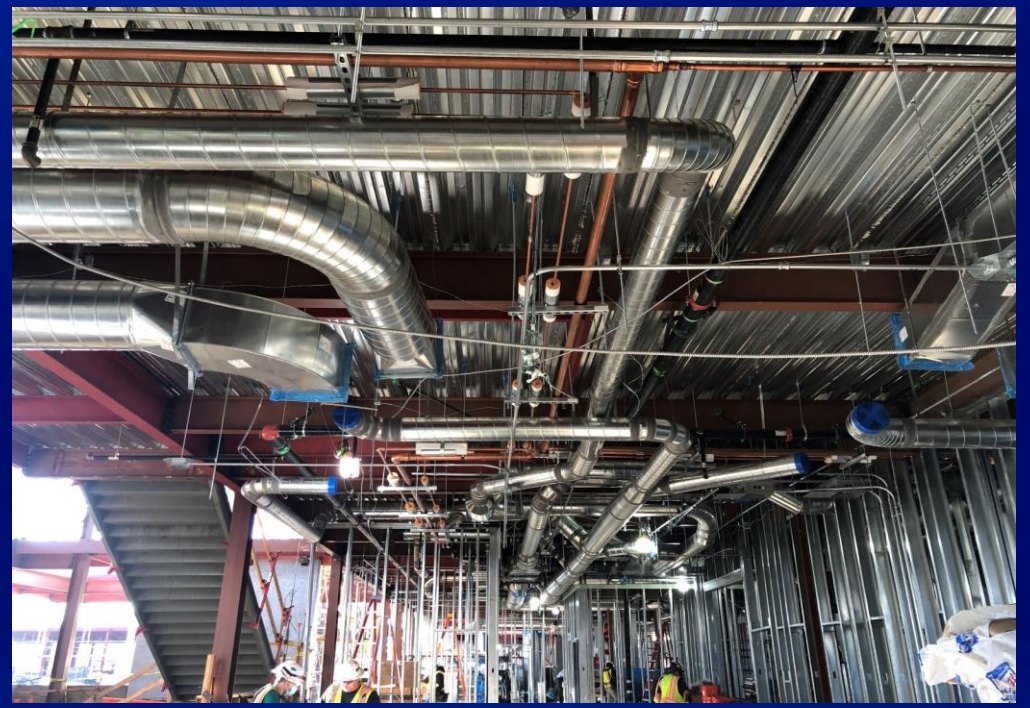
LAUSD UNIFIED

Facilities Update: Specification Updates & Cost Savings

Facilities and Procurement Committee Meeting

January 28, 2025



Today's Presentation

- Overview of Specifications and Deviations
- Update on Next Steps from November Committee Meeting
  - Specification activities underway
  - Interior and exterior painting specifications update and anticipated cost savings with spraying vs. roll-on application
- Cost Saving Examples
  - HVAC-related changes to equipment and testing
  - Plumbing system proposed change

Specifications

A detailed description of the materials, techniques, products, systems and workmanship acceptable to the District which establishes and maintains a safe, consistent level of quality across schools Districtwide.

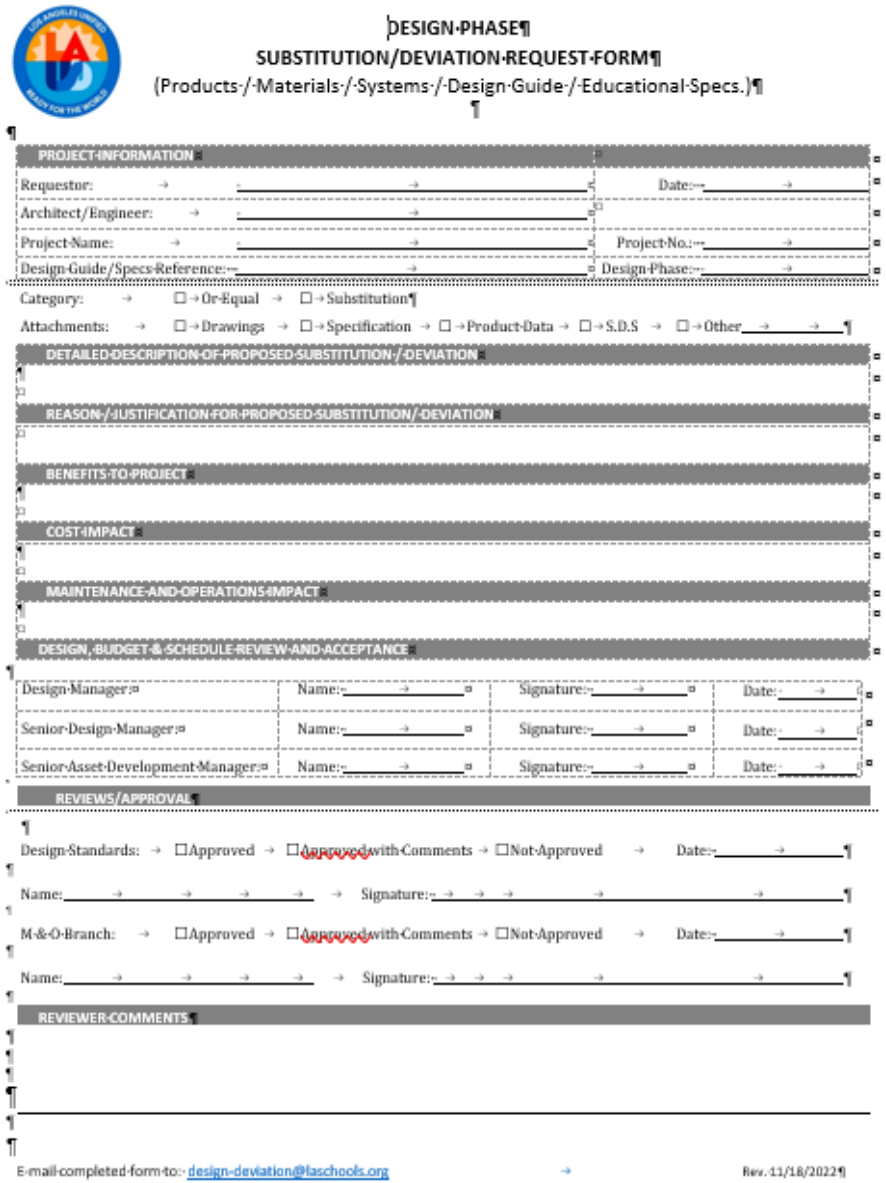
Included in the Construction Documents for each project. Edited for individual projects as appropriate.

- 33 Subject Matter Divisions
- Over 300 Specification Sections

Substitutions / Deviations

Deviation refers to modifying or deviating from the original specifications.

Any proposed substitution or deviation from products, materials, systems, layouts, or requirements indicated on the School Design Guide, Guide Specifications, Educational Specifications, Standard Technical Drawings or District's Studies and Reports, must be submitted for District approval.



DESIGN PHASE

SUBSTITUTION/DEVIATION REQUEST FORM

(Products / Materials / Systems / Design Guide / Educational Specs.)

PROJECT INFORMATION

Requestor: _____ Date: _____

Architect/Engineer: _____

Project Name: _____ Project No.: _____

Design Guide/Specs Reference: _____ Design Phase: _____

Category: ☐ Or-Equal ☐ Substitution

Attachments: ☐ Drawings ☐ Specification ☐ Product Data ☐ S.D.S ☐ Other _____

DETAILED DESCRIPTION OF PROPOSED SUBSTITUTION / DEVIATION

REASON / JUSTIFICATION FOR PROPOSED SUBSTITUTION / DEVIATION

BENEFITS TO PROJECT

COST IMPACT

MAINTENANCE AND OPERATIONS IMPACT

DESIGN, BUDGET & SCHEDULE REVIEW AND ACCEPTANCE

Design Manager:	Name:	Signature:	Date:
Senior Design Manager:	Name:	Signature:	Date:
Senior Asset Development Manager:	Name:	Signature:	Date:

REVIEWS/APPROVAL

Design Standards: ☐ Approved ☐ Approved with Comments ☐ Not Approved Date: _____

Name: _____ Signature: _____

M & O Branch: ☐ Approved ☐ Approved with Comments ☐ Not Approved Date: _____

Name: _____ Signature: _____

REVIEWER COMMENTS

E-mail completed form to: design-deviation@laschools.org

Rev. 11/18/2022

Snapshot of Activities to Date

- Initiated specification updates with Gensler Associates
  - 50 Mechanical and Electrical Design Guide and Specification sections reviewed for proposed revisions
    - 80 specific mechanical updates under consideration
    - 64 specific electrical updates under consideration
  - 238 non-mechanical and non-electrical specification sections under review
  - 142 previously approved deviations are under review for incorporation into LAUSD Design Standards

Snapshot of Activities to Date (cont.)

- Initiated specification updates with LAUSD Design Standards Dept.
  - 17 revisions being edited.
- Tracking marketplace expansion of available and reliable building equipment and components to meet energy efficiency requirements.
  - Requesting cost effective revisions from EMS subcontractors to reduce system complexities and reduce costs.

Painting Specifications

Section 09 9000 Painting and Coating

Specifications have been updated to allow spray paint applications in lieu of roll-on applications on surfaces of most interior materials and exterior stucco.

Specification Update
- 17% savings for interiors
- 12% savings for exteriors

The application of paint using spray paint equipment is faster than traditional roll-on paint application methods.

Cost Comparison Models

Conceptual Model for Cost Comparisons

- Use a 2-story 20 Classroom Building (24,000 square feet) to calculate a rough order of magnitude cost reduction of a single proposed change to a specification requirement.
  - Mechanical system changes for duct testing, duct lining, isolation curbs, clean-outs.

- Use a High School Gymnasium with Practice and Competitive gyms (43,000 square feet) to calculate a rough order of magnitude cost reduction of a single proposed change to a specification requirement.
  - Mechanical system changes for isolation equipment and clean-outs.

HVAC Testing, Adjusting, and Balancing

Section 01 4525 - HVAC Duct Leakage Testing

- Verify if the system is operating efficiently. Testing for leakage verifies there is no energy loss or strain on heating and cooling units, potentially extending their lifespan.

- The Sheet Metal and Air Conditioning Contractors' National Association (SMACNA) determines the standards for allowable leakage and provides recommended testing standards for HVAC duct leakage. SMACNA standards require a percentage of ducts to be tested.

HVAC Testing, Adjusting, and Balancing (cont.)

Specification requires duct leakage testing on *all* duct work when installing new HVAC duct equipment.

Specification Update ~$51K potential cost savings

- Align with SMACMA standards which does not recommend leakage testing of all ductwork.
- Commissioning will verify duct leakage prior to system acceptance.

HVAC Sound and Vibration Control

Section 23 0548 – HVAC Sound and Vibration Control

- Acoustical isolation of vibration from equipment and machinery reduces excessive noise.
- Roof curbs are raised metal frames designed to mount equipment and other accessories on a roof and provide acoustical isolation of operating equipment.
- Consistent acoustical isolation standards are established for maintenance, reliability, and quality throughout all modernization and new construction projects.

Specification requires rooftop vibration isolation curbs and vibration isolation hangers wherever HVAC equipment is located.

HVAC Sound and Vibration Control (cont.)

Specification Update

~$11K potential cost savings for Classroom Building
~$121K potential cost savings for High School Gymnasium

- Provide rooftop isolation curbs and isolation hangers only where HVAC equipment is installed above or within instructional and administrative spaces.
- Utilize an integrated internal isolation component in lieu of a separate isolation curb for large HVAC units at gymnasiums.

HVAC Insulation

Section 23 0700 – HVAC Duct Insulation & Lining

- Duct insulation and lining prevents temperature loss and optimizes system efficiency.
- Provides significant acoustical value and reduces need for costly sound attenuating components to control HVAC system noise.

- **Specification** limits use of insulation liner options for ductwork unless ductwork is double-walled. Current specification allows for the option of HVAC duct lining for round ducts for specific locations.

Specification Update ~$110K potential cost savings

- Consider more options for appropriate duct lining materials.

Plumbing System Cleanouts

Design Guide 3.4 B.2 - Sewer Lines
Clean-outs allow plumbing professionals to access sewage pipes to inspect and clear blockages in the pipes and prevent sewage backups.

Design Guidelines require full size clean-outs to be provided above all urinals, water closets, drinking fountains, bottle fillers, and sinks at each plumbing fixture.

Specification Update
~$10K potential cost savings for Classroom Building
~ $10K potential cost savings for High School Gymnasium

- All banks of back-to-back plumbing fixtures can share cleanouts.
- Still allows easy-to-access point to main sewer line.

Questions and Discussion