

CITY OF CORNING SPECIAL CITY COUNCIL MEETING

TUESDAY, SEPTEMBER 27, 2022 CITY COUNCIL CHAMBERS 794 THIRD STREET

The City of Corning welcomes you to our meetings, which are regularly scheduled for the second and fourth Tuesdays of each month. Your participation and interest are encouraged and appreciated.

In compliance with the Americans with Disabilities Act, the City of Corning will make available to members of the public any special assistance necessary to participate in this meeting. The public should contact the City Clerk's office (530/824-7033) to make such a request. Notification at least 72 hours prior to the meeting will enable the City to make reasonable arrangements to ensure accessibility to this meeting.

This is an Equal Opportunity Program. Discrimination is prohibited by Federal Law. Complaints of discrimination may be filed with the Secretary of Agriculture, Washington, D.C. 20250.

A. CALL TO ORDER: 6:00 p.m.

B. ROLL CALL:

Council: Dave Demo

Karen Burnett

Jose "Chuy" Valerio

Shelly Hargens

Mayor: Robert Snow

The <u>Brown Act</u> requires that the Council provide the opportunity for persons in the audience to briefly address the Council on the subject(s) scheduled for tonight's closed session. Is there anyone wanting to comment on the subject(s) the Council will be discussing in closed session? If so, please come to the podium, identify yourself and give us your comments.

C. PUBLIC COMMENTS:

D. REGULAR AGENDA:

Approve Specifications and Bid Documents and Authorize Staff to Solicit Bids for the Building Demolition Project Encompassing the Entire City Block Between Solano and Marin Streets and 3rd and 4th Streets.

ITEM NO.:

APPROVE SPECIFICATIONS AND BID DOCUMENTS AND AUTHORIZE STAFF TO SOLICIT BIDS FOR THE BUILDING DEMOLITION PROJECT ENCOMPASING THE ENTIRE CITY BLOCK BETWEEN SOLANO AND MARIN STREETS AND 3RD AND 4TH STREETS

September 27, 2022

TO: HONORABLE MAYOR AND COUNCIL MEMBERS

FROM: KRISTINA MILLER, CITY MANAGER

ROBIN KAMPMANN, PE; PUBLIC WORKS/ENGINEER CONSULTANT

SUMMARY:

Staff recommends City Council approve the specifications and the bid document and authorize Staff to seek bids for the Building Demolition Project encompassing the entire city block between Solano and Marin Streets and 3rd and 4th Streets. The project consists of, but is not limited to disconnection of identified utilities, removal of all asbestos and lead containing materials, demolition of all building structure above slab level, hauling and disposal of all debris located on APN 071-136-001 thru 071-136-011. A complete set of specification and bid documents are available for Council review at City Hall.

The proposed project is the first step in the Downtown Recreation Center and Plaza Project that the City received grant funding for from the Department of Parks and Recreation Statewide Park Development and Community Revitalization Program of 2018.

Once bids are received and reviewed by Staff, the successful low bid will be brought back to Council for the approval of the contract award.

FINANCIAL:

The proposed project will be funded by the Department of Parks and Recreation Statewide Park Development and Community Revitalization Program of 2018 grant funding for the Downtown Recreation Center and Plaza Project

RECOMMENDATION:

MAYOR AND COUNCIL APPROVE SPECIFICATIONS AND THE BID DOCUMENTS AND AUTHORIZE STAFF TO SOLICIT BIDS FOR THE BUILDING DEMOLITION PROJECT ENCOMPASING THE ENTIRE CITY BLOCK BETWEEN SOLANO AND MARIN STREETS AND 3RD AND 4TH STREETS





BUILDING DEMOLITION PROJECT

REQUEST FOR PROPOSALS

PROJECT LOCATION: ENTIRE CITY BLOCK BETWEEN SOLANO MARIN AND THIRD AND FOURTH STREETS

BIDS DUE ON OR BEFORE:

3:00 P.M. WEDNESDAY, OCTOBER 26, 2022



Building Demolition Project

TABLE OF CONTENTS

CONTENTS	TOTAL PAGES
NOTICE TO CONTRACTORS	
PROJECT DESCRIPTION	1
BIDDING REQUIREMENT SUMMARY	1
INSTRUCTIONS TO BIDDERS	5
PROPOSAL BID FORMS	6
BIDDERS BOND	3
AGREEMENT	5
PERFORMANCE BOND	2
PAYMENT BOND	2
GENERAL CONDITIONS	39
SUPPLEMENTARY CONDITIONS	6
GENERAL SPECIFICATIONS	43
TECHNICAL SPECIFICATIONS	2

CITY OF CORNING

NOTICE TO CONTRACTORS

NOTICE IS HEREBY GIVEN that the City Council of the City of Corning, will receive proposals for the "BUILDING DEMOLITION PROJECT" encompassing the entire city block between Solano Street and Marin Street and 3rd and 4th Streets.

Proposals shall be submitted on forms included in the Bid Packet. Bidding documents and specifications may be viewed at the Corning City Hall located at 794 Third Street, Corning CA and copies of the Bid Packet may be obtained from the Corning Web Page: www.corning.org listed under Public Information, or www.ciPlist.com.

Proposals must be received at Corning City Hall, 794 Third St., Corning, CA 96021 not later than 3:00 P.M. on October 26. 2022, at which time the Public Works Consultant will open said proposals. Bids shall be submitted in sealed envelopes plainly marked on the outside "SEALED BID – BUILDING DEMOLITION PROJECT – DO NOT OPEN", together with the name and address of the bidder. The bids will be opened and read publicly and bidders or their agents are invited to be present.

There will be a mandatory pre-bid walk-thru on Monday. October 17, 2022, at 10:00 a.m. We will meet at City Hall. 794 Third Street Corning. CA 96021 and walk over to the site.

In accordance with the provisions of Section 1770, and following, of the Labor Code of the State of California, the City of Corning has ascertained that the general prevailing rate of wages applicable to the locality in which the work is to be done will be listed in the "General Prevailing Wage Rates as determined by the Director of Industrial Relations," which is on file at City Hall and available from the California Department of Industrial Relations Internet website at www.dir.ca.gov.

Only one Contract will be awarded. The Contract, if awarded, will be awarded to the lowest responsive and responsible bidder as determined by the City. The City of Corning reserves the right to waive irregularities, accept or reject any and all bids, and make that award which is in the best interest of the City. If two or more bids are the same and the lowest, contract award will be the sole discretion of the City.

Each bidder must be appropriately licensed in the State of California and registered with the Department of Industrial Relations for this project as required by law. A contractor and/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 Labor Code Section 1725.5.

Lisa M. Linnet, City Clerk, City of Corning

Publish on 10/5/2022 & 10/12/2022

PROJECT DESCRIPTION

Building Demolition Project

<u>Project Location:</u> The entire city block south of Solano Street, north of Marin Street, west of Third Street and east of Fourth Street.

The project consists of the demolition of all structures located within APNS:

APN:	Address:
071-136-001	N/A
071-136-002	1121 Solano Street
071-136-003	1113 Solano Street
071-136-004	1101 Solano Street
071-136-005	N/A
071-136-006	N/A
071-136-007	1114 Marin Street
071-136-008	1158 Marin Street
071-136-009	N/A
071-136-010	813 Fourth Street
071-136-011	811 Fourth Street

The buildings located at 1111, 1113 and 1121 Solano Street are approximately 13,067 sf. The building located at 1158 Marin St. is approximately 1,400 sf. The building located at 811 Fourth Street us approximately 9,019 sf. (6,000 sf 1st floor shop and 3,019 sf second floor apartment). The building located at 813 Fourth Street is approximately 1,438sf.

Work to include disconnection of identified utilities, removal of all asbestos and lead containing materials as stated herein, demolition of all building structure above slab level, hauling and disposal of all debris in accordance with recycling requirements stated herein.

This is only a summary. See entire project documents for full scope of the project.

BIDDING REQUIREMENT SUMMARY

1. PROJECT TITLE: Building Demolition Project

2. PROJECT LOCATION: All Structures within APNS:

071-136-001, 071-136-002, 071-136-003, 071-136-004, 071-136-005, 071-136-006, 071-136-007, 071-136-008, 071-136-009, 071-136-010,

071-136-011

3. BID OPENING DATE: October 26, 2022 at 3:00 PM

4. BID PLACE: 794 Third Street Corning, CA

96021

5. MANDATORY PRE BID MEETING: October 17, 2022 at 10:00 AM

PLACE: 794 Third St. Coming, CA

6. BID SECURITY: 10% of maximum amount of bid

7. CONSTRUCTION TIME PERIOD: 60 Calendar Days

8. LICENSE REQUIREMENTS: Class A and C-21 for Demolition

Class B, C-33, or C-61/D-38 for Lead Removal

Class C-22 for Asbestos Removal

9. LIQUIDATED DAMAGES: \$250 per day

10. LABOR AND MATERIALS PAYMENT BOND: 100% of the total bid

11. PERFORMANCE BOND: 100% of the total bid

12. PREVAILING WAGE RATES: Yes

13. BID VALID FOR: 60 Days

14. ESTIMATE OF DEMOLITION COSTS: \$247,000

15. BID PACKET LOCATION: www.corning.org

www.CIPList.com

INSTRUCTION TO BIDDERS

Bid Proposal

Each bid shall be made on the proposal form furnished by the City, and shall be in accordance with the Drawings, Specifications, any Addenda issued prior to bid opening, and all other Contract Documents; and shall be accompanied by a certified check, cashier's check or bidders bond, payable to the City, for a sum of not less than ten (10%) percent of the amount of the bid, as a guarantee that the bidder will enter into the Contract for the work, the full amount of such guarantee to be forfeited to the City should said bidder fail to enter into said Contract. The successful bidder shall be required to furnish a Faithful Performance Bond for the amount of not less than one hundred percent (100%) of the contract price, and a Labor and Materials Bond for the amount of not less than one hundred percent (100%) of the contract price; said bonds to be secured from a surety company authorized to do business in the State of California.

The proposal shall be made on the form bound herein. The bid shall be enclosed in a sealed opaque envelope bearing the name of the bidder and name of project. The proposal shall be delivered by the time and to the place stipulated in the Notice to Contractors. It is the bidder's sole responsibility to see that his proposal is received in proper time. Any proposal received after the scheduled closing time for receipt of proposals will be returned to the bidder unopened. Electronic Proposals will not be considered. Modifications to Proposals already submitted will be allowed if received in writing, or by fax, prior to the time fixed in the Notice to Contractors for opening of Proposals. Modifications shall be submitted as such and shall not reveal the total amount of either the original or revised Proposal. Prior to the time fixed for bid opening the proposal may be withdrawn by the bidder by means of a written request, signed by the bidder or his properly authorized representative. Such written request must be delivered to the place stipulated in the Notice to Contractors for receipt of proposals.

The proposals will be publicly opened and read at the time and place stipulated in the Notice to Contractors.

Unauthorized conditions, limitations, or provisions attached to a proposal will render it informal and may cause its rejection. The completed proposal forms shall be without interlineation, alterations, or erasures. Alternative proposals will not be considered unless called for. Oral, telegraphic, or telephonic proposals or modifications will not be considered.

All items on the bid form shall be filled out; numbers shall be filled out; numbers shall be stated both in writing and in figures; words shall be given priority over figures and the signatures of all individuals shall be in longhand. In the event there is more than one (1) bid item in the bidding schedule, the bidder shall furnish a price for all bid items in the schedule, and failure to do so will render the proposal informal and may cause its rejection. In the event there are unit price bid items in the bidding schedule and the amount indicated for a unit price bid item does not equal the product of the unit price and quantity, the unit price shall govern and the amount will be corrected accordingly. In the event there is more than one (1) bid item in the bidding schedule and the total indicated for the schedule does not agree with the sum of the prices bid on the individual items, the prices bid on the individual items shall govern and the total for the schedule will be corrected accordingly.

In case of refusal or failure to enter into said Contract, the check or bond, as the case may be, shall be forfeited to the City. If the bidder elects to furnish a bid bond as the proposal guarantee, he shall use the bid bond form bound herein.

Before submitting a proposal, the bidder shall carefully examine the Drawings, Specifications, any Addenda issued prior to bid opening, and all other Contract Documents; and he shall visit the site of the Work. It will be assumed that the bidder is familiar with existing site conditions and that he has a clear understanding of the requirements of the Contract regarding the furnishing of materials and performance of work. Should a bidder find discrepancies in, or omissions from, the Drawings, Specifications, or Contract Documents, or should he be in doubt as to their meaning, he should at once notify the City of Corning Public Works Consultant, who will send written instructions or clarifications to all bidders. The City will not be responsible for any oral instructions.

Every bidder shall, in his bid, set forth the name and location of business of each subcontractor who will perform work, labor or service to the bidder in excess of one-half of one percent (1/2%) of the bidder's total bid. If the bidder fails to specify a subcontractor as stated above, he agrees to perform that portion himself. The successful bidder shall not, without the consent of the City, substitute any person or firm as subcontractor in place of the subcontractor designated in the original bid.

Every bidder shall submit a completed Non-Collusion Affidavit with the bid.

Bid Review

No bid proposal shall be considered as low bidder or apparent low bidder until after all bids have been analyzed by the City. If required by the City, the bidders shall submit any information requested to evaluate the bids, including subcontractors written bids, bonds, cost breakdowns, financial status, work experience and status of license.

Bid Selection

Contract for work will be executed with a contractor who is licensed in accordance with applicable state law.

A bidder may be relieved of his bid, and his bid security returned, by action of the City Council of the City of Corning provided he has given the City written notice within five (5) days after the opening of bids of a mistake, or other cause for the request, and specifying in detail the reason for the request.

More than one (1) proposal from an individual, partnership, corporation or association under the same or different names will not be considered. Reasonable grounds for believing that any bidder is interested in more than one (1) proposal for the work contemplated will cause the rejection of all proposals in which such bidder is interested. If there is reason for believing that collusion exists among the bidders, all bids will be rejected and none of the participants in such collusion will be considered in future proposals.

Upon request, the City will return all proposal guarantees to their respective bidder within ten (10) days after award of the Contract, except those accompanying proposals submitted by the three (3) lowest responsible bidders.

Bid Award

Award of a Contract, if awarded, will be made to the lowest responsible bidder whose proposal complies with all the requirements prescribed. Any such award will be made within sixty (60) calendar days after opening of the proposals. The City reserves the right to reject any or all bids, to waive any informality or irregularity in a bid, and to make award in the interests of the City.

The bidder to whom award is made shall execute a written Contract with the City on the form of agreement provided, and shall secure all insurance and bonds required by the Specifications.

Failure or refusal to enter into a contract within ten (10) days as herein provided, or to conform to any of the stipulated requirements in connection therewith, shall be just cause for annulment of the award and the forfeiture of the proposal guarantee. If the successful bidder refuses or fails to execute the Contact, the City may award the Contract to the second lowest responsible bidder. If the second bidder refuses or fails to execute the Contract, the City may award the Contract to the third lowest responsible bidder. On the failure or refusal of such second or third lowest bidder to execute the Contract, such bidder's guarantees shall be likewise forfeited to the City.

Addenda and Explanation to Bidders

Any request for explanation or interpretation of the Bid Documents must be made in writing not later than 4:00 p.m. on Wednesday October 19, 2022. All requests shall be made by email to rkampmann@corning.org with a subject line of "Building Demolition Project". Any explanation or interpretation will be made in the form of Addenda to the Contract Documents. All Addenda will be uploaded to www.CIPList.com and to the City of Corning website at www.corning.org. It will be the bidder's responsibility to verify that they have received all Addenda's. Receipt of all addenda shall be acknowledged on the proposal form in the space provided. Oral explanations and interpretations will not be binding.

Time of Completion and Liquidated Damages

The contractor shall commence work within ten (10) working days from the date of a written "Notice to Proceed" issued by the City and shall diligently prosecute same to completion before the expiration of 60 calendar days.

It is agreed by the parties to the Contract that in case all the Work called for under the Contract is not completed within the number of days specified, damage will be sustained by the City of Corning; and that it will be impractical to ascertain actual damages and it is therefore agreed the Contractor will pay to the City the sum set forth herein per day for each working day delay in completing the Work in excess of the number of days prescribed; and the Contractor agrees to pay said liquidated damages and agrees that the City may deduct the amount thereof from money due or that may become due to the Contractor under the Contract.

The Contractor shall pay to the City of Corning the sum of two hundred fifty dollars (\$250.00) for each and every working day's delay in finishing the work in excess of the

number of days prescribed above.

Form of Agreement

The form of agreement, which the successful bidder will be required to execute, if awarded the work, is attached hereto and is made a part hereof.

Wages

The attention of the bidder is called to the fact that the schedule of prevailing rates of pay for each craft or type of workman needed to execute the Work shall not be less than the minimum rates of pay as established in pursuance of the provisions of Section 1773 of the Labor Code of the State of California, which Code requires the establishing of such rates for the locality. The Code reads: "Nothing shall prohibit the payment of more than the general prevailing rate of wages to any workman employed on public work".

A copy of the current prevailing wage rates for this locality is available from the Department of Industrial Relations.

All bidders shall check the available source of labor supply and obtain information with reference to the working days of various crafts and the rates of wages being paid in the immediate vicinity of the place where the Work contemplated by these Specifications is to be performed.

It is intended that prevailing rates of wages and working hours shall be in accordance with those established by jurisdictional authorities of the vicinity in which the Work is to be performed. If rates established are in excess of those prevailing, the prevailing rates shall govern, but in no instance shall the City be held responsible for rates of wages paid which are below those prevailing.

Debarment Policy

It shall be the policy of the City of Corning City Council to prohibit any party or entity listed in the Excluded Parties System (EPLS), maintained by the General Services Agency of the United States Government, from participating in any contract, agreement, or other business relationship with the City of Corning.

Non-resident Contractor

The State of California Franchise Tax Board requires that whenever payments are made to a non-resident, independent contractor in excess of \$1,500 for services rendered, 7.0% of the gross amount must be withheld. A non-resident is anyone who is not a resident of California. A corporation is also subject to the withholding requirements if it is neither incorporated nor qualified to do business in the State of California. Unless the Franchise Tax Board has authorized a reduced rate or waiver of withholding and City is provided evidence of such reduction/waiver, all nonresident contractors will be subject to the withholding. It is the responsibility of the Contractor to submit the Waiver Request (Form 588) to the Franchise Tax Board as soon as possible in order to allow time for the Franchise Tax Board to review the request.

Public Works Contractor Registration Program

No contractor or subcontractor may be listed on a bid proposal or awarded a contract for a public works project unless registered with the Department of Industrial Relations pursuant

to Labor Code section 1725.5 with exceptions from this requirement specified under Labor Code sections 1725.5(f), 1771.1(a) and 1771.1(n).

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

License

The Contractor and all subcontractors must be licensed under the laws of the State of California at the time this Contract is awarded, and for its full duration. The Contractor or Subcontractors shall possess a class A or C-21 License for demolition, class C-22 for asbestos removal and a class B, C-33 or C-61/D38 for lead removal.

PROPOSAL BID FORMS CITY OF CORNING

City Council
City of Corning
Corning, CA

unc			

Building Demolition Project

including, but not limited to, furnishing all required labor, materials, taxes, permits, insurance, bonds, transportation, scaffolding, equipment, facilities, utilities, and incidentals.

If awarded the Contract, the undersigned hereby agrees that within ten (10) working days after receipt of the Contract from the City, he will sign the Contract in the required form, of which the Notice to Contractors, Instructions to Bidders, Proposal, Bid Forms, Bonds, General and Supplementary Conditions, Drawings, Specifications, and all Addenda issued prior to the opening of bids, are a part.

The undersigned agrees to complete all work required under the Contract within 60 calendar days and accept in full payment the price named in the Bid Proposal, which is bound herein and made a part of this proposal.

The undersigned declares that he has carefully checked all of the figures submitted on the Bid Forms and understands that the City will not be responsible for errors or omissions on the part of the undersigned in making up this bid.

Bidder hereby certifies that the Bidder has reviewed and understands the insurance coverage requirements and bonding requirements, as specified in the General Conditions, Article 5 – Bonds and Insurance. Should the Bidder be awarded the contract for the work, Bidder further certifies that the Bidder can meet the specified requirements for bonding and insurance, including insurance coverage of the subcontractors, and agrees to name the City of Corning, its elected officials, officers, and employees as additional insured for the work specified. The undersigned agrees to secure the required insurance and bonds and submit them prior to or concurrent with the return of the signed Contract.

Accompanying this proposal is a "Cashier's Check", "Certified Check" or "Bidder's Bond", as the case may be, in an amount equal to at least ten percent (10%) of the total of the bid.

Licensed in accordance v	vith an act providing for t	he registration of Contractors:
Class	License No.	Expires
Department of Industrial	Relations (DIR) Registra	tion Number:
Expiration Date:		
		penalty of perjury under the laws of the formation is true and correct.
Signature of Bidder:		
Business Address:		
Business Phone:		Business Fax:
Cell Phone:		
E-mail Address:		
Dated:		<u>~</u>
signature of the officer or officers true name of the firm shall be sel behalf of the co-partnership; and other than an officer of a corpora	authorized to sign Contracts on bel forth above, together with the sig if Bidder is an individual, his signa tion or a member of a partnership,	orporation shall be set forth above, together with the half of the corporation. If Bidder is a co-partnership, the mature of the partners authorized to sign Contracts on ature shall be placed above. If signature is by an agent, a Power of Attorney must be on file with Owner prior se, the Proposal will be disregarded as irregular and
Receipt of the following A	Addenda is hereby acknow	vledged:
Addendum No	Bidder's Initials	
Addendum No	Bidder's Initials	
Addendum No	Bidder's Initials	

PROPOSAL FOR

BUILDING DEMOLITION PROJECT

The undersigned bidder hereby proposes and agrees to furnish any and all services necessary to perform all Work required by the Contract Documents:

BID:

BID AMOUNT:

Furnish all labor, materials, taxes, insurance, bonds, transportation, equipment, facilities, utilities, and incidentals for the "BUILDING DEMOLITION PROJECT" for the lump sum as listed below.

	dollars
(written numbers)	dollars
\$ (figures)	
Bidder	
Date	

LIST OF SUBCONTRACTORS

BUILDING DEMOLITION PROJECT

Following is the name and location of the mill, shop, or office of each subcontractor who will perform work or labor or render services to the above-signed bidder. Failure of the bidder to specify a subcontractor for any portion of the work to be performed under the contract constitutes an agreement by the bidder to perform that portion of the work himself.

ALL SUBCONTRACTORS MUST BE LISTED REGARDLESS OF MONETARY VALUE OF WORK.

All blanks below must be completed for each subcontractor. Failure to do so may cause your bid to be declared nonresponsive:

Subcontractor	
Name:	
Location of place of business:	
License No	Class:
DIR #:	
Services to be performed:	
Subcontractor Name:	
License No	Class:
DIR #:	
Services to be performed:	
Subcontractor	
Name:	
License No.	Class:
DIR #:	
Services to be performed:	
Subcontractor	
Name:	
License No	Class:
DIR #:	
Services to be performed:	

No Contractor may perform work on a public works project with a Subcontractor who is ineligible to perform work on a public works project pursuant to Section 1777.1 or 1777.7 of the Labor Code.

INFORMATION REQUIRED OF BIDDERS

BUILDING DEMOLITION PROJECT

The bidder is required to supply the following information.

1.	Firm Name	4.101			
	Representative			90 10 1	
3.	Title	=:			
4.	Business Address	_			11
6.	Telephone	Cell #	90	Fax#	
7.	Email Address		THE N		
8.	California Contractors Licens	se(s):			
	No(s)	Type(s)			
۵	California Department of Indi	ustrial Polations Pa	agistration No		

NON-COLLUSION AFFIDAVIT

(Title 23 United States Code Section 112 and Public Contract Code Section 7106)

To the City of Corning, Department of General Services

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

Note: The above Non-collusion Affidavit is part of the Proposal. Signing this Proposal on the signature portion thereof shall also constitute signature of this Non-collusion Affidavit.

Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

EQUAL EMPLOYMENT OPPORTUNITY CERTIFICATION

The bidder, proposed
subcontractor , hereby certifies that he has
, has not, participated in a previous contract or subcontract subject to the equal
opportunity clause, as required by Executive Orders 10925, 11114, or 11246, and that,
where required, he has filed with the Joint Reporting Committee, the Director of the Office
of Federal Contract Compliance, a Federal Government contracting or administering
agency, or the former President's Committee on Equal Employment Opportunity, all reports
due under the applicable filing requirements.
due under the applicable ming requirements.
Note: The above certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor [41 CFR
60-1.7(b)(1)] and must be submitted by bidders and proposed subcontractors only in connection with contracts and subcontracts which are subject to the equal opportunity clause. Contracts and subcontracts are set forth in 41 CFR 60-1.5. (Generally only contracts or subcontracts of \$10,000 or under are exempt.)
Currently, Standard Form 100 (EEO-1) is the only report required by the Executive Orders or their implementing regulations.
Proposed prime contractors and subcontractors who have participated in a previous contract or subcontract subject to
the Executive Orders and have not filed the required reports should note that 41 CFR 60-1.7(b)(1) prevents the award
of contracts and subcontracts unless such contractor submits a report covering the delinquent period or such other period specified by the Federal Highway Administration or by the Director, Office of Federal Contract Compliance, U.S. Department of Labor.
Department of Labor.
PUBLIC CONTRACT CODE SECTION 10162 QUESTIONNAIRE
In accordance with Public Contract Code Section 10162, the Bidder shall complete,
under penalty of perjury, the following questionnaire:
and portally or polyary, the following quoductions
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
163 140
If the answer is yes, explain the circumstances in the following space:

PUBLIC CONTRACT CODE SECTION 10232 STATEMENT

In accordance with Public Contract Code Section 10232, the Contractor hereby states, under penalty of perjury, that no more than one final un-appealable finding of contempt of court by a federal court has been issued against the Contractor within the immediately preceding two (2) year period because of the Contractor's failure to comply with an order of a federal court which orders the Contractor to comply with an order of the National Labor Relations Board.

PUBLIC CONTRACT CODE SECTION 10285.1 STATEMENT

In accordance with Public Contract Code Section 10285.1 (Chapter 376, Stats. 1985), the bidder hereby declares, under penalty of perjury under the laws of the State of California, that the bidder has ____, has not ____ been convicted within the preceding three (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 must place a check mark after "has" or "has not" in one of the blank spaces provided. The above statements are part of the Proposal. Signing this Proposal on the signature portion hereof shall also constitute signature of this Statement. Bidders are cautioned that making a false certification may subject the certifier to criminal prosecution.

Proposal Bid Forms Page 8 of 9

PROPOSAL CERTIFICATION (LABOR CODE SECTION 1861)

STATE OF CALIFORNIA	4)	
) SS	
COUNTY OF TEHAMA)	
I, the undersigned, do he	ereby certify:	
That I am aware of	the provisions of Section 3700 of the Labor Code of the Sta	ate of
California, which require	res every employer to be insured against liability for Wo	rkers'
Compensation or to unde	ertake self-insurance in accordance with the provisions of that (Code,
and I will comply with suc	ch provisions before commencing the performance of the work of	of this
Contract.		
Executed at		
On(Dat	ite)	
i CERTIFY under	r the penalty of perjury that the foregoing is true and correct.	
	Signature of Contractor-Employer	

BIDDER'S BOND CITY OF CORNING STATE OF CALIFORNIA

We,	, as Principal, and	, as Surety, are
bound unto the City of C	orning, hereafter referred to as "Obligee," in the pena	al sum of ten percent (10%) of the
total amount of the bid o	f the Principal submitted to the Obligee for the work	described below, for the payment
of which sum we bind ou	rselves jointly and severally.	
THE CONDITION OF TH	HIS OBLIGATION IS SUCH, THAT:	
WHEREAS, the Prin	cipal is submitting a bid to the Obligee for the BUILD	ING DEMOLITION PROJECT for
which bids are to be ope	ned at Corning, California, on OCTOBER 26, 2022 A	AT 3:00 P.M.
the Notice to Contractors are presented to him for bid, and files two bonds with the contraction of the cont	i, if the Principal is awarded the contract and, within the s, Special Provisions, Proposals, and Contract for this signature, enters into a written contract, in the prescrivith the Obligee, one to guarantee faithful performance labor and materials is provided by law, then this can in full force.	s work, after the prescribed forms ribed form, in accordance with the ce of the contract and the other to
	rought upon this bond by the Obligee and judgment i gee in such suit, including a reasonable attorney's fe	
Dated:		
	8-	
	Ву:	
	·	
	Pag:	

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

NOTARY ACKNOWLEDGMENT

STATE OF)		
CITY OF			
Onand for said State, per	, before me,	Name of Notary Public	, a Notary Public in
and for baid blate, per		Name(s) of Signer(s)	
subscribed to the with in his/her/their authori the person(s), or the e	in instrument and acknow zed capacity(ies), and tha intity upon behalf of which IY OF PERJURY under t	vidence to be the person(s rledged to me that he/she/t at by his/her/their signature n the person(s) acted, exec he laws of the State of Cal	hey executed the same e(s) on the instrument cuted the instrument.
WITNESS my hand ar	nd official seal		
•			
			(SEAL)
Signa	ure of Notary Public		,

AGREEMENT FORM CITY OF CORNING

BUILDING DEMOLITION PROJECT

THIS AGREEMENT, made and entered into on the below written, by and between The City of Corning, hereinafter called the **OWNER**, and **enter name of contractor here** hereinafter called the **CONTRACTOR**.

WITNESSETH, that, for the considerations hereinafter mentioned, the Owner and Contractor agree as follows:

ARTICLE I. The Contractor agrees to furnish all labor, materials, tools, and equipment and to perform all work required to construct and complete in a good and workmanlike manner, and in strict accordance with the Contract Documents, those certain improvements entitled:

These Special Provisions, the Bid Proposal, and the Plans and Specifications attached hereto and incorporated herein by express reference are a material part of this contract and are expressly incorporated herein as though fully set forth in this paragraph. These documents are collectively marked **EXHIBIT "A"**.

ARTICLE II. The Owner agrees to pay the Contractor for the performance of the Contract, subject to additions and deductions provided therein at the following prices, and the Contractor agrees to receive and accept said payment as full compensation for furnishing all materials and for doing all the work contemplated and embraced in this agreement, and for all loss or damage arising out of the nature of the aforesaid work or from the action of the elements and from any unforeseen difficulties or obstructions which may arise or be encountered in the prosecution of the work until its acceptance by Owner, and for all risks of every description connected with the work, and for all expenses incurred by or in consequence of the suspension or discontinuance of the work, and for well and faithfully completing the work and the whole thereof in the manner and according to the Contract Documents and the requirements of the Engineer under them to wit: As shown on the Proposal attached hereto and incorporated herein.

ARTICLE III. The Contractor and Public Works Director shall produce a schedule for the project start date after the date of execution of the Contract. He/She shall diligently prosecute the same to completion as shown on the Proposal attached hereto and incorporated herein.

ARTICLE IV. Licensing, Insurance & Labor Code Requirements

- Contractor agrees to secure and maintain a general liability insurance policy in a sum not less than \$1,000,000.00 during the term of the Contract Agreement and any extension thereto and shall name the City of Corning as an additional insured under the general liability insurance policy. Contractor shall also secure and maintain, during the term of the Contract Agreement, Automobile Liability Insurance at limits competitive in the construction industry of like kind, which shall be applicable and cover those vehicles operating on the project, and any transfer obligation to/from the project, as well as Workers Compensation Insurance where applicable and/or required under California law.
- Contractor shall purchase and maintain a City of Corning Business License and any other applicable license issued by the State of California required for such work.
- A contractor and/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 Labor Code Section 1725.5. In accordance with the provisions of Section 1770, and following, of the Labor Code of the State of California, the City of Corning has ascertained that the general prevailing rate of wages applicable to the locality in which the work is to be done will be listed in the "General Prevailing Wage Rates as determined by the Director of Industrial Relations," which is on file at City Hall and available from the California Department of Industrial Relations Internet website at www.dir.ca.gov.

It is mandatory that the Contractor to whom the contract is awarded and any subcontractor under him pay not less than said specified rates to all persons employed by them or either of them in the execution of the contract. The successful bidder shall post a copy of such determination at the job site, and nothing herein shall be considered as an acceptance of the said terms of said proposal conflicting herewith.

ARTICLE V. Indemnity, Defense, and Hold Harmless. Contractor agrees to indemnify, defend, and hold the City of Coming harmless from any and all losses, liability, damages, injury (to person or property), fines, fees, penalties, and/or other damages that arises, in any way, under the terms of the Contract Agreement and/or any alleged and/or actual negligent act, intentional act, or other circumstance caused by or performed by Contractor, its agents, subcontractors, and/or employees. The obligations of this provision do not apply to injury, loss, damage, or other harm that arises from the sole and absolute negligence and/or intentional act of the City of Corning, its agents and/or employees.

ARTICLE VI. Termination of Contract. Should contractor fail to perform satisfactorily during this agreement, City reserves to itself the right to cancel any remaining portion of said contract upon thirty days written notice to Contractor, by notice in writing provided to Contractor at his usual place of business. Should Contractor breach any of the terms and conditions of this contract, or violate any laws, the City reserves unto itself the right to direct Contractor to immediately cease performance and then terminate this contract thereafter, upon thirty days written notice, and pay contractor such amounts as he may then be entitled to on a pro-rata basis (pro-rated according to amount of work satisfactorily completed)

ARTICLE VII. Integration and Modification. The Contract Agreement, its exhibits and attachments are the operative contract of the parties; there being no other written or oral agreements. Any modifications to this Agreement must be in writing and signed by all parties.

ARTICLE VIII. Savings Clause. Should any one part of this Agreement be deemed illegal or invalid, all other provisions shall remain valid and enforceable so long as the Agreement's purpose is not materially altered.

ARTICLE IX. Ability to Contract. Contractor represents and warrants that it has taken all necessary actions to bind the corporation as set forth in the Contract Agreement and any addendum thereto.

ARTICLE X. If during the performance of Contactor's work Contractor, its agents, or employees discover a dangerous condition that presents a possible danger to the general public, or is otherwise reasonably perceived by Contractor as a danger to the public, Contractor shall immediately notify Public Works of the condition and if necessary shall post a warning at the area presenting such condition to warn the general public of the same and thereafter safely and timely resolve the condition or until such time as the Public Works Department can assess or otherwise address the condition.

IN WITNESS WHEREOF, the parties to these presents have hereunto set their hands on the date below written.

CITY OF CORNING:	Approved as to form:
Kristina Miller, City Manager	City Attorney, City of Corning
Date	Date
CONTRACTOR:	
By (signature)	
By and Title (printed)	Address
Date	
F-Mail Address	Telephone Number

PERFORMANCE BOND CITY OF CORNING STATE OF CALIFORNIA

BUILDING DEMOLITION PROJECT

	KNOW	ALL M	EN BY	THESE F	RESEN	NTS, T	'HAT V	VE, _				, the
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							Contra	ctor				
							Surety					

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

NOTARY ACKNOWLEDGMENT

STATE OF CALIFORNIA)	
) ss. CITY OF))	
On, before me, _	Name of Notary Public
Notary Public in and for said State, personal	
who proved to me on the basis of satisfactor name(s) is/are subscribed to the within instru he/she/they executed the same in his/her/the his/her/their signature(s) on the instrument the which the person(s) acted, executed the inst	y evidence to be the person(s) whose ument and acknowledged to me that eir authorized capacity(ies), and that by ne person(s), or the entity upon behalf of
I certify under PENALTY OF PERJURY und foregoing paragraph is true and correct.	er the laws of the State of California that the
WITNESS my hand and official seal	
	(SEAL)
Notary Public	

PAYMENT BOND CITY OF CORNING STATE OF CALIFORNIA (SECTION 3247, CIVIL CODE)

BUILDING DEMOLITION PROJECT

WHEREAS, the City of Corning, Department of Po awarded to Contractor, for the work described as follows: BUILDING DEM	iblic Works, hereafter referred to as "Obligee," has, hereinafter referred to as "Principal," a contract OLITION PROJECT
AND, WHEREAS, said Principal is required to fusecure the payment of claims of laborers, mechanicaw.	rnish a bond in connection with said contract, to s, materialmen, and other persons as provided by
NOW, THEREFORE, we the undersigned Principsum of	al and Surety are bound unto the Obligee in the(\$) for which payment
THE CONDITION OF THIS OBLIGATION IS SUCH	
That if said Principal or its subcontractors shall if Section 3181, or amounts due under the Unemployr performed by such claimant, or any amounts require Franchise Tax Board from the wages of employees of Section 18806 of the Revenue and Taxation Code, wherein will pay for the same in an amount not exceed above obligation shall be void. In case suit is brough attorney's fee to be fixed by the court.	ed to be deducted, withheld, and paid over to the of the Principal and his subcontractors pursuant to ith respect to such work and labor, that the surety ding the sum specified in this bond, otherwise the
This bond shall inure to the benefit of any of the give a right of action to such persons or their assign	e persons named in Civil Code Section 3181 as to s in any suit brought upon this bond.
Dated:	
	Ву:
	Principal
	By: Attorney-in-Fact
	· · · · · · · · · · · · · · · · · · ·

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

NOTARY ACKNOWLEDGMENT

STATE OF CALIFORNIA)	
) ss. CITY OF CORNING))	
On	, before me,	_, a
Notary Public in and for said S	state, personally appeared	
name(s) is/are subscribed to the he/she/they executed the sam	s of satisfactory evidence to be the person(s) whose he within instrument and acknowledged to me that is in his/her/their authorized capacity(ies), and that by e instrument the person(s), or the entity upon behalf of ecuted the instrument.	
I certify under PENALTY OF P forgoing paragraph is true and	PERJURY under the laws of the State of California that t I correct.	he
WITNESS my hand and officia	al seal	
Signature of Alotany Du	(SEAL)	

GENERAL CONDITIONS

TABLE of CONTENTS

Article	4	DEFINITIONS
	1 -	THE HALL BUILDING

Article 2 - PRELIMINARY MATTERS

Execution of Agreement

Delivery of Bonds Copies of Documents

Contractor's Pre-start Representations

Commencement of Time; Starting the Project

Before Starting Construction

Article 3 - CORRELATION, INTERPRETATION, AND INTENT OF CONTRACT DOCUMENTS

Article 4 - AVAILABILITY OF LAND, PHYSICAL CONDITIONS, AND REFERENCE POINTS

Availability of Lands Physical Conditions Reference Points

Article 5 - BONDS AND INSURANCE

Contractor's Liability Insurance

Builders Risk Insurance

Performance, Payment and Other Bonds

Responsibility for Damage

Article 6 - CONTRACTOR'S RESPONSIBILITIES

Supervision and Superintendent

Verified Reports

Labor, Materials and Equipment

Substitute Materials or Equipment

Subcontractors

Patent Fees and Royalties

Permits

Laws and Regulations

Taxes

Use of the Premises

Record Drawings

Safety and Protection

Shop Drawings and Samples

Cleaning

Indemnification

Books and Records

Article 7 - WORK BY OTHERS

Article 8 - CITY'S RESPONSIBILITIES

Project Manager

Disputes Resolution

Disputed Work

Claims Submission and Documentation

Decisions on Claims

Release of Undecided Claims

Exhaustion

Article 9 - ARCHITECT'S STATUS DURING CONSTRUCTION

Visits to the Site

Clarifications and Interpretations

Rejecting Defective Work Shop Drawings and Samples

Limitations on Architect's Responsibilities

Article 10 - CHANGES IN WORK

Article 11 - CHANGE OF CONTRACT PRICE

Contract Price

Force Account Payment

Contract Change Order Form

Article 12 - CHANGE OF THE CONTRACT TIME

Contract Time

Liquidated Damages

Article 13 - WARRANTY AND GUARANTEE;

TEST AND INSPECTIONS:

CORRECTION, REMOVAL OR

ACCEPTANCE OF DEFECTIVE WORK

Warranty and Guarantee

Tests and Inspections

Access to Work

Uncovering the Work City

May Stop the Work

Correction or Removal of Defective Work

One-Year Correction Period

Acceptance of Defective Work

Work Neglected by Contractor

Article 14 - PAYMENTS AND COMPLETIONS

Schedules

Application for Progress Payment

Contractor's Warranty of Title

Approval of Payments

Notice of Completion

Partial Utilization

Final Inspection

Final Application for Payment

Approval of Final Payment

Contractor's Continuing Obligation

Waiver of Claims

Price Reduction for Defective Cost or Pricing Data

Covenant Against Contingent Fees

Gratuities

Article 15 - SUSPENSION OF WORK AND TERMINATION

City May Suspend Work City

May Terminate

Article 16 - MISCELLANEOUS
Giving Notice
General

Article 17 - EQUAL OPPORTUNITY

Article 18 - STATE LAWS

ARTICLE 1 - DEFINITIONS

Whenever used in these General Conditions or in the other Contract Documents, the following terms have the meanings indicated which are applicable to both the singular and plural thereof:

- 1.1 <u>Agreement</u> The written and signed contract between the City and the General Contractor that is entitled "Agreement."
- 1.2 <u>Application for Payment</u> The form furnished by the City to be used by the Contractor in requesting progress payment. This includes the schedule of values and an affidavit of Contractor that progress payments received on account of the work have been applied by Contractor to discharge in full all of the Contractor's obligations as reflected in prior Applications for Payment and otherwise.
- 1.3 <u>Architect</u> The person licensed by the State of California (architect or engineer) who is fully responsible for the Contract Drawings and Project Manual, Addenda and modifications.
- 1.4 <u>Bid</u> The offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the work to be performed.
- 1.5 <u>Bidder</u> Any person, firm or corporation, licensed in the State of California, submitting a bid for the work.
- 1.6 <u>Bonds</u> Bid, performance, and *labor and material* payment bonds and other instruments of security, including lien and stop-notice bonds, furnished by the Contractor and his Surety in accordance with the Contract Documents.
- 1.7 <u>Calendar Day (or "Day")</u> A day of twenty-four hours measured from one midnight to the next midnight, Pacific time. Unless otherwise indicated, a "day" shall mean a calendar day.
- 1.8 <u>Change Order</u> A written order, issued by the Project Manager to Contractor, signed by the Project Manager, Architect and City authorizing an addition, deletion or revision in the work, or an adjustment in the contract price or the contract time.
- 1.9 <u>Contract Completion Date</u> The date established in the Contract Documents for the completion of the construction phase of the project, namely, the Estimated Completion Date and Fixed Completion Date
- 1.10 <u>Contractor</u> The person, firm or corporation with whom City has executed the Agreement and who is fully responsible for the performance of the work.
- 1.11 <u>Contract Documents</u> The Agreement, Addenda, Contractor's Bid, the Bonds, and Notice of Award, these General Conditions, Supplementary Conditions, Specifications, Plans, Drawings and Modifications. The Contract Documents form the Contract for Construction. This Contract represents the entire and integrated agreement between the parties and supersedes all prior negotiations, representations, or agreements, either written or oral. The Contract may be modified or amended only by a Modification as defined in these General Conditions.
- 1.12 <u>Contract Price</u> The total amount stated in the Agreement as payable to Contractor for the performance of the work under the Contract Documents, including authorized adjustments thereto.
- 1.13 Contract Time The total amount stated in the Agreement for the completion of the work.
- 1.14 <u>City</u> City of Corning, a public entity organized and existing pursuant to the laws of the State of California and the Owner of the Project.

- 1.15 <u>Drawings</u> The drawings and/or plans which show the character and scope of the work to be performed, and which have been prepared or approved by the Architect and are referred to in the Contract Documents.
- 1.16 <u>Field Order</u> A written order issued by the Project Manager which clarifies or interprets the Contract Documents in accordance with paragraph 9.2, or orders minor changes in the work in accordance with paragraph 11.3.
- 1.17 <u>Furnish</u> To "supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations."
- 1.18 <u>General Conditions</u> That part of the Contract Documents which sets forth many of the rights, responsibilities and relationships of the parties involved or of the contract.
- 1.19 <u>General Requirements</u> The General Requirements are contained in Division 1 of the Specifications in these Contract Documents. The General Requirements are the administrative functions which the Contractor is bound to perform by the Contract.
- 1.20 <u>Inspector</u> An authorized representative of the City of Corning who is assigned to make a detailed inspection of any or all portions of the work or materials thereof.
- 1.21 <u>Install</u> Describes operations at project site including the actual "unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations."
- 1.22 <u>Instructions to Bidders</u> That part of the Bidding Requirements which contain the format of the bid, and the availability of the Contract Documents.
- 1.23 <u>Notice of Award</u> The written notification to the Contractor, from the Owner, of the Owner's intent to execute the Contract.
- 1.24 <u>Notice to Bidders</u> A notice contained in the Bidding Requirements informing prospective bidders of the opportunity to submit bids on a project and setting forth the procedures for doing so.
- 1.25 <u>Notice to Proceed</u> The written notice given by the City to Contractor fixing the date on which Contractor shall start to perform his obligations under the Contract Documents.
- 1.26 O.P.C.I. Owner purchased/Contractor receives, stores, and installs.
- 1.27 Per In accordance with or in compliance with.
- 1.28 <u>Progress Payment</u> Payment for work completed by measuring the work in place and applying the percentage complete of the measured amount to a previously agreed unit cost to determine the total payment.
- 1.29 <u>Project</u> The entire work to be performed as provided in the Contract Documents.
- 1.30 Project Manager The authorized representative of City of Corning.
- 1.31 <u>Project Manual</u> A part of the Contract Documents containing Introductory Information, Bidding Requirements, Contracting Requirements, Specifications, and Opening and Room Finish Schedules bound in one or more volumes.
- 1.32 <u>Project Work Schedule</u> A diagram showing proposed times of starting and completing various elements of the work.

- 1.33 Provide "To furnish and install, complete and ready for the intended use."
- 1.34 Punch List A list, made near the completion of work, indicating items to be furnished or work to be performed by the Contractor or Subcontractor in order to complete the work as specified in the Contract Documents.
- 1.35 <u>Schedule of Values</u> A statement furnished by the Contractor to the Project Manager reflecting the portions of the contract sum allotted for the various parts of the work.
- 1.36 <u>Shop Drawings</u> All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the Contractor, a subcontractor, manufacturer, supplier or distributor and which illustrate in detail the equipment, material or some portion of the work.
- 1.37 <u>Specifications</u> The portion of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the work.
- 1.38 <u>Subcontractor</u> An individual, firm or corporation having a direct contract with the Contractor, or with any other subcontractor, for the performance of a part of the work.
- 1.39 <u>Substantial Completion, Date of</u> The date as certified by the City in a Notice of Completion pursuant to paragraph 14.8 of these General Conditions.
- 1.40 <u>Work</u> The completed construction in the manner required by the Contract Documents. This includes without limitation all labor, services, and supervision necessary or appropriate to produce such construction, all materials, supplies and equipment incorporated or to be incorporated in such construction, and all obligations, duties and responsibilities with respect to such construction set forth in the Contract Documents.
- 1.41 Working Day Any day not a legal holiday, Saturday or Sunday.

ARTICLE 2 - PRELIMINARY MATTERS

2.1 Execution of Agreement:

2.1.1 The Agreement and such other Contract Documents as designated by the City, shall be executed in three counterparts and delivered by the Contractor to the City within fifteen (15) days of the Notice of Award. City will execute and deliver one counterpart to Contractor within ten (10) days of receipt of the executed Agreement from Contractor.

2.2 Delivery of Bonds:

2.2.1 Prior to execution of the Agreements by the Contractor, Contractor shall deliver to City such Bonds as he is required to furnish in accordance with the Contract Documents.

2.3 Copies of Documents:

2.3. 1 City shall furnish to Contractor 3 copies of the Contract Documents for the execution of the work. Additional copies will be furnished at cost of reproduction upon request.

2.4 Contractor's Pre-Start Representations:

2.4.1 Contractor represents that he has familiarized himself with, and assumes full responsibility for having familiarized himself with, the nature and extent of the Contract Documents, work, locality and with all local conditions including federal, state and local laws, ordinances, rules and regulations that

may in any manner affect performance of the work, and represents that he has correlated his study and observations with the requirements of the Contract Documents.

2.4.2 Contractor also represents that he has familiarized himself with all surveys and investigation reports of surface and latent physical and that he has correlated the results of all such data with the requirements of the Contract Documents.

2.5 Commencement of Time: Starting the Project

- 2.5. 1 The contract time will commence on the date fixed by the Notice to Proceed. The Contractor shall start to perform the work under the Contract Documents on or before the tenth working day after the date assigned in the Notice to Proceed.
- 2.5.2 The provisions set forth in Section VI of the Agreement are incorporated by reference as if fully set forth herein.

2.6 <u>Before Starting Construction</u>:

- 2.6. 1 The Contractor shall carefully study and compare the Contract Documents; check and verify pertinent figures shown thereon; and verify all applicable field measurements prior to undertaking each part of the work. He shall at once report in writing to the Project Manager any conflict, error or discrepancy which he may discover. Contractor shall be responsible for exercising reasonable care and skill in reviewing the Contract Documents to determine whether there is any conflict, error or discrepancy therein, and shall be responsible for notifying the Project Manager. No claim for additional compensation shall be made by the Contractor for extra work created by Contract Document conflicts, errors or discrepancies which a reasonable Contractor would have discovered prior to commencing work.
- 2.6.2 Contractor shall submit the required Schedule of Values and activity cost information in accordance with the General Requirements of these specifications.
- 2.6.3 The Contractor shall furnish the City all certificates of insurance required by the Contract Documents after the "Notice of Conditional Award" and prior to the "Notice to Proceed," in types and amounts set forth in Article 5.

ARTICLE 3 - CORRELATION, INTERPRETATION, AND INTENT OF CONTRACT DOCUMENTS

- 3.1 It is the intent of the Contract Documents to describe a complete project to be constructed. As stated in paragraph 1.11, the Contract Documents comprise the entire contract between City and Contractor. They may be altered only by a Modification, as defined in paragraph 1.11.
- 3.2 The Contract Documents are complementary, and what is required by any one shall be as binding as if required by all. Work not specifically covered in the Contract Documents shall nonetheless be required if it is consistent therewith and is <u>reasonably inferable</u> therefrom as being necessary or appropriate to produce the intended results. Should the Contractor discover a conflict, error, or discrepancy in the Contract Documents, he (she) shall immediately call it to the attention of the City in <u>writing</u> before proceeding with the work affected. Contractor agrees that proceeding with work without first giving such notice shall constitute a waiver by Contractor of any claim for additional time or money. Where there is a conflict, the Contract Documents, Specifications shall govern over the drawings; figure dimensions and drawings shall govern over scale drawings. Words and abbreviations that have technical or trade meanings are used in the Contract Documents in accordance with such recognized meanings.

ARTICLE 4 - AVAILABILITY OF LANDS, PHYSICAL CONDITIONS, AND REFERENCE POINTS 4.1 Availability of Lands:

4.1.1 City shall furnish the lands upon which the work is to be done, right-of-way for access thereto, and other such lands which are designated in the Contract Documents for the use of the Contractor. Contractor shall provide all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.2 Physical Conditions:

- 4.2.1 The Contractor shall immediately, and before any such conditions are disturbed, notify the Project Manager in writing of subsurface or latent physical conditions at the site differing materially from those indicated in the Contract Documents; or unknown and unforeseen physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract Documents. The Project Manager shall promptly investigate the conditions, and if he finds that such conditions do materially so differ to cause an increase or decrease in the time required for performance of the work, an appropriate adjustment in Contract Time may be made in accordance with Article 12 of these General Conditions. The Contract Documents may be modified by Change Order accordingly. In no event shall Contractor be entitled to increased compensation for such differing conditions, unless provided for in such Change Order.
- 4.2.2 No increase of time under paragraph 4.2 shall be allowed unless the Contractor shall have given the written notice described in paragraph 4.2.1 not later than 24 hours after such conditions are discovered, and before such conditions are disturbed. Contractor shall not proceed with the work affected by such conditions until directed in writing by Project Manager. Furthermore, no increase shall be given unless it is shown that Contractor's own investigation was done competently and did not disclose the error or condition. Failure of Contractor to give written notice and providing an opportunity for the Project Manager to investigate shall constitute a waiver by Contractor of any claim for additional time or money.
- 4.2.3 Groundwater, in whatever amount or condition, shall be deemed usual and ordinarily encountered and generally recognized as inherent in the work of the character provided for in the Contract Documents. Dewatering is the responsibility of the Contractor. No claim for a Modification of Contract time or price will be allowed for such conditions.

4.3 Reference Points:

4.3.1 City shall provide engineering reference points as shown on the plans for construction. Contractor shall be responsible for surveying and laying out work unless otherwise provided in the Contract Documents, and shall protect and preserve the established reference points and shall not change or relocate them without the prior written approval of Project Manager. Contractor shall report to Project Manager whenever any reference point is lost or destroyed or requires relocation because of changes in grades or locations. The cost of replacing and accurately relocating all reference points so lost, destroyed or moved shall be borne by the Contractor.

ARTICLE 5 - BONDS AND INSURANCE

5.1 Contractor's Liability Insurance

5.1.1: Contractor shall obtain and maintain continuously comprehensive general liability insurance and/or other insurance necessary to protect the public with limits of liability of not less than \$2,000,000 combined single limit bodily injury and property damage per occurrence with a \$2,000,000 combined single limit annual aggregate with appropriate coverage endorsements to include broad-form contractual, broad form property damage, contractor's protective, product/completed operations, auto and non-owned auto, personal injury, and fire-legal liability where applicable. The general aggregate

limit shall apply separately to this project, or Contractor shall provide insurance with a general aggregate limit of \$4,000,000.

- 5.1.2 The Contractor, upon notification of receipt by the City of any cancellation notice shall file with the City a replacement certificate with another insurance company meeting the financial requirements of the City and the coverage requirements. Failure to maintain any of the above required insurance shall require the immediate discontinuation of work until replacement insurance is furnished to the City. All payments due or that become due will be withheld until notice of replacement is received. Any failure to maintain insurance will be sufficient cause for termination of the contract.
- 5.1.3 Automobile Liability Insurance: Contractor shall carry Bodily injury and Property Damage liability including coverage for owned, hired and non-owned automobiles. The limits of liability shall be not less than \$1,000,000 Bodily Injury, \$300,000 Property Damage or \$1,000,000 Combined Single Limit Bodily Injury and Property Damage
- 5.1.4 As evidence of the insurance required by this agreement, certificates of workers compensation, general liability and automobile liability shall be furnished to the City before any work is commenced by the Contractor.
- 5.1.5 General Liability and Automobile Liability insurance shall include "City of Corning, its elected officials, officers, and employees as an additional insured", and shall not be reduced or canceled without 30 days written prior-notice certain to the City. Contractor shall provide the City a certificate of insurance and an additional insured endorsement as evidence of insurance protection provided which lists "City of Corning" as the certificate holder. Insurance certificates provided by any insurance company or underwriter shall not contain the language "endeavor to" and "but failure to mail such notice shall impose no obligation or liability of any kind upon the company", or similar language. If Contractor has employees, he/she shall obtain and maintain continuously workers' compensation insurance to cover Contractor and Contractor's employees and partners.
- 5.1.6 Contractor shall require and verify that all subcontractors of any tier maintain insurance meeting all the requirements stated herein, and Contractor shall ensure that "City of Corning, its elected officials, officers, and employees" is an additional insured on insurance required from subcontractors; provided, however, that the minimum limit by subcontractors for general aggregate under their comprehensive general liability shall be \$1,000,000 on all subcontracts other than major subcontracts and \$3,000,000 on major subcontracts (subcontracts in excess of \$1,000,000 and such other subcontracts identified in the Contract Documents as "major subcontracts"). Contractor shall maintain certificates of insurance from all subcontractors demonstrating compliance with the requirements of this section and make them available to the City upon request.

5.2 Builders Risk Insurance

The Contractor <u>will not be required</u> to obtain Builder's Risk Insurance. The Contractor will be responsible for building materials not installed and for the Contractor's tools, other equipment or supplies. The Contractor shall also be required to protect the construction project as stipulated elsewhere in this contract.

5.3 <u>Performance, Payment, and Other Bonds</u>

5.3.1 Prior to the commencement of any work, Contractor shall furnish performance and payment bonds as security for the faithful performance and payment of all Contractors' obligations under the contract documents. These bonds shall be in amounts at least equal to the contract price and in a form satisfactory to City. Surety company providing said bonds shall have a Best financial rating of at least A-: VII and be licensed in the State of California.

5.3.2 If at any time the Surety on any bond furnished by Contractor is adjudicated bankrupt, commences any proceeding under the Bankruptcy law of the United States, becomes insolvent, makes a general assignment for the benefit of creditors or has its right to do business terminated in California, or for any other reason is unable or unwilling to continue in business, Contractor shall within five calendar days thereafter substitute another bond in a Surety who meets the City's financial rating requirement.

5.4 Responsibility for Damage:

- 5.4.1 Approval of the Contractor's insurance by the Owner shall not decrease the extent to which the Contractor or any subcontractor may be held responsible for payment of any and all damages resulting from Contractor's operations.
- The Contractor shall assume the defense of and indemnity and save harmless City of Corning. 5.4.2 its elected officials, officers and employees, as well as the Project Manager, Architect and the officers, agents and employees of each of them, from any and all loss, liability or damage including attorney's fees and from all suits, actions, damages or claims of every nature and description to which they may be subjected or put by reasons of injury to persons or property arising out of, in connection with, or incident to the execution of the work or resulting from the active or passive negligence or carelessness on the part of the Contractor, Contractor's employees or agents in the delivery of materials and supplies by its employees or agents, including any failure to fulfill the terms of all laws and regulations which apply to this Contract together with any infringement or alleged infringement of the patent rights of any person or persons, firm or corporation in consequence of the use in or about the said work of any article or materials; and the City shall have the right to estimate the amount of such damage and to cause the Contractor to pay same, and the amount to be paid for such damage shall be deducted from the money due to the Contractor under this Contract; or the whole or so much of the money due or to become due to the Contractor under this Contract, as may be considered necessary by the City, shall be retained by the City until such suits or claims for damages shall have been settled or otherwise disposed of and satisfactory evidence to that effect furnished to the City. Contractor shall assume the defense of and indemnity and save harmless City of Corning, its elected officials, officers and employees, as well as the Architect. Project Manager and the officers, agents and employees of each of them in respect to any mechanics lien, foreclosure actions filed by any subcontractor or material man relative to the construction.

ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES

6.1 Supervision and Superintendent:

- 6.1.1 Contractor shall supervise and direct the work effectively, efficiently and with his best skill and attention. He shall have sole responsibility for the means, methods, techniques, sequences, procedures of construction, and for coordinating all portions of his work under the Contract Documents. Contractor shall be responsible for the finished work complying accurately with the Contract Documents.
- 6.1.2 The Contractor shall designate in writing, before starting work, the name, qualifications and experience of his proposed representative who must be approved by the Project Manager. Said representative shall have authority to represent and to act for the Contractor. Said authorized representative shall be present at the site of work at all times while work is in progress. Arrangements for responsible supervision, acceptable to Project Manager, shall be made for emergency work required during periods when work is suspended.
- 6.1.3 The Contractor shall notify the Project Manager, in writing, when he desires to change his representative. He shall provide all necessary information regarding his new representative when submitting request for approval. Any substitute representative shall require the approval of the Project Manager, which may not be unreasonably withheld.

- 6.1.4 In emergencies when the Contractor or his authorized representative is not present on any particular part of the work, directions will be given by the Project Manager and obeyed by the superintendent or foreman in charge of the particular work. Such directions will be confirmed in writing to the Contractor's authorized representative.
- 6.1.5 The Contractor shall identify, in writing, the individuals who are authorized to sign Change Orders to the Contract.
- 6.1.6 The Contractor shall remove his representative from the work and propose a substitute if Project Manager reasonably concludes that such representative is unable or unwilling to properly supervise the work in such a manner as to ensure its timely and successful completion in accordance with Contract Documents.
- 6.1.7 The Contractor shall maintain daily job site activity logs which record: location and number of all manpower on the site by his own and subcontractors' forces; all work being performed and whether such work is part of the base contract or change order; all work being performed and whether such work is part of the base contract or change order; all construction equipment in use, and not in use, and reasons why not in use; weather and site conditions; and delays or obstructions to the work. The Contractor shall sign the log representing that the information contained therein is true, accurate and complete.

6.2 <u>Verified Reports</u>

6.2.1 The Contractor shall completely fill out, sign and date the appropriate Verified Reports, as required by Sections 4-214, 4-240 and 4-249 of Title 24, Part I, California Code of Regulations. Copies of these reports shall be sent to the City.

6.3 <u>Labor, Materials and Equipment</u>

- 6.3.1 Contractor shall provide competent, suitable qualified personnel to survey and lay out the work and perform construction as required by the Contract Documents. Contractor shall at all times enforce strict discipline and good order on the project. He shall not employ on the work any unfit person or anyone not skilled in the task assigned to him.
- 6.3.2 Contractor shall furnish all materials, equipment, labor, transportation, and machinery, tools, appliances, other facilities and incidentals necessary for the execution, testing, initial operation and completion of work.
- 6.3.3 All materials and equipment incorporated in the work shall be new, except as otherwise provided in the Contract Documents. If required by Architect or Project Manager, Contractor shall furnish satisfactory evidence as to the kind, quality, source and purchase of materials and equipment.
- 6.3.4 All materials and equipment shall be applied, installed, connected, erected, used, cleaned and conditioned in accordance with the instruction of the applicable manufacturer, fabricator or processors.

6.4 Substitute Materials or Equipment:

6.4.1 The Specifications may permit Contractor to furnish or use a substitute that is equal to any material or equipment specified. Unless otherwise expressly provided in the Specifications, in accordance with Public Contract Code section 3400, whenever the contract documents refer to a named manufacturer or named product, the named manufacturer or named product shall be deemed to be followed by the words "or equal" so that bidders may furnish any equal material, product, thing, or service in accordance with the procedures set forth herein. If the Contractor wishes to furnish or use a proposed substitute, he shall, promptly and within 5 days of the Notice to Proceed, make written

application to the Architect for approval of such substitute, certifying and warranting in writing that the proposed substitute will perform the functions called for by the Contract Documents, be of the same quality as that specified and be suited to the same use. Contractor shall state whether or not its incorporation in or use in connection with the project is subject to payment of any license fee or royalty and also shall identify all variations of the proposed substitute from that specified and indicate available maintenance service. No substitute shall be ordered or installed without the written approval of the Architect whose decision as to substitutions shall be final and conclusive. Architect may require Contractor to furnish other such data about the proposed substitute that Architect considers pertinent.

6.4.2 No substitution shall be ordered or installed without such supplemental performance guarantee and bonds as City may require, all of which shall be furnished at Contractor's expense. Contractor shall be responsible for determining the required delivery date for incorporation into the work and shall certify that this date has been confirmed with the supplier of the substituted item.

6.5 Subcontractors:

- 6.5.1 Contractor shall investigate and assure himself and the City of the experience and skill of all subcontractors performing work specified by the Contract Documents as well as the financial stability of such subcontractors. Contractor shall not recommend any subcontractor or other person or firm, whether initially or as a substitution against whom City, at City's sole discretion, may have reasonable objection. If City who has no duty to investigate, but has the right to do so, after due investigation, has a reasonable objection to any subcontractor, supplier or material man proposed by Contractor, Contractor shall propose an acceptable substitute.
- 6.5.2 Contractor shall be fully responsible for all acts and omissions of his subcontractors, and of persons and organizations directly or indirectly employed by them and of persons and organizations for whose acts any of them may be liable to the same extent that he is responsible for the acts and omissions of persons directly employed by him. Nothing in the Contract Documents shall create any contractual relationship between the City, Project Manager or Architect and any subcontractor, or other person or organization having a direct contact with the Contractor, nor shall it create any obligation on the part of City, Project Manager or Architect to pay or see to the payment of any monies due any subcontractor or other persons or organizations.
- 6.5.3 The divisions and sections of the Specifications and the identifications of any Drawings shall not control the Contractor in dividing the work among subcontractors or delineating the work to be performed by any specific trade. Neither the Architect, nor Project Manager, nor City will act as arbiter to determine subcontract limits.
- 6.5.4 Contractor agrees to bind specifically every subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of the City including, but not limited to, all time and notification requirements.
- 6.5.4 All work performed for Contractor by a subcontractor shall be pursuant to an appropriate agreement between Contractor and subcontractor which shall contain provisions for the waiver of all rights the contracting parties may have against one another for damages caused by fire or other perils covered by insurance. Contractor shall pay each subcontractor a just share of any such insurance moneys received by Contractor.

6.6 Patent Fees and Royalties

6.6.1 Contractor shall pay license fees and royalties and assume all costs incident to the use, in the performance of the work, of any invention, design, process, product or device which is the subject of patent rights or copyrights held by others. If a particular invention, design, device or product is specified in the Contract Documents for use in the performance of the work, and to the actual knowledge of City and Architect its use is subject to patent rights or copyrights calling for the

payment of any license fee or royalty to others, the existence of such rights shall be disclosed by City in the Contract Documents. Contractor shall indemnify and hold harmless City, Project Manager, their employees, officers and agents, and Architect, his consultants, and anyone directly or indirectly employed by either of them from and against consultants' and other experts' fees and expenses arising out of any infringement of patent rights incident to the use in the performance of the work or resulting from the incorporation in the work of any invention, design, process, product or device not specified in the Contract Documents, and shall defend all such claims in connection with alleged infringement of such rights.

6.7 Permits & Utility Costs:

6.7.1 Permits: Contractor shall be responsible to obtain all building permits, construction permits, fugitive dust permits, fees and licenses necessary for the prosecution of the work. The City will make payment of permit fees directly to the permitting agency. The Contractor shall be responsible for all delays in obtaining all permits, licenses, and utility connection agreements. No delay claim may be made by Contractor for any delay in obtaining any permit, license or utility connection agreement.

6.8 Laws and Regulations:

6.8.1 Contractor shall give notices and comply with all laws, ordinances, rules and regulations applicable to the work. Contractor shall use reasonable care and skill in determining whether or not the Specifications or Drawings are at variance therewith, and, if he observes such variance, he shall give the Project Manager and Architect prompt written notice thereof. If Contractor performs any work knowing it to be contrary to such laws, ordinances, rules and regulations, and without such notice to the Project Manager and Architect, he shall bear all costs arising therefrom.

6.9 Taxes:

6.9.1 Contractor shall pay all sales, consumer use and other similar taxes required to be paid by him in accordance with the law of the place where the work is to be performed.

6.10 Use of the Premises:

- 6.10.1 Contractor shall confine his equipment, the storage of materials and equipment and the operations of his workmen to areas permitted by law, ordinance, permits or the requirements of the City and of the Contract Documents, and shall not unreasonably encumber the premises with materials or equipment.
- 6.10.2 Contractor shall not load nor permit any part of any structure to be loaded with weight that will endanger the structure, nor shall be subject any part of the work to stresses or pressure that will endanger it.

6.11 Record Drawings:

6.11.1 Contractor shall keep one current record copy of all Specifications, Drawings, Addenda, Modifications, and Shop Drawings at the site in good order and annotated to show all changes made during the construction process. These shall be available to the Architect and Project Manager at all times, and shall be reviewed monthly concurrent with the Progress Payment Request. Upon completion of the project the Contractor shall deliver the record documents to the Project Manager for review and approval. These record documents shall be prepared in accordance with Section 01720 of the Specifications.

6.12 Safety and Protection:

- 6.12.1 Contractor shall be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the work. He shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss:
 - 6.12.1.1 All employees on the work and other persons who may be affected thereby:
 - 6.12.1.2 All the work and all materials or equipment to be incorporated therein, whether in storage on or off the site; and
 - 6.12.1.3 Other property at the site or adjacent thereto, including trees, shrubs, lawns, pavements, roadway, structures and utilities not designated for removal, relocation or replacement in the course of construction.
 - 6.12.1.4 The Contractor represents that he has read and is thoroughly familiar with the California State Occupational Safety and Health Act, and regulations for construction promulgated thereunder, and agrees to comply with the Act and all such regulations applicable to the performance of the work. The Contractor accepts the duty of enforcing those regulations by federal, state or City Safety and Health Inspectors at the Contractor's work place at the job site or any area within the limits of construction and of the outcome of any such inspections. Contractor assumes exclusive responsibility for, and agrees to defend, indemnify and hold harmless City of Corning, Project Manager, Architect, and their elected officials, officers, agents, employees, consultants and representatives against all consequences of any violations of those regulations by the Contractor, including the payment of any fine, penalty and interest assessed in connection therewith, any court costs, undertakings, interest, and attorneys', accountants' consultants' and experts' expenses and fees incurred by the City.
- 6.12.2 Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. He shall erect and maintain, as required by the conditions and progress of the work, all necessary safeguards for its safety and protection. He shall notify owners of adjacent utilities when prosecution of the work might affect them. All damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by Contractor, and/or subcontractor, or anyone employed by them shall be remedied by Contractor at his own expense. Contractor's duties continue until such time as all the work is completed and Project Manager has issued a notice in accordance with paragraph 14.9 that work is acceptable.
- 6.12.3 Contractor shall designate a responsible member of his organization, at the site, satisfactory to the Project Manager, whose duty shall be the prevention of accidents. This person shall be Contractor's superintendent unless otherwise designated in writing by Contractor to Project Manager.

6.13 Shop Drawings, Product Data, and Samples:

- 6.13.1 Shop drawings, product data, and/or samples are required by the Specifications for certain portions of the work. These shall be submitted according to a schedule of submittals to be accepted by the Project Manager and Architect. Where a shop drawing, product data, or sample submittal is required by the Specifications, no related work shall be commenced until the submittal has been reviewed by the Architect. A copy of each reviewed shop drawing and each approved sample shall be kept in good order by Contractor at the site and shall be available to the Project Manager, Architect and Inspector.
- 6.13.2 The Contractor may submit a request for substitutions. The Contractor shall propose for approval all samples as specified or directed by the Architect. The provisions of subparagraph 6.4 shall apply in such case.
- 6.13.3 Contractor shall check and verify all field measurements and submit shop or setting coordination drawings in 1/4"=1'0" scale to verify clearances for various trades, and schedules required for the work

of the various trades, with such promptness as to cause no delay to the work.

- 6.13.4 Samples: Unless otherwise specified, submit samples in triplicate and of adequate size to show the quality, type and finish. Label each sample with the manufacturer's name, material name and quality, the Contractor's name, the project name and other pertinent data. Submit, with samples in triplicate a transmittal letter requesting approval. Prepay transportation charges to the Architect's office on samples forwarded.
- 6.13.5 Contractor shall not order materials until receipt of written approval of shop drawings, product data, and samples.
- 6.13.6 Project Manager's or Architect's review of shop drawings and samples shall not relieve Contractor from his responsibility for any deviation from the requirements of the Contract Documents. Nor shall any action by Architect relieve Contractor from any responsibility for errors or omissions in the shop drawings.

6.14 Cleaning:

6.14.1 Contractor shall keep the premises free from accumulations of waste materials, rubbish and other debris resulting from the work, and at the completion of the work he shall remove all waste materials, rubbish and debris from and about the premises, as well as all tools, construction equipment and machinery, and surplus materials. He shall leave the site clean and ready for occupancy by City. Contractor shall restore to original condition those portions of the site not designated for alteration by the Contract Documents.

6,15 Indemnification:

- 6.15.1 Contractor shall indemnify and hold harmless to the fullest extent permitted by law, City of Corning, Architect, Project Manager and their elected officials, officers, consultants, agents and employees, from and against all claims, damages, losses and expenses, including attorneys', accountants', consultants', and experts' fees and expenses, arising out of or resulting from the performance of the work attributable to bodily injury, sickness or death, or to injury to or destruction of tangible property, including the loss of use resulting therefrom, and caused in whole or in part by any negligent or other act or omission of Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, regardless of whether indemnification shall extend to claims, demands, or liability for injuries occurring after completion of the project as well as during the work's progress. Such obligation shall not be construed to negate, abridge or otherwise reduce any other obligation of indemnity which otherwise exists under the Contract Documents or at law as to any party or person described in this paragraph or otherwise.
- 6.15.2 In any and all claims against City of Corning, Architect, Project Manager, their elected officials, officers, employees, consultants or agents by an employee of Contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable, the indemnification obligation under subparagraph 6.15.1 shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for Contractor or any subcontractor under workmen's compensation acts, disability acts or other employee benefit acts.

6.16 Books and Records:

6.16.1 Contractor shall maintain books, records, documents and other evidence pertinent to the work in accordance with generally accepted accounting principles and practices. Such books, records, documents and other evidence shall be maintained for at least three years after the date of completion of the project. Access to the aforementioned books, records, documents and other evidence shall be available to the City or the Board, or any authorized representative of either, during the course of construction and for at least three years after completion of the project. Suitable facilities shall be

provided for said access, and for the inspection and copying thereof.

ARTICLE 7 - WORK BY OTHERS

- 7.1 City may perform additional work related to the project or it may award other direct contracts therefore. Contractor shall afford the other persons or contractors who are parties to such direct contracts reasonable opportunity for the storage of materials and equipment and the execution of work. He shall properly connect and coordinate his work with theirs. No claim for time extension will be made by the Contractor due to any alleged problems or difficulties suffered due to work performed by others unless written notice within twenty-four hours of the commencement of said alleged delaying activities is given to the City.
- 7.2 If any part of Contractor's work depends, for proper execution or results, upon the work of any other such person or contractor, Contractor shall inspect and promptly report to Project Manager and Architect in writing any defects or deficiencies in such work that render it unsuitable for such proper execution and results. His failure so to report shall constitute an acceptance of the other work as fit and proper for the relationship of his work, except as to defects and deficiencies which may appear in the other work after the execution of his work.
- 7.3 Contractor shall do all cutting, fitting, and patching of his work that may be required to make the several parts come together properly and fit to receive or be received by such other work. Contractor shall not endanger any work of others by cutting, excavating or otherwise altering their work, and will only cut or alter their work with the written consent of the City and of the other contractors whose work will be affected.
- 7.4 If the performance of additional work by other persons or contractors is not noted in the Contract Documents prior to the execution of the Agreement, written notice thereof shall be given to Contractor prior to starting any such additional work.

ARTICLE 8 - CITY'S RESPONSIBILITIES

- 8.1 <u>Communications</u>: City will forward all instructions and decisions to Contractor through the Project Manager.
- 8.2 Right to Stop Work: The City has the right to stop or suspend work, and to award other work.

8.3 Project Manager

- 8.3.1 The City will designate a Project Manager and assistants to enable it to carry out its responsibilities at the site. The Project Manager is the City's agent and shall act as directed by and under the supervision of the City Administrator.
- 8.3.2 The Project Manager will be the City's sole authorized representative for the project. All correspondence to Architect from Contractor will be copied to the Project Manager.

8.4 <u>Disputes Resolution</u>

8.4.1 A dispute, or claim, or other matter in question arising out of or relating to the Contract Documents which is not disposed of by agreement shall be decided by the Project Manager promptly and in writing as provided in the Contract Documents. The decision of the Project Manager shall be final and conclusive on the Contractor unless, within 5 days from the receipt of such decision, Contractor submits to Project Manager a written claims submission and documentation as defined in paragraph 8.6 below.

8.5 <u>Disputed Work</u>

- 8.5.1 Should Contractor object to any decision, order, directive, notice, action, or omission of Project Manager, Contractor may, within 5 days after receipt or occurrence of the same, or before commencing with the disputed work, whichever occurs first, furnish to Project Manager a written notice stating such objections.
- 8.5.2 Contractor shall furnish to Project Manager, beginning with the first day and at the end of each day detailed hourly records for labor, construction equipment, and services; and itemized records of materials and equipment used that day in performance of the disputed work. Such records shall be of a form approved by Project Manager. Such records shall be signed by Contractor and verified by Project Manager.
- 8.5.3 Failure by Contractor to furnish such written notice and records specified in 8.5.1 and 8.5.2 shall constitute a waiver of Contractor's right to furnish a claim for the disputed work.

8.6 <u>Claims Submission and Documentation</u>

- 8.6.1 Contractor may furnish a claim concerning a matter noticed in accordance with 8.5 to City of Corning Administrative Office, 794 Third Street, Corning CA 96021.
- 8.6.2 Contractor shall furnish 3 certified copies of claim documentation. The claim documentation shall be complete when furnished. The evaluation of the Contractor's claim will be based on City's records and the Contractor's furnished claim documentation.
- 8.6.3 Claim documentation shall conform to generally accepted auditing standards and shall be in the following format:
 - General Introduction
 - General Background
 - 3. Issues
 - a) Index of Issues
 - b) For each Issue
 - 1) Background
 - 2) Chronology
 - Contractor's Position (reason for City's potential liability)
 - 4) Supporting Documentation of Merit
 - 5) Supporting Documentation of Damages
 - 4. Critical Path Method Schedules, As-Planned and As-Built
 - 5. Productivity Exhibits
 - 6. Summary of Issues and Damages
- 8.6.4 Supporting documentation of merit for each issue shall be cited by reference, photocopied, or explained. Supporting documentation may include, but not be limited to general conditions, technical specifications, drawings, correspondence, conference notes, shop drawing, survey books, inspection reports, delivery schedules, test reports, daily reports, subcontracts, fragmentary critical path method schedules, photographs, technical reports, requests for information, field instructions, and other related records.
- 8.6.5 Supporting documentation of damages for each issue shall be cited, photocopied, or explained. Supporting documentation may include but not be limited to certified detailed labor, materials, equipment, and construction equipment and services costs; purchase orders; invoices; project as- planned and as-built costs; subcontractor payment releases; quantity reports; other related records; general ledger and any other accounting materials.

- 8.6.6 Each copy of claim documentation shall include the following certification:
- 1. I certify under penalty of perjury, according to the laws of the State of California that this claim is made in good faith, that the supporting documentation is accurate and complete to the best of my knowledge and belief; and that the amount requested accurately reflects the contract adjustments for which City is responsible.
 - 2. Certification shall be signed in the same manner as the proposal was signed.
- 8.6.7 Should Contractor be unable to support any part of the claim and it is determined that such inability is attributable to falsity of such certification or misrepresentation of fact or fraud on the part of Contractor, Contractor shall be liable to City for three times the amount of damages which the City sustains, plus the cost of civil action and may be liable to the City for a civil penalty of up to ten thousand dollars for each false claim.

8.7 Decisions on Claims

8.7.1 Claims of Contractor arising under and by virtue of the contract will be decided by the City Steering Committee consisting of the City Administrator, City Counsel, the Architect and the Project Manager who will furnish the decisions to Contractor in writing.

8.8 Release of Undecided Claims

8.8.1 Undecided claims furnished to City Steering Committee before execution of the final release of claims provided in 8.6 and not excepted therefrom shall be deemed released by Contractor upon execution of such release and will not be further considered by City.

8.9 Exhaustion

8.9.1 Contractor must exhaust all remedies and comply with all dispute resolution procedures set forth in paragraph 8.4 prior to filing suit which names the City, Architect, Project Manager or any officer, employee, agent or affiliate thereof.

ARTICLE 9 - ARCHITECT'S STATUS DURING CONSTRUCTION

9.1 Visits to Site:

- 9.1.1 Progress and quality of the executed work and to determine if the work is proceeding in accordance with the Contract Documents. However, the Architect will not be required to make exhaustive or continuous on-site observations to check quality or quantity of the work. On the basis of on site observations as an Architect, the Architect will keep the Project Manager informed of progress of the work, and will endeavor to guard the City against defects and deficiencies in the work.
- 9.1.2 Architect and his representatives will have access to the work at all times for the observation of the building operations, including the right to accept or reject materials and/or workmanship. The Architect and his representatives shall perform their duties in accordance with Section 4-213 and 4-217, Title 24, California Code and Regulations.
- 9.1.3 In cases of emergency the Architect may give directions to the Contractor, his authorized representative, or if neither are available, to the superintendent or foreman in charge of the particular work concerning which directions are given. Such directions will be confirmed in writing by the Project Manager.

9.2 Clarifications and Interpretations:

9.2.1 Architect will issue with reasonable promptness through the Project Manager such written Field Orders, which will clarify or interpret the design intent of the Contract Documents as he may determine

to be necessary. These Field Orders shall not entitle Contractor to any adjustment to the contract price or time.

9.3 Rejecting Defective Work:

9.3.1 Architect and/or the Project Manager will have authority to disapprove or reject work which is "defective" (which term includes without limitation work that is unsatisfactory, faulty, does not conform to the requirements of the Contract Documents, does not meet the requirements of any inspection, test or approval referred to in paragraph 13.2, or has been damaged prior to approval of final payment). He will also have authority to recommend to the Project Manager that he require special inspection or testing of the work as provided in paragraph 13.4, whether or not the work is fabricated, installed or completed.

9.4 Shop Drawings and Samples:

- 9.4.1 The Architect is responsible for the review of samples. (See paragraph 6.13)
- 9.4.2 The Contractor shall submit for review, with reasonable promptness, all samples as specified or directed by the Architect. The Architect shall review samples, with reasonable promptness, only for conformance with the design concept of the project and for compliance with information given in the Contract Documents. The work shall be in accordance with reviewed samples.

9.5 Shop Drawings

- 9.5.1 The Architect shall review, with reasonable promptness, schedules and drawings for conformance with the design concept of the project and compliance with the Contract Documents. The Architect's review of such drawings or schedules shall not relieve the Contractor from responsibility for deviations from Drawings and Specifications, nor shall it relieve him from responsibility for errors in shop drawings or schedules.
- 9.5.2 Architect shall be permitted a reasonable time to review such drawings and no claim for time extension or damages will be allowed for this time.
- 9.5.3 Satisfactory shop drawings shall be so identified by Architect, dated, and a reproducible copy returned to the Contractor.
- 9.5.4 Should shop drawings be rejected, one reproducible copy set will be returned to the Contractor with indicated corrections and changes to be made. After making such corrections and changes, Contractor shall resubmit shop drawings, in numbers of copies required, until approval is obtained. Any corrections or changes indicated on the shop drawings shall not be considered as an extra work order.
- 9.6 Architect will be the interpreter of the design and technical requirements of the Contract Documents and the compliance by the Contractor therewith. Neither the Project Manager, Architect, nor City will be liable to the Contractor for the result of any interpretation or decision rendered in good faith. Disputes with respect to interpretations will be processed and resolved as provided for in paragraph 8.4.

9.7 <u>Limitations on Architect's Responsibilities</u>

9.7.1 Neither Architect's authority to act under this Article 9 or elsewhere in the Contract Documents, nor any finding or decision made by him in good faith, shall give rise to any duty or responsibility of Architect to Contractor, any subcontractor, any material man, fabricator, supplier or any of their agents or employees or any other person performing any of the work.

- 9.7.2 Architect will not be responsible for Contractor's means, methods, techniques, sequences, division and allocation of the work or procedures of construction, or the safety precautions and programs incident thereto, and he will not be responsible for Contractor's failure to perform the work in accordance with the Contract Documents.
- 9.7.3 Architect will not be responsible for the acts or omissions of Contractor, or any subcontractors, or any of his or their agents or employees, or any other persons at the site or otherwise performing any of the work.
- 9.7.4 Nothing in these General Conditions or in the Contract Documents shall be deemed to establish a contractual relationship, direct or otherwise, between Architect and Contractor.

ARTICLE 10 - CHANGES IN THE WORK:

- 10.1 The City may at any time or from time to time order additions, deletions or revisions in the general scope of the work without invalidating the Contract Documents and without notice to the sureties.
- 10.2 Changes will be authorized by a Change Order. Upon receipt of a Change Order, Contractor shall immediately proceed with the work involved. All such work shall be executed under the applicable conditions of the Contract Documents. If any Change Order causes an increase or decrease in the contract price or any extension or shortening of the contract time, an adjustment will be made as provided in Articles 11 and 12, on the basis of a claim made by either Contractor or City.
- 10.3 Changes, Omissions, or Additions shall be made only through a standard written order of the Architect and approved by the Owner. Change Orders will be issued only before or at the time of change, and the expense or responsibility for any change or damage without said order shall rest entirely with the Contractor.
- 10.4 City may order minor changes or alterations in the work not involving extra costs or extension of time, and not inconsistent with the overall intent of the Contract Documents. Such changes may be ordered by a Field Order.
- 10.5 When necessary, in order to avoid delay to the work, the Project Manager may authorize the Contractor to proceed with the work pending completion of a change order. This prior authorization may be verbal; however, it must be confirmed in writing as soon as possible by the authorizing individual. Whenever work is to proceed on the basis of such prior authorization, the Contractor must be notified in writing to proceed with the work pending approval of the change order. In the case of a change order requested by the Contractor, the City must have positive assurance that he will execute the change order before allowing work to proceed. Preparation and final approval of change orders for work covered under prior authorization must be actively pursued. Prior authorization does not include authority to make payment for the work.
- 10.6 No claims for adjustment of contract price or time for delays or costs due to material shortage, transportation difficulties, labor shortage, or dewatering, will be paid by City except as defined in *sub*paragraphs 12.1.2 and 12.1.3.
- 10.7 Additional work performed by Contractor without authorization of a change order shall be at his own expense. Contractor shall not be entitled to an increase in the contract price or an extension of the contract time, except in the case of an emergency as provided in subparagraphs 6.1.4 or 9.1.3, for such work performed without a change order.
- 10.8 The City may order changes in the work. Notwithstanding any dispute or controversy that may arise in connection with a claim for adjustment of contract price, in the event of such changes

Contractor shall proceed with the work promptly and diligently upon written order from Project Manager. The contract price may be changed pursuant to Article 11 without notice to the Surety.

- 10.9 In the event that there is any dispute between City and Contractor with relation to any payment to be made under this contract, whether by reason of change order; progress payment; or otherwise, Contractor shall submit a claim pursuant to Articles 11 and 12 but will not be entitled to walk off the job or stop work in any manner and is under a full obligation to complete each and every term and condition of the contract.
- 10.10 Dispute resolutions provisions of paragraphs 8.5 and 8.6 are applicable to changes in the work except as in Articles 11 and 12.

ARTICLE 11 - CHANGE OF CONTRACT PRICE

11.1 Contract Price:

- 11.1.1 The Contract Price constitutes the total amount payable to Contractor for performing the work under the Contract Documents. All duties, responsibilities and obligations assigned to or undertaken by Contractor in respect to work under the Contract Documents shall be at his expense without change of the Contract Price.
- 11.1.2 If Contractor wishes to make a claim for an increase to the contract price, he shall give Project Manager written notice thereof not later than five (5) days after the occurrence of the event giving rise to such claim. Within ten (10) days thereafter, Contractor shall supply all supporting documents for such claim, including but not limited to time slips for labor and time slips for equipment. Failure to provide all supporting documents shall constitute a waiver of such claim by Contractor.
- 11.1.3 The written notice shall set forth the reasons for which the Contractor believes additional compensation is due, the nature of the costs involved and the amount thereof. The notice must be given to the Project Manager prior to Contractor's performing the work-giving rise to the claim for additional compensation.
- 11.1.4 Differences between the parties arising under and by virtue of the contract shall be brought to the attention of the respective parties at the earliest possible time in order that such matters may be promptly settled. The Contractor hereby agrees that he shall have no right to additional compensation for any claim for which written notice was not filed in strict compliance with this paragraph.
- 11.2 The cost or credit to the City resulting from a change in the work, from a prior authorization, or from any claim for an increase or decrease in the contract price shall be determined by the Project Manager in one of the following ways:
- 11.2.1 By a lump sum properly itemized, and showing direct cost and markup, and supported by such substantiating data as may be required by the Project Manager to permit evaluation; allowable markup shall not in any case exceed the amount set forth below:
 - 1. For work performed by the Contractor's own forces, for changes up to \$30,000.00, an additional 10% for overhead and 5% for profit may be added;
 - 2. For changes in excess of \$30,000, the sums in excess of \$30,000 are allowed an additional 8% for overhead and 5% for profit;
 - 3. For work performed by subcontractors, the subcontractors' billings shall be limited to the markups as described for the Contractor, except the Contractor may add 10% to the gross amount as set forth by the subcontractor, as his fee for coordinating and implementing such changed work by the subcontractor;

- 4. Overhead includes, but is not limited to, the costs of bonds, insurance, supervision, office expense, management, transportation and small tools allowance.
- 11.2.2 Where the work involved is related to unit prices, by application of unit prices to quantities involved; or
- 11.2.3 On the basis of force account as provided for in paragraph 11.3 which shall be employed only at the Project Manager's sole discretion, which shall not be an election of the Contractor.
- 11.2.4 All work undertaken by prior authorization shall be on the basis of force account, until and unless a lump sum is agreed upon.
- 11.3 <u>Force Account Payment</u> When extra work is to be paid for on a force account basis, the labor, materials, and equipment used in the performance of such work shall be subject to the approval of the Project Manager and compensation will be determined as follows:
- 11.3.1 Work Performed by Contractor The Contractor will be paid the direct costs for labor, materials and equipment used in performing the work determined as hereinafter provided in Sections "Labor," "Materials" and "Equipment Rental," except where agreement has been reached to pay in accordance with Section "Work Performed by Special Forces or Other Special Services."
- 11.3.2 To the total direct costs computed as provided in Sections "Labor," "Materials," and "Equipment Rental," there will be added a markup as defined in paragraph 11.2.1.
- 11.3.3 The above markups shall constitute full compensation for all overhead costs which shall be deemed to include all items of expense not specifically designated as cost or equipment rental in Sections "Labor," "Materials," and "Equipment Rental." The total payment made as provided above shall be deemed to be the actual cost of such work and shall constitute full compensation therefore.
- 11.3.4 When extra work paid for on a force account basis is performed by forces other than the Contractor's organization, the Contractor shall reach agreement with such other forces as to the distribution of the payment made by the Owner of such work. No additional payment therefore will be made by the Owner by reason of the performance of the work by a subcontractor or other forces.
- 11.3.4.1 <u>Labor</u> The Contractor will be paid the cost of labor for the workmen (including foremen when authorized by the Project Manager) used in the actual and direct performance of the work. The cost of labor, whether the employer is the Contractor, subcontractor, or other forces, will be the sum of the following:
- 11.3.4.2 <u>Actual Wages</u> The actual wages paid shall include any employer payments to or on behalf of the workmen for health and welfare, pension, vacation, and similar purposes.
- 11.3.4.3 <u>Labor Surcharge</u> To the actual wages, as defined in Section 11.4.2 will be added a labor surcharge set forth in the Department of Transportation publication entitled <u>Labor Surcharge and Equipment Rental Rates</u>, which is in effect on the date upon which the work is accomplished and which is part of the contract. Said labor surcharge shall constitute full compensation for all payments imposed by State and Federal laws, specifically worker's compensation, social security, Medicare, Federal unemployment insurance, State unemployment insurance and State training taxes, and for all other payments made to, or on behalf of, the workmen, other than actual wages as defined in Section 11.4.2 and subsistence and travel allowance as specified in Section 11.3.4.4.
- 11.3.4.4 <u>Subsistence and Travel Allowance</u> The actual subsistence and travel allowance paid to such workmen.

11.3.4.5 <u>Materials</u> - The Owner reserves the right to furnish such materials as it deems advisable, and the Contractor shall have no claims for costs and markup on such materials.

Only materials furnished by the Contractor and necessarily used in the performance of the work will be paid for. The cost of such materials will be the cost to the purchaser, whether Contractor, subcontractor, or other forces, from the supplier thereof, except as the following are applicable:

- 11.3.4.6 If materials are procured by the purchaser by any method which is not a direct purchase from and a direct billing by the actual supplier to such purchaser, the cost of such materials shall be deemed to be the price paid to the actual supplier as determined by the Project Manager plus the actual costs, if any, incurred in the handling of such materials.
- 11.3.4.7 If the materials are obtained from a supply or a source owned wholly or in part by the purchaser, the cost of such materials shall not exceed the price paid by the purchaser for similar materials furnished from said source on contract items or the current wholesale price for such materials delivered to the job site, whichever price is lower.
- 11.3.4.8 If the cost of such materials is, in the opinion of the Project Manager, excessive, then the cost of such materials shall be deemed to be the lowest current wholesale price at which such materials are available in the quantities concerned delivered to the job site, less any discounts as provided in Section 11.4.1.
- 11.3.4.10 Equipment Rental The Contractor will be paid for the use of equipment at the rental rates listed for such equipment in the Department of Transportation publication entitled <u>Labor Surcharge and Equipment Rental Rates</u>, which is in effect on the date upon which the work is accomplished and which is a part of the contract, regardless of ownership and any rental or other agreement, if such may exist, for the use of such equipment entered into by the Contractor. If it is deemed necessary by the Project Manager to use equipment not listed in the said publication, a suitable rental rate for such equipment will be established by the Project Manager. The Contractor may furnish any cost data, which might assist the Project Manager in establishment of such rental rates.

The rental rates paid as above provided shall include the cost of fuel, oil, lubrication, supplies, small tools, necessary attachments, repairs, and maintenance of any kind, depreciation, storage, insurance, and all incidentals.

Operators of rented equipment will be paid for as provided in Section 11.4.1(1) "Labor."

All equipment shall, in the opinion of the Project Manager, be in good working condition and suitable for the purpose for which the equipment is to be used.

Unless otherwise specified, manufacturer's ratings and manufacturer's approved modifications shall be used to classify equipment for the determination of applicable rental rates. Equipment that has no direct power unit shall be powered by a unit of at least the minimum rating recommended by the manufacturer.

Individual pieces of equipment or tools not listed in said publication and having a replacement value of \$150 or less, whether or not consumed by use, shall be considered to be small tools and no payment will be made therefore.

Rental time will not be allowed while equipment is inoperative due to breakdowns.

11.3.4.11 <u>Equipment on the Work</u> - The rental time to be paid for equipment on the work shall be the time the equipment is in operation on the extra work being performed, and in addition, shall include the time required to move the equipment to the location of the extra work and return it to the original location or to another location requiring no more time than that required to return it to its original

location, except that moving time will not be paid for if the equipment is used at the site of the extra work on other than such extra work. Loading and transporting costs will be allowed, in lieu of moving time, when the equipment is moved by means other than its own power, except that no payment will be made if equipment is used at the site of the extra work on other than such extra work.

The following shall be used in computing the rental time of equipment on the work:

- (1) When hourly rates are listed, less than 30 minutes of operation shall be considered to be $\frac{1}{2}$ hour of operation.
- (2) When daily rates are listed, less than 4 hours of operation shall be considered to be ½ day of operation.
- 11.3.4.12 Equipment Not on the Work For the use of equipment moved in on the work and used exclusively for extra work paid for on a force account basis, the Contractor will be paid the rental rates listed in the Department of Transportation publication entitled Labor Surcharge and Equipment Rental Rates, which is in effect on the date upon which the work is accomplished and which is a part of the contract, and for the cost of transporting the equipment to the location of the work and its return to its original location, all in accordance with the following provisions:
 - (1) The original location of the equipment to be hauled to the location of the work shall be agreed to by the Project Manager in advance.
 - (2) The Owner will pay the costs of loading and unloading such equipment.
 - (3) The cost of transporting equipment in low bed trailers shall not exceed the hourly rates charged by established haulers.
 - (4) The cost of transporting equipment shall not exceed the applicable minimum established rates of the Public Utilities Commission.
 - (5) The rental period shall begin at the time the equipment is unloaded at the site of the extra work, shall include each day that the equipment is at the site of the extra work, excluding Saturdays, Sundays, and legal holidays unless the equipment is used to perform the extra work on such days, and shall terminate at the end of the day on which the Project Manager directs the Contractor to discontinue the use of such equipment. The rental time to be paid per day will be in accordance with the following:

Hours	Equipment	Нο	urs	to
	peration	_	Pai	_

	··
0	4
0.5	4.25
1	4.5
1.5	4.75
2	5
2.5	5.25
3	5.5
3.5	5.75
4	6
4.5	6.25
5	6.5
5.5	6.75
6	7
6.5	7.25
7	7.5
7.5	7.75
8	8
Over	Hours in one

Over 8 Hours in operation

The hours to be paid for equipment which is operated less than 8 hours due to breakdowns, shall not exceed 8 less the number of hours the equipment is inoperative due to breakdowns.

When hourly rates are listed, less than 30 minutes of operation shall be considered to be ½ hour of operation.

When daily rates are listed, payment for ½ day will be made if the equipment is not used. If the equipment is used, payment will be made for one day.

- (6) Should the Contractor desire the return of the equipment to a location other than its original location, the Owner will pay the cost of transportation in accordance with the above provisions, provided such payment shall not exceed the cost of moving the equipment to the work.
- (7) Payment for transporting and loading and unloading equipment, as above provided will not be made if the equipment is used on the work in any other way than upon extra work paid for on a force account basis.

When extra work, other than work specifically designated as extra work in the plans and specifications, is to be paid for on a force account basis, and the Project Manager determines that such extra work required the Contractor to move on to the work equipment which could not reasonably have been expected to be needed in the performance of the contract, the Project Manager may authorize payment for the use of such equipment at equipment rental rates in excess of those listed as applicable for the use of such equipment subject to the following additional conditions:

- (a) The Project Manager shall specifically approve the necessity for the use of particular equipment on such work.
- (b) The Contractor shall establish to the satisfaction of the Project Manager that such equipment cannot be obtained from his normal equipment source or sources and those of his subcontractors.
- (c) The Contractor shall establish to the satisfaction of the Project Manager that the proposed equipment rental rate for such equipment from his proposed source is reasonable and appropriate for the expected period of use.
- (d) The Project Manager shall approve the equipment source and the equipment rental rate to be paid by the City before the Contractor begins work involving the use of said equipment.
- 11.3.4.13 Owner-Operated Equipment When owner-operated equipment is used to perform extra work to be paid for on a force account basis, the Contractor will be paid for the equipment and operator, as follows:

Payment for the equipment will be made in accordance with the provisions in Section 11.3.4.10, "Equipment Rental."

Payment for the cost of labor and subsistence or travel allowance will be made at the rates paid by the Contractor to other workmen operating similar equipment already on the project, or in the absence of such workmen, at the rates for such labor established by collective bargaining agreements for the type of workman and location of the work, whether or not the owner-operator will be added to the cost of labor described herein, in accordance with provision in Section 11.3.4.3 "Labor Surcharge."

To the direct cost of equipment rental and labor, computed as provided herein, will be added the markups for equipment rental and labor as provided for in Section 11.3.1 "Work Performed by Contractor."

11.4.1 Work Performed by Special Forces or Other Special Services - When the Project Manager and the Contractor, by agreement, determine that a special service for an item of extra work cannot be

performed by the forces of the Contractor or those of any of his subcontractors, such services or extra work item may be performed by a specialist. Invoices for such service of item of extra work on the basis of the current market price thereof may be accepted without complete itemization of labor, material and equipment rental costs when it is impractical and not in accordance with the established practice of the special service industry to provide such complete itemization.

In those instances wherein a Contractor is required to perform extra work necessitating a fabrication or machining process in a fabrication or machine shop facility away from the job site, the charges for that portion of the extra work performed in such facility, may, by agreement, be accepted as a specialty billing.

To the specialist invoice price, less a credit to the City for any cash or trade discount offered or available, whether or not such discount may have been taken, will be added 15 percent in lieu of the percentages provided in Section 11.3.1 "Work Performed by Contractor."

- 11.4.2 Records The Contractor shall maintain his records in such a manner as to provide a clear distinction between the direct costs of extra work paid for on a force account basis and the costs of other operations.
- 11.5 The amount of credit to be allowed to City for any change which results in a net decrease in cost of the work, will be the amount of the actual net decrease as determined by the Project Manager. When both additions and credits are involved in any one change, any Contractor's fee under paragraph 11.3.3 shall be calculated on the basis of the net increase, if any.
- 11.6 Whenever the cost of any work is to be determined pursuant to paragraph 11.3, Contractor will submit in form prescribed by City an itemized cost breakdown together with supporting data.
- 11.7 Disputes, claims and matters in question arising out of or relating to the interpretation of implementation of Article 11 shall be submitted and resolved in accordance with paragraph 8.5.
- 11.8 <u>Cash Allowances</u> NOT APPLICABLE Contract Change Order Form

11.9 All parties agree that the following form shall be used for all change orders:

CONTRACT CHANGE ORDER NO	
Date Sheet of	
	directed to make the herein-described changes from the
plans and specifications, or do the following described v Contract Documents. Work described herein shall incluservices necessary for its completion.	vork in accordance with applicable provisions of the
the contract time relating to the portion of the work described Change Order is a waiver of any rights or claims by the work or extensions of the contract time for that work. ITEM: The above changes result in the following adjustments to	Contractor to any additional compensation for the "Item"
Add/Deduct \$	
Contract Time is increased/decreased/unchanged	working days by this Change Order.
I, the undersigned Contractor, have given careful consideration to the change proposed and hereby	SUBMITTED BY:
agree to do the work above specified	ARCHITECT
and will accept as full payment therefore the prices shown above.	RECOMMENDED FOR APPROVAL:
	By
ByCONTRACTOR	By PROJECT MANAGER
By	Date
Title	
Date	APPROVED BY: CITY
	APPROVAL:
	By
	CHIEF ADMINISTRATOR
Date	Date
Distribution: District (Master) Contractor (Master) Architect (Copy) Project Manager (Copy)	

1 of 2 Change Order _

CONTRAC	T CHANGE ORDER NO	
PROJECT		_
Date:		_

The Contract is changed as follows:

CCO#	COR#	DESCRIPTION		AMOUNT
		Requested by:		
		Reason:	ADD	
		Requested by:		
		Reason:	ADD	
		Requested by:		
		Reason:	ADD	
		Requested by:		
		Reason:	ADD	
		Requested by:		
		Reason:		
		TOTAL CHANGE ORDER NO	ADD	\$0.00

The original Contract Sum	\$0
Net Change by previously authorized Change Orders	\$0
The Contract Sum prior to this Change Order	\$0
The Contract Sum will be increased by this Change Order in the amount of	\$0
The New Contract Sum including this Change Order will be	\$0
The Contract Time will be extended	(-0-) work days

ARTICLE 12 - CHANGE OF THE CONTRACT TIME

12.1 Contract Time

- 12.1.1 The City may extend, reduce or adjust the contract time without invalidating the Contract Documents and without notice to the Surety. The contract time may only be changed by a change order. Any claim for an extension in the contract time shall be based on written notice to Project Manager within five (5) days of commencement of the event giving rise to the claim. The notice shall set forth the reasons for the delay, the date of its commencement, the extent of the delay, together with such supporting data as may be required by Project Manager. Change in the contract time shall be incorporated in a change order. Failure to present notice of claim in writing within the stated five days constitutes a waiver for any delay claim.
- 12.1.2 In the event it is deemed necessary to extend the time for completion of the work, such extensions shall in no way release any guarantee given by the Contractor pursuant to the provisions of the Contract Documents, or the contract let hereunder, nor shall such extension of time relieve or release the Sureties on the bonds executed pursuant to said provision. The Sureties in executing such bonds shall be deemed to have expressly agreed to any such extension of time. The amount of time allowed in any extension of time shall be limited to the period of the delay giving rise to the same as determined by the City.
- 12.1.3 The amount of time extension, if any, to which the Contractor is entitled shall be determined by the Project Manager. No damages of any sort shall be paid to Contractor for delay, disruption, halting, cessation or temporary abandonment, no matter from what cause. Parties acknowledge that on this project, revisions to the plans and specifications will be needed, and Contractor waives, by entering into the Agreement with City, any damages caused by such revision or any other source during the term of this contract. Notwithstanding any dispute which may arise in connection with a claim for adjustment of the contract time, Contractor shall proceed with the work promptly and directly.

12.2 <u>Liquidated Damages</u>

- 12.2.1 The work prescribed by the Contract Documents must be completed within the time set forth in the Agreement, or damage will be sustained by the City. Any delay could cause delay to operations of the City depriving the City of the scheduled beginning of the use of the facility under construction. The parties hereto recognize that, because of the foregoing special circumstances, it is impractical and extremely difficult to fix the actual damages.
- 12.2.2 Accordingly, the parties hereto agree, and by execution of the Agreement the Contractor acknowledges that he understands, has ascertained and agrees, that the Contractor shall pay to the City, as liquidated damages, and not as a penalty or forfeiture, the amounts herein set forth for the failure of the Contractor to substantially complete the entire work within the time specified.
- 12.2.3 Time is therefore of the essence in these Contract Documents and it is imperative that the work included in these Contract Documents be substantially completed within the specified time.
- 12.2.4 Since it is impossible or extremely impractical, presently, to determine the actual amount of damages which the City will sustain by reason of such delay, it is, therefore, agreed that the Contractor will pay to the City liquidated damages in the amount as set forth in subparagraph 12.2.6, for each and every calendar day beyond the time set forth in the Agreement, as adjusted, until the time of completion as determined in paragraph 14.5. The Contractor agrees to promptly pay such liquidated damages as are herein provided. In case the same are not so paid, Contractor agrees that the City may deduct the amount thereof from any money due or that may become due the Contractor under the contract.

- 12.2.5 The parties have endeavored to estimate the actual damages likely to be suffered by the City in the event of a delay in completion beyond the time set forth in the Agreement, and agree that the amount is a reasonable estimate of the City's actual damages and are just and reasonable sums under the circumstances presently existing.
- 12.2.6 It is agreed that the amount of liquidated damages to be paid by the Contractor to the City for failure to complete the entire work specified by the Contract Completion Date or to meet any deadline set forth in the Agreement for the completion of specified work (as extended, if applicable) is two hundred fifty dollars and no/cents (\$250.00) for each calendar day, continuing after the Substantial Completion Date, as indicated in the Agreement, to the date of actual substantial completion, or until the time of completion of the work necessary to meet such a deadline, as the case may be.
- 12.2.7 In the event the Contractor shall become liable for liquidated damages under this Section, the City in addition to all other remedies provided by law, shall have the right to require the Project Manager to withhold any and all retained percentages of payments, subject to the requirements of Sections 10263 and 22300 of the Public Contracts Code, which would otherwise be or become due the Contractor until the liability of the Contractor under this Section has been finally determined. The City shall have the right to use and apply such retained percentages, in whole or in part, to reimburse the City for all liquidated damages due or to become due to the City. Any remaining balance of such retained percentages shall be paid to the Contractor only after discharge in full of all liability incurred by the Contractor under this Section or otherwise. If the retained percentage is not sufficient to discharge all such liabilities of the Contractor, the Contractor shall continue to remain liable to the City until all such liabilities are satisfied in full.
- 12.2.8 Such amount will be in each case the actual cash value agreed upon as the loss to the City resulting from the Contractor's default.
- 12.2.9 Disputes, claims and matters in question arising out of or relating to the interpretation or implementation of Article 12 shall be submitted and resolved in accordance with paragraph 8.4.

ARTICLE 13 - WARRANTY AND GUARANTEE; TEST AND INSPECTIONS; CORRECTION. REMOVAL OR ACCEPTANCE OF DEFECTIVE WORK

13.1 Warranty and Guarantee

13.1.2 Contractor warrants and guarantees to City that all materials and equipment will be unless otherwise specified, all work will be of good quality, free from faults or defects, in accordance with the requirements of the Contract Documents and of any inspections, tests or approvals referred to in paragraph 13.2. All unsatisfactory work, all faulty or defective work, and all work not conforming to the requirements of the Contract Documents at the time of acceptance thereof or of such inspections, tests or approvals shall be considered defective. All defective work, whether or not in place, may be rejected, corrected or accepted as the City may direct.

13.2 <u>Tests and Inspections</u>

- 13.2.1 If laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any work to be specifically inspected, tested or approved by some public body, Contractor shall assume full responsibility therefore, pay all costs in connection therewith, and furnish the Project Manager with the required certificates of inspection, testing or approval. All other inspections, tests and approvals required by the Contract Documents shall be performed by City and the costs be paid by City unless otherwise specified.
- 13.2.2 Contractor shall give Project Manager and Architect timely notice of readiness of the work for all inspections, tests or approvals. If any such work required so to be inspected, tested or approved is

covered before such inspections, tests, or approvals are made, without written approval of the Project Manager, it must, if requested by the Project Manager or Architect, be uncovered for observation, and such uncovering and replacement shall be at Contractor's expense.

- 13.2.3 Neither observations by Project Manager and Architect nor inspections, tests or approvals shall relieve Contractor from his obligations to perform the work in accordance with the requirements of the Contract Documents.
- 13.2.4 Any defective work, which may be discovered before final acceptance of the work, shall be corrected immediately by the Contractor, and any unsatisfactory materials shall be rejected, notwithstanding that they may have been overlooked by an inspector. The inspection of the work shall not relieve the Contractor of any of his obligations to perform satisfactory work as herein prescribed.
- 13.2.5 Failure or neglect on the part of the City or any of its authorized agents to condemn or reject bad or inferior work or materials shall not be construed to imply an acceptance of such work or materials if it becomes evident at any time prior to final acceptance of the work; neither shall it is construed as barring the City at any subsequent time from recovery of damages or of such a sum of money as may be needed to build all portions of the work in which fraud was practiced or improper materials used whenever found.

13.3 Access to Work

13.3.1 The City and its representative and the Architect and his representatives will at all times have access to the work. Contractor shall provide proper and safe facilities for such access and observation of the work and also for any inspection or testing thereof by others.

13.4 Uncovering the Work

- 13.4.1 Work, which is supposed to be tested prior to covering or inspecting, and which has been covered prior to testing or inspection must, if requested by Project Manager or Architect, be uncovered for observation and replaced at Contractor's expense.
- 13.4.2 The Project Manager may request any work to be uncovered and inspected and tested. If such work is found to be defective, Contractor shall bear the expense of uncovering, exposure, inspection, testing, correction and recovering. If the work is not found to be defective, Contractor shall be allowed an increase in contract price and, if necessary, an extension of time to cover all-time and cost expended. Such increase and extension shall be granted pursuant to Articles 10, 11, and 12.

13.5 <u>City May Stop the Work</u>

13.5.1 If the work is defective, or Contractor fails to supply sufficient skilled workmen or suitable materials or equipment, or if Contractor fails to make prompt payments to subcontractors or for labor, materials or equipment, City may order Contractor to stop the work, or any portion thereof, until the cause for such order has been eliminated. This right of City to stop the work shall not give rise to any duty on the part of City to exercise this right for the benefit of Contractor or any other party.

13.6 Correction or Removal of Defective Work

13.6.1 The Project Manager may require the Contractor, prior to approval of final payment, without cost to City and as specified by Project Manager, to either correct any defective work, whether or not fabricated, installed or completed, or, if the work has been rejected by Project Manager or Architect, remove it from the site and replace it with nondefective work. If Contractor does not correct such defective work or remove and replace such rejected work within a reasonable time, all as specified in a written notice from Project Manager, City may have the deficiency corrected or the rejected work removed and replaced by other persons. All direct or indirect costs of such correction or removal and

replacement, including compensation for additional professional services, shall be paid by Contractor. Contractor shall also bear the expenses of making good all work of others destroyed or damaged by his correction, removal or replacement of his defective work.

13.6.2 The Contractor shall remove from the site within 48 hours, when so directed by the Project Manager, any materials which are not in conformance with the Contract Documents.

13.7 One Year Correction Period

- 13.7.1 If, after the approval of final payment and prior to the expiration of one year after the date of Notice of Completion or such longer periods of time as may be prescribed by law or by the terms of any applicable special guarantee required by the Contract Documents, any work is found to be defective, Contractor shall promptly, without cost to City and in accordance with City's written instructions, either correct such defective work, or, if it has been rejected by City, remove it from the site and replace it with nondefective work. If Contractor does not promptly comply with the terms of such instructions, City may have the defective work corrected or the rejected work removed and replaced by other persons and all direct and indirect costs of such removal and replacement, including compensation for additional professional services, shall be paid by Contractor. The requirements of this paragraph shall be cumulative with such other indemnification, warranties and guarantees as provided by the Contract Documents, at law and in equity, and shall not be deemed a limitation of any sort on the rights and remedies of the City against the Contractor
- 13.7.1.1 The warranties, extended warranties and guarantees in these General Conditions and in the Specification shall be cumulative with such other indemnification, warranties and guarantees as provided by the Contract Documents, or at law or in equity, and shall be deemed a limitation of any sort on the rights and remedies of the City against the Contractor.

13.8 Acceptance of Defective Work

13.8.1 If, instead of requiring correction or removal and replacement of defective work, City prefers to accept it, it may do so. In such case, if acceptance occurs prior to approval of final payment, a change order shall be issued incorporating the necessary revisions in the Contract Documents, including appropriate reduction in the contract price; or, if the acceptance occurs after approval of final payment, an appropriate amount shall be paid by Contractor to City.

13.9 Work Neglected by Contractor

13.9.1 If Contractor fails to prosecute the work in accordance with the Contract Documents, including any requirements of the construction schedule, City may give Contractor written notice. Contractor shall respond to City within 24 hours' receipt of said notice, and conform to said notice within 7 days. City may, without prejudice to any other remedy it may have, make good deficiencies, and the cost thereof (including compensation for additional professional services) shall be charged against Contractor. If the payments then or thereafter due Contractor are not sufficient to cover such amount, Contractor shall pay the difference to City.

ARTICLE 14 - PAYMENTS AND COMPLETION

14.1 Schedules:

14.1.1 Work Schedule and activity cost data developed in connection therewith as described in the General Requirements. No progress payment will be made until after the Schedule has been updated as of the date of application. The activity cost data will be incorporated into the form of Application for Payment furnished by the City.

14.2 Application for Progress Payment:

- 14.2.1 Once a month Contractor shall submit to Project Manager and Architect for review an Application for Payment filled out and signed by Contractor covering the work completed as of the date of the application and accompanied by such data, vouchers and schedules as may reasonably be required. No payment shall be made for any work or material not specifically incorporated in the project, except equipment purchased by Contractor, delivered to and stored in a bonded warehouse acceptable to the Owner. Payment for 95% of the invoiced value of such equipment may be made, subject to the inspection by and approval of the Owner. Equipment that qualified for such payment while not incorporated into the work, is limited to: special order transformers, generators, pumps, valves, and motors. Items which are "stock" or "off the shelf" which are readily available are not, under any circumstances, eligible for payment under this provision.
- 14.2.2 Mobilization, bonds, and insurance premiums will be paid as part of the first progress payment if these costs are identified as part of the cost allocation required under General Requirements, Section 01310. Each subsequent Application for Payment shall include an affidavit of Contractor stating that all previous progress payments received on account of the work have been applied to discharge in full all of Contractor's obligations reflected in prior Applications for Payment and otherwise. Failure to submit any data and affidavits as may be required by this paragraph shall be grounds for rejection of the Application for Payment. This payment will be made pursuant to paragraph 14.11

14.3 Contractor's Warranty of Title:

14.3.1 Contractor warrants and guarantees that title to all work, materials and equipment covered by any Application for Payment, whether incorporated in the project or not, will pass to City at the time of payment, free and clear of all liens, claims, security interests and encumbrances (hereinafter in these General Conditions referred to as "liens"). The City may, at any time, require the Contractor to post, at Contractor's expense, a lien release bond as to any lien filed against the project.

14.4 Approval of Payments:

- 14.4.1 The Project Manager will, within fifteen days after receipt of each Application for Payment, either indicate in writing his approval for payment or return the application to Contractor indicating his reasons for refusing to approve payment. City shall, within 30 days of presentation to it of an approved Application for Payment, review said application and if found acceptable in form and amount, pay Contractor the amount approved.
- 14.4.2 The City will pay 95% of the amount due the Contractor as progress payments. The remaining monies will be paid pursuant to paragraph 14.9.1.
- 14.4.3 The Contractor may elect to receive 100% of payments due under the contract from time to time, without retention of any portion of the payment by the public agency, by depositing securities of equivalent value with the public agency in accordance with the provisions of Section 4590 of the Government Code. Such securities, if deposited by the Contractor, shall be valued by the public agency's Finance Director (Treasurer), whose decision on valuation of the securities shall be final.
- 14.4.4 The granting of any progress payment, or the receipt thereof by the Contractor, shall not constitute acceptance of the work or any portion thereof, and shall in no way lessen the liability of the Contractor to replace unsatisfactory work or material, though the unsatisfactory character of such work or material may not have been apparent or detected at the time such payment was made.
- 14.4.5 It is mutually understood and agreed that when under any provision of this contract the City shall charge any sum of money against the Contractor, the amount of such charge shall be deducted and retained by the City from the amount of the next succeeding progress estimate, or from any

other moneys due or that may become due the Contractor on account of the contract. If on completion or termination of the contract such moneys due the Contractor are found insufficient to cover the City's charges against him the City shall have the right to recover the balance from the Contractor or his sureties.

- 14.4.6 The City may withhold up to 125% of the estimated cost of remedial work from payments otherwise due the Contractor, if in the judgment of the Project Manager or Architect the Contractor has failed to make satisfactory progress on the completion of remedial work, or is otherwise in violation of any requirement, duty, obligation or covenant contained in the Contract Documents. Such withholding is supplementary to the retention amount required by these Contract Documents.
- 14.4.7 City may refuse to approve the whole or any part of any payment because of subsequently discovered evidence, change in circumstances or the results of subsequent inspections or tests, and may nullify any such payments previously approved to such extent as may be necessary in their opinion to protect City from loss, because:
- 14.4.7.1 the work is defective, or completed work has been damaged requiring correction or replacement;
- 14.4.7.2 claims or liens have been filed, or there is reasonable cause to believe such may be filed;
- 14.4.7.3 the contract price has been reduced because of modification;
- 14.4.7.4 City has been required to correct defective work or complete the work;
- 14.4.7.5 of unsatisfactory prosecution of the work including failure to furnish acceptable submittals; or
- 14.4.7.6 the Contractor has failed to comply with the Contract Documents, direction of City or with the requirements of the law.

14.5 Notice of Completion:

- 14.5.1 Contractor will certify in writing to City, prior to final payment, that the entire project is substantially complete and request that City issue a Notice of Completion. Within a reasonable time thereafter, Project Manager, Contractor, and Architect shall make a review of completeness. If Project Manager does not consider the project substantially complete, Project Manager will notify Contractor in writing giving his reasons. If Project Manager considers the project substantially complete, Project Manager will prepare a provisional Notice of Completion which shall fix the tentative date of Substantial Completion and the responsibilities for maintenance and utilities. There shall be attached to the provisional certificate a list of items to be completed or corrected before final payment, and the provisional certificate shall fix the time within which such items be completed or corrected, said time to be within the contract time. Section 01700 shall apply to this paragraph.
- 14.5.2 Contractor shall have seven days after receipt of the provisional certificate during which he may make written objection to Project Manager as to any provisions of the provisional certificate or attached list. If, after considering such objection, Project Manager concludes that the project is not substantially complete, Project Manager will within seven days after submission of the objection notify Contractor thereof in writing stating the reasons. Upon Contractor's completion of the items listed on the provisional certificate, and upon satisfaction of the terms and conditions of the provisional certificate, the Project Manager shall issue a final Notice of Completion, which shall fix date as may be necessary or appropriate. Project Manager's determination of the date of Substantial Completion and other items under this paragraph shall be final and conclusive on Contractor. Section 01700 shall apply to this paragraph.

14.5.3 Project Manager shall have the right to exclude Contractor from the project site after the date of Substantial Completion, but Project Manager shall allow Contractor reasonable access to complete punch list items or perform correction and warranty work.

14.6 Partial Utilization:

- 14.6.1 Prior to final payment, Project Manager may request Contractor in writing to permit City to use a specified part of the project which it believes it may use without significant interference with construction of the other parts of the project. If Contractor agrees, it will certify to Project Manager and Architect that said part of the project is substantially complete and request Project Manager to issue a certificate of Substantial Completion for that part of the project. Within a reasonable time thereafter Project Manager, Contractor and Architect shall make an inspection of that part of the project to determine its status of completion. If Project Manager determines that such part is substantially complete, Project Manager shall issue a Certificate of Substantial Completion. If Project Manager does not consider that it is substantially complete, Project Manager will notify Contractor thereof in writing, giving its reasons. In case of partial utilization by the City, the provisions of General Requirements Section 01700 will govern with respect to the responsibilities of Contractor and City.
- 14.6.2 Partial utilization shall not limit any warranty or guarantee by the Contractor, nor shall it constitute a waiver of any right of the City, its successors or assigns.

14.7 Final Inspection:

14.7.1 The Contractor shall give written notice that the project is complete. Project Manager and Architect will make a final review of completeness with Contractor, and will notify Contractor in writing of all particulars in which this review reveals that the work is incomplete or defective. Contractor shall immediately take such measures as are necessary to remedy such deficiencies.

14.8 Final Application for Payment:

14.8.1 The Contractor shall complete all such corrections to the satisfaction of the Project Manager and deliver all maintenance and operating instructions, schedules, guarantees, bonds, certificates of inspection and other documents required by the Contract Documents or by the Project Manager. He may then make application for final payment following the procedure for progress payments. The final Application for Payment shall be accompanied by such data as the Project Manager may reasonably require, together with complete releases - waivers of liens in a form satisfactory to the Project Manager. Contractor shall also be required to furnish receipts or releases in full; and affidavit that the releases and receipts include all labor, all payrolls, material and equipment for which a lien could be filed, and that all payrolls, material and equipment bills, and other indebtedness connected with the work for which City or his property might in any way be responsible, have been paid or otherwise satisfied; and consent of the Surety to final payment. If any subcontractor, material man, fabricator or supplier fails to furnish a release or receipt in full, Contractor may be required at Project Manager's sole discretion to furnish a bond or other collateral satisfactory to Project Manager to indemnify City against any lien, stop notice, or any other loss or liability. This payment is made pursuant to paragraph 14.11 and Section 01700.

14.9 Approval of Final Payment:

14.9.1 If, on the basis of observation and review of the work during construction, final inspection and review of the final Application for Payment, as required by the Contract Documents, Project Manager is satisfied that the work has been fully and satisfactorily completed and that Contractor has fulfilled all his obligations under the Contract Documents, Project Manager will file a Notice of Completion and, within fifteen days after receipt of the final Application for Payment, approved by Project Manager, indicate in writing its approval for payment.

- 14.9.2 If, on the basis of observation and review of the work during construction, final inspection and review of the final Application for Payment, as required by the Contract Documents, Project Manager is not satisfied that the work has been fully and satisfactorily completed, and that Contractor has not fulfilled all his obligations under the Contract Documents, Project Manager will, within fifteen days after receipt of the final Application for Payment, indicate in writing his disapproval for payment. Thereupon Project Manager will give written notice to Contractor indicating in writing the reasons for refusing to approve final payment, in which case Contractor shall make the necessary corrections and resubmit the Application.
- 14.9.3 City shall make payment, including retention, to Contractor, pursuant to an approved final application for Payment, within 15 days of its approval, or on the 30th day following the recording of the Notice of Completion, whichever date is later. The approval and payment procedures described in paragraphs 14.10, 14.11, and 11.4 shall apply to this paragraph.
- 14.9.4 The Contractor and each assignee under any assignment in effect at the time of final payment shall, if required by the Project Manager, execute and deliver at the time of final payment and as a condition precedent to final payment, a release in form and substance satisfactory to and containing such exemptions as may be found appropriate by the City, discharging the City, Project Manager, and their elected officials, officers, agents, and employees of and from all liabilities, obligations and claims arising under this contract.

14.10 Contractor's Continuing Obligation:

14.10.1 Contractor's obligation to perform the work and complete the project in accordance with the Contract Documents shall be absolute. Neither approval of any progress or final payment by City, nor the issuance of a Notice of Completion, nor any payment by City to Contractor under the Contract Documents, nor any use or occupancy of the project by City shall constitute an acceptance of work not in accordance with the Contract Documents.

14.11 Waiver of Claims:

- 14.11.1 The making and acceptance of each progress payment and of final payment shall constitute a waiver of all prior claims by Contractor against City which have not been brought to the notice of the City as provided in the Contract Documents.
- 14.11.2 If any claim or lien or stop-notice or any other demand for payment or security therefore, including claims or demands upon the performance and payment bond sureties, is made or filed with or against City, the project or the premises by any person claiming that Contractor or any subcontractor or other person under it has failed to perform its contractual obligations or to make payment for any labor, services, materials equipment, taxes or other items or obligations furnished or incurred for or in connection with the work, or if at any time there shall be evidence of such non-performance or non-payment or of any claim or lien or stop-notice or other demand for which, if established, City might become liable and which is chargeable to Contractor; or if Contractor or any subcontractor or other person under it causes damage to the work or to any other work on the project; or if the Contractor fails to perform or is otherwise in default under any of the terms or provisions of the Contract Documents, the Project Manager shall have the right to retain from any payment then due or thereafter to become due an amount which in his sole discretion he deems sufficient to:
- 14.11.2.1 satisfy, discharge and defend against any such claim or lien or stop-notice or other demand, or any action which may be brought or judgment which may be recovered thereon;
- 14.11.2.2 make good any such non-payment, nonperformance, damage, failure or default; and

- 14.11.2.3 compensate City for and indemnify it against any and all losses, liability, damages, costs and expenses (including attorneys', accountants', consultants' and experts' fees and costs) which may be sustained or incurred in connection therewith.
- 14.11.3 City shall have the right to apply and charge against Contractor as much of the amount retained as may be required for the foregoing purposes. If the amount retained is insufficient therefore, Contractor shall be liable for the difference and upon written demand immediately pay the same to the City. The provisions of this paragraph are in addition to such other rights and entitlements as the City may enjoy against Contractor as elsewhere provided in the Contract Documents, and at law and in equity.
- 14.11.4 Should any subcontractor, material man, supplier or other such person file or maintain any action on or respecting a claim of mechanic's lien, stop-notice, against payment or performance bond, Contractor shall immediately and at his own expense procure, furnish and record appropriate release bonds in accordance with California Civil Code Section 8000 et. seq., and California Code of Civil Procedure Sections 405 through 405.24, inclusive. Upon Contractor's failure immediately to procure, furnish and record such release bonds, City shall have right to procure and record such release bonds, and to retain from Contractor's payment the cost thereof. The provisions of this paragraph are in addition to such other rights and entitlements as enjoyed by the City against Contractor as elsewhere provided in the Contract Documents, and at law and in equity.

14.12 Price Reduction For Defective Cost or Pricing Data

- 14.12.1 If the Owner determines that any price (including profit) negotiated in connection with the contract, or any cost reimbursable under this contract, was increased by any significant sums because the Contractor, or any subcontractor furnished incomplete or inaccurate cost or pricing data or data not current, then such price or cost or profit shall be reduced accordingly and the contract shall be modified in writing to reflect such reduction. Failure to agree on a reduction shall be subject to the Disputes Resolution clause of this contract.
- 14.12.2 Since the contract is subject to reduction under this clause by reason of defective cost or pricing data submitted in connection with certain subcontracts, the Contractor may wish to include a clause in each such subcontract requiring the subcontractor to appropriately indemnify the Contractor. It is also expected that any subcontractor subject to such indemnification will generally require substantially similar indemnification for defective cost or pricing data required to be submitted by his lower tier subcontractors.

14.13 Covenant Against Contingent Fees

14.13.1 The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure this contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty the City shall have the right to annul this contract without liability or in its discretion to deduct from the contract price or consideration, or otherwise recover, the full amount of such commission, percentage, brokerage, or contingent fee.

14.14 Gratuities

14.14.1 If the Owner finds, after notice and hearing, that the Contractor or any of the Contractor's agents or representatives offered or gave gratuities (in the form of entertainment, gifts, or otherwise) to any official, employee, or agent of the Owner in an attempt to secure a contract or favorable treatment in the awarding, amending, or making any determinations related to the performance of this contract, the City may, by written notice to the Contractor, terminate the right of the Contractor to proceed under this contract. The City may also pursue other rights and remedies that the law or this contract

provides. However, the existence of the facts upon which the City makes such findings shall be in issue and may be reviewed in proceedings under the remedy clause of this contract.

14.14.2 In the event this contract is terminated as provided in this clause, the City shall be entitled (1) to pursue the same remedies against the Contractor as it could pursue in the event of a breach of the contract by the Contractor, and (2) as a penalty in addition to any other damages to which it may be entitled by law, to exemplary damages in an amount (as determined by the City) which shall be not less than 3 nor more than 10 times the costs the Contractor incurs in providing any such gratuities to any such officer or employee.

ARTICLE 15 - SUSPENSION OF WORK AND TERMINATION

15.1 <u>City May Suspend Work</u>

15.1.1 The City may, at any time and without cause, suspend the work or any portion thereof by notice in writing to Contractor. Contractor shall resume the work when so ordered in writing by City.

15.2 City May Terminate

- 15.2.1 The City may, without prejudice to any other right or remedy and after giving Contractor and his Surety seven calendar days written notice, terminate the services of Contractor and take possession of the project and of all materials, equipment, tools, construction equipment and machinery thereon owned by Contractor, and finish the work by whatever method it may deem expedient, if the Contractor is adjudged as bankrupt or insolvent, or if he makes a general assignment for the benefit of his creditors, or if a trustee or receiver is appointed for Contractor or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or similar laws, or if he fails to supply sufficient skilled workmen or suitable materials or equipment, or if he fails to make prompt payments to subcontractors or for labor, materials or equipment or if he disregards laws, ordinances, rules, regulations or orders of any public body having jurisdiction, or if he disregards the authority of Project Manager, or if he otherwise violates any provisions of the Contract Documents. In such case Contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price exceeds the direct and indirect costs of completing the project, including compensation for additional professional services, such excess shall be paid to Contractor. If the costs exceed such balance, Contractor shall pay the difference to City.
- 15.2.2 The termination of the Contractor's services by the City shall not affect any rights of the City against the Contractor then existing or which thereafter accrue. The retention of any payment of money by City due Contractor will not release the Contractor from liability.
- 15.2.3 The City may, after seven calendar days' written notice to Contractor, without cause and without prejudice to any other right or remedy, elect to abandon the project and terminate the agreement. In such case, Contractor shall be paid for all work then executed, any expense sustained, plus a reasonable profit.
- 15.2.4 The Contractor may not, under any condition, terminate or stop work because of a dispute, claim or any matter in controversy under the Contract Documents, then under submission, or previously resolved by a final and conclusive decision under paragraph 8.4.

ARTICLE 16 - MISCELLANEOUS

16.1 Giving Notice

16.1.1 Notice shall be deemed to have been validly given if delivered <u>in writing</u> to the individual or member of the firm or to an officer of the corporation for whom it is intended, or if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to him who gives the notice. Notice shall be effective as of the date of personal service or mailing.

16.2 General

- 16.2.1 All moneys not paid when due hereunder shall bear interest at the rate of 7% annually.
- 16.2.2 All specifications, drawings, and copies thereof furnished by the Architect shall be the property of City. They shall not be used on another project, and, with the exception of those sets that have been signed in connection with the execution of the Agreement, shall be returned to the City on request upon completion of the project.
- 16.2.3 The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder, and, in particular but without limitation, the warranties, guarantees and obligations imposed upon Contractor by the General Conditions and the rights and remedies available to City and Project Manager thereunder, shall be in addition to, and shall not be construed in any other way as a limitation of, any rights and remedies available to them which are otherwise imposed or available by law, by special guarantee or by other provisions of the Contract Documents.
- 16.2.4 Should City or Contractor suffer injury or damage to his person or property because of any error, omission or act of the other or any of his employees or agents or others for whose acts he is legally liable, notice of said injury shall be made in writing to the City within five days of the first observance of such injury or damage.
- 16.2.5 The Contract Documents shall be governed by the laws of the State of California. In case any provision of the Contract Documents, including without limitation these General Conditions, shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions shall not in any other way be affected or impaired.
- 16.2.6 No waiver by City of any provision of the Contract Documents, including without limitations these General Conditions, shall constitute a waiver of any other provision thereof.
- 16.2.7 The waiver of any instance is not a waiver in the second instance.

ARTICLE 17 - EQUAL OPPORTUNITY

- 17.1 The Contractor shall maintain policies of employment as follows:
- 17.1.2 The Contractor and all subcontractors shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, or national origin. The Contractor shall take affirmative action to insure that applicants are employed, and that employees are treated during employment without regard to race, religion, color, 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 setting forth the policies of non-discrimination.
- 17.2 See also Federal, State and City requirements in SUPPLEMENTARY CONDITIONS.

SUPPLEMENTARY CONDITIONS

1. Statements and Payrolls

- 1.1 The Contractor and each subcontractor shall preserve his payroll records for a period of three years from the date of completion of this contract.
- 1.2 The Contractor shall submit weekly a copy of all payrolls to the Project Manager. The copy shall be accompanied by a statement signed by the employer or his agent indicating that the payrolls are correct and complete and that the wage rates contained therein are not less than those determined by the Department of Industrial Relations. The Contractor and subcontractor may use standard forms furnished by the Project Manager or any other form approved by the Project Manager. The Contractor shall be responsible for the submission of copies of payrolls of all subcontractors.
- 1.3 The payrolls and payroll records shall contain the full name, address and social security number of each employee, his correct classification, rate of pay, daily and weekly number of hours worked, itemized deductions made and actual wages paid. They shall also indicate apprentices and ratio of apprentices to journeymen. The employees' address and social security number need only appear on the first payroll on which his name appears.
- 1.4 If, on or before the 20th of the month, the Contractor has not submitted satisfactory payrolls for all work performed during the monthly period ending on or before the 6th of that month, the Owner will retain an amount equal to 5 percent of the estimated value of the work performed during the month from the next monthly estimate, except that such retention shall not exceed \$10,000 nor be less than \$1,000. Retention for failure to submit satisfactory payrolls shall be additional to all other retention's provided for in this contract. The retention for failure to submit payrolls for any monthly period will be released for payment on the monthly estimate for partial payments next following the date that all the satisfactory payrolls for which the retention was made are submitted.

2. Accident Prevention

- 2.1 Precautions shall be exercised at all times for protection of persons (including employees) and property. These shall include, but not be limited to, installation of adequate safety guards and protective devices for all equipment and machinery, whether used in the performance of work or permanently installed as part of the work. Contractor shall comply with all applicable laws relating to safety precautions, including safety regulations of CAL-OSHA.
- 2.2 Where conditions of the work present unreasonable risk or death to persons, or property damage, in the judgment of the Owner, it may direct Contractor at his sole expense, to close down the work and not commence work again until the hazardous condition is eliminated.
- 2.3 Nothing herein shall be deemed to allow use of shoring, sloping or protective system less effective than that required by the Construction Safety Orders of CAL-OSHA.

3. Air Pollution - State Requirements

3.1 In connection with Public Contracts Code Section 10231, Contractor and his subcontractors shall comply with all air pollution control rules, regulations, ordinances, and statutes which apply to any work performed pursuant to the contract, including any air pollution control rules, regulations, ordinances, and statutes specified in Government Code Section 11017. Fugitive Dust Permit and construction emission dust/control plan will be required by the City of Corning Air Pollution Control District (TCAPCD). They advised that open burning without a permit is restricted.

4. Anti-Trust Claims

4.1 By execution of this contract, Contractor agrees to and does hereby assign to awarding body all right, title, and interest in and to all causes of action it may have under the Clayton Act (15 U.S.C. Sec. 15) Section 4 or under the Cartwright Act (Business and Professions Code) Section 16700 et. seq., arising from purchases of goods, services, or materials made in performance of this contract. The parties shall deem this assignment effective at the time of the tender of final payment to Contractor without further acknowledgment. Contractor shall include, or cause to be included, similar provision in any subcontract entered into for any part of the work of this contract.

Anti-Kick Back

5.1 The Contractor must comply with the provisions in the Copeland "Anti-Kick Back Act" (18 USC 874) as supplemented in Department of Labor Regulations (29 CFR, Part 3). This Act provides that each contractor shall be prohibited from inducing, by any means, any person employed in the construction, completion or repair of public work, to give up any part of the compensation to which he is otherwise entitled.

6. Equal Opportunity - Federal Requirements

- 6.1 <u>Selection of Labor:</u> During the performance of this contract, the Contractor shall not discriminate against labor from any other State, possession or territory of the United States.
- 6.2 <u>Employment Practices:</u> During the performance of this contract, Contractor agrees as follows:
 - a. The Contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contract 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; layoffs 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 by the Owner setting forth the provisions of this nondiscrimination clause.
 - b. The Contractor will, in all solicitation 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.

- c. The Contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the Owner advising the said labor union or workers' representative 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.
- d. The Contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations (41 CRF, Part 60) and relevant orders of the Secretary of Labor.
- e. The Contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by rules, regulations and order of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations and orders.
- f. 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 of Federally-assisted construction contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation or order of the Secretary of Labor, or as otherwise provided by law.
- g. The Contractor will include the provisions of this Section 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.

No otherwise qualified handicapped individual in the United States as defined in Section 7 (5) of the Rehabilitation Act of 1973 (P.L. 93-112) shall, solely by reason of his handicap, be excluded from the participation in, be denied the benefits of, or be subjected to discrimination under this contract.

- 6.3 <u>Air Pollution Federal Requirements</u>: The Contractor agrees to comply with all applicable standards, orders, or regulations issued pursuant to the Clean Air Act of 1970.
- 6.4 Assurance of Minority Business Enterprise Participation
- 6.4.1 The bidder's execution of the signature portion of this proposal shall also constitute execution of this assurance.
- 6.4.2 The bidder hereby gives assurance pursuant to the requirements of the code of federal regulations, that bidder has made a reasonable effort to employ Minority Business Enterprises. Bidder further gives assurance that bidder will submit the documentation listing Minority

Business Enterprises with which the bidder will subcontract if the contract is awarded to bidder and if bidder is unable to obtain MBE participation, of the steps bidder has taken to obtain MBE participation.

7. <u>Fair Employment Practices - State Requirements</u>

- 7.1 In connection with the performance of work under this contract, Contractor agrees as follows:
 - a. Contractor will not willfully discriminate against any employee or applicant for employment because of race, color, religious creed, physical handicap, medical condition, marital status, ancestry, sex or national origin. Contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, ancestry, 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. Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the awarding authority setting forth the provision of this Fair Employment Practices section.
 - b. Contractor will send to each labor union or representative of workers with which he has collective bargaining agreement or other contract or understanding, a notice, to be provided by awarding authority, advising said labor union or workers' representative of Contractor's commitments under this section, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.
 - c. Contractor will permit access to his records of employment, employment advertisements, application forms and other pertinent data and records by the Fair Employment and Housing Commission, awarding authority or any other appropriate agency of the State of California designated by awarding authority for purposes of investigation to ascertain compliance with Fair Employment Practices section of this contract.
 - d. A finding of willful violation of the Fair Employment Practices section of this contract or of the Fair Employment and Housing Act shall be regarded by awarding authority as a basis for determining Contractor to be not a "responsible bidder" as to future contracts for which such Contractor may submit bids, for revoking the Contractor's prequalification rating, if any, and for refusing to establish, re-establish or re prequalification rating for the Contractor.

Contractor shall immediately notify Awarding Authority if it the Fair Employment and Housing Commission has determined that a complaint alleging that Contractor has violated the Fair Employment and Housing Act is valid. Contractor shall immediately provide to Awarding Authority any agreement Contractor entered into under Government Code section 12964 and immediately notify Awarding Authority of any civil action brought against Contractor pursuant to Government Code section 12964.

Awarding authority shall deem a finding of willful violation of the Fair Employment and Housing Act to have occurred upon receipt of notice any such notice from Contractor, the Fair Employment and Housing Commission, and or Superior or Federal Court.

Upon receipt of such written notice, Awarding authority shall notify Contractor that unless he demonstrates to the satisfaction of Awarding authority within a stated period that the violation has been corrected, his prequalification rating will be revoked at the expiration of such period.

e. Contractor agrees, that should the awarding authority determine the Contractor has not complied with the Fair Employment Practices section of this contract, then pursuant to Labor Code Sections 1735 and 1775, Contractor shall, as a penalty to the awarding authority, forfeit, for each calendar day, Supplementary Conditions Page 4 of 5

or portion thereof, for each person who was denied employment as a result of such non-compliance, the penalties provided in the Labor Code for violation of prevailing wage rates. Such moneys may be recovered from Contractor. Awarding authority may deduct any such damages from any moneys due Contractor from the State of California.

f. Nothing contained in this Fair Employment Practices Section shall be construed in any manner or fashion so as to prevent awarding authority of the State of California from pursuing other remedies that may be available at law.

Nothing contained in this Fair Employment Practices section shall be construed in any manner or fashion so as to require or permit hiring of an employee not permitted by the National Labor Relations Act.

- g. Prior to award of the contract, Contractor shall certify to awarding authority that he has or will meet the following standards for affirmative compliance, which shall be evaluated in each case by awarding authority:
 - (1) Contractor shall provide evidence, as required by the awarding authority, that he has notified all supervisors, foremen, and other personnel officers in writing of the content of the anti-discrimination clause and their responsibilities under it.
 - (2) Contractor shall provide evidence, as required by awarding authority, that he has notified all sources of employee referrals (including unions, employment agencies, advertisements, Department of Employment Development) of the content of the anti- discrimination clause.
 - (3) Personally, or through his representative, Contractor shall, through negotiations with unions with whom he has agreements, attempt to develop an agreement, which will:
 - (a) Spell out responsibilities for non-discrimination in hiring, referral, upgrading and training.
 - (b) Otherwise implement an affirmative anti-discrimination program in terms of the unions' specific areas of skill and geography, to the end that qualified minority workers will be available and given equal opportunity for employment.
 - (4) Contractor shall notify contracting agency of opposition to the anti-discrimination clause by individuals, firms or organizations during the period of its prequalification.
- h. Contractor shall include the provisions of the foregoing paragraphs (a) through (g) in every first tier subcontract, so that such provisions will be binding upon each such subcontractor.
- 8. Additional Division of Labor Standards Enforcement Requirements
- 8.1 On each job site that is subject to compliance monitoring and enforcement by the Department of Industrial Relations, the prime contractor is required to post job site notices prescribed by regulation (See 8 Calif. Code Reg. §16451(d).
- 8.2 All contractors and subcontractors must furnish electronic certified payroll records directly to the Labor Commissioner (AKA Division of Labor Standards Enforcement) in compliance with California Labor Code Section 1776, with exceptions as specified in Labor Code section 1771.4(a)(4).

Standard Specifications

DIVISION 01 - GENERAL REQUIREMENTS TABLE OF CONTENTS

Division 1	 General Requirements
01090	Reference Standards
01200	Project Meetings
01300	Submittals
01310	Construction Schedule
01400	Quality Control
01500	Temporary Facilities
01540	Security and Protection
01590	Temporary General Services
01700	Project Closeout

SECTION 01090 REFERENCE STANDARDS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- Quality assurance.
- B. Schedule of references.

1.02 RELATED SECTIONS

A. Standards as noted in individual Sections of these Specifications.

1.03 QUALITY ASSURANCE

Contractor shall:

- A. For products or workmanship specified by association, trade, or Federal Standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Conform to reference standard by date of issue current on date of Contract Documents, unless specifically noted.
- Obtain copies of standards when required by Contract Documents.
- D. Maintain a copy of the applicable reference standards at jobsite during submittals, planning, and progress of the specified work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from the City before proceeding.
- F. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.04 SCHEDULE OF REFERENCES

AA Aluminum Association

818 Connecticut Avenue, N.W. Washington, DC 20006

AABC Associated Air Balance Council

1000 Vermont Avenue, N.W. Washington, DC 20005

AASHTO American Association of State Highway and Transportation Officials

444 North Capitol Street, N.W.

Washington, DC 20001

ACI American Concrete Institute

Box 19150

Standard Specifications Page 3 of 36

Reford Station Detroit, MI 48219

Αl Asphalt Institute

Asphalt Institute Building College Park, MD 20740

American Institute of Architects **AIA**

1735 New York Avenue, N.W.

Washington, DC 20006

American Institute of Steel Construction **AICS**

400 North Michigan Avenue

Eighth Floor Chicago, IL 60611

American Iron and Steel Institute AISI

1000 16th Street, N.W. Washington, DC 20036

American Institute of Timber Construction **AITC**

333 W. Hampden Avenue Englewood, CO 80110

American National Standards Institute **ANSI**

1430 Broadway New York, NY 10018

American Plywood Association **APA**

Box 11700

Tacoma, WA 98411

Air-Conditioning and Refrigeration Institute ARI

1501 Wilson Boulevard Arlington, VA 22209

American Society of Heating, Refrigerating and Air Conditioning Engineers **ASHRAE**

1791 Tullie Circle, N.E. Atlanta, GA 30329

American Society for Testing and Materials **ASME**

1916 Race Street Philadelphia, PA 19103

American Wood-Preservers' Association **AWPA**

7735 Old Georgetown Road Bethesda, MD 20014

American Welding Society **AWS**

550 LeJeune Road, N.W.

Miami, FL 33135

American Water Works Association AWWA

666 West Quincy Avenue Denver, CO 80235

CLFMI Chain Link Fence Manufacturers Institute

1101 Connecticut Avenue, N.W.

Washington, DC 20036

CRSI Concrete Reinforcing Steel Institute

933 Plum Grove Road Schaumberg, IL 60195

DHI Door and Hardware Institute

7711 Old Springhouse Road

McLean, VA 22102

FGMA Flat Glass marketing Association

3310 Harrison

White Lakes Professional Building

Topeka, KS 66611

FM Factory Mutual System

1151 Boston-Providence Turnpike

P.O. Box 688

Norwood, MA 01062

FS Federal Specification

General Services Administration

Specifications and Consumer Information

Distribution Section (WFSIS) Washington Navy Yard, Bldg. 197

Washington, DC 20407

GA Gypsum Association

1603 Orrington Avenue Evanston, IL 60201

ICBO International Conference of Building Officials

5360 S. Workman Mill Road

Whittier, CA 90601

IEEE Institute of Electrical and Electronics Engineers

345 East 47th Street New York, NY 10017

MFMA Maple Flooring Manufacturers Association

60 Rivere Drive Northbrook IL 60062

MIL Military Specification

Naval Publications and Forms Center

5801 Tabor Avenue Philadelphia, PA 19120

ML/SFA Metal Lath/Steel Framing Association

221 North LaSalle Street Chicago, IL 60601

NCMA National Concrete Masonry Association

P.O. Box 781 Herndon, VA 22070 NEBB National Environmental Balancing Bureau

8224 Old Courthouse Road

Vienna, VA 22180

NEMA National Electrical Manufacturers' Association

2101 "L" Street, N.W. Washington, DC 20037

NFPA National Fire Protection Association

Battery March Park Quincy, MA 02269

PCA Portland Cement Association

5420 Old Orchard Road

Skokie, IL 60077

PS Product Standard

U.S. Department of Commerce Washington, DC 20203

RIS Redwood Inspection Service

One Lombard Street San Francisco, CA 94111

RCSHSB Red Cedar Shingle and Handsplit Shake Bureau

515 116th Avenue Bellevue, WA 98004

SDI Steel Deck Institute

P.O. Box 9506 Canton, OH 44711

SDI Steel Door Institute

712 Lakewood Center North 14600 Detroit Avenue Cleveland, OH 44107

SIGMA Sealed Insulating Glass Manufacturers Association

111 East Wacker Drive Chicago, IL 60601

SMACNA Sheet Metal and Air Conditioning Contractor's National Association

8224 Old Court House Road

Vienna, VA 22180

TCA Tile Council of America, Inc.

Box 326

Princeton, NJ 08540

UL Underwriters' Laboratories Inc.

333 Pfingston Road Northbrook, IL 60062

WIC Woodwork Institute of California

1331 T Street

Sacramento, CA 95807

WCLIB West Coast Lumber Inspection Bureau

6980 S.W. Varns Road

Box 23145

Portland, OR 97223

WWPA

Western Wood Products Association

1500 Yeon Building Portland, OR 97204

1.05 SCHEDULE OF GOVERNING CODES

- A. See Drawings for a list of applicable codes and regulations which shall govern, except where otherwise indicated.
- B. Refer to individual Specification Sections for additional codes and regulations which shall apply to the individual Work of said Sections.

PART 2 - PRODUCTS

Not Used.

PART 3 - EXECUTION

A. All work shall be done in accordance with governing codes. A copy of each shall be kept at the jobsite at all times.

SECTION 01200 PROJECT MEETINGS

1.01 GENERAL

A. Meetings:

- 1. Project Manager will schedule regular project meetings as required. Contractor shall attend with appropriate staff, subcontractors, and suppliers.
- Meetings shall include, but not be limited to:
 - a. Pre-construction conference
 - b. Work progress.
 - c. Schedule and coordination.
 - d. Payment review.
 - e. Changes in the work.
 - f. Pre-installation.
- B. Administration: Project Manager will prepare agenda, conduct meetings, and distribute recorded proceedings and decisions to meeting participants and affected persons.
- C. Project Manager and ARCHITECT: Will attend each meeting.
- D. Space and Facilities: By Contractor at job site except Pre-construction Conference by Project Manager.

1.02 PRE-CONSTRUCTION CONFERENCE

A. With Contractor and subcontractors, within 10 days after Notice to Proceed. Time as determined by Project Manager.

1.03 PROGRESS MEETING

- A. General: Not less than once a month on a regular, scheduled basis.
- B. Attendance: Project Manager, Owner, ARCHITECT, Contractor, and subcontractors, subsubcontractors, suppliers and others as required by the Project Manager.

1.04 GUARANTEE, BONDS, SERVICE AND MAINTENANCE CONTRACTS MEETING

- A. General: Eleven months following date of final acceptance, meet to review guarantees, bonds, and service and maintenance contracts for materials and equipment.
- B. Action: Repair or replace defective work. Extend service and maintenance contracts as desired.
- C. Attendance: Project Manager, ARCHITECT, ARCHITECT's professional consultants as appropriate, Contractor, subcontractors, suppliers and others as appropriate to the agenda.

1.05 SPECIAL

Called by Project Manager as warranted by developed conditions.

SECTION 01300

SUBMITTALS

.....

1.01 SECTION INCLUDES

- Submittal procedures.
- B. Construction progress schedules.
- C. Schedule of Values.
- D. Submittals and Shop Drawings.
- E. Product Data.
- F. Samples.
- G. Mock-Ups.
- H. Manufacturers' instructions.
- Manufacturers' certificates.

1.02 RELATED SECTIONS

- A. Section 1039 Coordination and Meetings
- B. Section 01310 Construction Schedule
- C. Section 01400 Quality Control: Manufacturers' field services and reports.
- D. Section 01600 Material and Equipment / Substitutions.
- E. Section 01700 Contract Closeout: Contract warranty and manufacturer's certificates closeout submittals.

1.03 SUBMITTAL PROCEDURES

A. Timing:

- Make submittals within the times specified herein. Do not submit all at one time. Submit in accordance with the sequence of procurement, fabrication and construction.
- Make submittals far enough in advance of scheduled dates of installation to allow the time required for reviews, for securing necessary approvals, for possible revision and resubmittal, and for placing orders and securing delivery.

B. Identification:

- 1. Identify each submittal and resubmittal with the following information:
 - a. Project name and address as they appear on the Contract Documents.

Standard Specifications Page 9 of 36

- b. Contract name and number.
- c. Contractor's name and address.
- d. Date of submission.
- e. Numbering System: Submittals shall be identified by specification section (i.e., 02810-001, 07210-001, 11191-001, etc.) Any resubmittals shall be numbered sequentially according to the original submittal section, followed by the subscript ".1, .2, .3, etc. submittal number (i.e., 001.1, 001.2, etc.). Submittals and resubmittals shall be kept intact with the original number. Do not add new drawing or information outside the scope of the original submittal, unless specifically requested. Do not assign a new number for a resubmittal.
- f. Reference: List Specification Section number and product reference as a cross-reference for each submittal.
- Identify each submittal with the following additional identification:
 - a. Contractor's stamp with initials or signature, certifying to review of submittal, compliance with Contract Documents, and coordination with other impacted work, and verification of field measurements. The architect will return any submittal not bearing this stamp without being reviewed.
 - b. Drawing and Specifications SECTION numbers to which the submittal applies.
 - c. Subcontractor's or suppliers name and address.
 - d. Name and telephone number of the individual to contact for additional information regarding the submittal.
 - e. Whether it is an original or a resubmittal.

C. Coordination of Submittals:

- General: Prior to submittal for the Architect's or consultant's review, as applicable, fully coordinate material as follows:
 - Determine and verify field dimensions and conditions, materials, catalog numbers, and similar data.
 - b. Coordinate shop drawing submittals with previously issued Addenda and Information Bulletins.
 - c. Coordinate with the various types of Work, and public agencies involved.
 - Secure necessary approvals from public agencies and others and signify by stamp, or other means, that approvals have been secured.
 - e. Unless otherwise specifically permitted by the Architect, make submittals in groups containing all associated items.
- Completeness: Submittals shall be complete; partial submittals will be rejected for not complying with the Contract Documents.
- D. Coordinate preparation and processing submittals with performance of construction activities.

- 1. Make submittals in groups containing associate items to ensure that information is available for checking each item when received.
 - Partial submittals may be rejected as not complying with requirements of Contract documents and Contractor shall be liable for any resulting delays.
- 2. Requests for deviation from Contract Documents shall be submitted for consideration before submittal of affected items. Only deviations, which have been previously accepted in writing, shall be included in submittals.
- Place permanent label or title block on each submittal for identification. Indicate name or entity preparing each submittal in label or title block. See Paragraph 1.01.C herein for further information requirements on each submittal label or title block.
 - Provide space on label or beside title block to record Contractor's and Architect's review and approval markings and action taken.

F. Contractor's Review:

- Review submittals for accuracy, completeness, and conformity with Contract Documents.
 - a. Submittal shall be construed as stipulating Contractor has thoroughly and completely reviewed, and coordinated data.
 - Submittals that indicate less than Contractor's full compliance will be returned without action.
 - Delays caused by failure to comply will not be acceptable basis for extension of Completion Time.
- G. Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for resubmittals.
- Package each submittal appropriately for transmittal and handling.
- I. Project Architect's Review:
 - 1. Submittals are reviewed for general conformance with design concept and general compliance with information given in Contract Documents only.
 - 2. Review of separate item shall not indicate acceptance of assembly of which item is part.
- J. Review shall not relieve Contractor from responsibility for errors or deviations from requirements of Contract Documents.
- K. Submittal Log: Maintain accurate submittal log for duration of Contract. Indicate current status of all submittals at all times. Make submittal log available for the Project Manager's review upon request.

L. Resubmittals:

- Subject to same terms and conditions as original submittal.
- 2. Project Architect will accept not more than one resubmittal.

- a. Should additional resubmittals be required, Contractor shall reimburse Owner for Project Architect's account for time spent in processing additional resubmittals at rate of 2.5 times rate of Direct Personnel Expense (DPE). Direct Personnel Expense is defined as direct salaries of Project Architect's personnel engaged on Project and portion of costs of mandatory, and customary contributions and benefits related thereto, including employment taxes and other statutory employee benefits, insurance, sick leave, holidays, vacations, pensions, and similar contributions and benefits.
- Claims will not be considered for Contractor's additional time or expense associated with resubmittals.

M. Revisions:

- Make only those revisions required or accepted by Project Architect.
- 2. Identify all changes made since previous submittal.
- N. Distribute copies of reviewed submittals to concerned parties. Instruct parties to promptly report any inability to comply with provisions.
- O. Review or approval of any of the Contractor's submittals shall not relieve the Contractor of any of his/her responsibilities under the Contract for the successful completion of the Work in conformity with the requirements of the Drawings and Specifications. Any such review or approval shall not serve to waive any of the requirements of the Drawings or Specifications, nor to relieve the Contractor of any obligation thereunder. Defective, sub-standard, or non-complying work, materials, or equipment may be rejected, notwithstanding their previous review and/or approval.
- P. Special Submittals: In addition to submittals required by the Contract Documents, Contractor shall submit the following:
 - Submittals required by governmental authorities and agencies of jurisdiction, as applicable.
- Q. Substitutions: Refer to Section 01600.

1.04 CONSTRUCTION PROGRESS SCHEDULES

A. Refer to Section 01310.

1.05 SCHEDULE OF VALUES

- A. Submit a typed schedule on AIA Form G703 or other approved 8-1/2" x 11" format; Contractor's standard media-driven printout will be considered on request.
- B. Format: Table of Contents of Volume 2 Specifications, with modifications as may be directed by Owner; identify each line item with number and title of major Specification sections.
- C. Include in each line item a directly proportional amount of contractor general conditions, overhead, and profit.
- D. Revise schedule to list change orders for each Application for Payment.

A. General:

- Submit only as required by the various Specification SECTIONS. Do not submit shop drawings, product data, samples or other submittals, unless specifically required.
- Submit in accordance with the accepted submittal schedule. Send copies of transmittals to the Owner.
- 3. Submit in the manner and quantities specified hereinafter.
 - 4. Allow a minimum of 15 working days for processing by the Architect and his consultants, as applicable. Some submittals may require more processing time based upon consultant's input and the complexity of the submittal. If certain submittals are critical, they should be so identified at time of submission. If a specific submittal cannot be reviewed and returned within 15 working days, the Architect will develop with the Contractor a timely "turn-around" that will not impact the construction schedule.

B. Shop Drawings:

- Submit in the quantity required to be returned, together with 2 additional copies of black-line or blue-line prints.
- The Architect or his consultants, as applicable, will review the Shop Drawings; mark the drawings with required revisions; stamp the drawings and indicate "No Exceptions Noted," "Furnish as Corrected," "Revise and Resubmit," or "Rejected," and return the drawings. "Revise and Resubmit" or "Rejected" stamps shall not be construed by the Contractor as a valid reason for an extension of time.
- 3. Review the returned drawings and take appropriate action as indicated.
 - a. If drawings are marked "Revise and Resubmit," make revisions and indicate them with a "cloud," stamp and date, and resubmit in the same manner and number as for the original submittal.
 - b. If drawings are marked "Rejected," make a new submittal and submit in the same manner and number as for the original submittal.
 - c. If drawings are marked "No Exceptions Noted" or "Furnish as Corrected", print and distribute copies for Owner and Inspector, as well as those required for Contractor and Subcontractors.
- 4. The Architect or his consultants, as applicable, may review at their discretion up to one resubmittal and take action, as appropriate, in the same manner as for the original submittal. If more than one resubmittal is required, any associated costs as a result of additional reviews shall be an extra service of the Architect or his consultants, as applicable, and will be processed as a deductive Change Order in accordance with the GENERAL CONDITIONS and SUPPLEMENTARY CONDITIONS.
- 5. As with the original submittal, review the returned drawings and take appropriate action as indicated. As specified hereinabove, resubmit and revise until final action by the Architect or his consultants, as applicable. Final action is signified by the markings "No Exceptions Noted," or "Furnish as Corrected," on the returned drawings.

- 6. Following final action by the Architect or his consultants, as applicable, the Contractor shall make copies and distribute as required for accomplishment and inspection of the indicated Work.
- 7. Only those Shop Drawings which bear stamps showing final review of the Contractor, Architect, or the Architect's consultants, as applicable, shall be used.
- Reproduction and Mailing Costs: The Contractor shall pay the reproduction and mailing costs of reproducibles and all prints.
- Coordination drawings are a special type of Shop Drawing that show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or function as intended.
 - a. Preparation of coordination Drawings is specified in Section 01040 "Project Coordination" and may include components previously shown in detail on Shop Drawings or Product Data.
 - b. Submit coordination Drawings for integration of different construction elements. Show sequences and relationships of separate components to avoid conflicts in use of space.

C. Product Data:

- 1. Submit in the quantity required to be returned, together with two additional copies each of brochures, catalog cuts, and similar material.
- Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, rough-in diagrams and templates, wiring diagrams and performance curves. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawings."
 - Submit number of copies which Contractor requires, plus four copies which will be retained.
 - b. Mark each copy to show applicable choices and options. Where printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:
 - 1. Manufacturer's printed recommendations
 - Compliance with recognized trade association standards
 - Compliance with recognized testing agency standards
 - Application of testing agency labels and seals
 - 5. Notation of dimensions verified by field measurement
 - 6. Notation of coordination requirements
 - c. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
- 3. Review and processing of Product Data shall be the same as that for Shop Drawings.

Standard Specifications Page 14 of 36

D. Samples:

- 1. Submit in the size specified in the individual Specification SECTIONS, and in the quantity required to be returned to the Contractor, together with two additional Samples, which will be retained by the Architect or his consultants, as applicable.
- 2. Ship samples to the Architect's office, carriage prepaid.
- Submit samples to illustrate functional and aesthetic characteristics of Product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
- Preliminary Submittals:
 - a. Unless precise color, pattern, and texture or similar characteristics are specifically described, submit full set of choices for material or product.
 - b. Preliminary submittals will be reviewed and returned with Project Architect's mark indicating selection and other action.
 - c. Architect reserves right not to make individual determination or selections until all samples of all materials are submitted.
 - d. Submit samples of all selected colors, patterns, textures or other similar characteristics as selected by Project Architect.
- Submit number of samples required by Contractor plus three that will be retained.
 - Where variation in color, pattern, texture or other characteristics are inherent in material or product, submit multiple units (not less than 3), that show approximate limits of variations.
 - b. Accepted samples will form standard of comparison for finished Work.
 - c. Defects, and deviations in excess of those in accepted samples, are unacceptable and are subject to rejection of completed Work.
- Include identification on each sample, with full Project information, including:
 - a. Project name and location
 - b. Manufacturer and supplier
 - c. Name, finish, and composition of material
 - d. Location where material is to be used
 - e. Specification Section number.
- 7. Reviewed samples which may be used in the Work are indicated in individual specification sections.
- 8. Field Samples: Provide field samples as required by individual sections. Install samples in locations as directed, completed and finished.
- E. Other Submittals: Submit as specified in the individual Specification Sections.
 - Distribute after review.

- Unless specifically authorized in advance by the Owner, no fabrication or installation of any Product, material, component, or system of the Project shall begin until the specific submittals and shop drawings therefore (and/or other required submittal items, as may be applicable) have been reviewed by the Architect, and returned to the Contractor with indication that no exception is taken, or that the subject Work may be furnished as corrected on the shop drawings.
- The Contractor shall inform each of his/her subcontractors and suppliers of the various requirements found throughout the Specifications concerning the submission of shop drawings and related submittals for review by the Architect.
- Submittals and shop drawings prepared by the Contractor or his/her subcontractors or suppliers for submission to the Architect shall be checked by the Contractor before submission. In particular, the Contractor shall ascertain that the submittals and shop drawings meet all requirements of the Contract Documents and conform to the actual dimensions and conditions at the job site. Contractor shall be fully responsible for observing the need for and making any changes required by the equipment Contractor proposes to supply. If the submittals and shop drawings show variations from Contract Drawings or Specifications, whether because of standard practice or other reasons, the Contractor shall make special mention thereof in his/her letter of transmittal; if no specific mention of such variation is made the Contractor will not be relieved of the responsibility for completing the work in full accordance with the Contract Documents, even though such shop drawings are noted "REVIEWED", "NO EXCEPTIONS TAKEN", or similar notation by the Architect.
- Submittals and shop drawings shall be drawn to scale, shall show all necessary working and final dimensions and such details, sections, plans, and elevations (all properly cross-referenced to the Contract Drawings) as are necessary to clearly delineate arrangements, construction, and connection with other Work; and shall illustrate all Work contiguous with and having a bearing on Work indicated. Submittals and shop drawings shall indicate the Project name, the names of the Contractor and the subcontractor, the name or description of the equipment or articles shown, the manufacturers' names, and the kinds, types, grades, thickness, and finishes of materials or equipment to be installed in the work. Marked up copies of standard or "generic" product data, catalog cuts, manufacturer's drawings, etc., showing non-Project-specific conditions will not be acceptable, unless their specific application to the Project is clearly indicated.
- 6. Manufacturers' brochures shall be acceptable for submittals, provided that they comply with the requirements listed above and with applicable Sections of the Specifications. If manufacturers' brochures are used, they shall clearly and explicitly delineate what is being submitted.
- 7. Timeliness: Submittals and shop drawings shall be submitted in such time as to cause no delay in the orderly progress of Work, layout, or fabrication under the Contract. Proper allowances shall be made for checking by the Architect and such correcting, resubmission and re-checking as may be necessary.
- 8. The review of submittals and shop drawings by the Architect will be general, and shall not relieve the Contractor from his/her sole responsibility for errors or omissions of any sort; nor for proper fitting and construction of the Work; nor for the furnishing of materials or Work required by the Contract Documents but not shown; nor for required quantity of material; nor for correctness of dimensions. Any request by the Architect for change and corrections on shop drawings shall not be construed as an order of extra work under the Contract.

1.07 MOCK-UPS

- A. Provide as required by individual Sections of the Specifications.
- B. Refer also to Section 01400, Quality Control.

1.08 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual Specification Sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, start-up, adjusting, an finish, in quantities specified for Product Data.
- B. Identify conflicts between manufacturers' instructions and Contract Documents.

1.09 MANUFACTURER'S CERTIFICATES

- A. When specified in individual Specification Sections, submit manufacturers' certificate to the Owner for review, in quantities specified for Product Data.
- B. Indicate that material(s) or Product(s) conform to or exceed specified requirements. Submit supporting reference data, affidavits, and certifications, as appropriate.
- C. Certificates may be recent or previous test results on material or Product, but must be acceptable to Owner.

SECTION 01310

CONSTRUCTION SCHEDULE

1.01 SCOPE

- A. The work under this section consists of the planning, scheduling and reporting procedures required in conjunction with the progress of the work. It is the intent that the Contractor shall develop a schedule-demonstrating fulfillment of all contract requirements. The levels of detail and submittal procedures are described hereinafter.
- B. The schedule shall be updated a minimum of once a month at a joint meeting with the Project Manager, General Contractor and required subcontractors.
- C. Development and maintenance of the construction schedule and supplementary information as detailed hereinafter is the responsibility of the Contractor.
- D. The Contractor shall use the accepted schedule at all times in planning, coordinating and performing the work under this contract including all activities of the subcontractors, vendors and suppliers.

1.02 THE COMPLETE PROJECT SCHEDULE

- A. Within 10 working days after receipt of Notice to Proceed, the Contractor shall submit the schedule in accordance with all requirements of this section. The schedule shall reflect the Contractor's approach to scheduling the COMPLETE project, including all submittals; procurement and all required testing and operational requirements called for elsewhere in the documents.
- B. Within 5 working days after receipt of the schedule, the Project Manager will meet with the Contractor for joint review, correction or adjustment of the proposed schedule. Within five (5) working days after the joint review, the Contractor shall if necessary revise and shall resubmit the COMPLETE Schedule to the Project Manager. The resubmission will be reviewed by the Project Manager, and, if found to be as previously agreed upon, will be accepted.
- C. The accepted schedule shall constitute the project work schedule until subsequently revised in accordance with requirements of this section.

1.04 SCHEDULE REQUIREMENTS

- A. The schedule shall show the sequence and interdependence of activities required for complete performance of all items of work under the contract or portion thereof
- B. The Contractor shall submit the following supporting data with the submittal of his original CPM construction schedule:
 - 1. The proposed number of working days per week.
 - 2. The holidays to be observed during the duration of the contract (by day, month and year).
 - 3. The planned number of shifts per day.
 - The number of hours per shift.

- 5. The planned usage of major construction equipment on the site, on a monthly basis.
- 6. The average weekly manpower usage for each trade to be employed on the project.

Any changes to the above information shall be submitted with successive updates and revisions.

C. To the extent that the schedule or any revised schedule shows anything not jointly agreed upon, it shall be deemed to have not been accepted by the Project Manager. Failure to include any element of work required for the performance of this contract shall not excuse the Contractor from completing all work required within any applicable completion date of each phase notwithstanding the Project Manager's acceptance of the schedule.

1.05 ACTIVITY COST DATA

- A. The contractor shall furnish the Project Manager with a cost allocation (schedule of values) totaling to the contract amount, for all items detailed in the schedule. The Project Manager will prepare a Payment Request form this allocation. Once accepted by the Project Manager, the Payment Request form will become the basis for determining the progress payments for the balance of the project and the Contractor must submit his monthly Payment Request based upon progress reported on this form. No payment will be made unless supported by this Payment Request form completed to show monthly progress.
- B. The cost distribution may include cost for delivered equipment and material and the Project Manager will pay for only such items as identified elsewhere in these Contract Documents. All costs represented will include a pro rata distribution for overhead and profit: No separate item shall be shown for overhead and profit.
- C. Where the work of several trades is combined into one activity, the Contractor shall furnish for each such combined activity the cost breakdown of each trade on sheets separate from the network diagram. The sum of the costs for each trade shall equal the total dollar value of each such combined activity.
- D. Revisions to the schedule may require reallocation of costs. Revised activity cost data shall be submitted with revised Schedules as necessary, and a revised Payment Request form will be provided after approval of revised cost allocations.

1.06 PROGRESS REPORTING, UPDATING, AND REVISIONS

- A. On a date mutually agreed upon by the Project Manager and the Contractor, a job site progress meeting will be held each month at which time the schedule will be reviewed and updated. Attendees of this meeting shall include the Project Manager, the General Contractor and subcontractors if requested by the Project Manager. The Contractor shall have his copy of the Payment Request form and all other data required by the Contract Documents accurately filled in and completed prior to this meeting. Job progress and the Schedule will be reviewed to verify:
 - 1. Payment due to the Contractor based on percentage complete of items in the submitted Payment Request form.
 - Logic, time and cost data for change order work that is to be incorporated into the schedule or Payment Request form.
 - Status of as-built record drawings and as-built record specifications.

B. The Contractor shall submit a narrative report as a part of his monthly progress review and update in a form agreed upon by the Contractor and the Project Manager.

The narrative report shall include:

- Actual start and finish dates of activities completed during update period since the last accepted revision.
- Explanation of all changes in logic or in the scheduled work sequence, in durations, manpower and equipment.
- A description of the critical path for the remainder of the project.
- An explanation of corrective action taken or proposed.
- C. After each monthly update or revision, the Contractor shall submit to the Project Manager one complete schedule showing all revisions and changes in accordance with the monthly review meeting.
- D. Within five (5) working days after receipt of notice from the Project Manager, the Contractor shall submit a revised Schedule for any of the following reasons:
 - When delay in completion of any activity or group of activities indicates an overrun
 of the contract time or milestone requirement, by 20 working days or ten percent
 (10%) of the remaining duration, whichever is less.
 - Delays in submittals or deliveries or work stoppage are encountered which make replanning or rescheduling of the work necessary.
 - 3. The schedule does not represent the actual prosecution and progress of the project as being performed in the field.
- E. Acceptance of any revised Schedule and all supporting data is contingent upon compliance with all other paragraphs of this section and any other previous agreements or requirements with or by the Project Manager.
- F. The cost of revisions to the Schedule resulting from contract changes shall be included in the cost for the change in work, and shall be based on the complexity of the revisions or contract change, man-hours expended in analyzing the change, and the total cost of the change.

1.07 RESPONSIBILITY FOR COMPLETION

- A. The Contractor agrees that whenever it becomes apparent from the monthly progress review meeting or the schedule that contract completion dates will not be met, he shall take some or all of the following action at no additional cost to the Owner:
 - Increase construction manpower in such quantities and crafts as will bring the progress of the work into conformance with all other requirements of this section.
 - Increase the number of working hours per shift, shifts per working day, workdays
 per week, the amount of construction equipment or any combination of the
 foregoing, to bring the scheduling and progress of the work into conformance with
 all requirements of the Contract Documents.
 - Reschedule the work under this contract in conformance with all other contract requirements to demonstrate completion of the contract work within the contract time.

1.08 ADJUSTMENT OF THE CONTRACT TIME

- A. The contract time will be adjusted only for causes specified in the Contract Documents. In the event the Contractor requests an adjustment of the contract time, he shall furnish such justification, schedule data and supporting evidence as the Project Manager may deem necessary for a determination as to whether or not the Contractor is entitled to an adjustment of time under the provisions of the contract. Submissions of proof based on revised activity logic, durations and costs is obligatory with any request.
- B. The Contractor shall submit each request for an adjustment in the contract time to the Project Manager in accordance with all other requirements of the Contract Documents. The Contractor shall include, as part of each request:
 - Justification for the delay in narrative form.
- 2. A subnetwork showing all CPM logic revisions, duration changes, and cost changes, for the work in question and its relationship to other activities on the Schedule.
 - C. The schedule must clearly display that the Contractor has used, in full, all the float time available for the work involved in this request. Actual delays in activities, which according to the schedule, do not affect the critical path work in the Schedule, will not be the basis for an adjustment to the contract time.
 - D. The Project Manager's determination as to the adjustment of the contract time shall be based upon the latest schedule that has been accepted at the time of the alleged delay and all other relevant information. The Contractor shall submit with every request, an updated Schedule whenever the actual field progress of the work does not conform to the accepted schedule in force at the time of the alleged delay. The data if approved by the Project Manager shall be included in the next monthly updating of the schedule.
 - E. The Project Manager shall, within a reasonable time after receipt of a request for extension of the contract time and supporting evidence, review the facts and shall advise the Contractor, in writing of his decision.
 - F. When the Project Manager has not yet made a final determination as to the adjustment of the contract time, and the parties are unable to agree as to the amount of the adjustment to be reflected in the Schedule, the Contractor shall reflect that amount of time adjustment in the Schedule as the Project Manager may determine to be appropriate for interim purposes. It is understood and agreed that any such interim determination by the Project Manager shall not be binding and shall be made only for the purpose of continuing to schedule the work until such time as the Project Manager has made a final determination as to any adjustment of the contract time. The Contractor shall revise the Schedule prepared thereafter in accordance with the final decision.

SECTION 01400 QUALITY CONTROL

PART 1 - GENERAL

1.01 SECTION INCLUDES

- Quality assurance and control of installation.
- B. References.
- C. Field samples.
- D. Mock-ups.
- E. Inspection Services.
- F. Manufacturer's field services and reports.

1.02 RELATED SECTIONS

- A. Section 01090 Reference Standards.
- B. Section 01300 Submittals.
- C. Section 01410 Testing Laboratory Services.
- D. Section 01600 Material and Equipment / Substitutions: Requirements for material and product quality.

1.03 QUALITY ASSURANCE/CONTROL OF INSTALLATION

Contractor shall:

- Monitor quality control over sub-contractors, suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce Work of highest quality.
- B. Comply fully with manufacturer's instructions, including each step in sequence.
- Should manufacturers instructions conflict with Contract Documents, request clarification from the Architect before proceeding.
- D. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- Perform work by persons qualified to produce workmanship of specified quality.
- F. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

1.04 REFERENCES

- Conform to reference standard by date of issue current on date of Contract Documents.
- B. Contractor shall obtain copies of standards when required by Contract Documents.
- C. Should specified reference standards conflict with Contract Documents, Contractor shall request clarification from Architect before proceeding.
- D. The contractual relationship of the parties to the Contract shall not be altered from the Contract Documents by mention or inference otherwise in any reference document.

1.05 FIELD SAMPLES

- Contractor shall install field samples at the site as required by individual specification Section for review.
- Acceptable samples represent the minimum required quality level for the Work.
- C. Where field sample is specified in individual Sections to be removed, clear area after field sample has been accepted by Architect.

1.06 MOCK-UPS

- A. Contractor shall assemble specified items, complete, with specified attachment and anchorage devices, seals, and finishes, as applicable.
- B. Where mock-up is specified in individual Sections to be removed, Contractor shall clear the area after the mock-up has been accepted by Architect.

1.07 INSPECTION SERVICES

- A. The City will provide services of a person or persons to perform inspection of the Project. Contractor shall:
 - Notify City at least 48 hours prior to expected time for operations requiring specific inspection.
 - Make arrangements with City's inspector(s) and pay for additional samples and tests required for Contractor's use.

1.08 MANUFACTURERS' FIELD SERVICES AND REPORTS

Contractor shall:

- A. When specified in individual Specification Sections, require material or Product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust, and balance of equipment and as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Project Manager 30 days in advance of required observations. The observer is subject to approval of City.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.
- D Submit report in duplicate within 30 days of observation to Project Manager for review.

SECTION 01500 TEMPORARY FACILITIES

1.01 GENERAL

- A. Provide temporary facilities as shown or specified and as required to complete the work per Contract Documents.
- B. Providing temporary facilities is the Contractor's sole responsibility, and is not limited to the minimums established by the requirements hereof. Except as otherwise indicated, the use of alternative temporary facilities equivalent to those specified is the Contractor's option, subject to the Project Manager's or the ARCHITECT's acceptance. Temporary construction facilities are defined to exclude tools and self-contained construction machines and equipment.
- C. The types of temporary construction facilities as may be required for the project include:
 - Construction water distribution.
 - Dewatering facilities and drains.
 - Temporary enclosure.
 - 4 Temporary heat
 - Ventilation and humidity control
 - Construction aids and miscellaneous facilities.
 - Temporary power distribution.
 - 8. Temporary lighting.

1.02 QUALITY ASSURANCE

- Regulations: Comply with governing regulations for the installation and use of temporary construction facilities, including health and safety regulations.
- B. Standards: Comply with the "Manual of Accident Prevention in Construction" by AGC (AGC Safety Manual) and with NFPA Code 241 "Building Construction and Demolition Operations," and with ANSI AIO-Series standards "Safety Requirements for Construction and Demolition" and State of California Department of Indus-trial Relations, Division Occupational Safety and Health CAC Title 8.

1.03 SUBMITTALS

A. General: Submit copies of whatever reports of inspections, tests, gauge readings and similar data and copies of permits and certificates have been secured for the operation of temporary construction facilities, including those used for dewatering, distributing power, lighting and similar operations.

1.04 JOB CONDITIONS

- A. Schedule uses: Provide the temporary construction facilities ready for use at each location, at the time first needed to avoid delays in the performance of the work. Maintain, expand and modify as needed through the progress of work, and do not remove until no longer needed or replaced by authorized use of completed permanent facilities of the project.
- B. Temporary use of permanent facilities: Regardless of previously assigned responsibilities for temporary facilities, the Installer of each permanent facility shall assume responsibility for its operation, maintenance and protection during use as a construction facility prior to the Project Manager's acceptance and assumed operation of the facility.
- C. Conditions of use: Operate, maintain, control and protect temporary construction facilities in a manner which will prevent overloading, hazardous exposures, fire, disease, damage or deterioration of completed work, public nuisances, and similar deleterious effects.

1.05 MATERIALS OF TEMPORARY FACILITIES

- A. General: Provide either new or used materials and equipment, which are in substantially undamaged condition. Provide materials and equipment which are recognized in the construction industry, by compliance with appropriate standards, as being suitable for the intended use in each case, and capable of being maintained properly through the course of anticipated use at the project site.
- B. Water hoses: Where shut-off nozzles are used at the discharge of water hoses, provide heavy-duty abrasion-resistant hoses with a pressure rating greater than the maximum pressure of the water distribution system. Where non-potable water is used, provide adequate warning sign on discharge end of each length of hose.
- C. Heating units: Provide temporary heating unites which have been tested and labeled by UL, FM, FIA or a recognized trade association relate to the fuel being consumed (AGA, NEMA, or other).
- D. Tarpaulins: Waterproof and fire-retardant type, UL labeled with a flame-spread rating of 15 or less. Provide translucent type (Laminated polyethylene with nylon reinforcement, or similar) for temporary enclosure where work is being or will be performed.
- E. Voltage differences: Provide identification warning signs at power outlets which are other than 110-120 volt power. Provide polarized outlets for plug-in type outlets.
- F. Electrical power cords: Use only grounded extension cords; hard-service type where exposed to abrasion and traffic of any kind.
- G. Lamps and light fixtures: Provide general service type incandescent lamps of the wattage indicated or required for adequate illumination. Where exposed to breakage by construction operations, protect lamps with guard cages or tempered glass enclosures. Provide exterior type fixtures where exposed to weather or moisture.

1.06 INSTALLATION OF TEMPORARY FACILITIES

A. General:

Use qualified tradesmen for the installation of temporary construction facilities.
 Locate facilities where they will serve the total project construction work adequately, and result in minimum interference with performance of the work. Relocate, modify and extend facilities as required during the course of the work, to properly accommodate the entire work of the project.

- Changeover from the use of temporary facilities to the use of the permanent facilities at the earliest feasible date in each portion of the building. Do not use permanent water piping for the distribution of non-potable water.
- B. Dewatering facilities and drains: For general temporary drainage and dewatering facilities and operations provide dewatering as required to maintain the site, excavations and the construction free of water.
- C. Temporary Enclosure: Where required, provide temporary enclosure of materials, equipment, work in progress and completed portions of work, so as to afford protection for both the work and employees, from whatever ill effects may result from the work or the weather. Provide temporary enclosure wherever temporary heat is needed and permanent building enclosure is neither yet completed nor adequate for the containment of temporary heat. Coordinate temporary enclosures with ventilating and drying-of-the- work requirements, so as to avoid dangerous conditions and ill effects.

D. Temporary heat:

- At each stage of construction in each portion of the building, restrict the selection of temporary heating facility to a method that is recognized as safe and without ill effect upon the work in place and being installed. Provide temporary heat wherever needed for the proper performance of the work, or for curing or drying of work recently installed, or for the protection of work in place from adverse effects of low temperatures or high relative humidity. Coordinate temporary heating with ventilation requirements to produce the indicated ambient condition required for the work, and at the same time to minimize the consumption of fuel or energy.
- Except as otherwise indicated, maintain a minimum temperature of 45 degrees F
 in permanently enclosed portions of the building, and in areas where finished work
 has been installed.
- E. Temporary ventilation: Ventilate wherever possible through the use of natural ventilation, utilizing temporary heat and temporary enclosures and openings to effect the needed movement of air where necessary. Operate units with filters and baffles to avoid the distribution of dust and to minimize other ill effects upon the work.
- F. Construction aids and miscellaneous facilities: This category of temporary construction facilities includes scaffolding, ramps, runways, staging, temporary stairs, ladders, sheeting, shoring, cross-lot bracing, bridge, guard rails, barriers, closures, platforms, swing stages and temporary partitions. The design, construction and maintenance of these facilities is the sole responsibility of the Contractor. Provide whatever facilities are needed to accommodate the performance of the entire work of the project.

1.07 OPERATIONS AND TERMINATIONS:

- A. Supervision: Enforce strict discipline in the use of temporary facilities. Limit availability of facilities to essential uses.
- B. Maintained operations: Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation and similar facilities on a 24-hour-per-day basis where required to achieve the indicated results in the work, and avoid the possibility of damage to the work and temporary facilities.
- C. Prevent water-filled piping and vessels from freezing, whether temporary or permanent, by either draining or by insulation or heating.
- D. Termination and removal:

- At the time the need has ended for each temporary construction facility, or for a substantial element of the facility, or when it has been replaced by authorized use of a permanent facility, or no later than the time of substantial completion, promptly remove the temporary facility unless requested by the Project Manager to retain it for a longer period of time. Complete the work, which may have been delayed because of interference's with temporary facilities, and restore work which may have been affected by temporary facilities. Repair damaged work, clean exposed surfaces, and replace work that cannot be satisfactorily restored. Except as otherwise indicated, the materials and equipment of temporary facilities remain the property of the contractors.
- 2. At the time of substantial completion clean and renovate permanent facilities, which have been used to provide temporary services during the construction period. Replace significantly worn parts and parts which may have been subjected to unusual operating conditions. Restore facilities to a substantially good-as-new condition in every respect. Replace used facilities that cannot be satisfactorily restored.

SECTION 01540
SECURITY AND PROTECTION

1.01 DESCRIPTION OF REQUIREMENTS

- A. This section of General Requirements specifies minimum requirements of temporary provisions for security and protection not specified elsewhere. The providing of adequate security and protection is Contractor's sole responsibility, and is not limited to minimums established by requirements hereof. Except as otherwise indicated, use of alternative security and protection methods of facilities equivalent to those specified, is Contractor's option. The work of this section is not intended to include required insurance coverage, performance/payment bonds, individual provisions for safe performance of specific work, first aid requirements, general supervision, quality control, damage surveys, prequalification of construction personnel, temporary enclosure of completed work and stored materials, inspection and tests of the work, instructions to Owner's personnel and similar recognized protection/security provisions, which are, nevertheless, specified elsewhere in the Contract Documents, if required.
- B. The types of security and protection facilities and services required for project (entire project not just work of contract) include but are not necessarily limited to the following:
 - 1. Temporary fire protection.
 - Barricades, warning signs, lights.
 - 3. Barrier fence enclosure.
 - Security enclosure and lockup of work.
 - 5. Environmental protection. Coordinate permits with California Department of Fish and Game prior to commencing with the work when applicable.
- C. Coordinate with Owner to minimize conflict, and to facilitate Owner's operations. Coordinate with owner for a security plan, which will include ingress and egress, identification, protection of staff, materials and tools.

1.02 QUALITY ASSURANCE

- A. Regulations: Comply with governing regulations for installation and operation of security and protection facilities, including rules and recommendations of fire departments, police rescue squads, watchman services and similar local organizations and companies.
- B. Standards: Comply with NFPA Code 241 "Building Construction and Demolition Operations."
 - A. Responsibilities: The assignment of responsibilities for security and protection such as installation, maintenance and operation, is Contractor's obligation; refer to "Guidelines on Bid Conditions for Temporary Job Utilities and Services," by AGC and the Association of Specialty Contractors for industry recommendations.

1.03 JOB CONDITIONS:

A. Scheduled uses: Provide security and protection at times first needed at site; and maintain, expand and modify facilities as needed throughout construction period.

- B. Temporary use of permanent facilities: The Installer of each permanent facility shall be required to assume responsibility for its operation, maintenance and protection during use (if any) as a temporary security or protection facility, prior to Owner's acceptance and assumed operation of facility.
- Conditions of use: Use security and protection facilities and services in a safe, sanitary, lawful, and publicly acceptable manner, which will not interfere unduly with performance of the work nor result in other deleterious effect.

1.04 MATERIALS OF SECURITY AND PROTECTION FACILITIES

- A. General: Provide either new or used materials and equipment, which are in substantially undamaged and serviceable condition.
- B. Fire extinguishers: Provide type A fire extinguishers for temporary offices and similar spaces where there is minimal danger of electrical fires or grease-oil-flammable liquid fires.
 Otherwise, provide either type ABC dry chemical extinguishers or a combination of several extinguishers of NFPA-recommended types for exposure in each case.
- C. Plywood: Provide exterior type, prime painted and finish painted. For fences and vision barriers provide minimum 5/8" thick plywood. For safety barriers and similar direct-contact uses, provide minimum 5/8" thick plywood.

1.05 INSTALLATION OF SECURITY/PROTECTION FACILITIES

A. General:

- Use qualified tradesmen for installation of security and protection facilities. Locate facilities to serve total project construction work adequately, and to result in minimum interference with performance of the work. Relocate, modify and extend facilities as required during course of the work, to properly accommodate entire work of the project. Provide and maintain a reasonably neat and uniform appearance in security and protection facilities, acceptable to Project Manager.
- 2. Provide temporary security and protection facilities until time of substantial completion, or for longer periods of time as requested by Project Manager.

B. Temporary fire protection:

General:

- a. During construction period and until time certain protection needs may be fulfilled by permanent facilities, install and maintain whatever types and forms of fire protection temporary facilities may be needed to adequately protect against fire losses which are reasonably predictable and controllable. Except as otherwise indicated or required, comply with the applicable recommendations of NFPA No. 10 "Portable Fire Extinguishers" for each area of each construction activity when combustible materials, flammable liquids and similar exposures to possible fires are present. Locate extinguishers where most convenient and effective for intended purposes. Store combustible materials in recognized fire-safe locations and containers.
- b. The local fire authority shall be consulted regarding temporary fire protection.

- 2. Program: Develop and supervise an overall fire prevention and first-aid fire protection program for personnel at project site. Instruct personnel in methods and procedures of program; post warnings and information, and enforce strict discipline. Review needs with local fire department officials and establish procedures to be followed. Maintain unobstructed access to extinguishers, fire hydrants, temporary fire protection facilities, stairways, and other access routes for fighting fires.
- 3. Temporary water: Where temporary water outlets are available, provide hoses of adequate length to reach construction areas associated therewith. Hang hoses with warning sign, to effect that it is for fire protection and is not to be removed. Match hose sizes with outlet sizes, and equip with suitable nozzles.
- C. Permanent fire protection: not applicable
- D. Barricades, warning signs and lights: Comply with recognized standards and code requirements for erection of substantial and structurally adequate barricades where needed to prevent accidents and losses. Provide lighting where appropriate and needed for recognition of facility, including flashing red lights where appropriate.
- E. Enclosure fence: Installed by others. (Contractor will be responsible for any damage to and replacement of temporary fencing.)
- F. Security enclosure and lockup:
 - 1. General: Install substantial and durable temporary enclosure of partially completed areas of construction, with locking entrances, adequate to prevent unauthorized entrance, vandalism, theft, and similar deleterious effects and violations of project security. It is recognized that enclosure fence around construction site does not provide adequate security against certain exposure to loss by theft and vandalism.
 - Storage: Where materials and equipment must be temporarily stored, prior to and during construction, and are of substantial value or attractive for possible theft, provide secure lockup and enforce strict discipline in connection with timing of installation and release of materials, so that opportunity for theft and vandalism is minimized.
- G. Environmental protection: Provide protection facilities, operate temporary facilities, conduct construction activities, and enforce strict discipline for personnel at project site in ways and by methods which comply with environmental protection regulations, and which minimize the possibility that air, waterways and subsoil might be contaminated or polluted, or that other undesirable and deleterious effects might result from performance of the work at project site. Avoid use of tools and equipment, which produce harmful noise; and restrict use of noise-making tools and equipment to hours or use which will minimize noise near project site.

1.06 TERMINATION AND REMOVAL

Maintain protection and security facilities and services in good operating condition through time of use and until completion and use of permanent work makes each temporary service unnecessary, or until Owner's occupancy has replaced the need for service or until its discontinuation has been otherwise authorized. Remove each facility promptly after its use has been terminated. Complete or restore permanent work that may have been delayed or otherwise affected by temporary facility. Replace work, which cannot be satisfactorily restored. Except as otherwise indicated materials and equipment of temporary security and protection facilities remain property of contractors.

SECTION 01590

TEMPORARY GENERAL SERVICES

1.01 DESCRIPTION OF REQUIREMENTS

- A. Provide temporary services and facilities which will enable construction processes, and will accommodate other necessary activities at the project site. Providing adequate general services is the Contractor's sole responsibility, and is not limited to the minimums established by the requirements hereof. Except as otherwise indicated, the use of alternative general services equivalent to those specified is the Contractor's option, subject to the Project Manager's acceptance. Temporary general services exclude inspection and testing services, surveys, photographs, security provisions, protection, safety, final cleaning, startup of systems, instructions to Owner's personnel and other services which are recognized to be similar to the work of this section but are specified in other sections hereof, if required.
- B. The types of temporary general services required for the project include, but are not necessarily limited to, the following:
 - Sanitary facilities.
 - Collection/disposal of waste materials.
 - Miscellaneous general services.

1.02 QUALITY ASSURANCE

- A. Regulations: Comply with governing regulations for the installation and use of general service facilities, including health and safety regulations.
- B. Standards: Comply with the "Manual of Accident Prevention in Construction" by AGC (AGC Safety Manual) and with NFPA Code 241 "Building Construction and Demolition Operations."
- C. Responsibilities: Except as otherwise indicated, the assignment of responsibilities for installing facilities and performing general services, and for complying with trade regulations and union jurisdictions associated therewith, is the Contractor's obligation.

1.03 SUBMITTALS

Submit copies of inspection reports, certificates, permits and similar documentation required or issued in connection with general services.

1.04 JOB CONDITIONS

- A. Scheduled uses: Provide temporary general services at the time first needed at the site; and maintain, expand and modify the facilities as needed throughout the construction period.
- B. Conditions of use: Operate, maintain, control and protect general service facilities in a manner which will prevent fire, hazardous exposures, health problems, unsanitary conditions, pollution, contamination, discomfort to users, flooding, freeze-up, interference with the construction work, public nuisances and similar deleterious effects.

1.05 MATERIALS AND EQUIPMENT OF GENERAL SERVICES

- A. General: Provide either new or used materials and equipment for general service facilities, which are in substantially undamaged and serviceable condition. Provide types and qualities, which are recognized in the construction industry as suitable for the intended use in each application.
- B. Drinking water: Potable water approved by local health authorities.
- C. Construction materials: For offices, fabrication shops, storage sheds and similar construction, provide standard manufactured prefabricated or mobile home construction insulated and weather-tight where indicated to be heated or air conditioned; or provide equivalent job-built construction. Equip each unit with locked entrances, operable windows, roofing, adequate foundations for usual loading including wind loads, serviceable finishes of the types indicated, and mechanical/electrical equipment as needed to achieve the ambient conditions indicated.
- D. Self-contained toilet units: Single-occupant, self-contained units of the chemical aerated recirculation type fully enclosed with a glass fiber reinforced polyester shell or similar non-absorbent material, properly vented and maintained in operation.

1.06 INSTALLATION OF GENERAL SERVICE FACILITIES

A. General: Locate facilities where they will serve the total project construction work adequately, and result in minimum interference with performance of the work. Relocate, modify and extend facilities as required during the course of the work, to properly accommodate the entire work of the project.

B. Sanitary facilities:

- General: Sanitary facilities include toilets, wash facilities, and drinking water fixtures. Comply with governing regulations including safety and health codes for the type, number, location, operation, and maintenance of fixtures and facilities, but provide not less than the specified requirements. Install sanitary facilities in available locations which will best serve the needs of personnel at the project site.
- Toilets: Choice of either self-contained toilet units or water/sewer connected temporary toilet installations (or both) is the Contractor's option to the extent permitted by governing regulations.
- Drinking water fixtures: Supply drinking water for construction personnel by either water-system-connected drinking fountains or by containerized tap- dispensers with paper cups (or both) at Contractor's option.
- Collection and disposal of wastes: Establish and enforce a daily system for collecting and disposing of waste materials from construction areas and elsewhere at the project site. Do not hold collected materials at the site for periods of more than 7 days, nor for periods of more than 3 days during hot weather (when daily temperatures can be expected to rise above 80 degrees F). Handle hazardous, dangerous, unsanitary, contaminated, polluting and similar harmful wastes separately from inert materials, by containerizing in an appropriate manner. Dispose of each category of waste material in a lawful manner. Do not bury or burn waste materials on the Owner's property.
- D. Parking: Arrange for temporary surface parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking. Parking areas must be approved by Project Manager due to environmentally sensitive areas (i.e. vernal pools, wetlands)

E. Miscellaneous general services: Include whatever general services may be required, or are found to be necessary, for the accommodation of the work. The items of general service which may be needed include, but are not necessarily limited to, the installation of postal delivery service, parking spaces at the temporary offices, walkways in and around the construction area and personal protection items for employees and visitors.

1.07 OPERATIONS AND TERMINATIONS

- A. Supervision: Enforce strict discipline in the use of general services at the project site. Limit availability of facilities to essential and intended uses, so as to minimize wastes and the possibility of abuses and the resulting unsanitary and hazardous or dangerous conditions. Do not allow temporary offices and similar temporary or permanent spaces to be used as living quarters, or for other unintended occupancies or uses.
- B. Maintenance: Operate and maintain general services in good operating condition through the time of use, and until removal is authorized. Protect from damage by weather.
- C. Termination and removal: When the need has ended for each temporary general service facility, or at the time of substantial completion, promptly remove the facility unless requested by the Project Manager to retain it. Complete or restore permanent work which may have been delayed or otherwise affected by the temporary facility. Replace work which cannot be satisfactorily restored. Except as otherwise indicated, the materials and equipment of temporary general services remain the property of the Contractor. Owner reserves the right to take possession of project identification signs.

END OF SECTION

SECTION 01700
DDG IFOT OLD GOFGUT
PROJECT CLOSEOUT

1.01 DESCRIPTION OF REQUIREMENTS

A. Definitions: Closeout includes the general requirements near the end of the contract time, in preparation for final acceptance, final payment, normal termination of the contract, occupancy by the Owner and similar actions evidencing completion of the work. Specific requirements for individual units of work are specified in the specification sections. The time of closeout is recognized to be directly related to "Substantial Completion," and therefore may be either a single period for the entire work or a series of periods for individual parts of the work which have been certified as substantially complete at different dates.

1.02 PREREQUISITES FOR SUBSTANTIAL COMPLETION

- A. General: Prior to requesting Project Manager's inspection for certification of substantial completion, as required by the General Conditions, complete the following and list known exceptions in request:
 - Submit last Progress Payment Request, with sworn statement showing 100 percent completion of the work, complete with associated releases, consents and supports.
 - 2. Submit statement showing final accounting of changes to the contract price.
 - Advise Project Manager of pending insurance change-over requirements.
 - Submit special guarantees, warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
 - Obtain and submit, operating certificates, final inspection/test certificates, and similar releases enabling Owner's full and unrestricted use of the work and access to services and utilities.
 - Submit record drawings, maintenance manuals, final project photographs, damage or settlement survey, property survey, and similar final record information.
 - 7. Deliver tools, spare parts, extra stocks of materials, and similar physical items to Owner.
 - 8. Complete start-up testing of systems, and instructions of Project Manager's operating/maintenance personnel.
 - Discontinue (or change over) and remove from the project site temporary facilities and services, along with construction tools and facilities, and similar elements.
 - Complete the final cleaning.
 - 11. Touch-up and otherwise repair and restore marred exposed finishes.

B. Inspection procedures: Upon receipt of Contractor's request, Project Manager will either proceed with inspection or advise Contractor of prerequisites for inspection not fulfilled. The number of items to be corrected or completed will be averaged. When the average exceeds four items, the inspection will be stopped and the Contractor advised that the work is not ready for inspection. The Contractor shall then resume the work. Following initial complete inspection, Project Manager will either prepare certificate of substantial completion, or advise Contractor of work which must be performed prior to issuance of certificate; and repeat inspection when requested and assured that work has been substantially completed. Results of completed inspection will form initial "punch-list" for final acceptance.

1.03 PREREQUISITES FOR FINAL ACCEPTANCE

Prior to requesting Project Manager's final inspection for certification of final acceptance and final payment, as required by the General Conditions, complete the following and list known exceptions (if any) in request:

- A. Submit final payment request with final releases and supports not previously submitted and accepted. Include certificates of insurance for products and completed operations.
- B. Submit updated final statement, accounting for additional changes to the contract price.
- C. Submit certified copy of Project Manager's final punch-list of itemized work to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, endorsed and dated by the Project Manager.

1.04 RECORD DOCUMENT SUBMITTALS

- A. General: Specific requirements for record documents are indicated in individual sections of these specifications. The general requirements are indicated in individual sections of these specifications. The general submittal requirements are indicated in section 01.300. Do not use record documents for construction purposes; protect from deterioration and loss in a secure fire-resistive location; provide access to record documents for the Project Manager's inspection during normal working hours.
- B. Record drawings: Refer to Section 01720 Record Documents.
- C. Maintenance manuals: Organize maintenance-and-operating manual information into suitable sets of manageable size, and bind into individual binders properly identified and indexed (thumb-tabbed); Include emergency instructions, spare parts listing, warranties, guarantees, wiring diagrams, recommended "turnaround" cycles, inspection procedures, shop drawings, product data, and similar applicable information. Bind each manual of each set in a heavy-duty 2", 3-ring, vinyl-covered binder, and include pocket folders for folded sheet information. Mark identification on both the front and spine of each binder.

1.05 CLOSEOUT PROCEDURES

A. General operating/maintenance instructions: Arrange for each installer of work requiring continuing maintenance or operation (by the Owner) to meet with the Project Manager's personnel, at the project site, to provide basic instructions needed for proper operation and maintenance of the entire work. Include instructions by manufacturer's representative where installers are not expert in the required procedures. Review maintenance manuals, record documentation, tools, spare parts and materials, lubricants, fuels, identification system, control sequences, hazards, cleaning and similar procedures and facilities. For operational equipment, demonstrate start-up, shutdown, emergency operations, noise and vibration adjustments, safety, economy/efficiency adjustments, and similar operations. Review maintenance and operations in relation with applicable guarantees, warranties, agreements to maintain, bonds, and similar continuing commitments.

1.06 FINAL CLEANING

- A. General: Special cleaning for specific units of work is specified in the sections of specifications.
- B. Provide final cleaning of the work, at the time indicated, consisting of cleaning and grading the work area to its preconstruction condition prior to placing the final erosion control measures.

END OF SECTION

Technical Specifications

The **Building Demolition Project** involves the demolition of all structures located on APNS: 071-136-001 through 071-136-011 (approximately 24,924 square feet), the entire city block south of Solano Street, north of Marin Street, west of Third Street and east of Fourth Street in Corning, California. Contractor shall completely remove all roof, walls, and interior down to the slab. Contractor shall be responsible for removal, hauling and legal disposal of all materials resulting from the demolition of the building.

All rubbish and debris, etc., resulting from the demolition work shall be removed from the property, leaving the project site clean, to the satisfaction of the City. No burning or burying of debris on site shall be allowed. Debris shall be hauled by the Contractor for disposal in accordance with the waste disposal requirements.

Contractor shall leave the project site in a clean condition. Any improved surfaces utilized by the Contractor during the demolition project (i.e. roadways, sidewalks, parking areas) shall be swept clean of dirt and debris on a daily basis and upon completion of the project.

<u>Utilities</u> – Contractor must notify affected utility companies before starting work and comply fully with their requirements. Contractor shall notify Underground Service Alert (USA) prior to any groundwork. The Contractor shall maintain, protect and preserve utility connections on the parcel for the purpose of reconnection to future development.

- Sanitary Sewer. Contractor shall locate and cap sanitary sewer lines at the surface of the slab in compliance with City of Corning requirements. Contractor will cap sewer line(s) at this point and contact the City of Corning for inspection of sewer line cap(s). Contractor shall be responsible for any City application or permit, and related cost relative to the capping of the sewer lines.
- 2. Water. City will have water shut off by City of Corning. Contractor shall be responsible to locate and cap water line(s) where it enters the building and contact the City of Corning for inspection of water line cap(s). Underground pipe(s) shall remain for a future project. All work shall be completed in accordance with City of Corning requirements. Contractor shall be responsible for any City application or permit, and related cost relative to the capping of the water lines.
- Natural Gas: City will have Pacific Gas & Electric Company shut off any gas service and cap of the gas line(s) at the site. Any existing gas meters will be removed by Pacific Gas & Electric Company. Underground gas piping shall remain.
- 4. *Electricity*: City will have Pacific Gas & Electric Company shut off electrical service, remove existing electric meters, and disconnect electrical lines to the building.
- 5. *Telephone and Cable*: City will have AT&T and Charter disconnect the phone lines and cable to the building.

Contractor shall be responsible for providing all utilities necessary for the completion of the work, including obtaining hydrant meter as necessary.

<u>Site Concrete & Asphalt</u>: All sidewalks, paving, and building foundation shall remain in place.

<u>Site Lighting</u>: All existing light poles shall be removed by Contractor. Concrete bases shall remain.

<u>Air Quality</u>: The Contractor shall take steps as necessary to control dust during demolition, debris removal and final site restoration, including contact with the local air quality management district to determine requirements for demolition work and obtaining fugitive dust permit.

<u>Safety</u>: Contractor shall be required to provide and maintain temporary safety fencing and/or barriers around the demolition and debris loading site as may be necessary for public safety, and in order to comply with all applicable safety regulations.

<u>Trip Hazards</u>: Contractor shall remove anything that protrudes above the slab (i.e. rebar), and fill/patch substantial holes in the slab or site paving created during the demolition process with like materials, such that the site contains no trip hazards.

Hazardous Materials:

Asbestos-Containing Material: The building located at 813 4th Street has been found to have asbestos containing materials, see Hazardous Materials Management – Project Summary for a list of materials sampled for each property. All existing asbestos-containing materials must be removed in accordance with the Asbestos Materials Abatement Specification included within these Technical Specifications.

<u>Lead Paint</u>: The buildings located at 811 4th Street, 111/1113 Solano Street and 1158 Marin Street has been found to have lead containing materials, see Hazardous Materials Management – Project Summary for a list of materials sampled for each property. All existing lead materials must be removed in accordance with the Hazardous Materials Management – Lead & Other Hazardous Materials Specification included within these Technical Specifications.

Encroachment Permits: Do not close or obstruct roadways, sidewalks or hydrants. Contractor shall be responsible for any application and cost of said application to obtain the appropriate City of Corning encroachment permits as may be necessary.

<u>Salvage/Recycle</u>: Contractor shall have the right to salvage and/or recycle any portion of the buildings to be demolished or their contents, except for Asbestos or Lead containing materials. Contractor will immediately remove from the project site any materials for salvage or recycle.

No on-site stockpiling or storage of materials will be allowed. Contractor shall assume full liability for those materials removed from the project site for the purpose of salvage or recycle.

HAZARDOUS MATERIALS MANAGEMENT - PROJECT SUMMARY

PART 1 - GENERAL

- 1.1 PROJECT SUMMARY
 - A. This project will include the demolition of four buildings; 811 4th Street, 813 4th Street, 1111/1113 Solano Street, and 1158 Marin Street located in the city of Corning, California.
- 1.2 BUILDINGS & KNOWN ASBESTOS AND LEAD CONTAINING MATERIALS
 - A. 811 4th STREET
 - 1. Asbestos Sampling
 - a. Materials Sampled and Found to Contain Asbestos
 - (1) NONE
 - b. Materials Sampled and Found Not to Contain Asbestos
 - (1) Drywall & Joint Compound
 - (2) Fiberglass Insulation
 - 2. Lead Sampling
 - a. Materials Sampled and Found to Contain Lead
 - (1) Exterior Green Paint
 - b. Materials Sampled and Found Not to Contain Lead
 - (1) Front Office Pink
 - (2) Back Area White
 - (3) Upstairs Kitchen White
 - B. 813 4th STREET
 - 1. Asbestos Sampling
 - a. Materials Sampled and Found to Contain Asbestos
 - (1) Spray Applied Acoustical Ceiling Texture "Popcorn Ceiling"
 - a) 1,300 Square Feet
 - b) Class I Removal Work
 - c) RACM Waste Produced
 - b. Materials Sampled and Found Not to Contain Asbestos
 - (1) NONE
 - 2. Lead Sampling
 - a. Materials Sampled and Found to Contain Lead
 - (1) NONE
 - b. Materials Sampled and Found Not to Contain Lead
 - (1) Interior Area White
 - (2) Interior Area Blue
 - (3) Exterior Area Red

C. 1111/1113 SOLANO STREET

- 1. Asbestos Sampling
 - a. Materials Sampled and Found to Contain Asbestos
 - (1) NONE
 - b. Materials Sampled and Found Not to Contain Asbestos
 - (1) Brown Vinyl Floor Tile, Mastic, Leveler
 - (2) Wall Concrete
 - (3) Leno (As Designated in Survey Assumed to be Linoleum Flooring) Beneath Floor Tile
 - (4) Ceiling Tile
 - (5) Paper Material
 - (6) Drywall & Joint Compound
- 2. Lead Sampling
 - Materials Sampled and Found to Contain Lead
 - (1) North Wall White
 - (2) South Wall White
 - (3) Metal Beam White
 - (4) Wood Beam White
 - b. Materials Sampled and Found Not to Contain Lead
 - (1) East Wall Red

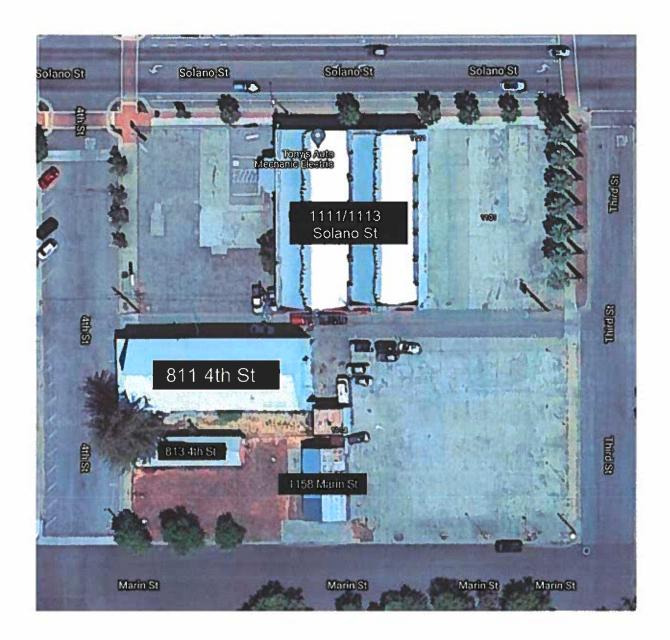
D. 1158 MARIN STREET

- Asbestos Sampling
 - a. Materials Sampled and Found to Contain Asbestos
 - (1) NONE
 - Materials Sampled and Found Not to Contain Asbestos
 - (1) Drywall & Joint Compound
- 2. Lead Sampling

b.

- a. Materials Sampled and Found to Contain Lead
 - (1) Exterior South Wall Red
 - (2) Shed Area Green
 - (3) Shed Area Green
- b. Materials Sampled and Found Not to Contain Lead
 - (1) South Wall White
 - (2) Exterior West Wall White

1.3 SITE MAP



PART 2 - DISCLAIMERS

The summary and specifications for this project were created by Entek Consulting Group, Inc. (Entek) and are based upon the Asbestos and Lead Building Inspection/Survey reports provided to Entek by the City of Corning. These provided reports were created by William Irwin of Alliance Environmental Services, Inc. dated August 25, 2022.

Entek cannot attest to the validity, thoroughness, or completeness of the provided survey reports. It is the responsibility of the contractor to ensure that any materials found not to be sampled for asbestos or lead content either be treated as containing such or are sampled prior to disturbance.

Specifications Created by:

Blake Howes Entek Consulting Group, Inc. CAC #13-5015 CDPH #3315 September 9, 2022

END OF SECTION

ASBESTOS MATERIALS ABATEMENT

PARTI- GENERAL

1.01 DESCRIPTION

A. The safe abatement of asbestos containing materials (ACM) and presumed asbestos containing materials (PACM) as part of the City Block Demolition Project is the primary purpose of these specifications. Four buildings are expected to be impacted during this project, located within the block bounded by 3rd Street, 4th Street, Solano Street, and Marin Street in the City of Corning. The contract provisions are designed to protect the City and their contractors from exposure as a result of work being performed by the Contractor.

1.02 SCOPE OF WORK

A. Work Included - General

- The Contractor shall furnish all labor, materials, equipment, services, testing, employee training, fit tests, medical exams, transportation, insurance, and daily expense to meet the requirements of this specification.
- The Contractor shall obtain all required permits, licenses, registrations, and notifications, and regulatory approvals required by law and City policy.
- All asbestos abatement activities associated with this contract shall be performed between the hours of **7:00 AM to 5:00 PM** unless coordinated with the City's Representative.
- The Contractor shall guard against unnecessary disturbances or damage to sensitive finishes on buildings, building systems, and equipment.
- 5. Any job with more than one class designation shall be performed at the higher standard. For example, a contract let for class II and class III work will be performed at the class II level.

B. Work Included – Specific

 The Contractor is responsible for identifying the exact locations and number of work areas listed below by referring to City supplied project drawings and by working with the City's Representative.

2. Asbestos Abatement

Known asbestos containing material is present in the building located at 813 4th Street. The material is a spray applied acoustical ceiling texture, commonly referred to as "popcorn ceiling". The survey report indicates 1,300 square feet of this material is present. While laboratory analysis indicates <1% asbestos in this material, no confirmatory 400 point count analysis was performed. Therefore, the material must be considered to contain >1% asbestos and will be designated as Class I work, producing regulated asbestos containing material (RACM) which shall be disposed of as an asbestos hazardous waste at an appropriate landfill. Removal of this material shall be performed prior to general building demolition.

1.03 SITE CHARACTERIZATION

A. An asbestos inspection was conducted by Mr. William Irwin, California Certified Asbestos Consultant with Alliance Environmental Services, Inc. Materials found or presumed to contain asbestos at this job site are listed in the table below:

Asbestos Containing Material(s)					
Building System Description	RACM Yes or No	Class I, II, or III	% of Asbestos	Quantity (approx.)	
813 4th Street - Spray Applied Acoustic Ceiling Texture – "Popcorn Ceiling"	YES	20	Assumed >1% Chrysotile	1,300 Sq. Ft.	

- PLM laboratory reports, database information, and statements of verification are available to the Contractor by contacting the City's Representative.
- 2. This specification is based upon the provided hazardous materials survey reports. If any materials are encountered in the course of this project which have not been sampled for asbestos, the material must be assumed to contain asbestos until otherwise determined by laboratory analysis.
- B. Hazardous materials, other than ACM or PACM that have the potential to be disturbed at this job site are listed in the table below:

Other Hazardous Materials at Job Site						
Material Description	Type of Hazard	% of Content	Quantity (approx.)			
Fluorescent Light Bulbs	Mercury	Unknown	See Drawings			
Light Ballasts	PCB's	Unknown	See Drawings			
Light Ballasts	Universal Waste	Unknown	See Drawings			
Mold Contamination	Mold	N/A	Undetermined			
Thermostat Switches	Mercury	Unknown	See Drawings			
Painted Surfaces &	Lead in Paint and	ppm	See Lead & Other			
Ceramic Products	Glaze		Specifications			

 The Contractor shall review non-asbestos hazardous material required protocols with the City's Representative.

1.04 JOB WALK PROTOCOL

A. No special provisions are required on job walk to review hazardous materials, since there are no areas of known contamination on this project.

1.05 ABBREVIATIONS AND DEFINITIONS

- A. Abbreviations
 - 1. ACM: Asbestos Containing Material
 - 2. AHERA: Asbestos Hazard Emergency Response Act
 - 3. CSLB: Contractor's State Licensing Board

- 4. CDPH: California Department of Public Health
- 5. DOP: Dioctyl Phthalate
- 6. DOSH: Division of Occupational Safety and Health (Cal/OSHA)
- 7. ELAP: Environmental Laboratory Accreditation Program
- 8. NEA: Negative Exposure Assessment
- 9. NPE: Negative Pressure Enclosure
- 10. NVLAP: National Voluntary Laboratory Accreditation
- 11. PACM: Presumed Asbestos Containing Material
- RACM: Regulated Asbestos Containing Material (greater than or equal to 1% asbestos and friable)
- 13. TSI: Thermal System Insulation (found on pipes and boiler units)
- B. Definitions: The following definitions are provided for additional clarification to the California Code of Regulations (CCR), Title 8, 1529.
 - ACM and PACM are defined in 8 CCR 1529; which includes friable and nonfriable asbestos. These regulations include the use of worker protection, negative pressure enclosures (NPE), air monitoring, etc.
 - Ambient Air Quality refers to the quality of local air conditions prior to the commencement of asbestos related work.
 - Class I asbestos work involves the removal (abatement) of TSI or Surfacing material when (1) more than one glove bag is used or (2) more than one 60" X 60" waste bag is used.
 - 4. Class II asbestos work involves the removal (abatement) of non-TSI or non-surfacing material or if the work is not repair or maintenance as defined by class III. Examples of Class II work include removal of floor tile, floor mastics, gypsum wallboard with joint compound, roofing and siding shingles, construction mastics, etc.
 - 5. Class III asbestos work involves repair and maintenance of friable ACM/PACM that is either TSI or Surfacing materials, but does not exceed either one glove bag or one 60" x 60" disposal waste bag.
 - 6. Class IV asbestos work refers to contact but no disturbance of ACM/PACM. Class IV work refers to clean-up operations of Class I, II, or III projects. Class IV work does not refer to incidental contact by maintenance workers (see 8 CCR 5208 for custodial/maintenance workers guidelines).
 - 7. Negative Pressure Enclosure (NPE) refers to full containment and minicontainments under negative pressure with HEPA filtered exhaust.

1.06 SUBMITTALS

- A. The submittals listed in 1.06 B must be completed and accepted by the City's Representative prior to the contractor beginning any work.
- B. List of Submittals:
 - 1. References to include three projects of similar scope and size.
 - 2. Notifications to Cal/OSHA, California Air Resources Board (CARB).
 - 3. Permits if applicable (federal, state, local).
 - 4. Current certificates of AHERA Asbestos Training for Workers and Supervisors.
 - 5. Current respiratory fit test records (within past year).
 - 6. Physician's certificates of medical fitness for respiratory use and medical evaluation for asbestos related work (within past year).
 - 7. DOSH Registration for asbestos related work.
 - 8. DOP certificates for all HEPA vacuums and negative air machines, which are required to be tested onsite. Submit after equipment has arrived at the project site and has been tested. Provide information of the company providing the DOP challenge testing of the HEPA filter systems showing proficiency in the testing. Include evidence of the training of personnel conducting the challenge testing.
 - List of HEPA vacuums and negative air machine (mfg. model and serial numbers.
 - 10. Material Safety Data Sheets (for all products used at the job site).
 - List all laboratories used for personal and area air samples.
 - 12. California Contractor's License with ASB or C-22 (asbestos).
 - Waste Disposal Plan including name of disposal site, waste transporter, and waste transporter certification.
 - General liability insurance certificate with Owner named as additional insured.
 - 15. Auto insurance certificate.
 - Workers Compensation Insurance certificate.
 - 17. Written work plan including schedule, emergency plans, route of waste transport from project site to waste bin outside of building.
 - 18. Manufacturer's documentation of 5.0 micron filter that shall be used for filtration of all water from the shower.

1.07 CONTRACTOR QUALIFICATIONS

- A. The contractor performing asbestos abatement work shall be currently licensed as an Asbestos Contractor with the California Contractor's Licensing Board.
- B. The contractor performing asbestos abatement work shall be currently registered for asbestos with the California Department of Industrial Relations, Division of Occupational Safety and Health.
- C. The contractor's personnel performing asbestos abatement work shall meet the following training requirements:
 - Class I and II Asbestos Work: Supervisors and Workers must be AHERA trained and shall have current refresher training certificates for asbestos related work.
 - Class III Asbestos Work: supervisors and Workers shall have received at least 16 hours of asbestos training. Depending upon the work trade such as electricians, plumbers, carpenters, etc., the number of hours of asbestos training may be less than 16 hours, if these trades are not involved in asbestos removal activity. Trade work involving these class of workers may only require about 6 hours of asbestos training for Class III work where they are working in asbestos contaminated work spaces, drilling holes in materials containing asbestos for conduit or pipe installation, attaching to building surfaces conduit, or other minor disturbance to asbestos materials, but no involved in actual removal of asbestos. Removal of small amounts of asbestos such as fireproofing for attachment of hangers for electrical, plumbing or other utilities would require a higher level of training (Class I).
 - Class IV: Supervisor must be AHERA trained. Workers must have a minimum of "asbestos awareness" level training.

1.08 REGULATIONS

- A. The contractor performing asbestos abatement work shall comply with applicable federal, state, local, and City laws and regulations. The list of regulators and regulations, cited below, is not meant to be comprehensive, but to serve as reference for the most commonly used standards:
 - FEDERAL
 - a. EPA
 - 1) 40 CFR, Part 763, Subpart E AHERA
 - b. OSHA
 - 1) 29 CFR 1926.1101 Construction Standard
 - 2) 29 CFR 1910.1001 General Industry Standard
 - 3) 29 CFR 1910.147 Lock Out Tag Out
 - c. NESHAP
 - 1) 40 CFR 61, Subpart M Asbestos Emissions

2) 40 CFR 61, Subpart A

STATE

a. Cal/OSHA

- 1) CCR, Title 8, Section 1529 Construction Standard
- 2) CCR, Title 8, Section 3203 Injury Illness Prevention
- 3) CCR, Title 8, Section 5194 Hazard Communication
- 4) CCR, Title 8, Section 5157 Confined Space
- 5) CCR, Title 8, Section 5208 General Industry Standard
- 6) CCR, Title 8, Section 5144 Respiratory Protection Standard

1.09 NOTIFICATION AND PERMITS

- A. Contractor is responsible for notifying federal, state, local agencies, obtaining all required permits/extensions, and bearing all related costs. Contractor shall provide a copy of all notifications and permits to the City's Representative prior to the start of the work and during the project if additional notifications or permits are obtained.
- B. California Air Resources Board (CARB)
 - 1. Provide ten (10) days notification to CARB for any demolition or renovation job with RACM that exceeds a combined amount of 260 linear feet, 160 square feet or 35 cubic feet. Notification to CARB is required if the contractor chooses to use mechanical means to remove asbestos containing flooring materials and underlying mastic in which case the asbestos materials would be considered RACM and written notification to CARB would be required. Removal of mechanical means of other non-friable materials may create a friable material that would render the material as RACM, thus requiring formal written notification.

C. CAL/OSHA

Only DOSH registered contractors are permitted to perform class I, II, and III work for the City. Contractor trades such as electricians, carpenters, plumbers, etc., who have received Class III asbestos training due to the potential for disturbance of asbestos materials are not required to be registered with Cal/OSHA if they are not removing asbestos materials. Drilling holes or attachments to building surfaces that might contain asbestos (such as gypsum wallboard or plaster systems) for example is not considered asbestos removal. Contractor shall provide written notification to the local Cal/OSHA office 24 hours prior to the start of work.

1.10 CITY CONTACTS

A. City's Representative: Robin Kampmann, City Engineer

Phone: 530-824-7025

PART II - MATERIALS AND EQUIPMENT

2.01 MATERIALS

A. Safety Data Sheets (SDS)

 As specified in the Hazard Communication standard, Contractor shall provide safety data sheets for all products they use on City job sites.

B. Surfactants

 Contractor may use Foster 32-90, Certane 2075, or equal, for amended water applications.

C. Encapsulants

- 1. The following products or their equals will be applied using a brush or an airless sprayer. Contractor shall follow strict manufacturer instructions regarding surface preparation, ambient air retractions, depth of penetration or recommended thickness (dry), and curing time.
 - a. For penetrating & lockdown purposes use Foster 32-60 or Certane 909, or equal.
 - For bridging purposes use Foster 32-32 or Certane 2000, or equal.
 - c. For high temperature applications, e.g., steam pipes, use Foster 84-18 or Certane 1000, or equal.
- Any proposed equal to the products listed above must meet the following criteria: submit product information prior to the start of the job and receive approval by the City's Representative; non-toxic and non-irritating as defined by the Hazardous Substance Control Act; sufficiently tinted to provide contrast with the material being coated; and have a minimum 60 lbs./inch Batelle Standard impact rating.
- 3. All products will be rated UL Class A and have a flame resistance/spread rate less than or equal to 25 as designated by the ASTM code E 162.

D. Polyethylene Bags and Sheeting

- 1. Bags and sheeting used for capturing asbestos waste are required to be (1) six microns thick (mil) and (2) meet the following standards: UL Standard No. 263, ASTM E-84, NFPA Standard 701 & 255; and have a flame resistance/spread rate less than or equal to 25 ASTM (E-162).
- Startex Corp.(Lakeville, MN), North Plastics (Cottage Grove, MN) Bermis Co. (Terre Haute, IN) provide acceptable bags and sheeting. If an equal is proposed, comply with the provisions in 2.1 C 2 above.
- The contractor will ensure all asbestos waste is properly labeled (per Cal EPA, DOT, and Cal/OSHA standards) prior to disposal.

E. Adhesive Removers

- 1. All adhesive removers shall meet the Hazardous Substance Control Act standards for non-toxic and non-irritating properties.
- 2. All adhesive removers shall be (a) non-flammable and (b) contain tess than 1% (by volume) any chlorinated hydrocarbon solvents.
- Whenever possible, adhesive removers shall be mixed into a slurry/paste using diatomaceous earth to control migration through the substrate. This requirement especially applies where there are existing building spaces below the project area.

2.02 EQUIPMENT

- A. All HEPA filtered vacuums and HEPA filtered negative air machines shall pass a leak (challenge) test using Dioctyl Phthalate (DOP) or equivalent method on-site by a firm independent of the contractor before they are allowed to be used on the project.
- B. Tools and equipment shall arrive at the job site free of significant visible debris and dust. No ACM debris shall be allowed to be brought onto the site at any time. The Owner or Owners' Representative reserves the right to reject any equipment brought onsite by the asbestos contractor that is deemed contaminated with suspect asbestos materials from a prior project.
- C. All electric tools and equipment shall be connected to a GFCI when in use.

PART III - EXECUTION

3.01 SAFETY MEETING

- A. In accordance with State and Federal laws, the Contractor is responsible for conditions of the project site, including the safety of all persons and property during the performance of the work. To ensure effective communications in safety matters, the Contractor shall participate and conduct the following meetings. There are three types of required safety meetings; pre-reconstruction, initial, and weekly.
 - Pre-construction safety meetings may include representatives from the following groups: affected building occupants, general contractor, asbestos subcontractors (if applicable), and City Hazardous Materials Representative. The following subjects will be discussed: impact to building occupants, waste disposal, and work related safety programs.
 - On the first day of work, Contractor shall conduct a safety meeting for its employees which alerts them to the specific hazards of the job. The Contractor shall conduct the safety meetings in primary language of its employees.
 - On a weekly basis, Contractor shall conduct a safety meeting with its employees.

3.02 WORK SITE PREPARATION

A. Prior to beginning any on-site work preparation, Contractor shall walk the job area with the City Representative to discuss site characterization, regulated area set-up, access controls, security, and safety issues. The contractor is responsible for providing locks and

- security to the project site to prevent the public from entering the project area during work hours and during off work hours.
- B. Post all regulatory notices, permits, sign in/out roster and air sample results at the primary entrance to the job site.
- C. Contractor, in coordination with the City's Representative, shall ensure all electrical and HVAC equipment servicing the work area is disconnected and locked out. Electrical tools in the work zone shall be connected to a ground-fault circuit interrupter (GFCI).
- D. The contractor shall seal air tight all HVAC supply and return registers and exhaust registers with tape, double layers of plastic and cardboard or plywood inserts as necessary.
- E. Contractor shall ensure all negative air machines and HEPA vacuums are delivered to the site clean and sealed.
- F. Contractor shall ensure all HEPA filtration units are leak tested (DOP) on site. Each piece of equipment shall be tested in compliance with the ANSI Z9.2 Standard (trapping and retaining 99,97% of all particles challenged with 0.3 micron diameter particles).
- G. In order for the City Representative to conduct timely inspections, Contractor is obligated to inform the City Representative when they are ready to be inspected at least four hours prior to the requested inspection.
- H. All Class I, II, and III work shall be conducted within a regulated area per 8 CCR 1529.

3.03 WORK SITE CONTROL

- A. Contractor shall restrict the work areas to authorized, trained and protected personnel; including, the Contractor's employees, City Representatives, and state agency representatives.
- B. At regulated job sites, the Contractor shall use caution tape to demarcate the boundary of the work zone and post two types of warning signs. The first sign is required by 8 CCR 1529:
 - First Sign:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE
CLOTHING ARE REQUIRED IN THIS AREA

Second Sign:

CAUTION ASBESTOS DUST HAZARD AVOID BREATHING DUST

C. All unauthorized personnel are to remain outside the regulated area. Contractor is to call the City's Representative for problem situations.

- D. If inclement weather threatens the job site, Contractor shall take all necessary measures to ensure contaminated debris does not migrate from regulated areas.
- E. If wind speed threatens the job site, Contractor shall erect a wind barrier or suspend operations until the wind is below 15 mph.

3.04 RECORD KEEPING

- A. Contractor shall maintain the following records at the regulated work area:
 - Site Log (sign-in/sign-out for all people entering the containment).
 - 2. Incident Log & Emergency Action Plan.
 - Personal air sampling results including chain of custody forms and laboratory analysis.
 - 4. Results from area samples collected inside and outside the regulated area.
 - Asbestos supervisor and worker training certificates, current respirator fit tests, current medical clearance certificates.
 - All applicable notifications, including, but not limited to CARB and Cal/OSHA and any revised notifications during the course of the project.
- B. The City Representative shall retain all records of samples related to the project and report results in the closeout documentation to be submitted at the end of the project.

3.05 ADMINISTRATIVE CONTROLS

- A. Asbestos work will be performed during normal working hours (Monday-Friday, 7:00 AM to 5:00 PM) unless otherwise coordinated.
- B. Construction work performed in high heat environments require the Contractor to provide sufficient breaks and drinking water to maintain a safe work environment and to reduce the potential for heat stress.
- C. Contractor shall clean the work site before all breaks and at the end of the shift.
- D. During the removal of asbestos an AHERA accredited Supervisor must be on-site at all times.

3.06 ENGINEERING CONTROLS

- A. Negative Pressure Enclosure (NPE)
 - A negative pressure enclosure is required when asbestos containing materials are being removed or disturbed on this project site.
 - 2. There are two types of negative pressure enclosures: full containment and minicontainment. Both containments require proper warning signs in accordance with Cal/OSHA to establish a restricted asbestos regulated area.
 - 3. Full containment requires the contractor to comply with all provisions in CCR, 8, 1529. The following items are provided as a reminder of key elements and is not

meant to be comprehensive: two layers of six-mil polyethylene on floors, two layers of four-mil polyethylene on walls, three stage decontamination unit with shower, sufficient negative pressure to maintain at least -0.020" of water column pressure differential at all times, clear viewing ports, recording manometer, fire extinguishers, and emergency response protocols.

- 4. The minimum negative pressure inside of the construction work area shall be -0.020" water pressure measured with a manometer at the entry. After removal of wall and ceiling systems, the negative pressure within the work area is expected to drop. The contractor shall be prepared to put in place additional negative air units to be turned on to increase the negative pressure if the building finishes are removed in order to raise and maintain the negative pressure to a minimum of -0.020" water pressure. All additional negative air units on standby that will be required to maintain negative pressure shall have passed the challenge test by DOP testing. These additional negative air units are to be tested at the same time as all other HEPA filtered equipment before the start of the project.
- Mini-containments are for Class II or III work. The construction of a mini-containment requires two layers of six mil polyethylene, at least one decontamination chamber attached to the mini-containment, and a HEPA vacuum or small negative pressure unit to maintain negative pressure inside the mini-containment. Comply with all mini-containment requirements as stated in 8 CCR 1529. Mini-enclosures that are manufactured and purchased comprised of greater thickness with re-enforcement of the plastic material may not necessarily require two layers.
- 6. Asbestos related work requiring glove bags to remove asbestos shall comply with the provisions in 8 CCR 1529. The type of glove bag must correspond to the type of activity, e.g., angle glove bags for curved pipe sections, vertical glove bags for vertical pipe, etc. Glove bags must be smoke tested to assure they do not leak. All glove bag work requires at least two people working together as required in Title 8 1529.

B. HEPA Units

 HEPA vacuums, tools, and air filtration equipment must pass the challenge leak test (DOP) on-site prior to use. All units must be clean and dust-free. All vacuum ports and other openings must be sealed when the units arrive on the job site.

C. Wet Methods

 Prior to removing ACM/PACM, the contractor shall adequately wet the material with water that may have an approved surfactant added. Once removed, the waste must be kept wet until it is placed into six-mil asbestos labeled bags. Asbestos debris generated during the project shall remain wetted at all times until the waste debris is placed into sealed waste bags.

3.07 WORKER PROTECTION

A. The following protective measures are required for asbestos related work associated with this project:

Employee Training

- Contractor shall provide information to its employees about asbestos hazards per the Hazard Communication standard per 8 CCR, 5194.
- b. Asbestos abatement workers and supervisors must be trained by an accredited AHERA course provider and shall have current refresher training as an AHERA Worker or AHERA supervisor.
- c. Other health and safety training in addition to asbestos shall be provided in accordance with Title 8, which is specific to the various work being performed on the project site.
- d. Trade workers such as electricians, plumbers, HVAC contractors, carpenters, etc., who will contact and potentially disturb asbestos materials shall have at a minimum Class III training, which at a minimum requires approximately 6 hours of asbestos training for the anticipated type of work for this project. Any removal of asbestos materials will require Class I training, which shall meet the EPA AHERA training requirements.

2. Respiratory Protection

- a. Respiratory protection shall be provided to all Contractor employees where there is the potential for exposure to asbestos at or above the permissible exposure limit. In addition, all work in the attic spaces where there is asbestos containing fireproofing will require workers to wear respirators while inside of the mini-enclosure. Respiratory protection shall be provided at no cost to the Contractor's employees per 8 CCR 1529 and 5144.
- b. Contractor asbestos employees who wear a respirator shall have passed a fit test within the previous year to perform work on the project. All workers required to wear a tight fitting respirator shall be clean shaven and not have any facial hair interfering or contacting the seal of the respirator with the worker's face. Workers who are observed inside of the asbestos contaminated work area with facial hair contacting the respirator seal will be asked to immediately leave the work area and shall not be allowed to return until clean shaven and a new respirator fit test has been provided and the individual passes.

3. Protective Clothing

a. Workers shall be provided with sufficient sets of protective clothing whenever there is potential exposure to asbestos dust at or above the permissible exposure limit. Tyvek, Kleenguard coveralls, or an equal with attached hood and foot coverings are required. The coveralls shall be available at no cost to the Contractor's employees, and state officials. Disposable coveralls shall be replaced or repaired when they rip or tear or become damaged to the point where they are not providing protection to the worker. At no time shall workers performing work in an asbestos contaminated work area leave the containment while wearing the disposable coverall. The coverall shall be removed inside of the containment prior to the worker exiting the enclosure.

Contractor shall provide rubber or latex gloves, rubber boots, eye
protection, ear plugs and hard hats as needed per the California Code of
Regulations, Title 8, Hazard Communication and Personal Protective
Equipment sections.

4. Medical Surveillance

- a. As required by 8 CCR 1529, the asbestos Contractor shall establish a medical surveillance program for all employees who may be exposed to asbestos at or above the permissible exposure limit. This requires an asbestos medical exam in accordance with Title 8 1529.
- Contractor will provide copies of the physician's written opinion for each employee who work with asbestos and found to be able to wear a respirator.
- All asbestos workers and asbestos supervisors shall pass the medical examination, FVC, FEV and chest x-ray examinations prior to working on the project.

3.08 PERSONAL HYGIENE

- A. No employee will be allowed to consume food, tobacco products or beverage in the regulated work area or any part of the building scheduled for asbestos abatement or inplace management operations. No food containers, water bottles, or any food will be allowed inside of the containment while work is performed under asbestos contaminated work conditions.
- B. Contractor shall establish a location outside the work area, which will be designated for employee eating and drinking. Employees must utilize the on-site decontamination facilities prior to entering the designated eating/drinking location. All workers entering the work containment shall wear proper shoes. Tennis shoes are not acceptable.
- C. The clean room shall be sized and equipped to adequately accommodate the work crew. Lighting, heat and electricity shall be provided as necessary for comfort. This space shall not be used for storage of tools, equipment or materials (except as specifically designated), or as office space. Shower room shall contain one or more showers as necessary to adequately accommodate workers. The shower enclosure shall be constructed to ensure against leakage of any kind. In addition, the shower shall be a separate unit from the decontamination unit walls. The shower unit cannot be made from poly. Metal or hard plastic is acceptable.
- D. An adequate supply of soap, shampoo and towels shall be supplied by the Contractor and available at all times. Shower water shall be drained, collected and filtered through a system with at least 5.0 micron particle size collection capability. The shower pan in the shower chamber shall be, at least, 3' x 3' in size. The shower chamber shall be constructed so that no water from the shower can spray out of the chamber, nor any water run down the sides of the poly and miss the pan. The shower chamber dimensions shall be determined by the size of the shower pan but are not to be smaller than 3' wide by 3' long by 6' tall. At least one shower shall be provided for each 10 workers. A minimum of two showers will be required for more than 10 workers.

3.09 AIR MONITORING PROGRAM

- A. Personal Air Samples Contractor Responsibility
 - The asbestos Contractor must presume Class I, II, and III work will exceed the PEL and conduct initial and negative exposure assessments. The air sampling results will not be used to determine if respiratory protection will be required. Respiratory protection will be required during all asbestos abatement activities, regardless of the air sampling results. The air sampling results will be used to assess the effectiveness of engineering control measures.
 - At least 25% of the asbestos workers per work shift shall be evaluated for asbestos assessment on a daily basis by the Contractor using personal air sampling.
 - Daily monitoring may be discontinued for a particular operation when a negative exposure assessment has shown the operation was performed below PEL for three continuous shifts. This exception does not apply when the scope of the job has changed, ACM/PACM has changed or the City Representative feels the work protocol is compromised, e.g., less skilled workers are not performing up to standard.
 - Negative Exposure Assessments (NEA) established outside the City are unacceptable.

3.10 SPECIFIC WORK PROTOCOLS

- A. The specific work protocols are intended as a supplement to the contract provisions. Contractor shall comply with specific work protocols and all other specifications. Where a conflict in specifications exists, the higher standard applies.
 - Asbestos Cement Pipe "Transite" (intact)
 - a. Class II or III
 - b. Non-friable
 - c. Respirator Required
 - d. No NPE
 - e. Work Practices:
 - 1) Disconnect service to the pipe.
 - 2) Mark pipe in lengths of approximately six (6) to ten (10) feet or other reasonable length to handle.
 - Wrap pipe with two (2) separate layers of 6-mil plastic, securely and completely taped.
 - 4) Place plastic underneath pipe and supports to catch falling pieces.
 - 5) Carefully supporting all portions of pipe, break into sections using chain snap cutter or the means of cutting or breaking without creating dust. Power cutters or saws are not acceptable.
 - 2. Asbestos Cement Products "Transite" (siding, shingles, furnace flue, and duct)

- a. Class II or III
- b. Friable and Non-friable
- c. Respirator Required
- d. No NPE, Wet Method
- e. Work Practices:
 - Provide plastic on the horizontal surface below the area of work extending out sufficient to capture material being removed.
 - Remove material in manageable sections and lengths without sizable quantities of materials dropping to the floor or ground using wet methods.
 - Where possible, remove mechanical fasteners without any abrading of transite material.

Gaskets

- a. Class III
- b. Friable
- c. Respirator Required
- d. No NPE
- Gypsum board and joint compound
 - a. Class II or III
 - b. Friable
 - Respirator Required
 - d. NPE, Wet Method, HEPA vacuum
 - e. Work Practices:
 - 1) Remove material in sections manageable without sizable quantities of materials dropping to the floor.
 - Use a power tools to cut material to be removed with a HEPA vacuum attached to the shroud. Hand cutting with a scoring knife shall be permitted as an alternative option. Keep all cuts moistened to minimize dust.
 - Keep debris and dropped waste material to a minimum. Under no circumstances shall debris be left at the end of the workday.
 - 4) Construct mini-containment or attach modified glove bag to wall surfaces; attach materials with taped portion being attached to tape strips applied directly to wall, floor and ceiling surfaces. Allow adequate room for maneuvering of hands within containment.
 - 5) Spray gypsum board to be removed with water and hand cut perimeter of material to be removed with a knife.
 - 6) Allow wetted material to drop into bottom of glove bag.
 - 7) Evacuate air from glove bag and wall cavity using HEPA vacuum; tie off lower section of glove bag prior to spraying wall and ceiling surfaces and cavity with encapsulant.

- For locations requiring back to back abatement; leave glove bag or mini-containment in place until work has been completed on both sides of the wall.
- Paints (textured)
 - a. Class II or III
 - b. Friable
 - c. Respirator Required
 - d. No NPE if class III, NPE for class II, HEPA vacuum, Wet Method
- 6. Plaster (interior and exterior)
 - a. Class II or III
 - b. Friable
 - c. Respirator Required
 - d. No NPE if class III, NPE for class I, HEPA vacuum, Wet Method
 - e. Work Practices:
 - Remove plaster material in manageable sections without sizable quantities of materials dropping to the floor.
 - Work shall include removal and disposal of plaster, expanded metal mesh and non-structural ceiling joists. Bag all materials as removed. Tape sharp edges as needed to prevent the bag from being punctured.
 - 3) Do not use power tools to cut material to be removed. Keep all cut material edges and surfaces moistened to minimize dust.
 - 4) Keep debris and minor dropped waste to a minimum, and immediately moisten and clean up. Under no circumstances shall debris be left at the end of the workday.
 - HEPA vacuum and wipe down all exposed surfaces to remain prior to applying an approved encapsulant or lockdown material.

Roofing Material

- a. Class II or III
- b. Friable and Non-friable
- Respirator Required
- d. No NPE, Wet Method, HEPA vacuum
- e. Work Practices:
 - If appropriate, remove ballast as non-asbestos containing material according to usual roofing practice. Mechanized ballast removal is permitted provided ACM roofing felts are not disturbed.
 - Power tools shall not be used to remove asbestos-containing roofing materials. Only shovels, spud bars, scrapers, hand axes or other hand tools may be used.
 - 3) With hand ax or similar tool, chop the membrane into hand manageable sections or "tiles" (approximately 2' X 2').

- 4) Before lifting cut membrane sections, mist the open cuts between sections with water.
- 5) With hand tools pry the membrane tiles free.
 - a) Scrape wall and roof substrate to remove roofing mastic. Apply additional water as needed to thoroughly saturate cut edges, and any loose debris exposed or generated by the cutting and removal operations.
- 6) As membrane tiles are removed, place them in clear 6-mil bags with asbestos warning labels. Use caution not to over fill bags. Seal bags close with tape.
- If holes in filled bags are discovered anywhere in the removal or disposal process, seal with duct tape.
- 8) Asbestos-containing roofing materials shall not be chuted to the ground, nor handled in any manner; i.e., tossed, dropped or smashed in a manner which creates dust or particulate ACM. Materials are to be bagged and hand carried or lowered by crane or mechanical lift to the ground.
- Bagged material must be hand carried or cradle lifted from the roof to an appropriate waste disposal vehicle or container.
- 10) If materials are lowered by crane or mechanical lift, City's Representative shall approve crane placement in advance.
- 11) Asbestos-containing roofing tiles or shingles are to be handled in a manner similar to bituminous roofing materials (also, see section on transite). In general minimize breakage of individual tiles and shingles.
- 12) Apply water to loose debris remaining when roofing materials have been removed. HEPA vacuum the substrate and apply lock-down encapsulant.
- Metal roofs with mastic, coatings, or other sealants shall be worked on in a project specific manner. Demolition projects shall collect metal roof components in a manner that minimizes visible dust or debris as well as damage to the asbestos containing component.
- 8. Spray Applied Acoustic Ceiling Texture / Fireproofing
 - a. Class I or III
 - b. Friable
 - c. Respirator Required
 - d. NPE, Wet Method, HEPA vacuum
 - e. Work Practices
 - f. Class III Work Practices:
 - 1) Set up mini containment.
 - While assistant sprays material continuously with water amended with surfactant, remove material in a manner to reduce visible dust or debris.

- 3) Immediately place material in waste bag.
- 4) Clean all surfaces of mini containment.
- g. Class I Work Practices
 - Set up full containment.
 - Establish baselines and conduct area monitoring throughout the project.
 - All class III work practices apply.
- 9. Steam/Hot Water/Chiller Pipe Lagging (horizontal, vertical, joints, valves)
 - a. Class 1 or III
 - b. Friable
 - c. Respirator Required
 - d. NPE, Wet Method, HEPA vacuum
 - e. Work Practices
 - f. Class III Work Practices:
 - Apply duct tape completely around the pipe at point where glove bag will be attached.
 - 2) Slit glove bag down sides; install on pipe with taped portions being attached to tape strips applied to pipe. Allow adequate room for maneuvering of hands at top of glove bag.
 - While assistant sprays lagging continuously with water amended with surfactant, cut lagging around its circumference using handsaws, knives, or other cutting tools.
 - Remove wetted lagging, drop into bottom of glove bag.
 - 5) Clean surface under section of removed lagging using toothbrush, towel, etc.
 - Evacuate glove bag using HEPA vacuum cleaner; tie off glove bag.
 - 7) Remove glove bag from pipe. Seal glove bag using at least two closures. Seal exposed lagging ends with bridging agent and Carlisle Hardcast wettable cloth or equivalent.
 - g. Class I Work Practices
 - Set up full containment.
 - 2) Establish baselines and conduct area monitoring throughout the project.
 - All class III work practices apply.
- 10. Floor Tiles, Rubber Cove Base and Adhesive
 - a. Class II or III
 - b. Non-friable
 - c. Respirator Required
 - d. No NPE if class III, NPE for class II, Wet Method, HEPA vacuum

e. Work Practices:

- Flooring shall be removed only by hand or mechanical methods which do not create dust. These include dry ice/blanket, hand and power scrapers, spud bars, etc. Do not sand, grind, blast or mechanically chip or abrade.
- Adhesive shall be removed only by wet methods or by approved solvent.

11. Window Putty

- a. Class II or III
- b. Friable
- c. Respirator Required
- d. No NPE, Wet Method, HEPA vacuum
- e. Work Practices:
 - Provide plastic on the horizontal surface below the area of work extending out sufficient to capture material being removed.
 - Remove material in manageable sections and lengths without sizable quantities of materials dropping to the floor or ground using wet methods.

3.11 INSPECTIONS

- A. Inspection Responsibilities Contractor
 - Prior to beginning any asbestos-related work, Contractor's asbestos supervisor shall inspect the regulated work areas for any building damage, hazardous conditions, and/or irregularities that may contribute to an unsafe work environment. Any condition that poses a hazard or potential hazard to the Contractor's employees or the City community must be immediately reported to the City Representative.
 - Contractor is responsible for monitoring and enforcing all requirements of this specification. This responsibility includes communicating scheduling changes to the City Representative to allow inspections at each phase of the project.
 - 3. Contractor shall provide protocols for responding to loss of negative pressure after they have left the job site. Under no circumstances shall Contractor shut off negative air machines at the end of the shift, unless the job has received final clearance. Emergency mobile telephone numbers shall be provided of key asbestos Supervisors on the project to the City's Representative in the event they need to be contacted after off hours.
 - 4. At the end of each shift, the Contractor shall adequately wet waste, collect all loose debris, place it in double 6 mil poly bags, and label the material. The asbestos waste may remain inside the containment, provided access controls are secure. If the Contractor cannot guarantee access control, the asbestos waste must be secured in a locked storage container.
 - The Contractor shall perform a pre-final visual of the containment work area and adjacent surfaces prior to requesting that the City's Representative conduct a

final visual inspection. The pre-final visual performed by the Contractor shall verify that all materials have been completely removed from the work area.

- 6. Containment access must be available to the City's Representative for any additional tasks that may be necessary.
- Inspection Responsibilities City's Representative Responsibilities
 - 1. The City's Representative shall walk the job site with the Contractor to review pre-cleaning operations and any safety or security issues. The City's Representative shall attend contractor safety meetings.
 - The City's Representative shall verify pre-cleaning was performed in accordance with the specifications.
 - 3. After the Contractor has completed set-up and before commencing operations, the City's Representative shall check completeness of the following items: regulated area is demarcated and posted with Cal/OSHA asbestos warning signs, permits are posted, poly sheeting is six mil, double layers, all HEPA equipment is leak tested (DOP) and passed the challenge tests, electrical tools are connected to GFCI, HVAC is shut off and all supply and return registers, exhaust register are sealed with six mil poly, electrical panels are tagged and locked out, electrical outlets are sealed with 6 mil poly, a fire extinguisher is available inside and outside the containment, and water connections are made with a back flow prevention device. If a NPE is used, the inspector will verify: 0.020" of water pressure is maintained, decontamination is sealed and air flow is correct, and the shower is functioning with a hot water heater, soap, shampoo, and disposable towels if required.
 - 4. Prior to asbestos abatement beginning, the City's Representative shall match onsite personnel with asbestos training certificates, fit tests and medical exam records. Workers without current and valid on-site documentation shall not be allowed in the regulated area.
 - The City's Representative is responsible for reviewing all air sample data for any personal or area air samples exceeding 0.1 f/cc.
 - 6. During abatement or in-place management activities, the City's Representative shall check for the following: all personnel are signing in and out, wet methods are being used, debris is collected at the end of each shift, workers are properly wearing disposable coveralls and respirators, work is performed in a safe manner, and an emergency exit is demarcated.
 - 7. After abatement activities are complete and before lockdown or encapsulant is sprayed, the City's Representative shall verify: completeness of abatement by conducting a thorough visual inspection of the work area and confirm and approve the lockdown (encapsulant) being used.
 - 8. The City's Representative shall review clearance protocols with the Contractor prior to clearance monitoring. If clearance is not achieved, the Contractor shall re-clean the containment area prior to re-sampling of the regulated area. All re-

sampling costs due to clearance monitoring failure are the responsibility of the contractor.

9. After clearance has been achieved the City's Representative shall ensure the work area is clean and free of all equipment, all waste has been removed in accordance with City protocols, keys are returned and the Contractor has restored the room to its original condition or to an otherwise agreed upon state.

3.12 CLEAN-UP

A. Daily Clean-Up

- 1. All asbestos debris shall be adequately wetted, collected, and placed into two 6 mil plastic bags with Cal/OSHA asbestos warning labels attached. Excess air shall be HEPA vacuumed from the bag, and shall be closed in a goose-necked fashion and secured with tape. No bag shall exceed a gross weight of 30 lbs.
- Materials exceeding the size of a 60" bag shall be adequately wetted, then
 double wrapped in 6 mil plastic sheeting and sealed air tight with tape, Cal/OSHA
 asbestos warning labels attached or the black diamond label, generator name
 and address and Waste Manifest number attached if the waste is friable
 asbestos materials.
- At the end of each work shift, all asbestos waste shall be secured in a locked container. The containment shall also be made secure such that unauthorized access is not allowed during off-work hours.

B. Final Clean-Up

- Dispose of all loose material as asbestos waste.
- 2. HEPA vacuum all visible debris and dust on the inner (top) layer of poly.
- 3. Wipe down interior surface of the inner (top) layer of poly.
- 4. Spray lockdown on all poly surfaces and within the containment.
- After the lock down encapsulant is dry, remove inner (top) layer of poly and dispose as asbestos waste.
- 6. HEPA vacuum all visible dust and debris from the outer (bottom) layer of poly.
- Wipe down the surface of outer (bottom) layer of poly.
- 8. Spray lockdown on all poly surfaces and within the containment.
- 9. After lockdown has dried, the outer (bottom) layer of poly shall be removed and all visible dust and debris that is present behind this poly shall be cleaned by HEPA vacuuming and wet wiping. At this time only the critical barriers shall remain in place with the building finishes exposed and in need of final detail cleaning.
- 10. When step 9 is achieved, the area is ready for clearance sampling with the critical barriers and decontamination unit left in place with the work area still under negative pressure. Floor and wall poly shall be removed during the

clearance air sampling, unless specific changes have been approved by the City's Representative.

3.13 WASTE DISPOSAL

- A. The Contractor shall propose their choice of hazardous waste site that accepts asbestos to the City's Representative and obtain approval of the hazardous waste site before the Contractor ships off the waste material.
 - Contractor shall comply with all waste protocols established by the City. These
 protocols explicitly require Contractor to properly complete the Uniform Waste
 Manifest form. Failure by Contractor to complete Contractor's portion of the form
 shall result in the Contractor assuming the fine imposed by the responsible
 agency.

B. Packaging Asbestos Waste

All asbestos containing waste material must be packaged in one of three ways: (1) placed two 6 mil clear polyethylene bags, (2) placed in sealed drums (DOT approved) or (3) double wrapped in opaque 6 mil polyethylene sheeting (AKA "burrito style"). For options 1 and 3 wet wipe the outer surface before storing material.

C. Labeling Hazardous Asbestos Waste

Each bag, drum, or "burrito" wrap shall have a label affixed with the following information: (1) Hazardous Waste warning, (2) Generator's Name, address, and phone number, (3) Location information, e.g., Building, department, room, (4) manifest document number, and (5) date. Contractor can generate the label or use bags with label information stenciled on the side. For non-hazardous asbestos waste, a Hazardous Waste Manifest is not required; however, at a minimum, the Cal/OSHA asbestos warning label is required per Title 1529.

Storing Asbestos Waste Outside of a Building

At the end of each shift, all asbestos waste shall be stored in a locked container or shipped off site. Accumulated waste shall not be allowed to remain in the regulated work area overnight. No container shall be allowed to remain on campus for greater than 90 continuous days from date the first bag was stored.

- E. The Waste Identification Notice and Certification must be completed by the Contractor to comply with waste stream identification requirements (Title 22, CCR). The Waste Identification Notice and Certification form can be obtained from Transporter.
- F. Uniform Waste Manifest Procedures

Prior to transporting waste from the site to a disposal facility, the Contractor shall prepare a California Uniform Hazardous Waste Manifest (form DTSC 8022A). After completing Contractor's portion of the form, Contractor shall return the Manifest to the City's Representative for signature between the hours of 0700 and 1600 hours Monday to Friday, and will require a 24 hour notice for the signature. The City's Representative or their designee shall sign off and return a copy to the Contractor. Only authorized City personnel can sign on behalf of the Generator. The Generator is the City of Corning. The City shall be responsible for obtaining a hazardous waste generator ID number for the project site.

G. Transporting Asbestos Waste

A registered waste transporter, hired by the Contractor, is responsible for transporting asbestos waste from the City site to a disposal facility permitted for asbestos waste. The transporter must make pick-ups during normal working hours (8:00 AM to 5:00 PM Monday through Friday). The transporter's vehicle must be clearly marked with warning signs.

3.14 CLEARANCE PROTOCOL

A. Project Specific

- 1. The clearance protocol to be used shall be clearly stated and communicated in advance of the City's Representative beginning the clearance procedure.
 - All containment areas of asbestos abatement will have clearance air samples analyzed by TEM per the AHERA analytical method.
 - b. Mini-containments in which more than three square feet of ACM is disturbed may be cleared using the PCM Method. The City's Representative will determine if PCM or TEM analysis is performed on the smaller work containments.
 - c. Due to the nature of the project as a demolition of structure, clearance air sampling may not be required at the discretion of the City's Representative. If no clearance sampling is performed, access to the containment shall be restricted and the containment shall be sealed after removal of all abatement equipment. Containment shall remain sealed until demolition of the structure occurs.

B. PCM Clearance Method

- The PCM analytical method for asbestos is one which may be selected; however, it is not the primary method of choice. It will be considered only for very small projects such as project sizes less than about 100 square feet in size for only certain asbestos materials that have been removed. If used, the clearance protocol for PCM Method shall conform to NIOSH 7400.
- 2. Air samples shall be collected on MCE cassettes with a 0.45 micron pore size.
- 3. The clearance criteria shall require all air samples to be <0.010 fiber/cc.
- A minimum 5 air samples shall be collected for each area.
- 5. After the lock down/encapsulant is settled and dry, use a leaf blowers to circulate the air within the negative pressure enclosure (referred to as the aggressive method). Install several free standing 24" fans inside of the work area to facilitate additional air movement inside the containment for the duration of the air sampling period.
- Air sampling shall continue until the sample results meet the clearance criteria.
 All additional cleaning of the containment by the contractor and additional costs for the collection and analysis of the air samples will be at the expense of the contractor.

C. TEM Clearance Method

- The TEM analytical method is the primary method that will be used at City facilities and will be used the majority of the time on asbestos projects. Clearance protocol for TEM Method shall conform to EPA AHERA standard pursuant to 40 CFR Part 763, Appendix A to Subpart E TEM analytical methods.
- Air samples shall be collected on MCE cassettes with a 0.45 micron pore size.
- 3. After the lock down/encapsulant is settled and dry, use a leaf blowers to circulate the air within the negative pressure enclosure (referred to as the aggressive method). Install several free standing 24" fans inside of the work area to facilitate additional air movement inside the containment for the duration of the air sampling period.
- 4. The clearance criteria shall be the AHERA standard. The average of all air samples collected inside of the work area shall be less than 71 asbestos structures per millimeter squared. If the clearance criteria is not met, the Contractor is responsible to re-clean the entire containment area, and the City's Representative shall collect clearance air samples again. Air sampling shall continue until the sample results meet the clearance criteria. All additional cleaning of the containment by the contractor and additional costs for the collection and analysis of the air samples will be at the expense of the contractor.

3.15 PROJECT CLOSE OUT

- A. Before the final certificate for payment is issued to the Contractor the following information shall be provided to the City's Representative:
 - Provide an "As-Built" summary to include:
 - Contractor's name, address, CSLB certification number, DOSH registration number, and tax identification number.
 - Name of hazardous transporter, address, phone number and registration number.
 - Laboratory names, addresses, and phone numbers used to perform personal and area air samples by PCM.
 - d. Building owner's name.
 - e. Building name and address.
 - f. Project name and contract number.
 - g. Describe scope of work; including, location (room numbers, approximate square footage, building system types).
 - h. Provide an inventory of the ACM/PACM removed from the job site. Include, building system, classes of asbestos related work, quantity, note whether the project was abatement or managed in-place, note whether the building system(s) was replaced - use yes or no, and the percentage of the total contract each building system abated or managed in-place represents.

- Total dollar amount paid by the City for asbestos related work including invoice dates and dates payment were received.
- Number of employees who worked on the job.
- k. Date on-site work began.
- Date on-site was completed.
- m. Work methods.
- n. Did the City provide specifications.
- Name, address, phone number and EPA registration number of waste disposal site.

B. Documentation

 The contractor will provide copies of all laboratory reports, chain of custody sampling forms, tail gate safety meeting logs, sign in and sign out logs, other revised notifications to agencies, protocols, and procedures that may be requested by the City's Representative.

END OF SECTION

HAZARDOUS MATERIALS MANAGEMENT - LEAD & OTHER HAZARDOUS MATERIALS

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. WORK INCLUDED - GENERAL

- 1. The Contractor shall furnish all labor, material, equipment, services, testing, employee training, fit testing, medical exams, transportation, and daily expense to meet the requirements of this Specification.
- The Contractor shall obtain all required permits, licenses, registrations, notifications, and regulatory approvals required by law (federal, state and local) policy.
- 3. All lead-related activities associated with this Contract shall be performed during the work period specified in each contract.
- 4. The Contractor shall guard against unnecessary disturbances or damage to sensitive finishes on buildings, building systems, and equipment.

B. WORK INCLUDED - SPECIFIC

- The Contractor is responsible for identifying the exact locations and number of work areas listed below by referring to City supplied Project Drawings and by working with the City's Representative or City's Hazardous Materials Consultant.
- This project does not include lead abatement or lead remediation. This project includes work on building components that have been tested and found to contain measurable amounts of lead. This project is a renovation/demolition project and not considered a lead abatement project with regards to the requirements of Title 17.
- Demolition of whole structures that does not include cutting, sanding, grinding, or abrading known lead containing surfaces or other activities that would produce a lead hazard is an expected part of this project. Lead training requirements vary based on task for this project. Removal of all loose and flakey paint with lead content is required prior to building demolition. Waste characterization for lead is required for all waste streams produced during this project.
- Lead testing of paint chips was performed in the project area with results included in Table 1.

1.2 SITE CHARACTERIZATION

A California Department of Public Health (CDPH) Certified Lead Inspector/Assessor, Mr. Willian Irwin of Alliance Environmental Inc., conducted a lead in paint testing in the project area. Results of paint chip sampling with analysis by atomic absorption spectroscopy (AAS) are presented in Table 1. Only those materials shown in Table 1 to contain lead below the limit of detection by AAS may be treated as lead-free. Limit of detection for this sampling was 80 parts per million (ppm).

Table 1 Lead Containing Materials in Project Area Paint Chip Samples by Atomic Absorption Spectroscopy (AAS)

Building System Type	Lead Content (PPM)	Quantity (Approx.)	Location	
Unknown – Pink	<80	Unknown	811 4th Street - Front Office	
Unknown – Green	250	Unknown	811 4th Street – Exterior Area	
Unknown – White	<80	Unknown	811 4th Street – Back Area	
Unknown – White	<80	Unknown	811 4th Street - Upstairs Kitchen	
Unknown – White	<80	Unknown	813 4th Street - Interior Area	
Unknown – Blue	<80	Unknown	813 4th Street – Interior Area	
Unknown – Red	<80	Unknown	813 4th Street – Exterior Area	
North Wall – White	3,700	Unknown	1111/1113 Solano Street - North	
			Wall	
South Wall – White	3,600	Unknown	1111/1113 Solano Street - South	
	58.0		Wall	
East Wall - Red	<80	Unknown	1111/1113 Solano Street – East Wall	
Metal Beam - White	26,000	Unknown	1111/1113 Solano Street - Beams	
Wood Beam - White	25,000	Unknown	1111/1113 Solano Street - Beams	
South Wall – White	<80	Unknown	1158 Marin Street - South Wall	
Exterior West Wall – White	<80	Unknown	1158 Marin Street – Exterior West	
			Wall	
Exterior South Wall – Red	7,800	Unknown	1158 Marin Street – Exterior South	
			Wall	
Shed – Green	6,800	Unknown	1158 Marin Street – Shed	
Shed – Green	11,000	Unknown	1158 Marin Street – Shed	

A. Hazardous materials, other than lead containing paints and Presumed Lead Containing Material (PLCM) that have the potential to be disturbed at this Project site are listed below:

Material Description	Type of Hazard	Location =	
Fluorescent Light Bulbs	Mercury	See Drawings	
Light Ballasts	PCB's	See Drawings	
Light Ballasts	Universal Waste	See Drawings	
Mold Contamination	Mold	Undetermined	
Thermostat Switches	Mercury	See Drawings	
(Materials)	Asbestos	See Asbestos Specifications	
Exit Signs	Radioactive Gas Tritium	See Drawings	

- B. Where light fixtures are required to be removed, the Contractor shall recycle all fluorescent light tubes and non-PCB containing ballasts as Universal Wastes as required in Title 22. All PCB containing light ballasts or caulking (if present) shall be sent to a hazardous waste site as a separate waste stream. Determination of potential PCBs for each light ballast shall be made when the light fixture is removed from the building component. Packaging of light tubes and light ballasts shall be in accordance with regulatory standards for safe storage and transport by a hazardous waste hauler.
- Prior to handling other hazardous materials at the project site, the Contractor shall review City's protocols.

1.3 ABBREVIATIONS AND DEFINITIONS

A. Abbreviation

AA Atomic Absorption – Flame (EPA SW-846)
AIHA American Industrial Hygiene Association
AL Action Level (30 µg/M³ per 8 hour TWA)

BLL Blood Lead Level

CCR California Code of Regulations

CDPH California Department of Public Health
CEPA California Environmental Protection Agency

CFR Code of Federal Regulations
CSLB Contractor's State Licensing Board
DIR Division of Industrial Relations

dL Deciliter

DOSH Division of Occupational Safety and Health DOT Federal Department of Transportation

DTSC California Department of Toxic Substances Control
ELLAP Environmental Lead Laboratory Accreditation Program
ELPAT Environmental Lead Proficiency Analytical Testing Program

EPA U.S. Environmental Protection Agency

FVC Forced Vital Capacity
FEV Forced Expiratory Volume
GFCI Ground Fault Circuit Interrupter
HEPA High Efficiency Particulate Air

HUD U.S. Department of Housing and Urban Development

HVAC Heating, Ventilation, and Air Conditioning

INTERIM CONTROLS Removal at specific locations to accommodate remodel < 20 years

LBP Lead Based Paint (paints, varnish, shellac, etc. >0.5% lead by weight,

>5,000 ppm, or > 1.0 mg/cm²)

LCM Lead Containing Material – materials tested to contain any measurable

levels of lead

μg Microgram = part per billion (ppb)

SDS Safety Data Sheet

NAAQS National Ambient Air Quality Standards

NAM Negative Air Machine

NESHAP National Emissions Standard for Hazardous Air Pollutants

NFPA National Fire Protection Association

NPE Negative Pressure Enclosure

NVLAP National Voluntary Laboratory Accreditation Program

O&M Operations and Maintenance

OSHA Federal Occupational Safety and Health Administration PEL Permissible Exposure Limit (50 µg/M³ 8 hr. TWA)

PLCM Presumed Lead Containing Material
PPE Personal Protective Equipment

RCRA Resource Conservation and Recovery Act

TCLP Toxicity Characteristic Leaching Procedure (mg/L)
TTLC Total Threshold Limit Concentration (wet-weight mg/kg)

TSP Trisodium Phosphate
TWA Time Weighted Average

STLC Soluble Threshold Limit Concentration (mg/L)

ULPA Ultra Low Penetrating Air XRF X-ray Fluorescence ZPP Zinc Protoporphyrin

- B. Definitions: The following definitions are provided for additional clarification and may exceed Federal, State or local regulatory requirements.
 - Lead Abatement "Abatement" means any set of measures designed to reduce or eliminate lead hazards or lead-based paint for public and residential buildings, but does not include containment or cleaning.
 - Lead Related Construction Work any "construction, alteration, painting, demolition, salvage, renovation, repair, or maintenance of any residential or public building, including preparation and cleanup that, by using or disturbing lead-containing material or soil, may result in significant exposure of adults or children to lead". (Title 17, California Code of Regulations, Division 1, Chapter 8, Article 1).

1.4 SUBMITTALS

- A. References: Submit names, addresses and telephone numbers of at least 3 Project Managers or Owners (not employed by Contractor) for whom Contractor has performed jobs of similar size and character to the work specified in this Contract.
- B. General: Submittal requirements listed below shall be completed and accepted by City's Representative prior to scheduling the start of project site work.
- C. Notifications and Permits: Submit copies of all regulatory agency notifications and permits.
 - 1. Contractor is required to submit a "Lead-Work Pre-Job Notification" (8 CCR 1532.1(p)) for all projects, if there is greater than 100 square feet or greater than 100 linear feet of materials containing lead greater than 5,000 ppm, 0.5% by weight, or 1.0 mg/cm² to be removed. If these quantities are exceeded, a copy of the notification to Cal/OSHA shall be provided to the City's Representative.
- D. Worker Training and Safety Programs
 - Training Certificates: For each employee who will be employed on the Project, submit a copy of employee's lead training that meets Cal/OSHA training requirements under Title 8 Section 1532.1 Lead in Construction. The City requires all contractor and subcontractor personnel directly involved with lead abatement to have current CDPH lead training certificates at a level appropriate for the project task (e.g., Project Designer, Project Monitor, Supervisor, Worker, Inspector/Assessor), in the unlikely event that lead abatement is required for the project.
 - Qualifications of person taking Personal Air Samples: Submit information regarding training and qualifications of the field technician who will be collecting personal air samples.
- E. Safety Programs: On company letterhead, submit confirmation that the Contractor has written safety programs for:
 - Injury Illness Prevention (T8 CCR 3203) (mandatory for all projects),
 - 2. Hazard Communication (T8 CCR 5194) (mandatory for all projects),
 - 3. Fall Protection (T8 CCR 1620 1621, 1632 1633, 1635.1 1637, 1640 1655, 1669 1672, 3209 3239) (when applicable),

- 4. Lock Out Tag Out (T8 CCR 3314) (when applicable),
- 5. Confined Space (T8 CCR 5156) (when applicable).
- 6. Respiratory Protection (8 CCR 5144) (when applicable)
- 7. Medical Surveillance (8 CCR 1532.1(i)) (when applicable)
- 8. Lead Compliance (8 CCR 1532.1(e)(2)) (when applicable)
- F. Work Plan and Schedule: Submit proposed Work Plan and schedule. The Work Plan shall be project specific and address project site preparation, site and engineering controls, worker protection and exposure monitoring, and protection of building occupants from exposure to lead. Schedule of work must be submitted and approved before work begins.
- G. Product Data Sheets and Safety Data Sheets (SDS): For all products proposed for use on the project, submit copies of the manufacturers' safety data sheets to the City's Representative for review.
- H. Laboratory Qualifications: For any laboratory performing lead analysis the Contractor shall submit evidence of ELLAP and ELPAT certification and accreditation. Laboratories performing worker exposure sample analysis must submit evidence of AIHA IHLAP certification for metals if they do not have ELLAP or ELPAT certification.
- I. HEPA/ULPA Equipment Test: Submit copies of leak test results to the City's Representative prior to starting project site work. Leak testing shall be performed at the project site and shall be witnessed by the City's Representative. The leak test results shall identify equipment by make, model and serial number. No equipment which fails the leak testing may be used at the project site, unless it is exclusively exhausts outdoors. Vacuums which fail may be used within full negative pressure enclosures at the discretion of the City.
- J. Emergency Contact List: Submit an emergency contact list; include name, phone number, fax number and pager number for Contractor's supervisor or competent person and subcontractor's telephone numbers who can be reached on a 24-hour basis.
- K. Hazardous Waste Disposal Plan: Submit a Waste Disposal Plan that includes estimated number of containers, size of container(s), hazardous material transporter name and proposed disposal site before start of project.
- Lead As-Built Summary: Submit a Lead As-Built Summary within 14 calendar days of the last day of field Work and prior to a request for final application for payment. The summary shall include a description of lead containing materials that were removed and a description of lead containing materials that remain in the project area.

1.5 CONTRACTOR QUALIFICATIONS

A. Contractor licensing for this work will require a B, C33, or C61/D-38 and appropriate lead training for employees to perform lead related work.

1.6 RULES AND REGULATIONS

A. The Contractor shall comply with the most recent edition of applicable Federal, State, local, and City standards, laws, codes and regulations. If a conflict exists between

referenced regulatory requirements and Contract Documents, the Contractor shall notify the City's Representative in writing and request the conflict be resolved. Contractor performing work contrary to mandated laws shall bear full legal and financial responsibility for the violations.

- B. The list of regulators and regulations, cited below, serve as a reference for the most commonly used standards governing the lead industry:
 - 1. FEDERAL REGULATORS AND REGULATIONS
 - a. EPA Environmental Protection Agency
 - (1) 40 CFR Part 261 et al. Resource Conservation and Recovery Act
 - (2) Title X Residential Lead Poisoning Prevention Act
 - (3) National Ambient Air Quality Standards (40 CFR 50)
 - b. OSHA Occupational Safety and Health Administration
 - (1) 29 CFR 1926.62 Construction Lead Standard
 - (2) 29 CFR 1910.1025 General Industry Lead Standard
 - (3) 29 CFR 1910 147 Lock Out Tag Out
 - c. DOT Department of Transportation
 - (1) 49 CFR Parts 173, 178 and 179
 - 2. STATE REGULATORS, LAWS AND REGULATIONS
 - a. Cal/OSHA California Division of Occupational Safety and Health
 - (1) 8 CCR 1532.1 Construction Lead Standard
 - (2) 8 CCR 5216 General Industry Lead Standard
 - (3) 8 CCR 5194 Hazard Communication
 - (4) 8 CCR 5157 Confined Space
 - (5) 8 CCR 5144 Respiratory Protection
 - (6) 8 CCR 3203 Injury and Illness Prevention
 - b. DTSC Department of Toxic Substances Control
 - (1) (Health and Safety Code Chapter 6.5 Hazardous Waste Control, Article 6 Transportation and Article 6.5 Hazardous Waste Haulers
 - (2) CCR, Title 22, Division 4, Sections 66000, et al.
 - c. CIWMB California Integrated Waste Management Board
 - d. California Department of Public Health (CDPH)
 - (1) CCR, Title 17, Division 1, Chapter 8
 - e. SWRCB State Water Resources Control Board CCR, Title 23
 - f. CSLB California Contractors State License Board
 - g. Health and Safety Code 25157.8 (AB 2784 Natural Resources)

1.7 NOTIFICATION AND PERMITS

- A. The Contractor is responsible for notifying Federal, State and local agencies, obtaining all required permits/extensions and paying all related fees, as required.
- B. Sacramento Metropolitan Air Quality Management City (SMAQMD) has no notification requirements for lead related work. SMAQMD and Cal/OSHA do have notification requirements for asbestos related work.
- C. Contractor is to submit a Lead-Work Pre-Job Notification to CAL/OSHA as required by 8 CCR 1532.1.

1.8 CITY CONTACTS

A. City's Representative: Robin Kampmann, City Engineer

1. Phone: 530-824-7025

PART 2 - PRODUCTS

2.1 MATERIALS

A. Safety Data Sheets (SDS)

 The Contractor shall provide SDS for all products used on UCDHS job sites. The SDS files shall be located near the Project site entrance at all times the product is used or stored onsite.

B. Polyethylene Products

- 1. Floor and wall sheeting used for lead containments or critical barriers are required to have a minimum thickness of: a) 6-mil (floor) and 4-mil (walls); and, b) meet the following standards ASTM E-84, with a flame resistance/spread rate less than or equal to 25 ASTM (E-162).
- 2. The polyethylene sheeting used for containment or critical barriers shall be frosted or black. Polyethylene bags or sheeting used for waste may be clear.

C. Paint Removers

- All paint removers shall be pre-approved by the City. Methylene chloride based paint removers are not permitted on this project.
- 2. The use of paint removers on the project must strictly comply with manufacturer application instructions and safety warnings.

2.2 EQUIPMENT

- A. HEPA/ULPA vacuums and negative air machines must be leak tested on-site by a firm independent of the Contractor, who are trained and qualified to perform the challenge testing of portable HEPA filtered equipment, shall follow the manufacturers recommended test procedure, and shall use the recommended test challenge agent.
- B. Tools and equipment shall arrive at the project site free of lead debris and dust.
- C. HEPA/ULPA vacuum exteriors must be clean when they arrive on project site. All openings on the vacuum, hoses, and negative air units shall be taped shut when they are brought onto the project site and when they are taken from the project site.
- D. All electric tools and equipment shall be connected to a GFCI.
- E. Power tools used to prepare surfaces containing lead must be connected to a HEPA/ULPA vacuum.
- F. Heat guns with a working temperature less than or equal to 1100° F are permitted.

PART 3 - EXECUTION

3.1 SAFETY

A. In accordance with State and Federal laws, Contractor shall be responsible for conditions of the project site including the safety of all persons and property during the performance

of work. To ensure effective communication in safety matters the Contractor shall participate and conduct the following meetings:

- A pre-construction safety meeting is required to be held with the City's Representative prior to the start of the project. The following subjects shall be discussed: impact to building occupants; waste disposal, and work related safety programs.
- On the first day of lead related work, the Contractor shall conduct a safety meeting (tailgate) for its employees and subcontractor employees that alert them to the specific hazards of the project. The Contractor must conduct the safety meeting in the primary language of its employees. If needed, more than one primary language presentation must occur. This same initial safety meeting must be provided to all personnel new to the project before they are permitted to start work.
- On a weekly basis, the Contractor shall conduct a safety meeting with its employees.

3.2 WORK SITE PREPARATION

- A. Prior to beginning any on-site work preparation, the Contractor shall walk the project area with the City's Representative to discuss site characterization, regulated area set-up, access controls, background samples, security, and safety issues.
- B. Post all regulatory notices, permits, sign-in-out roster, at the primary entrance to the project site.
- C. The Contractor, in coordination with the City's Representative shall ensure all electrical and HVAC equipment servicing the work area is disconnected and locked out. Electrical tools in the work zone must be connected to a GFCI.
- D. The Contractor shall seal existing critical barriers, including HVAC openings, windows, vents, open pipes, skylights, ducts, doorways, corridors, and diffusers with double layers of plastic and cardboard or plywood inserts as necessary.
- E. The Contractor shall pre-clean fixed objects and interior surfaces prior to establishing containment or critical barriers. The area to be pre-cleaned will be a minimum of 10 feet outside the Controlled area or surrounding structure which ever is closest. The Contractor will pre-clean exposed fixed objects and interior surfaces within the containment.
- F. The Contractor shall install approved backflow prevention devices before connecting to the City's domestic water system, if necessary. Contact the City's Representative for a list of approved devices.
- G. The Contractor is obligated to coordinate inspection schedules with the City's Representative and the City's Representative.
- H. The Contractor shall establish project site control barriers.

3.3 WORK SITE CONTROL

- A. The Contractor shall restrict the work areas to authorized personnel including the Contractor's employees, City's Representative, and regulatory agency representative.
- B. At regulated project sites, the Contractor shall use caution tape to demarcate the boundary of the work zone and post lead warning signs.

The following sign is required by Title 8, CCR 1532.1

DANGER LEAD WORK AREA MAY DAMAGE FERTILITY OR THE UNBORN CHILD CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM DO NOT EAT, DRINK OR SMOKE IN THIS AREA

- C. All unauthorized personnel are to remain outside the regulated area. The Contractor shall call the City's Representative if unauthorized staff or the public enters the containment area.
- D. If inclement weather threatens the project site, the Contractor shall take all necessary measures to ensure lead-contaminated debris does not migrate from regulated areas. Steps shall also be taken to prevent water intrusion/water damage to the work site and adjacent areas.
- E. If wind speed threatens the project site, the Contractor shall erect a wind barrier or suspend operations until the wind is below 15 mph.

3.4 RECORDKEEPING

- A. The Contractor shall maintain the following records at the regulated work area:
 - Site Log (sign-in/sign-out).
 - Incident Log and Emergency Action Plan.
 - 3. Personal air sampling results.
 - Area sample results from inside and outside the regulated area.
 - Lead Supervisor (Contractor) and Lead Worker training certificates, respirator fit tests, and medical clearance certificates.
 - Federal, state or local notifications.
- B. All Items 1 through 6 shall be submitted with the "As-Built" summary Identified in "Project Close-Out".
- C. The City's Representative shall retain all sample records (wipe, bulk, initial, area (perimeter), and clearance samples). At the end of the project, all sampling records are submitted as a complete package in the project close out to the Project Manager.

3.5 ADMINISTRATIVE CONTROLS

A. Any remediation project performed in high heat environments requires the Contractor to comply with T8 CCR 3395, including providing sufficient breaks to maintain a safe environment for their workers.

3.6 ENGINEERING CONTROLS

- A. Negative Pressure Enclosure (NPE)
 - Mini-containments: The construction of a mini-containment requires a minimum of one layer of 6-mil polyethylene and a HEPA/ULPA vacuum or HEPA filtered negative air unit exhausting from the containment.
 - HEPA vacuumed assisted tools shall be used for drilling, cutting, sawing, or removing lead containing paint from surfaces, unless a paste type stripper product is used.

B. HEPA/ULPA Equipment

- The Contractor shall ensure all HEPA/ULPA filtration units are leak tested on project site by an independent testing contractor. Each piece of equipment shall be tested in compliance with the ANSI Z9.2 Standard (trapping and retaining 99,97% of all test particles of 0.3 microns). Documentation of testing is to be maintained at the work site. The City's Representative shall be present to observe the challenge testing of all HEPA systems brought onsite.
- 2. The Contractor shall HEPA/ULPA vacuum visible debris prior to set-up, during the removal process and at the conclusion of each shift.
- 3. HEPA/ULPA equipment used to establish negative air pressure within a space must run continuously (24-hours a day) until the project is complete.
- 4. The Contractor shall ensure make-up air is drawn through an inlet that can be easily sealed in the event of a negative air failure. The inlet sealing method must also be effective when there is a failure in the system after normal work hours.
- All HEPA/ULPA filters must be disposed as hazardous waste.
- 6. Any HEPA system that has been removed from the project site and brought back to the project site shall be challenge tested again before being placed in use.

C. Wet Methods

1. Prior to removing LCM/PLCM, the Contractor shall adequately wet the material with water. The waste must remain wet until properly packaged for disposal.

D. Removal Operations

- If there is lead abatement work, as defined in these requirements, the Contractor must use a CDPH-Certified Lead Supervisor and CDPH-Certified Lead Workers. The Lead Supervisor must be present onsite at all times.
- Ensure all accumulated debris is completely sealed by the end of the shift. After gross debris is bagged, use wet wipe methods and HEPA/ULPA vacuums to clean the polyethylene sheeting.

3.7 WORKER PROTECTION

- A. The following protective measures are required for lead-related work associated with this project. These measures are not intended to be all-inclusive:
 - Employee Training/Supervision
 - a. The Contractor shall provide information to its employees about lead and other hazards per the Hazard Communication standard (8 CCR, 5194) and other Cal/OSHA standards (e.g., asbestos, fall protection, etc.) as appropriate for the project.
 - b. All contractor and subcontractor personnel are to be trained to the level of their project assignment in accordance with 8 CCR 1532.1, which at a minimum will require lead awareness training (1-2 hours in length).
 - Respiratory Protection
 - a. The Contractor shall provide respiratory protection to all employees where there is the potential for exposure to lead dust at or above the permissible exposure limit per Title 8 5144 Respiratory Protection.
 - b. The Contractor's employees who wear a respirator must have passed a fit test within the previous 12 months to perform contract work at the City.
 - 3. Protective Clothing
 - a. The Contractor shall provide workers with sufficient sets of protective clothing. Tyvek™, Kleenguard™ or equivalent, coveralls (with hood and feet protection) or equal are acceptable.

b. The Contractor shall provide rubber, latex or Nitrile gloves, rubber boots, eye protection, earplugs and hard hats as needed per the 8 CCR, Hazard Communication and Personal Protective Equipment standards.

Medical Surveillance

- a. As required by 8 CCR 1532.1, the Contractor shall establish a medical surveillance program for all employees performing lead work if work is expected to exceed the Action Level for more than 30 days per year. In addition, all personnel required to wear a respirator shall have an medical evaluation to assure they are capable of wearing a respirator per T8 CCR 5144.
- b. The Contractor shall demonstrate all project personnel are participating in the medical surveillance program with evidence supported in the prejob submittal.

3.8 PERSONAL HYGIENE

- A. The Contractor shall require that no employee be allowed to apply cosmetics, or consume food, tobacco products, or beverages in the regulated work area.
- B. The Contractor shall establish a location outside the work area, which shall be designated for employee eating and drinking. Employees must utilize the on-site decontamination facilities for clean-up prior to entering the designated eating/drinking location. The eating area shall be kept clean of dust on all horizontal surfaces. Cleaning stations shall include clean water, soap, and towels. Al workers shall clean face, hands and lower arms before leaving the work area for break periods, and at the end of the work shift.

3.9 AIR MONITORING PROGRAM

- A. Personal Air Samples Contractor Responsibility
 - The Contractor shall presume construction activities will exceed the PEL and conduct initial and daily exposure assessments in accordance with T8 1532.1.
 - 2. Exposure assessments are to be conducted in accordance with 8 CCR 1532.1(d).

B. Area Sampling

- Daily Perimeter Monitoring City's Representative Responsibilities
 - a. The City's Representative is responsible for monitoring the perimeter of the work zone at their discretion. Air samples that exceed 30 ug/m³ per 8 hr. TWA require the City's Representative to halt work and notify the Contractor. Work may resume after the Contractor has identified and corrected the work practice that led to the high airborne lead levels.
- 2. Daily Monitoring City's Representative Responsibilities
 - a. The City's Representative is responsible for monitoring air quality within the regulated area, including the clean room at their discretion. Any sample at or above 30 μg/M³ TWA in the clean room requires a cessation of work until the area is cleaned and the cause of the problem has been determined and solved. The Contractor shall thoroughly clean the spaces using the HEPA vacuum and wet wiping techniques. Air samples in the work zone that exceed the protection level of a respirator require a cessation of activity. The Contractor's competent person and the City's Representative shall review work practices as necessary.

3.10 SPECIFIC WORK PROTOCOLS

- Specific work protocols, cited below, provide minimum guidance for the performance of site work.
 - 1. Initial Site Clean-Up
 - a. LBP/LCM contaminated chips or debris, etc. generated during the project shall be collected while workers are wearing proper respirators and disposable coveralls, and using HEPA vacuums, wet methods, polyethylene bags, lead warning labels and proper disposal protocols.
 - 2. Interim Controls (In-Place-Management)
 - a. This is a control measure to reduce or eliminate lead exposure for less than 20 years. It is not considered abatement. Several strategies are used to control potential exposure to LCM left in place including, dust removal, paint stabilization, treatment of impact/friction surfaces, and soil coverings. No Interim Controls for lead are included in this project.
 - b. Dry blasting LCM is not permitted except by special circumstances preapproved by the City.
 - c. Water blasting LCM surfaces will not be allowed.

3. Abatement

- Lead abatement is not planned for this project. Abatement is meant to permanently control LCM products for a period of time greater than 20 years or in response to a lead hazard.
- b. The renovation project may impact lead in building components, but any disturbance to lead in paint must follow the Lead in Construction requirements of 8 CCR 1532.1.
- c. If the contractor needs to remove paint from surfaces, there are many options to consider including use of paint removal paste (such as Peel Away or equivalent), wet sanding, and HEPA equipped shrouded tools when disturbing LCM surfaces.
- Dry blasting LCM is not permitted except by special circumstances preapproved by the City.
- e. Water blasting LCM surfaces will not be allowed.

Demolition of Structures

- Demolition of structures with LBP/LCM via the use of mechanical means that does not include cutting, sanding, grinding, or abrading may be performed.
- b. Minimum training requirements for workers will still be enforced along with all hazard communication requirements.
- All waste produced will need to be characterized for lead content prior to removal from the site.
- d. Removal of all loose and flakey paint must be performed via hand methods prior to building demolition as not to create a lead hazard.

3.11 INSPECTIONS

- A. Inspection Responsibilities Contractor
 - Prior to beginning any lead-related work, the Contractor's lead supervisor shall inspect the regulated work areas for any building damage, hazardous conditions and/or irregularities that may contribute to an unsafe work environment. Any condition that poses a hazard or potential hazard to the Contractor's employees or the City's employees, patients and visitors must be immediately reported to the City's Representative.
 - 2. The Contractor is responsible for notifying and allowing sufficient time for the City's Representative to conduct inspections at all phases of the project.

- The Contractor shall establish emergency response protocols for a manometer alarm sounding after they have left the project site. Under no circumstances shall the Contractor shut off negative air machines, unless the project has received final clearance.
- 4. All waste shall be characterized and separated by the Contractor. Wastes will be sampled individually as directed by the City's Representative to determine levels of lead before containerizing for shipment.

B. Inspection Responsibilities - City's Representative

- The City's Representative shall walk the project site with the Contractor to review scope of work, pre-cleaning operations and any safety or security issues. The City's Representative may attend the Contractor's safety meetings.
- If minor lead related work requires removal of paint from surfaces using a paste, or work practices using HEPA filtered equipment, the hazard control measures shall be evaluated by the City's Representative.
- Prior to lead related work activities beginning, the City's Representative shall match on-site personnel with lead training certificates, fit tests and medical exam records. Workers without on-site documentation shall not be allowed in the regulated area.
- 4. The City's Representative is responsible for:
 - a. Reviewing all sampling data and all waste stream profiles.
 - b. Review Contractor's performance and non-compliance report to the Project Manager.
- After lead-related construction work, abatement, or interim control activities are complete, the City's Representative shall verify completeness of all visible debris removal.
- 6. City's Representative shall review contractor's waste characterization for the most efficient disposal for the City.

3.12 ENCAPSULATION, FINAL CLEAN-UP AND RESTORATION

A. Encapsulation

Encapsulation for lead painted components is not anticipated for this project.

B. Final Clean-Up

 Contractor shall clean entire project area of dust from all surfaces within the construction work area.

C. Restoration

1. Fixtures, equipment or objects relocated to storage areas designated by the City's Representative shall be restored to their exact position. The Contractor assumes full financial responsibility for damage to these objects.

3.13 WASTE DISPOSAL

- A. Packaging Lead Waste
 - All lead containing waste material must be packaged and labeled in accordance with U.S. DOT, DTSC and EPA requirements.
- B. Storing Lead Waste

- At the end of each shift, all lead waste shall be stored in a lockable container or shipped off site. Accumulated waste shall not be allowed to remain in the regulated work area overnight. No container shall be allowed to remain at the project site for greater than 90 continuous days from date the first waste container was generated.
- C. Uniform Hazardous Waste Manifest Procedures
 - The Contractor or transporter is responsible for providing appropriate Uniform
 Hazardous Waste Manifests for the transport of hazardous waste materials. Only
 authorized City personnel can sign on behalf of the generator.
- D. Transporting Lead Waste to Class 1 Landfill
 - 1. A DTSC registered waste transporter, hired by the Contractor, is responsible for transporting hazardous lead waste to an EPA permitted disposal facility.
 - The transporter shall make pick-ups during normal Working hours 8:00 AM to 5:00 PM, Monday through Friday. The Contractor must comply with DOT label requirements for their vehicles.
 - The Contractor must make shipments of lead waste containing less than 1,000 mg/kg lead but greater than 350 mg/kg of lead to a Class 1 landfill. This shipment does not require a registered waste hauler.

E. Disposal

- The selection of a Treatment, Storage and Disposal Facility as an alternative to a landfill for disposal of lead waste must be reviewed and approved by the City's Representative prior to arranging for the shipment of the waste.
- The Contractor shall provide waste documents from the Waste Disposal site as verification of the weight and proper disposal site, to the City's Representative within 15 days of each container disposal.
- Lead waste that has been contaminated with another hazardous waste (e.g. solvents) must be tested and disposed according to all applicable standards.
- 4. All lead waste will be sampled for Characterization before determination of Hazardous or Non-Hazardous material is made. Sequence of testing is as follows:
 - a. A TTLC result of ≥1,000 mg/kg is considered a hazardous waste.
 - TTLC with a result of ≥50 mg/kg of lead must be retested using STLC method.
 - A STLC result of ≥5.0 mg/l must be retested using TCLP.
 - d. A TCLP result of ≥5.0 mg/l deems the waste Federal RCRA.
 - e. A STLC of ≥5 mg/l is categorized as State Hazardous Waste (Class 1).
 - f. A TTLC with a result of >350 mg/kg but <5.0 mg/l (STLC and TCLP) must go to landfill permitted to accept this level of lead although it is not hazardous. (See Item 6 below)</p>
- 5. Contractor shall provide a waste stream report to the City's Representative identifying the number of containers and an explanation of how the samples were taken (composite or individual container sampling). A waste stream profile must be conducted on each unique waste stream. Confirmation will be provided by the Consultant, indicating all waste streams have been sampled per project specifications.
- 6. All waste with total lead >350 ppm (mg/kg) disposed of in California, must be disposed of at a permitted Class 1 Hazardous waste landfill, or at other landfills that have specific permits to accept these wastes. However, the wastes are not classed as hazardous wastes unless for a reason other than lead content. The California hazardous waste threshold for total lead is ≥1,000 mg/kg and the soluble threshold concentration (STLC) for lead is ≥5 mg/l.

F. Recordkeeping

 The Contractor shall provide the City Project Manager with copies of all waste disposal documents.

G. Fees

 The Contractor is responsible for all fees and charges related to lead waste transport and disposal operations including, waste steam profiles. Refer to SW-846-1311 (TCLP) and CCR, Title 22 Section 66261 (STLC) for waste stream identification requirements

H. Non-Hazardous Waste Manifest

 The City's Representative is responsible for reviewing and signing nonhazardous waste manifests. Prior to the Representative signing the manifest, the City's Representative shall inspect the load and confirm its non-hazardous status.

I. Recycled Metals

1. Recycling ferrous or non-ferrous metals with adhered lead paint is encouraged by the City. This section defines "Hazardous Waste" for the purpose of defining waste stream as material that is placed in a land fill. Employee protection regulations remain the same during disturbance of lead. The Contractor is required to remove all loose and flaking paint. The Contractor is responsible for removing all other hazardous material that is unacceptable by the recycling firm. The Contractor is required to recycle where possible. The contractor will obtain a letter from the recycler acknowledging that the recycler is aware of the lead paint and has an Injury Illness Prevention Program (IIPP) that addresses the handling of this material that meets OSHA and EPA regulations. There is no City requirement for testing (TTLC, STLC, or TCLP) the recycle material stream.

3.14 CLEARANCE PROTOCOL

A. Abatement and Interim Control Projects

- Lead abatement is not planned for this project; therefore, clearance wipe sampling is not currently planned. If, however, there is lead abatement due to an identified lead hazard, the following will be conducted:
- Prior to any clearance sampling, the regulated areas shall be visually inspected by the City's Representative for the presence of LBP chips, visible settled dust or debris. Final clearance sampling shall not take place until the area has successfully passed this visual clearance. The Representative shall follow the U.S. Housing and Urban Development (HUD) clearance wipe sampling protocol, which includes wiping one square foot of the surface being tested using an "S" pattern with an approved commercial lead sampling wipe. Clearance wipe sampling shall be conducted in locations most likely to be contaminated.
- 2. The City's Representative following HUD guidelines and CDPH Title 17 requirements, shall select the total number of clearance samples for each job site and shall use the Title 17 criteria for clearance purposes.

3.15 PROJECT CLOSE OUT

- A. Before the final certificate for payment is issued to the Contractor the following information shall be provided to the City's Representative:
 - 1. Provide "As-Built" summary to include:
 - Contractor's name, addresses, CSLB certification number, DOSH registration number, and tax identification number.

- Name of hazardous transporter, address, phone number and registration number.
- ELAP laboratory name(s), addresses, and phone number(s) used to perform AA (flame), TCLP, TTLC or STLC analysis.
- d. Building name and campus address.
- e. Project name and contract number.
- f. Describe scope of Work; Lead Related Work, Interim Controls, or Abatement and location (room number[s]); provide drawings detailing the areas in which lead work that were accomplished.
- g. Provide an inventory of the LCM/PLCM removed from the project site. Include: building system, quantity, note whether the project was Abatement or Interim Controls, the percentage of the total lead job for each building system type and cost.
- h. Total dollar amount paid by the City for lead-related work including invoice date(s) and date(s) payment received.
- i. Number of employees who worked on the project
- j. Date on-site work began
- k. Date on-site work was completed
- Work methods
- m. Did the City provide specification (answer yes or no).
- Name, address, phone number and EPA registration number of waste disposal site.
- Note that all copies of waste documents from the Waste Disposal site for hazardous material must be received by the City's Representative as part of this section.
- p. The Contractor shall provide copies of all laboratory reports lead work protocols, and disposal documents requested by the City's Representative.
- q. All documents relating to actual employees used for remediation purposes.

END OF SECTION

HAZARDOUS MATERIALS MANAGEMENT - PROJECT SUMMARY

PART 1 - GENERAL

1.1 PROJECT SUMMARY

A. This project will include the demolition of four buildings: 811 4th Street, 813 4th Street, 1111/1113 Solano Street, and 1158 Marin Street located in the city of Corning, California.

1.2 BUILDINGS & KNOWN ASBESTOS AND LEAD CONTAINING MATERIALS

A. 811 4th STREET

- 1. Asbestos Sampling
 - a. Materials Sampled and Found to Contain Asbestos
 - (1) NONE
 - b. Materials Sampled and Found Not to Contain Asbestos
 - (1) Drywall & Joint Compound
 - (2) Fiberglass Insulation
- 2. Lead Sampling
 - Materials Sampled and Found to Contain Lead
 - (1) Exterior Green Paint
 - b. Materials Sampled and Found Not to Contain Lead
 - (1) Front Office Pink
 - (2) Back Area White
 - (3) Upstairs Kitchen White

B. 813 4th STREET

- 1. Asbestos Sampling
 - a. Materials Sampled and Found to Contain Asbestos
 - (1) Spray Applied Acoustical Ceiling Texture "Popcorn Ceiling"
 - a) 1,300 Square Feet
 - b) Class I Removal Work
 - c) RACM Waste Produced
 - b. Materials Sampled and Found Not to Contain Asbestos
 - (1) NONE
- 2. Lead Sampling
 - a. Materials Sampled and Found to Contain Lead
 - (1) NONE
 - b. Materials Sampled and Found Not to Contain Lead
 - (1) Interior Area White
 - (2) Interior Area Blue
 - (3) Exterior Area Red

C. 1111/1113 SOLANO STREET

- 1. Asbestos Sampling
 - a. Materials Sampled and Found to Contain Asbestos
 - (1) NONE
 - b. Materials Sampled and Found Not to Contain Asbestos
 - (1) Brown Vinyl Floor Tile, Mastic, Leveler
 - (2) Wall Concrete
 - (3) Leno (As Designated in Survey Assumed to be Linoleum Flooring) Beneath Floor Tile
 - (4) Ceiling Tile
 - (5) Paper Material
 - (6) Drywall & Joint Compound
- 2. Lead Sampling
 - a. Materials Sampled and Found to Contain Lead
 - (1) North Wall White
 - (2) South Wall White
 - (3) Metal Beam White
 - (4) Wood Beam White
 - b. Materials Sampled and Found Not to Contain Lead
 - (1) East Wall Red

D. 1158 MARIN STREET

- 1. Asbestos Sampling
 - a. Materials Sampled and Found to Contain Asbestos
 - (1) NONE
 - Materials Sampled and Found Not to Contain Asbestos
 - (1) Drywall & Joint Compound
- 2. Lead Sampling

b.

- a. Materials Sampled and Found to Contain Lead
 - (1) Exterior South Wall Red
 - (2) Shed Area Green
 - (3) Shed Area Green
- b. Materials Sampled and Found Not to Contain Lead
 - (1) South Wall White
 - (2) Exterior West Wall White

1.3 SITE MAP



PART 2 - DISCLAIMERS

The summary and specifications for this project were created by Entek Consulting Group, Inc. (Entek) and are based upon the Asbestos and Lead Building Inspection/Survey reports provided to Entek by the City of Corning. These provided reports were created by William Irwin of Alliance Environmental Services, Inc. dated August 25, 2022.

Entek cannot attest to the validity, thoroughness, or completeness of the provided survey reports. It is the responsibility of the contractor to ensure that any materials found not to be sampled for asbestos or lead content either be treated as containing such or are sampled prior to disturbance.

Specifications Created by: Blake Howes Entek Consulting Group, Inc. CAC #13-5015 CDPH #3315 September 9, 2022

END OF SECTION

ASBESTOS MATERIALS ABATEMENT

PARTI - GENERAL

1.01 DESCRIPTION

A. The safe abatement of asbestos containing materials (ACM) and presumed asbestos containing materials (PACM) as part of the City Block Demolition Project is the primary purpose of these specifications. Four buildings are expected to be impacted during this project, located within the block bounded by 3rd Street, 4th Street, Solano Street, and Marin Street in the City of Corning. The contract provisions are designed to protect the City and their contractors from exposure as a result of work being performed by the Contractor.

1.02 SCOPE OF WORK

A. Work Included - General

- 1. The Contractor shall furnish all labor, materials, equipment, services, testing, employee training, fit tests, medical exams, transportation, insurance, and daily expense to meet the requirements of this specification.
- The Contractor shall obtain all required permits, licenses, registrations, and notifications, and regulatory approvals required by law and City policy.
- All asbestos abatement activities associated with this contract shall be performed between the hours of **7:00 AM to 5:00 PM** unless coordinated with the City's Representative.
- 4. The Contractor shall guard against unnecessary disturbances or damage to sensitive finishes on buildings, building systems, and equipment.
- Any job with more than one class designation shall be performed at the higher standard. For example, a contract let for class II and class III work will be performed at the class II level.

B. Work Included – Specific

 The Contractor is responsible for identifying the exact locations and number of work areas listed below by referring to City supplied project drawings and by working with the City's Representative.

2. Asbestos Abatement

Known asbestos containing material is present in the building located at 813 4th Street. The material is a spray applied acoustical ceiling texture, commonly referred to as "popcorn ceiling". The survey report indicates 1,300 square feet of this material is present. While laboratory analysis indicates <1% asbestos in this material, no confirmatory 400 point count analysis was performed. Therefore, the material must be considered to contain >1% asbestos and will be designated as Class I work, producing regulated asbestos containing material (RACM) which shall be disposed of as an asbestos hazardous waste at an appropriate landfill. Removal of this material shall be performed prior to general building demolition.

1.03 SITE CHARACTERIZATION

A. An asbestos inspection was conducted by Mr. William Irwin, California Certified Asbestos Consultant with Alliance Environmental Services, Inc. Materials found or presumed to contain asbestos at this job site are listed in the table below:

Asbestos Containing Material(s)						
Building System Description	RACM Yes or No	Class I, II, or III	% of Asbestos	Quantity (approx.)		
813 4th Street - Spray Applied Acoustic Ceiling Texture – "Popcorn Ceiling"	YES		Assumed >1% Chrysotile	1,300 Sq. Ft.		

- 1. PLM laboratory reports, database information, and statements of verification are available to the Contractor by contacting the City's Representative.
- This specification is based upon the provided hazardous materials survey reports. If any materials are encountered in the course of this project which have not been sampled for asbestos, the material must be assumed to contain asbestos until otherwise determined by laboratory analysis.
- B. Hazardous materials, other than ACM or PACM that have the potential to be disturbed at this job site are listed in the table below:

Other Hazardous Materials at Job Site						
Material Description	Type of Hazard	% of Content	Quantity (approx.)			
Fluorescent Light Bulbs	Mercury	Unknown	See Drawings			
Light Ballasts	PCB's	Unknown	See Drawings			
Light Ballasts	Universal Waste	Unknown	See Drawings			
Mold Contamination	Mold	N/A	Undetermined			
Thermostat Switches	Mercury	Unknown	See Drawings			
Painted Surfaces &	Lead in Paint and	ppm	See Lead & Other			
Ceramic Products	Glaze		Specifications			

1. The Contractor shall review non-asbestos hazardous material required protocols with the City's Representative.

1.04 JOB WALK PROTOCOL

A. No special provisions are required on job walk to review hazardous materials, since there are no areas of known contamination on this project.

1.05 ABBREVIATIONS AND DEFINITIONS

- A. Abbreviations
 - 1. ACM: Asbestos Containing Material
 - 2. AHERA: Asbestos Hazard Emergency Response Act
 - 3. CSLB: Contractor's State Licensing Board

- 4. CDPH: California Department of Public Health
- 5. DOP: Dioctyl Phthalate
- 6. DOSH: Division of Occupational Safety and Health (Cal/OSHA)
- 7. ELAP: Environmental Laboratory Accreditation Program
- 8. NEA: Negative Exposure Assessment
- 9. NPE: Negative Pressure Enclosure
- 10. NVLAP: National Voluntary Laboratory Accreditation
- 11. PACM: Presumed Asbestos Containing Material
- 12. RACM: Regulated Asbestos Containing Material (greater than or equal to 1% asbestos and friable)
- 13. TSI: Thermal System Insulation (found on pipes and boiler units)
- B. Definitions: The following definitions are provided for additional clarification to the California Code of Regulations (CCR), Title 8, 1529.
 - ACM and PACM are defined in 8 CCR 1529; which includes friable and nonfriable asbestos. These regulations include the use of worker protection, negative pressure enclosures (NPE), air monitoring, etc.
 - Ambient Air Quality refers to the quality of local air conditions prior to the commencement of asbestos related work.
 - Class I asbestos work involves the removal (abatement) of TSI or Surfacing material when (1) more than one glove bag is used or (2) more than one 60" X 60" waste bag is used.
 - 4. Class II asbestos work involves the removal (abatement) of non-TSI or non-surfacing material or if the work is not repair or maintenance as defined by class III. Examples of Class II work include removal of floor tile, floor mastics, gypsum wallboard with joint compound, roofing and siding shingles, construction mastics, etc.
 - Class III asbestos work involves repair and maintenance of friable ACM/PACM that is either TSI or Surfacing materials, but does not exceed either one glove bag or one 60" x 60" disposal waste bag.
 - Class IV asbestos work refers to contact but no disturbance of ACM/PACM.
 Class IV work refers to clean-up operations of Class I, II, or III projects. Class IV
 work does not refer to incidental contact by maintenance workers (see 8 CCR
 5208 for custodial/maintenance workers guidelines).
 - 7. Negative Pressure Enclosure (NPE) refers to full containment and minicontainments under negative pressure with HEPA filtered exhaust.

1.06 SUBMITTALS

- A. The submittals listed in 1.06 B must be completed and accepted by the City's Representative prior to the contractor beginning any work.
- B. List of Submittals:
 - 1. References to include three projects of similar scope and size.
 - Notifications to Cal/OSHA, California Air Resources Board (CARB).
 - Permits if applicable (federal, state, local).
 - 4. Current certificates of AHERA Asbestos Training for Workers and Supervisors.
 - 5. Current respiratory fit test records (within past year).
 - 6. Physician's certificates of medical fitness for respiratory use and medical evaluation for asbestos related work (within past year).
 - 7. DOSH Registration for asbestos related work.
 - 8. DOP certificates for all HEPA vacuums and negative air machines, which are required to be tested onsite. Submit after equipment has arrived at the project site and has been tested. Provide information of the company providing the DOP challenge testing of the HEPA filter systems showing proficiency in the testing. Include evidence of the training of personnel conducting the challenge testing.
 - List of HEPA vacuums and negative air machine (mfg. model and serial numbers.
 - Material Safety Data Sheets (for all products used at the job site).
 - List all laboratories used for personal and area air samples.
 - 12. California Contractor's License with ASB or C-22 (asbestos).
 - Waste Disposal Plan including name of disposal site, waste transporter, and waste transporter certification.
 - General liability insurance certificate with Owner named as additional insured.
 - Auto insurance certificate.
 - 16. Workers Compensation Insurance certificate.
 - 17. Written work plan including schedule, emergency plans, route of waste transport from project site to waste bin outside of building.
 - Manufacturer's documentation of 5.0 micron filter that shall be used for filtration of all water from the shower.

1.07 CONTRACTOR QUALIFICATIONS

- A. The contractor performing asbestos abatement work shall be currently licensed as an Asbestos Contractor with the California Contractor's Licensing Board.
- B. The contractor performing asbestos abatement work shall be currently registered for asbestos with the California Department of Industrial Relations, Division of Occupational Safety and Health.
- C. The contractor's personnel performing asbestos abatement work shall meet the following training requirements:
 - Class I and II Asbestos Work: Supervisors and Workers must be AHERA trained and shall have current refresher training certificates for asbestos related work.
 - Class III Asbestos Work: supervisors and Workers shall have received at least 16 hours of asbestos training. Depending upon the work trade such as electricians, plumbers, carpenters, etc., the number of hours of asbestos training may be less than 16 hours, if these trades are not involved in asbestos removal activity. Trade work involving these class of workers may only require about 6 hours of asbestos training for Class III work where they are working in asbestos contaminated work spaces, drilling holes in materials containing asbestos for conduit or pipe installation, attaching to building surfaces conduit, or other minor disturbance to asbestos materials, but no involved in actual removal of asbestos. Removal of small amounts of asbestos such as fireproofing for attachment of hangers for electrical, plumbing or other utilities would require a higher level of training (Class I).
 - Class IV: Supervisor must be AHERA trained. Workers must have a minimum of "asbestos awareness" level training.

1.08 REGULATIONS

- A. The contractor performing asbestos abatement work shall comply with applicable federal, state, local, and City laws and regulations. The list of regulators and regulations, cited below, is not meant to be comprehensive, but to serve as reference for the most commonly used standards:
 - 1. FEDERAL
 - a. EPA
 - 1) 40 CFR, Part 763, Subpart E AHERA
 - b. OSHA
 - 1) 29 CFR 1926.1101 Construction Standard
 - 2) 29 CFR 1910.1001 General Industry Standard
 - 3) 29 CFR 1910.147 Lock Out Tag Out
 - c. NESHAP
 - 1) 40 CFR 61, Subpart M Asbestos Emissions

2) 40 CFR 61, Subpart A

2. STATE

a. Cal/OSHA

- 1) CCR, Title 8, Section 1529 Construction Standard
- 2) CCR, Title 8, Section 3203 Injury Illness Prevention
- 3) CCR, Title 8, Section 5194 Hazard Communication
- 4) CCR, Title 8, Section 5157 Confined Space
- 5) CCR, Title 8, Section 5208 General Industry Standard
- CCR, Title 8, Section 5144 Respiratory Protection Standard

1.09 NOTIFICATION AND PERMITS

- A. Contractor is responsible for notifying federal, state, local agencies, obtaining all required permits/extensions, and bearing all related costs. Contractor shall provide a copy of all notifications and permits to the City's Representative prior to the start of the work and during the project if additional notifications or permits are obtained.
- B. California Air Resources Board (CARB)
 - 1. Provide ten (10) days notification to CARB for any demolition or renovation job with RACM that exceeds a combined amount of 260 linear feet, 160 square feet or 35 cubic feet. Notification to CARB is required if the contractor chooses to use mechanical means to remove asbestos containing flooring materials and underlying mastic in which case the asbestos materials would be considered RACM and written notification to CARB would be required. Removal of mechanical means of other non-friable materials may create a friable material that would render the material as RACM, thus requiring formal written notification.

C. CAL/OSHA

Only DOSH registered contractors are permitted to perform class I, II, and III work for the City. Contractor trades such as electricians, carpenters, plumbers, etc., who have received Class III asbestos training due to the potential for disturbance of asbestos materials are not required to be registered with Cal/OSHA if they are not removing asbestos materials. Drilling holes or attachments to building surfaces that might contain asbestos (such as gypsum wallboard or plaster systems) for example is not considered asbestos removal. Contractor shall provide written notification to the local Cal/OSHA office 24 hours prior to the start of work.

1.10 CITY CONTACTS

A. City's Representative: Robin Kampmann, City Engineer

Phone: 530-824-7025

PART II - MATERIALS AND EQUIPMENT

2.01 MATERIALS

A. Safety Data Sheets (SDS)

 As specified in the Hazard Communication standard, Contractor shall provide safety data sheets for all products they use on City job sites.

B. Surfactants

1. Contractor may use Foster 32-90, Certane 2075, or equal, for amended water applications.

C. Encapsulants

- 1. The following products or their equals will be applied using a brush or an airless sprayer. Contractor shall follow strict manufacturer instructions regarding surface preparation, ambient air retractions, depth of penetration or recommended thickness (dry), and curing time.
 - a. For penetrating & lockdown purposes use Foster 32-60 or Certane 909, or equal.
 - b. For bridging purposes use Foster 32-32 or Certane 2000, or equal.
 - c. For high temperature applications, e.g., steam pipes, use Foster 84-18 or Certane 1000, or equal.
- 2. Any proposed equal to the products listed above must meet the following criteria: submit product information prior to the start of the job and receive approval by the City's Representative; non-toxic and non-irritating as defined by the Hazardous Substance Control Act; sufficiently tinted to provide contrast with the material being coated; and have a minimum 60 lbs./inch Batelle Standard impact rating.
- All products will be rated UL Class A and have a flame resistance/spread rate less than or equal to 25 as designated by the ASTM code E 162.

D. Polyethylene Bags and Sheeting

- Bags and sheeting used for capturing asbestos waste are required to be (1) six microns thick (mil) and (2) meet the following standards: UL Standard No. 263, ASTM E-84, NFPA Standard 701 & 255; and have a flame resistance/spread rate less than or equal to 25 ASTM (E-162).
- Startex Corp.(Lakeville, MN), North Plastics (Cottage Grove, MN) Bermis Co. (Terre Haute, IN) provide acceptable bags and sheeting. If an equal is proposed, comply with the provisions in 2.1 C 2 above.
- 3. The contractor will ensure all asbestos waste is properly labeled (per Cal EPA, DOT, and Cal/OSHA standards) prior to disposal.

E. Adhesive Removers

- All adhesive removers shall meet the Hazardous Substance Control Act standards for non-toxic and non-irritating properties.
- 2. All adhesive removers shall be (a) non-flammable and (b) contain less than 1% (by volume) any chlorinated hydrocarbon solvents.
- 3. Whenever possible, adhesive removers shall be mixed into a slurry/paste using diatomaceous earth to control migration through the substrate. This requirement especially applies where there are existing building spaces below the project area.

2.02 EQUIPMENT

- A. All HEPA filtered vacuums and HEPA filtered negative air machines shall pass a leak (challenge) test using Dioctyl Phthalate (DOP) or equivalent method on-site by a firm independent of the contractor before they are allowed to be used on the project.
- B. Tools and equipment shall arrive at the job site free of significant visible debris and dust. No ACM debris shall be allowed to be brought onto the site at any time. The Owner or Owners' Representative reserves the right to reject any equipment brought onsite by the asbestos contractor that is deemed contaminated with suspect asbestos materials from a prior project.
- C. All electric tools and equipment shall be connected to a GFCI when in use.

PART III - EXECUTION

3.01 SAFETY MEETING

- A. In accordance with State and Federal laws, the Contractor is responsible for conditions of the project site, including the safety of all persons and property during the performance of the work. To ensure effective communications in safety matters, the Contractor shall participate and conduct the following meetings. There are three types of required safety meetings; pre-reconstruction, initial, and weekly.
 - Pre-construction safety meetings may include representatives from the following groups: affected building occupants, general contractor, asbestos subcontractors (if applicable), and City Hazardous Materials Representative. The following subjects will be discussed: impact to building occupants, waste disposal, and work related safety programs.
 - On the first day of work, Contractor shall conduct a safety meeting for its employees which alerts them to the specific hazards of the job. The Contractor shall conduct the safety meetings in primary language of its employees.
 - On a weekly basis, Contractor shall conduct a safety meeting with its employees.

3.02 WORK SITE PREPARATION

A. Prior to beginning any on-site work preparation, Contractor shall walk the job area with the City Representative to discuss site characterization, regulated area set-up, access controls, security, and safety issues. The contractor is responsible for providing locks and

- security to the project site to prevent the public from entering the project area during work hours and during off work hours.
- B. Post all regulatory notices, permits, sign in/out roster and air sample results at the primary entrance to the job site.
- C. Contractor, in coordination with the City's Representative, shall ensure all electrical and HVAC equipment servicing the work area is disconnected and locked out. Electrical tools in the work zone shall be connected to a ground-fault circuit interrupter (GFCI).
- D. The contractor shall seal air tight all HVAC supply and return registers and exhaust registers with tape, double layers of plastic and cardboard or plywood inserts as necessary.
- E. Contractor shall ensure all negative air machines and HEPA vacuums are delivered to the site clean and sealed.
- F. Contractor shall ensure all HEPA filtration units are leak tested (DOP) on site. Each piece of equipment shall be tested in compliance with the ANSI Z9.2 Standard (trapping and retaining 99.97% of all particles challenged with 0.3 micron diameter particles).
- G. In order for the City Representative to conduct timely inspections, Contractor is obligated to inform the City Representative when they are ready to be inspected at least four hours prior to the requested inspection.
- H. All Class I, II, and III work shall be conducted within a regulated area per 8 CCR 1529.

3.03 WORK SITE CONTROL

- A. Contractor shall restrict the work areas to authorized, trained and protected personnel; including, the Contractor's employees, City Representatives, and state agency representatives.
- B. At regulated job sites, the Contractor shall use caution tape to demarcate the boundary of the work zone and post two types of warning signs. The first sign is required by 8 CCR 1529:
 - 1. First Sign:

DANGER
ASBESTOS
CANCER AND LUNG DISEASE HAZARD
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE
CLOTHING ARE REQUIRED IN THIS AREA

Second Sign:

CAUTION ASBESTOS DUST HAZARD AVOID BREATHING DUST

C. All unauthorized personnel are to remain outside the regulated area. Contractor is to call the City's Representative for problem situations.

- D. If inclement weather threatens the job site, Contractor shall take all necessary measures to ensure contaminated debris does not migrate from regulated areas.
- E. If wind speed threatens the job site, Contractor shall erect a wind barrier or suspend operations until the wind is below 15 mph.

3.04 RECORD KEEPING

- A. Contractor shall maintain the following records at the regulated work area:
 - Site Log (sign-in/sign-out for all people entering the containment).
 - 2. Incident Log & Emergency Action Plan.
 - Personal air sampling results including chain of custody forms and laboratory analysis.
 - 4. Results from area samples collected inside and outside the regulated area.
 - Asbestos supervisor and worker training certificates, current respirator fit tests, current medical clearance certificates.
 - 6. All applicable notifications, including, but not limited to CARB and Cal/OSHA and any revised notifications during the course of the project.
- B. The City Representative shall retain all records of samples related to the project and report results in the closeout documentation to be submitted at the end of the project.

3.05 ADMINISTRATIVE CONTROLS

- A. Asbestos work will be performed during normal working hours (Monday-Friday, 7:00 AM to 5:00 PM) unless otherwise coordinated.
- B. Construction work performed in high heat environments require the Contractor to provide sufficient breaks and drinking water to maintain a safe work environment and to reduce the potential for heat stress.
- C. Contractor shall clean the work site before all breaks and at the end of the shift.
- D. During the removal of asbestos an AHERA accredited Supervisor must be on-site at all times.

3.06 ENGINEERING CONTROLS

- A. Negative Pressure Enclosure (NPE)
 - A negative pressure enclosure is required when asbestos containing materials are being removed or disturbed on this project site.
 - There are two types of negative pressure enclosures: full containment and minicontainment. Both containments require proper warning signs in accordance with Cal/OSHA to establish a restricted asbestos regulated area.
 - 3. Full containment requires the contractor to comply with all provisions in CCR, 8, 1529. The following items are provided as a reminder of key elements and is not

meant to be comprehensive: two layers of six-mil polyethylene on floors, two layers of four-mil polyethylene on walls, three stage decontamination unit with shower, sufficient negative pressure to maintain at least -0.020" of water column pressure differential at all times, clear viewing ports, recording manometer, fire extinguishers, and emergency response protocols.

- 4. The minimum negative pressure inside of the construction work area shall be -0.020" water pressure measured with a manometer at the entry. After removal of wall and ceiling systems, the negative pressure within the work area is expected to drop. The contractor shall be prepared to put in place additional negative air units to be turned on to increase the negative pressure if the building finishes are removed in order to raise and maintain the negative pressure to a minimum of -0.020" water pressure. All additional negative air units on standby that will be required to maintain negative pressure shall have passed the challenge test by DOP testing. These additional negative air units are to be tested at the same time as all other HEPA filtered equipment before the start of the project.
- Mini-containments are for Class II or III work. The construction of a mini-containment requires two layers of six mil polyethylene, at least one decontamination chamber attached to the mini-containment, and a HEPA vacuum or small negative pressure unit to maintain negative pressure inside the mini-containment. Comply with all mini-containment requirements as stated in 8 CCR 1529. Mini-enclosures that are manufactured and purchased comprised of greater thickness with re-enforcement of the plastic material may not necessarily require two layers.
- 6. Asbestos related work requiring glove bags to remove asbestos shall comply with the provisions in 8 CCR 1529. The type of glove bag must correspond to the type of activity, e.g., angle glove bags for curved pipe sections, vertical glove bags for vertical pipe, etc. Glove bags must be smoke tested to assure they do not leak. All glove bag work requires at least two people working together as required in Title 8 1529.

B. HEPA Units

 HEPA vacuums, tools, and air filtration equipment must pass the challenge leak test (DOP) on-site prior to use. All units must be clean and dust-free. All vacuum ports and other openings must be sealed when the units arrive on the job site.

C. Wet Methods

 Prior to removing ACM/PACM, the contractor shall adequately wet the material with water that may have an approved surfactant added. Once removed, the waste must be kept wet until it is placed into six-mil asbestos labeled bags. Asbestos debris generated during the project shall remain wetted at all times until the waste debris is placed into sealed waste bags.

3.07 WORKER PROTECTION

A. The following protective measures are required for asbestos related work associated with this project:

1. Employee Training

- a. Contractor shall provide information to its employees about asbestos hazards per the Hazard Communication standard per 8 CCR, 5194.
- b. Asbestos abatement workers and supervisors must be trained by an accredited AHERA course provider and shall have current refresher training as an AHERA Worker or AHERA supervisor.
- c. Other health and safety training in addition to asbestos shall be provided in accordance with Title 8, which is specific to the various work being performed on the project site.
- d. Trade workers such as electricians, plumbers, HVAC contractors, carpenters, etc., who will contact and potentially disturb asbestos materials shall have at a minimum Class III training, which at a minimum requires approximately 6 hours of asbestos training for the anticipated type of work for this project. Any removal of asbestos materials will require Class I training, which shall meet the EPA AHERA training requirements.

2. Respiratory Protection

- a. Respiratory protection shall be provided to all Contractor employees where there is the potential for exposure to asbestos at or above the permissible exposure limit. In addition, all work in the attic spaces where there is asbestos containing fireproofing will require workers to wear respirators while inside of the mini-enclosure. Respiratory protection shall be provided at no cost to the Contractor's employees per 8 CCR 1529 and 5144.
- b. Contractor asbestos employees who wear a respirator shall have passed a fit test within the previous year to perform work on the project. All workers required to wear a tight fitting respirator shall be clean shaven and not have any facial hair interfering or contacting the seal of the respirator with the worker's face. Workers who are observed inside of the asbestos contaminated work area with facial hair contacting the respirator seal will be asked to immediately leave the work area and shall not be allowed to return until clean shaven and a new respirator fit test has been provided and the individual passes.

Protective Clothing

a. Workers shall be provided with sufficient sets of protective clothing whenever there is potential exposure to asbestos dust at or above the permissible exposure limit. Tyvek, Kleenguard coveralls, or an equal with attached hood and foot coverings are required. The coveralls shall be available at no cost to the Contractor's employees, and state officials. Disposable coveralls shall be replaced or repaired when they rip or tear or become damaged to the point where they are not providing protection to the worker. At no time shall workers performing work in an asbestos contaminated work area leave the containment while wearing the disposable coverall. The coverall shall be removed inside of the containment prior to the worker exiting the enclosure.

b. Contractor shall provide rubber or latex gloves, rubber boots, eye protection, ear plugs and hard hats as needed per the California Code of Regulations, Title 8, Hazard Communication and Personal Protective Equipment sections.

4. Medical Surveillance

- a. As required by 8 CCR 1529, the asbestos Contractor shall establish a medical surveillance program for all employees who may be exposed to asbestos at or above the permissible exposure limit. This requires an asbestos medical exam in accordance with Title 8 1529.
- Contractor will provide copies of the physician's written opinion for each employee who work with asbestos and found to be able to wear a respirator.
- All asbestos workers and asbestos supervisors shall pass the medical examination, FVC, FEV and chest x-ray examinations prior to working on the project.

3.08 PERSONAL HYGIENE

- A. No employee will be allowed to consume food, tobacco products or beverage in the regulated work area or any part of the building scheduled for asbestos abatement or inplace management operations. No food containers, water bottles, or any food will be allowed inside of the containment while work is performed under asbestos contaminated work conditions.
- B. Contractor shall establish a location outside the work area, which will be designated for employee eating and drinking. Employees must utilize the on-site decontamination facilities prior to entering the designated eating/drinking location. All workers entering the work containment shall wear proper shoes. Tennis shoes are not acceptable.
- C. The clean room shall be sized and equipped to adequately accommodate the work crew. Lighting, heat and electricity shall be provided as necessary for comfort. This space shall not be used for storage of tools, equipment or materials (except as specifically designated), or as office space. Shower room shall contain one or more showers as necessary to adequately accommodate workers. The shower enclosure shall be constructed to ensure against leakage of any kind. In addition, the shower shall be a separate unit from the decontamination unit walls. The shower unit cannot be made from poly. Metal or hard plastic is acceptable.
- D. An adequate supply of soap, shampoo and towels shall be supplied by the Contractor and available at all times. Shower water shall be drained, collected and filtered through a system with at least 5.0 micron particle size collection capability. The shower pan in the shower chamber shall be, at least, 3' x 3' in size. The shower chamber shall be constructed so that no water from the shower can spray out of the chamber, nor any water run down the sides of the poly and miss the pan. The shower chamber dimensions shall be determined by the size of the shower pan but are not to be smaller than 3' wide by 3' long by 6' tall. At least one shower shall be provided for each 10 workers. A minimum of two showers will be required for more than 10 workers.

3.09 AIR MONITORING PROGRAM

- A. Personal Air Samples Contractor Responsibility
 - The asbestos Contractor must presume Class I, II, and III work will exceed the PEL and conduct initial and negative exposure assessments. The air sampling results will not be used to determine if respiratory protection will be required. Respiratory protection will be required during all asbestos abatement activities, regardless of the air sampling results. The air sampling results will be used to assess the effectiveness of engineering control measures.
 - At least 25% of the asbestos workers per work shift shall be evaluated for asbestos assessment on a daily basis by the Contractor using personal air sampling.
 - Daily monitoring may be discontinued for a particular operation when a negative exposure assessment has shown the operation was performed below PEL for three continuous shifts. This exception does not apply when the scope of the job has changed, ACM/PACM has changed or the City Representative feels the work protocol is compromised, e.g., less skilled workers are not performing up to standard.
 - Negative Exposure Assessments (NEA) established outside the City are unacceptable.

3.10 SPECIFIC WORK PROTOCOLS

- A. The specific work protocols are intended as a supplement to the contract provisions. Contractor shall comply with specific work protocols and all other specifications. Where a conflict in specifications exists, the higher standard applies.
 - Asbestos Cement Pipe "Transite" (intact)
 - a. Class II or III
 - b. Non-friable
 - c. Respirator Required
 - d. No NPE
 - e. Work Practices:
 - Disconnect service to the pipe.
 - Mark pipe in lengths of approximately six (6) to ten (10) feet or other reasonable length to handle.
 - Wrap pipe with two (2) separate layers of 6-mil plastic, securely and completely taped.
 - Place plastic underneath pipe and supports to catch falling pieces.
 - 5) Carefully supporting all portions of pipe, break into sections using chain snap cutter or the means of cutting or breaking without creating dust. Power cutters or saws are not acceptable.
 - Asbestos Cement Products "Transite" (siding, shingles, furnace flue, and duct)

- a. Class II or III
- b. Friable and Non-friable
- c. Respirator Required
- d. No NPE, Wet Method
- e. Work Practices:
 - Provide plastic on the horizontal surface below the area of work extending out sufficient to capture material being removed.
 - Remove material in manageable sections and lengths without sizable quantities of materials dropping to the floor or ground using wet methods.
 - Where possible, remove mechanical fasteners without any abrading of transite material.

Gaskets

- a. Class III
- b. Friable
- c. Respirator Required
- d. No NPE
- Gypsum board and joint compound
 - a. Class II or III
 - b. Friable
 - c. Respirator Required
 - d. NPE, Wet Method, HEPA vacuum
 - e. Work Practices:
 - 1) Remove material in sections manageable without sizable quantities of materials dropping to the floor.
 - 2) Use a power tools to cut material to be removed with a HEPA vacuum attached to the shroud. Hand cutting with a scoring knife shall be permitted as an alternative option. Keep all cuts moistened to minimize dust.
 - Keep debris and dropped waste material to a minimum. Under no circumstances shall debris be left at the end of the workday.
 - 4) Construct mini-containment or attach modified glove bag to wall surfaces; attach materials with taped portion being attached to tape strips applied directly to wall, floor and ceiling surfaces. Allow adequate room for maneuvering of hands within containment.
 - 5) Spray gypsum board to be removed with water and hand cut perimeter of material to be removed with a knife.
 - 6) Allow wetted material to drop into bottom of glove bag.
 - 7) Evacuate air from glove bag and wall cavity using HEPA vacuum; tie off lower section of glove bag prior to spraying wall and ceiling surfaces and cavity with encapsulant.

- For locations requiring back to back abatement; leave glove bag or mini-containment in place until work has been completed on both sides of the wall.
- Paints (textured)
 - Class II or III
 - b. Friable
 - c. Respirator Required
 - d. No NPE if class III, NPE for class II, HEPA vacuum, Wet Method
- Plaster (interior and exterior)
 - a. Class II or III
 - b. Friable
 - Respirator Required
 - d. No NPE if class III, NPE for class I, HEPA vacuum, Wet Method
 - e. Work Practices:
 - Remove plaster material in manageable sections without sizable quantities of materials dropping to the floor.
 - Work shall include removal and disposal of plaster, expanded metal mesh and non-structural ceiling joists. Bag all materials as removed. Tape sharp edges as needed to prevent the bag from being punctured.
 - Do not use power tools to cut material to be removed. Keep all cut material edges and surfaces moistened to minimize dust.
 - 4) Keep debris and minor dropped waste to a minimum, and immediately moisten and clean up. Under no circumstances shall debris be left at the end of the workday.
 - HEPA vacuum and wipe down all exposed surfaces to remain prior to applying an approved encapsulant or lockdown material.

Roofing Material

- a. Class II or III
- b. Friable and Non-friable
- c. Respirator Required
- d. No NPE, Wet Method, HEPA vacuum
- e. Work Practices:
 - If appropriate, remove ballast as non-asbestos containing material according to usual roofing practice. Mechanized ballast removal is permitted provided ACM roofing felts are not disturbed.
 - Power tools shall not be used to remove asbestos-containing roofing materials. Only shovels, spud bars, scrapers, hand axes or other hand tools may be used.
 - 3) With hand ax or similar tool, chop the membrane into hand manageable sections or "tiles" (approximately 2' X 2').

- 4) Before lifting cut membrane sections, mist the open cuts between sections with water.
- 5) With hand tools pry the membrane tiles free.
 - a) Scrape wall and roof substrate to remove roofing mastic. Apply additional water as needed to thoroughly saturate cut edges, and any loose debris exposed or generated by the cutting and removal operations.
- As membrane tiles are removed, place them in clear 6-mil bags with asbestos warning labels. Use caution not to over fill bags. Seal bags close with tape.
- 7) If holes in filled bags are discovered anywhere in the removal or disposal process, seal with duct tape.
- 8) Asbestos-containing roofing materials shall not be chuted to the ground, nor handled in any manner; i.e., tossed, dropped or smashed in a manner which creates dust or particulate ACM. Materials are to be bagged and hand carried or lowered by crane or mechanical lift to the ground.
- 9) Bagged material must be hand carried or cradle lifted from the roof to an appropriate waste disposal vehicle or container.
- 10) If materials are lowered by crane or mechanical lift, City's Representative shall approve crane placement in advance.
- 11) Asbestos-containing roofing tiles or shingles are to be handled in a manner similar to bituminous roofing materials (also, see section on transite). In general minimize breakage of individual tiles and shingles.
- 12) Apply water to loose debris remaining when roofing materials have been removed. HEPA vacuum the substrate and apply lock-down encapsulant.
- 13) Metal roofs with mastic, coatings, or other sealants shall be worked on in a project specific manner. Demolition projects shall collect metal roof components in a manner that minimizes visible dust or debris as well as damage to the asbestos containing component.
- 8. Spray Applied Acoustic Ceiling Texture / Fireproofing
 - a. Class I or III
 - b. Friable
 - Respirator Required
 - d. NPE, Wet Method, HEPA vacuum
 - e. Work Practices
 - f. Class III Work Practices:
 - 1) Set up mini containment.
 - While assistant sprays material continuously with water amended with surfactant, remove material in a manner to reduce visible dust or debris.

- 3) Immediately place material in waste bag.
- 4) Clean all surfaces of mini containment.
- g. Class I Work Practices
 - Set up full containment.
 - Establish baselines and conduct area monitoring throughout the project.
 - 3) All class III work practices apply.
- 9. Steam/Hot Water/Chiller Pipe Lagging (horizontal, vertical, joints, valves)
 - a. Class I or III
 - b. Friable
 - c. Respirator Required
 - d. NPE, Wet Method, HEPA vacuum
 - e. Work Practices
 - f. Class III Work Practices:
 - Apply duct tape completely around the pipe at point where glove bag will be attached.
 - Slit glove bag down sides; install on pipe with taped portions being attached to tape strips applied to pipe. Allow adequate room for maneuvering of hands at top of glove bag.
 - 3) While assistant sprays lagging continuously with water amended with surfactant, cut lagging around its circumference using handsaws, knives, or other cutting tools.
 - Remove wetted lagging, drop into bottom of glove bag.
 - 5) Clean surface under section of removed lagging using toothbrush, towel, etc.
 - Evacuate glove bag using HEPA vacuum cleaner; tie off glove bag.
 - 7) Remove glove bag from pipe. Seal glove bag using at least two closures. Seal exposed lagging ends with bridging agent and Carlisle Hardcast wettable cloth or equivalent.
 - g. Class I Work Practices
 - 1) Set up full containment.
 - Establish baselines and conduct area monitoring throughout the project.
 - 3) All class III work practices apply.
- 10. Floor Tiles, Rubber Cove Base and Adhesive
 - a. Class II or III
 - b. Non-friable
 - c. Respirator Required
 - d. No NPE if class III, NPE for class II, Wet Method, HEPA vacuum

e. Work Practices:

- Flooring shall be removed only by hand or mechanical methods which do not create dust. These include dry ice/blanket, hand and power scrapers, spud bars, etc. Do not sand, grind, blast or mechanically chip or abrade.
- Adhesive shall be removed only by wet methods or by approved solvent.

11. Window Putty

- a. Class II or III
- b. Friable
- c. Respirator Required
- d. No NPE, Wet Method, HEPA vacuum
- e. Work Practices:
 - 1) Provide plastic on the horizontal surface below the area of work extending out sufficient to capture material being removed.
 - Remove material in manageable sections and lengths without sizable quantities of materials dropping to the floor or ground using wet methods.

3.11 INSPECTIONS

A. Inspection Responsibilities - Contractor

- Prior to beginning any asbestos-related work, Contractor's asbestos supervisor shall inspect the regulated work areas for any building damage, hazardous conditions, and/or irregularities that may contribute to an unsafe work environment. Any condition that poses a hazard or potential hazard to the Contractor's employees or the City community must be immediately reported to the City Representative.
- Contractor is responsible for monitoring and enforcing all requirements of this specification. This responsibility includes communicating scheduling changes to the City Representative to allow inspections at each phase of the project.
- 3. Contractor shall provide protocols for responding to loss of negative pressure after they have left the job site. Under no circumstances shall Contractor shut off negative air machines at the end of the shift, unless the job has received final clearance. Emergency mobile telephone numbers shall be provided of key asbestos Supervisors on the project to the City's Representative in the event they need to be contacted after off hours.
- 4. At the end of each shift, the Contractor shall adequately wet waste, collect all loose debris, place it in double 6 mil poly bags, and label the material. The asbestos waste may remain inside the containment, provided access controls are secure. If the Contractor cannot guarantee access control, the asbestos waste must be secured in a locked storage container.
- The Contractor shall perform a pre-final visual of the containment work area and adjacent surfaces prior to requesting that the City's Representative conduct a

- final visual inspection. The pre-final visual performed by the Contractor shall verify that all materials have been completely removed from the work area.
- Containment access must be available to the City's Representative for any additional tasks that may be necessary.
- Inspection Responsibilities City's Representative Responsibilities
 - The City's Representative shall walk the job site with the Contractor to review pre-cleaning operations and any safety or security issues. The City's Representative shall attend contractor safety meetings.
 - 2. The City's Representative shall verify pre-cleaning was performed in accordance with the specifications.
 - 3. After the Contractor has completed set-up and before commencing operations, the City's Representative shall check completeness of the following items: regulated area is demarcated and posted with Cal/OSHA asbestos warning signs, permits are posted, poly sheeting is six mil, double layers, all HEPA equipment is leak tested (DOP) and passed the challenge tests, electrical tools are connected to GFCI, HVAC is shut off and all supply and return registers, exhaust register are sealed with six mil poly, electrical panels are tagged and locked out, electrical outlets are sealed with 6 mil poly, a fire extinguisher is available inside and outside the containment, and water connections are made with a back flow prevention device. If a NPE is used, the inspector will verify: 0.020" of water pressure is maintained, decontamination is sealed and air flow is correct, and the shower is functioning with a hot water heater, soap, shampoo, and disposable towels if required.
 - 4. Prior to asbestos abatement beginning, the City's Representative shall match onsite personnel with asbestos training certificates, fit tests and medical exam records. Workers without current and valid on-site documentation shall not be allowed in the regulated area.
 - 5. The City's Representative is responsible for reviewing all air sample data for any personal or area air samples exceeding 0.1 f/cc.
 - 6. During abatement or in-place management activities, the City's Representative shall check for the following: all personnel are signing in and out, wet methods are being used, debris is collected at the end of each shift, workers are properly wearing disposable coveralls and respirators, work is performed in a safe manner, and an emergency exit is demarcated.
 - 7. After abatement activities are complete and before lockdown or encapsulant is sprayed, the City's Representative shall verify: completeness of abatement by conducting a thorough visual inspection of the work area and confirm and approve the lockdown (encapsulant) being used.
 - The City's Representative shall review clearance protocols with the Contractor prior to clearance monitoring. If clearance is not achieved, the Contractor shall re-clean the containment area prior to re-sampling of the regulated area. All re-

sampling costs due to clearance monitoring failure are the responsibility of the contractor.

9. After clearance has been achieved the City's Representative shall ensure the work area is clean and free of all equipment, all waste has been removed in accordance with City protocols, keys are returned and the Contractor has restored the room to its original condition or to an otherwise agreed upon state.

3.12 CLEAN-UP

A. Daily Clean-Up

- All asbestos debris shall be adequately wetted, collected, and placed into two 6
 mil plastic bags with Cal/OSHA asbestos warning labels attached. Excess air
 shall be HEPA vacuumed from the bag, and shall be closed in a goose-necked
 fashion and secured with tape. No bag shall exceed a gross weight of 30 lbs.
- Materials exceeding the size of a 60" bag shall be adequately wetted, then
 double wrapped in 6 mil plastic sheeting and sealed air tight with tape, Cal/OSHA
 asbestos warning labels attached or the black diamond label, generator name
 and address and Waste Manifest number attached if the waste is friable
 asbestos materials.
- At the end of each work shift, all asbestos waste shall be secured in a locked container. The containment shall also be made secure such that unauthorized access is not allowed during off-work hours.

B. Final Clean-Up

- Dispose of all loose material as asbestos waste.
- 2. HEPA vacuum all visible debris and dust on the inner (top) layer of poly.
- Wipe down interior surface of the inner (top) layer of poly.
- 4. Spray lockdown on all poly surfaces and within the containment.
- After the lock down encapsulant is dry, remove inner (top) layer of poly and dispose as asbestos waste.
- HEPA vacuum all visible dust and debris from the outer (bottom) layer of poly.
- Wipe down the surface of outer (bottom) layer of poly.
- 8. Spray lockdown on all poly surfaces and within the containment.
- 9. After lockdown has dried, the outer (bottom) layer of poly shall be removed and all visible dust and debris that is present behind this poly shall be cleaned by HEPA vacuuming and wet wiping. At this time only the critical barriers shall remain in place with the building finishes exposed and in need of final detail cleaning.
- 10. When step 9 is achieved, the area is ready for clearance sampling with the critical barriers and decontamination unit left in place with the work area still under negative pressure. Floor and wall poly shall be removed during the

clearance air sampling, unless specific changes have been approved by the City's Representative.

3.13 WASTE DISPOSAL

- A. The Contractor shall propose their choice of hazardous waste site that accepts asbestos to the City's Representative and obtain approval of the hazardous waste site before the Contractor ships off the waste material.
 - Contractor shall comply with all waste protocols established by the City. These
 protocols explicitly require Contractor to properly complete the Uniform Waste
 Manifest form. Failure by Contractor to complete Contractor's portion of the form
 shall result in the Contractor assuming the fine imposed by the responsible
 agency.

B. Packaging Asbestos Waste

All asbestos containing waste material must be packaged in one of three ways: (1) placed two 6 mil clear polyethylene bags, (2) placed in sealed drums (DOT approved) or (3) double wrapped in opaque 6 mil polyethylene sheeting (AKA "burrito style"). For options 1 and 3 wet wipe the outer surface before storing material.

C. Labeling Hazardous Asbestos Waste

Each bag, drum, or "burrito" wrap shall have a label affixed with the following information: (1) Hazardous Waste warning, (2) Generator's Name, address, and phone number, (3) Location information, e.g., Building, department, room, (4) manifest document number, and (5) date. Contractor can generate the label or use bags with label information stenciled on the side. For non-hazardous asbestos waste, a Hazardous Waste Manifest is not required; however, at a minimum, the Cal/OSHA asbestos warning label is required per Title 1529.

D. Storing Asbestos Waste Outside of a Building

At the end of each shift, all asbestos waste shall be stored in a locked container or shipped off site. Accumulated waste shall not be allowed to remain in the regulated work area overnight. No container shall be allowed to remain on campus for greater than 90 continuous days from date the first bag was stored.

- E. The Waste Identification Notice and Certification must be completed by the Contractor to comply with waste stream identification requirements (Title 22, CCR). The Waste Identification Notice and Certification form can be obtained from Transporter.
- F. Uniform Waste Manifest Procedures

Prior to transporting waste from the site to a disposal facility, the Contractor shall prepare a California Uniform Hazardous Waste Manifest (form DTSC 8022A). After completing Contractor's portion of the form, Contractor shall return the Manifest to the City's Representative for signature between the hours of 0700 and 1600 hours Monday to Friday, and will require a 24 hour notice for the signature. The City's Representative or their designee shall sign off and return a copy to the Contractor. Only authorized City personnel can sign on behalf of the Generator. The Generator is the City of Corning. The City shall be responsible for obtaining a hazardous waste generator ID number for the project site.

G. Transporting Asbestos Waste

A registered waste transporter, hired by the Contractor, is responsible for transporting asbestos waste from the City site to a disposal facility permitted for asbestos waste. The transporter must make pick-ups during normal working hours (8:00 AM to 5:00 PM Monday through Friday). The transporter's vehicle must be clearly marked with warning signs.

3.14 CLEARANCE PROTOCOL

A. Project Specific

- The clearance protocol to be used shall be clearly stated and communicated in advance of the City's Representative beginning the clearance procedure.
 - a. All containment areas of asbestos abatement will have clearance air samples analyzed by TEM per the AHERA analytical method.
 - b. Mini-containments in which more than three square feet of ACM is disturbed may be cleared using the PCM Method. The City's Representative will determine if PCM or TEM analysis is performed on the smaller work containments.
 - c. Due to the nature of the project as a demolition of structure, clearance air sampling may not be required at the discretion of the City's Representative. If no clearance sampling is performed, access to the containment shall be restricted and the containment shall be sealed after removal of all abatement equipment. Containment shall remain sealed until demolition of the structure occurs.

B. PCM Clearance Method

- 1. The PCM analytical method for asbestos is one which may be selected; however, it is not the primary method of choice. It will be considered only for very small projects such as project sizes less than about 100 square feet in size for only certain asbestos materials that have been removed. If used, the clearance protocol for PCM Method shall conform to NIOSH 7400.
- Air samples shall be collected on MCE cassettes with a 0.45 micron pore size.
- 3. The clearance criteria shall require all air samples to be <0.010 fiber/cc.
- 4. A minimum 5 air samples shall be collected for each area.
- 5. After the lock down/encapsulant is settled and dry, use a leaf blowers to circulate the air within the negative pressure enclosure (referred to as the aggressive method). Install several free standing 24" fans inside of the work area to facilitate additional air movement inside the containment for the duration of the air sampling period.
- 6. Air sampling shall continue until the sample results meet the clearance criteria. All additional cleaning of the containment by the contractor and additional costs for the collection and analysis of the air samples will be at the expense of the contractor.

C. TEM Clearance Method

- The TEM analytical method is the primary method that will be used at City facilities and will be used the majority of the time on asbestos projects. Clearance protocol for TEM Method shall conform to EPA AHERA standard pursuant to 40 CFR Part 763, Appendix A to Subpart E TEM analytical methods.
- Air samples shall be collected on MCE cassettes with a 0.45 micron pore size.
- 3. After the lock down/encapsulant is settled and dry, use a leaf blowers to circulate the air within the negative pressure enclosure (referred to as the aggressive method). Install several free standing 24" fans inside of the work area to facilitate additional air movement inside the containment for the duration of the air sampling period.
- 4. The clearance criteria shall be the AHERA standard. The average of all air samples collected inside of the work area shall be less than 71 asbestos structures per millimeter squared. If the clearance criteria is not met, the Contractor is responsible to re-clean the entire containment area, and the City's Representative shall collect clearance air samples again. Air sampling shall continue until the sample results meet the clearance criteria. All additional cleaning of the containment by the contractor and additional costs for the collection and analysis of the air samples will be at the expense of the contractor.

3.15 PROJECT CLOSE OUT

- A. Before the final certificate for payment is issued to the Contractor the following information shall be provided to the City's Representative:
 - 1. Provide an "As-Built" summary to include:
 - Contractor's name, address, CSLB certification number, DOSH registration number, and tax identification number.
 - Name of hazardous transporter, address, phone number and registration number.
 - Laboratory names, addresses, and phone numbers used to perform personal and area air samples by PCM.
 - Building owner's name.
 - e. Building name and address.
 - f. Project name and contract number.
 - Describe scope of work; including, location (room numbers, approximate square footage, building system types).
 - h. Provide an inventory of the ACM/PACM removed from the job site. Include, building system, classes of asbestos related work, quantity, note whether the project was abatement or managed in-place, note whether the building system(s) was replaced - use yes or no, and the percentage of the total contract each building system abated or managed in-place represents.

CITY OF CORNING PROPOSITION 68 PROJECT

- Total dollar amount paid by the City for asbestos related work including invoice dates and dates payment were received.
- Number of employees who worked on the job.
- k. Date on-site work began.
- Date on-site was completed.
- m. Work methods.
- Did the City provide specifications.
- Name, address, phone number and EPA registration number of waste disposal site.

B. Documentation

1. The contractor will provide copies of all laboratory reports, chain of custody sampling forms, tail gate safety meeting logs, sign in and sign out logs, other revised notifications to agencies, protocols, and procedures that may be requested by the City's Representative.

END OF SECTION

HAZARDOUS MATERIALS MANAGEMENT - LEAD & OTHER HAZARDOUS MATERIALS

PART 1 - GENERAL

1.1 SCOPE OF WORK

A. WORK INCLUDED - GENERAL

- 1. The Contractor shall furnish all labor, material, equipment, services, testing, employee training, fit testing, medical exams, transportation, and daily expense to meet the requirements of this Specification.
- The Contractor shall obtain all required permits, licenses, registrations, notifications, and regulatory approvals required by law (federal, state and local) policy.
- All lead-related activities associated with this Contract shall be performed during the work period specified in each contract.
- 4. The Contractor shall guard against unnecessary disturbances or damage to sensitive finishes on buildings, building systems, and equipment.

B. WORK INCLUDED - SPECIFIC

- The Contractor is responsible for identifying the exact locations and number of work areas listed below by referring to City supplied Project Drawings and by working with the City's Representative or City's Hazardous Materials Consultant.
- 2. This project does not include lead abatement or lead remediation. This project includes work on building components that have been tested and found to contain measurable amounts of lead. This project is a renovation/demolition project and not considered a lead abatement project with regards to the requirements of Title 17.
- 3. Demolition of whole structures that does not include cutting, sanding, grinding, or abrading known lead containing surfaces or other activities that would produce a lead hazard is an expected part of this project. Lead training requirements vary based on task for this project. Removal of all loose and flakey paint with lead content is required prior to building demolition. Waste characterization for lead is required for all waste streams produced during this project.
- 4. Lead testing of paint chips was performed in the project area with results included in Table 1.

1.2 SITE CHARACTERIZATION

A California Department of Public Health (CDPH) Certified Lead Inspector/Assessor, Mr. Willian Irwin of Alliance Environmental Inc., conducted a lead in paint testing in the project area. Results of paint chip sampling with analysis by atomic absorption spectroscopy (AAS) are presented in Table 1. Only those materials shown in Table 1 to contain lead below the limit of detection by AAS may be treated as lead-free. Limit of detection for this sampling was 80 parts per million (ppm).

Table 1

Lead Containing Materials in Project Area

Paint Chip Samples by Atomic Absorption Spectroscopy (AAS)

Building System Type	Lead Content (PPM)	Quantity (Approx.)	Location
Unknown – Pink	<80	Unknown	811 4th Street – Front Office
Unknown – Green	250	Unknown	811 4th Street – Exterior Area
Unknown – White	<80	Unknown	811 4th Street – Back Area
Unknown – White	<80	Unknown	811 4th Street – Upstairs Kitchen
Unknown – White	<80	Unknown	813 4th Street – Interior Area
Unknown – Blue	<80	Unknown	813 4th Street – Interior Area
Unknown – Red	<80	Unknown	813 4th Street – Exterior Area
North Wall - White	3,700	Unknown	1111/1113 Solano Street - North
		ł	Wall
South Wall - White	3,600	Unknown	1111/1113 Solano Street - South
			Wall
East Wall – Red	<80	Unknown	1111/1113 Solano Street – East Wall
Metal Beam - White	26,000	Unknown	1111/1113 Solano Street – Beams
Wood Beam - White	25,000	Unknown	1111/1113 Solano Street - Beams
South Wall – White	<80	Unknown	1158 Marin Street – South Wall
Exterior West Wall – White	<80	Unknown	1158 Marin Street – Exterior West
			Wall
Exterior South Wall - Red	7,800	Unknown	1158 Marin Street – Exterior South
			Wall
Shed – Green	6,800	Unknown	1158 Marin Street – Shed
Shed – Green	11,000	Unknown	1158 Marin Street – Shed

A. Hazardous materials, other than lead containing paints and Presumed Lead Containing Material (PLCM) that have the potential to be disturbed at this Project site are listed below:

Material Description	Type of Hazard	Location	
Fluorescent Light Bulbs	Mercury	See Drawings	
Light Ballasts	PCB's	See Drawings	
Light Ballasts	Universal Waste	See Drawings	
Mold Contamination	Mold	Undetermined	
Thermostat Switches	Mercury	See Drawings	
(Materials)	Asbestos	See Asbestos Specifications	
Exit Signs	Radioactive Gas Tritium	See Drawings	

- B. Where light fixtures are required to be removed, the Contractor shall recycle all fluorescent light tubes and non-PCB containing ballasts as Universal Wastes as required in Title 22. All PCB containing light ballasts or caulking (if present) shall be sent to a hazardous waste site as a separate waste stream. Determination of potential PCBs for each light ballast shall be made when the light fixture is removed from the building component. Packaging of light tubes and light ballasts shall be in accordance with regulatory standards for safe storage and transport by a hazardous waste hauler.
- C. Prior to handling other hazardous materials at the project site, the Contractor shall review City's protocols.

1.3 ABBREVIATIONS AND DEFINITIONS

A. Abbreviation

AA Atomic Absorption – Flame (EPA SW-846)
AIHA American Industrial Hygiene Association
AL Action Level (30 μg/M³ per 8 hour TWA)

BLL Blood Lead Level

CCR California Code of Regulations

CDPH California Department of Public Health
CEPA California Environmental Protection Agency

CFR Code of Federal Regulations
CSLB Contractor's State Licensing Board
DIR Division of Industrial Relations

dL Deciliter

DOSH Division of Occupational Safety and Health DOT Federal Department of Transportation

DTSC California Department of Toxic Substances Control
ELLAP Environmental Lead Laboratory Accreditation Program
ELPAT Environmental Lead Proficiency Analytical Testing Program

EPA U.S. Environmental Protection Agency

FVC Forced Vital Capacity
FEV Forced Expiratory Volume
GFCI Ground Fault Circuit Interrupter
HEPA High Efficiency Particulate Air

HUD U.S. Department of Housing and Urban Development

HVAC Heating, Ventilation, and Air Conditioning

INTERIM CONTROLS Removal at specific locations to accommodate remodel < 20 years

LBP Lead Based Paint (paints, varnish, shellac, etc. >0.5% lead by weight,

>5,000 ppm, or > 1.0 mg/cm²)

LCM Lead Containing Material – materials tested to contain any measurable

levels of lead

μg Microgram = part per billion (ppb)

SDS Safety Data Sheet

NAAQS National Ambient Air Quality Standards

NAM Negative Air Machine

NESHAP National Emissions Standard for Hazardous Air Pollutants

NFPA National Fire Protection Association
NPE Negative Pressure Enclosure

NVLAP National Voluntary Laboratory Accreditation Program

O&M Operations and Maintenance

OSHA Federal Occupational Safety and Health Administration
PEL Permissible Exposure Limit (50 µg/M³ 8 hr. TWA)

PLCM Presumed Lead Containing Material PPE Personal Protective Equipment

RCRA Resource Conservation and Recovery Act

TCLP Toxicity Characteristic Leaching Procedure (mg/L)
TTLC Total Threshold Limit Concentration (wet-weight mg/kg)

TSP Trisodium Phosphate
TWA Time Weighted Average

STLC Soluble Threshold Limit Concentration (mg/L)

ULPA Ultra Low Penetrating Air XRF X-ray Fluorescence ZPP Zinc Protoporphyrin

- B. Definitions: The following definitions are provided for additional clarification and may exceed Federal, State or local regulatory requirements.
 - Lead Abatement "Abatement" means any set of measures designed to reduce or eliminate lead hazards or lead-based paint for public and residential buildings, but does not include containment or cleaning.
 - Lead Related Construction Work any "construction, alteration, painting, demolition, salvage, renovation, repair, or maintenance of any residential or public building, including preparation and cleanup that, by using or disturbing lead-containing material or soil, may result in significant exposure of adults or children to lead". (Title 17, California Code of Regulations, Division 1, Chapter 8, Article 1).

1.4 SUBMITTALS

- A. References: Submit names, addresses and telephone numbers of at least 3 Project Managers or Owners (not employed by Contractor) for whom Contractor has performed jobs of similar size and character to the work specified in this Contract.
- B. General: Submittal requirements listed below shall be completed and accepted by City's Representative prior to scheduling the start of project site work.
- Notifications and Permits: Submit copies of all regulatory agency notifications and permits.
 - Contractor is required to submit a "Lead-Work Pre-Job Notification" (8 CCR 1532.1(p)) for all projects, if there is greater than 100 square feet or greater than 100 linear feet of materials containing lead greater than 5,000 ppm, 0.5% by weight, or 1.0 mg/cm² to be removed. If these quantities are exceeded, a copy of the notification to Cal/OSHA shall be provided to the City's Representative.
- D. Worker Training and Safety Programs
 - 1. Training Certificates: For each employee who will be employed on the Project, submit a copy of employee's lead training that meets Cal/OSHA training requirements under Title 8 Section 1532.1 Lead in Construction. The City requires all contractor and subcontractor personnel directly involved with lead abatement to have current CDPH lead training certificates at a level appropriate for the project task (e.g., Project Designer, Project Monitor, Supervisor, Worker, Inspector/Assessor), in the unlikely event that lead abatement is required for the project.
 - Qualifications of person taking Personal Air Samples: Submit information regarding training and qualifications of the field technician who will be collecting personal air samples.
- E. Safety Programs: On company letterhead, submit confirmation that the Contractor has written safety programs for:
 - 1. Injury Illness Prevention (T8 CCR 3203) (mandatory for all projects).
 - 2. Hazard Communication (T8 CCR 5194) (mandatory for all projects),
 - 3. Fall Protection (T8 CCR 1620 1621, 1632 1633, 1635.1 1637, 1640 1655, 1669 1672, 3209 3239) (when applicable),

- 4. Lock Out Tag Out (T8 CCR 3314) (when applicable),
- 5. Confined Space (T8 CCR 5156) (when applicable).
- 6. Respiratory Protection (8 CCR 5144) (when applicable)
- 7. Medical Surveillance (8 CCR 1532.1(i)) (when applicable)
- 8. Lead Compliance (8 CCR 1532.1(e)(2)) (when applicable)
- F. Work Plan and Schedule: Submit proposed Work Plan and schedule. The Work Plan shall be project specific and address project site preparation, site and engineering controls, worker protection and exposure monitoring, and protection of building occupants from exposure to lead. Schedule of work must be submitted and approved before work begins.
- G. Product Data Sheets and Safety Data Sheets (SDS): For all products proposed for use on the project, submit copies of the manufacturers' safety data sheets to the City's Representative for review.
- H. Laboratory Qualifications: For any laboratory performing lead analysis the Contractor shall submit evidence of ELLAP and ELPAT certification and accreditation. Laboratories performing worker exposure sample analysis must submit evidence of AIHA IHLAP certification for metals if they do not have ELLAP or ELPAT certification.
- I. HEPA/ULPA Equipment Test: Submit copies of leak test results to the City's Representative prior to starting project site work. Leak testing shall be performed at the project site and shall be witnessed by the City's Representative. The leak test results shall identify equipment by make, model and serial number. No equipment which fails the leak testing may be used at the project site, unless it is exclusively exhausts outdoors. Vacuums which fail may be used within full negative pressure enclosures at the discretion of the City.
- J. Emergency Contact List: Submit an emergency contact list; include name, phone number, fax number and pager number for Contractor's supervisor or competent person and subcontractor's telephone numbers who can be reached on a 24-hour basis.
- K. Hazardous Waste Disposal Plan: Submit a Waste Disposal Plan that includes estimated number of containers, size of container(s), hazardous material transporter name and proposed disposal site before start of project.
- Lead As-Built Summary: Submit a Lead As-Built Summary within 14 calendar days of the last day of field Work and prior to a request for final application for payment. The summary shall include a description of lead containing materials that were removed and a description of lead containing materials that remain in the project area.

1.5 CONTRACTOR QUALIFICATIONS

A. Contractor licensing for this work will require a B, C33, or C61/D-38 and appropriate lead training for employees to perform lead related work.

1.6 RULES AND REGULATIONS

A. The Contractor shall comply with the most recent edition of applicable Federal, State, local, and City standards, laws, codes and regulations. If a conflict exists between

referenced regulatory requirements and Contract Documents, the Contractor shall notify the City's Representative in writing and request the conflict be resolved. Contractor performing work contrary to mandated laws shall bear full legal and financial responsibility for the violations.

- B. The list of regulators and regulations, cited below, serve as a reference for the most commonly used standards governing the lead industry:
 - 1. FEDERAL REGULATIONS AND REGULATIONS
 - a. EPA Environmental Protection Agency
 - (1) 40 CFR Part 261 et al. Resource Conservation and Recovery
 Act
 - (2) Title X Residential Lead Poisoning Prevention Act
 - (3) National Ambient Air Quality Standards (40 CFR 50)
 - b. OSHA Occupational Safety and Health Administration
 - (1) 29 CFR 1926.62 Construction Lead Standard
 - (2) 29 CFR 1910,1025 General Industry Lead Standard
 - (3) 29 CFR 1910.147 Lock Out Tag Out
 - c. DOT Department of Transportation
 - (1) 49 CFR Parts 173, 178 and 179
 - 2. STATE REGULATORS, LAWS AND REGULATIONS
 - a. Cal/OSHA California Division of Occupational Safety and Health
 - (1) 8 CCR 1532.1 Construction Lead Standard
 - (2) 8 CCR 5216 General Industry Lead Standard
 - (3) 8 CCR 5194 Hazard Communication
 - (4) 8 CCR 5157 Confined Space
 - (5) 8 CCR 5144 Respiratory Protection
 - (6) 8 CCR 3203 Injury and Illness Prevention
 - b. DTSC Department of Toxic Substances Control
 - (1) (Health and Safety Code Chapter 6.5 Hazardous Waste Control, Article 6 Transportation and Article 6.5 Hazardous Waste Haulers
 - (2) CCR, Title 22, Division 4, Sections 66000, et al.
 - c. CIWMB California Integrated Waste Management Board
 - d. California Department of Public Health (CDPH)
 - (1) CCR, Title 17, Division 1, Chapter 8
 - e. SWRCB State Water Resources Control Board CCR, Title 23
 - f. CSLB California Contractors State License Board
 - g. Health and Safety Code 25157.8 (AB 2784 Natural Resources)

1.7 NOTIFICATION AND PERMITS

- A. The Contractor is responsible for notifying Federal, State and local agencies, obtaining all required permits/extensions and paying all related fees, as required.
- B. Sacramento Metropolitan Air Quality Management City (SMAQMD) has no notification requirements for lead related work. SMAQMD and Cal/OSHA do have notification requirements for asbestos related work.
- C. Contractor is to submit a Lead-Work Pre-Job Notification to CAL/OSHA as required by 8 CCR 1532.1.

1.8 CITY CONTACTS

A. City's Representative: Robin Kampmann, City Engineer

1. Phone: 530-824-7025

PART 2 - PRODUCTS

2.1 MATERIALS

A. Safety Data Sheets (SDS)

 The Contractor shall provide SDS for all products used on UCDHS job sites. The SDS files shall be located near the Project site entrance at all times the product is used or stored onsite.

B. Polyethylene Products

- Floor and wall sheeting used for lead containments or critical barriers are required to have a minimum thickness of: a) 6-mil (floor) and 4-mil (walls); and, b) meet the following standards -- ASTM E-84, with a flame resistance/spread rate less than or equal to 25 ASTM (E-162).
- The polyethylene sheeting used for containment or critical barriers shall be frosted or black. Polyethylene bags or sheeting used for waste may be clear.

C. Paint Removers

- All paint removers shall be pre-approved by the City. Methylene chloride based paint removers are not permitted on this project.
- 2. The use of paint removers on the project must strictly comply with manufacturer application instructions and safety warnings.

2.2 EQUIPMENT

- A. HEPA/ULPA vacuums and negative air machines must be leak tested on-site by a firm independent of the Contractor, who are trained and qualified to perform the challenge testing of portable HEPA filtered equipment, shall follow the manufacturers recommended test procedure, and shall use the recommended test challenge agent.
- B. Tools and equipment shall arrive at the project site free of lead debris and dust.
- C. HEPA/ULPA vacuum exteriors must be clean when they arrive on project site. All openings on the vacuum, hoses, and negative air units shall be taped shut when they are brought onto the project site and when they are taken from the project site.
- All electric tools and equipment shall be connected to a GFCI.
- E. Power tools used to prepare surfaces containing lead must be connected to a HEPA/ULPA vacuum.
- F. Heat guns with a working temperature less than or equal to 1100° F are permitted.

PART 3 - EXECUTION

3.1 SAFETY

A. In accordance with State and Federal laws, Contractor shall be responsible for conditions of the project site including the safety of all persons and property during the performance of work. To ensure effective communication in safety matters the Contractor shall participate and conduct the following meetings:

- A pre-construction safety meeting is required to be held with the City's Representative prior to the start of the project. The following subjects shall be discussed: impact to building occupants; waste disposal, and work related safety programs.
- On the first day of lead related work, the Contractor shall conduct a safety meeting (tailgate) for its employees and subcontractor employees that alert them to the specific hazards of the project. The Contractor must conduct the safety meeting in the primary language of its employees. If needed, more than one primary language presentation must occur. This same initial safety meeting must be provided to all personnel new to the project before they are permitted to start work.
- On a weekly basis, the Contractor shall conduct a safety meeting with its employees.

3.2 WORK SITE PREPARATION

- A. Prior to beginning any on-site work preparation, the Contractor shall walk the project area with the City's Representative to discuss site characterization, regulated area set-up, access controls, background samples, security, and safety issues.
- B. Post all regulatory notices, permits, sign-in-out roster, at the primary entrance to the project site.
- C. The Contractor, in coordination with the City's Representative shall ensure all electrical and HVAC equipment servicing the work area is disconnected and locked out. Electrical tools in the work zone must be connected to a GFCI.
- D. The Contractor shall seal existing critical barriers, including HVAC openings, windows, vents, open pipes, skylights, ducts, doorways, corridors, and diffusers with double layers of plastic and cardboard or plywood inserts as necessary.
- E. The Contractor shall pre-clean fixed objects and interior surfaces prior to establishing containment or critical barriers. The area to be pre-cleaned will be a minimum of 10 feet outside the Controlled area or surrounding structure which ever is closest. The Contractor will pre-clean exposed fixed objects and interior surfaces within the containment.
- F. The Contractor shall install approved backflow prevention devices before connecting to the City's domestic water system, if necessary. Contact the City's Representative for a list of approved devices.
- G. The Contractor is obligated to coordinate inspection schedules with the City's Representative and the City's Representative.
- H. The Contractor shall establish project site control barriers.

3.3 WORK SITE CONTROL

- A. The Contractor shall restrict the work areas to authorized personnel including the Contractor's employees, City's Representative, and regulatory agency representative.
- B. At regulated project sites, the Contractor shall use caution tape to demarcate the boundary of the work zone and post lead warning signs.

The following sign is required by Title 8, CCR 1532.1

DANGER LEAD WORK AREA MAY DAMAGE FERTILITY OR THE UNBORN CHILD CAUSES DAMAGE TO THE CENTRAL NERVOUS SYSTEM DO NOT EAT, DRINK OR SMOKE IN THIS AREA

- C. All unauthorized personnel are to remain outside the regulated area. The Contractor shall call the City's Representative if unauthorized staff or the public enters the containment area.
- D. If inclement weather threatens the project site, the Contractor shall take all necessary measures to ensure lead-contaminated debris does not migrate from regulated areas. Steps shall also be taken to prevent water intrusion/water damage to the work site and adjacent areas.
- E. If wind speed threatens the project site, the Contractor shall erect a wind barrier or suspend operations until the wind is below 15 mph.

3.4 RECORDKEEPING

- A. The Contractor shall maintain the following records at the regulated work area:
 - Site Log (sign-in/sign-out).
 - 2. Incident Log and Emergency Action Plan.
 - 3. Personal air sampling results.
 - Area sample results from inside and outside the regulated area.
 - Lead Supervisor (Contractor) and Lead Worker training certificates, respirator fit tests, and medical clearance certificates.
 - 6. Federal, state or local notifications.
- B. All Items 1 through 6 shall be submitted with the "As-Built" summary Identified in "Project Close-Out".
- C. The City's Representative shall retain all sample records (wipe, bulk, initial, area (perimeter), and clearance samples). At the end of the project, all sampling records are submitted as a complete package in the project close out to the Project Manager.

3.5 ADMINISTRATIVE CONTROLS

A. Any remediation project performed in high heat environments requires the Contractor to comply with T8 CCR 3395, including providing sufficient breaks to maintain a safe environment for their workers.

3.6 ENGINEERING CONTROLS

- A. Negative Pressure Enclosure (NPE)
 - 1. Mini-containments: The construction of a mini-containment requires a minimum of one layer of 6-mil polyethylene and a HEPA/ULPA vacuum or HEPA filtered negative air unit exhausting from the containment.
 - HEPA vacuumed assisted tools shall be used for drilling, cutting, sawing, or removing lead containing paint from surfaces, unless a paste type stripper product is used.

B. HEPA/ULPA Equipment

- The Contractor shall ensure all HEPA/ULPA filtration units are leak tested on project site by an independent testing contractor. Each piece of equipment shall be tested in compliance with the ANSI Z9.2 Standard (trapping and retaining 99.97% of all test particles of 0.3 microns). Documentation of testing is to be maintained at the work site. The City's Representative shall be present to observe the challenge testing of all HEPA systems brought onsite.
- 2. The Contractor shall HEPA/ULPA vacuum visible debris prior to set-up, during the removal process and at the conclusion of each shift.
- HEPA/ULPA equipment used to establish negative air pressure within a space must run continuously (24-hours a day) until the project is complete.
- 4. The Contractor shall ensure make-up air is drawn through an inlet that can be easily sealed in the event of a negative air failure. The inlet sealing method must also be effective when there is a failure in the system after normal work hours.
- All HEPA/ULPA filters must be disposed as hazardous waste.
- 6. Any HEPA system that has been removed from the project site and brought back to the project site shall be challenge tested again before being placed in use.

C. Wet Methods

 Prior to removing LCM/PLCM, the Contractor shall adequately wet the material with water. The waste must remain wet until properly packaged for disposal.

D. Removal Operations

- If there is lead abatement work, as defined in these requirements, the Contractor must use a CDPH-Certified Lead Supervisor and CDPH-Certified Lead Workers.
 The Lead Supervisor must be present onsite at all times.
- Ensure all accumulated debris is completely sealed by the end of the shift. After gross debris is bagged, use wet wipe methods and HEPA/ULPA vacuums to clean the polyethylene sheeting.

3.7 WORKER PROTECTION

- A. The following protective measures are required for lead-related work associated with this project. These measures are not intended to be all-inclusive:
 - 1. Employee Training/Supervision
 - a. The Contractor shall provide information to its employees about lead and other hazards per the Hazard Communication standard (8 CCR, 5194) and other Cal/OSHA standards (e.g., asbestos, fall protection, etc.) as appropriate for the project.
 - All contractor and subcontractor personnel are to be trained to the level of their project assignment in accordance with 8 CCR 1532.1, which at a minimum will require lead awareness training (1-2 hours in length).
 - 2. Respiratory Protection
 - a. The Contractor shall provide respiratory protection to all employees where there is the potential for exposure to lead dust at or above the permissible exposure limit per Title 8 5144 Respiratory Protection.
 - b. The Contractor's employees who wear a respirator must have passed a fit test within the previous 12 months to perform contract work at the City.
 - 3. Protective Clothing
 - a. The Contractor shall provide workers with sufficient sets of protective clothing. Tyvek™, Kleenguard™ or equivalent, coveralls (with hood and feet protection) or equal are acceptable.

- b. The Contractor shall provide rubber, latex or Nitrile gloves, rubber boots, eye protection, earplugs and hard hats as needed per the 8 CCR, Hazard Communication and Personal Protective Equipment standards.
- 4. Medical Surveillance
 - a. As required by 8 CCR 1532.1, the Contractor shall establish a medical surveillance program for all employees performing lead work if work is expected to exceed the Action Level for more than 30 days per year. In addition, all personnel required to wear a respirator shall have an medical evaluation to assure they are capable of wearing a respirator per T8 CCR 5144.
 - b. The Contractor shall demonstrate all project personnel are participating in the medical surveillance program with evidence supported in the prejob submittal.

3.8 PERSONAL HYGIENE

- A. The Contractor shall require that no employee be allowed to apply cosmetics, or consume food, tobacco products, or beverages in the regulated work area.
- B. The Contractor shall establish a location outside the work area, which shall be designated for employee eating and drinking. Employees must utilize the on-site decontamination facilities for clean-up prior to entering the designated eating/drinking location. The eating area shall be kept clean of dust on all horizontal surfaces. Cleaning stations shall include clean water, soap, and towels. Al workers shall clean face, hands and lower arms before leaving the work area for break periods, and at the end of the work shift.

3.9 AIR MONITORING PROGRAM

- A. Personal Air Samples Contractor Responsibility
 - 1. The Contractor shall presume construction activities will exceed the PEL and conduct initial and daily exposure assessments in accordance with T8 1532.1.
 - 2. Exposure assessments are to be conducted in accordance with 8 CCR 1532.1(d).

B. Area Sampling

- 1. Daily Perimeter Monitoring City's Representative Responsibilities
 - a. The City's Representative is responsible for monitoring the perimeter of the work zone at their discretion. Air samples that exceed 30 ug/m³ per 8 hr. TWA require the City's Representative to halt work and notify the Contractor. Work may resume after the Contractor has identified and corrected the work practice that led to the high airborne lead levels.
- 2. Daily Monitoring City's Representative Responsibilities
 - a. The City's Representative is responsible for monitoring air quality within the regulated area, including the clean room at their discretion. Any sample at or above 30 μg/M³ TWA in the clean room requires a cessation of work until the area is cleaned and the cause of the problem has been determined and solved. The Contractor shall thoroughly clean the spaces using the HEPA vacuum and wet wiping techniques. Air samples in the work zone that exceed the protection level of a respirator require a cessation of activity. The Contractor's competent person and the City's Representative shall review work practices as necessary.

3.10 SPECIFIC WORK PROTOCOLS

- A. Specific work protocols, cited below, provide minimum guidance for the performance of site work.
 - 1. Initial Site Clean-Up
 - a. LBP/LCM contaminated chips or debris, etc. generated during the project shall be collected while workers are wearing proper respirators and disposable coveralls, and using HEPA vacuums, wet methods, polyethylene bags, lead warning labels and proper disposal protocols.
 - 2. Interim Controls (In-Place-Management)
 - This is a control measure to reduce or eliminate lead exposure for less than 20 years. It is not considered abatement. Several strategies are used to control potential exposure to LCM left in place including, dust removal, paint stabilization, treatment of impact/friction surfaces, and soil coverings. No Interim Controls for lead are included in this project.
 - Dry blasting LCM is not permitted except by special circumstances preapproved by the City.
 - Water blasting LCM surfaces will not be allowed.

3. Abatement

- Lead abatement is not planned for this project. Abatement is meant to permanently control LCM products for a period of time greater than 20 years or in response to a lead hazard.
- b. The renovation project may impact lead in building components, but any disturbance to lead in paint must follow the Lead in Construction requirements of 8 CCR 1532.1.
- c. If the contractor needs to remove paint from surfaces, there are many options to consider including use of paint removal paste (such as Peel Away or equivalent), wet sanding, and HEPA equipped shrouded tools when disturbing LCM surfaces.
- d. Dry blasting LCM is not permitted except by special circumstances preapproved by the City.
- e. Water blasting LCM surfaces will not be allowed.

Demolition of Structures

- Demolition of structures with LBP/LCM via the use of mechanical means that does not include cutting, sanding, grinding, or abrading may be performed.
- b. Minimum training requirements for workers will still be enforced along with all hazard communication requirements.
- All waste produced will need to be characterized for lead content prior to removal from the site.
- d. Removal of all loose and flakey paint must be performed via hand methods prior to building demolition as not to create a lead hazard.

3.11 INSPECTIONS

A. Inspection Responsibilities - Contractor

- Prior to beginning any lead-related work, the Contractor's lead supervisor shall inspect the regulated work areas for any building damage, hazardous conditions and/or irregularities that may contribute to an unsafe work environment. Any condition that poses a hazard or potential hazard to the Contractor's employees or the City's employees, patients and visitors must be immediately reported to the City's Representative.
- 2. The Contractor is responsible for notifying and allowing sufficient time for the City's Representative to conduct inspections at all phases of the project.

- The Contractor shall establish emergency response protocols for a manometer alarm sounding after they have left the project site. Under no circumstances shall the Contractor shut off negative air machines, unless the project has received final clearance.
- 4. All waste shall be characterized and separated by the Contractor. Wastes will be sampled individually as directed by the City's Representative to determine levels of lead before containerizing for shipment.

B. Inspection Responsibilities – City's Representative

- 1. The City's Representative shall walk the project site with the Contractor to review scope of work, pre-cleaning operations and any safety or security issues. The City's Representative may attend the Contractor's safety meetings.
- 2. If minor lead related work requires removal of paint from surfaces using a paste, or work practices using HEPA filtered equipment, the hazard control measures shall be evaluated by the City's Representative.
- Prior to lead related work activities beginning, the City's Representative shall match on-site personnel with lead training certificates, fit tests and medical exam records. Workers without on-site documentation shall not be allowed in the regulated area.
- The City's Representative is responsible for:
 - Reviewing all sampling data and all waste stream profiles.
 - b. Review Contractor's performance and non-compliance report to the Project Manager.
- After lead-related construction work, abatement, or interim control activities are complete, the City's Representative shall verify completeness of all visible debris removal.
- 6. City's Representative shall review contractor's waste characterization for the most efficient disposal for the City.

3.12 ENCAPSULATION, FINAL CLEAN-UP AND RESTORATION

A. Encapsulation

1. Encapsulation for lead painted components is not anticipated for this project.

B. Final Clean-Up

 Contractor shall clean entire project area of dust from all surfaces within the construction work area.

C. Restoration

1. Fixtures, equipment or objects relocated to storage areas designated by the City's Representative shall be restored to their exact position. The Contractor assumes full financial responsibility for damage to these objects.

3.13 WASTE DISPOSAL

- A. Packaging Lead Waste
 - All lead containing waste material must be packaged and labeled in accordance with U.S. DOT, DTSC and EPA requirements.
- B. Storing Lead Waste

- At the end of each shift, all lead waste shall be stored in a lockable container or shipped off site. Accumulated waste shall not be allowed to remain in the regulated work area overnight. No container shall be allowed to remain at the project site for greater than 90 continuous days from date the first waste container was generated.
- C. Uniform Hazardous Waste Manifest Procedures
 - 1. The Contractor or transporter is responsible for providing appropriate Uniform Hazardous Waste Manifests for the transport of hazardous waste materials. Only authorized City personnel can sign on behalf of the generator.
- D. Transporting Lead Waste to Class 1 Landfill
 - 1. A DTSC registered waste transporter, hired by the Contractor, is responsible for transporting hazardous lead waste to an EPA permitted disposal facility.
 - 2. The transporter shall make pick-ups during normal Working hours 8:00 AM to 5:00 PM, Monday through Friday. The Contractor must comply with DOT label requirements for their vehicles.
 - 3. The Contractor must make shipments of lead waste containing less than 1,000 mg/kg lead but greater than 350 mg/kg of lead to a Class 1 landfill. This shipment does not require a registered waste hauler.

E. Disposal

- The selection of a Treatment, Storage and Disposal Facility as an alternative to a landfill for disposal of lead waste must be reviewed and approved by the City's Representative prior to arranging for the shipment of the waste.
- The Contractor shall provide waste documents from the Waste Disposal site as verification of the weight and proper disposal site, to the City's Representative within 15 days of each container disposal.
- 3. Lead waste that has been contaminated with another hazardous waste (e.g. solvents) must be tested and disposed according to all applicable standards.
- 4. All lead waste will be sampled for Characterization before determination of Hazardous or Non-Hazardous material is made. Sequence of testing is as follows:
 - a. A TTLC result of ≥1,000 mg/kg is considered a hazardous waste.
 - TTLC with a result of ≥50 mg/kg of lead must be retested using STLC method.
 - A STLC result of ≥5.0 mg/l must be retested using TCLP.
 - d. A TCLP result of ≥5.0 mg/l deems the waste Federal RCRA.
 - e. A STLC of ≥5 mg/l is categorized as State Hazardous Waste (Class 1).
 - f. A TTLC with a result of >350 mg/kg but <5.0 mg/l (STLC and TCLP) must go to landfill permitted to accept this level of lead although it is not hazardous. (See Item 6 below)</p>
- Contractor shall provide a waste stream report to the City's Representative identifying the number of containers and an explanation of how the samples were taken (composite or individual container sampling). A waste stream profile must be conducted on each unique waste stream. Confirmation will be provided by the Consultant, indicating all waste streams have been sampled per project specifications.
- 6. All waste with total lead >350 ppm (mg/kg) disposed of in California, must be disposed of at a permitted Class 1 Hazardous waste landfill, or at other landfills that have specific permits to accept these wastes. However, the wastes are not classed as hazardous wastes unless for a reason other than lead content. The California hazardous waste threshold for total lead is ≥1,000 mg/kg and the soluble threshold concentration (STLC) for lead is ≥5 mg/l.

F. Recordkeeping

 The Contractor shall provide the City Project Manager with copies of all waste disposal documents.

G. Fees

 The Contractor is responsible for all fees and charges related to lead waste transport and disposal operations including, waste steam profiles. Refer to SW-846-1311 (TCLP) and CCR, Title 22 Section 66261 (STLC) for waste stream identification requirements

H. Non-Hazardous Waste Manifest

 The City's Representative is responsible for reviewing and signing nonhazardous waste manifests. Prior to the Representative signing the manifest, the City's Representative shall inspect the load and confirm its non-hazardous status.

I. Recycled Metals

1. Recycling ferrous or non-ferrous metals with adhered lead paint is encouraged by the City. This section defines "Hazardous Waste" for the purpose of defining waste stream as material that is placed in a land fill. Employee protection regulations remain the same during disturbance of lead. The Contractor is required to remove all loose and flaking paint. The Contractor is responsible for removing all other hazardous material that is unacceptable by the recycling firm. The Contractor is required to recycle where possible. The contractor will obtain a letter from the recycler acknowledging that the recycler is aware of the lead paint and has an Injury Illness Prevention Program (IIPP) that addresses the handling of this material that meets OSHA and EPA regulations. There is no City requirement for testing (TTLC, STLC, or TCLP) the recycle material stream.

3.14 CLEARANCE PROTOCOL

A. Abatement and Interim Control Projects

- Lead abatement is not planned for this project; therefore, clearance wipe sampling is not currently planned. If, however, there is lead abatement due to an identified lead hazard, the following will be conducted:
- Prior to any clearance sampling, the regulated areas shall be visually inspected by the City's Representative for the presence of LBP chips, visible settled dust or debris. Final clearance sampling shall not take place until the area has successfully passed this visual clearance. The Representative shall follow the U.S. Housing and Urban Development (HUD) clearance wipe sampling protocol, which includes wiping one square foot of the surface being tested using an "S" pattern with an approved commercial lead sampling wipe. Clearance wipe sampling shall be conducted in locations most likely to be contaminated.
- The City's Representative following HUD guidelines and CDPH Title 17
 requirements, shall select the total number of clearance samples for each job site
 and shall use the Title 17 criteria for clearance purposes.

3.15 PROJECT CLOSE OUT

- A. Before the final certificate for payment is issued to the Contractor the following information shall be provided to the City's Representative:
 - Provide "As-Built" summary to include:
 - a. Contractor's name, addresses, CSLB certification number, DOSH registration number, and tax identification number.

- Name of hazardous transporter, address, phone number and registration number.
- c. ELAP laboratory name(s), addresses, and phone number(s) used to perform AA (flame), TCLP, TTLC or STLC analysis.
- d. Building name and campus address.
- e. Project name and contract number.
- f. Describe scope of Work; Lead Related Work, Interim Controls, or Abatement and location (room number[s]); provide drawings detailing the areas in which lead work that were accomplished.
- g. Provide an inventory of the LCM/PLCM removed from the project site. Include: building system, quantity, note whether the project was Abatement or Interim Controls, the percentage of the total lead job for each building system type and cost.
- h. Total dollar amount paid by the City for lead-related work including invoice date(s) and date(s) payment received.
- i. Number of employees who worked on the project
- i. Date on-site work began
- k. Date on-site work was completed
- Work methods
- m. Did the City provide specification (answer yes or no).
- n. Name, address, phone number and EPA registration number of waste disposal site.
- Note that all copies of waste documents from the Waste Disposal site for hazardous material must be received by the City's Representative as part of this section.
- p. The Contractor shall provide copies of all laboratory reports lead work protocols, and disposal documents requested by the City's Representative.
- All documents relating to actual employees used for remediation purposes.

END OF SECTION