

PROJECT MANUAL
For

RSD – Exterior Painting at Shuey ES

Rosemead, CA

Prepared by



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SECTION 01000

ABBREVIATIONS, SYMBOLS AND ACRONYMS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. List of abbreviations, symbols, and acronyms of societies, institutes, and associations generally appearing in the Contract Documents.

1.02.1 RELATED SECTIONS

- A. Division 01: General Requirements

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.01 ABBREVIATIONS

ac	Alternating current
amp	ampere
BTU	British thermal unit
cfh	Cubic feet per hour
cfm	Cubic feet per minute
cm	Centimeter
Co.	Company
COP	Coefficient of performance
Corp.	Corporation
d	Penny
db.	Decibel
DB	Dry bulb
dc	Direct current
EER	Energy efficiency ratio
F	Degrees Fahrenheit
fpm	Feet per minute
ft	Foot or feet
gph	Gallons per hour
gpm	Gallons per minute
HP	Horsepower
HVAC	Heating, ventilating and air conditioning
Hz	Hertz
Inc.	Incorporated
KHz	Kilohertz
Kip	thousand pounds
Ksf	Thousand pounds per square foot
Ksi	Thousand pounds per square inch
Kv	Kilovolt
KVA	Kilovolt amperes

KW	Kilowatt
KWH	Kilowatt hour
LF	Linear foot
lb	Pound
LED	Light emitting diode
MBH	1000 BTUs per hour
MHz	Mega hertz
mil	Thousandth of an inch
mm	Millimeter
mph	Miles per hour
oz.	Ounce
PCF	Pounds per cubic foot
pH	Acidity-alkalinity balance
psf	Pounds per square foot
psi	Pounds per square inch
psig	Pounds per square inch, gage
RF	Radio frequency
rpm	Revolutions per minute
SF	Square foot
SY	Square yard
V	Volt
WB	Wet bulb

3.02 SYMBOLS

#	Number or pound
'	Foot or feet
"	Inch(es)
%	Percent

3.03 ACRONYMS

AA	The Aluminum Association, Inc
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturers Association
AASHTO	American Association of State Highway and Transportation Officials
AATCC	American Association of Textile Chemists and Colorists
ABMA	American Boiler Manufacturers Association
ACI	American Concrete Institute
ADA	Americans with Disabilities Act
ADAAG	Americans with Disabilities Act Accessibility Guidelines
AGA	American Gas Association
AGCIH	American Conference of Governmental Industrial Hygienists
AI	Asphalt Institute
AIA	American Institute of Architects
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
AMCA	Air Movement and Control Association, Inc.
ANSI	American National Standards Institute

APA	APA – The Engineered Wood Association
ARI	Air-Conditioning and Refrigeration Institute
ASHRAE	American Society of Heating, Refrigeration and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
ATBCB	Architectural & Transportation Barriers Compliance Board
AWI	Architectural Woodwork Institute
AWPA	American Wood Preservers Association
AWPI	American Wood Preservers Institute
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders Hardware Manufacturers Association
BIA	Brick Institute of America
CAL/OSHA	California Occupational Safety and Health Administration
CBC	California Building Code
CCR	California Code of Regulations
CEC	California Electrical Code
CFR	Code of Federal Regulations
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturers Institute
CMC	California Mechanical Code
CQC	California Quality Control (CMA Standards)
CPC	California Plumbing Code
CRA	California Redwood Association
CRI	Carpet and Rug Institute
CRSI	Concrete Reinforcing Steel Institute
CS	Commercial Standards, U.S. Department of Commerce
CSFM	California State Fire Marshal
CSI	Construction Specifications Institute
CTIOA	Ceramic Tile Institute of America
CTI	Cooling Tower Institute
DHI	Door and Hardware Institute
DSA	Division of the State Architect
EPA	Environmental Protection Agency
ETL	ETL Testing Laboratories
FCC	Federal Communication Commission
FM	Factory Mutual
FS	Federal Specifications
GA	Gypsum Association
GANA	Glass Association of North America
HMMA	Hollow Metal Manufacturer's Association
HPVA	Hardwood Plywood & Veneer Association

IACS	International Annealed Copper Standards
IAMPO	International Association of Plumbing and Mechanical Officials
ICBO	International Conference of Building Officials
ICEA	Insulated Cable Engineers Association
IEEE	Institute of Electrical & Electronic Engineers, Inc.
IES	Illuminating Engineering Society
IMI	International Masonry Institute
IRI	Industrial Risk Insurers
ISO	International Organization for Standardization
MLSFA	Metal Lath/Steel Framing Association
MSS	Manufacturers Standardization Society of the Valve & Fittings Industry.
NAAMM	National Association of Architectural Metal Manufacturers
NBFU	National Board of Fire Underwriters
NBS	National Bureau of Standards
NCMA	National Concrete Masonry Association
NEBB	National Environmental Balancing Bureau
NEMA	National Electrical Manufacturers Association
NEC	National Electrical Code
NFPA	National Fire Protection Association
NFPA	National Forest Products Association
NIOSH	National Institute for Occupational Safety and Health
NIST	National Institute of Standards and Technology
NOFMA	National Oak Flooring Manufacturers Association
NPCA	National Paint and Coatings Association
NPDES	National Pollutant Discharge Elimination System
NRCA	National Roofing Contractors Association
NSF	National Sanitation Foundation
NTMA	National Terrazzo & Mosaic Association
NUSIG	National Uniform Seismic Installation Guidelines
NWMA	National Woodwork Manufacturers Association
PCA	Portland Cement Association
PCI	Precast/Prestressed Concrete Institute
PDI	Plumbing and Drainage Institute
PEI	Porcelain Enamel Institute
PS	Product Standard, U.S. Department of Commerce
RIS	Redwood Inspection Service
RFCI	Resilient Floor Covering Institute
SCAQMD	South Coast Air Quality Management District
SDEI	Steel Deck Institute
SDI	Steel Door Institute
SFM	State Fire Marshal
SFPA	Southern Forest Products Association
SIGMA	Sealed Insulating Glass Manufacturers Association
SJI	Steel Joist Institute

SMACNA	Sheet Metal and Air Conditioning Contractors National Association
SSPC	Steel Structures Painting Council
SWI	Steel Window Institute
TCA	Tile Council of America
UBPPA	Uni-Bell PVC Pipe Association
UCI	Uniform Construction Index
UFAS	Uniform Federal Accessibility Standards
UL	Underwriters' Laboratories, Inc.
WCLIB	West Coast Lumber Inspection Bureau
WDMA	Window and Door Manufacturers Association
WIC	Woodwork Institute of California
WWPA	Western Wood Products Association

END OF SECTION

SECTION 01005

SUMMARY OF THE WORK

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. The furnishing of all labor, materials, equipment, services, and incidentals necessary for Work to be performed. Work includes but is not limited to painting of entire exterior surfaces and minor cosmetic repairs at Shuey Elementary School

1.02 RELATED SECTIONS

- A. Section 01010: Phasing of the Work
- B. Section 01100: Coordination
- C. Section 01500: Construction Facilities and Temporary Controls

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.01 USE OF PREMISES

- A. CONTRACTOR shall coordinate the Work of all trades, with OWNER and/or Separate Work Contract. CONTRACTOR shall sequence, coordinate, and perform the Work to impose minimum hardship on the operation and use of the existing facilities and/or Project site. CONTRACTOR shall install all necessary protection for existing improvements, Project site, property, and new Work against dust, dirt, weather, damage, vandalism, and maintain and relocate all protection to accommodate progression of the Work.
- B. CONTRACTOR shall confine entrance and exiting to the Project site and/or facilities to routes designated by the OAR
- C. Within existing facilities, OWNER will remove portable equipment, furniture, and supplies from Work areas prior to the start of Work. CONTRACTOR shall cover and protect remaining items in areas of the Work
- D. CONTRACTOR is advised school may be in session during performance of the Work. CONTRACTOR shall utilize all available means to prevent generation of unnecessary noise and maintain noise levels to a minimum. When required by the OAR,, CONTRACTOR shall immediately discontinue noise-generating activities and/or provide alternative methods to minimize noise generation. CONTRACTOR shall install and maintain air compressors, vehicles, and other internal combustion engine equipment with mufflers, including unloading cycle of compressors. CONTRACTOR

shall discontinue operation of equipment producing objectionable noise as required by the OAR.

- E. CONTRACTOR shall furnish, install, and maintain adequate supports, shoring, and bracing to preserve structural integrity and prevent collapse of existing improvements and/or Work modified and/or altered as part of the Work.
- F. CONTRACTOR shall secure building entrances, exits, and Work areas with locking devices as required by the OAR.
- G. CONTRACTOR assumes custody and control of OWNER property, both fixed and portable, remaining in existing facilities vacated during the Work.
- H. CONTRACTOR shall cover and protect surfaces of rooms and spaces in existing facilities turned over for the Work, including OWNER property remaining within as required to prevent soiling or damage from dust, dirt, water, and/or fumes. CONTRACTOR shall protect areas adjacent to the Work in a similar manner. Prior to OWNER occupancy, CONTRACTOR shall clean all surfaces including OWNER property.
- I. CONTRACTOR shall not use or allow anyone other than OWNER employees to use facility telephones and/or other equipment, except in an emergency. CONTRACTOR shall reimburse OWNER for telephone toll charges originating from the facility except those arising from emergencies or use by OWNER employees.
- J. CONTRACTOR shall protect all surfaces, coverings, materials, and finished Work from damage. Mobile equipment shall be provided with pneumatic tires.
- K. CONTRACTOR is advised OWNER will award Separate Work Contracts at this Project site.
- L. CONTRACTOR shall not permit the use of portable and/or fixed radio's or other types of sound producing devices including walkmans and similar devices.

3.02 PROPERTY INVENTORY

- A. Contractor to remove and re-install all exterior tack walls/display cases after painting the wall behind these items

END OF SECTION

SECTION 01050
SCHEDULE OF VALUES

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Procedure for submission of a certified Schedule of Values for review and approval by the OAR.

1.02 RELATED SECTIONS

- A. Section 01080: Application for Payment
- B. Section 01300: Submittals
- C. Section 01365: Construction Schedule

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.01 PREPARATION

- A. Upon receipt of the Notice of Intent to Award, CONTRACTOR shall commence preparation of a certified Schedule of Values.
- B. CONTRACTOR shall coordinate the preparation of a certified Schedule of Values with preparation of the Construction Schedule as set forth in Section 01365.
- C. CONTRACTOR shall follow the table of contents as a Project specific guide to establish the format for a certified Schedule of Values. Provide at least one (1) line item for each Division and/or Specification Section item. Provide separate line items for labor and material when required by the OAR.
- D. Include the following Project school(s) identification on each certified Schedule of Values:
 - 1. Project name and location
 - 2. Project Number
 - 3. ARCHITECT name
 - 4. CONTRACTOR name
 - 5. Date of Submittal
- E. Round amounts to the nearest whole dollar; the total shall equal the Contract Amount.
- F. An approved certified Schedule of Values shall serve as the basis for the monthly certified Application for Payment.

3.02 90 DAY INTERIM SCHEDULE OF VALUES

- A. CONTRACTOR may prepare and submit, in accordance with sub-section 3.03, a 90 day interim Schedule of Values denoting Work to be completed during the first 90 days following the date established in the Notice to Proceed.
- B. CONTRACTOR shall coordinate the preparation of the 90 day interim Schedule of Values with preparation of the Construction Schedule as set forth in Section 01360.
- C. The 90 day interim Schedule of Values is subject to the same terms and conditions as set forth in sub-section 3.03.
- D. The 90 day interim Schedule of Values shall be incorporated into a final Schedule of Values.
- E. The OAR has the right to require subsequent revisions to an approved 90 day interim and/or a final Schedule of Values.

3.03 SUBMITTAL

- A. Within ten (10) days after the date established in the Notice to Proceed, CONTRACTOR shall submit five (5) certified copies of an interim and/or final Schedule of Values for review and approval by the OAR.
- B. OAR will review and if necessary, return the submitted Schedule of Values with summary comments noting items not in compliance with the requirements of the Contract Documents. CONTRACTOR shall revise the submitted Schedule of Values and return five (5) copies within three (3) days of receipt of summary comments.
- C. Signature by OAR shall constitute acceptance of the submitted Schedule of Values.
- D. A copy of the approved Schedule of Values will be transmitted to CONTRACTOR, IOR, and ARCHITECT.
- E. CONTRACTOR shall obtain OAR approval of a 90 day interim Schedule of Values prior to submittal of the first certified Application for Payment.
- F. CONTRACTOR shall obtain OAR approval of the final Schedule of Values prior to submittal of the fourth certified Application for Payment.

END OF SECTION

SECTION 01080

APPLICATION FOR PAYMENT

PART 1 - GENERAL

1.01 SECTION INCLUDES:

- A. This Section specifies administrative and procedural requirements relative to a certified Application for Payment.
 - 1. Coordinate the certified Schedule of Values and certified Application for Payment with, but not limited to, the Construction Schedule, submittal log, and list of Subcontractors.

1.02 RELATED SECTIONS:

- 1. Section 01050: Schedule of Values
- 2. Section 01365: Construction Schedule
- 3. Section 01700: Contract Closeout

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.01 APPLICATION FOR PAYMENT

- A. Each certified Application for Payment shall be consistent with previous applications and payments as reviewed by ARCHITECT and/or OAR, paid for by OWNER, and:
 - 1. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the final Application for Payment involve additional requirements.
- B. Payment Application Times: The period of Work covered by each Application for Payment is the payment date for each progress payment as specified in the General Conditions. The period covered by each Application for Payment is the previous month.
- C. Payment Application Forms: Use OWNER provided forms for the Application for Payment.

- D. Application Preparation: Complete every entry on the form. Include execution by a person authorized to sign legal documents on behalf of CONTRACTOR. ARCHITECT will return incomplete applications without action.
- E. Transmittal: Submit a minimum of four (4) signed and original copies of each certified Application for Payment to the ARCHITECT. All copies shall be complete, including releases and similar attachments.
1. Transmit each copy with a transmittal form listing attachments and recording appropriate information related to the application, in a manner acceptable to ARCHITECT.
- F. Initial Application for Payment: Administrative actions and submittals, that must precede or coincide with submittal for the first certified Application for Payment include, but are not limited to, the following:
1. Certified Schedule of Values
 2. Performance and payment bonds. List of principal suppliers and fabricators.
 3. Worker Compensation certificates, if applicable.
 4. Auto Insurance, if applicable.
 5. Hazardous Material Insurance Certificates, if applicable.
 6. Construction Schedule
 7. Submittal Schedule
 8. Emergency Contact List
 9. Copies of authorizations and licenses from governing authorities for performance of the Work
- G. Application for Payment at Substantial Completion: Following OAR issuance of the certificate of Substantial Completion, submit an Application for Payment:
1. Administrative actions, submittals and/or Work that shall precede or coincide with this application include:
 - a. Occupancy permits and similar approvals by authorities having legal jurisdiction over the Work.
 - b. Removal of temporary facilities and services.
 - c. Testing, adjusting and balance records.
 - d. Removal of surplus materials, rubbish, and similar elements.
 - e. Meter readings.
 - f. Start-up performance reports.
 - g. OWNER training and orientations.
 - h. Change over information related to OWNER occupancy, use, operation, and maintenance.
 - i. Final cleaning.
 - j. Ensure that incomplete Work is not accepted and will be completed without undue delay.

- k. Advice on shifting insurance coverage.
 - l. List of defective Work, recognized as exceptions to certificate of Substantial Completion.
 - m. Change of door locks to OWNER system.
- H. Final Payment Application: Administrative actions and submittals that must precede or coincide with submittal of the final Application for Payment include, but are not limited to, the following:
 - 1. Completion of Contract Closeout requirements.
 - 2. Project record documents.
 - 3. Completion of final punch list items.
 - 4. Delivery of extra materials, products and or stock.
 - 5. Identification of unsettled claims.
 - 6. Proof that taxes, fees, and similar obligations are paid.
 - 7. Operating and maintenance instruction manuals.
 - 8. Consent of surety to final payment.
 - 9. Waivers and releases.
 - 10. Warranties, guarantees and maintenance agreements.

END OF SECTION

SECTION 01100

COORDINATION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. This Section specifies administrative and procedural requirements necessary for coordinating Work operations including, but not limited to, the following:
 - 1. General coordination procedures.
 - 2. Coordination drawings.

PART 2 – PRODUCTS (NONE)

PART 3 - EXECUTION

3.01 COORDINATION

- A. CONTRACTOR shall coordinate operations included in various sections of the Contract Documents to assure efficient and orderly installation of each part of the Work. Coordinate Work operations included under related sections of the Contract Documents that depend on each other for proper installation, connection, and operation of the Work, including but not limited to:
 - 1. Schedule construction operations in the sequence required where installation of one part of the Work depends on installation of other components, before or after its own installation.
 - 2. Coordinate installation of different components to assure maximum accessibility for required maintenance, service, and repair.
 - 3. Provide provisions to accommodate items scheduled for later installation.
 - 4. Prepare and administer provisions for coordination drawings.
- B. Where necessary, prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required in notices, reports, attendance at meetings, and:
 - 1. Prepare similar memoranda for OAR and Separate Work Contract where coordination of their Work is required.

- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and assure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
 - 1. Preparation of schedules.
 - 2. Installation, relocation, and removal of temporary facilities.
 - 3. Delivery and processing of submittals.
 - 4. Progress meetings.
 - 5. Project closeout activities.
- D. Conservation: Coordinate Work operations to assure operations are carried out with consideration given to conservation of energy, water, materials, and:
 - 1. Salvage materials and equipment involved in performance of, but not actually incorporated into the Work.

3.02 SUBMITTALS

- A. Coordination Drawings: CONTRACTOR shall prepare coordination drawings for coordination of installation of roofing and sheet metal products. Prepare coordination drawings for those areas where limited space availability necessitates maximum utilization of space for efficient installation of different components.
 - 1. All coordination meetings will be held in the Project field office of CONTRACTOR. CONTRACTOR is required to distribute Shop Drawings, cut sheets and submittals to Subcontractors where appropriate. Reviewed coordination drawings will be maintained in the Project field office of CONTRACTOR.

END OF SECTION

SECTION 01120
CUTTING AND PATCHING

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This Section specifies administrative and procedural requirements for cutting and patching.

1.02 RELATED SECTIONS

- A. Section 01050: Schedule of Values
- B. Section 01100: Coordination
- C. Section 01300: Submittals
- D. Section 01740: Warranties

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.01 SUBMITTALS

- A. The word “cutting” as used in the Contract Documents includes, but is not limited to, cutting, drilling, chopping, and other similar operations and the word “patching” includes, but is not limited to, patching, rebuilding, reinforcing, repairing, refurbishing, restoring, replacing, or other similar operations.
- B. Cutting and Patching Proposal: CONTRACTOR shall submit a proposal describing procedures well in advance of the time cutting and patching will be performed if the Contract Documents requires approval of these procedures before proceeding. Include the following information, as applicable, in the proposal:
 - 1. Describe the extent of cutting and patching required. Denote how it will be performed and indicate why it cannot be avoided.
 - 2. Describe anticipated results in terms of changes to existing construction. Include changes to structural elements and operating components as well as changes in the building’s appearance or other significant visual elements.
 - 3. List products to be used and firms or entities that will perform this Work.

4. Indicate dates when cutting and patching will be performed.
5. Utilities: List utilities that cutting and patching operations will disturb or affect. List utilities to be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.
6. Where cutting and patching involves adding reinforcement to structural elements, submit details and engineering calculations showing integration of reinforcement with the original structure.
7. Review by ARCHITECT and DSA prior to proceeding with cutting and patching does not waive ARCHITECT right to later require complete removal and replacement of defective Work.

3.02 QUALITY ASSURANCE

- A. Requirements for structural Work: Do not cut and patch structural elements in a manner that would change their load-carrying capacity or load-deflection ratio.
 1. Obtain approval from ARCHITECT and DSA of the cutting and patching proposal before cutting and patching the following structural elements:
 - a. Bearing walls
 - b. Structural concrete
 - c. Timber and primary wood framing
 - d. Miscellaneous structural metals
 - e. Equipment supports
 - f. Piping, ductwork, vessels, and equipment
- B. Operational Limitations: Do not cut and patch operating elements or related components in a manner that would result in reducing their capacity to perform as intended. Do not cut and patch operating elements or related components in a manner that would result in increased maintenance or decreased operational life or safety.
 1. Obtain review of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems:
 - a. Primary operational systems and equipment
 - b. Water, moisture, or vapor barriers
 - c. Membranes and flashings
 - d. Fire protection systems
 - e. Noise and vibration control elements and systems
 - f. Control systems
 - g. Communication and/or data systems
 - h. Electrical wiring systems

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

- 1. If possible, retain the original installer or fabricator to cut and patch the exposed Work listed below. If it is impossible to engage the original installer or fabricator, engage another recognized experienced and specialized firm.

- a. Firestopping
- b. Masonry (exterior and interior where exposed)

3.03 WARRANTY

- A. Existing Warranties: Replace, patch, and repair material and surfaces cut or damaged by methods and with materials in such a manner as not to void any warranties required or existing.

3.04 INSPECTION

- A. Examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed before cutting. If unsafe or unsatisfactory conditions are encountered, take corrective action before proceeding.

- 1. Before proceeding, meet at the 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.

3.05 PREPARATION

- A. Temporary support: Provide adequate temporary support of existing improvements or Work to be cut.
- B. Protection: Protect existing improvements and Work during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of existing improvements or Work that might be exposed during cutting and patching operations.
- C. Avoid interference with operation of adjoining areas or interruption of free passage to adjoining areas.
- D. Where the Work requires sandblasting of existing surfaces in order to receive new materials secured by cementitious, adhesive or chemical bond, completely remove existing finishes, stains, oil, grease, bitumen, mastic and adhesives or other

substances deleterious to the new bonding and/or fastening of new Work. Utilize wet sand blasting for interior surfaces and for exterior surfaces where necessary to prevent objectionable production of dust.

3.06 PERFORMANCE

- A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay. Carefully remove existing Work to be salvaged and/or reinstalled. Protect and store for reuse into the Work. Verify compatibility and suitability of existing substrates before starting the Work.
- B. Cutting: Cut existing construction using methods least likely to damage elements retained or adjoining Work. Where possible, review proposed procedures with the original installer; comply with the original installer's recommendations.
 - 1. In general, where cutting, provide hand or small power tools designed for sawing or 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. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
 - 3. Cut through concrete and masonry using a cutting machine, such as a carborundum saw or a diamond-core drill. Saw cut reinforcing bars and paint ends with bituminous paint except where bonded into new concrete or masonry.
 - 4. Comply with requirements of applicable Division 2 Sections where cutting and patching requires excavating, backfill, or re-compaction.
 - 5. Woodwork: Cut and or remove to a panel or joint line.
 - 6. Sheet Metal: Remove back to joint, lap, or connection. Secure loose or unfastened ends or edges and seal watertight.
- C. Patching: Patch with durable seams that are as invisible as possible. Comply with required tolerances.
 - 1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation. Verify conditions of existing substrates prior to executing Work.

2. Restore exposed finishes of patched areas and extend finish restoration into retaining adjoining construction in a manner that will eliminate all evidence of patching and refinishing.
3. Sheet Metal: Replace removed and/or damaged sheet metal items as required for new Work.
4. Lath and Plaster: Install new lath materials to match existing and fasten to supports at 6" centers. Provide a 6" lap where new lath to adjoins existing lath. Fasten new lath as required for new Work. Restore paper backings as required. Apply a bonding agent on cut edges of existing plaster. Apply three coat plaster of the type, thickness, finish, texture, and color to match existing.
5. Painting: Prepare areas to be patched, patch and paint as specified under related sections of the Contract Documents.

3.07 CLEANING

- A. Clean areas and spaces where cutting and patching are performed. Completely remove paint, mortar, oils, putty, and similar items. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials. Restore damaged coverings to their original condition.

END OF SECTION

SECTION 01160

REQUEST FOR CLARIFICATION

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Procedure for requesting clarification of the intent of the Contract Documents.

1.02 RELATED SECTIONS

- A. Section 01005: Summary of the Work
- B. Section 01100: Coordination
- C. Section 01365: Construction Schedule
- D. Section 01700: Contract Closeout

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.01 PROCEDURE

- A. ARCHITECT response is a clarification of the intent of the Contract Documents and does not authorize changes in the Contract Amount, Milestones and/or Contract Time.
- B. A Request for Clarification may be returned with a stamp or notation "Not Reviewed," if:
 - 1. The requested clarification is ambiguous or unclear;
 - 2. The requested clarification is equally available to the requesting party by researching and/or examining the Contract Documents;
 - 3. CONTRACTOR has not reviewed the Request for Clarification prior to submittal.
- C. Allow a minimum of nine (8) days for review and response time, after receipt by ARCHITECT and OAR. CONTRACTOR shall verify and is responsible in verifying ARCHITECT and OAR receipt of a Request for Clarification.
- D. Changes or alterations to the approved drawings or specifications shall be made by means of addenda or change orders as per section 4-338 of the California Building Standards Administrative Code.

END OF SECTIONp

SECTION 01200

PROJECT MEETINGS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This Section specifies administrative and procedural requirements for Project meetings, including but not limited to, the following:
 - 1. Job start meeting.
 - 2. Pre-installation conferences.
 - 3. Progress meetings.
 - 4. Meetings as required by the OAR.

1.02 RELATED SECTIONS

- A. Section 01010: Phasing of the Work
- B. Section 01100: Coordination
- C. Section 01300: Submittals
- D. Section 01365: Construction Schedule

PART 2 – PRODUCTS

PART 3 - EXECUTION

3.01 JOB START MEETING

- A. In accordance with General Condition Article 2.6, OAR will schedule a job start meeting before starting the Work, at a time and date determined by OAR. Meeting shall be held at the Project site or another location as determined by OAR. Meeting will be held in order to review responsibilities, procedures, and other administrative requirements contained within the Contract Documents.
- B. Authorized representatives of OWNER, IOR, ARCHITECT, CONTRACTOR and other parties shall attend the meeting. All participants at the meeting shall be familiar with the Project and authorized to conclude matters relating to the Work.
- C. Agenda items shall include significant items which could affect progress of the Work, including, but not limited to the following:
 - 1. Preliminary Construction Schedule
 - 2. Critical work sequencing
 - 3. Designation of responsible personnel

4. Identification of OAR
5. Procedures for processing field decisions
6. Request for Proposal
7. Construction Directive and Change Order
8. Procedures for processing Applications for Payment
9. Prevailing wages
10. Submittal of Shop Drawings, Product Data, material lists, and Samples
11. Preparation of project record documents
12. Use of the Project site and/or premises
13. Parking availability
14. Office, work, and storage areas
15. Equipment deliveries and priorities
16. Safety procedures
17. First Aid
18. Security
19. Housekeeping
20. Working hours
21. Insurance Services including OCIP
22. Environmental Health & Safety

- D. OAR shall prepare and issue meeting minutes to attendees and interested parties no later than five (5) calendar days after the meeting date.

3.02 PRE-INSTALLATION CONFERENCES

- A. CONTRACTOR shall coordinate and conduct pre-installation conferences at the Project site as required by related Sections of the Contract Documents.
- B. CONTRACTOR, manufacturers, and fabricators involved in or affected by the installation and its coordination or integration with other pre-ceding and/or subsequent installations of Work shall attend the meeting. CONTRACTOR shall advise OAR, IOR, and ARCHITECT of scheduled meeting dates in order to secure their attendance.

1. CONTRACTOR shall review the progress of construction activities and preparations for the particular activity under consideration at each pre-installation conference, including requirements for the following:
 - a. Contract Documents
 - b. Options
 - c. Related Construction Directives and Change Orders
 - d. Purchases
 - e. Deliveries
 - f. Shop Drawings, Product Data, and quality-control samples
 - g. Review of mockups
 - h. Possible conflicts
 - i. Compatibility problems

- j. Time schedules
- k. Weather limitations
- l. Manufacturer's recommendations
- m. Warranty requirements
- n. Compatibility of materials
- o. Acceptability of substrates
- p. Temporary facilities
- q. Space and access limitations
- r. Governing regulations
- s. Safety
- t. Inspecting and testing requirements
- u. Required performance results
- v. Recording requirements
- w. Protection

- 2. CONTRACTOR shall record significant discussions and directives received from each conference. CONTRACTOR shall, within three (3) calendar days after the meeting date, distribute the minutes of the meeting to all concerned parties, including but not limited to, OAR, IOR, and ARCHITECT.

3.03 PROGRESS MEETINGS

- A. Progress meetings will be held at the Project site at regular intervals, typically weekly, as determined by the OAR.
- B. In addition to representatives of CONTRACTOR, OWNER, and ARCHITECT, each Subcontractor, supplier, or other entity concerned with current progress or involved in planning, coordination, or performance of the Work shall, if requested by OAR, be represented at these meetings. All participants at the conference shall be familiar with the Project and authorized to conclude all matters relating to the Work.
- C. Failure of the CONTRACTOR to be so represented at any progress meeting which is held at a mutually agreed time or for which a written notice is given, shall not relieve CONTRACTOR from abiding by any and all OAR or ARCHITECT determinations or directives issued at such meeting.
- D. OAR will review and correct or approve minutes of the previous progress meeting and will review other significant items affecting progress. Topics for discussion as appropriate to the status of the Project include but are not limited to:
 - 1. Interface requirements
 - 2. Construction Schedule
 - 3. Sequence and coordination
 - 4. Status of submittals / RFC's
 - 5. Deliveries

6. Off-site fabrication
7. Access
8. Site utilization
9. Temporary Construction Facilities and Controls
10. Hours of work
11. Hazards and risks
12. Housekeeping
13. Quality and workmanship
14. Unforeseen conditions
15. Testing and Inspection
16. Defective Work
17. Construction Directive
18. Request for Proposal
19. Change Order Proposals and Change Orders
20. Documentation of information for payment requests
21. Application for Payment
22. Other items as required or as brought forth.

E. No later than three (3) calendar days after each progress meeting, OAR will prepare and distribute minutes of the meeting to each present and absent party. Include a brief summary, in narrative form, of progress, decisions, directives, actions taken, and all other issues since the previous meeting and report.

1. Schedule Updating: If required, CONTRACTOR shall revise the Construction Schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue the revised schedule concurrently with the next scheduled progress meeting.

3.04 ADDITIONAL MEETINGS

A. OAR, upon giving notice to the intended parties and without further obligation, may require additional meetings to discuss Work and/or Project related activities.

END OF SECTION

SECTION 01300

SUBMITTALS

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Administrative and procedural requirements for submittals required for the Work, including but not limited to; Shop Drawings, Product Data, Samples, material lists, and quality control items as required by the Contract Documents.
- B. Wherever possible, throughout the Contract Documents, the minimum acceptable quality of workmanship and products has been defined by the name and catalog number of a manufacturer and by reference of recognized industry standards.
- C. To ensure that specified products are furnished and installed in accordance with the design intent, procedures have been established for submittal of design data and for its review by ARCHITECT, OAR and/or others.

1.02 RELATED SECTIONS

- A. Section 01100: Coordination
- B. Section 01120: Cutting and Patching
- C. Section 01365: Construction Schedule
- D. Section 01640: Substitutions
- E. Section 01700: Contract Closeout
- F. Section 01740: Warranties

PART 2 – PRODUCTS

PART 3 - EXECUTION

3.01 PROCEDURES

- A. CONTRACTOR shall package each submittal appropriately for transmittal and handling. CONTRACTOR shall transmit each submittal to ARCHITECT with concurrent copy of the transmittal to the OAR. ARCHITECT and/or OAR will not accept submittals received from sources other than from CONTRACTOR.
- B. After ARCHITECT review, ARCHITECT will transmit submittals to OAR and OAR shall further distribute to CONTRACTOR, IOR and/or others as required. Work shall not commence, unless otherwise approved by OAR, until approved submittals are transmitted to CONTRACTOR.

- C. CONTRACTOR shall clearly identify any deviations from the Contract Documents on each submittal. Any deviation not so noted even though stamped reviewed is not acceptable.
- D. CONTRACTOR shall coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities requiring sequential activity.
- E. Timing of Submittals:
1. In accordance with General Conditions, CONTRACTOR shall submit to ARCHITECT, with copy of transmittal to the OAR, those Shop Drawings, Product Data, diagrams, materials lists, Samples and other submittals required by the Contract Documents.
 2. The schedule of submittals shall provide adequate time between submittals in order to allow for proper review without negative impact to the Construction Schedule.
 3. Schedule of submittals shall be related to Work progress, and shall be so organized as to allow sufficient time for transmitting, reviewing, corrections, resubmission, and re-reviewing.
 4. CONTRACTOR shall coordinate submittal of related items and ARCHITECT reserves the right to withhold action on a submittal requiring coordination with other submittals until all related submittals are received by ARCHITECT.
 5. CONTRACTOR shall revise, update and submit submittal schedule to ARCHITECT and OAR on the first of each month, or as required by OAR.
 6. CONTRACTOR shall allow in the Construction Schedule, at least sixteen (16) days for ARCHITECT review following ARCHITECT receipt of submittal. For mechanical, plumbing, electrical, and other submittals requiring joint review with OAR, CONTRACTOR shall allow a minimum of eighteen (18) days following ARCHITECT receipt of submittal.
 7. No adjustments to the Contract Time and/or Milestones will be authorized because of a failure to transmit submittals to ARCHITECT sufficiently in advance of the Work to permit review and processing.
 8. In case of product substitution, Shop Drawing preparation shall not commence until such time ARCHITECT and OAR reviews said submittal relative to the General Conditions.

- G. If required, resubmit submittals in a timely manner. Resubmit as specified for initial submittal but identify as such. Review times for re-submitted items shall be as per the time frames for initial submittal review.
- H. Shop Drawing preparation shall not commence until such time as CONTRACTOR receives Product Data approval.
- I. ARCHITECT, or authorized agent, will stamp each submittal with a uniform, action stamp. ARCHITECT, or authorized agent, will mark the stamp appropriately to indicate the action taken, as follows:
 - 1. Final Unrestricted Release: When ARCHITECT, or authorized agent, marks a submittal “ Reviewed, “ the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents. Final payment depends on that compliance.
 - 2. Final-But-Restricted Release: When ARCHITECT, or authorized agent, marks a submittal “ Reviewed as Noted,“ the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents. Final payment depends on that compliance.
 - 3. Returned for Re-submittal: When ARCHITECT, or authorized agent, marks a submittal “ Rejected, Revise and Resubmit,” do not proceed with Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal according to the notations; resubmit without delay. Repeat as necessary to obtain different action mark. In case of multiple submittals covering same items of Work, CONTRACTOR is responsible for any time delays, schedule disruptions, out of sequence Work, or additional costs due to multiple submissions of the same submittal item. Do not use, or allow others to use, submittals marked “Rejected, Revise and Resubmit” at the Project site or elsewhere where Work is in progress.
 - 4. Other Action: Where a submittal is for information or record purposes or special processing or other activity, the ARCHITECT, or authorized agent, will return the submittal marked “Action Not Required “.

3.02 SHOP DRAWINGS

- A. Shop Drawings are original drawings prepared by CONTRACTOR, Subcontractor, supplier, or distributor illustrating some portion of Work by showing fabrication, layout, setting, or erection details. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings.
- B. Produce Shop Drawings to an accurate scale that is large enough to indicate all pertinent features and methods. Except for templates, patterns, and similar full-size

drawings, submit Shop Drawings on sheets at least 8-1/2 x 11 inches but no larger than 24 x 36 inches.

- C. Shop Drawings shall include fabrication and installation drawings, setting diagrams, schedules, patterns, templates, and similar drawings. Include the following information:
 - 1. Dimensions
 - 2. Identification of products and materials included by sheet and detail number.
 - 3. Compliance with specified standards.
 - 4. Notation of coordination requirements.
 - 5. Notation of dimensions established by field measurement.
- D. Provide a space of approximately 4 by 5 inches on the label or beside the title block on Shop Drawings to record CONTRACTOR and ARCHITECT review, and the action taken. Include the following information on the label for processing and recording action taken:
 - 1. Project name.
 - 2. Date.
 - 3. Name and address of ARCHITECT.
 - 4. Name and address of CONTRACTOR.
 - 5. Name and address of Subcontractor.
 - 6. Name and address of supplier.
 - 7. Name and address of manufacturer.
 - 8. Name and title of appropriate Specification section.
 - 9. Drawing number and detail references, as appropriate.
- E. Unless otherwise agreed to or indicated in individual Specification sections, submit a sufficient number to allow for adequate CONTRACTOR, Subcontractor, supplier, manufacturer and fabricators distribution plus two sets to be retained by ARCHITECT, one set to IOR and one set to OAR. .

3.03 PRODUCT DATA

- A. Collect Product Data into a single submittal for each element of Work or system. Product Data includes printed information, such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, wiring diagrams, schedules, illustrations, or performance curves.
 - 1. Mark each copy to show or delineate pertinent materials, products, models, applicable choices, or options. Where Product Data includes information on several products that are not required, clearly mark copies to indicate the applicable information. Include the following information:
 - a. Manufacturer's printed recommendations.

- b. Compliance with trade association standards.
- c. Compliance with recognized testing agency standards.
- d. Application of testing agency labels and seals.
- e. Notation of dimensions verified by field measurement.
- f. Notation of coordination requirements.
- g. Notation of dimensions and required clearances.
- h. Indicate performance characteristics and capacities.
- i. Indicate wiring diagrams and controls.

- 2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.

C. Required Copies and Distribution: Same as denoted in sub - section 3.02, E.

3.04 SAMPLES

A. Procedure:

- 1. Submit Samples of sufficient size, quantity, cured and finished and physically identical to the proposed product or material. Samples include partial or full sections or range of manufactured or fabricated components, cuts or containers of materials, color range sets, and swatches denoting color, texture, and/or pattern.
 - a. Mount or display Samples in the manner to facilitate review of qualities indicated. Include the following:
 - 1. Specification section number and reference.
 - 2. Generic description of the Sample.
 - 3. Sampling source.
 - 4. Product name or name of manufacturer.
 - 5. Compliance with recognized standards.
 - 6. Availability and delivery time.
- 2. Submit Samples for review of size, kind, color, pattern, and texture. Submit Samples for a final check of these characteristics with other elements and a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
 - a. Where variations in color, pattern, texture, or other characteristic is inherent in the material or product represented, submit at least three (3) multiple units that show the approximate limits of the variations.
 - b. Refer to other Specification sections for requirements for Samples that illustrate workmanship, fabrication techniques, assembly

details, connections, operation, and similar construction characteristics.

- c. Refer to other sections for Samples to be returned to CONTRACTOR for incorporation into the Work. Such Samples must be undamaged at time of installation. On the transmittal indicate special requests regarding disposition of Sample submittals.
 - d. Samples not incorporated into the Work, or otherwise not designated as OWNER property, remain the property of CONTRACTOR and shall be removed from the Project site prior to Substantial Completion.
- 3. Color and Pattern: Whenever a choice of color or pattern is available in a specified product, submit accurate color chips and pattern charts to OAR for review and selection.
- 4. Number Required: Submit 5 of each. Two will be returned to CONTRACTOR with one to ARCHITECT, OAR, and IOR.
- B. When specified, erect field Samples and mock-ups at the Project site to illustrate products, materials, or workmanship and to establish standards by which completed Work shall be judged.
- C. Maintain sets of Samples, as returned, at the Project site, for quality comparisons throughout the course of the Work. Sample sets may be used to obtain final acceptance of the Work associated with each set.

3.05 QUALITY CONTROL SUBMITTALS

- A. Submit quality control submittals, including design data, certifications, manufacturer's field reports, and other quality control submittals as required under other sections of the Contract Documents.
- B. When other sections of the Contract Documents require manufacturer's certification of a product, material, and/or installation complies with specified requirements, submit a notarized certification from the manufacturer certifying compliance with specified requirements.
- C. Certification shall be signed by an officer of the manufacturer or other individual authorized to sign documents on behalf of the represented company.
- D. Requirements for submittal of inspection and test reports are specified in other sections of the Contract Documents.

END OF SECTION

SECTION 01340

CONSTRUCTION & DEMOLITION WASTE MANAGEMENT

PART 1 - GENERAL

1.01 SUMMARY

A. Section Includes:

1. Preparation and implementation, including reporting and documentation, of a Waste Management Plan for reusing, recycling, salvage or disposal of non-hazardous waste materials generated during demolition and/or new construction (Construction & Demolition (C&D) Waste), to foster material recovery and reuse and to minimize disposal in land fills.

B. Related Sections

1. Section 01300: Submittals
2. Section 01500: Construction Facilities and Temporary Controls
3. Section 01700: Contract Closeout

1.02 REFERENCES

- A. California Integrated Waste Management Act of 1989 (AB 939)
- B. California Code of Regulations Title 14, Section 18700 et seq.

1.03 SYSTEM DESCRIPTION

- A. Collection and separation of all C&D waste materials generated on-site, reuse or recycling on-site, transportation to approved recyclers or reuse organizations, or transportation to legally designated landfills, for the purpose of recycling salvaging and/or reusing a minimum of 75% of the C&D waste generated.

1.04 SUBMITTALS

- A. C&D Waste Management Plan (Exhibit 1): Within 10 calendar days after the Notice to Proceed and prior to any waste removal, submit the following to the OAR for review and approval. Update quarterly. Include:
 1. Materials to be recycled, reused, or salvaged, either onsite or offsite.
 2. Estimates of C&D waste quantity (in tons) by type of material. (If waste is measured by volume, give factors for conversion to weight in tons.)
 3. Procedures for recycling/ reuse program.
 4. Permit or license and location of Project waste-disposal areas.
 5. Site plan for placement of waste containers.

- B. C&D Waste Management Monthly Progress Report (Exhibit 2): Summary of waste generated by Project, monthly with Application for Payment. Include:
 - 1. Firms accepting the recovered or waste materials.
 - 2. Type and location of accepting facilities (landfill, recovery facility, used materials yard, etc.). If materials are reused or recycled on the Project site, location should be designated as “on-site reuse / recycling”.
 - 3. Type of materials and net weight (tons) of each.
 - 4. Value of the materials or disposal fee paid.
 - 5. Attach weigh bills and other documentation confirming amount and disposal location of waste materials.
- C. C&D Waste Management Final Compliance Report: Final update of Waste Management Plan to provide summary of total waste generated by Project.

PART 2 – PRODUCTS (Not Applicable)

PART 3 – EXECUTION

3.01 IMPLEMENTATION

- A. Implement approved Waste Management Plan including collecting, segregating, storing, transporting and documenting each type of waste material generated, recycled or reused, or disposed in landfills.
- B. Designate an on-site person to be responsible for instructing workers and overseeing the sorting and recording of waste/ recyclable materials.
- C. Include waste management and recycling in worker orientation and as an agenda item for regular Project meetings.
- D. Recyclable and waste bin areas shall be limited to areas approved on the Waste Management Plan. Keep recycling and waste bins neat and clearly marked to avoid contamination of materials.

3.02 ATTACHMENTS

- A. Exhibit 1: Waste Management Plan
- B. Exhibit 2: Waste Management Monthly Progress Report.

EXHIBIT 1

WASTE MANAGEMENT PLAN CONSTRUCTION/ MAINTENANCE/ALTERATION & DEMOLITION PROJECTS

PROJECT NAME:	«PROJECTTITLE» «CONTRACTTITLE»
PROJECT NO:	«Project Number»
NAME OF COMPANY:	
CONTACT PERSON:	
TELEPHONE:	
PROJECT SITE LOCATION:	
PROJECT TYPE:	<input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> DEMOLITION <input type="checkbox"/> MAINTENANCE/ALTERATION PROJECTS
PROJECT SIZE (SQ. FT.):	
DATE & ESTIMATED PERIOD	

(1) Material Type	(2) Tons Estimated Recycle	(3) Tons Estimated Reuse	(4) Tons Estimated Salvage	(5) Tons Estimated Landfill	(6) Proposed Disposal or Recycling Facility (e.g., Onsite, Name of Facility)
Total					
Diversion Rate: Columns [(2)+(3)+(4)] / [(2)+(3)+(4)+(5)]					=

Signature	Title	Date
-----------	-------	------

- Column 1 "Material Types" – Enter type of materials targeted for recycling, reuse, and/or salvage, either on- or off-site, and include a category for waste materials requiring disposal.
- Columns 2 "Estimated Generation" - Enter estimated quantities (tons) of recyclable, reusable, or salvageable waste
thru 4 materials anticipated to be generated and state number of salvageable items.
- Column 5 "Estimated Landfill" - Enter quantities (tons) of materials to be disposed in landfill.
- Column 4 "Disposal Location" - Enter end-destination of recycled, salvaged, and disposed materials.
- General : (1) Attach proposed Recycling & Waste Bin Location Plan.
 (2) Attach name and contact data for each recycling or disposal destination to be used.

EXHIBIT 2

WASTE MANAGEMENT PROGRESS REPORT CONSTRUCTION/ MAINTENANCE/ALTERATION & DEMOLITION PROJECTS

PROJECT NAME:	«PROJECTTITLE» «CONTRACTTITLE»
PROJECT NO:	«Project Number»
NAME OF COMPANY:	
CONTACT PERSON:	
TELEPHONE:	
PROJECT SITE LOCATION:	
PROJECT TYPE:	<input type="checkbox"/> NEW CONSTRUCTION <input type="checkbox"/> DEMOLITION <input type="checkbox"/> MAINTENANCE/ALTERATION PROJECTS
PROJECT SIZE (SQ. FT.):	
PERIOD	to

(1) Material Type	(2) Tons Actual Recycle	(3) Tons Actual Reuse	(4) Tons Actual Salvage	(5) Tons Actual Landfill	(6) Disposal or Recycling Facility (e.g., Onsite, Name of Facility)
Total					
Diversion Rate: Columns [(2)+(3)+(4)] / [(2)+(3)+(4)+(5)]					=

Signature	Title	Date
-----------	-------	------

- Column 1 "Material Types" – Enter type of materials targeted for recycling, reuse, and/or salvage, either on- or off-site, and include a category for waste materials requiring disposal.
- Columns 2 thru 4 "Estimated Generation" - Enter estimated quantities (tons) of recyclable, reusable, or salvageable waste materials anticipated to be generated and state number of salvageable items.
- Column 5 "Estimated Landfill" - Enter quantities (tons) of materials disposed.
- Column 4 "Disposal Location" - Enter end-destination of recycled, salvaged, and disposed materials.
- General :
- (1) Attach proposed Recycling & Waste Bin Location Plan.
 - (2) Attach name and contact data for each recycling or disposal destination to be used.

END OF SECTION

SECTION 01365

CONSTRUCTION SCHEDULE

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Construction Schedule procedures, preparation, submittal, updates, and revisions.

1.02 RELATED SECTIONS

- A. Section 01005: Summary of the Work
- B. Section 01300: Submittals.
- C. Section 01700: Contract Closeout.

1.03 PROCEDURES

- A. Within 7 calendar days after date of Notice to Proceed, CONTRACTOR shall submit to OWNER for review, a detailed Construction Schedule setting forth all requirements for complete execution of the Work.
- B. Seven (7) calendar days after receipt of the OWNER'S review comments, submit a final Construction Schedule acceptable to OWNER.
- C. If a Construction Schedule is considered by OWNER to not be in compliance with any requirement of the Contract, CONTRACTOR will be notified to review and revise the Construction Schedule and bring it into compliance. Failure of CONTRACTOR to submit a Construction Schedule in full compliance with the Contract Documents will result in a delay in progress payment processing. The Construction Schedule is to be used in evaluating progress for payment approval.
- D. Subsequently with each Progress Payment Request, CONTRACTOR shall deliver to OWNER an updated Construction Schedule reflecting Work progress to the end of the Progress Payment Request period. Each such Construction Schedule shall indicate actual progress to date in execution of the Work, together with a projected schedule for completion of all the Work.
- E. All schedule submittals are subject to review and acceptance by OWNER. OWNER retains the right to withhold progress payments until CONTRACTOR submits a Construction Schedule acceptable to OWNER.

- F. Concurrent with OWNER'S acceptance of CONTRACTOR'S submitted Construction Schedule, shall be CONTRACTOR'S signature of acceptance.

1.04 SCHEDULE SUBMITTAL PREPARATION GUIDELINES

- A. The Contract Work shall be scheduled and progress monitored using a Critical Path Method (CPM) network type scheduling system. Schedule shall be broken into sub-activities which shall, as a minimum, include major suppliers, all submittal approvals, all major trades, plumbing, mechanical, electrical, security, fire, and elevators/escalators. Scheduling system shall indicate all inter-relationships between trades and suppliers.
- B. Construction Schedule shall represent a practical plan to complete the Work within the Contract time requirement.
 - 1. A schedule extending beyond Contract time or less than Contract time will not be acceptable.
 - 2. A schedule found unacceptable by OWNER shall be revised by CONTRACTOR and resubmitted.
- C. Construction schedule shall clearly indicate sequence of construction activities, grouped by applicable phase and sorted by areas, buildings, or facilities within phase, and shall specifically indicate:
 - 1. Start and completion of all Work items, their major components, and interim milestone completion dates, as determined by CONTRACTOR and OWNER.
 - 2. Activities for procurement, delivery, installation of equipment, materials, and other supplies, including:
 - a. Time for submittals, resubmittals, and reviews. Include decision dates for selection of finishes.
 - b. Time for manufactured products for the Work fabrication and delivery.
 - c. Interdependence of procurement and construction activities.
 - d. As applicable, dates for testing, balancing equipment, and final inspection.

- D. Schedule shall be in sufficient detail to assure adequate planning and execution of the Work.
1. Each task activity shall range in duration from a 1 workday minimum to a 15 workday maximum and shall be total of actual days required for completion. The activity duration shall not include consideration of weather impact on completion of that activity.
 2. Schedule shall be suitable, in judgment of OWNER, to allow monitoring and evaluation of progress in performance of the Work; it shall be calendar time-scaled.
 3. Activities shall include:
 - a. Description; what is to be accomplished and where.
 - b. Workday duration.
 - c. Scheduled activities shall indicate continuous flow, from left to right.
 4. CONTRACTOR shall setup up the schedule calendar to identify workdays per week and shifts per day worked, non-work days, weekends and holidays.
- E. Failure to include any element of Work required for performance of this Contract shall not excuse CONTRACTOR from completing Work required to comply with the Contract Documents, notwithstanding acceptance of Construction Schedule.
- F. Submittal of Construction Schedule shall be understood to be CONTRACTOR'S confirmation that the schedule meets requirements of the Contract Documents, and that the Work will be executed in sequence indicated in schedule.

1.05 REVIEWS, UPDATES, AND REVISIONS

- A. OWNER will review and return the initial submittal of CONTRACTOR'S Construction Schedule, with summary comments, within 7 calendar days. If revisions are required, CONTRACTOR shall resubmit Schedule within 7 calendar days following receipt of OWNER'S comments.
- B. CONTRACTOR shall analyze and update the Project Construction Schedule:
1. As part of monthly payment application, CONTRACTOR shall submit to and participate with OWNER in a schedule review to include:
 - a. Actual start dates for Work items started during report period.

- b. The percent (%) complete on activities that have actual start dates.
 - c. Actual completion dates for Work items completed during report period.
 - d. Estimated remaining duration for Work items in progress, which will not exceed original duration for activity.
 - e. Estimated start dates for Work items scheduled to start during month following report period, if applicable.
 - f. Changes in duration of Work items.
 - 2. In case of a change to CONTRACTOR'S planned sequence of Work, CONTRACTOR shall include a narrative report with updated progress schedule which shall include, but not be limited to, a description of problem areas, current and anticipated delaying factors, and any proposed revisions for a recovery plan.
 - 3. All Change Orders affecting the schedule shall be clearly identified as separate and new activities integrated into the schedule at the appropriate time and in the appropriate sequence as reviewed and approved by OWNER.
 - 4. The Project Construction Schedule Review will not relieve CONTRACTOR of responsibility for accomplishing all Work in accordance with the Contract Documents.
- D. Updates: CONTRACTOR shall submit to OWNER, with each payment application, an up-to-date Project Construction Schedule to include following:
- 1. Work Item Report: Detailing Work items and dependencies as indicated on the Schedule.
 - 2. Separate listing of activities completed during reporting period.
 - 3. Separate listing of activities which are currently in progress, indicating their remaining duration and percentages completed.
 - 4. Separate listing of activities which are causing delay in Work progress.
- E. Scheduling of change or extra Work orders is responsibility of CONTRACTOR.
- 1. CONTRACTOR shall revise the Project Construction Schedule to incorporate all activities involved in completing change orders or extra Work orders and submit it to OWNER for review.

- F. If OWNER finds CONTRACTOR is entitled to extension of any completion date, under provisions of the Contract, OWNER'S determination of total number of days of extension will be based upon an analysis of the current Project Construction Schedule, and upon data relevant to the extension.
- G. CONTRACTOR acknowledges and agrees that delays to non-critical activities will not be considered a basis for a time extension unless activities become critical. Non-critical activities are those activities which, when delayed, do not affect an interim or Substantial Completion date.
- H. Any claim for extension of time shall be made in writing to OWNER not more than 7 days after commencement of delay; otherwise, it shall be deemed waived for all purposes. CONTRACTOR shall provide an estimate of the probable effect of such a delay on progress of Work as part of claim.

1.06 CONTRACTOR'S RESPONSIBILITY

- A. Nothing in these requirements shall be deemed to be an usurpation of CONTRACTOR'S authority and responsibility to plan and schedule Work as CONTRACTOR sees fit, subject to all other requirements of Contract Documents.
- B. CONTRACTOR shall provide at all times sufficient competent labor, materials, and equipment to properly carry on Work and to insure completion of each part in accordance with Construction Schedule and within time agreed.
- C. CONTRACTOR shall be responsible for ensuring that all submittals to the OWNER are accurate and consistent. Damage, including extra time and cost, caused by inaccuracies from CONTRACTOR will be compensated by CONTRACTOR.

1.07 SUSPENSION OF PAYMENTS

- A. Initial Submittal: If CONTRACTOR fails to comply with the specified requirements, OWNER reserves the right to engage an independent scheduling consultant to fulfill these requirements. Upon additional notice to CONTRACTOR, OWNER shall retain against CONTRACTOR all incurred costs for additional services.
- B. Update Submittals: OWNER has the right to withhold progress payments if CONTRACTOR fails to update and submit the Project Construction Schedule and reports as required by OWNER.

1.08 RECORD COPY

- A. Prior to the Contract Completion, CONTRACTOR shall submit the Project Construction Schedule showing the as-built sequence. The as-built schedule shall have all activities with actual start and end dates.

PART 2 - PRODUCTS - NOT USED

PART 3 - EXECUTION - NOT USED

END OF SECTION

SECTION 01600

MATERIALS AND EQUIPMENT

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. This Section includes administrative and procedural requirements governing selection of products for incorporation into the Work.

1.2 RELATED SECTIONS

- A. Section 01100: Coordination
- B. Section 01300: Submittals
- C. Section 01640: Substitutions
- D. Section 01740: Warranties

1.3 DEFINITIONS

- A. Definitions used in this Section are not intended to change the meaning of other terms used in the Contract Documents, such as “specialties,” “systems,” “structure,” “finishes,” “accessories,” and other similar terms. Such terms are self-explanatory and have well-recognized meanings in the construction industry.
 - 1. “Products” are items purchased for incorporation into the Work, whether purchased for the Work or taken from previously purchased stock. The term “product” includes the terms “material” and “equipment” and terms of similar intent.
 - a. “Named Products,” are items identified by the manufacturer’s product name, including make, model number or other designation, shown or listed in the manufacturer’s published product literature, current as of the date of the Contract.
 - b. “Foreign Products,” as distinguished from “domestic products,” are items substantially manufactured (50 percent or more of value) outside the United States and its possessions. Products produced or supplied by entities substantially owned (more than 50 percent) by persons who are not citizens of, nor living within, the United States and its possessions are also considered to be foreign products.

2. “Materials,” are products substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the Work.
3. “Equipment,” is a product with operational parts, whether motorized or manually operated, that requires service connections, such as wiring or piping.

1.4 SUBMITTALS

- A. Material list: Prepare a list in tabular form acceptable to ARCHITECT and/or OAR showing proposed products. Include generic names. Include the manufacturer’s name and proprietary names for each item listed.
 1. Coordinate material list with the Construction Schedule and the submittal schedule.
 2. Form: Prepare material list with information on each item tabulated under the following column headings.
 - a. Related Specification Section number
 - b. Generic name used in Contract Documents
 - c. Proprietary name, model number, and similar designations
 - d. Manufacturer’s name and address
 - e. Supplier’s name and address
 - f. Installer’s name and address
 - g. Projected delivery date or time span of delivery period
 3. Initial Submittal: Within ten (10) days after execution of each subcontract agreement, as set forth in General Condition Article 6.25, submit three (3) copies of an initial material list to the ARCHITECT with a copy to the OAR. Provide a written explanation for omissions of data and for known variations from the Contract Documents.
 4. ARCHITECT Action: ARCHITECT will respond in writing to OAR within fourteen (14) days and OAR will forward response to CONTRACTOR within sixteen (16) days of receipt of the completed material list. No response outside this period constitutes no objection to listed items but does not constitute a waiver of the requirement that selected items comply with the Contract Documents. ARCHITECT response will include a list of unacceptable item selections, containing a brief explanation of reasons for this action.

1.5 QUALITY ASSURANCE

- A. Source Limitations: To the fullest extent possible, provide products of the same kind from a single source.
 - 1. CONTRACTOR is to verify necessary lead times for all materials; however, when specified products are available only from sources that do not, or cannot, produce a quality adequate to complete Work in a timely manner, consult with the ARCHITECT to determine the most important product qualities before proceeding. Qualities may include attributes, such as visual appearance, strength, durability, or compatibility. When a determination has been made, select products from sources producing these qualities, to the fullest extent possible.
- B. Compatibility of Options: When the CONTRACTOR is given the option of selecting between two or more products for use in the Work, the product selected shall be compatible with products previously selected, even if previously selected products were also options.
- C. Foreign Product Limitations: Except under one or more of the following conditions, provide domestic products, not foreign products, for inclusion into the Work:
 - 1. No available domestic product complies with the Contract Documents.
 - 2. Domestic products that comply with the Contract Documents are available only at prices or terms substantially higher than foreign products that comply with the Contract Documents.
- D. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products that will be exposed in view in occupied spaces or on the exterior.
 - 1. Labels: Locate required product labels and stamps on concealed surfaces or, where required for observation after installation, on accessible surfaces that are not conspicuous.

1.6 PRODUCT DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, and handle products according to the manufacturer's recommendations, using means and methods that will prevent damage, deterioration, and loss, including theft.
 - 1. Schedule delivery to minimize long-term storage at the Project site and to prevent overcrowding of Work spaces.

2. Coordinate delivery with installation time to assure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft, and other losses.
3. Deliver products to the Project site in an undamaged condition in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
4. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
5. Store products at the Project site in a manner that will facilitate inspection and measurement of quantity or counting of units.
6. Store heavy materials away from structures in a manner that will not endanger the structure's supporting construction.
7. Store products subject to damage by the elements above ground, under cover in a weather-tight enclosure, with ventilation adequate to prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

PART 2 - PRODUCTS

2.1 MATERIAL SELECTION

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, new at the time of installation.
 1. Provide products complete
 2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situations on other Projects.
- B. Product Selection Procedures: The Contract Documents and governing regulations govern product selection. Procedures governing product selection include the following:
 1. Proprietary Specification Requirements: Where Specifications name only a single material or manufacturer, provide the product indicated. No substitutions will be permitted.

2. Semi-proprietary Specification Requirements: Where Specifications name two or more products or manufacturers, provide one of the products indicated. No substitutions will be permitted.
 - a. Where Specifications specify products or manufacturers by name, accompanied by the term “or equal” comply with General Condition Article 6.14 to obtain approval for use of an unnamed product.
3. Descriptive Specification Requirements: Where Specifications describe a product or assembly, list exact characteristics required, with or without use of a brand or trade name, provide a product or assembly that provides the characteristics and otherwise complies with the Contract Documents.
4. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements and are recommended by the manufacturer for the application indicated.
 - a. Manufacturer’s recommendations may be contained in published material literature or by the manufacturer’s certification of performance.
5. Compliance with Standards, Codes, and Regulations: Where Specifications only require compliance with an imposed code, standard or regulation, select a product that complies with the standards, codes, or regulations specified.
6. Visual Matching: Where Specifications require matching an established Sample, decision of the ARCHITECT will be final on whether a proposed product matches satisfactorily.
7. Visual Selection: Where specified product requirements include the phrase “... as selected from manufacturer’s standard or premium colors, patterns, textures...” or a similar phrase, select a product and manufacturer that complies with other specified requirements. The ARCHITECT will select the color, pattern, and texture from the product line selected.

PART 3 - EXECUTION

3.1 INSTALLATION OF PRODUCTS

- A. Comply with manufacturer’s instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located, and aligned with other Work.

1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration until Substantial Completion.

END OF SECTION

SECTION 01640

SUBSTITUTIONS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. This Section includes administrative and procedural requirements for handling requests for substitutions submitted eleven (11) days or more after the date established in the Notice to Proceed.

1.2 RELATED SECTIONS

- A. Section 01300: Submittals
- B. Section 01600: Materials and Equipment

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.1 APPLICATION

- A. CONTRACTOR proposed changes in products or materials required by the Contract Documents eleven (11) days or more after the date established in the Notice to Proceed, are considered to be requests for substitutions. OAR will consider requests for substitution if a product is no longer manufactured and/or cannot be acquired from existing inventories. The following are not considered to be valid requests for substitutions:
 - 1. Revisions to the Contract Documents requested by OAR or ARCHITECT.
 - 2. Specified options of products included in the Contract Documents.
 - 3. Substitutions requested on a “or equal” basis.

3.2 SUBMITTALS

- A. Transmit submittals as described in related Sections for each request for substitution.
 - 1. Identify the product to be replaced in each request. Include related Specification Section and Drawing number.

2. Provide complete documentation denoting compliance with the requirements for substitutions, and the following information, as appropriate.
 - a. A detailed comparison of significant qualities of the proposed substitution with those specified in the Contract Documents. Significant qualities may include elements, such as performance, weight, size, durability, and visual effect.
 - b. Product Data, including Drawings, descriptions of products, fabrication, and installation procedures.
 - c. Samples, where applicable or requested.
 - d. CONTRACTOR certification the proposed substitution conforms to requirements of the Contract Documents in every respect and is appropriate for the applications indicated.
 - e. CONTRACTOR waiver of rights to an increase in the Contract Amount, Milestones and/or Contract Time that may subsequently become necessary because of the failure of the substitution to adequately perform.
3. If required, ARCHITECT will request additional information or documentation for evaluation. OAR will notify CONTRACTOR of acceptance or rejection of the substitution.
4. ARCHITECT will review and consider request for substitution and provide a recommendation to OAR
5. Where a proposed substitution involves and/or effects more than one Subcontractor, CONTRACTOR shall ensure each Subcontractor cooperates with the other Subcontractor involved to coordinate the Work, provide uniformity and consistency, and assure compatibility of all products.
6. CONTRACTOR submittal and ARCHITECT review of Shop Drawings, Product Data, material lists or Samples do not constitute an acceptable or valid request for substitution.

END OF SECTION

SECTION 01700
CONTRACT CLOSEOUT

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. This Section includes administrative and procedural requirements for Contract Closeout, including but not limited to, the following:
 - 1. Inspection procedures.
 - 2. Project record documents submittal.
 - 3. Operation and maintenance manual submittal.
 - 4. OWNER orientation and instruction.
 - 5. Final cleaning.
- B. Closeout requirements for specific Work activities are included in the appropriate Sections in Divisions 01 through 16.

1.02 RELATED SECTIONS

- A. Section 01080: Application for Payment
- B. Section 01300: Submittals
- C. Section 01365: Construction Schedule
- D. Section 01500: Construction Facilities and Temporary Controls
- E. Section 01740: Warranties

PART 2 – PRODUCTS

PART 3 - EXECUTION

3.01 SUBSTANTIAL COMPLETION

- A. Inspection Procedures: On receipt of a request for a certificate of Substantial Completion, OAR will either authorize commencement of inspection or advise CONTRACTOR of unfilled requirements. IOR, OAR, CONTRACTOR and ARCHITECT will inspect the Work and IOR shall prepare a comprehensive punch list of items to be completed.
 - 1. IOR will repeat inspection when requested and assure the Work is complete.
 - 2. Results of the completed inspection will form a partial basis of the requirements for Final Completion.

- B. Re-inspection Procedures: IOR, OAR, CONTRACTOR and ARCHITECT will inspect the Work upon notice the Work, including final inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to OAR.
1. Upon completion of inspection, OAR will recommend Final Completion. If the Work is incomplete, OAR will advise CONTRACTOR of Work that is incomplete or of obligations that have not been fulfilled but are required for Final Completion.
 2. If necessary, re-inspection will be repeated, but may be assessed against CONTRACTOR if OWNER is subject to additional professional service and or additional costs of inspection.

3.02 PROJECT RECORD DOCUMENT SUBMITTAL

- A. General: Do not use project record documents for construction purposes. Protect record documents from deterioration and loss. Provide access to record documents for ARCHITECT, IOR and OAR reference during normal working hours. Project record document shall be updated on a weekly basis. Prior to submitting each application for payment, secure IOR and ARCHITECT approval of project record documents.
- B. Record Drawings: Maintain a clean, undamaged set of blue or black line white prints of Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark which Drawing is most capable of showing conditions fully and accurately. Where Shop Drawings are used, record a cross-reference at the corresponding location on the Drawings. Provide detailed and accurate field dimensions for concealed elements that would be difficult to measure and record at a later date.
1. Mark record sets with red erasable pencil. Use other colors to distinguish between variations in separate categories of the Work. Date and number entries in the same format as submitted. Call attention to entry by a “cloud” around the affected areas.
 2. Mark new information important to OWNER but was not shown on Drawings or Shop Drawings.
 3. Utility location and depth below finished grade and/or above ceilings and attic spaces shall be fully dimensioned and indicated on record drawings. Dimensions shall be measured from building lines or permanent landmarks and shall be triangulated to those features.

4. Note related Change Order or Construction Directive numbers where applicable. RFC submissions shall be referenced on each affected sheet, Drawing and/or Shop Drawing.
 5. Organize record drawing sheets into manageable sets. Bind sets with durable-paper cover sheets; print suitable titles, dates, and other identification on the cover of each set.
 6. Prior to Final Completion of the Work, and review of the project record drawings by ARCHITECT, prepare a final set of project record drawings incorporating all mark ups and information noted. Provide a hardline drawing set of record drawings printed on reproducible white bond paper. Submit final set of Record Drawings to ARCHITECT.
- C. Record Specifications: Maintain two complete copies of the Specifications, including Addenda. Include with the Specifications two copies of other written Contract Documents, such as Change Orders and/or Construction Directives issued during construction.
1. Mark these record documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications.
 2. Give particular attention to substitutions and selection of options and information on concealed Work that cannot otherwise be readily discerned later by direct observation.
 3. Note related record document information with Product Data.
 4. Prior to Final Completion of the Work, submit record Specifications to ARCHITECT for OWNER records.
- D. Record Product Data: Maintain two copies of each Product Data submittal. Note related Change Orders and Construction Directives and mark-up of record drawings and Specifications.
1. Mark these documents to illustrate significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the Project site and from the manufacturer's installation instructions and recommendations.
 2. Provide detailed and accurate information regarding concealed products and portions of Work that cannot otherwise be readily discerned later by direct observation.

3. Prior to Final Completion of the Work, submit complete set of record Product Data to the ARCHITECT for OWNER records.
- E. Record Samples: Immediately prior to Substantial Completion, CONTRACTOR shall meet with ARCHITECT and OAR at the Project site to determine which Samples are to be transmitted to OWNER for record purposes. Comply with OAR instructions regarding delivery to OWNER storage area.
- F. Miscellaneous Records: Refer to other Specification sections for requirements of miscellaneous record keeping and submittals in connection with actual performance of the Work. Immediately prior to the date of Final Completion, complete and compile miscellaneous records and place in good order. Identify miscellaneous records properly and bind or file, ready for continued use and reference. Submit to ARCHITECT for OWNER records.
- G. Maintenance Manuals: Prior to Substantial Completion, organize operation and maintenance data into suitable two sets of manageable size. Bind properly indexed data in individual, heavy-duty, 2-3", 3-ring, vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Submit to OAR for ARCHITECT and for OWNER records. Include the following types of information.
 1. Copies of warranties
 2. Shop Drawings and Product Data
- H. Verified Reports: Construction progress of the Work shall be reported to DSA via a duly verified report as per Sections 4-336 and 4-343 of the California Building Standards Administrative Code.

3.03 CLOSEOUT PROCEDURES:

- A. Operation and Maintenance Instructions: Prior to Substantial Completion, arrange for each installer of equipment that requires regular operation and maintenance to meet with designated OWNER personnel to provide instruction in proper operation and maintenance. Provide instruction by manufacturer's representatives if installers are not experienced in operation and maintenance procedures. Include a detailed review of the following items:
 1. Maintenance manuals
 2. Record documents
 3. Identification systems
 4. Cleaning
 5. Warranties and bonds
 6. Maintenance agreements and similar continuing commitments

3.04 FINAL CLEANING

- A. General: Related sections of the Contract Documents specify general cleaning during performance of the Work. General cleaning is included in Division 01 Section “Construction Facilities and Temporary Controls”.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer’s instructions.
 - 1. Complete the following cleaning operations before requesting inspection for a certificate of Substantial Completion.
 - a. Remove labels that are not permanent labels.
 - b. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
 - c. Clean exposed exterior hard-surfaced finished to a dust-free condition, free of stains, films, and similar foreign substances. Restore reflective surfaces to their original condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.
 - d. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
 - e. Clean the Project site, including landscape development areas, of rubbish, litter, and other foreign substances. Sweep paved areas broom clean; remove stains, spills, and other foreign deposits. Rake grounds that are neither paved nor planted to a smooth, even-textured surface.

END OF SECTION PART 1 - GENERAL

1.03 SECTION INCLUDES

- C. This Section includes administrative and procedural requirements for Contract Closeout, including but not limited to, the following:
 - 6. Inspection procedures.

7. Project record documents submittal.
8. Operation and maintenance manual submittal.
9. OWNER orientation and instruction.
10. Final cleaning.

- D. Closeout requirements for specific Work activities are included in the appropriate Sections in Divisions 01 through 16.

1.04 RELATED SECTIONS

- A. Section 01080: Application for Payment
- B. Section 01300: Submittals
- C. Section 01360: Construction Schedule
- D. Section 01450: Test and Balance
- E. Section 01500: Construction Facilities and Temporary Controls
- F. Section 01740: Warranties

PART 2 – PRODUCTS

PART 3 - EXECUTION

3.01 SUBSTANTIAL COMPLETION

- C. Inspection Procedures: On receipt of a request for a certificate of Substantial Completion, OAR will either authorize commencement of inspection or advise CONTRACTOR of unfilled requirements. IOR, OAR, CONTRACTOR and ARCHITECT will inspect the Work and IOR shall prepare a comprehensive punch list of items to be completed.
 3. IOR will repeat inspection when requested and assure the Work is complete.
 4. Results of the completed inspection will form a partial basis of the requirements for Final Completion.
- D. Re-inspection Procedures: IOR, OAR, CONTRACTOR and ARCHITECT will inspect the Work upon notice the Work, including final inspection list items from earlier inspections, has been completed, except for items whose completion is delayed under circumstances acceptable to OAR.
 3. Upon completion of inspection, OAR will recommend Final Completion. If the Work is incomplete, OAR will advise CONTRACTOR of Work that is incomplete or of obligations that have not been fulfilled but are required for Final Completion.

4. If necessary, re-inspection will be repeated, but may be assessed against CONTRACTOR if OWNER is subject to additional professional service and or additional costs of inspection.

3.02 PROJECT RECORD DOCUMENT SUBMITTAL

- H. General: Do not use project record documents for construction purposes. Protect record documents from deterioration and loss. Provide access to record documents for ARCHITECT, IOR and OAR reference during normal working hours. Project record document shall be updated on a weekly basis. Prior to submitting each application for payment, secure IOR and ARCHITECT approval of project record documents.
 - I. Record Drawings: Maintain a clean, undamaged set of blue or black line white prints of Drawings and Shop Drawings. Mark the set to show the actual installation where the installation varies substantially from the Work as originally shown. Mark which Drawing is most capable of showing conditions fully and accurately. Where Shop Drawings are used, record a cross-reference at the corresponding location on the Drawings. Provide detailed and accurate field dimensions for concealed elements that would be difficult to measure and record at a later date.
7. Mark record sets with red erasable pencil. Use other colors to distinguish between variations in separate categories of the Work. Date and number entries in the same format as submitted. Call attention to entry by a “cloud” around the affected areas.
 8. Mark new information important to OWNER but was not shown on Drawings or Shop Drawings.
 9. Utility location and depth below finished grade and/or above ceilings and attic spaces shall be fully dimensioned and indicated on record drawings. Dimensions shall be measured from building lines or permanent landmarks and shall be triangulated to those features.
 10. Note related Change Order or Construction Directive numbers where applicable. RFC submissions shall be referenced on each affected sheet, Drawing and/or Shop Drawing.
 11. Organize record drawing sheets into manageable sets. Bind sets with durable-paper cover sheets; print suitable titles, dates, and other identification on the cover of each set.
 12. Prior to Final Completion of the Work, and review of the project record drawings by ARCHITECT, prepare a final set of project record drawings incorporating all mark ups and information noted. Provide a hardline

drawing set of record drawings printed on reproducible white bond paper.
Submit final set of Record Drawings to ARCHITECT.

- J. Record Specifications: Maintain two complete copies of the Specifications, including Addenda. Include with the Specifications two copies of other written Contract Documents, such as Change Orders and/or Construction Directives issued during construction.
 - 5. Mark these record documents to show substantial variations in actual Work performed in comparison with the text of the Specifications and modifications.
 - 6. Give particular attention to substitutions and selection of options and information on concealed Work that cannot otherwise be readily discerned later by direct observation.
 - 7. Note related record document information with Product Data.
 - 8. Prior to Final Completion of the Work, submit record Specifications to ARCHITECT for OWNER records.
- K. Record Product Data: Maintain two copies of each Product Data submittal. Note related Change Orders and Construction Directives and mark-up of record drawings and Specifications.
 - 4. Mark these documents to illustrate significant variations in actual Work performed in comparison with information submitted. Include variations in products delivered to the Project site and from the manufacturer's installation instructions and recommendations.
 - 5. Provide detailed and accurate information regarding concealed products and portions of Work that cannot otherwise be readily discerned later by direct observation.
 - 6. Prior to Final Completion of the Work, submit complete set of record Product Data to the ARCHITECT for OWNER records.
- L. Record Samples: Immediately prior to Substantial Completion, CONTRACTOR shall meet with ARCHITECT and OAR at the Project site to determine which Samples are to be transmitted to OWNER for record purposes. Comply with OAR instructions regarding delivery to OWNER storage area.
- M. Miscellaneous Records: Refer to other Specification sections for requirements of miscellaneous record keeping and submittals in connection with actual performance of the Work. Immediately prior to the date of Final Completion, complete and compile miscellaneous records and place in good order. Identify

miscellaneous records properly and bind or file, ready for continued use and reference. Submit to ARCHITECT for OWNER records.

- N. Maintenance Manuals: Prior to Substantial Completion, organize operation and maintenance data into suitable two sets of manageable size. Bind properly indexed data in individual, heavy-duty, 2-3", 3-ring, vinyl-covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Submit to OAR for ARCHITECT and for OWNER records. Include the following types of information.

1. Copies of warranties
2. Shop Drawings and Product Data

- H. Verified Reports: Construction progress of the Work shall be reported to DSA via a duly verified report as per Sections 4-336 and 4-343 of the California Building Standards Administrative Code.

3.03 CLOSEOUT PROCEDURES:

- B. Operation and Maintenance Instructions: Prior to Substantial Completion, arrange for each installer of equipment that requires regular operation and maintenance to meet with designated OWNER personnel to provide instruction in proper operation and maintenance. Provide instruction by manufacturer's representatives if installers are not experienced in operation and maintenance procedures. Include a detailed review of the following items:

1. Record documents
2. Warranties and bonds
3. Maintenance agreements and similar continuing commitments

3.04 FINAL CLEANING

- C. General: Related sections of the Contract Documents specify general cleaning during performance of the Work. General cleaning is included in Division 01 Section "Construction Facilities and Temporary Controls".
- D. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.

2. Complete the following cleaning operations before requesting inspection for a certificate of Substantial Completion.

- f. Remove labels that are not permanent labels.

- g. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compounds and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
- h. Clean exposed exterior and interior hard-surfaced finished to a dust-free condition, free of stains, films, and similar foreign substances. Restore reflective surfaces to their original condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.
- i. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
- j. Clean the Project site, including landscape development areas, of rubbish, litter, and other foreign substances. Sweep paved areas broom clean; remove stains, spills, and other foreign deposits. Rake grounds that are neither paved nor planted to a smooth, even-textured surface.

END OF SECTION

SECTION 01740

WARRANTIES

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. This Section includes administrative and procedural requirements for warranties required by the Contract Documents, including manufacturers and/or installer's standard warranties on products and special product warranties.
 - 1. Refer to the General Conditions for terms of the guarantee period for the Work.

1.2 RELATED SECTIONS

- A. Section 01600: Materials and Equipment
- B. Section 01700: Contract Closeout
- C. All Necessary work related sections division 2-16

PART 2 - PRODUCTS

PART 3 - EXECUTION

3.1 WARRANTY REQUIREMENTS

- A. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties shall not relieve CONTACTOR of the warranty of the Work incorporating such materials, products, and/or equipment. Manufacturer's disclaimers and limitations on warranties do not relieve suppliers, manufacturers, installers, and Subcontractors of the requirement to countersign special warranties with CONTRACTOR.
- B. Standard warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to OWNER.
- C. Special warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for OWNER.
- D. Related Damages and Losses: When correcting failed or defective warranted Work, remove and replace Work that has been damaged as a result of such failure

or which must be removed and replaced to provide access for correction of warranted Work.

- E. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement with the reinstated warranty equal to the original warranty.
- F. Replacement Cost: Upon determination the Work covered by a warranty has failed and/or is defective, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. CONTRACTOR is responsible for the cost of replacing or rebuilding defective Work regardless of whether OWNER has benefited from use of the Work through a portion of its anticipated useful service life.
- G. OWNER Recourse: Expressed warranties made to OWNER are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which OWNER can enforce such other duties, obligations, rights, or remedies.
- H. Rejection of Warranties: OAR reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
- I. Where the Contract Documents require a special warranty, or similar commitment on the Work or part of the Work, OAR reserves the right to refuse to accept the Work until CONTRACTOR presents evidence the entities required to countersign such commitments have done so.

3.2 SUBMITTALS

- A. Submit written warranties to ARCHITECT prior to Final Completion of the Work. If the certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, submit written warranties as set forth in the certificate of Substantial Completion.
 - 1. When a designated portion of the Work is partially used and/or occupied by OWNER, submit properly executed warranties to ARCHITECT within fifteen (15) days of the Partial Use or Occupancy of the designated portion of the Work.
- B. When the Contract Documents require CONTRACTOR, or CONTRACTOR and a Subcontractor, installer, supplier or manufacturer to execute a special warranty, prepare a written document containing appropriate terms and identification, ready for execution by the required parties. Submit a draft to OAR, through the ARCHITECT, for approval prior to final execution.

1. Refer to Divisions 02 through 16 for specific content requirements and particular requirements for submitting special warranties.
- C. Form of Submittal: Prior to Final Completion of the Work, compile two copies of each required warranty properly executed by CONTRACTOR, or by CONTRACTOR and Subcontractor, installer, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the Specifications.
- D. Bind warranties and bonds in heavy-duty, commercial-quality, durable 3-ring, vinyl-covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8½ by 11” (115 by 280 mm) paper.
1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the item or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address, and telephone number of the installer.
 2. Identify each binder on the front and spine with the typed or printed title “WARRANTIES,” Project title and/or name, and name of CONTRACTOR.
 3. When warranted Work requires operation and maintenance manuals, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

END OF SECTION

SECTION 02221

DEMOLITION

PART 1 - GENERAL

1.01 SUMMARY

- A. Provisions of Division 01 apply to this section.
- B. Section Includes: Furnishing labor, materials and equipment necessary for demolition, dismantling, cutting and alterations as indicated, specified, or required for completion of the Work. Includes items such as the following:
 - 1. Protection of existing improvements to remain.
 - 2. Cleaning existing improvements to remain.
 - 3. Disconnecting and capping utilities.
 - 4. Removing debris, waste materials, and equipment.
 - 5. Removal of items for performance of the Work.
 - 6. Salvageable items to be retained by the Owner.
- C. Related Sections:
 - 1. Section 01005: Summary of the Work.
 - 2. Section 01120: Cutting and Patching

1.02 SUBMITTALS

- A. Shop Drawings: Submit Shop Drawings indicating the extent of items and systems to be removed. Indicate items to be salvaged or items to be protected during demolition. Indicate locations of utility terminations and the extent of abandoned lines to be removed. Include details indicating methods and location of utility terminations.

1.03 QUALITY ASSURANCE

- A. Perform the Work of this section by workers skilled in the demolition of buildings and structures. Perform the Work of this section under direct superintendence at all times.
- B. Prior to commencement of Work, schedule a walkthrough with the OAR, to confirm Owner property items have been removed from scheduled Work areas. Identify and mark remaining property items and schedule their removal.

- C. Coordinate demolition for the correct sequence, limits, and methods. Schedule demolition Work to create least possible inconvenience to the public and facility operations.
- D. Related Standard: American National Standard A10.6-1983

1.04 PROJECT CONDITIONS

- A. Drawings may not indicate in detail all demolition Work to be performed. Examine existing conditions to determine the full extent of required demolition.
- B. Repair damage to existing improvements or damage due to excessive demolition.
- C. Provide all measures to avoid excessive damage from inadequate or improper means and methods, improper shoring, bracing or support.
- D. If conditions are encountered that varies from those indicated, promptly notify the Architect for clarification before proceeding.

PART 2 - PRODUCTS

2.01 HANDLING OF MATERIALS

- A. Items scheduled for salvage by the Owner shall be delivered to a location designated by the OAR. Items shall be cleaned, packaged and labeled for storage.
- B. Items scheduled for reuse shall be stored on the Project site and protected from damage, theft and other deleterious conditions.

PART 3 - EXECUTION

3.01 GENERAL

- A. Protection:
 - 1. Do not commence demolition until safety partitions, barricades, warning signs and other forms of protection are installed. Refer to Section 01500: Construction Facilities and Temporary Controls.
 - 2. Provide all safeguards, including warning signs, lights and barricades, for protection of workers, occupants, and the public.
- B. If, at any time, safety of existing construction appears to be endangered, take immediate measures to correct such conditions; cease operations and immediately notify the Architect and OAR.

3.02 DEMOLITION

- A. Do not throw or drop materials.

- B. Remove existing construction only to extent necessary for proper installation of Work and interfacing with existing construction. Cut back finished surfaces to straight, plumb or level lines as required for a smooth transition.
- C. Where openings are cut oversize or in improper locations, replace or repair to required condition.

3.03 CUTTING EXISTING CONCRETE

- A. Cutting of existing concrete shall be performed by skilled workers familiar with the requirements and space necessary for placing concrete. Perform concrete cutting with concrete cutting wheels and hand chisels. Do not damage concrete intended to remain.
- B. Extent of cutting of structural concrete shall be as indicated on Drawings. Cutting of non-structural concrete shall be as indicated on Drawings or as reviewed by the Architect or structural engineer. Replace concrete demolished in excess of amounts indicated.
- C. Prior to cutting or coring concrete, determine locations of hidden utilities or other existing improvements and provide necessary measures to protect them from damage.

3.04 REMOVAL OF OTHER MATERIALS

- A. Masonry: Cut back to joint lines and remove mortar without damaging units to remain. Allow space for repairs to backing where applicable.
- B. Woodwork: Cut or remove to a joint or panel line.
- C. Remove existing improvements not specifically indicated or required but necessary to perform Work. Cut to clean lines, allowing for installation of Work.

3.06 PATCHING

- A. Patch and/or repair materials to remain when damaged by the performance of the Work of this section. Finish material and appearance of patch and/or repair Work shall match existing.

3.07 CLEANING

- A. Clean existing materials to remain with appropriate tools and equipment.
- B. Protect existing improvements during cleaning operations.
- C. Debris shall be dampened by fog water spray prior to transporting by truck.
- D. Debris pick-up area shall be kept broom-clean and shall be washed daily with clean water.

- E. Remove waste and debris, other than items to be salvaged. Turn over salvaged items to Owner, or store and protect for reuse where required. Continuously clean up and remove items as demolition Work progresses.
- F. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 07600

SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.01 SUMMARY

- A. Provisions of Division 01 apply to this section.
- B. Section Includes:
 - 1. Reglet and counter flashing assemblies.
 - 2. Miscellaneous metal flashing and counter flashing as required.
 - 3. Drip flashings.
 - 4. Other sheet metal items, not necessarily specified herein or in other sections, but required to prevent penetration of water into building.
- C. Related Sections:
 - 1. Section 07920: Joint Sealants.

1.02 SUBMITTALS

- A. Shop Drawings: Submit for fabricated sheet metal indicating shapes, details, methods of joining, anchoring and fastening, thicknesses and gages of metals, concealed reinforcement, expansion joint details, sections, and profiles.
- B. Samples: Submit Samples for materials or assemblies as requested.
- C. Product Data: Submit brochures of manufactured items.

1.03 QUALITY ASSURANCE

- A. Drawings and requirements specified govern. Provide the Work of this section in conformance with the Architectural Sheet Metal Manual published by SMACNA for conditions not indicated or specified and for general fabrication of sheet metal items.
- B. Materials shall conform to following standards:
 - 1. ASTM A 167 - Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet and Strip.
 - 2. ASTM A 653 - Sheet Steel, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
 - 3. ASTM B 370 - Copper Sheet and Strip for Building Construction.
 - 4. ASTM B 749 - Lead and Lead Alloy Sheet, Strip and Plate Products.
- C. Pre-installation Meetings: Refer to Division 7 roofing sections as appropriate. Attend the pre-installation and inspection meetings for roofing Work.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Do not install bent and/or otherwise damaged materials.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Galvanized Sheet Steel: ASTM A 653, coating designation G90, hot-dip galvanized.
- B. Copper Plate, Sheet and Strip: ASTM B 370, cold-rolled, tempered. Copper sheet and strip shall be cold-rolled-temper.
- C. Sheet Lead: ASTM B 749, Type L50049 or L51121, weighing not less than 4 pounds per square foot.
- D. Stainless Steel: Plate, sheet and strip shall conform to ASTM A 167, Type 304 or Type 316, No. 4 finish on exposed surfaces and No. 2 finish on concealed surfaces unless otherwise specified or indicated. Furnish Type 304 for general applications and Type 316 where exposed to acidic or alkaline conditions.
- E. Fastenings:
1. Galvanized Steel: Nails, rivets, and other fastenings furnished in connection with galvanized sheet steel Work shall be sealed with rust resistive coating. Rivets shall be tinned. Nails and other fastenings shall be zinc-coated.
 2. Copper: Nails, rivets, and other fastenings furnished in connection with copper sheet metal Work, shall be manufactured from hard-temper copper or hard brass.
 3. Stainless Steel: Nails, rivets and other fastenings furnished in connection with stainless steel Work, shall be 300 series alloy to match alloy of stainless steel being fastened.
- F. Soldering Flux: Raw muriatic acid for galvanized steel; rosin for tin, lead and tinned copper; non-corrosive soldering salts for uncoated copper and acid-type flux formulated for soldering stainless steel.
- G. Solder: ASTM B 32, Grade 50A. Name of product manufacturer and grade designation shall be stamped or cast onto each bar.

2.02 FABRICATION

- A. General:
1. Accurately form sheet metal Work to dimensions and shapes indicated and required. Cope finish molded and brake metal shapes with true, straight, sharp lines and angles and, where intersecting each other, to a precise fit. Unless otherwise specified, all galvanized sheet steel shall be 22 gage. Exposed edges of sheet metal shall have a 1/2 inch minimum hemmed edge.
 2. Soldering of sheet steel or copper shall be performed with well-heated copper soldering iron or soldering torch, joints full flowing, neat and consistent. Thoroughly clean materials at joints before soldering, and tin coppers before soldering. Exposed soldering on finished surfaces shall be scraped smooth. Lock seam Work shall be fabricated flat and true to line and soldered along its entire length. Acid-fluxed Work shall be neutralized after fabrication.

3. Form and install sheet metal Work to provide proper allowances for expansion and contraction, without causing undue stresses in any part of completed Work. Installation shall be water and weathertight.
- B. Reglet Type Counterflashing: Where roof comes in contact with vertical surfaces, provide counterflashing. Set top of counterflashing 8 inches above roof deck unless otherwise indicated, and extend down at least 5 inches or to top of cant strip. Counterflashing and reglet shall be 22 gage galvanized sheet steel. Lap counterflashing and reglet 3 inches minimum at splices and miter at angles, or supply special metal corner fittings. Reglet and method of securing flashing shall be so constructed that flashing is firmly locked in place, but may be readily removed for replacement.
- C. Miscellaneous Flashing: Unless otherwise indicated, miscellaneous flashing shall be fabricated of galvanized steel. Exterior doors and windows, unless covered by overhangs shall be provided with 22 gage galvanized steel drip flashing as detailed. At wood construction, nail flashing to framing before paper backed lath is installed.
- D. Roof Pipe Flashings: Provide welded seam 4 pound lead flashings. Field fabricated flashings shall also be welded.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Wood in contact with sheet metal shall be painted with 2 coats of aluminum paint or one coat of heavy-bodied bituminous paint.

3.02 INSTALLATION

- A. General: Coordinate with installation of underlayment indicated in the Drawings and specified in Section 09220.
- B. Reglets: Install reglets at constant height above cant or as indicated. Provide minimum 3 inch lap at end splices of reglets. Caulk laps solidly.
- C. Counterflashing:
 1. Install at constant horizontal elevation across roof slope and slope at constant height above cant or as indicated.
 2. Provide minimum 3 inch lap at all end splices of counterflashing.
- D. Galvanized sheet steel parapet coping and flashing shall be continuous over top of parapet to form a watertight cap, with waterproof seams at approximately 10 feet on center, or as indicated. Anchor coping to outside of wall with a continuous cleat face nailed at 24 inch centers. Coping shall be fastened on inside wall with hex head screws and bonded sealing washers through oversized holes in the back of the coping. Corners and angles shall be lapped and soldered; do not install joint sealant.

3.03 TESTING

- A. Perform field water testing to demonstrate installation is watertight. Continue testing with a continuous hose stream applied at base of installation for at least 30 minutes. If leaking is observed, discontinue test and repair installation, then test until satisfactory results are obtained.

3.04 PROTECTION

- A. Protect the Work of this section until Substantial Completion.

3.05 CLEANING

- A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

END OF SECTION

SECTION 07920
JOINT SEALANTS

PART 1 - GENERAL

1.01 SUMMARY

- A. Provisions of Division 01 apply to this section.
- B. Section Includes:
 - 1. Joint sealants as indicated or required.
- C. Related Sections:
 - 1. Section 07600: Flashing and Sheet Metal.

1.02 SUBMITTALS

- A. Shop Drawings: Submit Shop Drawings indicating sealant joint locations, with full-size sealant joint details.
- B. Product Data: Submit manufacturer's literature for each sealant material.
- C. Material Samples: Submit Samples indicating color range available for each sealant material intended for installation in exposed locations.
- D. Certifications: Submit manufacturer's certification materials comply with requirements specified.
- E. Site Samples: At locations required, provide a Sample of sealant for each typical installation, approximately 24" long, including joint preparation, backing, sealant and tooling. Allow backing to extend 6" beyond end of sealant for inspection of substrate.
- F. Test Reports: Submit manufacturer's adhesion compatibility test reports according to ASTM C 794 for each substrate.

1.03 QUALITY ASSURANCE

- A. Qualifications of Installer: The Work of this section shall be installed by a firm which has been in the business of installing similar materials for at least 5 consecutive years; and can show evidence of satisfactory completion of 5 projects of similar size and scope. Installer shall have applicators trained and approved by manufacturer for performing this Work.

1.04 DELIVERY, STORAGE AND HANDLING

- A. Store in accordance with manufacturer's recommendations. Provide a uniform ambient temperature between 60 and 80 degrees F.

1.05 WARRANTY

- A. Manufacturer shall provide a 5 year material warranty.
- B. Installer shall provide a 2 year labor warranty.

PART 2 - PRODUCTS

2.01 GENERAL

- A. Furnish sealants meeting following in-service requirements:
 - 1. Normal curing schedules are permitted.
 - 2. Non-staining, color fastness (resistance to color change), and durability when subjected to intense actinic (ultraviolet) radiation are required.
- B. Furnish the products of only one manufacturer unless otherwise required, sealant colors as selected to match the adjoining surfaces.

2.02 MATERIALS

- A. Sealants:
 - 1. Sealant 1: Acrylic latex, one-part, non-sag, mildew resistant acrylic emulsion compound complying with ASTM C 834, Type S, Grade NS, formulated to be paintable.
 - a. Tremco Inc., Acrylic Latex Caulk.
 - b. Bostik Construction Products Division, Chem-Calk 600.
 - c. Pecora Corporation, AC-20.
 - 2. Sealant 2: Butyl sealant, one-part, non-sag solvent-release-curing sealant complying with FS TT-S-001657 for Type 1 and formulated with a minimum of 75 percent solids.
 - a. Tremco Inc., Tremco Butyl Sealant.
 - b. Bostik Construction Products Division, Chem-Calk 300.
 - c. Pecora Corp., BC-158.
 - 3. Sealant 3: Silicone sealant, one-part non-acid-curing silicone sealant complying with ASTM C 920, Type S, Grade NS, Class 25.
 - a. Dow Corning Corp., Dow Corning 790, 791, 795.
 - b. General Electric Co., Silpruf.
 - c. Tremco, Inc., Spectrem 1.

- d. Pecora Corp., 864.
- 4. Sealant 4: One-part mildew-resistant silicone sealant, complying with ASTM C 920, Type S, Grade NS, Class 25.
 - a. Dow Corning Corp., Dow Corning 786.
 - b. General Electric Co., Sanitary 1700.
 - c. Tremco, Inc., Proglaze White.
 - d. Pecora Corp. 863 White.
- 5. Sealant 5: One-part non-sag urethane sealant, complying with ASTM C 920, Type S, Grade NS, Class 25.
 - a. Bostik Construction Products Div., Chem-Calk 900.
 - b. Mameco International, Inc., Vulkem 116.
 - c. Tremco, Inc., Dymonic.
 - d. Sika Corporation, Sikaflex 1-A.
- 6. Sealant 6: Multi-part pouring urethane sealant, complying with ASTM C 920, Type M, Grade P, Class 25.
 - a. Tremco, Inc., HPL.
 - b. Mameco International, Inc., Vulkem 255.
 - c. Sika Corporation, Sikaflex 2C NS/SL.
 - d. W.R. Meadows, Pourthane.
- 7. Sealant 7: Acoustical sealant, non-drying, non-hardening permanently flexible conforming to ASTM D 217.
 - a. Pecora Corp., BA-98 Acoustical Sealant.
 - b. Tremco, Inc., Tremco Acoustical Sealant.
 - c. United States Gypsum Co., Sheetrock Acoustical Sealant.
- B. Penetrations Through Fire Barriers:
 - 1. 3M Brand Fire Barrier Calk CP-25.
 - 2. 3M Brand Fire Barrier Putty 303.
- C. Primer: Non-Staining Type. Provide primer as required and shall be product of manufacturer of installed sealant.

- D. Lacquer sealer shall be clear, as recommended by sealant manufacturer.
- E. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer.
- F. Sealants shall have normal curing schedules, shall be nonstaining, color fast and shall resist deterioration due to ultraviolet radiation.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Verify that joint openings are ready to receive Work and field tolerances are within the guidelines recommended by sealant manufacturer.

3.02 SURFACE PREPARATION

- A. Joints and spaces to be sealed shall be completely cleaned of all dirt, dust, mortar, oil, and other foreign materials which might adversely affect caulking Work. Where necessary, degrease with an solvent or commercial degreasing agent. Surfaces shall be thoroughly dry before application of sealants.
- B. If recommended by manufacturer, remove paint and other protective coatings from surfaces to be calked before priming and installation of sealants.
- C. Preparation of surfaces to receive sealant shall conform to the sealant manufacturer's specifications. Provide air pressure or other methods to achieve required results. Provide masking tape to keep sealants off surfaces that will be exposed in finished Work.
- D. Etch concrete or masonry surfaces to remove excess alkalinity, unless sealant manufacturer's printed instructions indicate that alkalinity does not interfere with sealant bond and performance. Etch with 5 percent solution of muriatic acid; neutralize with dilute ammonia solution, rinse thoroughly with water and allow to dry before sealant installation.
- E. Perform preparation in accordance with ASTM C 804 for solvent release sealants, and ASTM C 962 for elastomeric sealants.
- F. Protect elements surrounding Work of this section from damage or disfiguration.

3.03 SEALANT APPLICATION SCHEDULE

	<u>Location</u>	<u>Type</u>	<u>Color</u>
A.	Exterior & Interior joints in horizontal surfaces of concrete; between metal & concrete masonry and mortar.	Sealant 6	To match adjacent material
B.	Exterior door, entrance & window frames. Exterior & interior vertical joints in concrete & masonry metal flashing.	Sealant 3 or 5	To match adjacent material

C.	Joints within Skylight framing system.	Sealant 3	Translucent or Black
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3.04 APPLICATION

- A. Provide sealant around all openings in exterior walls, and any other locations indicated or required for structure weatherproofing and/or waterproofing.
- B. Sealants shall be installed by experienced mechanics using specified materials and proper tools. Preparatory Work (cleaning, etc.) and installation of sealant shall be as specified and in accordance with manufacturer's printed instructions and recommendations.
- C. Concrete, masonry, and other porous surfaces, and any other surfaces if recommended by manufacturer, shall be primed before installing sealants. Primer shall be installed with a brush that will reach all parts of joints to be filled with sealant.
- D. Sealants shall be stored and installed at temperatures as recommended by manufacturer. Sealants shall not be installed when they become too jelled to be discharged in a continuous flow from gun. Modification of sealants by addition of liquids, solvents, or powders is not permitted.
- E. Sealants shall be installed with guns furnished with proper size nozzles. Sufficient pressure shall be furnished to fill all voids and joints solid. In sealing around openings, include entire perimeter of each opening, unless indicated or specified otherwise. Where gun installation is impracticable, suitable hand tools shall be provided.
- F. Sealed joints shall be neatly pointed on flush surfaces with beading tool, and internal corners with a special tool. Excess material shall be cleanly removed. Sealant, where exposed, shall be free of wrinkles and uniformly smooth. Sealing shall be complete before final coats of paint are installed.
- G. Comply with sealant manufacturer's printed instructions except where more stringent requirements are indicated on Drawings or specified.
- H. Partially fill joints with joint backing material, furnishing only compatible materials, until joint depth does not exceed 1/2 inch joint width. Minimum joint width for metal to metal joints shall be 1/4 inch. Joint depth, shall be not less than 1/4 inch and not greater than 1/2 inch.
- I. Install sealant under sufficient pressure to completely fill voids. Finish exposed joints smooth, flush with surfaces or recessed as indicated. Install non-tracking sealant to concrete expansion joints subject to foot or vehicular traffic.
- J. Where joint depth prevents installation of standard bond breaker backing rod, furnish non-adhering tape covering to prevent bonding of sealant to back of joint. Under no circumstances shall sealant depth exceed 1/2 inch maximum, unless specifically indicated on Drawings.
- K. Prime porous surfaces after cleaning. Pack joints deeper than 3/4 inch with joint backing to within 3/4 inch of surface. Completely fill joints and spaces with gun applied compound, forming a neat, smooth bead.

3.05 MISCELLANEOUS WORK

- A. Sealing shall be provided wherever required to prevent light leakage as well as moisture leakage. Refer to Drawings for condition and related parts of Work.
- B. Install sealants to depths as indicated or, if not indicated, as recommended by sealant manufacturer but within following general limitations:
 - 1. For joints in concrete walks, slab and paving subject to traffic, fill joints to a depth equal to 75 percent of joint width, but not more than 3/4 inch deep or less than 3/8 inch deep, depending on joint width.
 - 2. For building joints, fill joints to a depth equal to 50 percent of joint width, but not more than 1/2 inch deep or less than 1/4 inch deep.

3.06 CLEANING

- A. Remove rubbish, debris, and waste materials and legally dispose of off the Project site.

3.07 CURING

- A. Sealants shall cure in accordance with manufacturer's printed recommendations. Do not disturb seal until completely cured.

3.08 PROTECTION

- A. Protect the Work of this section until Substantial Completion.

END OF SECTION

SECTION 09910

PAINTING OF EXISTING FACILITIES

PART 1 - GENERAL

1.01 REGULATIONS AND CODES

- A. The Rules and Regulations of the State Of California relating to the Safety of Design and Construction of Public School Buildings, entitled "California Administrative Code, Title 21, Public Works, Sub-Chapter 1, Division of Architect" and the Building Code of Laws of the political subdivision having jurisdiction are made applicable to the work of the Contractor.

1.02 SPECIFYING BY REFERENCE

- A. Specifying by reference to any provisions, conditions, materials, work or anything relative to any part thereof in other parts of the contract or in the reference documents shall have the same force and effect as if the said provisions had been repeated word for word at the place where the reference is set out. Therefore the materials and/or work, and/or quality thereof, and/or work thereof mentioned or described in the provisions so referred to shall be furnished, and/or performed by the Contractor as a part of his/her work.

1.03 PROTECTION

- A. The Contractor shall replace and secure at the end of each working day all protective security grilles. Every bolt must be replaced properly using a washer, cut smooth and filed down. Problem grilles may be removed and replaced by the District at the District Representative's discretion.
- B. All fire alarm boxes, fire sprinkler heads, smoke detectors and intrusion alarm systems must be uncovered and available to perform the function that it was designed for each and every night.
- C. All pressure relief grilles with barometric damper leading to a corridor or an exterior must be masked off before spraying and then uncovered immediately after spraying.
- D. Should any damage occur as a result of the Contractor's work, his/her employee or equipment, to any property other than the District's, the Contractor shall replace the

damaged article or repair the damage to the satisfaction of the District. This shall include over-spray on private vehicles.

- E. Contractor to protect all existing signage and graphics that are to remain including but not necessarily limited to, first responders classroom numberings, etc. Note: Existing door numbers, and building designations (non-first responders) to be painted over and re-painted with the proper stencils as per the Bid Documents.

1.04 SCAFFOLDING

- A. Scaffolding erected by the Contractor shall be made available to the District, without cost, to make repairs. The District will coordinate its work with that of the Contractor's to avoid delays in his/her work.

1.05 MOVING EQUIPMENT

- A. The Contractor shall do all handling/moving of equipment and replacement of the same, except as otherwise specified by the District at the discretion of the District Representative.
- B. All such materials shall be moved before painting is begun in exterior walls of all buildings. Display cases, marker boards and all equipment against walls or surfaces to be painted shall be removed by the Contractor and be returned and/or reinstalled by the Contractor in their original locations after painting has been completed.

1.06 MISCELLANEOUS

- A. The Contractor will not be required to provide sanitary facilities.
- B. A Contractor that schedules work on an approved overtime period and then fails to have workers at the scheduled site will be billed for the District employee's time. The rate will be 1-1/2 times the employee's hourly rate of pay, for each hour (4 hour minimum).
- C. Work on this project may require the Contractor to perform work on Saturdays, Sundays and/or at times other than normal working hours.
- D. The Contractor and/or sub-contractor shall submit a "Daily Personnel Report" to the District Representative on a daily basis.
- E. The Contractor must have and use, on the work site, dustless sanding and cleaning equipment.
- F. The Contractor will not use school phones except in cases of an emergency.

- G. After the painting is completed, the Contractor must free the sash and leave it in an easy operating condition. Two (2) months after the completion of the project, the District Representative will arrange a date/time when the Contractor must return to the site, check and free all sash that s/he painted so it is in an easy operating condition.
- H. The Contractor shall provide and maintain all necessary or required barriers, guards, lights, warning signs, etc. for the complete protection of everything as directed by the District representative. The Contractor is required to provide free access to all doors and openings. The Contractor shall not store equipment or material near openings or traffic lanes that might prove hazardous during an emergency.

1.07 DEFINITIONS OF WORK

- A. All work shall include all labor, material, equipment and scaffolding required for the cleaning and preparation of surfaces to receive the painters finish and for all painting and varnishing, as herein specified. The Contractor shall perform all work unless specifically noted.
- B. "Paint and refinish stucco" shall mean all exposed repaired surfaces in conformance with all requirements specified sub-section. This includes all stucco, concrete and block which may or may not have been previously painted. See bid docs for more info.
- C. The painting shall include the complete preparation and finish or refinishing in accordance with the requirements specified herein.
- D. Guarantee-Warranty: The Contractor warrants and guarantees that all work executed and materials furnished under the contract shall be free from defects of materials and work for a period of three (3) years from the date of acceptance of completion of the contract.
- E. Whenever "Paint or Enamel" is referred to in these specifications, it shall be taken to mean all types of waterborne materials and water reducible materials.
- F. Whenever "edges" are referred to in these specifications, it shall be taken to mean all edges, (which include tops and bottoms).
- G. GLOSS degree STANDARDS shall be as follows:

HIGH GLOSS	70 and above	EGGSHELL	30 to 47
SEMI-GLOSS	48 to 69	SATIN	15 to 29
- L. Work shall be done by skilled and experienced painters in a first class and professional manner. All painters must wear presentable white uniforms.

- M. To insure a consistently uniform horizontal, vertical and curved surface, with a maximum deflection of 1/8th inch in a five foot span, a brown scrub coat may be required. Also, along with the assurance for a uniform color of the dashed texture, a fog coat may be necessary as deemed by the District Representative.
- N. All glass on the exterior shall be traced neat and clean with approximately, but no more than 1/16" overlay. Any paint specks, smears or splatters shall be immediately removed and the surface thoroughly cleaned.
- O. Paint product for all non-metal surfaces (cement plaster, T1-11 panels, wood trim, concrete, CMU, etc.) shall be EVERSIELD paint by Dunn Edwards (colors by District).
- P. Paint product for all metal surfaces (steel canopy posts, flashing, handrails, gutters, downspouts, metal awnings, doors, windows etc.) shall be ARISTOSHIELD by Dunn Edwards (colors by District)

1.08 INSPECTION

- A. The District Inspector will plan a work schedule with the Administrator or his/her representative providing areas for work to be performed. Work in the area provided shall be completed before proceeding to the next scheduled area. Care must be exercised by the Contractor so as to cause the minimum of inconvenience and danger to students, faculty and staff.
- B. The Contractor must schedule all work through the Inspector. The Inspector will divide the work into sections. Each section must be completed and a final inspection of that section will be performed by the Inspector before proceeding to next section.

1.9 MATERIALS

- A. All materials used in the work must be in accordance with the "Approved List of Paint Materials" and with the paint manufacturers, whose products have been tested and approved. The use of materials shall be limited to one manufacturer for any given portion of the contract. Adulteration of these materials is strictly prohibited.
- B. Materials shall be delivered to project site in original unbroken containers bearing the manufacturer's name, brand number and batch number.
- C. Materials shall be delivered in a timely manner to insure uninterrupted progress of the work.

- D. All materials shall be opened and mixed on the premises in the presence of the District Representative. Rejected materials shall be immediately removed from the premises.

1.10 CERTIFICATION

- A. The Paint Manufacturer shall submit a complete list of proposed paint materials to the District for approval. Identifying each material with the manufacturer's name, number and type of surfaces to receive the individual finishes.

1.11 COLORS AND THE NUMBER OF PAINT COATS

- A. The colors of all coatings shall be as directed by the District Representative. Three coats of paint must be applied as follows:
 - i. The first coat, primer/undercoat – untinted or tinted up to 50% lighter or darker (at the discretion of the Contractor) than the finish coat.
 - ii. The second coat is to be factory tinted in the range of 10 % to 15 % lighter or darker (at the discretion of the Contractor) than the finish coat.
 - iii. The third coat is to be factory tinted to the approved color selected. These tinting guidelines shall be used on all surfaces receiving paint. Allowances shall be made for coloring so that ceilings, beams, dados, walls, woodwork, etc. can be finished in more than one color. Color combinations for surfaces shall be varied in accordance with the colors selected by the District Representative.
- B. If the last coat is not a uniform surface in color and free from defects, then the Contractor must apply to the entire surface as many coats as is necessary to remedy the problem. This requirement supersedes all other specifications listed throughout.
- C. Any number of colors may be used on any portion of the work. The District reserves the right to change the colors before the work is started in an area or on a particular surface.
- D. Various colors may require more coats of paint than specified in these specifications for complete coverage. The Contractor is responsible for consulting the color letter, knowing the color to be used and being aware of the color to be covered, so s/he can bid accordingly.

1.12 SAMPLES

- A. Before any coating is applied, the Contractor must submit to the District Representative samples of each color to be used on this contract. Samples will be made as hereinafter specified. When the samples are approved, instructions will be

given to the Contractor so the approved colors can be used as directed. If more than one (1) batch of material and color is to be used, samples from each batch shall be submitted.

B. Paint and Enamel Spray-Outs

1. Samples of Paint and Enamel must be submitted shall have the color in full coverage. The sample shall be prepared using the material from the batch to be used on the actual job. Identify paint is to be used, the batch number, the color number, the type of material, the name of the manufacturer and the name of the Contractor.

C. The Contractor must furnish samples of all colors to the District Representative. The approved samples will be kept on the job until the painting is completed. The Contractor shall be responsible for the finish color on the wall or surface to be painted. Where different materials of the same color are specified to be applied on the same, or adjoining surfaces, the final color match must match the pre-approved color sample on those surfaces. The Contractor shall also check and be responsible for all color matches on the original and subsequent batches and shipments.

D. All materials and color samples shall be approved before a job start meeting will be scheduled.

PART 2 – PREPARATION OF SURFACES

2.01 CONTRACTOR MUST REMOVE AND REINSTALL

- A. The Contractor shall remove coat/hat hooks, name plates, label frames, display cases, marker boards, tack boards, and reinstall all of the above after the painting is completed.
- B. The Contractor shall remove exposed nails, hooks, tacks, screws, staples and pins in the surface to be painted and patch the holes with an approved material. Remove obsolete screen/grille hangers/fasteners and then patch the holes with an approved material.
- C. The Contractor shall replace removed hooks, markerboards, display cases, tack boards etc. as directed by the District Representative.
- D. The Contractor to remove all stick on Classroom numbers and replace with painted stenciled numbers at **both doors for each classroom.**
- E. The Contractor shall remove metal or plastic room numbers and letters on Stucco, and, after the painting is complete, clean and reinstall them neatly.

- F. The Contractor shall remove and reinstall all protective security grilles. The protective security grilles shall be reinstalled in the same manner they were installed prior to removal.
- 2.02 DISTRICT MAY REMOVE AND REPLACE
 - A. Speakers may be disconnected and reconnected by the District.
- 2.03 REPLACEMENT SCREWS AND HARDWARE
 - A. The Contractor must remove all paint from all hardware, including paint from previous painting.
- 2.04 PAINT DEFECTS
 - A. All painted, enameled or varnished wood, metal and/or plaster surfaces must have all checked, alligatored, cracked, blistered, defaced (including paint spots on varnished woodwork) and scaled material removed down to the original unfinished surfaces. Where any of the above mentioned defects occur, the entire piece of trim or material shall have the finish removed; in the case of a door, the finish on the entire surface of the door shall be removed. All surfaces shall then be hand sanded and dusted clean to remove all loose materials.
- 2.05 H.E.P.A. MACHINE SANDING
 - A. All checked, cracked, blistered, scaled loose, and/or alligatored paint on all wood and metal surfaces on the exterior of all buildings and appurtenances shall be machine sanded to a smooth solid surface, dusted clean and then painted as specified. All power sanding must be done with an approved H.E.P.A. vacuum sander and must be used only when school is not in session, and students and staff are not on site.
- 2.06 DOOR PAINT FINISH
 - A. All doors painted with rollers leaving a coarse texture finish must have the finish smoothed out with brush strokes. New door paint shall cover the existing room number designations. These numbers to be repainted by the Contractor with specific stencils at both doors of each classroom, as indicated in the Bid Documents.
- 2.7 WASHING, CLEANING AND REMOVING WAX
 - A. Prior to applying a coating, all surfaces must be thoroughly washed with a strong solution of an approved cleaner, rinsed with clean water, hand sanded and dusted off.

All waxed surfaces must have the wax completely removed, then washed and rinsed off.

2.8 SASH PUTTY

A. NOT USED

2.9 PUTTY

A. NOT USED

2.10 SPACKLE ON SIDING AND WOODWORK

A. Checked and cracked portions of siding (after the surrounding areas have been prepared as specified above) shall be primed, smoothed with an approved exterior spackling compound and then sanded smooth when dry. All spackled areas must be spot primed.

2.11 CRACKS AND VOIDS

A. All areas where the finish plaster coat is loose must have that portion removed to a solid surface. All surfaces that are broken, cracked, or damaged and areas where the finish plaster coat has been removed must be coated with Weld-Crete as manufactured by Larsen Products Corporation or equal. The surface will then be given a cement plaster finish coat consisting of one-part Plastic Portland Cement to three parts sand to match the existing finish. All cracks shall be "V-ee'd" out, filled, finished flush with and textured to match the adjoining surfaces, per the District Representative's approval.

B. Neutralize all walls showing the effects of alkali.

2.12 CAULKING SASH, DOOR FRAMES

A. Caulk around door and window frames, flashing, vents, separations between the masonry/stucco and adjoining surfaces, etc., with a caulking compound recommended by the manufacturer of the coating to be used. Caulking and filling shall be done with sufficient pressure to force the material to the base of the opening.

2.13 REPAIR OF MASONRY/STUCCO AND CONCRETE REPAIR CRACKS

A. Hairline cracks: Two coats of the elastomeric coating will bridge hairline cracks.

B. Small to medium cracks and imperfections: The elastomeric coating will fill and span cracks up to 1/32 inch. A credit card width or greater crack must be treated with an

elastomeric sealant (recommended by the paint manufacturer) prior to applying the elastomeric coating.

- C. Medium to large cracks and imperfections: Cracks from 1/32 inch to 1/8 inch shall be treated with a brush-grade elastomeric sealant applied in a 2 inch wide band; crowned at the center and feathered at the edges to conceal the repair.
- D. Large cracks: Cracks 1/8 inch to 1/2 inch shall receive a urethane sealant (recommended by the paint manufacturer), “rake out” the crack to conform to the manufacturer’s specifications and applied as directed for medium to large cracks.
- E. Cracks, holes and damaged spots larger than 1/2 inches: Damaged areas must be given a cement plaster finish coat consisting of one-part plastic Portland cement to three parts masonry/stucco sand to match the existing finish. When finished, it must be flush with and match the existing texture of the adjoining surface.
- F. Texture match: All crack repairs must be finished to match the texture of the adjoining surfaces, per the District Representative’s approval. Hand held stucco hopper guns may be used. Exercise care to ensure that all areas finished by hand held stucco machines match in color, texture and thickness to the adjoining surfaces. A bonder must be used (Thorobond, Weldcrete or equal).

2.14 MISCELLANEOUS PREPARATION

- A. Metal clad panels doors and frames must have all holes and major dented places filled with an approved exterior spackling compound, sanded smooth with the existing surfaces and dusted off.

2.15 REPAIR SPALLING CONCRETE

- A. The Contractor shall remove all surface contamination, broken and spalled concrete to a sound concrete base. The concrete shall be removed to a depth of one-half (1/2) inch minimum around the rebar. The sides of the areas to be repaired shall be straight, not tapered or sloped.
- B. All spalled or loose concrete must be removed using a electric or compressed air chipping hammer.
- C. The Contractor must clean all exposed rebar by sandblasting, remove all debris/dust and treat all steel with a sealant (Sika Top/110 Arimatec or approved equal) compatible to the patching materials the same day. The District representative must approve the sealant application prior to any patching materials being applied.

- D. The Contractor shall repair concrete to match the existing concrete surfaces using Sika Top 123 Gel Mortar or approved equal.
- E. All sealant and patching materials must be applied by qualified personnel adequately trained in their application.

PART 3 – LEAD

3.01 GENERAL

- A. Refer to District provided Hazardous Materials Removal Impact Technical Specification for lead and asbestos abatement.

3.02 – LEAD BASED PAINT ENCAPSULATION

- A. Refer to District provided Hazardous Materials Removal Impact Technical Specification

PART 4 - EXTERIOR PAINTING (INCLUDING MASONRY/STUCCO)

4.01 MIXING AND APPLICATION

- A. Paint and enamel shall not be applied to wet, damp, dusty, rough or defective surfaces.
- B. Surfaces to be finished and each coating shall be separately inspected by the District Representative and checked for mill thickness. The requirements are (2) mills each coat wet and/or three (3) mill dry after three (3) coats. Notice that such work is ready for inspection shall be given to the District Representative. Should such notice not be given before the succeeding coat is put on, the finish applied must be removed or an additional coat shall be applied, as directed by the Representative. At least one (1) day must intervene between coats for exterior work or as directed by the District Representative for thorough drying.

4.02 PAINT ROLLERS, BRUSH AND SPRAY

- A. Paint rollers or sprayer may be used on masonry/stucco and concrete surfaces and underside of walkways, nap not to exceed one half (1/2) inch in length, or as directed by the District Representative. However, a brush shall be used for cutting along the grooves of the T1-11 panels to ensure full coverage of the groove. All T1-11 panels (existing and new) to be rolled NOT sprayed to ensure full coverage.

At locations where T1-11 siding is removed (which has first responders' lettering), Contractor to provide new first responders lettering to match existing fonts, color etc. on the new T1-11 siding at this location.

- B. The first coat on wood overhang and ceilings must have the material applied by roller and then must be brushed out in a professional manner to leave the surface free of imperfections. The finish coat may be sprayed.
- C. All other surfaces must have all coatings applied with brushes of the proper size, consistent with professional work.
- D. The following surfaces to be sprayed ONLY: wrought iron fences, metal awnings, metal windows, downspouts, canopy posts, etc. or as directed by the District Representative.

4.03 COLORED VARNISH

- A. NOT USED

4.04 PRIMING

- A. New and/or unpainted materials/surfaces and those from which the paint finish have been removed down to the original wood or metal surfaces shall be thoroughly primed as follows:

Woodwork: Wood must be sealed or primed with a non-water borne material on both sides and all edges. Wood completely sealed with a non-water borne material shall be top coated with a water borne material as specified herein. The finish material (water borne) must be compatible with the non-water borne primer per the manufacturer's recommendations. Hardwood must be thoroughly filled and stained to an even color.

Galvanized Metal: Clean all oil and foreign material from surfaces and then apply a primer for galvanized metal following the manufacturer's recommendations. All metal primers must have a five (5) day curing time before recoating. This includes conduits mounted on masonry/stucco.

Ferrous Metal: Prime all ferrous metal with an approved primer for ferrous metal.

Non-Ferrous Metal: Prime all non-ferrous metal, unless otherwise specified, with an approved non-ferrous metal primer.

Aluminum: Prime with an approved metal primer as per the manufacturer's recommendations.

Vertical Concrete Surfaces: Power wash concrete to remove dirt, grease and contaminants.

Follow manufactures recommendations for proper preparation application and Dry Film Thickness D.F.T. as stated on manufactures data sheets. Prime with SUPER-LOC Premium, Interior/Exterior Masonry/Bonding Primer (SLPR00-2-WH)

CMU: All surfaces must be cured, clean, dry, and free from dirt, dust, rust, stains, grease, oil, mildew, wax, efflorescence, bond-breakers, and other contaminants. Remove all loose, peeling, or chalky paint by sanding, scraping, or other appropriate methods. Repair all cracks, holes, and other surface imperfections with a suitable patching material. Repaired surfaces should then be sanded smooth and dusted clean. Glossy surfaces should be dulled to provide a roughened surface for good adhesion. Prime surface with Smooth BLOCFIL Premium (SBPR00)

4.05 EXTERIOR WOODWORK

- A. Woodwork, hardboard, plastic impregnated plywood, asbestos board (if painted), and/or Cemesto Board shall be prepared as specified herein. Where the paint finish has been removed, the areas shall be built-up to match the adjoining surfaces with an exterior primer. Then all surfaces, unless otherwise specified, shall be given the number of coats of paint as detailed under “Colors and Number of Paint Coats.”

4.06 DOORS

- A. Painted or refinished exterior wood, metal and/or doors must be finished on exterior side only with three coats of paint consisting of the first coat of primer, the second coat and third coat of exterior finish per District standards.

4.07 WINDOW STILES

- A. Paint the designated windows in their entirety

4.08 SASH PUTTY

- A. Paint same color as window

4.9 MISCELLANEOUS EXTERIOR SURFACES

- A. NOT USED

4.10 SPRAYING MASONRY/STUCCO

- A. The masonry/stucco material must be a 100 % acrylic paint, color as directed. The material must be applied in strict conformity to the manufacturer’s directions. There must be at least 24 hours drying time between the first coat which shall be factory

tinted 10 % to 15 % lighter or darker in color (at the discretion of the Contractor) than the finish coat. The manufacturer shall thoroughly acquaint himself/herself with the conditions of the surfaces to be refinished and provide the Contractor with written specifications for the job including the special primers or additives needed for adhesion sealing of the first coat of paint and/or general performance of materials. The finished surface must be uniform and free of imperfections. Each coat applied to the surface must be sprayed using the "Cross-Off" method of application by spraying horizontally with a 50% overlap on returns and doubling back with a vertical stroke with a 50% overlap on returns.

4.23 UNPAINTED METAL

- A. Unpainted bronze, brass, copper work, handrails, chain-link fences, stainless steel, and aluminum will not be painted, unless otherwise specified.

4.24 PAINTED METAL

- A. Exposed miscellaneous, sheet metal work, guards, steel sash, etc. shall have the surfaces thoroughly cleaned and prepared as specified herein. The areas from which the original painter's finish has been removed shall be spot primed with metal primer to match the adjoining surfaces and then all surfaces shall be given a prime coat of metal primer, second and third coats as specified herein. All copper pipe shall be painted with one coat of enamel undercoat per the manufacturer's recommendation, a second and third coat of enamel as specified herein.

4.25 METAL COVERED DOORS

- A. Metal Covered Doors: All metal must be primed with an approved metal primer. The door(s) and all edges shall then be painted with one coat of enamel undercoat, a second coat and third coat of exterior gloss enamel as specified herein.

4.26 LIGHT FIXTURES

- A. NOT USED

4.27 ELECTRICAL CABINETS

- A. The front side of the doors and the exposed lip around the doors to the electrical cabinets in finished areas must be finished the same as the walls.

4.28 HARDWARE AND AUTOMATIC DOOR CLOSERS

- A. Hardware and automatic closers to remain as is. No paint required. Protect in place.

4.29 FINAL CLEANING

- A. Glass, polycarbonate and fiberglass on the interior and exterior where the painting has been done shall be cleaned of all paint and varnish, unless otherwise specified. Glass and fiberglass and polycarbonate that is scratched or damaged by the painter's work, or while cleaning, must be replaced with the same material, quality and design to match the original.
- B. Before applying the finish coat of material to exterior sash with security grilles, the Contractor shall clean all window panes with an approved cleaner before applying the enamel.

END OF SECTION