

7 thru 11) shall be the basis for all traffic control, resurfacing, and striping associated to this scope of work. Traffic Control and Encroachment Permits shall be obtained at least 48 hours prior to mobilization. Reference Project Master Schedule for schedule dates.

- .7 Electrical Contractor will be required to compensate the City of Riverside, Parking Authority for the lost revenue for each metered parking stall taken out of commission during the performance of this scope. Contractor to figure \$1.50 per Hour, 7:00 AM to 6:00 PM each day (equals \$16.50 per day, per stall), 5 days per week lost revenue per stall. Note, Sheet # 9 depicts specific stall closures.
- .8 Obtain fire hydrant construction meter from the City of Riverside, Public Utilities/Water Department, include all fees for meter and water usage. Return meter after permanent striping has been completed.
- .9 Note, work within intersection of Main and 11<sup>th</sup> Streets can only be accomplished during off-hours; pre-approved evenings, Saturdays and non-holiday weekends. Additionally, work may not be performed within intersection during special events. All street specific work related to this scope must be completed and signed off by November 1<sup>st</sup>, 2015. All costs associated to "off-hours" work to be included in Contractors bid.
- .10 Contractor to coordinate relocation of bus routes and bus stops with the Riverside Transit Agency.
- .11 Adjust all existing and new manholes to grade per County of Riverside Standards 605, 606 & 607.
- .12 Replace loop detectors at all locations where the existing loop detectors are affected or damaged by this work. Replace in the presence of the City Traffic Engineer's Inspector.
- .13 Maintain clear access to all adjacent properties at all times during the course of this work.
- .14 Maintain minimum 4' pedestrian access at all sidewalks at all times during the course of this work.
- .15 Collect and retain clear and concise as-built records if existing and new utilities and infrastructure including waterlines, conduits and sewer laterals crossing path of new installations. Turn over as-builts to Owner upon final signoff.
- .16 This infrastructure improvement work shall be performed in segments, one segment of work must be completed prior to beginning the next segment of work.
- .17 All field survey and layout to perform this scope of work.
- .18 Apply asphalt emulsion (fog seal) not less than 14 days following placement of all new asphalt per General Note #7, Sheet 02.
- .19 Signing and striping per Pettit, Inc. Sheets No.'s 10 & 11.- All parking-stall lines, curbs, fire lane, traffic symbols, directional arrows, lettering, safety zones and loading zone painting at new asphalt concrete and concrete paving. New pavement markings shall be thermoplastic.
- .20 Coordinate installation of striping for metered parking stalls with City of Riverside, Parking Services, (951) 826-5953.

- .21 All sawcut, remove, and patch AC paving as required and to properly join, align and match new work to existing work.
- .22 Restore any pavement markings and/or striping (beyond this scope of work), that has been damaged or badly worn during construction of the infrastructure improvement project.
- .23 All base material under asphalt pavement for own work. Include fine grade to +/- .10 feet and re-compaction of loose material to 95% modified compaction.
- .24 All asphalt paving, base, tack coat, prime coat, herbicide and surface sealer, including areas to be sawcut, removed, and patched to transition into existing asphalt.
- .25 Construct all paving and surface finishes per Construction Note.
- .26 Final or surface layer of asphalt concrete shall not be placed until all on-site improvements have been completed including any replaced curbing or sidewalks.
- .27 Include multiple move-ins to perform this scope of work, include for permanent patching of utility structures.

#### 4.0 SCOPE OF WORK – EXCLUSIONS

Prime Trade Contractor excludes the following items:

- .1 The following temporary facilities (provided by Owner's Representative) except as otherwise noted above in Section 3.0, Scope of Work - Specific:
  - .a Dumpsters.
  - .b Portable toilets.

**\*\* END OF SECTION \*\***

**SECTION 011200.26**  
**SCOPE OF WORK – FIRE PROTECTION**

1.0 SCOPE OF WORK – SPECIFICATIONS

Furnish all labor, material, equipment, taxes, and supervision necessary to perform all requirements of the following (but not limited to) specification sections in complete accordance with the Contract Documents:

- .1 Section 02070 – Selective Demolition and Reconstruction
- .2 Section 05049 – Supporting From Structure
- .3 Section 07840 – Firestopping
- .4 Section 07900 – Caulking and Sealants
- .5 Section 011900 – Surveying & Layout
- .6 Section 013315 – Deferred Approval Process
- .7 Section 015200 – Temporary Facilities and Controls (as applies)
- .8 Section 017419 – Construction Waste Management (as applies)
- .9 Section 210517 – Sleeves and Sleeve Seals for Fire Suppression Piping
- .10 Section 211200 – Fire-Suppression Standpipes
- .11 Section 211313 – Wet-Pipe Sprinkler Systems
- .12 Section 213900 – Controllers for Fire-Pump Drivers
- .13 Section 220523 – General-Duty Valves for Plumbing Piping (as applies)
- .14 Section 220529 – Hangers and Supports for Plumbing Piping and Equipment (as applies)
- .15 Section 220553 – Identification for Plumbing Piping and Equipment (as applies)
- .16 Section 260500 – Common Work Results for Electrical (as applies)
- .17 Section 260519 – Low-Voltage Electrical Power Conductors and Cables (as applies)
- .18 Section 260523 – Control-Voltage Electrical Power Cables (as applies)
- .19 Section 260526 – Grounding and Bonding for Electrical Systems (as applies)

2.0 SCOPE OF WORK – GENERAL

Prime Trade Contractor also includes, **but is not limited to**, the following general items required for Prime Trade Contractor's Work:

ADMINISTRATION

- .1 Permits, licenses, and fees required for this scope of work, including those required for delivery, set up and use of Prime Trade Contractor's cranes and equipment.
- .2 Submittals, shop drawings, manufacturer's data, samples, mockups, as-builts, warranty and guarantee.
- .3 Provide ten (10) copies of all submittals including shop drawings, product data and samples.
- .4 Coordinate work with all Prime Trade Contractors.

- .5 Weekly updates of as-built documents onto Construction Manager's plan set. Do not cover work prior to as-built updates. Include transparencies, CADD files, etc., and transfer all weekly as-built information, including RFI's, to these close-out documents.
- .6 Schedule material and equipment deliveries in a timely manner. Receive, unload, provide storage sheds, secure and protect all material and equipment. Limited on-site staging will be determined by Construction Manager and subject to several moves and/or setups over project duration as directed by Construction Manager. The Owner and Construction Manager are not responsible for any cost due to loss or damage to material and/or equipment.
- .7 Protection of all work and continued maintenance of same until accepted by Owner.
- .8 Multiple move-ons as required to meet this scope of work and the Prime Trade Contractor Schedule and Master Project Schedule.
- .9 Haul away from site all excavated spoils generated.
- .10 Schedule and coordinate all inspections and testing required for own work. Copy Construction Manager on all communications with Inspectors. Cost of re-inspection due to non-compliant work shall be the responsibility of Prime Trade Contractor.
- .11 When using scaffolding and/or temporary stairs provided by Separate Contractors, provide all waivers of liability and indemnification as required by Separate Contractors as regards scaffolding and/or temporary stairs.
- .12 When using any manufacturer or product which is not listed first in the specifications, include all additional impact costs such as field coordination, required modifications by Separate Contractors, redesign by Architect/Engineer, and similar costs.
- .13 Some Scopes of Work overlap the Scopes of Work of other Contractors. This does not absolve either Contractor of their obligation to complete their scope of work. In all cases of dispute, the Owner and/or Construction Manager shall have the final decision as to responsibility and/or payment allocation.
- .14 Daily workforce count report is due to the Construction Manager's field office no later than 8:00 AM each day. Written Daily Reports are to be submitted to the Construction Manager's field office by 2:00 PM each day.
- .15 Owner will provide limited vertical and horizontal control as described in Section 011900 – Scope of Work – Surveying & Layout. Prime Trade Contractor shall include all additional surveying and layout as required. Prime Trade Contractor is responsible for all costs associated with the destruction of survey points.

#### SUPERVISION

- .16 Attend pre-installation meetings prior to commencement of work.
- .17 Attend weekly Prime Trade Contractor coordination meetings. Field Supervisor and Project Manager must attend.
- .18 A minimum of one Superintendent/Foreman is required for duration of own work on project. Superintendent/Foremen must be on site when work is being performed. Superintendent/Foreman may not be changed without Construction Manager's approval. Subcontractors are to be supervised by Superintendent/Foreman. On site Foreman, Superintendent and Project Manager must have a cellular phone to allow the Construction

Manager to contact them during construction hours. Provide 24-hour contact phone number to call in case of emergency.

### SAFETY

- .19 Welding and temporary power for welding. Submit welder's certifications. Provide welding procedures. All onsite welding shall be done with OSHA approved protective shield, and shields must be in place prior to start of welding work. Shields are required to protect the general public and onsite workers from direct eye contact to welder's arc and keep welding slag spotter confined to the designated welding area.
- .20 Safety requirements for own work. OSHA approved personal protective safety equipment such as hard hats, work shoes, gloves, goggles, masks, vests, harnesses, etc. shall be worn by all personnel and third-party deliverymen at all times when on project site.
- .21 OSHA permits & safety compliance requirements and continued adherence to all OSHA safety regulations are required to perform all work scope activities.
- .22 OSHA approved temporary supports, bracings and accessories to complete own work.

### FIELD

- .23 Temporary power, portable lighting and extension cords necessary to complete work that is not within 100 feet of buildings. Temporary 120 volt electrical power distribution (spider boxes) in structures will be provided by Electrical Prime Trade Contractor. Include special and/or task lighting required for own work. Include all temporary power requirements for needs other than 120 volts. Construction Manager will provide source of water at a fire hydrant, including meter. Include water distribution, water trucks, and hoses/piping from meter to area of work as required. Water and power usage will be paid by Owner.
- .24 All temporary power, lighting, communication, and security required for own jobsite office trailer. Availability of space to be confirmed with Construction Manager.
- .25 Drinking water, ice and cups for own workforce.
- .26 Hoisting for own work.
- .27 Scaffolding for own work (unless otherwise noted in Section 3.0 below).
- .28 Adequate labor to broom clean work areas on a daily basis. Each Prime Trade Contractor shall provide one laborer, for a minimum of two days per week (Wednesday and Friday) who shall be assigned to composite jobsite clean-up crew until project completion. The Construction Manager will manage the composite crew and determine time and extent of clean-up. If Prime Trade Contractor does not provide clean-up labor, the Owner will provide clean-up labor and debit the cost to clean-up from Prime Trade Contractor's account via a deductive change order on a monthly basis. This will be strictly enforced. Clean-up of debris to be deposited in the dumpster on a daily basis. Break down boxes, crates, and all packing material. Dumpsters are provided for non-hazardous waste only.
- .29 Responsible for implementation of applicable best management practices within the SWPPP for own work and for replacement or repair of SWPPP control measures disturbed by own operations.
- .30 Traffic control, flagmen, or barricades, including trench plates and/or temporary asphalt patching for own work and accessibility for other trades to the site as required and

- approved by Construction Manager. During trenching operations outside the project fence, provide 6' high chain link fencing on all sides of excavation.
- .31 Provide approved backing, head-out, wall, floor and/or ceiling opening layout requirements and coordinate with all other Prime Trade Contractors before work starts, by communicating in writing with all affected Prime Trade Contractors of job conditions. If Prime Trade Contractor fails to provide timely notice to all affected Prime Trade Contractors before work starts, the non-compliant Prime Trade Contractor shall pay all rework ripple costs to correct the deficient work product.
  - .32 All vehicle and equipment refueling and maintenance to be performed in designated equipment fueling areas, as coordinated with Construction Manager.
  - .33 Relocate temporary construction services as required to perform work to locations approved by Construction Manager; i.e., toilets, fencing, barricades, scaffolding, etc. Site is to be safe, clean and secure at all times.
  - .34 No eating inside of buildings – eat only in designated lunch areas. Provide clean-up of all food waste and trash to dumpster immediately after eating. No smoking within the perimeter of building. No am/fm radios, CD players, iPods, MP3 players, i-Phones, head phones or ear buds of any type, etc. on site.
  - .35 Park in designated areas only as directed by Construction Manager. No stopping or parking allowed in Fire Lanes. Violators will be ticketed or towed at violator's expense.

LOCAL

- .36 Project Specific Items:
  - .a Schedule and coordinate all agency inspections and testing required to complete own work through Construction Manager. Provide timely notice, so as not to delay work. Cost of re-inspections due to non-compliant work product shall be the responsibility of the Prime Trade Contractor. All agency communication shall be coordinated with Construction Manager. Prime Trade Contractor to review and comply with all testing, inspection and Observation Program requirements.
  - .b The Jobsite is adjacent to existing occupied County facilities with ongoing activities. Weekday (i.e., Monday through Friday) work hour time is from 7:00 AM to 5:00 PM. Project schedule plan considers these work hours. Weekend work must be pre-approved by the Owner and Construction Manager. Some work may require working off hours and must be scheduled with the Construction Manager to be approved by the Owner.
  - .c Provide traffic control, flagmen, or barricades, including slip-resistant trench plates, and/or temporary asphalt patching for own work, and accessibility for other trades to the site work areas as required and approved by Construction Manager.
  - .d No smoking on County property.
  - .e All waivers of liability and indemnification shall be submitted as required by Prime Trade Contractors before using scaffolding supplied by other Prime Trade Contractors.
  - .f Project Site has limited Contractor laydown space. As such, Contractors will be required to work out of "gang" boxes within interior of project building as directed by the Construction Manager.

### 3.0 SCOPE OF WORK – SPECIFIC

*Prior to submitting a bid, Fire Protection Contractor to perform a comprehensive site review of new space and existing project conditions to ensure Contractor is submitting a complete, comprehensive proposal.*

*Note, the previous Fire Protection Contractor has installed a major portion of a new fire sprinkler system into our project, however, this new system has not been accepted by the Owner and therefore is required to be removed, salvaged, and reused as noted in Specific Scope Item # 1 below, and required by this scope of work. Additionally, the new sprinkler system was installed into a constrained ceiling space with limited height, and without the benefits of a coordinated BIM process.*

*For bid purposes, Bidders are to assume that all main and branch sprinkler lines are to be removed, salvaged, and reused accordingly. All Fire Protection Bidders are required to review the current fire sprinkler system installation, determine which installations are salvageable as installed (i.e. main risers). Further, Fire Protection Bidders are to review the attached inventory listing of available "loose" materials (black pipe & fittings) and incorporate said "loose" materials into their proposal.*

Prime Trade Contractor also includes, **but is not limited to**, the following specific items:

- .1 Remove, clean, cap and salvage all "installed" main and branch sprinkler lines, elbows, fittings, hangers, and equipment currently installed in project building. Patch back all voids left by hangers and anchors with 3000# concrete patch (Mfgr. SIKA or equal). Reference Fire Protection Demolition Plans FPD200, FPD201, FPD202 and FPD209.

Note, The City of Riverside Public Utilities Department (RPU) has recently performed a hydraulic model analysis of the fire flow at fire hydrant # 182 adjacent to the project, and has identified the available flow at 5,480 gallons per minute at 20 psi residual, with an anticipated static pressure in the area of 58 psi. (See RPU Letter, dated 6/26/15, and associated map attached to this scope of work).

- .2 Provide new automatic wet pipe fire sprinkler design and system with all required components including pumps, piping, valves, connections to existing, supports, flow switches, tamper switches, fire hose valves and cabinets, fire sprinkler heads, alarm devices and accessories for a complete fire protection system per plans and specifications. Calculations to include flow rates from existing installations providing feeds. Include new siamese fire department connections where depicted. Reference Fire Protection Floor Plans and Details F000, F001, FP200 thru FP209, FP302, F401 & F402.

- .3 Include all coordination with the County of Riverside and City of Riverside Fire Departments, and the City of Riverside, Public Utilities Electric Division (951) 826-5489, include all permitting, and permit and utility fees.

- .4 **Automatic Fire Suppression System Deferred Approval:**

Fire Protection Contractor is familiar with and understands "deferred" submittal preparation process and how to prepare and submit a comprehensive and complete "deferred" Fire Protection submittal package for approval per bid schedule.

- a) Provide all engineered, with current CA SE license and wet seal stamp for all "deferred" submittals complete inclusive for details, calculations, supports, necessary to complete this Scope of Work.
- b) Provide submittal review checklist with the initial "deferred" submittal package of all Fire Protection components, dimensions, calculations, finishes, electrical components and accessibility requirements of the comprehensive and complete "deferred" Fire Protection submittal.

- c) Coordinate Fire Protection "deferred" submittal preparation and installation with contract Electrical and Fire Alarm information, for inter-related component fit-up or structural elements and supports required to make detailed, comprehensive and complete Fire Protection "deferred" submittal package.
  - d) Submit six (6) copies of drawings and calculation into the City of Riverside Fire Department. Obtain stamped approval from the City.
- 5 The project has performed a complete scan of the project building. Additionally, the project has incorporated new Architectural attributes (walls and ceilings) into this building scan to afford the MEP Team a firm basis from which to begin the BIM process. Note, the HVAC & Controls Contractor shall be the projects designated MEP Coordinator. This project requires a BIM, Level of Development (LOD) 400 process, which is defined by BimForum as *"the Model Element is graphically represented within the Model as a specific system, object or assembly in terms of size, shape, location, quantity, and orientation with detailing, fabrication, assembly, and installation information"*.

Provide detailed coordination drawings as specified in Project Coordination, Section 013113. All drawings to be 30"x42" computer plots produced on the latest version of AutoCAD MEP software. (Background electronic files will be provided by the Owner and/or Architect).

Coordinate and produce a complete set of composite drawings inclusive of contract building elements.

Submit coordination drawing information to HVAC & Controls Contractor to produce a complete and comprehensive colorized set of composite drawings which shows at a minimum, (unless construction manager requires to show more information at no added cost) all Work in and above ceiling(s), within wall(s), within and beneath floor(s), within chase(s), within plumbing, mechanical, electrical and fire sprinkler spaces, all structural and architectural building elements, sizes, locations and elevations, column lines, below slab-on-grade, floor(s), wall partition(s), fire/smoke barrier(s) and roof, complete. Provide collision detection, (3D modeling) and recommend to the Construction Manager the most cost effective conflict resolution for the Architect to review and determine from information presented by prime trade contractors involved.

Include coordination for ISAT - MEP anchorage and bracing systems approval submission with Specification Section 013113 – Project Coordination drawing requirements.

In the event of coordination conflicts involving location and layout of the Work, the Architect shall determine precedence of services for coordination drawings.

Attend Coordination Meetings (up to 4 hours long) held at the jobsite or online, one per week, until submittal(s) and coordination plans are submitted to the Architect.

TARGET SUBMITTAL SCHEDULE:

- 1) Develop and Coordinate Divisions 21 thru 27 Equipment for Architect approval:  
6 weeks from Notice To Proceed.
  - 2) Obtain Submittal Approval on MEP Coordination Drawings:  
9 weeks from Notice To Proceed.
- 6 Provide seismic anchorage for pre-approved fasteners, identified to equipment being fastened. Provide seismic anchorage details for design-build fastening systems and hangers, include design engineered calculations by California Licensed Structural Engineer.

Prior to bid, obtain pricing from (I.S.A.T.) International Seismic Application Technology, (877) 999-4728, for seismic anchorage hardware for equipment, pipes, risers, thermal



stress analysis, flexible connections, expansion joint requirements, Y axis bending on the vertical support members, wall to wall design, vibration isolation and equipment calculations. (Note, project is under 2010 CBC Code). Also obtain pricing prior to bid from (I.S.A.T.) for seismic plans; including locations.

- .7 Provide complete 2-1/2" Fire Hose Valve, Class-1, include hose, nozzle and cabinet complete at all intermediate floor level landings in east stairwell per Keynotes 1 & 3 on Fire Protection Floor Plans FP200 thru FP209.
- .8 Provide submittals in two packages: a) rough-in, b) equipment & finish.
- .9 Furnish and install water flow and tamper switches. (Electrical Contractor to wire into Fire Alarm system).
- .10 Relocate Main FDC to front of building along Main Street.
- .11 Locate sprinkler heads in center of ceiling tiles, See Detail L15/A-511. Coordinate with grills, diffusers, light fixtures, ducts, cable tray, conduits and ceiling mounted accessories.
- .12 Patch fireproofing at beams where removed for hangers.
- .13 Provide sleeves or core drill at locations penetrating decks and walls. All coring of structural decks and ceilings require pre-approval from Structural Engineer of Record (SEOR).
- .14 Include all pipe penetrations through existing concrete slabs and walls. Reference Details D13/A-520, 2/S101, and 7/M403. Include all scanning and pipe sleeves (max 5"). Obtain prior approval for penetrations from Inspector of Record, and if not depicted, from Structural Engineer of Record (via RFI process).
- .15 Reference and adhere to General Notes, *Post-Installed Anchors* on S002.
- .16 Reference and adhere to General Note 16 on Electrical Sheet E001 that identifies all MEP Contractors responsibility to field verify existing conditions related to below ground piping and utilities, notify Dig Alert accordingly, replace any damages to existing piping and utilities created by, and during the installation of their respective scopes of work, and as-built recording requirements. Also reference and adhere to General Note 17 on Electrical Sheet E001 for Utility Shut-down requirements.
- .17 Pipe penetrations through roof decks per Detail 7/M403, include all flashing, sealant, pipe and insulation.
- .18 Seal all pipe penetrations of fire or smoke rated walls and floors with firestop sealant.
- .19 Housekeeping pads required, but not shown on Architectural or Structural drawings.
- .20 Label all fire suppression piping for identification.
- .21 Provide a qualified workforce and supervision to develop, coordinate, test and commission all major system(s). Develop and implement a commissioning narrative plan for this work scope prior to installation of work. Commissioning execution plan shall be inclusive of installation checklists, start-up checklists, test script production, systems interface, witness testing, field observation and record-keeping on all major systems. Coordination and interface with specification sections 22, 23, & 26 prime trade contractors.

- .22 Do not set pipe vises or threading machines on any unprotected concrete floors. Cover floor when making plumbing connections to avoid staining floors with oil, white or red lead or other substances. Contractor shall bear cost of removing any stains.
- .23 Furnish and install access doors (shown or not shown on drawings), where required for access to valves and equipment. Stainless steel access doors where required. Provide fire rated access doors at fire rated walls and ceilings. Coordinate with ACT, Drywall, Framing and Insulation Contractors.
- .24 Refer and adhere to Fire Supplementary Notes, General Notes, and Specifications on Fire Protection Drawings F000 & F001.
- .25 Refer to General Notes on S001 and S002 for requirements on piping, sleeves and conduits for this scope of work.
- .26 Refer to all applicable notes on Plumbing Sheet P-001.

#### 4.0 SCOPE OF WORK – EXCLUSIONS

Prime Trade Contractor excludes the following items:

- .1 Fire Alarm System (by Electrical & Special Systems Contractor)
- .2 Fire extinguishers and cabinets (by Specialties Contractor).
- .3 The following temporary facilities (provided by Owner's Representative) except as otherwise noted above in Section 3.0, Scope of Work - Specific:
  - .a Dumpsters.
  - .b Portable toilets.
  - .c Temporary water included. Prime Trade Contractor to provide own hoses, etc.
  - .d Temporary power included. Prime Trade Contractor to provide own extension cords.
  - .e Protection of fence and maintenance of project fence unless damaged or moved by this Scope of Work.



City of Arts & Innovation

June 26, 2015

Riverside County Eda  
3403 Tenth Street  
Suite 400 92501

Attn: Dominick

**Subject: Fire Flow Test Results for 4075 Main Street - Conducted on 06/26/2015**

Project: PUW15-0183

Dear Dominick:

The City of Riverside Public Utilities Department (RPU) is providing this letter in response to your request dated 06/25/2015 for fire flow test data near 4075 Main Street. The following results were determined from a computer simulation of RPU's water system from a hydraulic model. RPU's analysis identified the available fire flow near fire hydrant 182 is approximately 5,480 gallons per minute (gpm) at 20 psi residual. Furthermore, the anticipated static pressure in the area is 58 psi.

Please note, the results of this test are valid for one year following the date of this letter. Please contact Water Engineering at 951-826-5285, if you have any questions regarding this test.

Sincerely,

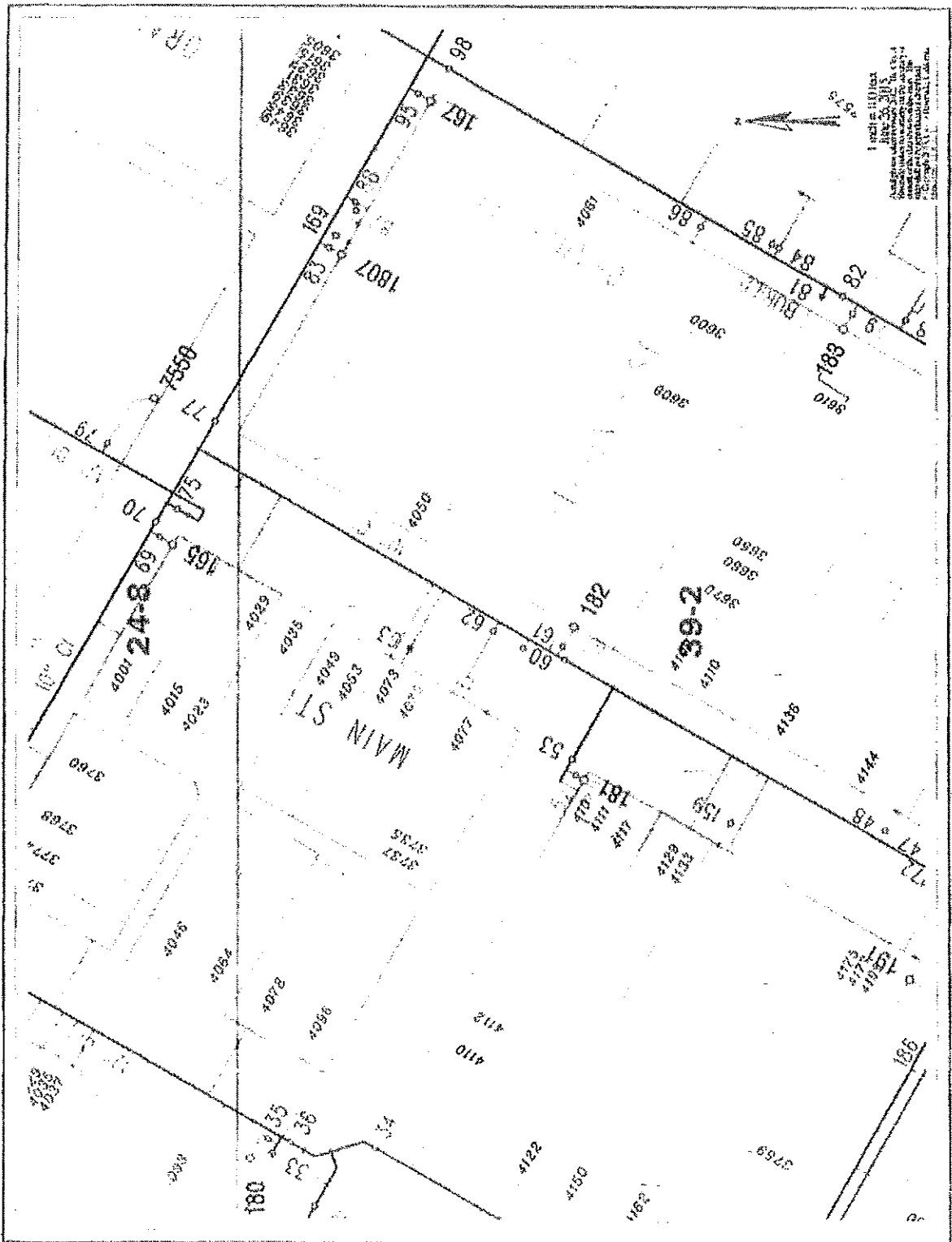
A handwritten signature in black ink, appearing to read "Matthew Baker".

RPU Water Engineering

Attachment: Fire Flow Test Exhibit

Riverside Public Utilities • Water Engineering  
3750 University Avenue, 3rd floor • Riverside, CA 92501 • 951.826.5285 • RiversidePublicUtilities.com





\*\* END OF SECTION \*\*

## SECTION 011900

### SCOPE OF WORK – SURVEYING & LAYOUT

#### 1.0 SCOPE OF WORK – SPECIFICATIONS

Furnish all labor, material, equipment, taxes, and supervision necessary to perform all requirements of the following specification sections in complete accordance with the Contract Documents:

#### 2.0 SCOPE OF WORK – GENERAL

Subcontractor also includes, but is not limited to, the following general items required for Subcontractor's Work:

##### ADMINISTRATION

- .1 Permits, licenses, and fees required for this scope of work, including those required for delivery, set up and use of Subcontractor's cranes and equipment.
- .2 ProWest will be utilizing Bluebeam as part of it digital plan room. Subcontractor will be required to participate and use Bluebeam on the jobsite for submittals, RFI's, daily reports, etc. and as part of general overall correspondence and document control/sharing.
- .3 Submittals, shop drawings, manufacturer's data, samples, mockups, as-builts, warranty and guarantee.
- .4 Weekly updates of as-built documents onto ProWest's plan set. Do not cover work prior to as-built updates. Include transparencies, CADD files, etc., and transfer all weekly as-built information, including RFI's, to these close-out documents.
- .5 Protection of all work and continued maintenance of same until accepted by Owner and ProWest.
- .6 Multiple move-ons as required to meet this scope of work, the Subcontractor Schedule, and the Master Project Schedule as developed by ProWest's Project Team.
- .7 Haul away from site all excavated spoils generated.
- .8 Receiving, unloading, and protecting material.
- .9 Hoisting. Large quantities of material stocking shall be accomplished via crane or forklift.
- .10 Temporary support for Subcontractor's own work.
- .11 Task lighting for your own work.
- .12 Lifting, staging, storage, and transportation.
- .13 Schedule and coordinate all inspections and testing required for own work. Copy ProWest on all communications with Inspectors. Cost of re-inspection due to non-compliant work shall be the responsibility of Subcontractor.
- .14 When using scaffolding and/or temporary stairs provided by separate subcontractors, provide all waivers of liability and indemnification as required by separate subcontractors as regards scaffolding and/or temporary stairs.
- .15 Daily workforce count report is due to ProWest's field office no later than 8:00 AM each day. Written Daily Reports are to be submitted to ProWest's field office by 2:00 PM each day.

### SUPERVISION

- .16 Attend pre-installation meetings prior to commencement of work.
- .17 Attend weekly Subcontractor coordination meetings while performing work on site. Superintendent/Foremen and Project Manager must attend.
- .18 A minimum of one Superintendent/Foreman is required for duration of own work on project. Superintendent/Foremen must be on site when work is being performed. ProWest shall be notified in writing of any changes to Superintendent/Foreman. Subcontractors are to be supervised by Superintendent/Foreman. On-site Foreman, Superintendent and Project Manager must have a cellular phone to allow ProWest to contact them during construction hours. Provide 24-hour contact phone number to call in case of emergency.

### FIELD

- .19 Drinking water, ice and cups for own workforce.
- .20 Hoisting for own work.
- .21 Scaffolding for own work.
- .22 Adequate labor to clean Subcontractor's work areas on a daily basis. If Subcontractor does not provide cleanup labor, ProWest will provide cleanup labor and debit the cost to clean up from Subcontractor's account via a deductive change order on a monthly basis. This will be strictly enforced. Cleanup of debris to be deposited in the dumpster on a daily basis. Break down boxes, crates, and all packing material which shall be the responsibility of the Subcontractors. Dumpsters are provided for non-hazardous general waste only.
- .23 Responsible for replacement or repair of SWPPP control measures disturbed by own operations.
- .24 Traffic control, flagmen, or barricades, including trench plates and/or temporary asphalt patching for own work and accessibility for other trades to the site as required and approved by ProWest. During trenching operations outside the project fence, provide 6-foot high chain link fencing on all sides of excavation.
- .25 Relocate temporary construction services as required to perform work to locations approved by ProWest; i.e., toilets, fencing, barricades, scaffolding, etc. Site is to be safe, clean and secure at all times.
- .26 No eating inside of buildings – eat only in designated lunch areas. Provide clean-up of all food waste and trash to dumpster immediately after eating. No smoking on site. No am/fm radios, CD players, iPods, MP3 players, i-Phones, head phones or ear buds of any type, etc. on site.
- .27 Subcontractor shall be responsible for its own parking. Please refer to specifications.

### SAFETY

- .28 Welding and temporary power for welding. Submit welder's certifications. Provide welding procedures. All onsite welding shall be done with OSHA approved protective shield, and shields must be in place prior to start of welding work. Shields are required to protect the general public and onsite workers from direct eye contact to welder's arc and keep welding slag spotter confined to the designated welding area.
- .29 Safety requirements for own work. OSHA approved personal protective safety equipment such as hard hats, work shoes, gloves, safety glasses, goggles, masks, vests, harnesses,

etc. shall be worn by all personnel and third-party deliverymen at all times when on project site.

- .30 OSHA permits & safety compliance requirements and continued adherence to all OSHA safety regulations are required to perform all work scope activities.
- .31 OSHA approved temporary supports, bracings and accessories to complete own work.
- .32 Contact Underground Service Alert prior to start of all underground trenching, shoring and/or excavation of work.

#### LOCAL

- .33 Project Specific Items:
  - a. As-built drawings upon completion of work. Prepare and submit in e-format and two (2) signed hard copies.

### 3.0 SCOPE OF WORK – SPECIFIC

Prime Trade Contractor also includes, but is not limited to, the following specific items:

- .1 Establish horizontal and vertical control inside of building and validate with BIM Model.
- .2 Provide two benchmarks per floor and roof at each portion of the building.
- .3 Provide permanent elevation benchmarks in two locations that will remain undisturbed during construction. Coordinate these locations with the Construction Manager.
- .4 Check location and invert elevation for points of connection at existing sewer, storm and domestic/fire water.
- .5 Telephone/communication and electrical power – locate all POC and all angle points, for pullboxes, manholes, and conduit runs.
- .6 Office computations.
- .7 Provide as built drawings dimensioning utility tie-ins 5 feet outside building footprint and locate dimension off of grid lines at each building.
- .8 Stake limits of demolition at paving and curbs.
- .9 Professional liability insurance with minimum limits of \$1,000,000.
- .10 All travel, reimbursables, etc.
- .11 Include an additional 32 hours of a two-man survey crew to verify Control Points, as directed by the Construction Manager. Include office computations, travel and equipment.

### 4.0 SCOPE OF WORK – EXCLUSIONS

Prime Trade Contractor excludes the following items:

- .1 Protection of survey points.

**\*\*END OF SECTION\*\***

**SECTION 012300**

**ADDITIVE ALTERNATES**

**PART 1 – GENERAL**

**1.01 SUMMARY**

- A. The Alternates described in this Section have been established to enable the Owner to compare total costs where alternative materials and methods might be used.
  - 1. This Section identifies each Alternate by number. The changes described in each Alternate are to be incorporated into the work only when that Alternate is made a part of such work by specific provision in the Owner-Contractor Agreement.
  - 2. Submit a price for each Alternate listed below in the Bid Form.
  - 3. If the Owner elects to proceed on the basis of one or more of the described Alternates, make modifications to the work required in furnishing and installing the selected Alternates to the acceptance of the Architect and at no additional cost to the Owner other than as proposed.
  
- B. Related Documents:
  - 1. Refer to Division 00 Documents – Procurement and Contracting Requirements for general requirements regarding Alternates.
  
- C. Related Sections: XXXXXXXXXXXXX

**1.02 SUBMITTALS**

- A. Alternates described in this Section are required to be included in the bid proposal submitted. However, do not submit Alternates other than those described in this Section,

**PART 2 – PRODUCTS**

**ADDITIVE ALTERNATES**

**2.01 XXXXXXXXXXXXX**

**PART 3 – EXECUTION**

**3.01 ADVANCE COORDINATION**

- A. Immediately after award of the Contract, or as soon thereafter as the Owner has stipulated which, if any, Alternates will be selected, advise all necessary personnel and suppliers as to the nature and extent of Alternates selected by the Owner.
  - 1. Alert those personnel and suppliers involved as to the changes in the schedule resulting from the Owner's selection or rejection of Alternates.

**\*\* END OF SECTION \*\***



## SECTION 012500

### CONTRACT MODIFICATION PROCEDURES

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. Administrative and procedural requirements for handling and processing contract modifications.

##### 1.02 RELATED SECTIONS

- A. Section 012910: Applications and Certificates for Payment.

##### 1.03 CHANGE ORDER PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: The Architect will issue a detailed description of proposed changes in the Work that will require adjustment to the Contract Sum or Contract Time.
  - 1. If necessary, the description will include supplemental or revised Drawings and Specifications.
  - 2. Proposal requests issued by the Architect are for information only. Do not consider them as an instruction either to stop work in progress or to execute the proposed change.
  - 3. Within 20 days of receipt of a proposal request, submit an estimate of cost necessary to execute the change to the Architect for the Owner's review.
    - a. Include a list of quantities of products required and unit costs, with the total amount of purchases to be made.
      - 1) Where requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include a statement indicating the effect the proposed change in the Work will have on the Contract Time.
- B. Contractor-Initiated Proposals: When latent or unforeseen conditions require modifications to the Contract, the Contractor may propose changes by submitting a request for a change to the Architect.
  - 1. Include a statement outlining the reasons for the change and the effect of the change on the Work.
    - a. Provide a complete description of the proposed change.
    - b. Indicate the effect of the proposed change on the Contract Sum and Contract Time.
  - 2. Include a list of quantities of products required and unit costs, with the total amount of purchases to be made.
    - a. Where requested, furnish survey data to substantiate quantities.
  - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
- C. Proposal Request Form: Use forms provided by the Owner for Change Order Proposals.

##### 1.04 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: When the Owner and the Contractor disagree on the terms of a Proposal Request, the Architect may issue a Construction Change Directive on AIA Form G714.
  - 1. The Construction Change Directive instructs the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
  - 2. The Construction Change Directive contains a complete description of the change in the Work. It also designates the method to be followed to determine change in the Contract Sum or Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.

1. After completion of the change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

**1.05 MINOR CHANGES IN THE WORK**

- A. The Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or Contract Time, on Architect's Field Order Form.

**1.06 CHANGE ORDER PROCEDURES**

- A. Upon the Owner's approval of a Proposal Request, the Architect will issue a Change Order for approval signatures of the Owner, Contractor and the EDA. See Exhibit 5 for a copy of Change Order form.

**PART 2 PRODUCTS (Not Applicable)**

**PART 3 EXECUTION (Not Applicable)**

**\*\* END OF SECTION \*\***

**SECTION 012613**

**REQUESTS FOR INFORMATION (RFI)**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. This Section contains the procedures to be followed by Contractor upon discovery of any apparent conflicts, omissions, or errors in the Contract Documents or upon having any question concerning interpretation.

**1.2 PROCEDURES**

A. Notification by Contractor:

1. Submit all requests for clarification or additional information in writing to Construction Manager using the Request for Information (RFI) form provided by Construction Manager or a similar form approved by Construction Manager.
2. Number RFIs sequentially. Follow RFI number with sequential alphabetical suffix as necessary for each resubmission. For example, the first RFI would be "001". The second RFI would be "002". The first resubmittal of RFI "002" would be "002a".
3. Limit each RFI to one subject.
4. Submit an RFI if one of the following conditions occur:
  - a. Contractor discovers an unforeseen condition or circumstance that is not described in the Contract Documents.
  - b. Contractor discovers an apparent conflict or discrepancy between portions of the Contract Documents that appears to be inconsistent or is not reasonably inferred from the intent of the Contract Documents.
  - c. Contractor discovers what appears to be an omission from the Contract Documents that cannot be reasonably inferred from the intent of the Contract Documents.
5. RFIs will not be recognized or accepted if, in the opinion of Construction Manager, one of the following conditions exist:
  - a. Contractor submits the RFI as a request for substitution.
  - b. Contractor submits the RFI as a submittal.
  - c. Contractor submits the RFI under the pretense of a Contract Documents discrepancy or omission without thorough review of the Documents.
  - d. Contractor submits the RFI in a manner that suggests that specific portions of the Contract Documents are assumed to be excluded or by taking an isolated portion of the Contract Documents in part rather than whole.
  - e. Contractor submits an RFI in an untimely manner without proper coordination and scheduling of Work of related trades.

- f. Contractor submits the RFI to request changes which entail additional cost or credit or a change of time of completion.
  6. Ask for any clarification or request for information immediately upon discovery. Submit RFIs in a reasonable time frame so as not to affect the Contract Schedule while allowing the full response time described below.
  7. In cases where RFIs are issued to request clarification of coordination issues, for example pipe and duct routing, clearances, specific locations of Work shown diagrammatically, and similar items, Contractor shall fully lay out suggested solution using drawings or sketches drawn to scale, and submit same with RFI. RFIs which fail to include suggested solution will be returned unanswered with requirement that Contractor submit complete request.
  8. In event Contractor believes that clarification by Architect results in additional cost or time, Contractor shall not proceed with Work indicated by RFI until change order is prepared and approved. RFIs shall not automatically justify cost increase in Work or change in project schedule.
    1. Answered RFIs shall not be construed as approval to perform extra Work.
    2. Unanswered RFIs will be returned with stamp or notation: Not Reviewed.
- B. Response Time:
1. Construction Manager, whose decision will be final and conclusive, shall resolve such questions and issue instructions to Contractor within a reasonable time frame. In most cases, RFIs will receive a response within 7 days. In some cases this time may need to be lengthened for complex issues, or shortened for emergency situations, as mutually agreed in writing.
  2. Should Contractor proceed with the Work affected before receipt of a response from Construction Manager, within the response time described above, any portion of the Work which is not done in accordance with Construction Manager's interpretations, clarifications, instructions, or decisions is subject to removal or replacement and Contractor shall be responsible for all resultant losses.
  3. Failure to Agree: In the event of failure to agree as to the scope of the Contract requirements, Contractor shall follow procedures set forth in Article 4 of the General Conditions.

## **PART 2 - PRODUCTS**

NOT USED

## **PART 3 - EXECUTION**

- 3.1 Refer to the following Request for Information Form

RIVERSIDE PUBLIC DEFENDER/PROBATION BUILDING PROJECT

TO:

FROM:

ISSUE: \_\_\_\_\_ SCHEDULE ACTIVITY: \_\_\_\_\_  
SPEC. SEC. REF.: \_\_\_\_\_ PARA: \_\_\_\_\_ DWG REF: \_\_\_\_\_ DETAIL: \_\_\_\_\_

CIVIL  ARCH  STRUCT  PLUMBING  MECH  FP  ELECT  LANDSCAPE  
 OTHER

INFORMATION NOT SHOWN ON CD'S  COORDINATION PROBLEM  
 INTERPRETATION OF CD'S  POSSIBLE COST IMPACT  
 CONFLICT IN CD'S  POSSIBLE TIME IMPACT

DESCRIPTION:

CONTRACTOR'S PROPOSED RESOLUTION:

SIGNED: \_\_\_\_\_ DATE INFORMATION REQUIRED: \_\_\_\_\_

RESPONSE:

ATTACHMENTS

RESPONSE FROM: \_\_\_\_\_ TO: \_\_\_\_\_

SIGNED: \_\_\_\_\_ DATE SENT: \_\_\_\_\_ DATE REC'D: \_\_\_\_\_

\*\* END OF SECTION \*\*

## SECTION 012910

### APPLICATIONS AND CERTIFICATES FOR PAYMENT

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. Administrative and procedural requirements governing the Contractor's Application for Payment.
- B. Submit Applications for Payment to Architect in accordance with the schedule established by Conditions of the Contract and Agreement between Owner and Contractor.
- C. Related Requirements in Other Parts of the Project Manual:
  - 1. Contract Sum and Payments: Agreement between Owner and Contractor.
  - 2. Progress Payments, Retainage and Final Payment: Conditions of the Contract.
  - 3. Section 017700: Closeout Procedures.

##### 1.02 FORMAT AND DATA REQUIRED

- A. Format and Content: Use the Project Manual Table of Contents as a guide to establish the format for the Schedule of Values.
- B. Submit itemized applications typed on AIA Document G702, Application and Certificate for Payment, and continuation sheets G703, or equivalent as approved by the Architect and the Construction Manager.
- C. Provide itemized data on continuation sheet:
  - 1. Format, schedules, line items and values: Those of the Schedule of Values accepted by Architect and Construction Manager.
- D. Obtain signature of Resident Inspector on each application prior to submittal to Architect.

##### 1.03 PREPARATION OF APPLICATION FOR EACH PROGRESS PAYMENT

- A. Application Form:
  - 1. Fill in required information, including that for Change Orders executed prior to the date of submittal of application.
  - 2. Fill in summary of dollar values to agree with the respective totals indicated on the continuation sheets.
  - 3. Execute certification with the signature of a responsible officer on Contract form.
- B. Continuation Sheets:
  - 1. Fill in total list of all scheduled component items of work, with item number and the scheduled dollar value for each items.
  - 2. Fill in the dollar value in each column for each scheduled line item when work has been performed or products stored.
    - a. Round off values to nearest dollar, or as specified for the Schedule of Values.
  - 3. List each Change Order executed prior to the date of submission, at the end of the continuation sheets.
    - a. List by Change Order Number, and description, as for an original component item of work.

#### **1.04 SUBSTANTIATING DATA FOR PROGRESS PAYMENTS**

- A. When the Owner, Architect or Construction Manager requires substantiating data, Contractor shall submit suitable information, with a cover letter identifying:
1. Project.
  2. Application number and date.
  3. Detailed list of enclosures.
  4. For stored products:
    - a. Item number and identification as shown on application.
    - b. Description of specific material.
- B. Submit one copy of data and cover letter for each copy of application.

#### **1.05 APPLICATION FOR PAYMENT AT SUBSTANTIAL COMPLETION**

- A. Following issuance of the Certificate of Substantial Completion, submit an Application for Payment; this application shall reflect any Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work.
- B. Administrative actions and submittals that shall proceed or coincide with this application include:
1. Occupancy permits and similar approvals.
  2. Warranties (guarantees) and maintenance agreements.
  3. Test/adjust/balance records.
  4. Maintenance instructions.
  5. Meter readings.
  6. Start-up performance reports.
  7. Change-over information related to Owner's occupancy, use, operation and maintenance.
  8. Final cleaning.
  9. Application for reduction of retainage, and consent of surety.
  10. Advice on shifting insurance coverages.
  11. List of incomplete work, recognized as exceptions to Architect's Certificate of Substantial Completion.

#### **1.06 PREPARATION OF APPLICATION FOR FINAL PAYMENT**

- A. Fill in application form as specified for progress payments.
- B. Use continuation sheet for presenting the final statement of accounting.
- C. Administrative actions and submittals which must precede or coincide with submittal of the final payment Application for Payment include the following:
1. Completion of Project closeout requirements.
  2. Completion of items specified for completion after Substantial Completion.
  3. Assurance that unsettled claims will be settled.
  4. Assurance that Work not complete and accepted will be completed without undue delay.
  5. Transmittal of required Project construction records to Owner.
  6. Certified property survey.
  7. Proof that taxes, fees and similar obligations have been paid.
  8. Removal of temporary facilities and services.
  9. Removal of surplus materials, rubbish and similar elements.
  10. Change of door locks to Owner's access.

**1.07 SUBMITTAL PROCEDURE**

- A. Submit Applications for Payment to Architect at the times stipulated in the Agreement.
- B. Number: Five copies of each application.
- C. When Architect finds the application properly completed and correct, he will transmit a certificate for payment to Owner, with a copy to Contractor.

**PART 2 PRODUCTS (Not Applicable)**

**PART 3 EXECUTION (Not Applicable)**

**\*\* END OF SECTION \*\***



**SECTION 013113**

**PROJECT COORDINATION**

**PART 1 – GENERAL**

**1.01 REQUIREMENTS INCLUDED**

- A. Coordination of Work of Contract.

**1.02 RELATED SECTIONS**

- A. General Conditions
- B. Section 013119 – Project Meetings
- C. Section 013300 – Submittal Procedures
- D. Section 015200 – Temporary Facilities and Controls
- E. Section 016000 – Product Requirements
- F. Section 017329 – Cutting and Patching
- G. Section 017700 – Closeout Procedures

**1.03 SUBMITTALS**

- A. Coordination Drawings: Submit in accordance with Section 013300, and as specified herein.
- B. Work Plans: Submit as specified herein.

**1.04 DESCRIPTION**

- A. Coordinate scheduling, work activities, submittals, including deferred approvals, District's separate contract, and work of the various sections of Specifications in accordance with the Project Schedule.
- B. Coordinate sequence of Work to accommodate Owner's separate contract and Owner Occupancy as specified in Section 011100.
- C. Set up control procedures so that the Project Schedule is adhered to.
  - 1. Contractor's responsibility is to properly notify Construction Manager of anticipated and actual time delays.
    - a. Refer to General Conditions.
- D. Coordinate the Work and do not delegate responsibility for coordination to any Subcontractor.
- E. Anticipate the interrelationship of all Prime Trade Contractors, Subcontractors, Owner's separate contracts, and their relationship with the Work.
- F. Resolve differences or disputes between Prime Trade Contractors and Subcontractors concerning coordination, interference, or extent of Work between SECTIONS.

**1.05 SHUT DOWN PROCEDURES**

- A. Contractor shall complete a Request For Shutdown form and submit for review and approval to the Construction Manager.

1. Include with the Request For Shutdown form all pertinent information to assist the Construction Manager in coordination of the shutdown activities.
  2. Submit Request for Shutdown form with the detailed work plans.
- B. Determine if proper and appropriate coordination and notifications have been completed, including written authorization from the Owner's Representative and Construction Manager, before the shutdown.
- C. Service shutdowns should be indicated on Specific Work Plans as submitted and coordinated with Construction Manager.
1. These Work Plans shall reflect the various work sections, activities or phases included in the scope of the Project and shall require the active participation of County's Teams in coordinating County functions and construction activities.
  2. The Contractor shall request and schedule a General Work Plan Meeting that shall take place prior to any work activity being conducted or carried out.
    - a. During the process of this meeting the Contractor and District shall produce and agree to a list of work activities, including Digging and Shutdown Coordination and Procedures.
  3. Upon receiving agreed submissions for coordination, Owner shall schedule actual digging and shutdown operations to take place not later than twenty-one days from date of submission.
    - a. Operation of existing valves, switches, and other items to effect shutdowns or that are directed by Owner, shall be operated by Owner's personnel only.
- D. Interruption of Services: Adequate advance written notice (minimum of twenty-one calendar days) shall be given to Construction Manager when interruptions of services, or interferences with use of existing buildings, facilities, and roads are anticipated.
1. Interruption of service will be made by Owner upon such notice.
  2. Contractor shall not interrupt service.
  3. Required access ways shall be kept open.
    - a. Use of one way traffic and detours shall be held to minimum.
- E. Planned service shutdowns shall be accomplished during periods of minimum usage.
1. In some cases, this may require work outside of normal 7:00 a.m. to 5:00 p.m. work hours, at no additional cost to the Owner.
  2. The Contractor shall program the work so that service will be restored in the minimum possible time, and shall cooperate with the County in reducing shutdowns of system. At least twenty-one (21) calendar days advance written notice shall be given to the Construction Manager before interruptions to service and other interferences to the use of, or access to existing buildings and facilities. Required access ways shall be kept open at all times; the use of one way traffic and detours shall be held to a minimum.

#### **1.06 DETAILED WORK PLANS**

- A. The Contractor shall develop and submit for review and approval to the Construction Manager detailed work plans for specific work activities, both inside and outside of the work area, associated with impact to or interruption (shutdown) of services and operation, and dig activities.
1. Work Plans shall include written description of work activity, detailed schedule to include proposed sequence of operations and activity duration, type of equipment to be used, a copy of site plan highlighted to indicate sequencing and location of work and equipment and completed Request For Shutdown and/or Dig Notification forms if applicable.
- B. Work plan submittal will not be accepted unless all information is provided at time of submitted.

- C. Submit work plan at least twenty-one (21) calendar days prior to the commencement of any associated work activities.

#### 1.07 COORDINATION

- A. General: Work of the Contract includes coordination of the entire work of the Project, from beginning of construction activity through Project close-out and warranty periods.
  - 1. Project includes Commissioning per County requirements for the project.
  - 2. Coordinate work of affected trades to include commissioning functions as part of construction process.
  - 3. Commissioning coordination is included within general requirements of this Project.
- B. Mechanical/Electrical Requirements of General Work:
  - 1. Comply with applicable requirements of Division 15 Sections for Mechanical Provisions within units of General Work.
  - 2. Comply with applicable requirements of Division 16 for Electrical provisions within units of General Work.
- C. Service Connections: Except as otherwise indicated.
  - 1. Final connection of mechanical services to general work is defined as being mechanical work.
  - 2. Final connection of electrical services to general work is defined as electrical work.
- D. Shutdown Coordination: Coordinate shutdowns so as to minimize shutdown time of any service.
  - 1. Request approval of a shutdown in writing to the Construction Manager not less than twenty-one (21) calendar days before the time that the shutdown is desired.
  - 2. Operation of existing valves, switches, and other items to effect service shutdowns will be made by the County
  - 3. Although the general location of utility lines and services may be shown on the drawings or described elsewhere, neither the County nor the Construction Manager warrant the accuracy of the location shown or described.
    - a. Responsibility for determining the actual on-site location of utility lines and services shall rest solely with the Contractor.
    - b. Each Contractor shall verify the location of all line and services before commencing work.
    - c. Capping, relocation or removal of such lines and services shall be performed by each Contractor at no increase in contract price.
- E. Coordination: The Project will require close cooperation and coordination with County and Contractors and Subcontractors.
  - 1. The Contractor shall consider coordination in the Work.
    - a. Schedule the Work with subcontractors and the Owner particularly near the end of the Project.
    - b. Keep the Owner advised of his activities to complete the Work in accordance with the Master Project Schedule.
- F. Coordination/Engineering Drawings:
  - 1. Contractor shall prepare and submit complete 1/4 " = 1'0" coordination drawings, including plans, sections, details, and other items, indicating the complete layout and all mechanical and electrical equipment in all areas and within the ceiling spaces for new and existing conditions, including bottom of duct, pipe, conduit and elevations to allow Construction Manager to compare between other Prime Trade Contractors' work.
  - 2. Mechanical, plumbing and electrical Prime Trade Contractors shall be responsible for providing all vertical sections through floors showing structural physical restraints, architectural restraints, plenum spaces and all other physical obstructions that may affect the work.
  - 3. Electronic reproduction or photo reproduction of Architectural drawings will not be acceptable.

- G. Mechanical, plumbing and electrical Prime Trade Contractors shall prepare a 1/4" = 1'0" sleeving layout indicating size and location of sleeves.
  - 1. Provide copies to applicable trades and Construction Manager.
- H. Coordination/Engineering Drawings: These drawings are for the Contractor's and Construction Manager's use during construction and shall not be construed as replacing any shop drawings, or Record ("as-built") Drawings required elsewhere in these Contract Documents.
- I. Debris Removal and Material Access: An area will be designated for debris removal and material access.

#### **1.08 EQUIPMENT COORDINATION**

- A. Equipment Coordination: With respect to mechanical and electrical features of Contractor and Owner supplied equipment, complete data must be exchanged directly between the Contractor and those vendors and subcontractors involved as the progress of the Project requires. The person requesting the information shall advise when it will be required.
- B. The Prime Trade Contractor's for casework and equipment are expressly required to provide large scale layout drawings for casework and equipment showing the required rough-in locations of all services (dimensioned from building features) service characteristics, and locations of studs where the location is critical to mounting or otherwise installing equipment and casework. Furnish sizes and spacing required for Mechanical and Electrical cutouts, and a complete brochure of fittings, sinks, outlets, or other information to provide complete data on the items and accessories being furnished.
- C. In the event of incorrect, incomplete, delayed or improperly identified information, the entity causing the delay or error shall be responsible and pay for any modifications or replacements necessary to provide a correct, proper and new installation, including relocations required.

#### **1.09 MEETINGS**

- A. In addition to progress meetings specified in Section 013119, attend coordination meetings and preinstallation conferences with requisite personnel to assure coordination of Work as scheduled by the Construction Manager.

#### **1.10 COORDINATION OF SUBMITTALS**

- A. Schedule and coordinate submittals specified in Section 013300 and as specified in Section 017700, and 017839.
- B. Coordinate work of various SECTIONS having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- C. Coordinate approved substitutions to assure compatibility of space, of operating elements, and effect on work of other sections. No substitutions will be reviewed and/or accepted after substitution request cut off date prior to bid.
- D. After Construction Manager's and Architect's review, Prime Trade Contractors shall submit the following directly to State Agencies for review and approval:
  - 1. Fire Protection Drawings: Refer to Division 21.
  - 2. Fire Alarm System: Refer to Sections 28311.

### **1.11 COORDINATION OF SPACE**

- A. Mechanical, plumbing and electrical Prime Trade Contractors shall coordinate use of Project space and sequence of installation of mechanical, and electrical work which is indicated diagrammatically on Drawings.
  - 1. Follow routings shown for pipes, ducts, and conduits as closely as practicable, with due allowance for available physical space.
    - a. Make runs parallel with lines of building.
    - b. Utilize space efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- B. In finished areas, except as otherwise shown, conceal pipes, ducts, and wiring in the construction.
  - 1. Coordinate locations of fixtures and outlets with finish elements.
- C. Off-Site Fabrication: Off-site fabrication is encouraged as much as possible and deliveries scheduled so materials and equipment can be installed immediately after delivery.
  - 1. The Contractor shall alert and advise others of the need to hold deliveries until they are notified the materials are required on the site.

### **1.12 ELECTRICAL COORDINATION**

- A. Provide supervision and coordination necessary to meet the requirements of electrical power connection as set forth by the Riverside City Public Utilities.
- B. Provide reasonable and convenient staging and access areas near buildings to permit the Riverside City Public Utilities, or its vendors or subcontractors, to install, modify or remove electrical transformers or other components of the electrical power system furnished and installed by the Riverside City Public Utilities.

### **1.13 COORDINATION OF CONTRACT CLOSEOUT**

- A. Coordinate completion and cleanup of work of separate sections in preparation for Owner occupancy.
- B. After Owner occupancy of premises, coordinate access to site by various sections for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.
- C. Assemble and coordinate closeout submittals specified in Section 017839.

### **1.14 DIGGING NOTIFICATION**

- A. Contractor shall complete and submit for review to the Construction Manager a Dig Notification Form and procure written authorization from the Construction Manager prior to the commencement of any dig activities.
  - 1. The Contractor shall include with the Dig Notification form all pertinent information, and submit it with the detailed work plan.
- B. Contractor shall mark location of all known utilities at dig area on ground at site with marker paint.
- C. Contractor shall verify before any digging commences that the project inspector has inspected the dig site and confirmed the site marking as accurate, complete and in conformance with site utility plans.

- D. Contractor shall verify with the Construction Manager that all interested Owner departments have been notified of intent to begin digging operations.
- E. Project record documents apply to digging requirements.
  - 1. Contractor shall provide as-built drawings.

**1.15 PROTECTION OF EXISTING STRUCTURES AND UTILITIES**

- A. The Drawings show, if applicable, existing above and below grade structures, drainage lines, storm drains, sewers, water, gas, electrical, hot water, and other utilities which are known to County.
- B. Locate all known existing installations before proceeding with construction operations which may cause damage to such installations.
  - 1. Existing installations shall be kept in service where possible and damage to them shall be repaired with no adjustment of Contract Sum.
- C. If any other structures or utilities are encountered, request Construction Manager to provide direction on how to proceed with the Work.
- D. If any structure or utility is damaged, take appropriate action to ensure the safety of persons and property.

**PART 2 – PRODUCTS**

NOT USED

**PART 3 – EXECUTION**

NOT USED

**\*\* END OF SECTION \*\***

## SECTION 013315

### DEFERRED APPROVAL SUBMITTAL PROCEDURES

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. Summary: General requirements for the submittal of plans, details, and calculations for products and systems designated as deferred *design approval* on the Contract Drawings.
1. To ensure that the specified products are furnished and installed in accordance with the design intent, procedures have been established for advance submittal of design data, and for review and acceptance or rejection by the Architect and building code agencies.
  2. Refer to Section 013300 for general submittal requirements.
  3. Refer to each product section for submittal requirements specific to that product or system.
- B. Referenced Sections:
1. Section 013300 - Submittal Procedures.

##### 1.02 DEFERRED APPROVAL SUBMITTALS

- A. Deferred Design Approvals
1. Provide deferred design approval submittals for the following items for review by building code agencies following approval by Architect as described in Paragraph 1.02-C:
    - a. Window wall systems or storefronts with spans greater than 10 feet.
    - b. Bleachers.
  2. Contractor shall be responsible for the design, engineering, fabrication, and installation of deferred approval items and their connections to the structure within the physical limitations and design parameters indicated on the Contract Documents.
    - a. *Submittals of drawings and calculations for structural items shall be wet stamped and signed by a professional structural engineer licensed to practice in the State of California.*
- B. Deferred design submittals shall include not less than the following:
1. Dimensioned plans, elevations, and sections locating assembly components in relationship to each other and in relationship to contiguous building structure.
  2. Typical and special fabrication and installation details, including details of anchorage to supporting structure.
  3. Design criteria, Shop Drawings, and calculations. Refer to Article 1.03 - Quality Assurance for additional requirements.
  4. Materials and finishes.
- C. Deferred Design Approval Procedures:
1. Preliminary Submittal: In accordance with this Section, submit design data, product literature, color schedules, samples, and other data illustrating intent to meet design and performance requirements.
  2. Contractor shall schedule and give prompt attention to the preparation and submittal of deferred approval items. Extension of Contract Time will not be approved if Project is delayed due to untimely submittals of deferred approvals.

### 1.03 QUALITY ASSURANCE

- A. Contractor shall be responsible for the design, engineering, fabrication, and installation of deferred design items and their connections to the structure within the physical limitations and design parameters indicated on the Contract Documents.
  - 1. *Submittals of drawings and calculations for structural items shall be wet stamped and signed by a professional structural engineer licensed to practice in the State of California.*

### PART 2 GENERAL

Not Applicable

### PART 3 EXECUTIONS

#### 3.01 APPROVAL PROCEDURES

- A. Preliminary Submittal: In accordance with Section 013300, submit design data, product literature, color schedules, samples, and other data illustrating intent to meet design and performance requirements.
- B. Agency Submittal: Upon acceptance of item by Architect, submit complete calculations and other design data to building code agencies for review and approval with transmittal to Architect.
- C. Final Submittal: Upon receipt of approval by building code agency, obtain all required permits and submit materials to Architect in accordance with Section 013300.

**\*\*END OF SECTION\*\***



**SECTION 013119**  
**PROJECT MEETINGS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Administrative and procedural requirements for project meetings including but not limited to:
  - 1. Pre-Construction Conference.
  - 2. Progress Meetings.
  - 3. Pre-Installation Conferences.

**1.02 CONSTRUCTION MANAGER'S RESPONSIBILITIES**

- A. Construction Manager shall administer preconstruction conference and periodic progress meetings throughout the progress of the Work.
  - 1. Schedule the preconstruction conference.
  - 2. Prepare agenda for preconstruction and progress meetings.
  - 3. Preside at preconstruction and progress meetings.
  - 4. Prepare the preconstruction and progress meeting reports.
    - a. Include all significant proceedings, issues, and decisions.
  - 5. Reproduce and distribute copies of above listed meeting reports within five days after each meeting.
    - a. To all participants in the meeting.
    - b. To all parties affected by decisions made at the meeting.
    - c. Owner's Representative.
- B. Construction manager shall schedule and administer pre-installation conferences and specifically called meetings throughout the progress of the Work.
  - 1. Prepare agenda for pre-installation conference and specifically called meetings.
  - 2. Distribute written notice of meetings four days in advance of meeting date.
  - 3. Make physical arrangements for meetings.
  - 4. Preside at pre-installation and specifically called meetings.
  - 5. Record the minutes
    - a. Include all significant proceedings, issues, and decisions.
  - 6. Reproduce and distribute copies of minutes within five days after each meeting.
    - a. To all participants in the meeting.
    - b. To all parties affected by decisions made at the meeting.
    - c. Owner's Representative.
    - d. Furnish three copies of minutes to Architect.
- C. Participants at the conferences and meetings shall be familiar with the Project and qualified and authorized to act on behalf of the entity each represents.
- D. Architect may attend preinstallation and other specifically called meetings to ascertain that Work is expedited consistent with Contract Documents and the construction schedules.

**1.03 PRE-CONSTRUCTION CONFERENCE**

- A. Construction Manager shall schedule and conduct at a time convenient to Owner, Architect and Contractor, but no later than 15 days after execution of the agreement and prior to commencement of construction activities.
- B. Location: At the Project Site or other central site, convenient for all parties, designated by Construction Manager.

- C. Attendees:
1. Construction Manager.
  2. Owner's representatives.
  3. Architect and Architect's professional consultants.
  4. Contractor and Contractor's Superintendent.
  5. Major subcontractors.
  6. Major manufactures and suppliers.
  7. Commissioning Agent (Cx).
  8. Others as appropriate.
- D. Agenda: Include the following items as a minimum:
1. Distribution and discussion of:
    - a. List of all major parties and protocol.
    - b. Projected construction schedules.
  2. Critical work sequencing.
  3. Major equipment deliveries and priorities of Owner.
  4. Designation of responsible personnel.
  5. Procedures and forms for processing of:
    - a. Field decisions.
    - b. Proposal requests.
    - c. Submittals.
    - d. Requests for Information (RFI).
    - e. Bulletins.
    - f. Change Orders.
    - g. Schedule of Values.
    - h. Applications for Payment.
  6. Adequacy of distribution of Contract Documents.
  7. Procedures for preparing and maintaining Record Documents.
  8. Use of Premises:
    - a. Office, work, parking and storage areas.
    - b. Owner's requirements.
  9. Construction facilities, controls and construction aids.
  10. Temporary utilities, sanitary facilities, signs, and other required temporary facilities.
  11. Safety and first-aid procedures, including designation of Contractor's Safety Officer.
  12. Security procedures.
  13. Housekeeping procedures.
  14. Working Hours.
  15. Communication procedures between parties.
  16. Provide names, addresses and telephone numbers of persons authorized to act for the Contractor in emergencies.
  17. Construction permit requirements, procedures and posting.
  18. Testing laboratory or agency and testing procedures.
  19. Establish schedule for progress meetings.
  20. Other administrative items as appropriate.

#### **1.04 PRE-INSTALLATION CONFERENCES**

- A. The Construction Manager will conduct a preinstallation conference at the site before each construction activity that requires coordination with other construction or when required in technical Specification Sections.
- B. Attendance will be required of parties directly affecting, or affected by, or involved in the installation and its coordination or integration with other materials and installations that have preceded or will follow the particular item of work or activity under consideration.
1. Parties attending the conference shall be qualified and authorized to act on behalf of the entity

**SECTION 013216**

**PRIME TRADE CONTRACTOR SCHEDULES**

**1. PRIME TRADE CONTRACTOR SCHEDULE**

**1.1 Submission**

1.1.1 Submit the Prime Trade Contractor Schedule to Construction Manager either:

.1 Within 10 days after receipt of Notice of Selection as Apparent Lowest Responsible Bidder or

.2 With the Agreement.

1.1.2 Within 7 days after receipt of the Prime Trade Contractor Schedule, Construction Manager will notify Contractor of its acceptance of, or its review comments about, the schedule so that appropriate adjustments may be made by Prime Trade Contractor in the development of the Prime Trade Contractor Schedule.

**1.2 Form**

1.2.1 Prepare the Prime Trade Contractor Schedule as a bar chart showing continuous flow from left to right. Specific calendar dates shall be clearly and legibly shown for the start and finish of each Work activity.

1.2.2 Prepare the Prime Trade Contractor Schedule in sufficient detail to demonstrate preliminary planning for the Work and to represent a practical plan to complete the Work within the Contract Time and in accordance with the Preliminary Master Project Schedule.

1.2.3 Identify the following milestone events on the Prime Trade Contractor Schedule:

Refer to the Preliminary Master Project Schedule shown in Volume 1 of the Bidding Documents for milestone events. For clarity, a filtered Preliminary Master Project Schedule has been included for each Bid Package and is located behind each Bid Form.

1.2.4 Identify all holidays and non-working days on the Prime Trade Contractor Schedule.

**1.3 Activities**

1.3.1 Identify all Work activities which constitute the critical path and identify any interaction with the events reflected on the Preliminary Master Project Schedule.

**2. MASTER PROJECT SCHEDULE**

2.1 The Master Project Schedule shall be suitable for monitoring progress of the Work and represent a practical plan to complete the Work within the Contract Time.

2.2.2 The Master Project Schedule will identify the following milestone events:

Refer to the Preliminary Master Project Schedule shown in Volume 1 of the Bidding Documents for milestone events. For clarity, a filtered Preliminary Master Project Schedule has been included for each Bid Package and is located behind each Bid Form.

2.2.3 The Master Project Schedule will identify all holidays and non-working days.

## 2.3 Activities

2.3.1 The Master Project Schedule will identify all Work activities in correct sequence for the completion of the Work. Work activities will include the following:

- .1 Major Contractor-furnished equipment, materials, and building elements, and scheduled activities requiring submittals or Owner's prior approval.
- .2 System test dates.
- .3 Scheduled overtime Work if required by Contract Documents.
- .4 Dates designated for working spaces, storage areas, access, and other facilities to be provided by Owner.
- .5 Dates orders and decisions from Owner on designated items are due.
- .6 Dates for delivery of Owner-furnished equipment.
- .7 Dates for Owner-furnished utilities.
- .8 Connection and relocation of existing utilities.
- .9 Connecting to or penetrating existing structures.
- .10 Scheduled inspections as required by Codes, or as otherwise specified.

2.3.2 Identify all Work activities that constitute the critical path.

2.3.3 Critical Work activities are defined as Work activities which, if delayed or extended, will delay the scheduled completion of one or more of the milestones specified in this Section or the scheduled completion of the Work, or both. All other Work activities are defined as non-critical Work activities and are considered to have float.

2.3.4 Float is defined as the time that a non-critical Work activity can be delayed or extended without delaying the scheduled completion of milestones specified in this Section or the scheduled completion of the Work, or both.

## 2.4 Updating

2.4.1 Prepare and submit to Construction Manager updated information once each month, or such other frequency as reasonably directed.

- .1 The updated information shall state the actual start date and actual completion date for all activities of the Prime Trade Contractor as shown on the Master Project Schedule; for any activity that is in progress, a statement of the percentage of completion and the estimated number of days it will take the Prime Trade Contractor to complete the activity.
- .2 The updated information shall incorporate all changes mutually agreed upon by Prime Trade Contractor and Owner during preceding periodic reviews and all changes resulting from Change Orders and Field Orders.
- .3 Prime Trade Contractor shall perform the Work in accordance with the Master Project Schedule. Prime Trade Contractor may modify the order or method of accomplishing the Work only with prior agreement by Owner.

- 2.4.3 Prime Trade Contractor shall submit the updated information, in the form acceptable to Construction Manager, at least 7 days prior to submitting the Application For Payment.
- 2.4.4 Construction Manager will determine acceptability of the updated information within 7 days after its receipt.
- 2.4.5 No Applications For Payment will be processed nor shall any progress payments become due until updated information is accepted by Construction Manager.

**\*\* END OF SECTION \*\***

## SECTION 013300

### SUBMITTAL PROCEDURES

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. Procedural requirements for non-administrative submittals including product data, shop drawings, samples and other miscellaneous work-related submittals required by the Contract Documents.
- B. Refer to other Division 1 sections and other contract documents for specifications for administrative submittals.
  - 1. Administrative submittals include, but are not limited to the following items:
    - a. Permits.
    - b. Payment applications.
    - c. Performance and payment bonds.
    - d. Insurance certificates.
    - e. Inspection and test reports
    - f. Schedule of values.
    - g. Progress schedule.
    - h. Listing or designation of subcontractors.
    - i. Record drawings
    - j. Commissioning requirements.
- C. Designate in the progress schedule, or in a separate coordinated schedule, the dates for submission and the dates reviewed shop drawings, product data and samples will be needed for each product.
  - 1. Identify items requiring long lead times.
- D. Prime Trade Contractor's submittal and Architect's acceptance of Product Data, Shop Drawings or Samples that relate to construction activities not complying with Contract Documents does not constitute acceptable or valid request for substitution, nor does it constitute approval.
- E. Product Data, Shop Drawing and Sample Submittals containing substitutions for specified items will be rejected and returned as not in compliance with Contract Documents.
- F. Commissioning Milestone Reports: Reports by parties that participate in design review, product submittal review, installation, start-up, test and balance, training, and closeout phases.
  - 1. Submittals of documentation pertaining to these functions must be coordinated and communicated with the Commissioning Authority via Construction Manager.

##### 1.02 RELATED SECTIONS

- A. Division 2 through 16 Sections where more specific submittal requirement are indicated.

##### 1.03 PRODUCT DATA

- A. Product Data includes standard printed information on manufactured products that has not been specially prepared for this Project, including but not limited to following items:
  - 1. Manufacturer's product specifications, brochures, catalog cuts, color charts, schedules, and installation instructions (as applies):
    - a. Sealants
    - b. Doors and Frames
    - c. Door Hardware
    - d. Glass and Glazing

- e. Ceramic Tile and Pool Tile
  - f. Carpet
  - g. Paint Material List
  - h. Toilet Accessories
  - i. Plastic Laminate
  - j. Electrical Distribution Panels
  - k. Lighting Fixtures
  - l. Plumbing Fixtures
2. Roughing-in Diagram and templates.
  3. Standard wiring diagrams
  4. Printed performance curves.
  5. Operational range diagrams.
  6. Mill reports.
  7. Standard product operating and maintenance manuals.
- B. Modify standard drawings to delete information which is not applicable to project.
- C. Supplement standard information to provide additional information specifically applicable to project.
1. Clearly mark each copy to identify pertinent materials, products or models.
  2. Show dimensions and clearances required.
  3. Show performance characteristics and capacities.
  4. Show wiring or piping diagrams and controls.

#### **1.04 SHOP DRAWINGS**

- A. Shop drawings are technical drawings and data that have been specially prepared for this project, including but not limited to the following items (as applies):
1. Fabrication and installation drawings.
    - a. Structural Steel
    - b. Metal Fabrications
    - c. Sheet Metal Flashing and Trim
    - d. Doors and Windows
    - e. Glass and Glazing
    - f. Toilet Compartments
    - g. Manufactured Casework
  2. Setting diagrams.
  3. Templates.
  4. Patterns.
  5. Schedules.
  6. Design mix formulas.
  7. Prime Trade Contractor's engineering calculations.
- B. Standard information prepared without specific reference to a project is not considered to be shop drawings.
- C. Cross-reference shop drawings to Drawings and Specifications.
1. Detail work included.
  2. Indicate dimensions, materials, fastenings, anchorages, joints, sealing, backing, utility requirements, rough-in, and adjacent related conditions.
- D. Coordination Drawings:
1. Prepare separate composite, detailed coordination drawings consisting of plans, elevations, and sections as required to clearly delineate and show relationship between utilities,

- mechanical, and electrical work.
  - 2. Include and show due consideration for utilities, architectural elements, and structural elements (including excavations and shoring, utility vaults, manholes, and foundations for permanent and temporary construction) and identify potential interface trouble spots.
  - 3. Individual drawings for single element will not be accepted or reviewed unless and until coordination drawings have been previously reviewed and accepted.
  - 4. Purpose for coordination drawings is to determine, for mutual benefit of all concerned, precedence of trade's work and allocation of available physical space for installation of trades' work.
  - 5. Generate and submit coordination drawings in timely manner and in support of Contract Schedule.
  - 6. Coordination drawings are not to be construed to be shop drawings or as a replacement for shop drawings.
- E. Long Lead Items: Submit at beginning of construction so as not to delay construction.

#### **1.05 SAMPLES**

- A. Samples are physical examples of work, including but not limited to the following items:
- 1. Materials, equipment, surface textures, colors, fabrics, and like items, as required by Drawings and Specifications, or as requested by Architect.
  - 2. Partial sections of manufactured or fabricated work.
  - 3. Small cuts or containers of materials.
  - 4. Complete units of repetitively used materials.
  - 5. Swatches showing color, texture and pattern.
  - 6. Color range sets.
  - 7. Units of work to be used for independent inspection and testing.
- B. Properly identify and describe samples submitted, as noted, or as may be required by Architect.
- 1. Submit/resubmit until approved.
  - 2. Approval of sample in itself does not change or modify contract requirements.
    - a. Finishes, materials, or workmanship in completed building must match approved samples.
- C. Prime Trade Contractor: Submit specified number of samples under cover letter for each set, including complete listing of such samples designated for use on Project, with complete identification on each sample by project name, ultimate destination of material, manufacturer, brand, lot, style, and model number.
- 1. Include Contract Document reference, specification section, names of Prime Trade Contractor, Supplier, Construction Manager, Project and Architect.
  - 2. Number submittals sequentially.
- D. Samples will be returned through Construction Manager to Prime Trade Contractor for use in Project after review, analysis, comparison, and testing (if required).
- 1. Architect will retain one of each sample for record.
- E. Test Sample: Test samples, as designated by Architect, will be selected from materials or equipment delivered by Prime Trade Contractor for use in Work.
- 1. If test sample fails to meet specification requirements, previous approvals will be withdrawn and such materials or equipment which fail testing shall be subject to removal and replacement by Prime Trade Contractor with material or equipment meeting specification requirements.
- F. Office Samples:
- 1. Provide in specified size and quantity to clearly illustrate:



- a. Functional characteristics of product or material, with integrally related parts and attachment devices.
- b. Full range of color, texture, and pattern.
2. Where size and quantity is not specified, provide minimum of four samples, 12 inch by 12 inch minimum size, where samples are required.
3. Samples including, but not limited to, following complying with submittal requirements of respective sections (as applies):
  - a. Sealants
  - b. Tile
  - c. Acoustical Ceiling Tile
  - d. Acoustical Wall Treatment
  - e. Resilient Flooring and Base
  - f. Carpet
  - g. Painting
- G. Field Samples and Mock-Ups:
  1. Submit schedule of layout, procurement, training, and construction related to field samples and mock-ups, integrated with Contract Schedule.
  2. Erect at Project Site in location acceptable to or as directed by Architect.
  3. Construct each sample or mock-up complete, including work of each trade required in finished Work.
  4. Size or area as specified in respective specification section.
  5. Remove mock-ups at conclusion of Work or when directed by Architect or Owner.

#### **1.06 MANUFACTURERS**

- A. Manufacturer's Instructions: Where required in specifications that materials, products, processes, or equipment be installed or applied in accordance with manufacturer's instructions, directions, or specifications, install or apply in strict accordance with printed instructions furnished by manufacturer of material for use under conditions similar to those at Job Site.
  1. Furnish three copies of such instructions to Architect for review and acceptance before Work is begun.
- B. Architect reserves right to review and request removal or redesign of manufacturers' trade marks and names on items of materials and equipment which will be exposed to view in completed Work.
  1. Provide such removal or redesign at no increase in Contract Sum.
- C. Provide materials and equipment, for which testing agency standards have been established and their label service is available with appropriate agency label affixed.

#### **1.07 VERIFIED REPORTS**

- A. Prime Trade Contractor shall prepare and submit Verified Reports as required and coordinate with Architect, Engineer, Testing Agency/Inspectors and others with Verified Reports of those entities.
  1. Submit Verified Reports to the Construction Manager who will forward to the Architect for approval.
  2. Comply with Title 24, California Code of Regulations, Part 1, Sections 4-336 and 4-343.

#### **1.08 DEFERRED APPROVALS**

- A. Submit detailed plans, specifications and engineering calculations for all deferred approval items.
- B. Calculations and drawings of structural nature shall be prepared and signed by a Structural

Engineer registered in the State of California.

- C. Submit one (1) reproducible transparency and five (5) opaque prints.
  - 1. If revisions are necessary, the architect will return only the transparency to the Prime Trade Contractor. Resubmit one (1) transparency and five (5) opaque prints with all corrections.
    - a. The reproducible and one print will be sent to IOR by the Architect for the approval.
    - b. If corrections are required by IOR, make the corrections and submit one (1) transparency and five (5) opaque prints, along with IOR checkset, to the Construction Manager who will forward to the Architect.
    - c. After DSA approval, the transparency with IOR approval will be returned to the Prime Trade Contractor.
- D. Fabrication and installation of deferred approval items shall not be started until detailed plans, specifications and engineering calculations have been accepted by the Architect and the IOR.

#### **1.09 MISCELLANEOUS SUBMITTALS (WORK-RELATED)**

- A. Include, but not limited to the following types of submittals:
  - 1. Specially-prepared warranties (guarantees).
  - 2. Standard printed warranties.
  - 3. Maintenance agreements.
  - 4. Printed industry standards.
  - 5. Collected-and-bound operating/maintenance manuals.
  - 6. Keying schedule, keys and other security-protection-safety devices.
  - 7. Maintenance tools and spare parts.
  - 8. Maintenance materials and overrun stock.

#### **1.10 PRIME TRADE CONTRACTOR RESPONSIBILITIES**

- A. As defined in the General Conditions and as follows.
- B. Maintain and update Submittal Log on weekly basis.
- C. Shop Drawings, Supporting/Supplemental Data, and Catalogs:
  - 1. Submit as instruments of Prime Trade Contractor, even though they may have been prepared by sub-Prime Trade Contractor, supplier, dealer, manufacturer, or by other person, firm, or organization.
  - 2. On each Shop Drawing submitted for review, affix stamp certifying that it has been reviewed and approved by Prime Trade Contractor in accordance with Contract Documents.
  - 3. Drawings Submitted in Response to Request of Architect: Show rearrangements, made necessary by use of materials or equipment other than those specified.
- D. Prior to Submission:
  - 1. Review shop drawings, product data and samples for compliance with Contract Documents.
  - 2. Undertake their own review and stamp with their acceptance those shop drawings and supplemental data of their suppliers, as well as their own, before submitting them to Architect.
  - 3. Ascertain that submittals meet requirements of Drawings and Specifications and conform to structural and space conditions.
- E. Coordinate each submittal with requirements of Work and of Contract Documents.
  - 1. By accepting and submitting shop drawings and supplemental data, Prime Trade Contractor represents that they have determined and verified field measurements, field construction criteria, physical construction, quality of materials, applicability of catalog numbers, and similar data, and have checked and coordinated each shop drawing for conformance with

- requirements of Work and Contract Documents.
  - 2. Resolve conflicts with other trades in shop drawings prior to actual construction.
  - 3. Prime Trade Contractor is fully responsible for observing need for and making changes in arrangement of piping, connections, wiring, or manner of installation, which may be required by equipment they propose to supply both as it pertains to their own work and Work affected under other parts, heading or division of Drawings and Specifications.
- F. Notify Architect in writing, at time of submission, of deviations or variations in submittals from requirements of Contract Documents.
- 1. If shop drawings shown variations from Contract Documents, whether because of standard shop practice or other reasons, make special mention thereof in letter of transmittal.
  - 2. Term "deviation" or "variation" means minor change to sequence indicated on Drawings or specified.
  - 3. Deviation or variation is not to be construed to mean substitutions or product options.
  - 4. In addition to notifying Architect in writing of deviation or variation, circle deviations and variations on shop drawings or product data.
- G. Do not begin fabrication or work which requires submittals until submittals have been returned with Architect's stamp and initials or signature indicating review and disposition.
- 1. Upon receipt of return of submittals, promptly distribute copies to affected parties.

#### 1.11 COORDINATION

- A. Coordination: Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
- 1. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.
  - 2. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
  - 3. Coordinate transmittal of different types of submittals for related elements of the work so processing will not be delayed by the need to review submittals concurrently for coordination.
    - a. The Architect reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.
  - 4. Incomplete or partial submittals will be returned without action for resubmittal in proper form.

#### 1.12 SUBMISSION REQUIREMENTS

- A. Prepare shop drawings and supplemental data where called for in accordance with General Conditions and as specified.
- B. Make submittals promptly in accordance with approved schedule, and in such sequence as not to cause delay in Work or in work of another Prime Trade Contractor.
- 1. Allow sufficient time from receipt by Architect, for initial review and comment.
  - 2. Allow additional time if processing must be delayed to permit coordination with subsequent submittals.
    - a. Architect will promptly advise Prime Trade Contractor when submittal being processed must be delayed for coordination.
  - 3. If intermediate submittal is necessary, process same as initial submittal.
  - 4. Allow additional time for reprocessing each submittal.
  - 5. No extension of Contract Time will be authorized because of failure to transmit submittals to Architect sufficiently in advance of Work to permit processing.

- C. Non-Administrative submittals shall be submitted to Architect through Construction Manager.
  - 1. Construction Manager shall maintain log of submittals and will coordinate submittal submissions with approved Submittal Schedule.
  - 2. Prime Trade Contractor shall coordinate submittal submissions with Construction Manager.
  
- D. Accompany submittals with accurately completed transmittal form provided by Architect containing:
  - 1. Date.
  - 2. Project title and number.
  - 3. Contractor's name and address.
  - 4. Number of each shop drawing, product data and sample submitted.
  - 5. Notification of deviations from Contract Documents.
  - 6. Pertinent data. .
  - 7. Submittals not accompanied by such form, or where applicable items on form are not completed, will be returned for resubmittal.
    - a. Sample of transmittal form is included at end of this Section.
  
- E. Use separate transmittal form for each specific item or class of material or equipment for which submittal is required.
  - 1. Transmittal of submittals on various items using single transmittal form will be permitted only when items taken together constitute a manufacturer's "package" or are so functionally related that expediency indicates review of group or package as whole.
  
- F. Schedule submissions at least 20 working days before dates reviewed submittals will be needed.
  - 1. Modifications to 20 working days may be required when excessive number (over 50 drawings) of shop drawings are submitted at one time.
  - 2. No extension of Contract Time will be authorized because of failure to transmit submittals to Architect sufficiently in advance of Work to permit processing.
  
- G. Number of Submittals Required: Submit number stated in each specification section, or as follows:
  - 1. Shop Drawings: Submit one opaque print and upload using Bluebeam.
  - 2. Product Data: Submit one copy of manufacturer's product data.
  - 3. Samples: Submit number stated in each specification section, or, if not stated, submit as specified in Article 1.05 F
  - 4. Warranties, Maintenance Agreements, Industry Standards, as may be modified by Specifications
  - 5. Operating/Maintenance Manuals: One paper copy and one electronic copy.
    - a. Furnish additional electronic copies as may be requested/required by Owner or Facility M&O staff.
  
- H. Submittals shall include:
  - 1. Date and revision dates.
  - 2. Project title and number.
  - 3. Names of:
    - a. Architect/Engineer.
    - b. Construction Manager.
    - c. Prime Trade Contractor.
    - d. SubPrime Trade Contractor.
    - e. Supplier.
    - f. Manufacturer.
    - g. Separate detailer when pertinent.
  - 4. Identification of product or material.
  - 5. Relation to adjacent structure or materials.

6. Field dimensions, clearly identified as such.
  7. Specification section number.
  8. Applicable standards, such as ASTM number or Federal Specification.
  9. A blank space, 8 inch by 3 inch, for Construction Manager, Prime Trade Contractor and Architect stamps.
  10. Identification of deviations from Contract Documents.
  11. On each sheet, provide Prime Trade Contractor's stamp, initialed or signed, certifying to review of submittal, verification of field measurements and compliance with Contract Documents.
  12. Submittals without Prime Trade Contractor's review stamp on each sheet, will be returned, without action, for resubmittal.
- I. Submittals Not Required: Shop drawings of supplemental data are not required unless specifically requested by Architect or as specified.
1. Do not submit shop drawings of supplemental data unless specifically requested by Architect.

### **1.13 SHOP DRAWINGS/PRODUCT DATA**

- A. Review Required: Shop drawings, required or requested, must be submitted to, reviewed, and accepted by Architect before being used by Prime Trade Contractor on Project.
- B. Terms "Shop Drawings" and "Product Data" as used herein also include, but are not limited to:
1. Fabrication, erection, layout and setting drawings.
  2. Manufacturers' standard drawings, descriptive literature, catalogues, brochures, performance and test data, wiring and control diagrams.
  3. Other drawings and descriptive data pertaining to materials, equipment, piping, duct and conduit systems, and methods of construction as may be required to show that materials, equipment, or systems and positions thereof conform to Contract Documents.
- C. Term "manufactured" as used herein, applies to standard units usually mass-produced.
- D. Term "fabricated" means items specifically assembled or made out of selected materials to meet individual design requirement.
- E. Shop Drawings shall establish actual detail of manufactured or fabricated items, indicate proper relation to adjoining Work, and amplify design details of mechanical and electrical equipment in proper relation to physical spaces in structure.
- F. Shop Drawings Delineation: Drawn to scale and completely dimensioned, giving plan together with such sections as are necessary to clearly show construction detail.
1. Include supplemental data or information noted in specification paragraphs requiring them, or as requested by Architect or Owner.
- G. Identification: Shop Drawings shall be entitled with name of Project on each sheet and shall otherwise be identified by listing particular division, section, article or reference of Work pertaining.
1. Submit different items on separate sheets, submittals shall be numbered sequentially.
- H. Furnish to Construction Manager for Architect's approval separate sheets of submittal of each specialty item in following manner:
1. Catalog Cuts: Photocopied or reproduced in other acceptable manner.
    - a. Provide specified number of copies on two sides of 8-1/2" x 11" sheet, identifying only items in question, together with complete descriptive data.
  2. Shop Drawings: Prepare and provide accurately drawn on paper suitable for copying by electrostatic process with specified number of opaque prints of each shop drawing.

3. Identify each sheet with division, section, article, or reference in Contract Documents which covers item submitted for approval.
4. Identify each sheet with Project Name and Architect.
5. Provide Prime Trade Contractor's stamp and signature of approval on each sheet.

#### **1.14 RESUBMISSION REQUIREMENTS**

- A. Shop Drawings:
  1. Revise initial drawings as required and resubmit as specified for initial submittal.
  2. Indicate on drawings any changes which have been made other than those requested by Architect.
- B. Product Data and Samples: Submit new data and samples as required for initial submittal.

#### **1.15 DISTRIBUTION OF SUBMITTALS AFTER REVIEW**

- A. Distribute reproductions of Shop Drawings and copies of Product Data and DSA approved deferred approvals (if any), which carry the Architect/Engineer stamp, with such reasonable promptness as to cause no delay in the work, but no later than three working days of the receipt, to:
  1. Construction Manager/Job Site file.
  2. Record Documents file.
  3. Architect and Architect's Consultants as appropriate
    - a. Structural Engineer (Structural Steel and Metal Deck only).
  4. Owner's Project Inspector.
    - a. Furnish additional copies for Owner's use as may be requested.
  5. Prime Trade Contractor's job file.
    - a. Sub-Prime Trade Contractors.
  6. Other affected Prime Trade Contractors/Sub-Prime Trade Contractors.
  7. Supplier or Fabricator.
  8. Additional copies as Prime Trade Contractor may desire for Prime Trade Contractor's own office files and for distribution by Prime Trade Contractor to Sub-Prime Trade Contractors or vendors.
  9. Exceptions: as noted in Specifications sections.
- B. Distribute samples which carry Architect's review stamp as directed by Architect.

#### **1.16 ARCHITECT'S DUTIES**

- A. As defined in the General Conditions.
- B. The Architect will review submittals as originally submitted, as well as the first resubmittal, at Architect's own cost.
  1. Architect's cost for reviewing additional resubmittals made or required, will be paid by Owner with reimbursement from Prime Trade Contractor by deductive change order.
- C. Action Stamp: The Architect will stamp each submittal with a uniform, self-explanatory action stamp.
  1. The stamp will be appropriately marked, as follows, to indicate the action taken:
    - a. Final Unrestricted Release: Where submittals are marked "No Exception Taken", that part of the Work covered by the submittal may proceed provided it complies with requirements of the Contract Documents.
      - 1) Final acceptance will depend upon that compliance.

- b. Final-But-Restricted Release: When submittals are marked "Make Corrections Noted," that part of the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents.
    - 1) Final acceptance will depend on that compliance.
  - c. Returned for Resubmittal: When submittal is marked "Rejected" or "Revise and Resubmit", do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity.
    - 1) Revise or prepare a new submittal in accordance with the notations; resubmit without delay.
    - 2) Repeat if necessary to obtain a different action mark.
  2. Do not permit submittals marked "Rejected" or "Revise and Resubmit" to be used at the Project site, or elsewhere where Work is in progress.
- D. Unsolicited Submittals: The Architect will return unsolicited submittals to the sender without action.
- E. Architect's Review: Architect will review shop drawings and supplemental data submitted by Prime Trade Contractor only for general design conformance with concept of Project and compliance with information given in Contract Documents.
  1. Review of such submittals is not conducted for purpose of determining accuracy and completeness of other details such as dimensions and quantities, or for substantiating instructions for installation or performance of equipment or systems, which remain responsibility of Prime Trade Contractor as required by Contract Documents.

**PART 2 PRODUCTS (Not Applicable)**

**PART 3 EXECUTION (Not Applicable)**

**\*\* END OF SECTION \*\***

## SECTION 013523

### OWNER SAFETY REQUIREMENTS

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. Safety Program, including general requirements for safety at the Project site relative to the work of this contract
  - 1. The Contractor is reminded that safety procedures for construction are governed by Federal and State laws, including, but not necessarily limited to, the latest amendments of the following:
    - a. Williams-Steiger Occupational Safety & Health Act of 1970, Public Law 91-596, revised July 1, 1998 (OSHA).
    - b. Occupational Safety and Health Standards, Chapter XVII of Title 29, Code of Federal Regulations Part 1900 to Section 1910.999 and Section 1910.100 to end.
    - c. Safety and Health Regulations for Construction, Chapter XIII of Title 29, Code of Federal Regulations, Part 1518.
  - 2. The omission of any governing safety code from the above list shall not relieve the Contractor from exercising full responsibility for construction safety.
  - 3. For the purposes of this Contract, neither the Owner, the Architect, nor their consultants and inspectors are to be considered experts in safety. *Job safety shall be the sole responsibility of the Contractor.*
- B. Prior to any demolition or construction that involves hazardous conditions, the Contractor shall first obtain a permit from the Division of Occupational Safety and Health (DOSH).

##### 1.02 REPORTS

- A. Immediately report accidents, injuries, or health hazards to Owner in writing. This shall not obviate any mandatory reporting under the provisions of the Occupational Safety and Health Act of 1970.
- B. Maintain a copy of the Contractor's Injury and Illness Prevention Program (IIPP) at jobsite office at all times for reference.

#### PART 2 PRODUCTS

##### 2.01 EQUIPMENT

- A. Equipment used or installed in construction shall meet the requirements of applicable codes, including the safety regulations of the State of California, division of Industrial Safety, or equivalent.
  - 1. Provide equipment with required protection devices such as belt and shaft guards, heat protection, insulation, clearances, and warnings.
  - 2. For equipment to be installed, indicate such devices on Shop Drawings reviewed by the Architect.

#### PART 3 EXECUTION

##### 3.01 SAFETY PROGRAM

- A. Safety Program: Employ or designate a qualified Safety Officer who shall have overall safety responsibility for the work at the Project site. This responsibility shall include public safety as well as safety of construction personnel. This Safety Program shall become a part of the Agreement between the Owner and Contractor.
  - 1. Furnish Owner with Name, address, 24-hour telephone number, and pager number of designated Safety Officer.
    - a. When and as directed by the Owner, submit statement of qualifications of designated Safety Officer.



- B. To implement the Safety Program, and to provide safe and healthful working conditions for all persons, general project safety meetings should be conducted at the site at least once each month the course of construction by the Project Superintendent or his designated Safety Officer.
- C. To further implement the Safety Program, each trade should conduct a meeting not less than once each week, to review project safety requirements mandatory for all persons during the coming week. Each foreman should report the agenda and specific items covered to the Project Superintendent, who should incorporate these items in his daily log or report.

### **3.02 SAFETY PROVISIONS**

- A. Observe safety provisions of applicable building codes and other laws as part of the Agreement between the Owner and Contractor.
  - 1. Machinery and equipment shall be guarded and other hazards eliminated in accordance with the State safety requirements.
- B. General Safety Precautions:
  - 1. Arrange for review of site and building construction by local fire department to determine additional safety measures.

**\*\* END OF SECTION \*\***

## SECTION 014224

### REFERENCES

#### PART 1 - GENERAL

##### 1.01 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Approved": The term "approved," when used to convey Architect's action on Contractor's submittals, applications, and requests, is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
  - 1. Or Equal And Or Approved Equal: The terms "or equal" and "or approved equal" shall mean "or equal as approved in writing by the Architect".
- C. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by Architect, requested by Architect, and similar phrases.
- D. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on Drawings or to other paragraphs or schedules in Specifications and similar requirements in the Contract Documents.
  - 1. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the user locate the reference.
- E. "Regulations": The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": The term "furnish" means to supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": The term "install" describes operations at Project site including unloading, temporarily storing, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.
- I. "Installer": An installer is the Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
  - 1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter."
  - 2. It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.
- J. "Project site" is the space available for performing construction activities.
  - 1. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.

##### 1.02 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied

directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.

- B. Publication Dates: Comply with standards in effect as of date of the Contract Documents, unless otherwise indicated.
- C. Conflicting Requirements: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement.
  - 1. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
  - 2. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed.
    - a. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits.
    - b. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements.
    - c. Refer uncertainties to Architect for a decision before proceeding.
- D. Copies of Standards: Each entity engaged in construction on Project must be familiar with industry standards applicable to its construction activity.
  - 1. Copies of applicable standards are not bound with the Contract Documents.
  - 2. Where copies of standards are needed to perform a required construction activity, obtain copies directly from publication source and make them available on request.
- E. Abbreviations and Acronyms for Industry Organizations: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities indicated in Gale Research's "Encyclopedia of Associations" or in Columbia Books' "National Trade & Professional Associations of the U.S."
- F. Abbreviations and Acronyms for Code Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.
  - 1. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

IAPMO International Association of Plumbing and Mechanical Officials  
www.iapmo.org (909) 595-8449

ICC International Code Council  
www.iccsafe.org (800) 422-7233 or Fax (202) 783-2348

ICC International Code Council - Los Angeles Regional Office  
www.iccsafe.org (800) 422-7233 or Fax (562) 908-5524

- G. Abbreviations and Acronyms for Federal Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.
  - 1. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CFR Code of Federal Regulations  
www.access.gpo.gov/nara/cfr (202) 512-1800

OSHA Occupational Safety and Health Administration  
(See CFR 29) www.osha.gov (202) 219-5000

- H. Abbreviations and Acronyms for State Government Agencies: Where abbreviations and acronyms are used in Specifications or other Contract Documents, they shall mean the recognized name of the entities in the following list.
1. Names, telephone numbers, and Web site addresses are subject to change and are believed to be accurate and up-to-date as of the date of the Contract Documents.

CAPUC State of California, Public Utilities Commission  
www.cpuc.ca.gov (415) 703-2782

**PART 2 - PRODUCTS (Not Used)**

**PART 3 - EXECUTION (Not Used)**

**\*\* END OF SECTION \*\***

## SECTION 014339

### MOCKUPS

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. Requirements for mockups indicated on Contract Drawings to verify selections made under sample submittals and to demonstrate aesthetic effects as well as qualities of materials and execution.
  - 1. Prior to installation in or on building, provide specified mockups identical in every respect to the finished work specified.
  - 2. In accordance with the provisions of Section 017123, provide engineering design required to ensure the structural stability of the mockups.
  - 3. Mockups will be reviewed for approval by cognizant building officials and for acceptance by the Architect. When so approved and accepted, the mockups will become the standard of workmanship by which subsequent work will be evaluated.
- B. Related Sections
  - 1. Section 013300 - Submittal Procedures.
  - 2. Section 017123 - Field Engineering.
  - 3. Additional sections as may be required to complete mockups.

##### 1.02 DEFINITIONS

- A. *Mockups*; Independent structures, installations, or assemblies that represent components of a portion of the facility or site work to demonstrate the coordination and interfacing of different products, such as a window assembly and adjacent wall construction.
  - 1. *Exception: Large wall enclosure assemblies installed directly on a building for approval of appearance, construction quality, or testing may be included under the category of mockups.*
- B. *Field Samples*: Refer to Section 013300 for a general definition of Field Samples.
  - 1. Refer to Article: Field Samples in the various Sections of the Specifications for descriptions of in-place installations for review of materials and systems.
    - a. *Note that these Specifications make a distinction between mockups and field samples.*

##### 1.03 SUBMITTALS

- A. Product Data and Samples: Submit in accordance with the requirements of each respective product Section.
- B. Schedule: Time schedule for the construction of mockups shall be prepared and submitted to the Architect for review prior to construction.
- C. Quality Control Submittals: In accordance with the provisions in Section 013300, submit the following:
  - 1. Design Data: When and as directed by the Architect, engineering design calculations confirming the structural stability of the mockups.

##### 1.04 QUALITY ASSURANCE

- A. Qualifications:
  - 1. Fabricators' and Installers' Qualifications: In accordance with the provisions of the specification Sections for products and materials incorporated into the mockups.
- B. Cost of quality control services occurring outside of 50 mile radius of Project Site will be

reimbursed to the Owner by deductive change order.

- C. Field Representations: During construction of mockup, representatives of the manufactures shall be present on site to coordinate installation.
- D. Prior to installation in or on building, construct mockups for each system and finish required to verify selections make under sample submittals and to demonstrate aesthetic effects as well as qualities of materials and execution. Building mockups shall comply with the following requirements, using materials indicated for final unit of work.
  - 1. *Place mockups on site in the location directed by Architect. Provide mockup consisting of a minimum of two posts, top rail, infill area, and anchorage system; components shall be full height and can be incorporated into the final work.*
  - 2. Notify Architect one week in advance of the dates and times when mockups will be constructed.
  - 3. Demonstrate the proposed range of aesthetic effects and workmanship.
  - 4. Obtain Architect's acceptance of mockups before start of final unit of work.
  - 5. Retain and maintain mockups during construction in an undisturbed ondition as a standard for judging the completed work.
    - a. *Accepted mockups in an undisturbed condition at the time of substantial Completion may become part of the completed work.*

## 1.05 SCHEDULING

- A. Notify Architect when construction of mockups are started. Furnish progress reports to Architect for the scheduling of inspections.
- B. Visual examination of the mockups during construction will be made by the Architect and other entities representing incorporated materials.
- C. After approximately 50 percent of each mockup has been build, request the Architect's preliminary review before completion. Incorporate changes or variations requested by the Architect into mockups during their construction and prior to their completion, insofar as possible.
- D. Obtain the Architect's acceptance of visual qualities of mockups before commencing the corresponding work for the Project, revise the updated Construction Schedule to reflect required revisions to mockups.
- E. Schedule field tests for performance of glazing systems.
- F. Should mockups fail to meet the Architect's approval or performance testing, partially or completely, they shall be taken down or dismantled, and reconstructed to the extent necessary, until acceptance has been obtained.
- G. Time the completion and reworking of mockups necessary to obtain acceptance to avoid delay in the construction schedule of the Project. Update the Construction Schedule to reflect required revisions to mockups.
- H. Retain and maintain mockups during construction to serve as a standard for judging work incorporated into the Project. Do not alter, remove or destroy mockups until their removal has been authorized by the Architect.

## PART 2 PRODUCTS

### 2.01 MATERIALS AND COMPONENTS

- A. Materials and finishes shall comply with the requirements specified in the various applicable Sections of the Specifications, and shall match previously submitted and approved samples.
- B. Mockups shall incorporate all related construction materials and finishes having a visual or

technical effect upon the completed work.

## **2.02 MOCKUPS**

- A. Provide full size mockups of paving construction in accordance with mockup schedule on Architectural Drawings.
  - 1. Concrete paving, including all decorative paving.
  - 2. Other building mockups as described on Contract Drawings

## **PART 3 EXECUTION**

### **3.01 INSTALLATION**

- A. Install materials in a manner that will duplicate the appearance in the completed building.
  - 1. In constructing mockups, take measures to insure the safety of Project personnel and the public.
  - 2. Construct mockups using same construction personnel, means, and methods as intended for use on actual project.
  - 3. Mockups shall be constructed in accordance with details indicated on the drawings and approved Shop Drawings.
  - 4. Mockups shall be located where specified or directed, and shall not be built "in place": as part of the permanent construction.

### **3.02 INSTALLATION**

- A. Maintain mockups during course of construction or until removal is directed.
- B. Repair damage to mockups immediately upon occurrence. Maintain mockups and surrounding site in a safe and clean condition

### **3.03 REMOVAL**

- A. Remove mockups at the completion of the work in a manner that shows no evidence of mockup's previous existence. Complete site work at area of mockup in accordance with Contract Drawings.

**\*\* END OF SECTION \*\***

**SECTION 014500**

**QUALITY CONTROL**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Administrative and procedural requirements for quality control services.
- B. Quality control services include inspections, tests, and related actions, including reports performed by Contractor, by independent agencies, and by governing authorities.
  - 1. They do not include contract enforcement activities performed by Architect.
- C. Inspection and testing services are required to verify compliance with requirements specified or indicated.
  - 1. These services do not relieve Contractor of responsibility for compliance with Contract Document requirements.
- D. Requirements for Contractor to provide quality-control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- E. Related requirements specified elsewhere
  - 1. Inspections and testing required by laws, ordinances, rules, regulations or orders of public authorities: General Conditions.
  - 2. Certification of Products: Respective specification sections.
  - 3. Test, Adjust and Balance of Equipment: Respective specification sections.
  - 4. Tests and Standards: Each specification section listed.
  - 5. Requirements for repair and restoration of construction disturbed by inspection and testing activities: Section 017329.

**1.02 SELECTION OF TESTING AGENCY**

- A. Owner will select and employ a consultant, testing laboratory or inspection agency to perform specified services.
- B. Testing agency must have approval of Owner
- C. Employment of Testing Laboratory shall in no way relieve Contractor of his obligation to perform Work in accord with Contract.

**1.03 PROJECT INSPECTOR**

- A. Owner will select and employ Project Inspector to perform specific duties for the project.

**1.04 PAYMENT**

- A. Owner will pay for quality control services.
- B. Cost of quality control services occurring outside of 50 mile radius of Project Site will be reimbursed to the Owner by deductive change order.

**1.05 DEFICIENCIES**

- A. Cost of tests or inspections due to the following will be reimbursed to the Owner by deductive change order.
  - 1. Retesting because of failure of initial samples.
  - 2. Additional costs due to overtime work or extra shifts work because of improper scheduling of work or of delivery of materials by Contractor.



3. Failure to properly notify laboratory.
4. Changes in sources, lots or suppliers of materials after original tests.
5. Changes in methods or materials of construction requested by Contractor that require testing, inspection, or other related services in excess of that required by original design.
6. Concrete mix designs in excess of first successful design for each concrete type.
7. Overtime or extra shift work requiring overtime work by Owner's Inspector.

#### **1.06 TESTS AND INSPECTION**

- A. Selection of the material required to be tested shall be by the laboratory or the Owner's representative and not by the Contractor.
- B. The Contractor shall notify the Owner's representative a sufficient time in advance of the manufacture of material to be supplied by him under the Contract Documents, which must by terms of the Contract be tested, in order that the Owner may arrange for the testing of same at the source of supply.
- C. Material shipped by the Contractor from the source of supply prior to having satisfactorily passed such testing and inspection or prior to the receipt of notice from said representative that such testing and inspection will not be required shall not be incorporated in the job.

#### **1.07 TESTING AGENCY SERVICES**

- A. Cooperate with Architect and Contractor; provide qualified personnel promptly on notice.
- B. Perform specified inspections, sampling and testing of materials and methods of construction:
  1. Comply with specified standards; ASTM, other recognized authorities, and as specified.
  2. Ascertain compliance with requirements of Contract Documents.
  3. Comply with requirements of Title 24, Part 1, Sections 4-333 and 4-335.
- C. Promptly notify Architect and Contractor, of irregularities or deficiencies of work which are observed during performance of services.
- D. Attend pre-construction conference and progress meetings when requested by Architect or Owner.
- E. Perform additional services as required by the Owner.
- F. Submittals: Promptly submit copies of reports of inspections and tests, mill analysis, concrete mix designs and certifications per applicable sections of the specification.
  1. Comply with testing requirements as called for in Contract.
  2. One copy of all test reports shall be forwarded to the owner by the testing agency.
    - a. Such reports shall include all tests made, regardless of whether such tests indicate that the material is satisfactory or unsatisfactory.
    - b. Samples taken but not tested shall also be reported.
    - c. Records of special sampling operations as required shall also be reported.
    - d. The reports shall show that the material or materials were sampled and tested in accordance with the requirements of Title 24 and with the approved specifications.
    - e. Test reports shall show the specified design strength.
      - 1) They shall also state definitely whether or not the material or materials tested comply with requirements.
  3. Verification of Test Reports: Each testing agency shall submit to the appropriate agency a verified report in duplicate covering all of the tests which are required to be made by that agency during the progress of the project.
    - a. Such report shall be furnished each time that work on the project is suspended, covering the tests up to that time, and at the completion of the project, covering all tests.
    - b. Comply with Title 24, Part 1, Sections 4-335(e) and 4-336.
  4. Submit one copy of all test reports to:
    - a. Owner.
    - b. Architect.
    - c. Structural Engineer.

- d. Contractor.
  - e. Inspector.
  - f. Construction Manager
- G. Report Data: Written reports of each inspection, test, or similar service include, but are not limited to, the following:
- 1. Date of issue.
  - 2. Project title and number.
  - 3. Name, address, and telephone number of testing agency.
  - 4. Dates and locations of samples and tests or inspections.
  - 5. Names of individuals making the inspection or test.
  - 6. Designation of the Work and test method.
  - 7. Identification of product and Specification Section.
  - 8. Complete inspection or test data.
  - 9. Test results and an interpretation of test results.
  - 10. Ambient conditions at the time of sample taking and testing.
  - 11. Comments or professional opinion on whether inspected or tested Work complies with Contract Document requirements.
  - 12. Name and signature of laboratory inspector.
  - 13. Recommendations on retesting.
- H. Testing Agency is not authorized to:
- 1. Release, revoke, alter, or enlarge requirements of Contract Documents or approve or accept any portion of the work.
  - 2. Perform any duties of the Contractor.

#### **1.08 INSPECTION BY THE OWNER**

- A. The Owner and his representative shall at all times have access for the purpose of inspection to all parts of the work and to the shops wherein the work is in preparation.
- 1. Contractor shall at all times maintain proper facilities and provide safe access for such inspection.
- B. The Owner shall have the right to reject materials and workmanship which are defective, or to require their correction.
- 1. Rejected workmanship shall be satisfactorily corrected and rejected materials shall be removed from the premises without charge to the Owner.
  - 2. If the Contractor does not correct such rejected work within a reasonable time, fixed by written notice, the Owner may correct same and charge the expense to the Contractor.
- C. Should it be considered necessary or advisable by the Owner at any time before final acceptance of the entire work to make an examination of work already completed by removing or tearing out the same, the Contractor shall on request promptly furnish all necessary facilities, labor and materials.
- 1. If such work is found to be defective in any respect due to fault of the Contractor or his subcontractor, he shall defray all expenses of such examinations and of satisfactory reconstruction.
  - 2. If, however, such work is found to meet the requirements of the Contract, the additional cost of labor and material necessarily involved in the examination and replacement shall be allowed the Contractor.

#### **1.09 WORK BY OWNER'S INSPECTOR**

- A. Concrete slump tests.
- B. Concrete cylinder samples.
- C. Continuous inspection of masonry work.
- D. Mortar and grout prism.

### **1.10 CONTRACTOR'S RESPONSIBILITIES**

- A. Cooperate with agencies performing required inspections, tests, and similar services, and provide reasonable auxiliary services as requested.
- B. Provide to agency, selected preliminary representative samples of materials to be tested, in required quantities or assist the agency in taking samples.
- C. Furnish casual labor and facilities:
  - 1. To provide access to the Work.
  - 2. To obtain and handle samples at the site.
  - 3. To facilitate inspections and tests.
  - 4. For agency's exclusive use for storage and curing of test samples.
  - 5. To provide security and protection of samples and test equipment at the Project Site.
- D. Notify agency sufficiently in advance of operations to permit assignment of personnel and scheduling of tests.
- E. Coordination: Coordinate the sequence of activities to accommodate required services with a minimum of delay.
  - 1. Coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.
  - 2. The Contractor is responsible for scheduling times for inspections, tests, taking samples, and similar activities.

### **1.11 MISCELLANEOUS TESTS AND INSPECTIONS**

- A. Soil and Compaction Testing and Inspection: Performed by soils engineer employed and paid by Owner.
- B. Special Tests: Special tests requested by Owner or Architect will be paid for by Owner, except that if such tests fail, the costs shall be deducted from the Contract Price by Change Order.

## **PART 2 PRODUCTS (Not Applicable)**

## **PART 3 EXECUTION**

### **3.01 REPAIR AND PROTECTION**

- A. General: Upon completion of inspection, testing, sample taking and similar services, repair damaged construction and restore substrates and finishes. Comply with requirements of Section 01732.
- B. Protect construction exposed by or for quality-control service activities, and protect repaired construction.
- C. Repair and protection is Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing, or similar services.

### **3.02 SCHEDULE OF TESTS, INSPECTIONS AND METHODS**

- A. Chapters and Articles refer to California Code of Regulations, Title 24, Part 2, 2010.
- B. Excavations, Foundations and Retaining Walls (Chapters 17A and 18A):
  - 1. Site Grading: 1803A.3
  - 2. Compacted Fill Material: 1803A.5
- C. Inspection:
  - 1. Site Soil and Backfill: 1704A.7
- D. Concrete (Chapters 17A and 19A):

1. Materials:
  - a. Portland Cement Tests: 1903A.1, 1916A.1
  - b. Concrete Aggregates: 1903A.3
  - c. Reinforcing Bars: 1903A.4, 1916A.2
  - d. Batch Plant Inspection and Tests: 1704A.4.3
  - e. Waiver of Batch Plant Inspection and Material Tests: 1704A.4.4, 1916A.4
2. Concrete Quality:
  - a. Proportions of Concrete: 1905A.1.1
  - b. Strength Tests of Concrete: 1905A.6
  - c. Mixing: 1905A.8
  - d. Placing Record: 1704A.4.7
3. Concrete Inspection:
  - a. Job Site Inspection: 1704A.4, Table 1704A.4, 1905A.7.
  - b. Batch Plant or Weighmaster Inspection: 1704A.4.3
  - c. Reinforcing Bar Welding Inspection: 1704A.4.2
  - d. Post Installed Anchors: 1704A, 1916A.8
  - e. Pre-Placement Record: 1704A.4.6
- E. Exterior Walls (Chapter s14 and 17)
  1. Special Requirements for Anchored and Adhered Veneer: 1408.2
  2. Testing of Anchored and Adhered Veneer: 1408.2.1
  3. Inspection of Anchored and Adhered Veneer: 1408.3 and 1704A.5.1
- F. Structural Steel (Chapters 17A and 22A):
  1. Materials:
    - a. Structural Steel, Cold Formed Steel: 2212A.1.
    - b. Material Identification: 2203A
  2. Inspection of Structural Steel:
    - a. Structural and Cold Formed Steel: 1704A.3
    - b. Tests of High Strength Bolts, Nuts, Washers: 2212A.2
    - c. Tests of End Welded Studs: 2212A.3
    - d. Shop Fabrication Inspection: 1704A.3.2.1
    - e. Welding Inspection: 1704A.3.1
- G. Aluminum (Chapters 17A and 20):
  1. Materials:
    - a. Alloys: 2002.1
    - b. Identification: 2002.1
  2. Inspection:
    - a. Welding: 1704A.3.1.1, 2003.1
- H. Miscellaneous Fasteners:
  1. Anchorage test as shown on Drawings and specified in respective Sections.

**\*\* END OF SECTION \*\***

**SECTION 015200**

**TEMPORARY FACILITIES AND CONTROLS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Temporary facilities and controls required for this work include, but are not necessarily limited to:
  - 1. Temporary utilities such as heat, water, electricity, and telephone.
  - 2. Field offices and sheds.
  - 3. Sanitary facilities.
  - 4. Construction aids.
  - 5. Barriers.
  - 6. Temporary controls.
  - 7. Temporary project signs.
- B. Project Identification sign: Provided by Construction Manager.
  - 1. Comply with requirements in Article 2.07.B.

**1.02 RELATED WORK**

- A. Equipment furnished by subcontractors shall comply with requirements of pertinent safety regulations.
  - 1. Ladders, planks, hoists, and similar items normally furnished by individual trades in execution of their own portions of work are not part of this section.
- B. Permanent installation and hook-up of various utility lines are described in other pertinent sections.

**1.03 PRODUCT HANDLING**

- A. Use means necessary to maintain temporary facilities and controls in proper and safe condition throughout progress of Work.

**1.04 SUBMITTALS**

- A. Shop drawings: Project Identification Sign.

**PART 2 PRODUCTS**

**2.01 UTILITIES**

- A. Water:
  - 1. Provide necessary temporary water lines and water supply and, upon completion of Work, remove such temporary facility.
  - 2. Provide meter at hydrant. Owner will provide water at no cost.
- B. Electricity:
  - 1. Provide necessary temporary wiring and, upon completion of Work, remove such temporary facility.
  - 2. Provide area distribution boxes so located that individual trades may furnish and use 100 foot maximum length extension cords to obtain adequate power and artificial lighting at points where needed for work, inspection, and safety.
- C. Heating: Provide and maintain heat necessary for proper conduct of operations needed in Work.

**2.02 FIELD OFFICES AND SHEDS**

- A. Contractor's Facilities:
  - 1. Provide field office building and sheds adequate in size and accommodation for Contractor's offices, supply, and storage.

2. Provide and maintain on premises, where directed, watertight storage sheds for materials which might be damaged by weather, including storage facilities for concrete test samples or other material samples required for Work.
- B. Owner's Inspector's Office: (Furnished by General Trades Contractor)
  1. Provide lockable office at least 10 feet by 12 feet in dimension with lockable operable window, serviceable finishes, lighting, heating, and air conditioning, for use by Owner's Inspector.
  2. Furnish with lockable desk, reference table, lockable 4-drawer file cabinet, plan rack, and two chairs.
- C. Provide and maintain on premises, where directed, watertight storage sheds for all materials which might be damaged by weather, including storage facilities for concrete test samples or other material samples required for Work.

### **2.03 SANITARY FACILITIES**

- A. Sanitary facilities include temporary toilets, wash facilities, and drinking-water fixtures.
  1. Comply with regulations and health codes for type, number, location, operation, and maintenance of fixtures and facilities.
  2. Install where facilities will best serve Project's needs.
  3. Provide toilet tissue, paper towels, paper cups, and similar disposable materials for each facility.
  4. Provide covered waste containers for used material.
  5. This service provided by general trades package.
- B. Temporary Toilet Units: Provide self-contained, single-occupant toilet units of chemical, aerated recirculation, or combustion type.
  1. Provide units properly vented and fully enclosed with a glass-fiber-reinforced polyester shell or similar nonabsorbent material.
  2. Provide separate facilities for male and female personnel.
  3. Maintain in a sanitary condition at all times.
  4. This service provided by general trades package.
- C. Wash Facilities: Install wash facilities supplied with potable water at convenient locations for personnel involved in handling materials that require wash-up for a healthy and sanitary condition.
  1. Dispose of drainage properly.
  2. Supply cleaning compounds appropriate for each condition.
  3. Provide safety showers, eyewash fountains, and similar facilities for convenience, safety, and sanitation of personnel.
  4. This service provided by general trades package.
- D. Drinking-Water Facilities: Provide containerized, tap-dispenser, bottled-water drinking-water units, including paper supply. Each contractor to provide drinking water for its own forces in compliance with OSHA.

### **2.04 CONSTRUCTION AIDS**

- A. Provide construction aids and equipment required by personnel and to facilitate execution of Work.
  1. Including, but limited to, scaffolds, staging, ladders, ramps, runways, platforms, railing, hoists, cranes, chutes and other such facilities and equipment.
- B. Provide necessary facilities and means of access to parts of structure so that Building Inspectors, Special Inspectors, Architect, and Structural Engineer may inspect portions of structure.
  1. Means of access includes, but is not limited to, ladders and scaffolds.

### **2.05 BARRIERS**

- A. Temporary Fencing: Provide temporary fence around entire construction area as required for safety and protection.
  1. Construction: Provide chain link fencing not less than 6 feet in height, complete with metal or wood posts and required bracing, and with suitably locked truck and pedestrian gates as

- required.
  - 2. Provide opaque, fabric or plastic windscreen material, full height and run of fence, including gates.
  - 3. This service to be provided by General Trades Contractor
- B. Tree and Plant Protection: Preserve and protect existing trees and plants at site which are designated to remain, and those adjacent to site.
- 1. Provide temporary barriers around each, or around each group of trees or plants.
  - 2. Comply with additional requirements specified in Section 02230.

## 2.06 TEMPORARY CONTROLS

- A. Provide and maintain methods, equipment, and temporary construction, as necessary to provide controls over environmental conditions at construction site and related areas under Contractor's control; remove physical evidence of temporary facilities at completion of work.
- 1. Comply with requirements of authorities having jurisdiction.
    - a. California Code of Regulations (CCR), Title 24, 2010 Edition, Part 9.  
California Fire Code (CFC), Article 87 for duration of Project.
  - 2. Contractor shall be responsible for specific safety requirements by governmental authorities, including requirements of latest Occupational Safety and Health Act (OSHA) and CAL OSHA.
- B. Temporary Fire Protection:
- 1. Comply with requirements of authorities having jurisdiction, and following:
    - a. California Code of Regulations (CCR), Title 24, 2010 Edition, Part 9,  
California Fire Code (CFC), Article 87 for duration of Project.
  - 2. Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses.
    - a. Comply with NFPA 241.
  - 3. Prohibit smoking in construction areas.
  - 4. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
  - 5. Develop and supervise overall fire prevention and protection program for personnel at Project Site.
    - a. Review needs with local fire department/County Fire Authority and establish procedures to be followed.
    - b. Instruct personnel in methods and procedures.
    - c. Post warnings and information.
- C. Dust Control: Provide positive methods and apply dust control materials to minimize raising dust from construction operations, and provide positive means to prevent air-borne dust from dispersing into atmosphere.
- D. Water Control: Provide methods to control surface water to prevent damage to Project, site, or adjoining properties.
- 1. Control fill, grading and ditching to direct surface drainage away from excavations, pits, tunnels and other construction areas; and to direct drainage to proper runoff.
  - 2. Provide, operate and maintain hydraulic equipment of adequate capacity to control surface water.
  - 3. Dispose of drainage water in a manner to prevent flooding, erosion, or other damage to any portion of site or to adjoining areas.
- E. Debris Control: Maintain all areas under Contractor's control free of extraneous debris.
- 1. Prevent accumulation of debris at construction site, storage and parking areas, or along access roads and haul routes.
  - 2. Provide containers for deposit of debris as specified in Section 017413.
- F. Pollution Control:
- 1. Provide methods, means and facilities required to prevent contamination of soil, water and

- atmosphere by discharge of noxious substances from construction operations.
2. Provide equipment and personnel to perform emergency measures required to contain spillages, and to remove contaminated soils and liquids.
- G. Temporary Fire Protection: Comply with CFC 2001 Edition, Article 87 and following for duration of Project.
1. Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
  2. Prohibit smoking in construction areas.
  3. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
  4. Develop and supervise an overall fire prevention and protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
- H. Excavate and dispose of contaminated earth off-site, and replace with suitable compacted fill and topsoil.
1. Take special measures to prevent harmful substances from entering public waters.
    - a. Prevent disposal of wastes, effluents, chemicals, and other such substances in sanitary or storm sewers.

## **2.07 PROJECT IDENTIFICATION AND TEMPORARY SIGNS**

- A. Prepare project identification and other signs of size indicated; install signs where indicated to inform public and persons seeking entrance to Project.
1. Support on posts or framing of preservative treated wood or steel.
  2. Do not permit installation of unauthorized signs.
- B. Project Identification Sign: Size, design and information as specified and as shown on drawing bound in with this section.
1. Engage an experienced sign painter to apply graphics.
  2. Finish with 3 coats of exterior enamel paint.
  3. Locate sign as indicated or directed.
- C. Provide temporary on-site informational signs.
1. As required by codes, laws and regulatory agencies.
  2. To identify key elements of construction facilities.
  3. To direct traffic.

## **2.08 OWNERSHIP OF TEMPORARY FACILITIES AND CONTROLS**

- A. Items provided by Contractor under this section shall remain property of Contractor and shall be removed from job site immediately upon completion of Work.

## **PART 3 EXECUTION**

### **3.01 MAINTENANCE AND REMOVAL**

- A. Maintain temporary facilities and controls as long as needed for safe and proper completion of Work.
- B. Remove such temporary facilities and controls as rapidly as progress of Work will permit, or as directed by Architect.

**\*\* END OF SECTION \*\***



**SECTION 015350  
PROTECTION OF INSTALLED WORK**

**PART 1 - GENERAL**

**1.01 REQUIREMENTS INCLUDED**

- A. Protection for Products Including Owner-Provided Products, After Installation.
- B. Protection of Existing Utilities and Interference.

**1.02 EXISTING UTILITIES**

- A. The known existing utilities are shown on the drawings in their approximate location and the Contractor shall exercise care in avoiding damage to these facilities as the Contractor will be held responsible for their repair if damaged. Hand excavation shall be utilized when digging in close proximity to existing utilities. The Construction Manager does not guarantee that all utilities or obstructions are shown or that the locations indicated are accurate.
- B. No work is to be performed on energized electrical equipment unless scheduled with the Construction Manager. The Construction Manager reserves the right to specify specific conditions for all work involving energized high voltage electrical equipment, and its scheduled modification proposal.
- C. If interferences occur at locations other than the general locations shown on the plans, and such utilities are damaged before their locations have been established, or create an interference, the Contractor shall notify the Construction Manager and a method for correcting said interference shall be supplied by the Construction Manager. Payment for additional work due to interferences not shown on the plans shall be in accordance with the General Conditions.
- D. Drawings showing location of equipment, piping, etc., are diagrammatic and job conditions will not always permit their installation in location shown. When this situation occurs, bring to Construction Manager's attention immediately to determine relocation in joint conference.
- E. Information shown relative to existing power and signal service is based upon available records and data but shall be regarded as approximate only. Minor deviations found necessary to conform with actual locations and conditions shall be made without extra cost to the Owner.

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

**3.01 PROTECTION AFTER INSTALLATION**

- A. Adequately protect all installed equipment and materials until completion and acceptance by Construction Manager.
- B. Protect installed products and control traffic in immediate area to prevent damage from subsequent operations.
- C. Provide protective coverings at walls, projections, corners, and jambs, sills, and soffits of openings in and adjacent to traffic areas.

- D. Cover walls and floors of elevator cabs, and jambs of cab doors, when elevators are used by construction personnel.
- E. Protect finished floors and stairs from dirt, wear, and damage:
  - 1. Secure heavy sheet goods or similar protective materials in place, in areas subject to foot traffic.
  - 2. Lay planking or similar rigid materials in place, in areas subject to movement of heavy objects.
  - 3. Lay planking or similar rigid materials in place in areas where storage of products will occur.
- F. Protect waterproofed and roofed surfaces:
  - 1. Restrict use of surfaces for traffic of any kind, and for storage of products.
  - 2. When an activity is mandatory, obtain recommendations for protection of surfaces from manufacturer. Install protection and remove on completion of activity. Restrict use of adjacent unprotected areas.
- G. Restrict traffic of any kind across planted lawn and landscape areas.
- H. Care shall be exercised to prevent damage to adjacent facilities including walks, curbs, and gutters; where equipment will pass over these obstructions suitable planking shall be placed, and damaged facilities, due to the Contractor operations, shall be removed and replaced at the Contractor's expense.
- I. Contractor shall be responsible for overloading of any part or parts of structures beyond their safe calculated carrying capacities by placing of materials, equipment, tools, machinery or any other item thereon. No loads shall be placed on floors or roofs before they have attained their permanent and safe strength.
- J. All existing improvements and facilities shall be protected from damage of any type resulting from the operations, equipment or workers of the Contractor during the course of construction.
- K. All damaged work shall be replaced, repaired and restored to its original condition without additional cost to the Owner.
- L. Where existing utilities are damaged or disrupted on account of any act, omission, neglect or misconduct by the Contractor in the manner or method of executing the work, or due to non-execution of work, such damage shall be immediately repaired to maintain operation regardless of the time of occurrence.
- M. Provide temporary construction necessary for protection of the building and its parts. Close in buildings as soon as possible as protection from the weather and vandalism. Protect existing buildings and controlled temperature areas from damage.
- N. Protect doors, millwork and mill counters and cases and hardware from damage, including abrading and scratching of finishes.
- O. Protect doors and frames and hardware from mechanical damage and damage to anodic coatings.

- P. Remove protective coatings, wrappings, temporary coverings, etc., as required to leave work in condition for painting and finishing, final cleaning, etc.
- Q. Protect all exterior work, including existing asphalt paving and landscaping and building.
- R. Repair or replace all damaged work promptly as directed by Construction Manager.

**\*\* END OF SECTION \*\***

**SECTION 015600**  
**TEMPORARY CONTROLS**

**PART 1 - GENERAL**

1.01 REQUIREMENTS INCLUDED

- A. Dust Control.
- B. Erosion and Sediment Control.
- C. Noise Control.
- D. Pollution Control.
- E. Waste Control.

1.02 RELATED REQUIREMENTS

- A. Section 01570 - Traffic Regulation.

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

3.01 DUST CONTROL

- A. The Contractor shall take appropriate steps throughout the term of the project to prevent airborne dust due to work under this contract. Water shall be applied wherever practical to settle and hold dust to a minimum, particularly during demolition and moving of materials. No chemical palliatives shall be used without permission of the Construction Manager.
- B. Execute Work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere.

3.02 EROSION AND SEDIMENT CONTROL

- A. Plan and execute construction by methods to control surface drainage from cuts and fills, from borrow and waste disposal areas. Prevent erosion and sediment.
- B. Minimize amount of bare soil at one time.
- C. Provide temporary measures such as berms, dikes, and drains, to prevent water flow.
- D. Construct fill and waste areas by selective placement to avoid erosive surface silts or clays.
- E. Periodically inspect earthwork to detect evidence of erosion and sedimentation; promptly apply corrective measures.

3.03 NOISE CONTROL

- A. Control noise as directed by Construction Manager.

3.04 POLLUTION CONTROL

- A. The use of noxious or toxic materials for all applications in alterations or work in buildings occupied by Owner personnel shall be done after proper notification to the people in that building and on the weekends or other unoccupied days.
- B. Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations.

3.05 WASTE CONTROL

- A. All waste materials resulting from the process of clearing and construction shall be disposed of as follows:
  - 1. All refuse and debris, combustible and incombustible, resulting from the processes of construction, shall be removed from the Owner's property as described in the GENERAL CONDITIONS. The Contractor shall not use any refuse container belonging to the Owner.
  - 2. Solvents: Solvents, oils and any other material which may be harmful to plant life shall be disposed of in containers and removed from the site. At completion of work, any soil contaminated by contractor shall be removed and replaced with good soil by Contractor at no expense to the Owner.

**\*\*END OF SECTION\*\***

## SECTION 015630

### STORM WATER POLLUTION CONTROL

#### PART 1 - GENERAL

##### 1.01 SECTION INCLUDES

- A. Requirements for compliance with Storm Water Pollution Prevention Plan (SWPPP) developed specifically for this Project.
  - 1. SWPPP satisfies mandates of Federal Clean Water Act as enforced by State of California Water Resources Control Board and its Regional Water Quality Boards.
- B. Related Sections
  - 1. Other Sections of this Specification shall comply with requirements of this Section.
  - 2. SWPPP requires compliance of all trades on Project that use or manipulate materials of any nature can potentially enter natural storm-water drainage system.
  - 3. Representative materials controlled by SWPPP include erosion of native soils and fill materials, leakage or spills from construction vehicles and machinery, stored fuels, concrete truck washout, chemical treatments, curing, compounds, paints, plasters, paving materials, adhesives and sealants, trash and general construction debris, pesticides, fertilizers, and any other material which can be carried by running water or percolate into earth.
  - 4. Note: Contractor to use the existing Storm Water Pollution Prevention Plan (SWPPP), used for Site Preparation in 2003: WDID # 6B 36 C317959.

##### 1.02 REGULATORY BACKGROUND

- A. After January 1, 2001, as required by Federal Water Pollution Control Act (Clean Water Act) and regulations of U.S. Environmental Protection Agency and of State of California Water Resources Control Board, any construction activity of ONE acre or more must be covered by National Pollutant Discharge Elimination System (NPDES) permit.
- B. The Act further decrees fines of as much as \$27,500 per day per violation.
- C. It is implicit that SWPPP satisfies requirements of NPDES permit.
- D. If Owner is cited for violation of Clean Water Act due to failure of SWPPP to address requirement, Contractor shall not be liable for any fines or penalties that might be imposed by regulatory agency, nor shall he be obligated to perform mandated corrective measures at his own expense.
- E. If Owner, Architect, or Owner's Inspector becomes aware of violations of SWPPP, they will immediately inform Contractor in writing. Contractor shall immediately cease violation and shall restore site, at his own expense, to same conditions it was in before violation, to approval of Owner. Contractor shall bear any fees or fines if Owner is cited for Contractor's violation of SWPPP.
- F. Should Contractor continue to violate requirements of SWPPP, or refuse to comply, or refuse to repair results of violation to Owner's approval, for purposes of this Contract it shall be considered as any other violation of Contract. Owner will take necessary measures as set forth in General Conditions.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Provide all temporary and permanent storm water pollution prevention equipment, material, and facilities as required by or as necessary to comply with SWPPP.

PART 3 - EXECUTION

3.01 IMPLEMENTATION

- A. Measures required in SWPPP shall be executed as dictated by SWPPP itself.
- B. Contractor shall prepare and submit Notice of Intent to comply with terms of this General Permit prior to commencement of construction activity.
1. An annual fee of \$700.00, paid by Contractor shall accompany Notice of Intent. Notice of Intent will not be processed if not accompanied by fee.
  2. Send Notice of Intent and annual fee to:  
State Water Resources Control Board (SWRCB)  
Division of Water Quality  
Attention: Storm Water Section, Permit Unit  
P.O. Box 1977  
Sacramento, CA 95812-1977.
  3. Copies of General Permit and Notice of Intent form may be obtained from California Regional Water Control Board, Santa Ana Region, 2010 Iowa Avenue, Suite 100, Riverside, CA 92507-2409, 909/782-4130.
  4. Concurrent with commencement of construction activities, Contractor shall develop, implement and retain at project site, a Storm Water Pollution Protection Plan and a monitoring program and reporting plan in accordance with the General Permit.
  5. For information, call State Water Board's Construction Activity Storm Water Hotline at 916/657-1146.
- C. During construction, make changes as necessary for proper functioning of SWPPP measures.
- D. At completion of work, Contractor shall remove temporary SWPPP measures and dispose of any pollutants in legal manner offsite, or as otherwise required by SWPPP.

**\*\* END OF SECTION \*\***

**SECTION 015700**

**TRAFFIC CONTROL**

**PART 1 - GENERAL**

**1.01 REQUIREMENTS INCLUDED**

- A. Construction Parking Control.
- B. Flagmen.
- C. Flares and Lights.
- D. Haul Routes.
- E. Traffic Signs and Signals.
- F. Removal.

**1.02 NOTICES**

- A. The Contractor shall adopt all practical means to minimize interference to traffic. Access to other facilities in the area shall be maintained at all times. The Contractor shall provide a schedule of any planned closing of the streets for approval by the Construction Manager and shall give a minimum of fourteen (14) calendar days' notice before closing any street or access.
- B. Contractor shall notify Construction Manager of all major pickups and deliveries which require use of controlled access fire lane. Keys to barriers will be provided as needed to allow use of fire lane.
- C. All major pick up and delivery operations shall occur in total before or after the normal 7:00 a.m. to 4:00 p.m. working hours.

**PART 2 - PRODUCTS**

**2.01 SIGNS, SIGNALS AND DEVICES**

- A. Traffic Control Signs: As approved by local jurisdictions.
- B. Traffic Cones and Drums, Flares and Lights: As approved by local jurisdictions.
- C. Flagmen Equipment: As required by local jurisdictions.
- D. The Contractor shall furnish at his/her expense all barricades, lights, and flagmen required to control traffic and shall provide and maintain suitable temporary barricades, fences, directional signs, or other structures as required for the protection of the public; and maintain from the beginning of twilight throughout the whole of every night on or near the obstructions, sufficient lights and barricades to protect the public, and/or work.

**PART 3 - EXECUTION**

**3.01 CONSTRUCTION VEHICLE PARKING**

- A. Control vehicular parking to prevent interference with public traffic and parking, access by emergency vehicles, and Owner's operations.



- B. Monitor parking of construction personnel's vehicles. Maintain vehicular access to and through parking areas.
- C. Prevent parking on or adjacent to roads or in non-designated areas.

3.02 FLAGMEN

- A. Provide properly trained and equipped flagmen to regulate vehicular traffic when construction operations or traffic encroach on public traffic eaves.
- B. Provide trained and equipped flagmen to regulate pedestrian traffic at all interior locations where interface with Hospital employees or public occurs.
- C. Flagmen shall wear appropriate identifying clothing such as bright colored vests so as to be clearly visible and identifiable as having responsibility for traffic control.

3.03 FLARES AND LIGHTS

- A. Use flares and lights during hours of low visibility to delineate traffic lanes and to guide traffic.

3.04 HAUL ROUTES

- A. Drawings indicate haul routes designated by authorities for use of construction traffic.
- B. Confine construction traffic to designated haul routes.
- C. Provide traffic control at critical areas of haul routes to regulate traffic, to minimize interference with public traffic.

3.05 TRAFFIC SIGNS AND SIGNALS

- A. At approaches to site and on site, install traffic signs and signals at crossroads, detours, parking areas, and elsewhere as needed to direct construction and affected public traffic.
- B. Install and operate traffic control signals to direct and maintain orderly flow of traffic in areas under Contractor's control, and areas affected by Contractor's operations.
- C. Relocate traffic signs and signals as Work progresses, to maintain effective traffic control.

3.06 REMOVAL

- A. Remove equipment and devices when no longer required. Repair damage caused by installation.

**\*\* END OF SECTION \*\***

## SECTION 016000

### PRODUCT REQUIREMENTS

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. Follow Administrative and Procedural Requirements:
  - 1. Selection of products for use in Project
  - 2. Product delivery, storage, and handling
  - 3. Manufacturers' standard warranties on products
  - 4. Special warranties
  - 5. Product substitutions

##### 1.02 RELATED REQUIREMENTS AND SECTIONS

- A. Instructions to Bidders: Procedures for requesting substitutions during bidding period.
- B. Section 014224: References; for applicable industry standards for products specified.
- C. Section 017700: Closeout Procedures; for submitting warranties for contract closeout.
- D. Divisions 2 through 16 Sections for specific requirements for warranties on products and installations specified to be warranted.

##### 1.03 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms "material," "equipment," "system," and terms of similar intent.
  - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation, shown or listed in manufacturer's published product literature, that is current as of date of the Contract Documents.
  - 2. New Products: Items that have not previously been incorporated into another project or facility, except that products consisting of recycled-content materials are allowed, unless explicitly stated otherwise.
    - a. Products salvaged or recycled from other projects are not considered new products.
- B. Substitutions: Changes in products, materials, equipment, and methods of construction required by Contract Documents and proposed by the Contractor. The following are not considered substitutions:
  - 1. Substitutions requested during the bidding period, and accepted by written Addendum prior to opening of bids or award of Contract. (No exceptions.)
  - 2. Revisions to Contract Documents requested by the Owner or Architect.
  - 3. Specified options of products and construction methods included in Contract Documents.
  - 4. Compliance with governing regulations and orders issued by governing authorities.
- C. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "Basis of Design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

- D. **Manufacturer's Warranty:** Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
- E. **Special Warranty:** Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.

#### 1.04 SUBMITTALS

- A. **Substitution Requests** will only be considered prior to bid and must be received by the Owner for review on or before the respective substitution submission cutoff date. Submit three copies of each request for consideration.
  - 1. Identify product or fabrication or installation method to be replaced.
  - 2. Include Specification Section number and title and Drawing numbers and titles.
    - a. Refer to Article 2.02, this Section.
  - 3. **Substitution Request Form.** Use form provided at end of this section. Other forms will not be accepted.
    - a. Requests received without completed Substitution Request Form will be rejected without further review.
  - 4. **Documentation:** Show compliance with requirements for substitutions and the following, as applicable:
    - a. Statement indicating why specified material or product cannot be provided.
    - b. Product identification, including manufacturer's name and address.
    - c. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors, that will be necessary to accommodate proposed substitution.
    - d. Detailed comparison of significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated and warranties.
    - e. Product Data, including drawings and descriptions of products and fabrication and installation procedures.
    - f. Structural calculations, where applicable or requested, prepared and signed by Engineer licensed in state where project is located.
    - g. Samples, where applicable or requested.
    - h. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
    - i. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
    - j. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
    - k. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time.
      - 1) If specified product or method of construction cannot be provided within the Contract Time, include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
    - l. Cost information, including a proposal of change, if any, in the Contract Sum.
    - m. Designation of availability of maintenance services, sources of replacement materials.
    - n. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
    - o. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
- B. **Basis-of-Design Product Specification Submittal:** Comply with requirements in Section 013300.

1. Show compliance with requirements.

#### **1.05 QUALITY ASSURANCE**

- A. To fullest extent possible, provide products of the same kind, from a single source.

#### **1.06 PRODUCT DELIVERY, STORAGE, AND HANDLING**

- A. Deliver, store and handle products using means and methods that will prevent damage, deterioration and loss, including theft. Comply with manufacturer's written instructions.
  1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
  2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.
  3. Deliver products to project site in an undamaged condition in manufacturer's original sealed container, or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting and installing.
  4. Inspect products on delivery to ensure compliance with Contract Documents, and to ensure products are undamaged and properly protected.
  5. Store products in a manner to facilitate inspection and measurement of quantity or counting of units.
  6. Store materials in a manner that will not endanger Project structure.
  7. Store products subject to damage by the elements under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
  8. Comply with product manufacturer's written instructions for temperature, humidity, ventilation, and weather-protection requirements for storage.
  9. Protect stored products from damage.

#### **1.07 PRODUCT WARRANTIES**

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents.
  1. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution.
  1. Submit a draft for approval before final execution.
  2. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
  3. Specified Form: Forms are included with the Specifications. Prepare a written document using appropriate form properly executed.
  4. Refer to Division 2 through 16 Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Section 017700.

### **PART 2 PRODUCTS**

#### **2.01 PRODUCT SELECTION**

- A. General: Provide products that comply with the Contract Documents, are undamaged, and unless otherwise indicated, that are new at time of installation.

1. Provide products complete with accessories, trim, finish, fasteners, safety guards and other items needed for a complete installation and indicated use and effect.
  2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
  3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
  4. Where products are accompanied by the term "as selected," Architect will make selection.
  5. Where products are accompanied by the term "match sample," sample to be matched is Architect's.
  6. Descriptive, performance, and reference standard requirements in the Specifications establish "salient characteristics" of products.
  7. Or Equal: Where products are specified by name and accompanied by the term "or equal" or "or approved equal" or "or approved", comply with provisions in "Product Substitutions" Article to obtain approval for use of an unnamed product.
- B. Product Selection Procedures: Procedures for product selection include the following:
1. Product: Where Specification paragraphs or subparagraphs titled "Product" name a single product and manufacturer, provide the product named.
    - a. Substitutions may be considered, unless otherwise indicated.
  2. Manufacturer/Source: Where Specification paragraphs or subparagraphs titled "Manufacturer" or "Source" name single manufacturers or sources, provide a product by the manufacturer or from the source named that complies with requirements.
    - a. Substitutions may be considered, unless otherwise indicated.
  3. Products: Where Specification paragraphs or subparagraphs titled "Products" introduce a list of names of both products and manufacturers, provide one of the products listed that complies with requirements.
    - a. Where products or manufacturers are specified by name, accompanied by the term "or equal", or "or approved equal" comply with the provisions in "Product Substitutions" Article to obtain approval for use of an unnamed product.
  4. Manufacturers: Where Specification paragraphs or subparagraphs titled "Manufacturers" introduce a list of manufacturers' names, provide a product by one of the manufacturers listed that complies with requirements.
    - a. Where manufacturers are specified by name, accompanied by the term "or equal", or "or approved equal" comply with the provisions in "Product Substitutions" Article to obtain approval for use of an unnamed product.
  5. Product Options: Where Specification paragraph titled "Product Options" indicate that size, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide either the specific product or system indicated or a comparable product or system by another manufacturer.
    - a. Comply with provisions in "Product Substitutions" Article to obtain approval for use of an unnamed product.
  6. Basis-of-Design Products: Where Specification paragraphs or subparagraphs titled "Basis-of-Design Product(s)" are included and also introduce or refer to a list of manufacturers' names, provide either the specified product or a comparable product by one of the other named manufacturers.
    - a. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named.
    - b. Comply with provisions in "Product Substitutions" Article to obtain approval for use of an unnamed product.
    - c. Substitutions may be considered, unless otherwise indicated.
  7. Visual Matching Specification: Where Specifications require matching an established Sample, select a product (and manufacturer) that complies with requirements and matches Architect's sample.

- a. Architect's decision will be final on whether a proposed product matches satisfactorily.
  - b. If no product available within specified category matches satisfactorily and complies with other specified requirements, comply with provisions of the Contract Documents on "substitutions" for selection of a matching product.
8. Visual Selection Specification: Where Specifications include the phrase "as selected from manufacturer's colors, patterns, textures" or a similar phrase, select a product (and manufacturer) that complies with other specified requirements.
- a. Standard Range: Where Specifications include the phrase "standard range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, or texture from manufacturer's product line that does not include premium items.
  - b. Full Range: Where Specifications include the phrase "full range of colors, patterns, textures" or similar phrase, Architect will select color, pattern, or texture from manufacturer's product line that includes both standard and premium items.
9. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with requirements, and are recommended by the manufacturer for application indicated.
- a. General overall performance of a product is implied where the product is specified for a specific application.
  - b. Manufacturer's recommendations may be contained in product literature, or by manufacturer's certification of performance.

## **2.02 PRODUCT SUBSTITUTIONS**

- A. Timing: Substitutions are restricted to the substitution request submittal cutoff date which will happen prior to bid. No substitution requests will be accepted after the Bid Date.
1. Requests for substitutions received after that time will not be considered or accepted.
  2. Requests received after award of contract will only be considered in case of substantiated product unavailability, or conditions beyond control of Contractor.
- B. Conditions: Contractor's substitution request will be received and considered by Architect when following conditions are satisfied, as determined by Architect; otherwise requests will be returned without action except to record noncompliance with these requirements; burden of proof of merit of proposed substitution is upon proposer.
1. Extensive revisions to Contract Documents are not required.
  2. Requested substitution is consistent with Contract Documents and will produce indicated results.
  3. Request is timely, fully documented and properly submitted.
  4. Request is directly related to "or equal" clause or similar language in Contract Documents.
  5. If requested substitution involves more than one contractor, requested substitution has been coordinated with other portions of Work, is uniform and consistent, is compatible with other products, and is acceptable to contractors involved.
- C. Architects Action: If necessary, within 2 days of receipt of request for substitution, Architect will request additional information or documentation for evaluation of request for substitution.
1. Within 1 weeks of receipt of request, or one week of receipt of additional information or documentation, whichever is later, Architect will notify Contractor of acceptance or rejection of requested substitution.
  2. Form of Acceptance: Change Order.
  3. Use product specified if Architect cannot make decision on use of proposed substitution within time allocated.
  4. Architect will not be responsible for locating or securing information which is not included in substantiating data.
  5. Architect's decision of acceptance or rejection of requested substitution shall be final.

- D. Contractor's submittal and Architect's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.

**PART 3 EXECUTION (Not Applicable)**

**\*\* END OF SECTION \*\***

**SUBSTITUTION REQUEST FORM**

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Project: Riverside Public Defender/Probation Project Substitution Request Number: \_\_\_\_\_

To: \_\_\_\_\_ From: \_\_\_\_\_

Re: \_\_\_\_\_ Date: \_\_\_\_\_

Architect's Project Number: \_\_\_\_\_ Contract For: \_\_\_\_\_

Specification Title: \_\_\_\_\_ Description: \_\_\_\_\_

Section: \_\_\_\_\_ Page: \_\_\_\_\_ Article/Paragraph: \_\_\_\_\_

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Proposed Substitution: \_\_\_\_\_

Manufacturer: \_\_\_\_\_ Address: \_\_\_\_\_

Trade Name: \_\_\_\_\_

Attached data shall include: product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitutions will require for its proper installation, at no cost to the Owner.

The Undersigned Certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing and construction costs caused by the substitutions.

Submitted by: \_\_\_\_\_

Signed by: \_\_\_\_\_

Firm: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

A/E's REVIEW AND ACTION

- Substitution Approved
- Substitution Rejected as marked below:
  - Insufficient information submitted
  - Submitted late.
  - Information not clearly marked.
  - Full line product information (Binder not provided).
  - Does not meet performance / design requirements of Paragraph \_\_\_\_\_.
  - Comparisons not properly identified on product data sheets.

Signed by: \_\_\_\_\_ Date: \_\_\_\_\_

Supporting Data Required:

- |   |                   |                          |  |
|---|-------------------|--------------------------|--|
| X | Drawings          | <input type="checkbox"/> | Tests if required in individual sections   |
| X | OSHPD Requirement | <input type="checkbox"/> | UL-Assemblies                              |
| X | Product Data      | <input type="checkbox"/> | Reports if required in individual sections |
| X | Samples           | <input type="checkbox"/> | Other: _____                               |

**\*\* END OF SECTION \*\***



**SECTION 016600**

**TRANSPORTATION AND HANDLING**

**PART 1 - GENERAL**

**1.01 REQUIREMENTS INCLUDED**

- A. Packaging, Transportation.
- B. Delivery and Receiving.
- C. Product Handling.

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

**3.01 PACKAGING, TRANSPORTATION**

- A. Require supplier to package products in boxes or crates for protection during shipment, handling, and storage. Protect sensitive products against exposure to elements and moisture.
- B. Protect sensitive equipment and finishes against impact, abrasion, and other damage.
- C. The Construction Manager will cooperate insofar as possible to provide temporary storage space near the work area.

**3.02 DELIVERY AND RECEIVING**

- A. Arrange for delivery of materials and equipment to minimize length of on-site storage prior to installation.
- B. Arrange deliveries of products in accordance with construction progress schedules. Allow time for inspection prior to installation.
- C. Coordinate deliveries to avoid conflict with Work and conditions at site.
- D. Deliver products in undamaged, dry condition, in original unopened container or packaging with identifying labels intact and legible.
- E. Clearly mark partial deliveries of component parts of equipment to identify equipment and contents to permit easy accumulation of parts and to facilitate assembly.
- F. Immediately on delivery, inspect shipment to assure:
  - 1. Product complies with requirements of Contract Documents and reviewed submittals.
  - 2. Quantities are correct.
  - 3. Accessories and installation hardware are correct.
  - 4. Containers and packages are intact and labels legible.
  - 5. Products are protected and undamaged.
- G. The Contractor shall make a close inspection of all materials as delivered, and shall promptly

return all defective materials without waiting for their rejection by the Owner.

- H. All pickups and deliveries of major items requiring the use of large delivery trucks and truck-trailers shall be conducted in total before or after the normal 7:00 a.m. to 5:00 p.m. working hours.
  - I. Use of existing fire lanes shall be allowed at the discretion of the Owner.
- 3.03 PRODUCT HANDLING
- A. Provide equipment and personnel to handle products by methods to prevent soiling and damage.
  - B. Provide additional protection during handling to prevent marring and otherwise damaging products, packaging, and surrounding surfaces.
  - C. Handle product by methods to avoid bending or overstressing. Lift large and heavy components only at designated lift points.

3.03 PRODUCT STORAGE

- A. Provide suitable storage facilities at the site for the proper protection and safe storage of materials.
- B. Materials delivered to the site that are permanent parts of the work shall be considered the property of the Owner and shall not be removed without the Owner's consent. However, surplus materials shall be removed upon completion of each phase or portion of work.
- C. Confine storage at the site to areas permitted by laws, ordinances, permits, and the Contract Documents. Do not unreasonably encumber the site with materials or equipment.
- D. Obtain and pay for use of any additional storage or work areas that may be required for the satisfactory performance of the work.
- E. Take particular care to not load the structure with weight that might cause damage or endanger the structure.
- F. Remove or relocate stored materials that encumber other work or the Owner's operations.
- G. When using a building area as an office, shop, or storeroom, assume responsibility for repairs, patching, or cleaning arising from such use.
- H. Absorptive Materials:
  - 1. Protect stored absorptive materials from moisture damage.
  - 2. Moisture damage materials shall not be used or installed in the building unless specifically approved in writing by Owner
  - 3. Dispose of moisture damaged materials in accordance with the requirements with Section 017419.

\*\* END OF SECTION \*\*

## SECTION 017223

### FIELD ENGINEERING

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. Provide and pay for field engineering services required for the project.
  - 1. Survey work required in execution of the project.
  - 2. Civil, structural or other professional engineering services specified, or required to execute Contractor's construction methods.
  - 3. Coordination with testing laboratory and soils engineer.
  - 4. Contractor furnished assistance.
  - 5. Verification of conditions.
- B. Related Requirements in Other Parts of the Project Manual:
  - 1. Conditions of the contract.

##### 1.02 RELATED SECTIONS:

- A. Section 017839: Project Record Documents.

##### 1.03 SUBMITTALS

- A. Comply with pertinent provisions of Section 013300.
- B. Submit name and address of Surveyor or professional engineer to Architect, including changes as they may occur.
- C. On request of Architect, submit documentation to verify accuracy of field engineering work.
- D. Submit certificate signed by registered Civil Engineer or Land Surveyor certifying that elevations and locations of improvements are in conformance, or non-conformance, with Contract Documents.
- E. Record Drawings:
  - 1. At project completion, obtain and pay for reproducible transparencies of the project plans.
    - a. Clearly indicate all differences between original drawings and completed work within specified tolerances.
  - 2. Show as-built locations by coordinates of all utilities onsite with top of pipe elevations at major grade and alignment changes.
  - 3. Completed record drawing transparencies shall be dated, signed and certified as correct by the Licensed Surveyor or Civil Engineer.
  - 4. Comply with requirements of Section 017839.

##### 1.04 QUALITY ASSURANCE

- A. Qualifications of Surveyor or Engineer: Engage a registered Civil Engineer or licensed Land Surveyor acceptable to both Contractor and Owner and who is qualified to perform land surveying.
  - 1. Furnish to Owner prior to start of work, the name and license (or registration number) issued by the State of California, Board of Registration for Professional Engineers and Land Surveyors.
  - 2. Provide notice to Owner during course of construction should identification of individual responsible for this work change, and obtain approval of Owner for the replacement.

- B. All field engineering services furnished during the course of this project shall be under the direct supervision and control of the named individual Civil Engineer or Land Surveyor.

## **PART 2 PRODUCTS (NOT USED)**

## **PART 3 EXECUTION**

### **3.01 SURVEY REFERENCE POINTS**

- A. Existing horizontal and vertical control points for the Project are those designated on drawings.
- B. Locate and protect control points prior to starting site work, and preserve all permanent reference points during construction.
1. Make no changes or relocations without prior written notice to Architect.
  2. Report to Architect when any reference point is lost or destroyed, or requires relocation because of necessary changes in grades or locations.
  3. Identify and protect all survey monuments on the site discovered during construction, which are not referenced on the project drawings.
    - a. Tie out such monuments and notify Architect prior to allowing them to be disturbed.
  4. Replace permanent boundary markers disturbed during construction with new permanent monuments and file the required Record of Survey or Corner Record in accordance with applicable State and County laws, at no additional cost to the Owner.

### **3.02 PROJECT SURVEY REQUIREMENTS**

- A. Establish a minimum of two permanent horizontal and vertical control points on the site, remote from the building area referenced to data established by survey control points.
1. Record locations, with horizontal and vertical data, on Project Record Documents, including description of monuments in place.
- B. Establish lines and levels, locations and dimensions, by instrumentation or similar technical appropriate means:
1. Building Lines and Levels
    - a. Provide layout for interior of building as detailed in Section 012000.
    - b. Provide POC locations as they enter building.
  3. Provide control lines and levels required for the Mechanical and Electrical work.
  4. Provide grade stakes and elevations as required to reconstruct paved areas, building pads, landscaped areas, and other areas as required.
    - a. From time to time, verify the layout of all work by the same methods.

### **3.03 RECORDS**

- A. Maintain a complete, accurate surveyor's log of all control and survey work as it progresses. Make this log available for reference.
- B. Submit certification of subgrade completion on all building(s) showing actual elevation of completed subgrade to nearest 0.01 foot.

**\*\* END OF SECTION \*\***

## SECTION 017329

### CUTTING AND PATCHING

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. Administrative and procedural requirements for cutting and patching.
- B. Contractor shall be responsible for cutting, fitting and patching, including attendant excavation and backfill, required to complete the Work or to:
  - 1. Make its several parts fit together properly.
  - 2. Uncover portions of the Work to provide for installation of ill-timed work.
  - 3. Remove and replace defective work.
  - 4. Remove and replace work not conforming to requirements of Contract Documents.
  - 5. Remove samples of installed work as specified for testing.
  - 6. Provide routine penetrations of non-structural surfaces for installation of piping and electrical conduit.

##### 1.02 RELATED SECTIONS

- A. Conditions of the Contract: Basic responsibilities of parties.
- B. Section 017419: Construction Waste Management; recycling and disposing of non-hazardous demolition and construction materials.
- C. Section 016000: Product Requirements.
- D. Divisions 2 through 16 Sections for specified requirements and limitations applicable to cutting and patching individual parts of the Work.

##### 1.03 DEFINITIONS

- A. Cutting: Removal of in-place construction necessary to permit installation or performance of other Work.
- B. Patching: Fitting and repair work required to restore surfaces to original conditions after installation of other Work.

##### 1.04 SUBMITTALS

- A. Comply with pertinent provisions of ~~Section 013300~~.
- B. Submit written request to Architect well in advance of executing any cutting or alteration which affects:
  - 1. The work of the Owner or separate contractor.
  - 2. The structural value or integrity of any element of the Project.
  - 3. The integrity or effectiveness of weather-exposed or moisture-resistant elements or systems.
  - 4. The efficiency, operational life, maintenance or safety of operational elements.
  - 5. The visual qualities of sight-exposed elements.
- C. Request shall include:
  - 1. Identification of the Project.

2. Description of the affected work.
  3. Necessity for cutting, alteration or excavation.
  4. Effect on the work of the Owner or any separate contractor, or on the structural or weatherproof integrity of the Project.
  5. Description of the proposed work:
    - a. Scope of cutting, patching, alteration, or excavation.
    - b. Trades who will execute the work.
    - c. Products proposed to be used.
    - d. Extent of refinishing to be done.
  6. Alternatives to cutting and patching.
  7. Cost proposal, when applicable.
  8. Written permission of any separate contractor whose work will be affected.
- D. Should conditions of the Work or the schedule indicate a change of products from the original installation, Contractor shall notify the Architect in writing.
- E. Submit written notice to Architect designating the date and the time the work will be uncovered.
- F. Approval by the Architect to proceed with cutting and patching does not waive the Architect's right to later require complete removal and replacement of unsatisfactory work.

#### **1.05 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 Architect's approval of the cutting and patching proposal before cutting and patching structural elements.
- 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.
- C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces in a manner that would, in the Architect's judgment, reduce the building's aesthetic qualities.
1. Do not cut and patch construction in a manner that would result in visual evidence of cutting and patching.
    - a. Remove and replace construction cut and patched in a visually unsatisfactory manner.
  2. If it is not possible to engage original installer or fabricator, engage another recognized experienced and specialized firm.

#### **1.06 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.

### **PART 2 PRODUCTS**

#### **2.01 MATERIALS**

- A. Use materials identical to existing materials.
1. For exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible if identical materials are unavailable or cannot be used.

2. Use compatible materials whose installed performance will equal or surpass that of existing materials.

### **PART 3 EXECUTION**

#### **3.01 INSPECTION**

- A. Inspect existing conditions of the Project, including elements subject to damage or to movement during cutting and patching.
- B. After uncovering work, inspect the conditions affecting the installation of Products, or performance of the work.
- C. Report unsafe, unsatisfactory or questionable conditions to the Architect in writing; do not proceed with the work until the Architect has provided further instructions.
- D. Compatibility: Before patching, verify compatibility with and suitability of substrates, including compatibility with in-place finishes or primers.

#### **3.02 PREPARATION**

- A. Provide adequate temporary support as necessary to assure the structural value or integrity of the affected portion of the Work.
- B. Provide devices and methods to protect other portions of the Project from damage.
- C. Provide protection from the elements for that portion of the Project which may be exposed by cutting and patching work, and maintain excavations free from water.
- D. Avoid interference with use of adjoining areas or interruption of free passage to adjoining areas.
- E. Avoid cutting existing pipe, conduit, or ductwork serving the building but scheduled to be removed or relocated until provisions have been made to bypass them.

#### **3.03 PERFORMANCE**

- A. General: Employ skilled workmen to perform cutting and patching.
  1. Proceed with cutting and patching at the earliest feasible time and complete without delay.
  2. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction using methods least likely to damage elements retained or adjoining construction.
  1. Where possible, review proposed procedures with the original Installer; comply with the original Installer's recommendations.
  2. In general, where cutting, use hand or small power tools designed for sawing or grinding, not hammering and chopping.
    - a. Cut holes and slots as small as possible, neatly to size required, and with minimum disturbance of adjacent surfaces.
    - b. Temporarily cover openings when not in use.
  3. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
  4. Cut through concrete and masonry using a cutting machine, such as a Carborundum saw or a

- diamond-core drill.
5. Comply with requirements of applicable Division 2 Sections where cutting and patching requires excavating and backfilling.
  6. Execute excavating and backfilling by methods which will prevent settlement or damage to other work.
- C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
  2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching and refinishing.
  3. Fit work airtight to pipes, sleeves, ducts, conduit and other penetrations through surfaces.
    - a. For continuous surfaces, refinish to nearest intersection.
    - b. For an assembly, refinish the entire unit.
  4. Floors and Walls: Where walls or partitions that are removed extend one finished area into another, patch and repair floor and wall surfaces in new space.
    - a. Provide an even surface of uniform finish, color, texture, and appearance.
    - b. Remove in-place floor and wall coverings and replace with new materials, if necessary, to achieve uniform color and appearance.
    - c. Where patching occurs in a painted surface, apply primer and intermediate paint coats over the patch and apply final paint coat over entire unbroken surface containing the patch.
      - 1) Provide additional coats until patch blends with adjacent surfaces.
  5. Ceilings: Patch, repair, or rehang in-place ceilings as necessary to provide an even-plane surface of uniform appearance.
  6. Exterior Building Enclosure: Patch components in a manner that restores enclosure to a weather-tight condition.

### 3.04 CLEANING

- A. Clean areas and spaces where cutting and patching are performed.
1. Completely remove paint, mortar, oils, putty, and similar items.
  2. Thoroughly clean piping, conduit, and similar features before applying paint or other finishing materials.
  3. Restore damaged pipe covering to its original condition.
- B. Comply with requirements of Sections 017419 and 017413.

\*\* END OF SECTION \*\*



## SECTION 017413

### FINAL CLEANING

#### PART 1 GENERAL

##### 1.01 SECTION INCLUDES

- A. Execute cleaning, during progress of the Work, and at completion of the Work, as required by General Conditions.
- B. Related Requirements in Other Parts of the Project Manual:
  - 1. Conditions of the Contract.

##### 1.02 RELATED SECTIONS

- A. Section 017419: Construction Waste Management; recycling and disposing of non-hazardous demolition and construction materials.
- B. Cleaning for specific products of work: The specification Section for that work.

##### 1.03 DISPOSAL REQUIREMENTS

- A. Conduct cleaning and disposal operations to comply with codes, ordinances, regulations, and anti-pollution laws.

#### PART 2 PRODUCTS

##### 2.01 MATERIALS

- A. Use only those cleaning materials which will not create hazards to health or property and which will not damage surfaces.
- B. Use only those cleaning materials and methods recommended by manufacturer of the surface material to be cleaned.
- C. Use cleaning materials only on surfaces recommended by cleaning material manufacturer.

#### PART 3 EXECUTION

##### 3.01 DURING CONSTRUCTION

- A. Comply with requirements of Section 017419.
- B. Execute periodic cleaning to keep the work, the site and adjacent properties free from accumulations of waste materials, rubbish and windblown debris, resulting from construction operations.
- C. Provide on-site containers for the collection of waste materials, debris and rubbish.
- D. Remove waste materials, debris and rubbish from the site periodically and dispose of at legal disposal areas away from the site.

### 3.02 DUST CONTROL

- A. Clean interior spaces prior to the start of finish painting and continue cleaning on an as-needed basis until painting is finished.
- B. Schedule operations so that dust and other contaminants resulting from cleaning process will not fall on wet or newly-coated surfaces.

### 3.03 FINAL CLEANING

- A. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.
- B. Employ experienced workers or professional cleaners for final cleaning.
  - 1. Comply with manufacturer's instructions.
- C. Remove labels that are not permanent labels.
- D. Clean transparent materials, including mirrors and glass in doors and windows.
  - 1. Remove glazing compound and other substances that are noticeable vision-obscuring materials.
  - 2. Replace chipped or broken glass and other damaged transparent materials.
- E. Clean exposed exterior and interior hard-surfaced finishes to a dust-free condition, free of stains, films and similar foreign substances.
  - 1. Restore reflective surfaces to their original reflective condition.
  - 2. Leave concrete floors broom clean.
  - 3. Vacuum carpeted surfaces.
- F. Ventilating Systems:
  - 1. Clean permanent filters and replace disposable filters if units were operated during construction.
  - 2. Clean ducts, blowers and coils if units were operated without filters during construction.
  - 3. Coordinate with requirements of Commissioning Specification sections.
- G. Wipe surfaces of mechanical and electrical equipment.
  - 1. Remove excess lubrication and other substances.
  - 2. Clean plumbing fixtures to a sanitary condition.
  - 3. Clean light fixtures and lamps.
  - 4. Coordinate with requirements of Commissioning Specification sections.
- H. Clean the site, including landscape development areas, of rubbish, litter and other foreign substances.
  - 1. Sweep paved areas broom clean; remove stains, spills and other foreign deposits.
  - 2. Rake grounds that are neither paved nor planted, to a smooth even-textured surface.
- I. Removal of Protection: Remove temporary protection and facilities installed for protection of the Work during constructions.
- J. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning.
  - 1. Do not burn waste materials.
  - 2. Do not bury debris or excess materials on the Owner's property.
  - 3. Do not discharge volatile, harmful or dangerous materials into drainage systems.
  - 4. Remove waste materials from the site and dispose of in a lawful manner.

5. Where extra materials of value remaining after completion of associated Work have become the Owner's property, arrange for disposition of these materials as directed.
- K. Prior to final completion, or Owner occupancy, Contractor shall conduct an inspection of sight-exposed interior and exterior surfaces, and all work areas, to verify that the entire Work is clean.

**\*\* END OF SECTION \*\***

## SECTION 017419

### CONSTRUCTION WASTE MANAGEMENT

#### PART 1 – GENERAL

##### 1.01 SUMMARY

- A. Section includes administrative and procedural requirements for following:
  - 1. Salvaging, reduction, recycling, and disposing of nonhazardous demolition and construction waste.

##### 1.02 RELATED SECTIONS

- A. Section 013300: Submittal Procedures; general LEED submittal requirements
- B. Section 015200: Temporary Facilities and Controls
- C. Section 017413: Cleaning

##### 1.03 REFERENCES

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

##### 1.04 PURPOSE

- A. Purpose is to promote waste reduction (source reduction) and recycling practices to maximum extent reasonably possible for construction and demolition projects.
  - 1. State law requires jurisdictions to achieve 50 percent diversion goal.
    - a. Owner is significant generator of waste during construction and demolition projects and should participate in reducing and recycling waste.
  - 2. Contractor's completion of required documentation and submittal of disposal and diversion reporting form will allow Owner to track and calculate diversion rate.

##### 1.05 DEFINITIONS

- A. Construction Waste: Building and site improvement materials and other solid waste resulting from construction, remodeling, renovation, or repair operations.
  - 1. Construction waste includes packaging.
- B. Demolition Waste: Building and site improvement materials resulting from demolition or selective demolition operations.
- C. Disposal: Removal off-site of demolition and construction waste and subsequent sale, recycling, reuse, or deposit in landfill or incinerator acceptable to authorities having jurisdiction.
- D. Recycle or Recycling: Recovery of demolition or construction waste for subsequent processing in preparation for reuse.
  - 1. Process of collecting, sorting, cleansing, treating, and reconstituting materials that would otherwise become solid waste, and returning them to economic

- mainstream in form of raw material for new, reused, or reconstituted products which meet quality standards necessary to be used in marketplace.
2. Does not include transformation, as defined in California Public Resources Code Section 40201.
- E. Salvage: Recovery of demolition or construction waste and subsequent sale or reuse in another facility.
- F. Salvage and Reuse: Recovery of demolition or construction waste and subsequent incorporation into Work.
- G. Source Reduction: Action which causes net reduction in generation of solid waste.
1. Includes, but is not limited to:
    - a. Reducing use of non-recyclable materials.
    - b. Replacing disposable materials and products with reusable materials and products.
    - c. Reducing packaging
    - d. Reducing amount of yard wastes generated
    - e. Establishing garbage rate structures with incentives to reduce amount of wastes that generators produce, and increasing efficiency of use of paper, cardboard, glass, metal, plastic, and other materials.
  2. Source Reduction does not include steps taken after material becomes solid waste or actions which would impact air or water resources in lieu of land, including, but not limited to, transformation.
- H. Transformation Facility: Facility whose principal function is to convert, combust, or otherwise process solid waste by incineration, pyrolysis, destructive distillation, or gasification; or to chemically or biologically process solid wastes, for purpose of volume reduction, synthetic fuel production, or energy recovery.
1. Transformation Facility does not include composting facility.

#### 1.06 PERFORMANCE GOALS

- A. Salvage/Recycle Goals: Owner's goal is to salvage and recycle as much nonhazardous demolition and construction waste as possible including following materials:
1. Demolition Waste:
    - a. Asphalt paving.
    - b. Concrete paving.
  2. Construction Waste:
    - a. Site-clearing waste.
    - b. Masonry and CMU.
    - c. Lumber.
    - d. Wood sheet materials.
    - e. Metals.
    - f. Roofing.
    - g. Insulation.
    - h. Carpet.
    - i. Gypsum board.
    - j. Piping.
    - k. Electrical conduit.
  3. Packaging: Regardless of salvage/recycle goal indicated above, salvage or recycle 100 percent of following uncontaminated packaging materials:
    - a. Paper.
    - b. Cardboard.
    - c. Boxes.

- d. Plastic sheet and film.
- e. Polystyrene packaging.
- f. Wood crates.
- g. Plastic pails.

#### **1.07 SUBMITTALS**

- A. Waste Management Plan: Submit three copies of plan within 15 days of date established for commencement of Work.
- B. Waste Reduction Summary/Progress Reports: Concurrent with each Application for Payment, submit three copies of Waste Disposal and Diversion Report.
  - 1. Use form included at end of this Section.
- C. Records of Donations: Indicate receipt and acceptance of salvageable waste donated to individuals and organizations
  - 1. Indicate whether organization is tax exempt.
- D. Records of Sales: Indicate receipt and acceptance of salvageable waste sold to individuals and organizations.
  - 1. Indicate whether organization is tax exempt.
- E. Recycling and Processing Facility Records: Indicate receipt and acceptance of recyclable waste by recycling and processing facilities licensed to accept them.
  - 1. Include manifests, weight tickets, receipts, and invoices.
- F. Landfill and Incinerator Disposal Records: Indicate receipt and acceptance of waste by landfills and incinerator facilities licensed to accept them.
  - 1. Include manifests, weight tickets, receipts, and invoices.
- G. Submit Waste Material Disposition Summaries at completion of construction.
  - 1. Provide weigh tickets or other documentation to support reported tonnages and destinations.
  - 2. Maintain records for minimum of three years.
  - 3. Use form included at end of this Section.

#### **1.08 QUALITY ASSURANCE**

- A. Regulatory Requirements: Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Waste Management Conference: Conduct conference at Project site to comply with requirements in Division 1.
  - 1. Review methods and procedures related to waste management including, but not limited to, following:
    - a. Review and discuss waste management plan.
    - b. Review requirements for documenting quantities of each type of waste and its disposition.
    - c. Review and finalize procedures for materials separation and verify availability of containers and bins needed to avoid delays.
    - d. Review procedures for periodic waste collection and transportation to recycling and disposal facilities.
  - 2. Review waste management requirements for each trade.

## 1.09 WASTE MANAGEMENT PLAN

- A. Develop plan consisting of waste identification, waste reduction work plan, and cost/revenue analysis.
  - 1. Indicate quantities by weight or volume, but use same units of measure throughout waste management plan.
  
- B. Waste Identification: Indicate anticipated types and quantities of demolition, site-clearing, and construction waste generated by Work.
  - 1. Include estimated quantities and assumptions for estimates.
  
- C. Waste Reduction Work Plan: List each type of waste and whether it will be salvaged, recycled, or disposed of in landfill or incinerator. Include points of waste generation, total quantity of each type of waste, quantity for each means of recovery, and handling and transportation procedures.
  - 1. Salvaged Materials for Reuse: For materials that will be salvaged and reused in this Project, describe methods for preparing salvaged materials before incorporation into Work.
  - 2. Salvaged Materials for Sale: For materials that will be sold to individuals and organizations; include list of their names, addresses, and telephone numbers.
  - 3. Salvaged Materials for Donation: For materials that will be donated to individuals and organizations; include list of their names, addresses, and telephone numbers.
  - 4. Recycled Materials: Include list of local receivers and processors and type of recycled materials each will accept; include names, addresses, and telephone numbers.
  - 5. Disposed Materials: Indicate how and where materials will be disposed of; include name, address, and telephone number of each landfill and incinerator facility.
  - 6. Handling and Transportation Procedures: Include method that will be used for separating recyclable waste including sizes of containers, container labeling, and designated location on materials separation will be located.
  
- D. Cost/Revenue Analysis: Indicate total cost of waste disposal as if there was no waste management plan and net additional cost or net savings resulting from implementing waste management plan.
  - 1. Include following:
    - a. Total quantity of waste.
    - b. Estimated cost of disposal (cost per unit); include hauling and tipping fees and cost of collection containers for each type of waste.
  - 2. Total cost of disposal (with no waste management).
  - 3. Revenue from salvaged materials.
  - 4. Revenue from recycled materials.
  - 5. Savings in hauling and tipping fees by donating materials.
  - 6. Savings in hauling and tipping fees that are avoided.
  - 7. Handling and transportation costs; include cost of collection containers for each type of waste.
  - 8. Net additional cost or net savings from waste management plan.

**PART 2 PRODUCTS** *(Not Applicable)*

**PART 3 EXECUTION**

### 3.01 PLAN IMPLEMENTATION

- A. Implement waste management plan as approved by Architect and Owner.
  - 1. Provide handling, containers, storage, signage, transportation, and other items as required to implement waste management plan during entire duration of Contract.
  - 2. Comply with Division 1 Section 015200 for operation, termination, and removal requirements.
- B. Waste Management Coordinator: Engage waste management coordinator to be responsible for implementing, monitoring, and reporting status of waste management work plan.
- C. Training: Train workers, subcontractors, and suppliers on proper waste management procedures, as appropriate for Work occurring at Project Site.
  - 1. Distribute waste management plan to everyone concerned within three days of submittal return.
  - 2. Distribute waste management plan to entities when they first begin work on-site.
    - a. Review plan procedures and locations established for salvage, recycling, and disposal.
- D. Site Access and Temporary Controls: Conduct waste management operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
  - 1. Designate and label specific areas on Project site necessary for separating materials that are to be salvaged, recycled, reused, donated, and sold.

### 3.02 SALVAGING DEMOLITION WASTE

- A. Salvaged Items for Reuse in Work:
  - 1. Clean salvaged items.
  - 2. Pack or crate items after cleaning. Identify contents of containers.
  - 3. Store items in a secure area until installation.
  - 4. Protect items from damage during transport and storage.
  - 5. Install salvaged items to comply with installation requirements for new materials and equipment.
    - a. Provide connections, supports, and miscellaneous materials necessary to make items functional for use indicated.
- B. Salvaged Items for Sale and Donation: Not permitted on Project site.
- C. Salvaged Items for Owner's Use:
  - 1. Clean salvaged items.
  - 2. Pack or crate items after cleaning. Identify contents of containers.
  - 3. Store items in a secure area until delivery to Owner.
  - 4. Transport items to Owner's storage area designated by Owner.
  - 5. Protect items from damage during transport and storage.

### 3.03 RECYCLING DEMOLITION AND CONSTRUCTION WASTE

- A. General:
  - 1. Recycle paper and beverage containers used by on-site workers.
  - 2. Procedures:
    - a. Separate recyclable waste from other waste materials, trash, and debris.



- b. Separate recyclable waste by type at Project site to maximum extent practical.
  - c. Provide appropriately marked containers or bins for controlling recyclable waste until they are removed from Project site.
    - 1) Include list of acceptable and unacceptable materials at each container and bin.
    - 2) Inspect containers and bins for contamination and remove contaminated materials if found.
  3. Stockpile processed materials on-site without intermixing with other materials.
    - a. Place, grade, and shape stockpiles to drain surface water.
    - b. Cover to prevent windblown dust.
  4. Stockpile materials away from construction area.
    - a. Do not store within drip line of remaining trees.
  5. Store components off ground and protect from weather.
  6. Remove recyclable waste off Owner's property and transport to recycling receiver or processor.
- B. Recycling Demolition Waste:**
1. Asphaltic Concrete Paving: Break up and transport paving to asphalt recycling facility.
  2. Concrete: Remove reinforcement and other metals from concrete and sort with other metals.
  3. Masonry: Remove metal reinforcement, anchors, and ties from masonry and sort with other metals.
    - a. Clean and stack undamaged, whole masonry units on wood pallets.
  4. Wood Materials: Sort and stack members according to size, type, and length.
    - a. Separate lumber, engineered wood products, panel products, and treated wood materials.
  5. Metals: Separate metals by type.
    - a. Structural Steel: Stack members according to size, type of member, and length.
    - b. Remove and dispose of bolts, nuts, washers, and other rough hardware.
  6. Gypsum Board: Stack large clean pieces on wood pallets and store in a dry location.
    - a. Remove edge trim and sort with other metals.
  7. Acoustical Ceiling Panels and Tile: Stack large clean pieces on wood pallets and store in a dry location.
    - a. Separate suspension system, trim, and other metals from panels and tile and sort with other metals.
  8. Carpet: Roll large pieces tightly after removing debris, trash, adhesive, and tack strips.
    - a. Store clean, dry carpet and pad in closed container or trailer provided by Carpet Reclamation Agency or carpet recycler.
  9. Equipment: Drain tanks, piping, and fixtures.
    - a. Seal openings with caps or plugs.
    - b. Protect equipment from exposure to weather.
  10. Plumbing Fixtures: Separate by type and size.
  11. Piping: Reduce piping to straight lengths and store by type and size.
    - a. Separate supports, hangers, valves, sprinklers, and other components by type and size.
  12. Lighting Fixtures: Separate lamps by type and protect from breakage.
  13. Electrical Devices: Separate switches, receptacles, switchgear, transformers, meters, panel boards, circuit breakers, and other devices by type.
  14. Conduit: Reduce conduit to straight lengths and store by type and size.

- C. Recycling Construction Waste:
1. Packaging:
    - a. Cardboard and Boxes: Break down packaging into flat sheets.
      - 1) Bundle and store in a dry location.
    - b. Polystyrene Packaging: Separate and bag materials.
    - c. Pallets: As much as possible, require deliveries using pallets to remove pallets from Project Site.
      - 1) For pallets that remain on-site, break down pallets into component wood pieces and comply with requirements for recycling wood.
    - d. Crates: Break down crates into component wood pieces and comply with requirements for recycling wood.
- D. Disposal of Waste:
1. General: Except for items or materials to be salvaged, recycled, or otherwise reused, remove waste materials from Project Site and legally dispose of them in a landfill or incinerator acceptable to authorities having jurisdiction.
    - a. Except as otherwise specified, do not allow waste materials that are to be disposed of accumulate on-site.
    - b. Remove and transport debris in manner that will prevent spillage on adjacent surfaces and areas.
  2. Burning: Burning of waste materials is prohibited.
  3. Disposal: Transport waste materials off Owner's property and legally dispose of.

**\*\* END OF SECTION \*\***

**WASTE DISPOSAL AND DIVERSION REPORTING FORM**

Riverside Public Defender/Probation Building Project: Riverside, CA Date: \_\_\_\_\_

Property Address:

Facility Contact and Telephone:

Contractor Name:

Contractor Contact: \_\_\_\_\_ Contractor Telephone: \_\_\_\_\_

Description of Project: \_\_\_\_\_

\_\_\_\_\_

Approximate Dollar Value of Construction/Demolition: \_\_\_\_\_

Approximate Square Footage of Project: \_\_\_\_\_

Demolition Schedule: \_\_\_\_\_

Construction Schedule: \_\_\_\_\_

Haulers:

Name: \_\_\_\_\_ Telephone: \_\_\_\_\_

Name: \_\_\_\_\_ Telephone: \_\_\_\_\_

Name: \_\_\_\_\_ Telephone: \_\_\_\_\_

Please check waste reduction activities that are practiced at this project site:

\_\_\_ Use of Prefabricated Components

\_\_\_ Reduced Packaging

\_\_\_ Reuse of Materials Onsite

\_\_\_ Other (describe)

\_\_\_ Accurate Material Estimates

**Conversion Factors for Selected Loose Materials:**

Concrete	2370 lbs/cu yd	1.18 tons / cu yd	0.84 cu yd / ton
Asphalt	1940 lbs / cu yd	0.97 ton / cu yd	1.03 cu yds / ton
Brick	2430 lbs / cu yd	1.21 tons / cu yd	0.82 cu yd / ton
Dirt	2660 lbs / cy yd	1.33 tons / cu yd	0.75 cu yd / ton
Wood	400 lbs / cu yd	0.20 ton / cu yd	5.00 cu yds / ton
Gypsum Board	500 lbs / cu yd	0.25 ton / cu yd	4.00 cu yds / ton
Cardboard	100 lbs / cu yd	0.05 ton / cu yd	20.0 cu yds / ton