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October 3, 2022

Henry + Associates Project No. 22-32-057

DSA File No. 39-50

DSA Application No. 02-120272

ADDENDUM NO. 02
HVAC REPLACEMENT LODI MIDDLE SCHOOL
Lodi Unified School District
Lodi, California



.....
Henry + Associates Architects

1. ALL WORKMANSHIP, MATERIALS, APPLIANCES AND EQUIPMENT which may be included in the following items shall be the same relative quality as described for similar work set forth in the original or main specifications of which these Addendum items shall be considered a part.
2. ADDENDUM DRAWINGS (included in the back of this Addendum).
The following Addendum drawings modify or supplement the issued bid documents:

None

3. PROJECT MANUAL:

A. Document 01 11 00, SUMMARY OF WORK

1. Include attached Lodi Unified School District 2022-2023 Modified Traditional Instructional Calendar at part of Document 01 11 00, SUMMARY OF WORK.
2. Paragraph D, Project Schedule: Add the following under "Construction"
"Date of availability March 11-26, 2023
Fall Break 2023 October 1-14, 2023"
Spring break is available for onsite construction activities. Whatever work is completed onsite during this period must be secured and waterproofed until the summer break, such that the school is completely available for use for the remainder of the school year.

B. Appendix: Added to the back of the Project Manual and included in the scope of work are the following:

1. Hazardous Materials Report.
2. Hazardous Materials Abatement Plan.

4. DRAWINGS:

None

5. OTHER:

- A. Prebid Meeting sign in sheet is attached to this addendum.
- B. Engineers' Estimate: \$3.6m - \$4.2m.
- C. DSA 103-19: Listing of Structural Tests & Special Inspections, 2019 CBC.

* * * END OF ADDENDUM * * *

Modified Traditional Instructional Calendar

2022

July

M	T	W	T	F
				1
4	5	6	7	8
11	12	13	14	15
18	19	20	21	22
25	26	27	28	29

August

M	T	W	T	F
1	2	3	4	5
8	9	10	11	12
15	16	17	18	19
22	23	24	25	26
29	30	31		

September

M	T	W	T	F
			1	2
5	6	7	8	9
12	13	14	15	16
19	20	EO	22	23
26	EO	EO	EO	EO

October

M	T	W	T	F
3	4	5	6	7
10	11	12	13	14
17	18	19	20	21
24	25	26	27	28
31				

2023

November

M	T	W	T	F
	1	2	3	4
7	8	9	10	11
14	15	16	17	18
21	22	23	24	25
28	29	30		

December

M	T	W	T	F
			1	2
5	6	7	8	9
12	13	EO	15	16
19	20	21	22	23
26	27	28	29	30

January

M	T	W	T	F
2	3	4	5	6
9	10	11	12	13
16	17	18	19	20
23	24	25	26	27
30	31			

February

M	T	W	T	F
		1	2	3
6	7	8	9	10
13	14	15	16	17
20	21	22	23	24
27	28			

March

M	T	W	T	F
		EO	2	3
6	7	8	9	10
13	14	15	16	17
20	21	22	23	24
27	28	29	30	31

April

M	T	W	T	F
3	4	5	6	7
10	11	12	13	14
17	18	19	20	21
24	25	26	27	28

May

M	T	W	T	F
1	2	3	4	5
8	9	10	11	12
15	16	17	18	19
22	23	EO	25	26
29	30	31		

June

M	T	W	T	F
			1	2
5	6	7	8	9
12	13	14	15	16
19	20	21	22	23
26	27	28	29	30

Vacation Days

June 6, 2022 - July 29, 2022 - SUMMER BREAK
October 3 - October 14, 2022 - FALL BREAK
November 23, 2022 - Non Instructional Day
November 24 - 25, 2022 - Thanksgiving Days
December 23, 2022-January 6, 2023-WINTER BREAK
March 13 - 24, 2023 - SPRING BREAK
June 5 - July 30, 2023 - SUMMER BREAK

Holidays

Sept. 5, 2022 (L)Labor Day
Nov. 11, 2022 (L)Veteran's Day
Nov. 24, 2022 (L)Thanksgiving Day
Nov. 25, 2022 (L).....Board Designated
Dec. 26, 2022 (L)Christmas Holiday
Dec. 30, 2022 (B)Designated Holiday
Jan. 2, 2023 (L).....New Year's Holiday
Jan. 16, 2023 (L) Martin Luther King
Feb. 10, 2023 (L)Lincoln's Holiday
Feb. 20, 2023 (L).....Washington's Holiday

LUSD Minimum Days

K-12	EO
08/10/22	9/21/22
09/14/22	9/27-9/30/22
10/26/22	12/14/22
11/09/22	3/1/23
12/07/22	5/24/23
12/22/22	
01/18/23	
02/08/23	
04/12/23	
05/10/23	
06/02/23	

STUDENTS: School year begins: August 1, 2022
Last Day of School: June 2, 2023



Environmental Science Services

AIHA Laboratory ID # 232274

March 24, 2022

Joe Patty
Lodi Unified School District
880 N. Guild Ave
Lodi Ca 95242

**RE: Environmental Inspection, Sampling & Consulting for:
Lodi Middle School
945 S. Ham Lane
Lodi, CA 95242
ESS Project #: 20221082-1**

Environmental Science Services performed a limited asbestos survey of suspect asbestos containing materials (ACBM) at the above referenced site on 03/24/22 for building materials identification.

Bulk Sampling Report

Materials suspected of containing asbestos that were identified and sampled include,

- **WALLBOARD COMPONENTS**
- **TILE GROUT**
- **CEILING TILE**
- **CAULKING**

Sampling and Analysis

Asbestos bulk samples were collected and analyzed by Polarized Light Microscopy (PLM) with dispersion staining as described in the "Interim Method for the Determination of Asbestos in Bulk Insulation Samples", Method EPA-600/R-93/116 (Federal Register/Volume 40, CFR 763, Subpart F Appendix A, July 1993). Samples were analyzed by Environmental Science Services Laboratories, located in Lodi, CA.

Environmental Science Services

California/Nevada Operations

916.417.5361 209.304.8444

Email: envss1ca@gmail.com

www.greenenvironmental1.com



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Findings

For all samples collected within the present scope, laboratory analysis indicated:
PLM Analysis CVE Calibrated Visual Estimation Method EPA-600/R-93/116

Sample #	Material	Location	Type/% of Asbestos
1	CAULKING	BLDG. E DOORS	5% CHRYSOTILE
2	CAULKING	RM. 32 DOORS	5% CHRYSOTILE
3	WBJTC	RM. 32 WALLS	<1% CHRYSOTILE
4	TEXTURE	RM. 32 WALLS	NAD
5	WBJTC	JANITOR RM.	<1% CHRYSOTILE
6	TEXTURE	JANITOR RM.	NAD
7	CAULKING	RM. 21 DOORS	5% CHRYSOTILE
8	CEILING TILE	RM. 21	NAD
9	TILE GROUT	GIRLS BATH	NAD
10	BRICK WALL GROUT	BLDG. E STORAGE RM.	NAD

NAD: NO ASBESTOS DETECTED

WBJTC: WALLBOARD JOINT TAPE COMPOUND COMPOSITE

ASBESTOS DETECTED

Summary of Asbestos Containing Materials

1	CAULKING	BLDG. E DOORS	5% CHRYSOTILE
2	CAULKING	RM. 32 DOORS	5% CHRYSOTILE
3	WBJTC	RM. 32 WALLS	<1% CHRYSOTILE
5	WBJTC	JANITOR RM.	<1% CHRYSOTILE
7	CAULKING	RM. 21 DOORS	5% CHRYSOTILE

Recommendations

Remove and dispose of all asbestos containing building materials in accordance with all Federal, State & Local regulations.

Environmental Science Services

California/Nevada Operations

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Email: envss1ca@gmail.com

www.greenenvironmental1.com



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Limitations

Reasonable effort was made by ESS, Inc. personnel to locate and sample all accessible areas regarding the remediation. This report is intended to assist in the areas specified only. If any additional areas are to be impacted or that the scope of work is modified, additional investigation is advised.

Thank you for allowing Environmental Science Services to assist you with your asbestos consulting needs. Please feel free to contact us with any questions regarding this report at: (916) 417-5361.

Sincerely,

John Shane Jones, CAC, IH, IA

California Certified Asbestos Consultant

CA DOSH #16-5690

CDPH # 4810

Nevada DOSH # IJPM-20188

Senior Staff Hygienist

Environmental Science Services

Environmental Science Services

California/Nevada Operations

916.417.5361 209.304.8444

Email: envss1ca@gmail.com

www.greenenvironmental1.com

Certificate of Analysis

PLM Polarized Light Microscopy

Asbestos Identification

AIHA LABORATORY ID # 232274



ENVIRONMENTAL SCIENCE SERVICES

Lab Report # 221082

Client:
Environmental Science Services
P. O. Box 452
Lockeford, CA 95237
916.417.5361

Date Collected: 03/24/22**Date Received:** 03/24/22**Date Analyzed:** 03/24/22

Project #: 20221082-1
Project Address: 945 S.HAM LANE LODI, CA
Analytical Analysis Method: EPA-600 / R-93 / 116 and EPA 600 / M4-82 / 02

Lab/Client #	Material	Lab Attributes	Fibrous	Non-Fibrous	Asbestos%
1082-1	Caulking Bldg. E	Heterogeneous White/Tan Non-Fibrous Bound		5% Cellulose %15 Synth. %75 Binder	5% Chrysotile Asbestos
1082-2	Caulking Rm. 32	Heterogeneous White/Tan Non-Fibrous Bound		5% Cellulose %15 Synth. %75 Binder	5% Chrysotile Asbestos
1082-3	WBJTC Int Wall Rm. 32	Heterogeneous White/Tan Non-Fibrous Bound	10% Cellulose	%2 Paint %75 Gypsum %12 Binder	<1% Chrysotile Asbestos
1082-4	Texture Int Wall	Heterogeneous White/Tan Non-Fibrous Bound	5% Cellulose	%5 Paint %80 CaCO3 %10 Binder	NAD
1082-5	WBJTC Int Wall Janitor Rm.	Heterogeneous White/Tan Non-Fibrous Bound	10% Cellulose	%2 Paint %75 Gypsum %12 Binder	<1% Chrysotile Asbestos
1082-6	Texture Int Wall Janitor Rm.	Heterogeneous White/Tan Non-Fibrous Bound	5% Cellulose	%5 Paint %80 CaCO3 %10 Binder	NAD
1082-7	Caulking Rm. 21	Heterogeneous White/Tan Non-Fibrous Bound		5% Cellulose %15 Synth. %75 Binder	5% Chrysotile Asbestos

Certificate of Analysis

PLM Polarized Light Microscopy

Asbestos Identification

AIHA LABORATORY ID # 232274

1082-8	Ceiling Tile Rm. 21	Homogeneous White Fibrous Bound	60% Cellulose 15% Fiberglass	%25 Synth.	NAD
1082-9	Tile Grout Girls Bath	Homogeneous Gray Non-Fibrous Bound	<1% Cellulose	%75 CaCO3 %20 Clay %10 Sand	NAD
1082-10	Tile Grout Bldg. E Storage Rm.	Homogeneous Gray Non-Fibrous Bound	<1% Cellulose	%75 CaCO3 %20 Clay %10 Sand	NAD


Supervisor _____
Shane Jones


Analyst _____
Greg Candelario

Bulk Sample(s) submitted was (were) analyzed in accordance with the procedure outlined in the U S Federal Register 40 CFR 763, Subpart F, Appendix A: EPA-600/R-93/116 (Method for Determination of Asbestos in Building Materials), and EPA-600/M4-82-020 (US EPA Interim Method for the Determination of Asbestos in Insulation Samples). Samples were analyzed using Calibrated Visual Estimations (CVES); therefore, results may not be reliable for samples of low asbestos concentration levels. Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite unless specifically requested by the customer to report analytical results for individual layers. The report applies to only the items tested. Results are representative of the samples submitted and may not represent the entire material from which the samples were collected. "No Asbestos Detected" means that no asbestos was observed in the sample. "<1%" (less than one percent) means that asbestos was observed in the sample but the concentration is below the quantifiable level of 1%. Environmental Science Services participates in a proficiency analytical program with American Industrial Hygiene Association (AIHA) laboratory ID number 232274. This report may not be reproduced, except in full without the expressed written consent of Environmental Science Services.



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AIHA Laboratory ID # 232274

September 29, 2022

Joe Patty
Lodi Unified School District
880 N. Guild Ave
Lodi Ca 95242

**RE: Asbestos Inspection and Sampling Report for:
Lodi Middle School (Roof)
945 S. Ham Lane
Lodi, CA 95242
ESS Project #: 20222133-1**

Environmental Science Services performed a limited asbestos survey of suspect asbestos containing materials (ACBM) at the above referenced site on 09/26/22 for building materials identification.

Bulk Sampling Report

Materials suspected of containing asbestos that were identified and sampled include,

- **ROOFING COMPONENTS**

Sampling and Analysis

Asbestos bulk samples were collected and analyzed by Polarized Light Microscopy (PLM) with dispersion staining as described in the "Interim Method for the Determination of Asbestos in Bulk Insulation Samples", Method EPA-600/R-93/116 (Federal Register/Volume 40, CFR 763, Subpart F Appendix A, July 1993). Samples were analyzed by Environmental Science Services Laboratories, located in Lodi, CA.

Findings

For all samples collected within the present scope, laboratory analysis indicated:
PLM Analysis CVE Calibrated Visual Estimation Method EPA-600/R-93/116

Sample #	Material	Location	Type/% of Asbestos
1-6	ROOFING MAT.	ROOF BLDGS. A,B,C,D,E,F	NAD

NAD: NO ASBESTOS DETECTED

Environmental Science Services

California/Nevada Operations

916.417.5361 209.304.8444

Email: envss1ca@gmail.com

www.greenenvironmental1.com



© **Environmental Science Services**

Limitations

Reasonable effort was made by ESS, Inc. personnel to locate and sample all accessible areas regarding the remediation. This report is intended to assist in the areas specified only. If any additional areas are to be impacted or that the scope of work is modified, additional investigation is advised.

Thank you for allowing Environmental Science Services to assist you with your asbestos consulting needs. Please feel free to contact us with any questions regarding this report at: (916) 417-5361.

Sincerely,

John Shane Jones, CAC, IH

California Certified Asbestos Consultant

CA DOSH #16-5690

Nevada DOSH # IJPM-20188

Senior Staff Hygienist

Environmental Science Services

Environmental Science Services

California/Nevada Operations

916.417.5361 209.304.8444

Email: envss1ca@gmail.com

www.greenenvironmental1.com

Certificate of Analysis

PLM Polarized Light Microscopy Asbestos Identification

AIHA LABORATORY ID # 232274



ENVIRONMENTAL SCIENCE SERVICES

Lab Report # 222133

Client:
Environmental Science Services
P. O. Box 452
Lockeford, CA 95237
916.417.5361

Date Collected: 09/26/22
Date Received: 09/26/22
Date Analyzed: 09/26/22

Project #:
Project Address:
Analytical Analysis Method:

20222133-1
LODI MIDDLE SCHOOL 945 S HAM LODI, CA
EPA-600 / R-93 / 116 and EPA 600 / M4-82 / 02

Lab/Client #	Material	Lab Attributes	Fibrous	Non-Fibrous	Asbestos%
2133-1	Roofing White/Black	Heterogeneous Non-Fibrous Bound	15% Cellulose	%70 Synth. %5 Tar %10 Binder	NAD
2133-2	Roofing White/Black	Heterogeneous Non-Fibrous Bound	15% Cellulose	%70 Synth. %5 Tar %10 Binder	NAD
2133-3	Roofing White/Black	Heterogeneous Non-Fibrous Bound	15% Cellulose	%70 Synth. %5 Tar %10 Binder	NAD
2133-4	Roofing White/Black	Heterogeneous Non-Fibrous Bound	15% Cellulose	%70 Synth. %5 Tar %10 Binder	NAD
2133-5	Roofing White/Black	Heterogeneous Non-Fibrous Bound	15% Cellulose	%70 Synth. %5 Tar %10 Binder	NAD
2133-6	Roofing White/Black	Heterogeneous Non-Fibrous Bound	15% Cellulose	%70 Synth. %5 Tar %10 Binder	NAD

Certificate of Analysis

PLM Polarized Light Microscopy

Asbestos Identification

AIHA LABORATORY ID # 232274



Supervisor _____

Shane Jones



Analyst _____

Shane Jones

Bulk Sample(s) submitted was (were) analyzed in accordance with the procedure outlined in the U S Federal Register 40 CFR 763, Subpart F, Appendix A: EPA-600/R-93/116 (Method for Determination of Asbestos in Building Materials), and EPA-600/M4-82-020 (US EPA Interim Method for the Determination of Asbestos in Insulation Samples). Samples were analyzed using Calibrated Visual Estimations (CVES); therefore, results may not be reliable for samples of low asbestos concentration levels. Samples of wall systems containing discrete and separable layers are analyzed separately and reported as composite unless specifically requested by the customer to report analytical results for individual layers. The report applies to only the items tested. Results are representative of the samples submitted and may not represent the entire material from which the samples were collected. "No Asbestos Detected" means that no asbestos was observed in the sample. "<1%" (less than one percent) means that asbestos was observed in the sample but the concentration is below the quantifiable level of 1%. Environmental Science Services participates in a proficiency analytical program with American Industrial Hygiene Association (AIHA) laboratory ID number 232274. This report may not be reproduced, except in full without the expressed written consent of Environmental Science Services.

**ASBESTOS CONTAINING MATERIAL (ACM) AND LEAD BASE
PAINT (LBP) HAZARD ABATEMENT PLAN**

ASBESTOS ABATEMENT PLAN FOR THE REMOVAL OF FRIABLE AND NON-FRIABLE
ASBESTOS CONTAINING BUILDING MATERIALS AS WELL AS LEAD BASE PAINT FROM:

**LODI MIDDLE SCHOOL
945 S HAM LANE, LODI, CA 95242
HVAC Project Phase**

**ENVIRONMENTAL SCIENCE SERVICES (ESS)
Lodi, CA**

September 01, 2022

WRITTEN & APPROVED BY:
JOHN S. JONES
CERTIFIED ASBESTOS CONSULTANT
CAL/OSHA 16-5690
CERTIFIED DHS LEAD PREVENTION INSPECTOR/ASSESSOR
DHS ID #: 4810

SCOPE:

This plan specifies abatement procedures that must be used by the abatement contractor to remove friable asbestos containing materials, non-friable asbestos containing as well as LBP (Lead Base Paint) throughout the site above mentioned as part of the Modernization project. The abatement contractor shall remove or abate the asbestos and lead containing materials found at this building site in accordance with the specifications of this abatement plan.

Five buildings throughout the school are going to be subject to remodel, demolition, disturbance respectively as part of the modernization project taking place. The buildings are labeled on the Modernization Plan as Buildings A, B, C, D, E & F. The exact amount of asbestos containing material and Lead Base Paint is not yet determined at this time however the material categories are identified within this scope and the attached reports.

1. Composite Wallboard, Gypsum Wallboard, Joint Compound and Brick Caulking have been identified throughout the site and listed on the most recent AHERA Re-inspection Report and supplemental reports attached.
2. The attached asbestos reports dated 03/24/22 & 09/29/22 identify materials if impacted will need to be quantified and abated prior to renovation/construction activities.
3. The most recent AHERA Re-inspection Report also indicates any other asbestos materials positive for asbestos.
4. **The amount of asbestos containing material and Lead Base Paint to be removed shall be determined at the time of the bid walk due to the nature of the work to be performed. It is recommended the trades that are to disturb any asbestos containing or lead base paint materials identified in the inspection reports shall lay out the areas of the disturbance so the materials can be quantified.**

The abatement contractor will notify, in writing to the Local Metropolitan Air Quality Management District (Local AQMD) under Rule 902 of the planned removal of asbestos containing materials. Notification of asbestos related work will be made to the AQMD per regulations. It is recommended to request an emergency notification to overrule the standard 10-day requirement. The abatement contractor shall also notify in writing CAL- OSHA that asbestos removal is planned in accordance with section 341.6. The notifications will be made on the forms and in the formats as required by the AQMD and CAL-OSHA.

The friable asbestos containing building materials shall be removed under full containment as described in this plan. There shall be no exceptions.

Please refer to the section in this plan entitled "ASBESTOS ABATEMENT" for an exact description of the materials to be removed and removal restrictions / requirements.

It is the responsibility of the abatement contractor to estimate the amounts and types of the materials that will be removed based on this plan the renovation specifications, and the abatement contractors' own inspection of the building.

The abatement contractor shall don at least Powered Air Purifying Respirators for the initial removal of friable asbestos containing materials – specifically the sheet vinyl linoleum. The abatement contractor shall don at least half face negative pressure respirators for the removal / abatement if the fiber in air counts show that this minimal protection is possible. Half face respirators must be worn when abatement workers are removing the asbestos containing vinyl

linoleum. In addition, all asbestos workers shall wear at least disposable protective suites, hard hats, safety shoes, and eye protection when inside any containment.

The abatement contractor is responsible for the proper disposal of the doubled bagged friable asbestos containing building materials generated at the site. The abatement contractor is responsible for bagging or properly wrapping the asbestos containing materials and properly packing the bags into the appropriate friable asbestos storage bins located at the job site.

The abatement contractor will comply with the latest applicable requirements of federal, state and local regulations governing removal and disposal of asbestos containing materials.

The abatement contractor will comply with the publications listed below to the extent referenced:

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z9.2 1979 (R 1991) Fundamentals Governing the Design and Operation of Local Exhaust Systems

ANSI Z88.2 1992 (R) Respiratory Protection

AMERICA SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 732 1982 (R) Aging Effects of Artificial Weathering on Latex Sealants

ASTM D 1331 1989 (R) Surface and Interfacial Tension of Solutions of Surface-Active Agents

ASTM E 84
Materials 1989 (Rev A) Surface Burning Characteristics of Building

ASTM E 96 1990 Water Vapor Transmission of Material

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1910.134 1988 Respiratory Protection

29 CFR 1910.141 Sanitation

29 CFR 1910.145 Accident Prevention Signs and Tags

29 CFR 1910.1200 1988 Hazard Communications

29 CFR 1926.1101 Asbestos, Tremolite, Anthophyllite, & Actinolite

40 CFR 61 Subpart A General Provisions

40 CFR 61 Subpart M National Emission Standards for Asbestos

40 CFR 763 Asbestos Containing Materials in Schools

29 CFR 1910.1000 Air Contaminates

29 CFR 1926.103	Respiratory Protection
29 CFR 1910.134	1988 Respiratory Protection
29 CFR 1926.62	Lead
29 CFR 1910.1200	1988 Hazard Communication
29 CFR 1926.59	Hazard Communication
29 CFR 1926.55	Gases Vapors, Fumes, Dusts and Mists
29 CFR 1926.57	Ventilation
40 CFR 260 - 270	Hazardous Waste Management Systems: General & SW -846 Sampling Protocol
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Generators of Hazardous Waste
40 CFR 263	Transporters of Hazardous Waste and AHERA
40 CFR 264	Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities
40 CFR 265	Interim Status Standards for Owners and Operators of Hazardous Waste Treatment,

ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA 560/5-85-024 Buildings	Guidance for Controlling Asbestos Containing Materials in
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CALIFORNIA CODE OF REGULATIONS (CCR)

CCR-Title 8 Subchapter 7	General Industry Safety Orders, Group 1. General Physical Conditions & Surfaces
CCR- Title 8 1529	Asbestos
CCR-Article 2	Standard Specifications
para.3209	Standard Guardrails
para.3210	Elevated Locations
para.3211	Wall Openings
para.3212	Floor Openings, Floor Holes, and Roofs
para.3214	Stair Rails and Hand Rails
para.3215	Means of Egress
para.3216	Exit of Signs

CCR-Article 4	Access, Work Space and Work Areas
para.3270	Access General
para.3271	Openings
para.3272	Aisles, Walkways, and Crawl Ways
para.3273	Working Area
para.3276	Scaffolds
para.3277	Fixed Ladders
para.3278	Portable Wood Ladders
para.3279	Portable Metal Ladders
para.3280	Portable Reinforced Plastic Ladders
GROUP 2	Safe Practices and Personal Protection
CCR-Article 7	Miscellaneous Safe Practices
para.3302	Gas Blowing of Hazardous Substances
para.3303	Flying Particles or Substances
para.3308	Hot Pipes and Hot Surfaces
para.3316	Hand Tools
para.3317	Illumination
para.3320	Warning Signs
SANITATION	
CCR-Article 9	
para.3367	Change Rooms
CCR-Article 10	Personal Safety Devices and Safeguards
para.3380	Personal Protective Devices
para.3381	Head Protection
para.3382	Eye and Face Protection
para.3383	Body Protection
para.3384	Hand Protection
para.3385	Foot Protection
para.3386	Jewelry
para.3387	Sanitation
para.3388	Safety Belts and Life Lines
para.3389	Life Rings and Personal Flotation Devices
para.3390	Protections from Electric Shock
para.3400	Medical Services and First Aid
CCR-Article 11	Safety Belts, Lineman's Body Belts, Harnesses. Lanyards, Lifelines, Drop lines and Safety Lines
	Telecommunications Lineman's Body Belts, Safety Straps and Lanyards
GROUP 4	General Mobile Equipment and Auxiliaries
CCR-Article 23	Mobile Ladder Stands and Scaffolds (Towers)

General	
para.3624	Mobil Tubular Welded Sectional Folding Scaffold
para.3625	Mobil Tube and Coupler Scaffolds
para.3626	Mobil Work Platforms
para.3627	Mobil Ladder Stands
CCR-Article 26	Vehicle Mounted Elevating and Rotating Work Platforms
GROUP 16	Control of Hazardous Substances
CCR-Article 107	Dusts, Fumes, Mists, Vapors, and Gases
para.5144	Respiratory Protective Equipment
CCR-Article 109	Hazardous Substances and Processes
para.5162	Emergency Eyewash and Shower Equipment
para.5164	Storage of Hazardous Substances
CCR-Article 110	Special Hazardous Substances and Processes
para.5208	Asbestos, Appendix A
CCR-Article 112	Labeling of Injurious Substances
para.5225	Application of These Orders
para.5226	Definitions
para.5227	Labeling
para.5228	Labels
para.5229	Protection
para.5230	Samples

UNDERWRITERS LABORATORIES INC. (UL)

UL 596	1990 (R 1995) High-Efficiency, Particulate Air Filter Units, Seventh Edition
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PERSONAL PROTECTIVE EQUIPMENT:

All personnel who will be authorized to enter the areas of potential contamination will be fully qualified to wear respiratory protection as defined in 29 CFR 1910.134; Title 8, CCR 1529.29, and CFR 1926.1101. The abatement contractor will assure that such personnel have received medical approval to wear respiratory protective equipment and have successfully been fit tested with the brand, model and size of respirator that will be worn. Documentation of medical fitness and fit testing will be provided. These requirements will remain in effect for all personnel who enter the work area until air monitoring results and visual inspection demonstrate that airborne levels of asbestos fiber levels are 1) less than 0.01 fibers/cc. and that 2) there is no visible asbestos associated with the abatement present at the site.

The level of respiratory protection assigned will be based on the results of monitoring for airborne asbestos and dust in the work area. The results of the air monitoring will be submitted to the property owner and of course to the abatement contractor. The requirements for various levels are:

EXPOSURE LIMITS: ASBESTOS

Permissible Exposure Limit (PEL) = 0.1 fibers/cc

fibers/cc = fibers per cubic centimeter of air

PERSONAL PROTECTIVE EQUIPMENT (PPE):

The requirements for various levels are:

REQUIRED RESPIRATORS	AIRBORNE CONCENTRATION OF ASBESTOS OR CONDITION OF USE
Half-face air purifying negative pressure Respirator equipped with High efficiency filters	not in excess of 1 fibers/cc (10 X PEL)
Full-face piece air purifying Respirator equipped with high Efficiency filters	not in excess of 5 fibers/cc (50 X PEL)
Supplied-air respirator with Full-face piece hood, helmet Or suit, operated in positive Pressure mode.	not in excess of 200 fibers/cc (2000 X PEL)
Full-face piece, self-contained Breathing apparatus operated in Positive pressure mode or fire fighting	Greater than 200 fibers/cc Unknown concentration

All respirators are to be NIOSH approved. All personnel shall initially be fitted with at least half faced, negative pressure respirators with HEPA filters at a minimum for the general clean and removal of the wall board. As stated in the SCOPE section of this plan for friable asbestos removal – for the abatement of the sheet vinyl linoleum - all personnel shall don at least powered air purifying respirators (PAPR's) initially. All respirator cartridges must be approved by NIOSH for use in asbestos atmospheres. All respiratory protection shall be approved for asbestos work. It shall be left to the discretion of the Asbestos Consultant for this project to allow for higher or less or orders of respiratory protection.

In addition to the initial fit test for the brand, model and size of respirator to be worn by each assigned worker, a field fit test to determine that the face piece properly seals will be performed each time the respirator is put on. The following steps will be taken:

- a. Adjust the respirator to the face according to the manufacturer's instructions.
- b. Cover the air inlets with the palms of the hands.
- c. Gently inhale so that the face piece collapses slightly.

- d. Hold your breath for ten (10) seconds.
- e. The respirator shall remain slightly collapsed with no inward leaks detected.
- f. Close off the exhalation valve with the palms of the hands.
- g. Exhale gently.
- h. A small buildup of positive pressure, with no outward leaks,
Indicates a good fit.

All workers assigned to abatement work will be provided sufficient sets of protective full-body disposable clothing. The disposable clothing will be taped at the wrist and ankles prior to entering the work area. Additional protective clothing will consist of disposable gloves, foot coverings and headgear. Eye protection and hard hats will be provided and shall be worn at all times.

Warning signs printed in English and Spanish will be posted at the perimeter of the area to provide notice of potential airborne asbestos. The signs will be located at regular intervals and at such a distance that personnel may read the signs and take necessary precautions required prior to entering the area. Signs shall conform to 29 CFR 1926.1101 (para. K). The sign shall be at least 20" by 14" displaying the following legend in the lower panel:

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

Entry and exit routes will be established and clearly marked. Control of site entry and exit will be established before the project begins.

Employee and authorized personnel will enter the control areas or containments through a decontamination site (DECON) directly attached to the containment(s). These decon units will be the sites for cleaning, HEPA vacuuming suspect asbestos contamination, and changing out of contaminated disposable PPE while transitioning from the full contained abatement areas to the outside. Such units shall be an example of the classical three stage decontamination system with a dirty room attached directly to the containment which leads into a shower which in turn leads to the clean room. These three sections of the decon unit shall be isolated from one another with double flaps of 6 mil poly.

Anyone who enters the work area must read this plan and will sign an entry log upon entry and exit. This log will be located at the entrance of the decon site.

Prior to entering the work area, personnel will read and become familiar with all posted regulations, personal protection requirements and emergency procedures. A sign-off sheet will be used to acknowledge that these procedures and regulations have been received and understood by all personnel.

Prior to entry, personnel will put on respiratory protection, clean disposable coveralls. Hard hats will be worn at all times. All asbestos workers shall have safety glasses, goggles or safety shields for eye protection.

Clean respirators and protective clothing will be provided and utilized by every person entering the work area. Personnel in designated personal protective clothing will proceed to the work area.

Before leaving the work area, personnel will remove any gross contamination from the outside of the respirators and protective clothing by vacuuming themselves off with the HEPA vacuum stationed at the decon site. Personnel will proceed through this decontamination site at the dirty side of decon. All contaminated boots, tools, and other equipment shall be either stored inside the asbestos restricted area -- the full containment dirty room -- or wiped off and cleaned for removal through the decon area. Personnel will then strip off the disposable suits and go into the shower. After showering asbestos workers shall then go into the clean room to dry themselves and put on clean clothing.

All cleaning or showering water shall be either stored on site for asbestos testing or disposal; or filtered through an approved asbestos HEPA filter and disposed of directly into the sewer.

The disposable suits and the HEPA cartridges for the respirators will be disposed of as hazardous asbestos containing material.

Water for emergency eyewash and drinking shall, also, be provided at the decontamination site.

Eating, drinking, smoking and the application of cosmetics are prohibited within the contaminate control areas.

ASBESTOS / LEAD PAINT ABATEMENT:

The site of friable and non-friable asbestos abatement is the buildings A, B, C, D, E & F located at Lodi Middle School, 945 S Ham Lane, Lodi, California 95242. **NOTE:** Please refer/consult at all time the Modernization Plan (Blue Print) provided by HENRY Associates Architects for details about the areas of each building directly impacted by the scope of work. Some areas are going to be subject of partial and/or full demolition, painting, and/or minor disturbance respectively as part of the modernization process.

All asbestos work must take place using "wet methods". This means that all asbestos removal work shall be done using amended water to wet down both the material and the atmosphere inside containment during removal and open handling of the materials.

The abatement contractor shall first abate the friable asbestos containing material prior to any removal of non-friable asbestos containing material.

The interior of the structure must be cleaned by means of HEPA vacuuming and wiping down the floor and remaining wood structure walls and ceiling joists.

Any dumpster on-site must be lined with 2 layers of 6 mil poly, bagged and labeled for friable asbestos.

Critical barriers must be established over all openings leading out of the building/work area.

The abatement contractor shall assure the on-site site technician that enough negative air pressure is attained inside the room (containment area) by posting and maintaining a manometer at the job site that continuously reads out negative air pressure. The air pressure inside the

containment area shall be maintained from -0.02 to -0.08 inches of water throughout the entire abatement until clearance of the building / rooms.

Exterior walls of the sites shall be covered with at least two layers of 4-mil poly sheeting extending from the ceiling/roof to the floor/ground for friable removal. The dumpster containment shall consist of at least two layers of 6 mil poly on floors/ground attaching to the inner walls of the dumpster.

It is necessary that the immediate areas of abatement be contained using proper warning signs and barrier tape. Therefore, any open holes into the property and/or roof must be temporary blocked off using poly sheeting and temporary construction materials. Critical barriers and negative air pressure shall be maintained inside the property during the removal of all PACM.

The abatement contractor shall construct a three stage decon somewhere leading outside of the abatement areas at a convenient point of egress for any removal. All workers shall be in protective disposal suits, hard hats, gloves, and at least have half face negative pressure respirators.

GENERALIZED REQUIREMENTS FOR ABATEMENT:

Prior to any abatement, the industrial hygienist and/or a designated representative from ESS shall walk through the containment(s) / exclusion areas and clearly agree and mark out the specified and contracted areas of abatement.

All asbestos/lead paint removal work shall / must be done under wet conditions at all times --- there shall be no dry removal.

JOB MEDICAL & TRAINING:

All abatement employees assigned to work within the contaminant area will have been trained in the risks associated with the hazard abatement work to be performed, in the use and limitations of personal protective equipment and in the state-of-the-art practices and procedures. This training will be in accordance with the requirements of Title 8 CCR 1529, and 29 CFR 1926.1101 & Title 10. Copies of each assigned employees' current training certificates will be posted at the site at all times.

Before exposure to airborne asbestos fibers, workers shall have a comprehensive medical examination as required by 29 CFR 1926.1101 and other pertinent state and local directives. This requirement must have been satisfied within the past six months. Personnel shall also have the proper training, fit tests, notifications, and respirator use releases as directed by 29 CFR 1926.1101 prior to any abatement work. Please see the attached submittals on the individuals who have received said training and will be working and entering the asbestos containment areas.

INTERFACE OF CONSTRUCTION TRADES:

Air monitoring will be conducted throughout the abatement. A full-time state certified site technician of ESS will conduct air sampling at the site. PCM air cassette samples shall be taken as personals and at least one excursion inside on the abatement workers, area samples in containments, at negative air machines, and at bag out exits and clean room exits.

Engineering controls will be established and maintained to control asbestos and/or lead paint dust or chips: including the establishment and maintenance of the control area, decontamination system and continuous misting and HEPA vacuuming by experienced, trained, certified abatement personnel from the abatement contractor.

All other trades and other untrained personnel will be excluded from the work area until the hygienist gives final clearance for the area to be reoccupied without respiratory protection and the engineering controls have been demobilized.

AIR MONITORING PLAN:

Sampling of airborne concentrations of asbestos will be performed in accordance with 29 CFR 1926.1101, and 29 CFR 1910.1000. A full-time site surveillance technician will conduct air monitoring. Dust Wipe sampling for lead will be conducted if needed post abatement activities.

Baseline air samples will be taken prior to any abatement.

Sampling of airborne concentrations of asbestos dust will be performed in accordance with 29 CFR 1926.1101. All fiber testing shall be in accordance with NIOSH 7400 A rules for PCM analysis.

Air monitoring will be conducted throughout the abatement. The approved site technician will take the required air samples and inspect abatement procedures during abatement. PCM air cassette samples shall be taken every shift as personals and at least one excursion inside on the abatement worker or workers. Area samples shall likewise be taken during every shift both at the exit to clean rooms and outside at negative air exhausts to ensure worker and environmental protection. Samples will be collected at the job site and returned to the lab for optical analysis or read and posted at the job site. Personal and excursion samples will be collected for those workers who are anticipated to be at the greatest risk of exposure as determined by the on-site hygienist.

Those that are at greatest risk must always be determined at the job site by the on-site industrial hygienist, site technician or CDPH I/A. In general, those that will be sampled will be the workers that will be removing and handling exposed asbestos or lead paint. Those of greatest risk may also be pin pointed by reviewing the monitoring data each day. Asbestos air samples will be taken on at least 25% of the work crew or a minimum of 2 persons; whichever is greater, during a work shift. The CAC from ESS shall review the sampling data taken during that day to determine if conditions require any further change in work methods. The results from the air monitoring will be submitted to the school district.

Any asbestos fiber count exceeding 0.1 fiber per cc will require that the abatement to immediately stop; the on-site hygienist will be notified, and corrective action taken by the contractor as required. Any fiber count outside of containment greater than 0.01 fiber per cc or greater than 1.25X the back ground, will cause all work to be stopped and the on-site hygienist will be notified for remediation of the problem. Work will only then be allowed to resume if permitted so by the hygienist at the job site. High fiber counts may be resolved by sending out TEM samples if necessary.

A thorough visual inspection will be conducted by the certified asbestos consultant before initiation of final air clearance sampling. At least 5 TEM cassettes per containment or exclusion zone. It is anticipated that clearance of the containment will not be attempted until the suspect materials have been removed- in other words the entire containment shall be cleared after abatement is complete. Clearance sampling shall require at least 1200 liters of air be sampled with a high flow pump not to exceed 10 liters per minute. All 5 inside air cassettes must show less 70 structures per mm² via TEM analysis to pass air clearance testing per containment.

Cleaning will continue, if necessary, until these clearance criteria are met. The containment, barriers and signs establishing the asbestos control area will not be removed --- or moved ---until the final clearance criteria has been met.

DISPOSAL PLAN:

All friable asbestos waste shall be double bagged with approved friable poly asbestos bags and disposed of as friable asbestos containing waste as required.

All waste generated from this work shall be treated as hazardous waste until lab results indicate otherwise. The abatement contractor is responsible for any disposal of all waste --- whether common construction debris or RCRA (Resource Conservation and Recovery Act) hazardous waste.

Containerized materials can be sampled and analyzed for asbestos by polarized light microscopy (PLM) using the "Interim Method for the Determination of Asbestos in Bulk Samples" found in Appendix A to Subpart F in 40 CFR 763. If analyses reveal that the samples have asbestos concentrations greater than, or equal to, 1 percent by volume, then the materials in question will be deemed "asbestos containing".

Asbestos contaminated hazardous waste including sediment, sludge, water, scraps, debris bags, sheeting, clothing, filters and equipment which may produce airborne asbestos fibers will be collected for disposal. The material will be wetted to ensure the security of the material in case of container breaching. A Department of Transportation (DOT) label will be affixed to each bag, wrapper, drum or other container.

All friable asbestos containing material shall be packaged with the most up to date and required methods of packaging asbestos waste, such as, double bagging, "goose-necking", burrito wrapping and labeling. All friable asbestos waste shall be packaged in this way. The wiping rags and dust/ small debris from clean up must be disposed of as friable asbestos.

There shall / must be asbestos containers for storing friable asbestos and lead paint chips. These disposal bin(s) must be properly labeled and secured at the site. All such bins must be totally enclosed, and each lined with two layers of 6-mil poly. The bins must be covered, and fully enclosed as well as secured.

The abatement contractor prior to use shall inspect all asbestos and lead chip containers. The CAC, and the owner of the building and /or their representatives also have the right to inspect each hazardous waste container prior to use by the abatement contractor. After abatement has been completed the manifest will begin a manifest and hold it for up to 90 days. The contractor will provide information such as job site, contract number and the ultimate disposal site. The container will be marked with the current date as the accumulation start date. Other container markings must be in place as required by law. Asbestos waste may not be stored in an accumulation area for more than 90 days.

If the waste is properly loaded, the manifest -- the abatement contractor --- will estimate the quantity of waste by volume and complete and sign the manifest. The Abatement Contractor shall notify the owner of the building, the project CAC as to the amount and date of removal of the bins. The owner of the building, ESS and their representatives have the right to inspect and review the manifest prior to removal.

Bagged / wrapped asbestos waste will be loaded into an enclosed truck for transport. The enclosed cargo area of the truck will be lined with 6-mil poly sheeting to prevent contamination from leaking or spilled containers.

The personnel loading the asbestos containing waste will wear protective equipment including overalls, head and foot, coverings, gloves and a respirator.

Upon reaching the landfill, the truck will approach the dump location as closely as possible for unloading of the asbestos waste material. The containers will be inspected, as each is unloaded. Material in damaged containers will be properly repackaged. The personnel unloading the truck

and the landfill personnel will wear protective equipment. Following removal of waste, the cargo area of the truck will be decontaminated using HEPA vacuums and wet wiping techniques. This material will be bagged and wrapped in bundles for disposal. Personnel will remove their disposable protective equipment and wrap it in poly to be disposed of at the same time.

LEAD MANAGEMENT AND SAFETY PLAN:

All cleanup activities- whether loose paint scraping or dirt/ dust clean up – must be done under wet conditions. There can be no dry sweeping. All materials shall be HEPA vacuumed up, wet scraped or wet swiped. These operations do not require a formal containment, but do require a lead restricted zone or area.

The abatement contractor can use a variety of methods to of drilling through the lead paint. A full containment (NPE) can be erected prior to drilling, or isolated areas can be removed from the area prior to drilling, or the drilling can commence without full containment only with use of a drill equipped with a HEPA filtered vacuum attachment recovery system, and the drill area zoned off establishing a safe zone during the drilling activities.

The contractor shall establish a work zone during the drilling poses operations that may generate airborne lead dust.

Local HEPA exhaust equipped needle gunning, drilling, grinding or cutting does not require containment. These operations may take place in lead restricted zones or areas.

The abatement contractor shall ensure that there are no visible paint chips or leaded dust is left at any of the work sites – whether contained or not contained.

The lead abatement contractor shall place either catchment tarps or 6-mil poly sheeting beneath any paint removal operations, dust abatement, paint scrape or during cold cutting the existing metal with lead paint. This catchment - either tarps or poly -- must extend to cover the area of any site of lead paint work, and serves to protect the flooring/soil / environment by containing any loose paint chips or other loose debris that falls from the removal of any lead painted components or the cleanup of the dust and loose paint chips.

Only certified abatement contractor lead workers shall be allowed inside the exclusion areas / containments during removal or cleaning.

It is the responsibility of the contractor to dispose of any lead paint chips and dust as hazardous waste materials in accordance with the requirements of Federal, State & Local regulations.

Lead abatement workers shall wear as a minimum, full body protection consisting of at least two disposal body suits with work boots and hard hats. All workers shall wear either goggles or safety glass eye protection. All workers doing demolition, removal or cleanup work shall as a minimum don approved half face negative pressure respirators with approved cartridges for lead dusts, mists, and fumes.

All lead / heavy metals removal contractor work shall comply with the publications listed below.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z9.2 1979 (R) Fundamentals Governing the Design and
Operation of Local Exhaust Systems

ANSI Z88.2 1980(R) Respiratory Protection

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1910.134	1988 Respiratory Protection
29 CFR 1926.62	Lead
29 CFR 1910.1200	1988 Hazard Communication
29 CFR 1926.55	Gases Vapors, Fumes, Dusts and Mists
29 CFR 1926.57	Ventilation
40 CFR 260	Hazardous Waste Management Systems: General
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Generators of Hazardous Waste
40 CFR 263	Transporters of Hazardous Waste
40 CFR 264	Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities
40 CFR 265	Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities
40 CFR 268	Land Disposal Restrictions
49 CFR 172	Hazardous Materials Tables and Hazardous Materials Communications Regulations
49 CFR 178	Shipping Container Specifications

UNDERWRITERS LABORATORIES INC. (UL)

UL 586	1990 High-Efficiency, Particulate Air Filter Units, Seventh Edition
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DHS GUIDELINES FOR LEAD BASED PAINT ABATEMENT CCR 1532.1

EXPOSURE LIMITS

Permissible Exposure Limit (PEL) for Lead	= 50ug/M ³ 8hr TWA
Action Level for Lead	= 30ug/M ³

PERSONAL PROTECTIVE EQUIPMENT:

All personnel who will be authorized to enter the areas of potential contamination will be fully qualified to wear respiratory protection as defined in 29 CFR 1910.134, 29 CFR 1926.62, Title 8 CCR article 1532.1, and all Navy contract requirements. The abatement contractor will assure that such personnel have received medical approval to wear respiratory protective equipment, and have successfully been fit tested with the brand, model and size of respirator that will be worn. Documentation of medical fitness and fit testing will be provided. These requirements will remain in effect for all personnel who enter the work area until air-monitoring results demonstrate that airborne levels of lead dust are below 30 micrograms per cubic meter of air, and wipe-testing protocol proves that the areas are safe for unprotected habitation.

The level of respiratory protection assigned will be based on the results of monitoring for airborne lead fumes and dust in the work area. The results of the air monitoring will be submitted to the consultant. The requirements for various levels are:

REQUIRED RESPIRATORS:	AIRBORNE CONCENTRATION OF LEAD OR CONDITION OF USE
Half-face air purifying respirator equipped with high efficiency filters	Not in excess of 0.5 mg/M ³ (10 X PEL)
Full-face piece air purifying respirator equipped with high efficiency filters	Not in excess of 2.5 mg/M ³ (50 X PEL)
Supplied-air respirator with full face piece hood, helmet or suit, operated in positive pressure mode.	Not in excess of 100 mg/M ³ (2000 X PEL)
Full-face piece, self-contained breathing apparatus operated in positive pressure mode	Greater than 100 mg/M ³ Unknown concentration or fire fighting

All respirators and cartridges shall be NIOSH / MSHA approved for lead dust and fumes. All personnel shall initially wear at least a half faced negative pressure respirator with approved cartridges for lead dust, mists, and fumes for uncontained lead abatement activities. Any lead / toxic metal remediation work that involves exposures in a contained environment will require at a minimum a full-face powered air purifying respirator (PAPR). Any dry or wet blasting will require full-face positive pressure airline respirators.

In addition to the initial fit test for the brand, model and size of respirator to be worn by each assigned worker, a field fit test to determine that the face piece properly seals will be performed each time the respirator is put on. The following steps will be taken:

- a. Adjust the respirator to the face according to the manufacturer's instructions.

- b. Cover the air inlets with the palms of the hands.
- c. Gently inhale so that the face piece collapses slightly.
- d. Hold your breath for ten (10) seconds.
- e. The respirator shall remain slightly collapsed with no inward leaks detected.
- f. Close off the exhalation valve with the palms of the hands.
- g. Exhale gently.
- h. A small buildup of positive pressure, with no outward leaks, indicates a good fit.

All workers assigned to lead abatement related work will be provided sufficient sets of protective full-body disposable clothing. The suits will be taped at the wrist and ankles prior to entering the work area. Additional protective clothing will consist of disposable gloves, foot coverings and headgear. Eye protection and hard hats will be provided and worn.

The control area shall be established by having an exclusion zone, and by posting warning signs as previously stated in the SCOPE section. These restricted areas can be any area within fifteen feet (or as far as practical) of any work; or it could be the entire inside of the bathroom. It is also possible that the controlled or restricted area will be a fully contained abatement area. It shall be the responsibility of the on-site surveillance technician, the abatement contractor personnel to designate the perimeter to these containments / restricted areas at the job site.

Warning signs printed in English will be posted at the perimeter of the restricted area to provide notice of potential airborne lead. The signs will be located at regular intervals and at such a distance that personnel may read the signs and take necessary precautions required prior to entering the area. Signs shall conform to 29 CFR 1926.62 (m). The sign shall be at least 20" by 14" displaying the following legend in the lower panel:

WARNING
LEAD WORK AREA
POISON
NO EATING, DRINKING, OR SMOKING

Entry and exit routes will be established and clearly marked. Control of site entry and exit will be established before the project begins.

Employee and authorized personnel will enter the containment / restricted areas through a worker site egress and exit site which must be at a DECON site located at a convenient entry and exit point to building areas. Anyone who enters a work area must read this plan and will sign an entry log upon entry and exit. All pertinent information -- like the abatement plan --- will be posted at this entrance and exit site.

Prior to entering the work area, personnel will read and become familiar with all posted regulations, personal protection requirements and emergency procedures. A sign-off sheet will be used to acknowledge that these procedures and regulations have been received and understood by all personnel.

Prior to entry, personnel will remove street clothing and put on respiratory protection, clean coveralls, head coverings and foot coverings. Hard hats will be worn at all times. At least two sets of disposable coveralls shall be worn when inside the restricted work area.

Clean respirators and protective clothing will be provided and utilized by every person entering the work area. Personnel in designated personal protective clothing will then proceed to the work area.

Before leaving the work area, personnel will remove any gross contamination from the outside of the respirators, their boots, and other protective clothing by vacuuming themselves off with the HEPA vacuum. Personnel will proceed to peel off at least the outer protective disposable suit and place it into a properly labeled disposal barrel located near the designated exit site. The contractor must provide a shower, and its' use is mandatory. All protective equipment, and other contaminated equipment will be placed into labeled containers or plastic bags while still inside the restricted zones or containments. Equipment that is to be removed from the hazard zones shall be contained or bagged as described, or it shall at a minimum be wet wiped down or HEPA vacuumed prior to exiting the contained lead work areas.

All wastewater from showering and other waters used for cleaning must be tested for disposal. It is, therefore, required that all water from cleaning or DECON operations be stored in an onsite container(s).

Water for emergency eyewash and drinking shall, also, be provided at the decontamination site.

ABATEMENT PROCEDURES:

Initially all dust, dirt, debris, and loose paint must be cleaned up in the work areas. This must be done using local HEPA exhaust saws or drills or other such equipment. The abatement contractor has the option of removing back the paint (total removal) from all sites of cutting. It is anticipated that there will be metal that must be torch cut, which will require total paint abatement. Paint can be removed using a variety of methods as already described in the SCOPE section. This can be accomplished using approved chemical strippers – caustic paint removers – or the abatement contractor can abrasively remove the paint by using grinders, needle guns, or even dry / wet blasting.

There will be at least a lead restricted zone around all sites of paint scrape, paint chip and dust clean up, HEPA assisted needle gunning, HEPA assisted grinding, HEPA assisted cold cutting, or chemical stripping extending out fifty feet (50') or as far as practical. The abatement contractor may also make the rooms the abatement zone or area. Total containment with negative air pressure is not required for this type of paint removal.

However, as stated earlier, if the abatement contractor chooses to use any other method for removing lead paint or lead dust and debris that could generate lead in air concentrations; then those types of operations must take place in a totally contained enclosure. Such operations include, but are not restricted to cutting, sawing, grinding or open abrasive blasting on metal coated with lead / heavy based paint or any other surface coated with dust or debris that contains heavy metals.

Total containment means that there must be an enclosure established with critical barriers covering all openings to the outside environment. Negative air pressure must be established and maintained throughout all totally contained abatement work. Such enclosures are generally constructed with temporary framing using at least one layer of 6-mil poly sheeting enclosing the areas of abatement.

All lead / heavy metals abatement activities – whether in fully contained enclosures or just in restricted areas – must take place using wet methods. Wet methods is described as constant misting with water to keep emissions to a minimum.

There shall be no visible emissions from any lead remediation work. Hand methods shall be used to remove the loose and flaking paint chips on those surfaces that are specified for dismantling and cleaning. The abatement contractor may use power tools (like rotary saws, needle guns), and other power equipment to remove the painted surfaces. All paint chipping, cleaning and scraping must / shall be done in such a manner as to preclude any possible emissions of lead dust. The contractor shall keep the dust down to bare minimum levels. Once removed, the immediate areas

inside the containment shall be cleaned up by HEPA vacuuming and wet wiping. The abatement contractor must spray water mist to keep dust down, and HEPA vacuum up dust and any loose debris from the catchment tarps or the poly that shall be placed on the floor during scraping and demolition to catch debris. Six-mil poly sheeting or some form of tarp must be positioned directly beneath all scrape work to catch lead chips or dust from getting on the soil or flooring if appropriate. The abatement contractor shall not use dry sweeping to clean up any loose leaded debris.

Any catchment whether outside or inside must also extend out a minimum of ten (10') feet beyond any areas that is being worked on.

All paint flakes, and other debris that is generated from these operations shall be lightly wet wiped up by hand or HEPA vacuumed and placed into a clearly labeled hazardous waste container. All lead paint chips, dust and debris are most probably a RCRA hazardous waste.

The abatement contractor shall ensure that all areas of heavy metal work are thoroughly clean free of dust and paint chips following removal, wiping, and demolition work.

JOB MEDICAL & TRAINING:

All personnel engaged in lead abatement or who may be exposed to lead in air shall supply the contracting officer with the appropriate paperwork to show lead hazard within the past year. This means that for both paint removal (scraping / demolition) and cleanup activities certified personnel are required for both types of "lead abatement".

All persons who may be exposed to lead shall be given a comprehensive physical as required in the lead standard. This physical shall include a base line lead in blood test to prove that blood lead levels are less than 25 ug of lead per 100 grams of whole blood.

INTERFACE OF CONSTRUCTION TRADES:

Air monitoring and wipe testing will be conducted throughout the abatement. Air samples will be conducted by a full-time employee of ESS under the direct guidance of the project Certified Lead Inspector Assessor.

Engineering controls will be established and maintained to control lead dust: including the establishment and maintenance of the lead control area, decontamination system and continuous misting and HEPA vacuuming by experienced, trained, certified abatement personnel from the abatement contractor.

All abatement workers shall have attended an approved lead hazardous class within the past year -- they must be certified lead abatement workers.

All other trades personnel will be excluded from the work area until the Lead Inspector Assessor gives final clearance for the area to be reoccupied without respiratory protection and the engineering controls have been demobilized.

AIR & ENVIRONMENT MONITORING PLAN:

Sampling of airborne concentrations of lead dust will be performed in accordance with 29 CFR 1926.62. Air monitoring will be conducted by the designated competent person / lead monitoring technician under direct supervision from ESS. The other metals will be monitored for, but it is not anticipated that there will be significant exposure from those metals (cadmium and chromium).

Based on the parameters of the contract, there shall be baseline wipe taken at these sites.

Area monitoring will be conducted each shift during the abatement process at the designated limits of the control areas. Personal samples will be collected for those workers who are anticipated to be at the greatest risk of exposure as determined by the Lead Inspector/Assessor. Air samples will be taken on at least 25% of the work crew or a minimum of 2 persons; whichever is greater, during a work shift. If the quantity of airborne lead dust monitored at the designated limits at any time exceeds 30 ug/M^3 all work will be stopped and the Lead Inspector/Assessor shall be immediately called to direct correction of the conditions causing the increased levels and notify the abatement contractor, and the property representative. The limits for the other metals are 2.5 ug/M^3 for cadmium and 10 ug/M^3 for chromium. The Lead Inspector/Assessor shall review the sampling data taken during that day to determine if conditions require any further change in work methods. Work shall resume when approval is given by the competent person. If adjacent areas are contaminated, the areas will be cleaned, monitored and visually inspected. The Lead Inspector/Assessor shall comply with the H.U.D. and D.H.S. Guidelines, and require that contaminated sites be cleaned free of lead below 10 micrograms per square foot of horizontal non porous surface, and less than 100 micrograms per square foot for window sills. There are no legal wipe criteria for cadmium or chromium, but the contractor will assume that wipe testing limits must be 20 X lower for cadmium and 5 X lower for chromium. The results from the air monitoring, and wipe testing will be submitted to the consultant and the districts representative.

The competent person will conduct a thorough visual inspection before there is any final clearing of the hazard or restricted zones. Once the criteria for visual inspection have been satisfied, final clearance wipe samples will be taken and analyzed. The criteria for clearance testing are identical to that requirement that have been discussed for contaminated sites in the previous paragraph.

Cleaning will continue, if necessary, until this clearance criterion is met. The barriers and signs establishing the containment will not be removed until this final visual clearance criterion has been met.

Air / wipe sampling and collection and analysis will be conducted by or under the direction of a Lead Inspector/Assessor from ESS. Samples shall be submitted to a certified laboratory for instrumental analysis via AA Spectroscopy.

DISPOSAL PLAN:

Suspect lead containing paint residues will be tested to determine whether it is hazardous waste. All suspect hazardous paint chips, dust and other generated waste shall be tested by the STLC leaching test procedure for lead, chromium and cadmium content prior to disposal.

All waste generated from this work shall be treated as hazardous waste until S.T.L.C. results indicate otherwise. Contractors through ESS shall determine if the materials are common construction debris or if they are lead hazardous waste. The contractor is responsible for any disposal of all waste --- whether common construction debris or RCRA hazardous waste (the paint chips and dust from the abatement process).

Small lead contaminated hazardous waste including: water, scrap, debris, bags, containers, equipment, and clothing which may produce airborne concentrations of lead dust will be collected and placed into USDOT approved drums for disposal. Each drum will be properly labeled to identify the type of waste and the date the drum was filled.

A Uniform Hazardous Waste Manifest for the small debris from paint chip scraping / abatement work will be obtained and properly filled out, by adhering to the following procedures: At the start of the project, the empty container must be in good condition, empty, lockable and have a valid

state certification. If the container fails the inspection, the deficiency must be corrected or another container obtained.

The abatement contractor shall give all appropriate waste documentation to the district's consultant.

When the container is approved, the entity in charge of the manifest will begin a manifest and hold it for up to 90 days. The abatement contractor will provide information such as job site, contract number and the ultimate disposal site. The container will be marked with the current date as the accumulation start date. Waste may not be stored in an accumulation area for more than 90 days. Other container markings must be in place as required by law.

Lead waste (paint dust and chips and lead tainted remover) will be properly packaged and loaded into the container, which will be locked at all times except during loading or inspection. RCRA lead waste shall go in DOT approve barrels to be transported by the abatement contractor's approved hazardous waste hauler. Containerized waste will be loaded into an enclosed truck for transport. The enclosed cargo area of the truck will be lined with 6-mil poly sheeting to prevent contamination from leaking or spilled containers.

The personnel loading the lead containing waste will wear protective equipment including overalls, head and foot, coverings, gloves and a respirator.

Upon reaching the landfill, the truck will approach the dump location as closely as possible for unloading of the lead waste material. The containers will be inspected, as each is unloaded. Material in damaged containers will be properly repackaged. The personnel unloading the truck and the landfill personnel will wear protective equipment. Following removal of waste, the cargo area of the truck will be decontaminated using HEPA vacuums and wet wiping techniques. This material will be bagged and wrapped in bundles for disposal. Personnel will remove their disposable protective equipment and wrap it in poly to be disposed of at the same time.

FIRE AND MEDICAL EMERGENCY RESPONSE PLAN:

Each day a tailgate safety meeting shall be held outside of the containment areas for all assigned personnel prior to the start of work. All personnel will be made aware of the site address and the location of any existing on-site fire alarms and the location of the nearest telephone. This information will also be posted at the on-site notice posting board located at the entrance to any asbestos/lead paint removal control area along with the phone numbers for police, fire, ambulance, and the name and location of the nearest emergency medical facility. This information must be provided by the abatement contractor in the abatement contractor's submittal package prior to any work.

In the event of a medical emergency within the control area, the sick or injured person will be decontaminated before removal if the nature of the illness or injury is not life threatening or will not be exacerbated by the decontamination process. If the illness or injury is life threatening or is likely to be made worse by the decontamination process, then the ill or injured person will be removed immediately without regard to decontamination and medical attention summoned. Illness and/or injuries occurring on the job will be promptly and thoroughly investigated.

In the event of fire, the first person to notice the fire shall alert others within the control area and immediately evacuate. The fire alarm, if present, will be activated and the fire department will be called from the nearest safe phone.

A complete first aid kit will be kept on-site for minor injuries.



John S. Jones
Certified Asbestos Consultant
CAL/OSHA DOSH Certificate Number 16-5690
Environmental Science Services

CDPH I/A #4810

09/01/22

**ASBESTOS CONTAINING MATERIAL (ACM) AND LEAD BASE
PAINT (LBP) HAZARD ABATEMENT PLAN**

ASBESTOS ABATEMENT PLAN FOR THE REMOVAL OF FRIABLE AND NON-FRIABLE
ASBESTOS CONTAINING BUILDING MATERIALS AS WELL AS LEAD BASE PAINT FROM:

**LODI MIDDLE SCHOOL
945 S HAM LANE, LODI, CA 95242
HVAC Project Phase**

**ENVIRONMENTAL SCIENCE SERVICES (ESS)
Lodi, CA**

September 01, 2022

WRITTEN & APPROVED BY:
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CAL/OSHA 16-5690
CERTIFIED DHS LEAD PREVENTION INSPECTOR/ASSESSOR
DHS ID #: 4810

SCOPE:

This plan specifies abatement procedures that must be used by the abatement contractor to remove friable asbestos containing materials, non-friable asbestos containing as well as LBP (Lead Base Paint) throughout the site above mentioned as part of the Modernization project. The abatement contractor shall remove or abate the asbestos and lead containing materials found at this building site in accordance with the specifications of this abatement plan.

Five buildings throughout the school are going to be subject to remodel, demolition, disturbance respectively as part of the modernization project taking place. The buildings are labeled on the Modernization Plan as Buildings A, B, C, D, E & F. The exact amount of asbestos containing material and Lead Base Paint is not yet determined at this time however the material categories are identified within this scope and the attached reports.

1. Composite Wallboard, Gypsum Wallboard, Joint Compound and Brick Caulking have been identified throughout the site and listed on the most recent AHERA Re-inspection Report and supplemental reports attached.
2. The attached asbestos reports dated 03/24/22 & 09/29/22 identify materials if impacted will need to be quantified and abated prior to renovation/construction activities.
3. The most recent AHERA Re-inspection Report also indicates any other asbestos materials positive for asbestos.
4. **The amount of asbestos containing material and Lead Base Paint to be removed shall be determined at the time of the bid walk due to the nature of the work to be performed. It is recommended the trades that are to disturb any asbestos containing or lead base paint materials identified in the inspection reports shall lay out the areas of the disturbance so the materials can be quantified.**

The abatement contractor will notify, in writing to the Local Metropolitan Air Quality Management District (Local AQMD) under Rule 902 of the planned removal of asbestos containing materials. Notification of asbestos related work will be made to the AQMD per regulations. It is recommended to request an emergency notification to overrule the standard 10-day requirement. The abatement contractor shall also notify in writing CAL- OSHA that asbestos removal is planned in accordance with section 341.6. The notifications will be made on the forms and in the formats as required by the AQMD and CAL-OSHA.

The friable asbestos containing building materials shall be removed under full containment as described in this plan. There shall be no exceptions.

Please refer to the section in this plan entitled "ASBESTOS ABATEMENT" for an exact description of the materials to be removed and removal restrictions / requirements.

It is the responsibility of the abatement contractor to estimate the amounts and types of the materials that will be removed based on this plan the renovation specifications, and the abatement contractors' own inspection of the building.

The abatement contractor shall don at least Powered Air Purifying Respirators for the initial removal of friable asbestos containing materials – specifically the sheet vinyl linoleum. The abatement contractor shall don at least half face negative pressure respirators for the removal / abatement if the fiber in air counts show that this minimal protection is possible. Half face respirators must be worn when abatement workers are removing the asbestos containing vinyl

linoleum. In addition, all asbestos workers shall wear at least disposable protective suites, hard hats, safety shoes, and eye protection when inside any containment.

The abatement contractor is responsible for the proper disposal of the doubled bagged friable asbestos containing building materials generated at the site. The abatement contractor is responsible for bagging or properly wrapping the asbestos containing materials and properly packing the bags into the appropriate friable asbestos storage bins located at the job site.

The abatement contractor will comply with the latest applicable requirements of federal, state and local regulations governing removal and disposal of asbestos containing materials.

The abatement contractor will comply with the publications listed below to the extent referenced:

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z9.2 1979 (R 1991) Fundamentals Governing the Design and Operation of Local Exhaust Systems

ANSI Z88.2 1992 (R) Respiratory Protection

AMERICA SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 732 1982 (R) Aging Effects of Artificial Weathering on Latex Sealants

ASTM D 1331 1989 (R) Surface and Interfacial Tension of Solutions of Surface-Active Agents

ASTM E 84
Materials 1989 (Rev A) Surface Burning Characteristics of Building

ASTM E 96 1990 Water Vapor Transmission of Material

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1910.134 1988 Respiratory Protection

29 CFR 1910.141 Sanitation

29 CFR 1910.145 Accident Prevention Signs and Tags

29 CFR 1910.1200 1988 Hazard Communications

29 CFR 1926.1101 Asbestos, Tremolite, Anthophyllite, & Actinolite

40 CFR 61 Subpart A General Provisions

40 CFR 61 Subpart M National Emission Standards for Asbestos

40 CFR 763 Asbestos Containing Materials in Schools

29 CFR 1910.1000 Air Contaminates

29 CFR 1926.103	Respiratory Protection
29 CFR 1910.134	1988 Respiratory Protection
29 CFR 1926.62	Lead
29 CFR 1910.1200	1988 Hazard Communication
29 CFR 1926.59	Hazard Communication
29 CFR 1926.55	Gases Vapors, Fumes, Dusts and Mists
29 CFR 1926.57	Ventilation
40 CFR 260 - 270	Hazardous Waste Management Systems: General & SW -846 Sampling Protocol
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Generators of Hazardous Waste
40 CFR 263	Transporters of Hazardous Waste and AHERA
40 CFR 264	Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities
40 CFR 265	Interim Status Standards for Owners and Operators of Hazardous Waste Treatment,

ENVIRONMENTAL PROTECTION AGENCY (EPA)

EPA 560/5-85-024 Buildings	Guidance for Controlling Asbestos Containing Materials in
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CALIFORNIA CODE OF REGULATIONS (CCR)

CCR-Title 8 Subchapter 7	General Industry Safety Orders, Group 1. General Physical Conditions & Surfaces
CCR- Title 8 1529	Asbestos
CCR-Article 2	Standard Specifications
para.3209	Standard Guardrails
para.3210	Elevated Locations
para.3211	Wall Openings
para.3212	Floor Openings, Floor Holes, and Roofs
para.3214	Stair Rails and Hand Rails
para.3215	Means of Egress
para.3216	Exit of Signs

CCR-Article 4	Access, Work Space and Work Areas
para.3270	Access General
para.3271	Openings
para.3272	Aisles, Walkways, and Crawl Ways
para.3273	Working Area
para.3276	Scaffolds
para.3277	Fixed Ladders
para.3278	Portable Wood Ladders
para.3279	Portable Metal Ladders
para.3280	Portable Reinforced Plastic Ladders
GROUP 2	Safe Practices and Personal Protection
CCR-Article 7	Miscellaneous Safe Practices
para.3302	Gas Blowing of Hazardous Substances
para.3303	Flying Particles or Substances
para.3308	Hot Pipes and Hot Surfaces
para.3316	Hand Tools
para.3317	Illumination
para.3320	Warning Signs
SANITATION	
CCR-Article 9	
para.3367	Change Rooms
CCR-Article 10	Personal Safety Devices and Safeguards
para.3380	Personal Protective Devices
para.3381	Head Protection
para.3382	Eye and Face Protection
para.3383	Body Protection
para.3384	Hand Protection
para.3385	Foot Protection
para.3386	Jewelry
para.3387	Sanitation
para.3388	Safety Belts and Life Lines
para.3389	Life Rings and Personal Flotation Devices
para.3390	Protections from Electric Shock
para.3400	Medical Services and First Aid
CCR-Article 11	Safety Belts, Lineman's Body Belts, Harnesses. Lanyards, Lifelines, Drop lines and Safety Lines
	Telecommunications Lineman's Body Belts, Safety Straps and Lanyards
GROUP 4	General Mobile Equipment and Auxiliaries
CCR-Article 23	Mobile Ladder Stands and Scaffolds (Towers)

General	
para.3624	Mobil Tubular Welded Sectional Folding Scaffold
para.3625	Mobil Tube and Coupler Scaffolds
para.3626	Mobil Work Platforms
para.3627	Mobil Ladder Stands
CCR-Article 26	Vehicle Mounted Elevating and Rotating Work Platforms
GROUP 16	Control of Hazardous Substances
CCR-Article 107	Dusts, Fumes, Mists, Vapors, and Gases
para.5144	Respiratory Protective Equipment
CCR-Article 109	Hazardous Substances and Processes
para.5162	Emergency Eyewash and Shower Equipment
para.5164	Storage of Hazardous Substances
CCR-Article 110	Special Hazardous Substances and Processes
para.5208	Asbestos, Appendix A
CCR-Article 112	Labeling of Injurious Substances
para.5225	Application of These Orders
para.5226	Definitions
para.5227	Labeling
para.5228	Labels
para.5229	Protection
para.5230	Samples

UNDERWRITERS LABORATORIES INC. (UL)

UL 596	1990 (R 1995) High-Efficiency, Particulate Air Filter Units, Seventh Edition
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PERSONAL PROTECTIVE EQUIPMENT:

All personnel who will be authorized to enter the areas of potential contamination will be fully qualified to wear respiratory protection as defined in 29 CFR 1910.134; Title 8, CCR 1529.29, and CFR 1926.1101. The abatement contractor will assure that such personnel have received medical approval to wear respiratory protective equipment and have successfully been fit tested with the brand, model and size of respirator that will be worn. Documentation of medical fitness and fit testing will be provided. These requirements will remain in effect for all personnel who enter the work area until air monitoring results and visual inspection demonstrate that airborne levels of asbestos fiber levels are 1) less than 0.01 fibers/cc. and that 2) there is no visible asbestos associated with the abatement present at the site.

The level of respiratory protection assigned will be based on the results of monitoring for airborne asbestos and dust in the work area. The results of the air monitoring will be submitted to the property owner and of course to the abatement contractor. The requirements for various levels are:

EXPOSURE LIMITS: ASBESTOS

Permissible Exposure Limit (PEL) = 0.1 fibers/cc

fibers/cc = fibers per cubic centimeter of air

PERSONAL PROTECTIVE EQUIPMENT (PPE):

The requirements for various levels are:

REQUIRED RESPIRATORS	AIRBORNE CONCENTRATION OF ASBESTOS OR CONDITION OF USE
Half-face air purifying negative pressure Respirator equipped with High efficiency filters	not in excess of 1 fibers/cc (10 X PEL)
Full-face piece air purifying Respirator equipped with high Efficiency filters	not in excess of 5 fibers/cc (50 X PEL)
Supplied-air respirator with Full-face piece hood, helmet Or suit, operated in positive Pressure mode.	not in excess of 200 fibers/cc (2000 X PEL)
Full-face piece, self-contained Breathing apparatus operated in Positive pressure mode or fire fighting	Greater than 200 fibers/cc Unknown concentration

All respirators are to be NIOSH approved. All personnel shall initially be fitted with at least half faced, negative pressure respirators with HEPA filters at a minimum for the general clean and removal of the wall board. As stated in the SCOPE section of this plan for friable asbestos removal – for the abatement of the sheet vinyl linoleum - all personnel shall don at least powered air purifying respirators (PAPR's) initially. All respirator cartridges must be approved by NIOSH for use in asbestos atmospheres. All respiratory protection shall be approved for asbestos work. It shall be left to the discretion of the Asbestos Consultant for this project to allow for higher or less or orders of respiratory protection.

In addition to the initial fit test for the brand, model and size of respirator to be worn by each assigned worker, a field fit test to determine that the face piece properly seals will be performed each time the respirator is put on. The following steps will be taken:

- a. Adjust the respirator to the face according to the manufacturer's instructions.
- b. Cover the air inlets with the palms of the hands.
- c. Gently inhale so that the face piece collapses slightly.

- d. Hold your breath for ten (10) seconds.
- e. The respirator shall remain slightly collapsed with no inward leaks detected.
- f. Close off the exhalation valve with the palms of the hands.
- g. Exhale gently.
- h. A small buildup of positive pressure, with no outward leaks,
Indicates a good fit.

All workers assigned to abatement work will be provided sufficient sets of protective full-body disposable clothing. The disposable clothing will be taped at the wrist and ankles prior to entering the work area. Additional protective clothing will consist of disposable gloves, foot coverings and headgear. Eye protection and hard hats will be provided and shall be worn at all times.

Warning signs printed in English and Spanish will be posted at the perimeter of the area to provide notice of potential airborne asbestos. The signs will be located at regular intervals and at such a distance that personnel may read the signs and take necessary precautions required prior to entering the area. Signs shall conform to 29 CFR 1926.1101 (para. K). The sign shall be at least 20" by 14" displaying the following legend in the lower panel:

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

Entry and exit routes will be established and clearly marked. Control of site entry and exit will be established before the project begins.

Employee and authorized personnel will enter the control areas or containments through a decontamination site (DECON) directly attached to the containment(s). These decon units will be the sites for cleaning, HEPA vacuuming suspect asbestos contamination, and changing out of contaminated disposable PPE while transitioning from the full contained abatement areas to the outside. Such units shall be an example of the classical three stage decontamination system with a dirty room attached directly to the containment which leads into a shower which in turn leads to the clean room. These three sections of the decon unit shall be isolated from one another with double flaps of 6 mil poly.

Anyone who enters the work area must read this plan and will sign an entry log upon entry and exit. This log will be located at the entrance of the decon site.

Prior to entering the work area, personnel will read and become familiar with all posted regulations, personal protection requirements and emergency procedures. A sign-off sheet will be used to acknowledge that these procedures and regulations have been received and understood by all personnel.

Prior to entry, personnel will put on respiratory protection, clean disposable coveralls. Hard hats will be worn at all times. All asbestos workers shall have safety glasses, goggles or safety shields for eye protection.

Clean respirators and protective clothing will be provided and utilized by every person entering the work area. Personnel in designated personal protective clothing will proceed to the work area.

Before leaving the work area, personnel will remove any gross contamination from the outside of the respirators and protective clothing by vacuuming themselves off with the HEPA vacuum stationed at the decon site. Personnel will proceed through this decontamination site at the dirty side of decon. All contaminated boots, tools, and other equipment shall be either stored inside the asbestos restricted area -- the full containment dirty room -- or wiped off and cleaned for removal through the decon area. Personnel will then strip off the disposable suits and go into the shower. After showering asbestos workers shall then go into the clean room to dry themselves and put on clean clothing.

All cleaning or showering water shall be either stored on site for asbestos testing or disposal; or filtered through an approved asbestos HEPA filter and disposed of directly into the sewer.

The disposable suits and the HEPA cartridges for the respirators will be disposed of as hazardous asbestos containing material.

Water for emergency eyewash and drinking shall, also, be provided at the decontamination site.

Eating, drinking, smoking and the application of cosmetics are prohibited within the contaminate control areas.

ASBESTOS / LEAD PAINT ABATEMENT:

The site of friable and non-friable asbestos abatement is the buildings A, B, C, D, E & F located at Lodi Middle School, 945 S Ham Lane, Lodi, California 95242. **NOTE:** Please refer/consult at all time the Modernization Plan (Blue Print) provided by HENRY Associates Architects for details about the areas of each building directly impacted by the scope of work. Some areas are going to be subject of partial and/or full demolition, painting, and/or minor disturbance respectively as part of the modernization process.

All asbestos work must take place using "wet methods". This means that all asbestos removal work shall be done using amended water to wet down both the material and the atmosphere inside containment during removal and open handling of the materials.

The abatement contractor shall first abate the friable asbestos containing material prior to any removal of non-friable asbestos containing material.

The interior of the structure must be cleaned by means of HEPA vacuuming and wiping down the floor and remaining wood structure walls and ceiling joists.

Any dumpster on-site must be lined with 2 layers of 6 mil poly, bagged and labeled for friable asbestos.

Critical barriers must be established over all openings leading out of the building/work area.

The abatement contractor shall assure the on-site site technician that enough negative air pressure is attained inside the room (containment area) by posting and maintaining a manometer at the job site that continuously reads out negative air pressure. The air pressure inside the

containment area shall be maintained from -0.02 to -0.08 inches of water throughout the entire abatement until clearance of the building / rooms.

Exterior walls of the sites shall be covered with at least two layers of 4-mil poly sheeting extending from the ceiling/roof to the floor/ground for friable removal. The dumpster containment shall consist of at least two layers of 6 mil poly on floors/ground attaching to the inner walls of the dumpster.

It is necessary that the immediate areas of abatement be contained using proper warning signs and barrier tape. Therefore, any open holes into the property and/or roof must be temporary blocked off using poly sheeting and temporary construction materials. Critical barriers and negative air pressure shall be maintained inside the property during the removal of all PACM.

The abatement contractor shall construct a three stage decon somewhere leading outside of the abatement areas at a convenient point of egress for any removal. All workers shall be in protective disposal suits, hard hats, gloves, and at least have half face negative pressure respirators.

GENERALIZED REQUIREMENTS FOR ABATEMENT:

Prior to any abatement, the industrial hygienist and/or a designated representative from ESS shall walk through the containment(s) / exclusion areas and clearly agree and mark out the specified and contracted areas of abatement.

All asbestos/lead paint removal work shall / must be done under wet conditions at all times --- there shall be no dry removal.

JOB MEDICAL & TRAINING:

All abatement employees assigned to work within the contaminant area will have been trained in the risks associated with the hazard abatement work to be performed, in the use and limitations of personal protective equipment and in the state-of-the-art practices and procedures. This training will be in accordance with the requirements of Title 8 CCR 1529, and 29 CFR 1926.1101 & Title 10. Copies of each assigned employees' current training certificates will be posted at the site at all times.

Before exposure to airborne asbestos fibers, workers shall have a comprehensive medical examination as required by 29 CFR 1926.1101 and other pertinent state and local directives. This requirement must have been satisfied within the past six months. Personnel shall also have the proper training, fit tests, notifications, and respirator use releases as directed by 29 CFR 1926.1101 prior to any abatement work. Please see the attached submittals on the individuals who have received said training and will be working and entering the asbestos containment areas.

INTERFACE OF CONSTRUCTION TRADES:

Air monitoring will be conducted throughout the abatement. A full-time state certified site technician of ESS will conduct air sampling at the site. PCM air cassette samples shall be taken as personals and at least one excursion inside on the abatement workers, area samples in containments, at negative air machines, and at bag out exits and clean room exits.

Engineering controls will be established and maintained to control asbestos and/or lead paint dust or chips: including the establishment and maintenance of the control area, decontamination system and continuous misting and HEPA vacuuming by experienced, trained, certified abatement personnel from the abatement contractor.

All other trades and other untrained personnel will be excluded from the work area until the hygienist gives final clearance for the area to be reoccupied without respiratory protection and the engineering controls have been demobilized.

AIR MONITORING PLAN:

Sampling of airborne concentrations of asbestos will be performed in accordance with 29 CFR 1926.1101, and 29 CFR 1910.1000. A full-time site surveillance technician will conduct air monitoring. Dust Wipe sampling for lead will be conducted if needed post abatement activities.

Baseline air samples will be taken prior to any abatement.

Sampling of airborne concentrations of asbestos dust will be performed in accordance with 29 CFR 1926.1101. All fiber testing shall be in accordance with NIOSH 7400 A rules for PCM analysis.

Air monitoring will be conducted throughout the abatement. The approved site technician will take the required air samples and inspect abatement procedures during abatement. PCM air cassette samples shall be taken every shift as personals and at least one excursion inside on the abatement worker or workers. Area samples shall likewise be taken during every shift both at the exit to clean rooms and outside at negative air exhausts to ensure worker and environmental protection. Samples will be collected at the job site and returned to the lab for optical analysis or read and posted at the job site. Personal and excursion samples will be collected for those workers who are anticipated to be at the greatest risk of exposure as determined by the on-site hygienist.

Those that are at greatest risk must always be determined at the job site by the on-site industrial hygienist, site technician or CDPH I/A. In general, those that will be sampled will be the workers that will be removing and handling exposed asbestos or lead paint. Those of greatest risk may also be pin pointed by reviewing the monitoring data each day. Asbestos air samples will be taken on at least 25% of the work crew or a minimum of 2 persons; whichever is greater, during a work shift. The CAC from ESS shall review the sampling data taken during that day to determine if conditions require any further change in work methods. The results from the air monitoring will be submitted to the school district.

Any asbestos fiber count exceeding 0.1 fiber per cc will require that the abatement to immediately stop; the on-site hygienist will be notified, and corrective action taken by the contractor as required. Any fiber count outside of containment greater than 0.01 fiber per cc or greater than 1.25X the back ground, will cause all work to be stopped and the on-site hygienist will be notified for remediation of the problem. Work will only then be allowed to resume if permitted so by the hygienist at the job site. High fiber counts may be resolved by sending out TEM samples if necessary.

A thorough visual inspection will be conducted by the certified asbestos consultant before initiation of final air clearance sampling. At least 5 TEM cassettes per containment or exclusion zone. It is anticipated that clearance of the containment will not be attempted until the suspect materials have been removed- in other words the entire containment shall be cleared after abatement is complete. Clearance sampling shall require at least 1200 liters of air be sampled with a high flow pump not to exceed 10 liters per minute. All 5 inside air cassettes must show less 70 structures per mm² via TEM analysis to pass air clearance testing per containment.

Cleaning will continue, if necessary, until these clearance criteria are met. The containment, barriers and signs establishing the asbestos control area will not be removed --- or moved ---until the final clearance criteria has been met.

DISPOSAL PLAN:

All friable asbestos waste shall be double bagged with approved friable poly asbestos bags and disposed of as friable asbestos containing waste as required.

All waste generated from this work shall be treated as hazardous waste until lab results indicate otherwise. The abatement contractor is responsible for any disposal of all waste --- whether common construction debris or RCRA (Resource Conservation and Recovery Act) hazardous waste.

Containerized materials can be sampled and analyzed for asbestos by polarized light microscopy (PLM) using the "Interim Method for the Determination of Asbestos in Bulk Samples" found in Appendix A to Subpart F in 40 CFR 763. If analyses reveal that the samples have asbestos concentrations greater than, or equal to, 1 percent by volume, then the materials in question will be deemed "asbestos containing".

Asbestos contaminated hazardous waste including sediment, sludge, water, scraps, debris bags, sheeting, clothing, filters and equipment which may produce airborne asbestos fibers will be collected for disposal. The material will be wetted to ensure the security of the material in case of container breaching. A Department of Transportation (DOT) label will be affixed to each bag, wrapper, drum or other container.

All friable asbestos containing material shall be packaged with the most up to date and required methods of packaging asbestos waste, such as, double bagging, "goose-necking", burrito wrapping and labeling. All friable asbestos waste shall be packaged in this way. The wiping rags and dust/ small debris from clean up must be disposed of as friable asbestos.

There shall / must be asbestos containers for storing friable asbestos and lead paint chips. These disposal bin(s) must be properly labeled and secured at the site. All such bins must be totally enclosed, and each lined with two layers of 6-mil poly. The bins must be covered, and fully enclosed as well as secured.

The abatement contractor prior to use shall inspect all asbestos and lead chip containers. The CAC, and the owner of the building and /or their representatives also have the right to inspect each hazardous waste container prior to use by the abatement contractor. After abatement has been completed the manifest will begin a manifest and hold it for up to 90 days. The contractor will provide information such as job site, contract number and the ultimate disposal site. The container will be marked with the current date as the accumulation start date. Other container markings must be in place as required by law. Asbestos waste may not be stored in an accumulation area for more than 90 days.

If the waste is properly loaded, the manifest -- the abatement contractor --- will estimate the quantity of waste by volume and complete and sign the manifest. The Abatement Contractor shall notify the owner of the building, the project CAC as to the amount and date of removal of the bins. The owner of the building, ESS and their representatives have the right to inspect and review the manifest prior to removal.

Bagged / wrapped asbestos waste will be loaded into an enclosed truck for transport. The enclosed cargo area of the truck will be lined with 6-mil poly sheeting to prevent contamination from leaking or spilled containers.

The personnel loading the asbestos containing waste will wear protective equipment including overalls, head and foot, coverings, gloves and a respirator.

Upon reaching the landfill, the truck will approach the dump location as closely as possible for unloading of the asbestos waste material. The containers will be inspected, as each is unloaded. Material in damaged containers will be properly repackaged. The personnel unloading the truck

and the landfill personnel will wear protective equipment. Following removal of waste, the cargo area of the truck will be decontaminated using HEPA vacuums and wet wiping techniques. This material will be bagged and wrapped in bundles for disposal. Personnel will remove their disposable protective equipment and wrap it in poly to be disposed of at the same time.

LEAD MANAGEMENT AND SAFETY PLAN:

All cleanup activities- whether loose paint scraping or dirt/ dust clean up – must be done under wet conditions. There can be no dry sweeping. All materials shall be HEPA vacuumed up, wet scraped or wet swiped. These operations do not require a formal containment, but do require a lead restricted zone or area.

The abatement contractor can use a variety of methods to of drilling through the lead paint. A full containment (NPE) can be erected prior to drilling, or isolated areas can be removed from the area prior to drilling, or the drilling can commence without full containment only with use of a drill equipped with a HEPA filtered vacuum attachment recovery system, and the drill area zoned off establishing a safe zone during the drilling activities.

The contractor shall establish a work zone during the drilling poses operations that may generate airborne lead dust.

Local HEPA exhaust equipped needle gunning, drilling, grinding or cutting does not require containment. These operations may take place in lead restricted zones or areas.

The abatement contractor shall ensure that there are no visible paint chips or leaded dust is left at any of the work sites – whether contained or not contained.

The lead abatement contractor shall place either catchment tarps or 6-mil poly sheeting beneath any paint removal operations, dust abatement, paint scrape or during cold cutting the existing metal with lead paint. This catchment - either tarps or poly -- must extend to cover the area of any site of lead paint work, and serves to protect the flooring/soil / environment by containing any loose paint chips or other loose debris that falls from the removal of any lead painted components or the cleanup of the dust and loose paint chips.

Only certified abatement contractor lead workers shall be allowed inside the exclusion areas / containments during removal or cleaning.

It is the responsibility of the contractor to dispose of any lead paint chips and dust as hazardous waste materials in accordance with the requirements of Federal, State & Local regulations.

Lead abatement workers shall wear as a minimum, full body protection consisting of at least two disposal body suits with work boots and hard hats. All workers shall wear either goggles or safety glass eye protection. All workers doing demolition, removal or cleanup work shall as a minimum don approved half face negative pressure respirators with approved cartridges for lead dusts, mists, and fumes.

All lead / heavy metals removal contractor work shall comply with the publications listed below.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z9.2 1979 (R) Fundamentals Governing the Design and
Operation of Local Exhaust Systems

ANSI Z88.2 1980(R) Respiratory Protection

CODE OF FEDERAL REGULATIONS (CFR)

29 CFR 1910.134	1988 Respiratory Protection
29 CFR 1926.62	Lead
29 CFR 1910.1200	1988 Hazard Communication
29 CFR 1926.55	Gases Vapors, Fumes, Dusts and Mists
29 CFR 1926.57	Ventilation
40 CFR 260	Hazardous Waste Management Systems: General
40 CFR 261	Identification and Listing of Hazardous Waste
40 CFR 262	Generators of Hazardous Waste
40 CFR 263	Transporters of Hazardous Waste
40 CFR 264	Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities
40 CFR 265	Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities
40 CFR 268	Land Disposal Restrictions
49 CFR 172	Hazardous Materials Tables and Hazardous Materials Communications Regulations
49 CFR 178	Shipping Container Specifications

UNDERWRITERS LABORATORIES INC. (UL)

UL 586	1990 High-Efficiency, Particulate Air Filter Units, Seventh Edition
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DHS GUIDELINES FOR LEAD BASED PAINT ABATEMENT CCR 1532.1

EXPOSURE LIMITS

Permissible Exposure Limit (PEL) for Lead	= 50ug/M ³ 8hr TWA
Action Level for Lead	= 30ug/M ³

PERSONAL PROTECTIVE EQUIPMENT:

All personnel who will be authorized to enter the areas of potential contamination will be fully qualified to wear respiratory protection as defined in 29 CFR 1910.134, 29 CFR 1926.62, Title 8 CCR article 1532.1, and all Navy contract requirements. The abatement contractor will assure that such personnel have received medical approval to wear respiratory protective equipment, and have successfully been fit tested with the brand, model and size of respirator that will be worn. Documentation of medical fitness and fit testing will be provided. These requirements will remain in effect for all personnel who enter the work area until air-monitoring results demonstrate that airborne levels of lead dust are below 30 micrograms per cubic meter of air, and wipe-testing protocol proves that the areas are safe for unprotected habitation.

The level of respiratory protection assigned will be based on the results of monitoring for airborne lead fumes and dust in the work area. The results of the air monitoring will be submitted to the consultant. The requirements for various levels are:

REQUIRED RESPIRATORS:	AIRBORNE CONCENTRATION OF LEAD OR CONDITION OF USE
Half-face air purifying respirator equipped with high efficiency filters	Not in excess of 0.5 mg/M ³ (10 X PEL)
Full-face piece air purifying respirator equipped with high efficiency filters	Not in excess of 2.5 mg/M ³ (50 X PEL)
Supplied-air respirator with full face piece hood, helmet or suit, operated in positive pressure mode.	Not in excess of 100 mg/M ³ (2000 X PEL)
Full-face piece, self-contained breathing apparatus operated in positive pressure mode	Greater than 100 mg/M ³ Unknown concentration or fire fighting

All respirators and cartridges shall be NIOSH / MSHA approved for lead dust and fumes. All personnel shall initially wear at least a half faced negative pressure respirator with approved cartridges for lead dust, mists, and fumes for uncontained lead abatement activities. Any lead / toxic metal remediation work that involves exposures in a contained environment will require at a minimum a full-face powered air purifying respirator (PAPR). Any dry or wet blasting will require full-face positive pressure airline respirators.

In addition to the initial fit test for the brand, model and size of respirator to be worn by each assigned worker, a field fit test to determine that the face piece properly seals will be performed each time the respirator is put on. The following steps will be taken:

- a. Adjust the respirator to the face according to the manufacturer's instructions.

- b. Cover the air inlets with the palms of the hands.
- c. Gently inhale so that the face piece collapses slightly.
- d. Hold your breath for ten (10) seconds.
- e. The respirator shall remain slightly collapsed with no inward leaks detected.
- f. Close off the exhalation valve with the palms of the hands.
- g. Exhale gently.
- h. A small buildup of positive pressure, with no outward leaks, indicates a good fit.

All workers assigned to lead abatement related work will be provided sufficient sets of protective full-body disposable clothing. The suits will be taped at the wrist and ankles prior to entering the work area. Additional protective clothing will consist of disposable gloves, foot coverings and headgear. Eye protection and hard hats will be provided and worn.

The control area shall be established by having an exclusion zone, and by posting warning signs as previously stated in the SCOPE section. These restricted areas can be any area within fifteen feet (or as far as practical) of any work; or it could be the entire inside of the bathroom. It is also possible that the controlled or restricted area will be a fully contained abatement area. It shall be the responsibility of the on-site surveillance technician, the abatement contractor personnel to designate the perimeter to these containments / restricted areas at the job site.

Warning signs printed in English will be posted at the perimeter of the restricted area to provide notice of potential airborne lead. The signs will be located at regular intervals and at such a distance that personnel may read the signs and take necessary precautions required prior to entering the area. Signs shall conform to 29 CFR 1926.62 (m). The sign shall be at least 20" by 14" displaying the following legend in the lower panel:

WARNING
LEAD WORK AREA
POISON
NO EATING, DRINKING, OR SMOKING

Entry and exit routes will be established and clearly marked. Control of site entry and exit will be established before the project begins.

Employee and authorized personnel will enter the containment / restricted areas through a worker site egress and exit site which must be at a DECON site located at a convenient entry and exit point to building areas. Anyone who enters a work area must read this plan and will sign an entry log upon entry and exit. All pertinent information -- like the abatement plan --- will be posted at this entrance and exit site.

Prior to entering the work area, personnel will read and become familiar with all posted regulations, personal protection requirements and emergency procedures. A sign-off sheet will be used to acknowledge that these procedures and regulations have been received and understood by all personnel.

Prior to entry, personnel will remove street clothing and put on respiratory protection, clean coveralls, head coverings and foot coverings. Hard hats will be worn at all times. At least two sets of disposable coveralls shall be worn when inside the restricted work area.

Clean respirators and protective clothing will be provided and utilized by every person entering the work area. Personnel in designated personal protective clothing will then proceed to the work area.

Before leaving the work area, personnel will remove any gross contamination from the outside of the respirators, their boots, and other protective clothing by vacuuming themselves off with the HEPA vacuum. Personnel will proceed to peel off at least the outer protective disposable suit and place it into a properly labeled disposal barrel located near the designated exit site. The contractor must provide a shower, and its use is mandatory. All protective equipment, and other contaminated equipment will be placed into labeled containers or plastic bags while still inside the restricted zones or containments. Equipment that is to be removed from the hazard zones shall be contained or bagged as described, or it shall at a minimum be wet wiped down or HEPA vacuumed prior to exiting the contained lead work areas.

All wastewater from showering and other waters used for cleaning must be tested for disposal. It is, therefore, required that all water from cleaning or DECON operations be stored in an onsite container(s).

Water for emergency eyewash and drinking shall, also, be provided at the decontamination site.

ABATEMENT PROCEDURES:

Initially all dust, dirt, debris, and loose paint must be cleaned up in the work areas. This must be done using local HEPA exhaust saws or drills or other such equipment. The abatement contractor has the option of removing back the paint (total removal) from all sites of cutting. It is anticipated that there will be metal that must be torch cut, which will require total paint abatement. Paint can be removed using a variety of methods as already described in the SCOPE section. This can be accomplished using approved chemical strippers – caustic paint removers – or the abatement contractor can abrasively remove the paint by using grinders, needle guns, or even dry / wet blasting.

There will be at least a lead restricted zone around all sites of paint scrape, paint chip and dust clean up, HEPA assisted needle gunning, HEPA assisted grinding, HEPA assisted cold cutting, or chemical stripping extending out fifty feet (50') or as far as practical. The abatement contractor may also make the rooms the abatement zone or area. Total containment with negative air pressure is not required for this type of paint removal.

However, as stated earlier, if the abatement contractor chooses to use any other method for removing lead paint or lead dust and debris that could generate lead in air concentrations; then those types of operations must take place in a totally contained enclosure. Such operations include, but are not restricted to cutting, sawing, grinding or open abrasive blasting on metal coated with lead / heavy based paint or any other surface coated with dust or debris that contains heavy metals.

Total containment means that there must be an enclosure established with critical barriers covering all openings to the outside environment. Negative air pressure must be established and maintained throughout all totally contained abatement work. Such enclosures are generally constructed with temporary framing using at least one layer of 6-mil poly sheeting enclosing the areas of abatement.

All lead / heavy metals abatement activities – whether in fully contained enclosures or just in restricted areas – must take place using wet methods. Wet methods is described as constant misting with water to keep emissions to a minimum.

There shall be no visible emissions from any lead remediation work. Hand methods shall be used to remove the loose and flaking paint chips on those surfaces that are specified for dismantling and cleaning. The abatement contractor may use power tools (like rotary saws, needle guns), and other power equipment to remove the painted surfaces. All paint chipping, cleaning and scraping must / shall be done in such a manner as to preclude any possible emissions of lead dust. The contractor shall keep the dust down to bare minimum levels. Once removed, the immediate areas

inside the containment shall be cleaned up by HEPA vacuuming and wet wiping. The abatement contractor must spray water mist to keep dust down, and HEPA vacuum up dust and any loose debris from the catchment tarps or the poly that shall be placed on the floor during scraping and demolition to catch debris. Six-mil poly sheeting or some form of tarp must be positioned directly beneath all scrape work to catch lead chips or dust from getting on the soil or flooring if appropriate. The abatement contractor shall not use dry sweeping to clean up any loose leaded debris.

Any catchment whether outside or inside must also extend out a minimum of ten (10') feet beyond any areas that is being worked on.

All paint flakes, and other debris that is generated from these operations shall be lightly wet wiped up by hand or HEPA vacuumed and placed into a clearly labeled hazardous waste container. All lead paint chips, dust and debris are most probably a RCRA hazardous waste.

The abatement contractor shall ensure that all areas of heavy metal work are thoroughly clean free of dust and paint chips following removal, wiping, and demolition work.

JOB MEDICAL & TRAINING:

All personnel engaged in lead abatement or who may be exposed to lead in air shall supply the contracting officer with the appropriate paperwork to show lead hazard within the past year. This means that for both paint removal (scraping / demolition) and cleanup activities certified personnel are required for both types of "lead abatement".

All persons who may be exposed to lead shall be given a comprehensive physical as required in the lead standard. This physical shall include a base line lead in blood test to prove that blood lead levels are less than 25 ug of lead per 100 grams of whole blood.

INTERFACE OF CONSTRUCTION TRADES:

Air monitoring and wipe testing will be conducted throughout the abatement. Air samples will be conducted by a full-time employee of ESS under the direct guidance of the project Certified Lead Inspector Assessor.

Engineering controls will be established and maintained to control lead dust: including the establishment and maintenance of the lead control area, decontamination system and continuous misting and HEPA vacuuming by experienced, trained, certified abatement personnel from the abatement contractor.

All abatement workers shall have attended an approved lead hazardous class within the past year -- they must be certified lead abatement workers.

All other trades personnel will be excluded from the work area until the Lead Inspector Assessor gives final clearance for the area to be reoccupied without respiratory protection and the engineering controls have been demobilized.

AIR & ENVIRONMENT MONITORING PLAN:

Sampling of airborne concentrations of lead dust will be performed in accordance with 29 CFR 1926.62. Air monitoring will be conducted by the designated competent person / lead monitoring technician under direct supervision from ESS. The other metals will be monitored for, but it is not anticipated that there will be significant exposure from those metals (cadmium and chromium).

Based on the parameters of the contract, there shall be baseline wipe taken at these sites.

Area monitoring will be conducted each shift during the abatement process at the designated limits of the control areas. Personal samples will be collected for those workers who are anticipated to be at the greatest risk of exposure as determined by the Lead Inspector/Assessor. Air samples will be taken on at least 25% of the work crew or a minimum of 2 persons; whichever is greater, during a work shift. If the quantity of airborne lead dust monitored at the designated limits at any time exceeds 30 ug/M^3 all work will be stopped and the Lead Inspector/Assessor shall be immediately called to direct correction of the conditions causing the increased levels and notify the abatement contractor, and the property representative. The limits for the other metals are 2.5 ug/M^3 for cadmium and 10 ug/M^3 for chromium. The Lead Inspector/Assessor shall review the sampling data taken during that day to determine if conditions require any further change in work methods. Work shall resume when approval is given by the competent person. If adjacent areas are contaminated, the areas will be cleaned, monitored and visually inspected. The Lead Inspector/Assessor shall comply with the H.U.D. and D.H.S. Guidelines, and require that contaminated sites be cleaned free of lead below 10 micrograms per square foot of horizontal non porous surface, and less than 100 micrograms per square foot for window sills. There are no legal wipe criteria for cadmium or chromium, but the contractor will assume that wipe testing limits must be 20 X lower for cadmium and 5 X lower for chromium. The results from the air monitoring, and wipe testing will be submitted to the consultant and the districts representative.

The competent person will conduct a thorough visual inspection before there is any final clearing of the hazard or restricted zones. Once the criteria for visual inspection have been satisfied, final clearance wipe samples will be taken and analyzed. The criteria for clearance testing are identical to that requirement that have been discussed for contaminated sites in the previous paragraph.

Cleaning will continue, if necessary, until this clearance criterion is met. The barriers and signs establishing the containment will not be removed until this final visual clearance criterion has been met.

Air / wipe sampling and collection and analysis will be conducted by or under the direction of a Lead Inspector/Assessor from ESS. Samples shall be submitted to a certified laboratory for instrumental analysis via AA Spectroscopy.

DISPOSAL PLAN:

Suspect lead containing paint residues will be tested to determine whether it is hazardous waste. All suspect hazardous paint chips, dust and other generated waste shall be tested by the STLC leaching test procedure for lead, chromium and cadmium content prior to disposal.

All waste generated from this work shall be treated as hazardous waste until S.T.L.C. results indicate otherwise. Contractors through ESS shall determine if the materials are common construction debris or if they are lead hazardous waste. The contractor is responsible for any disposal of all waste --- whether common construction debris or RCRA hazardous waste (the paint chips and dust from the abatement process).

Small lead contaminated hazardous waste including: water, scrap, debris, bags, containers, equipment, and clothing which may produce airborne concentrations of lead dust will be collected and placed into USDOT approved drums for disposal. Each drum will be properly labeled to identify the type of waste and the date the drum was filled.

A Uniform Hazardous Waste Manifest for the small debris from paint chip scraping / abatement work will be obtained and properly filled out, by adhering to the following procedures: At the start of the project, the empty container must be in good condition, empty, lockable and have a valid

state certification. If the container fails the inspection, the deficiency must be corrected or another container obtained.

The abatement contractor shall give all appropriate waste documentation to the district's consultant.

When the container is approved, the entity in charge of the manifest will begin a manifest and hold it for up to 90 days. The abatement contractor will provide information such as job site, contract number and the ultimate disposal site. The container will be marked with the current date as the accumulation start date. Waste may not be stored in an accumulation area for more than 90 days. Other container markings must be in place as required by law.

Lead waste (paint dust and chips and lead tainted remover) will be properly packaged and loaded into the container, which will be locked at all times except during loading or inspection. RCRA lead waste shall go in DOT approve barrels to be transported by the abatement contractor's approved hazardous waste hauler. Containerized waste will be loaded into an enclosed truck for transport. The enclosed cargo area of the truck will be lined with 6-mil poly sheeting to prevent contamination from leaking or spilled containers.

The personnel loading the lead containing waste will wear protective equipment including overalls, head and foot, coverings, gloves and a respirator.

Upon reaching the landfill, the truck will approach the dump location as closely as possible for unloading of the lead waste material. The containers will be inspected, as each is unloaded. Material in damaged containers will be properly repackaged. The personnel unloading the truck and the landfill personnel will wear protective equipment. Following removal of waste, the cargo area of the truck will be decontaminated using HEPA vacuums and wet wiping techniques. This material will be bagged and wrapped in bundles for disposal. Personnel will remove their disposable protective equipment and wrap it in poly to be disposed of at the same time.

FIRE AND MEDICAL EMERGENCY RESPONSE PLAN:

Each day a tailgate safety meeting shall be held outside of the containment areas for all assigned personnel prior to the start of work. All personnel will be made aware of the site address and the location of any existing on-site fire alarms and the location of the nearest telephone. This information will also be posted at the on-site notice posting board located at the entrance to any asbestos/lead paint removal control area along with the phone numbers for police, fire, ambulance, and the name and location of the nearest emergency medical facility. This information must be provided by the abatement contractor in the abatement contractor's submittal package prior to any work.

In the event of a medical emergency within the control area, the sick or injured person will be decontaminated before removal if the nature of the illness or injury is not life threatening or will not be exacerbated by the decontamination process. If the illness or injury is life threatening or is likely to be made worse by the decontamination process, then the ill or injured person will be removed immediately without regard to decontamination and medical attention summoned. Illness and/or injuries occurring on the job will be promptly and thoroughly investigated.

In the event of fire, the first person to notice the fire shall alert others within the control area and immediately evacuate. The fire alarm, if present, will be activated and the fire department will be called from the nearest safe phone.

A complete first aid kit will be kept on-site for minor injuries.



John S. Jones
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CAL/OSHA DOSH Certificate Number 16-5690
Environmental Science Services

CDPH I/A #4810

09/01/22

LODI MIDDLE SCHOOL HVAC REPLACEMENT PROJECT

MANDATORY PRE-BID WALK & SITE VISIT

DATE: Thursday, September 29, 2022 @ 10:00 AM AT LODI MIDDLE SCHOOL, 945 s. Ham Lane, Lodi, CA 95242

SIGN-IN SHEET

"Please leave your business card also"

CONTRACTOR / COMPANY (PRINT)	PHONE / EMAIL ADDRESS (PRINT)
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Tyler Armstrong / Quality Air Services	510-728-7700 ChaseContracting@yahoo.com
Champion Industrial / Garry Thompson	(209) 652-1952 gthompson@championindustrial.com
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CONTRACTOR / COMPANY (PRINT)

PHONE / EMAIL ADDRESS (PRINT)

Menghetti Construction
Harold Williams
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DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS, 2019 CBC

Application Number: 02-120272	School Name: Lodi Middle School	School District: Lodi Unified School District
DSA File Number: 39-50	Increment Number:	Date Created: 2022-06-30 19:23:19

2019 CBC

IMPORTANT: This form is only a summary list of structural tests and some of the special inspections required for the project. Generally, the structural tests and special inspections noted on this form are those that will be performed by the Geotechnical Engineer of Record, Laboratory of Record, or Special Inspector. The actual complete test and inspection program must be performed as detailed on the DSA approved documents. The appendix at the bottom of this form identifies work NOT subject to DSA requirements for special inspection or structural testing. The project inspector is responsible for providing inspection of all facets of construction, including but not limited to, special inspections not listed on this form such as structural wood framing, high-load wood diaphragms, cold-formed steel framing, anchorage of non-structural components, etc., per Title 24, Part 2, Chapter 17A (2019 CBC).

****NOTE:** Undefined section and table references found in this document are from the CBC, or California Building Code.

KEY TO COLUMNS

1. TYPE	2. PERFORMED BY
Continuous – Indicates that a continuous special inspection is required	GE – Indicates that the special inspection shall be performed by a registered geotechnical engineer or his or her authorized representative.
Periodic – Indicates that a periodic special inspection is required	LOR – Indicates that the test or special inspection shall be performed by a testing laboratory accepted in the DSA Laboratory Evaluation and Acceptance (LEA) Program. See CAC Section 4-335.
Test – Indicates that a test is required	PI – Indicates that the special inspection may be performed by a project inspector when specifically approved by DSA.
	SI – Indicates that the special inspection shall be performed by an appropriately qualified/approved special inspector.

DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Concrete), 2019 CBC

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

Application Number: 02-120272	School Name: Lodi Middle School	School District: Lodi Unified School District
DSA File Number: 39-50	Increment Number:	Date Created: 2022-06-30 19:23:19

7. CAST-IN-PLACE CONCRETE				
	Test or Special Inspection	Type	Performed By	Code References and Notes
Material Verification and Testing:				
<input type="checkbox"/>	a. Verify use of required design mix.	Periodic	SI	Table 1705A.3 Item 5, 1910A.1.
<input type="checkbox"/>	b. Identify, sample, and test reinforcing steel.	Test	LOR	1910A.2; ACI 318-14 Section 26.6.1.2; DSA IR 17-10. (See Appendix for exemptions.)
<input type="checkbox"/>	c. During concrete placement, fabricate specimens for strength tests, perform slump and air content tests, and determine the temperature of the concrete.	Test	LOR	Table 1705A.3 Item 6; ACI 318-14 Sections 26.5 & 26.12.
<input type="checkbox"/>	d. Test concrete (f'_c).	Test	LOR	1905A.1.15; ACI 318-14 Section 26.12.
Inspection:				
<input type="checkbox"/>	e. Batch plant inspection:	See Notes	SI	Default of 'Continuous' per 1705A.3.3. If approved by DSA, batch plant inspection may be reduced to 'Periodic' subject to requirements in Section 1705A.3.3.1, or eliminated per 1705A.3.3.2. (See Appendix for exemptions.)
<input type="checkbox"/>	f. Welding of reinforcing steel.	Provide special inspection per STEEL, Category 19.1(d) & (e) and/or 19.2(g) & (h) below.		

8. PRESTRESSED / POST-TENSIONED CONCRETE (in addition to Cast-in-Place Concrete tests and inspections):
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DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Concrete), 2019 CBC

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

Application Number: 02-120272	School Name: Lodi Middle School	School District: Lodi Unified School District
DSA File Number: 39-50	Increment Number:	Date Created: 2022-06-30 19:23:19

	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/>	a. Sample and test prestressing tendons and anchorages.	Test	LOR	1705A.3.4, 1910A.3
<input type="checkbox"/>	b. Inspect placement of prestressing tendons.	Periodic	SI	1705A.3.4, Table 1705A.3 Items 1 & 9.
<input type="checkbox"/>	c. Verify in-situ concrete strength prior to stressing of post-tensioning tendons.	Periodic	SI	Table 1705A.3 Item 11. Special inspector to verify specified concrete strength test prior to stressing.
<input type="checkbox"/>	d. Inspect application of post-tensioning or prestressing forces and grouting of bonded prestressing tendons.	Continuous	SI	1705A.3.4, Table 1705A.3 Item 9; ACI 318-14 Section 26.13

	9. PRECAST CONCRETE (in addition to Cast-in-Place Concrete tests and inspections):			
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/>	a. Inspect fabrication of precast concrete members.	Continuous	SI	ACI 318-14 Section 26.13.
<input type="checkbox"/>	b. Inspect erection of precast concrete members.	Periodic	SI*	Table 1705A.3 Item 10. * May be performed by PI when specifically approved by DSA.

	10. SHOTCRETE (in addition to Cast-in-Place Concrete tests and inspections):			
	Test or Special Inspection	Type	Performed By	Code References and Notes

DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS (Concrete), 2019 CBC

Table 1705A.3; ACI 318-14 Sections 26.12 & 26.13

Application Number: 02-120272	School Name: Lodi Middle School	School District: Lodi Unified School District
DSA File Number: 39-50	Increment Number:	Date Created: 2022-06-30 19:23:19

<input type="checkbox"/>	a. Inspect shotcrete placement for proper application techniques.	Continuous	SI	1705A.19, Table 1705A.3 Item 7, 1908A.6, 1908A.7, 1908A.8, 1908A.9, 1908A.11, 1908A.12. See ACI 506.2-13 Section 3.4, ACI 506R-16.
<input type="checkbox"/>	b. Sample and test shotcrete (f'_c).	Test	LOR	1908A.5, 1908A.10.

	11. POST-INSTALLED ANCHORS:			
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input checked="" type="checkbox"/>	a. Inspect installation of post-installed anchors	See Notes	SI*	1617A.1.19, Table 1705A.3 Item 4a (Continuous) & 4b (Periodic), 1705A.3.8 (See Appendix for exemptions). ACI 318-14 Sections 17.8 & 26.13. * May be performed by the project inspector when specifically approved by DSA.
<input checked="" type="checkbox"/>	b. Test post-installed anchors.	Test	LOR	1910A.5. (See Appendix for exemptions.)

	12. OTHER CONCRETE:			
	Test or Special Inspection	Type	Performed By	Code References and Notes
<input type="checkbox"/>	a.			

Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

Application Number: 02-120272	School Name: Lodi Middle School	School District: Lodi Unified School District
DSA File Number: 39-50	Increment Number:	Date Created: 2022-06-30 19:23:19

Exempt items given in DSA IR A-22 or the 2019 CBC (including DSA amendments) and those items identified below with a check mark by the design professional are NOT subject to DSA requirements for the structural tests / special inspections noted. **Items marked as exempt shall be identified on the approved construction documents.** The project inspector shall verify all construction complies with the approved construction documents.

	SOILS:
<input type="checkbox"/>	1. Deep foundations acting as a cantilever footing designed based on minimum allowable pressures per CBC Table 1806A.2 and having no geotechnical report for the following cases: A) free standing sign or scoreboard, B) cell or antenna towers and poles less than 35'-0" tall (e.g., lighting poles, flag poles, poles supporting open mesh fences, etc.), C) single-story structure with dead load less than 5 psf (e.g., open fabric shade structure), or D) covered walkway structure with an apex height less than 10'-0" above adjacent grade.
<input type="checkbox"/>	2. Shallow foundations, etc. are exempt from special inspections and testing by a Geotechnical Engineer for the following cases: A) buildings without a geotechnical report and meeting the exception item #1 criteria in CBC Section 1803A.2 supported by native soil (any excavation depth) or fill soil (not exceeding 12" depth per CBC Section 1804A.6), B) soil scarification/recompaction not exceeding 12" depth, C) native or fill soil supporting exterior non-structural flatwork (e.g., sidewalks, site concrete ramps, site stairs, parking lots, driveways, etc.), D) unpaved landscaping and playground areas, or E) utility trench backfill.

	CONCRETE/MASONRY:
<input type="checkbox"/>	1. Post-installed anchors for the following: A) exempt non-structural components (e.g., mechanical, electrical, plumbing equipment - see item 7 for "Welding") given in CBC Section 1617A.1.18 (which replaces ASCE 7-16, Section 13.1.4) or B) interior nonstructural wall partitions meeting criteria listed in exempt item 3 for "Welding."
<input type="checkbox"/>	2. Concrete batch plant inspection is not required for items given in CBC Section 1705A.3.3.2 subject to the requirements and limitations in that section.

Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

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<input type="checkbox"/>	3. Non-bearing non-shear masonry walls may be exempt from certain DSA masonry testing and special inspection items as allowed per DSA IR 21-1.16. Refer to construction documents for specific exemptions accordingly for each applicable wall condition.
<input type="checkbox"/>	4. Epoxy shear dowels in site flatwork and/or other non-structural concrete.
<input type="checkbox"/>	5. Testing of reinforcing bars is not required for items given in CBC Section 1910A.2 subject to the requirements and limitations in that section.

	Welding:
<input type="checkbox"/>	1. Solid-clad and open-mesh gates with maximum leaf span or rolling section for rolling gates of 10' and apex height less than 8'-0" above lowest adjacent grade. When located above circulation or occupied space below, these gates are not located within 1.5x gate/fence height (max 8'-0") to the edge of floor or roof.
<input type="checkbox"/>	2. Handrails, guardrails, and modular or relocatable ramps associated with walking surfaces less than 30" above adjacent grade (excluding post base connections per the 'Exception' language in Section 1705A.2.1); fillet welds shall not be ground flush.
<input type="checkbox"/>	3. Non-structural interior cold-formed steel framing spanning less than 15'-0", such as in interior partitions, interior soffits, etc. supporting only self weight and light-weight finishes or adhered tile, masonry, stone, or terra cotta veneer no more than 5/8" thickness and apex less than 20'-0" in height and not over an exit way. Maximum tributary load to a member shall not exceed the equivalent of that occurring from a 10'x10' opening in a 15' tall wall for a header or king stud.
<input type="checkbox"/>	4. Manufactured support frames and curbs using hot rolled or cold-formed steel (i.e., light gauge) for mechanical, electrical, or plumbing equipment weighing less than 2000# (equipment only) (connections of such frames to superstructure elements using welding will require special inspection as noted in selected item(s) for Sections 19, 19.1 and/or 19.2 of listing above).
<input type="checkbox"/>	5. Manufactured components (e.g., Tolco, B-Line, Afcon, etc.) for mechanical, electrical, or plumbing hanger support and bracing (connections of such components to superstructure elements using welding will require special inspection as noted in selected item(s) for Sections 19, 19.1 and/or 19.2 of listing above).

Appendix: Work Exempt from DSA Requirements for Structural Tests / Special Inspections

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<input type="checkbox"/>	6. TV Brackets, projector mounts with a valid listing (see DSA IR A-5) and recreational equipment (e.g., playground structures, basketball backstops, etc.) (connections of such elements to superstructure elements using welding will require special inspection as noted in selected item(s) for section 19, 19.1 and/or 19.2 located in the Steel/Aluminum category).
<input type="checkbox"/>	7. Any support for exempt non-structural components given in CBC Section 1617A.1.18 (which replaces ASCE 7-16, Section 13.1.4) meeting the following: A) when supported on a floor/roof, <400# and resulting composite center of mass (including component's center of mass) $\leq 4'$ above supporting floor/roof, B) when hung from a wall or roof/floor, <20# for discrete units or <5 plf for distributed systems.

DSA 103-19: LISTING OF STRUCTURAL TESTS & SPECIAL INSPECTIONS(SIGNATURE), 2019 CBC

Application Number:
02-120272
DSA File Number:
39-50

School Name:
Lodi Middle School
Increment Number:

School District:
Lodi Unified School District
Date Created:
2022-06-30 19:23:19

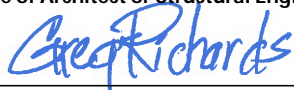
Name of Architect or Engineer in general responsible charge:

Stephen Henry

Name of Structural Engineer (When structural design has been delegated):

Gregory I. Richards

Signature of Architect or Structural Engineer:



Date:

8/26/2022

Note: To facilitate DSA electronic mark-ups and identification stamp application, DSA recommends against using secured electronic or digital signatures.

DSA STAMP

IDENTIFICATION STAMP
DIV. OF THE STATE ARCHITECT
APP: 02-120272 INC:
REVIEWED FOR
SS ☒ FLS ☒ ACS ☒
DATE: 09/12/2022

DSA 103-19: LIST OF REQUIRED VERIFIED REPORTS, CBC 2019

Application Number: 02-120272	School Name: Lodi Middle School	School District: Lodi Unified School District
DSA File Number: 39-50	Increment Number:	Date Created: 2022-06-30 19:23:19

1. Post-installed Anchors: Laboratory Verified Report Form DSA 291, or, for independently contracting SI, Special Inspection Verified Report Form DSA 292
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