ADDENDUM NO. 2

BUILDING "R" TOILET ROOMS RENOVATION

NTD #2007-SH29-01

DSA A-#3-113596 FILE #19-C5

Pasadena City College

1570 E. Colorado Blvd.
Pasadena, California 91106

November 21, 2011

NTD ARCHITECTURE
955 Overland Court, Suite 100
San Dimas, CA 91773

_____

Jay R. Tittle, #C-12955

1. PART 1 - GENERAL

1.1. The following revisions and/or clarifications shall be made to the Bidding Requirements and Contract Documents. Revise and amend the Documents for the above named project in accordance with this Addendum. The bid shall reflect these addendum changes and each bidder shall make reference in their bid to this addendum.

1.2. All Bidding Requirements and Contract Documents shall apply to this addendum as originally indicated in the applicable portions of the contract documents, unless otherwise modified by this addendum.

1.2.1. Previous Addendum #1 issued November 10, 2010.

1.3. The week of June 11, 2012 is exam week and no construction noise is allowed. An alternative work schedule for that week can be accommodated with college approval.

1.4. Job Walk Sign-In Sheet is attached for reference.

2. PART 2 - PROJECT MANUALS

2.1. REVISIONS TO BIDDING/CONTRACT REQUIREMENTS

2.1.1. Bidding and Contract Documents:

2.1.1.1. Revision to Notice to Contractors Calling for Bids, page 5, Documents Accompanying Bid: Delete "(6) documentation verifying previous DSA approved projects; (7) Insurance Qualification Form; and (8) Insurance Cost Worksheet and Article 6".

2.1.1.2. Clarification to Information for Bidders, page 11, Item 20: See attached Outreach District Map.

2.1.1.3. Revision to Bid Form, page 16, Item 3.0, Documents Accompanying Bid: Delete "(6) documentation verifying previous DSA approved projects; (7) Insurance Qualification Form; and (8) Insurance Cost Worksheet and Article 6".

2.1.1.4. Revision to Supplementary General Conditions, page 110, Item B.: liquidated damages is Seven Hundred and Fifty Dollars ($750).

2.1.1.5. Revision to Supplementary General Conditions, page 110, Item C: The General Contractor will be responsible to supply an Asbestos Abatement Contractor to satisfy all of the requirements for the Asbestos Abatement Specifications. Lobby abatement includes removal of ceiling tile, grid, light fixtures, and fireproofing, see specifications for restroom abatement. SCAQMD Emergency Notification to be submitted in lieu of 10 Day Notification. Schedule for abatement is as follows:

Board Approval – 12/14/11
Notice To Proceed – 12/15/11
Commence Abatement – 12/19/11
Complete Abatement – 1/8/12

2.1.1.6. Clarification to Hazardous Material Abatement Bid Package: Base bid shall be the abatement of the restroom and coffered ceiling area. Alternate bid shall be the abatement to include removal of the entire elevator lobby ceiling tile and grid system, 4'-0" x 4'-0" light fixtures, fireproofing, etc. Replace ceiling with 2'-0" x 2'-0" Tegular ceiling tile and grid system and 2'-0" x 4'-0" light fixtures. Refer to the attached revised Abatement specifications and Drawings AD2-A05 and AD2-A06.

2.2. REVISIONS TO SPECIFICATIONS

2.2.1. Section 03 01 30 - Concrete Patching and Resurfacing:

2.2.1.1. Clarification to flooring demolition in existing elevator lobby, foyer and classroom: Mechanically remove existing adhesive bond breaking materials to clean, sound, stabile concrete by shotblasting or grinding. Perform this work outside of regular college classroom hours and provide noise and dust control measures. Reference Specification Section 03 01 30, Paragraph 3.1 for additional information.

2.2.2. Section 07 81 16 - Cementitious Fireproofing:

2.2.2.1. Add this specification for reference to new fireproofing to replace those abated. Provide fireproofing to maintain 2-hour fire resistance.

2.2.3. Section 09 51 00 - Acoustical Ceilings:

2.2.3.1. Revise to include 2'-0" x 2'-0" ceiling tile and grid, style to match existing w/ tegular edge, for reference to replacement of existing ceiling tile and grid at elevator lobby and foyer.

3. PART 3 - DRAWINGS

3.1. ARCHITECTURAL DRAWINGS

3.1.1. Drawing D2.1 – Modify as follows:

3.1.1.1. Clarification to remove all terrazzo wall finish, including coved portions and those on walls to remain, inside existing Men's restroom.

3.1.1.2. Revision to provide new fireproofing to replace existing at abatement area, restroom, elevator lobby and foyer. New fireproofing to maintain a 2-hour fire-resistance rating. Refer to attached Specification Section 07 81 16.

3.1.1.3. Revision to remove all existing ceiling tile and grid, and 4'-0" x 4'-0" light fixtures at elevator lobby and foyer.

3.1.2. Drawing A3.1 – Modify as follows:

3.1.2.1. Revision to change Wall Type "3" to "4" at new wall along Grid 9 and south of Grid B. Provide P-1/P-3 paint at foyer side, with three (3) colors to match existing adjacent Foyer walls.

3.1.3. Drawing A4.1 – Modify as follows:

3.1.3.1. Revision to provide 2'-0" x 2'-0" Tegular ceiling tile and grid, and 2'-0" x 4'-0" light fixtures at elevator lobby and foyer.

3.1.4. Drawing A7.1 – Modify as follows:

3.1.4.1. Clarification to Interior Elevation 4: Graphic hatching only partially represent wall surfaces to receive ceramic tile finish. All walls in Women's Toilet Room 103, both new and existing, are to receive ceramic tile finish per Finish Schedule on A8.1.

3.1.5. Drawing A8.1 - Modify as follows:

3.1.5.1. Revisions to Finish Schedule: Revise Foyer Room 101 as follows:

3.1.5.1.1. Wall - East – Fin.: “P3”

3.1.6. Drawing AD1-A01 - Modify as follows:

3.1.6.1. Revise to include in this contract the drinking fountain, with its associated furring wall, railing and related work, by Grid 10 and north of existing stairs. Refer to Drawing A3.1.

3.1.7. Drawings AD2-A01 - Add as follows:

3.1.7.1. Add this attached drawing for reference to signage detail 9/A8.1.

3.1.8. Drawings AD2-A02 - Add as follows:

3.1.8.1. Add this attached drawing for reference to signage details 9 & 12/A8.1.

3.1.9. Drawings AD2-A03 - Add as follows:

3.1.9.1. Add this attached drawing for reference to exit signage detail on Sheet A3.1. Refer to detail 9/A8.1 for additional information.

3.1.10. Drawings AD2-A04 - Add as follows:

3.1.10.1. Add this attached drawings for reference to accessible entry signage at Grids 10/A and 9/C per drawing A3.1. Refer to detail 9/A8.1 for additional information.

END OF ADDENDUM #2 INCLUDING REFERENCED ENCLOSURES

Enclosures:
(Note that these are listed here for clarity only. Refer to narrative above for detailed descriptions of revisions related to these enclosures.)

I) New Project Manual Documents Issued:
   a) Job Walk Sign-In Sheet
   b) Outreach District Map
   c) Sect 07 81 16 – Cementitious Fireproofing (7 pages)
   d) Abatement Specifications (22 pages)

II) New Drawings Issued:
   a) Drawing AD2-A01, Room Signage Clarification.
   b) Drawing AD2-A02, Restroom Signage Clarification.
   c) Drawing AD2-A03, Exit Signage Clarification.
   d) Drawing AD2-A04, Exterior Signage.
   e) Drawing AD2-A05, Demolition Ceiling Plan Clarification.
   f) Drawing AD2-A06, Ceiling Plan Clarification.

End of Enclosures

SECTION 07 81 16

CEMENTITIOUS FIREPROOFING

1. PART 1 - GENERAL

1.1. SECTION INCLUDES

1.1.1. Cementitious fireproofing, spray applied.

1.1.2. Repair and replacement of existing fireproofing.

1.2. REFERENCES

1.2.1. ASTM E 84, Test for Surface Burning Characteristics of Building Materials.

1.2.2. ASTM E 119 - Fire Tests of Building Construction and Materials.

1.2.3. ASTM E 605 - Thickness and Density of Sprayed Fire - Resistive Material Applied to Structural Members.

1.2.4. ASTM E 736 - Cohesion/Adhesion of Sprayed Fire - Resistive Materials Applied to Structural Members.

1.2.5. ASTM E 759, Effect of Deflection of Sprayed Fire-Resistive Materials Applied to Structural Members.

1.2.6. ASTM E 760 - Effect of Impact on Bonding of Sprayed Fire - Resistive Material Applied to Structural Members.

1.2.7. ASTM E 761, Compressive Strength of Sprayed Fire-Resistive Materials Applied to Structural Members.

1.2.8. ASTM E 859, Air Erosion of Sprayed Fire-Resistive Materials Applied to Structural Members.

1.2.9. ASTM E 937, Corrosion of Steel by Sprayed Fire-Resistive Materials Applied to Structural Members.

1.2.10. Underwriters Laboratories, Inc. (UL) Fire Resistance Directory (latest edition), CALV, and Test Report File R4339.

1.2.11. Test Methods for Abrasion and Impact Resistance developed by the City of San Francisco, Bureau of Building Inspection.

1.2.12. Uniform Building Code (UBC) Standard No. 7-6, Thickness and Density Determination for Spray-Applied Fireproofing.

1.2.13. ICBO Evaluation Service Research Report No. 4607, current edition.

1.3. SYSTEM DESCRIPTION

1.3.1. Cementitious fireproofing system to provide a fire rated assembly for various building components as scheduled.

1.3.2. Base all thicknesses and ratings on unrestrained conditions, unless noted otherwise.

1.3.3. Fireproofing thicknesses may be calculated by formula per CBC/IBC Chapter 7 and as specified.

1.4. SUBMITTALS

1.4.1. Submit in accordance with Section 01 33 00 Submittal Procedures.

1.4.2. Materials List:

1.4.2.1. Submit manufacturer's list of materials and instructions for bonding and applying sprayed fireproofing. Materials list shall certify materials as asbestos free.

1.4.3. Provide Fireproofing schedule, showing calculation method and thickness of required fireproofing for each member, by type and size classification.

1.4.3.1. Obtain approval of jurisdictional authority of fireproofing schedule.

1.4.4. Certification:

1.4.4.1. Provide independent test reports confirming that materials meet or exceed performance criteria specified.

1.5. QUALITY ASSURANCE

1.5.1. Applicator shall be acceptable to sprayed fireproofing material manufacturer.

1.5.2. Regulatory Requirements:

1.5.2.1. Underwriters Laboratories, Inc: Products, execution, and thickness shall conform to approved UL designs as published in UL Fire Resistance Directory.

1.5.2.2. Conform to current edition of CBC/IBC requirements, including methods for determining thickness as defined in CBC/IBC Chapter 7.

1.6. REGULATORY REQUIREMENTS

1.6.1. Conform to Chapter 7, CBC/IBC.

1.6.2. Comply with requirements of ICBO/ICC ES Report Number 4607.

1.7. DELIVERY, STORAGE, AND HANDLING

1.7.1. Deliver materials in original unopened packages bearing the name of the manufacturer, the brand and proper Underwriters Laboratories, Inc., the fireproofing as cementitious with applicable approved UL designs.

1.7.2. Keep materials dry, off the ground, undercover, and away from all damp surfaces until ready for use. Bags exposed to water before use shall be discarded. Rotate stock material and use before expiration date.

1.8. ENVIRONMENTAL REQUIREMENTS

1.8.1. Maintain a minimum air and substrate temperature of 40 degrees F (4 degrees C) for 24 hours before and a minimum of 24 hours after application of the fireproofing. Air temperature and available ventilation based on job conditions will determine length of drying time required following initial application of the product.

1.8.2. In areas lacking natural ventilation, provide forced air circulation.

2. PART 2 - PRODUCTS

2.1. CEMENTITIOUS SPRAY APPLIED FIREPROOFING

2.1.1. Basis of Design: Characteristics of specific products manufactured by Grace Construction Products, W.R. Grace & Co. are indicated to establish required level of quality and performance. The Architect will consider requests for substitutions, under the provisions of Section 01 25 00.

2.1.2. Type: Spray Applied Cementitious Fireproofing:

2.1.2.1. Use of spray applied mineral fiber fireproofing not acceptable.

2.1.3. Series: Monokote MK6/CBF or MK6/ED.

2.1.3.1. For repair of existing fireproofing, W.R.Grace RetroGard RG is acceptable for applications approved by listed ES report.

2.1.4. Product Characteristics:

2.1.4.1. Dry Density: The minimum average field density shall be a minimum of 15 pcf, or as required by referenced standard, measured and reported in accordance with ASTM E 605 and CBC/IBC Std. 7-6.

2.1.4.2. Deflection: No cracks or delamination when tested in accordance with ASTM E 759.

2.1.4.3. Impact Resistance: No cracks or delamination when tested in accordance with ASTM E 760.

2.1.4.4. Bond Strength: Minimum average test value of 200 psf, with minimum individual test value of 150 psi, when tested in accordance with ASTM E 736.

2.1.4.5. Air Erosion:

2.1.4.5.1. Maximum 0.005 gm./ft.^{2} allowable weight loss when tested in accordance with ASTM E 859, as applied material, over a 24 hour period.

2.1.4.5.2. No continued erosion after 4 hours at air speed of 2500 fpm per ASTM E 859.

2.1.4.6. Compression: 10 percent maximum deformation when subjected to 1200 psf compressive forces in accordance with ASTM E 761.

2.1.4.7. Corrosion Resistance: No evidence of corrosion on steel when tested in accordance with ASTM E 937.

2.1.4.8. Abrasion: Maximum fireproofing material loss due to abrasion shall be no more than 15 cm^3 when subjected to test methods developed by the City of San Francisco, Bureau of Building Inspection and as required by the Department of the Navy, Naval Facilities Engineering Command (NAVFAC).

2.1.4.9. Impact Penetration: Maximum fireproofing material loss shall be no more than 6 cm^3 when subjected to impact penetration test methods developed by the City of San Francisco, Bureau of Building Inspection and as required by the Department of the Navy, Naval Facilities Engineering Command (NAVFAC).

2.1.5. Fire/Life Safety Criteria:

2.1.5.1. Surface Burning Characteristics: Maximum flame spread value 0, Maximum smoke developed value 0 per ASTM E84.

2.1.5.2. Combustibility: Maximum total heat release of 20 MJ/m^2 at 600 seconds after insertion at radiant heat flux of 75 kw/m^2 per ASTM E 1354, horizontal orientation.

2.1.5.3. Asbestos Containing Material: Provide material free of asbestos containing materials.

2.1.5.4. Top Coat: Where required by code or by governing agency, provide gypsum/sand protective top coat finish for impact and abrasion resistance.

2.1.5.5. Regulatory Approval:

2.1.5.5.1. Comply with requirements of ICBO ES Report Number 4607, current edition.

2.1.5.5.2. Test and report in accordance with ASTM E 119, and comply with listing requirements described in ULI Fire Resistance Directory, current edition.

2.1.5.6. Mold Resistance: Provide integral mold inhibitor, indicating resistance to mold growth per ASTM G 21.

2.2. FIREPROOFING SUPPORT MATERIALS

2.2.1. Where required by test or application, provide expanded steel lath, standard galvanized finish, 3.4 lb per square yard, with all required clips, corner beads, fasteners, and other accessories.

2.2.2. Provide Monokote Spatterkote where required for adhesion or at cellular decking applications.

2.2.3. Provide primers, bonding agents, and all other accessory products required for a complete system.

2.3. WATER

2.3.1. Provide clean, fresh and potable water, suitable for domestic consumption and free from such amounts of mineral or organic substances as would adversely affect characteristics of the fireproofing material.

2.4. OTHER MATERIALS

2.4.1. Provide all other materials, not specifically described but required for complete and proper installation of this work, as selected by the contractor and subject to the approval of the Architect.

3. PART 3 - EXECUTION

3.1. SURFACE CONDITIONS

3.1.1. Inspection:

3.1.1.1. Prior to work of this section, carefully inspect previously installed work. Verify all such work is complete to the point where this installation may properly commence.

3.1.1.2. Verify that work of this section may be installed in strict accordance with the original design, all pertinent codes and regulations, and all pertinent portions of the referenced standards.

3.1.1.2.1. Confirm compatibility of surfaces to receive fireproofing material, including fireproofing bond and adhesion characteristics where applied to prime painted steel members per ASTM E 736.

3.1.1.2.2. Prior to application of fireproofing, verify that clips, hangers, supports, sleeves and other items required to penetrate fireproofing are in place.

3.1.1.2.3. Verify ducts, piping, equipment, or other items which would interfere with application of fireproofing materials are not positioned until fireproofing work is complete.

3.1.1.3. In the event of discrepancy, immediately notify the Architect.

3.1.1.4. Do not proceed with installation in areas of discrepancy until all such discrepancies have been fully resolved.

3.1.2. Preparation:

3.1.2.1. Clean substrate of dirt, dust, grease, oil, loose material, or other matter which may effect bond of fireproofing.

3.1.2.2. Protect adjacent surfaces and equipment from damage by overspray, fall - out, and dusting.

3.1.2.3. Close off and seal ductwork in areas where fireproofing is being applied.

3.2. APPLICATION

3.2.1. Apply fireproofing in sufficient thickness to achieve rating, with as many passes necessary to cover with monolithic blanket of uniform density, thickness, and texture required to achieve required fire resistance rating.

3.2.2. Apply fireproofing as required to restore damaged or removed fireproofing to its original thickness.

3.2.3. Where installed on fireproofed structural elements, apply fireproofing to clips, supports, and braces as required to maintain original fireproofing thickness.

3.2.4. Where angles, unistrut and similar building system support assemblies are attached to fireproofed beam or columns, apply fireproofing to support assembly a minimum of 18 inches on each side of beam or column. Apply fireproofing at same thickness as beam or column,

3.2.5. Apply fireproofing in strict accordance with manufacturer's instructions including use of approved lathing and supporting materials.

3.2.6. Apply top coat material as required by code and listing approvals.

3.2.7. Collection and re-use of overspray material is prohibited.

3.2.8. Install fireproofing only after completion of roofing system over metal deck without concrete fill.

3.2.9. Install fireproofing only after placing concrete fill at roof and floor decking.

3.2.10. Prohibit roof traffic over roof decks during application of fireproofing and until material is dry.

3.3. FIELD QUALITY CONTROL

3.3.1. Field inspection and testing will be performed under provisions of Section 01 45 29.

3.3.1.1. Owners testing laboratory shall test density and thickness to establish required fire resistance rating .

3.3.2. Inspections will be performed to verify compliance with requirements.

3.3.3. Reinspect the installed fireproofing for integrity of fire protection, prior to concealment of work.

3.3.4. Inspect members for complete coverage. After completion of other work, correct damaged areas.

3.3.5. After installation of all attached components that damage or remove fireproofing, apply hand patching of equal thickness of fireproofing material.

3.3.6. Correct unacceptable work and provide further inspection to verify compliance with requirements.

3.4. SCHEDULE

3.4.1. As specified in this Section, provide complete schedule of all applications and fireproofing applications in the following or similar format. Include fireproofing assemblies as shown on drawings and all fireproofing selections as required to comply with applicable regulations

3.4.2. Beams supporting Metal Deck, Beams, trusses and similar structural frame elements supporting metal deck (Example)

3.4.2.1. Deck Type: Metal decking, rigid insulation, unrestrained condition.

3.4.2.2. Design Number: ICBO Report 4607, Table VI

3.4.2.3. Rating: 1 hour.

3.4.2.4 Schedule:

Thickness (Inches)

Member Size	W/D Ratio	1 Hour
WF 6 x 16 min	0.66	0-3/4
WF 8 x 10	0.37-0.66	1

3.4.3. Wide Flange Columns: (Example)

3.4.3.1. Application: Structural Frame, Secondary framing.

3.4.3.2. Design Number: ICBO report 4607, Table 1.

3.4.3.3. Rating: 1 hour.

3.4.3.4. Schedule:

Thickness (Inches)

Member Size	W/D Ratio	1 Hour
WF 6 x 9 min	0.33-0.56	1-1/8

3.4.4. Hollow Shapes/Tube Columns: Example

3.4.4.1. Application: Structural Frame, Secondary framing.

3.4.4.2. Design Number: ICBO Report 4607, Table 1.

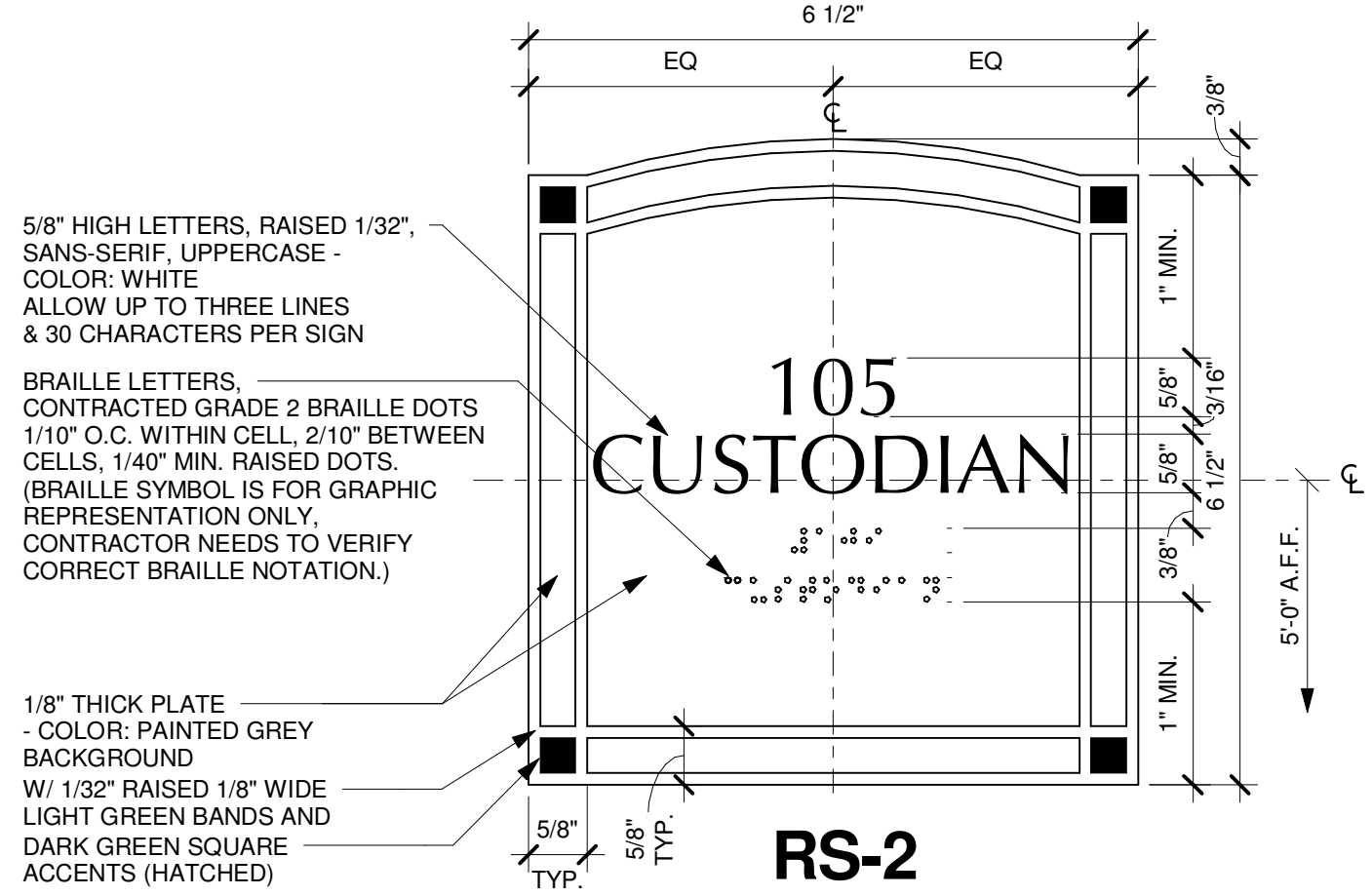
3.4.4.3. Rating: 1 Hour.

3.4.4.4. Schedule:

Member Size	Thickness (Inches) 1 Hour
4 x 4 x 1/4	7/8
4 x 4 x 3/8	5/8

3.4.4.5. Provide fireproofing at all other steel structural framing members in compliance with ICBO report 4607, thickness as required to provide one hour rating in buildings designated as one hour fire resistive or rated.

END OF SECTION



NOTE:

1. CHARACTERS, SYMBOLS AND THEIR BACKGROUND SHALL HAVE A NONGLARE FINISH. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND PER CBC 1117.B.5.2.
2. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH-TO-HEIGHT RATIO OF BETWEEN 3:5 AND 1:1 AND A STROKE WIDTH-TO-HEIGHT RATIO BETWEEN 1:5 AND 1:10 PER CBC 1117.B.5.3.

K:\Pasadena_CC\2007-SH29-01\Common\Central\PCC-R-RR-ARCH10-CENTRAL.rvt

11/21/2011 12:37:03 PM

LICENSED ARCHITECT
JAY R TITTLE
NO.C12955
EXP 11-30-11
STATE OF CALIFORNIA

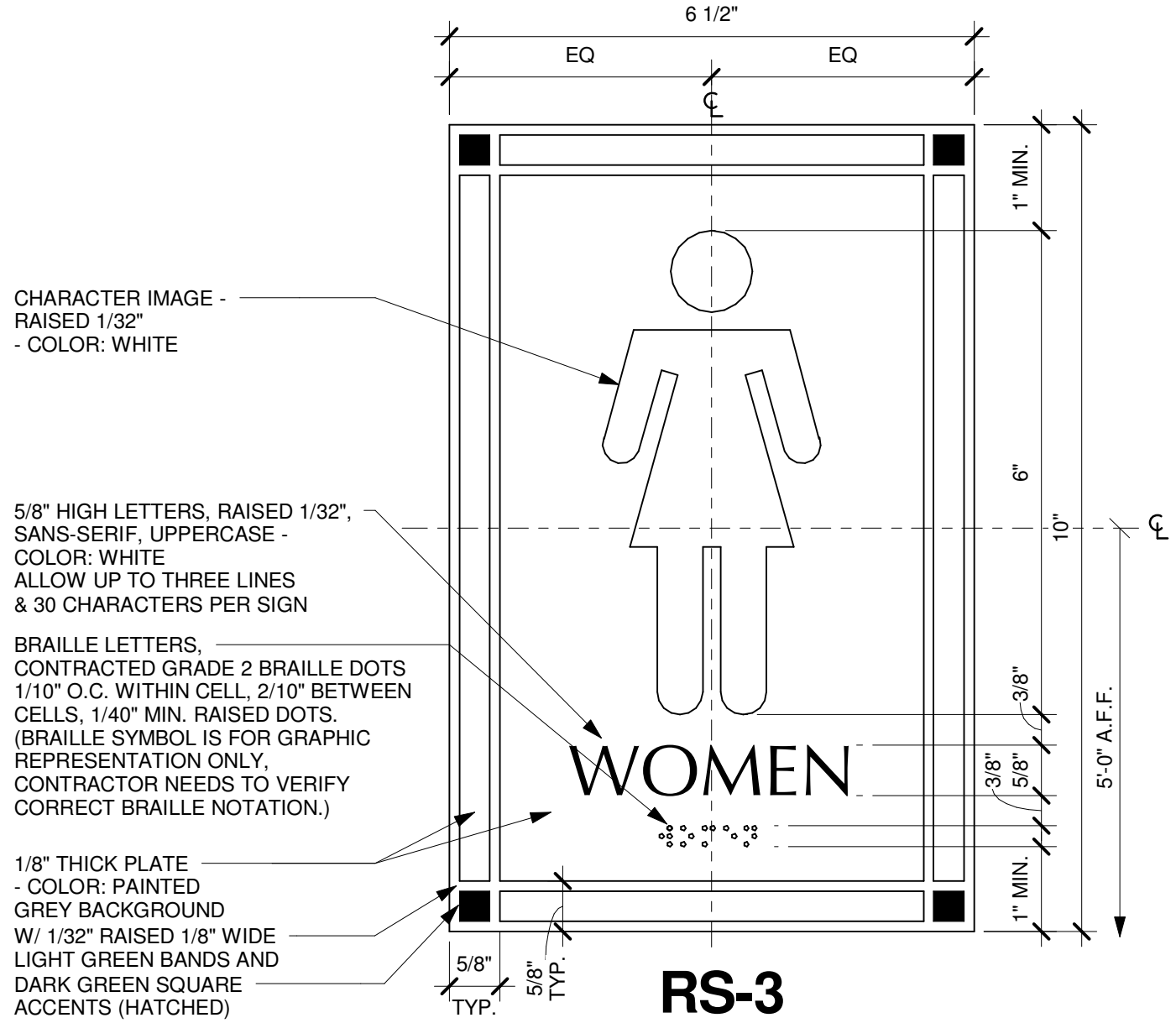
TITLE: ROOM SIGNAGE CLARIFICATION

BLDG "R" TOILET ROOMS RENOVATION
PASADENA CITY COLLEGE

APPL. NO: 03-113596 | FILE NO: 19-C5

N T D A R C H I T E C T U R E
955 Overland Court, Suite 100, San Dimas, California 91773
San Diego • Los Angeles • Auburn • Visalia • Salinas • Phoenix • Tucson

SHEET REF:	9/A8.1
DOC. REF:	
CONTR. REF:	
DATE:	11/14/11
JOB NO:	2007-SH29-01
DRAWING:	AD2-A01



RS-3

NOTE:

1. CHARACTERS, SYMBOLS AND THEIR BACKGROUND SHALL HAVE A NONGLARE FINISH. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND PER CBC 1117.B.5.2.
2. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH-TO-HEIGHT RATIO OF BETWEEN 3:5 AND 1:1 AND A STROKE WIDTH-TO-HEIGHT RATIO BETWEEN 1:5 AND 1:10 PER CBC 1117.B.5.3.

K:\Pasadena_CC\2007-SH29-01\Common\Central\PCC-R-RR-ARCH10-CENTRAL.rvt

11/21/2011 12:37:22 PM

LICENSED ARCHITECT
JAY R TITTLE
NO.C12955
EXP 11-30-11
STATE OF CALIFORNIA

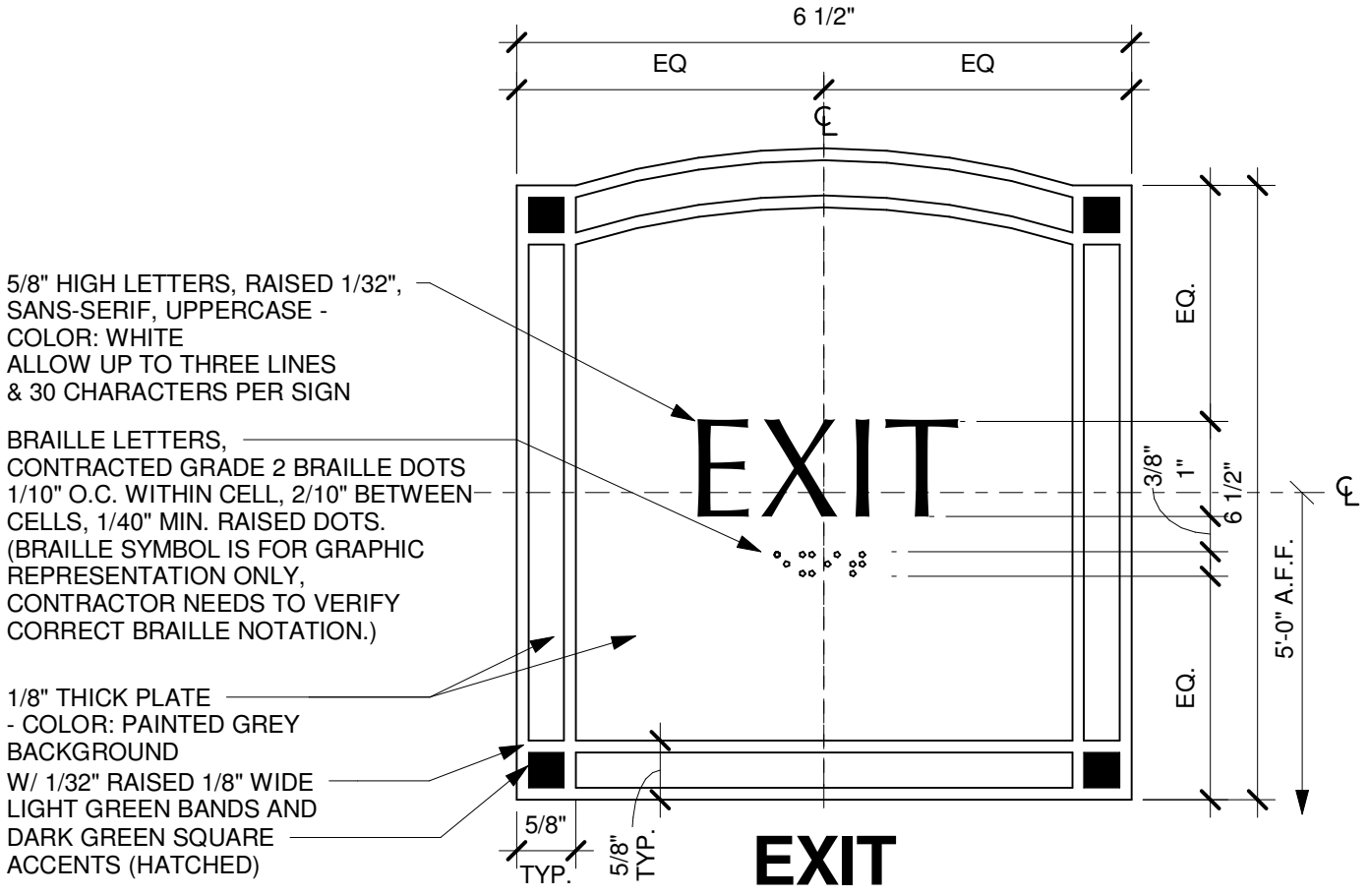
TITLE: RESTROOM SIGNAGE CLARIFICATION

BLDG "R" TOILET ROOMS RENOVATION
PASADENA CITY COLLEGE

APPL. NO: 03-113596 | FILE NO: 19-C5

N T D A R C H I T E C T U R E
955 Overland Court, Suite 100, San Dimas, California 91773
San Diego • Los Angeles • Auburn • Visalia • Salinas • Phoenix • Tucson

SHEET REF:	9 & 12/A8.1
DOC. REF:	
CONTR. REF:	
DATE:	11/14/11
JOB NO:	2007-SH29-01
DRAWING:	AD2-A02



NOTE:
1. CHARACTERS, SYMBOLS AND THEIR BACKGROUND SHALL HAVE A NONGLARE FINISH. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND PER CBC 1117.B.5.2.
2. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH-TO-HEIGHT RATIO OF BETWEEN 3:5 AND 1:1 AND A STROKE WIDTH-TO-HEIGHT RATIO BETWEEN 1:5 AND 1:10 PER CBC 1117.B.5.3.

K:\Pasadena_CC\2007-SH29-01\Common\Central\PCC-R-RR-ARCH10-CENTRAL.rvt

11/21/2011 12:37:43 PM

LICENSED ARCHITECT
JAY R TITTLE
NO.C12955
EXP 11-30-11
STATE OF CALIFORNIA

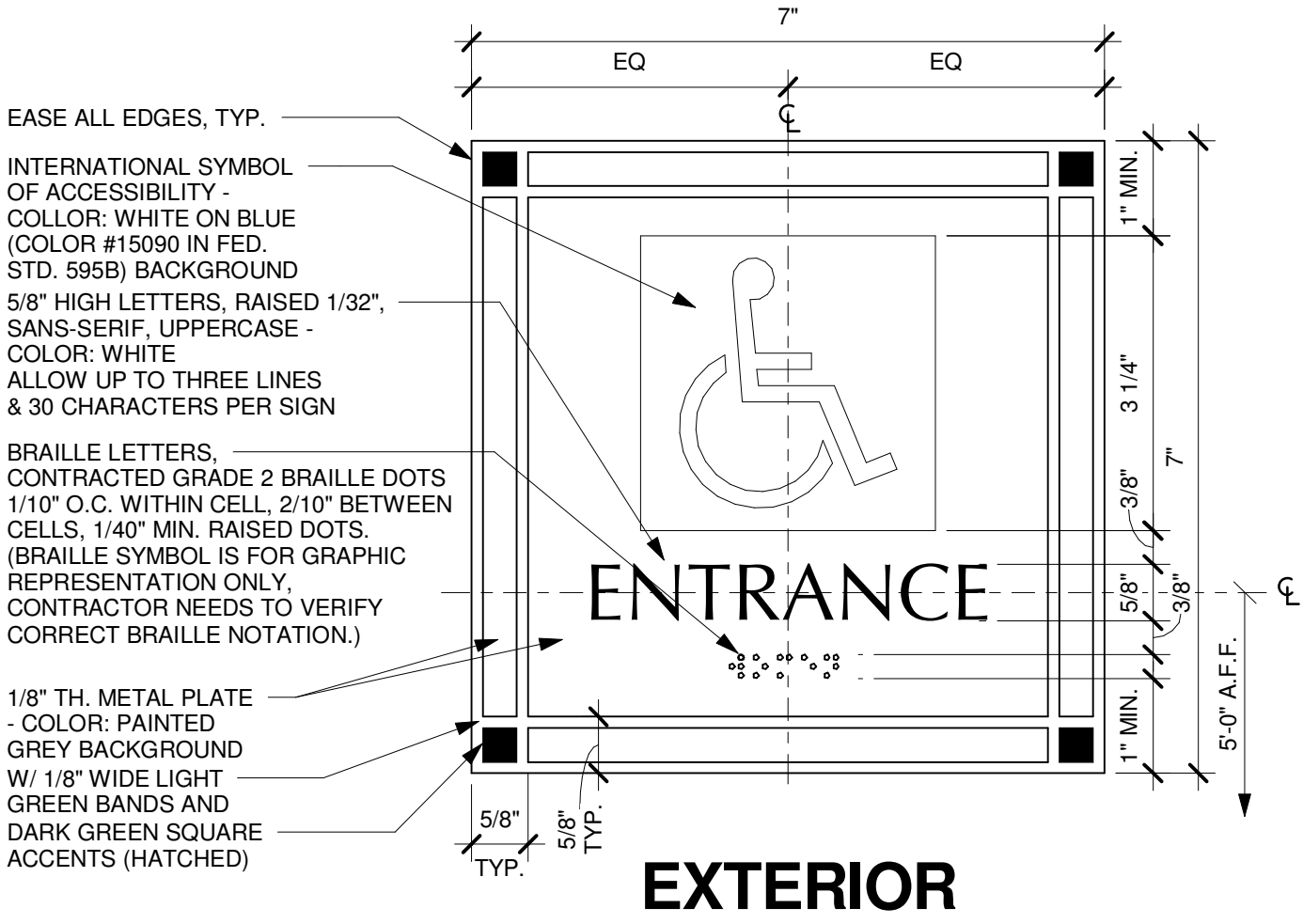
TITLE: EXIT SIGNAGE CLARIFICATION

BLDG "R" TOILET ROOMS RENOVATION
PASADENA CITY COLLEGE

APPL. NO: 03-113596 | FILE NO: 19-C5

N T D A R C H I T E C T U R E
955 Overland Court, Suite 100, San Dimas, California 91773
San Diego • Los Angeles • Auburn • Visalia • Salinas • Phoenix • Tucson

SHEET REF:	A/A3.1 & 9/A8.1
DOC. REF:	
CONTR. REF:	
DATE:	11/14/11
JOB NO:	2007-SH29-01
DRAWING:	AD2-A03



EXTERIOR

NOTE:
1. CHARACTERS, SYMBOLS AND THEIR BACKGROUND SHALL HAVE A NONGLARE FINISH. CHARACTERS AND SYMBOLS SHALL CONTRAST WITH THEIR BACKGROUND, EITHER LIGHT ON A DARK BACKGROUND OR DARK ON A LIGHT BACKGROUND PER CBC 1117.B.5.2.
2. LETTERS AND NUMBERS ON SIGNS SHALL HAVE A WIDTH-TO-HEIGHT RATIO OF BETWEEN 3:5 AND 1:1 AND A STROKE WIDTH-TO-HEIGHT RATIO BETWEEN 1:5 AND 1:10 PER CBC 1117.B.5.3.

K:\Pasadena_CC\2007-SH29-01\Common\Central\PCC-R-RR-ARCH10-CENTRAL.rvt

11/21/2011 12:35:19 PM

LICENSED ARCHITECT
JAY R TITTLE
NO.C12955
EXP 11-30-11
STATE OF CALIFORNIA

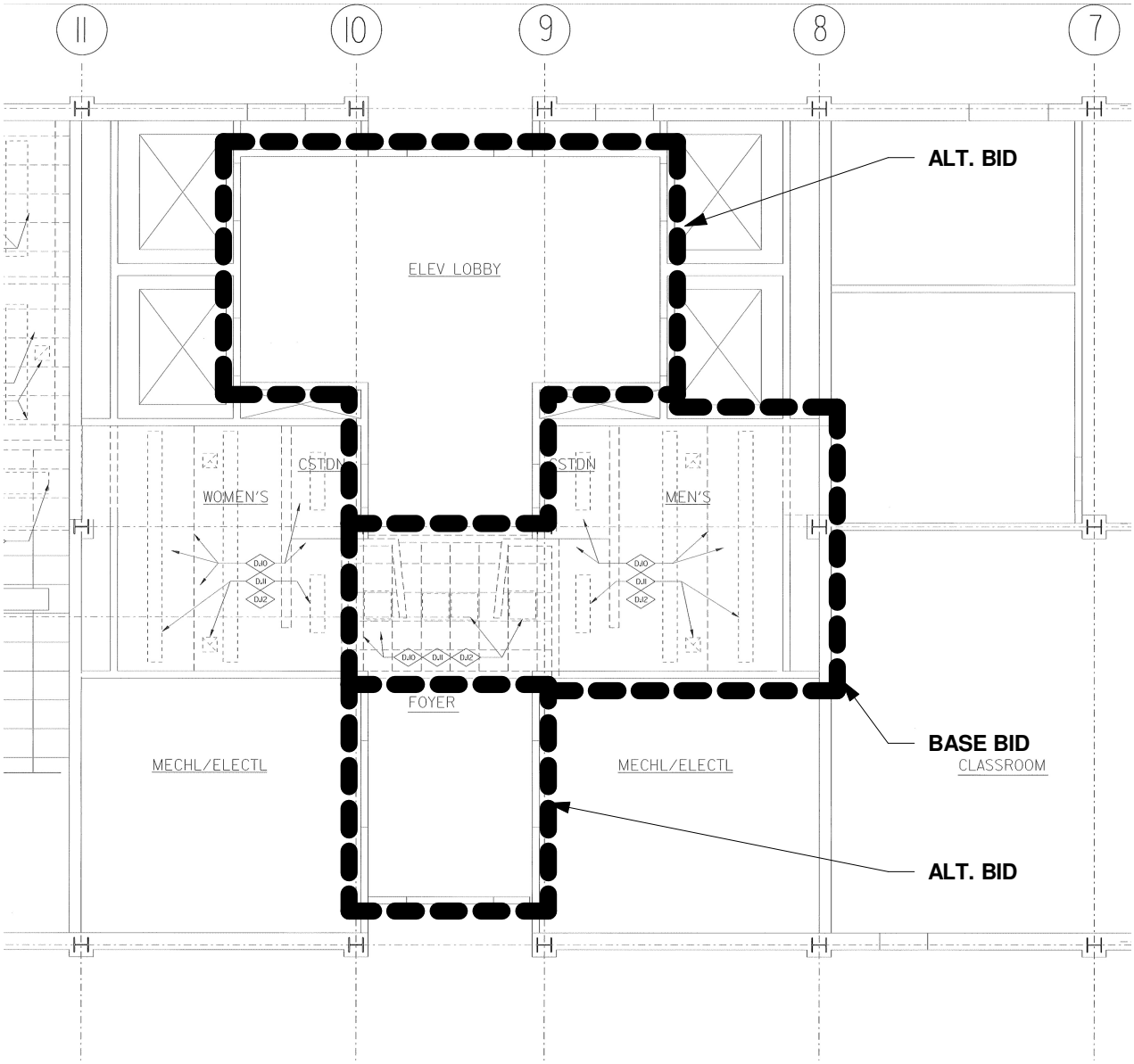
TITLE: EXTERIOR SIGNAGE

BLDG "R" TOILET ROOMS RENOVATION
PASADENA CITY COLLEGE

APPL. NO: 03-113596 | FILE NO: 19-C5

N T D A R C H I T E C T U R E
955 Overland Court, Suite 100, San Dimas, California 91773
San Diego • Los Angeles • Auburn • Visalia • Salinas • Phoenix • Tucson

SHEET REF:	9/A8.1
DOC. REF:	
CONTR. REF:	
DATE:	11/14/11
JOB NO:	2007-SH29-01
DRAWING:	AD2-A04



K:\Pasadena_CC\2007-SH29-01\Common\Central\PCC-R-RR-ARCH10-CENTRAL.rvt

11/21/2011 1:22:41 PM

LICENSED ARCHITECT
JAY R TITTLE
NO.C12955
EXP 11-30-11
STATE OF CALIFORNIA

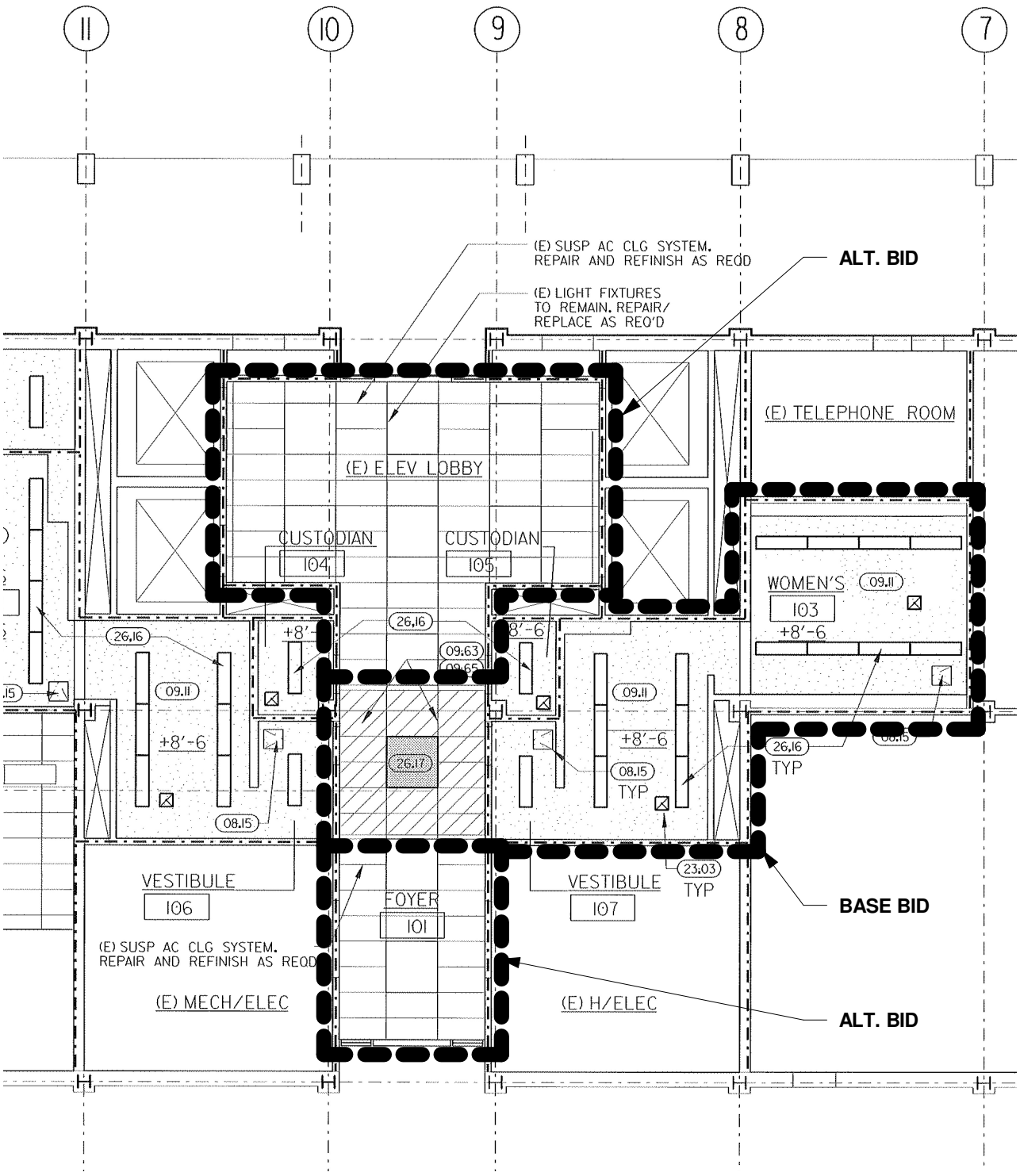
TITLE: DEMOLITION CEILING PLAN CLARIFICATION

BLDG "R" TOILET ROOMS RENOVATION
PASADENA CITY COLLEGE

APPL. NO: 03-113596 | FILE NO: 19-C5

N T D A R C H I T E C T U R E
955 Overland Court, Suite 100, San Dimas, California 91773
San Diego • Los Angeles • Auburn • Visalia • Salinas • Phoenix • Tucson

SHEET REF:	D4.1
DOC. REF:	
CONTR. REF:	
DATE:	11/21/11
JOB NO:	2007-SH29-01
DRAWING:	AD2-A05



K:\Pasadena_CC\2007-SH29-01\Common\Central\PCC-R-RR-ARCH10-CENTRAL.rvt

11/21/2011 1:18:37 PM

LICENSED ARCHITECT
JAY R TITTLE
NO.C12955
EXP 11-30-11
STATE OF CALIFORNIA

TITLE: CEILING PLAN CLARIFICATION

BLDG "R" TOILET ROOMS RENOVATION
PASADENA CITY COLLEGE

APPL. NO: 03-113596 | FILE NO: 19-C5

N T D A R C H I T E C T U R E
955 Overland Court, Suite 100, San Dimas, California 91773
San Diego • Los Angeles • Auburn • Visalia • Salinas • Phoenix • Tucson

SHEET REF:	A4.1
DOC. REF:	
CONTR. REF:	
DATE:	11/21/11
JOB NO:	2007-SH29-01
DRAWING:	AD2-A06

CF ENVIRONMENTAL, INC.

HAZARDOUS MATERIALS
ABATEMENT SPECIFICATIONS

BUILDING 'R' RESTROOM
UPGRADE PROJECT

for

PASADENA CITY COLLEGE
1570 EAST COLORADO BOULEVARD
PASADENA, CA 91106

November - 2011

4017 ALCOVE AVENUE, STUDIO CITY, CA 91604
(818) 762-0960 ■ FAX: (818) 762-6062 ■ cfenviro@roadrunner.com

TABLE OF CONTENTS

ABATEMENT SPECIFICATIONS

HAZARDOUS AND NON-HAZARDOUS MATERIAL REMOVAL

BUILDING "R" RESTROOM RENOVATION

PART 1 - GENERAL CONDITIONS

1.01 REQUIREMENTS

A. Contractor is to supply labor, materials, equipment, notifications, insurance, disposal and related work to remove hazardous and non-hazardous materials as described.

B. Contract is bid on a 'Lump Sum' for Base Bid and Alternates as described below for materials identified and as listed in Part 5 - Scope of Work Listing.

BASE BID - Men's Restroom, Custodian Room and Coffered Ceiling in Hallway

Complete removal of all hazardous and non-hazardous materials above and below the ceiling, inside wall cavities and interstitial spaces within the Building R Restroom Renovation Project as identified and outlined in the Construction Specifications and Drawings. These materials shall include but are not limited to sprayed fireproofing, ceiling tile and grid, lighting fixtures, pipe and fitting insulation, PCB Ballasts, Fluorescent Tubes, and contaminated demolition materials including plaster ceilings and walls, conduit, hanger wires, black iron, and all other installed components or installed materials affected by this demolition/renovation project.

All surfaces remaining in the demolition area shall be cleaned and decontaminated including but not limited to metal duct work, terrazzo walls and floor. linoleum sheeting, structural members, vent and drain lines, steam supply and return lines, chiller lines, and any and all remaining utilities and service items or components.

Work area is inclusive of the existing Men's Restroom and Custodian Room on the East side of the 1st Floor Lobby and Coffered Hallway Ceiling between existing Restrooms.

ALTERNATE BID 1 - Men's Restroom, Custodian Room, Coffered Ceiling, North Elevator Lobby, and South Entry Foyer (North and South Lobby)

Complete removal of all hazardous and non-hazardous materials above and below the ceiling, inside wall cavities and interstitial spaces within the proposed Building R Restroom Renovation Project as outlined in the Construction Specifications and Drawings. These materials shall include but are not limited to sprayed fireproofing, ceiling tile and grid, lighting fixtures, pipe and fitting insulation, PCB Ballasts, Fluorescent Tubes, and contaminated demolition materials including plaster ceilings and walls, conduit, hanger wires, black iron, and all other installed components or installed materials affected by this demolition/renovation project.

All surfaces remaining in the demolition area shall be cleaned and decontaminated including but not limited to metal duct work, terrazzo walls and floor. linoleum sheeting, structural members, vent and drain lines, steam supply and return lines, chiller lines, and any and all remaining utilities and service items or components.

Work areas include Men's Restroom, Custodian Room, Coffered Hallway Ceiling between Restrooms, North Elevator Lobby, and South Entry Foyer

C. No replacement of removed materials is required of the asbestos abatement contractor.

D. Contractor has the responsibility to verify the type, size, location, and difficulty of work prior to submitting a bid.

E. Prior to commencing work, the Contractor shall supply to the Owner documentation of all permits and/or notifications to regulatory agencies relating to this project.

F. Prior to commencing work, the Contractor shall supply proof that Contractor is:

1. Certified for Asbestos Work by the State Contractors Licensing Board;
2. Registered for Asbestos Work with the California Division of Safety and Health;
3. Accredited to perform response actions under the Asbestos Hazard Emergency Response Act;
4. Workers assigned to this project must be:
   a. Accredited as an Asbestos Worker under the Asbestos Hazard Emergency Response Act. At least one employee on each shift shall be currently accredited as a Supervisor and shall have successfully completed in the last 12 months a course of instruction meeting the requirement for "Competent Person"(29 CFR 1926.1101).
   b. All workers who perform the demolition/renovation work for lead abatement and */* or site preparation (including clean up) described herein shall be State Certified Workers with current State issued "certificates" and have prior training in lead abatement as required by Title 17, CCR, Division 1 Chapter 8, §35009 & §35001 as well as other required training including safe and proper use of equipment. Contractor is to have a State Certified Lead Supervisor with a current State issued "certificate" referenced above by Title 17 CCR, as part of his staff during the lead paint abatement and site preparation. The State Certified Lead Supervisor will be designated the "competent person". A "competent person" is a DHS "certified supervisor" who is capable of identifying existing and predictable lead hazards in the surroundings or working conditions who has authorization to take prompt corrective measures to eliminate them.

G. All work shall be done in accordance with applicable regulations, including but not limited to 29 CFR 1926.1101, 40 CFR 763 (AHERA), 40 CFR Part 61 (NESHAPS), SCAQMD Rule 1403, and 8 CCR 1529 (CAL/OSHA Asbestos), Cal/OSHA Construction and Safety Orders, Lead Section *1532.1,* including mandatory and non-mandatory appendices as Applicable.

H. Contractor has the responsibility to verify the type, size, location, and difficulty of access to the identified materials by attending a mandatory job walk, as scheduled by PCC, prior to submitting bid. Quantities listed in this Specification are estimated.

1. By submitting a bid, the contractor acknowledges that he has investigated the site and satisfied as to:
   a. the conditions affecting the work, including, but not limited to, physical conditions of the site that might bear upon access to identified hazardous and non-hazardous materials identified in Part 5 Scope of Work Listing, handling and storage of tools and materials, access to water, electric or other utilities, or other conditions that otherwise could affect performance of required activities;
   b. the character and quantity of all surface and subsurface materials or obstacles to be encountered insofar as this information is reasonably ascertainable from an inspection of the site, including exploratory work done by the PCC or designated consultants, as well as information within this specification and other construction documents. Any failure by the contractor to acquaint himself/herself with available information will not relieve him/her for the responsibility of estimating properly the difficulty or cost of successfully performing the work, PCC is not responsible for any conclusions or interpretations made by the Contractor on the basis of the information made available by PCC or designated consultants.
2. Discrepancies:
   a. Should a bidder find discrepancies in the specification, or should he/she be in doubt as the meaning of intent of any part thereof, he must request, in writing, clarification from PCC no later than 5 days prior to the bid opening. Discrepancies with regard to conflicts between the contract documents and applicable federal, state or local regulations or requirement shall be included herein. Failure to request such clarification is a waiver to any claim by the bidder for expense made necessary by reason of later interpretation of the documents by PCC.

I. Contractor shall indemnify and hold Pasadena City College (PCC), CF Environmental, Inc. (CFE) , AAA Consultants and Inspections, Inc. harmless for claims, damages, losses, and expenses against including attorney's fees arising out of or resulting from any patent infringement concerning methods, procedures or uses of equipment in relation to the abatement work for this project.

J. Questions concerning this project should be directed in writing to:

Ms. Lori Holzem
Project Manager
Pasadena City College
1570 East Colorado Boulevard
Pasadena, CA 91106

1.02 DESCRIPTION OF WORK

This project requires the removal of hazardous and non-hazardous materials including but not limited to sprayed fireproofing, ceiling tile and grid, lighting fixtures, pipe and fitting insulation, PCB Ballasts, Fluorescent Tubes, and contaminated demolition materials including plaster ceilings and walls, conduit, hanger wires, black iron, and all other installed components or installed materials affected by this demolition/renovation project.

All surfaces remaining in the demolition area shall be cleaned and decontaminated including but not limited to metal duct work, terrazzo walls and floor. linoleum sheeting, structural members, vent and drain lines, steam supply and return lines, chiller lines, and any and all remaining utilities and service items or components.

1.03 REFERENCES

A. General - Codes, regulations and references applicable to asbestos abatement work include but are not limited to the following:

1. American National Standards Institute (ANSI) publications;

   Z9.2-79 Fundamentals Governing the Design and Operation of Local Exhaust Systems.

   Z87.1-79 Occupational and Educational Eye and Face Protection.

   Z88.2-80 Practices for Respiratory Protection.

   Z89.1-81 Requirements for Protective Headgear for Industrial Workers.

   Z41-83 Personal Protection - Protective Footwear.

   Z88.6-84 Respiratory Protection - Respiratory Use Physical Qualifications for Personnel.

2. American Society for Testing and Materials (ASTM) publications;

   D1331-56 Surface and Interfacial Tensions of Solutions of Surface Active Agents.

3. Code of Federal Regulations (CFR);

   29 CFR 1910, et al. Occupational Exposure to Asbestos; Final Rule

   29 CFR 1910.20 General Safety and Health Provisions Access to Employee Exposure and Medical Records.

   29 CFR 1910 Subpart I, Personal Protective Equipment.

   29 CFR 1910.145 Specifications for Accident Prevention Signs and Tags.

   29 CFR 1926.1101 Asbestos.

   34 CFR 231 Appendix C, Procedures for Containing and Removing Building Materials Containing Asbestos.

   40 CFR 61 Subpart A and Subpart M, USEPA, National Emission Standards for Hazardous Air (NESHAPS).

4. Compressed Gas Association, Inc.:
   G-7.1 Commodity Specification for Air (1973).

5. National Fire Protection Association (NFPA):
   No. 70.1984 National Electrical Code.

6. UL 586-77 (R1982) Test Performance of High Efficiency Particulate Air Filter Units (June 10, 1977, 5th Ed.; Rev. March 12, 1982).

7. National Institute for Occupation Safety and Health (NIOSH):

N31, 3rd. Ed., Vol. 1, Manual of Analytical Methods, Method 7400 Fibers.

8. U. S. Environmental Protection Agency (USEPA) Documents:

   EPA 530-SW-85-007 Asbestos Waste Management Guidance, May 1985.

   EPA 560/5-85-024 Guidance for Controlling Asbestos-Containing Material in Buildings, June 1985.

   EPA 600/4-85-049 Measuring Airborne Asbestos Following an Abatement Action, November 1985.

   EPA 560 OPTS-86.001 A Guide to Respiratory Protection for the Asbestos Abatement Industry, April 1986.

9. California Code of Regulations (CCR):

   Title 8, Article 2.5 Registration Asbestos-Related Work Section 341.6 through 341.14.

   Title 8, Section 1529 General Industry Safety Orders, Asbestos Regulations.

   Title 22, Division 4, Minimum Standards for Management of Hazardous and Extremely Hazardous Waste.

10. Local Air Pollution Control District Regulations:
    South Coast Air Quality Management District, Rule 1403

1.04 DEFINITIONS

A. The following definitions are specific to Work in this Specification; terms not defined herein shall have the meaning as given in applicable publications and regulations.

1. Abatement: a term of art referring to procedures that can be utilized to control release of hazardous and non-hazardous materials including asbestos, lead, PCBs, and Fluorescent tubes. Includes repair, encapsulation, enclosure, enclosure and/or maintenance and operation.
2. Air Filtration Equipment: A portable air recirculating system equipped with HEPA filtration and used to cleanse air of particulate matter within an abatement area. Air filtration equipment is essentially the same as differential pressure equipment except it recirculates air instead of exhausting it.
3. Airlock: A system for permitting ingress and egress with minimum air movement between a contaminated area and an uncontaminated area.
4. Air Monitoring: The process of measuring the fiber content of a specific volume of air in a stated period of time.
5. Ambient Air Monitoring: Shall mean measurement or determination of airborne asbestos fiber concentrations outside but in the vicinity of the work site.
6. Amended Water: Water to which a surfactant has been added at a concentration of one (1) ounce surfactant to five (5) gallons water.
7. Area Monitoring: Sampling of asbestos fiber concentrations within the asbestos Work Area and outside the asbestos Work Area which is representative of the airborne concentrations of asbestos fibers which may reach the breathing zone.
8. Asbestos: The term asbestos includes chrysotile, amosite, crocidolite, tremolite, anthophyllite, and actinolite.
9. Asbestos-Contaminated Objects: any objects which may be contaminated by asbestos or asbestos-containing material as determined by the Consultant.
10. Asbestos Fibers: This expression refers to asbestos fibers having an aspect ratio of 3:1 and longer than 5 micrometers.
11. Authorized Visitor: The Owner's Representative, and any Representative of a regulatory or other agency having jurisdiction over the project.
12. Barriers or Containment Barriers: shall mean walls, tunnels, or enclosures erected to separate any section of an abatement area from the adjoining non abatement spaces. When required by site conditions barriers shall be constructed of 2' x 4's, 16 " O.C. with minimum 1/2" plywood walls, all seams in plywood shall be sealed airtight with caulking, The inside (work) side of all such barriers shall be covered with two layers of 6-mil poly sheeting. Tunnels and/or separation walls to maintain public access through a work area shall also be considered as part the of these barriers.

13. Baseline or Background Air Monitoring: shall mean a measurement or determination of airborne asbestos fiber concentrations inside the work place and outside the building prior to the start of abatement activities.
14. Ceiling Concentration: An exposure of airborne concentrations of asbestos fibers at any time in excess of 10 fibers per cubic centimeters of air.
15. Certified Clean: shall mean that a work area has no visible signs of fibrous materials or other debris of any kind and does not have levels of airborne fiber above the defined air clearance criteria
16. Clean or Decontaminate: shall mean to make a surface free of all visible and optically-detectable fibers by thoroughly HEPA-vacuuming and wet washing with lint free rags, sponges and/or mops.
17. Clean Room: An uncontaminated area or room which is a part of the Worker decontamination enclosure with provisions for storage of Workers' street clothes and protective equipment.
18. Decontamination Enclosure System: A series of connected chambers, with airtight doorways or a series of off-setting flaps, between any two adjacent chambers, for the decontamination of Workers and of materials and equipment. If off-setting poly flaps are used they shall be a minimum of 6 mil poly sheeting weighted at the bottom to re-establish a seal after entry or exit.
19. Differential Pressure Equipment: A portable local exhaust system equipped with HEPA filtration and capable of maintaining a constant, low velocity air flow into contaminated areas from adjacent uncontaminated areas.
20. Encapsulant (sealant): A liquid material which can be applied to asbestos containing material and which controls the possible release of asbestos fiber from the material either by creating a membrane over the surface (bridging encapsulant) or by penetrating into the material and binding its components together (penetrating encapsulant).
21. Encapsulation: Procedures necessary to apply an encapsulant to asbestos-containing building materials to control the possible release of asbestos fibers into the ambient air.
22. Enclosure: Procedures necessary to enclose completely asbestos containing material behind airtight, impermeable, permanent barriers.
23. Equipment Room: A contaminated area or room which is part of the Worker decontamination unit with provisions for storage of contaminated clothing and equipment.
24. Equipment Decontamination Enclosure: That portion of a decontamination enclosure system designed for controlled transfer of materials and equipment, typically consisting of a wet sponge area, a washroom and a holding area.
25. Excursion Limit: A limit of 1.0 f/cc over a 30-minute sampling period to which employees may not be exposed without appropriate respiratory protection.
26. Final Clean: shall mean that no three dimensional material is visible to the naked eye, there is no visible dust inside the containment, and all residue on the substrate from which the asbestos materials were abated is removed.
27. Friable Asbestos Material: Material that contains more than one tenth percent asbestos by weight and that can be crumbled, pulverized, or reduced to powder by hand pressure when dry.
28. Fixed Louver: A non-operable type louver equipped with a HEPA filter and mounted in the rigid doors or walls of a decontamination enclosure system.
29. Fixed Object: A unit of equipment or furniture in the Work Area which cannot be removed from the Work Area.
30. Glovebag Technique: A method with limited applications for removing small amounts of friable asbestos-containing material from HVAC ducts, short piping runs, valves, joints, elbows, and other non-planar surfaces in a non-contained Work Area. The glovebag typically constructed of 6 mil transparent regulite plastic, two inward projecting longsleeve rubber gloves, one inward projecting waterwand sleeve, an internal tool pouch, and an attached, labeled receptacle for asbestos waste. The glovebag is constructed and installed in such a manner that it surrounds the object or area to be decontaminated and contains asbestos fibers released during the removal process. Workers who are permitted to use the glovebag technique shall be highly trained, experienced, and skilled in this method.

31. HEPA Filter: A high efficiency particulate absolute (HEPA) filter capable of trapping and retaining 99.97 percent of particles (asbestos fibers) greater than 0.3 micrometers in mass median aerodynamic equivalent diameter.
32. HEPA Vacuum Equipment: Vacuuming equipment with a HEPA filter system.
33. Holding Area: A chamber in the equipment decontamination enclosure located between the washroom and an uncontaminated area. The holding area comprises an airlock.
34. Hygienist: For the purposes of this contract the Site Surveillance Technician (CF Environmental, Inc.) will provide on site monitoring services.
35. Isolation Barriers: shall mean the construction of partitions, the placement of solid materials, and the plasticizing of apertures to seal off the work place from surrounding areas and to contain asbestos fibers in the work area.
36. Lockout: shall mean the safe, approved means for shutting down HVAC equipment, electrical panels or breakers, and water so that they cannot be inadvertently turned back on.
37. Log: an official record of all activities that occurred during the project and it shall identify the building owner, agent, contractor, worker, floor number, date, work area, and other relevant information to the project.
38. Mini Enclosure - an enclosed work area of one layer of six mil poly sheeting built inside a larger room. Each mini enclosure shall be constructed in such a manner as to allow for unrestricted access to all asbestos containing materials and capable of maintaining its integrity when placed under negative pressure. All mini enclosures will have a decontamination facilities attached. To be used in glove bag operations or for accessing contaminated areas above ceilings, in attics, or in crawlspaces.
39. Movable Object: A unit of equipment or furniture in the Work Area which can be removed from the Work Area.
40. Non-Friable Asbestos Material: Material that contains asbestos in which the fibers have been locked in by a bonding agent, coating, binder, or other material so that the asbestos is well bound and will not release fibers in excess of the asbestos control limit during any appropriate use, handling, demolition, storage, transportation, processing or disposal.
41. Personnel Monitoring: Sampling of asbestos fiber concentrations within the breathing zone of an asbestos worker. The abatement contractor is responsible for providing the collection and analysis of all personal air samples in accord with the most recent regulations.
42. Plasticize: To cover floor and wall surfaces with plastic sheeting as herein specified.
43. Removal: Procedures necessary to remove asbestos-containing materials from designated areas and to dispose of these materials at an acceptable site.
44. Rigid Doorway: A device to allow ingress or egress from one room to another while permitting minimal air movement between the rooms. Doorway typically consists of a solid panel door, gasketed to prevent air leakage, attached by hinges to a rigid door frame. A lockset is required to secure door in the closed position.
45. Shower Room: A room between the clean room and the equipment room in the Worker decontamination enclosure with hot and cold or warm running water and suitably arranged for complete showering during decontamination. The shower room comprises an airlock between contaminated and clean areas. Shower room and/or decon units shall not be visible to the public.
46. Site Surveillance Technician: a CAL/OSHA certified professional contracted or employed to supervise air monitoring and analysis schemes. This individual is also responsible for recognition of technical deficiencies in Worker protection equipment and procedures during both planning and on-site phases of an abatement project. This individual shall have specialized experience in air sampling for asbestos.
47. Surfactant: A chemical wetting agent added to water to improve penetration.
48. Washroom: A room between the Work Area and the holding area in the equipment decontamination enclosure system. The washroom comprises an airlock.

49. Wet Cleaning: The process of eliminating asbestos contamination from building surfaces and objects by using cloths, mops, or other cleaning tools which have been dampened with water, and by afterwards disposing of these cleaning tools as asbestos-contaminated waste.
50. Work Area: Designated rooms, spaces, or areas of the project in which asbestos abatement actions are to be undertaken or which may become contaminated as a result of such abatement actions. A contained Work Area is a Work Area which has been sealed and equipped with a decontamination enclosure system. A non-contained Work Area is an isolated or controlled-access Work Area which has not been sealed nor equipped with a decontamination enclosure system.
51. Worker Decontamination Enclosure System: That portion of a decontamination enclosure system designed for controlled passage of Workers, and other personnel and authorized visitors, typically consisting of a clean room, a shower room, and an equipment room.

1.05 SUBMITTALS

A. Six copies (5 to PCC, 1 to Consultant) shall be submitted at the first Pre-construction Meeting; Abatement will not begin until the requested submittals are received by CFE and approved.

1. Copies of California Contractors License with Asbestos Certification issued by the State Contractors License Board and Department of Safety and Health Certificate of Registration for asbestos related work.
2. Copy of General Liability Insurance Certificates naming Pasadena City College, CF Environmental, Inc., AAA Consultants and Inspections, Inc. as additionally insured.
3. Notifications to public agencies as in 1.06(B).
4. Copies of notifications to local Police, Fire, and Emergency Medical personnel. Notifications will be limited to those required by law.
5. Copies of Worker Certifications to include training, medical monitoring, respirator fit tests, and Blood Lead Levels for Lead Abatement Projects, as required.
6. Copy of the Contractor's formal written OSHA Respiratory Program including a description of each respirator type, fit testing procedures for passive air filtering type respirators. The respiratory protection program must conform to 29 CFR 1910.134(b),(d),(e) and (f).
7. Name, address, and telephone number of the environmental laboratory which will analyze Contractor's Personal Air Samples.
8. List proposed Waste Hauler on project and copies of applicable licenses, including State of California registration number.
9. List proposed landfill for disposal of hazardous and non hazardous asbestos waste, and copies of applicable licenses including State and Federal registration numbers.
10. List of proposed sub-contractors, if any, to be used on project.
11. A detailed list of all materials, tools and equipment and miscellaneous supplies that will be used during the project. Required information shall include manufacturer's product data, specifications, samples and application instructions, Material Safety Data Sheets (MSDS), and other pertinent information as necessary.
12. A copy of permits issued for HEPA Filtration System(s) per South Coast Air Quality Management District (SCAQMD) permits.
13. Submit copies of any other permits, licenses, manifests, or patents which are required or will be used.
15. A written overview of the entire asbestos abatement plan to be used at the site. Highlights to include workmen, visitors, and employees will be protected from exposure, how spaces outside the work area will be protected from contamination until completion of work, and procedures implemented in case of emergency. Include a Site Security Plan for securing buildings while under abatement.
16. Schedules - Detailed work schedules which list the work area, dates of proposed work, work time shifts, projected work accomplishments during each shift, and number of workers and Supervisors/Foremen.

14. List product substitutions, if any, for consideration by PCC; all decisions are final.

1.06 QUALITY ASSURANCE

A. Qualification: The contractor is to maintain the following documents on site and update them as needed for life of the project:

1. Registration: One copy of the registration for Asbestos-Related Work from the Division of Occupational Safety and Health in accordance with Title 8, Article 2.5 of the California Code of Regulations.
2. Personnel Training--Superintendent and Foreman: Submit copy of certificates signed by the superintendent and foreman that he or she has successfully completed a training course in asbestos abatement project supervision offered by an EPA endorsed educational institution.
3. Personnel Training-Workers: Submit copy of the asbestos abatement employee training program, and a certificate signed by each employee that he or she has had instructions on the hazards of asbestos exposure, has had training in asbestos removal, and understands this instruction.
4. Respirators: One copy of a written standard operating procedure governing selection, fit-testing, and use of respirators in accordance with 29 CFR 1910, Subpart I, 29 CFR 1926.1101, CGAI Standard G7.1, ANSI Z88.2, and Z88.6. Also submit manufacturer's certification that the respirators to be used in this project comply with these regulatory requirements.
5. Medical Examination: Proof that personnel who will be entering contaminated areas have had medical examinations, and furnish the results of said exam to the Owner. Comply with 29 CFR 1910.20 for access to employee exposure and medical records.
   a. Before exposure to airborne asbestos, provide each employee with a comprehensive medical exam meeting the general definition outlined in California Code of Regulations Title 8, CCR Section 5208 (j). No employee shall be allowed to enter the Work Area without having first provided a copy of his Medical History to the Owner.
   b. Submit an employee roster to the Owner for each Work shift prior to commencement of shift.

B. Notifications, Communications and Postings-as listed or local offices as permitted:

1. Submit copies of notifications to all appropriate Government agencies, including:
   a. Cal/OSHA
      Division of Occupational Safety and Health
      320 West 4th Street, Room 350
      Los Angeles, CA 90013 (213) 576-7451 FAX (213) 576-7461

      Notification shall be in accordance with the Section 341.9 of Title 8 of California Code of Regulations.

   b. U.S. Environmental Protection Agency
      75 Hawthorne St.
      San Francisco, CA 94105
      Attn: Asb. NESHAPS Coordinator
   c. South Coast Air Quality Management District
      21865 East Copely Drive
      Diamond Bar, Ca. 91765 (909)-396-2336
   d. Copies of Government agency correspondence shall be included in the submittals.
2. Safety Compliance: In addition to detailed requirements of this Specification, comply with laws, ordinances, rules, and regulations of federal, state, regional, and local authorities regarding handling, storing, transporting, and disposing of asbestos waste materials. Comply with applicable requirements of the current issue of 29 CFR 1926.1101, and 40 CFR 61, Subparts A, & M, 40 CFR 61.152, and CCR Section 5208. Submit matters of interpretation of standards to the appropriate administrative agency for resolution before starting Work. Where requirements of this Specification and reference documents vary, the most stringent requirement shall apply.
3. Contractor shall have at least one copy each of 29 CFR 1926.1101; 40 CFR Part 61, Subparts A & M; and CCR, Title 8, Section 5208, at his office and also at the job site.

4. Before the commencement of any Work at the site, post bilingual (English and Spanish) EPA and CAL/OSHA caution signs in and around the Work Area to comply with EPA and OSHA regulations.

C. Employee Exposure Monitoring:

1. Personnel monitoring and other monitoring which is required by law or considered necessary by the Contractor for Worker protection shall be the responsibility of the Contractor and performed by Contractor's Air Sampling Professional.

D. Certifications:

1. Equipment Certification: Submit manufacturer's certification that vacuums, differential pressure equipment filters, and other local exhaust ventilation equipment conform to ANSI Z9.2.
2. Rental Equipment: When rental equipment is to be used in removal areas or to transport waste materials, a copy of the written notification provided to the rental company informing them of the nature of use of the rented equipment shall be submitted to the Owner Construction Supervisor and signed by the rental company.

E. Post Job Submittals:

1. Prior to receipt of final payment the Abatement Contractor will submit six copies (5 copies to PCC and 1 copy to the Consultant) of a final Close-Out Package for review by the Consultant. The Close-Out Package shall include as a minimum:
   a. Required Governmental Notifications
   b. Daily Status Reports/Daily Logs
   c. Entry/Exit Logs
   d. OSHA Air Monitoring
   e. Workers Submittals
   f. Waste Manifests

PART 2 - PRODUCTS

2.01 GENERAL

A. Submit manufacturer's product data for all the items listed under Part 2 - Products.

2.02 ISOLATION MEDIA (PLASTIC)

A. Polyethylene sheets 6 mil and 4 mil in sizes to minimize frequency of joints.

2.03 TAPE

A. Duct tape 2" or wider, or equal, capable of sealing joints of adjacent sheets of plastic sheets and for attachment of plastic sheet to finished or unfinished surfaces of dissimilar materials and capable of adhering under both dry and wet conditions, including use of amended water.

2.04 DISPOSAL PACKAGING

A. Appropriately labeled 6 mil (doubled) sealable polyethylene bags as a minimum.

B. Appropriately labeled 6 mil sealable polyethylene bag placed inside a closed, impermeable drum containers.

C. Bilingual labels (English and Spanish) on containment glove bags, waste packages, contaminated material packages and other containers shall be in accordance with EPA or OSHA standards.

2.05 WARNING LABELS AND SIGNS

A. As required by and 29 CFR 1910.145.

2.06 SURFACTANT

A. Surfactant, or wetting agent, for amending water will be 50 percent polyoxyethylene ether and 50 percent polyoxyethylene ester, or equivalent, at a concentration of one ounce per 5 gallons of water.

2.07 ENCAPSULANTS

A. Following removal apply 'lockdown' encapsulant as follows tinted for ease of identification:

1. American Coatings Corporation "22 P";
2. Better Working Environments "BWE 3000";
3. Fosters 32-60/32-61, or Approved Equal.

2.08 LAGGING ADHESIVE - Not Applicable To This Contract

2.09 AIR FILTRATION EQUIPMENT -

A. Provide differential pressure equipment - High-efficiency particulate absolute (HEPA) filtration systems shall be equipped with filtration equipment in compliance with ANSI Z9.2, local exhaust ventilation. No air movement system or air filtering equipment shall discharge unfiltered air outside the Work Area. Differential pressure within the work area shall be maintained at negative .02 inches of water during abatement as demonstrated by use of a manometer.

B. Provide air filtration equipment with HEPA filtration system to cleanse air of particulate matter during abatement. Replace HEPA filters when filters become clogged with particulate matter. Provide enough air filtration devices within the work area to maintain fiber levels within the protection factors of workers' respirators.

2.10 PERSONAL PROTECTION

A. Personal Protective Equipment shall comply with the requirements of 29 CFR 1910, Subpart I.

B. Work clothes shall consist of fire retardant (should conditions demand), disposable, full-body coveralls, head covers, boots, rubber gloves, and sneakers or equivalent in accordance with ANSI Z41. Secure sleeves at wrists and cuffs at ankles.

C. Eye protection and hard hats shall be available as required by applicable safety regulations and shall conform to ANSI 87.1 and 89.1.

D. Provide authorized visitors with suitable protective clothing, headgear, eye protection, and footwear whenever they are required to enter Work area.

2.11 RESPIRATORS

A. Provide all workers, foremen, superintendents, authorized visitors, and inspectors personally issued and marked respiratory equipment jointly approved by NIOSH/MSHA. When respirators with disposable filters are employed, provide sufficient filters for replacement as recommended by manufacturers or this specification. Selection of respirators shall be made according to the guidance of 29 CFR 1910 Subpart I; ANSI Z88.2; CGAI G7.1; EPA 560 OPTS-86.001; and Table I of this section.

B. When positive pressure supplied air Type "C" equipped with full face piece respirators are employed, the Air Supply System shall provide Grade "D" breathing air in accordance with OSHA 29 CFR 1910 Subpart I and ANSI Z88.2 and CGAI G7.1.

C. The Compressed Air system for Type "C" Respirators shall be high pressure (nominal 100 psi), with a compressor capacity to satisfy the respirator manufacturer's recommendations. The receiver shall have sufficient capacity to allow a 15 minute escape time for the respirator wearers in the event of compressor failure or malfunction. Type C supplied air respirators with HEPA filter disconnect may be used as an alternate to the 15 minute escape time required in the event of compressor failure for Type C respirators. The Compressed Air System shall have compressor failure alarm, high temperature alarm, carbon monoxide alarm, and suitable in-line air purifying sorbent beds and filters to assure Grade "D" breathing air.

D. The minimum respiratory protection required for this project is as follows (See also Table I of this section):

1. Use high efficiency air-purifying respirators for the following provided maximum airborne fiber concentration outside the respirator is at or below 0.1 fibers/cc:
    a. Preconstruction sealing of openings and penetrations to the work areas with plastic sheeting.
    b. Decontamination of removable furnishings and equipment.
    c. Loading asbestos waste on truck for transportation.
    d. During use of glovebag technique.
    e. During limited use of glovebag technique and removal of piping with asbestos insulation intact.
    f. During final wipe down of work space
2. Use Type "C" respirators are not required for this project (follow guidelines set forth in Table I):
    a. Alternate respiratory protection systems proposed by the Contractor will be considered by the Owner's industrial hygiene consultant. Documentation must be provided by the Contractor that asbestos levels during previous, comparable jobs were within the protection factors of the respirators to be used as outlined in Table I.

b. When Type "C" respirators are not required according to the OSHA standard (or this specification, whichever is more stringent), provide workers with approved, permanent, personally-issued and marked respirators with replaceable filters. Provide sufficient quantity of filters jointly approved by NIOSH/MSHA for use in asbestos environments so that workers can change filters as required by manufacturer during the work day. Filters shall not be used any longer than one work day.

TABLE I

Max. Conc. Outside Respirator	Protection Factor	Minimum Acceptable Respirator
0.1 fiber/cc*	10	Half or full face mask dual cartridge air purifying respirator with high efficiency cartridges approved for asbestos filters (P-100).*
0.25 fibers/cc	25	Powered air purifying respirator (half or full-face piece) with high efficiency filters.*
0.5 fibers/cc	50	Type "C" supplied air respirators, full face piece, continuous flow.
2.0 fibers/cc**	100	Type "C" supplied air respirators, full facepiece, pressure demand mode.
Over 2.0 fibers/cc**		Type "C" supplied air respirators, full face piece, pressure demand mode, equipped with an auxiliary positive pressure self-contained breathing apparatus.

Disposable (single use) respirators are not to be worn for protection against asbestos.

***** Greater respiratory protection is always acceptable regardless of asbestos concentrations.

****** Must demonstrate that the fiber levels will not exceed 0.01 f/cc inside the respirator based on quantitative mask fit testing for each individual using the respirator protection factor formula.

PART 3 - EXECUTION

3.01 PROJECT PROCEDURES:

A. Abatement Procedure Plans: Submit a plan of the work procedures for abatement of asbestos materials. Include the following:

1. Personnel monitoring procedures in accordance with current Cal/OSHA Regulations.
2. Phasing of abatement work indicating daily roster of workers for each phase.
3. Security system warning signs locations in accordance with Cal//OSHA Regulations
4. Plans for decontamination of workers and other hygiene facilities.
5. Standard procedures for protecting workers, visitors, and employees and protection of spaces outside work area from contamination.

B. Emergency Precautions and Procedures

1. Establish emergency and fire exits from the Work Area. Emergency exits shall be equipped with 2 full sets of protective clothing and respirators.
2. Local medical emergency personnel, both ambulance crews and hospital emergency room staff, shall be notified prior to commencement of abatement operations as to the possibility of having to handle contaminated or injured Workers, and shall be advised on safe decontamination.
3. Contractor shall be prepared to administer first aid to injured personnel after decontamination. Seriously injured personnel shall be treated immediately or evacuated without delay for decontamination. When an injury occurs, the Contractor shall stop Work and implement fiber reduction techniques (e.g., water spraying) until the injured person has been removed from the Work Area.
4. Before starting actual removal of asbestos material local police and fire departments shall be notified as to the danger of entering the Work Area.

C. Bilingual Workers Protection Procedures (English and Spanish) -- To Be Posted in Clean Room.

1. Each Worker and authorized visitor shall, upon entering the Regulated Area: Don a respirator and clean protective clothing before entering.
2. Workers shall, each time they leave the Work Area: Remove gross contamination from clothing before leaving the Work Area; proceed to the Equipment Room and remove clothing except respirators; still wearing the respirator, proceed naked to the showers; clean the outside of the respirator with soap and water while showering; remove the respirator; thoroughly shampoo and wash themselves.
3. Following showering and drying off, each Worker shall proceed directly to the clean change room and dress in clean clothes at the end of each day's Work, or before eating, smoking, or drinking. Before re-entering the Work Area from the clean-change room, each Worker and authorized visitor shall put on a clean respirator and shall dress in clean protective clothing.
4. Contaminated Work footwear shall be stored in the Equipment Room when not in use in the Work Area. Upon completion of asbestos abatement, dispose of footwear as contaminated waste.
5. Workers removing waste containers from the Equipment Decontamination Enclosure shall enter the holding Area from outside wearing a respirator and dressed in clean disposable coveralls. No Worker shall use this system as a means to leave or enter the washroom or the Work Area.
6. Color of disposable clothing worn outside Work Area shall be different in color or markings from disposable clothing work inside Work Area.
7. Workers shall not eat, drink, smoke, or chew gum or tobacco while in the Work Area.
8. Workers and Authorized visitors with beards shall not enter the Work Area unless equipped with respirators approved for use with beards.

3.02 PREPARATION

A. Work Areas:

1. Shut down electric power within the containment area as needed to protect workers from electrical hazards. The abatement contractor shall have the responsibility to provide temporary power and lighting within the containment area. The contractor shall either request permission from PCC to use site power or provide a generator on site. All electrical connections and maintenance of the generator and temporary power shall be the responsibility of the contractor.
2. The contractor shall ensure safe installation of temporary power sources and equipment per applicable electrical code requirements and provide ground-fault interrupter circuits as power source for electrical equipment.
3. Shut down and isolate heating, cooling, ventilation air systems to prevent contamination and fiber dispersal to other areas of the structure. Vents and ductwork within the Work Area that are to remain shall be pre-cleaned and sealed with tape and plastic sheeting.
3. Do not begin Work until area is free of loose equipment.
4. Pre-clean fixed objects within the proposed Work Areas, using HEPA filtered vacuum equipment and/or wet cleaning methods as appropriate, and enclose with protective barriers of plywood covered with minimum 6 mil plastic sheeting sealed with tape.
5. Clean proposed work areas using HEPA filtered vacuums or wet cleaning methods as necessary to maintain fiber levels at or below 0.01 f/cc. Methods that raise dust, such as dry sweeping or vacuuming with equipment not equipped with HEPA filters is prohibited.
6. Seal off openings, including but not limited to corridors, doorways, ducts, grills, diffusers, and any other penetrations of the Work Areas, with plastic sheeting sealed with tape. Doorways and corridors which will not be used for passage during Work must be sealed with barriers.
7. Cover wall surfaces with a minimum of two layers of 6 mil plastic sheeting extending from the ceiling to floor level. All seams are to be sealed with duct tape. Each layer of poly sheeting shall be hung on the walls independent of each other.
8. Cover floors with a minimum of two layers of 6 mil poly sheeting. Offset seams to reduce potential for leaking. Fully seal seams with spray adhesive and duct tape.

A. Contractor is responsible for complying with South Coast Air Quality Management District (SCAQMD) requirements for containment of friable materials. All non work surfaces are to be covered with poly sheeting.

9. Install Decontamination Enclosure System (decon units) or equivalent prefabricated portable decontamination units as approved. When possible decon units will be inside the building. If this is not possible decon units to be constructed to maintain building security (i.e. decon unit large enough to allow the exterior doors to be locked. All Decon Units (worker entry/exit and/or equipment/waste bagout shall be kept from public view, where possible).

10. Maintain emergency and fire exits from Work Areas.

B. Decontamination Enclosure System (General):

1. Construct decontamination enclosure system of suitable framing; walls, ceiling, and floors of decontamination enclosure system shall be lined with 6 mil polyethylene sheeting sealed with duct tape.

2. Access between contaminated and uncontaminated rooms or areas shall be through an airlock. Access between any two rooms within the decontamination enclosure systems shall be through a rigid doorway or overlapping 6 mil poly flaps.

C. Worker Decontamination Enclosure System: Construct a worker decontamination enclosure systems contiguous to the Work Area consisting of three totally enclosed chambers as follows:

1. An equipment room with two rigid doorways or overlapping 6 mil poly flaps one to the Work Area and one to the shower room.

2. A shower room with two rigid doorways or overlapping 6 mil poly flaps, one to the equipment room and one to the clean room. Shower room shall contain at least one shower with hot and cold or warm water. Careful attention shall be paid to the shower enclosure to ensure against leaking of any kind. Ensure a supply of soap at all times in the shower room. Shower water shall be filtered to remove asbestos prior to being discharged to drain or barrel.

3. A clean room with one rigid doorway or overlapping 6 mil poly flaps into the shower and one entrance or exit to non-contaminated areas of the building. Clean room shall have sufficient space for storage of Worker's street clothes, towels, and other non-contaminated items. Clean room shall also store fresh, non-contaminated protective clothing, respirators, and any other accessory to be used by workers in the work area.

D. Equipment Decontamination/Waste Removal Enclosure System:

1. Provide or construct an equipment decontamination and waste removal enclosure system consisting of areas as follows:

a. A washroom, constituting an airlock, with a rigid doorway or overlapping 6 mil poly flaps to a designated wet sponge area, a rigid doorway or overlapping 6 mil poly flaps to the holding area, and a rigid doorway or overlapping 6 mil poly flaps to the shower area.

b. A wet sponge area, with a rigid doorway or overlapping 6 mil poly flaps to the equipment room and wash room.

c. A holding area, constituting an airlock, with a rigid doorway or overlapping 6 mil poly flaps to an uncontaminated clean room and rigid doorway each to wash room and loading ramp.

E. Separation of Work Areas from Occupied Areas.

1. Separate areas within the building that must be occupied from those locations that are to undergo asbestos abatement by means of airtight barriers, constructed as follows:

a. Install suitable framing and apply isolation on work side (refer to Section 1.04 Item 12).

b. Isolation medium shall be a minimum of 2 layers of 6 mil plastic sheet, sealed with duct tape as specified on Work Area side.

c. Seal all penetration points to the work area by using minimum of 2 layers of 6 mil plastic sealed with duct tape.

F. Maintenance of Enclosure Systems:

1. Ensure that barriers and plastic linings are effectively sealed and taped. Repair damaged barriers and remedy defects immediately upon discovery.
2. Visually inspect enclosures at the beginning of each work period.
3. Use smoke methods to test effectiveness of barriers prior to implementing asbestos removal and when directed by the Owner.
4. Maintain emergency and fire exits from Work Areas.

G. Asbestos abatement work shall not commence until:

1. Arrangements have been made for disposal of waste at an acceptable site.
2. Arrangements have been made for containing and disposal of waste water resulting from wet stripping.
3. Work areas and decontamination enclosure systems and parts of the building required to remain in use are effectively segregated.
4. Tools, equipment and material waste receptors are on hand.
5. Arrangements have been made for building security.
6. Preparatory steps have been taken and applicable notices posted and permits obtained.
7. Differential pressure systems are installed and operating. All exhaust to be outside the building.
8. Contractor submittal for isolating non-asbestos work areas have been reviewed and approved by the Owner.

3.03 ENCAPSULATION OF ASBESTOS

A. Following full abatement, apply 'lockdown' encap to all surfaces within the work area after the Site surveillance Technician has performed his/her final visual inspection verifying that all identified hazardous and non-hazardous materials, including demolition debris and other contaminated items within the work areas as identified in these specifications have been removed.

3.04 ASBESTOS REMOVAL: GROSS REMOVAL

A. Install containment as outlined in Section 3.02.

B. Spray asbestos material and demolition items with amended water, using spray equipment capable of providing a "mist" application to reduce the release of fibers. Saturate material sufficiently to wet it to substrate without causing excess dripping or delamination of the material. Spray asbestos containing materials and contaminated items repeatedly during work process to maintain wet condition and to minimize asbestos fiber dispersion.

C. Remove saturated asbestos material in small sections. As it is removed, pack material in sealable plastic bags (6 mil minimum thickness) or other container lined with 6 mil poly in preparation for removal from containment. As the bags or containers are removed from the work area through the bag out chamber, the packaged material shall be placed in a clean 6 mil bag or container lined with 6 mil poly sheeting. Material shall not be allowed to dry out prior to packaging.

1. Where asbestos material is applied to a non-asbestos gypsum or other substrate, both the asbestos and substrate may be removed (Refer to Part 4 - Special Conditions). Replacement of substrate, if removed, shall be performed hereunder in accordance with applicable portions of other sections of these specifications.

D. After completion of stripping work, surfaces from which asbestos has been removed shall be final cleaned to remove remaining asbestos residue and/or debris. To verify removal of the asbestos containing material the consultant may elect to collect bulk samples of the remaining substrate. The surface will be considered to be clean if there is no asbestos detected. If the surfaces are not clean, the contractor will be directed to re-clean all areas as needed to meet the above criteria. Subsequent cleaning and cost of bulk sampling costs will be at the contractor's expense at no added cost to PCC.

E. Notify the Owner and Owner's Representative in writing that Work Area is ready for review.

3.05 ASBESTOS REMOVAL: GLOVEBAG TECHNIQUE -

A. All work involving removal of pipe or fitting insulation using the glove bag procedure as described below shall be in accordance with current CAL/OSHA Regulations and manufacturers recommendations.

1. Install critical barriers over openings into the work area.
2. Pre-Clean visible asbestos debris.
3. Cover vertical and horizontal surfaces prevent contamination of non-asbestos surfaces. All abatement areas will have a fully operational decontamination chamber at work area entry. When glove bag work is taking place in a large room a "mini enclosure" can be constructed and used as a negative pressure enclosure.
4. Place glove bag under negative pressure for .

B. Contractor will wait for containment and glove bag installation inspection prior to removal of any asbestos materials.

C. After installation of glovebag, thoroughly wet material to be removed with amended water. Allow to soak in, then remove insulating material from piping. Remove all visible debris from piping. Thoroughly wash the inside of the bag, the piping surfaces and the tools. Without removing the wand from the bag, change the spray bottle to an encapsulant material, then re-spray inside of bag, piping and ends of exposed insulation material. Evacuate bag with HEPA vacuum; tie off trash area; remove tools from bag; remove bag from pipe, folding inward the sides of the bag; then twist and tape the open end, the wand opening, and the vacuum opening. Place glovebag directly into another labeled bag, twist and seal, then place into container.

D. Seal filled containers. Place danger labels on containers in accordance with OSHA regulation 29 CFR 1926.1101. Ensure that containers are removed from the holding area by workers who have entered from uncontaminated areas dressed in clean overalls and equipped with respirators. Ensure that workers do not enter from the equipment decontamination enclosure system into the washroom or the Work Area; ensure that contaminated workers do not exit Work Area through equipment decontamination enclosure system.

3.06 DISPOSAL

A. Waste Transportation: Submit the method of transport of hazardous waste including name, address, EPA I.D. number and telephone number of transporter.

B. Hazardous Waste Site: Submit for approval the name, class, address, EPA I.D. number and telephone number of hazardous waste site(s) to be utilized for disposal.

C. The sealed asbestos containers shall be delivered to Contractor's predesignated approved Hazardous Waste Site for burial; in accordance with Title 22, CCR, EPA guidelines and 40 CFR 61.156 and local Air Pollution Control District Regulations.

D. Notify the Owner in advance of the time when contaminated materials are to be removed from the site.

E. Contractor shall be responsible for safe handling, pick-up, and transportation of hazardous waste generated by this Contract to the designated Hazardous Waste Site.

F. Contractor shall hold the PCC, CF Environmental, Inc., and AAA Consultants and Inspections, Inc. harmless for claims, damages, losses, and expenses, including attorney's fees arising out of or resulting from asbestos spills on the site or spills en route to the disposal site.

3.07 DECONTAMINATION OF WORK AREA -

A. After written notification to proceed from Owner's Representative, encapsulate surfaces where asbestos material has been removed.

1. Surfaces from which asbestos have been removed shall be sealed with a clear encapsulant after the surface is clean and dry. Apply encapsulant as needed using airless spray equipment.
2. Prepare and apply encapsulant according to the manufacturer's specifications. Because application by spraying could cause dissemination of residual fibers, encapsulant must be applied with caution and at as low a nozzle pressure as possible.

B. Upon written notification, Owner and Owner's Representative will review surfaces coated with 'lockdown' encapsulant for conformance with Specifications. Non-conformance of Work shall be remedied until Work is in compliance.

3.08 AIR MONITORING

A. Area Air Monitoring:

1. Throughout the abatement process area air monitoring shall be conducted by CF Environmental, Inc. to ensure Work is done in conformance with fiber concentration limits of these Specifications.
2. If area air monitoring outside the Work Area or personnel air monitoring results are in excess of 0.01 f/cc; the Contractor shall make changes in work procedures to assure compliance with minimum standards. Unsatisfactory results are fiber counts in excess of 0.01 fibers/cc by PCM or 0.005 asbestos fibers/cc by TEM, determined as a TWA outside the work area for Area Air Monitoring.

B. Contractor shall submit written report to Owner's Representative of Contractor's personnel monitoring as soon as practicable. Personnel air monitoring shall not exceed the levels recommended for the type of respiratory gear in use.

C. The Consultant (CF Environmental, Inc.) shall have the authority to stop work at any time it becomes apparent that abatement work is not proceeding as required in these specifications. If at any time the Consultant determines that conditions are not within specifications and applicable regulations, abatement can be stopped. The stoppage of work shall continue until conditions have been corrected to the satisfaction of the Consultant. Standby time required to resolve the problem shall be at the Abatement Contractor's expense.

Those individuals who have been designated as "Competent Persons" by the Abatement Contractor may be removed at PCC's and/or the Consultant's discretion for non performance. The replacement individuals must meet the previous standards and be approved by PCC and/or the Consultant.

Failure of the Contractor to comply with the requirements of the Specification shall be grounds for termination of the Abatement Contractor’s contract with PCC.

3.09 RE-ESTABLISHMENT OF WORK AREA - NOT APPLICABLE TO THIS CONTRACT

3.10 REPAIR AND PAINTING

The asbestos abatement contractor will remove all duct tape, tape residue, adhesive residue, staples, furring strips and/or other materials installed or applied to the buildings or there contents in order to remove the identified materials.

3.11 CLEAN UP

A. Maintain a clean project site during and upon completion of Work of this Section. Cleaning shall be in accordance with PCC’s General Conditions.

PART 4 - SPECIAL CONDITIONS

General

Pasadena City College is requesting proposals to provide abatement and disposal services to remove materials identified in Part 5 - Scope of Work Listing including appendixes.

The materials listed on the following pages have been identified as requiring removal prior to demolition of the existing Men's Restrooms, Custodian Room, Coffered Ceiling, North Elevator Lobby and South Entry Foyer as described in the Base Bid and Alternate Bid. The cost of abatement shall be included in the overall cost of the renovation project.

The estimated quantities listed in Part 5: Scope of Work Listing are to be removed within the identified rooms whether or not they are directly affected by renovation project.

4.01 SCHEDULING

A. The Abatement Contractor will coordinate all abatement work with PCC, its Project Managers and Consultants. The contractor will have sufficient employees to accomplish the abatement task during the time allotted. Failure of the Abatement Contractor to complete a particular task may result in the termination of the contract agreement.

PCC will contract the services of a Certified Asbestos Consultant (CAC)/Site Surveillance Technician (SST) for on-site monitoring and visual inspection.

B. The CAC/SST will be available for on site monitoring and visual inspection.

1. Overtime work shall be requested in advance and in writing to allow for the scheduling of the appropriate PCC Personnel and the on site Hygienist.
2. If the CAC/SST is required to work overtime at *the request of, or because of, the Abatement Contractor*, PCC has the *option* of charging the responsible contractor for the overtime hours worked at the Hygienist's overtime rate.

C. The General Contractor and/or his Abatement Contractor shall be responsible for scheduling abatement work through PCC's Project Manager. The following time lines shall dictate abatement activities:
1. 48 hour notice prior to start of shift - No delay in abatement schedule.
2. 24 hour notice prior to start of shift – Consultants will provide oversight if possible.
3. Should abatement contractor arrive on site without prior notification, work cannot proceed until PCC's consultants make arrangements for project oversight.

4.02 SITE SECURITY

A. The abatement contractor is responsible for maintaining site security for the duration of his/her abatement activities. The existing security system shall remain in operation or the abatement contractor will provide on-site security.

4.03 SITE UTILITIES

A. PCC has the option of providing the Abatement Contractor with water and power. However, it is the responsibility of the Abatement Contractor to provide his/her own connections.

B. The abatement contractor employees are not allowed to use PCC's phones.

4.04 ABATEMENT CONTRACTORS SUPPLIES AND EQUIPMENT

A. All HEPA vacuums, negative air machines, airless sprayers, Hudson sprayers, spray bottles, ladders, scaffolding, extension cords, showers, water filtration units, and hand tools will be clean and in good working order. The Consultant, Site Surveillance Technician, or PCC Representative will periodically inspect the abatement contractor's supplies and equipment. Defective or contaminated equipment will be removed from the PCC site.

4.05 WORK PROCEDURES

A. Work procedures outlined below are designed based on conditions present at this site. The Abatement Contractor shall comply with all laws, ordinances, rules, and regulations of federal, state, regional, and local authorities regarding removal, encapsulation, handling, storing, transporting, and disposing of hazardous and non-hazardous asbestos, PCBs, and Fluorescent Tubes. Where requirements of this Specification, reference documents or regulations vary, the most stringent requirement shall apply.

This project requires the removal of hazardous and non-hazardous materials include but are not limited to sprayed fireproofing, ceiling tile and grid, lighting fixtures, pipe and fitting insulation, PCB Ballasts, Fluorescent Tubes, and contaminated demolition materials including plaster ceilings and walls, conduit, hanger wires, black iron, and all other installed components or installed materials affected by this demolition/renovation project.

Base Bid and Alternate Bid - Abatement of All Identified Materials

The abatement contractor is to remove ALL hazardous and non-hazardous materials from locations as identified in the Base Bid and Alternate Bid.

A. Asbestos abatement contractor isolates work area as outlined in Section *3.02 PREPARATION* including the following:
1. Isolate the work area with 2 layers of 6 mil poly sheeting covering walls below the ceiling and hung independent of each other. Containment to be large enough to allow for reconstruction work to take place without further disturbance of remaining materials.
2. Attach a Decontamination Unit at work area entry. Attach an Equipment/Waste Removal Unit for load-out of equipment and waste.

B. Place work area under *negative pressure,* exhaust air to exterior of building. Contractor to install plywood barriers entry, exits, and exhaust locations as needed to maintain building security.

C. After the containment has been approval by the CAC/SST, the abatement contractor shall remove ceiling tiles around perimeter of work area, below strategic sections of the HVAC system, and/ or otherwise access areas above 'hard lid' to install "pony walls" and "critical barriers" as needed to isolate the work area and HVAC system from adjacent non-work areas.

1. The contractor shall, at point of disconnect, remove duct work slated for demo, clean around opening and install "critical barriers', isolating all openings into the supply and return HVAC system that is not to be demolished during this renovation.
1. Any and all building surfaces, components or materials identified to remain in the building shall be pre-cleaned, covered with poly sheeting sealed with duct tape, and protected throughout the abatement process.

D. Contractor shall demolish any remaining ceiling and wall systems including plaster and drywall, light fixtures, hanger wires, structural components, and all building components and associated items above and below the ceiling including but not limited to fiberglass batting, insulation on hard metal duct (if present), flexible ducting, electrical conduit, light fixtures, data and various low-voltage wiring, and all other items and components as indicated in the Construction Specifications and/or Construction Drawings. All materials shall be disposed of as hazardous asbestos waste.

E. The abatement contractor shall remove all fireproofing (including overspray) from steel beams, columns, concrete, plaster, and all other exposed surfaces in addition to ceiling tile, pipe and fitting insulation, floor tile, tile mastic, surfaces coated with lead based paint, PCB Ballasts, Fluorescent Tubes containing mercury, and contaminated demolition materials using 'adequately wet methods'.

F. After visual inspection to verify all material has been removed, the contractor shall seal all abated surfaces with 'lockdown' encap, tinted for ease of identification, within the contained area including poly sheeting and covered items in preparation for clearance sampling.

G. Containment shall remain in place until final clearance samples are collected and analyzed. Clearance samples must be below the mandated AHERA Clearance Level following an abatement project of 70 structures per millimeter squared (s/mm^2) and these specifications.

H. 'Pony walls' separating the renovation area from adjoining non-work areas containing hazardous and non-hazardous materials to remain in place until renovation project is complete. Abatement contractor shall return to remove 'pony walls' at completion of renovation work.

CLEARANCE SAMPLES

PCC will pay for the first set of Clearance Samples in any one work area. If the area fails to meet the clearance criteria of less than or equal to 0.01 fibers per cubic centimeter (f/cc) when analyzed by Phase Contrast Microscopy (PCM) the Abatement Contractor will be responsible for any and all additional sample analysis and related costs until the work area meets the above criteria.

By Submitting A Bid The Abatement Contractor Agrees To All Terms And Conditions Of This Specification.

PART 5 - SCOPE OF WORK LISTING

PASADENA CITY COLLEGE

BUILDING "R" RESTOOM RENOVATION

Building Identification and Material Location

The Construction Drawings indicate the extent of renovation work to take place in the Men's Restroom, Custodian Room, Coffered Hallway Ceiling, Ceiling Spaces, Pipe Chases, Wall Cavities, and Interstitial Spaces that will be affected work under this contract in the Base Bid and Alternate 1. To assist in identification of areas requiring abatement, the main reference document is the Construction Specifications and Drawings, cross referenced with PCC Site Maps. Work areas are inclusive of all spaces as indicated on the Construction Drawings whether or not they are specifically mentioned. Hazardous and non-hazardous materials identified that require abatement include asbestos, PCB Ballasts, and fluorescent tubes containing mercury.

Hazardous and Non-Hazardous Materials listed below are grouped by category as follows:

1) ASBESTOS CONTAINING MATERIALS

2) PCB BALLASTS AND FLUORESCENT TUBES

LOCATION	MATERIAL	QUANTITY	ABATEMENT COST
BASE BID - Full Abatement (Removal): Men's Restroom, Custodian Room and Coffered Ceiling in Hallway between Restrooms			
Remove all asbestos containing materials including but not limited to Sprayed Fireproofing, Ceiling Tile and Grid, Lighting Fixtures, Pipe and Fitting Insulation, Lighting, Contaminated Items Slated for Demo, various other contaminated components and resulting debris.			
1) ASBESTOS CONTAINING MATERIALS			
- Restroom, Custodian Room, Coffered Hall Ceiling	Sprayed Fireproofing (Nominal Floor Area)	460 SF	_____. _____
- Coffered Hall Ceiling	Ceiling Tile and Grid	100 SF	_____. _____
	Pipe Insulation	100 LF	_____. _____
	Fitting Insulation	30 EA	_____. _____
LEAD CONTAINING MATERIALS - No components/surfaces tested above HUD Action Level of 1.0 mg/cm^2.			
2) PCB'S, FLUORESCENT TUBES CONTAINING MERCURY			
- Restroom, Custodian Room, Coffered Hall Ceiling	Ballasts	14 EA	_____. _____
	Tubes	14 EA	_____. _____
		Base Bid Total	_____. _____

LOCATION	MATERIAL	QUANTITY	ABATEMENT COST

ALTERNATE BID - Full Abatement (Removal): Men's Restroom, Custodian Room, Coffered Ceiling, North Elevator Lobby and South Entry Foyer (North and South Lobby)

Remove all asbestos containing materials including but not limited to Sprayed Fireproofing, Ceiling Tile and Grid, Lighting Fixtures, Pipe and Fitting Insulation, Lighting, Contaminated Items Slated for Demo, various other contaminated components and resulting debris.

1) ASBESTOS CONTAINING MATERIALS

- Restroom, Custodian Room, Coffered Hall Ceiling, North Elevator Lobby, South Foyer Entry (North and South Lobby)	Sprayed Fireproofing (Nominal Floor Area)	1,200 SF	_____. ____
	2 x 4 Ceiling Tile and Grid	736 SF	_____. ____
	Pipe Insulation	160 LF	_____. ____
	Fitting Insulation	50 EA	_____. ____

LEAD CONTAINING MATERIALS - No components/surfaces tested above HUD Action Level of 1.0 mg/cm^2.

2) PCB'S, FLUORESCENT TUBES CONTAINING MERCURY

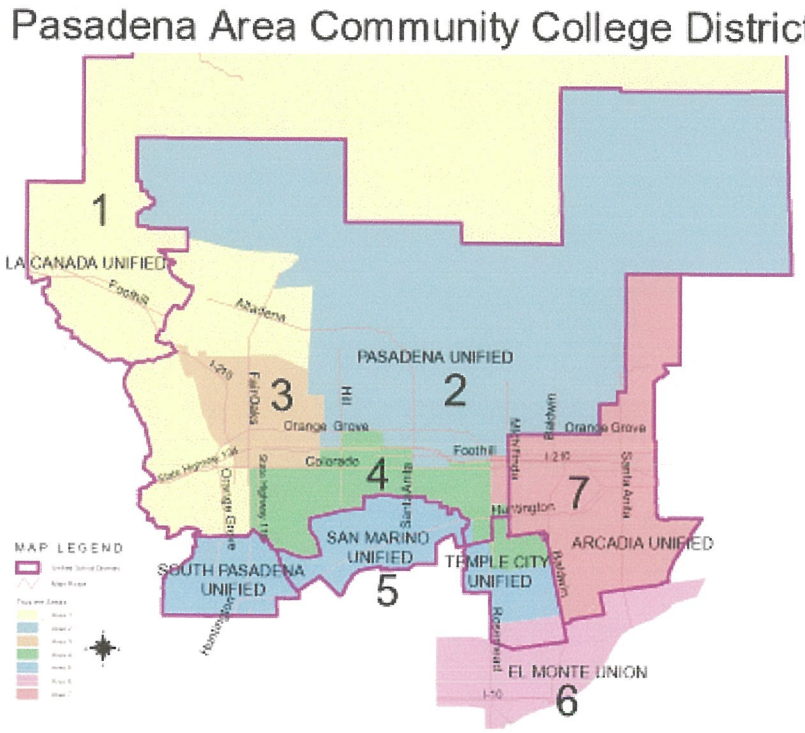
- Restroom, Custodian Room, Coffered Hall Ceiling, North Elevator Lobby, South Foyer Entry (North and South Lobby)	Ballasts	32 EA	_____. ____
	Tubes	50 EA	_____. ____

Alternate Bid Total _____. ____

PASADENA CITY COLLEGE

BOARD OF TRUSTEES

Pasadena Area Community College District Map



To view a detailed map with streets click here to open an Adobe Acrobat PDF. (web1paccd.pdf 176k)

Revised October 29, 2010 by #vWebEmail#