DSA **140**

APPLICATION FOR SUBMITTAL OF POST-APPROVAL DOCUMENT

This application is for submittal of documents, after the initial approval of the project (post-approval documents), that require Division of the State Architect (DSA) review and approval.This form shall be completed by the Design Professional in General Responsible Charge of the project, in accordance with California Code of Regulations, Title 24, Part 1, Sections 4-317, 4-323 and 4-338 and in compliance with DSA IR A-6: Construction Change Document Submittal and Approval Process.

DSA documents referenced within this form are available on the DSA Forms or DSA Publications webpages.

1. SUBMITTAL TYPE: (Is this a resubmittal? Yes ☐ No ☐)

Deferred Submittal ☐	Addendum Number: 01	Revision Number:	CCD Number:	Category A ☐ or B ☐

2. PROJECT INFORMATION:

School District/Owner: Redwoods Community College District	DSA File Number: 12 C1
Project Name/School: PE Replacement Project	DSA Application Number 01 119705

3. APPLICANT INFORMATION:

Date Submitted: 06/19/24	Attached Pages? No ☐ Yes ☑ Number of pages? 100		
Firm Name: tBP Architecture	Contact Name: Jeff Rosier		
Work Email: jrosier@tbparchitecture.com	Work Phone: (925) 246-6419		
Firm Address: 1777 Oakland Blvd. Suite 320	City: Walnut Creek	State: CA	Zip Code: 94596

4. REASON FOR SUBMITTAL: (Check applicable boxes)

☑ For revision or addendum prior to construction.

☐ For a project currently under construction.

☐ For a project that has a form *DSA 301-N: Notification of Requirement for Certification*, *DSA 301-P: Posted Notification of Requirement for Certification* or a 90-Day Letter issued.

☐ To obtain DSA approval of an existing uncertified building or buildings.

☐ For Category B CCD this is: ☐ a voluntary submittal, ☐ a DSA required submittal (attach DSA notice requiring submission).

5. DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE:

Name of the Design Professional In General Responsible Charge: Philip J. Newsom

Professional License Number: 23270 Discipline: Architect

Design Professional in General Responsible Charge Statement: The attached post-approval documents have been examined by me for design intent and appear to meet the appropriate requirements of Title 24, California Code of Regulations and the project specifications. They are acceptable for incorporation into the construction of the project.

Signature: _____

DESIGN PROFESSIONAL IN GENERAL RESPONSIBLE CHARGE

6. CONFIRMATION, DESCRIPTION AND LISTING OF DOCUMENTS:

For addenda, revisions, or CCDs: CHECK THIS BOX ☑ to confirm that *all* post-approval documents have been stamped and signed by the Responsible Design Professional listed on form *DSA 1: Application for Approval of Plans and Specifications* for this project. (For *Deferred Submittals*, refer to *IR A-18: Use of Construction Documents Prepared by Other Professionals,* and *IR A-19: Design Professional's Signature and Seal (Stamp) on Construction Documents*, when applicable, for signature and seal requirements.)

Provide a brief description of construction scope for this post-approval document (attach additional sheets if needed):

Revisions and additions to Specifications, front-end documents.

List of DSA-approved drawings affected by this post-approval document:

DSA USE ONLY

SSS MSS Date 6/25/2024 ☒ Approved ☐ Disapproved ☐ Not Required

Comments: _____

FLS MS Date 06/21/2024 ☐ Approved ☐ Disapproved ☐ Not Required

Comments: _____

ACS TNguyen Date 06/21/2024 ☐ Approved ☐ Disapproved ☐ Not Required

Comments: _____

Returned	DSA STAMP
Date:	APPROVED DIV. OF THE STATE ARCHITECT APP: 01-119705 INC: REVIEWED FOR SS ☑ FLS ☑ ACS ☑ DATE: 06/25/2024
By:	

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 01-119705 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 06/25/2024

ADDENDUM "1"

REFERENCE: P.E. Replacement Project
College of the Redwoods
7351 Tompkins Hill Road
Eureka, California 95501
DSA Application # 01-119705
DSA File # 12-C1

FROM: tBP Architecture
1777 Oakland Blvd., Suite 320
Walnut Creek, CA 94596

TO: Division of State Architect – Oakland Regional Office
1515 Clay Street, Suite 1201
Oakland, CA 94612

This Addendum "1", dated June 18, 2024, forms a part of the Contract Documents, and modifies the Bid Documents approved by DSA on January 16, 2024.

This Addendum consists of 2 pages and all attachments noted herein.

MODIFICATIONS TO PROJECT MANUAL / SPECIFICATIONS:

Replaced Specifications:

	Section	Title
1.	00 01 00	Table of Contents
2.	00 11 16	Invitation to Bid
3.	00 21 13	Instructions to Bidders
4.	00 30 00	Available Information
5.	00 52 00	Agreement Forms
6.	01 11 00	Summary of Work
7.	01 14 00A	Work Restrictions, Exhibit A
8.	01 32 50	Delays and Extensions

Added Specifications:

	Section	Title
1.	01 81 15A	DSA GL4_V1
2.	02 82 00	Asbestos Containing Materials
3.	02 83 00	Lead-Related Construction

Attachments:

Specifications:

	Section	Title
1.	00 01 00	Table of Contents
2.	00 11 16	Invitation to Bid
3.	00 21 13	Instructions to Bidders
4.	00 30 00	Available Information
5.	00 52 00	Agreement Forms
6.	01 11 00	Summary of Work
7.	01 14 00A	Work Restrictions, Exhibit A
8.	01 32 50	Delays and Extensions
9.	01 81 15A	DSA GL4_V1
10.	02 82 00	Asbestos Containing Materials
11.	02 83 00	Lead-Related Construction

END OF
ADDENDUM 1

SECTION NO. TITLE

DIVISION 00 - PROCUREMENT AND CONTRACTING REQUIREMENTS

DIVISION 01 - GENERAL REQUIREMENTS

SECTION NO. TITLE

SECTION NO. TITLE

SECTION NO. TITLE

SECTION NO. TITLE

SECTION NO. TITLE

SECTION NO. TITLE

Section 00 11 16
INVITATION TO BID

PE REPLACEMENT PROJECT

College of the Redwoods
7351 Tompkins Hill Road
Eureka, California 95501

NOTICE IS HEREBY GIVEN that the Governing Board of the Redwoods Community College District (District), Eureka, California, will receive sealed bid proposals for the furnishing of all labor, materials, equipment, transportation and services for the construction of the project entitled **PE REPLACEMENT PROJECT.**

The District has pre-qualified General Contractors for this project, and the list of pre-qualified General Contractors can be found on the District's web site:
https://www.redwoods.edu/businessoffice/Purchasing.html
Only Pre-Qualified Contractors are allowed to bid as Prime Contractors on this project. The District does not prequalify Subcontractors.

Construction Cost Estimate (Range): **$64,000,000 to $65,000,000**
California License Required: **B-General Building Contractor**

In general, the Work consists of, but is not limited to:

1. CONSTRUCTION OF A NEW PHYSICAL EDUCATION BUILDING WITH SPECTATOR GYMNASIUM
2. CONSTRUCTION OF A NEW FIELD HOUSE BUILDING WITH INTERIOR PRACTICE FIELD
3. SITE WORK INCLUDING RETAINING WALLS, FIRE LANES, PARKING SPACES, FIRE HYDRANTS, UTILITIES, PATHS OF TRAVEL, SITE LIGHTING, FLATWORK, LANDSCAPING, AND OTHER SITE DEVELOPMENT
4. ABATEMENT OF HAZARDOUS MATERIALS AND DEMOLITION OF THE EXISTING PHYSICAL EDUCATION / FIELD HOUSE BUILDINGS AND SURROUNDING SITE AREAS
5. SITE RESTORATION AT DEMOLISHED BUILDINGS
6. NEW GENERATOR AND TRANSFORMERS
7. OTHER WORK AS INDICATED IN THE CONTRACT DOCUMENTS

The District does not provide hardcopies of bid documents or reimburse cost of printing, delivery, or any expenses related to the bidding process.

For information directly from the District, you may also log on to the District Website: https://www.redwoods.edu/businessoffice/Purchasing.html Project documents available include, but are not limited to, plans, specifications, addenda, bidders lists, bid results, etc., and can be viewed on this District webpage.

All questions related to this project must be submitted, via email, to:

Leslie Marshall, Director of Facilities & Planning
Redwoods Community College District
7351 Tompkins Hill Rd., Eureka, CA 95501
Email: leslie-marshall@redwoods.edu, julia-morrison@redwoods.edu, and ericka-barber@redwoods.edu with a Cc to robm@csipm.com.
Include the question in the body of the email. *Questions will only be*

accepted from prequalified Contractors.

Each bid shall be made on the bid form, which is included in the Bid Documents and when submitted, shall be accompanied by a Bid Bond or Certified Cashier's Check in the amount of 10% of bid (made payable to the Redwoods Community College District). The District reserves the right to forfeit Bid Bond submitted for failure of the successful bidder to secure Payment & Performance Bonds.

IMPORTANT INFORMATION:
Pre-Bid Meeting and Job Walk, Date/Time:.....07/09/24 1:00 PM (MANDATORY)
Pre-Bid Meeting Location:.....College of the Redwoods – Theater Building
7351 Tompkins Hill Rd., Eureka, CA 95501
(See College of the Redwoods Campus Map)
PLEASE NOTE: A Site Visit will be held Immediately following the Pre-Bid meeting. Please remember to obtain a Certification of Site Visit, signed by the District Representative, prior to leaving the site.

Last Date / Time for Bidder's
Requests for Information: .....07/11/24 5:00 PM
Last Day to Issue Addendum: 07/18/24
Bids Due No Later Than, Date / Time: .....07/25/24 2:00 PM
Bids Must Be Received at: .....Redwoods Community College District - Board Room
7351 Tompkins Hill Rd., Eureka, CA 95501
Attn: Leslie Marshall, Director of Facilities & Planning

The **Board Room is located on the 2nd floor of the Administration Building (Building 18)**. The 2nd floor can be accessed by stairway or elevator. Anyone entering the Administration Building will need to complete the Health Screening at the front door before further entry into the building.

Bids must be received by the District prior to the time and by the date noted above. Bids that are not received by the District prior to the time and by the date noted above will not be accepted, and will be returned to the Bidder unopened.

The successful bidder will be required to furnish a labor and material bond in an amount equal to one hundred percent (100%) of the contract price and a faithful performance bond in an amount equal to one hundred percent (100%) of the contract price, said bonds to be secured from a surety company acceptable to the Redwoods Community College District and authorized to execute such surety in the State of California.

This project is a public works project and is subject to prevailing wage rate laws. A copy of the prevailing rates of wages is on file with the Contracts & Purchasing Office of the Redwoods Community College District. Said rates of wages shall be included in the contract for the work by this reference.

Attention is directed to Section 4100 through 4113 of the Public Contract Code concerning Subcontractors, with emphasis on Section 4104, known as the "Subletting and Subcontracting Fair Practices Act, effective July 1, 2014.

Attention is directed to Labor Code Section 1725.5 regarding Department of Industrial Relations (DIR) contractor registration process including registration criteria and implementation of DIR registration requirements. Labor Code Section 1771.7 establishes contractor's obligation to submit Certified Pay Roll (CPR) to the Department of Labor and Standards Enforcement (DLSE) and public works monitoring and enforcement. Labor Code Section 1773.3 requires the District to submit a PWC-100 to DIR for all public works contract awarded effective January 1, 2015.

END OF SECTION 00 11 16

SECTION 00 21 13

INSTRUCTIONS TO BIDDERS

1.1 ISSUING OF DOCUMENTS

A. Bidding Documents may be examined at the Redwoods Community College District, 7351 Tompkins Hill Rd., Eureka CA, 95501. By Appointment: Leslie Marshall, Director of Facilities & Planning, phone: (707) 476-4382.

1.2 QUALIFICATIONS OF BIDDERS

A. Bidders may be required to furnish additional evidence satisfactory to the District that they have sufficient means and sufficient experience in the class of work called for to enable them to complete the Contract in a satisfactory manner. The District has pre-qualified General Contractors for this project, and the list of pre-qualified General Contractors can be found on the District's web site: https://www.redwoods.edu/businessoffice/Purchasing

B. Bidders shall be Contractors properly licensed in accordance with the laws of the State of California.

C. The successful Bidder shall furnish satisfactory Certificates of Insurance coverage as specified in the Contract Documents.

1.3 RECEIPT AND OPENING OF BIDS

A. Redwoods Community College District hereinafter referred to as the District, will receive Bids at the same time and place specified in the Invitation to Bid.

B. Complete the Bid Form included in the Project Manual.

C. The envelopes containing the Bids shall be sealed, addressed to the District, and designated as **"PE Replacement Project, College of the Redwoods".** The envelope shall contain the name and address of the Bidder.

D. Bids that are mailed shall have the previously described envelope placed inside an envelope addressed to: REDWOODS COMMUNITY COLLEGE DISTRICT, 7351 Tompkins Hill Rd., Eureka CA, 95501 ATTENTION: Leslie Marshall, Director of Facilities & Planning. Bids should be mailed in time to be received prior to the time set forth in the Invitation to Bid.

E. Bids which are conditional (or which make alterations, omissions, or reservations to the terms of the Bidding Documents) may be rejected as non-responsive.

F. All monetary figures are required, both in writing and in numerals. In event of conflict between written quotations and numerical quotations, written quotations shall govern.

G. Type or print all bid data legibly in ink except signatures which shall be in script. Mistakes may be crossed out and corrections inserted, if each is initialed in ink by signer of Bid.

H. Bidder's business address and signature shall be on the Bid. A Bid by a partnership shall furnish the full names of partners and be signed in the partnership name by one member of the partnership, or by authorized representative, followed by the signature and designation of the person signing. Bids by corporations, with corporate seal affixed, shall be signed with the legal

name of the corporation followed by the name of the state of incorporation and by the signature and designation of the person authorized to bind it to the matter. The name of each person signing shall also be typed or printed below the respective signatures. When required by the District, satisfactory evidence of authority of the office signing in behalf of the corporation shall be furnished.

I. No Bids will be received after the date and time set forth in the Notice Inviting Bids.

1.4 BID SECURITY

A. Submit with the Bid a Bid Security in the amount of 10 percent (10%) of the Bid.

B. The District reserves the right to forfeit the Bid Bond submitted for failure of the successful bidder to secure Payment & Performance Bonds.

1.5 SURETY BONDS

A. The successful Bidder shall furnish a Labor and Material Payment Bond in the amount equal to one hundred percent (100%) of the Contract Price and a faithful Performance Bond in the amount equal to 100 percent (100%) of the Contract Price as security for the successful performance of the work and payment of persons performing labor and furnishing materials. The Bonds shall be executed by a surety company or companies acceptable to the District and authorized to execute such in the State in which the Project is located and shall be furnished within 10 days after Notice of Acceptance of said Bid. Surety shall be made in favor of the District and shall cover the guarantee periods as well as the construction period.

1.6 WITHDRAWAL OR REVISIONS OF BID

A. This Bid may be withdrawn or revised prior to the scheduled time for receipt. Bids not withdrawn prior to the scheduled time for receipt may not be withdrawn for a period of 90 days.

1.7 BID PROTESTS

A. Inquiries or questions based on alleged patent ambiguity of the plans, specifications or estimate must be communicated as a bidder inquiry prior to bid opening. Any such inquiries or questions, submitted after bid opening, will not be treated as a bid protest.

B. Bidder may file a protest with the District against the Bid of other Bidder or Bidders ("Bid Protest") subject to the provisions of this Article. The procedures and time limits set forth in this Article are mandatory and are a Bidder's sole and exclusive remedy in protesting other Bidders' bids. Failure to comply with these procedures shall constitute a waiver of any right to pursue a Bid Protest, or to contest the District's award of the contract for the work that is the subject of the Bid, in any legal proceeding before any authority with jurisdiction.

C. Bid Protests and Responses shall be governed by the following time limitations:

1. Bidder must deliver any Bid Protest to the District, in writing, **before 2:00PM**, **three (3) working days** after the date of bid opening. The District will reject any Bid Protest not received by the District by this deadline. Bidder must concurrently deliver a copy of its Bid Protest to all Bidders against whose Bids the Bid Protest is directed. The Bidder must

include with its Bid Protest written proof to the District's satisfaction that Bidder has delivered a copy of its Bid Protest to the other Bidder whose bid is the subject of the Bid Protest.

2. A Bidder whose Bid is the subject of a Bid Protest must deliver its written response, if any, ("Response") to the District, **before 2:00PM**, **eight (8) working days** after the date of bid opening. The District will reject any Response not received by the District by this deadline.

D. Delivery of Bid Protest or Response:
   1. Bidder may deliver a Bid Protest to the District by personal delivery or electronic transmission such as by facsimile. Bidder is solely responsible for ensuring that the District receives any Bid Protest or Response by the deadlines set forth herein.
   2. The District will not consider Bid Protests or Responses by telephone conversation or any other non-written communication.
   3. Bidder shall submit any Bid Protest or Response to: LESLIE MARSHALL, Director – Facilities & Planning, Redwoods Community College District, 7351 Tompkins Hill Rd., Eureka CA 95501, Facsimile: (707) 476-4405.

E. Content of Bid Protest:
   1. A Bid Protest must state the basis for the protest and provide supporting evidence.
   2. A Bid Protest must refer to the specific portion of the Bid that forms the basis of the protest.
   3. A Bid Protest must include the name, address, and telephone number of the person representing the protesting Bidder.
   4. A Bid Protest must be clearly identified as a Bid Protest.

1.8 AWARD AND REJECTION OF BIDS

A. In awarding or rejecting Bids, the District reserves the following rights:
   1. Identification of successful Bidder will not be determined at time of opening Bids.
   2. To obtain opinion of counsel on legality and sufficiency of bids.
   3. To reject all Bids, to re-bid, or waive irregularities or informalities in a Bid, and to accept or reject alternates.
   4. Request proof that the successful Bidder can provide performance and payment bonds as required.

1.9 EXAMINE DOCUMENTS AND VISIT SITE

A. Before submitting a Bid, the Bidder shall examine the Bidding Documents, visit the site of the work, attend the required site visit arranged by the District and obtain Certification of Attendance signed by the District, ascertain existing conditions and limitations, including those of labor, and include in the Bid a sum to cover the cost of all items described in the Contract Documents.

B. No consideration will be granted for alleged misunderstanding of the materials to be furnished or work to be done. The tender of a Bid carries with it the agreement to terms and conditions referred to in the Contract Documents.

1.10 DISCREPANCIES, AMBIGUITIES, OR CONFLICTS

A. If the Bidder is in doubt as to the true meaning of any part of the Contract Documents; finds discrepancies, errors or omissions therein; or finds variances in any of the Contract Documents with applicable rules, regulations, ordinances and/or laws, a written request for an interpretation or correction thereof must be submitted to the District's Contract Manager. Bidders are solely responsible for submitting to District's Contract Manager such request. Ambiguities or inconsistencies arising as a result of separation of sections or portions of the drawings or specifications by or for subcontractor bidding shall not relieve the Contractor for providing the complete Work without increase to or adjustment in the Contract Price or the Time for performance. Interpretations or corrections of the Contract Documents will be by written addendum issued by the Architect. No person is authorized to render an oral interpretation or correction of any portion of the Contract Documents to any Bidder, and no Bidder is authorized to rely on any such oral interpretation or correction. Failure to request interpretation or clarification of any portion of the Contract Documents pursuant to the foregoing is a waiver of any discrepancy, defect or conflict therein.

1.11 ADDENDA

A. Cost for work included in any Addenda issued during the time of bidding shall be included in the Bid, and will become a part of the Contract. List Addenda received as indicated on the Bid Form.

1.12 FORM OF AGREEMENT

A. The form of agreement to be used for the Contract is provided by the District and is included in the Project Manual.

1.13 AWARD OF CONTRACT

A. The District will be allowed a period of ninety (90) calendar days after Bid Opening Date for evaluating the Bids.
B. Bidders of record will be notified of the results of the District's evaluation of bids and Award of Contract, if any.
C. The Contractor shall begin work within ten (10) calendar days of receipt of Notice to Proceed.

END OF SECTION 00 21 13

SECTION 00 30 00
AVAILABLE INFORMATION

PART 1 - REPORT AND INFORMATION

1.1 Existence of reports, record drawings, and utility surveys**:** Redwoods Community College District, its consultants, and prior contractors may have collected documents providing a general description of the site and conditions of the work. These documents may consist of geotechnical reports for and around the site, record drawings, utility drawings, and information regarding underground utilities. These reports, documents and other information are not part of the Contract Documents and do not show new work to be constructed, rather, they show existing conditions that Contractor may have to address as part of its construction planning.

1.2 Available Documentation - The following documents are either available for review through District office, or the District's web site:

A. Existing PE Building Drawings
B. Creative Arts Project As-Built Drawings
C. Underground Utility Project Drawings
    1. E.1 College of the Redwoods Building Infrastructure and Site Utilities
    2. E.2 College of the Redwoods Building Infrastructure and Site Utilities - Addendum 1

D. Geotechnical Reports
    1. Geotechnical and Geologic Hazard Evaluation Report – New Gymnasium, College of the Redwoods, May 1, 2020, LACO
    2. Geotechnical and Geologic Hazard Evaluation Report – New Fieldhouse Building, College of the Redwoods, December 30, 2020, LACO
    3. Addendum Number 2 to Geotechnical and Geologic Hazards Evaluation Report – New Gymnasium and Fieldhouse Building, November 16, 2021, LACO
    4. Addendum to Note 48 compliant Geotechnical and Geologic Hazard Evaluation Report, New fieldhouse Building Retaining Walls, December 1, 2022, LACO

E. Hazardous Materials Reports
    1. 04/08/2022 GHD Asbestos Assessment Report - Fieldhouse and Physical Education Buildings
    2. 08/01/2023 FACS Lead Survey Report – Fieldhouse and Physical Education Buildings

F. College of the Redwoods Telecommunication Standards (dated July 2018)

1.3 Contractor shall acknowledge and accept that the documents are not a part of the Contract Documents and are made available to bidders for reference only. The District and its

representatives are not responsible for any and all discrepancies between the documents and the existing and actual as-built conditions, and do not guarantee the accuracy of the documents.

1.4 The District and Architect assume no responsibility for the completeness or accuracy of the documents or the records compiled there from and the interpretations made from the documents. There is no express or implied guarantee that the conditions indicated in the documents are representative of those existing throughout the building and/or site Conditions differing substantially from those indicated may be encountered.

END OF SECTION 00 30 00

SECTION 00 52 00
AGREEMENT FORMS

CONSTRUCTION AGREEMENT

CONTRACT NO. _____
(Construction Agreement)

==========

This Agreement shall not be enforceable until ratified and approved by the Redwoods Community College District's Governing Board. The estimated board meeting is February 6, 2024.

(§1.1) Parties: (Public Agency) **REDWOODS COMMUNITY COLLEGE DISTRICT**
7351 Tompkins Hill Rd., Eureka, CA 955001

(Contractor) _____
Address: _____
_____

(§1.2) Effective Date: _____

(§1.3) The Work: **PE Replacement Project**

(§1.4) Substantial Completion Time: **938 Calendar Days** from the Notice to Proceed.

(§1.4.1) Final Completion Milestone for the Field House, Gym and associated work: **60 Calendar Days** from Substantial Completion.
(§1.4.2) College completion of move out of existing PE buildings: **67 Calendar Days** from Substantial Completion of the Field House & Gym
(§1.4.3) Demolition of existing PE buildings and Final Completion: **120 Calendar Days** from College completion of move into new buildings.
(§1.4.4) Total duration to Final Completion: **1125 Calendar Days** from the Notice to Proceed

(§1.5) The Bidder acknowledges that this project contains a Final Completion Milestone and bidder agrees that this milestone must be substantially completed and accepted by the Owner before a written "Notice to Proceed" is issued for the demolition of the existing Art Building. Bidder also agrees to pay, as liquidated damages the amounts specified below for each consecutive calendar day after the expiration of the consecutive calendar days allowed for each phase.

(§1.5.1) Liquidated Damages, Substantial Completion **$2,000/** per calendar day Work is delayed

(§1.5.2) Liquidated Damages, Remaining Work and Final Completion: **$1,000 /** per calendar day Remaining Work is delayed for 1) Final Completion Milestone (§1.4.1) Gym and Field House and 2) Final Completion of Demolition of the existing PE Buildings (§1.4.3).

(§1.6) Public Agency's Agent: **REDWOODS COMMUNITY COLLEGE DISTRICT ("District")**

(§1.7) Contract Sum: **____MILLION,_____THOUSAND,_____HUNDRED DOLLARS and NO CENTS ($00,000,000.00)**

2. SCOPE OF WORK:

The Work consists of:

1. CONSTRUCTION OF A NEW PHYSICAL EDUCATION BUILDING WITH SPECTATOR GYMNASIUM
2. CONSTRUCTION OF A NEW FIELD HOUSE BUILDING WITH INTERIOR PRACTICE FIELD
3. SITE WORK INCLUDING RETAINING WALLS, FIRE LANES, PARKING SPACES, FIRE HYDRANTS, UTILITIES, PATHS OF TRAVEL, SITE LIGHTING, FLATWORK, LANDSCAPING, AND OTHER SITE DEVELOPMENT
4. ABATEMENT OF HAZARDOUS MATERIALS AND DEMOLITION OF THE EXISTING PHYSICAL EDUCATION / FIELD HOUSE BUILDINGS AND SURROUNDING SITE AREAS
5. SITE RESTORATION AT DEMOLISHED BUILDINGS
6. NEW GENERATOR AND TRANSFORMERS
7. OTHER WORK AS INDICATED IN THE CONTRACT DOCUMENTS

3. WORK CONTRACT, CHANGES

(a) By their signatures below, effective on the above date, these parties promise and agree as set forth in this Agreement, incorporating by these references labor and materials contained in Section 2, Scope of Work.
(b) Contractor shall, at Contractor's own cost and expense, and in a workmanlike manner, fully and faithfully perform and complete the work; and will furnish all materials, labor, services, equipment, and transportation necessary, convenient and proper in order fairly to perform the requirements of this contract, all strictly in accordance with the Public Agency's plans, drawings and specifications.
(c) The work can be changed only with Public Agency's prior written order specifying such change and its cost agreed to by the parties; and the Public Agency shall never have to pay more than specified in Section 1.7 without such an order.

4. TIME: NOTICE TO PROCEED AND ACCEPTANCE

(a) Contractor shall start this work as directed in the specifications or the Notice to Proceed and shall complete it as specified in Section 1, Completion Time.
(b) Remaining Work after Substantial Completion. If the Architect or District determines that the work required by the Contract is Substantially Complete during any inspection conducted pursuant to this Agreement or Specification Section 01 77 00, Closeout Procedures, the Contractor shall be notified of that determination and the District shall determine if there is Remaining Work. A list of Remaining Work shall be issued only by the District or the Architect and only after the District has certified Substantial Completion. The District or Architect shall give the Contractor the necessary instructions for correction or completion of the Remaining Work, and the Contractor shall immediately comply with and execute such instructions within the Contract Time. Upon completion of the Remaining Work, another inspection shall be made that shall constitute the Final Inspection, provided the Remaining Work has been completed to the satisfaction of the District. If the remaining work has been completed to the satisfaction of the District, the District shall make the final acceptance and notify the Contractor in writing of this acceptance as of the date of Final Inspection.

(c) Final Acceptance – Upon due notice from the Contractor of completion of the entire project, the District shall make an inspection. If all construction provided for and contemplated by the contract is found to be completed to the District's satisfaction, then that inspection shall constitute the Final Inspection and the District shall notify the Contractor in writing of final acceptance effective as of the date of the Final Inspection.

(d) Default for failure to Complete Remaining Work In the event the Contract Time expires before the Remaining Work is completed to the satisfaction of the District, the District may provide notice to the Contractor that the Remaining Work shall be completed by Contractor to the satisfaction of the District within ten consecutive calendar days from the date of such notice. The failure of the Contractor to satisfactorily complete the Remaining Work within the ten days shall entitle to District to declare Contractor in default and thereafter terminate the Contract. The ten-day notice provided under this paragraph shall not be construed as adding any time to the Contract Time and is a time period solely for the purposes of providing notice of default.

(e) Application for Final Payment. After the Contractor has completed all Remaining Work to the satisfaction of the District and delivered all maintenance and operating instructions, schedules, guarantees, warranties, bonds, certificates of inspection, marked-up record documents and other documents as required by the Contract, and after the District or Architect has indicated that the work is acceptable, Contractor may make application for final payment following the Payments Procedures for progress payments. The final application for payment shall be accompanied by all documentation called for in the Contract Documents, together with complete and legally effective releases or waivers (satisfactory to the District) of all liens arising out of or filed in connection with the work on the project.

(f) Final Payment and Acceptance. If the Architect determines that the work has been completed and the Contractor's other obligations under the Contract have been fulfilled, the Architect shall, within ten working days after receipt of the final application for payment, indicate in writing the Architect's recommendation of payment and present the application to District for payment. Thereupon the Architect shall prepare a Certificate of Final Completion. Otherwise, Architect shall return the application to Contractor indicating in writing the reasons for refusing to recommend final payment. Contractor shall make the corrections identified in the Architect's refusal to recommend final payment. Thirty days after presentation to District of the application and accompanying documentation, with the Architect's recommendation and notice of acceptability of the work, the amount recommended by Architect shall be come due and payable by District to Contractor.

5. LIQUIDATED DAMAGES

5.1 LIQUIDATED DAMAGES - SUBSTANTIAL COMPLETION

If the Contractor fails to complete this contract and this Work within the time fixed therefore, allowance being made for contingencies as provided herein, Contractor becomes liable to the Public Agency for all its loss and damage there from; and because, from the nature of the case, it is and will be impracticable and extremely difficult to ascertain and fix the Public Agency's actual damage from any delay in performance hereof, it is agreed that Contractor will pay as liquidated damages to the Public Agency the reasonable sum specified in Section 1, the result of the parties' reasonable endeavor to estimate fair average compensation therefore, for each calendar day's delay in finishing said Work or Phase of Work; and if the same be not

paid, Public Agency may, in addition to its other remedies, deduct the same from any money due or to become due Contractor under this Contract. If the Public Agency for any cause authorizes or contributes to a delay, suspension of work or extension of time, its duration shall be added to the time allowed for completion, but it shall not be deemed a waiver nor be used to defeat any right of the Agency to damages for non-completion or delay hereunder. Pursuant to Government Code Section 4215, the Contractor shall not be assessed liquidated damages for delay in completion of the work, when such delay was caused by the failure of the Public Agency or the owner of a utility to provide for removal or relocation of existing utility facilities.

5.2 LIQUIDATED DAMAGES-THE REMAINING WORK.

The Remaining Work, as such work is determined by the Public Agency or Public Agency's Representative, shall be completed within the Contract Time or any proper extension thereof granted by Public Agency. If the Contractor shall neglect, fail or refuse to complete the Remaining Work within the Contract Time or any proper extension thereof granted by the Public Agency, then the Contractor does hereby agree, as part consideration for the awarding of this Contract, to pay to the Public Agency the amount specified in the Contract, not as a penalty but as liquidated damages for the Remaining Work for each such breach of Contract set forth herein for each and every consecutive calendar day that the Contractor shall be in default after expiration of the Contract Time.

6. INTEGRATED DOCUMENTS

The plans, drawings and specifications and special provisions of the Public Agency's Invitation to Bid, and Contractor's accepted bid for this work are hereby incorporated into this Contract; and they are intended to cooperate, so that anything exhibited in the plans or drawings and not mentioned in the specifications or special provisions, or vice versa, is to be executed as if exhibited, mentioned and set forth in both, to the true intent and meaning thereof when taken all together; and differences of opinion concerning these shall be finally determined by the Public Agency.

7. PAYMENT

(a) For strict and literal fulfillment of these promises and conditions, and full compensation for all this work, the Public Agency shall pay the Contractor the sum specified in Section 1, except that in unit price contracts the payment shall be for finished quantities at unit bid prices.
(b) On or about the first day of each calendar month, the Contractor shall submit to the Public Agency a verified application for payment, supported by a statement showing all materials actually installed during the preceding month, the labor expended thereon, and the cost thereof; whereupon, after checking, the Public Agency shall issue to Contractor a certificate for the amount determined to be due, minus five (5%) percent thereof pursuant to the Public Agency's General Terms and Conditions, but not until defective work and materials have been removed, replaced and made good.

8. PAYMENTS WITHHELD

(a) The Public Agency or its agent may withhold any payment, or because of later discovered evidence nullify all or any certificate for payment, to such extent and period of time only as may be necessary to protect the Public Agency from loss because of:

(1) Defective work not remedied, or work not completed, or
(2) Claims filed or reasonable evidence indicating probable filing, or
(3) Failure to properly pay subcontractors or for material or labor, or
(4) Reasonable doubt that the work can be completed for the balance then unpaid, or
(5) Damage to another contractor, or
(6) Damage to the Public Agency, other than damage due to delays.

(b) The Public Agency shall use reasonable diligence to discover and report to the Contractor, as the work progresses, the materials and labor which are not satisfactory to it, so as to avoid unnecessary trouble or cost to the Contractor in making good any defective work or parts.

(c) Thirty-five (35) calendar days after Public Agency files its notice of completion of the entire work, it shall issue a certificate to the Contractor and pay the balance of the contract price after deducting all amounts withheld under this contract, provided the Contractor shows that all claims for labor and materials have been paid, no claims have been presented to the Public Agency based on acts or omissions of the Contractor, and no liens or withhold notices have been filed against the work or site, and provided there are not reasonable indications of defective or missing work or of late-recorded notices of liens or claims against Contractor.

9. INSURANCE

Contractor's Liability Insurance: Before the commencement of the Work, the Contractor shall purchase from and maintain in a company or companies lawfully authorized to do business in California as admitted carriers with a financial rating of at least A status as rated in the most recent edition of Best's Insurance Reports or as amended by the Supplementary General Conditions, if any, such insurance as will protect the Public Agency from claims set forth below, which may arise out of or result from the Contractor's operations under the Contract and for which the Contractor may be legally liable, whether such operations are by the Contractor, by a Subcontractor, by anyone directly or indirectly employed by any of them, or by anyone for whose acts any of them may be liable.

(a) Claims for damages because of bodily injury, sickness, disease, or death of any person. District would require indemnification and coverage for employee claim;
(b) Claims for damages insured by usual personal injury liability coverage, which are sustained by a person as a result of an offense directly or indirectly related to employment of such person by the Contractor or by another person;
(c) Claims for damages because of injury or destruction of tangible property, including loss of use resulting therefrom, arising from operations under the Contract Documents;
(d) Claims for damages because of bodily injury, death of a person, or property damage arising out of the ownership, maintenance, or use of a motor vehicle, all mobile equipment, and vehicles moving under their own power and engaged in the Work;

(e) Claims involving contractual liability applicable to the Contractor's obligations under the Contract Documents, including liability assumed by and the indemnity and defense obligations of the Contractor and the Subcontractors; and

(f) Claims involving Completed Operations, Independent Contractors' coverage, and Broad Form property damage, without any exclusions for collapse, explosion, demolition, underground coverage, and excavating. (XCU)

(g) Claims involving sudden or accidental discharge of contaminants or pollutants.

Subcontractor Insurance Requirements: The Contractor shall require its Subcontractors to take out and maintain similar public liability insurance and property damage insurance as required under the above paragraph, titled "Contractor's Liability Insurance, in amounts commensurate with the value of the subcontract. A "claims made" or modified "occurrence" policy shall not satisfy the requirements of the above paragraph, titled "Contractor's Liability Insurance, without prior written approval of the District.

Additional Insured Endorsement Requirement: The Contractor shall name, on any policy of insurance, the District, Architect, Construction Manager, Inspector, the State of California, their officers, employees, agents and independent contractors as Additional Insured. Subcontractors shall name the Contractor, the District, Architect, Construction Manager, Inspector, the State of California, their officers, employees, agents and independent contractors as Additional Insured.

The Additional Insured Endorsement included on all such insurance policies shall be on a CG 2010 11 85 form, CG2033 07 04 (Operations) and a CG2037 07 04 (Completed Operations) or their equivalent, and shall state that coverage is afforded the additional insured with respect to claims arising out of operations and Completed Operations performed by or on behalf of the insured. If the Additional Insured have other insurance which is applicable to the loss, such other insurance shall be on an excess or contingent basis. The insurance provided by the Contractor must be designated in the policy as primary to any insurance obtained by the Public Agency. The amount of the insurer's liability shall not be reduced by the existence of such other insurance.

Workers' Compensation Insurance: During the term of this Contract, the Contractor shall provide workers' compensation insurance for all of the Contractor's employees engaged in Work under this Contract on or at the Site of the Project and, in case any of the Contractor's Work is subcontracted, the Contractor shall require the Subcontractor to provide workers' compensation insurance for all the Subcontractor's employees engaged in Work under the subcontract. Any class of employee or employees not covered by a Subcontractor's insurance shall be covered by the Contractor's insurance. In case any class of employees engaged in Work under this Contract on or at the Site of the Project is not protected under the Workers' Compensation laws, the Contractor shall provide or cause a Subcontractor to provide adequate insurance coverage for the protection of those employees not otherwise protected. The Contractor shall file with the District certificates of insurance as required under Section 00 70 00, Article 11.6, and in compliance with Labor Code § 3700.

Specific Insurance Requirement: Contractor shall take out and maintain and shall require all subcontractors, if any, whether primary or secondary, to take out and maintain:

(a) Workers' Compensation Insurance: $1,000,000.00; Contractor is aware of and complies with Labor Code Section 3700 and the Worker's Compensation Law.

(b) Comprehensive General Liability Insurance with a combined single limit per occurrence of not less than $5,000,000.00 and $10,000,000.00 project specific aggregate, or Commercial General Liability Insurance (including automobile insurance) which provides limits of not less than:

(1)	Per occurrence (combined single limit)	$5,000,000.00
(2)	Project Specific Aggregate (for this project only)	$10,000,000.00
(3)	Products and Completed Operations	$5,000,000.00

(c) Insurance Covering Special Hazards
The following Special hazards shall be covered by riders or riders to above mentioned public liability insurance or property damage insurance policy or policies of insurance, in amounts as follows:

(1)	Automotive and truck where operated in amounts	$1,000,000.00
(2)	Material Hoist where used in amounts	$1,000,000.00
(3)	Explosion, Collapse and Underground (XCU coverage)	$1,000,000.00

(d) In addition, provide Excess Liability Insurance coverage in the amount of Two Million Dollars ($2,000,000.00).

(e) There shall be no endorsements or exclusions related to soils movement or subsidence including: soil erosion, freezing or thawing, improperly compacted soil or construction defects, roots of trees or shrubs, collapse of storm or sewer drains, or natural occurring shrink or swell soil.

Builder's Risk/ "All Risk" Insurance/ Course-of-Construction Insurance Requirements: The Contractor, during the progress of the Work and until final acceptance of the Work by District upon completion of the entire Contract, shall maintain Builder's Risk, Course of Construction or similar first party property coverage issued on a replacement cost value basis consistent with the total replacement cost of all insurable Work and the Project included within the Contract Documents. Coverage is to insure against all risks of accidental direct physical loss, and must include, by the basic grant of coverage or by endorsement, the perils of vandalism, malicious mischief (both without any limitation regarding vacancy or occupancy), fire, sprinkler leakage, civil authority, sonic boom, earthquake, flood, collapse, wind, lightning, smoke and riot. The coverage must include debris removal, demolition, increased costs due to enforcement of building ordinance and law in the repair and replacement of damage and undamaged portions of the property, and reasonable costs for the Architect's and engineering services and expenses required as a result of any insured loss upon the Work and Project which is the subject of the Contract Documents, including completed Work and Work in progress, to the full insurable value thereof. Such insurance shall include the District and the Architect as additional named insureds, and any other person with an insurable interest as designated by the District. The **maximum deductible** for this policy shall be **no greater than $25,000** unless approved by the District.

The Contractor shall submit to the District for its approval all items deemed to be uninsurable. The risk of the damage to the Work due to the perils covered by the "Builder's Risk/All Risk" Insurance, as well as any other hazard which might result in damage to the Work, is that of the Contractor and the surety, and no claims for such loss or damage shall be recognized by the District nor will such loss or damage excuse the complete and satisfactory performance of the Contract by the Contractor.

10. BONDS

Bond Requirements: Prior to commencing any portion of the Work, the Contractor shall furnish separate payment and performance bonds for its portion of the Work which shall cover 100% faithful performance of and payment of all obligations arising under the Contract Documents and/or guaranteeing the payment in full of all claims for labor performed and materials supplied for the Work. All bonds shall be provided by a corporate surety authorized and admitted to transact business in California as sureties.

To the extent, if any, that the Contract Price is increased in accordance with the Contract Documents, the Contractor shall, upon request of the Public Agency, cause the amount of the bonds to be increased accordingly and shall promptly deliver satisfactory evidence of such increase to the Public Agency. To the extent available, the bonds shall further provide that no change or alteration of the Contract Documents (including, without limitation, an increase in the Contract Price, as referred to above), extensions of time, or modifications of the time, terms, or conditions of payment to the Contractor will release the surety. If the Contractor fails to furnish the required bonds, the Public Agency may terminate the Contract for cause.
On signing this contract, Contractor shall deliver to Public Agency for approval good and sufficient bonds with sureties, in amount(s), specified in the specifications or special provisions, guaranteeing faithful performance of this contract and payment for all labor and materials hereunder.

11. FAILURE TO PERFORM

If the Contractor at any time refuses or neglects, without fault of the Public Agency or its agent(s), to supply sufficient materials or workers to complete this agreement and work as provided herein, for a period of ten days or more after written notice thereof by the Public Agency, the Public Agency may furnish same and deduct the reasonable expenses thereof from the contract price.

12. LAWS APPLY: General

Both parties recognize the applicability of various federal, state and local laws and regulations, especially Chapter 1 of Part 7 of the California Labor Code (beginning with Section 1720, and including Sections 1735, 1777.5, 1777.6, forbidding discrimination) and intend that this agreement complies therewith. The parties specifically stipulate that the relevant penalties and forfeitures provided in the Labor Code, especially in Sections 1775, 1776, and 1813, concerning prevailing wages and hours, shall apply to this agreement as though fully stipulated herein.

13. SUBCONTRACTORS

Public Contract Code Sections 4100-4113 are incorporated herein.

14. WAGE RATES

(a) Pursuant to Labor Code Section 1773, the Director of the Department of Industrial Relations has ascertained the general prevailing rates of wages per diem, and for holiday and overtime work, in the

locality in which this work is to be performed, for each craft, specified in the call for bids for this work and are on file with the Public Agency, and are hereby incorporated herein.

(b) This schedule of wages is based on a working day of eight (8) hours unless otherwise specified; and the daily rate is the hourly rate multiplied by the number of hours constituting the working day. When less than that number of hours are worked, the daily wage rate is proportionately reduced, but the hourly rate remains as stated.

(c) The Contractor, and all subcontractors, must pay at least these rates to all persons on this work, including all travel, subsistence, and fringe benefit payments provided for by applicable collective bargaining agreements. All skilled labor not listed above must be paid at least the wage scale established by collective bargaining agreement for such labor in the locality where such work is being performed. If it becomes necessary for the Contractor or any subcontractor to employ any person in a craft, classification or type of work (except executive, supervisory, administrative, clerical or other non-manual workers as such) for which no minimum wage rate is specified, the contractor shall immediately notify the Public Agency which shall promptly determine the prevailing wage rate therefore and furnish the Contractor with the minimum rate based thereon, which shall apply from the time of the initial employment of the person affected and during the continuance of such employment.

15. HOURS OF LABOR

Eight hours of labor in one calendar day constitutes a legal day's work, and no worker employed at any time on this work by the Contractor or by any subcontractor shall be required or permitted to work longer thereon except as provided in Labor Code Sections 1810-1815.

16. APPRENTICES

Properly indentured apprentices may be employed on this work in accordance with Labor Code Sections 1777.5 and 1777.6, forbidding discrimination.

17. PREFERENCE FOR MATERIALS

The Public Agency desires to promote the industries and economy of Humboldt County, and the Contractor therefore promises to use the products, workers, laborers and mechanics of this County in every case where the price, fitness and quality are at least equal.

18. ASSIGNMENT

This agreement binds the heirs, successors, assigns, and representatives of the Contractor; but Contractor cannot assign it in whole or in part, nor any monies due or to become due under it, without the prior written consent of the Public Agency and the Contractor's surety or sureties, unless they have waived notice of assignment.

19. NO WAIVER BY PUBLIC AGENCY

Inspection of the work and/or materials, or approval of work and/or materials inspected, or statement by any officer, agent or employee of the Public Agency indicating the work or any part thereof complies with the requirements of this contract, or acceptance of the whole or any part of said work and/or materials, or payments therefore, or any combination of these acts, shall not relieve the Contractor of Contractor's obligation to fulfill this contract as prescribed; nor shall the Public Agency be thereby stopped from bringing any action for damages or enforcement arising from the failure to comply with any of the terms and conditions hereof.

20. HOLD HARMLESS AND INDEMNITY

(a) Contractor promises to and shall hold harmless and indemnify from the liabilities as defined in this section.
(b) The Indemnitees benefited and protected by this promise are the Public Agency and its elective and appointive boards, commissions, officers, agents and employees.
(c) The liabilities protected against are any liability or claim for damage of any kind allegedly suffered, incurred or threatened because of actions defined below, including personal injury, death, property damage, inverse condemnation, or any combination of these, regardless of whether or not such liability, claim or damage was unforeseeable at any time before the Public Agency approved the improvement plan or accepted the improvements as completed, and including the defense of any suit(s) or action(s) at law or equity concerning these.
(d) The actions causing liability are any act or omission (negligent or non-negligent) in connection with the matters covered by this contract and attributable to the contractor, subcontractor(s), or any officer(s), agent(s), or employee(s) of one or more of them.
(e) Non-conditions: The promise and agreement in this section is not conditioned or dependent on whether or not any Indemnities has prepared, supplied, or approved any plan(s), drawing(s), specifications(s) or special provision(s) in connection with this work, has insurance or other indemnification covering any of these matters, or that the alleged damage resulted partly from any negligent or willful misconduct of any Indemnities.

21. EXCAVATION

Contractor shall comply with the provisions of Labor Code Section 6705, if applicable, by submitting to Public Agency a detailed plan showing the design of shoring, bracing, sloping, or other provisions to be made for worker protection from the hazard of caving ground during trench excavation.

22. Not Used

23. WARRANTY

(a) In addition to any other warranties or guaranties in the Contract Documents, the Contractor warrants, except as provided in paragraph (i) of this clause, that work performed under this contract

conforms to the contract requirements and is free of any defect in equipment, material, or design furnished, or workmanship performed by the Contractor or any subcontractor or supplier at any tier.

(b) This warranty shall continue for a period of 1 year from the date of final acceptance of the Work, unless otherwise provided or extended in the Contract Documents. If the District takes possession of any part of the work before final acceptance, this warranty shall continue for a period of 1 year from the date the District takes possession.

(c) The Contractor shall remedy at the Contractor's expense any failure to conform, or any defect. In addition, the Contractor shall remedy at the Contractor's expense any damage to District-owned or controlled real or personal property, when that damage is the result of—

(1) The Contractor's failure to conform to contract requirements; or

(2) Any defect of equipment, material, workmanship, or design furnished.

(d) The Contractor shall restore any work damaged in fulfilling the terms and conditions of this clause. The Contractor's warranty with respect to work repaired or replaced will run for 1 year or as otherwise provided or extended from the date of repair or replacement.

(e) The District shall notify the Contractor, in writing, within a reasonable time after the discovery of any failure, defect, or damage.

(f) If the Contractor fails to remedy any failure, defect, or damage within a reasonable time after receipt of notice, the District shall have the right to replace, repair, or otherwise remedy the failure, defect, or damage at the Contractor's expense.

(g) With respect to all warranties, express or implied, from subcontractors, manufacturers, or suppliers for work performed and materials furnished under this contract, the Contractor shall—

(1) Obtain all warranties that would be given in normal commercial practice;

(2) Require all warranties to be executed, in writing, for the benefit of the District, if directed by the District; and

(3) Enforce all warranties for the benefit of the District, if directed by the District.

(h) In the event the Contractor's warranty under paragraph (b) of this clause has expired, the District may bring suit at its expense to enforce a subcontractor's, manufacturer's, or supplier's warranty.

(i) Unless a defect is caused by the negligence of the Contractor or subcontractor or supplier at any tier, the Contractor shall not be liable for the repair of any defects of material or design furnished by the District nor for the repair of any damage that results from any defect in District-furnished material or design.

(j) This warranty shall not limit the District's rights under the Inspection and Acceptance clause of this contract with respect to latent defects, gross mistakes, or fraud.

24. CONSEQUENTIAL DAMAGES

The Contractor and Public Agency waive Claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes:

(a) Damages incurred by the Public Agency for rental expenses, for losses of use, income, profit, financing, business and reputation, and for loss of management or employee productivity or of the services of such persons; and
(b) Damages incurred by the Contractor for principal office expenses including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the Work.

This mutual waiver is applicable, without limitation, to all consequential damages due to either party's termination. Nothing contained in this subparagraph shall be deemed to preclude an award of liquidated direct damages, when applicable, in accordance with the requirements of the Contract Documents.

25. HAZARDOUS MATERIALS

(a) If reasonable precautions will be inadequate to prevent foreseeable bodily injury or death to persons resulting from a material or substance, including but not limited to asbestos, lead or polychlorinated biphenyl (PCB), encountered on the site by the Contractor, the Contractor shall, upon recognizing the condition, immediately stop Work in the affected area and report the condition to the Public Agency in writing.
(b) The Public Agency shall obtain the services of a licensed laboratory to verify the presence or absence of the material or substance reported by the Contractor and, in the event such material or substance is found to be present, to verify that it has been rendered harmless. The Public Agency shall furnish in writing to the Contractor the names and qualifications of persons or entities who are to perform tests verifying the presence or absence of such material or substance or who are to perform the task of removal or safe containment of such material or substance. When the material or substance has been rendered harmless, Work in the affected area shall resume upon written notification from the Public Agency and Contractor. The Contract Time shall be extended appropriately.

26. SAFETY

(a) **Safety Programs.** In addition to and as required by other Sections of the Contract Documents, the Contractor shall be solely responsible for initiating, maintaining and supervising all safety programs required by applicable law, ordinance, regulation or governmental orders in connection with the performance of the Contract, or otherwise required by the type or nature of the Work. The Contractor's safety program shall include all actions and programs necessary for compliance with California or federally statutorily mandated workplace safety programs, including without limitation, compliance with the California Drug Free Workplace Act of 1990 (California Government Code §§8350 et seq.). Without limiting or relieving the Contractor of its obligations hereunder, the Contractor shall require that its Subcontractors similarly initiate and maintain all appropriate or required safety programs. Prior to commencement of Work, the Contractor shall meet with the campus Buildings and Grounds Manager, Project Manager, and Construction Manager to review Contractor's safety precautions and implementation of safety programs during the Work.

(b) **Safety Precautions.** In addition to and as required by other Sections of the Contract Documents, the Contractor shall be solely responsible for initiating and maintaining reasonable precautions for safety of, and shall provide reasonable protection to prevent damage, injury or loss to: (i) employees on the Work and other persons who may be affected thereby; (ii) the Work and materials and equipment to be incorporated therein, whether in storage on or off the site, under care, custody or control of the Contractor or the Contractor's Subcontractors or Sub-subcontractors; and (iii) other property or items at the site of the Work, or adjacent thereto, such as trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction. The Contractor shall take adequate precautions and measures to protect existing roads, sidewalks, curbs, pavement, utilities, adjoining property and improvements thereon (including without limitation, protection from settlement or loss of lateral support) and to avoid damage thereto. Without adjustment of the Contract Price or the Contract Time, the Contractor shall repair, replace or restore any damage or destruction of the foregoing items as a result of performance or installation of the Work.

(c) **Safety Signs, Barricades.** In addition to and as required by other Sections of the Contract Documents, the Contractor shall erect and maintain, as required by existing conditions and conditions resulting from performance of the Contract, reasonable safeguards for safety and protection of property and persons, including, without limitation, posting danger signs and other warnings against hazards, promulgating safety regulations and notifying Districts and users of adjacent sites and utilities.

(d) **Safety Notices.** In addition to and as required by other Sections of the Contract Documents, the Contractor shall give or post all notices required by applicable law and comply with applicable laws, ordinances, rules, regulations and lawful orders of public authorities bearing on safety of persons or property or their protection from damage, injury or loss.

27. Not Used

28. SIGNATURES AND ACKNOWLEDGEMENT

Public Agency, By: _____
Keith Flamer – President/Superintendent

Note to Contractor: (1) Execute acknowledgement form below, and (2) if a corporation, affix Corporate Seal.

Contractor, hereby also acknowledging awareness of and compliance with Labor Code S1861 concerning Worker's Compensation Law.

Contractor:

By: _____ (CORPORATE SEAL)
(Designate Official Capacity – **COMPANY NAME)**

_____
Print NAME and TITLE

_____ _____
License Number Federal ID Number

NOTARY PUBLIC

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State of California)ss. ACKNOWLEDGEMENT (By Corporation, Partnership or Individual)
County of Humboldt)

The person(s) signing above for Contractor, known to me in individual and business capacity as stated, personally appeared before me today and acknowledged that he/she/they executed it and that the corporation or partnership named above executed it.

Dated: _____

_____ (NOTARIAL SEAL)

END OF SECTION 00 52 00

SECTION 01 11 00
SUMMARY OF WORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. All Contract Documents shall be reviewed for applicable provisions related to the provisions in this document, and provisions in the General Conditions and other Division 1 Specification Sections shall apply to this Section without limitation**.**

1.2 RELATED REQUIREMENTS SPECIFIED IN OTHER SECTIONS

A. Section 00 54 36 – "Building Information Modeling (BIM)"
B. Section 01 14 00- "Work Restrictions"
C. Section 01 29 00 – "Payment Procedures"
D. Section 01 31 19 – "Project Meetings"
E. Section 01 31 80 – "Document Management System"
F. Section 01 32 13 – "Scheduling of Work"
G. Section 01 32 33 – "Photographic Documentation"
H. Section 01 33 00 – "Submittal Procedures"
I. Section 01 35 20 – "Site Security & Safety"
J. Section 01 45 00 – "Quality Control"
K. Section 01 43 39 – "Mockups"
L. Section 01 62 00 – "Product Options"
M. Section 01 77 00 – "Closeout Procedures"
N. Section 01 78 36 – "Warranties"
O. Section 01 78 39 – "Project Record Documents"
P. Section 01 79 00 – "Demonstration and Training"
Q. Divisions 2 through 41 Sections for Summary of Work requirements for the work in those Sections.

1.3 WORK DESCRIPTIONS WITHOUT FORCE

A. All general descriptions and/or general summaries of the work noted in this section, or elsewhere within the Contract Documents, are without force and effect on the Contract Work described and indicated in detail the Construction Documents. These general descriptions and summaries are for general reference and descriptive purposes only and in no way offer the complete and concise description of all the Work required by the Contract Documents.

1.4 WORK COVERED BY CONTRACT DOCUMENTS

A. The intent of the Contract Documents includes but is not limited to:

1. CONSTRUCTION OF A NEW PHYSICAL EDUCATION BUILDING WITH SPECTATOR GYMNASIUM
2. CONSTRUCTION OF A NEW FIELD HOUSE BUILDING WITH INTERIOR PRACTICE FIELD
3. SITE WORK INCLUDING RETAINING WALLS, FIRE LANES, PARKING SPACES, FIRE HYDRANTS, UTILITIES, PATHS OF TRAVEL, SITE LIGHTING, FLATWORK, LANDSCAPING, AND OTHER SITE DEVELOPMENT
4. ABATEMENT OF HAZARDOUS MATERIALS AND DEMOLITION OF THE EXISTING PHYSICAL EDUCATION / FIELD HOUSE BUILDINGS AND SURROUNDING SITE AREAS
5. SITE RESTORATION AT DEMOLISHED BUILDINGS
6. NEW GENERATOR AND TRANSFORMERS
7. OTHER WORK AS INDICATED IN THE CONTRACT DOCUMENTS

B. CONTRACTS

1. Perform the work under a single, fixed-price Contract.

1.5 PROJECT INFORMATION

A. Project Identification: Creative Arts Building

1. Project Location: 7351 Tompkins Hill Rd., Eureka, CA 95501
2. Architect's Project Number: 22035.00

B. Owner (District): Redwoods Community College District

C. Architect: tBP/ Architecture

1. Location: 1777 Oakland Blvd, Ste 320, Walnut Creek, CA 94596

D. Web-Based Project Software: Project software provided and administered by the contractor will be used for the purposes of managing communication and documents during the construction stage. Refer to Section 01 31 80 Document Management System

1.6 CONTRACTOR PERSONNEL & PERSONNEL QUALIFICATIONS

A. Qualifications: In addition to the requirements of Article 3.2 of the Conditions of the Contract (Section 00 70 00), the Contractor shall employ full time (8 hours per work day) at the Site (with the exception of the Project Manager), unless otherwise approved by the District, the following individuals with the following minimum experience levels:

1. Project Manager: This individual must have a minimum of 10 years of construction experience on similar public building projects, including the completion of two public projects involving similar building construction exceeding $20 million in value over the last ten years. One of these projects shall have been under the jurisdiction of DSA. This individual shall visit the Site a minimum of once a week to meet with the District's Construction Manager.
2. On-Site General Superintendent (Full Time at the Site): This individual must have a minimum of 15 years of experience on similar public building projects, including the completion of two public projects involving similar building construction exceeding $20 million in value over the last ten years. One of these projects shall have been under the jurisdiction of DSA.

3. On-Site Project Engineer (Full Time at the Site): This individual must have a minimum of 3 years of construction experience on similar public building projects with completion of one public project involving similar building construction in excess of $20 million in value over the last three years.
4. BIM Coordinator – see requirements of Section 00 54 36 Article 10. Construction Roles and Responsibilities.

1.7 WORK BY DISTRICT

A. General: Cooperate fully with District so work may be carried out smoothly, without interfering with or delaying work under this Contract or work by District. Coordinate the Work of this Contract with work performed by District.
B. District reserves the right to perform construction operations with its own forces or to employ separate contractors on portions of the Project. Coordinate with this work in terms of providing site access, workspace, and storage space, cooperation of work forces, scheduling, and technical requirements.
C. Coordination with District's Forces or District's Contractors:

1. Provide site access, space allocation, scheduling, scheduling coordination, coordination of work forces and coordination of technical requirements with contractors that may be selected and employed by District to perform work simultaneously and in conjunction with the Work, which may include, but shall not be limited to the following, as applicable to the Project:

a. Materials Inspection and Testing Agency
b. Surveying
c. Geotechnical Engineering and Consulting
d. Furniture contractors
e. Other District consultants and contractors not listed here but that may be required for successful completion of the Project.

1.8 WORK UNDER SEPARATE CONTRACTS

A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying Work under this Contract or other contracts. Coordinate the Work of this Contract with work performed under separate contracts.
B. Preceding Work: District has awarded, or will award before commencement of this Contract, separate contract(s) for the following construction operations at Project site. Those operations are scheduled to be substantially complete before Work under this Contract begins.
1. Stadium Project at the existing track and field – see attached Exhibit A

C. Subsequent Work: District will award separate contract(s) for the following additional work to be performed at site concurrently with the work of this Contract or following Substantial Completion of the work of this Contract. Completion of that work will depend on successful completion of preparatory Work under this Contract.

1. The subsequent phase of construction to begin once this contract is completed, or concurrently, pertains to new Student Housing – see attached Exhibit A.

1.9 WORK SEQUENCE

A. Construct work as shown in the Contract Documents. Coordinate Baseline CPM Schedule activities and construction operations with District and the Architect. Provide a 40 Work Day activity for anticipated rain delays as a "bank". Insert this rain bank as the last activity prior to Substantial Completion of the Gym and Field House.

B. Scheduling of Contractor's use of the areas and times involved shall be determined in cooperation with the District. Notify the District a minimum of 10-days prior to commencement of work.

C. Construction activities shall be performed between the hours of 7AM and 5PM, Monday through Friday, unless otherwise required. No Work shall be performed outside the above hours without prior written authorization from the Construction Manager/Project Manager. No work on Sundays or Holidays will be permitted.

1.10 ACCESS TO SITE

A. General: Project is located on College of the Redwoods campus property. Contractor shall have limited use of campus for delivery and Project site access purposes only during construction period. Contractor shall have full use of Project site for construction operations during this time. Contractor's use of Project site is limited only by District's right to perform work or to retain other contractors on portions of Project.

B. Condition of Existing Grounds: Maintain portions of existing grounds, landscaping, and hardscaping affected by construction operations throughout construction period. Repair damage caused by construction operations.

1.11 USE OF PREMISES

A. Contractor shall only use the premises for work, storage, staging areas, and vehicular parking as designated in the Contract Documents.

B. Use of Site: Limit use of Project site to areas within the Contract limits indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.

1. Limits: Confine construction operations to areas permitted by law, ordinances, permits, and Contract Documents.
2. Driveways, Walkways and Entrances: Keep driveways, loading areas, and entrances serving premises clear and available to District, District's employees, Residents, and emergency vehicles at all times. Do not use these areas for parking or for storage of materials.

    a. Schedule deliveries to minimize use of driveways and entrances by construction operations, and to minimize space and time requirements for storage of materials and equipment on-site.

1.12 EXISTING AREA CONDITION SURVEY

A. Prior to commencement of work, jointly survey the existing area to be remodeled with the District and Architect, noting and recording existing damage such as cracks, sags, and other damage (on Site Plan/Floor Plans).
B. This record shall serve as a basis for determination of subsequent damage to these items due to settlement, movement, demolition, or Contractor's operations.
C. Existing damage observed shall be marked and the official record of existing damage shall be signed by the parties making the survey.
D. Cracks, sags, and damage to the area and other items not noted in the original survey but subsequently observed shall be reported immediately to the Architect.
E. Contractor shall comply with Section 01 32 33 for photographic and video recording of existing conditions.

1.13 PROTECTION OF EXISTING STRUCTURES AND UTILITIES

A. The Drawings may not show all existing water, gas, electrical, and hot water lines, and other items known or suspected to exist around the work.
B. Contractor shall locate these installations before proceeding with demolition or other operations which may cause damage, maintain them in service where appropriate, and repair damage caused by the performance of the Work, at no increase in the Contract Sum.
C. In addition to notification, if a structure or utility is damaged, take appropriate action as specified in the General Conditions.

1.14 USE AND OCCUPANCY OF WORK PRIOR TO ACCEPTANCE BY DISTRICT

A. The District may use and occupy the building before formal acceptance under the following conditions:

1. A Certificate of Substantial Completion shall be prepared and executed as provided in the Contract Documents. See Section 01 77 00 Contract Closeout Procedures. The Certificate of Substantial Completion shall be accompanied by a written endorsement of the Contractor's insurance carrier and surety permitting occupancy by the District during the remaining period of the work.
2. Occupancy by the District shall not be construed as being an acceptance of that part of the Work occupied.
3. The Contractor will not be held responsible for damage to the occupied part of the Work resulting from the District's occupancy.
4. Occupancy by the District shall not be deemed to constitute a waiver of existing claims the District or Contractor may have against each other.
5. Comply with Specification Section 01 78 36, Warranties, and 01 77 00 Contract Closeout Procedures for the Work or any Phase of Work.
6. The District will pay for utility costs associated with occupancy during construction.

1.15 PROTECTION OF EXISTING IMPROVEMENTS

A. Provide barricades, coverings, or other types of protection necessary to prevent damage to existing improvements indicated to remain in place.

B. Protect improvements on adjoining properties as well as those on the District's property.
C. Protect existing trees and other vegetation indicated to remain in place, against unnecessary cutting, breaking or skinning of roots, skinning and bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within drip line, excess foot or vehicular traffic, or parking of vehicles within drip line.
D. Restore any improvements damaged by this work to their original condition as acceptable to the District or other parties or authorities having jurisdiction.

1.16 HAZARDOUS MATERIALS – NOT USED

1.17 SPECIFICATION AND DRAWING CONVENTIONS

A. Specification Content: The Specifications use certain conventions for the style of language and the intended meaning of certain terms, words, and phrases when used in particular situations. These conventions are as follows:

1. Imperative mood and streamlined language are generally used in the Specifications. The words "shall," "shall be," or "shall comply with," depending on the context, are implied where a colon (:) is used within a sentence or phrase.
2. Specification requirements are to be performed by Contractor unless specifically stated otherwise.

B. Division 01 General Requirements: Requirements of Sections in Division 01 apply to the Work of all Sections in the Specifications.
C. Drawing Coordination: Requirements for materials and products identified on Drawings are described in detail in the Specifications. One or more of the following are used on Drawings to identify materials and products:

1. Terminology: Materials and products are identified by the typical generic terms used in the individual Specifications Sections.
2. Abbreviations: Materials and products are identified by abbreviations published as part of the U.S. National CAD Standard and scheduled on Drawings.

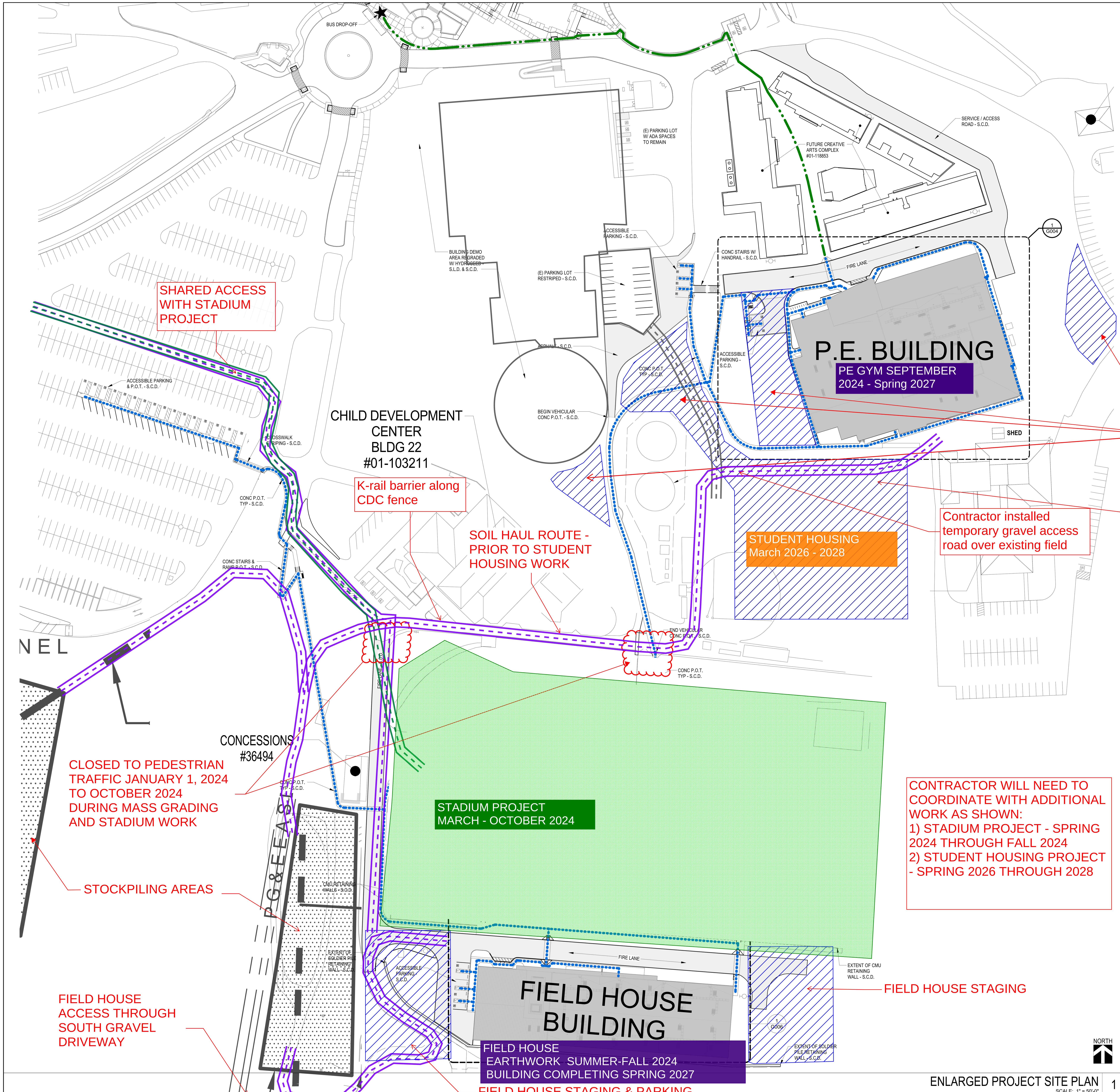
1.18 MISCELLANEOUS PROVISIONS

A. Items shown or scheduled to be salvaged will remain the property of the District.
B. Rain Delays: Since the contract work will start on site during the rainy season, the Contract duration noted in Section 00 52 00 Construction Agreement Form is based on the Contractor encountering 40 work days of rain or delays due to rain (e.g., muddy conditions). The Contractor shall include 40 work days in their Baseline CPM Schedule just prior to the Substantial Completion milestone. In the event the Project is delayed at the site by rain or rain impacts beyond the 40 work days to SC, the Contractor will be entitled to a non-compensable time extension.

PART 2 – PRODUCTS - Not Used.

PART 3 – EXECUTION - Not Used.

END OF SECTION 01 11 00



BUS DROP-OFF
SERVICE / ACCESS ROAD - S.C.D.
FUTURE CREATIVE ARTS COMPLEX #01-118853
(E) PARKING LOT W/ ADA SPACES TO REMAIN
ACCESSIBLE PARKING - S.C.D.
BUILDING DEMO AREA REGRADED W/ HYDROSEED - S.L.D. & S.C.D.
(E) PARKING LOT RESTRIPED - S.C.D.
CONC STAIRS W/ HANDRAIL - S.C.D.
FIRE LANE
P.E. BUILDING
PE GYM SEPTEMBER 2024 - Spring 2027
SHED
SHARED ACCESS WITH STADIUM PROJECT
ACCESSIBLE PARKING & P.O.T. - S.C.D.
CROSSWALK STRIPING - S.C.D.
CHILD DEVELOPMENT CENTER
BLDG 22
#01-103211
BEGIN VEHICULAR CONC P.O.T. - S.C.D.
K-rail barrier along CDC fence
SOIL HAUL ROUTE - PRIOR TO STUDENT HOUSING WORK
PE STAGING OPTIONS
TEMP PE PARKING & STAGING PRIOR TO STUDENT HOUSING WORK
Contractor installed temporary gravel access road over existing field
STUDENT HOUSING
March 2026 - 2028
CONC P.O.T. TYP - S.C.D.
CONC STAIRS & RAMP P.O.T. - S.C.D.
END VEHICULAR CONC P.O.T. - S.C.D.
CONCESSIONS
#36494
CLOSED TO PEDESTRIAN TRAFFIC JANUARY 1, 2024 TO OCTOBER 2024 DURING MASS GRADING AND STADIUM WORK
STADIUM PROJECT
MARCH - OCTOBER 2024
CONTRACTOR WILL NEED TO COORDINATE WITH ADDITIONAL WORK AS SHOWN:
1) STADIUM PROJECT - SPRING 2024 THROUGH FALL 2024
2) STUDENT HOUSING PROJECT - SPRING 2026 THROUGH 2028
PHASE 1 - PE & FIELD HOUSE EARTHWORK START SUMMER 2024 - STADIUM PROJECT 3/5/24 - 11/30/24
STOCKPILING AREAS
PG&E EASE
FIELD HOUSE ACCESS THROUGH SOUTH GRAVEL DRIVEWAY
EXTENT OF CMU RETAINING WALL - S.C.D.
FIELD HOUSE STAGING
FIELD HOUSE BUILDING
FIELD HOUSE
EARTHWORK SUMMER-FALL 2024
BUILDING COMPLETING SPRING 2027
FIELD HOUSE STAGING & PARKING
EXTENT OF SOLDIER PILE RETAINING WALL - S.C.D.
NORTH

ENLARGED PROJECT SITE PLAN 1

SCALE: 1" = 50'-0"

SITE PLAN GENERAL NOTES

1. THE ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLAN IS A BARRIER FREE ACCESS ROUTE WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2" BEVELED AT 1:2 MAX SLOPE OR VERTICAL LEVEL CHANGE NOT EXCEEDING 1/4" MAX AND AT LEAST 48" WIDE. SURFACE IS SLIP RESISTANT, STABLE, FIRM AND SMOOTH. CROSS SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED.
2. CONTRACTOR TO VERIFY THAT ALL BARRIERS IN THE PATH OF TRAVEL HAVE BEEN REMOVED OR WILL BE REMOVED UNDER THIS PROJECT, AND PATH OF TRAVEL COMPLIES WITH CBC 1133B.

SITE LEGEND

- ACCESSIBLE PATH OF TRAVEL THIS PROJECT
- ACCESSIBLE PATH OF TRAVEL UNDER #01-118853
- EXISTING BUILDINGS
- NEW BUILDINGS
- POINT OF ENTRY / DROP OFF LOCATION

01 14 00A Exhibit A ADDENDUM 1

APPROVED
DIV. OF THE STATE ARCHITECT
APP: 01-119705 INC:
REVIEWED FOR
SS ☑ FLS ☑ ACS ☑
DATE: 06/25/2024

DIVISION OF THE STATE ARCHITECT
1515 CLAY STREET, #1201
OAKLAND, CA 94612
(510) 622-3101
DSA Application #01-119705
DSA File #12-C1

agency

tBP architecture planning interiors

LICENSED ARCHITECT PHILIP JOHN NEWSOM NO. 23270 REN. 10-31-23 STATE OF CALIFORNIA

tBP/Architecture
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ph: 925.246.6419

architect

consultant

P.E. REPLACEMENT PROJECT
COLLEGE OF THE REDWOODS
REDWOODS COMMUNITY COLLEGE DISTRICT
7351 TOMPKINS HILL ROAD, EUREKA, CA 95501

owner

tBP project number: 22035.00
file name:
drawn by: Author checked by: Checker
date: Issue Date 12/30/2022 8:50:01 AM

rev:	date:	description:

drawing title:
ENLARGED PROJECT SITE PLAN

drawing no.:
AS001

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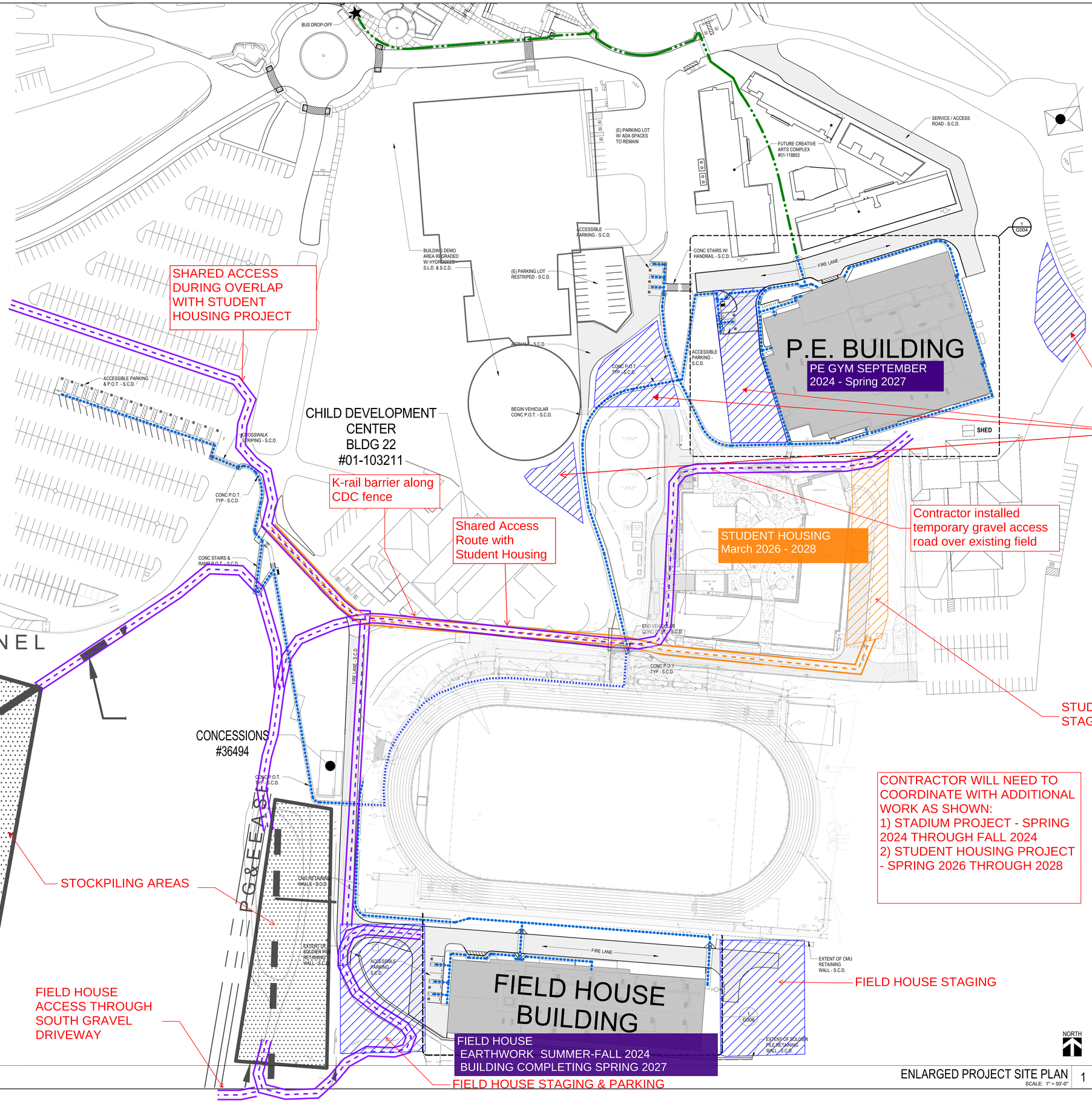

PHASE 2 - PE & FIELD HOUSE IN PROGRESS, STUDENT HOUSING START 2026

SITE PLAN GENERAL NOTES

1. THE ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLAN IS A BARRIER FREE ACCESS ROUTE WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2" BEVELED AT 1:2 MAX SLOPE OR VERTICAL LEVEL CHANGE NOT EXCEEDING 1/4" MAX AND AT LEAST 48" WIDE. SURFACE IS SLIP RESISTANT, STABLE, FIRM AND SMOOTH. CROSS SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED.
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SITE LEGEND

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- ACCESSIBLE PATH OF TRAVEL UNDER #01-118853
- EXISTING BUILDINGS
- NEW BUILDINGS
- POINT OF ENTRY / DROP OFF LOCATION

ENLARGED PROJECT SITE PLAN
SCALE: 1" = 50'-0" | 1

01 14 00A Exhibit A ADDENDUM 1

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tBP project number: 22035.00
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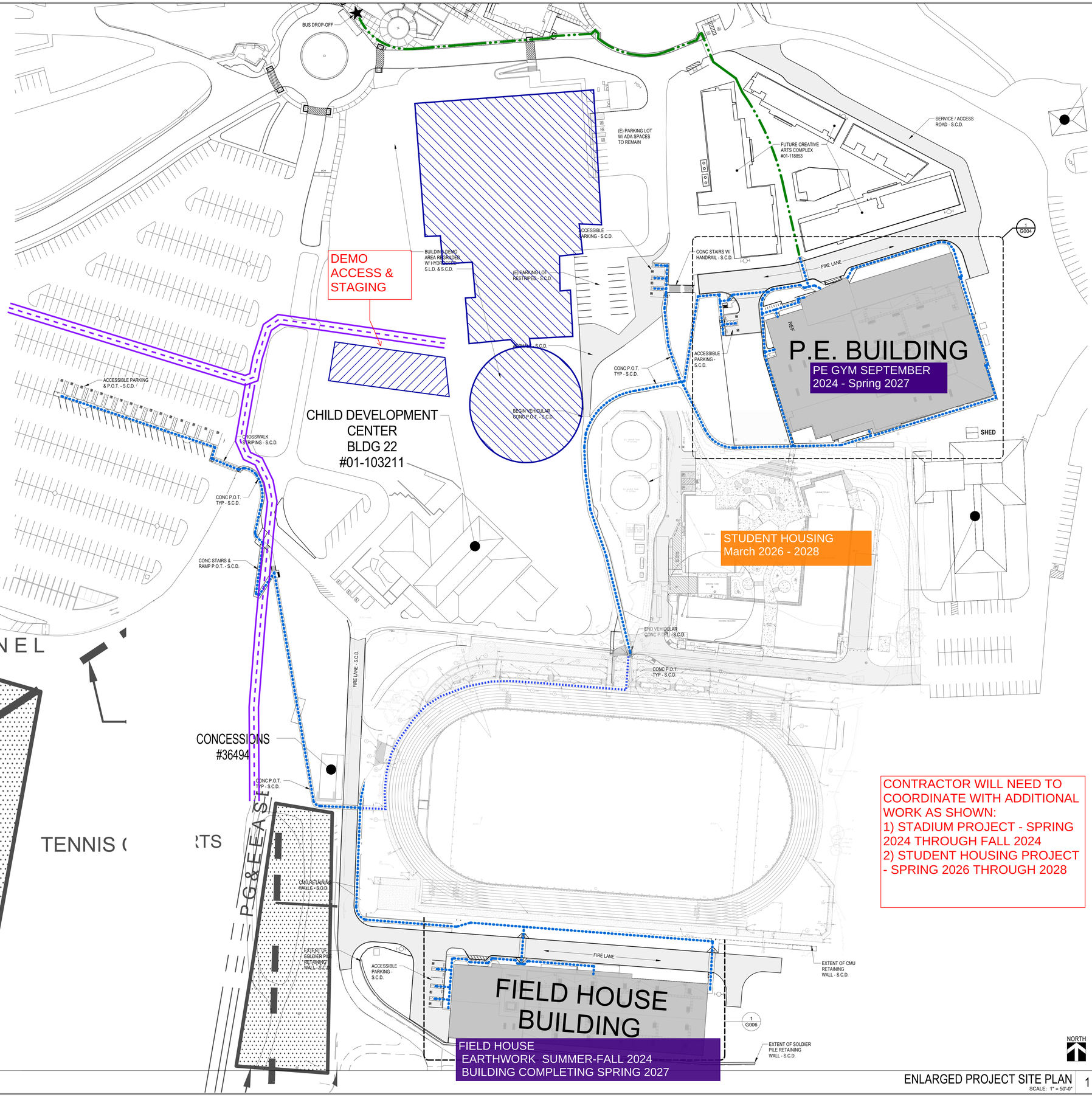
drawn by: Author checked by: Checker
date: Issue Date 12/30/2022 8:50:01 AM

rev:	date:	description:

drawing title:
ENLARGED PROJECT SITE PLAN

drawing no.:
AS001



CONTRACTOR WILL NEED TO COORDINATE WITH ADDITIONAL WORK AS SHOWN:
1) STADIUM PROJECT - SPRING 2024 THROUGH FALL 2024
2) STUDENT HOUSING PROJECT - SPRING 2026 THROUGH 2028

PHASE 3 - DEMOLITION OF EXISTING PE BLDGS SUMMER 2027

SITE PLAN GENERAL NOTES

1. THE ACCESSIBLE PATH OF TRAVEL AS INDICATED ON PLAN IS A BARRIER FREE ACCESS ROUTE WITHOUT ANY ABRUPT LEVEL CHANGES EXCEEDING 1/2" BEVELED AT 1:2 MAX SLOPE OR VERTICAL LEVEL CHANGE NOT EXCEEDING 1/4" MAX AND AT LEAST 48" WIDE. SURFACE IS SLIP RESISTANT, STABLE, FIRM AND SMOOTH. CROSS SLOPE DOES NOT EXCEED 2% AND SLOPE IN THE DIRECTION OF TRAVEL IS LESS THAN 5% UNLESS OTHERWISE INDICATED.
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SITE LEGEND

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- ACCESSIBLE PATH OF TRAVEL UNDER #01-118853
- EXISTING BUILDINGS
- NEW BUILDINGS
- POINT OF ENTRY / DROP OFF LOCATION

ENLARGED PROJECT SITE PLAN
SCALE: 1" = 50'-0"

1

01 14 00A Exhibit A ADDENDUM 1

APPROVED
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APP: 01-119705 INC:
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ENLARGED PROJECT SITE PLAN

drawing no.:
AS001

SECTION 01 32 50
DELAY AND EXTENSIONS TO THE WORK

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. All Contract Documents shall be reviewed for applicable provisions related to the provisions in this document, and provisions in the General Conditions and other Division 1 Specification Sections shall apply to this Section without limitation.

1.2 RELATED REQUIREMENTS SPECIFIED IN OTHER SECTIONS

A. Section 01 11 00 – "Summary of Work"
B. Section 01 32 13 – "Construction Scheduling of Work"
C. Section 01 31 00 – "Project Management and Coordination"
D. Divisions 2 through 41 Sections for Delay and Extensions to the Work requirements for the work in those Sections.

1.3 SUMMARY

A. This Section includes administrative and procedural requirements for evaluation of excusable delays including delays due to abnormal or adverse weather conditions.

1.4 DELAYS AND EXTENSIONS TO THE WORK

A. Contractor must complete all Work within the time specified in these Contract Documents. The Contractor will be granted an extension of time and will not be assessed liquidated damages or the cost of engineering and inspection for any delay in substantially completing the Work (or parts thereof) beyond the time set elsewhere in the Contract Documents, provided that such delay was caused by unforeseeable causes beyond the control and without the fault or negligence of the Contractor. Examples of such causes include fire, floods, abnormal weather (as described below), and earthquakes, embargoes, changes made pursuant to the provisions of "Changes in work" elsewhere in the Contract Documents or acts or neglect of the District not contemplated by the Contract Documents. In all cases, any extension of time is conditioned on the following:

1. That the cause is not due to the fault or negligence of the Contractor, and the Contractor has taken reasonable precautions to prevent the delays and minimize the effects thereof; and
2. That the Contractor notifies the District, Architect, Project Manager, and project Inspector in writing within five (5) days from the beginning of such delay, specifying the nature of the delay and the measures that have been or will be taken to prevent or minimize the delay. Failure to submit written notice within this time period shall constitute an absolute waiver of any claim for a time extension.

B. No extension of time will be granted for a delay caused by a shortage of materials, unless the Contractor furnishes to the District documentary proof that he has diligently made every effort to obtain such materials from all known sources within reasonable distance of the work and further proof, in the form of schedule data as required in Section 01 32 13 that the inability to obtain such materials as originally planned did in fact cause a delay in final completion of the Work which could not be compensated for by revising the sequence of the Contractor's operations. Only the physical shortage of material will be considered as a cause for extension of time, and no consideration will be given to any claim that material could not be obtained at a reasonable, practical or economical cost or price, unless it is shown to satisfaction of the District that such material could have been obtained only at exorbitant prices, taking into account the quantities involved and the usual practices in obtaining such quantities.

C. The term "shortage of materials," as used in this section, shall apply only to materials, articles, parts or equipment which are standard items and shall not apply to materials, parts, articles or equipment which are processed, made, constructed, fabricated or manufactured to meet the specific requirements of the Contract Documents.

D. No extensions of time will be granted for delay that have no measurable impact on the completion of the Work (or parts thereof) under the Contract Documents. When extensions of time are granted, they will be limited to the period equivalent to the actual number of days lost on the critical path or controlling operations of the current approved Construction Schedule, taking into account the extent to which that delay could be decreased by reasonable mitigation measures by the Contractor. All requests for extensions of time must be supported with a critical path analysis showing the critical path and impacts to it. Contractor's failure to submit this analysis will be sufficient cause for denial of any request for a time extension.

E. Within a reasonable period of time after the Contractor submits the notice of delay along with any other information required by this section, the District will determine whether an extension of time is justified and, if so, the number of days for the extension.

1.5 ABNORMAL OR ADVERSE WEATHER CONDITIONS

A. For the purposes of this Project, the Contractor shall include within the Contract Time of its Baseline CPM Schedule an allowance of **40 work days as a bank,** just prior to its Substantial Completion date milestone activity for normally anticipated adverse weather. The allowance will be reduced pursuant to the procedures noted in this Section for abnormal weather. In the event this allowance is consumed, a non-compensable time extension for abnormal weather will be granted pursuant to the procedures of this Section. If this allowance is not consumed by normal adverse weather, the remaining work days will be considered project float as defined in Section 01 32 13, Construction Scheduling of Work.

B. In addition, before a time extension may be granted for abnormal weather, Contractor must establish to District satisfaction that the rain either significantly impacted at least 75% of the planned work of the critical path operations for a particular day or prohibited at least five (5) hours of work on the critical path operations planned for that day.

C. In the event that the project experiences favorable weather for a particular month (e.g. a number of actual rain days less than that allocated for allowable rain days per month), the cumulative float resulting from such favorable weather shall accrue to the project.

D. Rain delay shall be only for the actual period of time established pursuant to full compliance with the above requirements.

E. Contractor shall take reasonable steps to mitigate potential weather delays, such as dewatering the Site, providing access roads that are stable under abnormal or adverse weather conditions, and covering work and material that could be affected adversely by weather. Failure to do so shall be cause for the District to not grant a time extension due to abnormal or adverse weather, where Contractor could have avoided or mitigated the potential delay by exercising reasonable care.

F. Abnormal weather may be a valid basis for a time extension under the Contract. The term "abnormal weather" is defined as the occurrence rain conditions that exceed the criteria set forth that cause impact to Contractor's operations.

G. Contractor shall employ reasonable methods to mitigate the impact of abnormal weather (i.e. dewatering, protection of site, etc.) The occurrence of rain during non-work hours or having minimal impact to work on the controlling operation shall not constitute a day of abnormal weather.

1.6 ENTITLEMENT TO CLAIM FOR DELAY AND EXTENSIONS TO THE WORK

A. Any Contractor claim for damages or additional compensation based on delay shall be limited to only those circumstances where the Contractor has fulfilled at least one of the following three (3) requirements:
   1. Contractor has established its entitlement to a time extension pursuant to the provisions described above regarding delay and extensions to the Work.
   2. The delay was caused solely by the District by District's issuance of changes made pursuant to the provisions of "Changes in Work" elsewhere in these General Conditions or by or acts of neglect of the district.
   3. The delay was unreasonable under the circumstances and not within the contemplation of the parties and/or the Contract Documents.

B. It is expressly understood and agreed that delays caused by the District will be non-compensable when there are concurrent delays caused by the Contractor. Also, Contractor shall have no entitlement to additional compensation for any delay where there have been concurrent delays caused by non-compensable delays, including, but not limited to, fire, floods, tidal waves, earthquakes, epidemics, quarantine restrictions, strikes, labor disputes and freight embargoes weather days.

C. In the event that the Contractor submits a claim for additional costs associated with overhead, the Contractor shall, within 60 calendar days of the District's written request, submit to the District an audit examination and report performed by an independent Certified Public Accountant certifying the Contractor's actual unanticipated overhead costs. The independent Certified Public Accountant's audit examination shall be performed in conformance with the requirements of the American Institute of Certified Public Accountants Attestation Standards. The audit examination and report shall depict the Contractor's project and company-wide financial records and shall specify the actual overall average daily rates for both field and home office overhead for the entire duration of the project, and whether the costs have been properly allocated. The rates of field and home office overhead shall exclude all unallowable costs as determined in the Federal Acquisition Regulations, 48 CFR, Chapter 1, Part 31. The audit examination shall determine if the rates of field and home office overhead;

1. Are allowable in conformance with the requirements of the Federal Acquisition Regulations, 48 CFR, Chapter 1, Part 31;
2. Are adequately supported by reliable documentation; and
3. Related solely to the project under examination.

D. Upon the District's written request, the Contractor shall make its financial records available for audit by the District for the purpose of verifying the actual rate of overhead specified in the audit submitted by the Contractor. The overhead specified in the audit, submitted by the Contractor, will be subject to review and approval by the District.

PART 2 – PRODUCT

Not Used.

PART 3 – EXCUTION

Not Used.

END OF SECTION 01 32 50

DSA GL-4

PROJECT SUBMITTAL GUIDELINE: CALGREEN CODE

Division of the State Architect (DSA) documents referenced within this publication are available on the DSA Forms or Publications webpages.

Projects submitted to DSA for review, as a single project or as increments, must comply with the Title 24, Part 11, California Green Building Standards Code (CALGreen).

DSA-SS CALGreen regulatory requirements consists of compliance with the scoping requirements in CALGreen Chapter 3, Section 301.4 and the Nonresidential Mandatory Measures adopted by DSA-SS in Chapter 5. Please refer to the Chapter 5 Matrix Adoption Tables for each Division for the specific Mandatory Measures adopted by DSA-SS.

The measures outlined in CALGreen Chapter 5, Section 5.410.2 for building and site Commissioning and Section 5.410.4 for building and site Testing and Adjusting are *not* mandatory requirements for schools and community colleges; however, portions of these regulations are required by the California Energy Code with which all facilities must comply. For mandatory Commissioning requirements under the California Energy Code, including installation and acceptance testing requirements, refer to Energy Code Section 120.8. Although not adopted by DSA-SS, the additional design measures for Commissioning in CALGreen Section 5.410.2 and the verification measures for Testing and Adjusting under CALGreen Section 5.410.4 are encouraged and recommended.

CALGreen Section 306 Voluntary Measures encourages building practices that improve public health, safety and general welfare by promoting the use of building concepts which minimize the building's impact on the environment, and promote a more sustainable design. Chapter 5 Nonresidential Mandatory Measures that are not adopted as mandatory measures by DSA-SS are voluntary measures recommended and encouraged for the design, construction, verification, and maintenance of non-energy systems. Appendix A5, Divisions A5.1 through A5.5 outline means of achieving enhanced sustainable design and construction by incorporating voluntary measures that exceed the mandatory measures.

Attachment 1 lists the CALGreen Nonresidential Mandatory Measures adopted by DSA-SS. For the complete text, consult the 2019 Title 24, Part 11, California Green Building Standards Code. For Project Submission, check the CALGreen Mandatory Measures that are applicable to and have been incorporated into the Project and submit this Guideline (checklist) with the application.

Attachment 1

2019 CALIFORNIA GREEN BUILDING STANDARDS CODE

Division of the State Architect – Structural Safety (DSA-SS)

(CCR, Title 24, Part 11)

CHAPTER 3 – GREEN BUILDING

SECTION 301 – GENERAL

301.4 Mandatory measures for public schools and community colleges. [DSA-SS] New building construction and site work on a new or existing site shall comply with Section 301.4.

301.4.1 Building and site construction on a new site shall comply with Chapter 5 as adopted by DSA-SS.

301.4.2 Work on an existing site shall comply with Section 301.4.2.

301.4.2.1 Newly constructed site work shall comply with Chapter 5 as adopted by DSA-SS.

301.4.2.2 Newly constructed buildings shall comply with Chapter 5 as adopted by DSA-SS and Section 301.4.3.

301.4.2.3 Additions to existing buildings shall comply with Section 301.4.3.

301.4.2.4 Rehabilitated landscape areas shall comply with Sections 5.304.6 and 5.106.12.

301.4.3 Minimum rehabilitated landscape area requirement. A minimum rehabilitated landscape area equal to 75 percent of the footprint area of the building shall comply with Section 5.304.6 and Section 106.12. New buildings or additions to existing buildings less than 1,600 square feet shall not be required to comply with Section 301.4.3.

CHAPTER 5 – NONRESIDENTIAL MANDATORY MEASURES

DIVISION 5.1 – PLANNING AND DESIGN

SECTION 5.106 – SITE DEVELOPMENT

5.106.4.2 Bicycle parking. [DSA-SS] For public schools and community colleges, comply with Sections 5.106.4.2.1 and 5.106.4.2.2.

☑ **5.106.4.2.1 Student bicycle parking.** Provide permanently anchored bicycle racks conveniently accessed with a minimum of four two-bike capacity racks per new building.

☑ **5.106.4.2.2 Staff bicycle parking.** Provide permanent secure bicycle parking conveniently accessed with a minimum of two staff bicycle parking spaces per new building. Acceptable parking facilities shall be convenient from the street or staff parking area and shall meet one of the following:

1. Covered, lockable enclosures with permanently anchored racks for bicycles;
2. Lockable bicycle rooms with permanently anchored racks; or
3. Lockable, permanently anchored bicycle lockers.

☐ **5.106.5.3 Electric vehicle (EV) charging. [N]** Construction shall comply with Section 5.106.5.3.1 or Section 5.106.5.3.2 to facilitate future installation of electric vehicle supply equipment (EVSE). When EVSE(s) is/are installed, it shall be in accordance with the

California Building Code, the *California Electrical Code* and as follows:

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☐ **5.106.5.3.1 Single charging space requirements. [N]** When only a single charging space is required per Table 5.106.5.3.3, a raceway is required to be installed at the time of construction and shall be installed in accordance with the *California Electrical Code.* Construction plans and specifications shall include, but are not limited to, the following:

1. The type and location of the EVSE.
2. A listed raceway capable of accommodating a 208/240-volt dedicated branch circuit.
3. The raceway shall not be less than trade size 1 inch.
4. The raceway shall originate at a service panel or a subpanel serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into a listed suitable cabinet, box, enclosure or equivalent.
5. The service panel or subpanel shall have sufficient capacity to accommodate a minimum 40-amprere dedicated branch circuit for the future installation of the EVSE.

☐ **5.106.5.3.2 Multiple charging space requirements. [N]** When multiple charging spaces are required per Table 5.106.5.3.3 raceway(s) is/are required to be installed at the time of construction and shall be installed in accordance with the *California Electrical Code.* Construction plans and specifications shall include, but are not limited to, the following:

1. The type and location of the EVSE.
2. The raceway(s) shall originate at a service panel or a subpanel(s) serving the area, and shall terminate in close proximity to the proposed location of the charging equipment and into listed suitable cabinet(s), box(es), enclosure(s) or equivalent.
3. Plan design shall be based upon 40-amprere minimum branch circuits.
4. Electrical calculations shall substantiate the design of the electrical system, to include the rating of equipment and any on-site distribution transformers and have sufficient capacity to simultaneously charge all required EVs at its full rated amperage.
5. The service panel or subpanel(s) shall have sufficient capacity to accommodate the required number of dedicated branch circuit(s) for the future installation of the EVSE.

EV charging space calculation. [N] Table 5.106.5.3.3 shall be used to determine if single or multiple charging space requirements apply for the future installation of EVSE.

Exceptions: On a case-by-case basis where the local enforcing agency has determined EV charging and infrastructure is not feasible based upon one or more of the following conditions:

1. Where there is insufficient electrical supply.
2. Where there is evidence suitable to the local enforcing agency substantiating that additional local utility infrastructure design requirements, directly related to the implementation of Section 5.106.5.3, may adversely impact the construction cost of the project.

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TABLE 5.106.5.3.3	
TOTAL NUMBER OF ACTUAL PARKING SPACES	**NUMBER OF REQUIRED EV CHARGING SPACES**
0 – 9	0
10 – 25	1
26 – 50	2
51 – 75	4
76 – 100	5
101 – 150	7
151 – 200	10
201 and over	6 percent of total [1]

1. Calculation for spaces shall be rounded up to the nearest whole number.

☐ **5.106.5.3.4 [N] Identification.** The service panel or subpanel(s) circuit directory shall identify the reserved overcurrent protective device space(s) for future EV charging as “EV CAPABLE”. The raceway termination location shall be permanently and visibly marked as “EV CAPABLE.”

☐ **5.106.5.3.5 [N] Future charging spaces.** Future charging spaces qualify as designated parking as described in Section 5.106.5.2 Designated parking for clean air vehicles.

☑ **5.106.8 Light pollution reduction. [N]** Outdoor lighting systems shall be designed and installed to comply with the following:

1. The minimum requirements in the *California Energy Code* for Lighting Zones 0 to 4 as defined in Chapter 10, Section 10-114 of the *California Administrative Code,* and
2. Backlight, (B) ratings as defined in Illuminating Engineering Society of North America (IESNA) TM-15-11*(shown in TABLE A-1 in Chapter 8),* and
3. Uplight and Glare ratings as defined in *California Energy Code* (shown in TABLES 130.2-A and 130.2-B in Chapter 8) and
4. Allowable Backlight, Uplight, and Glare (BUG) ratings not exceeding those shown in Table 5.106.8 [N], or Comply with a local ordinance lawfully enacted pursuant to Section 101.7, whichever is more stringent.

Exceptions: [N]

1. Luminaires that qualify as exceptions in Section 140.7 of the *California Energy Code.*
2. Emergency lighting.
3. Building facade meeting the requirements in Table 140.7-B of the *California Energy Code*, Part 6.
4. Custom lighting features as allowed by the local enforcing agency, as permitted by Section 101.8 Alternate materials, designs and methods of construction.

Notes:

1. **[N]** See also *California Building Code,* Chapter 12, Section 1205.7 for college campus lighting requirements for parking facilities and walkways.
2. Refer to Chapter 8 (Compliance Forms, Worksheets and Reference Material) for Illuminating Engineering Society Technical Memorandum TM-15-11 Table A-1, *California Energy Code* Tables 130.2-A and 130.2-B.
3. Refer to the California Energy Code for requirements for additions and alterations.

TABLE 5.106.8 [N]

MAXIMUM ALLOWABLE BACKLIGHT, UPLIGHT, AND GLARE (BUG) RATINGS
(See CALGreen for TABLE)

☑ **5.106.10 Grading and paving.** Construction plans shall indicate how site grading or a drainage system will manage all surface water flows to keep water from entering buildings. Examples of methods to manage surface water include, but are not limited to, the following:

1. Swales.
2. Water collection and disposal systems.
3. French drains.
4. Water retention gardens.
5. Other water measures which keep surface water away from buildings and aid in groundwater recharge.

   Exception: Additions and alterations not altering the drainage path.

☑ **5.106.12 Shade trees. [DSA-SS]** Shade trees shall be planted to comply with Sections 5.106.12.1, 5.106.12.2, and 5.106.12.3. Percentages shown shall be measured at noon on the summer solstice. Landscape irrigation necessary to establish and maintain tree health shall comply with Section 5.304.6.

☑ **5.106.12.1 Surface parking areas.** Shade tree plantings, minimum #10 container size or equal, shall be installed to provide shade over 50% of the parking area within 15 years.

Exception: The surface parking area covered by solar photovoltaic shade structures, or shade structures with roofing materials that comply with Table A5.106.11.2.2 in Appendix A5, are not included in the total area calculation.

☑ **5.106.12.2 Landscape areas.** Shade trees plantings, minimum #10 container size or equal, shall be installed to provide shade over 20% of the landscape area within 15 years

Exception: Playfields for organized sport activity are not included in the total area calculation.

☑ **5.106.12.3 Hardscape areas.** Shade trees plantings, minimum #10 container size or equal, shall be installed to provide shade over 20% of the hardscape area within 15 years.

Exception: Walks, hardscape areas covered by solar photovoltaic shade structures, and hardscape areas covered by shade structures with roofing materials that comply with Table A5.106.11.2.2 in Appendix A5, are not included in the total area calculation.

DIVISION 5.2 – ENERGY EFFICIENCY

SECTION 5.201 – GENERAL

☑ **5.201.1 California Energy Code.** For the purposes of mandatory energy efficiency standards in this code, the California Energy Commission will continue to adopt mandatory standards.

CALGREEN CODE

DIVISION 5.3 – WATER EFFICIENCY AND CONSERVATION

SECTION 5.303 – INDOOR WATER USE

5.303.3 Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:

☑ **5.303.3.1 Water closets.** The effective flush volume of all water closets shall not exceed 1.28 gallons per flush. Tank-type water closets shall be certified to the performance criteria of the U.S. EPA WaterSense Specifications for Tank-Type Toilets.

Note: The effective flush volume of dual flush toilets is defined as the composite, average flush volume of two reduced flushes and one full flush.

5.303.3.2 Urinals.

☑ **5.303.3.2.1 Wall mounted urinals**. The effective flush volume of wall mounted urinals shall not exceed 0.125 gallons per flush.

☐ **5.303.3.2.2 Floor mounted urinals**. The effective flush volume of floor mounted or other urinals shall not exceed 0.5 gallons per flush.

5.303.3.3 Showerheads

☐ **5.303.3.3.1 Single showerhead.** Showerheads shall have a maximum flow rate of not more than 1.8 gallons per minute at 80 psi. Showerheads shall be certified to the performance criteria of the U.S. EPA WaterSense Specifications for showerheads.

☐ **5.303.3.3.2 Multiple showerheads serving one shower**. When a shower is served by more than one showerhead, the combined flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi, or the showerhead shall be designed to allow only one shower outlet to be in operation at one time.

Note: A hand-held shower shall be considered a showerhead.

5.303.3.4 Faucets and fountains.

☑ **5.303.3.4.1 Non-residential lavatory faucets.** Non-residential lavatory faucets shall have a maximum flow rate of not more than 0.5 gallons per minute at 60 psi.

☐ **5.303.3.4.2 Kitchen faucets.** Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute at 60 psi. Kitchen faucets may temporarily increase the flow above the maximum rate, but not to exceed 2.2 gallons per minute at 60 psi, and must default to a maximum flow rate of 1.8 gallons per minute at 60 psi.

5.303.3.4.3 Wash fountains. Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute/20 [rim space (inches) at 60 psi].

☐ **5.303.3.4.4 Metering faucets.** Metering faucets shall not deliver more than 0.20 gallons per cycle.

☐ **5.303.3.4.5 Metering faucets for wash fountains.** Metering faucets for wash fountains shall have a maximum flow rate of not more than 0.20 gallons per cycle/20 [rim space (inches) at 60 psi].

Note: Where complying faucets are unavailable, aerators or other means may be used to achieve reduction.

☑ **5.303.6 Standards for plumbing fixtures and fittings.** Plumbing fixtures and fittings shall be installed in accordance with the *California Plumbing Code*, and shall meet the applicable standards referenced in Table 1701.1 of the *California Plumbing Code* and in Chapter 6 of this code.

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SECTION 5.304 – OUTDOOR WATER USE

5.304.6 Outdoor potable water use in landscape areas. For public schools and community colleges, landscape projects as described in Sections 5.304.6.1 and 5.304.6.2 shall comply with the California Department of Water Resources Model Water Efficient Landscape Ordinance (MWELO) commencing with Section 490 of Chapter 2.7, Division 2, Title 23, *California Code of Regulations*, except that the Evapotranspiration Adjustment Factor (ETAF) shall be 0.65 with an additional water allowance for special landscape areas (SLA) of 0.35.

Exception: Any project with an aggregate landscape area of 2,500 square feet or less may comply with the prescriptive measures contained in Appendix D of the MWELO.

☑ **5.304.6.1 Newly constructed landscapes.** New construction projects with an aggregate landscape area equal to or greater than 500 square feet.

☐ **5.304.6.2 Rehabilitated landscapes.** Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 1,200 square feet.

DIVISION 5.4 – MATERIAL CONSERVATION AND RESOURCE EFFICIENCY

SECTION 5.407 – WATER RESISTANCE AND MOISTURE MANAGEMENT

☑ **5.407.1 Weather protection.** Provide a weather-resistant exterior wall and foundation envelope as required by *California Building Code,* Section 1402.2 (Weather Protection), manufacturer's installation instructions, or local ordinance, whichever is more stringent.

5.407.2 Moisture control. Employ moisture control measures by the following methods:

☑ **5.407.2.1 Sprinklers.** Design and maintain landscape irrigation systems to prevent spray on structures.

5.407.2.2 Entries and openings. Design exterior entries and/or openings subject to foot traffic or wind-driven rain to prevent water intrusion into buildings as follows:

☑ **5.407.2.2.1 Exterior door protection.** Primary exterior entries shall be covered to prevent water intrusion by using nonabsorbent floor and wall finishes within at least 2 feet around and perpendicular to such openings plus at least one of the following:

1. An installed awning at least 4 feet in depth.
2. The door is protected by a roof overhang at least 4 feet in depth.
3. The door is recessed at least 4 feet.
4. Other methods which provide equivalent protection.

☑ **5.407.2.2.2 Flashing.** Installed flashings integrated with a drainage plane.

SECTION 5.408 – CONSTRUCTION WASTE REDUCTION, DISPOSAL AND RECYCLING

5.408.1 Construction waste management. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1, 5.408.1.2 or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent.

☑ **5.408.1.1 Construction waste management plan.** Where a local jurisdiction does not have a construction and demolition waste management ordinance that is more stringent, submit a construction waste management plan that:

1. Identifies the construction and demolition waste materials to be diverted from disposal by efficient usage, recycling, reuse on the project or salvage for future use or sale.

2. Determines if construction and demolition waste materials will be sorted on-site (source-separated) or bulk mixed (single stream).
3. Identifies diversion facilities where construction and demolition waste material collected will be taken.
4. Specifies that the amount of construction and demolition waste materials diverted shall be calculated by weight or volume, but not by both.

☑ **5.408.1.2 Waste management company.** Utilize a waste management company that can provide verifiable documentation that the percentage of construction and demolition waste material diverted from the landfill complies with this section.

Note: The owner or contractor shall make the determination if the construction and demolition waste material will be diverted by a waste management company.

Exceptions to Sections 5.408.1.1 and 5.408.1.2:

1. Excavated soil and land-clearing debris.
2. Alternate waste reduction methods developed by working with local agencies if diversion or recycle facilities capable of compliance with this item do not exist.
3. Demolition waste meeting local ordinance or calculated in consideration of local recycling facilities and markets.

☑ **5.408.1.3 Waste stream reduction alternative.** The combined weight of new construction disposal that does not exceed two pounds per square foot of building area may be deemed to meet the 65 percent minimum requirement as approved by the enforcing agency.

☐ **5.408.1.4 Documentation.** Documentation shall be provided to the enforcing agency which demonstrates compliance with Section 5.408.1.1 through 5.408.1.3. The waste management plan shall be updated as necessary and shall be accessible during construction for examination by the enforcing agency.

Notes:

1. Sample forms found in "A Guide to the California Green Building Standards Code (Nonresidential)" located at www.bsc.ca.gov/Home/CALGreen.aspx may be used to assist in documenting compliance with the waste management plan.
2. Mixed construction and demolition debris (C&D) processors can be located at the California Department of Resources Recycling and Recovery (CalRecycle).

SECTION 5.410 – BUILDING MAINTENANCE AND OPERATION

☑ **5.410.1 Recycling by occupants.** Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive.

Exception: Rural jurisdictions that meet and apply for the exemption of Public Resources Code 42649.82 (a)(2)(A) et seq. will also be exempt from the organics waste portion of this section.

☐ **5.410.1.2 Sample ordinance.** Space allocation for recycling areas shall comply with Chapter 18, Part 3, Division 30 of the *Public Resources Code.* Chapter 18 is known as the California Solid Waste Reuse and Recycling Access Act of 1991 (Act).

Note: A sample ordinance for use by local agencies may be found in Appendix A of the document at the CalRecycle's website.

DIVISION 5.5 ENVIRONMENTAL QUALITY

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SECTION 5.504.1 – POLLUTANT CONTROL

☑ **5.504.3 Covering of duct openings and protection of mechanical equipment during construction.** At the time of rough installation and during storage on the construction site until final startup of the heating, cooling and ventilating equipment, all duct and other related air distribution component openings shall be covered with tape, plastic, sheet metal or other methods acceptable to the enforcing agency to reduce the amount of dust, water and debris which may enter the system.

5.504.4 Finish material pollutant control. Finish materials shall comply with Sections 5.504.4.1 through 5.504.4.6.

☑ **5.504.4.1 Adhesives, sealants, and caulks.** Adhesives, sealants, and caulks used on the project shall meet the requirements of the following standards:

1. Adhesives, adhesive bonding primers, adhesive primers, sealants, sealant primers, and caulks shall comply with local or regional air pollution control or air quality management district rules where applicable, or SCAQMD Rule 1168 VOC limits, as shown in Tables 5.504.4.1 and 5.504.4.2. Such products also shall comply with the Rule 1168 prohibition on the use of certain toxic compounds (chloroform, ethylene dichloride, methylene chloride, perchloroethylene, and trichloroethylene), except for aerosol products as specified in subsection 2, below.
2. Aerosol adhesives, and smaller unit sizes of adhesives, and sealant or caulking compounds (in units of product, less packaging, which do not weigh more than one pound and do not consist of more than 16 fluid ounces) shall comply with statewide VOC standards and other requirements, including prohibitions on use of certain toxic compounds, of *California Code of Regulations*, Title 17, commencing with Section 94507.

TABLE 5.504.4.1 – ADHESIVE VOC LIMIT
(See CALGreen for TABLE)

TABLE 5.504.4.2 – SEALANT VOC LIMIT
(See CALGreen for TABLE)

☑ **5.504.4.3 Paints and coatings.** Architectural paints and coatings shall comply with VOC limits in Table 1 of the ARB Architectural Coatings Suggested Control Measure, as shown in Table 5.504.4.3, unless more stringent local limits apply. The VOC content limit for coatings that do not meet the definitions for the specialty coatings categories listed in Table 5.504.4.3, shall be determined by classifying the coating as a Flat, Nonflat, or Nonflat-High Gloss coating, based on its gloss, as defined in Subsections 4.21, 4.36 and 4.37 of the 2007 California Air Resources Board, Suggested Control Measure, and the corresponding Flat, Nonflat or Nonflat-High Gloss VOC limit in Table 5.504.4.3 shall apply.

TABLE 5.504.4.3 – VOC CONTENT LIMITS FOR ARCHITECTURAL COATINGS
(See CALGreen for TABLE)

☑ **5.504.4.3.1 Aerosol paints and coatings.** Aerosol paints and coatings shall meet the PWMIR Limits for ROC in Section 94522(a)(3) and other requirements, including prohibitions on use of certain toxic compounds and ozone depleting substances, in Sections 94522(c)(2) and (d)(2) of *California Code of Regulations*, Title 17, commencing with Section 94520; and in areas under the jurisdiction of the Bay Area Air Quality Management District additionally comply with the percent VOC by weight of product limits of Regulation 8 Rule 49.

5.504.4.3.2 Verification. Verification of compliance with this section shall be provided at the request of the enforcing agency. Documentation may include, but is not limited to, the following:

1. Manufacturer's product specification.

2. Field verification of on-site product containers.

☑ **5.504.4.4 Carpet systems.** All carpet installed in the building interior shall meet at least one of the following testing and product requirements:

1. Carpet and Rug Institute's Green Label Plus Program;
2. Compliant with the VOC-emission limits and testing requirements specified in the California Department of Public Health Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers, Version1.1, February 2010 (also known as CDPH Standard Method V1.1 or *Specification 01350*);
3. NSF/ANSI 140 at the Gold level or higher;
4. Scientific Certifications Systems Sustainable Choice; or
5. Compliant with the Collaborative for High Performance Schools California (CA-CHPS) Criteria 2014 and listed in the CHPS High Performance Product Database.

☐ **5.504.4.4.1 Carpet cushion.** All carpet cushion installed in the building interior shall meet the requirements of the Carpet and Rug Institute's Green Label program**.**

☑ **5.504.4.4.2 Carpet adhesive.** All carpet adhesive shall meet the requirements of Table 5.504.4.1.

☑ **5.504.4.5 Composite wood products.** Hardwood plywood, particleboard, and medium density fiberboard composite wood products used on the interior or exterior of the building shall meet the requirements for formaldehyde as specified in ARB's Air Toxics Control Measure (ATCM) for Composite Wood (17 CCR 93120 et seq.). Those materials not exempted by the ATCM must meet the specified emission limits as shown in Table 5.504.4.5.

TABLE 5.504.4.5 – FORMALDEHYDE LIMITS
(See CALGreen for TABLE)

☐ **5.504.4.6 Resilient flooring systems.** For 80 percent of floor area receiving resilient flooring, installed resilient flooring shall meet at least one of the following:

1. Certified under the Resilient Floor Covering Institute (RFCI) FloorScore program;
2. Compliant with the VOC-emission limits and testing requirements specified in the California Department of Public Health's 2010 Standard Method for the Testing and Evaluation Chambers, Version 1.1, February 2010;
3. Compliant with the Collaborative for High Performance Schools California (CA-CHPS) Criteria 2014 and listed in the CHPS High Performance Product Database; or
4. Products certified under the UL GREENGUARD Gold (formerly the Greenguard Children & Schools program).

☑ **5.504.5.3 Filters.** In mechanically ventilated buildings, provide regularly occupied areas of the building with air filtration media for outside and return air prior to occupancy that provides at least a Minimum Efficiency Reporting Value (MERV) of 13. MERV 13 filters shall be installed prior to occupancy and recommendations for maintenance with filters of the same value shall be included in the operation and maintenance manual.

Exception: Existing mechanical equipment.

5.504.5.3.1 Labeling. Installed filters shall be clearly labeled by the manufacturer indicating the MERV rating.

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SECTION 5.505 – INDOOR MOISTURE CONTROL

☑ **5.505.1 Indoor moisture control.** Buildings shall meet or exceed the provisions of *California Building Code*, CCR, Title 24, Part 2, Sections 1202 (Ventilation) and Chapter 14 (Exterior Walls). For additional measures see Section 5.407.2 of this code.

SECTION 5.506 – INDOOR AIR QUALITY

☑ **5.506.1 Outside air delivery.** For mechanically or naturally ventilated spaces in buildings, meet the minimum requirements of Section 120.1 (Requirements for Ventilation) of the *California Energy Code*, or the applicable local code, whichever is more stringent, and Division 1, Chapter 4 of CCR, Title 8.

SECTION 5.507 – ENVIRONMENTAL COMFORT

☑ **5.507.4 Acoustical control.** Employ building assemblies and components with Sound Transmission Class (STC) values determined in accordance with ASTM E 90 and ASTM E 413 or Outdoor–Indoor Sound Transmission Class (OITC) determined in accordance with ASTM E 1332, using either the prescriptive or performance method in Section 5.507.4.1 or 5.507.4.2.

Exception: Buildings with few or no occupants or where occupants are not likely to be affected by exterior noise, as determined by the enforcement authority, such as factories, stadiums, storage, enclosed parking structures and utility buildings.

Exception: [DSA-SS] For public schools and community colleges, the requirement of this section and all subsections apply only to new construction.

☑ **5.507.4.1 Exteriors noise transmission, prescriptive method.** Wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall meet a composite STC rating of at least 50 or a composite OITC rating of no less than 40, with exterior windows of a minimum STC of 40 or OITC of 30 in the following locations:

1. Within the 65 CNEL noise contour of an airport.

   Exceptions:

   1. L_{dn} or CNEL for military airports shall be determined by the facility Air Installation Compatible Land Use Zone (AICUZ) plan.
   2. L_{dn} or CNEL for other airports and heliports for which a land use plan has not been developed shall be determined by the local general plan noise element.

2. Within the 65 CNEL or L_{dn} noise contour of a freeway or expressway, railroad, industrial source or fixed-guideway source as determined by the Noise Element of the General Plan.

☐ **5.507.4.1.1 Noise exposure where noise contours are not readily available.** Buildings exposed to a noise level of 65 dBL_{eq}-1-hr during any hour of operation shall have building, addition or alteration exterior wall and roof-ceiling assemblies exposed to the noise source meeting a composite STC rating of at least 45 (or OITC 35), with exterior windows of a minimum STC of 40 (or OITC 30).

☐ **5.507.4.2 Performance method.** For buildings located as defined in Section 5.507.4.1 or 5.507.4.1.1, wall and roof-ceiling assemblies exposed to the noise source making up the building or addition envelope or altered envelope shall be constructed to provide an interior noise environment attributable to exterior sources that does not exceed an hourly equivalent noise level (L_{eq}-1Hr) of 50 dBA in occupied areas during any hour of operation.

☐ **5.507.4.2.1 Site features.** Exterior features such as sound wall or earth berms may be utilized as appropriate to the building, addition or alteration project to mitigate sound migration to the interior.

☐ **5.507.4.2.2. Documentation of compliance.** An acoustical analysis documenting complying interior sound levels shall be prepared by personnel approved by the architect or engineer of record.

☑ **5.507.4.3 Interior sound transmission.** Wall and floor-ceiling assemblies separating tenant spaces and tenant spaces and public places shall have an STC of at least 40.

Note: Examples of assemblies and their various STC rating may be found at the California Office of Noise Control: www. https://www.tsib.org/files/STC_IIC_Ratings.pdf

SECTION 5.508 – OUTDOOR AIR QUALITY

5.508.1 Ozone depletion and greenhouse gas reductions. Installations of HVAC, refrigeration and fire suppression equipment shall comply with Sections 5.508.1.1 and 5.508.1.2.

☑ **5.508.1.1 Chlorofluorocarbons (CFCs).** Install HVAC, refrigeration and fire suppression equipment that do not contain CFCs.

SECTION 02 82 00

ASBESTOS-CONTAINING MATERIALS

PART 1 - GENERAL

1.1 SUMMARY

A. SCOPE OF WORK: Except as otherwise expressly provided herein, Contractor shall supply all labor, supervision, installed and consumable materials, equipment, tools, services, testing devices, warehousing, and each and every item of expense necessary for the supply, fabrication, erection, installation, application, handling, hauling, unloading and receiving, construction, evaluation, engineering, testing, and assembly of the abatement of asbestos-containing or contaminated materials herein called the Work. This work shall include the abatement of any materials identified herein as containing detectable concentrations of asbestos or asbestiform minerals.

B. ASBESTOS-CONTAINING MATERIALS: In accordance with all drawings, specifications and instructions, Contractor shall remove all asbestos-containing materials (ACM) identified herein and as may be subsequently revealed during the work. To date, the following ACM has been identified [Reference GHD Asbestos Assessment Report dated April 8, 2022]:

a. **Field House**
   i. Dark Grey paint
   ii. Orange/red paint
   iii. Remnant mastic
   iv. Penetration mastic

b. **Physical Education**
   i. Vinyl floor tile
   ii. Joint compound
   iii. Thermal System Insulation (TSI)
   iv. Cove base mastic
   v. Roofing material
   vi. Silver paint
   vii. Tar paper
   viii. Fire doors

The Contractor is responsible for verifying all estimated quantities provided in this Specification.

C RELATED SECTIONS:
   a. DIVISION 1 – GENERAL REQUIREMENTS
   b. DIVISION 2 – SITE CONSTRUCTION
      i. Section 02 41 00 – Demolition
      ii. Section 02 81 00 – Hazmat Disposal

1.2 SUBMITTALS

A. GENERAL: Refer to Section 01 33 00 – SUBMITTALS.

B. SCHEDULE AND FORMAT:

a. Delivery: Submittals listed in this section shall be delivered to the Owner's Consultant via the Construction Manager:

b. Quantity: Two legible (2) copies each of all submittals shall be delivered in an organized fashion suitable for review by the Owner and/or its authorized representative.

c. Work Commencement: No portion of the work requiring submittals shall commenced until the submittals are approved by the Owner or its designated representative.

d. Delays: Delays to the work caused by late or disapproved submittals shall be the sole responsibility of the Contractor. No extensions will be made to the contract time on account of such delays.

e. Schedule: Submittals shall be received by the Owner's Consultant in accordance with the following timetable:

i. Pre-work Submittals – Not less than five (5) working days prior to the Contractor's mobilization onto the work site the Contractor shall submit to the Owner's Consultant two (2) legible copies of the submitted documents on 8-1/2" x 11" format. Illegible submittals will be considered deficient and returned for correction. Owner's Consultant will review submittals and return deficient submittals within three (3) days after receipt. Deficient submittals shall be resubmitted by the Contractor within two (2) working days after return of review copy. Once accepted, one reviewed copy shall be returned to the Contractor, who shall maintain one (1) reviewed copy at the job site.

ii. Product Submittals – Not less than two (2) working days prior to the initial use of the product on the work site.

iii. Post-work Submittals – In addition to any requirements of Section 01 77 00 – CLOSEOUT PROCEDURES and Section 01 33 00 – SUBMITTALS, the Contractor (or asbestos abatement sub-contractor) shall, within two weeks of demobilization from the project site, submit 2 copies (in three-ring binders, indexed and separated by tabs) of the post-work submittals. If the Consultant or Owner determines that the post-work submittals are inadequate, the Contractor will be required to correct the deficiencies. The cost of the Consultant's time to perform a subsequent review of post-work submittals will be paid by the Contractor.

C. PRE-WORK SUBMITTALS:

a. Progress Schedule: Provide a proposed work schedule indicating the following items:

i. Show the complete sequence of the abatement plan by activity and the sequencing of work within each building, floor, or regulated work area.

ii. Show the dates for beginning and completion of each major element (set-up, removal, testing, reapplication, etc.) of abatement work, including substantial completion dates for each building, floor, or regulated work area.

iii. Show manpower distribution per activity and schedule. Distinguish between trained full-time personnel and unskilled or temporary labor.

iv. Show anticipated final inspection dates.

v. The schedule shall be formulated on a day/week basis, updated weekly, and revised as required.

vi. Deviations from, or changes to the initially established daily work shift hours and/or the weekly workdays shall be submitted in writing to the Owner's Consultant for approval not less than 24 hours prior to the anticipated implementation of said changes. The Contractor shall not implement such work schedule changes without the prior expressed approval of the Owner's Consultant. The Contractor shall be responsible for its Subcontractor's compliance with this requirement.

b. Notices:

i. Written Notice of Proposed Abatement activity to the applicable air quality district/pollution control agency.

ii. North Coast Unified Air Quality Management District (NCUAQMD)

iii. California Air Resources Board (CARB)

iv. Written Notice of Proposed Abatement activity to the Cal-OSHA Regional Office or any other agency having jurisdiction.

v. Written proof that all required permits, licenses, and registrations have been applied for and/or received. This shall include Contractor and Project Superintendent Licenses and Asbestos Workers' Registrations under the federal, state, local regulations, and regulatory agencies.

c. Worker Documentation:

i. Name and social security number of each employee to be engaged in asbestos abatement work.

ii. Current valid documentation from an AHERA-accredited training provider indicating the most recent asbestos abatement training course and training date that each person listed has attended. Photocopies of recent (within the preceding 12 months) training certification cards (Laborer's Trust Cards) will suffice, as long as both sides of the card are provided.

iii. Name and social security number of the Asbestos Project Superintendent. Provide current valid documentation from an AHERA-accredited training provider indicating the most recent asbestos abatement contractor/supervisor training course and training date that he/she has attended. Provide evidence indicating that he/she has a minimum of one-year on-the-job experience as an Asbestos Project Superintendent.

iv. Current valid documentation indicating the date and type of each worker's most recent respiratory training and respirator fit testing.

v. Current valid medical documentation indicating the date of each worker's most recent asbestos medical examination. Illegible or incomplete photocopies, or preliminary results reports will be rejected as deficient.

vi. Current valid medical documentation indicating each worker's medical respiratory compliance status. Illegible or incomplete photocopies, or preliminary results reports will be rejected as deficient.

vii. Completed Certificates of Worker's Release Forms. No Contractor's employee will be allowed to engage in asbestos removal work prior to submitting a completed Certificate of Worker's Release form.

d. Subcontractors: Submit qualifications and a 24-hour point-of-contact for each subcontractor to be used. This shall include two (2) copies of federal, state, or

local operating permits and identification numbers for the waste transporters and disposal facilities to be used.

e. Abatement Work Plan: Submit a detailed work plan of the practices and procedures proposed for use in complying with the requirements of this specification. Include in the plan the location and layout of decontamination areas; the sequencing of asbestos work; the interface of trades involved in the performance of work; work schedule including work shift time, number of employees, date of start and completion including dates of preparation work, removal, and final clearance dates; methods to be used to assure the safety of building occupants and visitors to the site; disposal plan including location of approved disposal site; and a detailed description of the methods to be employed to control pollution. Expand upon the use of portable HEPA ventilation system, closing out of the building's HVAC system, method of removal to prohibit visible emissions in work area, and packaging of removed asbestos debris. The plan must be reviewed by the Consultant prior to the commencement of work.

f. Contingency Plan: Submit a contingency plan for emergencies including fire, accident, power failure, differential air system failure, supplied air system failure, or any other event that may require modification or abridgement of decontamination or work area isolation procedures. Include in plan specific procedures for decontamination or work area isolation. Note that nothing in this specification should impede safe exiting or providing of adequate medical attention in the event of an emergency.

   i. Post: In the clean room of Personnel Decontamination Unit, display telephone numbers and locations of emergency services including but not limited to fire, ambulance, doctor, hospital, police, power company, telephone company, and Contractor personnel.

g. Field Logs: Submit a sample of Daily Field Logs, Work Area Entry/Exit Logs, etc. to be used during the asbestos abatement work.

h. Rental Equipment: If rental equipment is to be used in conjunction with this asbestos abatement work, a copy of a written notification provided to the rental company informing the rental company that the rented equipment will be used on an asbestos abatement project shall be submitted. The notification shall state how the equipment is to be used and that the rental company has been advised of possible contamination. A representative of the rental company shall sign an acknowledgment of such and return the notification to the Contractor for compliance with this submittal.

i. Pre-Work Punchlist: Submit a punch list of damages existing in work area(s) prior to commencement of Contractor's work. In the absence of any observed existing damage, submit a signed statement on Company letterhead stating that no existing building damage(s) were noted prior to the start of work.

j. Safety Data Sheets: Submit current Safety Data Sheets (SDS) on all potentially hazardous materials to be used on the jobsite. Refer to above Section 1.2, B 5 b – Product Submittals.

k. California D.O.S.H. Registration: Submit evidence of the Contractor’s (or abatement sub-contractor’s) registration with the Department of Occupational Safety and Health (Cal-OSHA) to conduct asbestos-related construction work.

l. Waste Hauling Qualifications: Submit proof of hazardous waste transporter’s registration and employee’s training (if not subcontracting waste hauling). Submittals shall include, but not necessarily be limited to, current vehicle registration and insurance coverage; most recent vehicle inspection certificate or

report; California Waste Transporter's License; and a copy the vehicle operator's current California Driver's License and current DMV driving record.

D. POST-WORK SUBMITTALS:
   a. General: In accordance with the requirements of the above Section 1.2, B 5 c – Post-Work Submittals, submit the following documentation:
      i. Copies of employee and visitor Work Area Entry/Exit Logs and Daily Field Logs/Reports.
      ii. Waste manifests, certified weight tickets, and landfill receipts.
      iii. Results of all personnel air monitoring.
      iv. Manometer print-out(s) attached to 8½ " x 11" paper. Each page should indicate the dates, times, and work area containment(s) to which the Manometer print-out(s) apply.
      v. Emergency reports describing events such as injuries and loss of differential air pressure.

1.3 QUALITY REQUIREMENTS

A. GENERAL: Refer to Section 01430 – QUALITY ASSURANCE.
B. REFERENCE STANDARDS:
   a. General: Refer to Section 01420 – REFERENCES for standards, applicable codes and definitions.
   b. Regulations: Applicable regulations pertaining to asbestos abatement work include, but are not limited to, the following:
      i. North Coast Unified Air Quality Management District (NCUAQMD) - Rule 902 Adopted June 6, 1975, Amended February 26, 2015 or more recent.
      ii. California Department of Occupational Safety and Health (Cal-OSHA) – Asbestos Standard for The Construction Industry, Title 8, California Code of Regulations section 1529, et. seq. (8 CCR 1529).
      iii. California Health and Safety Code sections 24914 (Hazardous Substance Removal Contracts); 25915, et. seq. (Asbestos Notification Act); and 19827.5 (Demolition Permits).
      iv. California Labor Code sections 6501.5 (Employer Registration); and 6501.9 (Determining the Presence of Asbestos Prior to Contracting for Work).
      v. California Safe Drinking Water and Toxic Enforcement Act of 1986 (Prop. 65).
      vi. Title 29, Code of Federal Regulations, Parts 1910 and 1926.1101.
      vii. Title 40, Code of Federal Regulations, Part 61, Subpart M, National Emission Standards for Hazardous Air Pollutants (NESHAP). U.S. Environmental Protection Agency (U.S. EPA).
      viii. Title 40, Code of Federal Regulations, Part 763, Subpart E, sections 763.80 – 763.99, Asbestos Hazard Emergency Response Act. U.S. EPA.
      ix. Title 49, Code of Federal Regulations, Part 172, U.S. Department of Transportation.
      x. All other applicable Federal, State, and/or Local regulations, codes, and ordinances.

c. Standards: Applicable industry standards pertaining to asbestos abatement work include, but are not limited to, the following:

i. American National Standard Institute (ANSI) Publications: Z9.2 Fundamentals Governing the Design and Operation of Local Exhaust Systems; and Z88.2 Practices for Respiratory Protection.

ii. National Fire Protection Association (NFPA): Standard 90A Installation of Air Conditioning and Ventilation Systems.

iii. U. S. Environmental Protection Agency (EPA): Publication No. 560/5-85-024 Guidance for Controlling Asbestos-Containing Materials in Buildings, June, 1985

iv. American Society for Testing Materials (ASTM) Publications:

a. 849-82 Safety and Health Requirements Relating to Occupational Exposures to Asbestos.
b. P-189 Specifications for Encapsulants for Friable asbestos-containing materials.

v. National Institute of Occupational Safety and Health (NIOSH) Publications:

a. Manual of Analytical Methods, 2nd Ed., Vol. 1.
b. Physical and Chemical Analysis Method (P&CAM):
c. Method 239 Asbestos Fibers in Air; and
d. Method 7400 Fibers (N1, 3rd Ed., Vol. 1.).
e. Underwriters Laboratories, Inc. (UL) Publication:
f. 586-77 Test Performance of High Efficiency,
g. (R1982) Particulate, Air Filter Units

d. Applicability. The most current issue of each document shall apply. Where conflict among requirements or with these specifications exists, the more strict or stringent requirement or interpretation shall apply.

C. DEFINITIONS: In addition to definitions provided elsewhere in these specifications, the following definitions shall apply:

a. **Abatement:** The procedure to control fiber release from asbestos-containing building materials. Activities include removal, encapsulation, and enclosure.

b. **Adequately Wet:** A term defined in 40 CFR 61, Subpart M and EPA 340/1-90-019 that means to sufficiently mix or penetrate with liquid to prevent the release of particulates. If visible emissions are observed to be coming from ACM, then that material has not been adequately wetted. The absence of visible emissions, however, is not sufficient evidence of being adequately wetted.

c. **Aggressive Clearance:** Final clearance air monitoring of a regulated asbestos work area which utilizes leaf blowers, fans, and similar tools to “aggressively” disturb and entrain any settled residual asbestos fibers for the purpose of capturing them during sampling.

d. **Air Lock:** A system for permitting ingress and egress with minimum air movement between a contaminated area and an uncontaminated area.

e. **Air Monitoring:** The process of measuring the fiber content of a specific volume of air in a stated period of time.

f. **Amended Water:** Water to which a surfactant has been added.

g. **Asbestos:** The general name given to a group of fibrous mineral forms including chrysotile, crocidolite, amosite, tremolite actinophylite, and actinolite and any of these minerals that have been chemically treated or altered.

Asbestos-containing materials are those which contain greater than one percent (1%) asbestos as measured by the EPA interim method.

h. **Asbestos-containing Hazardous Waste:** Any material that contains equal to, or greater than, one percent asbestos by weight and is friable. Alternately, any mixture of material(s) which contains (i.e., is contaminated with) equal to, or greater than, one percent friable asbestos by weight is also asbestos-containing hazardous waste.

i. **Asbestos Abatement Contractor:** The Contractor designated in the contract documents as being responsible to the Owner for the control or abatement of asbestos-containing or contaminated materials.

j. **Asbestos Permissible Exposure Limit (PEL):** An airborne concentration of asbestos of 0.1 f/cc averaged over an 8-hour period.

k. **Authorized Visitor:** The building Owner, the Owner's representative, the Consultant, the Consultant's inspector or representative, or any representative of a federal, state, county, city, or local agency having jurisdiction over the project while acting in an official capacity. Any person whose name appears upon an approved authorized visitor's list.

l. **Background Monitoring:** See “Prevalent Level Monitoring.”

m. **Building Owner:** The Owner or his authorized representative.

n. **Class I Asbestos Work:** Activities involving the removal of TSI and surfacing ACM and PACM.

o. **Class II Asbestos Work:** Activities involving the removal of ACM which is not thermal system insulation or surfacing material. This includes, but is not limited to, the removal of asbestos-containing wallboard, floor tile and sheeting, roofing and siding shingles, and construction mastics.

p. **Clean Room:** An uncontaminated area or room which is part of the worker decontamination enclosure with provisions for storage of worker's street clothes and protective equipment.

q. **Competent Person:** In addition to the definition in 29 CFR 1926.32 (f), one who is capable of identifying existing asbestos hazards in the workplace and selecting the appropriate control strategy for asbestos exposure, who has the authority to take prompt corrective measures to eliminate them, as specified in 29 CFR 1926.32 (f): in addition, for Class I and Class II work who is specially trained in a training course which meets the criteria of EPA’s Model Accreditation Plan (40 CFR 763) for supervisor, or its equivalent and, for Class II and Class IV work, who is trained in a manner consistent with EPA requirements for training of local education agency maintenance and custodial staff as set forth at 40 CFR 763.92 (a)(2).

r. **Critical Barrier:** One or more layers of plastic sealed over all openings into a work area or any other similarly placed physical barrier sufficient to prevent airborne asbestos in a work area from migrating to an adjacent area.

s. **Curtained Doorway:** A device to allow ingress and egress from one room to another while permitting minimal air movement between the rooms, typically constructed by placing two overlapping sheets of plastic over an existing or temporarily framed doorway, securing the vertical edge of one sheet along one vertical side of the doorway, and securing the vertical edge of the other sheet along the opposite vertical side of the doorway.

t. **Decontamination Enclosure System:** A series of connected rooms, with curtained doorways between any two adjacent rooms, for the decontamination of workers and of materials and equipment. A decontamination enclosure system always contains at least one airlock.

u. **Differential Air Pressure Equipment:** A portable local exhaust system equipped with HEPA filtration and capable of maintaining a constant, low velocity air flow into contaminated areas from adjacent uncontaminated areas.

v. **Disturbance:** Activities that disrupt the matrix of ACM or PACM, crumble or pulverize ACM or PACM, or generate visible debris from ACM or PACM. This term includes activities that disrupt the matrix of ACM or PACM, render ACM or PACM friable, or generate visible debris. Disturbance includes cutting away small amounts of ACM and PACM, no greater than the amount which can be contained in one standard sized glove bag or waste bag in order to access a building component. In no event shall the amount of ACM or PACM so disturbed exceed that which can be contained in one glove bag or waste bag which shall not exceed 60 inches in length and width.

w. **DOP:** 0.3 μm diocylphthalate aerosol used in connection with testing the integrity of the negative pressure system.

x. **Encapsulant:** A liquid material which can be applied to asbestos-containing materials, and which prevents the possible release of asbestos fibers from the material either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components together (penetrating encapsulant). (Also, sealant).

y. **Encapsulation:** All herein specified procedures necessary to apply an encapsulant to asbestos-containing building materials to control the possible release of asbestos fibers into the air.

z. **Enclosure:** All herein specified procedures necessary to completely enclose asbestos-containing material behind airtight, impermeable, permanent barriers.

aa. **Equipment Decontamination Enclosure:** That portion of a decontamination enclosure system designed for controlled transfer of materials and equipment, typically consisting of a washroom and a holding area.

bb. **Equipment Room:** A contaminated area or room which is part of the worker decontamination enclosure with provisions for storage of contaminated clothing and equipment.

cc. **Excursion Limit:** An airborne concentration of asbestos of 1.0 fiber per cubic centimeters (f/cc) as an average over a sampling period of thirty minutes.

dd. **Fixed Object:** A unit of equipment or furniture in the work area which cannot be removed from the work area.

ee. **Friable:** Asbestos-containing material that can be crumbled, pulverized, or reduced to powder, when dry, by hand pressure.

ff. **Glovebag:** Not more than a 60 x 60-inch impervious plastic bag-like enclosure affixed around an asbestos-containing material, with glove-like appendages through which material and tools may be handled.

gg. **Glovebag Technique**: A method with limited applications for removing small amounts of friable asbestos- containing material from HVAC ducts, short pipe runs, valves, joints, elbows, and other non-planer surfaces in a non-contained work area. The glovebag assembly is a manufactured or fabricated device consisting of a glovebag (typically constructed of 6-mil transparent regulate plastic), two inward projecting long sleeve rubber gloves, one inward projecting sleeve, an internal tool pouch, and an attached, labeled receptacle for asbestos waste. The glovebag is constructed and installed in such a manner that it surrounds the object or area to be decontaminated and contains all asbestos fibers released during the removal process. All workers who are permitted to use the glovebag technique must be highly trained, experienced, and skilled in this method. Limitations on and requirements pertaining to glovebag work, as set forth in 29 CFR 1926.1101, shall be observed and complied with during this work.

hh. **Holding Area:** A chamber in the equipment decontamination enclosure located between the washroom and an uncontaminated area. The holding area comprises an airlock.

ii. **HEPA Filter:** A High-Efficiency Particulate Air (HEPA) filter capable of trapping and retaining 99.97 percent of particles (asbestos fibers) greater than 0.3 micrometers in mass median aerodynamic equivalent diameter.

jj. **HEPA Vacuum Equipment:** Vacuuming equipment with a HEPA filter system.

kk. **Logbook:** A notebook or other book containing essential project data and daily project information and a daily project diary. This book shall be kept up to date and on the project site at all times.

ll. **Movable Object:** A unit of equipment or furniture in the work area which can be removed from the work area.

mm. **SDS:** Safety Data Sheet (formerly known as Material Safety Data Sheet).

nn. **MSHA:** Mine Safety and Health Administration.

oo. **Negative Initial Exposure Assessment:** A demonstration by the employer, which complies with the criteria in paragraph (B)(b)(ii) of this section, that employee exposure during an operation is expected to be consistently below the PELs.

pp. **NIOSH:** National Institute of Occupational Safety and Health.

qq. **PACM: "**Presumed asbestos containing material".

rr. **Phase Contrast Microscopy (PCM):** NIOSH Method 7400 using "A" counting rules.

ss. **Plant:** The tools, machinery, structures, equipment, etc., necessary to perform a mechanical operation, process, or to carry out a business.

tt. **Plasticize:** To cover floors and walls with plastic sheeting as specified herein.

uu. **Presumed Asbestos Containing Material:** Thermal system insulation and surfacing material found in buildings constructed no later than 1980. The designation of a material as "PACM" may be rebutted pursuant to paragraph (k)(5) of this section.

vv. **Prevalent Level Monitoring:** Air sampling conducted for the purposes of evaluating existing ambient airborne fiber concentrations prior to starting abatement activities.

ww. **Regulated Area:** An area established by the employer to demarcate areas where Class I, II and III asbestos work is conducted, and any adjoining area where debris and waste from such asbestos work accumulate; and a work area within which airborne concentrations of asbestos, exceed or there is a reasonable possibility they may exceed the permissible exposure limit. Requirements for regulated areas are set out in paragraph (e) of this section.

xx. **Removal:** All herein specified procedures necessary to remove asbestos-containing materials from the designated areas in an appropriate manner and to dispose of these materials at an acceptable site.

yy. **Shower Room:** A room between the clean room and the equipment room in the worker decontamination enclosure with hot and cold or warm running water and suitably arranged for complete showering during decontamination.

zz. **Surfacing Material:** Material that is sprayed troweled-on or otherwise applied to surfaces (such as acoustical plaster on ceilings and fireproofing materials on structural members, or other materials on surfaces for acoustical, fireproofing, and other purposes).

aaa. **Surfactant:** A chemical wetting agent added to water to improve penetration.

bbb. **Thermal System Insulation (TSI):** ACM applied to pipes, fittings, boilers, breaching, tanks, ducts or other structural components to prevent heat loss or gain.

ccc. **Time Weighted Average (TWA):** The TWA is an 8-hour time weighted average of the airborne concentration of fibers (longer than 5 micrometers) per cubic centimeter of air which represents the employee's 8-hour workday as determined by Appendix A of CFR 29, Part 1926, Section 1926.1101.

ddd. **Transmission Electron Microscopy (TEM):** A method of analyzing air samples for asbestos fibers using a transmission electron microscope and associated instrumentation.

eee. **Visible Emissions:** Any emissions containing particulate asbestos material that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

fff. **Washroom:** A room between the work area and the holding area in the equipment decontamination enclosure system. The washroom comprises an airlock.

ggg. **Wet Cleaning:** The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with water, and by afterwards disposing of these cleaning tools as asbestos-contaminated waste.

hhh. **Wiping:** Final cleanup stage performed after gross asbestos removal where all surfaces are wet cleaned.

iii. **Work Area:** Designated rooms, spaces, or areas of the project in which asbestos abatement actions are to be undertaken or which may become contaminated as a result of such abatement actions. A contained work area is a work area which has been sealed, plasticized, and equipped with a decontamination enclosure system. A non-contained work area is an isolated or controlled-access work area which has not been plasticized nor equipped with a decontamination enclosure system.

jjj. **Worker Decontamination Enclosure System:** That portion of a decontamination enclosure system designed for controlled passage of workers, and other personnel and authorized visitors, typically consisting of a clean room, a shower room, and an equipment room separated by air locks.

PART 2 – PRODUCTS

2.1 MATERIALS

A. GENERAL: Refer to Section 01 61 00 – COMMON PRODUCT REQUIREMENTS

B. PRODUCT PROHIBITIONS: The following products or product constituents are prohibited from use during these asbestos abatement activities:

a. Any product for which a Safety Data Sheet has yet to be submitted and approved.

b. Any product for which a less hazardous substitute product is readily available, provided that the substitute product possesses similar performance characteristics.

c. Any product containing any concentration of diethylene glycol dimethyl ether; ethylene glycol monoethyl ether; or ethylene glycol mono methyl ether (skin TLV 5 ppm; CAS 109-86-4): causes reproductive damage and blood cell damage.

d. Any product containing any concentration of ethylene glycol (1,2 Ethanediol glycol; TLV = 50 ppm): causes kidney damage if ingested.

e. Any product containing any concentration of formaldehyde: a known human carcinogen (1987).

f. Any product containing any concentration of methylene chloride metabolizes to carbon monoxide, a probable human carcinogen.

g. Any product containing any concentration of n-hexane causes peripheral nerve damage (common ingredient in spray glues).

h. Any product containing any concentration of isocyanates: an allergic sensitizer, this group of chemicals typically has no warning properties (common ingredient in spray foams).

i. Non-fire rated Visquene and/or non-fire rated lumber are prohibited from use.

j. Solvents with a flash point <140^{o} F are prohibited from use.

C. EQUIPMENT PROHIBITIONS: The following equipment are prohibited from use during these asbestos abatement activities:

a. Fasteners: High velocity powder-actuated fasteners are prohibited from use.

b. Torches: Open flame torches are prohibited from use for asbestos abatement purposes.

c. Compressed Air: Air compressors, leaf blowers or similar forced-air equipment is prohibited from use for asbestos abatement purposes.

d. Lamps: Use of sodium or mercury lamps are prohibited from use.

e. Noise: Equipment emitting noise >85 db at 3 feet shall be prohibited from use.

f. Ladders: Wooden or metal ladders are prohibited from use.

g. Engines: Internal combustion engines shall not be permitted for operation indoors without express written permission of the Owner.

h. Grounded Electrical Equipment: Electrical equipment manufactured with internal grounding or grounded wiring shall not be used if the grounding has been removed, tampered with, or otherwise altered.

D. MATERIAL REQUIREMENTS:

a. Sealants: Sealants used shall have a flame spread, smoke and fuel contribution of zero, and shall be ASTM and UL rated for 3 hours for standard method fire test for fire stop systems.

b. Lock-down Encapsulants: Lock-down encapsulants used shall be compatible with substrate to which they will be applied, as well as with adhesives or other finish materials which will be applied over such encapsulants. Fiberlock FT or PM w/ Spatterkote type SKII, or equivalent encapsulate which is U.L. listed in a full-scale E-119 fire test, is acceptable.

c. Visquene Sheeting: Visquene sheeting used shall be in compliance with NFPA Standard 701 fire testing, with flame spread $\leq$ 5 and smoke development rating of $\leq$ 70 when tested by ASTM E-84. Minimal thickness shall be 6 mil.

d. Spray Poly: Spray poly as a liquid, must be non-flammable (no flash point) vapor free, and not noxious; when dry, poly must be Class A rated, with flame spread $\leq$20, have a fuel contribution of zero, and smoke development of $\leq$ 110 by ASTM method E-84.

e. Waste Containers: Waste containers (bags, drums, bins, etc.) shall be suitable for loading, temporary storage, transit, and unloading of asbestos waste without rupture, or otherwise causing exposure to persons or releases to the atmosphere. Where rigid primary containers (bins, drums, etc.) are used, they shall be lined with a secondary water-tight barrier of poly sheeting or poly bags of minimal thickness of 6 mil. All containers used for disposal of asbestos-containing waste shall be labeled in general accordance with applicable regulations, and specifically with the requirements of 8 CCR 1529 (k) (8) and SMAQMD Rule 902.

f. Adhesives: Adhesives, whether tape or aerosol liquid, shall be capable of securely bonding plastic to plastic or plastic to substrate. The bonding strength and resulting seal of the material used must not be compromised by mist or water, encapsulating agent or any other product or process used in the regulated work area.

g. Warning Signs and Labels: Warning signs and labels shall be in compliance with applicable federal, state, and local regulations. They shall be lettered in the language(s) necessary to communicate the specific hazard warning(s) to workers or visitors reasonably expected to be at the job site.

E. EQUIPMENT REQUIREMENTS:

a. Differential Air Pressure Equipment: Differential air pressure equipment shall be in well-maintained condition and shall comply with ANSI Standard Z9.2-1979 for performance. Differential air pressure equipment shall bear a UL586 label. Each unit shall be DOP (or equivalent) tested on-site, in-place, and prior to use, in accordance with Military Standard Number 282 and Army Manual 136-300-175A, so as to ensure 99.97% filtering efficiency of aerosol particulates of 0.3 microns or greater in size. Having once passed DOP testing (or equivalent), units relocated on-site to another separate building shall be re-tested prior to each subsequent re-use. Each unit shall be visibly clean and free of apparent contamination, as judged by the Owner's Consultant. If, in the opinion of the Owner's Consultant, the differential air pressure units are judged to need maintenance or in any other way fail to meet typical industry standards, the units shall not be placed into operation on this project.

b. HEPA-filtered Vacuum Cleaners: HEPA-filtered vacuum cleaners shall be in well-maintained condition and shall be visibly clean and free of apparent contamination, as judged by the Owner's Consultant. Each unit shall arrive on-site empty of any debris. Each unit shall be DOP tested (or equivalent) on-site, in-place, and prior to use, in accordance with Military Standard Number 282 and Army Manual 136-300-175A, prior to its being used as an air filtration device in mini-enclosures.

c. Lights and Electrical Cords: Electrical lights and equipment utilizing electrical power cords shall be in well-maintained condition and shall be visibly clean and free of apparent contamination, as judged by the Owner's Consultant. All lighting and electrical equipment shall be fully water resistant. Work lighting shall have covers over the light bulbs. Ground electrical equipment shall be used with grounded electrical supply and outlets. Where such equipment will be used in the near vicinity of water, ground fault interruption (GFI) protection shall be used in the wiring circuit at the first feasible point closest to the source of power.

d. Decontamination Facilities: At a minimum, a 3-stage personal decontamination chamber (decon) with functioning shower shall be constructed and used whenever Class I work is being conducted. The decon shall be constructed contiguous with the regulated work area. Use of a remote shower for Class I work may be allowed where a contiguous shower is infeasible, as judged by the Owner's Consultant. A curtained doorway (see Section 1.3 C above) shall be constructed to separate chambers within a decon unit, as well as at ingress and egress points. The decon shall be constructed in a manner so as to be free of jagged metal or exposed wood surfaces. Other alternate decontamination facilities may be used for compliance with Class II asbestos work or asbestos roofing removal work. The personal decon shall not be used for waste load-out.

e. Water Filtration Equipment: Water shall be collected from decontamination unit showers and from general asbestos abatement activities and shall be filtered prior to discharge. Water shall be filtered through a system capable of trapping particles 1 micron and larger in size, specifically designed to remove asbestos fibers. Filtered water shall be discharged into a sanitary sewer system, if acceptable to do so. The Contractor shall bear the responsibility to investigate discharge requirements and to obtain any necessary discharge permits prior to the start of work. To the extent feasible, water should be reclaimed and used on-site for application in wet method work practices prior to its discharge.

f. Fire Extinguishers: Fire extinguishers, rated not less than 2A or as specified by more stringent regulations, will be required in the work area(s) at a rate of one per 3000 square feet or within 100 feet of anywhere in the work area. The minimum allowable number of fire extinguishers will be one in the regulated work area and one in the clean area.

g. Smoke Detectors: Smoke detectors of the battery powered ionization type will be required at a rate of one per 5000 square feet within the regulated work area and one in the clean area. The Contractor shall also post a Notice of Asbestos Abatement adjacent to the main fire alarm panel.

h. Manometer: Manometers used to monitor air pressure within a regulated work area shall have been calibrated within manufacturer's specifications within the previous year. Manometers shall have real-time digital read-out; an audible alarm; and a hardcopy record (circular disk) or be capable of continuous data logging and printing out a data record.

PART 3 – EXECUTION

3.1 PREPARATION

A. EXAMINATION OF CONDITIONS: The Contractor shall carefully examine the work site before beginning work and report any damage or defects to the Architect. The start of work shall be interpreted as implied acceptance of conditions as they exist. The Contractor shall be held responsible for repairing, replacing, or restoring at his expense any existing damage which was not reported, or which was the result of the abatement or his negligence. This includes, but is not limited to, any damage to walls, finishes, fixtures, doors, windows and/or equipment, resulting from poly and tape removal or remaining residues.

B. RESPONSIBILITY FOR WORK: The Asbestos Abatement Contractor acknowledges and agrees that he has sole and primary responsibility and obligation to the Owner to make inspections of his own work at all stages of the Work, and he furthermore acknowledges and agrees that he has sole responsibility to supervise or superintend the performance of the Work, and that said work shall be in strict adherence and compliance with the methods, materials, regulations, and required standards specified herein. The Contractor is responsible for site security upon starting the project. This responsibility extends 24 hours per day.

C. COORDINATION OF WORK: The Asbestos Abatement Contractor is responsible to coordinate all scheduling, phasing, and completion of asbestos abatement work with the General Contractor and all other subcontractors working on the job site.

D. MEASUREMENTS AND QUANTITIES: The Contractor is responsible for verifying all measurements and quantities before the start of work. Discrepancies between plan and field dimensions or quantities shall be reported to the Architect as soon as discovered.

E. JOB SITE POSTINGS: Prior to commencing any preparation of the work area(s) for asbestos removal operations, the Contractor shall post all required documents, warning signs, and erect any physical barriers in order that the work area may be secured. Prior to the commencement of any work, the Contractor shall post bilingual or multi-lingual (as appropriate) EPA and OSHA caution signs in and around the work area in compliance with applicable regulations.

F. PRE-WORK CONFERENCE: Prior to the start of any work, the Asbestos Abatement Contractor shall meet at the project site with the General Contractor, the Owner's Consultant, the Construction Manager, and other entities concerned with the asbestos abatement work. This is an organizational meeting to review responsibilities and personnel assignments; to identify any visible damage to the existing structure or its condition; to identify the work area containment and decontamination areas; and to coordinate temporary facilities including power, light, water, etc.

G. WORK AREA PREPARATION:

a. Work Area Designation: Each work area will be designated and discussed with the Owner’s Consultant prior to preparation. At a minimum, topics will include ingress and egress points, work areas, containment procedures, placement of viewing ports, and decontamination system. This may be accomplished at the Pre-Work Conference.

b. Electrical Lock-out: The Contractor is responsible for the shutdown and disconnect of all electrical power within the work area. The Contractor will provide temporary power and lighting and ensure safe installation of temporary power sources and equipment per applicable electrical code requirements. The Contractor should notify the owner in writing before disconnecting any power or communication lines that may service other areas of the building(s).
   i. **NOTE: The Contractor will be responsible for all costs and damages that occur from a loss of power, water, or communication as a result of any action taken or activity performed by the Contractor.**

c. HVAC Isolation: The Contractor shall shut down and isolate heating, cooling, and ventilating air systems to prevent contamination and fiber dispersal to other areas of the system. During the Work, vents and any other HVAC openings within the Work Area shall be covered with rigid barriers and sealed with tape and plastic sheeting. In the event of any containment breaches, filters in the HVAC system(s) shall be removed and disposed of as contaminated waste at the expense of the Contractor. The Contractor shall be responsible for the main duct disconnect (cut and cap) into and out of the work area.

d. Remaining Utilities: Exposed electrical, phone and other conduits and lines designated by the Owner or Architect to remain in the work area shall be wrapped with a minimum of two layers of 6-mil fire-rated poly before gross removal.

e. Work Area Containment: The Work Area shall be completely sealed airtight and isolated (contained) from all building areas not a part of the work area. All critical openings, including but not limited to doorways, windows, tunnels, ducts, grills, diffusers, skylights, or openings through which pipe conduit passes, or any other openings shall be sealed securely with plastic sheeting and other means, as necessary to prohibit the passage of air out of the work area. Any fixed objects to remain within the proposed work area will be cleaned using HEPA vacuum equipment and/or wet cleaning methods as appropriate and enclosed with plastic sheeting. The plastic sheeting shall be, at a minimum, 6-mil fire-rated poly. Once fully constructed, the Contractor shall inspect the containment for gaps, breaches, tears, leaks, holes or other unwanted passages. A similar inspection shall be conducted not less than once at the start of each work shift. The Contractor shall remain vigilant to ensure the integrity of the containment at all times. Deficiencies shall be corrected immediately and with top priority.

f. Decontamination Facilities: Prior to the start of work, the Contractor shall erect suitable personal decontamination facilities. At a minimum, a 3-stage personal decontamination chamber (decon) with functioning shower shall be constructed and used whenever Class I work is being conducted. The decon shall be constructed contiguous with the regulated work area. Use of a remote shower for Class I work may be allowed where a contiguous shower is infeasible, as judged by the Owner's Consultant. A curtained doorway (see Section 1.3 C above) shall be constructed to separate chambers within a decon unit, as well as at ingress and egress points. The decon shall be constructed in a manner so as to be free of jagged metal or exposed wood surfaces. Other alternate decontamination facilities may be used for compliance with Class II asbestos work or asbestos roofing removal work. The personal decon shall not be used for waste load-out.

g. Temporary Closures: Open doorways, cased openings, and corridors which will not be used for passage during work shall be sealed with temporary partitions as follows:
   i. Wood or metal studs, 16" o.c., faced with 3/8" plywood sheeting on the work side only.
   ii. Both sides of partition covered with double layer of minimum 6-mil fire-rated plastic sheet with joints staggered and sealed with tape. The edges of partition at floor, walls, and ceiling shall be secured and sealed airtight.

h. Movable and Loose Items: Movable and loose items located in the work area and not removed by the Owner shall be cleaned using HEPA vacuum equipment and/or wet cleaning methods as appropriate or shall be removed from the work area to a temporary location designated by the Owner. The items will be received by and protected from future damage or loss by the Owner and relocated by the Owner.

i. Carpet Removal: As directed by the Contract documents and drawings, remove and dispose of carpeting, including pad, prior to plasticizing work area. The carpet and pad to be discarded shall be misted with amended water or with an encapsulant prior to and during removal to minimize airborne dust releases, wrapped and sealed airtight in plastic, and disposed of as an asbestos-contaminated material.

j. Pre-Cleaning: Clean the entire work area(s) prior to plasticizing, using HEPA vacuum equipment and wet cleaning methods as appropriate. Do not use methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters.

k. Class I Work Area Isolation: For Work Areas where Class I asbestos work is to be conducted, the Contractor shall cover floor and wall surfaces with fire-rated plastic sheeting. A minimum of two layers of 6-mil plastic shall be used on the walls, floors, and ceilings (where applicable). Exceptions to this would include the removal of thermal system insulation (TSI) by means of glovebag techniques. In the case of TSI removal using glovebags, full-room or partial-room (“mini-enclosure”) containment conditions may, at the Consultant’s discretion, be required. Floor layers shall be applied making sure that plastic is turned-up the wall at least 16 inches and securely fastened. Then apply wall layers overlapping the previously turned-up floor plastic by at least 12 in. All joints and seams for each layer shall be glued, taped, or stapled securely with care to minimize damage to existing walls or floor, yet in a manner to prohibit water or air movement through the covered areas.

l. Modified Class I Work Area Isolation: For Work Areas where Class II asbestos work is to be conducted by means or methods which would reasonably be expected to render non-friable ACM to a friable condition; or where the method of removal will necessarily entrain substantially elevated concentrations of asbestos fibers into the work area (e.g. use of non-HEPA-filtered power tools to cut wallboard), the Contractor shall cover floor and, at the discretion of the Owner’s Consultant, the walls and ceilings with fire-rated plastic sheeting. A minimum of two layers of 6-mil plastic shall be used on the floors. Exceptions to this would include the removal of asbestos-containing flooring within the same work area. All joints and seams for each layer shall be glued, taped, or stapled securely with care to minimize damage to remaining walls or floor, yet in a manner to prohibit water or air movement through the covered area. Cover the floor under the decontamination unit, hoses, and equipment with an additional layer of 6-mil poly. Class I Work Area Isolation procedures may be used by the Contractor in work areas where modified Class I work will be conducted.

m. Class II Work Area Isolation: For Work Areas where Class II asbestos work is to be conducted, the Contractor shall use a minimum of one layer of 6-mil plastic on the walls. The height of the wall area to be covered shall be determined on-site, at the discretion of the Owner's Consultant. 6-mil plastic on the floor and ceiling is not required in areas where only floor tile and mastic is to be removed. Cover the floor under the decontamination unit, hoses, and equipment with an additional layer of 6-mil poly.

n. Localized Limited Work Area Isolation: For Work Areas where small-scale, Class I or Class II ACM removal work will occur, the Contractor may, with the approval of the Owner's Consultant, use Localized Limited Work Area Isolation ("mini containment") methods. For the purposes of this work, the term "small-scale" shall generally apply to work which can be completed by no more than two (2) workers in no more than four (4) hours; and which generates no more waste than can be contained in four (4) standard-sized (60") waste bags. At a minimum, the Work Area shall be fully enclosed with two layers of 6-mil plastic, have a diminished interior pressure differential, and a curtained doorway for ingress/egress use.

o. Containment Obscurity: Work Areas with containment walls visible to the public shall have one layer of opaque poly substituted for one of the 6-mil layers.

p. Adjacent Areas: Work Areas immediately adjacent to asbestos removal areas, such as corridors or hallways which will not be subject to asbestos material removal, but are necessary routes to and from work areas, shall be protected with plastic on floors, walls, and ceilings, similar as described herein. At the Contractor's discretion, plastic-enclosed, framed-in tunnels shall be permitted to provide access in lieu of plasticizing walls and ceilings. Openings from these areas into areas where asbestos material is removed shall have curtained doorways to minimize fiber release into other areas.

q. Emergency Exits: The Contractor shall establish emergency and fire exits from the Work Areas, or establish alternative exits satisfactory to fire officials or applicable fire codes.

i. All exits shall be marked in bold lettering "EXIT" or "Emergency Exit."

r. Work Area Communications: The Asbestos Abatement Contractor shall provide communication equipment capable of linking the personnel in the work area to those stationed outside, so that communications can be maintained without worker decontamination. Equipment should be operating properly and maintained as such during removal and clean-up operation.

s. Work Area Viewing Ports: The Contractor shall provide and construct observation/communication window(s) in location(s) specified by the Owner's Consultant. The window(s) shall be a minimum 1/8-inch Plexiglass or poly-carbonate sheet, shall have a minimum size of 18" X 18", and shall be constructed and maintained so as to allow unobstructed observation of the entire work area(s).

t. Differential Air Pressure: Prior to the start of asbestos removal work, the Contractor shall install differential air pressure equipment, as specified herein, to maintain negative pressure in the Work Area during the abatement and decontamination phases of the Project until the required visual and clearance air testing has been satisfactorily achieved.

i. A minimum pressure differential of -0.02 inches of water column (-0.02" w.c.), with respect to the air pressure of the area outside the Work Area, shall be established and maintained within the Work Area. Air exhausted from this equipment shall be exhausted to the outdoors.

ii. The Contractor shall have sufficient backup units on-site and/or in place to maintain this requirement throughout the Work.
iii. Documentation of satisfactory differential air pressure shall require the use of a manometer, as specified elsewhere herein.
iv. If, in the opinion of the Owner's Consultant, the differential air pressure units are judged to need maintenance or in any other way fail to meet typical industry standards, the units shall not be placed into operation on this project.

u. Pre-Abatement Work Area Inspections: Prior to the start of asbestos removal work, the Contractor, accompanied by the Owner's Consultant, shall conduct a detailed inspection of all equipment and Work Area isolation preparations to assure that appropriate engineering controls are in place and are functioning sufficiently to contain asbestos fibers within the Work Area.
i. The concurrence of the Owner's Consultant shall be required to determine that a Work Area has undergone adequate preparation to proceed with asbestos removal work.
ii. This Pre-Abatement Work Area inspection shall be conducted for each regulated Work Area and each individual inspection shall be documented in writing.
iii. Such documentation shall be signed by the individual(s) conducting the inspection(s). A copy of each such documentation shall be provided to the Owner's Consultant for conveyance to the Owner.

3.2 ASBESTOS REMOVAL

A. GENERAL: The following asbestos-containing materials have been identified for removal during this Project:

a. **Class I Asbestos Work:** The following asbestos-containing materials have been identified for removal under Cal-OSHA's Class I work practices:

Physical Education Building

i. Insulated piping (elbows, Tees, and straight runs)

b. **Modified Class I Asbestos Work:** The following asbestos-containing materials have been identified for removal under Cal-OSHA's Class II work practices, utilizing the Modified Class I Work Area Isolation procedures specified in Part 3, Section 3.1 – Preparation, paragraph G, sub-paragraph 12:

Physical Education Building

i. Wallboard with joint compound
1. **NOTE: At the Contractor's discretion, this material may be removed by manual work methods (no power tools), or with power tools equipped with HEPA-filtered dust collection devices. In these instances, this work can be conducted as Class II work.**

c. **Class II Asbestos Work:** The following asbestos-containing materials have been identified for removal under Cal-OSHA's Class II work practices:

Field House Building
i. Exterior Paints (dark grey, orange, red, dark orange
Physical Education Building
i. Tan remnant mastic
ii. Tan 9" vinyl floor tile (VFT) with streaks.
iii. Black mastic on HVAC ducting
iv. Black Floor mastic under White !2" with streaks
v. Gold, tan and brown mastic on 2" cove base
vi. Fire doors

d. **Asbestos Roof Work:** The following asbestos-containing materials have been identified for removal under Cal-OSHA's Section (g) (11) "Alternative methods of compliance for roofing materials" [8 CCR 1529 (g) (11)]:

Field House Building
i. Black roof penetration mastic
Physical Education Building
i. Black roof penetration mastic
ii. Black roof mastic on parapet walls
iii. Silver roof paint
iv. Tar paper at parapet walls

B. WORK PRACTICES:
a. General: At all times, the Contractor will employ work practices intended to maintain an orderly and safe workplace. This shall include, but not be limited to, pre-cleaning the work area; wetting ACM during the work; prompt clean-up of ACM waste; use of HEPA-filtered vacuums and exhaust fans; and employing all necessary engineering controls needed to prevent elevated airborne asbestos fiber concentrations within the Work Area.
b. Class I Asbestos Work: Thermal System Insulation (TSI) removed by the use of glove-bags shall be conducted under full secondary Work Area containment, as described in the preceding Section 3.1 - PREPARATION. In this instance, a single layer of 6-mil poly sheeting will be allowed for use to cover the floors and walls. Glove bag removal work shall be conducted in full compliance with Cal-OSHA Class I work practices (8 CCR 1529). ACM shall be wetted prior to and during removal, handling, and waste disposal.
c. Class II Asbestos Work: Floor tile, mastic, baseboard, and other identified Class II materials shall be removed with hand tools and, to the extent feasible, substantially intact. At the discretion of the Owner's Consultant, use of mechanical or motorized removal methods may be permitted, provided the proposed method(s) is/are not prohibited under Cal-OSHA Class II work practices. Class I work practices may be utilized to perform Class II work. ACM shall be wetted prior to and during removal, handling, and waste disposal. Low-odor, solvent-based mastic removers may be used to remove ACM mastics, provided the product(s) meets the requirements of Section 2.1 – MATERIALS of this Specification, and provided the waste generated is managed in accordance with applicable state and federal regulations. Use of solvent-based mastic removers will be followed by a suitable rinse (as per manufacturer's recommendations) to remove any residual mastic remover. The

Contractor shall be responsible for any subsequent failure of a flooring installation due to the failure to adequately remove residual solvent-based mastic remover.

d. Asbestos Roof Work: Asbestos-containing roofing materials shall be removed with hand tools and, to the extent feasible, substantially intact. At the discretion of the Owner's Consultant, use of mechanical or motorized removal methods may be permitted, provided the proposed method(s) is/are not prohibited under applicable Cal-OSHA work practices. Class I or Class II work practices may be utilized to perform removal of asbestos-containing roofing material. ACM shall be wetted prior to and during removal, handling, and waste disposal. ACM waste shall not be dropped from the roof top, but shall be properly containerized (double-bagged, drummed, etc.) and lowered from the roof top for appropriate waste storage. All ACM waste shall be removed from the Work Area before the end of each shift. **The Contractor shall be mindful that roof removal may reveal materials that have yet to be tested for asbestos. The Contractor shall immediately stop work upon such discovery and immediately notify the Owner's Consultant prior to disturbing untested materials.**

e. Work Area Isolation: Class I and Class II Work Areas shall be regulated to prevent unauthorized entry. Isolation methods shall include, but not necessarily be limited to, the use of barrier tape (yellow "Caution" and/or OSHA's "Danger Asbestos") and OSHA's "Danger Asbestos" sign(s). The Contractor shall maintain a daily Work Area entry/exit log and require all persons entering the Work Area to sign in and out. The Contractor shall bear sole responsibility for regulating entry into the Work Area.

C. WORK AREA DECONTAMINATION

a. Initial Cleaning: Clean-up and containerization of ACM waste shall be an on-going activity throughout the removal work. ACM gross debris shall not be allowed to accumulate within the Work Area for subsequent clean-up. ACM shall be wetted and kept wet throughout the removal and clean-up work. Containerized waste may be stored within the Work Area during the work but should be removed from the Work Area for storage in a secured location on a periodic basis. In no event shall the accumulation of containerized waste within the Work Area be allowed to impede the work progress or compromise work site safety.

b. Containerization of Waste: ACM waste shall be containerized in waste containers (bags, drums, bins, etc.) suitable for loading, temporary storage, transit, and unloading of asbestos waste without rupture, or otherwise causing exposure to persons or releases to the atmosphere. Where rigid primary containers (bins, drums, etc.) are used, they shall be lined with a secondary water-tight barrier of poly sheeting or poly bags of minimal thickness of 6 mil. Waste containerized in bags shall be double bagged, evacuated of air, and sealed with duct tape. All containers used for disposal of asbestos-containing waste shall be labeled in general accordance with applicable regulations, and specifically with the requirements of 8 CCR 1529 (k) (8) and NCUAQMD.

c. Detail Cleaning: Following gross removal of ACM, the substrate surface shall be detail cleaned using a combination of hand tools (scrapers, wire brushes, etc.), wet-wiping, and HEPA vacuuming. The substrate will be considered to be adequately cleaned when no visible and no three-dimensional remnant of the ACM can be seen or felt. Porous substrates such as wooden or concrete floors shall be considered to be adequately cleaned when no three-dimensional remnant of the ACM can be felt, and only light staining can be seen. This determination shall be made by the Owner's Consultant on a case-by-case basis. In no event shall encapsulation be used in lieu of detail cleaning.

d. Waste Load Out: Prior to the removal of containerized waste from the Work Area, each container shall be wet wiped to remove any residual asbestos contamination. Double-bagging of waste shall be completed within the regulated Work Area and the exterior of each bag (inner and outer) shall be individually wet-wiped prior to removal from the Work Area. Waste shall be loaded out of the Work Area through the equipment decontamination (waste load out) chamber and not through the personal decontamination chamber. Once outside of the Work Area, the waste shall be transported in rigid movable bins or wheelbarrows directly to a secured waste storage facility.

e. Post-Abatement Work Area Inspections: Subsequent to all cleaning phases and waste load-out, the Contractor's Supervisor, accompanied by the Owner's Consultant, shall conduct a detailed visual inspection of the Work Area to assure that the identified asbestos has been removed and that the Work Area has been adequately cleaned. The concurrence of the Owner's Consultant shall be required to determine that a Work Area has undergone adequate cleaning to proceed with clearance air testing. This Post-Abatement Work Area inspection shall be conducted for each regulated Work Area and each individual inspection shall be documented in writing. Such documentation shall be signed by the individual(s) conducting the inspection(s). A copy of each such documentation shall be provided to the Owner's Consultant for conveyance to the Owner.

f. Equipment Decontamination: Prior to removal from the Work Area, the Contractor shall decontaminate all tools and equipment. Decontamination shall include, but not be limited to, wet-wiping, HEPA-vacuuming, and containerizing tools into subsequently decontaminated containers. HEPA-filtered vacuum cleaners shall be wrapped, bagged or otherwise containerized before removal from the Work Area. Likewise, differential air pressure equipment shall be sealed with poly sheeting and tape, and externally decontaminated before removal from the Work Area.

g. Encapsulation: Upon successful compliance with the requirements for Post-Abatement Work Area Inspection, the Contractor shall encapsulate the surfaces from which ACM have been removed. The encapsulant shall be compatible with the existing substrate and replacement materials and shall be rated to safely withstand the temperature of the items to which it will be applied. Following application of the encapsulant, the Contractor shall allow a sufficient amount of time (preferably overnight) for the encapsulant to dry. If clearance air samples are collected at the Contractor's request without having allowed a sufficient drying period, and if those samples are revealed by analyses to have been overloaded with encapsulant, additional clearances will be conducted at the Contractor's expense.

h. Poly Removal: After the encapsulant has been allowed to dry, the Contractor shall remove the outer layer of plastic on the walls, floors, and ceilings (where applicable). The inner plastic layer and isolation barriers on vents, grilles, diffusers, etc., shall remain in place for the clearance air sampling. Care should be taken to avoid pulling down the remaining layer of plastic sheeting. In Work Areas where a single layer of plastic has been used on the walls, floors, and ceilings (where applicable), that plastic layer shall remain in place until air clearance sampling is completed, and satisfactory air clearance criteria have been met. Containerize removed plastic and any remaining debris, decontaminate container, and dispose of as ACM-contaminated waste. All other isolation engineering controls including decontamination facilities shall remain in place. **Removal of plastic layers and isolation engineering controls ("teardown") shall not occur without the knowledge and consent of the Owner's Consultant.**

D. PERSONAL PROTECTION

a. General: The Contractor shall be solely responsible for the safety, efficiency, and adequacy of his work, workers, equipment, and methods, and for any damages which may result from their improper actions, practices, construction, maintenance, or operations. The Contractor shall erect and properly maintain at all times, as required by the condition and progress of the Work, proper safeguards for the protection of the workmen and the public and shall post appropriate warning signs around the site.

b. Competent Person: The Contractor shall designate a responsible member of his organization on the work site, whose duty shall be the detection, recognition, and prevention of accidents and potential accidents. The designated individual shall assume and fulfill the duties of the Competent Person, as defined in 8 CCR 1529. In the absence of notice to the contrary, provided in writing to the Owner's Consultant, this person shall be the Supervisor of the Asbestos Abatement Contractor.

c. Toxic Exposure Responsibility: The Contractor shall assume all responsibility for any toxic effects to workers of the air supplied to respirators. The Contractor shall assume all responsibility for any toxic effects to personnel or property caused by airborne particulates, mists, vapors, or any wetting agent(s) and for the disposal of said agent(s) and any residual toxic damaging residues.

d. Worker Discipline: The Contractor shall at all times enforce strict discipline and good order among his employees and shall not employ on the work crew any person not skilled in the Work assigned, nor anyone who has not received notice and instructions in the dangers of asbestos exposure, and in the reduction of the dangers associated with its removal. They shall also receive training in the proper use of respirators, safety procedures, equipment, clothing, and work procedure. The Contractor shall remove any employee from the project not adhering to any standard or requirement set forth herein.

e. Work Crew Size: The Contractor shall be responsible for setting the size of his work crews. During removal operations, a minimum of two (2) workers shall be in the work area. Under no circumstances should workers be allowed to work without the supervision of a foreman while within the work area. No workers shall be allowed alone in the work area.

f. Respiratory Protection: Prior to commencement of work, all workers shall be instructed and shall be knowledgeable in the use of respiratory equipment. All respiratory protection shall be provided to workers in conjunction with a respiratory protection program which shall meet the requirements of OSHA 29 CFR 1910.1001 and OSHA 29 CFR 1926.1101. This includes qualitative or quantitative fit testing. The following additional requirements shall apply:

g. The Contractor shall provide workers with personally issued and marked respiratory equipment certified by the National Institute for Occupational Safety and Health (NIOSH) for use in atmospheres containing asbestos fibers. Respiratory protection shall be worn by all persons potentially exposed to asbestos from the initiation of the asbestos abatement project until all areas have been given clearance. Clearance shall be obtained by visual inspection and air monitoring.

h. Where respirators with disposable filters are employed, the Contractor shall provide sufficient filters for replacement as necessary by the worker, or as required by the applicable regulation.

i. The Contractor shall supply all individuals with adequate respiratory protection, which is set at a minimum to be that which is in compliance with OSHA requirements. In accordance with 29 CFR 1926.1101, the Contractor shall have a Competent Person conduct exposure assessments and periodic monitoring to establish the minimum appropriate respiratory protection to be used and the effectiveness of the chosen respiratory protection. In the absence of data acceptable to the Owner's Consultant as satisfying the requirements for a Negative Exposure Assessment [29 CFR 1926.1101 (f)(2)(iii)], the Contractor shall conduct Initial Exposure Assessments, as defined in 29 CFR 1926.1101(f)(2). In addition, the Contractor shall require and enforce the use of the following activity-related requirements:
    i. Work involving the use of solvents or volatile organic compounds shall be conducted with the use of air purifying respirators equipped with HEPA and Organic Vapor cartridges.

j. Any question as to respiratory protection requirements for any activity unnamed or not otherwise described herein shall, by default, require the maximum protection or, alternately, may be directed by the Owner's Consultant.

k. Proper respiratory equipment shall be used throughout the project, including removal of final layers of plastic after final air clearance is attained.

l. The Contractor shall post in the Equipment Room and the Clean Room all decontamination and safety procedures to be followed for ingress and egress from the work area.

m. Protective Clothing: The Contractor shall provide workers with sufficient sets of hooded, disposable, full-body coveralls recommended for use in asbestos operations equivalent to DuPont "TYVEK-Type 14". Such full body protective clothing shall include, but not be limited to:

n. Foot coverings including safety shoes or boots, or disposable foot coverings. Rubber boots are recommended.

o. Head covers (hard-hats).

p. Clothing should be hooded, full-body coverall type.

q. Durable water-proof gloves (plastic, latex, or rubber) selected for chemical compatibility of the glove material and the materials to be handled. Cloth or leather gloves may be worn underneath for comfort but shall not be worn alone.

r. Additional Clothing Requirements: The Contractor shall observe the following additional work clothing requirements:

s. Street clothes shall not be worn under protective clothing, nor in the regulated work area.

t. Any non-decontaminated protective clothing shall remain within the contaminated areas and shall be disposed of as asbestos-contaminated waste upon completion.

u. Provide authorized visitors with disposable sets of protective full-body clothing including footwear.

v. Provide eye protection and hard hats as required for job conditions or by applicable safety regulations. Where negative pressure respirators are worn, they shall be full faced, unless the Contractor also provides protective eye wear.

w. All clothing shall be sealable by design or by securing with tape at the workers' ankles and wrists. Short pants or short sleeves will not be allowed.

x. Personal Exposure Monitoring: It shall be the Contractor's responsibility to conduct required personal exposure monitoring. Such exposure monitoring shall be in full compliance with the requirements of 8 CCR 1529 and 8 CCR 5144. The Contractor shall monitor the airborne asbestos exposures of not less than 10% of the work crew, or a minimum of two (2) workers, whichever is greater. Workers shall be monitored in "worst case scenario" tasks, as well as those conducting less hazardous work. Personal monitoring shall not be the responsibility of the Owner, nor the Owner's Consultant, however, the Owner's Consultant may elect to conduct such monitoring as a supplemental or quality assurance measure. Personal exposure monitoring conducted by the Owner's Consultant shall not substitute for, nor obviate the Contractor's duty to conduct such monitoring. Personal exposure monitoring shall be conducted and analyzed in accordance with NIOSH Method 7400. Analytical results of Contractor's personal exposure monitoring shall be posted at the work site daily, and copies of the analyses shall be submitted to the Owner along with the Post-Job Submittals.

E. WASTE MANAGEMENT AND DISPOSAL

a. General: The Contractor shall be responsible for the safe handling, storage and transportation of all asbestos-containing waste (hazardous and non-hazardous) generated by the Work. The Contractor shall bear all costs for any claims, damages, losses, and/or clean-up expenses arising out of or resulting from asbestos spills on the job site or enroute to the designated waste disposal facility. The Contractor shall deliver all asbestos-containing waste materials to the designated waste disposal facility or facilities that have been pre-approved by the Owner and in accordance with the applicable regulations.

b. Storage Facilities: The Contractor shall ensure that all asbestos-containing waste (hazardous and non-hazardous) generated by the Work is stored in a secure manner. Debris bins, storage enclosures, etc. shall be locked overnight or whenever the Contractor is off-site and unable to directly monitor their contents and management. The Contractor shall ensure that the appropriate and required warning signs are posted on waste storage locations. The Contractor shall maintain the waste storage facilities in an orderly and well-kept condition at all times. The Contractor shall conduct routine waste storage area inspections to assure that appropriate storage conditions are maintained. Waste shall not be co-mingled with stored non-waste material or equipment.

c. Off-site Shipment of Wastes: The Contractor shall notify the Owner in advance, whenever asbestos-containing waste materials are to be removed from the site. A copy of the Uniform Hazardous Waste Manifest or any other documents required by State or Local agencies shall be completed by the Contractor and submitted to the Owner for review and signature prior to transporting asbestos-containing waste materials to a disposal facility. The Owner's Consultant shall not have authority to sign or approve waste shipping documents. It shall be the Contractor's responsibility to obtain the necessary authorized signature(s) to ship wastes off-site. Delays or expenses resulting from the untimely waste document coordination shall be borne by the Contractor.

d. Waste Shipment Documentation: The State of California Uniform Hazardous Waste Manifest forms will be used for all shipments transported off-site for hazardous waste disposal. An asbestos non-hazardous waste manifest will be used for all shipments transported off-site for disposal of non-hazardous asbestos-containing waste. All loads removed from the Project Site shall be weighed by a Certified Weighmaster prior to delivery to the disposal facility. Certified weight tickets are to be submitted by the Contractor as a part of the Post-job Submittals. At the conclusion of the Work, the Contractor shall provide documentation that the asbestos-containing waste materials were disposed of at the appropriate EPA-

approved waste disposal facility. The documentation shall be submitted as part of the Post-Job Submittals.

e. Shipment Containers: All waste shipping containers shall be individually labeled with appropriate signage and warnings, as required by applicable regulations, codes and ordinances. All waste hauling vehicles and/or waste debris bins shall, at all times, be enclosed and sealed while in route to the disposal facility.

f. Nonfriable Debris Disposal: Resilient floor tiles, roofing materials and other nonfriable asbestos-containing materials will not be required to be disposed of as hazardous waste, unless they are made friable during the removal process (see Definitions for description of friability.) Friability will be determined by the Owner's Consultant or by a representative of a regulatory agency.

F. WORK AREA CLEARANCE CRITERIA

a. General: The Contractor shall not be authorized to de-mobilize from a Work Area until both visual and air monitoring clearance criteria have been met and documented, as described herein.

b. Visual Clearance Criteria: Subsequent to all cleaning phases and waste load-out, the Contractor's Supervisor, accompanied by the Owner's Consultant, shall conduct a detailed visual inspection of the Work Area to assure that the identified ACM has been removed and that the Work Area has been adequately cleaned. The concurrence of the Owner's Consultant shall be required to determine that a Work Area has undergone adequate cleaning to proceed with clearance air testing. The Work Area will be considered to be adequately cleaned when no visible and no three-dimensional remnant of the ACM can be seen or felt. Porous substrates such as wooden or concrete floors shall be considered to be adequately cleaned when no three-dimensional remnant of the ACM can be felt, and only light staining can be seen. This determination shall be made by the Owner's Consultant on a case-by-case basis.

c. Air Clearance Criteria: Once a Work Area has successfully achieved Visual Clearance Criteria; has been encapsulated; and has been allowed to dry, the Owner's Consultant shall conduct Air Clearance Testing to evaluate the Work Area's suitability for unprotected human re-occupancy. Air Clearance Testing shall be conducted in accordance with AHERA protocols (40 CFR 763 Subpart E) for analysis by Transmission Electron Microscopy (TEM). Where applicable, air sample collection shall be conducted by aggressively disturbing the air prior to and during the sample collection period. A Work Area will be judged to be suitable for unprotected human re-occupancy when the mean average asbestos structure concentration of five (5) air samples collected within the Work Area, as analyzed by TEM, are reported to be equal to or less than 70 structures per millimeter squared ($\geq$70 structures/mm^2); or when the mean average asbestos structure concentration of five (5) air samples collected within the Work Area, as analyzed by TEM, are reported to be less than the mean average asbestos structure concentration of five (5) air samples collected outside the Work Area. At the discretion of the Owner's Consultant, some Work Areas may be evaluated by Air Clearance Testing which is analyzed by phase contrast microscopy (PCM), providing that the conditions of the Work Area and the Work performed meet the requirements set forth in the AHERA protocols for PCM Clearance Air Testing. In such instances, the Work Area will be judged to be suitable for unprotected human re-occupancy when each of five (5) PCM samples collected within the Work Area reported to be less than 0.01 fibers per cubic centimeter of air sampled (<0.01 f/cm^3).

d. Failure to Achieve Clearance Criteria: Should the Contractor fail to achieve either Visual Clearance Criteria or Air Clearance Criteria in a Work Area, the Contractor shall repeat a thorough re-cleaning of the entire Work Area. Following completion of the re-cleaning, the visual Post-Abatement Work Area Inspection shall be repeated and documented again. Once the re-cleaned Work Area has successfully achieved the Visual Clearance Criteria, the Owner's Consultant shall repeat the Air Clearance Testing. This pattern shall be repeated until both Visual Clearance Criteria and Air Clearance Criteria have been achieved in the Work Area. All costs associated with any subsequent re-cleaning, re-inspection, and re-sampling and analyses shall be borne by the Contractor as re-work.

END OF SECTION

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SECTION 02 83 00 - LEAD-RELATED CONSTRUCTION

Table of Contents

SECTION 02 83 00 - LEAD-RELATED CONSTRUCTION

PART 1 - GENERAL

These specifications provide a detailed list of conditions the Contractor must meet including project submittals, training, medical evaluations, licensing, insurance, work practices, communications and other requirements. Attached to these specifications is the building survey report for the Physical Education Gym and Field House Buildings demolition project. This report helps clarify the project scope and include tables with detailed descriptions of building materials, locations, laboratory analyses, regulatory categorization (lead-based paint (LBP), lead-containing paint or coatings)and building diagrams.

1.01 SECTION CONTENTS

A. This section specifies the methods, procedures, and requirements related to the removal and disposal of lead-based paint including, but not limited to:

1. Regulatory requirements
2. Submittals
3. Personal protective measures
4. Execution
5. Inspections
6. Waste handling and disposal

1.02 SCOPE OF WORK

A. In accordance with all drawings, specifications and instructions, Contractor shall furnish all labor, transportation, materials, supervision, equipment, insurance, taxes, overhead and all other items of expense, or services necessary for the removal and disposal of lead-containing and lead-based paint in the areas affected by the work.

B. This draft specification is intended to provide general information related to abatement of lead at the Sutter Memorial site. It will be updated with specific information upon completion of the hazardous building materials survey conducted by Forensic Analytical Consulting Services, Inc.

C. These specifications are intended to provide requirements for the abatement of lead-based paint or other lead-containing materials at the Redwoods Community College District site. The scope of work is to remove and dispose of all LPB and Lead-Containing Materials in accordance with all applicable regulations and these specifications. The buildings included in the scope of work are Physical Education Gym and Field House Buildings.

Section 2 attached to these specifications includes the lead inspection report for the building included in the scope of work. The report detail material descriptions, designations, locations, and estimated quantities. The Contractor is responsible to determine quantities of hazardous materials impacted by the planned demolition work.

1.03 POTENTIAL LEAD HAZARD

A. The disturbance of building materials coated with lead-containing paint may cause lead contaminated dust to be released in to the environment, thereby creating a potential health hazard to workers and occupants. Ingestion or inhalation of lead contaminated dust can cause various health concerns, including but not limited to nausea, anemia, vomiting, kidney disease, nervous system disorders, and reproductive problems. All contractors, sub-contractors, consultants, and other occupants in the vicinity of a potential lead hazard should be apprised, by the responsible parties and applicable warning signs per OSHA requirements cited herein.

B. Significant lead exposure may result from activities such as demolition of components, scraping, sanding, or grinding lead-based paint, abrasive blasting of surface coatings, welding, torch cutting, or related procedures. Where in performance of the work specified herein, a lead exposure is potential, strict adherence to the measures and procedures of these specifications shall be mandatory.

1.04 REGULATIONS

A. The Contractor shall comply with the requirements of the following regulations and guidelines governing lead-related construction activities and disposal, as well as other applicable federal, state, and local government regulations. The regulations and/or guidelines listed herein are incorporated by reference.

Code of Federal Regulations (CFR)
29 CFR 1926, Construction Standards
29 CFR 1926.62, Lead in Construction Standard
40 CFR Part 50.12, Ambient Air Quality Standard for Lead
40 CFR Parts 261, 265, and 268, Hazardous Waste Management
49 CFR Parts 172, 173, 178, 179, Hazardous Material Transportation

California Code of Regulations (CCR)
8 CCR Division 1, Chapter 4, Subchapter 4, Construction Safety Orders
8 CCR 1532.1, Lead in Construction Standard
8 CCR 5144, Respiratory Protection
22 CCR Division 4 and 4.5, Hazardous Waste

"Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing", U.S. Department of Housing and Urban Development (HUD), July 1995.

1.05 DEFINITIONS

A. General: Definitions contained in this Section are not necessarily complete, but are general to the extent that they are not defined more explicitly elsewhere in the Contract Documents.

1. **Abatement**: means the removal or covering of paint, plaster or other material containing lead from interior or exterior surfaces.

2. **Action Level**: An airborne concentration of 30 micrograms per cubic meter (30 ug/m^3) of air as an eight (8) hour time weighted average (TWA) as covered by OSHA regulations 29 CFR 1926.62 and Cal-OSHA Title 8, Section 1532.1.

3. **Air Monitoring**: The process of measuring the lead levels of a specific volume of air.

4. **Authorized Visitor**: The Owner, consultant, or a representative of any federal, state and local regulatory or other agency having authority over the project.

5. **Certified Industrial Hygienist (C.I.H.)**: A person certified in comprehensive practice by the American Board of Industrial Hygiene and qualified by training and/or experience to specify measures for the recognition, evaluation, and control of occupational health hazards.

6. **Construction Barrier**: Demarcation of the work area limiting access by unauthorized personnel.

7. **Consultant**: Consultant represents Sutter Health on issues relating to the project design and the scope of work as defined by this specification. The consultant is certified by the California Department of Public Health in one or more of the following disciplines: Lead Inspector/Assessor; Lead Supervisor; Lead Project Monitor; and/or Lead Project Designer.

8. **Disposal Bag**: A leak-tight plastic bag with a minimum thickness of 6-mil, used for transporting lead waste from work area to disposal site.

9. **Elevated Blood Lead Level**: Means a blood lead concentration equal to or greater than twenty-five (25) micrograms per deciliter (ug/dl).

10. **Filter**: A media component used in respirators to remove solid or liquid particles from the inspired air.

11. **Final Inspection**: Inspection by a qualified inspector, industrial hygienist, or local public health official to determine whether abatement and cleanup are complete.

12. **Hazardous Waste**: As defined in Resource Conservation Recovery Act (RCRA) the term "hazardous waste" means a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may cause, or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

13. **HEPA Filter**: A High Efficiency Particulate Air filter capable of trapping and retaining 99.97% of particles 0.3 microns in diameter.

14. **HEPA Filter Vacuum Collection Equipment** (or vacuum cleaner): High Efficiency Particulate Air (absolute) filtered vacuum collection equipment with a filter system capable of collecting and retaining 99.97% of particles 0.3 microns in diameter or larger.

15. **High Phosphate Detergent**: Detergent which contains at least 5% tri-sodium phosphate (TSP).

16. **Lead-Based Paint**: Any paint or surface coating that contains lead equal to or exceeding one milligram per square centimeter (1.0 mg/cm2) or 0.5% by weight.

17. **Lead-Containing Paint**: Surface coatings containing any detectable concentration

when measured by an OSHA approved laboratory method.

18. **Lead Permissible Exposure Limit (PEL)**: The employer shall ensure that no employee is exposed to an airborne concentration of lead in excess of 50 micrograms per cubic meter (50 ug/m^3) of air as an eight (8) hour time weighted average (TWA) as covered by OSHA regulations 29 CFR 1926.62 and Cal-OSHA Title 8, Section 1532.1.

19. **Negative Pressure**: Air pressure lower than surrounding areas, generally caused by exhausting air from a sealed space (work area).

20. **Negative Pressure Respirator**: A respirator in which the air pressure inside the respiratory-inlet covering is positive during exhalation in relation to the air pressure of the outside atmosphere and negative during inhalation in relation to the air pressure of the outside atmosphere. Negative pressure respirators include all powered-air purifying respirators (PAPRs)

21. **Negative Pressure Ventilation System**: A local exhaust system utilizing HEPA filtration capable of maintaining a negative pressure inside the work area and a constant air flow from adjacent areas into the work area and exhausting that air outside the work area.

22. **Owner's Representative(s)**: Any combination of the following: Consultant; Project Manager; Construction Manager; Project Designer; and/or Employee of Sutter Health.

23. **Personal Monitoring**: Sampling of lead concentrations within the breathing zone of an employee.

24. **Respirator**: A device designed to protect the wearer from the inhalation of harmful atmospheres.

25. **RCRA**: Resource Conservation and Recovery Act of 1976. RCRA is an amendment to the Solid Waste Disposal Act of 1965. RCRA was amended in 1980 and most recently on November 8, 1984 by Hazardous and Solid Waste Amendments.

26. **Testing Laboratories**: A "testing laboratory" is an independent entity engaged to perform specific inspections or tests, either at the project site or elsewhere, and to report on results of those inspections or tests.

27. **Time Weighted Average (TWA)**: The average concentration of a contaminant in air during a specific time period.

28. **Visible Emissions**: Any emissions containing particulate lead material that are visually detectable without the aid of instruments. This does not include condensed uncombined water vapor.

29. **Wet Cleaning**: The process of eliminating lead contamination from building surfaces and objects by using cloth, mops, or other cleaning utensils which have been dampened with high phosphate detergent and afterwards thoroughly decontaminated or disposed of as lead contaminated waste.

30. **Work Area**: The area where lead related work or removal operations are performed which is defined and/or isolated to prevent the spread of lead dust, or debris, and entry

by unauthorized personnel.

1.06 SUBMITTALS AND NOTICES

A. Training: Submit at least ten (10) days prior to commencing work copies of the training documentation for each supervisor and worker who will be on-site for this project. This training shall be in accordance with 8 CCR 1532.1 (CAL/OSHA Lead in Construction Standard).

B. Medical Monitoring: Submit ten (10) days prior to commencing work copies of the medical documentation for each supervisor and worker who will be on-site for this project. Contractor shall submit documentation that all employees engaged in removal activities have had the appropriate medical examinations within the prescribed time periods immediately preceding project start-up. Documentation shall include, but is not limited to, baseline blood lead levels performed in accordance with 8 CCR 1532.1 (CAL/OSHA Lead in Construction Standard).

C. Respiratory Protection: Submit at least ten (10) days before starting work copy of Respiratory Protection Program which is in compliance with ANSI Z88.2-1980, OSHA 29 CFR 1910 and 1926, Cal-OSHA Title 8 Section 1532.1. Contractor shall submit statement from examining physician that each employee is fit to wear a respirator in accordance with 8 CCR 5144 within the last twelve months. Contractor shall also provide documentation showing that all employees have passed respiratory fit tests within the past twelve months.

D. OSHA Lead Compliance Plan: Submit at least ten (10) days prior to commencing work a detailed plan of the procedures proposed in order to comply with the requirements of 29 CFR 1926.62 and Cal-OSHA Title 8 Section 1532.1. Include in the plan all components required under the standard.

E. OSHA Lead-Work Pre-Job Notification: The contractor shall provide written notification to the nearest Cal/OSHA Division District Office in the manner prescribed by subsections (p)(1) through (p)(4) when work is planned that includes the disturbance of any lead containing material containing greater than 0.5% lead by weight. This will not be required if the amount of material being disturbed is less than 100 square or linear feet.

F. Hazard Communication Program: Submit ten (10) days before starting work copy of Hazard Communication Program which is in compliance with 29 CFR 1910.1200.

G. Hazardous Waste Management Plan: Submit ten (10) days before starting work copy of Hazardous Waste Management plan which is in compliance with federal, state, and local hazardous waste regulations and addresses:

1. Identification of hazardous wastes associated with the work.

2. Estimated quantities of wastes to be generated and disposed of.

3. Names and qualifications of each contractor that will be transporting, storing, treating, and disposing of the wastes. Include the facility location and a 24-hour point of contact. Furnish two (2) copies of EPA, state, and local permit applications, permits, and EPA Identification numbers.

4. Names and qualifications (experience and training) of personnel who will be working on-site with hazardous wastes.

5. List of waste handling equipment to be used in performing the work, to include cleaning, volume reduction, and transport equipment.

6. Spill prevention, containment, and cleanup contingency measures to be implemented.

7. The Contractor shall submit name, address, and telephone number of landfill or landfills and transporter to Owner's Representative for approval, prior to disposal. This includes those landfills used for waste categories determined to be non-hazardous.

H. Waste Disposal Records:

1. A written record of receipts with certified weight for disposal of materials containing lead and lead based paint contaminated items shall be furnished to the Owners's Representative within forty eight (48) hours after disposal has taken place.

2. Provide a schedule showing date, amount, type of material and location disposed of within five (5) working days of disposal.

1.07 OWNER'S REPRESENTATIVE

A. The Owner may authorize a credentialed consultant to provide the following inspection, testing, and monitoring services including, but not limited to:

1. Soil lead testing to establish pre-abatement and post abatement soil lead concentrations.

2. Visual inspections to verify Contractor's compliance with the specifications, as well as applicable regulations, regarding hazard control measures, and related decontamination procedures.

3. Wipe Sampling for lead contamination to determine whether Contractor has successfully completed clean-up and met the project decontamination criteria.

4. Interpretation of technical sections of the contract documents, and coordination with Owner and Contractor for enforcement of regulatory and contractual conformance, including stop work issues.

B. The cost of the Owner's Representative will generally be the responsibility of the Owner except under special circumstances. The Contractor shall be responsible for the cost of the Owner's Representative for additional services performed when: a) The Contractor's Work Area fails final clearance inspection and/or testing; or b) additional workdays or workday hours (overtime) are required by the Contractor; or c) The Contractor exceeds the allowable time frame for completion; or d) additional services associated with response to an uncontrolled, unauthorized release to the environment as a result of the Contractor's performance of the work.

1.08 CONTRACTOR QUALIFICATIONS

A. General Superintendent: Provide a General Superintendent whenever Contractor's personnel are on site who is experienced in administration and supervision of lead abatement projects including work practices, protective measures for building and personnel, disposal procedures, etc. This person is the Contractor's Representative responsible for compliance with all applicable federal, state and local regulations, particularly those relating to lead-containing

materials.

Experience and Training: The General Superintendent and all workers must have completed lead training in accordance with 8 CCR 1532.1 and have had on-the-job training in lead abatement procedures. Submit documentation for each worker per section 1.06.

B. Contractor shall use only workers medically qualified and trained for lead work and respirator usage.

1. The minimum acceptable training course duration is basic lead awareness training in accordance with 8 CCR 1532.1. Should the initial exposure assessment determine lead exposures exceeding the permissible exposure limit of 50 ug/m^3, each worker must successfully complete lead training with a minimum course length of thirty-two (32) hours including “hands-on” instruction, as specified by CDPH. Additional CDPH accredited training is required for the competent person (supervisor). All training shall comply with 8 CCR 1532.1 (CAL/OSHA Lead in Construction Standard).

2. Contractor shall submit documentation that all employees engaged in removal activities have had the appropriate medical examinations within the prescribed time periods immediately preceding project start-up. Documentation shall include, but is not limited to, baseline blood lead levels performed in accordance with 8 CCR 1532.1 (CAL/OSHA Lead in Construction Standard).

3. Contractor shall submit statement from examining physician that each employee is fit to wear a respirator in accordance with 8 CCR 5144 within the last twelve months.

4. Documentation that all employees have passed respiratory fit tests within the past six months.

5. The Contractor will provide a copy of their lead compliance program specific for this project, as specified in 8 CCR 1532.1. and indicated in Section 1.06 -- Submittals, above.

END OF SECTION

PART 2 - PRODUCTS

2.01 PROTECTIVE COVERING

A. Polyethylene sheets, of 6 mil thickness, in dimensions of adequate width to minimize frequency of joints.

2.02 TAPE

A. Duct tape, two inches or wider, capable of sealing joints of adjacent sheets of plastic sheeting or for attachment of plastic sheeting to finished or unfinished surfaces.

2.03 CLEANERS

A. Cleaning and decontamination agents shall be subject to approval by the Owner's Representative.

2.04 DISPOSAL CONTAINERS

A. Provide 6-mil thick polyethylene sheeting, 6-mil leak-tight polyethylene bags and other impervious containers as required by applicable regulations. All waste shall be labeled as potentially hazardous waste unless proven otherwise by appropriate sampling and laboratory analysis.

B. All hazardous waste shipping containers shall meet applicable DOT requirements.

2.05 WARNING SIGNS AND LABELS

A. Warning signs shall be posted in accordance with 8 CCR 1532.1, are to be a minimum of 14 x 20 inches and include phrase:

B.

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

Lettering shall be at least 2" in height. These signs shall be posted at each approach to the work area.

B. Hazardous waste labels in accordance with federal, state and local regulations, including, but not limited to the California Code of Regulations, Title 22 Chapter 30 and the U.S. Department of Transportation 49 CFR Parts 172, 173, 178 and 179.

2.06 PERSONAL PROTECTIVE EQUIPMENT

A. Workers shall wear full body disposable TYVEK® or similar type suits with hoods and booties. Suits without integrated hoods and booties may be used but booties shall be taped around ankles and hood shall be taped down to the chest and back. Suit sleeves shall be taped to gloves. Suits will be worn inside the work area after the area passes pre-abatement inspection and shall remain in use until the area passes final clearance inspection.

B. Goggles with side shields will be worn when working with a material that may splash or fragment, or if protective eye wear is specified on the Safety Data Sheets (SDS) for that product.

C. Additional respiratory protection by supplemental filters, such as organic vapor cartridges, may be needed when handling some coating products. Consult the SDS and obtain the proper filters as necessary. The guideline on the following page indicates types of respirators appropriate for adequate protection against varying lead exposures:

RESPIRATORY PROTECTION FACTORS
ASSOCIATED WITH LEAD EXPOSURE OPERATIONS

Respirator Type	**Protection Factor**	**Airborne Concentration of Lead**
Air purifying, negative pressure respirator, half-face, HEPA filter	10	Not in excess of 500 ug/m^3
Air purifying, negative pressure respirator, full-face, HEPA filter	50	Not in excess of 2,500 ug/m^3
Powered-air purifying positive pressure respirator full or half-face, HEPA	50	Not in excess of 2,500 ug/m^3
Type C supplied air positive pressure respirator continuous flow mode half-face	1000	Not in excess of 50,000 ug/m^3
Type C supplied air positive pressure respirator pressure demand mode full facepiece, equipped with auxiliary positive pressure self contained breathing apparatus (SCBA)	over 2000	Greater than 100,000 ug/m^3
Self contained breathing apparatus (SCBA) positive pressure demand mode full facepiece	over 2000	Greater than 100,000 ug/m^3

D. In addition, the Contractor must meet all applicable Cal-OSHA requirements which may include but may not be limited to the use of hard hats, hearing protection, protective footwear, fall protection, portable hygiene and toilet facilities and visibility clothing.

2.07 TOOLS AND EQUIPMENT

A. Provide suitable tools for the decontamination and removal of lead-containing-paint including required HEPA vacuums and exhaust units, airless sprayers, ground fault interrupters, hand tools, wipes, ladders, and scaffolds. Mechanical abrasion tools shall be equipped with local HEPA exhaust and subject to approval by the Owner's representative. All tools and equipment brought on site shall be clean and free of contamination from lead and other hazardous materials. HEPA filtered equipment shall be labeled with a warning label and dedicated to lead-containing paint work to prevent combining hazardous wastes of differing characteristics. The Contractor shall provide on-site, independent aerosol challenge testing (e.g DOP testing) to document the effectiveness of the all HEPA filtered vacuums.

B. Provide adequate support equipment, including, but not limited to lumber, hardware, handwashing facilities, sprayers, hoses, miscellaneous collection devices, and secured holding facilities.

END OF SECTION

PART 3 - EXECUTION

3.01 GENERAL

A. The purpose of the Lead in Construction Standard is to provide a level of protection to workers exposed to lead in construction equivalent to that afforded other lead workers under OSHA's general industry standard 29 CFR 1910.1025. The Lead Standard for the construction industry applies to all occupational exposure to lead in all construction work in which lead, in any amount, is present in an occupationally related context.

B. The following are general work procedures that may be required during demolition or abatement activities. Procedures will be updated, as necessary, upon completion of the hazardous building materials survey conducted by Forensic Analytical Consulting Services, Inc.

3.02 WORKER SAFETY/DECONTAMINATION PROCEDURES

A. The contractor shall employ only workers medically qualified and trained for lead work and respirator usage.

1. Medically qualified shall mean that the worker has had an occupational medical exam for lead exposure and respirator use within the last 12 months, in accordance with 8CCR 5144, and shall have had a blood lead test within the last 6 months.

2. Each abatement worker shall have completed documented training in lead hazards and lead abatement, in accordance with 1532.1.

3. The Contractor shall assure that no worker is permitted to perform lead abatement work until the Owner' representative has received and approved all of that worker's medical, training, and respirator fit test certifications.

B. The Contractor shall perform an initial exposure assessment in accordance with 8 CCR 1532.1. This includes, but is not limited to, collecting personal air samples to determine the employees actual exposure to lead dust during construction activities. Personal samples will be collected by the contractor pursuant to OSHA regulations.

C. Each worker, upon entering the job location, shall proceed to the designated clean room/area and don, at a minimum, a half-mask, negative pressure respirator equipped with HEPA filters, and disposable, full-body, tyvek suit, before entering the Work Area.

D. Prior to work, Contractor shall post lead warning signs at all entrances to work area. These lead warning signs will be in compliance with the Cal/OSHA Lead in Construction Standard (8 CCR 1532.1).

E. All disposable clothing worn in each work shift shall be removed prior to exiting the Work Area and shall be properly segregated and placed in containers for non-hazardous disposal.

F. All tools and equipment shall be decontaminated by HEPA vacuuming and/or wet wiping prior to being taken out of the Work Area.

G. Workers shall not eat, drink, smoke, or chew gum or tobacco at the work site.

H. Each worker shall have a final medical blood lead laboratory test within one week of job

completion and before engaging in other lead related work.

3.03 GENERAL REMOVAL PROCEDURES

A. Paint and Ceramic Tile Removal

1. Post warning signs as stated in Section 3.02. Cordon off Work Area at a minimum of 15 feet from the area of abatement.
2. Containment can be a combination of rigid barriers, non-rigid barriers and engineering controls. Contain the work area so that no lead dust or debris may migrate from the work area. Containment must also capture and control any water or other liquids used to control dust and vapors from any chemicals used to remove materials or clean the work area.
3. Don appropriate PPE as stated in Section 3.02.
4. Carefully remove the paint or tiles. Manual, mechanical and/or chemical removal methods may be used. Any chemicals to be used must be pre-authorized by the Owner or Owner's Representatives. Constantly mist the work areas with amended water to minimize dust levels. Have a HEPA vacuum readily accessible to clean up loose debris.

3.04 INSPECTION PROCEDURE/WORK AREA CLEARANCE

A. A visual inspection may be performed following abatement in order to determine the presence of any remaining lead containing debris.

C. Wipe samples may be collected from the floor of each of the Work Areas. Clearance levels for demolition projects that will not be occupied by the public will be set at four hundred micrograms per square foot (400 µg/ft2) in accordance with Title 17, California Code Of Regulations, Division 1, Chapter 8 Accreditation, Certification, and Work Practices For Lead-Based Paint and Lead Hazards §35035. Lead-Contaminated Dust for exterior floor and exterior horizontal surfaces.

C. Any wipe samples and appropriate field blanks collected shall be analyzed by the Atomic Absorption Flame Method.

D. If the Work Area is not visibly clean or if wipe sample results determine Work Area is not clean, the Contractor will reclean using HEPA vacuums and TSP solution, or similar. Additional wipe samples will be collected after recleaning and subject to same clearance levels state in Section 3.04(B).

E. The contractor shall be released only after all areas have been cleared according to the above criteria and accepted by the Owner.

3.05 WASTE STORAGE AND CHARACTERIZATION

A. The Contractor shall provide for secure on-site storage of lead related waste. Waste storage location, equipment, containers and methods shall be in compliance with the requirements of 40 CFR 262 and 265 and California Code of Regulations Title 22, and are subject to prior approval by Owner and/or Owner's Representative.

B. Construction materials removed from each Work Area must be evaluated to determine waste characteristics prior to disposal.

C. Removed intact lead coated components shall be properly segregated, wrapped in 6 mil polyethylene sheeting, labeled and securely sealed with duct tape.

D. Each Lead related waste (chips, dust, tiles, rags, disposable protective clothing, etc.) produced shall be placed in properly segregated, labeled and sealed containers.

E. All waste containers and packaged waste shall be stored in a designated, secure waste storage area and labeled "PENDING ANALYSIS" with the following information:

1. Waste Category (Chip/Dust and Removed Components)
2. Date Accumulated
3. Name and Address of Owner
4. Origin of Waste

F. All waste shall be considered hazardous until waste characterization has been performed under the California Code of Regulations, Title 22, including using one or more of the following testing procedures:

1. Total Threshold Limit Concentration (TTLC)
2. Waste Extraction Test (WET)
3. Toxicity Characteristic Leaching Procedure (TCLP)

G. All waste shall remain stored in secured waste storage areas until results of waste characterization are available. Due to analytical methods of these tests, this may require storage for up to seven working days. Based on the testing protocols, any waste containing greater than or equal to 5 ppm lead using WET of TCLP tests or any waste containing greater than or equal to 1000 ppm using the TTLC test shall be considered a hazardous waste.

H. A minimum of two (2) representative samples will be collected from each category of waste generated.

I. The Contractor is responsible for conducting and all costs associated with waste characterization testing.

3.06 WASTE DISPOSAL

A. The Contractor is responsible for all costs associated with transportation and disposal of all waste, hazardous and non-hazardous.

B. The Contractor shall submit name, address, and telephone number of landfill or landfills and transporter to Owner and/or Owner’s Representative for approval, prior to disposal. This includes those landfills used for waste categories determined to be non-hazardous.

C. The Contractor shall arrange for all hazardous waste to be transported from the site in accordance with the requirements of 40 CFR 263 and 264, and disposed of properly in accordance with 40 CFR 268, 49 CFR Parts 172, 173, 178, and 179 and California Code of Regulations Title 22.

D. The Contractor shall prepare hazardous waste shipping manifests for review by the Owner and/or Owner’s Representative. The manifests shall be signed by the Owner and copies retained by the Owner.

E. Copies of the landfill weight tickets shall be provided to the Owner and/or Owner's Representative immediately upon receipt in order to verify the amount of waste disposed of at the site.

3.07 STOP WORK ORDERS

A. The Owner and/or Owner's Representative has the authority to stop work if it is determined that conditions or procedures are not in compliance with the Work Plan and/or applicable regulations; the Contractor is deficient in providing required submittals; the waste is not securely stored; or a potential release of lead dust to outside the Work Area is imminent based on the Owner and/or Owner's Representative judgment.

B. The work stoppage shall remain in effect until conditions have been corrected and corrective measures have been taken to the satisfaction of the Owner and/or Owner's Representative.

END OF SECTION