

FRESNO UNIFIED SCHOOL DISTRICT
SCOPE OF WORK
Middle School Gymnasium Scoreboard Replacement

A. SCOPE OF WORK

1. The work of this contract is comprised of providing necessary labor and materials, design, fabrication, procurement, and installation of new district standard scoreboards and shot clocks in fourteen (14) Middle School Gymnasiums.
 - a. Middle School Locations:
 - 1) Ahwahnee, 1127 E. Escalon Ave., Fresno, CA 93710
 - 2) Computech, 555 E. Belgravia Ave., Fresno, CA 93706
 - 3) Cooper, 2277 W. Bellaire Way, Fresno, CA 93705
 - 4) Fort Miller, 1302 E. Dakota Ave., Fresno, CA 93704
 - 5) Hamilton K-8, 102 E. Clinton Ave., Fresno, CA 93704
 - 6) Kings Canyon, 5117 E. Tulare Ave., Fresno, CA 93727
 - 7) Scandinavian, 3216 N. Sierra Vista Ave., Fresno, CA 93726
 - 8) Sequoia, 4050 E. Hamilton Ave., Fresno, CA 93702
 - 9) Tehipite, 630 N. Augusta St., Fresno, CA 93701
 - 10) Tenaya, 1239 W. Mesa Ave., Fresno, CA 93711
 - 11) Terronez, 2300 S. Willow Ave., Fresno, CA 93725
 - 12) Tioga, 3232 E. Fairmont Ave., Fresno, CA 93726
 - 13) Wawona, 4524 N. Thorne Ave., Fresno, CA 93704
 - 14) Yosemite, 1292 N. 9th St., Fresno, CA 93703

B. RELATED SECTIONS

- | | |
|-------------|---|
| 1. 09 90 00 | Painting |
| 2. 26 00 00 | Basic Electrical Requirements |
| 3. 8218EMC | All American Indoor Scoreboard |
| 4. 8000 | All American Wireless Multi-Sport Console |
| 5. 8299SCS | All American LED Basketball Scoreboard Shot Clock Strips |
| 6. 8299 | All American LED Basketball Scoreboard Shot Clock |
| 7. 8299L | All American LED Basketball Scoreboard Shot Clock Light Strip Ready |
| 8. Pictures | Inside Gymnasium Scoreboards, shot clocks, and Electrical |

C. QUALITY ASSURANCE

1. Contractor/Manufacturer Qualifications:
 - a. Proposed Scoreboard design drawings shall be submitted for District review, revision and final approval.
2. Warranty

- a. The CONTRACTOR/MANUFACTURER must supply a one-year (12 month) guarantee against faulty workmanship and materials.

D. PRODUCT

1. District Standard Scoreboard
 - a. All American Model No. 8218EMC with combination wired and wireless controller, no substitutions. If no existing raceway for hard connection of controller exists, it will not need to be provided. The system will be wireless only.
2. District Standard Shot Clock
 - a. All American Model No. 8299SCS shot clocks, no substitutions.

E. CONTRACTOR RESPONSIBILITIES

1. Removal and disposal of existing scoreboards and shot clocks including electrical components and infrastructure, as necessary. Costs associated with repairs to infrastructure shall be the responsibility of contractor.
2. All electrical and control wiring is to be removed and replaced with new.
3. Provide design drawings depicting location of scoreboard and shot clocks, intended conduit routing and sizes, points of connection and intended panels and circuits where necessary.
4. Install all new conduit, raceway and wiring necessary for connection and function of all components. All conduit to be painted to match adjacent wall.
5. Provide and install district standard scoreboards and shot clocks.
6. Make all necessary electrical and low voltage connections.
7. Provide 1hr training on scoreboard operation at each site.
8. Provide minimum 48hr notice to District Project Manager requesting inspection up on completion of each site.
9. Responsible for final start up and initial programming.
10. Contractor to protect gymnasium flooring and lay down $\frac{3}{4}$ " plywood when driving equipment on floor.

F. DISTRICT RESPONSIBILITIES

1. Provide access and coordination with site and district staff.
2. Assist in the identification of electrical panels and circuits to be utilized for connection.
3. Assess existing infrastructure and provide information relating to necessary replacement.
4. Schedule final inspection and in-service training with site and district staff.

END OF SECTION

SECTION 099000
PAINTING

PART 1 - GENERAL

1.01 REFERENCE:

Requirements in Addenda, Alternates, Conditions, and Division 1 collectively apply to this work.

1.02 DESCRIPTION:

A. Principal Work Items Are:

1. Complete application of paint to interior and exterior surfaces.
 - a. Unfinished materials.
 - b. Back-priming.
 - c. Metals, including certain hidden surfaces.
 - d. Woods and fabrications of wood.
 - e. Sheet metal.
 - f. Plaster, except where integrally colored.
 - g. Gypsum wallboard.
 - h. Doors.
 - i. Exposed piping, conduits, ducts, panels, mechanical and electrical equipment and items.
 - j. Visible roof-top equipment.
 - k. Miscellaneous items.
 - l. Concrete block.
 - m. Painted stripes at stairs, to conform to Handicap Requirements.
2. Application of finish coats to shop-primed metal surfaces:
 - a. Door louvers.
 - b. Pressed metal frames.
 - c. Hollow metal doors.
 - d. Coiling grilles.
3. Structural steel.

B. Some Surfaces Not To Be Painted:

1. In general, items with District approved integral finishes, approved plated finishes, approved complete factory finishes, except where otherwise indicated.
2. Finish hardware, except where primed for paint.
3. Integrally colored plaster.
4. Acoustical materials: Acoustic tile, acoustic panels, and exposed suspension grids.
5. Metal items:
 - a. Approved plated or factory finished items.
 - b. Anodized and color anodized aluminum.
 - c. Stainless steel.
 - d. Toilet partitions.
 - e. Factory finished steel or aluminum frame sliding glass doors.

f. Passenger lift doors, frames and cars.

C. Related Work Specified Elsewhere:

1. Materials and items which receive paint: Respective Sections.
2. Factory finished items: Respective Sections.
3. Pavement Marking: Section O2584.
4. Finish Carpentry: Section 06200 and Hardware removal and replacement in coordination with painting work: Section O6200.
5. Factory finishing of Custom Casework: Section 06410.
6. Joint Sealers: Section 07900.
7. Paint Materials List: Section 09901.
8. Custom Casework: Section 06410.
9. Electrical fixture trim and plates removal and replacement in coordination with painting work: Division 16.

D. Definitions:

1. DFT: Abbreviation for dry film thickness.
2. Concealed Ungalvanized Steel: Defined in Paragraph 3.06B.
3. Paint: A collective general reference to include all materials of every component for finishing systems of every type, and preparation of surfaces for and application of said materials.
4. Rough-surface wood: Rough-sawn, re-sawn, or sandblasted woods.
5. Visible roof-top equipment: Mechanical and electrical equipment, piping, ducts, conduits, panels and other materials exposed on building roof tops which can be seen by a person standing on the earth's surface at any point within 1,000' of any building.

1.03 SUBSTITUTIONS:

Only written approval of the will permit substitutions for materials specified. Refer to Section 00700, Article 30, Substitutions, for procedure.

1.04 QUALITY ASSURANCE:

- A. Reference Standards: Steel Structures Painting Council-Surface Preparation Specifications (SSPC-SP).
- B. Job Mock-Up, Supergraphic Designs: Layout designs full-size on indicated walls, revise as required by District. Obtain District's approval prior to doing any finished work.

1.05 SUBMITTALS:

- A. Samples
 1. Number required: Three each.
 2. Paints and enamels:
 - a. Typical: Each type, in each selected color; 8" x 10" size on stiff smooth material typical; on sandpaper for rough surfaces.
 - b. Stipple enamel: Each selected color District approved, roller texture on 12" x 24" piece of drywall.

3. Stains, varnishes, lacquers: Each finish type on each specie and texture of wood; 8" x 10" size for plywood, 16" length for casing or boards, show clearly each step of finishing process.
 4. Make samples by same methods to be used to produce actual work. Samples will be examined for color, texture, and workmanship.
 5. Re-make and re-submit samples when required for approval.
- B. Product Data: Complete list of all paint materials.
- 1.06 PRODUCT DELIVERY, STORAGE AND HANDLING:
- A. Deliver in sealed containers. Manufacturer, brand name, product, and use instructions clearly identified thereon.
 - B. Store in assigned spaces.
 - C. Handle to prevent damage during storage and use.
- 1.07 JOB CONDITIONS:
- A. Environmental Requirements:
 1. Follow manufacturer's printed recommendations for product when they are more stringent than limits stated herein.
 2. Do not apply materials when temperature is below 50°F or above 110°F.
 3. Do not apply materials when RH is above 90%.
 4. As necessary to provide air movement, aid drying, disperse noxious fumes.
 5. Do not apply paint to wet-applied construction until such work is dry, and acceptable to District and paint manufacturer.
 6. Do not apply exterior paint in rainy, damp, misty, smoggy, or excessively windy weather.
 7. Do not apply paint in areas where dust is being generated.
 - B. Protection:
 1. Cover or otherwise protect finished work of other trades, work not to be painted concurrently, landscaping, and adjacent property from damage.
 2. When not in use, store paints in designated areas. Keep containers closed. At end of day's work, remove empty containers, paint soaked rags, and debris. Vent fumes. Take precautions to prevent fire.
 - C. Sequencing, Scheduling:
 1. Coordinate removal and replacement of hardware, electrical fixtures and trim, and related work of other Sections.
 2. Stain, prime, back paint, and pre-finish items before installation as required.
 - D. Cleaning and Disposal:

Do not use Project plumbing fixtures or piping systems for:

 1. Cleaning painting equipment and utensils.
 2. Disposal of waste from cleaning or disposal of paints.

PART 2 - PRODUCTS

2.01 MATERIALS:

A. Acceptable Manufacturers and Products:

1. Materials shall be those listed in Paint Materials List Specifications, Section 09901.
2. Each material type to be same manufacturer throughout. All materials in a coating system to be by a single manufacturer.
3. Brand Names: Shall constitute a standard of quality.
4. Other Manufacturers: Refer to Paragraph 1.03, Substitutions.

B. Colors:

1. As selected by, using ICI/Sinclair color and finish systems as a standard.
2. Concrete block: As selected by District using Triarch Industries, Incorporated and Pittsburgh Paints color and finish systems as a standard.
3. A number of colors (8 minimum to 12 maximum) will be selected, arranged in various combinations, used to accent trim and other Architectural features, and colors and combinations will vary from exterior-to-interior, space-to-space, surface-to-surface, material-to-material, feature-to-feature.
 - a. Supergraphic designs: Two additional colors may be selected.
4. Colors to be factory mixed, and to match approved samples.
5. Tint undercoats sufficiently different so that they are readily distinguishable in any light from each other and the finish coat.

2.02 CONCRETE BLOCK AT INTERIOR:

A. Acceptable Manufacturers and Products:

1. Triarch Industries, Incorporated.

B. Materials and Products:

1. DUROPLEX acrylic coating finish, (Smooth Sand; SPRAYTEK II over undercoat).

C. Spray Pattern; SPRAYTEK over undercoat (DS-IV texture).

2.03 MIXING:

A. Follow manufacturer's printed recommendations.

B. Mix all paints thoroughly prior to application.

C. Mix only in Inspector's presence in assigned spaces.

D. Except where thinning is specifically recommended by manufacturer, do not thin products.

PART 3 - EXECUTION

3.01 INSPECTION:

- A. Examine surfaces for suitability to receive paint. Prior to application of any paint, surfaces to be cleaned free of dust, corrosion, and other foreign matter.

Sand, scrape, fill and repair surfaces flush with suitable materials. Fill voids between adjoining surfaces flush with suitable fillers.

B. Wood:

1. Clean solid surfaces.
2. Except for rough-surface finishes, sand to a smooth even finish and dust clean.
3. Seal knots, pitch spots, and resinous sapwood with shellac or knot sealer before priming.
4. Puttying:
 - a. Do after first priming coat is dry.
 - b. For transparent or stained work, color putty to match finish.
 - c. Fill flush all nail holes, open joints, cracks and other defects.

C. Drywall:

Fill any cracks or defects with drywall joint compound or speckle. Sand any rough spots smooth. Do not raise nap on paper covering.

D. Portland Cement Plaster:

Where surfaces alkali is present, wash surface clean with zinc-sulphate in water solution. Fill cracks and defects with cement grout, match surface texture. Small defects may be filled with exterior speckle.

E. Concrete:

Brush and wash with clean water to remove laitance, efflorescence, from oil bond breaker, and other foreign matter. Fill cracks and defects with cement grout; match surface texture.

F. Galvanized Metal:

1. Cleaning: Solvent clean per SSPC-SP, No. 1, Solvent Cleaning.
2. Vinyl wash: Apply Dunn-Edwards Galva-Etch, No. GE-123. Follow manufacturer's directions.
 - a. Application: Mop or brush-apply in a thin even coat. Remove excessive solution from surface with rags, squeegee or sponge. When using full strength, rinse surface with water.
 - b. Thinning: Use water, do not reduce solution beyond three parts water to one part Galva-Etch.
 - c. Drying: One-half hour minimum and four hours maximum before priming.

G. Ungalvanized Shop Primed Structural Steel:

1. Cleaning method: Clean member free of corrosion, loose paint, and foreign matter by either SSPC-SP, No. 2, Hand Cleaning or SSPC-SP, No. 3, Power Brush Cleaning at the Project site after steel is erected.
2. Touch-up paint, with compatible primer, all abraded, damaged, or uncoated areas.

- H. Ungalvanized Shop Primed Metals Other Than Paragraph G Above:
Clean free of all loose paint and foreign matter. Touch-up paint, with compatible primer, all abraded, damaged, or uncoated areas.
- I. Factory Finished Equipment and Items:
Where indicated to receive job-applied finish coats, sand or etch factory finish as required for proper paint adherence.
- J. Concrete Block:
Substrate shall be cleaned of dust, oils, and other substances that might reduce adhesion of the finish material.

3.03 APPLICATION:

- A. Workmanship:
 - 1. Execute all work with skilled craftsmen.
 - 2. Evenly apply all coats with suitable equipment, well flowed on, free of laps, runs, skips, dead spots, and other imperfections. Last coat to present a uniform surface, color and texture.
 - 3. Stipple texture to be as approved by District.
- B. Manufacturer's Printed Recommendations:
Follow where more stringent than limits specified herein.
- C. Equipment:
Brushes, rollers, and spraying equipment as required and suitable for material being applied; keep clean and in proper operating condition.
- D. General:
 - 1. Paint and color areas per District's color schedules.
 - 2. Mask and cut-in as required to accomplish the various color combinations. Make edges of paint clean and sharp (no overlaps) where they adjoin other colors or materials.
 - 3. Paint entire surface parts and items including reveals, returns, rebates, soffits, projections, openings, and ornamental features.
 - 4. Do not apply initial coating until moisture content of surface is within paint manufacturer's recommended limits.
 - 5. Do not apply next coat until previous coats are properly cured and prepared to receive them.
- E. Examination of Work:
 - 1. Refer to Paragraph 3.04, Field Quality Control, for required examination of work.
 - 2. Notifies Inspector when work is ready for examination.
 - 3. Do not proceed with next operation until required examination has been made.
- F. Number of Coats:
 - 1. Specified number is the minimum number to be applied.

2. Contractor shall, at his expense, apply additional coats as directed by District if:
 - a. Contractor does not produce full even coverage and/or required dry film thickness with specified number of coats.
 - b. Contractor applies a coat before Inspector has examined previous coat.

- G. Dry Film Thickness:

DFT thickness stated in Paragraph 3.06, Schedule of Paint Finishes, is the minimum thickness to be applied and must be increased to manufacturer recommended thickness when such exceeds the thickness stated herein.

- H. Drying Time:

Minimum interval between coats shall be the most stringent of the following conditions.

 1. Until coat is dry.
 2. Manufacturer's printed recommendations.
 3. Three days for exterior work, two days for interior work, except where other time requirements are specifically stated in manufacturer's printed recommendations.

- I. Preparation Work Between Coats:

Prepare each coat to receive succeeding coat:

 1. General: Repair defects, sand, dust, wipe clean.
 2. Wood, enameled: When dry, lightly sand smooth.
 3. Wood, varnished or lacquered: When dry, steel wool smooth.
 4. Plaster and concrete: Neutralize suction spots or hot spots then touch up so coat surface is uniform.

- J. Back-Priming:
 1. Immediately upon delivery to Project site, back-prime all surfaces which will be concealed after installation for following items: exterior and interior finish lumber and millwork, door frames, trim, plywood wall lining and paneling.
 2. Painted or Enameled Work: One coat clear sealer.
 3. Work With Stained Finish: One coat linseed oil.
 4. Keep back-priming off exposed faces.

- K. Priming:
 1. General: Prime work as soon as possible after surfaces are prepared.
 2. Ungalvanized Steel: Prime immediately after cleaning on the same day.
 3. Galvanized Sheet Metal: Prime immediately after erection.
 4. Exterior and Interior Woodwork: Prime immediately after erection.
 5. At Glazing: Paint all glass beads, stops and rebates, except for aluminum.

- L. Application Methods:

Apply by brush or roller, except as listed below:

 1. Enamel: to doors: Roller only.
 2. Enamel: Roller typically.
 3. Stipple enamel: Roller only, with District approved texture.

4. Varnish or lacquer: Spray.
5. Exterior wood stains: Apply by brush or roller only. Work well into surface, especially on rough surface woods.

M. Doors:

Finish faces, edges, top, and bottom. On wood doors, apply first coat to all parts at the same time. At exterior doors, paint interior face with same material used on the exterior face.

N. Colors:

Make color changes at inside corners typically. Paint to a clean straight line.

3.04 FIELD QUALITY CONTROL:

A. Examination of Work (By Inspector):

1. Surface preparation--prior to application of prime coat.
2. Each coat--prior to application of succeeding coat.
3. Final coat and finished work.

3.05 ADJUSTMENT AND CLEANING:

A. Cleaning:

1. Clean surfaces as work progresses.
2. Remove all paint spillage and droppings and stains as soon as possible.
3. Do not use tools or cleaners, which will mar finish of item being cleaned.
4. Leave work and paint storage area clean and free of droppings, stains, dirt or defacements resulting from this work.

B. Correction of Defective Work:

1. Repair abraded, damaged or incomplete paint surfaces by methods acceptable to District. Spot repairs to be well-blended into adjacent work. For large repairs, re-coat entire plane or building element in which damaged area occurs.
2. Defaced surfaces of work not to be painted shall be cleaned and their original finish restored.

3.06 SCHEDULE OF PAINT FINISHES:

A. Reference: Refer to Paragraphs 3.03, F and G, regarding number of coats and DFT.

B. Metal Work, Exterior and Interior:

1. Galvanized Metal Exterior and Interior:
 - a. Coat 1: Zinc Dust Primer or Oil-Cementitious Primer. If Oil Cementitious Primer is used, it shall be re-coated within 48 hours in accordance with the manufacturer's recommendations.
 - b. Coat 2: Sash and trim.
 - c. Coat 3: Sash and trim.
 - d. DFT: Five mils.

2. Ungalvanized Shop Primed Structural Steel, Exposed On Building Exterior: Apply prime coat immediately after steel is cleaned.
 - a. Touch-Up: Spot prime any abraded, damaged, rusted, or uncoated areas with rust inhibitive primer for ferrous metals.
 - b. Coat 1: Rust Inhibitive Primer For Ferrous Metals.
 - c. DFT For Coat 1: 1.3 mils.
 - d. Coat 2: Sash and trim.
 - e. Coat 3: Sash and trim.
 - f. DFT For Coats 2 + 3: 3 mils.
 3. Ungalvanized Shop Primed Structural Steel, Exposed On Building Interior:
 - a. Touch-up: Spot prime any abraded, damaged, rusted, or uncoated areas with rust inhibitive primer for ferrous metals.
 - b. Coat 1: Sash and trim.
 - c. Coat 2: Sash and trim.
 - d. DFT: 4.5 mils.
 4. Ungalvanized Shop Primed Structural Steel, Concealed: Touch-up by spot priming any abraded, damaged, rusted, or uncoated areas with rust inhibitive primer for ferrous metals.
 5. Shop Primed Metals and Door Louvers, Exterior and Interior, Except For Subparagraphs 2, 3, and 4 above:
 - a. Coat 1: Sash and trim.
 - b. Coat 2: Sash and trim.
 - c. DFT: Three mils.
 6. Factory Finished Equipment and Items, Exterior and Interior:
 - a. Coat 1: Sash and trim.
 - b. DFT: 1.5 mils.
 7. Visible Roof-Top Equipment: Refer to definition in Paragraph 1.02, D.
 - a. Paint the various materials, items, and equipment per requirements of Paragraph 3.06, B, Metal Work, Exterior and Interior.
- C. Exterior Work, Other Than Metals:
1. Wood Typical:
 - a. Coat 1: Exterior wood primer.
 - b. Coat 2: Sash and trim.
 - c. Coat 3: Sash and trim.
 - d. DFT: Five mils.
 2. Surface Trim, Wood, And Plywood:
 - a. Coat 1: Exterior wood stain, opaque.
 - b. Coat 2: Exterior wood stain, opaque.
 - c. Application Rate: 150 SF per gallon per coat.
 3. Surface Plywood Siding:
 - a. Coat 1: Exterior wood stain, opaque. Prime all surfaces of all pieces completely before installation (faces, edges, ends).
 - b. After installation, inspect members; touch-up any damage, cuts, and nail holes.
 - c. Application Rate: 150 SF per gallon per coat.

4. Surface Boards Over Plywood at Building Fascias and Certain Building Walls, Both Stained Same Color:
 - a. Finish: Exterior wood stain, opaque.
 - b. Coat 1, Plywood: Apply stain after plywood is installed, but before any boards or trim are installed over plywood.
 - c. 2 x 3 Boards:
 1. Boards to be cut to size by Carpentry Section prior to any staining.
 2. Coat 1: Prime stain all surfaces of all pieces completely before installation (faces, backs, edges, ends).
 3. Touch-Up: After installation over plywood by Carpentry Section, inspect members, touch-up stain any damage, cuts and nail holes.
 - d. Coat 2, All Parts: Apply stain to all exposed wood and plywood surfaces.
 - e. Application Rate: 150 SF per gallon per coat.
 5. Exposed Structural Plywood Sheathing At Roof Screens Smooth Surface:
 - a. Coat 1: Exterior wood stain, opaque.
 - b. Coat 2: Exterior wood stain, opaque.
 - c. Application Rate: 250 SF per gallon per coat.
 6. Soffit Construction Behind Screen Vents:
 - a. Coat 1: Exterior wood stain, opaque; black color.
 - b. Application Rate: 250 SF per gallon per coat.
 - c. Apply to all construction, which will be visible through installed vents. Apply prior to installation of screen.
 7. Plaster Smooth Troweled Finish:
 - a. Coat 1: Exterior masonry finish.
 - b. Coat 2: Exterior masonry finish.
 - c. DFT: 2.3 mils.
 8. Concrete Exposed Foundation Walls and Curbs, Recessed Letters at Sandblasted Concrete Name and Office Signs:
 - a. Coat 1: Concrete sealer.
 - b. Coat 2: Exterior masonry finish.
 - c. Coat 3: Exterior masonry finish.
 - d. DFT: 3.6 mils.
 9. Plastic Condensate Piping and Other Plastic Piping Exposed On Rooftops:
 - a. Coat 1: Chlorinated rubber base paint.
 - b. Application Rate: One coat to cover.
 10. Building Dado (8' Height):
 - a. Coat 1: Light tack coat.
 - b. Coat 2: Semi-gloss enamel.
- D. Interior Work, Other Than Metals:
1. Softwood Typical:
 - a. Coat 1: Enamel undercoater.
 - b. Coat 2: Sash and trim.
 - c. Coat 3: Sash and trim.
 - d. DFT: Four mils.

2. Hardwood Doors and Handrails, Softwood Casework Where Not Factory Finished:
 - a. Sealer: At Contractor's option and expense, Clear Sealer may be used as an aid in obtaining a uniform stain color.
 - b. Coat 1: Oil Stain, or wiped white glaze, as selected by District.
 - c. Coat 2: Gloss varnish. Sand smooth.
 - d. Coat 3: Gloss varnish. Steel wool smooth.
 - e. Coat 4: Satin varnish.
 - f. DFT: 3.5 mils.
 - g. Lacquer Option: With specific approval of District, lacquer may be used in lieu of varnish.
3. Rough Surface Wood and Trim:
 - a. Coat 1: Exterior wood stain, semi-transparent.
 - b. Coat 2: Exterior wood stain, semi-transparent.
 - c. Application Rate: 150 SF per gallon per coat.
4. Rough Surface Board On Plywood Wall Treatment:
 - a. Coat 1: Exterior wood stain, semi-transparent. Prime all pieces completely before installation (faces, edges, and ends). After installation, inspect members, touch up any damage, cuts, and nail holes.
 - b. Coat 2: Exterior wood stain, semi-transparent. Apply to all exposed surfaces.
 - c. Application Rate: 150 SF per gallon per coat.
5. Plywood Wall Lining At Storage Areas:
 - a. Coat 1: Exterior wood stain, semi-transparent.
 - b. Coat 2: Exterior wood stain, semi-transparent.
 - c. Application Rate: 250 SF per gallon per coat.
6. Hardboard Panels At Integrated Ceiling:
 - a. Coat 1: Clear methacrylic lacquer.
 - b. Apply before items are installed.
7. Concrete; Exposed Foundation Wall and Curbs:
 - a. Coat 1: Concrete sealer.
 - b. Coat 2: Exterior masonry finish.
 - c. Coat 3: Exterior masonry finish.
 - d. DFT: 3.6 mils.
8. Drywall Walls; Typical:
 - a. Coat 1: Latex sealer.
 - b. Coat 2: Enamel undercoater.
 - c. Coat 3: Stipple enamel, semi-gloss. Apply with a District approved heavy-texture stipple roller.
 - d. DFT: Five mils.
9. Drywall Ceilings, Soffits, and Beams:
 - a. Coat 1: Latex sealer.
 - b. Coat 2: Flat wall latex.
 - c. Coat 3: Flat wall latex.
 - d. DFT: Four mils.
10. Drywall Walls and Ceilings At Janitor's Rooms, Toilets, Storage Rooms,

- And Kitchen:
- a. Coat 1: Latex sealer.
 - b. Coat 2: Enamel undercoater.
 - c. Coat 3: Stipple enamel, semi-gloss. Apply with a District approved heavy-texture stipple roller.
 - d. DFT: Five mils.
11. Painted Strips At Interior Concrete Stairs, Conform To State Handicap Requirements:
- a. Coat 1: Traffic paint.
 - b. Coat 2: Traffic paint.
 - c. Application Rate: Two coats, at 400 SF per gallon per coat.
 - d. Stripes: 2" wide, located 1" maximum from and parallel to nosing.
 - e. Required Locations: Bottom tread and upper approach of each flight of stairs and landings.
12. Concrete Block: Interior.
- a. SPRAYTEK II over undercoat.
 1. Coat 1: Primer, undercoat with hopper or other equipment qualified for heavy bodied material to a minimum thickness of 20 mils.
 2. Finish Coat: SPRAYTEK, minimum thickness of 10 mils.
 3. Texture: Smooth sand; DS-IV Texture.
 - b. Water-base Acrylic-epoxy
 1. Pittsburgh Paints; Pitt-glaze, (tinted).
 2. Wet film; 20 to 40 mils thickness as required to fill the surface. Films in excess of 25 mils wet should be applied in two coats to facilitate their cure.
13. Special Paint and Varnish Areas:
- a. Kitchen and cafeteria.
 - b. Walls and ceiling: High Gloss Enamel.
 - c. Pool areas: Marine Epoxy, High Gloss.
 - d. Shower and locker areas: Marine Epoxy, High Gloss.
 - e. Playground equipment: High Gloss Enamel.
 - f. Lunch benches: High Gloss Enamel.
 9. Furniture, cabinetry and trim: McCloskey Varnish, Plastic, Semi gloss.
 - h. Gym floors: Hockwald Varnish.
 - l. Wood floors: Hockwald Varnish.
 - j. Bleachers: McCloskey Varnish, Gloss Spar.
- E. Mechanical and Electrical Work:
1. General: Unless otherwise specified herein, paint all exposed mechanical, plumbing, fire sprinklers, and electrical equipment, apparatus, piping, conduit, fittings incidental thereto, and coverings applied thereto as specified above in Paragraph 3.06, B, Metal Work, Exterior and Interior.
 - a. Finished rooms and spaces: Paint equipment, panel boards, and all other items to match room finish.
 - b. Unfinished rooms and spaces: Same requirements as "Finished Rooms and Spaces," except that equipment, panel boards, and other items with complete

factory-applied paint finishes need not be painted.

- c. Do not paint out nameplates, labels, or stamped designations of sizes, qualities, standards and manufacture on pieces of equipment.
- d. Do not paint canvas connections between fans and ducts.
- e. Do not paint brass fittings, rough or polished, plated or non-plated.
- f. Items mounted in floors: Paint cover plates to sumps and pipe trenches, and manhole covers and rings mounted in floors, and similar items two coats of cement color floor paint.
- 9. Exposed exterior items: Paint per Paragraph 3.06, B.
- h. Painting flat black: Paint two coats flat black color as far back as visible the inside surfaces of ducts, dampers, louvers, vents, and similar items.
- l. Plumbing fixtures: Paint unfinished exposed surfaces to match adjoining walls.
- j. Main sprinkler riser: Paint bright red color.
- k. Sprinkler head canopies: Paint to match color of adjacent surfaces, unless canopies are chrome-finished or stainless steel.
- l. Paint work not specifically mentioned shall be as specified for work of similar character.

3.7 MATERIALS GENERAL:

- A. Standard Materials and Finishes: Use pure unadulterated factory-mixed material delivered to site in unopened containers bearing manufacturer's name and brand; colors, as selected by District, shall be factory-mixed.
 - 1. Manufacturers shall verify that their products conform to latest California Air Resources Board regulations.

3.8 2.0ACCEPTABLE MANUFACTURERS AND PRODUCTS:

- A. General:
 - 1. All materials used in the work shall be a proprietary brand of one of the manufacturers listed below for each type.
- B. Metal Primers:

<u>MANUFACTURER</u>	<u>PRODUCT</u>
1. Zinc Dust:	
Sherwin-Williams	B69A8 Zinc-Clad IV
Kelly Moore	Devoe 1405
2. Oil-Cementitious:	
Sherwin-Williams	B66-310 ProCryl Universal Primer
Dunn Edwards	Galv-Alum White Anti-Corrosion Primer #43-7
TNEMEC	Series 22 Galv-Gard Oil

Ameritone Mirrolac Kelly Moore	Cementitious Exterior Coating Galvanized Metal Primer#13201 Devoe 1405
-----------------------------------	--

3. Rust-Inhibitive Primer for Ferrous Metals:
- | | |
|---|---|
| Dunn Edwards
Sherwin-Williams
Kelly Moore | Block-Rust Red Oxide Primer #43-4
DTM Primer/Finish B66W1
Devoe/Devprime 1404 |
|---|---|

C. Exterior Wood Primers:

- | | |
|---------------------|------------------------------|
| 1. Dunn Edwards | Apex Extr. Primer # 42-9 |
| 2. Sherwin-Williams | ProBlock Latex Primer B51W20 |
| 3. Kelly Moore | Acryshield 225 |

D. Exterior Surfaces - Acrylic Enamel:

- | | |
|---------------------|----------------------------|
| 1. Dunn Edwards | Permasheen Semi Gloss W901 |
| 2. Sherwin-Williams | A-100 Gloss A8 Series |
| 3. Kelly Moore | Acryshield 1250 |

E. Semi-Transparent Exterior Wood Stain; For Interior Wood; Must Be An Oil-Base Stain:

- | | |
|---------------------|--|
| 1. Dunn Edwards | Rancho-Hues, #17 Series Semi-Transparent |
| 2. Sherwin-Williams | WoodScapes Ext. Semi-Transparent Stain A15T5 |
| 3. Kelly Moore | Acryshield 1285 |

F. Opaque Exterior Wood Stains; For Exterior Wood; Must Be An Oil-Base Stain:

- | | |
|---------------------|---|
| 1. Olympic | Exterior, Solid Color Stain |
| 2. Sherwin-Williams | WoodScapes Ext. Solid Color Stain A15W50 Series |
| 3. Kelly Moore | Storm #4 Enduradeck |

G. Exterior Masonry Finish:

- | | |
|---------------------|-----------------------------------|
| 1. Dunn Edwards | Evershield #W 701-1; 100% acrylic |
| 2. Sherwin-Williams | A-100 Flat A6 Series |
| 3. Kelly Moore | Acryshield 1240 |

H. Sealer; Latex:

- | | |
|---------------------|--|
| 1. Dunn Edwards | Vinylastic Pigmented Wall Sealer W-101 |
| 2. Sherwin-Williams | ProMar 200 Zero Primer B28 |
| 3. Kelly Moore | PVA Sewler 971 |

I. Sealer; Concrete:

- | | |
|---------------------|---------------------------------|
| 1. Dunn Edwards | Eff-Stop Concrete Sealer W-709. |
| 2. Sherwin-Williams | Loxon Masonry Primer A24W300 |
| 3. Kelly Moore | Acryshield Exterior Masonry 247 |

J. Interior Finishes:

- | | |
|----------------------------------|--|
| 1. Enamel Undercoater. Interior: | |
|----------------------------------|--|

- a. Dunn Edwards Enamel Undercoater #42-31 or E22-1 Super-U 365
 - b. Sherwin-Williams Water Reducible Alkyd Primer B49WJ1100
 - c. Kelly Moore Zinser / Coverstain
2. Enamel Semi-Gloss Stipple:
- a. Sherwin-Williams ProMar 200 Zero B31
 - b. Dunn Edwards Semi-Gloss Stipple Enamel #8-14
 - c. ICI/Sinclair Semi-Gloss Stipple #782

Color Selection: Dunn Edwards, Navajo White 60.

3. Lacquer Sanding Sealer: High Solids:
- a. Dunn Edwards Lacquer Sanding Sealer #LQ-101
 - b. Sherwin-Williams Lacquer Sanding Sealer B44MJ91
 - c. Kelly Moore Gemini Lacquer System
4. Interior Lacquer System:
- a. Dunn Edwards Lacquer Clear (gloss #LQ-103) (Semi-gloss #LQ-104) (Flat #LQ-105)
 - b. Sherwin-Williams Gemini Lacquer System
 - c. Kelly Moore Gemini Lacquer System
5. Interior Varnish System:
- a. Dunn Edwards Pale Synthetic Varnish: Gloss #V-197; Satin #V-199
 - b. Sherwin-Williams WoodClassics Waterborne Polyurethane Varnish A68-90 Series
 - c. Kelly Moore Interior Clear Old Masters System
6. Clear Sealer:
- a. Dunn Edwards Reinseal Clear Sealer #V-195
 - b. Sherwin-Williams WoodClassics Waterborne Polyurethane Varnish A68-90 Series
 - c. Kelly Moore Exterior Clear Varnish / Old Masters System

K. Traffic Paint:

- 1. Dunn Edwards "Vin-L-Stripe" #W-801, vinyl-epoxy.
- 2. J.E. Bauer Latex base; formulas #1030A9 white, #1056A9 Yellow, #1865A9 blue, #1118A9 Green, and #1854A9 Red.
- 3. Kelly Moore Alkyd Traffic Paint System 1475
- 4. Sherwin-Williams Set Fast Traffic Marking Paint
 - a. Color Selection:
 - 1) Text: White.
 - 2) Parking Dividers: White.
 - 3) No Parking Zones: Yellow.
 - 4) No Parking Curb: Red.

- 5) Handicap Zones: Blue.
- 6) Directional Arrows: White.
- 7) Driving Lane Dividers: White.
- 8) Playground Striping: Beige or Green.
- 9) Blue paint for Handicap shall match No. 15090 in Federal Standard 595A.
- 10) Traffic Paint 1475 – Kelly Moore

END OF SECTION

SECTION 00 00 11 – SECTION NAME

PART 4 - GENERAL

4.3 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specifications Sections, apply to this Section.

4.4 SUMMARY

- A. This Section includes the following:
 - 1. Provide all material, labor, equipment and services necessary to completely install all **[Insert description here]** materials, accessories and other related items necessary to complete the Project as indicated by the Contract Documents.
 - a) Related Sections: The following Project Manual Sections contain requirements that relate to this section:
 - 2. ALL DIVISION 00 SPECIFICATION SECTIONS.
 - 3. ALL DIVISION 01 SPECIFICATION SECTIONS.
 - 4. ALL SPECIFICATION SECTIONS IN THE FACILITY CONSTRUCTION SUBGROUP.
 - 5. ALL SPECIFICATION SECTIONS IN THE FACILITY SERVICES SUBGROUP.
 - 6. ALL SPECIFICATION SECTIONS IN THE SITE AND INFRASTRUCTURE SUBGROUP.
 - 7. ALL SPECIFICATION SECTIONS IN THE PROCESS EQUIPMENT SUBGROUP.
- B. Allowances:
 - 1. An allowance for the total cost of providing XXXXXXXXXXXXXXXXXXXX (and to be included in the Base Bid) Should the allowance not be needed by agreement of all parties, then the allowance amount shall be credited to the Owner by way of a Change Order.

4.5 REFERENCES

- A. Standards:
 - 1. In accordance with the following standards:

4.6 SYSTEM DESCRIPTION

- A. Design Requirements:
 - 1. In accordance with allowable values and properties assigned and approved by CBC. It is the intention of this section and the drawings to form a guide for a complete and operable system. Any items not specifically noted but necessary for a complete and operable system shall be provided under this section.
- B. Performance Requirements:
 - 1. In accordance with allowable values and properties assigned and approved by CBC. It is the intention of this section and the drawings to form a guide for a complete and operable system. Any items not specifically noted but necessary for a complete and operable system shall be provided under this section.

Division One Specification - SUBMITTALS

- A. General: Submit in accordance with Specification Section - SUBMITTAL PROCEDURES:
- B. Format for Submittals:
- C. Coordination Drawings:
 - 1. Submit installer's coordination drawings indicating the work of this section with that of related work of other sections for proper interface of the completed work. Installer shall coordinate and obtain approvals from the work of other related sections prior to submitting to the Architect.
- D. Product Data: For each type of *[Insert description here]*.
 - 1. Include construction details, material descriptions, fabrication methods, dimensions of individual components and profiles, hardware, finishes, and operating instructions.
 - 2. Submit manufacturer's standard color range for selection by the Architect.
 - 3. Submit manufacturer's full color range (including any standard, premium and custom colors) for selection by the Architect.
- E. Shop Drawings.
 - 1. Submit shop drawings prepared by, or under the supervision of a registered Civil or Structural Engineer in the State of California, detailing fabrication and assembly of the work under this section, as well as procedures and diagrams. Include setting drawings, templates, and directions for installation of anchor bolts and other anchorage to be installed as unit of work of other related sections.
 - 2. Submit shop drawings showing fabrication and installation of the work of this section

including plans, elevations, sections, details of components, and attachments to other units of work.

- a. Where installed products are indicated to comply with certain design loading, include structural computations, material properties, and other information needed for structural analysis that has been signed and stamped by a registered Civil or Structural Engineer in the State of California.
3. Submit shop drawings from manufacturer detailing equipment assemblies and indicating dimensions, weights, loading, required clearances, method of field assembly, components, and location and size of each field connection.

F. Samples.

1. Item type
 - a. Provide 24 inch square sample of each color and pattern selected.
 - b. Provide 12 inch square sample of each color and pattern selected.
2. Different item type
 - a. Provide 6 inch square sample of each color and pattern selected.
 - b. Provide 3 inch square sample of each color and pattern selected.
 - c.
3. Accessories/Trim/Etc.
 - a. Provide 6 inch lineal samples of each piece of trim material specified.
 - b. Provide 4 inch lineal samples of each piece of trim material specified.
 - c.

G. Quality Assurance/Control Submittals:

1. Design Data.
2. Item/Assembly/System: [Describe submittal required.]
3. Test:
4. Item/Assembly/System:
 - a. Item/Assembly/System: Submit reports required by regulatory requirements.
 - b. Item/Assembly/System: *[Insert description here]*
 - c. [Insert description here]
5. Certificates:
 - a. Item/Assembly/System: *[Insert description here]*
6. Manufacturer's Instructions:
 - a. Item/Assembly/System: Submit manufacturer's written instructions.
 - b. [Insert description here]
7. Manufacturer's Field Reports:
 - a. Item/Assembly/System: Submit manufacturer's written field reports.
 - b. [Insert description here]
8. Engineering Calculations:

- a. Item/Assembly/System: Submit engineering calculations computed and signed by a registered Civil or Structural Engineer in the State of California.

H. Closeout Submittals in accordance with the following:

1. Maintenance Data in accordance with Specification Section - PROJECT CLOSEOUT.
2. Operation Data in accordance with Specification Section - PROJECT CLOSEOUT.
3. Record Documents in accordance with Specification Section - RECORD DOCUMENTS.
4. Warranty in accordance with Specification Section – WARRANTIES.

4.8 QUALITY ASSURANCE

A. Qualifications:

1. Installer Qualifications:

- a. Engage an experienced Installer who has successfully completed three (3) projects of similar scope and size to that indicated for this Project.
- b. Engage an experienced Installer who is certified in writing by the manufacturer listed herein as qualified to install manufacturer's product (or system) in accordance with manufacturer's written warranty requirements.
- c.

2. Manufacturer/Supplier Qualifications:

- a. Firm experienced in successfully producing/supplying products, similar to that indicated for this Project, with sufficient production/supply capacity to produce/supply required units without causing delay in the work.
- b. [Insert description here].

B. Regulatory Requirements:

1. In accordance with Specification Section - REGULATORY REQUIREMENTS.
2. In accordance with Specification Section - REGULATORY REQUIREMENTS, and the following:
 - a. CARB Materials and equipment used for this Project shall comply with the current applicable regulations of the California Air Resources Board (CARB) and the Environmental Protection Agency (EPA), in the area where the Project is located.

C. Certificates:

1. Provide a letter on Contractor's Letterhead certifying work provided meets or exceeds the requirements of this Section.
 - 2.
- D. Field Samples:
1. Provide one complete coating system for each color, gloss and texture required. When approved, the sample panel areas will be deemed incorporated into the Project and will serve as the standards by which the subsequent work of this section will be judged.
 - 2.
- E. Mockups:
- 1.
- F. Meetings:
1. Pre- Demolition: Schedule prior to the start of work.
 - a. Coordinate the work with other work being performed.
 - b. Review requirements of work performed by others that rely on substrates exposed by selective demolition work.
 - c. Identify any potential problems, which may impede planned progress and proper demolition of work.
 - d. Review structural load limitations of existing structure.
 - e. Review areas where existing construction is to remain and requires protection.
 - f. Review demolition waste disposal and material recycling procedures.
 2. Pre-Construction:
 - a. Coordinate the work with other work being performed.
 - b. Identify any potential problems, which may impede planned progress and proper construction of work.
 - c. Review structural load limitations of existing structure.
 - d. Review areas where existing construction is to remain and requires protection.
 3. Pre-Installation:
 - a. Coordinate the work with other work being performed.
 - b. Identify any potential problems, which may impede planned progress and proper installation of work.
 - c. Review structural load limitations of existing structure.
 - d. Review areas where existing construction is to remain and requires protection.
 4. Progress: Scheduled by the Contactor during the performance of the work.
 - a. Review for proper work progress.
 - b. Identify any problems and acceptable corrective measures.
 - c. Identify any measures to maintain or regain project schedule if necessary.
 5. Completion: Scheduled by the Contactor upon proper completion of the work.
 - a. Inspect and identify any problems.
 - b. Establish method and procedures to maintain protections while progressing to project completion.

4.9 DELIVERY, STORAGE, AND HANDLING

- A. Packing, shipping, handling, and unloading:
 - 1. Products shall be individually wrapped.
 - 2. Products shall be handled in such a manner as to assure that they are free from dents, scratches and other damage.

- B. Acceptance at Site:
 - 1. Products must be in manufacturer's original unopened containers with labels indicating brand name, model, and grade.
 - 2. Damaged products will not be accepted.

- C. Storage and protection:
 - 1. Products shall be stored in a dry, protected area.
 - 2. Products shall be stored in locked storage building.
 - 3. Products shall be stored above ground on level platforms, six (6) inches above ground, allowing air circulation under stacked units.
 - a. Cover materials and protect against wetting prior to use.
 - b. Cover materials with protective waterproof covering providing for adequate air circulation and ventilation.
 - c.

4.10 PROJECT CONDITIONS

- A. Environmental requirements:
 - 1. Dust control: Perform work in a manner as to minimize the spread of dust and flying particles. Thoroughly moisten all surfaces as required to prevent dust from being a nuisance to the public, neighbors and concurrent performance of other on-site work.
 - 2. Burning: No burning will be allowed on-site.
 - 3. Rain: The work under this section shall not be started or maintained under threat of rain unless the work is not affected by the rain.
 - 4. Temperature: Maintain ambient temperature in space to receive products at sixty-eight (68) *[insert number]* degrees Fahrenheit for two (2) *[insert number]* days prior, during, and two (2) *[insert number]* days minimum following installation.
 - a. After this period, maintain a temperature of not less than 55 degrees Fahrenheit.
 - b. After installation, at no such time shall the temperature exceed 85 degrees Fahrenheit.
 - c. Inform the Owner of ambient temperature requirements for products installed and maintain until Substantial Completion and turn-over of the building or facility to the Owner.
 - 5. Humidity: Maintain humidity in space to receive products between 6 *[insert number]* percent to 9 *[insert number]* percent for four (4) *[insert number]* days minimum prior,

during, and following installation in accordance with manufacturer's recommendations. Inform the Owner of humidity requirements for products installed and maintain until Substantial Completion and turn-over of the building or facility to the Owner.

B. Existing Conditions:

1. Examine site and compare it with the drawings and specifications. Thoroughly investigate and verify conditions under which the work is to be performed. No allowance will be made for extra work resulting from negligence or failure to be acquainted with all available information concerning conditions necessary to estimate the difficulty or cost of the work.
2. Conduct work so as not to interfere unnecessarily with adjacent roads, streets, drives and walks.
- 3.

4.11 SCHEDULING

A.

4.12 SEQUENCING

A.

4.13 WARRANTY

A. Contractor's General Warranty:

1. In accordance with Specification Section - WARRANTIES.

B. Manufacturer's Warranty:

1. In accordance with manufacturer's written standard warranty:
 - a. Warranty Period One (1) Year.
 - b. Vinyl Composition Tile Five (5) Years.
 - c. Rubber Tile Ten (10) Years.
 - d. Solid Vinyl Tile Ten (10) Years.
 - e. Static Dissipative Tile Five (5) years.

C. Installer's Warranty:

1. In accordance with the terms of the Specification Section - WARRANTIES:

Pick the appropriate Warranty Period below in [].

- a. Warranty period [One (1) Year.][Five (5) years.]

4.14 SYSTEM STARTUP

A.

4.15 OWNER'S INSTRUCTIONS

- A. Provide the services of a factory-authorized service representative to provide start-up service and to demonstrate and train the Owner's maintenance personnel as specified below:
 - 1. Test and adjust controls and any safeties. Replace damaged or malfunctioning controls and equipment.

4.16 COMMISSIONING

A.

4.17 MAINTENANCE

- A. Extra Materials:
 - 1.

B. Maintenance Service:

- 1. Starting at the date of Substantial Completion, provide full maintenance of units for a period of three (3) months on a weekly surveillance basis, followed by nine (9) months on a monthly surveillance basis.
 - a. Correct operational imperfections and restore or replace defective or deteriorated components and finishes.
 - b. Use only genuine parts, components, and supplies as used in the manufacture and installation of original equipment.
 - c.

PART 5 - PRODUCTS

5.3 MANUFACTURERS

A. These products listed herein establish the size, pattern, color range and function selected by the Architect for this Project. Manufacturers that are listed as acceptable alternative manufacturers and substitutions must still comply with the requirements of this project and the products listed in order to be approved as an equivalent during the Submittal Process. If the acceptable alternative manufacturers listed or substitutions are not approved during the Submittal Process due to non-compliance with the contract documents, then the Contractor shall submit product specified.

- 1. Specified product manufacturer:
 - a. MANUFACTURER PRODUCT.
 - b. Acceptable alternative manufacturers:

1)	MANUFACTURER	PRODUCT.
a)	x	

B. Products from other manufacturers not listed must submit in accordance with Specification Section - SUBSTITUTION PROCEDURES.

5.4 EXISTING PRODUCTS

A.

5.5 MATERIALS

A.

5.6 MANUFACTURED UNITS

A.

5.7 EQUIPMENT

A.

5.8 COMPONENTS

A.

5.9 ACCESSORIES

A.

5.10 MIXES

A.

5.11 FABRICATION

A. Shop Assembly:

1.

B. Fabrication Tolerances:

1.

5.12 FINISHES

A. Shop Priming:

1.

B. Shop Finishing:

1.

5.13 SOURCE QUALITY CONTROL

A. Tests, Inspection:

1.

- B. Verification of Performance:
 - 1.

PART 6 - EXECUTION

6.3 ACCEPTABLE INSTALLERS

- A.

6.4 EXAMINATION

- A. Site verification of conditions:
 - 1. Prior to the execution of the work under this specification section, inspect the installed work executed under other sections of this Project Manual that affects the execution of work under this specification section.
 - 2. Report unacceptable conditions to the Architect. Do not begin work until unacceptable conditions have been corrected.
 - 3. Execution of work under this specification section shall constitute acceptance of existing conditions.

6.5 PREPARATION

- A. Coordination:
 - 1. Coordinate work under this specification section with work specified under other sections to ensure proper and adequate interface of work.

- B. Protection:
 - 1. Protect all adjacent surfaces from drips, spray, air pollution of surrounding environment, and other damage from work under this specification section.

- C. Surface preparation:

1. Prepare surface in accordance with manufacturer's instructions and recommendations.
2. Clean substrates of substances (oil, grease, rolling compounds, incompatible primers, loose mill scale, etc.) which could impair bond of materials specified within this section.
- 3.

6.6 ERECTION / INSTALLATION / APPLICATION / CONSTRUCTION

A. General:

1. In accordance with manufacturer's written instructions and recommendations unless specifically noted otherwise.
2. In accordance with approved submittals.
3. In accordance with Regulatory Requirements.
4. Set plumb, level, and square.
5. In accordance with Specification Section

B. Layout:

1. Lines shall be straight and true.

C. Assistance:

1. Application shall be in direct consultation and review of

D. Special Techniques:

- 1.

E. Interface with other work:

- 1.

F. Sequences of operation:

- 1.

G. Site Tolerances:

- 1.

6.7 REPAIR / RESTORATION

A.

6.8 RE-INSTALLATION

A.

6.9 FIELD QUALITY CONTROL

A. Site Tests:

1. As required by Regulatory Requirements.
 - a.

B. Inspection:

1. As required by Regulatory Requirements.
2. Schedule inspections and notify the Architect, Project Inspector and any other regulatory agencies of the time at least 48 hours prior to the inspection.
3. No work shall be without the inspections required by regulatory requirements.
4. .

C. Manufacturer's Field Services:

- 1.

6.10 ADJUSTING

A. Test and adjust controls and safeties. Replace damaged or malfunctioning controls and equipment.

- 1.

6.11 CLEANING

A. Clean in accordance with Specification Section - TEMPORARY FACILITIES AND CONTROLS.

1. Leave area level and free of any ruts or debris. Appearance of earth surface shall be equal to or better than adjacent undisturbed surfaces.
2. Clean any soiled surfaces immediately.
3. Clean any soiled surfaces at the end of each day, minimum.

4. Finish shall be clean and ready for the application of any additional finishes.
5. In accordance with manufacturer's instructions and recommendations.

6.12 DEMONSTRATION

- A. In accordance with Specification Section - PROJECT CLOSEOUT.
 1. Provide the services of a factory-authorized service representative to provide start-up service and to demonstrate and train Owner's maintenance personnel as specified below.
 2. Schedule training with the Owner's maintenance personnel with at least seven (7) days advance notice.
 - a. Train Owner's maintenance personnel on procedures and schedules related to start-up and shut-down, troubleshooting, servicing, and preventative maintenance.
 - b. Review data in "Operating and Maintenance Manuals". Refer to Specification Section - PROJECT CLOSEOUT.

6.13 PROTECTION

- A. Protection from weather:
 1. Protect newly installed work from freezing for twenty-four (24) hours after erection, installation or application.
- B. Protection from traffic:
 1. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and installer, which ensures the work of this section being without damage or deterioration until the time of Substantial Completion.
 2. Immediately after cleaning, neatly apply four (4) mil thick, minimum, polyethylene film over finished surfaces at traffic areas. Fasten film firmly to surface.
 - 3.

6.14 SCHEDULES

- A.

GROUP XX – (EACH OPENING TO HAVE):

DOUBLE DOORS, INTERIOR EXIT, RATED, NO DOGGING

SPECIFICATIONS

FRESNO UNIFIED SCHOOL DISTRICT

PAINTING
REV DATE: 06/06/19

QUANT.	DESCRIPTION	MANUF. NO.	FINISH	MANUF.
1 E A	REMOVABLE MULLION	A-FL-KR822	689	PR
1 E A	MULLION CYLINDER	20-057	626	SC
1 E A	RIM CYLINDER	20-057	626	SC
2 E A	MORTISE CYLINDER	26-091	626	SC
2 E A	CLOSER	7500	689	NOR
2 E A	KICKPLATE	37 10" X 2" LDW	630	TR
2 E A	DOOR STOP	1211	626	TR
1 S ET	SMOKE GASKET	S88D HEAD AND JAMBS	719L	PK

SECTION 26 00 00

GENERAL ELECTRICAL

PART 1 GENERAL

1.01 RELATED DOCUMENTS:

Contact requirements of the foregoing GENERAL CONDITIONS, SPECIAL CONDITIONS and supplements thereto and all requirements of Division 1 of these Specifications shall form a part of this Section with the same force and effect as though repeated herein. The provisions of this Section shall apply to all of the following Sections of Division 26 of these Specifications. All applicable portions of the work under Division 26 shall conform fully to all provisions of all other Division 26 Sections along with other Sections of these Specifications including, but not limited to the following:

1.02 SUMMARY OF WORK:

The Contractor shall provide all materials, tools, equipment, labor and services necessary to furnish and install complete working electrical systems as shown on the plans and described within these Specification. All systems, at project completion and before final acceptance, shall be demonstrated to have a complete and working functional operation. The work includes but is not specifically limited to items indicated on Drawings and specified herein.

1.03 DESCRIPTION AND INSTALLATION OF SYSTEMS:

- A. The electrical drawings are diagrammatic and do not necessarily show all raceway, wiring, number or types of fittings, offsets, bends or exact locations of items required by the electrical systems. Items not shown or indicated which are clearly necessary for proper operation, payment or installation of systems shown shall be provided at no-increase in contract price.
- B. The exact routing of systems and location of devices and equipment shall be governed by coordination with other trades, structural and architectural conditions. The Architect or Electrical Engineer reserves the right, at no increase in contract price, to make reasonable changes in location of electrical equipment or wiring systems; so as to coordinate with other systems, group them into orderly relationships, or to increase their utility. Contractor shall verify requirements in this regard prior to roughing in.
- C. Install electrical work in cooperation with other trades and make proper provisions to avoid interferences and coordinate with structural and architectural features, in a manner approved by the Architect or Electrical Engineer. All changes caused by neglect to make such provisions shall be at Contractor's expense. Provide offsets and special fittings, as required to facilitate installation of the work.
- D. When a particular product or type of product is specified with a manufacturer's designation, the latest published specifications, installation, and construction information of the manufacturer shall constitute the minimum acceptable standard. Any substitutions shall be made in accordance with Section 1.09 SUBSTITUTIONS.

1.04 RELATED DOCUMENTS:

A. Codes and Regulations: All electrical equipment and material and its installation shall conform to the current requirements of the following authorities and Section for CODES AND STANDARDS:

1. Occupational Safety and Health Act (OSHA).
2. 2019 California Electric Code (CEC),
3. California Code of Regulations (CCR).
 - a. Title 8, Safety Orders.
 - b. Title 19, Fire and Panic Safety Standard.
 - c. Title 24, Part 1, Administrative Regulations.
4. 2019 California Fire Code (Based on the International Fire Code by NFPA).
5. 2019 California Building Code (Based on the International Building Code,, now incorporated as CCR-T24, Part 2.)

NOTE: Where two or more codes or designs conflict, the most restrictive shall apply. Nothing in these Plans and Specifications shall be construed to permit work not conforming to applicable codes.

B. Tests and Standards: The tests, standards, or recommended procedures of the following agencies shall relate to all parts of these Specifications and shall be considered a minimum:

1. American National Standards Institute (ANSI).
2. Underwriters Laboratories, Inc. (UL).
3. National Electric Manufacturers Association (NEMA).
4. Electrical Testing Laboratories (ETL).
5. National Fire Protection Association (NFPA).
6. Insulated Power Cable Engineers Association (IPCEA).
7. Institute of Electrical and Electronic Engineers (IEEE).
8. Illumination Engineering Society (IES).

1.05 EXAMINATION OF DOCUMENTS AND SITE:

Before submitting a proposal, each bidder shall carefully examine the electrical, mechanical,

architectural, and structural drawings and specifications. He shall also visit the site and fully inform himself as to all existing conditions and limitations applying to the work. If, after such examination and study, it appears that any change from the drawings and specifications should be allowed, the bidder shall so state in writing together with any change in cost involved.

By the act of submitting a proposal, each bidder shall be deemed to have made such examinations of the drawings and specifications and premises, and it will be assumed that he is therefore familiar with the entire scope of the project and has based his proposal upon the work described in the Plans and Specifications and upon all existing conditions and limitations applying to his work.

1.06 EXECUTION:

- A. Workmanship: The work shall be performed by competent workmen, skilled in the particular phase of the work entailed. The work shall be first class throughout, neat, accurate and in full accordance with the intent of these Specifications and the satisfaction of the Architect or Electrical Engineer.
- B. Safety: All standard safety procedures as set forth by OSHA, CCR, and California Division of Industrial Safety shall be strictly adhered to.
- C. Coordination: The Contractor shall familiarize himself with the work of other crafts so as to be able to provide electrical service of correct size and voltage and other requirements to any equipment to be installed. The installations shall be coordinated as to location and time, and interference causing delays and non-acceptable construction shall be avoided.

Prior to commencing construction the Electrical Contractor shall arrange a conference with the Mechanical and Plumbing Contractors and sub-contractors as well as equipment suppliers and shall verify types, sizes, locations, requirements, controls, and diagrams of all equipment furnished by them. Prior to roughing in, he shall, in writing, inform the Architect or Electrical Engineer that all phases of coordination of this equipment have been covered. Exact equipment rough-in locations shall be verified from shop drawings.

- D. Cutting and Repairing: The Electrical Contractor shall do all cutting necessary for the proper installation of his work, repair any damage done by himself or his workmen, and coordinate his work with that of others. Do no cutting or patching without approval of the Architect or Electrical Engineer. Round holes through concrete slabs or walls shall be core drilled with a diamond drill, rectangular openings shall be cut with a diamond saw. In no case shall any concrete beam or column be cut.
- E. Sleeves and Openings: Electrical Contractor shall be responsible for all sleeves and openings through walls and floors required by electrical work. All openings around conduits in sleeves shall be sealed with a material of equal fire rating as the surface penetrated. Openings not utilized shall be temporarily sealed in a similar manner. All required sleeves shall be furnished to and coordinated with the General Contractor.

- F. Cleaning and Painting: All exposed work shall be thoroughly cleaned upon completion of work. All panelboards and equipment not located in electrical or mechanical rooms or closets shall be field painted per painting specifications, finish M2, color as selected by Architect. Panelboard enclosures, fixtures, and equipment, where finish has been marred in shipment or installation, shall be completely refinished. Minor finish damage shall be rectified as indicated by the Architect or Electrical Engineer. Contractor shall remove all waste and rubbish resulting from his work from the site.

1.07 QUALITY CONTROL:

- A. Supervision: The Contractor shall personally, or through a competent representative, constantly supervise the work from beginning to completion and final acceptance. He shall cooperate fully with the inspection authorities in the provision of information and access to the work. He shall, to the best of his ability, maintain the same job foreman throughout the life of the project unless a replacement is requested or authorized by the Architect or Electrical Engineer.
- B. Inspection and Tests: The Contractor shall furnish all labor and test equipment required to fully test and adjust the equipment installed under this specification and demonstrate its proper operation.
 - 1. Arrange for all tests and inspections and provide minimum 48 hours notice to the Architect or Electrical Engineer.
 - 2. A test must demonstrate that each piece of equipment, outlet, fixture, device, and appurtenance is in sound operating condition and in proper cooperative relation to associated equipment.
 - 3. All tests shall be conducted under supervision of the Architect or Electrical Engineer, and any defects of any nature which are apparent as a result of such test shall be made correct to the satisfaction of the Architect or Electrical Engineer before final acceptance is made.
 - 4. No equipment shall be tested, or operated for any other purpose, such as checking motor rotation, until it has been fully checked in accordance with the manufacturer's instructions.
 - 5. Check and tighten nuts, bolts, lugs, and similar elements of equipment; switchboards, motor control centers, busways, panels, etc.
 - 6. Submit complete test reports with maintenance manual submission.
- C. Guarantee: The Contractor agrees to replace or repair, to the satisfaction of the Owner, any part of the installation which may fail due to defective material and/or workmanship or failure to follow Plans and Specifications, for a period of one year after final acceptance. Any damage to other work resulting from such failure or the correction thereof shall be remedied at the Contractor's expense. The Contractor shall, further, secure from the manufacturers of special equipment, such as signal systems, their respective guarantees and deliver same to Owner. Guarantees

between Contractor and his suppliers shall not affect guarantees between Contractor and Owner.

1.08 GROUNDING:

- A. The conduit system supports, cabinets, switchboards, etc., and neutral conductors must be permanently and effectively grounded by means of approved ground clamp, in accordance with the electrical safety orders of the Department of Industrial Relations of the State of California.
- B. This Contractor shall exercise every precaution to obtain good contacts at all panel boxes, pull boxes, etc. Where it is not possible to obtain good contacts, the conduit shall be bonded around the boxes with a #6B&S gauge, rubber covered, double braided wire with ground clamps.
- C. Equipment and raceway bonding procedures shall be rigidly maintained and meet all jurisdictional requirements of codes and regulations.
- D. A separate grounding conductor shall be run in all PVC conduit runs.

1.09 SUBSTITUTIONS:

- A. The Specifications or Plans are in no way to be construed as being proprietary toward one product. Those products, or types of products, listed are intended to set the standard for quality, design, and installation procedure. However, no right is implied upon the part of the Contractor to substitute other materials, products or systems without the written approval of the Architect or Engineer.
- B. All requests for substitution shall be made in accordance with Section of the General requirements - SUBSTITUTIONS.
- C. All requests for substitutions shall be in writing, received at least 10 days prior to bid date, and shall indicate all information required thereon including differences from the specified item. The request for substitution shall be accompanied by cuts, product literature, performance data, specifications, drawings, samples or other means as may be required for proper evaluation by the Architect or Electrical Engineer.
- D. All proposed substitutions shall be standard product of the firm under current manufacture and be a catalog item at time of bid.
- E. Acceptance of substitution shall not relieve the Contractor from responsibility for complying with requirements of the Contract Documents. The Contractor shall be responsible for changes in other parts of the work occasioned by his substitutions and shall bear their expense.
- F. Representative samples may be required for determination of equality.

1.10 SUBMITTAL:

- A. Make submittal for all material to be used on the project, whether as specified or

substitutions, within five (5) days after award of Contract by the Owner, in accordance with the following:

1. All submittal shall be neat and bound in a suitable folder or binder.
 2. Identify each item by manufacturer, brand, trade, name, number, size, rating, and whatever other data is necessary to properly identify and check materials and equipment. Words "as specified" are not sufficient identification.
 3. Identify each submittal item by reference to specifications section paragraph in which item is specified, or Drawings and Detail Number.
 4. All submittal shall be submitted in coherent groups, e.g. all light fixtures at one time. No partial, or incomplete submittal will be accepted.
 5. Organize submittal in same sequence as they appear in specification sections, articles or paragraphs.
- B. Product Data: Submit eight copies, in groups, as follows:
1. Conduits and raceway types required, including fittings
 2. Electric Wire, cable and connectors
 3. Electrical boxes and fittings
 4. Wiring devices
 5. Power distribution boards, panels, transformers, disconnects, and switchboards.
- C. Shop Drawings: Shop drawings shall show physical arrangement, wiring diagram, construction details, finishes, materials used in fabrication, provisions for conduit entrance, access requirements for installation and maintenance, physical size, electrical characteristics, foundation and support details, weight, power sources, circuit numbers, and shall be compatible with the Contract Drawings and Specifications.

Show wiring as actually installed, connected, and identified for this specific project. Include identification of cables and cable conductors.

Shop and instruction drawings shall cover the equipment or device to be installed and not merely the general class of such equipment or device.

1.11 DOCUMENTATION:

- A. Construction Record Drawings: The Contractor shall furnish to the Architect or Engineer, in accordance with the GENERAL REQUIREMENTS, a complete set of "as constructed" drawings which clearly indicate all deviations from the basic contract drawings, including exact dimension locations and depths for all stubbed conduits,

location and size of spare conduits, & conductors, all new and uncovered existing work outside the buildings, power feeder runs, and communications "primary" conduit runs. Corrections and changes shall be kept up to date at all times.

- B. All submittal and shop drawings will be resubmitted with record drawings showing all revisions and changes made, clearly marked with field termination wire so as to reflect actual construction record conditions. Revisions and changes will be enumerated and new dates of drawings shown.

1.12 EARTHWORK:

- A. Scope: Do all earthwork required for installation of the underground electrical work in accordance with Trench Excavation and Backfill Specifications and the following:
- B. Existing Utilities: Prior to performing any excavation, Contractor shall establish all existing utilities in area.
- C. Patching and Paving: General Contractor to patch and pave all surfaces involved with underground utilities after fill compacted by Contractor to specified values.
- D. After Excavation: Raceways shall be installed as quickly as possible and the excavation backfilled in order to reduce hazards. Barricades, construction signs, battery operated flashing lights and guards, as required, shall be placed and maintained during the progress of the construction to protect persons from injury and to avoid property damage as per General Conditions.

1.13 EXISTING SUB-SURFACE STRUCTURES:

- A. The civil plans indicate all known electrical and major sewer and water systems on the site, underground. No exact recorded information is available on any and/or all buried systems on the site. Responsibility for absolute accuracy of site data indicated on electrical plans is not assumed by the Architect or Electrical Engineer.
- B. It shall be the Contractor's responsibility to protect all underground systems and structures while excavating and installing the electrical distribution system. Any damage done to the existing system during the course of the electrical work shall be repaired to the satisfaction of the Owner and the utility or agency involved, at the expense of the Contractor.

1.14 PORTABLE OR DETACHABLE PARTS:

The Contractor shall retain in his possession and shall be responsible for all portable and detachable parts or portions of the installation such as fuses, keys, locks, adapters, locking clips, and inserts until final completion of his work. These parts shall be itemized and delivered to the Owner at Project Closeout.

1.15 OPERATION AND SERVICE MANUALS:

- A. Contractor shall prepare manuals describing the operations, servicing, and maintenance requirements of all electrical equipment provided and complete parts

lists, in accordance with Section Operating and Maintenance Data.

- B. Equipment: Equipment described in the manual shall include all equipment listed under "Submittal", and on all other auxiliary miscellaneous systems.
- C. Information contained in the manual shall consist of 8-1/2" x 11" size catalog data on each item, together with parts lists, description of operation, maintenance information, shop drawings, wiring and riser diagrams and test reports as installed. Catalogs and data in the manuals shall be neat, clean copies. Drawings shall be accordion folded to letter size and installed in an envelope within the manual. An index shall be provided, which shall list all contents in an orderly manner with the respective equipment supplier's name, address and telephone number, and the manufacturer's recommended servicing instructions. Diagrams shall be complete for each system installed. Provide divider sheets with identifying tabs between each category.

END OF SECTION