hours prior to application; and when the weather is not foggy or rainy. The temperature requirements may be waived when directed by the Engineer.

603-3.2 Equipment. The Contractor shall provide equipment for heating and applying the bituminous material.

Provide a distributor with pneumatic tires of such size and number that the load produced on the base surface does not exceed 65.0 psi (4.5 kg/sq cm) of tire width to prevent rutting, shoving or otherwise damaging the base, surface or other layers in the pavement structure. Design and equip the distributor to spray the bituminous material in a uniform coverage at the specified temperature, at readily determined and controlled rates from 0.05 to 2.0 gallons per square yard (0.23 to 9.05 L/square meter), with a pressure range of 25 to 75 psi (172.4 to 517.1 kPa) and with an allowable variation from the specified rate of not more than ±5%, and at variable widths. Include with the distributor equipment a separate power unit for the bitumen pump, full-circulation spray bars, tachometer, pressure gauges, volume-measuring devices, adequate heaters for heating of materials to the proper application temperature, a thermometer for reading the temperature of tank contents, and a hand hose attachment suitable for applying bituminous material manually to areas inaccessible to the distributor. Equip the distributor to circulate and agitate the bituminous material during the heating process. If the distributor is not equipped with an operable quick shutoff valve, the tack operations shall be started and stopped on building paper. The Contractor shall remove blotting sand prior to asphalt concrete lay down operations at no additional expense to the Owner.

A power broom and/or power blower suitable for cleaning the surfaces to which the bituminous tack coat is to be applied shall be provided.

603-3.3 Application of bituminous material. Immediately before applying the tack coat, the full width of surface to be treated shall be swept with a power broom and/or power blower to remove all loose dirt and other objectionable material.

Emulsified asphalt shall be diluted by the addition of water when directed by the Engineer and shall be applied a sufficient time in advance of the paver to ensure that all water has evaporated before the overlying mixture is placed on the tacked surface.

The bituminous material including vehicle shall be uniformly applied with a bituminous distributor at the rate of 0.05 to 0.10 gallons per square yard (0.20 to 0.50 liters per square meter) depending on the condition of the existing surface. The type of bituminous material and application rate shall be approved by the Engineer prior to application.

After application of the tack coat, the surface shall be allowed to cure without being disturbed for the period of time necessary to permit drying and setting of the tack coat. This period shall be determined by the Engineer. The Contractor shall protect the tack coat and maintain the surface until the next course has been placed.

603-3.4 Bituminous material Contractor's responsibility. The Contractor shall provide a statement of source and character of the proposed bituminous material which must be submitted and approved by the Engineer before any shipment of bituminous materials to the project.

The Contractor shall furnish the vendor's certified test reports for each carload, or equivalent, of bituminous material shipped to the project. The tests reports shall be provided to and approved by the Engineer before the bituminous material is applied. If the bituminous material does not meet the specifications, it shall be replaced at the Contractor's expense. Furnishing the vendor's certified test report for the bituminous material shall not be interpreted as a basis for final acceptance.

603-3.5 Freight and weigh bills The Contractor shall submit waybills and delivery tickets, during progress of the work. Before the final statement is allowed, file with the Engineer certified waybills and certified delivery tickets for all bituminous materials used in the construction of the pavement covered by the contract. Do not remove bituminous material from storage until the initial outage and temperature measurements have been taken. The delivery or storage units will not be released until the final outage has been taken.

METHOD OF MEASUREMENT

603-4.1 The bituminous material for tack coat shall be measured by the gallon (liter). Volume shall be corrected to the volume at 60°F (16°C) in accordance with ASTM D1250. The bituminous material paid for will be the measured quantities used in the accepted work, provided that the measured quantities are not 10% over the specified application rate. Any amount of bituminous material more than 10% over the specified application rate for each application will be deducted from the measured quantities, except for irregular areas where hand spraying of the bituminous material is necessary. Water added to emulsified asphalt will not be measured for payment.

BASIS OF PAYMENT

603.5-1 Payment shall be made at the contract unit price per gallon (liter) of bituminous material. This price shall be full compensation for furnishing all materials, for all preparation, delivery, and application of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-603-5.1	Bituminous Tack Coat - per gallon (liter)

MATERIAL REQUIREMENTS

ASTM D633	Standard Volume Correction Table for Road Tar
ASTM D977	Standard Specification for Emulsified Asphalt

ASTM D1250	Standard Guide for Use of the Petroleum Measurement Tables
ASTM D2028	Standard Specification for Cutback Asphalt (Rapid-Curing Type)
ASTM D2397	Standard Specification for Cationic Emulsified Asphalt
ASTM D3628	Standard Practice for Selection and Use of Emulsified Asphalts

END ITEM P-603

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Item P-605 Joint Sealants and Joint Adhesives

DESCRIPTION

605-1.1 This item shall consist of providing and installing a resilient and adhesive joint sealing material capable of effectively sealing joints and cracks in rigid pavements.

MATERIALS

605-2.1 Joint sealants. Joint sealant materials shall meet the requirements of consist of a hot applied modified asphalt composition used as an adhesive and tacking material for cold contraction joints in asphalt concrete pavement. Joint adhesive materials shall me the requirements shown in Table 1.

Table 1 – Joint Adhesive Specification Conformance Requirements.

Test	Standard	Specification
Brookfield Viscosity, 400 Degrees F	ASTM D 2669	4,000 to 10,000 cp
Cone Penetration, 77 Degrees F	ASTM D 5329	60 to 100
Flow, 140 Degrees F	ASTM D 5329	5 mm Maximum
Resilience, 77 Degrees F	ASTM D 5329	30% Maximum
Ductility, 77 Degrees F	ASTM D 113	30 cm Minimum
Ductility, 39.2 Degrees F	ASTM D 113	30 cm Maximum
Tensile Adhesion, 77 Degrees F	ASTM D 5329	500% Minimum
Flexibility, 0 Degrees F	Manufacturer Procedure	Pass
Softening Point	ASTM D 36	170 Degrees F Minimum
Asphalt Compatibility	ASTM D 5329	Pass
Recommended Pour Temperature	-	380 Degrees F
Safe Heating Temperature	-	410 Degrees F

The asphalt cold joint adhesive shall be pavement joint adhesive, Part No. 34524, as manufactured by CRAFCO™ Inc., 420 North Roosevelt Avenue, Chandler, Arizona 85226 or an approved equal. Phone number for CRAFCO™, Inc is (800) 528-8242, or www.crafco.com.The pavement joint adhesive material shall be a hot applied modified asphalt composition effectively bonding the paving passes together creating a watertight seal during thermal movement.

Each lot or batch of sealant shall be delivered to the jobsite in the manufacturer's original sealed container. Each container shall be marked with the manufacturer's name, batch or lot number, the safe heating temperature, and shall be accompanied by the manufacturer's certification stating that the sealant meets the requirements of this specification.

CONSTRUCTION METHODS

605-3.1 Time of application. Installation of sealants. Joints shall be inspected for proper width, depth, alignment, and preparation, and shall be approved by the Engineer before sealing is allowed. Sealants shall be installed in accordance with the following requirements:

a. Asphalt cold joint adhesive material shall be applied to the vertical face of all existing asphalt to new asphalt joints prior to placing the new asphalt.
b. Surface Preparation. Prior to the application of the asphalt joint adhesive, the Contractor shall ensure that the face of the longitudinal joint of the first paving lane paved is thoroughly dry and free from any loose material, dust, or any other debris that would inhibit adhesion. When the joint is not clean, the Contractor shall clean the joint face by the use of compressed air. If moisture is present, the Contractor shall use a hot compressed air lance. The Contractor shall ensure the preparation process occurs shortly before the application to prevent the return of debris on the joint face prior to applying the asphalt joint adhesive.
c. Asphalt Joint Adhesive Temperature Control. The Contractor shall ensure the temperature of the asphalt joint adhesive is between 380 degree F and 410 degrees F when applied to the longitudinal joint.
d. Asphalt Joint Adhesive Application. The Contractor shall ensure the pavement temperature is a minimum of 40 Degrees F during the application of the adhesive. Prior to applying the adhesive, the Contractor shall demonstrate competence in applying the adhesive to the satisfaction of the Engineer. The joint adhesive shall be heated in a melter kettle to the specified temperature range. The joint adhesive shall be pumped from the melter kettle, through the wand onto the vertical face of the joint. The adhesive shall be applied in a continuous, 1/8 – inch thick band over the entire face of the longitudinal joint. Application excesses should not exceed an overlap of more than 2 inches at the bottom of the joint, or more than ½ - inch at the top of the joint. Upon completion of the joint adhesive application, the contractor swill place and compact the adjacent lane against the face of the joint coated with the asphalt joint adhesive.

The Contractor shall furnish an original asphalt joint adhesive manufacturer's certification to the Engineer stating the material conforms to all requirements herein prior to use.

605-3.2 Equipment. Machines, tools, and equipment used in the performance of the work required by this section shall be approved before the work is started and maintained in satisfactory condition at all times. Submit a list of proposed equipment to be used in performance of construction work including descriptive data, **10** days prior to use on the project.

The unit applicators used for heating and installing joint sealant materials shall be mobile and shall be equipped with a double-boiler, agitator-type kettle with an oil medium in the outer space for heat transfer; a direct-connected pressure-type extruding device with a nozzle shaped for inserting in the joint to be filled; positive temperature devices for controlling the temperature of the transfer oil and sealant; and a recording type thermometer for indicating the temperature of the sealant. The applicator unit shall be designed so that the sealant will circulate through the delivery hose and return to the inner kettle when not in use.

605-3.6 Clean-up. Upon completion of the project, remove all unused materials from the site and leave the pavement in a clean condition.

METHOD OF MEASUREMENT

605-4.1 Asphalt Cold Joint Adhesive shall be measured by the linear foot (meter) of sealant in place, completed, and accepted.

BASIS OF PAYMENT

605-5.1 Payment for asphalt cold joint adhesive material shall be made at the contract unit price linear foot (meter). The price shall be full compensation for furnishing all materials, for all preparation, delivering, and placing of these materials, and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-605-5.1 Asphalt Cold Joint Adhesive - per linear foot (meter)

TESTING REQUIREMENTS

ASTM D412 Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers – Tension

ASTM D1644 Standard Test Methods for Nonvolatile Content of Varnishes

MATERIAL REQUIREMENTS

AC 150/5340-30 Design and Installation Details for Airport Visual Aids

ASTM D789 Standard Test Method for Determination of Relative Viscosity of Polyamide (PA)

ASTM D5893 Standard Specification for Cold Applied, Single Component, Chemically Curing Silicone Joint Sealant for Portland Cement Concrete Pavements

ASTM D6690 Standard Specification for Joint and Crack Sealants, Hot Applied, for Concrete and Asphalt Pavements

END ITEM P-605

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Item P-608 Emulsified Asphalt Seal Coat

DESCRIPTION [1]

608-1.1 This item shall consist of the application of a emulsified asphalt surface treatment composed of an emulsion of natural and refined asphalt materials, water and, if specified, a polymer additive, for taxiways and runways with the application of a suitable aggregate to maintain adequate surface friction; and airfield secondary and tertiary pavements including low-speed taxiways, shoulders, overruns, roads, parking areas, and other general applications with or without aggregate applied. Emulsified Asphalt Seal Coat products assist in pavement preservation through reducing the rate of pavement oxidation. The emulsified asphalt surface treatment shall be applied in accordance with these specifications, and as shown on the plans or as directed by the Engineer.

[1] The terms seal coat and sealer binder and asphalt material are interchangeable throughout this specification. The term emulsified asphalt means an emulsion of natural and refined asphalt materials.

608-1.2 Quantities of materials per square yard (square meter). The approximate amounts of materials per square yard (square meter) for the asphalt surface treatment shall be as provided in the table for the treatment area(s) at the specified dilution rate(s) as noted **below**. The actual application rates will vary within the range specified to suit field conditions and will be recommended by the manufacturer's representative and approved by the Engineer from the test area/sections evaluation.

Application Rate

Dilution Rate	Quantity of Emulsion gal/yd^2 (l/m^2)	Quantity of Aggregate lb/yd^2 (kg/m^2)
2:1	0.08-0.15 (0.36-0.54)	0.20-0.50 (0.11-0.27)

MATERIALS

608-2.1 Aggregate. The aggregate material shall be a dry, clean, dust and dirt free, sound, durable, angular shaped manufactured specialty sand, such as that used as an abrasive, with a Mohs hardness of 6 to 8. The Contractor shall submit manufacturer's technical data and a manufacturer's certification indicating that the specialty sand meets the requirements of the specification to the Engineer prior to start of construction. The sand must be approved for use by the Engineer and shall meet the following gradation limits when tested in accordance with ASTM C136 and ASTM C117:

Aggregate Material Gradation Requirements

Sieve Designation (square openings)	Percentage by Weight Retained Sieves
No. 8 (2.38 mm)	0
No. 16 (1.19 mm)	0-8
No. 20 (0.84 mm)	0-28
No. 30 (0.60 mm)	20-50
No. 40 (0.42 mm)	10-55
No. 50 (0.30 mm)	0-30
No. 70 (0.21 mm)	0-5
No. 100 (0.15 mm)	0-2
No. 200 (0.07 mm)	0-2

The Contractor shall provide a certification showing particle size analysis and properties of the material delivered for use on the project. The Contractor's certification may be subject to verification by testing the material delivered for use on the project.

608-2.2 Asphalt material. The Contractor shall furnish the vendor's certified test reports for the emulsified asphalt, in its concentrated form, to the Engineer, showing that the material meets the following properties:

Concentrated Asphalt Material Properties

Properties	Specification	Limits
Saybolt Furol Viscosity at 77°F (25°C)	ASTM D244	20 – 100 seconds
Residue by Distillation or Evaporation	ASTM D244	57% minimum
Sieve Test	ASTM D244	0.1% maximum
24-hour Stability	ASTM D244	1% maximum
5-day Settlement Test	ASTM D244	5.0% maximum
Particle Charge [1]	ASTM D244	Positive 6.5 maximum pH

[1] pH may be used in lieu of the particle charge test which is sometimes inconclusive in slow setting, asphalt emulsions.

The asphalt material concentrate must be diluted with heated water prior to application. The asphalt material, when diluted in the volumetric proportion of two parts concentrated asphalt material to one part hot water shall have the following properties:

Two-to-One Dilution Emulsion Properties

Properties	Specification	Limits
In Ready-to-Apply Form, two parts concentrate to one part water, byolume		
Saybolt Furol Viscosity at 77°F (25°C)	ASTM D244	10 – 50 seconds
Residue by Distillation or Evaporation	ASTM D244	38% minimum
Pumping Stability [1]		Pass

[1] Pumping stability is tested by pumping one pint (475 ml) of seal coat diluted one (1) part concentrate to one (1) part water, at 77°F (25°C), through a 1/4-inch (6 mm) gear pump operating 1750 rpm for 10 minutes with no significant separation or coagulation.

The asphalt material base residue shall contain not less than 20% gilsonite, or uintaite and shall not contain any tall oil pitch or coal tar material. The material shall be compatible with asphaltic concrete, and have a 5-year minimum proven performance record at airports with similar climatic conditions. Curing time, under recommended application conditions, shall not exceed eight (8) hours.

Emulsion Residue by Distillation or Evaporation Tests

Properties	Specification	Limits
Viscosity at 275°F (135°C)	ASTM D4402	1750 cts maximum
Solubility in 1, 1, 1 trichloroethylene	ASTM D2042	97.5% minimum
Penetration	ASTM D5	50 dmm minimum
Asphaltenes	ASTM D2007	15% minimum
Saturates	ASTM D2007	15% maximum
Polar Compounds	ASTM D2007	25% minimum
Aromatics	ASTM D2007	15% minimum

The Contractor shall furnish vendor's certified test reports showing that the material is the type, grade and quality specified for each load of asphalt material delivered to the project. The certification shall also show the shipment number, refinery, consignee, destination, contract number and date of shipment. The test reports and certification shall be delivered to the Engineer before permission is granted to use the material. The furnishing of the vendor's certified test report for the asphalt material shall not be interpreted as a basis for final acceptance. The manufacturer's material test report certification may be subject to verification by testing the material delivered for use on the project.

The asphalt material storage and handling temperature shall be between 50°F - 160°F (10°C - 70°C) and the material shall be protected from freezing, or whenever outside temperature drops below 40°F (4°C) for prolonged time periods.

608-2.3 Water. Water used in making the emulsion shall be potable, free from harmful soluble salts and chemicals, and at least 100°F (38°C).

608-2.4 Polymer. The polymer shall be a vinyl acrylic polymer approved for use by the asphalt material manufacturer. The Contractor shall submit manufacturer's technical data, the manufacturer's certification indicating that the polymer meets the requirements of the specification, and the asphalt material manufacturer's approval of its use to the Engineer. The polymer must be approved for use by the Engineer and shall meet the following properties:

Polymer Properties

Properties	Limits
Solids Content	54 to 57%, Percent by Weight
Weight	8.9 to 9.8 pounds/gallon (1.07 to 1.17 kg/L)
pH	4.0 to 6.0
Particle Charge	Nonionic/Anionic
Mechanical Stability	Excellent
Film Forming Temperature, °C	+5°C, minimum
Tg,°C	22°C, maximum

APPLICATION RATE

608-3.1 Material performance for runway and high-speed taxiway projects. The Contractor shall submit to the Engineer friction tests, from previous airport projects which used the seal coat materials in a similar environment, in accordance with AC 150/5320-12, at 40 or 60 mph (65 or 95 km/h) wet, showing, as a minimum; friction value of pavement surface prior to sealant application; two values, tested between 24 and 96 hours after application, with a minimum of 24 hours between tests; and one value tested at no less than 180 days or greater than 360 days after the application. The results of the two tests between 24 and 96 hours shall indicate friction is increasing at a rate to obtain similar friction value of the pavement surface prior to application, and the long term test shall indicate no apparent adverse effect with time relative to friction values and existing pavement surface. The Contractor shall submit to the Engineer a list of airports which meet the above requirements, as well as technical details on application rates, aggregate rates, and point of contact at these airports to confirm use and success of sealer with aggregate. Friction tests shall be submitted from no less than one of the airports on the list and each set of tests described above, must be from one project.

Seal coat material submittal without required friction performance will not be approved. Friction tests performed on this project cannot be used as a substitute of this requirement.

608-3.2 Test areas and test sections. A qualified manufacturer's representative shall be present in the field to assist the Contractor in applying test areas and/or test sections to determine the optimum application rate of both emulsion and sand to be approved by the Engineer.

A test area and/or section shall be applied for each differing HMA pavement surface identified in the project. The test area(s) and/or test section(s) shall be used to determine the material application rate(s) of both emulsion and sand prior to full production. The same equipment and method of operation shall be utilized on the test area(s) and/or test section(s) as will be utilized on the remainder of the work.

a. For taxiway, taxilane and apron surfaces. Prior to full application, the Contractor shall place test areas at varying application rates as specified by the manufacturer's representative and Engineer to

determine appropriate application rate(s). The test areas will be located on representative section(s) of the pavement to receive the asphalt surface treatment designated by the Engineer.

b. For runway and high speed exit taxiway surfaces. Prior to full application, the Contractor shall place a series of test sections a minimum of 300 feet (90 m) long by 12 feet (3.6 m) wide, or width of anticipated application, whichever is greater, at varying application rates as stipulated by the manufacturer's representative and Engineer to determine appropriate application rate(s). The area to be tested will be located on a representative section of the pavement to receive the asphalt surface treatment designated by the Engineer. Before beginning the test section(s), the skid resistance of the existing pavement shall be determined for each test section with a continuous friction measuring equipment (CFME). The skid resistance test after application shall be at approximately the same location as the test done on the existing pavement. The Contractor may begin testing the skid resistance of runway and high speed exit taxiway test sections after application of the asphalt surface treatment has fully cured. Aircraft shall not be permitted on the runway or high speed exit taxiway test sections for a minimum of 24 hours and until such time as the Contractor validates that its surface friction meets AC 150/5320-12. The results of the friction evaluation meet or exceed the Maintenance Planning levels provided in Table 3-2, "Friction Level Classification for Runway Pavement Surfaces," in AC 150/5320-12, Measurement, Construction, and Maintenance of Skid-resistant Airport Pavement Surfaces, when tested at speeds of 40 and 60 mph (65 and 95 km/h) wet with approved CFME.

If the test section should prove to be unsatisfactory, necessary adjustments to the application rate, placement operations, and equipment shall be made. Additional test sections shall be placed and additional skid resistance tests performed and evaluated. Full production shall not begin without the Engineer's approval of an appropriate application rate(s). Acceptable test sections shall be paid for in accordance with paragraph 608-8.1.

CONSTRUCTION METHODS

608-4.1 Worker safety. The seal coat product shall be handled with caution. The Contractor shall obtain a Material Safety Data Sheet (MSDS) for both the asphalt emulsion product and sand and require workmen to follow the manufacturer's recommended safety precautions.

608-4.2 Weather limitations. The asphalt emulsion shall be applied only when the existing pavement surface is dry and when the weather is not foggy, rainy, or when the wind velocity will prevent the uniform application of the material. No material shall be applied when dust or sand is blowing or when rain is anticipated within eight (8) hours of application completion. The atmospheric temperature and the pavement surface temperature shall both be above 60°F (16°C) and rising. During application, account for wind drift. Cover existing buildings, structures, runway edge lights, taxiway edge lights, informational signs, retro-reflective marking and in-pavement duct markers as necessary to protect against overspray before applying the emulsion. Should emulsion get on any light or marker fixture, promptly clean the fixture. If cleaning is not satisfactory to the Engineer, the Contractor shall replace any light, sign or marker with equivalent equipment at no cost to the Owner.

608-4.3 Equipment and tools. The Contractor shall furnish all equipment, tools, and machinery necessary for the performance of the work.

a. Pressure distributor. The emulsion shall be applied with a manufacturer-approved computer rate-controlled asphalt distributor. The equipment shall be in good working order and contain no contaminants or diluents in the tank. Spreader bar tips must be clean, free of burrs, and of a size to maintain an even distribution of the emulsion. Any type of tip or pressure source is suitable that will maintain predetermined flow rates and constant pressure during the application process with application speeds

under eight (8) miles per hour (13 km per hour) or seven (700) feet per minute (213 m per minute). Test the equipment under pressure for leaks and to ensure it is in good working order before use.

The distributor truck shall be equipped with a 12-foot (3.7-m), minimum, spreader bar with individual nozzle control. The distributor truck shall be capable of specific application rates in the range of 0.05 to 0.25 gallons per square yard (0.15 to 0.80 liters per square meter). These rates shall be computer-controlled rather than mechanical. The distributor truck shall have an easily accessible thermometer that constantly monitors the temperature of the emulsion, and have an operable mechanical tank gauge that can be used to cross-check the computer accuracy.

A distributor truck shall be provided, if necessary, equipped to effectively heat and mix the material to the required temperature prior to application. Heating and mixing shall be done in accordance with the manufacturer's recommendations. Care shall be taken not to overheat or over mix the material.

The distributor shall be equipped to hand spray the emulsion in areas identified either on the plans or by the Engineer.

b. Aggregate spreader. The asphalt distributor truck will be equipped with an aggregate spreader mounted to the distributer truck that can apply sand to the emulsion in a single pass operation without driving through wet emulsion. The aggregate spreader shall be equipped with a variable control system capable of uniformly distributing the sand at the specified rate at varying application widths and speeds. The sander shall have a minimum hopper capacity of at least 3,000 pounds (1361 kg) of sand. Push-type hand sanders will be allowed for use around lights, signs and other obstructions.

c. Power broom/blower. A power broom and/or blower shall be provided for removing loose material from the surface to be treated.

d. Equipment calibration. The Contractor shall calibrate the equipment using either of the following procedures:

(1) First procedure. The Contractor shall furnish a State Calibration Certification for the emulsified asphalt distributor, from any state providing that service, or other acceptable agency certification approved by the Engineer, and the calibration date shall have been within six (6) months of the contract award, or up to 12 months if supporting documents substantiate continuous work using the same distributor.

(2) Second procedure. The Contractor shall furnish all equipment, materials and labor necessary to calibrate the emulsified asphalt distributor and the aggregate spreader. Perform all calibrations with the approved job materials and prior to applying the specified coatings to the prepared surface. Perform calibration of the emulsified asphalt distributor in accordance with ASTM D2995. Perform work to calibrate the tank and measuring devices of the distributor. Perform inspection and calibration at the beginning of the work and at least once a day during construction.

608-4.4 Preparation of asphalt pavement surfaces. Clean pavement surface immediately prior to placing the seal coat by sweeping, flushing well with water leaving no standing water, or a combination of both, so that it is free of dust, dirt, grease, vegetation, oil or any type of objectionable surface film. Remove oil or grease that has not penetrated the asphalt pavement by scraping or by scrubbing with a detergent, then wash thoroughly with clean water. After cleaning, treat these areas with the oil spot primer. Any additional surface preparation, such as crack repair, shall be in accordance with paragraph 101-3.6.

a. New asphalt pavement surfaces. Allow new asphalt pavement surfaces to cure so that there is no concentration of oils on the surface. A period of at least 30 days at 70°F (21°C) daytime temperatures shall elapse between the placement of a hot mixed asphalt concrete surface course and the application of the surface treatment.

Perform a water-break-free test to confirm that the surface oils have degraded and dissipated. (Cast approximately one gallon (4 liters) of clean water out over the surface. The water should sheet out and wet the surface uniformly without crawling or showing oil rings.) If signs of crawling or oil rings are apparent on the pavement surface, additional time must be allowed for additional curing and retesting of the pavement surface prior to treatment.

608-4.5 Emulsion mixing. The application emulsion shall be obtained by blending asphalt material concentrate, water and polymer, if specified. Always add heated water to the asphalt material concentrate, never add asphalt material concentrate to heated water. Mix one part heated water to two parts asphalt material concentrate, by volume.

Polymer is required. The amterial supplier shall add 1% polymer, by volume, to the emulsion mix. If the polymer is added to the emulsion mix at the plant, submit weigh scale tickets to the Engineer. As an option, the polymer may be added to the emulsion mix at the job site provided the polymer is added slowly while the circulating pump is running. The mix must be agitated for a minimum of 15 minutes or until the polymer is mixed to the satisfaction of the Engineer.

608-4.6 Application of asphalt emulsion. The asphalt emulsion shall be applied using a pressure distributor upon the properly prepared, clean and dry surface at the application rate recommended by the manufacturer's representative and approved by the Engineer from the test area/sections evaluation for each designated treatment area. The asphalt emulsion should be applied at a temperature between 130°F (54°C) and 160°F (70°C) or in accordance with the manufacturer's recommendation.

Pavement surfaces which have excessive runoff of seal coat due to excessive amount of material being applied or excessive surface grade shall be treated in two or more applications to the specified application rate at no additional cost to the Owner. Each additional application shall be performed after the prior application of material has penetrated into the pavement.

If low spots and depressions greater than 1/2 inch (12 mm) in depth in the pavement surface cause ponding or puddling of the applied materials, the pavement surface shall be broomed with a broom drag. Brooming shall continue until the pavement surface is free of any pools of excess material. Ponding and/or puddling shall not cause excessive pavement softening and/or additional distress. The Engineer shall inspect and approve areas after brooming.

During all applications, the surfaces of adjacent structures shall be protected to prevent their being spattered or marred. Asphalt materials shall not be discharged into borrow pits or gutters or on the airport area.

608-4.7 Application of aggregate material. Immediately following the application of the asphalt emulsion or as directed by the Engineer, sand at the rate recommended by the manufacturer's representative and approved by the Engineer from the test area/sections evaluation for each designated application area, shall be spread uniformly over the asphalt emulsion. The aggregate shall be spread to the same width of application as the asphalt material and shall not be applied in such thickness as to cause blanketing.

Sprinkling of additional aggregate material, and spraying additional asphalt material over areas that show up having insufficient cover or bitumen, shall be done by hand whenever necessary. In areas where hand work is necessitated, the sand shall be applied before the sealant begins to break.

Sanding shall be performed to prevent excessive amounts of sand from accumulating on the pavement prior to the emulsion being applied. The Contractor shall clean areas with excess or loose sand and dispose of off airport property.

QUALITY CONTROL

608-5.1 Manufacturer's representation. The manufacturer's representative shall have knowledge of the material, procedures, and equipment described in the specification and shall be responsible for determining the application rates and shall oversee the preparation and application of the seal coat product. Documentation of the manufacturer representative's experience and knowledge for applying the seal coat product shall be furnished to the Engineer a minimum of 10 work days prior to placement of the test sections. The cost of the manufacturer's representative shall be included in the bid price.

608-5.2 Contractor qualifications. The Contractor shall provide the Engineer Contractor qualifications for applicators, personnel and equipment. The Contractor shall also provide, from the seal coat Manufacturer, documentation that the Contractor is certified to apply the seal coat and to have made at least three (3) applications similar to this project in the past two (2) years.

MATERIAL ACCEPTANCE

608-6.1 Friction tests. Friction tests in accordance with AC 150/5320-12, Measurement, Construction, and Maintenance of Skid-Resistant Airport Pavement Surfaces, shall be accomplished on all runway and high-speed taxiways that have received a seal coat. The Contractor shall perform tests and coordinate testing with the Engineer. Each test includes performing friction tests at 40 mph and 60 mph (65 or 95 km/h) both wet, 15 feet (4.5 m) to each side of runway centerline. The friction tests shall be run after seal coat application is completed and fully cured. It is recommended that the friction tests are made no sooner than 24 hours after the seal coat has been applied. The results of the friction evaluation shall meet the Maintenance Planning levels provided in Table 3-2, "Friction Level Classification for Runway Pavement Surfaces", in AC 150/5320-12, Measurement , Construction, and Maintenance of Skid-Resistant Airport Pavement Surfaces, when tested at speeds of 40 MPH and 60 MPH wet with approved CFME. The Resident Engineer shall be present for testing . The Contractor shall provide a written report of friction test results. Friction tests performed by the Contractor shall utilize equipment qualified for CFME in accordance with AC 150/5320-12, Appendix 4.

If the results of the friction test should prove to be unsatisfactory , the Contractor will be responsible to conduct additional friction tests at least 24 hours after the first set of friction tests were ran to demonstrate that the skid resistance is improving to meet the Maintenance Planning levels discussed above . The Engineer will determine if any further testing is needed prior to accepting the seal coat areas and approving the runways or high-speed taxiways for use.

The runway or high-speed taxiway will not be approved for use by the airport until the friction tests indicate that the seal coated areas are meeting the Maintenance Planning levels or are acceptable for use as determined by the Engineer.

Friction tests are not required on normal taxiway , taxi lane or apron surfaces that are to receive this seal coat.

METHOD OF MEASUREMENT

608-7.1 Asphalt surface treatment. The quantity of asphalt surface treatment shall be measured by the square yards of material applied in accordance with the plans and specifications and accepted by the Resident Engineer.

The Contractor must furnish the Engineer with the certified weigh bills when materials are received for the asphalt material used under this contract. The Contractor must not remove material from the tank car or storage tank until initial amounts and temperature measurements have been verified.

BASIS OF PAYMENT

608-8.1 Payment shall be made at the contract unit price per square yard for the asphalt surface treatment applied and accepted by the Resident Engineer. This price shall be full compensation for all surface preparation, furnishing all materials , delivery and application of these materials , for all labor, equipment, tools , CFME Friction Testing , and incidentals necessary to complete the item, including the friction testing and all work required to meet AC 150/5320-12, and any costs associated with furnishing a qualified manufacturer's representative to assist with test strips.

Payment will be made under:

Item P-608-8.1	Emulsified Asphalt Seal Coat (With Aggregate & CFME Friction Testing) - per square yard

MATERIAL REQUIREMENTS

ASTM C117	Standard Test Method for Materials Finer than 75-µm (No. 200) Sieve in Mineral Aggregates by Washing
ASTM C136	Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates
ASTM D5	Standard Test Method for Penetration of Bituminous Materials
ASTM D244	Standard Test Methods and Practices for Emulsified Asphalts
ASTM D2007	Standard Test Method for Characteristic Groups in Rubber Extender and Processing Oils and Other Petroleum-Derived Oils by the Clay-Gel Absorption Chromatographic Method
ASTM D2042	Standard Test Method for Solubility of Asphalt Materials in Trichloroethylene
ASTM D2995	Standard Practice for Estimating Application Rate of Bituminous Distributors
ASTM D4402	Standard Test Method for Viscosity Determination of Asphalt at Elevated Temperatures Using a Rotational Viscometer
ASTM D5340	Standard Test Method for Airport Pavement Condition Index Surveys
AC 150/5320-12	Measurement, Construction, and Maintenance of Skid-Resistant Airport Pavement Surfaces
AC 150/5320-17	Airfield Pavement Surface Evaluation and Rating (PASER) Manuals
AC 150/5380-6	Guidelines and Procedures for Maintenance of Airport Pavements

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Item P-620 Runway and Taxiway Marking

DESCRIPTION

620-1.1 This item shall consist of the preparation and painting of numbers, markings, and stripes on the surface of runways, taxiways, and aprons, in accordance with these specifications and at the locations shown on the plans, or as directed by the Engineer. The terms "paint" and "marking material" as well as "painting" and "application of markings" are interchangeable throughout this specification.

MATERIALS

620-2.1 Materials acceptance. The Contractor shall furnish manufacturer's certified test reports for materials shipped to the project. The certified test reports shall include a statement that the materials meet the specification requirements. The reports can be used for material acceptance or the Engineer may perform verification testing. The reports shall not be interpreted as a basis for payment. The Contractor shall notify the Engineer upon arrival of a shipment of materials to the site. All material shall arrive in sealed containers 55 gallons or smaller for inspection by the Engineer. Material shall not be loaded into the equipment until inspected by the Engineer.

620-2.2 Marking materials. Paint shall be waterborne in accordance with the requirements of paragraph 620-2.2 a. Paint shall be furnished in **White – 37925, Red – 31136, Yellow – 33538 or 33655, and Black – 37038** in accordance with Federal Standard No. 595.

a. Waterborne. Paint shall meet the requirements of Federal Specification TT-P-1952E, Type II. The non-volatile portion of the vehicle for all paint types shall be composed of a 100% acrylic polymer as determined by infrared spectral analysis.**620-2.3 Reflective media.** Glass beads shall meet the requirements for **Type I, gradation A**. Glass beads shall be treated with all compatible coupling agents recommended by the manufacturers of the paint and reflective media to ensure adhesion and embedment.

Paint Color	Glass Beads, Type I, Gradation A
White	See Table 1
Yellow	See Table 1
Red	See Table 1 and Note
Black	Not used
Green	Not used

CONSTRUCTION METHODS

620-3.1 Weather limitations. The painting shall be performed only when the surface is dry and when the surface temperature is at least 45°F (7°C) and rising and the pavement surface temperature is at least 5°F

(2.7°C) above the dew point or meets the manufacturer's recommendations. Markings shall not be applied when the wind speed exceeds 10 mph unless windscreens are used to shroud the material guns.

620-3.2 Equipment. Equipment shall include the apparatus necessary to properly clean the existing surface, a mechanical marking machine, a bead dispensing machine, and such auxiliary hand-painting equipment as may be necessary to satisfactorily complete the job.

The mechanical marker shall be an atomizing spray-type or airless-type marking machine suitable for application of traffic paint. It shall produce an even and uniform film thickness at the required coverage and shall apply markings of uniform cross-sections and clear-cut edges without running or spattering and without over spray.

620-3.3 Preparation of surface. Immediately before application of the paint, the surface shall be dry and free from dirt, grease, oil, laitance, or other foreign material that would reduce the bond between the paint and the pavement. The area to be painted shall be cleaned by waterblasting or by other methods as required to remove all contaminants minimizing damage to the pavement surface. Use of any chemicals or impact abrasives during surface preparation shall be approved in advance by the Engineer. After the cleaning operations, sweeping, blowing, or rinsing with pressurized water shall be performed to ensure the surface is clean and free of grit or other debris left from the cleaning process.

At least 24 hours prior to remarking existing markings, loose existing markings must be removed such that 100% of the loose existing markings are removed. After removal, the surface shall be cleaned of all residue or debris either with sweeping or blowing with compressed air or both.

Prior to the application of any markings, the Contractor shall certify in writing that the surface has been prepared in accordance with the paint manufacturer's requirements, that the application equipment is appropriate for the type of marking paint and that environmental conditions are appropriate for the material being applied. This certification along with a copy of the paint manufacturer's surface preparation and application requirements must be submitted and approved by the Engineer prior to the initial application of markings.

620-3.4 Layout of markings. The proposed markings shall be laid out in advance of the paint application. All pavement markings, except temporary markings and black paint, are to receive glass beads.

620-3.5 Application. Paint shall be applied at the locations and to the dimensions and spacing shown on the plans. Paint shall not be applied until the layout and condition of the surface has been approved by the Engineer. The edges of the markings shall not vary from a straight line more than 1/2 inch (12 mm) in 50 feet (15 m), and marking dimensions and spacings shall be within the following tolerances:

Dimension and Spacing	Tolerance
36 inch (910 mm) or less	±1/2 inch (12 mm)
greater than 36 inch to 6 feet (910 mm to 1.85 m)	±1 inch (25 mm)
greater than 6 feet to 60 feet (1.85 m to 18.3 m)	±2 inch (50 mm)
greater than 60 feet (18.3 m)	±3 inch (76 mm)

The paint shall be mixed in accordance with the manufacturer's instructions and applied to the pavement with a marking machine at the rate shown in Table 1. The addition of thinner will not be permitted. A period of **30 calendar days (cure period)** shall elapse between placement of a bituminous surface course or seal coat and application of the paint.

The runway is required to be opened to aircraft traffic prior to the required cure time has elasped. Accordingly, temporary markings will be required after paving operations are complete. The temporary paint shall be applied to the bituminous pavement as soon as practical but only after the pavement has cooled enough to accept the paint and the application of the paint will not damage the surface. Application rate for all temporary markings shall be at 50% of the application rate prescribed in Table 1. Glass beads shall not be applied to temporary markings. The final marking application must be at the full application rate in order to adequately set the glass bead; a 50% first application rate followed by a 50% second application rate will not be permitted.

Prior to the initial application of markings, the Contractor shall certify in writing that the surface has been prepared in accordance with the paint manufacturer's requirements, that the application equipment is appropriate for the marking paint and that environmental conditions are appropriate for the material being applied. This certification along with a copy of the paint manufactures application and surface preparation requirements must be submitted to the Engineer prior to the initial application of markings.

620-3.6 Test strip. Prior to the full application of airfield markings, the Contractor shall produce a test strip in the presence of the Engineer. The test strip shall include the application of a minimum of 5 gallons (4 liters) of paint and application of 35 lbs (15.9 kg) of Type I/50 lbs (22.7 kg) of Type III glass beads. The test strip shall be used to establish thickness/darkness standard for all markings. The test strip shall cover no more than the maximum area prescribed in Table 1 (e.g., for 5 gallons (19 liters) of waterborne paint shall cover no more than 575 square feet (53.4 m^2).

Table 1. Application Rates For Paint And Glass Beads
(See Note regarding Red and Pink Paint)

Paint Type	Paint Square feet per gallon, ft^2/gal (Sq m per liter, m^2/l)	Glass Beads, Type I, Gradation A Pounds per gallon of paint-lb/gal (Km per liter of paint-kg/l)
Waterborne Type I or II	115 ft^2/gal max (2.8 m^2/l)	7 lb/gal min (0.85 kg/l)

Note: The glass bead application rate for Red and Pink paint shall be reduced by 2 lb/gal (0.24 kg/l) for Type I and Type IV beads. Type III beads shall not be applied to Red or Pink paint.

Glass beads shall be distributed upon the marked areas at the locations shown on the plans to receive glass beads immediately after application of the paint. A dispenser shall be furnished that is properly designed for attachment to the marking machine and suitable for dispensing glass beads. Glass beads shall be applied at the rate shown in Table 1. Glass beads shall not be applied to black paint or green paint. Glass beads shall adhere to the cured paint or all marking operations shall cease until corrections are made. Different bead types shall not be mixed. Regular monitoring of glass bead embedment should be performed.

All emptied containers shall be returned to the paint storage area for checking by the Engineer. The containers shall not be removed from the airport or destroyed until authorized by the Engineer.

620-3.7 Application--preformed thermoplastic airport pavement markings.

a. Asphalt and Portland cement. To ensure minimum single-pass application time and optimum bond in the marking/substrate interface, the materials must be applied using a variable speed self-propelled mobile heater with an effective heating width of no less than 16 feet (5 m) and a free span between supporting wheels of no less than 18 feet (5.5 m). The heater must emit thermal radiation to the marking material in such a manner that the difference in temperature of 2 inches (50 mm) wide linear segments in the direction of heater travel must be within 5% of the overall average temperature of the

heated thermoplastic material as it exits the heater. The material must be able to be applied at ambient and pavement temperatures down to 35°F (2°C) without any preheating of the pavement to a specific temperature. The material must be able to be applied without the use of a thermometer. The pavement shall be clean, dry, and free of debris. A non-volatile organic content (non-VOC) sealer with a maximum applied viscosity of 250 centiPoise must be applied to the pavement shortly before the markings are applied. The supplier must enclose application instructions with each box/package.

620-3.8 Protection and cleanup. After application of the markings, all markings shall be protected from damage until dry. All surfaces shall be protected from excess moisture and/or rain and from disfiguration by spatter, splashes, spillage, or drippings. The Contractor shall remove from the work area all debris, waste, loose or unadhered reflective media, and by-products generated by the surface preparation and application operations to the satisfaction of the Engineer. The Contractor shall dispose of these wastes in strict compliance with all applicable state, local, and Federal environmental statutes and regulations.

METHOD OF MEASUREMENT

620-4.1 The quantity of runway and taxiway markings to be paid for shall be the number of square feet (square meters) of painting performed in accordance with the specifications and accepted by the Engineer. No separate measurement or payment shall be made for the glass beads, they shall be considered a subsiditary obligation of the contractor covered under this contract item.

620-4.2 Payment for temporary markings shall be the number of square feet of painting performed in accordance with the specifications and accepted by the Engineer. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

BASIS OF PAYMENT

620-5.1 Payment shall be made at the respective contract price per square foot (square meter) for runway and taxiway painting. This price shall be full compensation for furnishing all materials and for all labor, equipment, tools, and incidentals necessary to complete the item.

Payment will be made under:

Item P-620-5.1-1	Runway and Taxiway Marking - per square foot (square meter)
Item P-620-5.1-2	Temporary Marking - per square foot (square meter)

TESTING REQUIREMENTS

ASTM C371	Standard Test Method for Wire-Cloth Sieve Analysis of Nonplastic Ceramic Powders
ASTM D92	Standard Test Method for Flash and Fire Points by Cleveland Open Cup Tester
ASTM D711	Standard Test Method for No-Pick-Up Time of Traffic Paint
ASTM D968	Standard Test Methods for Abrasion Resistance of Organic Coatings by Falling Abrasive
ASTM D1652	Standard Test Method for Epoxy Content of Epoxy Resins
ASTM D2074	Standard Test Method for Total, Primary, Secondary, and Tertiary Amine Values of Fatty Amines by Alternative Indicator Method
ASTM D2240	Standard Test Method for Rubber Property - Durometer Hardness

ASTM D7585	Standard Practice for Evaluating Retroreflective Pavement Markings Using Portable Hand-Operated Instruments
ASTM E1710	Standard Test Method for Measurement of Retroreflective Pavement Marking Materials with CEN-Prescribed Geometry Using a Portable Retroreflectometer
ASTM E2302	Standard Test Method for Measurement of the Luminance Coefficient Under Diffuse Illumination of Pavement Marking Materials Using a Portable Reflectometer
ASTM G154	Standard Practice for Operating Fluorescent Ultraviolet (UV) Lamp Apparatus for Exposure of Nonmetallic Materials

MATERIAL REQUIREMENTS

ASTM D476	Standard Classification for Dry Pigmentary Titanium Dioxide Products
40 CFR Part 60, Appendix A-7, Method 24	Determination of volatile matter content, water content, density, volume solids, and weight solids of surface coatings
29 CFR Part 1910.1200	Hazard Communication
FED SPEC TT-B-1325D	Beads (Glass Spheres) Retro-Reflective
American Association of State Highway and Transportation Officials (AASHTO) M247	Standard Specification for Glass Beads Used in Pavement Markings
FED SPEC TT-P-1952E	Paint, Traffic and Airfield Marking, Waterborne
Commercial Item Description A-A-2886B	Paint, Traffic, Solvent Based
FED STD 595	Colors used in Government Procurement
AC 150/5340-1	Standards for Airport Markings

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Part 8 – Fencing

NOT USED

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Part 9 – Drainage

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Part 10 – Turfing

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Part 11 – Lighting Installation

NOT USED

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APPENDIX A

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U.S. Department
of Transportation
Federal Aviation
Administration

Advisory Circular

Subject: Operational Safety on Airports During Construction	**Date:** 12/13/2017 **Initiated By:** AAS-100	**AC No:** 150/5370-2G **Change:**

1 **Purpose.**

This AC sets forth guidelines for operational safety on airports during construction.

2 **Cancellation.**

This AC cancels AC 150/5370-2F, *Operational Safety on Airports during Construction*, dated September 29, 2011.

3 **Application.**

This AC assists airport operators in complying with Title 14 Code of Federal Regulations (CFR) Part 139, *Certification of Airports*. For those certificated airports, this AC provides one way, but not the only way, of meeting those requirements. The use of this AC is mandatory for those airport construction projects receiving funds under the Airport Improvement Program (AIP). See Grant Assurance No. 34, *Policies, Standards, and Specifications*. While we do not require non-certificated airports without grant agreements or airports using Passenger Facility Charge (PFC) Program funds for construction projects to adhere to these guidelines, we recommend that they do so to help these airports maintain operational safety during construction.

4 **Related Documents.**

ACs and Orders referenced in the text of this AC do not include a revision letter, as they refer to the latest version. Appendix A contains a list of reading material on airport construction, design, and potential safety hazards during construction, as well as instructions for obtaining these documents.

5 **Principal Changes.**

The AC incorporates the following principal changes:

1. Notification about impacts to both airport owned and FAA-owned NAVAIDs was added. See paragraph 2.13.5.3, NAVAIDs.

2. Guidance for the use of orange construction signs was added. See paragraph 2.18.4.2, Temporary Signs.
3. Open trenches or excavations may be permitted in the taxiway safety area while the taxiway is open to aircraft operations, subject to restrictions. See paragraph 2.22.3.4, Excavations.
4. Guidance for temporary shortened runways and displaced thresholds has been enhanced. See Figure 2-1 and Figure 2-2.
5. Figures have been improved and a new Appendix F on the placement of orange construction signs has been added.

Hyperlinks (allowing the reader to access documents located on the internet and to maneuver within this document) are provided throughout this document and are identified with underlined text. When navigating within this document, return to the previously viewed page by pressing the "ALT" and " ←" keys simultaneously.

Figures in this document are schematic representations and are not to scale.

6 **Use of Metrics.**

Throughout this AC, U.S. customary units are used followed with "soft" (rounded) conversion to metric units. The U.S. customary units govern.

7 **Where to Find this AC.**

You can view a list of all ACs at http://www.faa.gov/regulations_policies/advisory_circulars/. You can view the Federal Aviation Regulations at http://www.faa.gov/regulations_policies/faa_regulations/.

8 **Feedback on this AC.**

If you have suggestions for improving this AC, you may use the Advisory Circular Feedback form at the end of this AC.

John R. Dermody
Director of Airport Safety and Standards

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CHAPTER 1. PLANNING AN AIRFIELD CONSTRUCTION PROJECT

1.1 Overview.

Airports are complex environments, and procedures and conditions associated with construction activities often affect aircraft operations and can jeopardize operational safety. Safety considerations are paramount and may make operational impacts unavoidable. However, careful planning, scheduling, and coordination of construction activities can minimize disruption of normal aircraft operations and avoid situations that compromise the airport's operational safety. The airport operator must understand how construction activities and aircraft operations affect one another to be able to develop an effective plan to complete the project. While the guidance in this AC is primarily used for construction operations, the concepts, methods and procedures described may also enhance the day-to-day airport maintenance operations, such as lighting maintenance and snow removal operations.

1.2 Plan for Safety.

Safety, maintaining aircraft operations, and construction costs are all interrelated. Since safety must not be compromised, the airport operator must strike a balance between maintaining aircraft operations and construction costs. This balance will vary widely depending on the operational needs and resources of the airport and will require early coordination with airport users and the FAA. As the project design progresses, the necessary construction locations, activities, and associated costs will be identified and their impact to airport operations must be assessed. Adjustments are made to the proposed construction activities, often by phasing the project, and/or to airport operations to maintain operational safety. This planning effort will ultimately result in a project Construction Safety and Phasing Plan (CSPP). The development of the CSPP takes place through the following five steps:

1.2.1 Identify Affected Areas.

The airport operator must determine the geographic areas on the airport affected by the construction project. Some, such as a runway extension, will be defined by the project. Others may be variable, such as the location of haul routes and material stockpiles.

1.2.2 Describe Current Operations.

Identify the normal airport operations in each affected area for each phase of the project. This becomes the baseline from which the impact on operations by construction activities can be measured. This should include a narrative of the typical users and aircraft operating within the affected areas. It should also include information related to airport operations: the Aircraft Approach Category (AAC) and Airplane Design Group (ADG) of the airplanes that operate on each runway; the ADG and Taxiway Design Group (TDG)[1] for each affected taxiway; designated approach visibility minimums;

[1] Find Taxiway Design Group information in AC 150/5300-13, *Airport Design.*

available approach and departure procedures; most demanding aircraft; declared distances; available air traffic control services; airport Surface Movement Guidance and Control System (SMGCS) plan; and others. The applicable seasons, days and times for certain operations should also be identified as applicable.

1.2.3 Allow for Temporary Changes to Operations.

To the extent practical, current airport operations should be maintained during the construction. In consultation with airport users, Aircraft Rescue and Fire Fighting (ARFF) personnel, and FAA Air Traffic Organization (ATO) personnel, the airport operator should identify and prioritize the airport's most important operations. The construction activities should be planned, through project phasing if necessary, to safely accommodate these operations. When the construction activities cannot be adjusted to safely maintain current operations, regardless of their importance, then the operations must be revised accordingly. Allowable changes include temporary revisions to approach procedures, restricting certain aircraft to specific runways and taxiways, suspension of certain operations, decreased weights for some aircraft due to shortened runways, and other changes. An example of a table showing temporary operations versus current operations is shown in Appendix E.

1.2.4 Take Required Measures to Revise Operations.

Once the level and type of aircraft operations to be maintained are identified, the airport operator must determine the measures required to safely conduct the planned operations during the construction. These measures will result in associated costs, which can be broadly interpreted to include not only direct construction costs, but also loss of revenue from impacted operations. Analysis of costs may indicate a need to reevaluate allowable changes to operations. As aircraft operations and allowable changes will vary widely among airports, this AC presents general guidance on those subjects.

1.2.5 Manage Safety Risk.

The FAA is committed to incorporating proactive safety risk management (SRM) tools into its decision-making processes. FAA Order 5200.11, *FAA Airports (ARP) Safety Management System (SMS)*, requires the FAA to conduct a Safety Assessment for certain triggering actions. Certain airport projects may require the airport operator to provide a Project Proposal Summary to help the FAA determine whether a Safety Assessment is required prior to FAA approval of the CSPP. The airport operator must coordinate with the appropriate FAA Airports Regional or District Office early in the development of the CSPP to determine the need for a Safety Risk Assessment. If the FAA requires an assessment, the airport operator must at a minimum:

1. Notify the appropriate FAA Airports Regional or District Office during the project "scope development" phase of any project requiring a CSPP.
2. Provide documents identified by the FAA as necessary to conduct SRM.
3. Participate in the SRM process for airport projects.
4. Provide a representative to participate on the SRM panel.

5. Ensure that all applicable SRM identified risks elements are recorded and mitigated within the CSPP.

1.3 Develop a Construction Safety and Phasing Plan (CSPP).

Development of an effective CSPP will require familiarity with many other documents referenced throughout this AC. See Appendix A for a list of related reading material.

1.3.1 List Requirements.

A CSPP must be developed for each on-airfield construction project funded by the Airport Improvement Program (AIP) or located on an airport certificated under Part 139. For on-airfield construction projects at Part 139 airports funded without AIP funds, the preparation of a CSPP represents an acceptable method the certificate holder may use to meet Part 139 requirements during airfield construction activity. As per FAA Order 5200.11, projects that require Safety Assessments do not include construction, rehabilitation, or change of any facility that is entirely outside the air operations area, does not involve any expansion of the facility envelope and does not involve construction equipment, haul routes or placement of material in locations that require access to the air operations area, increase the facility envelope, or impact line-of-sight. Such facilities may include passenger terminals and parking or other structures. However, extraordinary circumstances may trigger the need for a Safety Assessment and a CSPP. The CSPP is subject to subsequent review and approval under the FAA's Safety Risk Management procedures (see paragraph 1.2.5).

1.3.2 Prepare a Safety Plan Compliance Document (SPCD).

The Safety Plan Compliance Document (SPCD) details how the contractor will comply with the CSPP. Also, it will not be possible to determine all safety plan details (for example specific hazard equipment and lighting, contractor's points of contact, construction equipment heights) during the development of the CSPP. The successful contractor must define such details by preparing an SPCD that the airport operator reviews for approval prior to issuance of a notice-to-proceed. The SPCD is a subset of the CSPP, similar to how a shop drawing review is a subset to the technical specifications.

1.3.3 Assume Responsibility for the CSPP.

The airport operator is responsible for establishing and enforcing the CSPP. The airport operator may use the services of an engineering consultant to help develop the CSPP. However, writing the CSPP cannot be delegated to the construction contractor. Only those details the airport operator determines cannot be addressed before contract award are developed by the contractor and submitted for approval as the SPCD. The SPCD does not restate nor propose differences to provisions already addressed in the CSPP.

1.4 Who Is Responsible for Safety During Construction?

1.4.1 Establish a Safety Culture.

Everyone has a role in operational safety on airports during construction: the airport operator, the airport's consultants, the construction contractor and subcontractors, airport users, airport tenants, ARFF personnel, Air Traffic personnel, including Technical Operations personnel, FAA Airports Division personnel, and others, such as military personnel at any airport supporting military operations (e.g. national guard or a joint use facility). Close communication and coordination between all affected parties is the key to maintaining safe operations. Such communication and coordination should start at the project scoping meeting and continue through the completion of the project. The airport operator and contractor should conduct onsite safety inspections throughout the project and immediately remedy any deficiencies, whether caused by negligence, oversight, or project scope change.

1.4.2 Assess Airport Operator's Responsibilities.

An airport operator has overall responsibility for all activities on an airport, including construction. This includes the predesign, design, preconstruction, construction, and inspection phases. Additional information on the responsibilities listed below can be found throughout this AC. The airport operator must:

1.4.2.1 Develop a CSPP that complies with the safety guidelines of Chapter 2, Construction Safety and Phasing Plans, and Chapter 3, Guidelines for Writing a CSPP. The airport operator may develop the CSPP internally or have a consultant develop the CSPP for approval by the airport operator. For tenant sponsored projects, approve a CSPP developed by the tenant or its consultant.

1.4.2.2 Require, review and approve the SPCD by the contractor that indicates how it will comply with the CSPP and provides details that cannot be determined before contract award.

1.4.2.3 Convene a preconstruction meeting with the construction contractor, consultant, airport employees and, if appropriate, tenant sponsor and other tenants to review and discuss project safety before beginning construction activity. The appropriate FAA representatives should be invited to attend the meeting. See AC 150/5370-12, *Quality Management for Federally Funded Airport Construction Projects.* (Note "FAA" refers to the Airports Regional or District Office, the Air Traffic Organization, Flight Standards Service, and other offices that support airport operations, flight regulations, and construction/environmental policies.)

1.4.2.4 Ensure contact information is accurate for each representative/point of contact identified in the CSPP and SPCD.

1.4.2.5 Hold weekly or, if necessary, daily safety meetings with all affected parties to coordinate activities.

1.4.2.6 Notify users, ARFF personnel, and FAA ATO personnel of construction and conditions that may adversely affect the operational safety of the airport via Notices to Airmen (NOTAM) and other methods, as appropriate. Convene a meeting for review and discussion if necessary.

1.4.2.7 Ensure construction personnel know applicable airport procedures and changes to those procedures that may affect their work.

1.4.2.8 Ensure that all temporary construction signs are located per the scheduled list for each phase of the project.

1.4.2.9 Ensure construction contractors and subcontractors undergo training required by the CSPP and SPCD.

1.4.2.10 Ensure vehicle and pedestrian operations addressed in the CSPP and SPCD are coordinated with airport tenants, the airport traffic control tower (ATCT), and construction contractors.

1.4.2.11 At certificated airports, ensure each CSPP and SPCD is consistent with Part 139.

1.4.2.12 Conduct inspections sufficiently frequently to ensure construction contractors and tenants comply with the CSPP and SPCD and that there are no altered construction activities that could create potential safety hazards.

1.4.2.13 Take immediate action to resolve safety deficiencies.

1.4.2.14 At airports subject to 49 CFR Part 1542, *Airport Security*, ensure construction access complies with the security requirements of that regulation.

1.4.2.15 Notify appropriate parties when conditions exist that invoke provisions of the CSPP and SPCD (for example, implementation of low-visibility operations).

1.4.2.16 Ensure prompt submittal of a Notice of Proposed Construction or Alteration (Form 7460-1) for conducting an aeronautical study of potential obstructions such as tall equipment (cranes, concrete pumps, other), stock piles, and haul routes. A separate form may be filed for each potential obstruction, or one form may be filed describing the entire construction area and maximum equipment height. In the latter case, a separate form must be filed for any object beyond or higher than the originally evaluated area/height. The FAA encourages online submittal of forms for expediency at https://oeaaa.faa.gov/oeaaa/external/portal.jsp. The appropriate FAA Airports Regional or District Office can provide assistance in determining which objects require an aeronautical study.

1.4.2.17 Ensure prompt transmission of the Airport Sponsor Strategic Event Submission, FAA Form 6000-26, located at https://oeaaa.faa.gov/oeaaa/external/content/AIRPORT_SPONSOR_STRATEGIC_EVENT_SUBMISSION_FORM.pdf, to assure proper coordination for NAS Strategic Interruption per Service Level Agreement with ATO.

1.4.2.18 Promptly notify the FAA Airports Regional or District Office of any proposed changes to the CSPP prior to implementation of the change. Changes to the CSPP require review and approval by the airport operator and the FAA. The FAA Airports Regional or District office will determine if further coordination within the FAA is needed. Coordinate with appropriate local and other federal government agencies, such as Environmental Protection Agency (EPA), Occupational Safety and Health Administration (OSHA), Transportation Security Administration (TSA), and the state environmental agency.

1.4.3 Define Construction Contractor's Responsibilities.

The contractor is responsible for complying with the CSPP and SPCD. The contractor must:

1.4.3.1 Submit a Safety Plan Compliance Document (SPCD) to the airport operator describing how it will comply with the requirements of the CSPP and supply any details that could not be determined before contract award. The SPCD must include a certification statement by the contractor, indicating an understanding of the operational safety requirements of the CSPP and the assertion of compliance with the approved CSPP and SPCD unless written approval is granted by the airport operator. Any construction practice proposed by the contractor that does not conform to the CSPP and SPCD may impact the airport's operational safety and will require a revision to the CSPP and SPCD and re-coordination with the airport operator and the FAA in advance.

1.4.3.2 Have available at all times copies of the CSPP and SPCD for reference by the airport operator and its representatives, and by subcontractors and contractor employees.

1.4.3.3 Ensure that construction personnel are familiar with safety procedures and regulations on the airport. Provide a point of contact who will coordinate an immediate response to correct any construction-related activity that may adversely affect the operational safety of the airport. Many projects will require 24-hour coverage.

1.4.3.4 Identify in the SPCD the contractor's on-site employees responsible for monitoring compliance with the CSPP and SPCD during construction. At least one of these employees must be on-site when active construction is taking place.

1.4.3.5 Conduct sufficient inspections to ensure construction personnel comply with the CSPP and SPCD and that there are no altered construction activities that could create potential safety hazards.

1.4.3.6 Restrict movement of construction vehicles and personnel to permitted construction areas by flagging, barricading, erecting temporary fencing, or providing escorts, as appropriate, and as specified in the CSPP and SPCD.

1.4.3.7 Ensure that no contractor employees, employees of subcontractors or suppliers, or other persons enter any part of the air operations area (AOA) from the construction site unless authorized.

1.4.3.8 Ensure prompt submittal through the airport operator of Form 7460-1 for the purpose of conducting an aeronautical study of contractor equipment such as tall equipment (cranes, concrete pumps, and other equipment), stock piles, and haul routes when different from cases previously filed by the airport operator. The FAA encourages online submittal of forms for expediency at https://oeaaa.faa.gov/oeaaa/external/portal.jsp.

1.4.3.9 Ensure that all necessary safety mitigations are understood by all parties involved, and any special requirements of each construction phase will be fulfilled per the approved timeframe.

1.4.3.10 Participate in pre-construction meetings to review construction limits, safety mitigations, NOTAMs, and understand all special airport operational needs during each phase of the project.

1.4.4 Define Tenant's Responsibilities.

If planning construction activities on leased property, Airport tenants, such as airline operators, fixed base operators, and FAA ATO/Technical Operations sponsoring construction are strongly encouraged to:

1. Develop, or have a consultant develop, a project specific CSPP and submit it to the airport operator. The airport operator may forgo a complete CSPP submittal and instead incorporate appropriate operational safety principles and measures addressed in the advisory circular within their tenant lease agreements.
2. In coordination with its contractor, develop an SPCD and submit it to the airport operator for approval issued prior to issuance of a Notice to Proceed.
3. Ensure that construction personnel are familiar with safety procedures and regulations on the airport during all phases of the construction.
4. Provide a point of contact of who will coordinate an immediate response to correct any construction-related activity that may adversely affect the operational safety of the airport.
5. Identify in the SPCD the contractor's on-site employees responsible for monitoring compliance with the CSPP and SPCD during construction. At least one of these employees must be on-site when active construction is taking place.
6. Ensure that no tenant or contractor employees, employees of subcontractors or suppliers, or any other persons enter any part of the AOA from the construction site unless authorized.
7. Restrict movement of construction vehicles to construction areas by flagging and barricading, erecting temporary fencing, or providing escorts, as appropriate, as specified in the CSPP and SPCD.
8. Ensure prompt submittal through the airport operator of Form 7460-1 for conducting an aeronautical study of contractor equipment such as tall equipment (cranes, concrete pumps, other), stock piles, and haul routes. The FAA encourages online submittal of forms for expediency at https://oeaaa.faa.gov/oeaaa/external/portal.jsp.
9. Participate in pre-construction meetings to review construction limits, safety mitigations, NOTAMs, and understand all special airport operational needs during each phase of the project.

CHAPTER 2. CONSTRUCTION SAFETY AND PHASING PLANS

2.1 Overview.

Aviation safety is the primary consideration at airports, especially during construction. The airport operator's CSPP and the contractor's Safety Plan Compliance Document (SPCD) are the primary tools to ensure safety compliance when coordinating construction activities with airport operations. These documents identify all aspects of the construction project that pose a potential safety hazard to airport operations and outline respective mitigation procedures for each hazard. They must provide information necessary for the Airport Operations department to conduct airfield inspections and expeditiously identify and correct unsafe conditions during construction. All aviation safety provisions included within the project drawings, contract specifications, and other related documents must also be reflected in the CSPP and SPCD.

2.2 Assume Responsibility.

Operational safety on the airport remains the airport operator's responsibility at all times. The airport operator must develop, certify, and submit for FAA approval each CSPP. It is the airport operator's responsibility to apply the requirements of the FAA approved CSPP. The airport operator must revise the CSPP when conditions warrant changes and must submit the revised CSPP to the FAA for approval. The airport operator must also require and approve a SPCD from the project contractor.

2.3 Submit the CSPP.

Construction Safety and Phasing Plans should be developed concurrently with the project design. Milestone versions of the CSPP should be submitted for review and approval as follows. While these milestones are not mandatory, early submission will help to avoid delays. Submittals are preferred in 8.5 × 11 inch or 11 × 17 inch format for compatibility with the FAA's Obstruction Evaluation / Airport Airspace Analysis (OE / AAA) process.

2.3.1 Submit an Outline/Draft.

By the time approximately 25% to 30% of the project design is completed, the principal elements of the CSPP should be established. Airport operators are encouraged to submit an outline or draft, detailing all CSPP provisions developed to date, to the FAA for review at this stage of the project design.

2.3.2 Submit a CSPP.

The CSPP should be formally submitted for FAA approval when the project design is 80 percent to 90 percent complete. Since provisions in the CSPP will influence contract costs, it is important to obtain FAA approval in time to include all such provisions in the procurement contract.

2.3.3 Submit an SPCD.

The contractor should submit the SPCD to the airport operator for approval to be issued prior to the Notice to Proceed.

2.3.4 Submit CSPP Revisions.

All revisions to a previously approved CSPP must be re-submitted to the FAA for review and approval/disapproval action.

2.4 Meet CSPP Requirements.

2.4.1 To the extent possible, the CSPP should address the following as outlined in Chapter 3, Guidelines for Writing a CSPP. Details that cannot be determined at this stage are to be included in the SPCD.

1. Coordination.
    a. Contractor progress meetings.
    b. Scope or schedule changes.
    c. FAA ATO coordination.
2. Phasing.
    a. Phase elements.
    b. Construction safety drawings.
3. Areas and operations affected by the construction activity.
    a. Identification of affected areas.
    b. Mitigation of effects.
4. Protection of navigation aids (NAVAIDs).
5. Contractor access.
    a. Location of stockpiled construction materials.
    b. Vehicle and pedestrian operations.
6. Wildlife management.
    a. Trash.
    b. Standing water.
    c. Tall grass and seeds.
    d. Poorly maintained fencing and gates.
    e. Disruption of existing wildlife habitat.
7. Foreign Object Debris (FOD) management.
8. Hazardous materials (HAZMAT) management.
9. Notification of construction activities.

a. Maintenance of a list of responsible representatives/ points of contact.

b. NOTAM.

c. Emergency notification procedures.

d. Coordination with ARFF Personnel.

e. Notification to the FAA.

10. Inspection requirements.

a. Daily (or more frequent) inspections.

b. Final inspections.

11. Underground utilities.

12. Penalties.

13. Special conditions.

14. Runway and taxiway visual aids. Marking, lighting, signs, and visual NAVAIDs.

a. General.

b. Markings.

c. Lighting and visual NAVAIDs.

d. Signs, temporary, including orange construction signs, and permanent signs.

15. Marking and signs for access routes.

16. Hazard marking and lighting.

a. Purpose.

b. Equipment.

17. Work zone lighting for nighttime construction (if applicable).

18. Protection of runway and taxiway safety areas, object free areas, obstacle free zones, and approach/departure surfaces.

a. Runway Safety Area (RSA).

b. Runway Object Free Area (ROFA).

c. Taxiway Safety Area (TSA). Provide details for any adjustments to Taxiway Safety Area width to allow continued operation of smaller aircraft. See paragraph 2.22.3.

d. Taxiway Object Free Area (TOFA). Provide details for any continued aircraft operations while construction occurs within the TOFA. See paragraph 2.22.4.

e. Obstacle Free Zone (OFZ).

f. Runway approach/departure surfaces.

19. Other limitations on construction.

a. Prohibitions.

b. Restrictions.

2.4.2 The Safety Plan Compliance Document (SPCD) should include a general statement by the construction contractor that he/she has read and will abide by the CSPP. In addition, the SPCD must include all supplemental information that could not be included in the CSPP prior to the contract award. The contractor statement should include the name of the contractor, the title of the project CSPP, the approval date of the CSPP, and a reference to any supplemental information (that is, "I, (Name of Contractor), have read the (Title of Project) CSPP, approved on (Date), and will abide by it as written and with the following additions as noted:"). The supplemental information in the SPCD should be written to match the format of the CSPP indicating each subject by corresponding CSPP subject number and title. If no supplemental information is necessary for any specific subject, the statement, "No supplemental information," should be written after the corresponding subject title. The SPCD should not duplicate information in the CSPP:

1. Coordination. Discuss details of proposed safety meetings with the airport operator and with contractor employees and subcontractors.
2. Phasing. Discuss proposed construction schedule elements, including:
   a. Duration of each phase.
   b. Daily start and finish of construction, including "night only" construction.
   c. Duration of construction activities during:
      i. Normal runway operations.
      ii. Closed runway operations.
      iii. Modified runway "Aircraft Reference Code" usage.
3. Areas and operations affected by the construction activity. These areas and operations should be identified in the CSPP and should not require an entry in the SPCD.
4. Protection of NAVAIDs. Discuss specific methods proposed to protect operating NAVAIDs.
5. Contractor access. Provide the following:
   a. Details on how the contractor will maintain the integrity of the airport security fence (gate guards, daily log of construction personnel, and other).
   b. Listing of individuals requiring driver training (for certificated airports and as requested).
   c. Radio communications.
      i. Types of radios and backup capabilities.
      ii. Who will be monitoring radios.
      iii. Who to contact if the ATCT cannot reach the contractor's designated person by radio.

d. Details on how the contractor will escort material delivery vehicles.

6. Wildlife management. Discuss the following:
   a. Methods and procedures to prevent wildlife attraction.
   b. Wildlife reporting procedures.
7. Foreign Object Debris (FOD) management. Discuss equipment and methods for control of FOD, including construction debris and dust.
8. Hazardous Materials (HAZMAT) management. Discuss equipment and methods for responding to hazardous spills.
9. Notification of construction activities. Provide the following:
   a. Contractor points of contact.
   b. Contractor emergency contact.
   c. Listing of tall or other requested equipment proposed for use on the airport and the timeframe for submitting 7460-1 forms not previously submitted by the airport operator.
   d. Batch plant details, including 7460-1 submittal.
10. Inspection requirements. Discuss daily (or more frequent) inspections and special inspection procedures.
11. Underground utilities. Discuss proposed methods of identifying and protecting underground utilities.
12. Penalties. Penalties should be identified in the CSPP and should not require an entry in the SPCD.
13. Special conditions. Discuss proposed actions for each special condition identified in the CSPP.
14. Runway and taxiway visual aids. Including marking, lighting, signs, and visual NAVAIDs. Discuss proposed visual aids including the following:
    a. Equipment and methods for covering signage and airfield lights.
    b. Equipment and methods for temporary closure markings (paint, fabric, other).
    c. Temporary orange construction signs.
    d. Types of temporary Visual Guidance Slope Indicators (VGSI).
15. Marking and signs for access routes. Discuss proposed methods of demarcating access routes for vehicle drivers.
16. Hazard marking and lighting. Discuss proposed equipment and methods for identifying excavation areas.
17. Work zone lighting for nighttime construction (if applicable). Discuss proposed equipment, locations, aiming, and shielding to prevent interference with air traffic control and aircraft operations.

18. Protection of runway and taxiway safety areas, object free areas, obstacle free zones, and approach/departure surfaces. Discuss proposed methods of identifying, demarcating, and protecting airport surfaces including:
    a. Equipment and methods for maintaining Taxiway Safety Area standards.
    b. Equipment and methods to ensure the safe passage of aircraft where Taxiway Safety Area or Taxiway Object Free Area standards cannot be maintained.
    c. Equipment and methods for separation of construction operations from aircraft operations, including details of barricades.
19. Other limitations on construction should be identified in the CSPP and should not require an entry in the SPCD.

2.5 Coordination.

Airport operators, or tenants responsible for design, bidding and conducting construction on their leased properties, should ensure at all project developmental stages, such as predesign, prebid, and preconstruction conferences, they capture the subject of airport operational safety during construction (see AC 150/5370-12, *Quality Management for Federally Funded Airport Construction Projects*). In addition, the following should be coordinated as required:

2.5.1 Progress Meetings.

Operational safety should be a standing agenda item for discussion during progress meetings throughout the project developmental stages.

2.5.2 Scope or Schedule Changes.

Changes in the scope or duration at any of the project stages may require revisions to the CSPP and review and approval by the airport operator and the FAA (see paragraph 1.4.2.17).

2.5.3 FAA ATO Coordination.

Early coordination with FAA ATO is highly recommended during the design phase and is required for scheduling Technical Operations shutdowns prior to construction. Coordination is critical to restarts of NAVAID services and to the establishment of any special procedures for the movement of aircraft. Formal agreements between the airport operator and appropriate FAA offices are recommended. All relocation or adjustments to NAVAIDs, or changes to final grades in critical areas, should be coordinated with FAA ATO and may require an FAA flight inspection prior to restarting the facility. Flight inspections must be coordinated and scheduled well in advance of the intended facility restart. Flight inspections may require a reimbursable agreement between the airport operator and FAA ATO. Reimbursable agreements should be coordinated a minimum of 12 months prior to the start of construction. (See paragraph 2.13.5.3.2 for required FAA notification regarding FAA-owned NAVAIDs.)

2.6 Phasing.

Once it has been determined what types and levels of airport operations will be maintained, the most efficient sequence of construction may not be feasible. In this case, the sequence of construction may be phased to gain maximum efficiency while allowing for the required operations. The development of the resulting construction phases should be coordinated with local Air Traffic personnel and airport users. The sequenced construction phases established in the CSPP must be incorporated into the project design and must be reflected in the contract drawings and specifications.

2.6.1 Phase Elements.

For each phase the CSPP should detail:

- Areas closed to aircraft operations.
- Duration of closures.
- Taxi routes and/or areas of reduced TSA and TOFA to reflect reduced ADG use.
- ARFF access routes.
- Construction staging, disposal, and cleanout areas.
- Construction access and haul routes.
- Impacts to NAVAIDs.
- Lighting, marking, and signing changes.
- Available runway length and/or reduced RSA and ROFA to reflect reduced ADG use.
- Declared distances (if applicable).
- Required hazard marking, lighting, and signing.
- Work zone lighting for nighttime construction (if applicable).
- Lead times for required notifications.

2.6.2 Construction Safety Drawings.

Drawings specifically indicating operational safety procedures and methods in affected areas (i.e., construction safety drawings) should be developed for each construction phase. Such drawings should be included in the CSPP as referenced attachments and should also be included in the contract drawing package.

2.7 Areas and Operations Affected by Construction Activity.

Runways and taxiways should remain in use by aircraft to the maximum extent possible without compromising safety. Pre-meetings with the FAA ATO will support operational simulations. See Appendix E for an example of a table showing temporary operations versus current operations. The tables in Appendix E can be useful for coordination among all interested parties, including FAA Lines of Business.

2.7.1 Identification of Affected Areas.

Identifying areas and operations affected by the construction helps to determine possible safety problems. The affected areas should be identified in the construction safety drawings for each construction phase. (See paragraph 2.6.2.) Of particular concern are:

2.7.1.1 **Closing, or Partial Closing, of Runways, Taxiways and Aprons, and Displaced Thresholds.**

When a runway is partially closed, a portion of the pavement is unavailable for any aircraft operation, meaning taxiing, landing, or takeoff in either direction on that pavement is prohibited. A displaced threshold, by contrast, is established to ensure obstacle clearance and adequate safety area for landing aircraft. The pavement prior to the displaced threshold is normally available for take-off in the direction of the displacement and for landing and takeoff in the opposite direction. Misunderstanding this difference, may result in issuance of an inaccurate NOTAM, and can lead to a hazardous condition.

2.7.1.1.1 Partially Closed Runways.

The temporarily closed portion of a partially closed runway will generally extend from the threshold to a taxiway that may be used for entering and exiting the runway. If the closed portion extends to a point between taxiways, pilots will have to back-taxi on the runway, which is an undesirable operation. See Figure 2-1 for a desirable configuration.

2.7.1.1.2 Displaced Thresholds.

Since the portion of the runway pavement between the permanent threshold and a standard displaced threshold is available for takeoff and for landing in the opposite direction, the temporary displaced threshold need not be located at an entrance/exit taxiway. See Figure 2-2.

2.7.1.2 Closing of aircraft rescue and fire fighting access routes.

2.7.1.3 Closing of access routes used by airport and airline support vehicles.

2.7.1.4 Interruption of utilities, including water supplies for fire fighting.

2.7.1.5 Approach/departure surfaces affected by heights of objects.

2.7.1.6 Construction areas, storage areas, and access routes near runways, taxiways, aprons, or helipads.

Figure 2-1. Temporary Partially Closed Runway

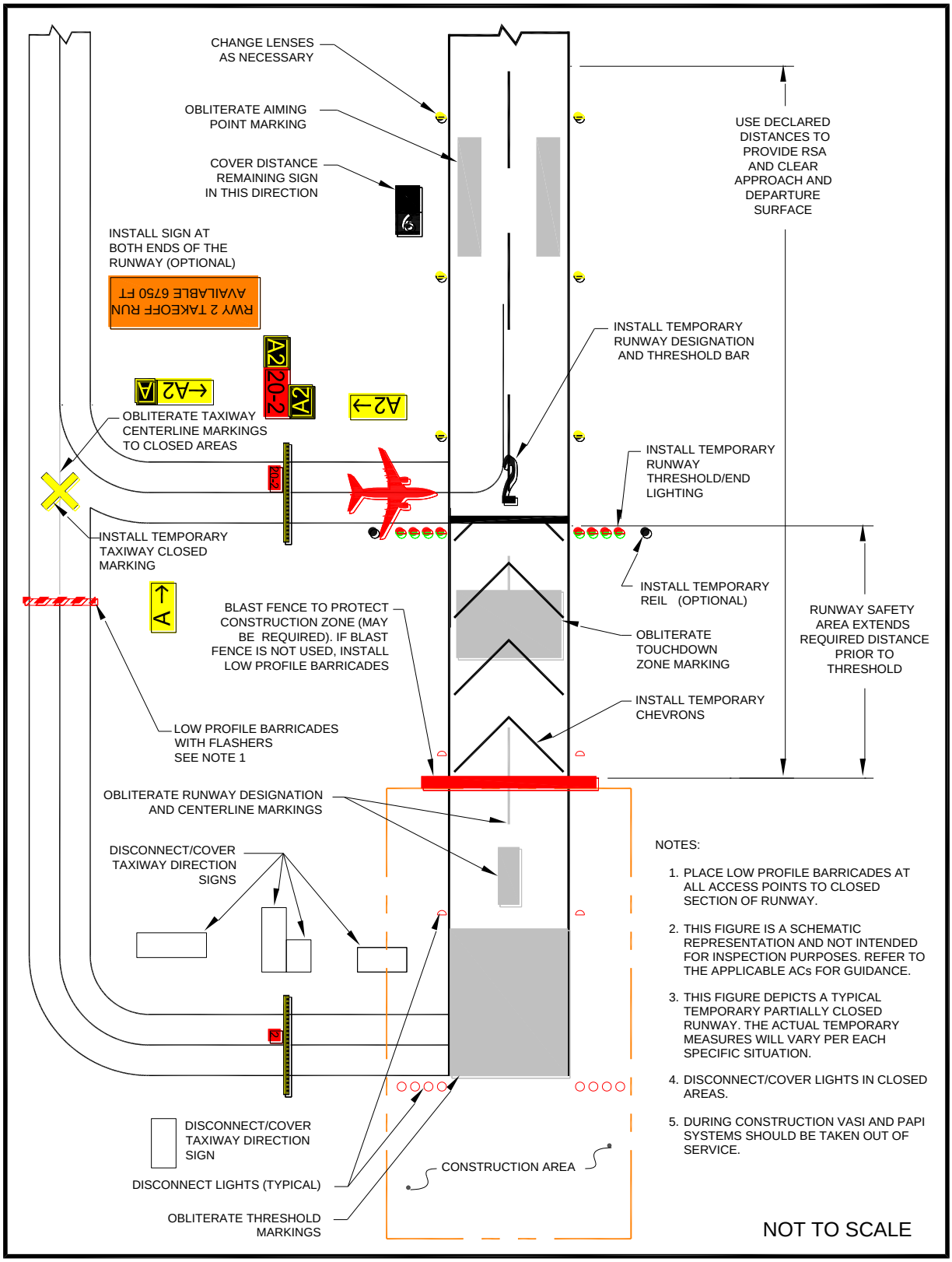
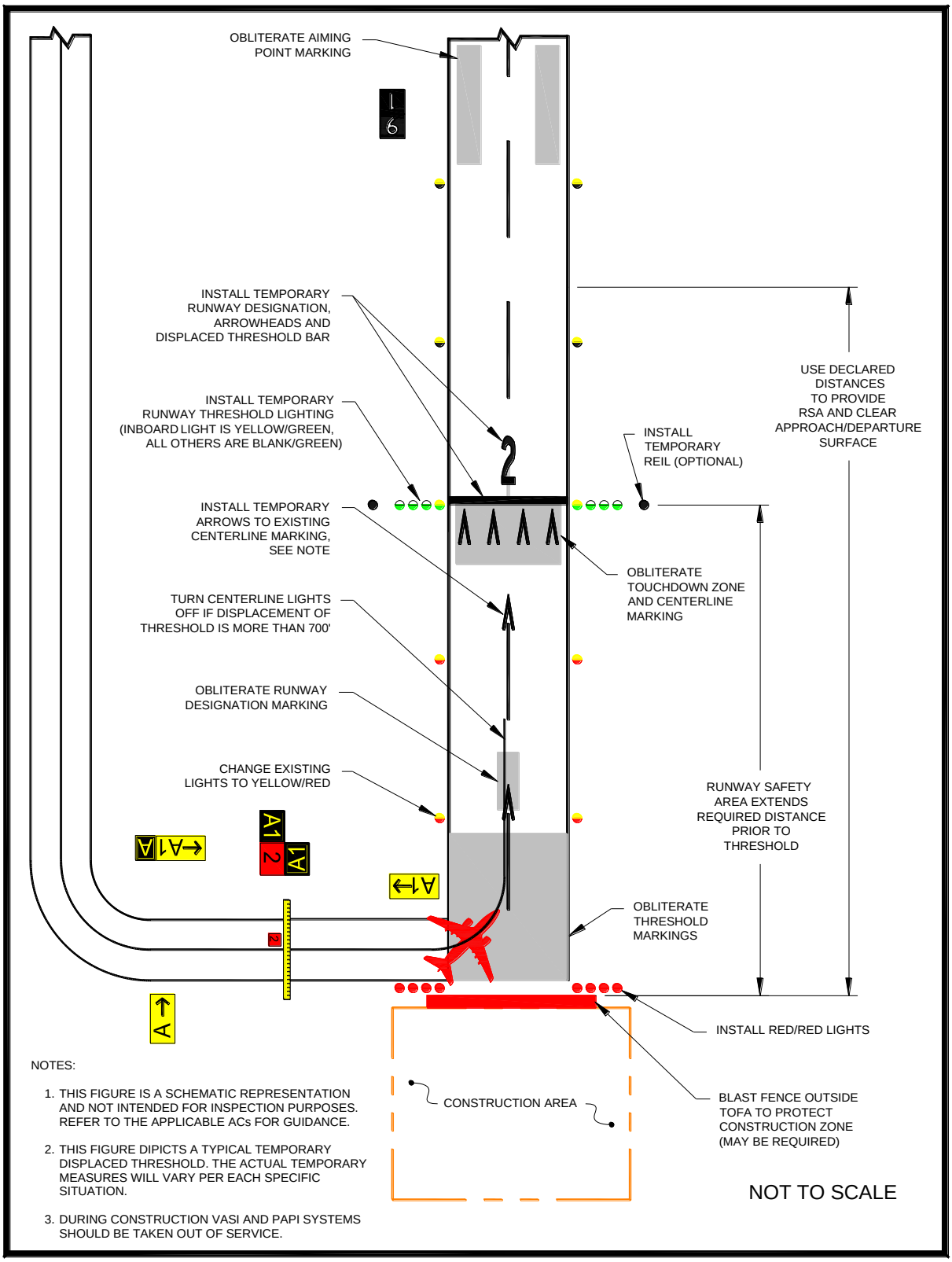


Figure 2-2. Temporary Displaced Threshold



Note: See paragraph 2.18.2.5.

2.7.2 Mitigation of Effects.

Establishment of specific procedures is necessary to maintain the safety and efficiency of airport operations. The CSPP must address:

2.7.2.1 Temporary changes to runway and/or taxi operations.

2.7.2.2 Detours for ARFF and other airport vehicles.

2.7.2.3 Maintenance of essential utilities.

2.7.2.4 Temporary changes to air traffic control procedures. Such changes must be coordinated with the ATO.

2.8 Navigation Aid (NAVAID) Protection.

Before commencing construction activity, parking vehicles, or storing construction equipment and materials near a NAVAID, coordinate with the appropriate FAA ATO/Technical Operations office to evaluate the effect of construction activity and the required distance and direction from the NAVAID. (See paragraph 2.13.5.3.) Construction activities, materials/equipment storage, and vehicle parking near electronic NAVAIDs require special consideration since they may interfere with signals essential to air navigation. If any NAVAID may be affected, the CSPP and SPCD must show an understanding of the "critical area" associated with each NAVAID and describe how it will be protected. Where applicable, the operational critical areas of NAVAIDs should be graphically delineated on the project drawings. Pay particular attention to stockpiling material, as well as to movement and parking of equipment that may interfere with line of sight from the ATCT or with electronic emissions. Interference from construction equipment and activities may require NAVAID shutdown or adjustment of instrument approach minimums for low visibility operations. This condition requires that a NOTAM be filed (see paragraph 2.13.2). Construction activities and materials/equipment storage near a NAVAID must not obstruct access to the equipment and instruments for maintenance. Submittal of a 7460-1 form is required for construction vehicles operating near FAA NAVAIDs. (See paragraph 2.13.5.3.)

2.9 Contractor Access.

The CSPP must detail the areas to which the contractor must have access, and explain how contractor personnel will access those areas. Specifically address:

2.9.1 Location of Stockpiled Construction Materials.

Stockpiled materials and equipment storage are not permitted within the RSA and OFZ, and if possible should not be permitted within the Object Free Area (OFA) of an operational runway. Stockpiling material in the OFA requires submittal of a 7460-1 form and justification provided to the appropriate FAA Airports Regional or District Office for approval. The airport operator must ensure that stockpiled materials and equipment adjacent to these areas are prominently marked and lighted during hours of restricted visibility or darkness. (See paragraph 2.18.2.) This includes determining and

verifying that materials are stabilized and stored at an approved location so as not to be a hazard to aircraft operations and to prevent attraction of wildlife and foreign object damage from blowing or tracked material. See paragraphs 2.10 and 2.11.

2.9.2 Vehicle and Pedestrian Operations.

The CSPP should include specific vehicle and pedestrian requirements. Vehicle and pedestrian access routes for airport construction projects must be controlled to prevent inadvertent or unauthorized entry of persons, vehicles, or animals onto the AOA. The airport operator should coordinate requirements for vehicle operations with airport tenants, contractors, and the FAA air traffic manager. In regard to vehicle and pedestrian operations, the CSPP should include the following, with associated training requirements:

2.9.2.1 **Construction Site Parking.**

Designate in advance vehicle parking areas for contractor employees to prevent any unauthorized entry of persons or vehicles onto the AOA. These areas should provide reasonable contractor employee access to the job site.

2.9.2.2 **Construction Equipment Parking.**

Contractor employees must park and service all construction vehicles in an area designated by the airport operator outside the OFZ and never in the safety area of an active runway or taxiway. Unless a complex setup procedure makes movement of specialized equipment infeasible, inactive equipment must not be parked on a closed taxiway or runway. If it is necessary to leave specialized equipment on a closed taxiway or runway at night, the equipment must be well lighted. Employees should also park construction vehicles outside the OFA when not in use by construction personnel (for example, overnight, on weekends, or during other periods when construction is not active). Parking areas must not obstruct the clear line of sight by the ATCT to any taxiways or runways under air traffic control nor obstruct any runway visual aids, signs, or navigation aids. The FAA must also study those areas to determine effects on airport design criteria, surfaces established by 14 CFR Part 77, Safe, Efficient Use, and Preservation of the Navigable Airspace (Part 77), and on NAVAIDs and Instrument Approach Procedures (IAP). See paragraph 2.13.1 for further information.

2.9.2.3 **Access and Haul Roads.**

Determine the construction contractor’s access to the construction sites and haul roads. Do not permit the construction contractor to use any access or haul roads other than those approved. Access routes used by contractor vehicles must be clearly marked to prevent inadvertent entry to areas open to airport operations. Pay special attention to ensure that if construction traffic is to share or cross any ARFF routes that ARFF right of way is not impeded at any time, and that construction traffic on haul

roads does not interfere with NAVAIDs or approach surfaces of operational runways. Address whether access gates will be blocked or inoperative or if a rally point will be blocked or inaccessible.

2.9.2.4 Marking and lighting of vehicles in accordance with AC 150/5210-5, *Painting, Marking, and Lighting of Vehicles Used on an Airport.*

2.9.2.5 Description of proper vehicle operations on various areas under normal, lost communications, and emergency conditions.

2.9.2.6 Required escorts.

2.9.2.7 **Training Requirements for Vehicle Drivers to Ensure Compliance with the Airport Operator's Vehicle Rules and Regulations.**

Specific training should be provided to vehicle operators, including those providing escorts. See AC 150/5210-20, *Ground Vehicle Operations on Airports*, for information on training and records maintenance requirements.

2.9.2.8 **Situational Awareness.**

Vehicle drivers must confirm by personal observation that no aircraft is approaching their position (either in the air or on the ground) when given clearance to cross a runway, taxiway, or any other area open to airport operations. In addition, it is the responsibility of the escort vehicle driver to verify the movement/position of all escorted vehicles at any given time. At non-towered airports, all aircraft movements and flight operations rely on aircraft operators to self-report their positions and intentions. However, there is no requirement for an aircraft to have radio communications. Because aircraft do not always broadcast their positions or intentions, visual checking, radio monitoring, and situational awareness of the surroundings is critical to safety.

2.9.2.9 **Two-Way Radio Communication Procedures.**

2.9.2.9.1 General.

The airport operator must ensure that tenant and construction contractor personnel engaged in activities involving unescorted operation on aircraft movement areas observe the proper procedures for communications, including using appropriate radio frequencies at airports with and without ATCT. When operating vehicles on or near open runways or taxiways, construction personnel must understand the critical importance of maintaining radio contact, as directed by the airport operator, with:

1. Airport operations
2. ATCT

3. Common Traffic Advisory Frequency (CTAF), which may include UNICOM, MULTICOM.
4. Automatic Terminal Information Service (ATIS). This frequency is useful for monitoring conditions on the airport. Local air traffic will broadcast information regarding construction related runway closures and "shortened" runways on the ATIS frequency.

2.9.2.9.2 Areas Requiring Two-Way Radio Communication with the ATCT.

Vehicular traffic crossing active movement areas must be controlled either by two-way radio with the ATCT, escort, flagman, signal light, or other means appropriate for the particular airport.

2.9.2.9.3 Frequencies to be Used.

The airport operator will specify the frequencies to be used by the contractor, which may include the CTAF for monitoring of aircraft operations. Frequencies may also be assigned by the airport operator for other communications, including any radio frequency in compliance with Federal Communications Commission requirements. At airports with an ATCT, the airport operator will specify the frequency assigned by the ATCT to be used between contractor vehicles and the ATCT.

2.9.2.9.4 Proper radio usage, including read back requirements.

2.9.2.9.5 Proper phraseology, including the International Phonetic Alphabet.

2.9.2.9.6 Light Gun Signals.

Even though radio communication is maintained, escort vehicle drivers must also familiarize themselves with ATCT light gun signals in the event of radio failure. See the FAA safety placard "Ground Vehicle Guide to Airport Signs and Markings." This safety placard may be downloaded through the Runway Safety Program Web site at http://www.faa.gov/airports/runway_safety/publications/ (see "Signs & Markings Vehicle Dashboard Sticker") or obtained from the FAA Airports Regional Office.

2.9.2.10 **Maintenance of the secured area of the airport, including:**

2.9.2.10.1 Fencing and Gates.

Airport operators and contractors must take care to maintain security during construction when access points are created in the security fencing to permit the passage of construction vehicles or personnel. Temporary gates should be equipped so they can be securely closed and locked to prevent access by animals and unauthorized people. Procedures should be in place to ensure that only authorized persons and vehicles have access to the AOA and to prohibit "piggybacking" behind another person or vehicle. The Department of Transportation (DOT) document DOT/FAA/AR-

00/52, *Recommended Security Guidelines for Airport Planning and Construction*, provides more specific information on fencing. A copy of this document can be obtained from the Airport Consultants Council, Airports Council International, or American Association of Airport Executives.

2.9.2.10.2 Badging Requirements.

Airports subject to 49 CFR Part 1542, *Airport Security*, must meet standards for access control, movement of ground vehicles, and identification of construction contractor and tenant personnel.

2.10 Wildlife Management.

The CSPP and SPCD must be in accordance with the airport operator's wildlife hazard management plan, if applicable. See AC 150/5200-33, *Hazardous Wildlife Attractants On or Near Airports*, and CertAlert 98-05, *Grasses Attractive to Hazardous Wildlife*. Construction contractors must carefully control and continuously remove waste or loose materials that might attract wildlife. Contractor personnel must be aware of and avoid construction activities that can create wildlife hazards on airports, such as:

2.10.1 Trash.

Food scraps must be collected from construction personnel activity.

2.10.2 Standing Water.

2.10.3 Tall Grass and Seeds.

Requirements for turf establishment can be at odds with requirements for wildlife control. Grass seed is attractive to birds. Lower quality seed mixtures can contain seeds of plants (such as clover) that attract larger wildlife. Seeding should comply with the guidance in AC 150/5370-10, *Standards for Specifying Construction of Airports*, Item T-901, Seeding. Contact the local office of the United Sates Department of Agriculture Soil Conservation Service or the State University Agricultural Extension Service (County Agent or equivalent) for assistance and recommendations. These agencies can also provide liming and fertilizer recommendations.

2.10.4 Poorly Maintained Fencing and Gates.

See paragraph 2.9.2.10.1.

2.10.5 Disruption of Existing Wildlife Habitat.

While this will frequently be unavoidable due to the nature of the project, the CSPP should specify under what circumstances (location, wildlife type) contractor personnel should immediately notify the airport operator of wildlife sightings.

2.11 Foreign Object Debris (FOD) Management.

Waste and loose materials, commonly referred to as FOD, are capable of causing damage to aircraft landing gears, propellers, and jet engines. Construction contractors must not leave or place FOD on or near active aircraft movement areas. Materials capable of creating FOD must be continuously removed during the construction project. Fencing (other than security fencing) or covers may be necessary to contain material that can be carried by wind into areas where aircraft operate. See AC 150/5210-24, *Foreign Object Debris (FOD) Management.*

2.12 Hazardous Materials (HAZMAT) Management.

Contractors operating construction vehicles and equipment on the airport must be prepared to expeditiously contain and clean-up spills resulting from fuel or hydraulic fluid leaks. Transport and handling of other hazardous materials on an airport also requires special procedures. See AC 150/5320-15, *Management of Airport Industrial Waste.*

2.13 Notification of Construction Activities.

The CSPP and SPCD must detail procedures for the immediate notification of airport users and the FAA of any conditions adversely affecting the operational safety of the airport. It must address the notification actions described below, as applicable.

2.13.1 List of Responsible Representatives/points of contact for all involved parties, and procedures for contacting each of them, including after hours.

2.13.2 NOTAMs.

Only the airport operator may initiate or cancel NOTAMs on airport conditions, and is the only entity that can close or open a runway. The airport operator must coordinate the issuance, maintenance, and cancellation of NOTAMs about airport conditions resulting from construction activities with tenants and the local air traffic facility (control tower, approach control, or air traffic control center), and must either enter the NOTAM into NOTAM Manager, or provide information on closed or hazardous conditions on airport movement areas to the FAA Flight Service Station (FSS) so it can issue a NOTAM. The airport operator must file and maintain a list of authorized representatives with the FSS. Refer to AC 150/5200-28, *Notices to Airmen (NOTAMs) for Airport Operators,* for a sample NOTAM form. Only the FAA may issue or cancel NOTAMs on shutdown or irregular operation of FAA owned facilities. Any person having reason to believe that a NOTAM is missing, incomplete, or inaccurate must notify the airport operator. See paragraph 2.7.1.1 about issuing NOTAMs for partially closed runways versus runways with displaced thresholds.

2.13.3 Emergency notification procedures for medical, fire fighting, and police response.

2.13.4 Coordination with ARFF.

The CSPP must detail procedures for coordinating through the airport sponsor with ARFF personnel, mutual aid providers, and other emergency services if construction requires:

1. The deactivation and subsequent reactivation of water lines or fire hydrants, or
2. The rerouting, blocking and restoration of emergency access routes, or
3. The use of hazardous materials on the airfield.

2.13.5 Notification to the FAA.

2.13.5.1 **Part 77.**

Any person proposing construction or alteration of objects that affect navigable airspace, as defined in Part 77, must notify the FAA. This includes construction equipment and proposed parking areas for this equipment (i.e., cranes, graders, other equipment) on airports. FAA Form 7460-1, *Notice of Proposed Construction or Alteration*, can be used for this purpose and submitted to the appropriate FAA Airports Regional or District Office. See Appendix A to download the form. Further guidance is available on the FAA web site at oeaaa.faa.gov.

2.13.5.2 **Part 157.**

With some exceptions, Title 14 CFR Part 157, *Notice of Construction, Alteration, Activation, and Deactivation of Airports*, requires that the airport operator notify the FAA in writing whenever a non-Federally funded project involves the construction of a new airport; the construction, realigning, altering, activating, or abandoning of a runway, landing strip, or associated taxiway; or the deactivation or abandoning of an entire airport. Notification involves submitting FAA Form 7480-1, *Notice of Landing Area Proposal*, to the nearest FAA Airports Regional or District Office. See Appendix A to download the form.

2.13.5.3 **NAVAIDs.**

For emergency (short-notice) notification about impacts to both airport owned and FAA owned NAVAIDs, contact: 866-432-2622.

2.13.5.3.1 Airport Owned/FAA Maintained.

If construction operations require a shutdown of 24 hours or greater in duration, or more than 4 hours daily on consecutive days, of a NAVAID owned by the airport but maintained by the FAA, provide a 45-day minimum notice to FAA ATO/Technical Operations prior to facility shutdown, using Strategic Event Coordination (SEC) Form 6000.26 contained within FAA Order 6000.15, *General Maintenance Handbook for National Airspace System (NAS) Facilities*.

2.13.5.3.2 FAA Owned.

1. The airport operator must notify the appropriate FAA ATO Service Area Planning and Requirements (P&R) Group a minimum of 45 days prior to implementing an event that causes impacts to NAVAIDs, using SEC Form 6000.26.
2. Coordinate work for an FAA owned NAVAID shutdown with the local FAA ATO/Technical Operations office, including any necessary reimbursable agreements and flight checks. Detail procedures that address unanticipated utility outages and cable cuts that could impact FAA NAVAIDs. Refer to active Service Level Agreement with ATO for specifics.

2.14 Inspection Requirements.

2.14.1 Daily Inspections.

Inspections should be conducted at least daily, but more frequently if necessary to ensure conformance with the CSPP. A sample checklist is provided in Appendix D, Construction Project Daily Safety Inspection Checklist. See also AC 150/5200-18, *Airport Safety Self-Inspection.* Airport operators holding a Part 139 certificate are required to conduct self-inspections during unusual conditions, such as construction activities, that may affect safe air carrier operations.

2.14.2 Interim Inspections.

Inspections should be conducted of all areas to be (re)opened to aircraft traffic to ensure the proper operation of lights and signs, for correct markings, and absence of FOD. The contractor should conduct an inspection of the work area with airport operations personnel. The contractor should ensure that all construction materials have been secured, all pavement surfaces have been swept clean, all transition ramps have been properly constructed, and that surfaces have been appropriately marked for aircraft to operate safely. Only if all items on the list meet with the airport operator's approval should the air traffic control tower be notified to open the area to aircraft operations. The contractor should be required to retain a suitable workforce and the necessary equipment at the work area for any last minute cleanup that may be requested by the airport operator prior to opening the area.

2.14.3 Final Inspections.

New runways and extended runway closures may require safety inspections at certificated airports prior to allowing air carrier service. Coordinate with the FAA Airport Certification Safety Inspector (ACSI) to determine if a final inspection will be necessary.

2.15 Underground Utilities.

The CSPP and/or SPCD must include procedures for locating and protecting existing underground utilities, cables, wires, pipelines, and other underground facilities in excavation areas. This may involve coordinating with public utilities and FAA ATO/Technical Operations. Note that "One Call" or "Miss Utility" services do not include FAA ATO/Technical Operations.

2.16 Penalties.

The CSPP should detail penalty provisions for noncompliance with airport rules and regulations and the safety plans (for example, if a vehicle is involved in a runway incursion). Such penalties typically include rescission of driving privileges or access to the AOA.

2.17 Special Conditions.

The CSPP must detail any special conditions that affect the operation of the airport and will require the activation of any special procedures (for example, low-visibility operations, snow removal, aircraft in distress, aircraft accident, security breach, Vehicle / Pedestrian Deviation (VPD) and other activities requiring construction suspension/resumption).

2.18 Runway and Taxiway Visual Aids.

This includes marking, lighting, signs, and visual NAVAIDs. The CSPP must ensure that areas where aircraft will be operating are clearly and visibly separated from construction areas, including closed runways. Throughout the duration of the construction project, verify that these areas remain clearly marked and visible at all times and that marking, lighting, signs, and visual NAVAIDs that are to continue to perform their functions during construction remain in place and operational. Visual NAVAIDs that are not serving their intended function during construction must be temporarily disabled, covered, or modified as necessary. The CSPP must address the following, as appropriate:

2.18.1 General.

Airport markings, lighting, signs, and visual NAVAIDs must be clearly visible to pilots, not misleading, confusing, or deceptive. All must be secured in place to prevent movement by prop wash, jet blast, wing vortices, and other wind currents and constructed of materials that will minimize damage to an aircraft in the event of inadvertent contact. Items used to secure such markings must be of a color similar to the marking.

2.18.2 Markings.

During the course of construction projects, temporary pavement markings are often required to allow for aircraft operations during or between work periods. During the design phase of the project, the designer should coordinate with the project manager,

airport operations, airport users, the FAA Airports project manager, and Airport Certification Safety Inspector for Part 139 airports to determine minimum temporary markings. The FAA Airports project manager will, wherever a runway is closed, coordinate with the appropriate FAA Flight Standards Office and disseminate findings to all parties. Where possible, the temporary markings on finish grade pavements should be placed to mirror the dimensions of the final markings. Markings must be in compliance with the standards of AC 150/5340-1, *Standards for Airport Markings*, except as noted herein. Runways and runway exit taxiways closed to aircraft operations are marked with a yellow X. The preferred visual aid to depict temporary runway closure is the lighted X signal placed on or near the runway designation numbers. (See paragraph 2.18.2.1.2.)

2.18.2.1 **Closed Runways and Taxiways.**

2.18.2.1.1 Permanently Closed Runways.

For runways, obliterate the threshold marking, runway designation marking, and touchdown zone markings, and place an X at each end and at 1,000-foot (300 m) intervals. For a multiple runway environment, if the lighted X on a designated number will be located in the RSA of an adjacent active runway, locate the lighted X farther down the closed runway to clear the RSA of the active runway. In addition, the closed runway numbers located in the RSA of an active runway must be marked with a flat yellow X.

2.18.2.1.2 Temporarily Closed Runways.

For runways that have been temporarily closed, place an X at each end of the runway directly on or as near as practicable to the runway designation numbers. For a multiple runway environment, if the lighted X on a designated number will be located in the RSA of an adjacent active runway, locate the lighted X farther down the closed runway to clear the RSA of the active runway. In addition, the closed runway numbers located in the RSA of an active runway must be marked with a flat yellow X. See Figure 2-3. See also paragraph 2.18.3.3.

2.18.2.1.3 Partially Closed Runways and Displaced Thresholds.

When threshold markings are needed to identify the temporary beginning of the runway that is available for landing, the markings must comply with AC 150/5340-1. An X is not used on a partially closed runway or a runway with a displaced threshold. See paragraph 2.7.1.1 for the difference between partially closed runways and runways with displaced thresholds. Because of the temporary nature of threshold displacement due to construction, it is not necessary to re-adjust the existing runway centerline markings to meet standard spacing for a runway with a visual approach. Some of the requirements below may be waived in the cases of low-activity airports and/or short duration changes that are measured in days rather than weeks. Consider whether the presence of an airport traffic

control tower allows for the development of special procedures. Contact the appropriate FAA Airports Regional or District Office for assistance.

Figure 2-3. Markings for a Temporarily Closed Runway

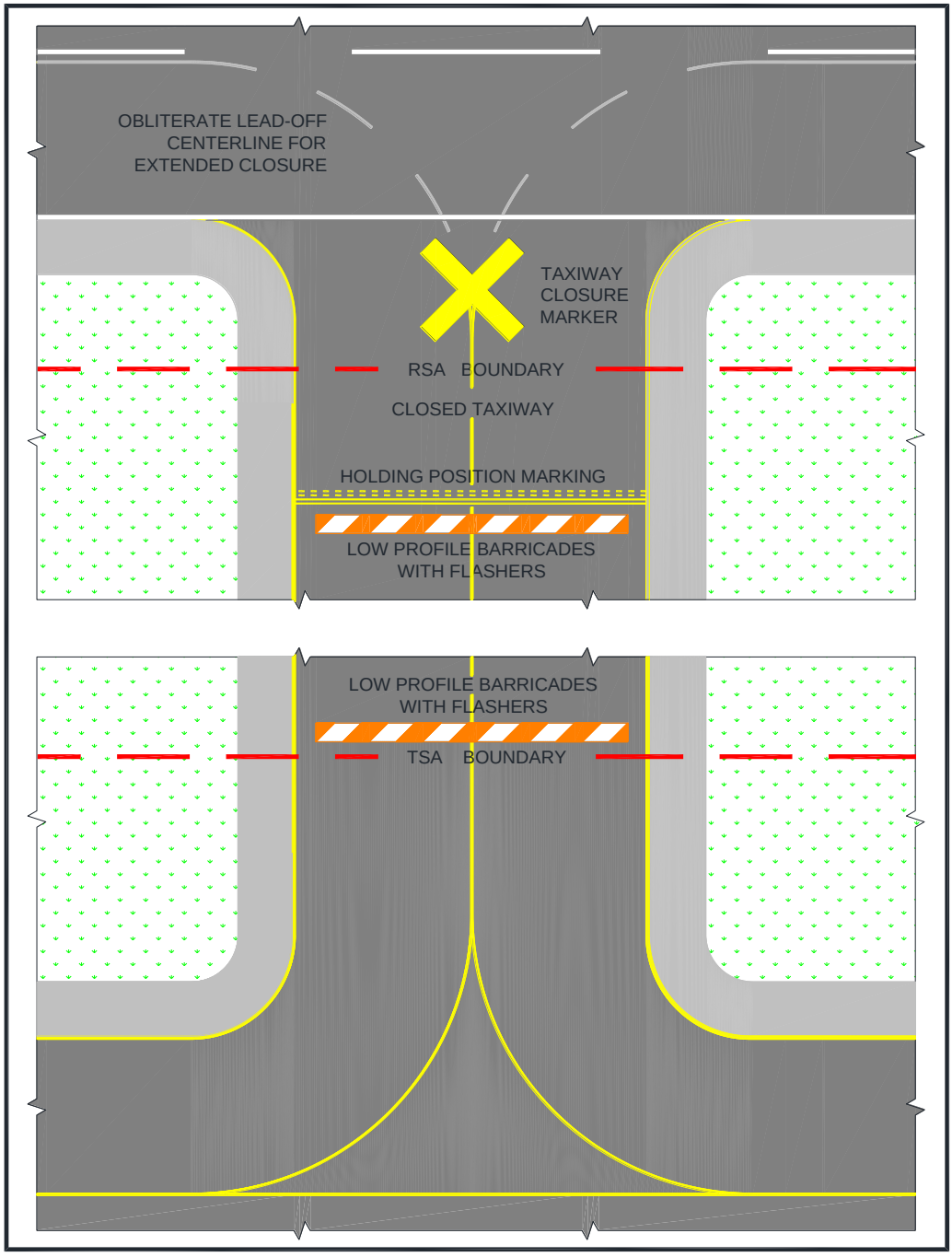
1. **Partially Closed Runways.** Pavement markings for temporary closed portions of the runway consist of a runway threshold bar, runway designation, and yellow chevrons to identify pavement areas that are unsuitable for takeoff or landing (see AC 150/5340-1). Obliterate or cover markings prior to the moved threshold. Existing touchdown zone markings beyond the moved threshold may remain in place. Obliterate aiming point markings. Issue appropriate NOTAMs regarding any nonstandard markings. See Figure 2-4.

2. **Displaced Thresholds.** Pavement markings for a displaced threshold consist of a runway threshold bar, runway designation, and white arrowheads with and without arrow shafts. These markings are required to identify the portion of the runway before the displaced threshold to provide centerline guidance for pilots during approaches, takeoffs, and landing rollouts from the opposite direction. See AC 150/5340-1. Obliterate markings prior to the displaced threshold. Existing touchdown zone markings beyond the displaced threshold may remain in place. Obliterate aiming point markings. Issue appropriate NOTAMs regarding any nonstandard markings. See Figure 2-2.

2.18.2.1.4 Taxiways.

1. **Permanently Closed Taxiways.** AC 150/5300-13 *Airport Design*, notes that it is preferable to remove the pavement, but for pavement that is to remain, place an X at the entrance to both ends of the closed section. Obliterate taxiway centerline markings, including runway leadoff lines, leading to the closed taxiway. See Figure 2-4.

Figure 2-4. Temporary Taxiway Closure



2. **Temporarily Closed Taxiways.** Place barricades outside the safety area of intersecting taxiways. For runway/taxiway intersections, place an X at the entrance to the closed taxiway from the runway. If the taxiway will be closed for an extended period, obliterate taxiway centerline markings, including runway leadoff lines and taxiway to taxiway turns, leading to the closed section. Always obliterate runway lead-off lines for high speed exits, regardless of the duration of the closure. If the centerline markings will be reused upon reopening the taxiway, it is preferable to paint over the marking. This will result in less damage to the pavement when the upper layer of paint is ultimately removed. See Figure 2-4.

2.18.2.1.5 Temporarily Closed Airport.

When the airport is closed temporarily, mark all the runways as closed.

2.18.2.2 If unable to paint temporary markings on the pavement, construct them from any of the following materials: fabric, colored plastic, painted sheets of plywood, or similar materials. They must be properly configured and appropriately secured to prevent movement by prop wash, jet blast, or other wind currents. Items used to secure such markings must be of a color similar to the marking.

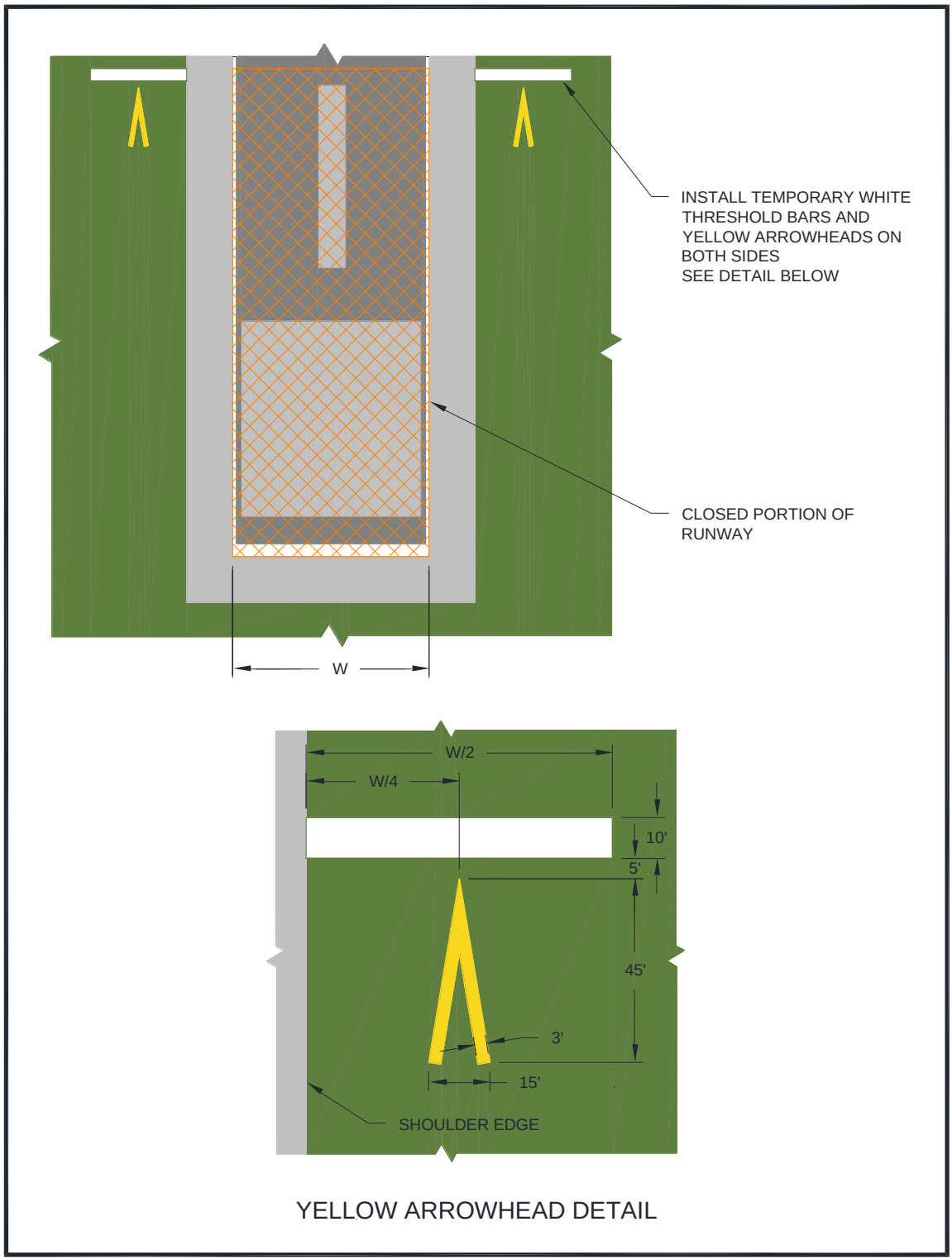
2.18.2.3 It may be necessary to remove or cover runway markings, including but not limited to, runway designation markings, threshold markings, centerline markings, edge stripes, touchdown zone markings and aiming point markings, depending on the length of construction and type of activity at the airport. When removing runway markings, apply the same treatment to areas between stripes or numbers, as the cleaned area will appear to pilots as a marking in the shape of the treated area.

2.18.2.4 If it is not possible to install threshold bars, chevrons, and arrows on the pavement, “temporary outboard white threshold bars and yellow arrowheads”, see Figure 2-5, may be used. Locate them outside of the runway pavement surface on both sides of the runway. The dimensions must be as shown in Figure 2-5. If the markings are not discernible on grass or snow, apply a black background with appropriate material over the ground to ensure they are clearly visible.

2.18.2.5 The application rate of paint to mark a short-term temporary runway and taxiway markings may deviate from the standard (see Item P-620, “Runway and Taxiway Painting,” in AC 150/5370-10), but the dimensions must meet the existing standards. When applying temporary markings at night, it is recommended that the fast curing, Type II paint be used to help offset the higher humidity and cooler temperatures often experienced at night. Diluting the paint will substantially increase cure time and is not recommended. Glass beads are not recommended for temporary markings. Striated markings may also be used for certain temporary markings. AC

150/5340-1, *Standards for Airport Markings*, has additional guidance on temporary markings.

Figure 2-5. Temporary Outboard White Threshold Bars and Yellow Arrowheads



2.18.3 Lighting and Visual NAVAIDs.

This paragraph refers to standard runway and taxiway lighting systems. See below for hazard lighting. Lighting installation must be in conformance with AC 150/5340-30, *Design and Installation Details for Airport Visual Aids*, and fixture design in conformance with AC 150/5345-50, *Specification for Portable Runway and Taxiway Lights.* When disconnecting runway and taxiway lighting fixtures, disconnect the associated isolation transformers. See AC 150/5340-26, *Maintenance of Airport Visual Aid Facilities*, for disconnect procedures and safety precautions. Alternately, cover the light fixture in such a way as to prevent light leakage. Avoid removing the lamp from energized fixtures because an excessive number of isolation transformers with open secondaries may damage the regulators and/or increase the current above its normal value. Secure, identify, and place any above ground temporary wiring in conduit to prevent electrocution and fire ignition sources. Maintain mandatory hold signs to operate normally in any situation where pilots or vehicle drivers could mistakenly be in that location. At towered airports certificated under Part 139, holding position signs are required to be illuminated on open taxiways crossing to closed or inactive runways. If the holding position sign is installed on the runway circuit for the closed runway, install a jumper to the taxiway circuit to provide power to the holding position sign for nighttime operations. Where it is not possible to maintain power to signs that would normally be operational, install barricades to exclude aircraft. Figure 2-1, Figure 2-2, Figure 2-3, and Figure 2-4 illustrate temporary changes to lighting and visual NAVAIDs.

2.18.3.1 **Permanently Closed Runways and Taxiways.**

For runways and taxiways that have been permanently closed, disconnect the lighting circuits.

2.18.3.2 **Temporarily Closed Runways and New Runways Not Yet Open to Air Traffic.**

If available, use a lighted X, both at night and during the day, placed at each end of the runway on or near the runway designation numbers facing the approach. (Note that the lighted X must be illuminated at all times that it is on a runway.) The use of a lighted X is required if night work requires runway lighting to be on. See AC 150/5345-55, *Specification for L-893, Lighted Visual Aid to Indicate Temporary Runway Closure.* For runways that have been temporarily closed, but for an extended period, and for those with pilot controlled lighting, disconnect the lighting circuits or secure switches to prevent inadvertent activation. For runways that will be opened periodically, coordinate procedures with the FAA air traffic manager or, at airports without an ATCT, the airport operator. Activate stop bars if available. Figure 2-6 shows a lighted X by day. Figure 2-7 shows a lighted X at night.

Figure 2-6. Lighted X in Daytime

Figure 2-7. Lighted X at Night

2.18.3.3 **Partially Closed Runways and Displaced Thresholds.**

When a runway is partially closed, a portion of the pavement is unavailable for any aircraft operation, meaning taxiing and landing or taking off in either direction. A displaced threshold, by contrast, is put in place to ensure obstacle clearance by landing aircraft. The pavement prior to the displaced threshold is available for takeoff in the direction of the displacement, and for landing and takeoff in the opposite direction. Misunderstanding this difference and issuance of a subsequently inaccurate NOTAM can result in a hazardous situation. For both partially

closed runways and displaced thresholds, approach lighting systems at the affected end must be placed out of service.

2.18.3.3.1 Partially Closed Runways.

Disconnect edge and threshold lights on that part of the runway at and behind the threshold (that is, the portion of the runway that is closed). Alternately, cover the light fixtures in such a way as to prevent light leakage. See Figure 2-1.

2.18.3.3.2 Temporary Displaced Thresholds.

Edge lighting in the area of the displacement emits red light in the direction of approach and yellow light (white for visual runways) in the opposite direction. If the displacement is 700 feet or less, blank out centerline lights in the direction of approach or place the centerline lights out of service. If the displacement is over 700 feet, place the centerline lights out of service. See AC 150/5340-30 for details on lighting displaced thresholds. See Figure 2-2.

2.18.3.3.3 Temporary runway thresholds and runway ends must be lighted if the runway is lighted and it is the intended threshold for night landings or instrument meteorological conditions.

2.18.3.3.4 A temporary threshold on an unlighted runway may be marked by retroreflective, elevated markers in addition to markings noted in paragraph 2.18.2.1.3. Markers seen by aircraft on approach are green. Markers at the rollout end of the runway are red. At certificated airports, temporary elevated threshold markers must be mounted with a frangible fitting (see 14 CFR Part 139.309). At non-certificated airports, the temporary elevated threshold markings may either be mounted with a frangible fitting or be flexible. See AC 150/5345-39, *Specification for L-853, Runway and Taxiway Retroreflective Markers.*

2.18.3.3.5 Temporary threshold lights and runway end lights and related visual NAVAIDs are installed outboard of the edges of the full-strength pavement only when they cannot be installed on the pavement. They are installed with bases at grade level or as low as possible, but not more than 3 inch (7.6 cm) above ground. (The standard above ground height for airport lighting fixtures is 14 inches (35 cm)). When any portion of a base is above grade, place properly compacted fill around the base to minimize the rate of gradient change so aircraft can, in an emergency, cross at normal landing or takeoff speeds without incurring significant damage. See AC 150/5370-10.

2.18.3.3.6 Maintain threshold and edge lighting color and spacing standards as described in AC 150/5340-30. Battery powered, solar, or portable lights that meet the criteria in AC 150/5345-50 may be used. These systems are intended primarily for visual flight rules (VFR) aircraft operations but may

be used for instrument flight rules (IFR) aircraft operations, upon individual approval from the Flight Standards Division of the applicable FAA Regional Office.

2.18.3.3.7 When runway thresholds are temporarily displaced, reconfigure yellow lenses (caution zone), as necessary, and place the centerline lights out of service.

2.18.3.3.8 Relocate the Visual Glide Slope Indicator (VGSI), such as Visual Approach Slope Indicator (VASI) and Precision Approach Path Indicator (PAPI); other airport lights, such as Runway End Identifier Lights (REIL); and approach lights to identify the temporary threshold. Another option is to disable the VGSI or any equipment that would give misleading indications to pilots as to the new threshold location. Installation of temporary visual aids may be necessary to provide adequate guidance to pilots on approach to the affected runway. If the FAA owns and operates the VGSI, coordinate its installation or disabling with the local ATO/Technical Operations Office. Relocation of such visual aids will depend on the duration of the project and the benefits gained from the relocation, as this can result in great expense. See FAA JO 6850.2, *Visual Guidance Lighting Systems*, for installation criteria for FAA owned and operated NAVAIDs.

2.18.3.3.9 Issue a NOTAM to inform pilots of temporary lighting conditions.

2.18.3.4 **Temporarily Closed Taxiways.**

If possible, deactivate the taxiway lighting circuits. When deactivation is not possible (for example other taxiways on the same circuit are to remain open), cover the light fixture in a way as to prevent light leakage.

2.18.4 Signs.

To the extent possible, signs must be in conformance with AC 150/5345-44, *Specification for Runway and Taxiway Signs*, and AC 150/5340-18, *Standard for Airport Sign Systems.*

2.18.4.1 **Existing Signs.**

Runway exit signs are to be covered for closed runway exits. Outbound destination signs are to be covered for closed runways. Any time a sign does not serve its normal function or would provide conflicting information, it must be covered or removed to prevent misdirecting pilots. Note that information signs identifying a crossing taxiway continue to perform their normal function even if the crossing taxiway is closed. For long term construction projects, consider relocating signs, especially runway distance remaining signs.

2.18.4.2 **Temporary Signs.**

Orange construction signs comprise a message in black on an orange background. Orange construction signs may help pilots be aware of changed conditions. The airport operator may choose to introduce these signs as part of a movement area construction project to increase situational awareness when needed. Locate signs outside the taxiway safety limits and ahead of construction areas so pilots can take timely action. Use temporary signs judiciously, striking a balance between the need for information and the increase in pilot workload. When there is a concern of pilot "information overload," the applicability of mandatory hold signs must take precedence over orange construction signs recommended during construction. Temporary signs must meet the standards for such signs in Engineering Brief 93, *Guidance for the Assembly and Installation of Temporary Orange Construction Signs*. Many criteria in AC 150/5345-44, *Specification for Runway and Taxiway Signs*, are referenced in the Engineering Brief. Permissible sign legends are:

1. CONSTRUCTION AHEAD,
2. CONSTRUCTION ON RAMP, and
3. RWY XX TAKEOFF RUN AVAILABLE XXX FT.

Phasing, supported by drawings and sign schedule, for the installation of orange construction signs must be included in the CSPP or SPCD.

2.18.4.2.1 Takeoff Run Available (TORA) signs.

Recommended: Where a runway has been shortened for takeoff, install orange TORA signs well before the hold lines, such as on a parallel taxiway prior to a turn to a runway hold position. See EB 93 for sign size and location.

2.18.4.2.2 Sign legends are shown in Figure F-1.

Note: See Figure E-1, Figure E-2, Figure E-3, Figure F-2, and Figure F-3 for examples of orange construction sign locations.

2.19 Marking and Signs for Access Routes.

The CSPP should indicate that pavement markings and signs for construction personnel will conform to AC 150/5340-18 and, to the extent practicable, with the Federal Highway Administration Manual on Uniform Traffic Control Devices (MUTCD) and/or State highway specifications. Signs adjacent to areas used by aircraft must comply with the frangibility requirements of AC 150/5220-23, *Frangible Connections*, which may require modification to size and height guidance in the MUTCD.

2.20 Hazard Marking, Lighting and Signing.

2.20.1 Hazard marking, lighting, and signing prevent pilots from entering areas closed to aircraft, and prevent construction personnel from entering areas open to aircraft. The CSPP must specify prominent, comprehensible warning indicators for any area affected by construction that is normally accessible to aircraft, personnel, or vehicles. Hazard marking and lighting must also be specified to identify open manholes, small areas under repair, stockpiled material, waste areas, and areas subject to jet blast. Also consider less obvious construction-related hazards and include markings to identify FAA, airport, and National Weather Service facilities cables and power lines; instrument landing system (ILS) critical areas; airport surfaces, such as RSA, OFA, and OFZ; and other sensitive areas to make it easier for contractor personnel to avoid these areas.

2.20.2 Equipment.

2.20.2.1 **Barricades.**

Low profile barricades, including traffic cones, (weighted or sturdily attached to the surface) are acceptable methods used to identify and define the limits of construction and hazardous areas on airports. Careful consideration must be given to selecting equipment that poses the least danger to aircraft but is sturdy enough to remain in place when subjected to typical winds, prop wash and jet blast. The spacing of barricades must be such that a breach is physically prevented barring a deliberate act. For example, if barricades are intended to exclude aircraft, gaps between barricades must be smaller than the wingspan of the smallest aircraft to be excluded; if barricades are intended to exclude vehicles, gaps between barricades must be smaller than the width of the excluded vehicles, generally 4 feet (1.2 meters). Provision must be made for ARFF access if necessary. If barricades are intended to exclude pedestrians, they must be continuously linked. Continuous linking may be accomplished through the use of ropes, securely attached to prevent FOD.

2.20.2.2 **Lights.**

Lights must be red, either steady burning or flashing, and must meet the luminance requirements of the State Highway Department. Batteries powering lights will last longer if lights flash. Lights must be mounted on barricades and spaced at no more than 10 feet (3 meters). Lights must be operated between sunset and sunrise and during periods of low visibility whenever the airport is open for operations. They may be operated by photocell, but this may require that the contractor turn them on manually during periods of low visibility during daytime hours.

2.20.2.3 **Supplement Barricades with Signs (for example) As Necessary.**

Examples are “No Entry” and “No Vehicles.” Be aware of the increased effects of wind and jet blast on barricades with attached signs.

2.20.2.4 **Air Operations Area – General.**

Barricades are not permitted in any active safety area or on the runway side of a runway hold line. Within a runway or taxiway object free area, and on aprons, use orange traffic cones, flashing or steady burning red lights as noted above, highly reflective collapsible barricades marked with diagonal, alternating orange and white stripes; and/or signs to separate all construction/maintenance areas from the movement area. Barricades may be supplemented with alternating orange and white flags at least 20 by 20 inch (50 by 50 cm) square and securely fastened to eliminate FOD. All barricades adjacent to any open runway or taxiway / taxilane safety area, or apron must be as low as possible to the ground, and no more than 18 inches high, exclusive of supplementary lights and flags. Barricades must be of low mass; easily collapsible upon contact with an aircraft or any of its components; and weighted or sturdily attached to the surface to prevent displacement from prop wash, jet blast, wing vortex, and other surface wind currents. If affixed to the surface, they must be frangible at grade level or as low as possible, but not to exceed 3 inch (7.6 cm) above the ground. Figure 2-8 and Figure 2-9 show sample barricades with proper coloring and flags.

Figure 2-8. Interlocking Barricades

Figure 2-9. Low Profile Barricades

2.20.2.5 **Air Operations Area – Runway/Taxiway Intersections.**

Use highly reflective barricades with lights to close taxiways leading to closed runways. Evaluate all operating factors when determining how to mark temporary closures that can last from 10 to 15 minutes to a much longer period of time. However, even for closures of relatively short duration, close all taxiway/runway intersections with barricades. The use of traffic cones is appropriate for short duration closures.

2.20.2.6 **Air Operations Area – Other.**

Beyond runway and taxiway object free areas and aprons, barricades intended for construction vehicles and personnel may be many different shapes and made from various materials, including railroad ties, sawhorses, jersey barriers, or barrels.

2.20.2.7 **Maintenance.**

The construction specifications must include a provision requiring the contractor to have a person on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades. The contractor must file the contact person's information with the airport operator. Lighting should be checked for proper operation at least once per day, preferably at dusk.

2.21 Work Zone Lighting for Nighttime Construction.

Lighting equipment must adequately illuminate the work area if the construction is to be performed during nighttime hours. Refer to AC 150/5370-10 for minimum illumination levels for nighttime paving projects. Additionally, it is recommended that all support equipment, except haul trucks, be equipped with artificial illumination to safely

illuminate the area immediately surrounding their work areas. The lights should be positioned to provide the most natural color illumination and contrast with a minimum of shadows. The spacing must be determined by trial. Light towers should be positioned and adjusted to aim away from ATCT cabs and active runways to prevent blinding effects. Shielding may be necessary. Light towers should be removed from the construction site when the area is reopened to aircraft operations. Construction lighting units should be identified and generally located on the construction phasing plans in relationship to the ATCT and active runways and taxiways.

2.22 Protection of Runway and Taxiway Safety Areas.

Runway and taxiway safety areas, OFZs, OFAs, and approach surfaces are described in AC 150/5300-13. Protection of these areas includes limitations on the location and height of equipment and stockpiled material. An FAA airspace study may be required. Coordinate with the appropriate FAA Airports Regional or District Office if there is any doubt as to requirements or dimensions (see paragraph 2.13.5) as soon as the location and height of materials or equipment are known. The CSPP should include drawings showing all safety areas, object free areas, obstacle free zones and approach departure surfaces affected by construction.

2.22.1 Runway Safety Area (RSA).

A runway safety area is the defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway (see AC 150/5300-13). Construction activities within the existing RSA are subject to the following conditions:

2.22.1.1 No construction may occur within the existing RSA while the runway is open for aircraft operations. The RSA dimensions may be temporarily adjusted if the runway is restricted to aircraft operations requiring an RSA that is equal to the RSA width and length beyond the runway ends available during construction. (See AC 150/5300-13). The temporary use of declared distances and/or partial runway closures may provide the necessary RSA under certain circumstances. Coordinate with the appropriate FAA Airports Regional or District Office to have declared distances information published, and appropriate NOTAMs issued. See AC 150/5300-13 for guidance on the use of declared distances.

2.22.1.2 The airport operator must coordinate the adjustment of RSA dimensions as permitted above with the appropriate FAA Airports Regional or District Office and the local FAA air traffic manager and issue a NOTAM.

2.22.1.3 The CSPP and SPCD must provide procedures for ensuring adequate distance for protection from blasting operations, if required by operational considerations.

2.22.1.4 **Excavations.**

2.22.1.4.1 Open trenches or excavations are not permitted within the RSA while the runway is open. Backfill trenches before the runway is opened. If backfilling excavations before the runway must be opened is impracticable, cover the excavations appropriately. Covering for open trenches must be designed to allow the safe operation of the heaviest aircraft operating on the runway across the trench without damage to the aircraft.

2.22.1.4.2 Construction contractors must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by the airport operator, and light them with red lights during hours of restricted visibility or darkness.

2.22.1.5 **Erosion Control.**

Soil erosion must be controlled to maintain RSA standards, that is, the RSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting snow removal equipment, aircraft rescue and fire fighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft.

2.22.2 Runway Object Free Area (ROFA).

Construction, including excavations, may be permitted in the ROFA. However, equipment must be removed from the ROFA when not in use, and material should not be stockpiled in the ROFA if not necessary. Stockpiling material in the OFA requires submittal of a 7460-1 form and justification provided to the appropriate FAA Airports Regional or District Office for approval.

2.22.3 Taxiway Safety Area (TSA).

2.22.3.1 A taxiway safety area is a defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway. (See AC 150/5300-13.) Since the width of the TSA is equal to the wingspan of the design aircraft, no construction may occur within the TSA while the taxiway is open for aircraft operations. The TSA dimensions may be temporarily adjusted if the taxiway is restricted to aircraft operations requiring a TSA that is equal to the TSA width available during construction. Give special consideration to TSA dimensions at taxiway turns and intersections. (see AC 150/5300-13).

2.22.3.2 The airport operator must coordinate the adjustment of the TSA width as permitted above with the appropriate FAA Airports Regional or District Office and the FAA air traffic manager and issue a NOTAM.

2.22.3.3 The CSPP and SPCD must provide procedures for ensuring adequate distance for protection from blasting operations.

2.22.3.4 **Excavations.**

1. Curves. Open trenches or excavations are not permitted within the TSA while the taxiway is open. Trenches should be backfilled before the taxiway is opened. If backfilling excavations before the taxiway must be opened is impracticable, cover the excavations appropriately. Covering for open trenches must be designed to allow the safe operation of the heaviest aircraft operating on the taxiway across the trench without damage to the aircraft.
2. Straight Sections. Open trenches or excavations are not permitted within the TSA while the taxiway is open for unrestricted aircraft operations. Trenches should be backfilled before the taxiway is opened. If backfilling excavations before the taxiway must be opened is impracticable, cover the excavations to allow the safe passage of ARFF equipment and of the heaviest aircraft operating on the taxiway across the trench without causing damage to the equipment or aircraft. In rare circumstances where the section of taxiway is indispensable for aircraft movement, open trenches or excavations may be permitted in the TSA while the taxiway is open to aircraft operations, subject to the following restrictions:
   a. Taxiing speed is limited to 10 mph.
   b. Appropriate NOTAMs are issued.
   c. Marking and lighting meeting the provisions of paragraphs 2.18 and 2.20 are implemented.
   d. Low mass, low-profile lighted barricades are installed.
   e. Appropriate temporary orange construction signs are installed.
3. Construction contractors must prominently mark open trenches and excavations at the construction site with red or orange flags, as approved by the airport operator, and light them with red lights during hours of restricted visibility or darkness.

2.22.3.5 **Erosion control.**

Soil erosion must be controlled to maintain TSA standards, that is, the TSA must be cleared and graded and have no potentially hazardous ruts, humps, depressions, or other surface variations, and capable, under dry conditions, of supporting snow removal equipment, aircraft rescue and firefighting equipment, and the occasional passage of aircraft without causing structural damage to the aircraft.

2.22.4 Taxiway Object Free Area (TOFA).

Unlike the Runway Object Free Area, aircraft wings regularly penetrate the taxiway object free area during normal operations. Thus, the restrictions are more stringent. Except as provided below, no construction may occur within the taxiway object free area while the taxiway is open for aircraft operations.

2.22.4.1 The taxiway object free area dimensions may be temporarily adjusted if the taxiway is restricted to aircraft operations requiring a taxiway object free area that is equal to the taxiway object free area width available. Give special consideration to TOFA dimensions at taxiway turns and intersections.

2.22.4.2 Offset taxiway centerline and edge pavement markings (do not use glass beads) may be used as a temporary measure to provide the required taxiway object free area. Where offset taxiway pavement markings are provided, centerline lighting, centerline reflectors, or taxiway edge reflectors are required. Existing lighting that does not coincide with the temporary markings must be taken out of service.

2.22.4.3 Construction activity, including open excavations, may be accomplished without adjusting the width of the taxiway object free area, subject to the following restrictions:

2.22.4.3.1 Taxiing speed is limited to 10 mph.

2.22.4.3.2 NOTAMs issued advising taxiing pilots of hazard and recommending reduced taxiing speeds on the taxiway.

2.22.4.3.3 Marking and lighting meeting the provisions of paragraphs 2.18 and 2.20 are implemented.

2.22.4.3.4 If desired, appropriate orange construction signs are installed. See paragraph 2.18.4.2 and Appendix F.

2.22.4.3.5 Five-foot clearance is maintained between equipment and materials and any part of an aircraft (includes wingtip overhang). If such clearance can only be maintained if an aircraft does not have full use of the entire taxiway width (with its main landing gear at the edge of the usable pavement), then it will be necessary to move personnel and equipment for the passage of that aircraft.

2.22.4.3.6 Flaggers furnished by the contractor must be used to direct and control construction equipment and personnel to a pre-established setback distance for safe passage of aircraft, and airline and/or airport personnel. Flaggers must also be used to direct taxiing aircraft. Due to liability issues, the airport operator should require airlines to provide flaggers for directing taxiing aircraft.

2.22.5 Obstacle Free Zone (OFZ).

In general, personnel, material, and/or equipment may not penetrate the OFZ while the runway is open for aircraft operations. If a penetration to the OFZ is necessary, it may be possible to continue aircraft operations through operational restrictions. Coordinate with the FAA through the appropriate FAA Airports Regional or District Office.

2.22.6 Runway Approach/Departure Areas and Clearways.

All personnel, materials, and/or equipment must remain clear of the applicable threshold siting surfaces, as defined in AC 150/5300-13. Objects that do not penetrate these surfaces may still be obstructions to air navigation and may affect standard instrument approach procedures. Coordinate with the FAA through the appropriate FAA Airports Regional or District Office.

2.22.6.1 Construction activity in a runway approach/departure area may result in the need to partially close a runway or displace the existing runway threshold. Partial runway closure, displacement of the runway threshold, as well as closure of the complete runway and other portions of the movement area also require coordination through the airport operator with the appropriate FAA air traffic manager (FSS if non-towered) and ATO/Technical Operations (for affected NAVAIDS) and airport users.

2.22.6.2 **Caution About Partial Runway Closures.**

When filing a NOTAM for a partial runway closure, clearly state that the portion of pavement located prior to the threshold is not available for landing and departing traffic. In this case, the threshold has been moved for both landing and takeoff purposes (this is different than a displaced threshold). There may be situations where the portion of closed runway is available for taxiing only. If so, the NOTAM must reflect this condition).

2.22.6.3 **Caution About Displaced Thresholds.**

Implementation of a displaced threshold affects runway length available for aircraft landing over the displacement. Depending on the reason for the displacement (to provide obstruction clearance or RSA), such a displacement may also require an adjustment in the landing distance available and accelerate-stop distance available in the opposite direction. If project scope includes personnel, equipment, excavation, or other work within the existing RSA of any usable runway end, do not implement a displaced threshold unless arrivals and departures toward the construction activity are prohibited. Instead, implement a partial closure.

2.23 Other Limitations on Construction.

The CSPP must specify any other limitations on construction, including but not limited to:

2.23.1 Prohibitions.

2.23.1.1 No use of tall equipment (cranes, concrete pumps, and so on) unless a 7460-1 determination letter is issued for such equipment.

2.23.1.2 No use of open flame welding or torches unless fire safety precautions are provided and the airport operator has approved their use.

2.23.1.3 No use of electrical blasting caps on or within 1,000 feet (300 meters) of the airport property. See AC 150/5370-10.

2.23.2 Restrictions.

2.23.2.1 Construction suspension required during specific airport operations.

2.23.2.2 Areas that cannot be worked on simultaneously.

2.23.2.3 Day or night construction restrictions.

2.23.2.4 Seasonal construction restrictions.

2.23.2.5 Temporary signs not approved by the airport operator.

2.23.2.6 Grades changes that could result in unplanned effects on NAVAIDs.

CHAPTER 3. GUIDELINES FOR WRITING A CSPP

3.1 General Requirements.

The CSPP is a standalone document written to correspond with the subjects outlined in paragraph 2.4. The CSPP is organized by numbered sections corresponding to each subject listed in paragraph 2.4, and described in detail in paragraphs 2.5 - 2.23. Each section number and title in the CSPP matches the corresponding subject outlined in paragraph 2.4 (for example, 1. Coordination, 2. Phasing, 3. Areas and Operations Affected by the Construction Activity, and so on). With the exception of the project scope of work outlined in Section 2. Phasing, only subjects specific to operational safety during construction should be addressed.

3.2 Applicability of Subjects.

Each section should, to the extent practical, focus on the specific subject. Where an overlapping requirement spans several sections, the requirement should be explained in detail in the most applicable section. A reference to that section should be included in all other sections where the requirement may apply. For example, the requirement to protect existing underground FAA ILS cables during trenching operations could be considered FAA ATO coordination (Coordination, paragraph 2.5.3), an area and operation affected by the construction activity (Areas and Operations Affected by the Construction Activity, paragraph 2.7.1.4), a protection of a NAVAID (Protection of Navigational Aids (NAVAIDs), paragraph 2.8), or a notification to the FAA of construction activities (Notification of Construction Activities, paragraph 2.13.5.3.2). However, it is more specifically an underground utility requirement (Underground Utilities, paragraph 2.15). The procedure for protecting underground ILS cables during trenching operations should therefore be described in 2.4.2.11: “The contractor must coordinate with the local FAA System Support Center (SSC) to mark existing ILS cable routes along Runway 17-35. The ILS cables will be located by hand digging whenever the trenching operation moves within 10 feet of the cable markings.” All other applicable sections should include a reference to 2.4.2.11: “ILS cables shall be identified and protected as described in 2.4.2.11” or “See 2.4.2.11 for ILS cable identification and protection requirements.” Thus, the CSPP should be considered as a whole, with no need to duplicate responses to related issues.

3.3 Graphical Representations.

Construction safety drawings should be included in the CSPP as attachments. When other graphical representations will aid in supporting written statements, the drawings, diagrams, and/or photographs should also be attached to the CSPP. References should be made in the CSPP to each graphical attachment and may be made in multiple sections.

3.4 **Reference Documents.**

The CSPP must not incorporate a document by reference unless reproduction of the material in that document is prohibited. In that case, either copies of or a source for the referenced document must be provided to the contractor. Where this AC recommends references (e.g. as in paragraph 3.9) the intent is to include a reference to the corresponding section in the CSPP, not to this Advisory Circular.

3.5 **Restrictions.**

The CSPP should not be considered as a project design review document. The CSPP should also avoid mention of permanent ("as-built") features such as pavements, markings, signs, and lighting, except when such features are intended to aid in maintaining operational safety during the construction.

3.6 **Coordination.**

Include in this section a detailed description of conferences and meetings to be held both before and during the project. Include appropriate information from AC 150/5370-12. Discuss coordination procedures and schedules for each required FAA ATO Technical Operations shutdown and restart and all required flight inspections.

3.7 **Phasing.**

Include in this section a detailed scope of work description for the project as a whole and each phase of work covered by the CSPP. This includes all locations and durations of the work proposed. Attach drawings to graphically support the written scope of work. Detail in this section the sequenced phases of the proposed construction. Include a reference to paragraph 3.8, as appropriate.

3.8 **Areas and Operations Affected by Construction.**

Focus in this section on identifying the areas and operations affected by the construction. Describe corresponding mitigation that is not covered in detail elsewhere in the CSPP. Include references to paragraphs below as appropriate. Attach drawings as necessary to graphically describe affected areas and mechanisms proposed. See Appendix F for sample operational effects tables and figures.

3.9 **NAVAID Protection.**

List in this section all NAVAID facilities that will be affected by the construction. Identify NAVAID facilities that will be placed out of service at any time prior to or during construction activities. Identify individuals responsible for coordinating each shutdown and when each facility will be out of service. Include a reference to paragraph 3.6 for FAA ATO NAVAID shutdown, restart, and flight inspection coordination. Outline in detail procedures to protect each NAVAID facility remaining in service from interference by construction activities. Include a reference to paragraph 3.14 for the

issuance of NOTAMs as required. Include a reference to paragraph 3.16 for the protection of underground cables and piping serving NAVAIDs. If temporary visual aids are proposed to replace or supplement existing facilities, include a reference to paragraph 3.19. Attach drawings to graphically indicate the affected NAVAIDS and the corresponding critical areas.

3.10 **Contractor Access.**

This will necessarily be the most extensive section of the CSPP. Provide sufficient detail so that a contractor not experienced in working on airports will understand the unique restrictions such work will require. Due to this extent, it should be broken down into subsections as described below:

3.10.1 Location of Stockpiled Construction Materials.

Describe in this section specific locations for stockpiling material. Note any height restrictions on stockpiles. Include a reference to paragraph 3.21 for hazard marking and lighting devices used to identify stockpiles. Include a reference to paragraph 3.11 for provisions to prevent stockpile material from becoming wildlife attractants. Include a reference to paragraph 3.12 for provisions to prevent stockpile material from becoming FOD. Attach drawings to graphically indicate the stockpile locations.

3.10.2 Vehicle and Pedestrian Operations.

While there are many items to be addressed in this major subsection of the CSPP, all are concerned with one main issue: keeping people and vehicles from areas of the airport where they don't belong. This includes preventing unauthorized entry to the AOA and preventing the improper movement of pedestrians or vehicles on the airport. In this section, focus on mechanisms to prevent construction vehicles and workers traveling to and from the worksite from unauthorized entry into movement areas. Specify locations of parking for both employee vehicles and construction equipment, and routes for access and haul roads. In most cases, this will best be accomplished by attaching a drawing. Quote from AC 150/5210-5 specific requirements for contractor vehicles rather than referring to the AC as a whole, and include special requirements for identifying HAZMAT vehicles. Quote from, rather than incorporate by reference, AC 150/5210-20 as appropriate to address the airport's rules for ground vehicle operations, including its training program. Discuss the airport's recordkeeping system listing authorized vehicle operators.

3.10.3 Two-Way Radio Communications.

Include a special section to identify all individuals who are required to maintain communications with Air Traffic (AT) at airports with active towers, or monitor CTAF at airports without or with closed ATCT. Include training requirements for all individuals required to communicate with AT. Individuals required to monitor AT frequencies should also be identified. If construction employees are also required to communicate by radio with Airport Operations, this procedure should be described in detail. Usage of vehicle mounted radios and/or portable radios should be addressed. Communication procedures for the event of disabled radio communication (that is, light

signals, telephone numbers, others) must be included. All radio frequencies should by identified (Tower, Ground Control, CTAF, UNICOM, ATIS, and so on).

3.10.4 Airport Security.

Address security as it applies to vehicle and pedestrian operations. Discuss TSA requirements, security badging requirements, perimeter fence integrity, gate security, and other needs. Attach drawings to graphically indicate secured and/or Security Identification Display Areas (SIDA), perimeter fencing, and available access points.

3.11 Wildlife Management.

Discuss in this section wildlife management procedures. Describe the maintenance of existing wildlife mitigation devices, such as perimeter fences, and procedures to limit wildlife attractants. Include procedures to notify Airport Operations of wildlife encounters. Include a reference to paragraph 3.10 for security (wildlife) fence integrity maintenance as required.

3.12 FOD Management.

In this section, discuss methods to control and monitor FOD: worksite housekeeping, ground vehicle tire inspections, runway sweeps, and so on. Include a reference to paragraph 3.15 for inspection requirements as required.

3.13 HAZMAT Management.

Describe in this section HAZMAT management procedures: fuel deliveries, spill recovery procedures, Safety Data Sheet (SDS), Material Safety Data Sheet (MSDS) or Product Safety Data Sheet (PSDS) availability, and other considerations. Any specific airport HAZMAT restrictions should also be identified. Include a reference to paragraph 3.10 for HAZMAT vehicle identification requirements. Quote from, rather than incorporate by reference, AC 150/5320-15.

3.14 Notification of Construction Activities.

List in this section the names and telephone numbers of points of contact for all parties affected by the construction project. We recommend a single list that includes all telephone numbers required under this section. Include emergency notification procedures for all representatives of all parties potentially impacted by the construction. Identify individual representatives – and at least one alternate – for each party. List both on-duty and off-duty contact information for each individual, including individuals responsible for emergency maintenance of airport construction hazard lighting and barricades. Describe procedures to coordinate immediate response to events that might adversely affect the operational safety of the airport (such as interrupted NAVAID service). Explain requirements for and the procedures for the issuance of Notices to Airmen (NOTAMs), notification to FAA required by 14 CFR Part 77 and Part 157 and in the event of affected NAVAIDs. For NOTAMs, identify an individual, and at least one alternate, responsible for issuing and cancelling each specific type of Notice to

Airmen (NOTAM) required. Detail notification methods for police, fire fighting, and medical emergencies. This may include 911, but should also include direct phone numbers of local police departments and nearby hospitals. Identify the E911 address of the airport and the emergency access route via haul roads to the construction site. Require the contractor to have this information available to all workers. The local Poison Control number should be listed. Procedures regarding notification of Airport Operations and/or the ARFF Department of such emergencies should be identified, as applicable. If airport radio communications are identified as a means of emergency notification, include a reference to paragraph 3.10. Differentiate between emergency and nonemergency notification of ARFF personnel, the latter including activities that affect ARFF water supplies and access roads. Identify the primary ARFF contact person and at least one alternate. If notification is to be made through Airport Operations, then detail this procedure. Include a method of confirmation from the ARFF department.

3.15 Inspection Requirements.

Describe in this section inspection requirements to ensure airfield safety compliance. Include a requirement for routine inspections by the resident engineer (RE) or other airport operator's representative and the construction contractors. If the engineering consultants and/or contractors have a Safety Officer who will conduct such inspections, identify this individual. Describe procedures for special inspections, such as those required to reopen areas for aircraft operations. Part 139 requires daily airfield inspections at certificated airports, but these may need to be more frequent when construction is in progress. Discuss the role of such inspections on areas under construction. Include a requirement to immediately remedy any deficiencies, whether caused by negligence, oversight, or project scope change.

3.16 Underground Utilities.

Explain how existing underground utilities will be located and protected. Identify each utility owner and include contact information for each company/agency in the master list. Address emergency response procedures for damaged or disrupted utilities. Include a reference to paragraph 3.14 for notification of utility owners of accidental utility disruption as required.

3.17 Penalties.

Describe in this section specific penalties imposed for noncompliance with airport rules and regulations, including the CSPP: SIDA violations, VPD, and others.

3.18 Special Conditions.

Identify any special conditions that may trigger specific safety mitigation actions outlined in this CSPP: low visibility operations, snow removal, aircraft in distress, aircraft accident, security breach, VPD, and other activities requiring construction suspension/resumption. Include a reference to paragraph 3.10 for compliance with airport safety and security measures and for radio communications as required. Include

a reference to paragraph 3.14 for emergency notification of all involved parties, including police/security, ARFF, and medical services.

3.19 Runway and Taxiway Visual Aids.

Include marking, lighting, signs, and visual NAVAIDS. Detail temporary runway and taxiway marking, lighting, signs, and visual NAVAIDs required for the construction. Discuss existing marking, lighting, signs, and visual NAVAIDs that are temporarily, altered, obliterated, or shut down. Consider non-federal facilities and address requirements for reimbursable agreements necessary for alteration of FAA facilities and for necessary flight checks. Identify temporary TORA signs or runway distance remaining signs if appropriate. Identify required temporary visual NAVAIDs such as REIL or PAPI. Quote from, rather than incorporate by reference, AC 150/5340-1, *Standards for Airport Markings;* AC 150/5340-18, *Standards for Airport Sign Systems;* and AC 150/5340-30, as required. Attach drawings to graphically indicate proposed marking, lighting, signs, and visual NAVAIDs.

3.20 Marking and Signs for Access Routes.

Detail plans for marking and signs for vehicle access routes. To the extent possible, signs should be in conformance with the Federal Highway Administration MUTCD and/or State highway specifications, not hand lettered. Detail any modifications to the guidance in the MUTCD necessary to meet frangibility/height requirements.

3.21 Hazard Marking and Lighting.

Specify all marking and lighting equipment, including when and where each type of device is to be used. Specify maximum gaps between barricades and the maximum spacing of hazard lighting. Identify one individual and at least one alternate responsible for maintenance of hazard marking and lighting equipment in the master telephone list. Include a reference to paragraph 3.14. Attach drawings to graphically indicate the placement of hazard marking and lighting equipment.

3.22 Work Zone Lighting for Nighttime Construction.

If work is to be conducted at night, specify all lighting equipment, including when and where each type of device is to be used. Indicate the direction lights are to be aimed and any directions that aiming of lights is prohibited. Specify any shielding necessary in instances where aiming is not sufficient to prevent interference with air traffic control and aircraft operations. Attach drawings to graphically indicate the placement and aiming of lighting equipment. Where the plan only indicates directions that aiming of lights is prohibited, the placement and positioning of portable lights must be proposed by the Contractor and approved by the airport operator’s representative each time lights are relocated or repositioned.

3.23 **Protection of Runway and Taxiway Safety Areas.**

This section should focus exclusively on procedures for protecting all safety areas, including those altered by the construction: methods of demarcation, limit of access, movement within safety areas, stockpiling and trenching restrictions, and so on. Reference AC 150/5300-13, as required. Include a reference to paragraph 3.10 for procedures regarding vehicle and personnel movement within safety areas. Include a reference to paragraph 3.10 for material stockpile restrictions as required. Detail requirements for trenching, excavations, and backfill. Include a reference to paragraph 3.21 for hazard marking and lighting devices used to identify open excavations as required. If runway and taxiway closures are proposed to protect safety areas, or if temporary displaced thresholds and/or revised declared distances are used to provide the required Runway Safety Area, include a reference to paragraphs 3.14 and 3.19. Detail procedures for protecting the runway OFZ, runway OFA, taxiway OFA and runway approach surfaces including those altered by the construction: methods of demarcation, limit of cranes, storage of equipment, and so on. Quote from, rather than incorporate by reference, AC 150/5300-13, as required. Include a reference to paragraph 3.24 for height (i.e., crane) restrictions as required. One way to address the height of equipment that will move during the project is to establish a three-dimensional “box” within which equipment will be confined that can be studied as a single object. Attach drawings to graphically indicate the safety area, OFZ, and OFA boundaries.

3.24 **Other Limitations on Construction.**

This section should describe what limitations must be applied to each area of work and when each limitation will be applied: limitations due to airport operations, height (i.e., crane) restrictions, areas which cannot be worked at simultaneously, day/night work restrictions, winter construction, and other limitations. Include a reference to paragraph 3.7 for project phasing requirements based on construction limitations as required.

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APPENDIX A. RELATED READING MATERIAL

Obtain the latest version of the following free publications from the FAA on its Web site at http://www.faa.gov/airports/.

Table A-1. FAA Publications

Number	Title and Description
AC 150/5200-28	*Notices to Airmen (NOTAMs) for Airport Operators* Guidance for using the NOTAM System in airport reporting.
AC 150/5200-30	*Airport Field Condition Assessments and Winter Operations Safety* Guidance for airport owners/operators on the development of an acceptable airport snow and ice control program and on appropriate field condition reporting procedures.
AC 150/5200-33	*Hazardous Wildlife Attractants On or Near Airports* Guidance on locating certain land uses that might attract hazardous wildlife to public-use airports.
AC 150/5210-5	*Painting, Marking, and Lighting of Vehicles Used on an Airport* Guidance, specifications, and standards for painting, marking, and lighting vehicles operating in the airport air operations areas.
AC 150/5210-20	*Ground Vehicle Operations to include Taxiing or Towing an Aircraft on Airports* Guidance to airport operators on developing ground vehicle operation training programs.
AC 150/5300-13	*Airport Design* FAA standards and recommendations for airport design. Establishes approach visibility minimums as an airport design parameter, and contains the Object Free area and the obstacle free-zone criteria.
AC 150/5210-24	*Airport Foreign Object Debris (FOD) Management* Guidance for developing and managing an airport foreign object debris (FOD) program

Number	Title and Description
AC 150/5320-15	*Management of Airport Industrial Waste* Basic information on the characteristics, management, and regulations of industrial wastes generated at airports. Guidance for developing a Storm Water Pollution Prevention Plan (SWPPP) that applies best management practices to eliminate, prevent, or reduce pollutants in storm water runoff with particular airport industrial activities.
AC 150/5340-1	*Standards for Airport Markings* FAA standards for the siting and installation of signs on airport runways and taxiways.
AC 150/5340-18	*Standards for Airport Sign Systems* FAA standards for the siting and installation of signs on airport runways and taxiways.
AC 150/5345-28	*Precision Approach Path Indicator (PAPI) Systems* FAA standards for PAPI systems, which provide pilots with visual glide slope guidance during approach for landing.
AC 150/5340-30	*Design and Installation Details for Airport Visual Aids* Guidance and recommendations on the installation of airport visual aids.
AC 150/5345-39	*Specification for L-853, Runway and Taxiway Retroreflective Markers*
AC 150/5345-44	*Specification for Runway and Taxiway Signs* FAA specifications for unlighted and lighted signs for taxiways and runways.
AC 150/5345-53	*Airport Lighting Equipment Certification Program* Details on the Airport Lighting Equipment Certification Program (ALECP).
AC 150/5345-50	*Specification for Portable Runway and Taxiway Lights* FAA standards for portable runway and taxiway lights and runway end identifier lights for temporary use to permit continued aircraft operations while all or part of a runway lighting system is inoperative.
AC 150/5345-55	*Specification for L-893, Lighted Visual Aid to Indicate Temporary Runway Closure*

Number	Title and Description
AC 150/5370-10	*Standards for Specifying Construction of Airports* Standards for construction of airports, including earthwork, drainage, paving, turfing, lighting, and incidental construction.
AC 150/5370-12	*Quality Management for Federally Funded Airport Construction Projects*
EB 93	*Guidance for the Assembly and Installation of Temporary Orange Construction Signs*
FAA Order 5200.11	FAA Airports (ARP) Safety Management System (SMS) Basics for implementing SMS within ARP. Includes roles and responsibilities of ARP management and staff as well as other FAA lines of business that contribute to the ARP SMS.
FAA Certalert 98-05	*Grasses Attractive to Hazardous Wildlife* Guidance on grass management and seed selection.
FAA Form 7460-1	Notice of Proposed Construction or Alteration
FAA Form 7480-1	Notice of Landing Area Proposal
FAA Form 6000.26	National NAS Strategic Interruption Service Level Agreement, Strategic Events Coordination, Airport Sponsor Form

Obtain the latest version of the following free publications from the Electronic Code of Federal Regulations at http://www.ecfr.gov/.

Table A-2. Code of Federal Regulation

Number	Title
Title 14 CFR Part 77	Safe, Efficient Use and Preservation of the Navigable Airspace
Title 14 CFR Part 139	Certification of Airports
Title 49 CFR Part 1542	Airport Security

Obtain the latest version of the Manual on Uniform Traffic Control Devices from the Federal Highway Administration at http://mutcd.fhwa.dot.gov/.

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APPENDIX B. TERMS AND ACRONYMS

Table B-1. Terms and Acronyms

Term	Definition
Form 7460-1	Notice of Proposed Construction or Alteration. For on-airport projects, the form submitted to the FAA regional or airports division office as formal written notification of any kind of construction or alteration of objects that affect navigable airspace, as defined in 14 CFR Part 77, *Safe, Efficient Use, and Preservation of the Navigable Airspace*. (See guidance available on the FAA web site at https://oeaaa.faa.gov.) The form may be downloaded at http://www.faa.gov/airports/resources/forms/, or filed electronically at: https://oeaaa.faa.gov.
Form 7480-1	Notice of Landing Area Proposal. Form submitted to the FAA Airports Regional Division Office or Airports District Office as formal written notification whenever a project without an airport layout plan on file with the FAA involves the construction of a new airport; the construction, realigning, altering, activating, or abandoning of a runway, landing strip, or associated taxiway; or the deactivation or abandoning of an entire airport The form may be downloaded at http://www.faa.gov/airports/resources/forms/.
Form 6000-26	Airport Sponsor Strategic Event Submission Form
AC	Advisory Circular
ACSI	Airport Certification Safety Inspector
ADG	Airplane Design Group
AIP	Airport Improvement Program
ALECP	Airport Lighting Equipment Certification Program
ANG	Air National Guard
AOA	Air Operations Area, as defined in 14 CFR Part 107. Means a portion of an airport, specified in the airport security program, in which security measures are carried out. This area includes aircraft movement areas, aircraft parking areas, loading ramps, and safety areas, and any adjacent areas (such as general aviation areas) that are not separated by adequate security systems, measures, or procedures. This area does not include the secured area of the airport terminal building.
ARFF	Aircraft Rescue and Fire Fighting
ARP	FAA Office of Airports
ASDA	Accelerate-Stop Distance Available
AT	Air Traffic
ATCT	Airport Traffic Control Tower
ATIS	Automatic Terminal Information Service
ATO	Air Traffic Organization
Certificated Airport	An airport that has been issued an Airport Operating Certificate by the FAA under

Term	Definition
	the authority of 14 CFR Part 139, *Certification of Airports*.
CFR	Code of Federal Regulations
Construction	The presence of construction-related personnel, equipment, and materials in any location that could infringe upon the movement of aircraft.
CSPP	Construction Safety and Phasing Plan. The overall plan for safety and phasing of a construction project developed by the airport operator, or developed by the airport operator's consultant and approved by the airport operator. It is included in the invitation for bids and becomes part of the project specifications.
CTAF	Common Traffic Advisory Frequency
Displaced Threshold	A threshold that is located at a point on the runway other than the designated beginning of the runway. The portion of pavement behind a displaced threshold is available for takeoffs in either direction or landing from the opposite direction.
DOT	Department of Transportation
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration
FOD	Foreign Object Debris/Damage
FSS	Flight Service Station
GA	General Aviation
HAZMAT	Hazardous Materials
HMA	Hot Mix Asphalt
IAP	Instrument Approach Procedures
IFR	Instrument Flight Rules
ILS	Instrument Landing System
LDA	Landing Distance Available
LOC	Localizer antenna array
Movement Area	The runways, taxiways, and other areas of an airport that are used for taxiing or hover taxiing, air taxiing, takeoff, and landing of aircraft, exclusive of loading aprons and aircraft parking areas (reference 14 CFR Part 139).
MSDS	Material Safety Data Sheet
MUTCD	Manual on Uniform Traffic Control Devices
NAVAID	Navigation Aid
NAVAID Critical Area	An area of defined shape and size associated with a NAVAID that must remain clear and graded to avoid interference with the electronic signal.
Non-Movement Area	The area inside the airport security fence exclusive of the Movement Area. It is important to note that the non-movement area includes pavement traversed by aircraft.

Term	Definition
NOTAM	Notices to Airmen
Obstruction	Any object/obstacle exceeding the obstruction standards specified by 14 CFR Part 77, subpart C.
OCC	Operations Control Center
OE / AAA	Obstruction Evaluation / Airport Airspace Analysis
OFA	Object Free Area. An area on the ground centered on the runway, taxiway, or taxi lane centerline provided to enhance safety of aircraft operations by having the area free of objects except for those objects that need to be located in the OFA for air navigation or aircraft ground maneuvering purposes. (See AC 150/5300-13 for additional guidance on OFA standards and wingtip clearance criteria.)
OFZ	Obstacle Free Zone. The airspace below 150 ft (45 m) above the established airport elevation and along the runway and extended runway centerline that is required to be clear of all objects, except for frangible visual NAVAIDs that need to be located in the OFZ because of their function, in order to provide clearance protection for aircraft landing or taking off from the runway and for missed approaches. The OFZ is subdivided as follows: Runway OFZ, Inner Approach OFZ, Inner Transitional OFZ, and Precision OFZ. Refer to AC 150/5300-13 for guidance on OFZ.
OSHA	Occupational Safety and Health Administration
OTS	Out of Service
P&R	Planning and Requirements Group
NPI	NAS Planning & Integration
PAPI	Precision Approach Path Indicator
PFC	Passenger Facility Charge
PLASI	Pulse Light Approach Slope Indicator
Project Proposal Summary	A clear and concise description of the proposed project or change that is the object of Safety Risk Management.
RA	Reimbursable Agreement
RE	Resident Engineer
REIL	Runway End Identifier Lights
RNAV	Area Navigation
ROFA	Runway Object Free Area
RSA	Runway Safety Area. A defined surface surrounding the runway prepared or suitable for reducing the risk of damage to airplanes in the event of an undershoot, overshoot, or excursion from the runway, in accordance with AC 150/5300-13.
SDS	Safety Data Sheet
SIDA	Security Identification Display Area
SMS	Safety Management System

Term	Definition
SPCD	Safety Plan Compliance Document. Details developed and submitted by a contractor to the airport operator for approval providing details on how the performance of a construction project will comply with the CSPP.
SRM	Safety Risk Management
SSC	System Support Center
Taxiway Safety Area	A defined surface alongside the taxiway prepared or suitable for reducing the risk of damage to an airplane unintentionally departing the taxiway, in accordance with AC 150/5300-13.
TDG	Taxiway Design Group
Temporary	Any condition that is not intended to be permanent.
Temporary Runway End	The beginning of that portion of the runway available for landing and taking off in one direction, and for landing in the other direction. Note the difference from a displaced threshold.
Threshold	The beginning of that portion of the runway available for landing. In some instances, the landing threshold may be displaced.
TODA	Takeoff Distance Available
TOFA	Taxiway Object Free Area
TORA	Takeoff Run Available. The length of the runway less any length of runway unavailable and/or unsuitable for takeoff run computations. See AC 150/5300-13 for guidance on declared distances.
TSA	Taxiway Safety Area, or Transportation Security Administration
UNICOM	A radio communications system of a type used at small airports.
VASI	Visual Approach Slope Indicator
VGSI	Visual Glide Slope Indicator. A device that provides a visual glide slope indicator to landing pilots. These systems include precision approach path indicator (PAPI), visual approach slope indicator (VASI), and pulse light approach slope indicator (PLASI).
VFR	Visual Flight Rules
VOR	Very High Frequency Omnidirectional Radio Range
VPD	Vehicle / Pedestrian Deviation

APPENDIX C. SAFETY AND PHASING PLAN CHECKLIST

This appendix is keyed to Chapter 2. In the electronic version of this AC, clicking on the paragraph designation in the Reference column will access the applicable paragraph. There may be instances where the CSPP requires provisions that are not covered by the list in this appendix.

This checklist is intended as an aid, not a required submittal.

Table C-1. CSPP Checklist

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
General Considerations					
Requirements for predesign, prebid, and preconstruction conferences to introduce the subject of airport operational safety during construction are specified.	2.5				
Operational safety is a standing agenda item for construction progress meetings.	2.5				
Scheduling of the construction phases is properly addressed.	2.6				
Any formal agreements are established.	2.5.3				
Areas and Operations Affected by Construction Activity					
Drawings showing affected areas are included.	2.7.1				
Closed or partially closed runways, taxiways, and aprons are depicted on drawings.	2.7.1.1				
Access routes used by ARFF vehicles affected by the project are addressed.	2.7.1.2				
Access routes used by airport and airline support vehicles affected by the project are addressed.	2.7.1.3				
Underground utilities, including water supplies for firefighting and drainage.	2.7.1.4				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Approach/departure surfaces affected by heights of temporary objects are addressed.	2.7.1.5				
Construction areas, storage areas, and access routes near runways, taxiways, aprons, or helipads are properly depicted on drawings.	2.7.1				
Temporary changes to taxi operations are addressed.	2.7.2.1				
Detours for ARFF and other airport vehicles are identified.	2.7.2.2				
Maintenance of essential utilities and underground infrastructure is addressed.	2.7.2.3				
Temporary changes to air traffic control procedures are addressed.	2.7.2.4				
NAVAIDs					
Critical areas for NAVAIDs are depicted on drawings.	2.8				
Effects of construction activity on the performance of NAVAIDS, including unanticipated power outages, are addressed.	2.8				
Protection of NAVAID facilities is addressed.	2.8				
The required distance and direction from each NAVAID to any construction activity is depicted on drawings.	2.8				
Procedures for coordination with FAA ATO/Technical Operations, including identification of points of contact, are included.	2.8, 2.13.1, 2.13.5.3.1, 2.18.1				
Contractor Access					
The CSPP addresses areas to which contractor will have access and how	2.9				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
the areas will be accessed.					
The application of 49 CFR Part 1542 Airport Security, where appropriate, is addressed.	2.9				
The location of stockpiled construction materials is depicted on drawings.	2.9.1				
The requirement for stockpiles in the ROFA to be approved by FAA is included.	2.9.1				
Requirements for proper stockpiling of materials are included.	2.9.1				
Construction site parking is addressed.	2.9.2.1				
Construction equipment parking is addressed.	2.9.2.2				
Access and haul roads are addressed.	2.9.2.3				
A requirement for marking and lighting of vehicles to comply with AC 150/5210-5, *Painting, Marking and Lighting of Vehicles Used on an Airport*, is included.	2.9.2.4				
Proper vehicle operations, including requirements for escorts, are described.	2.9.2.5, 2.9.2.6				
Training requirements for vehicle drivers are addressed.	2.9.2.7				
Two-way radio communications procedures are described.	2.9.2.9				
Maintenance of the secured area of the airport is addressed.	2.9.2.10				
Wildlife Management					
The airport operator's wildlife management procedures are addressed.	2.10				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Foreign Object Debris Management					
The airport operator's FOD management procedures are addressed.	2.11				
Hazardous Materials Management					
The airport operator's hazardous materials management procedures are addressed.	2.12				
Notification of Construction Activities					
Procedures for the immediate notification of airport user and local FAA of any conditions adversely affecting the operational safety of the airport are detailed.	2.13				
Maintenance of a list by the airport operator of the responsible representatives/points of contact for all involved parties and procedures for contacting them 24 hours a day, seven days a week is specified.	2.13.1				
A list of local ATO/Technical Operations personnel is included.	2.13.1				
A list of ATCT managers on duty is included.	2.13.1				
A list of authorized representatives to the OCC is included.	2.13.2				
Procedures for coordinating, issuing, maintaining and cancelling by the airport operator of NOTAMS about airport conditions resulting from construction are included.	2.8, 2.13.2, 2.18.3.3.9				
Provision of information on closed or hazardous conditions on airport movement areas by the airport operator to the OCC is specified.	2.13.2				
Emergency notification procedures for medical, fire fighting, and police	2.13.3				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
response are addressed.					
Coordination with ARFF personnel for non-emergency issues is addressed.	2.13.4				
Notification to the FAA under 14 CFR parts 77 and 157 is addressed.	2.13.5				
Reimbursable agreements for flight checks and/or design and construction for FAA owned NAVAIDs are addressed.	2.13.5.3.2				
Inspection Requirements					
Daily and interim inspections by both the airport operator and contractor are specified.	2.14.1, 2.14.2				
Final inspections at certificated airports are specified when required.	2.14.3				
Underground Utilities					
Procedures for protecting existing underground facilities in excavation areas are described.	2.15				
Penalties					
Penalty provisions for noncompliance with airport rules and regulations and the safety plans are detailed.	2.16				
Special Conditions					
Any special conditions that affect the operation of the airport or require the activation of any special procedures are addressed.	2.17				
Runway and Taxiway Visual Aids - Marking, Lighting, Signs, and Visual NAVAIDs					
The proper securing of temporary airport markings, lighting, signs, and visual NAVAIDs is addressed.	2.18.1				
Frangibility of airport markings, lighting, signs, and visual NAVAIDs is specified.	2.18.1, 2.18.3, 2.18.4.2, 2.20.2.4				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
The requirement for markings to be in compliance with AC 150/5340-1, *Standards for Airport Markings*, is specified.	2.18.2				
Detailed specifications for materials and methods for temporary markings are provided.	2.18.2				
The requirement for lighting to conform to AC 150/5340-30, *Design and Installation Details for Airport Visual Aids;* AC 150/5345-50, *Specification for Portable Runway and Taxiway Lights;* and AC 150/5345-53, *Airport Lighting Certification Program*, is specified.	2.18.3				
The use of a lighted X is specified where appropriate.	2.18.2.1.2, 2.18.3.2				
The requirement for signs to conform to AC 150/5345-44, *Specification for Runway and Taxiway Signs;* AC 50/5340-18, *Standards for Airport Sign Systems;* and AC 150/5345-53, *Airport Lighting Certification Program*, is specified.	2.18.4				
Marking and Signs For Access Routes					
The CSPP specifies that pavement markings and signs intended for construction personnel should conform to AC 150/5340-18 and, to the extent practicable, with the MUTCD and/or State highway specifications.	2.18.4.2				
Hazard Marking and Lighting					
Prominent, comprehensible warning indicators for any area affected by construction that is normally accessible to aircraft, personnel, or vehicles are specified.	2.20.1				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Hazard marking and lighting are specified to identify open manholes, small areas under repair, stockpiled material, and waste areas.	2.20.1				
The CSPP considers less obvious construction-related hazards.	2.20.1				
Equipment that poses the least danger to aircraft but is sturdy enough to remain in place when subjected to typical winds, prop wash and jet blast is specified.	2.20.2.1				
The spacing of barricades is specified such that a breach is physically prevented barring a deliberate act.	2.20.2.1				
Red lights meeting the luminance requirements of the State Highway Department are specified.	2.20.2.2				
Barricades, temporary markers, and other objects placed and left in areas adjacent to any open runway, taxiway, taxi lane, or apron are specified to be as low as possible to the ground, and no more than 18 inch high.	2.20.2.3				
Barricades are specified to indicate construction locations in which no part of an aircraft may enter.	2.20.2.3				
Highly reflective barriers with lights are specified to barricade taxiways leading to closed runways.	2.20.2.5				
Markings for temporary closures are specified.	2.20.2.5				
The provision of a contractor's representative on call 24 hours a day for emergency maintenance of airport hazard lighting and barricades is specified.	2.20.2.7				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
Work Zone Lighting for Nighttime Construction					
If work is to be conducted at night, the CSPP identifies construction lighting units and their general locations and aiming in relationship to the ATCT and active runways and taxiways.	2.21				
Protection of Runway and Taxiway Safety Areas					
The CSPP clearly states that no construction may occur within a safety area while the associated runway or taxiway is open for aircraft operations.	2.22.1.1, 2.22.3.1				
The CSPP specifies that the airport operator coordinates the adjustment of RSA or TSA dimensions with the ATCT and the appropriate FAA Airports Regional or District Office and issues a local NOTAM.	2.22.1.2, 2.22.3.2				
Procedures for ensuring adequate distance for protection from blasting operations, if required by operational considerations, are detailed.	2.22.3.3				
The CSPP specifies that open trenches or excavations are not permitted within a safety area while the associated runway or taxiway is open, subject to approved exceptions.	2.22.1.4				
Appropriate covering of excavations in the RSA or TSA that cannot be backfilled before the associated runway or taxiway is open is detailed.	2.22.1.4				
The CSPP includes provisions for prominent marking of open trenches and excavations at the construction site.	2.22.1.4				
Grading and soil erosion control to maintain RSA/TSA standards are	2.22.3.5				

Coordination	Reference	Addressed?			Remarks
		Yes	No	NA	
addressed.					
The CSPP specifies that equipment is to be removed from the ROFA when not in use.	2.22.2				
The CSPP clearly states that no construction may occur within a taxiway safety area while the taxiway is open for aircraft operations.	2.22.3				
Appropriate details are specified for any construction work to be accomplished in a taxiway object free area.	2.22.4				
Measures to ensure that personnel, material, and/or equipment do not penetrate the OFZ or threshold siting surfaces while the runway is open for aircraft operations are included.	2.22.4.3.6				
Provisions for protection of runway approach/departure areas and clearways are included.	2.22.6				
Other Limitations on Construction					
The CSPP prohibits the use of open flame welding or torches unless adequate fire safety precautions are provided and the airport operator has approved their use.	2.23.1.2				
The CSPP prohibits the use of electrical blasting caps on or within 1,000 ft (300 m) of the airport property.	2.23.1.3				

APPENDIX D. CONSTRUCTION PROJECT DAILY SAFETY INSPECTION CHECKLIST

The situations identified below are potentially hazardous conditions that may occur during airport construction projects. Safety area encroachments, unauthorized and improper ground vehicle operations, and unmarked or uncovered holes and trenches near aircraft operating surfaces pose the most prevalent threats to airport operational safety during airport construction projects. The list below is one tool that the airport operator or contractor may use to aid in identifying and correcting potentially hazardous conditions. It should be customized as appropriate for each project including information such as the date, time and name of the person conducting the inspection.

Table D-1. Potentially Hazardous Conditions

Item	Action Required (Describe)	No Action Required (Check)
Excavation adjacent to runways, taxiways, and aprons improperly backfilled.		
Mounds of earth, construction materials, temporary structures, and other obstacles near any open runway, taxiway, or taxi lane; in the related Object Free area and aircraft approach or departure areas/zones; or obstructing any sign or marking.		
Runway resurfacing projects resulting in lips exceeding 3 inch (7.6 cm) from pavement edges and ends.		
Heavy equipment (stationary or mobile) operating or idle near AOA, in runway approaches and departures areas, or in OFZ.		
Equipment or material near NAVAIDs that may degrade or impair radiated signals and/or the monitoring of navigation and visual aids. Unauthorized or improper vehicle operations in localizer or glide slope critical areas, resulting in electronic interference and/or facility shutdown.		
Tall and especially relatively low visibility units (that is, equipment with slim profiles) — cranes, drills, and similar objects — located in critical areas, such as OFZ and		

Item	Action Required (Describe)	No Action Required (Check)
approach zones.		
Improperly positioned or malfunctioning lights or unlighted airport hazards, such as holes or excavations, on any apron, open taxiway, or open taxi lane or in a related safety, approach, or departure area.		
Obstacles, loose pavement, trash, and other debris on or near AOA. Construction debris (gravel, sand, mud, paving materials) on airport pavements may result in aircraft propeller, turbine engine, or tire damage. Also, loose materials may blow about, potentially causing personal injury or equipment damage.		
Inappropriate or poorly maintained fencing during construction intended to deter human and animal intrusions into the AOA. Fencing and other markings that are inadequate to separate construction areas from open AOA create aviation hazards.		
Improper or inadequate marking or lighting of runways (especially thresholds that have been displaced or runways that have been closed) and taxiways that could cause pilot confusion and provide a potential for a runway incursion. Inadequate or improper methods of marking, barricading, and lighting of temporarily closed portions of AOA create aviation hazards.		
Wildlife attractants — such as trash (food scraps not collected from construction personnel activity), grass seeds, tall grass, or standing water — on or near airports.		
Obliterated or faded temporary markings on active operational areas.		
Misleading or malfunctioning obstruction lights. Unlighted or unmarked obstructions in the approach to any open runway pose aviation hazards.		

Item	Action Required (Describe)	No Action Required (Check)
Failure to issue, update, or cancel NOTAMs about airport or runway closures or other construction related airport conditions.		
Failure to mark and identify utilities or power cables. Damage to utilities and power cables during construction activity can result in the loss of runway / taxiway lighting; loss of navigation, visual, or approach aids; disruption of weather reporting services; and/or loss of communications.		
Restrictions on ARFF access from fire stations to the runway / taxiway system or airport buildings.		
Lack of radio communications with construction vehicles in airport movement areas.		
Objects, regardless of whether they are marked or flagged, or activities anywhere on or near an airport that could be distracting, confusing, or alarming to pilots during aircraft operations.		
Water, snow, dirt, debris, or other contaminants that temporarily obscure or derogate the visibility of runway/taxiway marking, lighting, and pavement edges. Any condition or factor that obscures or diminishes the visibility of areas under construction.		
Spillage from vehicles (gasoline, diesel fuel, oil) on active pavement areas, such as runways, taxiways, aprons, and airport roadways.		
Failure to maintain drainage system integrity during construction (for example, no temporary drainage provided when working on a drainage system).		

Item	Action Required (Describe)	No Action Required (Check)
Failure to provide for proper electrical lockout and tagging procedures. At larger airports with multiple maintenance shifts/workers, construction contractors should make provisions for coordinating work on circuits.		
Failure to control dust. Consider limiting the amount of area from which the contractor is allowed to strip turf.		
Exposed wiring that creates an electrocution or fire ignition hazard. Identify and secure wiring, and place it in conduit or bury it.		
Site burning, which can cause possible obscuration.		
Construction work taking place outside of designated work areas and out of phase.		

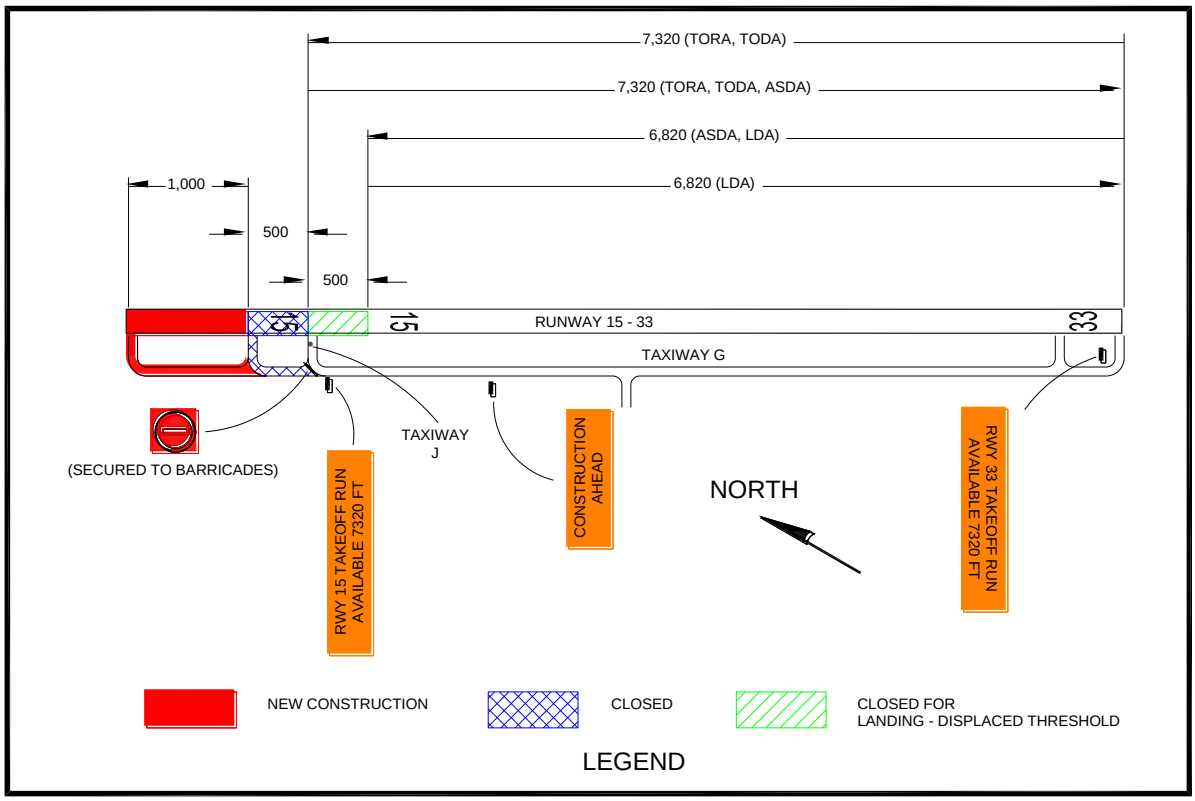
APPENDIX E. SAMPLE OPERATIONAL EFFECTS TABLE

E.1 **Project Description.**

Runway 15-33 is currently 7820 feet long, with a 500 foot stopway on the north end. This project will remove the stopway and extend the runway 1000 feet to the north and 500 feet to the south. Finally, the existing portion of the runway will be repaved. The runway 33 glide slope will be relocated. The new runway 33 localizer has already been installed by FAA Technical Operations and only needs to be switched on. Runway 15 is currently served only by a localizer, which will remain in operation as it will be beyond the future RSA. Appropriate NOTAMS will be issued throughout the project.

E.1.1 During Phase I, the runway 15 threshold will be displaced 1000 feet to keep construction equipment below the approach surface. The start of runway 15 takeoff and the departure end of runway 33 will also be moved 500 feet to protect workers from jet blast. Declared distances for runway 33 will be adjusted to provide the required RSA and applicable departure surface. Excavation near Taxiway G will require its ADG to be reduced from IV to III. See Figure E-1.

Figure E-1. Phase I Example

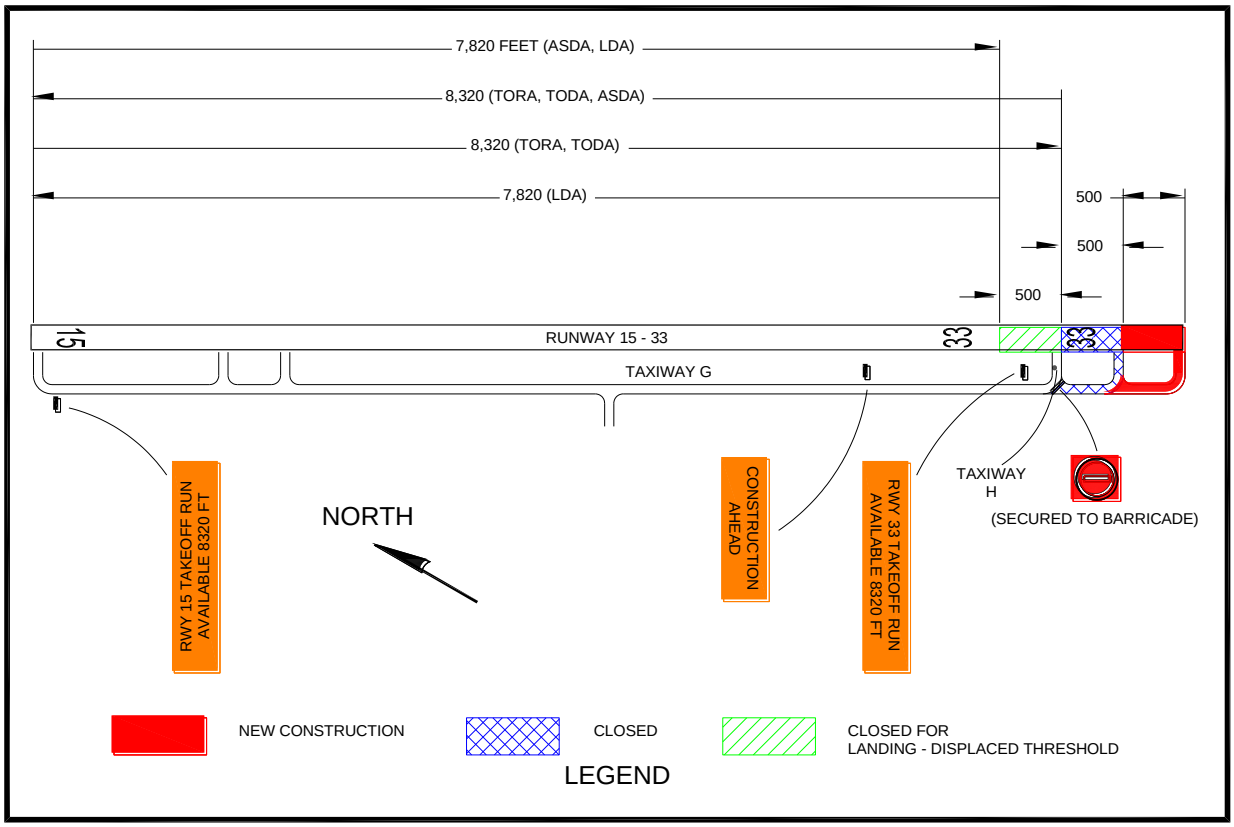


Note 1: Where hold signs are installed on both sides of a taxiway, install the TORA sign on the left side of the taxiway before the final turn to the runway intersection.

Note 2: Based on the declared distances for Runway 33 departures, the maximum equipment height in the construction area is 12.5 feet (500/40 = 12.5).

E.2 During Phase II, the runway 33 threshold will be displaced 1000 feet to keep construction equipment below the approach surface. The start of runway 33 takeoff and the departure end of runway 15 will also be moved 500 feet to protect workers from jet blast. Declared distances for runway 15 will be adjusted to provide the required RSA and applicable departure surface. See Figure E-2.

Figure E-2. Phase II Example



Note 1: Where hold signs are installed on both sides of a taxiway, install the TORA sign on the left side of the taxiway before the final turn to the runway intersection.

Note 2: Based on the declared distances for Runway 15 departures, the maximum equipment height in the construction area is 12.5 feet (500/40 = 12.5).

E.3 During Phase III, the existing portion of the runway will be repaved with Hot Mix Asphalt (HMA) and the runway 33 glide slope will be relocated. Construction will be accomplished between the hours of 8:00 pm and 5:00 am, during which the runway will be closed to operations.

Figure E-3. Phase III Example

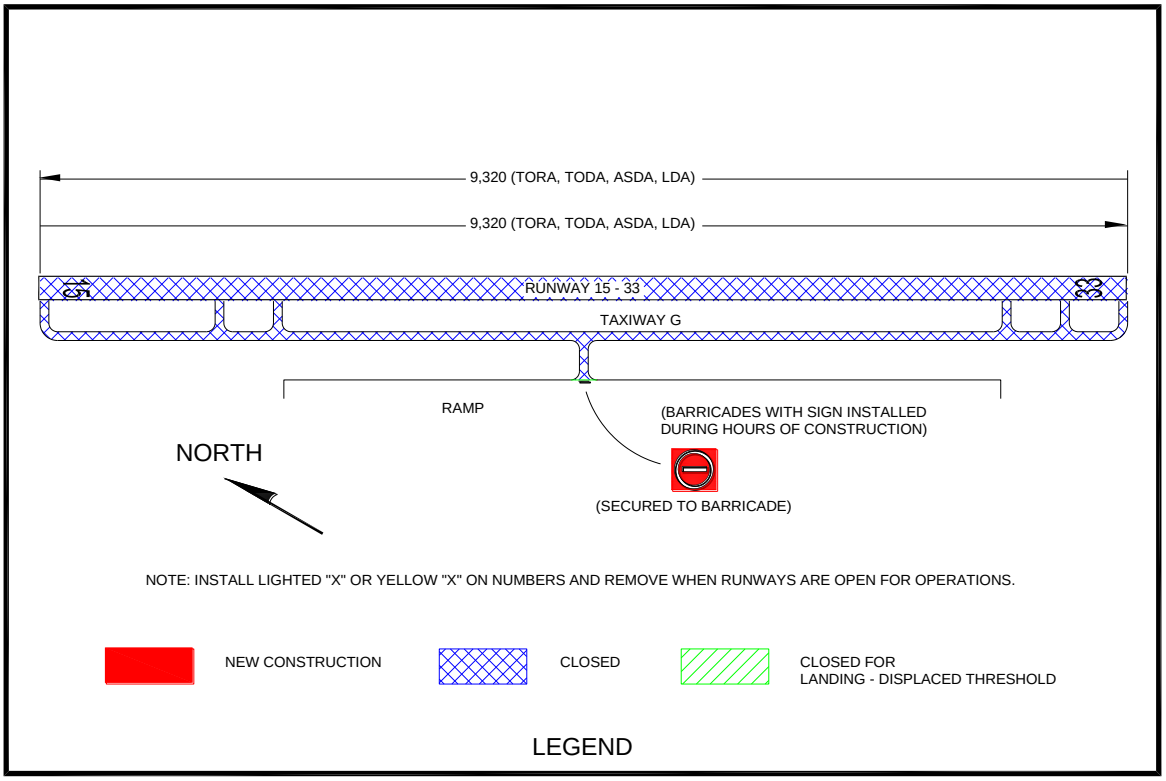


Table E-1. Operational Effects Table

Project	**Runway 15-33 Extension and Repaving**			
Phase	**Normal (Existing)**	**Phase I: Extend Runway 15 End**	**Phase II: Extend Runway 33 End**	**Phase III: Repave Runway**
Scope of Work	N/A	Extend Runway 15-33 1,000 ft on north end with Hot Mix Asphaltic Concrete (HMA).	Extend Runway 15-33 500 ft on south end with Hot Mix Asphaltic Concrete (HMA).	Repave existing runway with HMA Relocate Runway 33 Glide Slope
Effects of Construction Operations	N/A	Existing North 500 ft closed	Existing South 500 ft closed	Runway closed between 8:00 pm and 5:00 am Edge lighting out of service
Construction Phase	N/A	Phase I (Anticipated)	Phase II (Anticipated)	Phase III (Anticipated)
Runway 15 Average Aircraft Operations	Carrier: 52 /day GA: 26 /day Military: 11 /day	Carrier: 40 /day GA: 26 /day Military: 0 /day	Carrier: 45 /day GA: 26 /day Military: 5 /day	Carrier: 45 / day GA: 20 / day Military: 0 /day
Runway 33 Average Aircraft Operations	Carrier: 40 /day GA: 18 /day Military: 10 /day	Carrier: 30 /day GA: 18 /day Military: 0 /day	Carrier: 25 /day GA: 18 /day Military: 5 /day	Carrier: 20 /day GA: 5 /day Military: 0 /day
Runway 15-33 Aircraft Category	C-IV	C-IV	C-IV	C-IV
Runway 15 Approach Visibility Minimums	1 mile	1 mile	1 mile	1 mile
Runway 33 Approach Visibility Minimums	¾ mile	¾ mile	¾ mile	1 mile

Note: Proper coordination with Flight Procedures group is necessary to maintain instrument approach procedures during construction.

Project		**Runway 15-33 Extension and Repaving**			
Phase		**Normal (Existing)**	**Phase I: Extend Runway 15 End**	**Phase II: Extend Runway 33 End**	**Phase III: Repave Runway**
Runway 15 Declared Distances	**TORA**	7,820	7,320	8,320	9,320
	TODA	7,820	7,320	8,320	9,320
	ASDA	7,820	7,320	7,820	9,320
	LDA	7,820	6,820	7,820	9,320
Runway 33 Declared Distances	**TORA**	7,820	7,320	8,320	9,320
	TODA	7,820	7,320	8,320	9,320
	ASDA	8,320	6,820	8,320	9,320
	LDA	7,820	6,820	7,820	9,320
Runway 15 Approach Procedures		LOC only	LOC only	LOC only	LOC only
		RNAV	RNAV	RNAV	RNAV
		VOR	VOR	VOR	VOR
Runway 33 Approach Procedures		ILS	ILS	ILS	LOC only
		RNAV	RNAV	RNAV	RNAV
		VOR	VOR	VOR	VOR
Runway 15 NAVAIDs		LOC	LOC	LOC	LOC
Runway 33 NAVAIDs		ILS, MALSR	ILS, MALSR	ILS, MALSR	LOC, MALSR
Taxiway G ADG		IV	III	IV	IV
Taxiway G TDG		4	4	4	4
ATCT (hours open)		24 hours	24 hours	24 hours	0500 - 2000
ARFF Index		D	D	D	D

Project	**Runway 15-33 Extension and Repaving**			
Phase	**Normal (Existing)**	**Phase I: Extend Runway 15 End**	**Phase II: Extend Runway 33 End**	**Phase III: Repave Runway**
Special Conditions	Air National Guard (ANG) military operations	All military aircraft relocated to alternate ANG Base	Some large military aircraft relocated to alternate ANG Base	All military aircraft relocated to alternate ANG Base
Information for NOTAMs		Refer above for applicable declared distances. Taxiway G limited to 118 ft wingspan	Refer above for applicable declared distances.	Refer above for applicable declared distances. Airport closed 2000 – 0500. Runway 15 glide slope OTS.

Note: This table is one example. It may be advantageous to develop a separate table for each project phase and/or to address the operational status of the associated NAVAIDs per construction phase.

Complete the following chart for each phase to determine the area that must be protected along the runway and taxiway edges:

Table E-2. Runway and Taxiway Edge Protection

Runway/Taxiway	**Aircraft Approach Category*** **A, B, C, or D**	**Airplane Design Group*** **I, II, III, or IV**	**Safety Area Width in Feet Divided by 2***

*See AC 150/5300-13 to complete the chart for a specific runway/taxiway.

Complete the following chart for each phase to determine the area that must be protected before the runway threshold:

Table E-3. Protection Prior to Runway Threshold

Runway End Number	**Airplane Design Group*** **I, II, III, or IV**	**Aircraft Approach Category*** **A, B, C, or D**	**Minimum Safety Area Prior to the Threshold***	**Minimum Distance to Threshold Based on Required Approach Slope***	
			ft	ft	: 1
			ft	ft	: 1
			ft	ft	: 1
			ft	ft	: 1

*See AC 150/5300-13 to complete the chart for a specific runway.

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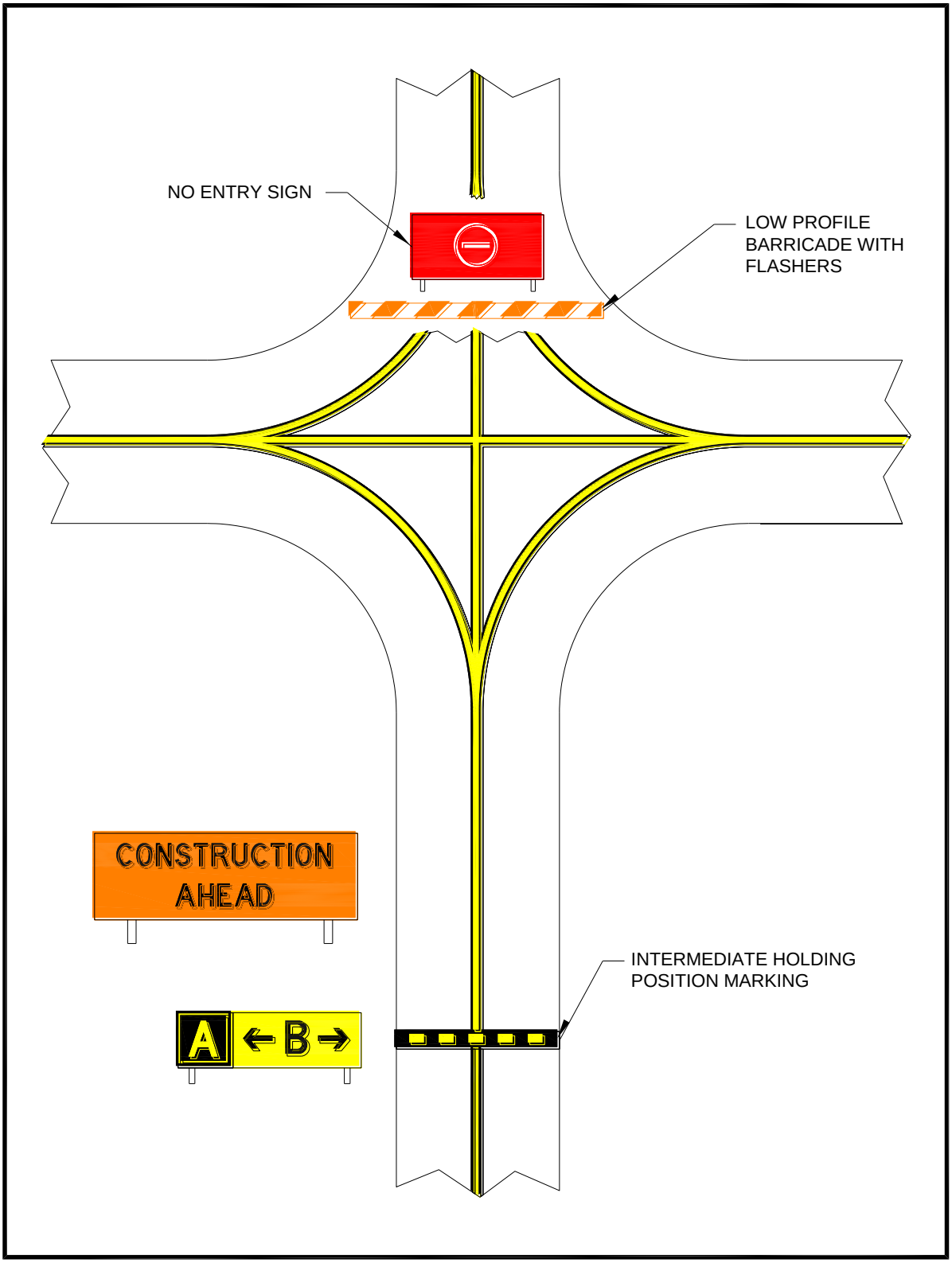
APPENDIX F. ORANGE CONSTRUCTION SIGNS

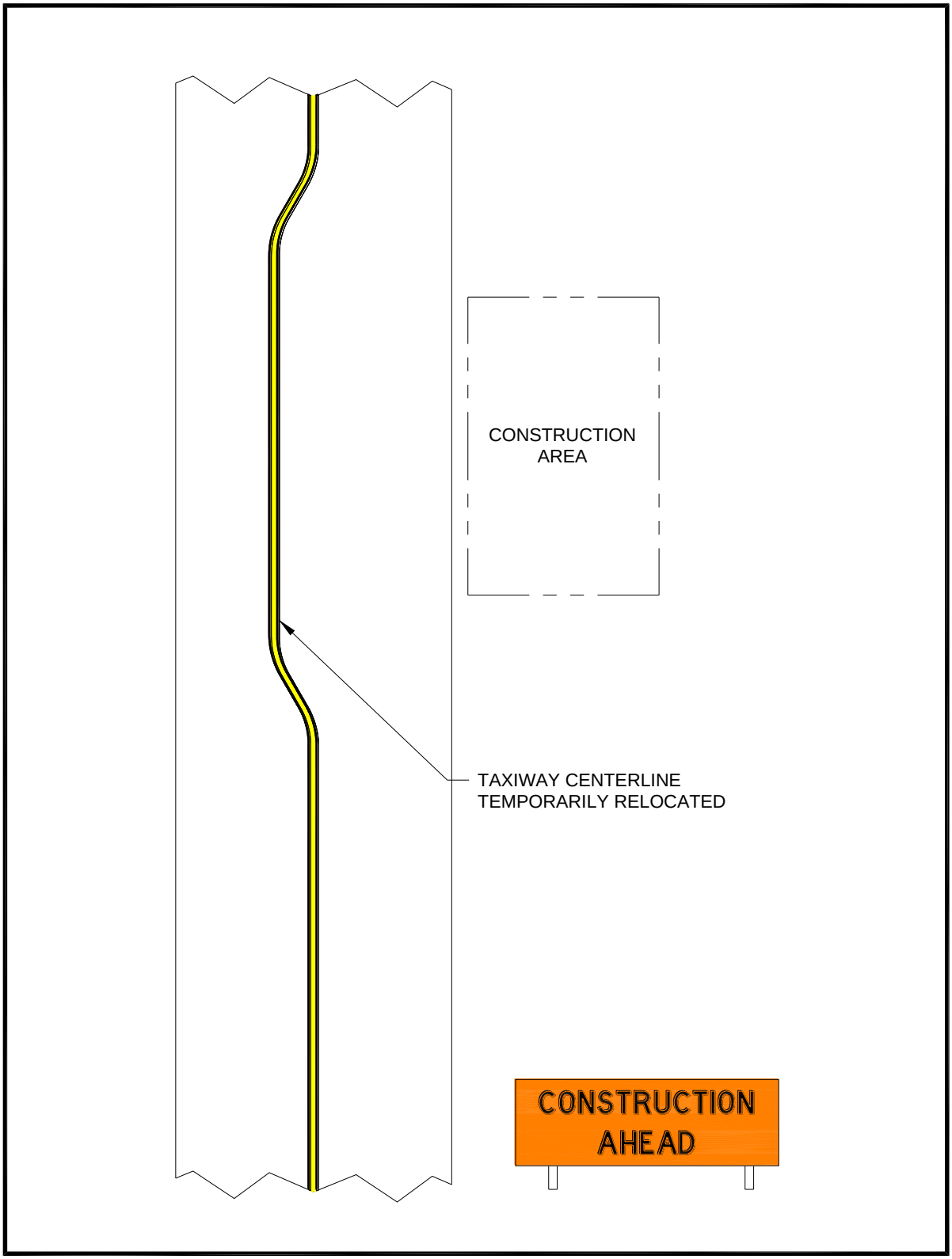
Figure F-1. Approved Sign Legends

Figure F-2. Orange Construction Sign Example 1



Note: For proper placement of signs, refer to EB 93.

Figure F-3. Orange Construction Sign Example 2



Note: For proper placement of signs, refer to EB 93.

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Advisory Circular Feedback

If you find an error in this AC, have recommendations for improving it, or have suggestions for new items/subjects to be added, you may let us know by (1) mailing this form to Manager, Airport Engineering Division, Federal Aviation Administration ATTN: AAS-100, 800 Independence Avenue SW, Washington DC 20591 or (2) faxing it to the attention of the Office of Airport Safety and Standards at (202) 267-5383.

Subject: AC 150/5370-2G Date: _____

Please check all appropriate line items:

☐ An error (procedural or typographical) has been noted in paragraph _____ on page _____.

☐ Recommend paragraph _____ on page _____ be changed as follows:

_____
_____
_____

☐ In a future change to this AC, please cover the following subject:
(Briefly describe what you want added.)

_____
_____
_____

☐ Other comments:

_____
_____
_____

☐ I would like to discuss the above. Please contact me at (phone number, email address).

_____

Submitted by: _____ Date: _____

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