

**Business Services Contracts Office** 

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#### **ADDENDUM NO. 2**

Date: April 3, 2018

Issued by: Sacramento City Unified School District

Project: American Legion Core Academic Renovation

You are hereby notified of the following changes, clarifications, or modifications to the original Contract Documents, Specifications, and Drawings. This Addendum shall supersede the original project documents, and shall take precedence over anything to the contrary therein. All Addenda shall be acknowledged in the Bid Form. Failure to do so may result in disqualification of the bid. All other conditions remain unchanged.

#### **GENERAL**

ITEM # 2.1

<u>Fire Sprinklers</u>: The fire sprinkler system to be installed shall be provided as shown in the contract documents. Modifications to or any variance from these approved drawings are not allowed. Any change or variance from the DSA Approved fire sprinkler drawings, hydraulic calculations, or equipment/materials, would require a CCD to be submitted, reviewed, and approved by DSA. Fire sprinkler / fire protection CAD files as represented in the DSA Approved plans **will not** be provided, as they are copyrighted and intellectual property of the designer. Fire sprinkler subcontractor shall include, in their bid, pricing to generate their own shop drawings for review and approval. Scanned duplicates of the copyrighted work will not be accepted.

#### **SPECIFICATIONS**

ITEM # 2.2 <u>Section 01 22 00 – Alternates and Unit Pricing</u>: Replace this section with the attached **Section 01 22 00 – Alternates and Unit Pricing – Addendum # 2**. Alternate # 9 has been added.

- ITEM # 2.3 Section 09 67 23 Decorative Flake Troweled Mortar System, Item 1.2.A.1: Change Item 1.2.A.1 to read:
  - 1. To be installed in Culinary CR (103), Toilet Room (112), Toilet Room (113), and Jan / Laundry (115), as shown on plans.
- Section 09 67 25 Decorative Interior Wall Surfacing System: Replace this section with the attached Section 09 67 25 Decorative Interior Wall Surfacing System Addendum # 2. Pages 2 and 4 are missing in the contract documents.

- ITEM # 2.5 Section 09 72 16 Vinyl Coated Fabric Tackable Wall System: Replace this section with the attached Section 09 72 16 Vinyl Coated Fabric Tackable Wall System Addendum # 2.
- ITEM # 2.6 Section 23 80 00 Heating, Ventilating, and Air Conditioning, Item 3.11 Equipment Start-Up: Replace Item 3.11 in its entirety with the following:

#### 3.11 EQUIPMENT START-UP

- A. Initial start-up of the mechanical system shall be performed by a mechanic hired by the manufacturer of the package rooftop equipment.
- B. Equipment start-up shall not be performed until ductwork has been installed and the unit is powered up.
- C. It shall be the responsibility of the Contractor to assemble and supervise a start-up team consisting of controls contractor, start-up technician, and test and balance contractor; all to work in concert to assure that the systems are started, balanced, and operate in accordance with the design.
- After start-up is complete, provide manufacture startup reports to owner.
- ITEM # 2.7 Section 27 20 00 Data and Voice Communication: Replace this section with the attached Section 27 20 00 Data and Voice Communication Addendum # 2.
- ITEM # 2.8 Section 32 31 19 Ornamental Metal Fencing and Gates, Item # 2.1.A.1.a: Change this item to read as follows:
  - a. <u>Match Existing</u>. Basis-of-Design, for bidding, is Ameristar Corp. <u>AEGIS</u> <u>II Xtreme, as f</u>ollows:
    - i. Series: Similar to Majestic (contractor to match on site)
    - ii. Style: 2-Rail (top and bottom)
    - iii. Rails: 1.75" x 3.5" x 14 ga.
    - iv. Posts: 4" sq x 11 ga.
    - v. Interspace: Standard 4"
    - vi. Height: See Drawings
    - vii. Gates: As indicated on drawings.
    - viii. <u>Hardware:</u> Gate to include panic hardware and kick plates, as noted on the plans and in Section 08 71 00.

#### **PLANS**

- ITEM # 2.9 General: Two (2) row floor mounted bleachers have been added to Gym 101.

  Bleachers shall be Hussey Seating Maxam Floor Mounted Courtside Seating, with Hussey Seating Maxam XC10 Seat. See attached ADD#2 AG001, ADD#2 AG101, and ADD#2 AG102 for details.
- ITEM # 2.10 Sheet AG001 Building G Code Plan: Replace with sheet with the attached Sheet ADD#2 AG001 Building G Code Plan. All changes have been clouded.

- ITEM # 2.11 Sheet AG101 Building G Floor Plan: Replace with sheet with the attached Sheet ADD#2 AG101 Building G Floor Plan. All changes have been clouded.
- ITEM # 2.12 Sheet AG102 Court Striping Plan: Replace with sheet with the attached Sheet ADD#2 AG102 Court Striping Plan. All changes have been clouded.
- ITEM # 2.13 Sheet AG181 Reflected Ceiling Plan Detail 1, Reflected Ceiling Plan: Delete Keyed Note 8.12 shown on grid line 1 between grid lines A and F.
- Sheet AG221 Exterior Elevations Details 2 and 4 Alternate # 9: See Details 2 and 4 on attached Sheet ALT # 9 ADD # 2 AG221 in reference to Alternate # 9. See attached Section 01 22 00 Alternates and Unit Pricing Addendum # 2 for additional details on Alternate # 9.
- ITEM # 2.15

  Sheet AG291 Interior Elevations Keyed Note 4.51: Add the following text to this Keyed Note: "SIZES AND DEPTHS OF TECTUM WALL PANEL ASSEMBLIES SHALL BE A TYPICAL REPEATING PATTERN. THREE SEPARATE COLORS SHALL BE USED TO PAINT TECTUM PANELS; 4' x 8' x 2" PANELS SHALL BE PAINTED COLOR A; ~4' x 4' x 1" PANELS SHALL BE PAINTED COLOR C. PAINT COLORS TO BE DETERMINED DURING CONSTRUCTION."
- ITEM # 2.16

  Sheet AG292 Interior Elevations Keyed Note 4.51: Add the following text to this Keyed Note: "SIZES AND DEPTHS OF TECTUM WALL PANEL ASSEMBLIES SHALL BE A TYPICAL REPEATING PATTERN. THREE SEPARATE COLORS SHALL BE USED TO PAINT TECTUM PANELS; 4' x 8' x 2" PANELS SHALL BE PAINTED COLOR A; ~4' x 4' x 1" PANELS SHALL BE PAINTED COLOR C. PAINT COLORS TO BE DETERMINED DURING CONSTRUCTION."
- ITEM # 2.17 Sheet A-541 Wall Types, Roof, and Miscellaneous Details Detail D2,

  Troweled Epoxy System: Replace with the attached drawing ADD#2 D2/A
  541.
- ITEM # 2.18 Sheet A-542 Wall and Miscellaneous Details: Add the attached Detail D3 to this sheet, as shown on the attached drawing ADD#2 D3/A-542.
- ITEM # 2.19 Sheet A-590 Finish Schedule:
  - A. Room Finish Schedule
    - 1. Room 110 Office: Change floor finish to **F2**.
    - 2. Room 115 Jan/Laundry: Delete Remark "1".
  - B. <u>Finish Types</u>:
    - 1. <u>Floor Finish F4</u>: Change to read **FLAKE TROWELED EPOXY MORTAR FLOORING SYSTEM**.
    - 2. <u>Base Finish F4</u>: Change to read **6" FLAKE TROWELED EPOXY MORTAR FLOORING SYSTEM**.
    - 3. <u>Base Finish B4</u>: Change to read **6" FLAKE TROWELED EPOXY MORTAR FLOORING SYSTEM**.

- 4. Wall Finish W2: Change to read **DECORATIVE INTERIOR WALL** SURFACING SYSTEM OVER IMPACT RESISTANT GYP BOARD, TO 7'-2"; EPOXY PAINTED GYP BD ABOVE.
- 5. Wall Finish W3: Change to read PLASTIC LAMINATE WALL PANEL TO 10'-0", PAINTED GYP BD AND SURFACE APPLIED, PAINTED TECTUM PANELS ABOVE.
- 6. Remarks: Delete this item. There are no remarks on this project.

#### **ITEM # 2.20** Sheet E100 – Site Plan – Demolition:

- A. Delete existing fire alarm control panel "FACP-E". The fire alarm on the campus is controlled by existing fire alarm control panel "FACP-A", located in main building.
- B. Location of the existing fire alarm control panel "FACP-A" in main building is shown incorrectly. The panel is located on the first floor, at south-east corner of the building custodian room.
- C. Numbered Note 2: Add the following text to numbered note 2: "THERE IS AN EXISTING INTRUSION ALARM CONTROL PANEL IN THIS BUILDING. PROTECT THE PANEL FOR RECONNECTION. THE CONTRACTOR SHALL COORDINATE INTRUSION ALARM DOWN TIME WITH THE ARCHITECT AND THE OWNER. ANY COST ASSOCIATED WITH INTRUSION ALARM DOWN TIME SHALL BE INCLUDED IN THE CONTRACT."

#### **ITEM # 2.21** Sheet E110 – Site Plan – Electrical:

- A. Revise location of new voice evacuation system panel "VESP" from most north building, to main building. New voice evacuation system panel "VESP" shall be mounted adjacent to existing fire alarm control panel "FACP-A" in main building. The new "VESP" panel shall be interconnected with existing fire alarm control panel "FACP-A".
- B. Refer to architectural, and landscape drawings for location of new irrigation controller and irrigation booster pump south from the new kiln location. Provide new 40/3 circuit breaker and new 20/1 circuit breaker in existing panel "S" inside art room. Provide 1-1/2"C-3#8, 1#10G, and 2#12, 1#12G for the booster pump and the controller and connect to new circuit breakers in panel "S". Also provide 3/4"c with one data cable (OSP), from existing IDF, adjacent to room 107, to new irrigation controller. Run new conduits common route as conduit for new kiln and continue south to the irrigation

#### C. Numbered Notes:

controller and booster pump.

- 1. <u>Numbered Note 2</u>: Delete numbered note 2, conduit associated with numbered note 2.
- 2. Numbered Note 6: Add the following text to numbered note 6: "EACH EXISTING PARKING LOT POLE SHALL GET TWO (2) FIXTURES, MOUNTED AT 180 DEGREE. THE FIXTURE SHALL BE GARDCO ECF-S-48L-1A-NW-G2-270-UNV-DA30-IMRI3.

- PROVIDE CUSTOM MOUNTING HARDWARE TO MOUNT NEW FIXTURE TO EXISTING SQUARE, STEEL POLES."
- 3. Numbered Note 7: Add the following text to numbered note 7: "PROVIDE CONDUIT/CONDUCTORS TO RECONNECT EXISTING INTRUSION ALARM CONTROL PANEL IN RELOCATED BUILDING TO RESTORE PREVIOUS STATE OF THE INTRUSION ALARM SYSTEM."
- 4. Numbered Note 9: Add the following text to numbered note 9: "IN ADDITION TO TWO (2) 2" CONDUITS FOR DATA, ADD A 2" CONDUIT FOR FIRE ALARM."
- 5. Numbered Note 11: Replace numbered note 11 in its entirety with the following: "(N) KILN, CONNECT TO EXISTING 50/2 CIRCUIT BREAKER IN EXISTING PANEL "S". PANEL "S" IS LOCATED IN ART ROOM 102, ADJACENT TO NEW KILN LOCATION. RUN 1"C-3#6, 1#10G FROM THE PANEL, AS INCONSPICUOUSLY AS POSSIBLE THROUGH ART CLASSROOM, THEN OUTSIDE DOWN EXTERIOR WALL, AND UNDERGROUND TO THE KILN. PROVIDE DISCONNECT AT THE KILN. THE ROUTING OF THE CONDUIT SHALL BE COORDINATED WITH THE ARCHITECT BEFORE ROUGH IN."

#### **ITEM # 2.22** Sheet E200 – Floor Plan - Lighting:

- A. Revise lighting circuit homerun callout (Gym 110 lights, south) from GL-2 to GL- 2,4.
- B. Revise fan power homerun callout (Gym 110 fans, north) from G-43 to G-43,45, and from G-45 to G-34,36.
- ITEM # 2.23 Sheet E220 Floor Plan Power: Add three (3) fire/smoke dampers to equal a total of five (5) fire/smoke dampers; only two (2) are shown on the plan. Connect all five (5) fire/smoke dampers to circuit G-49.

#### ITEM # 2.24 Sheet E225 – Roof Plan – Power:

- A. Revise fan power homerun callout (Gym 110 fans, north) from G-43 to G-43,45, and from G-45 to G-34,36.
- B. Revise power homerun callout for SCU1 from G-24,26 shown, to G-2,4.
- ITEM # 2.25 Sheet E230 Floor Plan Signal: Add a general note to this sheet, to read:
  - NEW SPEAKERS AND CLOCKS SHALL MATCH EXISTING ON THE SITE.

#### **ITEM # 2.26** Sheet E240 – Floor Plan – Fire Alarm:

- A. There are two relay modules (for fire/smoke dampers) shown. Total count of the fire/smoke dampers is five (5). Provide total of five (5) relay modules to connect power for fire/smoke dampers via relays in relay modules.
- B. <u>Culinary Classroom 1</u>03: Revise smoke/carbon monoxide detector shown, to heat detector 194 degrees.

#### ITEM # 2.27 Sheet E300 – Power Panel Schedules:

#### A. <u>One Line Power Diagram</u>:

- 1. Revise circuit breaker in existing mains switchboard "MS", for new panel "G" from 400/3 shown, to 500/3.
- 2. Revise power feeder for new panel "G" from 4"C-4#500MCM, 1#2G shown, to two (2) sets of 3"C-4#250MCM, 1#2G.

#### B. Power Panel "G" Schedule:

- 1. Revise two 20/1 circuit breakers at circuits 43 and 45, to one 20/2 circuit breaker.
- 2. Provide 20/2 circuit breaker at circuits 34 and 36, and connect MP room fan to that circuit breaker.
- Sheet E400 Fire Alarm Riser Diagram, Details, and Matrix, Detail 1 Fire Alarm Riser Diagram: Revise fire alarm riser diagram according to the changes listed in this addendum (new voice evacuation system panel "VESP" is connected to existing fire alarm control panel "FACP-A", number of relay modules).
- ITEM # 2.29 Sheet E500 Electrical Details, Detail 6 Underground Pull Box Detail: Replace with the attached drawing ADD#2 6/E500. The Underground Pull Box Schedule located above this detail to remain in the contract documents.

**END OF ADDENDUM NO. 2** 

**Attachments** 

#### SECTION 01 22 00 - ALTERNATES AND UNIT PRICING - ADDENDUM # 2

#### **PART 1 – ALTERNATES**

#### 1.1 RELATED DOCUMENTS AND PROVISIONS

- A. All Contract Documents should be reviewed for applicable provisions related to the provisions in this document, including without limitation:
  - 1. General Conditions:
  - Special Conditions;
  - 3. Bid Form and Proposal;
  - Instruction to Bidders.

#### 1.2 DESCRIPTION

A. The items of work indicated below propose modifications to, substitutions for, additions to and/or deletions from the various parts of the Work specified in other Sections of the Specifications. The acceptance or rejection of any of the alternates is strictly at the option of the District subject to District's acceptance of Contractor's stated prices contained in this Proposal.

#### 1.3 GENERAL

A. Where an item is omitted, or scope of Work is decreased, all Work pertaining to the item whether specifically stated or not, shall be omitted and where an item is added or modified or where scope of Work is increased, all Work pertaining to that required to render same ready for use on the Project in accordance with intention of Drawings and Specifications shall be included in an agreed upon price amount.

#### 1.4 BASE BID

A. The Base Bid includes all work required to construct the Project completely and in accordance with the Contract Documents.

#### 1.5 ALTERNATES

- A. The Alternate descriptions below are general in nature and for reference purposes only. The Contract Documents, including, without limitation, the Drawings and Specifications, must be referred to for the complete scope of Work.
  - Alternate # 1 Additive: Project Green Habitat Garden and Outdoor Teaching Space by Great Valley Design, Inc, as shown on Sheets L-1, L-2, L-3, L-4 and L-5, and in associated specification sections.
  - 2. <u>Alternate # 2 Additive</u>: Irrigation Mains and Valve Replacement, as shown on Sheets L0.1, L0.2, L2.1A, and L2.2A.
  - 3. <u>Alternate # 3 Additive</u>: Scrape, sand, prep, prime, and paint exterior of existing Classroom Building, as shown on Sheet AC221. All paint products and associated materials, shall be per Section 09 91 00.

- 4. <u>Alternate # 4 Additive</u>: Additional Visitor Parking in front of campus, as shown on Sheet GS109, C7.1, and area as noted on L2.2B.
- 5. <u>Alternate # 5 Deductive</u>: Omit and credit all material and labor associated with ten (10) Solatubes, including block out framing for openings. 6 x 10 framing, roofing assembly, ceiling assembly, and building insulation to run continuous where Solatubes are omitted.
- 6. <u>Alternate # 6 Deductive</u>: Omit 3/4" D x 10'-0" H plastic laminate wainscot wall paneling and 2x6 wood trim in Gymnasium. Underlying gypsum wall board to be changed/upgraded from standard 5/8" to 5/8" impact resistant gyp board (Type X where required), painted. Vented rubber base to remain.
- 7. <u>Alternate # 7 Deductive</u>: Existing Staff and Student parking lot to receive crack fill and seal coat (in lieu of complete removal / replacement of AC paving and underlying AB) in areas noted on Sheet C4.1
- 8. <u>Alternate # 8 Additive</u>: Prop 39 work, including HVAC and electrical work at existing administration building, as shown on Sheets M002 through M6.2, Sheet P100, and Sheets E250 and E251.
- 9. <u>Alternate # 9 Deductive</u>: In lieu of brick veneer on portions of North and West elevations, provide a plaster finish coat in Color # 2, different from primary plaster color of building (Color # 1). In lieu of top of brick veneer, separate the two plaster colors with a plaster reveal. See attached Sheet ALT#9 ADD-2 AG221 for specific locations.

#### **PART 2 – UNIT PRICING**

#### 2.1 GENERAL

A. Contractor shall completely state all required figures based on Unit Prices listed below. Where scope of Work is decreased, all Work pertaining to the item, whether specifically stated or not, shall be omitted and where scope of Work is increased, all work pertaining to that item required to render same ready for use on the Project in accordance with intention of Drawings and Specifications shall be included in an agreed upon price amount.

#### 2.2 UNIT PRICES

- A. Furnish unit prices for each of the named items on a square foot, lineal foot, or per each basis, as applies. Unit prices shall include all labor, materials, services, profit, overhead, insurance, bonds, taxes, and all other incidental costs of Contractor, subcontractors, and supplier(s).
  - 1. There are no unit prices on this project.

#### PART 3 – EXECUTION – NOT APPLICABLE

END OF SECTION 01 22 00 - ADDENDUM # 2.

#### SECTION 09 67 25 - DECORATIVE INTERIOR WALL SURFACING SYSTEM - ADDENDUM # 2

#### PART 1 – GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 WORK INCLUDED

A. Furnish all necessary material, labor, and equipment required to prepare designated areas and install a Decorative Interior Wall Surfacing System.

#### 1.3 RELATED SECTIONS

- A. Section 09 29 00 Gypsum Board
- B. Section 09 67 23 Decorative Flake Troweled Mortar System
- C. Section 09 67 24 Decorative Flake Mortar Flooring System

#### 1.4 QUALITY ASSURANCE

- A. <u>Manufacturer's Qualifications</u>: Obtain Decorative Interior Wall Surfacing System materials from a single manufacturer with a minimum of ten (10) years verifiable field installation experience providing antimicrobial system materials of the type specified in this section.
- B. <u>Contractor's Qualifications</u>: Installation must be performed by a manufacturer approved contractor with skilled mechanics having not less than ten (10) years satisfactory experience in the installation of the type of system as specified in this section, and must be approved in writing by the manufacturer of the Decorative Interior Wall Surfacing System.
  - Due to the high gloss nature of the wall coating system in this section, poor workmanship in the substrate over which it is applied will be accentuated. The contractor providing each substrate is responsible for repairing imperfections in their work. Contractor to attend a Pre-Construction Coordination Meeting as specified under Job Conditions in this specification.

#### 1.5 WARRANTY

- A. The contractor and the manufacturer shall furnish a standard guarantee of the Decorative Interior Wall Surfacing System for a period of one year after installation. This labor and material guarantee shall include loss of bond and wear-through to the substrate through normal wear and tear.
- B. Not included in the warranty are damage due to structural design deficiencies including but not limited to slab cracking from lateral, vertical or rotational movement, and gouging or other damage due to fork lifts, other equipment,

- delamination caused by sub-surface hydrostatic pressure, Acts of God, or other elements beyond the scope of protection of this system nor causes not related to the system materials.
- C. In case of a warranty claim, the owner will notify the manufacturer and contractor in writing within 30 days of the first appearance of problems covered under this warranty, and will provide free access to the area during normal working hours. Property protection is also the owner's responsibility. Remedy is limited to direct repair of the Wall Surfacing System.

#### 1.6 SUBMITTALS

- A. <a href="Product Data">Product Data</a>: Submit manufacturer's specifications on cured system and individual components of the Decorative Interior Wall Surfacing System, including physical properties and performance properties and all tests described in part 2.1 B in this section and submit all Material Safety Data Sheets. Each individual component of the system will be evaluated on the basis of these standards. For any of these tests not listed in the manufacturer's standard nationally published data, the manufacturer must supply the missing data from an independent test laboratory tested according to the referenced standard. Furnish five (5) hard copy sets, or one (1) PDF of this information.
- B. <u>Colors</u>: Custom color (or colors) to be provided. Color mix to be provided by the Owner and/or Architect.
  - 1. The contractor shall submit a 6" x 6" system sample for verification purposes and finish texture approval.
- C. <u>Contractor Experience</u>: The contractor shall furnish a list projects using either specified material or another material pre-approved for this project that they have installed during the last ten (10) years. Information shall include: project name, square footage, contact name with owner address and phone number. Also, the contractor shall furnish resumes detailing the experience of key project personnel including supervisors and technicians.
- D. It is the intention of this Section to provide the products as named. Substitutions will be considered only when received by the Architect, Engineer or Design Professional through a bidding Prime Contractor at least ten days prior to the date set for receipt of bids. Upon receipt of any such submission, the Architect, Engineer or Design Professional will determine whether or not the proposed product is an approved equal. In the event the Architect, Engineer or Design Professional determines that a proposed system is an approved equal, he will issue an addendum and notify all bidders at least 48 hours prior to receipt of bids. No substitutions will be considered after contract bid date.
- E. The contractor shall submit a copy of the manufacturer's packing slip, tagged for this specific job, along with calculations, signed by an officer of the primary material supplier demonstrating that the quantity of material furnished for the project will achieve the specified coverage and mil thickness.

#### 1.7 MATERIAL DELIVERY, HANDLING AND STORAGE

- A. Primary system materials shall be delivered in the manufacturer's undamaged, unopened containers. Each container shall be clearly marked with the following:
  - 1. Product name(s) and/or Number(s)
  - 2. Manufacturer's name
  - 3. Component designation (A, B, etc.)
  - 4. Product Mix Ratio
  - 5. Health and Safety Information
  - 6. CHEMTREC Emergency Response Information
- B. Provide equipment and personnel to handle the materials by methods which prevent damage.
- C. The contractor shall promptly inspect direct jobsite material deliveries to assure that quantities are correct, comply with requirements and are not damaged.
- D. The contractor shall be responsible for materials furnished by him, and he shall replace, at his own expense, such materials that are found to be defective in manufacture or that have become damaged in transit, handling or storage.
- E. Store material(s) in accordance with manufacturer's instructions, with seals and labels intact and legible. Maintain temperatures within the required range. Do not use materials which exceed the manufacturer's maximum recommended shelf life.

#### 1.8 JOB CONDITIONS

- A. The contractor shall visit the jobsite prior to beginning the installation of the Decorative Interior Wall Surfacing System to evaluate substrate condition, including substrate moisture content, and the extent of repairs required, if any. Concrete substrates shall be tested to verify that the moisture content of the substrate does not exceed Decorative Interior Wall Surfacing System manufacturers' recommendations. Cost of repair and remediation of the substrate cannot be predicted prior to inspection and testing, and therefore is not encompassed within the installation estimates.
  - 1. Contractor to attend a Pre-Construction Coordination Meeting to discuss specific tolerances for the substrates to ensure a high quality installation of this product.
- B. The contractor should exercise care during surface preparation and system installation to protect surrounding substrates and surfaces, as well as in-place equipment. The contractor shall use his discretion as to the physical means used for preparation and protection. Any costs incurred for resultant damage from negligence or inadequate protection shall be the sole responsibility of the contractor.
- C. Job area to be free of and protected from the activities of other trades during installation and for a period of time recommended by the manufacturer upon completion of the job.

- D. The minimum substrate temperature must be conditioned to 60°F before commencing installation, during installation, and for at least 72 hours after installation is complete.
- E. Use of respirators and/or adequate ventilation must be provided.
- F. Maintain lighting at a minimum uniform level of 50 or more foot candles in all areas where the Decorative Interior Wall Surfacing System is being installed. It is the recommendation of the manufacturer that the permanent lighting be in place and working during the installation.
- G. All leaks from pipes and other sources must be corrected prior to the installation of the Decorative Interior Wall Surfacing System.

#### PART 2 – PRODUCTS

#### 2.1 PRODUCT / MANUFACTURER

- A. <u>Available Manufacturers</u>: Subject to compliance with requirements, manufacturers offering products which may be incorporated in the work include but are not limited to, the following:
  - To establish a standard of quality, design and performance, The General Polymers BIOFLAKE Wall System, as manufactured by Sherwin-Williams product has been selected. Alternatives will be considered provided they meet or exceed the specification criteria contained herein. The Architect shall be the sole determinant of equivalency.

#### 2.2 MATERIALS

- A. <u>System Overview</u>: The General Polymers BIOFLAKE Wall System, as manufactured by Sherwin-Williams consists of 5531 Pre-Primer / Tack Coat as optional Primer for Ceramic Tile, 3462 AquArmor Coating as primer, 6750D/6755D Vinyl Chips for broadcast, 3461 AquArmor Gloss Topcoat for bonding coat and 6750D/6755D Vinyl Chips second broadcast, grout and final seal coat.
- B. <u>Typical Physical Properties @ 73°F (unless otherwise noted)</u>:

Hardness, Shore D: 70

**ASTM D 2240** 

Tensile Strength: 3,000 psi

**ASTM D 412** 

<u>Fungus & Bacteria Resistance</u>: Will not support growth or fungus or MIL-D-3134F Sec. 4.4.2.11 bacteria per test specified TT-P-34

Adhesion: 300 psi

ACI 503R Substrate Failure

Flammability: Pass Class A

ASTM E 84 Smoke and Flame

Resistance to Elevated Temperatures: No slip or flow at required MIL-D-3134J Temperature of 158°F

#### **PART 3 – EXECUTION**

#### 3.1 SURFACE PREPARATION

- A. Proper surface preparation prior to installation of materials is essential for interior wall coating systems. Read the following recommended methods of surface preparation carefully. Consult manufacturer for answers to questions prior to installation.
  - 1. Closely examine all substrates for undulation, cleanliness, holes, cracks and soundness.
  - 2. Surface contaminants must be removed by mechanical abrasion or other approved methods to ensure proper adhesion of the system.
  - 3. Substrate finish will affect the final appearance of the wall coating. The contractor providing each substrate is responsible for repairing imperfections in their work.
    - a. <u>Drywall</u>: Must be finish to a minimum of Level #4 Finish utilizing materials compatible with the wall board product and the resinous wall coating system.
    - b. <u>Cast-in-Place Concrete</u>: Fill bugholes with compatible material and apply skim coat as needed for desired smoothness.
  - 4. Surface and air temperature should be a minimum of 50°F / 15°C.
  - 5. Air movement must be present in application area to prevent surface condensation during installation.

#### 3.2 INSTALLATION

#### A. General:

- 1. Apply each component of the Decorative Interior Wall Surfacing System in compliance with manufacturer's written installation instructions and strictly adhere to mixing and installation methods, recoat windows, cure times and environmental restrictions.
- 2. If necessary, install Pre-formed Vinyl Corner Moldings with fast setting, high strength adhesive.
- 3. Coordinate installation with Decorative Flake Troweled Mortar System for Flooring, to ensure seamless integration of the two products.

#### B. Primer / Broadcast:

- 1. 3462 AquArmor Coating as primer
- 2. 6750D/6755D Vinyl Chips for broadcast

- C. Bonding Coat / Broadcast:
  - 1. 3461 AquArmor Gloss Topcoat
  - 2. 6750D/6755D Vinyl Chips for broadcast
- D. Grout Coat: 3461 AguArmor Gloss Topcoat
- E. Final Finish Coat: 3461 AquArmor Gloss Topcoat
- 3.3 CURING, CLEANING AND PROTECTION
  - A. Cure all Decorative Interior Wall Surfacing System materials in compliance with manufacturer's directions, taking care to prevent contamination during stages of the installation and prior to completion of the curing process.
  - B. Protect the Decorative Interior Wall Surfacing System from damage and wear during other phases of the construction operation, using temporary coverings as recommended by the manufacturer, if required. Remove temporary covering just prior to final inspection.
  - C. Clean the Decorative Interior Wall Surfacing System just prior to final inspection, using materials and procedures suitable to the system manufacturer.
  - D. Some cleaners will affect the color or texture of your polymer wall surfaces. To determine how your cleaner will perform, first test each cleaner, in a small area, utilizing your cleaning technique. This precaution will demonstrate the effect of your cleaner and technique. If no deleterious effects are observed, continue with the procedure. If deleterious effects do occur, modify the cleaning material and/or procedure.

END OF SECTION 09 67 25 - ADDENDUM # 2.

#### SECTION 09 72 16 - VINYL COATED FABRIC TACKABLE WALL SYSTEM - ADDENDUM # 2

#### PART 1 – GENERAL

#### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to work specified in this section.

#### 1.2 DESCRIPTION OF WORK

- A. Provide all labor, materials and services required to properly and completely install Vinyl Coated Fabric Tackable Wall System as specified herein.
  - This shall include cutouts for fire extinguishers, duplex receptacle outlets, communications handsets, TV outlets, etc. (which shall be installed flush with Tackboard Panel surface). Also, the edge strips sufficient to produce a completed installation according to manufacturer's instructions and supervision acceptable to Architect and Owner.

#### 1.3 QUALITY ASSURANCE

- A. <u>Qualifications of Manufacturer</u>: Products used in the work of this Section shall e produced by manufacturers regularly engaged in manufacture of similar items and with a history of successful production acceptable to the Architect.
- B. <u>Qualifications of Installers</u>: Use adequate numbers of skilled workmen who are thoroughly trained and experienced in the necessary crafts and who are completely familiar with the specific requirements and the methods needed for proper performance of the work of this Section.
- C. <u>Maintenance Materials</u>: Deliver usable scraps of facing to Owner's designated storage space, properly packaged and identified. Usable scraps are defined to include pieces of more than a 3 sq. ft. area and more than 8" wide. Dispose of smaller pieces.

#### 1.4 REFERENCES

- A. <u>Tackboard Panel System Components</u>: Shall be tested in accordance with ASTM E 84 Tunnel Test.
  - 1. Flame Spread: 26-75 (UL Class II)
  - 2. Smoke Density: Less than 450 per NFPA 258 (ASTM E662).

#### 1.5 SUBMITTALS

- A. <u>Manufacturer's Data</u>: Submit data to show compliance with requirements. Include test laboratory reports and manufacturer's certifications and installation/maintenance instructions and recommendations.
- B. Samples: Submit 12" x 12" samples of each facing material required.

C. <u>Shop Drawings</u>: Provide drawings and manufacturer's information indicating type of Tackboard Panel System proposed and location and spacing of panels for coordination with wall stud framing, Division 6.

#### 1.6 PRODUCT DELIVERY AND STORAGE

- A. Comply with the manufacturer's instructions and recommendations and as herein specified.
- B. Deliver panel system in original, undamaged packaging with all labels intact and legible at time of use, clearly labeled to identify manufacturer, brand name, quality or grade, and fire hazard classification.
- C. Store materials inside, protected from weather, moisture and soiling. Do not store vinyl covered tackboard fabric in an upright position. Maintain temperature in storage area above 40 degrees F.

#### 1.7 JOB CONDITIONS

A. Maintain a constant minimum temperature of 70 degrees F at areas of installation for at least 48 hours before, during and 48 hours after the application of materials.

#### 1.8 WARRANTY

A. Provide special warranty, signed by Contractor, Installer and Manufacturer agreeing to repair or replace defective materials and workmanship of wall system work during 2 year warranty period following acceptance. Provide Owner with copies of product warranties.

#### PART 2 – PRODUCTS

#### 2.1 MANUFACTURER

- A. <u>Tackboard Panel System</u>: Subject to compliance, requirements of products which may be incorporated in the work include but are not limited to the following:
  - 1. Koroseal.
    - a. <u>Basis-of-Design Product Line</u>: Galerie; up to three (3) colors to be chosen.

#### 2.2 PRODUCT DETAILS

#### A. Panels:

- 1. <u>Size</u>: 4'-0" wide x 1/2" thick x height shown on drawings.
- 2. <u>Material</u>: Vinyl covered tackboard substrate shall be composed of 1/2" Class II fiberboard pressure laminated to facing material, 1/2" by full height and shall be manufactured specifically as a substrate for vinyl covered wall panels. The board shall be asphalt free, shall have an ironed on coating, and have a density of 16 lbs. per cubic foot.

- a. Contractor may choose to install tackboard substrate first, and apply vinyl covered tackboard over substrate in the field, in lieu of ordering and installing prefinished panels.
- 3. <u>Guarantee</u>: Shall be guaranteed for one (1) year against bubbles, delamination and any defect of material or workmanship.

#### B. <u>Trim</u>:

- 1. Extruded plastic with painted finish as selected by the Architect from manufacturer's standard range of finishes.
- 2. Top and bottom shall be installed in "J" trim. End trim shall be same as intermediate trim with end cap. All cutouts are to be wrapped in vinyl.

#### C. Vinyl:

- Shall meet or exceed all requirements of the Federal Specs. In addition, it must meet CCC-W-408A and the Standard Classification of Wall Covering by Durability Characteristics of ASTM F793 including 24 cleanability tests based on ASTM D1308.
- 2. Both the vinyl and the adhesive to be treated with an antimicrobial to resist the growth of mildew and bacteria.
- 3. Color to be selected by Architect from manufacturer's full range. Basis of Design Product is "Galerie", with up to three colors to be chosen.
- 4. The vinyl coatings shall be made of virgin vinyl calendered base color, weighing a minimum of **21 oz**. per lineal yard.
- 5. The coating shall be backed with sheeting of nonwoven fabric.
- 6. The vinyl wallcovering shall be mechanically laminated, with the long edges wrapped to the back of the tackboard.
- 7. Care shall be taken in mounting the tackboard so that the texture of all panels will have the same orientation and color match.

#### **PART 3 – EXECUTION**

#### 3.1 PRE-INSTALLATION REQUIREMENTS

- A. Installer is to cooperate with framing contractor on the layout of studs and backing for wall standards.
- B. Tackwall shall be submitted and ordered to allow for ample time for chosen product to be manufactured and shipped; minimum of 8 weeks prior to installation.
- C. Installer must examine substrates for defects and other conditions under which wall system is to be installed and notify Contractor in writing of conditions detrimental to proper completion of the work. Do not proceed until unsatisfactory conditions have been corrected. Irregularities of the wall surface shall not be

- greater than 3/16".
- D. Remove vinyl covered tackboard materials from packaging and allow acclimatizing to the area of installation 24 hours before application.
- E. Prime and seal substrates in accordance with the vinyl covered tackboard manufacturer's recommendations for the type of substrate material to be covered.
- F. Clear away debris and scrape up deposits from surfaces to receive wall system; vacuum clean immediately before installation.
- G. Sequence wall system with other work so as to minimize the possibility of damage and soiling of facing material during the remainder of the construction period.

#### 3.2 INSTALLATION

- A. Panels shall be as noted above.
- B. Panels shall be a maximum of four feet wide with each panel being trimmed outside with anodized extrusion.
- C. Paint wall behind standards with flat black paint prior to installation of standard.
- D. The panels are to be centered in the room for installation with equal end panels provided at the corners.
- E. Panels are to be installed plumb and true. Horizontal seams will not be permitted.
- F. Remove switchplates, wall plates, and surface-mounted fixtures, and cut tackwall evenly to the edges of the outlet box or support, if applicable.
- G. Wrap vinyl around any exposed cutout or panel edge.
- H. All tackable wall panels to be installed the entire extent of all walls, prior to installation rubber base, or casework. Tackable wall panels shall extend behind base, behind casework, and within the throat of all HM door and window frames.

#### 3.3 CLEANING AND PROTECTION

- A. Remove debris, sorting pieces to be saved from scraps to be disposed of.
- B. Advise Project Coordinator of protection methods and materials needed to ensure that panel system will be without deterioration or damage at time of acceptance.
- C. All cut, marred, distorted, chipped, nicked, scratched, soiled and otherwise defective wall panels damaged during or after installation and prior to final acceptance of the building project shall be removed and replaced at no additional cost to the Owner.

END OF SECTION 09 72 16 - ADDENDUM # 2.

#### SECTION 27 20 00 - DATA AND VOICE COMMUNICATION - ADDENDUM # 2

#### **PART 1 – GENERAL**

#### 1.1 INTRODUCTION

A. The following specifications are intended to assist in the development of a telecommunications system for accommodating present and future technologies within the Owner. They provide a set of instructions and materials needed to install a telecommunications system within parameters set by industry standards. The requirements for the structured cabling systems within the facilities are continued in this document.

#### 1.2 WORK INCLUDED

- A. Contractor shall design and provide all materials in order to install a complete and functional data/telecommunications and cable television infrastructure.
- B. Only ONE Contractor shall be responsible for providing a complete and functional infrastructure, including necessary components and documentation.
- C. Documentation will include drawings showing room drop locations, cable runs, and conduit pathways. Data, voice, and coax cables are all part of the same infrastructure and shall all be installed, terminated, labeled, and documented by only one contractor (no exceptions).

#### 1.3 CONTRACTOR QUALIFICATIONS

- A. Must possess a valid C-7 California State contractor's license. This license must have been issued 2 years prior to the date of the bid. No other license classification is acceptable.
- B. Must be able to prove to the satisfaction of the Owner that they have significant experience in the installation of fiber optic systems.
- C. Proper installation of fiber optic cable
- D. Fiber termination
- E. Interconnecting equipment
- F. Test procedures with appropriate documentation.
- G. Must prove employees have been trained in the proper handling and cleanup of small quantities of lead paint. Contractor must contact Technology Services, prior to any work starting for an updated list of sites that require drilling work to be handled by a dedicated asbestos vendor. In the event Contractor encounters asbestos, stop work and notify district.

- H. Must be in trade of installing telecommunication systems, continuously, for a period of at least 3 years prior to the date of this bid.
- I. Must submit at least one project reference for each of the three years prior to the date of this bid.
- J. Must provide a minimum of 3 references supporting a claim of experience for a similar project within 2 years prior to this bid. These project references shall contain the starting and ending contract price, the project foreman or superintendent's name, and the name, address, and telephone number of a project contact.
- K. Must also provide a list of key installation personnel, their hire dates and a resume of their experience. Key installation personnel shall include at least one foreman and two journey level installers or technicians. By submitting the names of these personnel, contractor is committing them to the execution of the project outlined in this specification.

#### 1.4 REQUIREMENTS

- A. Drawings and General Provisions of the contract, including General and Supplementary Conditions and Division 1 Specifications Sections shall apply to work specified, in this Section.
- B. <u>Rules and Regulations</u>: All work and materials shall be in full accordance with the latest rules and regulations of the following:
  - EIA/TIA Standards
  - 2. BICSI Standards
  - 3. NEC Standards
  - 4. Title 24 (California Code of Regulation)
  - 5. All Local Codes
  - 6. THE OWNER Standards
  - 7. NFPA Standards
  - 8. Safety, Health and Environmental Standards
- C. <u>Permits, Fees and Inspections</u>: Contractor shall be responsible for all fees and permits required to any governmental agency having jurisdiction over the work of this section. Contractor shall arrange inspections required by any local ordinances during construction. Upon completion of the work, satisfactory evidence shall be furnished to THE OWNER to show that all work has been installed in accordance with the code(s).
- D. <u>Examination of Site</u>: Contractor shall be held to have visited the site and been satisfied with the conditions under which the work is to be performed. Contractor shall check existing conditions that may affect the work. If the contractor retains services of other firms, those firms shall investigate existing systems and determine labor and other materials required to add devices or modify systems. No allowance shall subsequently be made on the contractor's behalf, for any extra expense resulting from a failure or neglect to discover conditions affecting the work.

E. <u>Cleaning and Cleanup</u>: All work areas shall be cleaned to remove all dust, dirt, grease, paint or other marks. All electrical equipment shall be left in a clean condition inside and out, satisfactory to THE OWNER. Buildings and premises will be kept free from accumulated waste materials, rubbish and debris resulting from work. Upon completion of work: tools, appliances, surplus and waste materials, rubbish and/or debris will be removed and/or legally disposed of offsite.

#### F. Interruption of Services:

- 1. The underground route may run through areas of existing underground irrigation, signal, power, gas, water and sewer.
- 2. Contractor must take precautions to avoid damaging/killing the root systems of existing trees. Contractor shall hand-dig as necessary to prevent disruption to existing systems, and make all repairs as required if damage occurred, at no additional cost to THE OWNER.
- 3. THE OWNER will make every effort to assist contractor in locating existing underground routes. However, contractor will be required to pothole and inspect as needed. Contractor is responsible for USA surveys (Underground Service Alert).
- 4. Power and signal services to existing buildings and related circuits are to remain in operation and shall not be interrupted, except by specific written approval from THE OWNER.
- 5. If it is deemed necessary to shutdown circuits for the installation of new work, such shutdowns shall be scheduled with THE OWNER who may at its choosing, have a representative present during shutdown. Shutdowns shall be scheduled "after hours" or on weekends when an interruption would not cause a disturbance to school activities. Any accidental interruption of service to circuits or equipment as a result of work performed by the contractor shall be restored immediately in a manner acceptable to THE OWNER, at the contractor's expense.
- G. <u>Cooperation and Coordination</u>: Contractor shall be solely responsible for instituting and maintaining safe working conditions for the project area under construction. Noise, dust and other nuisance control measures will be implemented as effectively as possible. Work will be executed at a time when the space required by this installation is accessible. Adequate barrier and trench covers will be provided and no equipment will be left unattended, ensuring the safety of students and staff.
- H. <u>Inspection</u>: Contractor shall cooperate with the THE OWNER Designer/Inspector and provide assistance at all times for inspection of the work performed under this contract. Work that will be contained behind or under access covers, ground covering, or similar impediments shall be left exposed until inspected by THE OWNER. Contractor shall remove covers, operate devices, or perform any

- reasonable work that, in the opinion of THE OWNER, will be necessary to determine the quality and adequacy of the work.
- I. <u>Manufacturers Direction</u>: Contractor shall follow manufacturer's directions that cover points not included in the drawings or specifications.
- J. <u>Workmanship</u>: Contractor shall take all precautions necessary to protect existing structures. Structures or items to remain that are damaged during the course of work, shall be repaired or replaced by the contractor. Good workmanship shall be evident by the proper installation of all materials and equipment. Equipment shall be level, plumb and true with the structure and other equipment. All materials shall be firmly secured in place, adequately supported and permanent.
- K. <u>Contractor's Supervision</u>: Contractor shall personally, or through an authorized and competent representative, constantly supervise the work from its commencement to its completion and acceptance. Contractor shall have the same foreman and workers on the job from its commencement to it completion, as much as possible. THE OWNER shall be notified of any personnel changes and supplied with the proper documents for any new personnel (I.e. lead certificates). All non-THE OWNER personnel shall be identified either by an ID tag or uniform with a company logo when on school grounds.
- L. <u>Scheduling of Work</u>: Due to its nature, this work will have to proceed with a definite sequence of operations to minimize outages and continue facilities to all areas. The site will remain in operation during the work, and the contractor shall make every effort to maintain required services.

#### M. Guarantees:

- Acceptance of the contract for this work includes this guarantee:
   Contractor guarantees that he has performed the work in accordance with
   the contract documents. Contractor also agrees to replace or repair, as
   new, any defective work, materials, or parts which appears within 4 years
   of final payment. THE OWNER will make the final determination of
   whether any defects are the responsibility of the contractor to replace or
   repair.
- Warranties, guarantees and certificates shall be provided for equipment and materials furnished and installed, as of the date of final payment and be delivered to THE OWNER. A set of "As Built" Visio drawings and test results for all installed cabling shall be provided to THE OWNER, before the project will be considered complete.

#### N. Submittals and Substitutions:

1. THE OWNER has evaluated and approved all the approved items listed in the THE OWNER Parts List. Substitutions to this list are possible but must be approved before a bid is accepted. Substitutions must be submitted to THE OWNER 10 working days before a bid is due and will either be approved or rejected 5 working days before a bid is due. The substitution documentation shall include the comparative specification

listing for the approved product and the proposed product, including a complete listing of the characteristics of the equipment in the specification.

- Within 10 working days after the date of the award of the contract, contractor shall submit to 3 copies of a complete submission to THE OWNER for review. The submission shall consist of 5 major sections, with each section separated with index tabs:
- 3. Section 1 shall be the Index, which will include the project title, address, name of the firm submitting the proposal and name of the architect. Each page in the submission shall be numbered chronologically and summarized in the index.
- 4. Section 2 shall include a copy of the contractor's valid C-7 California State Contractor's License, documentation outlined in Part 1.2 and a list of instrumentation to be used for system testing.
- 5. Section 3 shall contain the pre-approved substitution submittal and the written approval from THE OWNER. If no substitutions are planned, it will be noted in this section as well.
- 6. Section 4 shall contain samples of proposed cable markers and labeling.
- 7. Section 5 shall contain a complete and detailed satellite cable count, workstation count, bill-of-materials and Visio drawing showing proposed work ("As Planned"). Any contractor failing to include all of the required information shall be deemed non-responsive and may be disqualified, at the discretion of THE OWNER.

#### **PART 2 – PRODUCTS AND PROCEDURES**

#### 2.1 APPROVED OWNER PARTS LIST

A. An approved parts list is detailed at the end of this document. All products must be selected from the "THE OWNER PART LIST," unless substitutions have been approved by THE OWNER.

#### 2.2 LABELING

- A. Shall follow the Owner's labeling format, the contractor shall coordinate with the Owner.
- B. Shall never be hand-written.
- C. Shall be machine printed on clear or opaque tape, stenciled onto adhesive labels, or type written onto adhesive labels.
- D. Shall have font that is at least 1/8" in height, block characters, and legible.

- E. Shall have text that is of a color contrasting with the label so that it may be easily read. If labeling tape is utilized, the font color shall contrast with the background.
- F. Patch panels shall exhibit workstation numbers, in a sequential order, for all workstations served by the MDF or IDF.
- G. Shall be completed before testing commences. Labeling discrepancies found during inspection will void all test results.

#### 2.3 COPPER BACKBONE CABLE

- A. <u>Description</u>: The backbone cabling used to connect all IDF's to the MDF, used for voice/data.
- B. Shall be Category 6 and installation must be in compliance with all EIA/TIA standards.
- C. The number of available wire pairs to each IDF must account for a minimum of 2 pairs per classroom. A minimum of 25 pairs of cable shall be used to any building encompassing an office. Each pathway, upon the population of cable, shall have enough wire pairs to accommodate all existing and future IDF's in that pathway's route.
- D. Cable must be rated for the environment that it will be installed in, such as plenum, riser or outdoor rated.
- E. Only Cat 6 110 punch blocks will be allowed for terminations. Backbone pairs shall be terminated at the top left of the blocks installed in the IDF.
- F. Each copper backbone cable shall be machine labeled and printed EIA/TIA 606 Section 8 compliant at each end with its respective IDF number/letter. All binder groups shall be tied off with their respective identifying ribbon at every breakout point.

#### 2.4 COPPER DATA CABLING:

- A. Shall be Cat6, gray jacketed. For underground run use Cat6 OSP.
- B. Jumper cables shell be blue for all network cabling, except green for wireless access points (WAP).
- C. Network jacks shall be Ivory
- D. WAP jacks shall be Green.
- E. Terminations at IDF shall be keystone jacks on patch panel.
- F. All grounding must be done according to TIA 942 standard.

- G. Copper station cabling may run outside of conduits and above T-Bar suspended ceilings when available. Cables installed in this fashion must follow these guidelines:
  - 1. Run horizontally in bundles and tie down neatly without the use of zipties.
  - 2. Be well clear of any light fixtures or other electrical appliances that may affect data transmissions.
  - 3. Have their own support system, such as J-Hooks or a cable tray
  - 4. Cannot be supported by other items in the ceiling such as conduit, ducts and ceiling grids.

#### 2.5 FIBER INNER DUCT

- A. <u>Description</u>: Ducting specifically manufactured to enclose and protect fiber optic cable
- B. Must be used for all fiber installations, with exceptions where conduits are too small to run inner duct.
- C. THE OWNER will be notified, in writing, that conduits might be too small to run inner duct. THE OWNER must approve, in writing, any fiber run not in inner duct.

#### 2.6 FIBER DISTRIBUTION

- A. Description: The backbone cabling used to connect all IDF's to the MDF.
- B. Only 62.5/125 single mode fiber shall be used and installation must comply with all EIA/TIA standards.
- C. A minimum of 12-strand fiber shall be used from the IDF's to the MDF.
- D. Each fiber cable shall homerun from the IDF's to the MDF without the use of interconnects.
- E. Each pathway, upon the population of fiber, shall have enough fibers to accommodate all existing and future IDF's in that pathway route, and also be accompanied by a coax cable.
- F. LC style connectors shall be used for all fiber termination.
- G. All fiber strands shall be terminated and labeled at both ends with its respective IDF identifier.
- H. All fiber interconnect devices shall be labeled with their respective IDF identifier.
- I. At each location where the fiber cable is exposed to human intrusion, it shall be marked with warning tags. These tags shall be orange in color and shall contain

the warning: "CAUTION FIBER OPTIC CABLE". The text shall be (insert color), block characters and at least 3/16" high. A warning tag shall be permanently affixed to each exposed cable or bundle of cables.

#### 2.7 MAIN DISTRIBUTION FACILITY (MDF) – EXISTING

#### 2.8 INTERMEDIATE DISTRIBUTION FACILITY (IDF)

- A. <u>Description</u>: A location in a building that interconnects and manages the telecommunications wiring between the MDF and workstation devices.
- B. Must be in compliance with all EIA/TIA standards.
- C. Cabinet shall be fastened to a 5/8" plywood backboard.
- D. Cabinet/Rack must have a live 110 VAC power outlet, and 208/30a power outlet mounted inside.
- E. Cabinet must be mounted with 4 lag bolts; two of which are fastened to studs.
- F. Cabinet shall be load tested with no less than 200 pounds and up to rated shear strength.
- G. A wire manager must be mounted in-between every patch panel (must use one wire management panel for every patch panel).

RACEWAY MATERIAL					
Wiremold PN10 drop ceiling connector - ivory	PN10F86FV	145 X 2			
Wiremold PN10 surface raceway – ivory 8'	PN10L08V	145 X 2			
Wiermold internal elbows - ivory	PN10F17V	1/5			
Wiremold junction box - ivory	PSB1V	145 x 2			
Wiremold 90 degree flat elbow - ivory	PN10F11V	1/5			
Wiermold external elbows - ivory	PN10F18V	1/5			
Wiremold tee fitting - ivory	PN10F15V	1/5			
Wiremold cover clip - ivory	PN10F06V	1/4			
Wiremold blank end fitting - ivory	PN10F20V	1/5			

#### 2.9 BACKBOARD

- A. <u>Description</u>: Generally refers to the plywood sheeting lining the walls of telecommunications facilities. Backboard may also refer to the entire wall-mounted assembly including wire management, wiring blocks, and equipment racks.
- B. Dimensions shall be no larger than the cabinet/IDF when installed in a classroom.
- C. Shall be fastened to two separate wall studs with 4 lag bolts.
- D. Shall be no thinner than 5/8".

#### 2.10 TESTING AND DOCUMENTATION

- A. <u>Testing</u>: Contractor shall test each fiber strand and each pair of twisted pair copper cable after labeling is 100% complete. THE OWNER reserves the right to have a representative present during testing.
- B. <u>Fiber Optics Cable</u>: Each strand shall undergo bi-directional testing for signal attenuation losses.
  - 1. Test Equipment: Multi-mode: Fluke DSP 4000 for equivalent.
  - 2. Tests: Multi-mode: Bi-directional signal attenuation at 850 and 1300 nm.
  - 3. Test Criteria: Signal loss less than the link loss budget as determined by the tables below.

SC Connector Pair 0.5dB

Multi-Mode Cable

Wavelength (nm) Maximum Attenuation (dB/km)

850 3.5 1300 1.5

Example: A link with 3 connectors and a total length of 500m should have a maximum attenuation of 3.25dB at 850nm and 2.25dB at 1300nm

SC Connector Pair 0.5dB

- C. <u>Workstation Cable</u>: Each workstation cable shall be tested from the Jack Panel to the data outlet after labeling is completed.
  - 1. Test Equipment: Fluke DSP-4000 or equivalent.
  - 2. Tests: Conform to EIA/TIA Standards for Category 6.
  - 3. Test Criteria: Tested to Category 6 for permanent link compliance.
- D. <u>Wi-Fi Cable</u>: Each Wi-Fi cable shall be tested from the Jack Panel to the data outlet after labeling is completed.
  - 1. Test Equipment: Fluke DSP-4000 or equivalent.
  - 2. Tests: Conform to EIA/TIA Standards for Category 6 and 802.3bt Type 4.
  - 3. Test Criteria: Tested to Category 6 for permanent link compliance.
- E. <u>Documentation</u>: Contractor shall provide documentation to include test results and "As-Built" drawings in both soft and hard copy format.
- F. Fiber Test Results:
  - 1. Only original signed copies will be acceptable.
  - 2. Hand written results are not acceptable.
  - 3. Copies of test results are not acceptable.
  - 4. Test results shall be in PDF format.

- G. <u>Workstation/WAP Test Results</u>: Shall be provided in the form of printouts from the test equipment, as well as computer file copies on CD including the software needed to read the results.
  - 1. Only original signed copies will be acceptable.
  - 2. Hand written results are not acceptable.
  - 3. Copies of test results are not acceptable.
  - Test results shall be in PDF format.

#### 2.11 ACCEPTANCE

- A. Acceptance of the Data Communications System, by THE OWNER, shall be based on the results of testing, functionality, and the receipt of documentation.
- B. With regard to testing, all fiber segments and workstation data cables must meet the testing criteria established in Part 2.12 above.
- C. With regard to functionality, contractor must demonstrate to THE OWNER that Gigabit Ethernet data signals can be successfully transmitted bi-directionally, from the MDF/IDF to and from a number of individual data outlets.
- D. No more than 5% of the data jacks will be tested.
- E. If any locations fail, an additional 5% will be tested until no more links fail.
- F. With regard to documentation, all required documentation shall be submitted to THE OWNER

#### **PART 3 – EXECUTION**

#### 3.1 DIVISION OF WORK

- A. Contractor shall design and install the data communications system as described in the preceding documentation. Installation shall result in a functional system. The scope of work shall include:
- B. All necessary conduit and raceway with a Visio drawing showing proposed cable routes, existing conduit to be used, new conduit being installed, equipment racks and approximate drop location. (Note: The EIA/TIA specifies at least 2 drops per workstation location, back to the IDF/MDF).
- C. Necessary trenching, backfill, replacement of landscape material, repair of damage to utilities or structures, replacement of asphalt and base, and replacement or repair to concrete work resulting from conduit or raceway installation.
- D. Provide and install all equipment.
- E. Test and document system upon completion. Copies of all other forms and enclosures shall be included.

F. Supply and install all necessary materials resulting in a safe, complete and functional system. The scope of work shall be reviewed by no less than 1 person for completeness from the following departments: Facilities & Planning, Maintenance & Operations.

#### **PART 4 – VIDEO SAFETY**

#### 4.1 INTRODUCTION

- A. In addition to THE OWNER Infrastructure Wiring Specifications, the following guidelines apply to access control card readers, security cameras, and other access devices installed within THE OWNER.
- B. A site walk must also be performed with a Technology Services staff member before work begins.
- C. Security cameras will be:
  - 1. Connected directly on the THE OWNER network.
  - 2. Operations, VLAN 99.
  - 3. Powered by POE switches.
  - 4. Security cameras will be placed on their own private network.
  - 5. New camera shall match existing on the site.
- D. NVR is existing.

#### PART 5 - OWNER APPROVED PARTS

CABINET and GROUNDING				
Manufacturer	Part Number	Description	Location	
Chatsworth	GF-1A320-CB-7'	GF-1A320-CB-7' Chatsworth 7ft Cabinet		
Chatsworth	10250-712 Universal Cable Runway IDF		IDF	
Chatsworth	12804-701	Exhaust Fan M		
Chatsworth	40164-001	Grounding Strap Kit	MDF/IDF	
Chatsworth	10610-019	Horizontal Rack Busbar	MDF/IDF	
Chatsworth 40604-003 Floor Mounting Kit		MDF/IDF		

TWISTED PAIR PRODUCT				
Manufacturer Part Number Description		Location		
Ortronics	ORSPKSU48	48 Port Keystone Patch Panel	MDF	
Ortronics	ORKS613	Ivory Jacks for DATA	MDF	
Ortronics	ORKS645	Green Jacks for DATA to Aps	MDF	
Ortronics	ORKSSMB2	2 Port Surface Mount Box	IDF	
Ortronics ORKSFP299		"SINGLE GANG PLASTIC FACEPLATE,	MDF/IDF	
		HOLDS TWO KEYSTONE JACKS"		
Ortronics	ORKSFP499	SINGLE GANG PLASTIC FACEPLATE,		
		HOLDS FOUR KEYSTONE JACKS		
Ortronics	ORKSB1099	BLANK, KEYSTONE,		

TWISTED PAIR PRODUCT (CONTINUED)				
Manufacturer	nufacturer Part Number Description			
Superior Essex	r Essex CMR 77-246-3A Superior Essex CAT6 Gray			
Superior Essex	sex CMP 77-246 3B Superior Essex CAT6 Gray			
Superior Essex	CMR 77-246-2A	Superior Essex CAT6 Blue (CCTV)		
Superior Essex	04-001-68	Superior Essex CAT6 OSP		
Quicktron	576-110-010	10ft Blue CAT6 Jumper		
Quicktron	576-110-003	3ft Blue CAT6 Jumper		

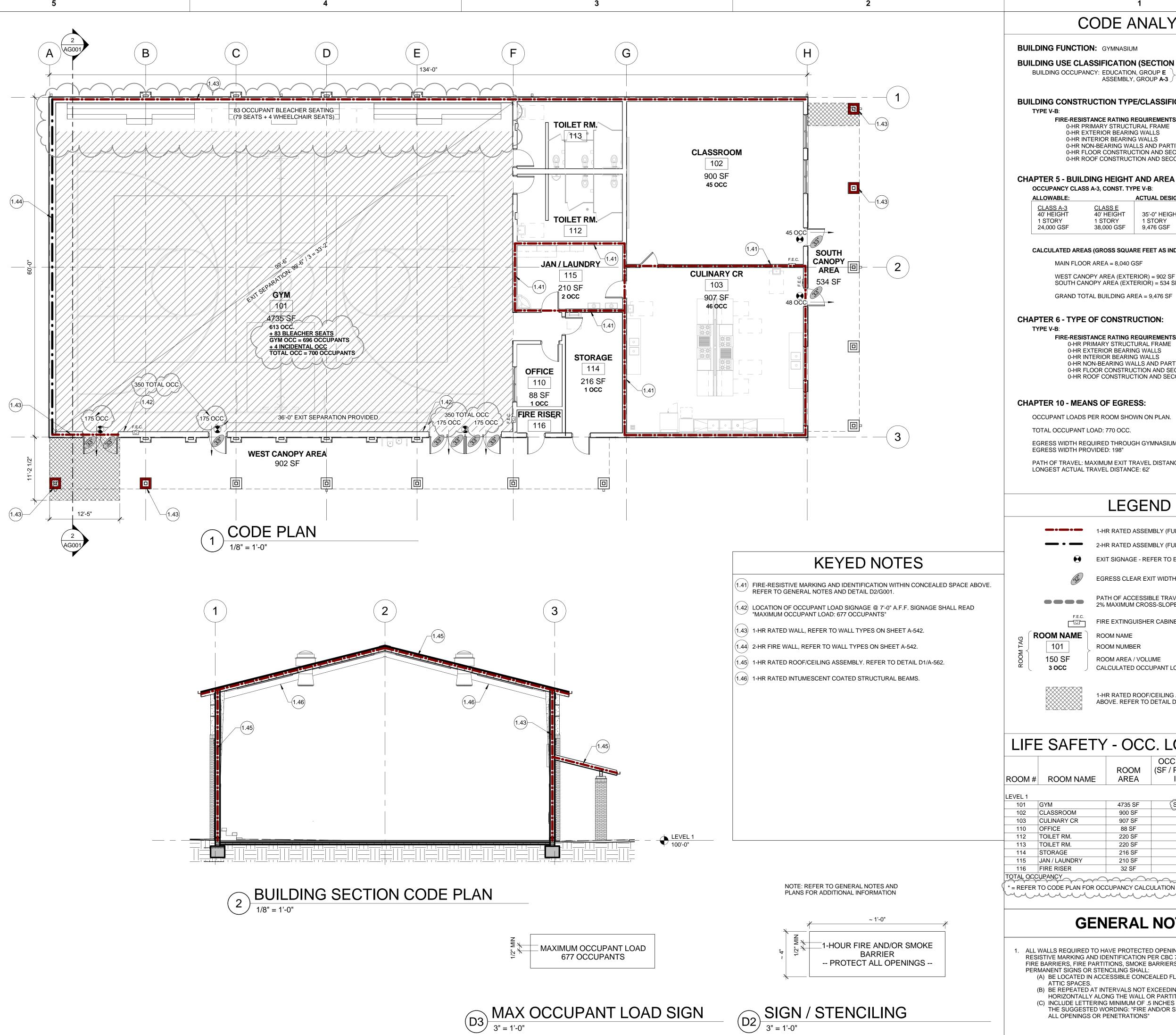
WIRE MANAGMENT			
Manufacturer	Part Number	Description	Location
HellermanTyton	WMB2	Horizontal Wire Manager, Dual Sided	

FIBER PRODUCTS				
Manufacturer	Part Number	Description	Location	
Ortronics	ORFC01UC	1U Fiber Tray		
Ortronics ORFC03UC 3U Fiber		3U Fiber Tray		
Superior 12 Strand Single Mode Fiber Dry Block,				
Essex	W4012J01	Sunlight Resistant, Indoor/Outdoor		
		LC FIELD TERMINATING ANAEROBIC		
Ortronics OR205KAN9GASM		CONNECTORS, SINGLE MODE, 900		

NETWORK PRODUCTS					
Manufacturer	Part Number	Part Number Description (			
Cisco	SFP-10G-LR	10GBASE SFP Module	2		
Cisco	WS-C3650-48FD-S	48 PORT FULL PoE 2X10G Uplink IP base	1		
Fiber patch	LC to LC 9/125		2		
cable	Singl mode Duplex	Yellow color, 3 meter length			

WIRELESS EQUIPMENT					
Manufacturer	Part Number	Part Number Description			
Cisco L-LIC-CT8500-UPG		License	1		
Cisco	LIC-CT8500-1A	License for wireless controller	5		
Cisco AIR-CAP3702I-A-K9		Access point	5		

END OF SECTION 27 20 00 - ADDENDUM # 2.



## CODE ANALYSIS

**BUILDING FUNCTION:** GYMNASIUM

#### **BUILDING USE CLASSIFICATION (SECTION 302):**

BUILDING OCCUPANCY: EDUCATION, GROUP E NON-SEPARATED ASSEMBLY, GROUP A-3 OCCUPANCY USED IN CODE ANALYSIS

#### **BUILDING CONSTRUCTION TYPE/CLASSIFICATION:**

FIRE-RESISTANCE RATING REQUIREMENTS:

- 0-HR PRIMARY STRUCTURAL FRAME
- 0-HR EXTERIOR BEARING WALLS 0-HR INTERIOR BEARING WALLS
- 0-HR NON-BEARING WALLS AND PARTITIONS 0-HR FLOOR CONSTRUCTION AND SECONDARY MEMEBERS 0-HR ROOF CONSTRUCTION AND SECONDARY MEMBERS

#### **CHAPTER 5 - BUILDING HEIGHT AND AREA (TABLE 504 & 506):** OCCUPANCY CLASS A-3, CONST. TYPE V-B:

ALLOWABLE:		ACTUAL DESIGN:		
CLASS A-3 40' HEIGHT 1 STORY 24,000 GSF	CLASS E 40' HEIGHT 1 STORY 38,000 GSF	35'-0" HEIGHT 1 STORY 9,476 GSF		
		1		

#### CALCULATED AREAS (GROSS SQUARE FEET AS INDICATED IN PLAN):

MAIN FLOOR AREA = 8,040 GSF

WEST CANOPY AREA (EXTERIOR) = 902 SF SOUTH CANOPY AREA (EXTERIOR) = 534 SF

GRAND TOTAL BUILDING AREA = 9,476 SF

#### **CHAPTER 6 - TYPE OF CONSTRUCTION:**

FIRE-RESISTANCE RATING REQUIREMENTS:

- 0-HR PRIMARY STRUCTURAL FRAME 0-HR EXTERIOR BEARING WALLS
- 0-HR INTERIOR BEARING WALLS 0-HR NON-BEARING WALLS AND PARTITIONS 0-HR FLOOR CONSTRUCTION AND SECONDARY MEMEBERS

0-HR ROOF CONSTRUCTION AND SECONDARY MEMBERS

#### **CHAPTER 10 - MEANS OF EGRESS:**

OCCUPANT LOADS PER ROOM SHOWN ON PLAN.

TOTAL OCCUPANT LOAD: 770 OCC.

EGRESS WIDTH REQUIRED THROUGH GYMNASIUM: 678 X 0.2 = 135.6" EGRESS WIDTH PROVIDED: 198"

PATH OF TRAVEL: MAXIMUM EXIT TRAVEL DISTANCE = 250' (TABLE 1017.2) LONGEST ACTUAL TRAVEL DISTANCE: 62'

## LEGEND

1-HR RATED ASSEMBLY (FULL-HEIGHT) - REFER TO DETAILS 2-HR RATED ASSEMBLY (FULL-HEIGHT) - REFER TO DETAILS EXIT SIGNAGE - REFER TO ELECTRICAL PLANS

EGRESS CLEAR EXIT WIDTH PROVIDED.

PATH OF ACCESSIBLE TRAVEL - 1:20 MAXIMUM SLOPE, 2% MAXIMUM CROSS-SLOPE - SEE GENERAL NOTE #1

FIRE EXTINGUISHER CABINET **ROOM NAME** 

**ROOM NAME** 101 150 SF

**ROOM NUMBER** ROOM AREA / VOLUME CALCULATED OCCUPANT LOAD

1-HR RATED ROOF/CEILING ASSEMBLY ABOVE. REFER TO DETAIL D3/A-562.

## LIFE SAFETY - OCC. LOAD SCHED.

ROOM#	ROOM NAME	ROOM AREA	OCC. LOAD FACTOR (SF / PERSON) AS PER IBC 1004.1.1	OC0 LOA
LEVEL 1				<u></u>
101	GYM	4735 SF	SEE CODE PLAN	696
102	CLASSROOM	900 SF	20 SF	45
103	CULINARY CR	907 SF	20 SF	46
110	OFFICE	88 SF	100 SF	1
112	TOILET RM.	220 SF		
113	TOILET RM.	220 SF		
114	STORAGE	216 SF	300 SF	1
115	JAN / LAUNDRY	210 SF	100 SF	3
116	FIRE RISER	32 SF		~
TOTAL OCC	LIPANCY			<b>(</b> 79

\* = REFER TO CODE PLAN FOR OCCUPANCY CALCULATION

### **GENERAL NOTES**

- ALL WALLS REQUIRED TO HAVE PROTECTED OPENINGS SHALL HAVE FIRE-RESISTIVE MARKING AND IDENTIFICATION PER CBC 703.6, INCLUDING FIRE WALLS, FIRE BARRIERS, FIRE PARTITIONS, SMOKE BARRIERS AND SMOKE PARTITIONS. PERMANENT SIGNS OR STENCILING SHALL: (A) BE LOCATED IN ACCESSIBLE CONCEALED FLOOR, FLOOR / CEILING, OR
  - (B) BE REPEATED AT INTERVALS NOT EXCEEDING 30 FEET MEASURED
  - HORIZONTALLY ALONG THE WALL OR PARTITION. (C) INCLUDE LETTERING MINIMUM OF .5 INCHES IN HEIGHT INCORPORATING THE SUGGESTED WORDING: "FIRE AND/OR SMOKE BARRIER -- PROTECT ALL OPENINGS OR PENETRATIONS"



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## **CORE ACADEMIC** AND CAMPUS RENOVATION

SACRAMENTO CITY UNIFIED SCHOOL DISTRICT

5735 47th AVENUE C SACRAMENTO, CA 95824

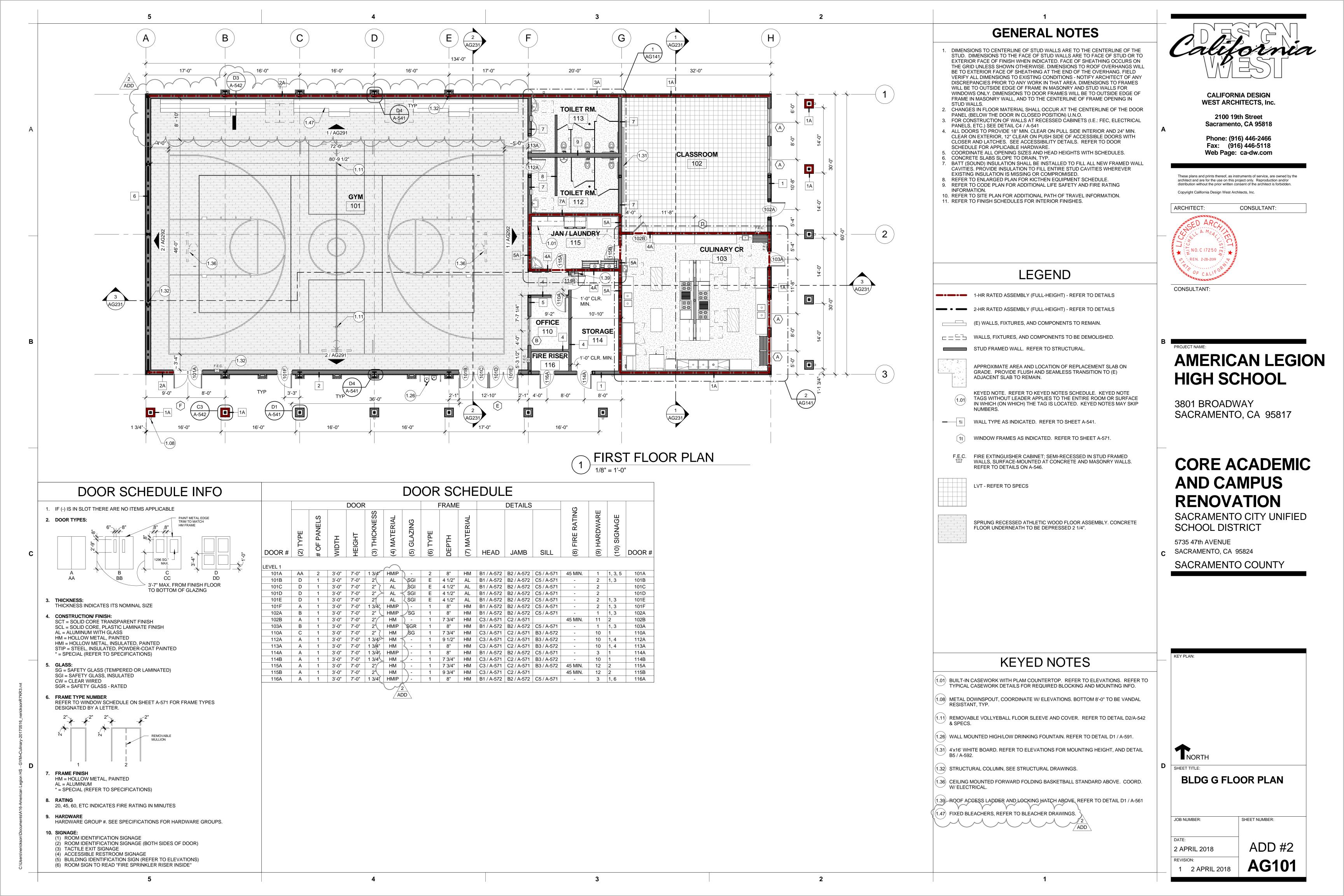
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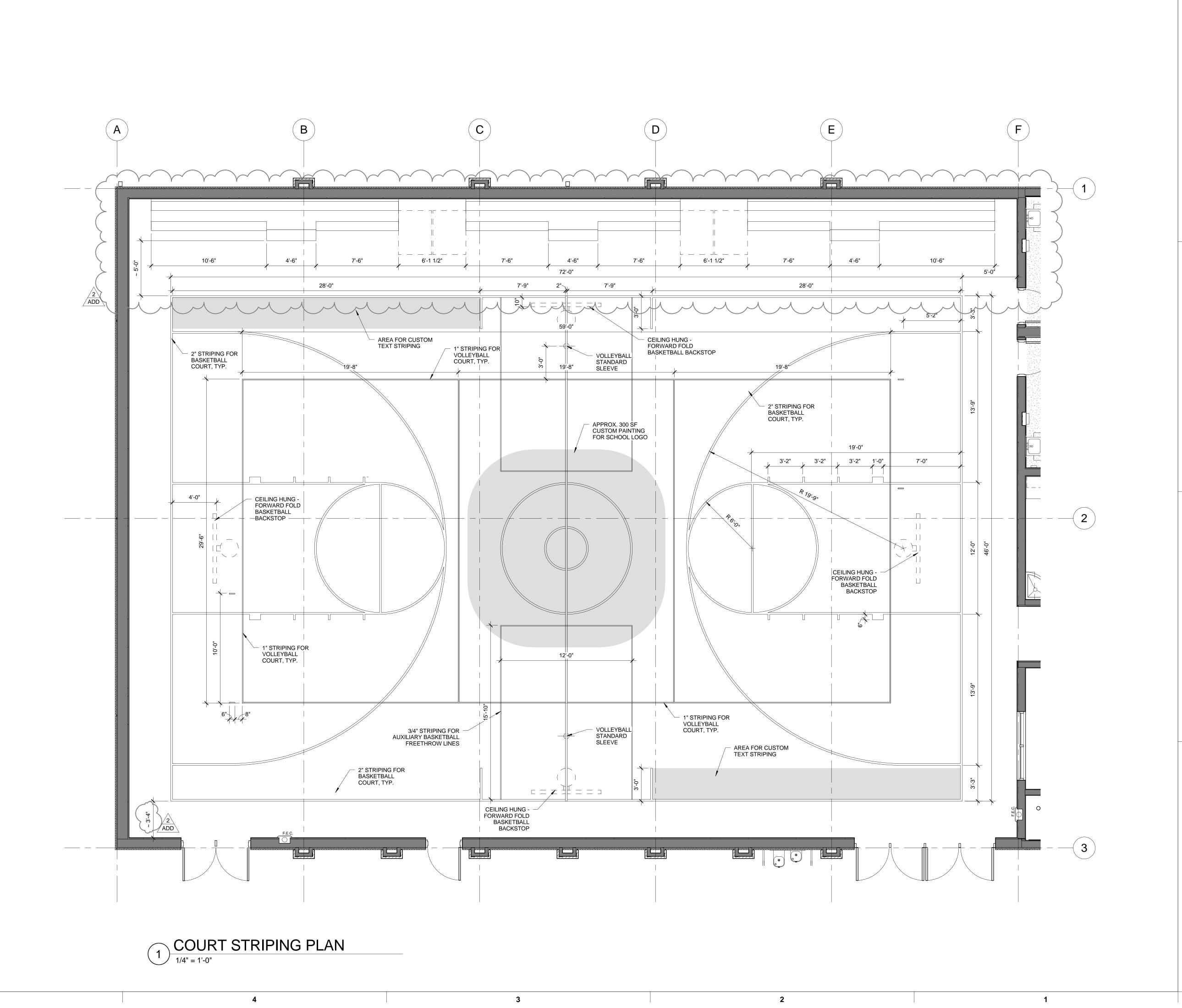
NORTH SHEET TITLE: **BLDG G CODE PLAN** JOB NUMBER: SHEET NUMBER: **ADD #2** 2 APRIL 2018

**AG001** 

REVISION:

1 2 APRIL 2018







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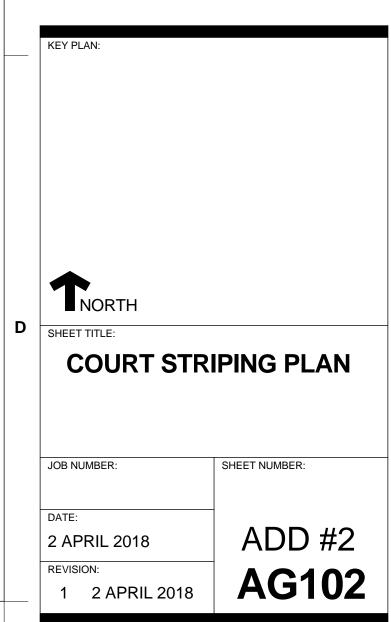
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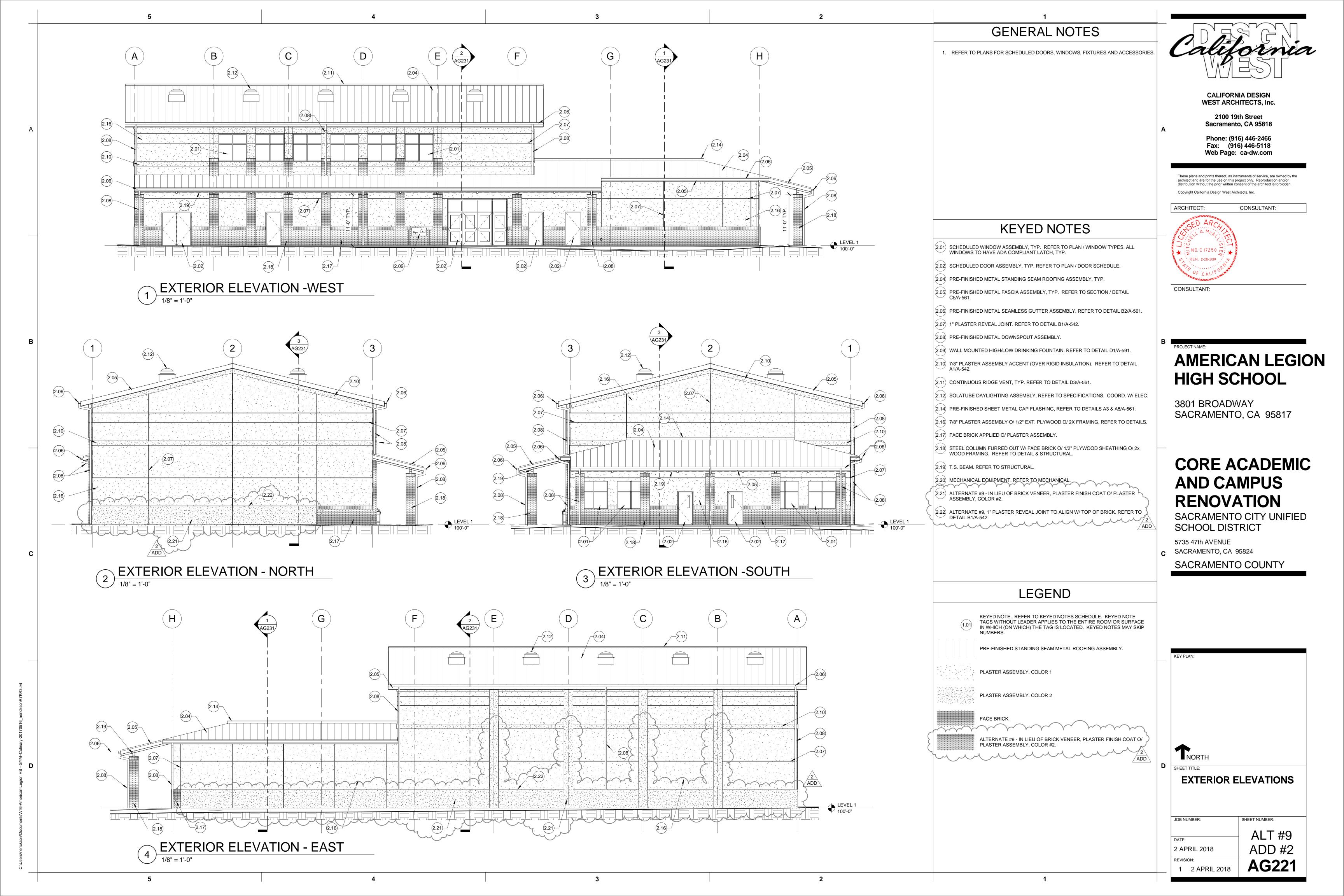
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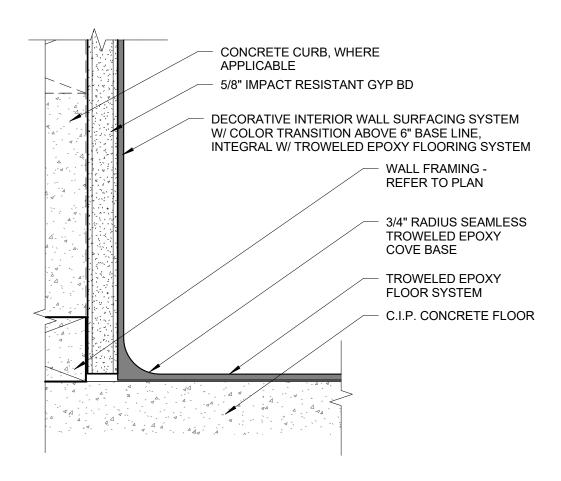
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SACRAMENTO COUNTY







## TROWELED EPOXY SYSTEM

6" = 1'-0"

