SPECIFICATIONS

Attachment 'A
SECTION 00 01 30
SAN FRANCISCO UNIFIED SCHOOL DISTRICT CONSTRUCTION STANDARDS

The following construction products, materials, and systems have been approved as a District Standard by the Board of Education or the Board of Education’s official designee. In accordance with the Public Contract Code, the products, materials, and systems listed below are specified to match others in use on District sites, either completed or in the course of construction. No substitutions will be allowed or permitted for these District construction standards unless approved in writing by the District. Substitutions from these standards will only be granted if the specific products, materials, or systems are no longer manufactured or are unavailable. District construction standards include the following:

DIVISION 0

None

DIVISION 1 - GENERAL REQUIREMENTS

None

DIVISION 2 - SITE WORK

None

DIVISION 3 - CONCRETE

None

DIVISION 4 - MASONRY

None

DIVISION 5 - METALS

None

DIVISION 6 - WOOD AND PLASTIC

CASEWORK
1. Cabinet door and drawer locks: National Cabinet Lock, C8173, C8174, C8175 for cabinets and C8177, C8178, and C8179 for drawers

DIVISION 7 - THERMAL AND MOISTURE PROTECTION

None
DIVISION 8 - DOORS AND WINDOWS

DOOR HARDWARE
2. Locksets: Schlage Lock
   a. General Cylindrical Locksets: Schlage Lock ND Vandlgard Series, Rhodes Trim
   b. All instructional rooms and other rooms with 5 or more occupants without exit
devices: ND95PD Vandlgard, Rhodes Trim
3. Privacy Lockset at Adult/Staff Single-Occupant Restrooms: Schlage L9485P x L283-722
   with OCCUPIED/VACANT indicator
4. Exit Devices:
   a. Interior Single Door Rim Exit Devices:
      Unrated – Von Duprin AX99L-2 / 20-057
      Fire-rated – Von Duprin AX99L-F-2 / 20-057
   b. Interior Pair of Doors Rim Exit Devices with Mullion:
      Unrated – Von Duprin AX99L-2 x 4954 Mullion / 20-057
      Fire-rated – Von Duprin AX99L-F-2 x 4954 Mullion / 20-057
   c. Exterior Single Door Rim Exit Devices:
      Unrated – Von Duprin AX99NL Series x VR900 Series Trim
      Fire-Rated – Von Duprin AX99NL-F x VR900 Series Trim
   d. Exterior Pair of Doors Rim Exit Devices:
      Unrated – Von Duprin AX99NL x AX98EO Series x VR900 Series Trim x 4954
      Mullion
      Fire-rated – Von Duprin AX99NL-F x AX98EO-F Series x VR900 Series Trim x 4954
      Mullion
   e. Exterior Single Door Electrified Exit Device
      EL-AX99NL-OP x VR900 Series trim
   f. Exterior Pair of Doors Electrified Exit Device
      EL-AX99NL-OP x AX99EO x VR900 Series Trim x 4954 mullion
5. Surface Closers: LCN 4040XP x EDA x ST3596
6. Automatic Door Openers: LCN 9500
7. Rated Hold-Open Electromagnetic Holders: LCN SEM 7800 Series

WINDOW HARDWARE
1. Window Handles:
   a. Cam Handles: Bronze Craft
   b. Project-Out Vent (Awning Type): Bronze Craft #162-001-4504 (right handle) #162-
      003-4504 (left handle) in conjunction with #282 series strikes
   c. Project-In Vent (Hopper Type):
      i. Hand-Operated Handles: Bronze Craft #156-001-4504 (right handle) #156-003-
         4504 (left handle)
      ii. Pole-Operated Handles: Bronze Craft #158-001-4504 (right handle) #158-003-
         4504 (left handle) in conjunction with #210 series keepers
2. Window Hinges: Bronze Craft 851 Series stainless steel storm hinges
3. Pole:
   a. Pole Ring: Bronze Craft #233-005-4504 (aluminum bronze)
   b. Pole Hook Assembly (aluminum tube with rubber end): Bronze Craft #234-007-4504
      (7 feet long)
   c. Pole Hanger: Bronze Craft #231-002-0125
   d. Pole Tip: Bronze Craft #232-004-0125
DIVISION 9 - FINISHES

None

DIVISION 10 - SPECIALTIES

TOILET ACCESSORIES

1. Paper Towel Dispensers:
   a. EES, Elementary, Middle and High Schools, all locations: Georgia Pacific SofPull Dispenser Model #59010 (Black)

2. Toilet Paper Dispensers:
   a. Georgia Pacific Compact Vertical 2 Roll High Capacity Bathroom Tissue Dispenser model 56790 for standard (not accessible) toilet stall locations
   b. Multi-roll toilet paper dispensers for accessible toilet stalls:
      i. Recessed, wall-mounted: Bobrick B-3888
      ii. Recessed, wall-mounted: Bobrick B-6977 (Pre-K restrooms)

3. Soap Dispensers: Bobrick B-2111 (vertical) or B-2112 (horizontal) 40 oz. stainless steel tank liquid soap dispenser

4. Grab Bars: Bobrick B-6806 – 42" long at rear and 48" long at side

DIVISION 11 - EQUIPMENT

EVACUATION CHAIRS

1. Garaventa Evacu-Trac CD7 with manufacturer-supplied storage cabinet and manufacturer-provided labeling

DIVISION 12 - FURNISHINGS

None

DIVISION 13 - SPECIALTIES

None

DIVISION 14 - CONVEYING SYSTEMS

HYDRAULIC ELEVATORS

1. Control Manufacturers: Motion Control Engineering
2. Motion 2000 Hydraulic Elevator Control as manufactured by Motion Control Engineering, Inc.
3. Door Operating Equipment: G.A.L. Manufacturing Corporation
5. Lock box keyed to the San Francisco Fire Department standards from E.M. Hundley Hardware, 617 Bryant St., San Francisco, (415) 777-5050

DIVISION 15 - MECHANICAL

MECHANICAL EQUIPMENT

1. Domestic Hot Water Circulating Pumps: Grundfos
2. In-Line Circulators: Grundfos Pump UP Series100
3. Hot Water Boilers: Cast iron by Peerless Heater Company
4. Expansion Tanks: Bell & Gossett
5. Chemical Feeder: J.L. Wingert
6. Energy Management System: Vykon JACE-545 router, as manufactured by Tridium
7. Controls: Any upgrade or new addition to the existing system shall be fully integrated with the graphical user interface of the existing Circon controls system and the Wide Area Network of the San Francisco Unified School District.

**PLUMBING FIXTURES**

1. Drinking Fountains:
   a. Exterior and Interior Wall-Mounted Fixture: Haws 1117L with lead filter for interior and exterior wall-mounted installations
   b. Free-Standing Fixture: Haws 3150 adjustable-height pedestal fountain with exposed aggregate finish, or Haws 3300, pedestal fountain with powdercoat finish; and lead filter when no building plumbing wall surfaces are available

2. Eyewashes: HAWS 7360BTWC with acid-resistant drains and dust cover 9102 for middle school and high school science labs that use chemicals

3. Emergency Shower and Eye/Face Wash Units: Combination Unit HAWS 8309WC with emergency test kit 9010 and dust cover 9102

4. Faucets (refer to Division 15, Plumbing Fixtures where each type of faucet is applicable):
   a. Single-Temperature Metering:
      - Chicago 3400-ABC (ECAST) (3-hole, 4” centers, 4½” spout)
      - Moen M-Dura 8884 with 99550 (3-hole, 4” centers, 4-1/2” spout)
   b. Single-Temperature Metering for retrofits at existing single-hole lavatories:
      - Chicago 333-665PSHABC (ECAST) (single-hole, 3-3/8” spout) for use at Moen M-Dura 8884 (single hole, 4-1/2” spout)
   c. Single wrist blade handle, single-hole, deck-mounted 5-1/4” gooseneck:
      - Chicago 350-317XKABC (ECAST)
      - Moen M-Dura 8103
   d. Dual wrist blade handles, single-hole, deck-mounted 5-1/4” gooseneck: Chicago 50-317XKABCP (ECAST)
      - Moen M-Dura 8113
   e. Dual wrist blade handles, 2-hole, 8” centers, deck-mounted gooseneck:
      - Moen M-Dura 8285 w/S0030 spout

5. Service Sinks:
   a. Fixture: Fiat MSB-2424 24”x24”x10” molded stone mop service basin with 3” drain
   b. Faucet: Lever style handles with hot and cold indicators, vacuum-breaker spout with garden hose thread, wall bracket, backflow preventer, chrome finish (at service sinks-custodial closets): Moen M-Dura 8124

6. Encased/Recessed Narrow Wall Hydrant: Zurn Z1350VB encased narrow wall hydrant type keyed hose bib

7. Floor or Shower Drains: Jay R. Smith 2005Y floor drain with adjustable strainer heads, vandal proof screws, nickel bronze strainer

8. Toilets, Wall-Hung – Elementary (K-5), Middle, and High School student restrooms, adult/staff restrooms:
   a. Fixtures – white vitreous china, elongated bowl, 1.28-gallon, 1½” top spud:
      i. New construction or full restroom remodel: American Standard Afwall FloWise 3351.128
      ii. Retrofit in existing wall: American Standard Afwall FloWise ADA Retrofit 3355.128
   b. Toilet Seats – 1” total thickness including bumper, stainless steel hinge, concealed check, solid plastic, open front: Bemis 1955SSCT-047 black
   c. Flush valve (for 1.28 gal fixtures): Sloan Royal 111-1.28
Moen M-Dura 8310M128
d. Carrier: Jay R. Smith for siphon jet toilets. Waste 4", vent 2", CW 1"

9. Toilets, Floor-Mounted:
   a. Fixtures – white vitreous china, elongated bowl, 1.28-gallon, 1½" top spud
      i. Pre-K (EES): American Standards “Baby Devoro” – Flowise: 2282.001
      ii. Elementary student restrooms (K-5): American Standards “Madera Youth” – Flowise: 2599.001 14
      iii. Middle and High School student restrooms, adult/staff restrooms: American Standard Madera FloWise 3461.128
   b. Toilet Seats – 1¼" total thickness including bumper, stainless steel hinge, concealed check, solid plastic, open front:
      i. Pre-K (EES): Bemis 126-CC white
      ii. Elementary (K-5), Middle, and High Schools, adult/staff toilets: Bemis 1955SSCT-047, black
   c. Flush valve (for 1.28 gal fixtures):
      Sloan Royal 111-1.28. Waste 4", vent 2", CW 1"
      Moen M-Dura 8310M128, Waste 4", vent 2", CW 1"

10. Urinals:
   a. Fixtures – 1/8-gallon (1-pint)
      i. Elementary student restrooms (K-5, new construction or full restroom remodel only): Zurn Z5738.207 “The Small Pint”
      ii. Middle and High School student restrooms, adult/staff restrooms (new construction or full restroom remodel only): American Standard Washbrook FloWise 6590.125
   b. Flush valve (manual):
      Sloan Royal 186-0.125
      Moen M-Dura 8312M0125
      American Standard 6045.013.002-0.125 (AS Washbrook)
   c. Carrier: Manufactured by Jay R. Smith, waste 2", vent 2", CW ¾"

11. Water Heaters:
   a. Local Instantaneous Type: AO Smith, electric 10 gallon, 110 volt.
   b. Local Gas Type Heaters: AO Smith BT Series water heater.

12. Plaster Trap (for art classrooms): Zurn solid intercepter Z-1181

13. Differential Pressure Switches: Honeywell

DIVISION 16 - ELECTRICAL

CLOCK/BELL/PUBLIC ADDRESS
1. Integrated Clock/Bell/PA: Simplex 5110 Building Communication System (BCS), wired, low-voltage, with Valcom 24V round analog clocks
2. Wireless Clocks: American Time and Signal SiteSync IQ round analog clocks

FIRE ALARM SYSTEM
1. Fire Alarm Control Panel Simplex 4100ES and related addressable components:
   a. Smoke Detectors – 4098 Series
   b. Heat Detectors – 4098 Series
   d. Monitoring Modules – 4090 Series
   e. Control Modules – 4090 Series
   f. Horn/Strobe Units – 4906 Series
   g. Strobe Only Units – 4906 Series
h. Remote Power Supplies – 4009 Series
i. Remote Annunciator Panels – 4603 Series

SECURITY SYSTEM
1. Security Integration, Inc. Camera System
   a. Software Package SI-VI.76
   b. Digital Video Recording Management and Network Software
   c. DVR Hardware
   d. Camera models 3895IR and SI-PTZ-DN-MT
2. Door Contacts: Sentrol 2505A by GE
3. Control Panels: Ademco Vista 50P by Honeywell
4. Keypads: Ademco Alpha #6160 by Honeywell

END OF SECTION 00 01 30
SECTION 00 80 00
SPECIAL CONDITIONS

1.1 Application of Special Conditions. These Special Conditions are a part of the Contract Documents for
the Work generally described as: JOHN O’CONNELL HIGH SCHOOL – LIBRARY
IMPROVEMENTS.

1.2 Contract Time/Milestone Schedule and Description of Phases

All Phase times indicated are from start of Contractor’s access to work area to Substantial
Completion for each Phase. All punch list work shall be completed within 30 days of Substantial
Completion for each phase.

Contract Time and Milestone Schedule:

- Notice To Proceed (NTP): October 17, 2016
- Phase 1: October 17, 2016 – December 9, 2016
- Phase 2: December 10, 2016 – January 4, 2017
- Final Completion: February 6, 2017. All work must be achieved within 30 days of Substantial
Completion, (January 4, 2017), 109 calendar days from Notice to Proceed.

Description of Phase 1: Materials Procurement

Work during this period shall include submittals and materials procurement. All long-lead items
including, but not limited to, windows shades, sheet linoleum, and rubber wall base, must be procured
in advance prior to start of construction. Materials must be stored in a bonded facility, physically
verified by the district inspector and district project manager. Upon verification, the contractor may
invoice the district for the amount of the materials purchased. All necessary documentation must be
presented by the contractor to the district for the purpose of proving that the said materials are
intended for and shall only be used for the project.

Description of Phase 2: Move, Demolition, and Construction

The work includes, but not necessarily limited to, moving the casework, demolition, installation of the
new finishes and window shades, electrical work, miscellaneous work, punch list, cleaning as required
per Appendix A, etc.

1.3 Description of General Milestone Requirements:

A. These descriptions of the phases are general in nature and in no way offer the complete and
concise description of all the work required by the Contract Documents.
B. The start dates represented in the milestone schedule are preliminary and the District reserves the
right to modify these dates based on when the Notice to Proceed is issued.
C. The Contractor is responsible for providing the manpower and scheduling the shifts necessary to
complete the work in accordance with the Contract Time and Milestone Schedule.
D. Non-School hours are defined as hours before 7:00 AM and after 3:30 PM on days when school is
in session.
E. Hazmat work prohibited on days when school is in session. Haz-Mat Abatement cannot be
performed while students or school staff is on site.
F. Follow City of San Francisco Noise Ordinance
G. Work that is hazardous, noisy, or that causes vibration may not be performed in the buildings or on
the site during school hours, without written approval from the District Representative. This
includes but is not limited to the following work activities:
1. Haz-Mat Abatement
2. Concrete bushing, chipping, grinding, jack hammering.
3. The use of powder-actuated fasteners (PAF’s)
4. Floor grinding to remove adhesive.
5. Chemicals used in quantities that cause excessive odor and cannot be effectively ventilated. As determined by the Owners Representative.
6. Wall tile removal. Hand scraping or chipping may be acceptable as approved by the Owners Representative.
7. Electric Tile Cutter, may be used if isolated in a temporary sound deadening room constructed by the Contractor as approved by the Owners Representative.
8. Large impact drills for use in concrete.
9. Smaller Bulldog type impact drills for ¼” holes or less.
10. Operation of cranes in occupied areas, including drilling rigs, and concrete pump trucks unless the occupants can be sufficiently isolated from the swing zone.
11. Chop Saws for metal studs or other metal cutting. These may be used if isolated in a temporary sound deadening room constructed by the Contractor as approved by the Owner's representative.
12. The use of abrasive or “hot” saws to cut steel decking.
13. Earthwork compaction, including the operation of vibratory compaction equipment.

H. School Academic Testing: No work which creates noise or a vibration in the structure which can be heard and/or felt in occupied classrooms may be done on the following dates between 7:00 a.m. and 12:30 p.m. due to academic testing. These dates are approximate and Contractor shall confirm each school with the District during the school year. 

SCHEDULE BELOW FOR EACH PROJECT WITH THE PRINCIPAL>

1. English Learners: 3 days between September and October.
2. STAR Testing: 15 days between April and May.
3. Other Testing: To be verified with the District

I. All work remaining on a phase after the Substantial Completion date of that phase shall be done during non-school hours.

J. Temporary hard barriers as necessary for each phase shall be constructed prior to the start of each phase of work in accordance with section 01520 "Construction Facilities". On a site plan indicate lay down areas, pedestrian walkways, and contractor parking areas Snow fencing is not acceptable as hard fencing. The Contractor shall submit diagrams for each phase one week prior to start of construction of that phase, indicating the construction zone, and barricades and access for students and School Personnel, for approval by the District Representative. The Contractor must provide and maintain access and code compliant egress to and from all occupied spaces. Contractor shall post temporary signage (appropriate and secure) shall be posted to redirect students and staff for emergency exiting.

K. The Contractor shall diligently maintain all construction zone barricades and fencing. Fence panels shall be secured with two fence clamps per joint. The Contractor shall secure end panels in a manner acceptable to the District Representative. The use of tie wire will not be an acceptable method for securing fence panels. Construction zone gates shall be secured with chains and District provided padlocks.

L. When school is in session any work that occurs in the building and cannot be safely segregated from students must be performed during non-school hours.

M. The existing fire alarm system and fire sprinkler system shall remain operational twenty four (24) hours/day, seven (7) days/week until such time as the new fire alarm system is fully functional, tested and accepted, and tied into the entire campus’s fire alarm system. If at any time during the Project the existing system is not fully operational the Contractor, at its own expense, shall provide a “Fire Watch” acceptable to the District Representative until either the existing system is made fully operational or the new system is fully installed, tested and accepted.

N. Liquidated damages are assessed per phase.
O. The Contractor’s Construction Schedule shall reflect the work sequence and time period for each phase of the Project.

P. Contractor to verify the dates and obtain approval for the timing, demolition, and construction of the Work in each area and phase with the District.

Q. The Work of each phase shall include the building or buildings indicated (if applicable) and the adjacent site work required for safe access and egress for District Occupancy at Substantial Completion of each phase.

R. The Contractor shall carefully review the Drawings and other Contract Documents to fully understand the interdependency of the phases, the buildings, and the site work.

S. Work on weekends, evenings or holidays may be required to meet the project phasing schedules. Provide 72 hours notification to the District representative to ensure necessary inspections, monitoring, testing, etc. are provided during these work hours.

T. The District may withhold payments for late submittals. The District is willing to consider alternate means of phasing the project proposed by the Contractor. The acceptance of any alternate means of phasing is at the sole discretion of the District.

U. The District may withhold payments for late submittals.

1.4 Liquidated Damages

A. **Substantial Completion:** The delayed Substantial Completion of any phase of the Work will result in the assessment and withholding of Liquidated Damages for each day of delayed Substantial Completion beyond the Contract Time for Substantial Completion of that phase of the Work in the amount of **$500 (Five Hundred Dollars)** per day.

B. **Final Completion.** The delayed Final Completion of the Work will result in the assessment and withholding of Liquidated Damages for each day of delayed Final Completion beyond the Contract Time for Final Completion of the Work in the amount of **$500 (Five Hundred Dollars)** per day until all punch list items are completed.

1.5 Labor Compliance Program (LCP). A LCP is required for this project.

1.6 Building Access. Access to the school buildings and entry to buildings, classrooms, restrooms, mechanical rooms, electrical rooms, or other rooms, for construction purposes, must be coordinated with District and onsite District personnel before Work is to start.

A. Upon request, the District may, at its own discretion, provide a master key to the school site for the convenience of the Contractor. The Contractor agrees to pay all expenses to re-key the entire school site and all other affected District buildings if the master key is lost or stolen or if any unauthorized party obtains a copy of the key or access to the school.

1.7 Utility Work.

A. The Contractor is advised that Work is to be performed in spaces regularly scheduled for instruction. Interruption and/or periods of shutdown of public access, electrical service, water service, lighting, or other utilities shall be only as arranged in advance with the District. Contractor shall provide temporary services to all facilities interrupted by Contractor’s Work.

B. The Contractor shall maintain in operation during duration of Contract, drainage lines, storm drains, sewers, water, gas, electrical, steam, irrigation systems and other utility service lines (including but not limited to low voltage systems and fire sprinkler systems) within working area.

1.8 Weather Days. Delays due to adverse weather conditions will only be permitted in compliance with
the provisions in the General Conditions, 00 70 00 Article 8.02.A and only if the number of days of adverse weather exceeds the following parameters and only if Contractor can verify that adverse weather caused delays exceeds the following number of calendar days:

January, [11]; February [10]; March [10]; April [6]; May [3]; June [1]; July [0]; August [0]; September [1]; October [4]; November [7]; December [10].

1.9 **Standardized Forms.** Each and every document generated and/or submitted by the Contractor relating to cost breakdowns, applications for payment, change order requests, requests for information, submittals, verified reports, progress reports, and all other matters relating to the administration of the Work as set forth in the General Conditions, shall be prepared by the Contractor on such forms as may be directed by the District. Unless otherwise expressly provided for in the Contract Documents, all such documents shall be submitted to the District with such frequency as the District may require in its sole reasonable discretion.

1.10 **District Tests/Inspections.** Pursuant to Article 13.05 of the General Conditions, within fourteen (14) calendars days of the date of award of the Contract, the Contractor, the District, and the Architect shall meet and confer to establish, by mutual agreement, the specific tests/inspections to be conducted by or on behalf of the District and to establish limits on costs incurred by the District to complete such tests/inspections. If mutual agreement is not reached as to tests/inspections to be completed by or on behalf of the District or the limitations on the District’s costs to complete such tests/inspections, the Architect shall issue a final binding determination. The Contractor shall be responsible for all costs of tests/inspections exceeding those established pursuant to the forgoing.

1.11 **Allowed Number of Hazardous Material Abatement Shifts.** Within the overall construction schedule, the total allotted time for completion of all identified hazardous material abatement work of the Project shall be limited to the number of work shifts (of stated duration) specified in Appendix A, Section 01011. The Contractor shall be responsible for all additional Environmental Consultant and analytical laboratory costs associated with exceeding the specified total number of work shifts allowed in accordance with the 00 70 00 General Conditions, Article 9.09 Related Damages.

1.12 **Identification Vests/Badges.**

A. The District reserves the right to require the Contractor to do the following:

No employee or independent contractor to the Contractor or any Subcontractor, of any tier, shall be permitted access to the Site at any time unless such individual wears, in a prominent visual manner, a photographic identification badge issued by the District. The identification badge shall be prominently worn at all times while at the Site. Any person performing any Work at the Site without wearing a duly issued District photographic identification badge will be immediately removed from the Site. The District will issue photographic identification badges only to those individuals who are identified on a Fingerprinting Certification of the Contractor or a Subcontractor. The photographic identification badges are the sole and exclusive property of the District. The Contractor shall promptly return to the District each photographic identification badge once an employee or independent contractor to the Contractor or any Subcontractor of any tier has completed his Work at the Site or is absent from the Site for a period of thirty (30) consecutive days, whichever first occurs.

All cost associated with this requirement are at the Contractors expense.

B. No employee or independent contractor to the Contractor or any Subcontractor, of any tier, shall be permitted access to the Site at any time unless such individual wears, in a prominent visual manner, a safety vest that has been approved by the District. All vests must include the General
Contractors company logo, with an area is at least 144 square inches. Any person performing any Work at the Site without wearing an approved safety vest will be immediately removed from the Site.

C. The Contractor’s compliance with the requirements of this Paragraph and/or the District’s enforcement of the requirements of this Paragraph shall not result in adjustment of the Contract Time or the Contract Price.

1.13 Parking: The Contractor is responsible for off site parking for their personnel. The Contractor is not permitted to park any vehicles on campus. Catering Trucks: No catering trucks are permitted on District property.

1.14 Emergency Shut off Survey. Before construction begins Contractor shall field survey the building/buildings and site and contact the appropriate SFUSD personnel to develop an Emergency Shut-off Plan. The plan will show graphically all shut-off locations for utilities clearly identified along with any special instructions and contact procedures. The plan will include an emergency contact list for the Contractor, SFUSD Project Manager, Construction Manager, Building and Grounds, Fire Department, PUC, PG & E and Water District. The Contractor shall assemble any specialty tools required and keys for any locked areas. The Emergency Shut-off Plan shall be posted in Contractor’s construction office with a copy of all items to be located in the CM office.

1.15 Theatrical Equipment and Furnishings. The Contractor is prohibited from using any existing theatrical equipment and furnishings in the auditorium and/or multi-purpose room during construction. The Contractor is required to protect and/or remove theatrical equipment and furnishings as directed by the District and at their own expense. The Contractor, at its own expense will provide any and all temporary lighting necessary to accomplish the work.

1.16 District Standards. In accordance with California Public Contract Code section 3400, a designee of the District has made a finding that particular materials, products, things, and/or services are to be designated in the Contract Documents by specific brand or trade name for the following purpose: in order to match other products in use on a particular public improvement either completed or in the course of completion (“District Standards”). The District Standards are set forth in Section 00 01 13 San Francisco Unified School District Construction Standards. The particular materials, products, things, and/or services designated in the District Standards shall be used in the Work.

1.17 The Environmental Protection Agency (EPA) regulation 40 CFR Part 745 became fully effective June 23, 2008 which requires all firms, including sub-contracted firms who impact lead-based paint (LBP) at Child Occupied Facilities to be EPA certified; have an EPA “Certified Renovator”; provide “on-the-job” training for workers; conduct pre-renovation notifications; follow specific work practice procedures for containment, disturbance and final clean-up; and inspection requirements. Renovation is defined as the modification to any existing structure or portion that results in the disturbance of LBP surfaces, unless the activity is performed as part of an abatement. In essence this regulation includes all work construction activities that disturb LBP surfaces.

END OF SECTION 00 80 00
SECTION 01 70 30
CUTTING AND PATCHING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS
A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY
A. This Section includes procedural requirements for cutting and patching.

1.3 DEFINITIONS
A. Cutting: Removal of existing construction necessary to permit installation or performance of other Work.

B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

1.4 SUBMITTALS
A. Cutting and Patching Proposal: Submit a proposal describing procedures at least 10 days before the time cutting and patching will be performed, requesting approval to proceed. Include the following information:

1. Extent: Describe cutting and patching, show how they will be performed, and indicate why they cannot be avoided.

2. Changes to Existing Construction: Describe anticipated results. Include changes to structural elements and operating components as well as changes in building's appearance and other significant visual elements.

3. Products: List products to be used and firms or entities that will perform the Work.

4. Dates: Indicate when cutting and patching will be performed.

5. Utilities: List utilities that cutting and patching procedures will disturb or affect. List utilities that will be relocated and those that will be temporarily out of service. Indicate how long service will be disrupted.

6. Structural Elements: Where cutting and patching involve adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with original structure.

7. District's Approval: Obtain approval of cutting and patching proposal before cutting and patching. Approval does not waive right to later require removal and replacement of unsatisfactory work.

1.5 QUALITY ASSURANCE
A. Structural Elements: Do not cut and patch structural elements in a manner that could change their load-carrying capacity or load-deflection ratio.

B. Operational Elements: Do not cut and patch the following including but not limited to operating elements and related components in a manner that results in reducing their capacity to perform as intended or that results in increased maintenance or decreased operational life or safety.
   1. Primary operational systems and equipment.
   2. Air or smoke barriers.
   3. Fire-protection systems and security alarm and camera systems.
   4. Control systems, including electrical or pneumatic lines.
   5. Communication systems.
   6. Conveying systems.
   7. Electrical wiring systems. This shall also include all computer/data and fiber optic cabling.
   8. Operating systems of special construction in Division 13 Sections.

C. Miscellaneous Elements: Do not cut and patch the following elements or related components in a manner that could change their load-carrying capacity, that results in reducing their capacity to perform as intended, or that results in increased maintenance or decreased operational life or safety.
   1. Water, moisture, or vapor barriers.
   2. Membranes and flashings.
   3. Exterior curtain-wall construction.
   4. Equipment supports.
   5. Piping, ductwork, vessels, and equipment.

D. Visual Requirements: Do not cut and patch construction in a manner that results in visual evidence of cutting and patching. Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in Architect's opinion, reduce the building's aesthetic qualities. Remove and replace construction that has been cut and patched in a visually unsatisfactory manner.

E. Cutting and Patching Conference: Before proceeding, meet at Project site with parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

1.6 WARRANTY

A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during cutting and patching operations, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 MATERIALS
A. General: Comply with requirements specified in other Sections of these Specifications.

B. Existing Materials: Use materials identical to existing materials. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.
   1. If identical materials are unavailable or cannot be used, use materials that, when installed, will match the visual and functional performance of existing materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces to be cut and patched and conditions under which cutting and patching are to be performed.
   1. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with existing finishes or primers.
   2. Proceed with installation only after unsafe or unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Temporary Support: Provide temporary support of Work to be cut.

B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of Project that might be exposed during cutting and patching operations.

C. Adjoining Areas: Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.

D. Existing Services: Where existing services are required to be removed, relocated, or abandoned, bypass such services before cutting to avoid interruption of services to occupied areas.

3.3 PERFORMANCE

A. General: Employ skilled workers to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time, and complete without delay.
   1. Cut existing construction to provide for installation of other components or performance of other construction, and subsequently patch as required to restore surfaces to their original condition.

B. Cutting: Cut existing construction by sawing, drilling, breaking, chipping, grinding, and similar operations, including excavation, using methods least likely to damage elements retained or adjoining construction. If possible, review proposed procedures with original Installer; comply with original Installer's written recommendations.
1. In general, use hand or small power tools designed for sawing and grinding, not hammering and chopping. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.

2. Existing Finished Surfaces: Cut or drill from the exposed or finished side into concealed surfaces.

3. Concrete and/or Masonry: Cut using a cutting machine, such as an abrasive saw or a diamond-core drill.

4. Excavating and Backfilling: Comply with requirements in applicable Division 2 Sections where required by cutting and patching operations.

5. Mechanical and Electrical Services: Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after cutting.

6. Proceed with patching after construction operations requiring cutting are complete.

C. Patching: Patch construction by filling, repairing, refinishing, closing up, and similar operations following performance of other Work. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections of these Specifications.

1. Inspection: Where feasible, test and inspect patched areas after completion to demonstrate integrity of installation.

2. Exposed Finishes: Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.

3. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in the new space. Provide an even surface of uniform finish, color, texture, and appearance. Remove existing floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.

   a. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface, from corner to corner and floor to ceiling, containing the patch. Provide additional coats until patch blends with adjacent surfaces.

4. Ceilings: Patch, repair, or re-hang existing ceilings as necessary to provide an even-plane surface of uniform appearance.

5. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weather tight condition.

END OF SECTION 01 70 30
SECTION 01 70 32
SELECTIVE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. This Section includes demolition and removal of the following:

1. Selected portions of a building or structure.
2. Selected site elements.
3. Repair procedures for selective demolition operations.

B. See Cutting and Patching for demolishing, cutting, patching, or relocating certain items.

1.2 DEFINITIONS

A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.

B. Remove and Salvage: Detach items from existing construction and deliver them to District ready for reuse.

C. Remove and Reinstall: Detach items from existing construction, prepare them for reuse, and reinstall them where indicated.

D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.3 MATERIALS OWNERSHIP

A. Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain District's property, demolished materials shall become Contractor's property and shall be removed from Project site.

1.4 SUBMITTALS

A. Proposed Control Measures: Submit statement or drawing that indicates the measures proposed for use, proposed locations, and proposed time frame for their operation. Identify options if proposed measures are later determined to be inadequate. Include measures for the following:

1. Dust control.
2. Noise control.
3. Visual distraction control.
B. Schedule of Selective Demolition Activities: Indicate detailed sequence of selective demolition and removal work, with starting and ending dates for each activity, interruption of utility services, use of elevator and stairs, and locations of temporary partitions and means of egress.

C. Pre-demolition Photographs or Videotape: Show existing conditions of adjoining construction and site improvements that might be misconstrued as damage caused by selective demolition operations. Submit before Work begins.

D. Landfill Records: Indicate receipt and acceptance of hazardous wastes by a landfill facility licensed to accept hazardous wastes.

1.5 QUALITY ASSURANCE

A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.

B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

C. Standards: Comply with ANSI A10.6 and NFPA 241.

D. Pre-demolition Conference: Conduct conference at Project site.

1.6 PROJECT CONDITIONS

A. District will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so District’s operations will not be disrupted. Provide not less than seventy two (72) hours’ notice to District of activities that will affect District’s operations.

B. Maintain access to existing entrances and doorways, walkways, corridors, and other adjacent occupied or used facilities.
   1. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from authorities having jurisdiction.

C. District assumes no responsibility for condition of areas to be selectively demolished.
   1. Conditions existing at time of inspection for bidding purpose will be maintained by District as far as practical.

D. Storage or sale of removed items or materials on-site will not be permitted.

E. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
   1. Maintain fire-protection facilities in service during selective demolition operations.

1.7 WARRANTY
A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

1. If possible, retain original Installer or fabricator to patch the exposed Work listed below that is damaged during selective demolition. If it is impossible to engage original Installer or fabricator, engage another recognized experienced and specialized firm.

   a. Processed concrete finishes.
   b. Stonework and stone masonry.
   c. Ornamental metal.
   d. Matched-veneer woodwork.
   e. Preformed metal panels.
   f. Roofing.
   g. Firestopping.
   h. Window wall system.
   i. Stucco and ornamental plaster.
   j. Terrazzo.
   k. Finished wood flooring.
   l. Fluid-applied flooring.
   m. Aggregate wall coating.
   n. Wall covering.
   o. Swimming pool finishes.
   p. HVAC enclosures, cabinets, or covers.

PART 2 - PRODUCTS

2.1 REPAIR MATERIALS

A. Use repair materials identical to existing materials.

1. If identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.

2. Use materials whose installed performance equals or surpasses that of existing materials.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify that utilities have been disconnected and capped.

B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.
D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to District.

E. Engage a professional engineer to survey condition of building to determine whether removing any element might result in structural deficiency or unplanned collapse of any portion of structure or adjacent structures during selective demolition operations.

3.2 UTILITY SERVICES

A. Existing Utilities: Maintain services indicated to remain and protect them against damage during selective demolition operations.

B. Do not interrupt existing utilities serving occupied or operating facilities unless authorized in writing by District and authorities having jurisdiction. Provide temporary services during interruptions to existing utilities, as acceptable to District and to authorities having jurisdiction.

   1. Provide at least seventy two (72) hours' notice to District if shutdown of service is required during changeover.

C. Utility Requirements: Locate, identify, disconnect, and seal or cap off indicated utilities serving areas to be selectively demolished.

   1. Arrange to shut off indicated utilities with utility companies.
   2. If utility services are required to be removed, relocated, or abandoned, provide temporary utilities before proceeding with selective demolition that bypass area of selective demolition and that maintain continuity of service to other parts of building.
   3. Cut off pipe or conduit in walls or partitions to be removed. Cap, valve, or plug and seal remaining portion of pipe or conduit after bypassing.

D. Utility Requirements: Refer to Division 22, 23, and 26 Sections for shutting off, disconnecting, removing, and sealing or capping utilities. Do not start selective demolition work until utility disconnecting and sealing have been completed and verified in writing.

3.3 PREPARATION

A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.

   1. Do not close or obstruct streets, walks, walkways, or other adjacent occupied or used facilities without permission from District and authorities having jurisdiction. Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.
   2. Erect temporary protection, such as walks, fences, railings, canopies, and covered passageways, where required by authorities having jurisdiction.
   3. Protect existing site improvements, appurtenances, and landscaping to remain.

B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
C. Temporary Enclosures: Provide temporary enclosures for protection of existing building and construction, in progress and completed, from exposure, foul weather, other construction operations, and similar activities. Provide temporary weathertight enclosure for building exterior.

D. Temporary Partitions: Erect and maintain dustproof partitions and temporary enclosures to limit dust and dirt migration and to separate areas from fumes and noise.

E. Temporary Shoring: Provide and maintain interior and exterior shoring, bracing, or structural support to preserve stability and prevent movement, settlement, or collapse of construction to remain, and to prevent unexpected or uncontrolled movement or collapse of construction being demolished.

3.4 POLLUTION CONTROLS

A. Dust Control: Use water mist, temporary enclosures, and other suitable methods to limit spread of dust and dirt. Comply with governing environmental-protection regulations.

1. On an as needed basis wet mop floors to eliminate track-able dirt and wipe down walls and doors of demolition enclosure. Vacuum carpeted areas.

B. Disposal: Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

1. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.

C. Cleaning: Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

3.5 SELECTIVE DEMOLITION

A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations.

1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction.
2. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
3. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
4. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.

B. Existing Facilities: Comply with building manager's requirements for using and protecting elevators, stairs, walkways, loading docks, building entries, and other building facilities during selective demolition operations.
C. Removed and Salvaged Items:
   1. Clean salvaged items.
   2. Pack or crate items after cleaning. Identify contents of containers.
   3. Store items in a secure area until delivery to District.
   4. Transport items to District's storage area designated by District.
   5. Protect items from damage during transport and storage.

D. Removed and Reinstalled Items:
   1. Clean and repair items to functional condition adequate for intended reuse. Paint
equipment to match new equipment.
   2. Pack or crate items after cleaning and repairing. Identify contents of containers.
   3. Protect items from damage during transport and storage.
   4. Reinstall items in locations indicated. Comply with installation requirements for new
materials and equipment. Provide connections, supports, and miscellaneous materials
necessary to make item functional for use indicated.

E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling
during selective demolition. When permitted by District, items may be removed to a suitable,
protected storage location during selective demolition and cleaned and reinstalled in their
original locations after selective demolition operations are complete.

3.6 PATCHING AND REPAIRS
A. General: Promptly repair damage to adjacent construction caused by selective demolition
operations.

B. Patching: Comply with Division 1 Section "Cutting and Patching."

C. Repairs: Where repairs to existing surfaces are required, patch to produce surfaces suitable for
new materials.
   1. Completely fill holes and depressions in existing masonry walls that are to remain with an
approved masonry patching material applied according to manufacturer's written
recommendations.

D. Finishes: Restore exposed finishes of patched areas and extend restoration into adjoining
construction in a manner that eliminates evidence of patching and refinishing.

E. Floors and Walls: Where walls or partitions that are demolished extend one finished area into
another, patch and repair floor and wall surfaces in the new space. Provide an even surface of
uniform finish color, texture, and appearance. Remove existing floor and wall coverings and
replace with new materials, if necessary, to achieve uniform color and appearance.

F. Ceilings: Patch, repair, or rehang existing ceilings as necessary to provide an even-plane
surface of uniform appearance.

3.7 DISPOSAL OF DEMOLISHED MATERIALS
A. General: Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off District's property and legally dispose of them.

END OF SECTION 01 70 32
SECTION 03 01 30
MAINTENANCE OF CAST-IN-PLACE CONCRETE

PART 1 – GENERAL

1.1 RELATED DOCUMENTS
A. Drawings, general provisions of the Contract, and other related construction documents.

1.2 SUMMARY
A. This Section includes a self-drying, cement-based finish underlayment that provides a smooth surface prior to the installation of floor covering over a variety of substrates.
   1. ARDEX FEATHER FINISH Self-Drying, Cement-Based Finish Underlayment
   2. ARDEX P82 Ultra Prime
   3. ARDEX P51 Primer

B. Related Sections include the following:
   1. Section 09 65 40 – Linoleum Flooring
   2. Section 09 05 61 Moisture Emission Control

1.4 REFERENCES
A. ASTM F2170, relative Humidity in Concrete Flooring Slabs Using in situ Probes.
B. ASTM F710, Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.

1.5 SUBMITTALS
A. Product Data: Submit manufacturer’s product data and installation instruction for each material and product used. Include manufacturer’s Material Safety Data Sheets.

B. Qualification Data: For Installer

1.6 QUALITY ASSURANCE
A. Installation of the ARDEX product must be completed by a factory-trained applicator, such as an ARDEX Level Master Elite or Choice Contractor, using mixing equipment and tools approved by the manufacturer.

B. Product must be cement-based having an inorganic binder content which includes a minimum 80% Portland Cement per ASTM C150 Standard Specification for Portland Cement and other specialty hydraulic cements. Gypsum products are not acceptable.

C. Manufacturer Experience: Provide products of this section by companies which have successfully specialized in production of this type of work for not less than 5 years. Contact manufacturer representative prior to installation.

1.7 DELIVERY, STORAGE, AND HANDLING
A. Deliver products in original packaging, labeled with product identification, manufacturer, batch number and shelf life.
B. Store products in a dry area with temperature maintained between 50 degrees and 85 degrees F and protect from direct sunlight.

C. Handle products in accordance with manufacturer’s printed recommendations.

1.8 PROJECT CONDITIONS

A. Do not install material below 50 degrees F surface and air temperatures. These temperatures must also be maintained during and for 48 hours after installation of the products included in this section. Install quickly if substrate is warm and follow warm weather instructions available from the ARDEX Technical Service Department.

PART 2—PRODUCTS

2.1 MAINTENANCE OF CAST-IN-PLACE CONCRETE

A. Self-Drying, Cement-Based Finish Underlayment

1. Acceptable Products:

i. ARDEX FEATHER FINISH: manufactured by ARDEX Engineered Cements; 400 Ardex Park Drive, Aliquippa, PA 15001; 724-203-5000; www.ardexamericas.com

a. Primer

a. Other non-porous substrates such as epoxy coating systems and metal; ARDEX P82 Ultra Prime.

b. Gypsum: ARDEX P51 Primer.

2.2 WATER: Water shall be clean, potable, and sufficiently cool (not warmer than 70 degrees F).

PART 3—EXECUTION

3.1 PREPARATION

A. General: Prepare substrate in accordance with manufacturer’s instructions.

1. Concrete:

i. Prior to proceeding please refer to ASTM F170 Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring. All concrete subfloors must be sound, solid, clean, and free of all oil, grease, dirt, curing compounds, and any substance that might act as a bond breaker before priming. Acid etching and the use of sweeping compounds and solvents are not acceptable.

ii. Substrates shall be inspected in accordance with ASTM F2170 and corrected for moisture or any other conditions that could affect the performance of the underlayment or the finished floor covering. Fore areas where moisture vapor emissions exceed the required limits install the appropriate ARDEX Moisture Control System.
2. Cracked and Joint Preparation

i. Moving Joints – honor all moving joints and moving cracks up through the installation. A flexible sealing compound such as ARDEX ARDISEAL Rapid Plus Semi-Rigid Joint Sealant may be installed.

ii. Sawcuts and Control Joints – Fill all dormant joints and dormant cracks with ARDEX ARDIFIX Low Viscosity Rigid Polyurethane Crack and Joint Repair or ARDEX FEATHER FINISH as recommended by the manufacturer.

3. Gypsum: All gypsum subfloors must be thoroughly cleaned and free of dirt, debris, sealers, and contaminants that might act as a bond breaker. Mechanically clean if necessary using shot blasting or other.

4. Wood: The wood subfloor must be constructed according to prevailing building codes and must be solid and securely fixed to provide a rigid base free of undue flex. Any boards exhibiting movement must be re-nailed. The surface of the wood must be clean and free of oil, grease, dirt, varnish, shellac and any contaminant that might act as a bond breaker. If necessary, sand down to bare wood. Do not use solvents, strippers or cleaners. Vacuum all dust and debris. It is the responsibility of the installation contractor to verify that the wood subfloor is thoroughly clean and properly anchored.

5. Metal: Metal substrates must be rigid, well supported, properly anchored, and free of undue flex and vibration. They must be clean, including the complete mechanical removal of rust, corrosion and any contaminant that may act as a bond breaker. It is the responsibility of the installation contractor to ensure that this is so. To prevent rust from recurring, steel surfaces must be coated with an anticorrosive epoxy coating and allowed to dry thoroughly. The coating must be installed in strict accordance with the coating manufacturer’s written recommendations and allowed to cure fully. Lead, copper and aluminum do not need to be coated with an anticorrosive epoxy.

6. Adhesive residues on concrete must first be tested to make certain they are no water-soluble. Water-soluble adhesives must be completely mechanically removed down to clean concrete. Non-water-soluble adhesives should be prepared to a thin, well-bonded residue using the wet-scraping technique as recommended by the Resilient Floor Covering Institute. The prepared residue should appear as nothing more than a transparent stain on the concrete after scraping.

7. Other Non-Porous Substrates: The substrates must be clean, including complete removal of existing waxes and sealers, dust, dirt, and any other contamination that may act as a bond breaker. Substrate preparation must be by mechanical means, such as shot blasting.

3.2 APPLICATION OF ARDEX FEATHER FINISH

A. Examine substrates and conditions under which materials will be installed. Do not proceed with installation until unsatisfactory conditions are corrected.

B. Coordinate installation with adjacent work to ensure proper sequence of construction. Protect adjacent areas from contact due to mixing and handling of materials.

C. Priming:
1. Gypsum: Make an initial application of ARDEX P51 diluted with 3 parts water using a soft push broom. Do not leave any bare spots. Remove all puddles and excess primer. Allow to dry thoroughly (1 to 3 hours) before proceeding with the second application of ARDEX P51 diluted 1:1 with water. Allow thoroughly drying to a clear, thin film (minimum 3 hours, max 24 hours).

2. Epoxy coating systems and metal shall be primed with ARDEX P82 Ultra Prime. Do not leave any bare spots. Brush off puddles and excess primer. Allow primer to dry to a thin slightly tacky film (minimum 3 hours to max 24 hours).

D. Mixing: Comply with manufacturer’s printed instructions and the following:

1. Add 2-1/2 quarts (2.4 L) of clean potable water per 10-pound bag.


E. Application: Comply with manufacturer’s printed instructions and the following:

1. ARDEX FEATHER FINISH can be installed from a true featheredge up to 1/2 inch over large areas. It can be installed up to any thickness in small, well-defined areas.

2. Apply the ARDEX FEATHER FINISH to the substrate with the flat side of a trowel to obtain a solid mechanical bond before applying the desired thickness.

F. Curing:

1. As soon as the ARDEX FEATHER FINISH can be worked on without damaging the surface (15-20 minutes), standard floor coverings, such as VCT, sheet vinyl, and carpeting can be installed. If installing word flooring, or if high-performance adhesives will be used, such as epoxy or urethane, ARDEX FEATHER FINISH must first cure for 16 hours.

3.3 FIELD QUALITY

A. Where specified, field sampling of the ARDEX underlayment is to be done by taking an entire unopened bag of the product being installed to an independent facility to perform compressive strength testing in accordance with ASTM C109/modified, air-cure only. There are no in situ test procedures for the evaluation of compressive strength.

3.4 PROTECTION

A. Prior to the installation of the finish flooring, the surface of the underlayment should be protected from abuse by other trades by the use of plywood, Masonite, or other suitable protection course.

END OF SECTION
SECTION 09 65 40
LINOLEUM FLOORING

PART 1 – GENERAL

1.1 DESCRIPTION

A. Work Included:
   1. Rubber wall base, reducer strips, and other accessories.
   2. Rubber stair treads.
   3. Underlayment.

1.2 RELATED SECTIONS

A. Section 03 01 30 - Maintenance of Cast-In-Place Concrete

1.3 SUBMITTALS

A. Manufacturer’s Literature and Product Data:
   1. Description of each product.
   2. Resilient material manufacturer’s recommendations for adhesives, underlayment, primer, and polish.
   3. Application and installation instructions.
   4. Linoleum sheet flooring must be ordered a minimum of sixty (60) days prior to start of scheduled installation.

B. Samples: Submit 2 sets of samples of each type, color, and finish of resilient flooring and accessory required. Provide 6” square samples of flooring and 6” long samples of accessories.

C. Closeout Submittals:
   1. Maintenance and operations data: Include methods for maintaining installed products, recommendations for maintenance materials and equipment, suggested schedule for cleaning, and precautions against cleaning materials and methods detrimental to finishes and performance.
   2. Warranty: Warranty documents specified herein.

D. Flame Spread Certification: Submit manufacturer’s certification that resilient flooring furnished for areas indicated to comply with required flame spread rating has been tested and meets or exceeds indicated standard.

E. Replacement Material: After completion of work, deliver to project site replacement materials from same manufactured lot as materials installed, and as follows:
   1. Sheet Flooring: Not less than 50 square feet for each type, pattern, and color installed. Coordinate storage location with owner.

1.4 QUALITY ASSURANCE

A. Single-Source Responsibility: Provide each type of resilient flooring and accessories as provided by a single manufacturer, including recommended primers, adhesives, sealants, and leveling compounds.
B. Contractor Qualifications:

1. The awarded contractor shall be an established firm, experienced in the installation of the specified product and shall have access to all manufacturer’s required technical, maintenance, specifications, and related documents.
2. The flooring contractor shall have completed at least three projects of similar magnitude, material and complexity, and must provide project reference list including contact names and telephone numbers.

C. Regulatory Requirements: Provide products with the following fire-test response characteristics as determined by testing identical products per ASTM test method indicated below by UL or another testing and inspecting agency acceptable to authorities have jurisdiction.

E. Standard of Quality: For the purpose of evaluating the quality of workmanship, a mock up installation of the specified floor covering shall be provided by the Flooring Contractor in an area designated by the architect. Upon approval, this test installation shall then be considered the standard of quality and basis of comparison for the balance of the project. Areas found to be deficient by specification standards or application procedures shall be repaired/replaced at contractor’s expense.

1.5 WARRANTY

A. Manufacturer’s Warranty: Submit manufacturers standard warranty document.

1. Warranty Period: Five (5) year limited warranty commencing on Date of Substantial completion.
2. Project Warranty: Refer to Condition of the Contract for project warranty provisions.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver materials in manufacturer’s original, unopened, undamaged containers with identification labels intact.

B. Storage and Protection: Store materials protected for exposure to harmful weather conditions and at a temperature and humidity conditions recommended by manufacturer.

1. Materials should be stored in areas that are fully enclosed, weather tight with the permanent HVAC system set at a uniform temperature of at least 68 degrees F (20 degrees C) for 72 hours prior to, during and after installation.
2. Move resilient flooring and installation accessories into spaces where they will be installed at least 48 hours before installation, unless longer conditioning periods are recommended in writing by the manufacturer.

1.7 PROJECT CONDITIONS

A. Environmental Requirements/Conditions: In accordance with manufacturer’s recommendations. Areas to receive flooring shall be clean, fully enclosed, weather tight with the permanent HVAC set at a uniform temperature of at least 68 degrees F (20 degrees C). The flooring material should be conditioned in the same manner.

B. Temperature Requirements: Maintain air temperature in spaces where products will be installed for time period before, during, and after installation as recommended by manufacturer.

1. Temperature Conditions: 68 degrees F (20 degrees C) for 72 hours prior to and during and for not less than 48 hours after installation.
C. Close spaces to traffic during resilient flooring installation and for time period after installation recommended in writing by the manufacturer.

D. Install resilient flooring material and accessories after other finishing operations, including painting, have been completed.

E. Where demountable partitions and other items are indicated for installation on top of sheet resilient flooring material, install flooring material before these items are installed.

PART 2—PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include but are not limited to, the following:

1. Linoleum Sheet Flooring: To establish a standard of quality, design and performance, FORBO Marmoleum Striato and Marmoleum Fresco, 2.5 mm sheet linoleum over 1.0 mm Polyolefin layer for sound insulation and comfort, Top Shield finish for improved maintenance & long-term appearance retention, and polyester backing for dimensional stability has been selected. Alternative materials shall be considered acceptable provided they meet or exceed the specification criteria as detailed herein. The District shall be solely responsible for determination as to equivalency.

2.2 MATERIALS

A. Colors and Patterns: Reference color selection in the Legend on the drawings A-03.

1. Color 1 – Marmoleum Fresco 3866 Eternity
2. Color 2 – Marmoleum Striato 5225 Compressed Time

B. Linoleum Sheet Flooring: Meeting or ASTM F-2034 Type 1, 0.100" (2.5mm) nominal thickness, ASTM E 84 – Class C.

C. Homogeneous linoleum comprised primarily of natural materials consisting of linseed oil, wood flour, rosin binders and pigments calendared in a two-stage process on a jute backing to insure optimal dimensional stability with an integral acoustical backing.

D. Critical Radiant Flux: 0.45 watts per sq. cm or more per ASTM E648.

E. Smoke Density: Less than 450 per ASTM E662.

F. Slip Resistance value of S.C.O.F. >0.6 min, ASTM D 2047.

G. Upon request by Architect, Flooring manufacturing to provide independent testing labs verification of all applicable test results.

2.3 ACCESSORIES

A. Adhesive: As recommended by the flooring manufacturer.

1. Able to withstand concrete moisture vapor emissions up to 5 pounds per 1,000 sq. ft. in 24 hours.
2. Comply with applicable regulations regarding toxic and hazardous materials Green Seal (GS-36) for commercial adhesive and State of California VOC requirements.

B. Resilient Edge Strips: 1/8” thick, homogeneous rubber composition, tapered or bull nose edge, color to match flooring, or as selected by Architect from standard colors available, no less than 1” wide. Johnsonite, Burke, Roppe or approved equal.

C. Metal Edge Strips: 1-1/8 inch width and of required thickness to protect exposed edge of resilient flooring. Provide units of maximum available length, to minimize number of joints.

D. Leveling and Patching Compounds: Portland Cement types as recommended by flooring manufacturer.

E. Coved Rubber Base: 4 inches high, 1/8 inch thick, molded thermoset rubber base per ASTM F1861 with premolded end stops, internal and external corners. Provide in 120’ roll length.
   1. Acceptable manufacturers: Johnsonite, Burke, Roppe
   2. Color: **Burke: 660 Rocky**

F. Rubber Stair Tread: Johnsonite Cubis surface texture rubber stair tread with integrated riser, Color shall be 76 Cinnamon with 2” wide contrasting solid rubber color insert strip color 49 Beige.

G. Heat Weld Rods: Forbo, Johnsonite, color to be selected by the architect.

H. Primer (for concrete subfloors)
   1. As recommended by the adhesive manufacturer.

I. Self-Leveling Compound: Ardex Feather Finish – self-drying matrix; mixes with water only; trowelable; mold and mildew resistant; for interior use.

**PART 3—EXECUTION**

3.1 INSPECTION

A. Installer must examine areas and conditions under which resilient flooring and accessories are to be installed and must notify General Contractor in writing of conditions detrimental to proper and timely completion of work. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Owner and Architect.

3.2 PREPARATION

A. Surface Preparation:
   1. General: Broom clean or vacuum surfaces to be covered and inspect subfloor. Start of flooring installation indicates acceptance of subfloor conditions and full responsibility for completed work.
   2. Floor Substrate: Prepare floor substrate to be smooth, rigid, flat, level, permanently dry, clean and free of foreign materials such as dirt, paint, grease, oils, solvent, curing and hardening compounds, sealers, asphalt and old adhesive residue.

B. Subfloor Preparation (concrete)
1. Verify that concrete slabs comply with ASTM F710. At existing slabs, determine levelness by F-number method in accordance with ASTM E1155. Overall value shall not exceed as follows: FF30/FL20

2. Correct conditions which will impair proper installation.

3. Fill cracks, joints and other irregularities in concrete with leveling compound:
   a. Do not use adhesive for filling or leveling purposes.
   b. Do not use leveling compound to correct imperfections which can be corrected by spot grinding.
   c. Trowel to smooth surface free of trowel marks, pits, dents, protrusions, cracks or joints.

4. Clean floor of oil, paint, dust, and deleterious substances: Leave floor dry and cured free of residue from existing curing or cleaning agents.

5. Perform additional subfloor preparation to obtain satisfactory adherence of flooring if subfloor test patches allows easy removal of tile.

6. Prime the concrete subfloor if the primer will seal slab conditions that would inhibit bonding, or if priming is recommended by the adhesive manufacturers.

7. Preparation of existing installation shall include the removal of existing resilient floor and existing adhesive. Do not use solvents to remove adhesives.

8. Apply self-leveling compound per manufacturer’s recommendation.

C. SUBFLOOR PREPARATION (WOOD)

1. Inspect the subfloor for evenness along joints and flatness between floor joists. When necessary, sand the subfloor near the joints; install extra blocking and re-fasten the subfloor to flatten uneven areas.

2. Check the subfloor for squeaks and re-fasten as necessary before installing underlayment.

3. Install plywood underlayment smooth side up, on a dry subfloor. For maximum stiffness, install underlayment with the face grain perpendicular to floor joists. Stagger end joints.

4. All joints of the underlayment panels shall be offset from the joints of the subfloor panels at a minimum of 2-inches unless otherwise recommended by the resilient flooring manufacturer.

3.3 INSTALLATION

A. Adhesive Flooring Installation: Refer to Manufacturers recommendations. Apply adhesive using 1/16" x 1/16" x 1/16" square notch trowel and lay flooring into wet adhesive and roll with a 100 pound roller.

1. Adhesive Material Installation: Use trowel as recommended by flooring manufacturer for specific adhesive. Spread at a rate of approximately 150 sq. ft/ gallon as recommended by flooring manufacturer.

B. Installation Techniques:
1. Do not reverse sheets for seaming.

2. Install one sheet at a time.

3. Install rolls and cuts in consecutive order.

4. Where demountable partitions and other items are indicated for installation on top of finished flooring, install flooring before these items are installed.

5. Scribe, cut, fit flooring to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture, including pipes, outlets, edgings, thresholds, nosing and cabinets.

6. Extend flooring into toe spaces, floor reveals, closets, knee space casework, and similar openings.

7. Install flooring on covers for telephone and electrical ducts, and similar items occurring within finish floor areas. Maintain overall continuity of color and pattern with pieces of flooring installed on these covers.

8. Do not install resilient flooring over expansion joints. Use expansion joint covers manufactured for use with resilient flooring. Refer to other specification sections for expansion joint covers.

9. Adhere resilient flooring to substrate without producing open cracks, voids, raising and puckering at joints, telegraphing to adhesive spreader marks, or other surface imperfections in completed installation.

   a. Use adhesive applied to substrate in compliance with flooring manufacturer’s recommendations, including those for trowel notching, adhesive mixing and adhesive open and working times.

C. Heat Welded Seams: To provide a seamless and watertight installation, seams are to be heat welded using color matched welding rod (4 mm. Diameter) as manufactured by Forbo as indicated.

D. Finish Flooring Patterns: As shown on architectural drawings A2.1 and A2.2.

E. Provide seam layout drawings to Architect for review and approval.

3.4 CLEANING

A. Materials: Contractor shall provide and apply initial maintenance products as per details and procedures as follows:

B. Cleaning: Remove temporary coverings and protection of adjacent work areas. Repair or replace damaged installed products. Clean installed products in accordance with manufacturer’s instructions, prior to owner’s acceptance. Remove construction site debris from project site and legally dispose of debris.

C. Remove visible adhesive and other surface blemishes using cleaning methods recommended by flooring manufacturer.

D. Sweep vacuum floor after installation.

E. Do not wash floor until after time period recommended by flooring manufacturer.
F. Damp mop flooring to remove black marks and soil.

G. Prohibit traffic from floor for 48 hours after installations.

3.5 PROTECTION

A. Protection: Protect installed product and finish surfaces from damage during construction. Remove and legally dispose of protective covering at time of Substantial Completion.

3.6 EXTRA MATERIALS

A. Provide 10 percent of each materials installed (linoleum, weld rods, and wall base).

END OF SECTION
SECTION 00 90 00
PAINTS AND COATINGS

PART 1 – GENERAL

1.1 SUMMARY

A. Section includes surface preparation and field application of paints, stains, varnishes, and other coatings.

1.2 REFERENCES

A. ASTM International:

B. Painting and Decorating Contractors of America:

C. SSPC: The Society for Protective Coatings:
   1. SSPC - Steel Structures Painting Manual.

D. Air Quality Management District:
   1. AQMD – Air Quality Regulations.

1.3 DEFINITIONS

A. Conform to ASTM D16 for interpretation of terms used in this section.

1.4 SUBMITTALS

A. Product Data: Submit manufacturer’s printed product data on all coatings specified, including preparation and application instructions.

B. Samples:
   1. Submit two paper chip samples, 3 inch by 5 in size illustrating range of colors and textures available for each surface finishing product scheduled.
   2. Submit two painted samples, illustrating selected colors and textures for each color and system selected. Submit on white card stock, 8 inch by 10 inch in size.

C. Manufacturer’s Installation Instructions: Submit special surface preparation procedures, and substrate conditions requiring special attention.

1.5 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: Submit data on cleaning, touch-up, and repair of painted and coated surfaces.
1.6 QUALIFICATIONS

A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three (3) years documented experience.

B. Applicator: Company specializing in performing work of this Section with minimum three (3) years documented experience.

C. Volatile Organic Compounds (VOC): Use only products in compliance with VOC content limits required by state and local regulations.

1.7 MOCKUP

A. General: In place, on material scheduled to be finished, illustrating coating colors, texture and finish. At discretion of Owner up to three (3) color palettes shall be painted out for selection. Locate where directed; accepted sample may remain as part of work.
   1. Size: Interior: 8'-0" by 8'-0" panel.
   2. Size: Exterior: 8'-0" by 8'-0" panel.

B. Contractor may use actual surfaces to be painted as mock-ups. Contractor to coordinate and schedule with the District Representative to view mock-ups prior to proceeding with work. Mock-ups may be used as part of the final product at the direction of the District.

1.8 PRE-INSTALLATION MEETINGS

A. Convene minimum one week prior to commencing work of this section.

1.9 DELIVERY, STORAGE, AND HANDLING

A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.

B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.

C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

1.10 ENVIRONMENTAL REQUIREMENTS

A. Do not apply materials when surface and ambient temperatures are outside temperature ranges required by paint product manufacturer.

B. Do not apply exterior coatings during rain or snow when relative humidity is outside humidity ranges, or moisture content of surfaces exceed those required by paint product manufacturer.

C. Minimum Application Temperatures for Latex Paints: 65 degrees F for interiors; 50 degrees F for exterior, unless required otherwise by manufacturer's instructions.

D. Minimum Application Temperature for Varnish Finishes: 65 degrees F for interior or exterior, unless required otherwise by manufacturer's instructions.
E. Provide lighting level of 80 ft candles measured mid-height at substrate surface.

1.11 SEQUENCING

A. Sequence application to the following:
   1. Do not apply finish coats until paintable sealant is applied.
   2. Back prime wood trim before installation of trim.

1.12 EXTRA MATERIALS

A. Supply 1 percent or a minimum of one gallon of each color, type, and surface texture of paint installed. Store where directed.

B. Label each container with color, type, texture, and room locations, in addition to manufacturer's label.

PART 2 - PRODUCTS

2.1 MANUFACTURER

A. Products listed in Schedule establish a standard of quality and are manufactured by Dunn Edwards Paints.

B. Alternate Manufacturers: Dunn Edwards, Kelly Moore, Fuller O'Brian, ICI Delux.

C. Considerations for substitutions must be accompanied by support test data certifying that products meet established standards.

2.2 COMPONENTS

A. Coatings: Ready mixed, except field catalyzed coatings. Prepare coatings:
   1. To soft paste consistency, capable of being readily and uniformly dispersed to homogeneous coating.
   2. For good flow and brushing properties.
   3. Capable of drying or curing free of streaks or sags.

B. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials not specifically indicated but required to achieve finishes specified; commercial quality.

C. Patching Materials: Latex fillers as recommended by coatings manufacturer.

D. Fastener Head Cover Materials: Latex filler as recommended by coatings manufacturer.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Verify surfaces are ready to receive Work as instructed by product manufacturer.

B. Examine surfaces scheduled to be finished prior to commencement of work. Report conditions capable of affecting proper application.
C. Test shop applied primer for compatibility with subsequent cover materials.

D. Measure moisture content of surfaces using electronic moisture meter. Do not apply finishes unless moisture content of surfaces are below the following maximums:
   1. Plaster and Gypsum Wallboard: 12 percent.
   2. Masonry, Concrete, and Concrete Unit Masonry: 12 percent.
   3. Interior Wood: 15 percent, measured in accordance with ASTM D4442.
   4. Exterior Wood: 15 percent, measured in accordance with ASTM D4442.
   5. Concrete Floors: 8 percent.

3.2 PREPARATION

A. Remove or mask electrical plates, hardware, light fixture trim, and similar fittings prior to beginning painting operations.

B. Correct defects and clean surfaces affecting work of this section. Sand all gloss finishes to sheen. Remove existing coatings that are flaking or otherwise in unacceptable condition to receive paint. Preparation or removal of coatings containing lead must be performed in accordance with all EPA and OSHA guidelines.

C. Remove all posters, picture frames, photos, staples, nails, screws, pins, etc. on all surfaces scheduled to be painted. Patch all holes and cracks as needed to provide a smooth and even surface.

D. Marks: Seal with shellac or other coating acceptable to paint manufacturer any marks or defects that might bleed through paint finishes.

E. Impervious Surfaces: Remove mildew from impervious surfaces by scrubbing with solution of trisodium phosphate and bleach. Rinse with clean water and allow substrate to dry.

F. Aluminum Surfaces Scheduled for Paint Finish: Remove surface contamination by steam or high pressure water. Remove oxidation by acid etching and solvent washing. Apply etching primer immediately following cleaning.

G. Asphalt Concrete Surfaces Scheduled to Receive Paint Finish: All surfaces must be cleaned free from grease, oil, dirt, mildew, stains and other contaminants that would cause adhesion problems. Remove loose, peeling or chalky paint by high-pressure washing or other appropriate methods. Surfaces must be completely dry before application.

H. Concrete Floors: Remove contamination, acid etch, and rinse floors with clear water. Verify required acid-alkali balance is achieved. Allow to dry.


J. Galvanized Surfaces: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.

K. Concrete and Masonry Surfaces Scheduled to Receive Paint Finish: Pressure wash to remove all dirt, loose mortar, scale, salts, alkalies, and other foreign matter. Remove oil
and grease with solution of tri-sodium phosphate; rinse well and allow to dry. Remove stains caused by weathering of corroding metals with solution of sodium metasilicate after thoroughly wetting with water. Remove all plant growth, including all growth spores and spore residue where designated.

L. Concrete, Stucco, Plaster and Joint Repair:

1. Remove all loose, non-adhering or deteriorating caulk, sealant or expansion joint compound.

2. Detail hairline cracks less than 1/16 inch with ICI Decra-Flex Elastomeric Patching Compound. Blend Patch with adjacent texture.

3. Rout open, cracks or joints greater than 1/16 inch but less than 1/8 inch to form a "V" or "U" shape, dust clean, and caulk with ICI Decra-Flex Elastomeric Patching Compound. Tool patching compound into crack to insure proper adhesion.

4. Rout out, cracks or joints 1/8 inch to 1/4 inch to a minimum of 1/4 inch in width and depth and pack with ICI Dera-Flex Elastomeric Patching Compound. Tool to insure proper adhesion. Allow to tack cure, then apply a top coat of ICI Decra-Flex Elastomeric Patching Compound, slightly crowning center directly over crack to allow for thermal movement, and blend with adjacent texture. In deep cracks or joints patching compound depth can be controlled with use of a polyethylene backer rod. Consult your local representative for proper specification.

5. Caulk cracks, openings or expansion joints larger than 1/4 inch with a cementitious sealant. Consult your local representative for proper specification.

M. Uncoated Steel and Iron Surfaces: Remove grease, mill scale, weld splatter, dirt, and rust. Where heavy coatings of scale are evident, remove by hand or power tool wire brushing or sandblasting; clean by washing with solvent. Apply treatment of phosphoric acid solution, ensuring weld joints, bolts, and nuts are similarly cleaned. Spot prime paint after repairs.

N. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces.

O. Interior Wood Items Scheduled to Receive Paint Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats.

P. Interior Wood Items Scheduled to Receive Transparent Finish: Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats.

Q. Exterior Wood Scheduled to Receive Paint Finish: Remove dust, grit, and foreign matter. Seal knots, pitch streaks, and sappy sections with sealer recommended by paint
manufacturer. Fill nail holes with tinted exterior paintable caulking compound after prime coat has been applied.

R. Glue-Laminated Beams: Prior to finishing, wash surfaces with solvent, remove grease and dirt.

S. Wood Doors Scheduled for Painting: Seal wood door top and bottom edges with specified primer.

T. Metal Doors Scheduled for Painting: Prime metal door top and bottom edges with specified primer.

3.3 EXISTING WORK

A. Extend existing paint and coatings installations using materials and methods compatible with existing installations and as specified.

B. Submit brush-outs for matching existing colors.

3.4 APPLICATION

A. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

B. Apply each coat to uniform appearance. Apply each coat of paint slightly darker than preceding coat unless specified otherwise.

C. Sand wood and metal surfaces lightly between coats to achieve required finish.

D. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.

E. Where clear finishes are required, tint fillers to match wood. Work fillers into grain before set. Wipe excess from surface.

F. Prime concealed surfaces of interior and exterior woodwork with primer paint.

G. Prime concealed surfaces of interior wood surfaces scheduled to receive stain or varnish finish with gloss varnish reduced 25 percent with thinner.

H. Finishing Mechanical And Electrical Equipment:
   1. Refer to Division 15 and Division 16 for schedule of color coding and identification banding of equipment, duct work, piping, and conduit.
   2. Paint shop primed equipment.
   3. Remove unfinished louvers, grilles, covers, and access panels on mechanical and electrical components and paint separately.
   4. Prime and paint insulated and exposed pipes, conduit, boxes, insulated and exposed ducts, hangers, brackets, collars and supports, except where items are shop finished.
   5. Paint interior surfaces of air ducts and convector and baseboard heating cabinets visible through grilles and louvers with one coat of flat black paint to visible surfaces. Paint dampers exposed behind louvers, grilles to match face panels.
6. Paint exposed conduit and electrical equipment occurring in finished areas.
7. Paint both sides and edges of plywood backboards for electrical and telephone equipment before installing equipment.
8. Color code equipment, piping, conduit, and exposed duct work in accordance with requirements indicated. Color band and identify with flow arrows, names, and numbering.
9. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.5 CLEANING

A. See Appendix A.
B. Collect waste material which may constitute fire hazard, place in closed metal containers, and remove daily from site.

3.6 SCHEDULE - EXTERIOR SURFACES

A. Wood Trim, Fascias:
   1. Acrylic Latex Semi-Gloss Finish:
      a. 1 coat 2000 Dulux 100 percent Acrylic Primer
      b. 2 coats 2406 Dulux 100 percent Acrylic Semi-Gloss Finish.

B. Stucco or Cement Plaster Surfaces:
   1. Acrylic Finish:
      a. 1 coat 3030 Bond Prep Acrylic Primer.
      b. 2 coats 2402 Dulux 100 percent Acrylic Satin.

C. Fiber Cement Hardboard Siding:
   1. Acrylic Latex, Flat Finish:
      a. 1 coat 2000 Dulux 100 percent Acrylic Primer
      b. 2 coats 2200 Dulux 100 percent Flat Finish

D. CMU Block (Painted):
   a. 1 coat 4000 Bloxfil 100% Acrylic Block Filler
   b. 2 coats 2200 Dulux !00% Acrylic Flat Finish

E. Ferrous Metals (Miscellaneous metal):
   1. Industrial Acrylic Finish:
      a. 1 coat 4020PF Devflex DTM Metal Primer (2.5 DFT).
      b. 2 coats Devflex 4216HP Industrial Acrylic S/G.

F. Galvanized and Aluminum Metals:
   1. Industrial Acrylic Finish:
      a. New Only - Etch with Ecoprime (distributed by ICI Dulux Paints).
      b. 1 coat 4020PF Devflex DTM Metal Primer.
      c. 2 coats 4216HP Devflex Industrial Acrylic S/G.

G. Aluminum, Brass, other non-ferrous metals:
   1. Industrial Acrylic Finish:
      a. Clean all surfaces thoroughly with a suitable abrasive and solvent to remove any surface oxidation or contaminates.
b. 1 coat 4020PF Devflex DTM Primer/Finish.
c. 2 coats 4216HP Devflex Acrylic Industrial Acrylic S/G.

H. Pipes, Boilers and Stacks:
1. Heat Resistant Aluminum Coating (min. 1000 degree F).
   a. 2 coats ICI Devoe HT-10 Silicone High Heat Aluminum.

3.9 SCHEDULE – INTERIOR SURFACES

A. Gypsum Board:
1. Low-Lustre Acrylic Latex Finish:
   a. 1 coat ICI 1030 PVA Sealer.
   b. 2 coats ICI 1402 Dulux Eggshell Acrylic Finish.
2. Semi-Gloss Acrylic Latex Finish
   a. 1 coat ICI 1030 PVA Sealer.
   b. 2 coats ICI 1406 Dulux Semi-Gloss Acrylic Finish.
3. Semi-Gloss Epoxy Finish:
   a. 1 coat 1030 PVA Sealer.
   b. 2 coats 4406 Tru-Glaze-WB Semi-Gloss Epoxy.

B. Wall Surfaces Under Vinyl Covered Tackboard Panels:
1. One coat ICI 1030 PVA Sealer.

C. Wood Trim (painted):
1. Semi-Gloss Acrylic Enamel Finish:
   a. 1 coat ICI 1020 Acrylic Wood Primer.
   b. 2 coats ICI 1406 Dulux Semi-Gloss Acrylic Enamel.

D. Wood Trim (natural finish):
1. Acrylic Varnish Finish:
   a. 1 coat 1700 WoodPride Stain.
   b. 1 coat Zinsser Quick Dry Sealer.
   c. 2 coats 1802 Satin Acrylic.

E. Ferrous Metal (Miscellaneous metal):
1. Industrial Semi-Gloss Acrylic Enamel:
   a. 1 coat 4020 Devflex DTM Metal Primer (2.5 DFT).
   b. 2 coats 4216 HP Devflex Industrial Acrylic S/G.

F. Galvanized Metals Including Ductwork:
1. Industrial Semi-Gloss Acrylic Enamel.
   a. 1 coat 4020PF Devflex DTM Metal Primer.
   b. 1 coat 4216HP Devflex Industrial Acrylic S/G.

3.10 SCHEDULE - COLORS

A. Paint colors to be selected by the School District approved color palette.

B. Selected sheens – Interior surfaces:

C. Selected sheens – Exterior surfaces:
1. Walls: Satin.
2. Soffits: Satin.

END OF SECTION 09 90 00
SECTION 12 24 14
WINDOW SHADES

PART 1 – GENERAL

1.1 SECTION INCLUDES
A. Motorized and Manually Operated Roller Window Shades

1.2 REFERENCES
A. The publications listed below form a part of this Section to the extent referenced. The publications are referred to in the text by the basic designation only. Refer to Division 01 for definitions, acronyms, and abbreviations.
B. Unless otherwise noted, standards, manuals, and codes refer to the latest edition of such standards, manuals, and codes as of the date of this Project Manual.
C. Referenced Standards:
   AAMA 2603  Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels
   ASTM G21  Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi
   NFPA 701  Standard Methods of Fire Tests for Flame Propagation of Textiles and Films
   NFPS 703  Standards for Fire-Retardant Treated Wood and Fire-Retardant Coatings for Building Materials

1.4 SUBMITTALS
A. General: Submit in accordance with Division 01
B. Product Data: Submit manufacturer’s descriptive literature and product specification for each product.
   1. Preparation instructions and recommendations.
   2. Styles, material descriptions, dimensions of individual components, profiles, features, finishes, and operating instructions.
   3. Storage and handling requirements and recommendations.
      a. Environmental Certification: Submit written certification from the manufacturer, including third party evaluation, recycling characteristics, and perpetual use certification as specified below.
      b. Third Party Evaluation: Provide documentation stating the shade cloth has undergone third party evaluation for all chemical inputs, down to a scale of 100 parts per million and have been evaluated from human and environmental safety. Identify any and all inputs which are known to be carcinogenic, mutagenic, teratogenic, reproductively toxic, or endocrine disrupting. Identify items that are toxic to aquatic systems, contain heavy metals, or organo-halogens. The material shall contain no inputs that are known problems to human or environmental health per the above major criteria, except for an input that is required to meet applicable fire codes and regulations.
      c. Recycling Characteristics: Provide documentation that the shade cloth is part of a closed loop of perpetual use and not be required to be down-cycled, incinerated, or otherwise disposed of. Scrap material shall be capable of being sent back to the mill.
for reprocessing and recycling into the same quality yarn and woven into new material without down-cycling. Certify that this process is currently available and will be utilized for this project.

d. Perpetual Use Certification: Certify that at the end of useful life of the shade cloth that the material can be sent back to the manufacturer for recapture as part of a closed loop of perpetual use and that the material can and will be reconstituted into new yarn for weaving into new shade cloth. Provide information on each shade band indicating that the shade band can be sent back to the manufacturer for this purpose.

C. Shop Drawings:

1. Provide plans, elevations, sections, product details, installation details, operational clearances, and relationship to adjacent work.
2. Provide window treatment schedule for all roller shades. Use same room designations as indicated on Drawings and include opening sizes and key to typical mounting details.

D. Samples:

1. Submit roller shade sample assembly showing component parts.
2. Selection of metal component finishes.
3. Selection of shade fabric colors, weaves, and types.

E. Manufacturer’s Operation and Maintenance Instructions: Methods for maintaining roller shades, precautions regarding cleaning materials and methods, instructions for operating hardware and controls, and repair guidelines and replacement parts diagram.

1.5 QUALITY ASSURANCE

A. Qualifications

1. Manufacturer’s Qualifications: Obtain roller shades through one source from a single manufacturer with a minimum of ten (10) year experience in manufacturing products comparable to those specified in this Section.
2. Supplier Qualifications: The manufacturer or its subsidiary or licensed agent approved to supply products of this Section and honor any claims against the product presented in accordance with the warranty.
3. Installer Qualifications: Firm specializing in installing work specified in this Section acceptable to manufacturer with documented experience on at least five projects of similar nature in past three (3) years.

B. Fabric Anti-Microbial Characteristics: No Growth per ASTM G21 results for fungi ATCC9642, ATCC9644, and ATCC9645.

C. Field Samples: Provide large size sample of selected fabric for final verification of color, weave, and density as directed by the District.

D. Prior to fabrication, shade installer shall contact the District Project Manager to arrange for a sample installation for review and acceptance by the District Facilities and Buildings and Grounds Glazing Shop Supervisor.

E. Pre-Installation Meetings:

1. Conduct pre-installation meeting.
2. Convene pre-installation meeting one week prior to commencing work of this Section.
3. Coordinate work in this Section with work in related Sections.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver materials in manufacturer’s original, unopened, undamaged containers with identification labels intact.
B. Deliver products when all concrete, masonry, plaster, painting, and other wet work has been completed and dried.
C. Deliver shades in factory-labeled packages, marked with manufacturer and product name, fire-test-response characteristics, and location of installation using same room designations indicated on Drawings.
D. Store materials in a dry secure place. Protect from weather, surface contaminants, corrosion, construction traffic, and other potential damage.

1.7 ENVIRONMENTAL REQUIREMENTS

A. Maintain ambient temperature between 60 degrees F and 85 degrees F and relative humidity between 20% and 50% 24 hours before installation and maintain until Owner’s final acceptance.
B. Condition products at designated work areas 24 hours before installation.

1.8 WARRANTY

A. Manufacturer’s Warranties: Installed units shall be free from defects in material and workmanship as follows:
   2. Shade Cloth: Manufacturer’s standard non-depreciating twenty-five year limited warranty.
   3. Roller Shade Motors and Motor Control Systems: Manufacturer’s standard non-depreciating five year warranty.
   4. Roller Shade Installation: One year from date of Substantial Completion, not including scaffolding, lifts, or other means to reach inaccessible areas.

1.9 MAINTENANCE

A. Extra Materials:
   1. Provide Buildings and Grounds Glazing Shop with spare parts amounting to 10% of the total required for the project.
   2. Provide replacement fabric completely fabricated and ready for attachment to roller tubes equal to 5% of the total number of each fabric type and color in the largest size required for those fabrics.
B. Operations and Maintenance Data:
   1. Include operation and cleaning information.
   2. Include schematic diagram of motor control systems.

PART 2—PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS


2.2 MANUALLY OPERATED WINDOW SHADES

A. Inside Mounting: Shade mounts through top of head assembly to inside of window opening. Shade shall be sized with current clearance not to come in contact with sides of window opening and shall be wide enough to block the maximum amount of light.

B. Roller Tube:
   1. Extruded aluminum alloy roller tube.
   2. Diameter: Sufficient diameter and thickness to prevent excessive deflection.

C. Operator and Clutch/Brake Mechanism: Manual operated chain and sprocket system with a bi-directional clutch/brake mechanism designed to hold shade fabric at any position.

   1. Provide heavy duty single spring for a positive mechanical relationship between the shade tube unit and the installation bracket to ensure stationary positioning in the static state. When activated, the wrap spring shall release and permit the clutch to turn while reducing friction on the clutch.
   2. Clutch bracket shall be removable without having to remove the installation brackets from the wall. Clutch mechanism shall be fasten with screws.
   3. Idle end cap shall spring loaded and have a retractable pin end or secure anchorage into end bracket.

D. Chain: No. 10 stainless steel, minimum 90 pound test ball chain with connector and upper and lower ball stops. Provide wall mounted pulley wheel at bottom of chain to keep chain tracking straight and in-line during operation. Provide locking chain clips at each chain.

E. Mounting brackets shall have a nylon insert on the pin side, have a closed end projection adequate to clear all hardware, and shall support 150% of the weight of the shade.

   1. Idler end mounting bracket shall have a ball bearing idler socket for smooth and quiet operation. Bracket shall include a built-in leveling adjustment to minimize shade telescoping.

F. Provide closed end stop pulleys. The spacing between the pulley roller and the pulley roller bracket arm holding the pulley roller must not allow the shade chain to catch.

2.3 MOTORIZED WINDOW SHADES

A. Motorized shades is based on MechoShade motorized units as a standard of quality.

B. Operator: Mecho Electro 1 or 2 Drive-End Bracket.

C. Blackout Channels: Side, extruded aluminum, clear anodized.
D. Fascia Concealer: Snap-on extruded aluminum, clear anodized.

E. Accessories: As required for mounting directly to the underside of the window header/wall assembly.

F. Motor: Tubular, asynchronous motors with built-in reversible capacitor operating at 110v AC, single phase, temperature Class, concealed motors.

G. Controls: Low-voltage multi-level control, Momentary switch.


I. Snap-on/snap-off spline mounting.

J. Where double shades are specified, room darkening shall be closest to the window.

2.4 SHADE FABRIC

A. Manufacturers:
   1. Phifer Inc. Product: SheerWeave Performance+ 2500 1%.
   2. Draper Inc.
   3. MechoShade
   4. Lutron
   5. Nysan

B. Visually transparent non-raveling shade fabric.

C. Characteristics
   1. Openness: One percent.
   2. Composition: 37 percent fiberglass and 63 percent vinyl.
   4. Thickness: 0.024 inches.
   5. Construction: Full basket weave, non-directional.
   7. Flammability: Meet or exceed requirements of NFPA 701, Class A. Fabric shall be non-combustible, inherently flame retardant, and permanently flame-resistant.
   8. Washable, colorfast and fade resistant.
   10. Color: As selected by the Architect or Owner.

2.5 ACCESSORIES AND SHADE COMPONENTS

A. Fascia
   1. Continuous removable extruded aluminum L-shape profile fascia that attaches to shade mounting brackets by snapping in place on a hinge rib clip without the use of adhesives, magnetic strips, or exposed fasteners.
   2. Fascia shall be able to be installed across two or more shade bands in on piece.
   3. Fascia shall fully conceal brackets, shade roller, and fabric on the tube.
4. Provide bracket / fascia end caps where mounting conditions exposed outside of roller of roller shade brackets.
5. Notching of fascia for manual chain will not be acceptable.

B. Room Darkening Side and/or Sill Channels

1. Extruded aluminum with polybond edge seals and snap lock mounting brackets with concealed fastening. Exposed fastening is not acceptable. Channels shall accept one-piece exposed blackout hembar with vinyl seal to assure side light control and sill light control.
3. Channels shall be two piece and U-shape.
4. Color: Selected by Architect or Owner from manufacturer’s standard colors.

C. Motorized Shade Hardware and Shade Brackets

1. Provide shade hardware constructed of minimum 1/8 inch thick plated steel or heavier, thicker, as required to support 150 percent of the full weight of each shade.
2. Provide shade hardware system that allows for field adjustment of motor or replacement of any operable hardware component without requiring

2.6 FINISH

A. Extruded Aluminum (panels, fascia, cover, bars, and channels) and Steel Brackets

1. Thermostat acrylic resin complying with AAMA 2603; “Duracron” manufactured by PPG Industries, Inc. or acceptable equal. Color as selected by Architect or Owner.

2.7 FABRICATION

A. Take accurate field measurements to verify required dimensions prior to fabrication.

B. Fabricate fabric to hang flat without buckling or distortion. Fabricate so that edges hang straight without curling or reveling.

C. Fabricate unguided fabric to roll true and straight without shifting sideways more than 1/8 inches in either direction for every eight feet of shade height due to wrap distortion or weave design.

D. Shades shall be hemmed top and bottom, with both hems double needle stitched and backstitched at edges. Hems shall be turned so that stitching passes through three thicknesses of fabric.

E. Hem bar shall be kiln dried hard maple, mahogany, or poplar in sized as required, but not less than 1-1/4 inch by 5/16 inch. Length shall equal width of shade material across window. Sew ends of hem bar to shade material.

F. Provide battens in standard shades as required to assure proper tracking and uniform rolling of fabric.

G. Fabric shall be of sufficient length to allow two complete wraps around roller when shade is fully extended.

PART 3—EXECUTION
3.1 EXAMINATION

A. Examine substrate conditions and dimensions. Verify if substrate is ready and acceptable to receive window shade system.

B. Report unacceptable conditions to the Architect or owner. Begin installation only when unacceptable conditions have been corrected.

3.2 INSTALLATION

A. Install in accordance with the manufacturer's printed instructions and approved shop drawings.

B. Install units with clearance for window operation plumb, level, and square, secure for unencumbered operation, and free from warp or twist while maintaining dimensional tolerances and alignment with adjacent surfaces.

C. Coordinate window hardware, such as handles, with shade hardware.

D. Installation tolerances:
   1. Maximum variation of gap at window opening perimeter: ¼ inch per 8 feet of shade height.
   2. Maximum offset from level: 1/16 inch per 5 feet of shade width.

3.3 ADJUSTING

A. Adjust parts for smooth, uniform operation.

B. Adjust shade assembly and fabric to hang flat without buckling and distortion.

C. Replace any units or components, which do not hang properly or operate smoothly at no additional cost to Owner.

3.4 CLEANING

A. Clean exposed surfaces, including metal and fabric using non-abrasive materials and methods as recommended by manufacturer.

B. Do not use materials or methods, which may damage finish or surrounding construction.

C. Remove and replace work which cannot be satisfactorily cleaned at no additional cost to Owner.

END OF SECTION
APPENDIX A
CLEANING AND MAINTENANCE REQUIREMENTS

PART 1 - GENERAL

1.1 WORK INCLUDED

A. This summary outlines the cleaning services that must be completed by the end of a construction project at any of the San Francisco Unified School District school sites. Contractual arrangements for completion of this work must be made at schools where construction interrupts or does not allow typical district-provided general cleaning of the school facilities affected by the construction work.

B. Refer to Section 00 80 00 Special Conditions for work required for each project phase.

C. The contractor shall clean the immediate exterior surroundings in the affected areas of work per paragraph 3.01.B, items a thru e, in this Section.

D. The contractor shall clean ALL interior spaces in the following (refer to sheet A-03):
   i. Library (Room 219)
   ii. Library Offices and Workrooms (Room 219A and 219B)
   iii. Storage Room (Room S25)
   iv. Library Lobby and Hallway (Room 200J)
   v. All other areas outside the limits of work but are affected by the project scope, such as hallways and pathways from building entrances, stairways, and elevators leading to the project, stairways and elevators used to transport crew and materials, etc.

PART 2 – PRODUCTS

2.1 MATERIALS


B. Floor finish shall be minimum 20% solids content high-gloss wax. The following have been approved by Custodial Services:
   1. Waxie Green Floor Finish by Waxie Sanitary Supply
   2. Betco Earth Prelude Floor Finish Sealer by Clean Source

C. Graffiti Remover (non-toxic): SO-SAFE by Bracto SoSafe, Inc.

D. Wood Floor Finish acceptable products: Diversey Wood Care Ultra Low Odor Water Base By Waxie Sanitary Supply, Betco EZ Coat by Clean Source

E. Diversey Alpha HP Multi Surface Cleaner is a Green Seal Certified sanitizer appropriate for use in public school buildings.

F. All other green cleaners shall be specifically designed for the purpose intended, safe for use on the intended object to be cleaned, and safe to students, staff and the public. Must be Green Seal Certified or equivalent (Ecologo).
All cleaning and application of protective materials/finishes shall be in strict compliance with the manufacturers’ recommendations and these specifications.

PART 3 – EXECUTION
3.1 FINAL AND END-OF-PHASE CLEANING

A. General: Provide final cleaning at the final project completion as notified by the District project managers. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

B. Cleaning: Employ professional cleaning service for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer’s written instructions.

1. Complete the following cleaning operations before requesting inspection for certification of entire Project:
   a. Clean project site, yard, and grounds in areas disturbed by construction activities including landscape development areas, of rubbish, waste materials, letter, and other foreign substances.
   b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
   c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
   d. Remove tools, construction equipment, machinery, and surplus material from Project site.
   e. Clean exposed exterior and interior hard-surfaced finishes to a dirt-free condition, free of stains, films, and similar foreign substances. Avoid disturbing natural weathering of exterior surfaces. Restore reflective surfaces to their original condition.
   f. Horizontal surfaces: All horizontal surfaces must be dusted/vacuumed and/or washed until free of dust and grime.
   g. Furnishings and equipment:
      1) Remove all gum and sticky substances from all surfaces. Wash all furniture and equipment with a neutral cleaner. Use specialized cleaner appropriate for wood and/or excessively dirty surfaces.
      2) Dust all machinery and equipment located in any shop area.
      3) Clean all chalkboards and chalk rails by washing with water and/or chalkboard cleaner. Re-chalk chalkboards after completing cleaning process.
      4) Clean exterior of all locked lockers and interior of unlocked ones.
      5) Graffiti must be removed from all furnishings and equipment.
   h. Walls and Furnishings: Wash all wall, furnishing with Green Seal Certified or equivalent cleaners. Remove all graffiti. All restroom walls and surfaces should be washed with sanitizer cleaner.
   i. Doors: Wash all doors, frames and hardware.
   j. Floors:
1) Resilient Floors (except linoleum and rubber flooring) – Clean and refinish flooring, using appropriate procedures and finishes/sealers. Strip existing wax from all existing resilient flooring (using appropriate safety measures as recommended by the E.P.A. for any tile containing asbestos) and re-wax as follows:

- Classrooms, offices, and rooms - two coats of wax.
- Corridors - Three coats of wax.

These floors should be scrubbed with Alpha HP Multi Surface Cleaner – not stripped. Seal as recommended by flooring manufacturer and re-wax as indicated above.

Initial cleaning of linoleum floors should be scrubbed with a neutral pH detergent/cleaner, such as Alpha HP Multi Surface Cleaner, mixed according to label directions. Using a non-abrasive scrubbing pad. Scrub and Seal as recommended by flooring manufacturer and re-wax as indicated above.

2) Concrete Floors - Scrub using water and Alpha HP Multi Surface Cleaner.

3) Ceramic Floors - Scrub using water and Alpha HP Multi Surface Cleaner.

4) Wood Floors - Clean, screen and apply gym seal per manufacturer’s recommendation. All gym seal to be approved by Custodial Services Department.

Recommended product: Diversey Wood Care Ultra Low Odor or Betco EZ Coat.

5) Carpeted Floors - Vacuum all carpets and clean by water extraction.

Recommended product: Waxie Green Fiber Care #2 Shampoo Solution.

6) Other Floors - Marble, terrazzo and rubber floors should be cleaned and refinished using appropriate procedures and finishes/sealers.

k. STAIRS: All stairs to be scrubbed with Alpha HP Multi Surface Cleaner sanitizer solution including walls, handrails and ledges. Finish is not to be applied to stairs unless necessary and approved by the District (Custodial Services Department).

l. RESTROOMS: Thoroughly clean and sanitize all surfaces and fixtures. Remove all foreign objects from walls/ceilings and eliminate all graffiti. Specifications provided above for fixtures, walls and floors are applicable.

m. Remove debris and surface dust from limited access spaces, including roofs, plenums, shafts, trenches, equipment vaults, manholes, attics, and similar spaces.

n. Sweep, mop, scrub and/or hose down concrete floors, stairs.

o. Vacuum carpet and similar soft surfaces, removing debris and excess nap; shampoo if visible soil or stains remain.

p. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other noticeable, vision-obscuring materials. Wash mirrors and glass, taking care not to scratch surfaces.

q. Remove non-permanent labels.
r. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.

1) Do not paint over “UL” and similar labels, including mechanical and electrical nameplates.

s. Wipe surfaces of mechanical and electrical equipment, elevator equipment, and similar equipment. Remove excess lubrication, paint and mortar droppings, and other foreign substances.

t. Replace parts subject to unusual operating conditions.

u. Clean, sanitize plumbing fixtures to a sanitary condition, free of stains, including stains resulting from water exposure.

v. Clean exposed surfaces of diffusers, registers, and grills.

w. Clean all new and existing light fixtures, lamps, globes, and reflectors to function with full efficiency. Leave Project clean and ready for occupancy.

C. Final Inspection: Any surface still exhibiting dirt, graffiti or dust shall be re-cleaned/re-stripped/re-finished until free of dirt, dust or graffiti.

D. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on District property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove materials from Project site and dispose of lawfully.

PART 4 - CUSTODIAL SERVICES DEPARTMENT

Any further inquiries may be directed to:

SFUSD
Custodial Services Department
834 Toland Street
San Francisco, CA 94124
Phone: (415) 695-5535