

date: 2.19.2024

project:

LCSD - Indoor Athletic Facility Remodel

Issued by:

Michael Rigby

subject:

Addendum #2

This Addendum shall be considered part of the bid documents for the above-mentioned project as though it had been issued at the same time and shall be incorporated integrally therewith. Where provisions of the following supplementary data differ from those of the original bid documents. This Addendum shall govern and take precedence. **Bidders Must acknowledge this addendum on their bids**.

Proposers are hereby notified that they shall make any necessary adjustments in their estimates as a result of this Addendum. It will be construed that each bidder's proposal is submitted with full knowledge of all modifications and supplemental data specified herein.

Except as described below, the original bid documents remain unchanged. The bid documents are modified and/or clarified. As follows:

Items:

BID ADDENDUM #

AD-01

AD-101.1- PLAN DEMOLTION

- Added note to demo unbonded tile and patch with T5 at Girl's Locker Room
- Added D.44 to Keynotes and keynote tags to east wall showers
- Added note to mezzanine level restrooms to patch floor with similar color 2"x2" tile

AD-02

A-111.2- PLAN - FINISHES

- Changed Finish Tag in the Material Finish Legend from C5 to C3
- Added hatch over the stairs to show RF1 will be placed on the landing
- Added RF1 hatch and finish tag to the Finish Material Legend
- Extended 3A flooring in Halls 107 and 114
- Added Stairs 211 finish tag to the open staircase on the mezzanine level
- Changed P6 to 6A on finish tag Stairs 205
- Changed 6A to 6B on finish tag Stairs 208
- Added note to indicating demolition changes to east walls of showers
- Added note to match missing tile base to existing tile base as close as possible in boy's and girl's locker rooms

AD-03

A-201 – ELEVATIONS, A-301 – BUILDINGT SECTIONS, A-532 – BUILDING DETAILS

Added EIFS finish to east wall.

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AD-04 A-401 – ENLARGED VIEWS AND INTERIOR ELEVATIONS

Removed diaper changing stations (J) and mop and broom holder

(H) from Legend

AD-05 A-505 – DETAILS – INTERIORS

 Corrected detail C4 to show carpet flooring next to the existing flooring instead of resilient flooring. Added finish combination tag

calling out the carpet.

AD-06 A-532 – BUILDING DETAILS

Added EIFS details C1, C2, and C4

AD-07 A-601 SCHEDULE – FINISH

• Changed note on C3 from "BLACK" to "RED" and added "CUT TO

6"X24" TILES" Removed TR3

Added P1 and EP3 to Wall Combinations 2A

Changed P1 to P5 on Wall Combinations 2E

• Added T5 to Tile

Added 6B to Stair Finishes

Added EP4 to Epoxy Paint

AD-08 G-006 SPECIFICATIONS

• Added section 07 2400 Exterior Insulation and Finish Systems

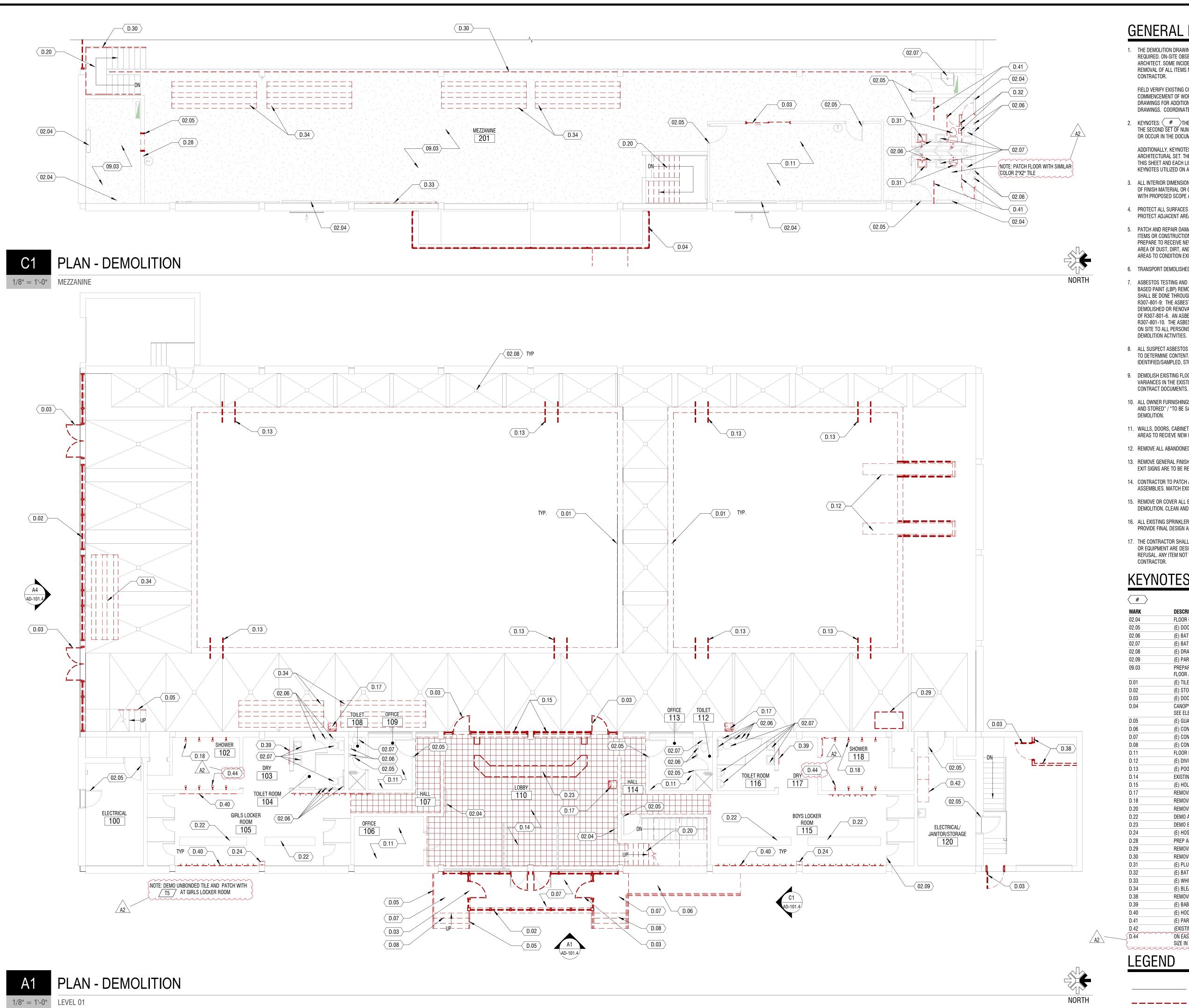
Attachments:

Bid Question answers Responses

G-006
 G-009
 AD-101.1
 A-505
 G-008
 A-111.2
 A-601

Michael Rigby 2.19.2024

ISSUED BY Date Architect



GENERAL NOTES:

1. THE DEMOLITION DRAWINGS ARE INTENDED TO SHOW THE GENERAL NATURE & SCOPE OF THE WORK REQUIRED. ON-SITE OBSERVATIONS SHOULD BE MADE AND REPORT ANY ABNORMAL CONDITIONS TO ARCHITECT, SOME INCIDENTAL ITEMS REQUIRING REMOVAL MAY NOT BE SPECIFICALLY CALLED OUT. REMOVAL OF ALL ITEMS NECESSARY FOR THE COMPLETION OF WORK IS THE RESPONSIBILITY OF THE

FIELD VERIFY EXISTING CONDITIONS AND THEIR COMPATIBILITY WITH NEW CONSTRUCTION PRIOR TO THE COMMENCEMENT OF WORK. SEE ARCHITECTURAL, STRUCTURAL, MECHANICAL, ELECTRICAL, PLUMBING DRAWINGS FOR ADDITIONAL DEMOLITION PLANS AND SCOPE. REFER TO SHEET INDEX FOR DEMOLITION DRAWINGS. COORDINATE DISCREPANCIES WITH ARCHITECT PRIOR TO PROCEEDING WITH WORK.

- 2. KEYNOTES: (#)THE FIRST TWO NUMBERS REPRESENT THE RELATED CS MASTER FORMAT DIVISION. THE SECOND SET OF NUMBERS REPRESENTS AN IDENTIFYING MARK VALUE. NOT ALL VALUES MAY BE USED OR OCCUR IN THE DOCUMENT SET.
- ADDITIONALLY, KEYNOTES RETAIN THEIR ASSIGNED VALUE UNIVERSALLY THROUGHOUT THE ARCHITECTURAL SET. THE KEYNOTES LISTED BELOW. REPRESENT THE KEYNOTES FOUND AND UTILIZED ON THIS SHEET AND EACH LIST WILL DIFFER RESPECTIVE TO ITS' SHEET. THEREFORE, BASED ON ACTUAL KEYNOTES UTILIZED ON A GIVEN SHEET OF DRAWINGS, GAPS IN THE SEQUENCING WILL OCCUR.
- 3. ALL INTERIOR DIMENSIONS ARE TO/FROM FACE OF FINISH. ALL EXTERIOR DIMENSIONS ARE TO/FROM FACE OF FINISH MATERIAL OR GRID WHERE SHOWN. CONTRACTOR SHALL COORDINATE EXISTING DIMENSIONS WITH PROPOSED SCOPE AND REPORT DISCREPANCIES WHERE FOUND.
- 4. PROTECT ALL SURFACES THAT ARE TO REMAIN OR THAT ARE EXPOSED, AND PROVIDE DUST BARRIERS TO PROTECT ADJACENT AREAS FROM DUST AND DEBRIS DURING SELECTIVE DEMOLITION OPERATIONS.
- 5. PATCH AND REPAIR DAMAGE IN WALLS, CEILINGS, AND FLOORS RESULTING FROM DEMOLITION OF EXISTING ITEMS OR CONSTRUCTION OF NEW ITEMS AND/OR REPLACE WITH NEW TO MATCH EXISTING. CLEAN AND PREPARE TO RECEIVE NEW FINISH. PROVIDE PAINT/FINISH TOUCHUP AT ALL DEMO LOCATIONS, CLEAN WORK AREA OF DUST, DIRT, AND DEBRIS CAUSED BY SELECTIVE DEMOLITION OPERATIONS. RETURN ADJACENT AREAS TO CONDITION EXISTING BEFORE SELECTIVE DEMOLITION OPERATIONS BEGAN.
- 6. TRANSPORT DEMOLISHED MATERIALS OFF OWNER'S PROPERTY AND LEGALLY DISPOSE OF DEBRIS.
- 7. ASBESTOS TESTING AND REMOVAL BY OWNER. ANY ASBESTOS CONTAINING MATERIAL (ACM) OR LEAD-BASED PAINT (LBP) REMOVAL SHALL BE COORDINATED WITH AUTHORITY HAVING JURISDICTION. REMOVAL SHALL BE DONE THROUGH A QUALIFIED ACM AND LBP CONTRACTORS. DIVISION OF AIR QUALITY RULE R307-801-9: THE ASBESTOS PROJECT OPERATOR SHALL ENSURE THAT THE STRUCTURE OR FACILITY TO BE DEMOLISHED OR RENOVATED IS INSPECTED FOR ACM BY AN INSPECTOR CERTIFIED UNDER THE PROVISIONS OF R307-801-6. AN ASBESTOS SURVEY REPORT SHALL BE GENERATED ACCORDING TO THE PROVISIONS OF R307-801-10. THE ASBESTOS PROJECT OPERATOR SHALL MAKE THE ASBESTOS SURVEY REPORT AVAILABLE ON SITE TO ALL PERSONS WHO HAVE ACCESS TO THE SITE FOR THE DURATION OF THE RENOVATION OR
- 8. ALL SUSPECT ASBESTOS CONTAINING MATERIALS OR LEAD BASED PAINT NOT IDENTIFIED MUST BE SAMPLED TO DETERMINE CONTENT. IF MATERIALS ARE ENCOUNTERED WHICH HAVE NOT BEEN PREVIOUSLY IDENTIFIED/SAMPLED, STOP WORK AND CONTACT THE AUTHORITY HAVING JURISDICTION.
- 9. DEMOLISH EXISTING FLOORING WHERE SHOWN, INCLUDING: SETTING BEDS, ADHESIVES AND OTHER VARIANCES IN THE EXISTING FLOOR. PREPARE FLOOR TO RECEIVE NEW FLOORING AS REQUIRED BY CONTRACT DOCUMENTS.
- 10. ALL OWNER FURNISHINGS AND EQUIPMENT SHALL BE REMOVED BY OWNER. ITEMS IDENTIFIED AS "REMOVED AND STORED" / "TO BE SALVAGED" SHALL BE REMOVED AND STORED IN A SAFE LOCATION PRIOR TO
- 11. WALLS, DOORS, CABINETS, WINDOWS, CEILINGS, ETC. WHERE SHOWN DASHED ARE TO BE REMOVED. AREAS TO RECIEVE NEW FINISH NEED EXISTING FINISH TO BE REMOVED. SEE FINISH PLANS
- 12. REMOVE ALL ABANDONED POWER AND SIGNAL CABLING BACK TO SOURCE AND SAFE OFF.
- 13. REMOVE GENERAL FINISHES, SIGNAGE, FIXTURES, HARDWARE, ETC. THROUGHOUT AREA OF WORK, U.N.O. EXIT SIGNS ARE TO BE REMOVED AND STORED FOR REINSTALLATION.
- 14. CONTRACTOR TO PATCH AND REPAIR DAMAGED FIRE PROOFING ON STRUCTURAL AND FIRE RATED ASSEMBLIES. MATCH EXISTING FIRE RATING.
- 15. REMOVE OR COVER ALL EXISTING PERIMETER WINDOW COVERINGS PRIOR TO COMMENCEMENT OF DEMOLITION. CLEAN AND UNCOVER OR REINSTALL AT COMPLETION OF CONSTRUCTION.
- 16. ALL EXISTING SPRINKLER / FIRE ALARM WORK SHALL BE SEPARATE SUBMITTAL. CONTRACTOR SHALL PROVIDE FINAL DESIGN AND PERMITTING.
- REFUSAL. ANY ITEM NOT WISHED TO BE RETAINED, SHALL BE DISPOSED OF AT THE RESPONSIBILITY OF THE

KEYNOTES

MARK	DESCRIPTION
02.04	FLOOR CABINET HEATERS TO BE PROTECTED DURING CONSTRUCTION
02.05	(E) DOOR TO BE PREPARED FOR NEW FINISH
02.06	(E) BATHROOM ACCESSORIES TO REMAIN, PROTECT DURRING CONSTRUCTION
02.07	(E) BATHROOM FIXTURES TO REMAIN, PROTECT DURRING CONSTRUCTION
02.08	(E) DRAINS TO BE SEALED
02.09	(E) PARTITIONS TO BE PROTECTED DURRING CONSTRUCTION
09.03	PREPARE SLAB TO RECIEVE NEW FINISH, CLEAN AND PATCH AND REQUIRED FOR NEV FLOOR ADDHESION REQUIERMENTS
D.01	(E) TILE EDGE TO BE REMOVED, GROUND FLUSH
D.02	(E) STOREFRONT SYSTEM TO BE REMOVED
D.03	(E) DOOR SYSTEM TO BE REMOVED
D.04	CANOPY OVERBUILD TO BE DEMOLISHED DOWN TO PREVIOUS CAST ARCH CANOPY, SEE ELEVATIONS. ARCH CANOPY TO BE PROTECTED DURING CONSTRUCTION
D.05	(E) GUARD RAIL/HAND RAIL TO BE REMOVED
D.06	(E) CONCRETE RAMP TO BE REMOVED
D.07	(E) CONCRETE SLAB TO BE REMOVED
D.08	(E) CONCRETE STAIRS TO BE REMOVED
D.11	FLOOR FINISH TO BE REMOVED. PREPARE SLAB FOR NEW FINISH.
D.12	(E) DIVING BOARD TO BE REMOVED
D.13	(E) POOL RAILING TO BE DEMOLISHED. PATCH AND REPAIR CONCRETE FOR NEW FINI
D.14	EXISTING TILE TO BE REMOVED
D.15	(E) HOLLOW METAL FRAMES AND GLAZING TO BE REMOVED
D.17	REMOVE EXISTING DRINKING FOUNTAIN
D.18	REMOVE EXISTING SHOWER FIXTURES
D.20	REMOVE STAIR FINISH, PREPARE FOR NEW FINISH
D.22	DEMO ALL EXISTING TILE ON BENCHES PATCH AND REPAIR BENCH FOR NEW FINISH
D.23	DEMO EXISTING CASEWORK
D.24	(E) HOSE HANGER TO BE REMOVED
D.28	PREP AREA FOR FINISHED WALL CONSTRUCTION AND DOOR IN FRAME
D.29	REMOVE EXISTING COVER AND FRAME
D.30	REMOVE RAILING, PREPARE CONNECTION FOR NEW RAILING
D.31	(E) PLUMBING FIXTURES TO BE REMOVED. PATCH AND REPAIR AS NEEDED, CAP PIPE
D.32	(E) BATHROOM ACCESORIES TO BE REMOVED. PATCH AND REPAIR AS NEEDED
D.33	(E) WHITE BOARD/TACK BOARD TO BE REMOVED
D.34	(E) BLEACHER SEATS TO BE REMOVED
D.38	REMOVE EXISTING WALL
D.39	(E) BABY CHANGING STATION, TO BE REMOVED, PATCH WALL TO RECEIVE NEW PAIN
D.40	(E) HOOKS AND BOARD RAILS TO BE REMOVED
D.41	(E) PARTITIONS TO BE REMOVED
D.42	(EXISTING) CASEWORK TO BE REMOVED
D.44	ON EAST SHOWER WALL REMOVE SHOWER HEADS AND PATCH WITH EXISTING TILE SIZE IN A WHITE GLOSS TILE. KEEP METAL PANEL AND CAP CONTROLS.
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EXISTING TO REMAIN TO BE DEMOLISHED

PLAN - DEMOLITION

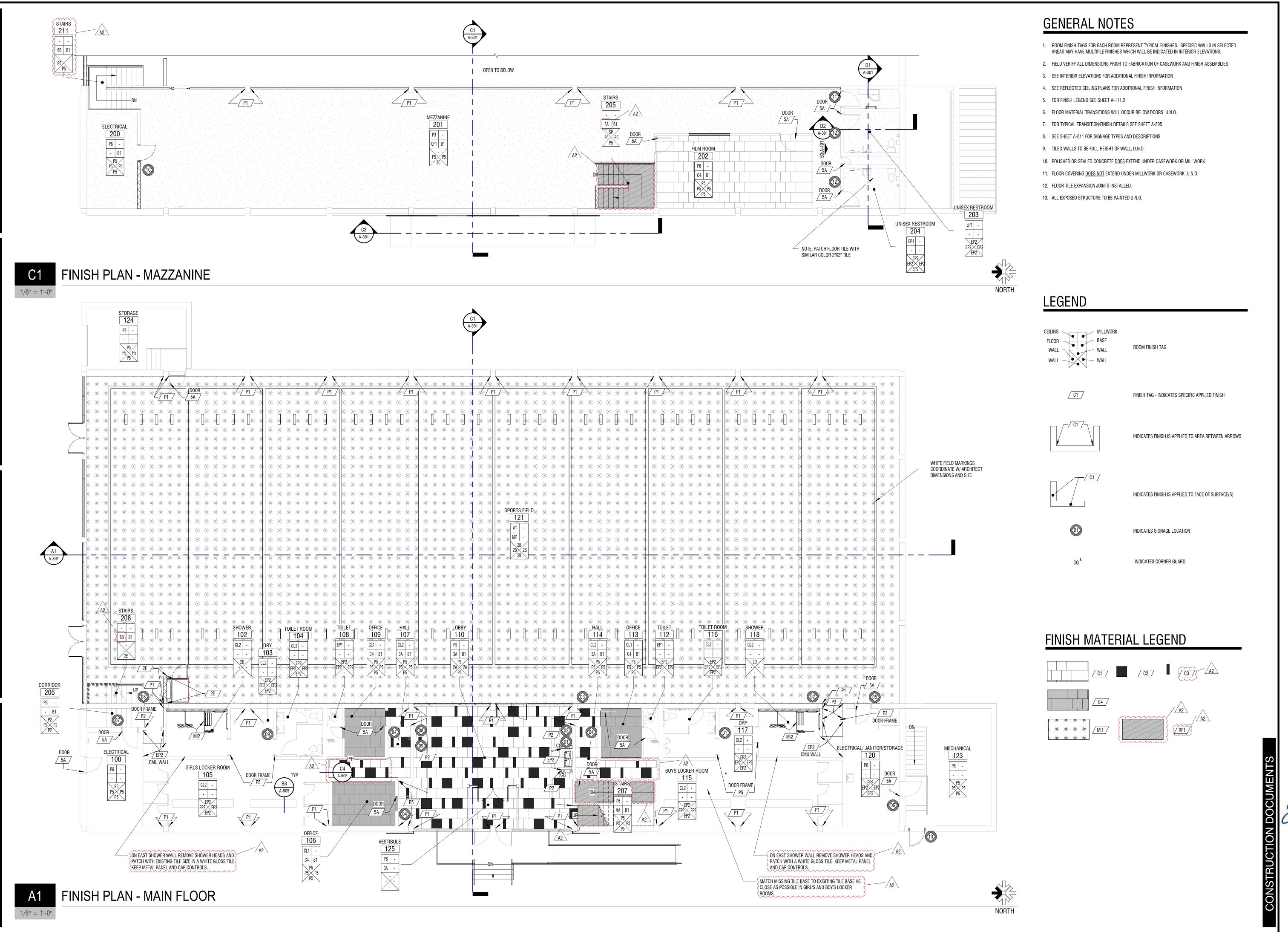
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**FACILIT** 

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**AD-101.1** 



mest architects

LOGAN UT 84321

SALT LAKE CITY UT 84103

design 255 SOUTH 300 WEST 795 NORTH 400 WEST

INDOOR ATHLETIC FACILITY

MARK: DATE: DESCRIPTION:
A2 01/14/2024 ADDENDUM 02

PROJECT #: 123

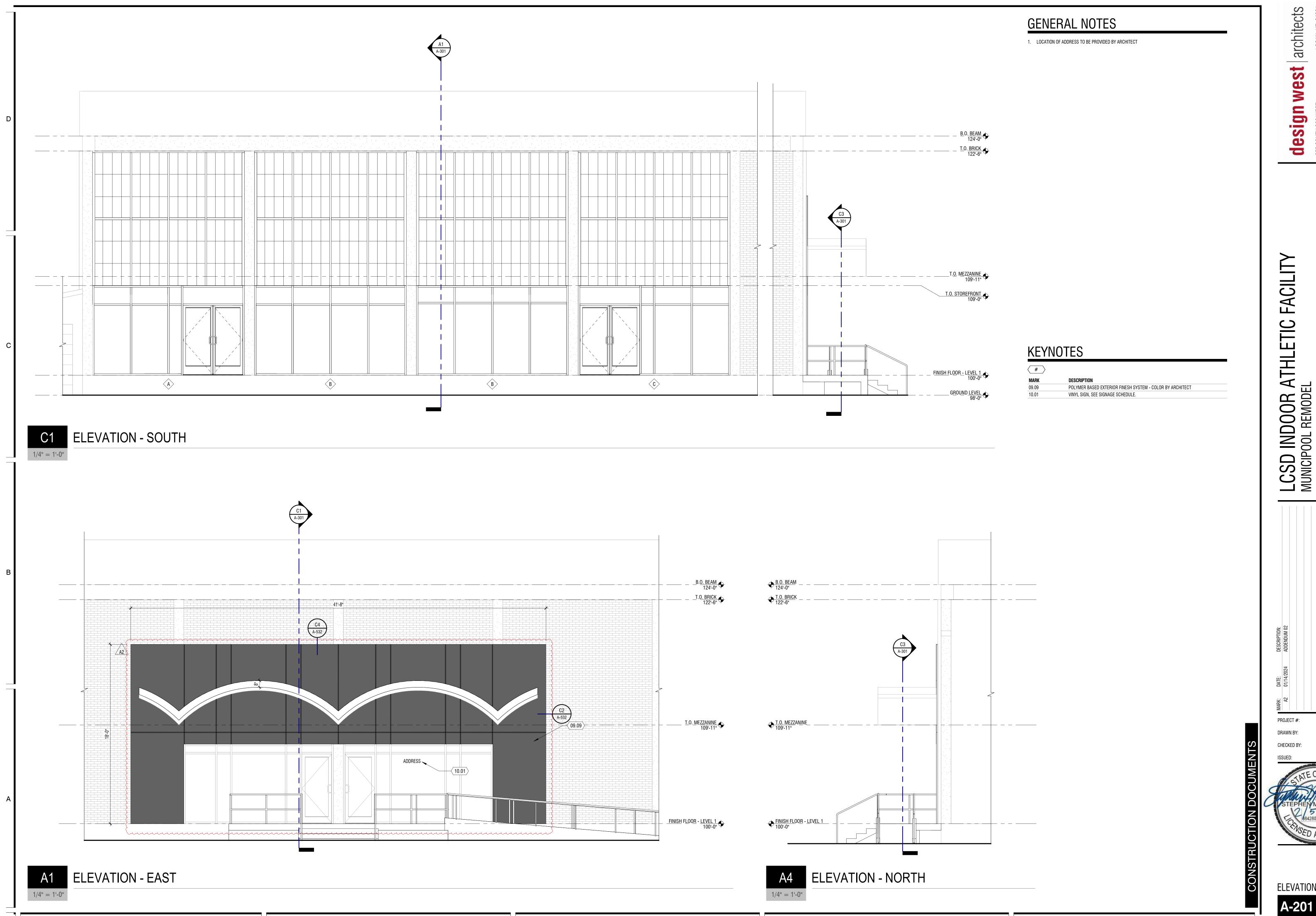
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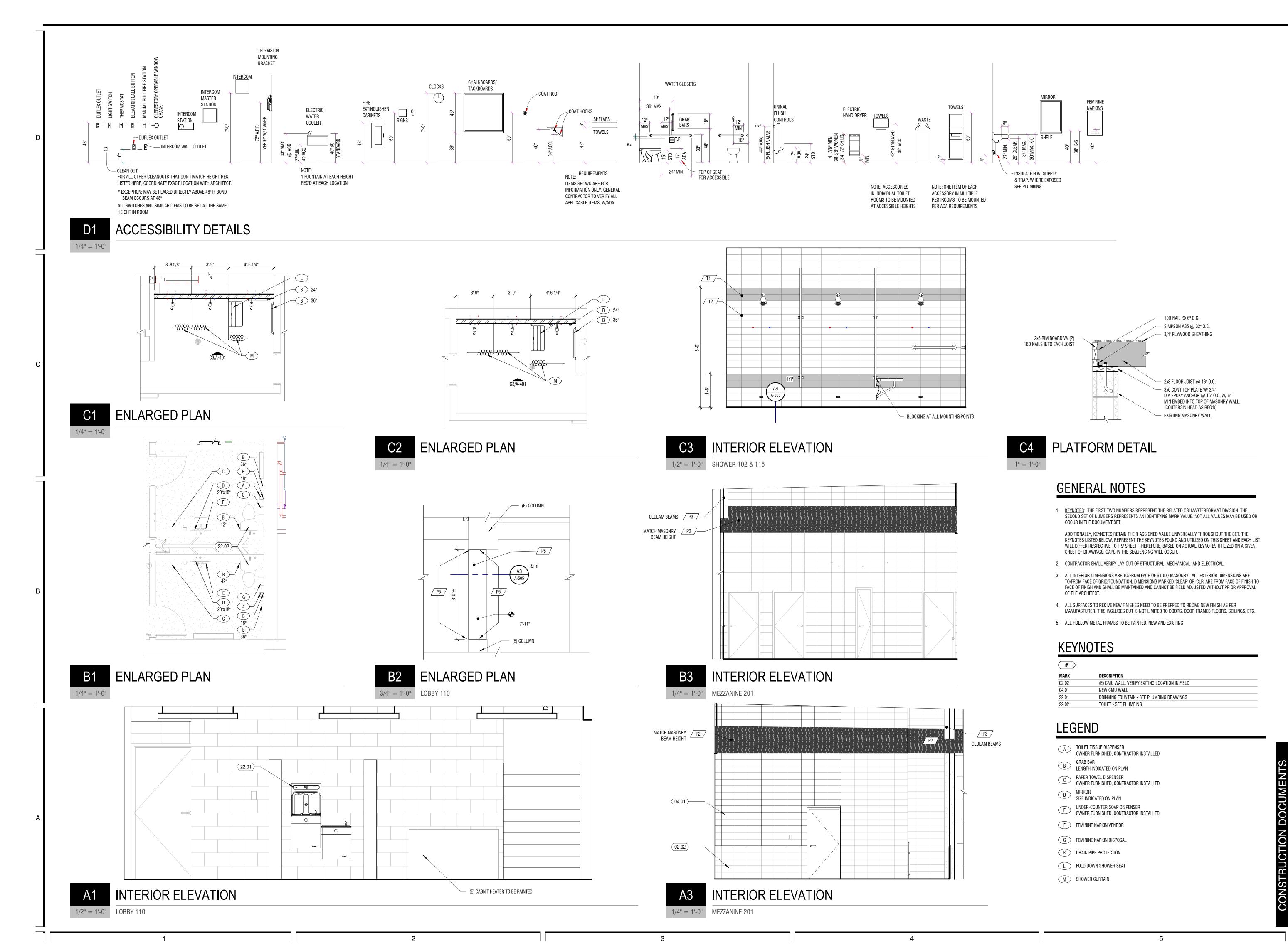
PLAN - FINISHES
A-111.2



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LCSD INDOOR ATHLETIC FACILITY
MUNICIPOOL REMODEL
114 EAST 1000 NORTH
LOGAN UT 84321
LOGAN CITY SCHOOL DISTRICT

**ELEVATIONS** 



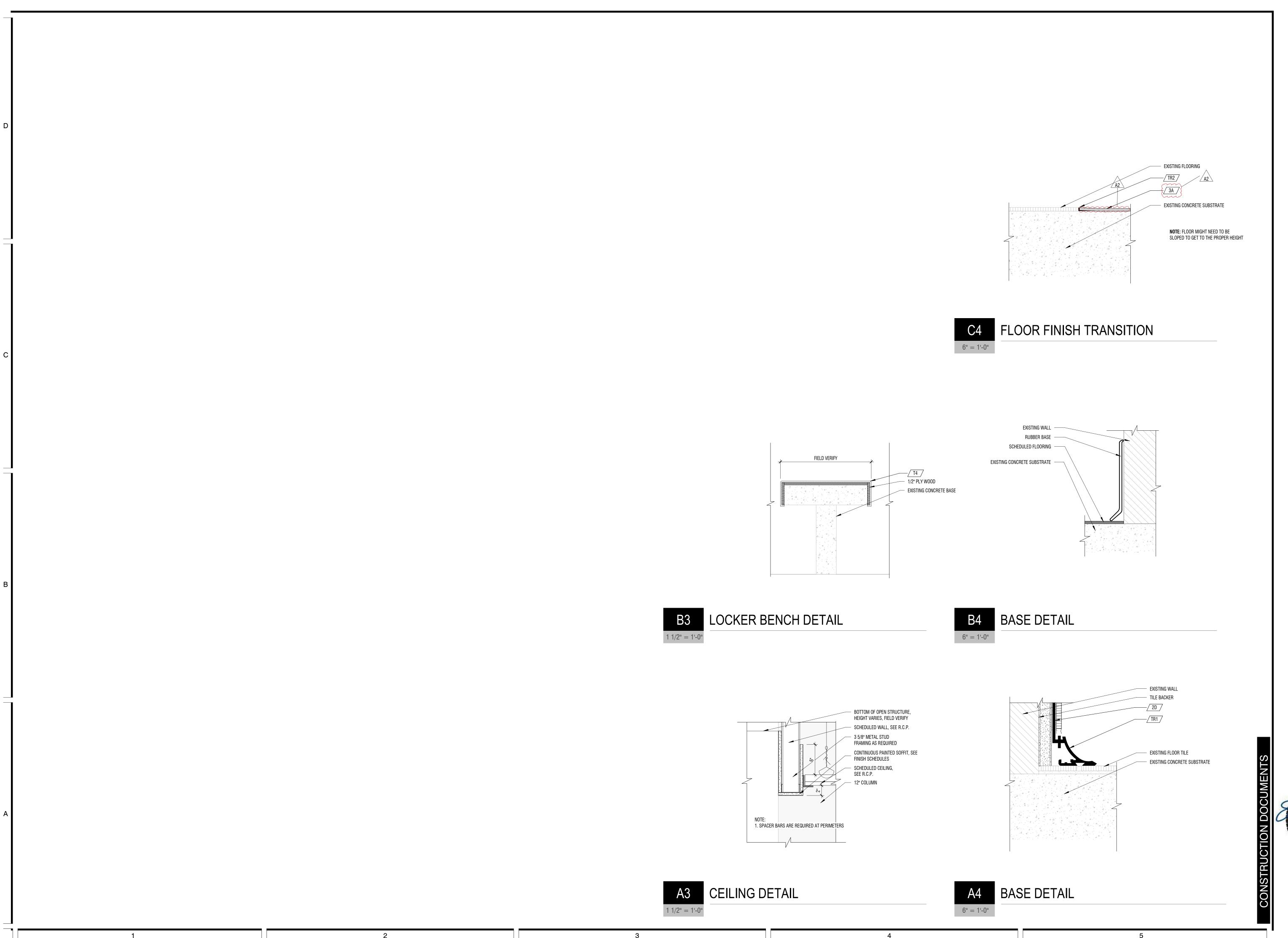
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**FACILITY** ATHLETIC SD INDOOR

PROJECT #:

FRANKS CHECKED BY

**ENLARGED VIEWS & INTERIOR ELEVATIONS** 



design west architects
255 SOUTH 300 WEST SALT LAKE CITY UT 84321

LCSD INDOOR ATHLETIC FACILITY
MUNICIPOOL REMODEL
114 EAST 1000 NORTH
LOGAN UT 84321
LOGAN CITY SCHOOL DISTRICT

MARK: DATE: DESCRIPTION:

# 123F024 ADDENDUM 02

# SHAPPION:

# 124/2024 ADDENDUM 02

PROJECT #: 123998

DRAWN BY: FRANKS

CHECKED BY: RIGBY

ISSUED: 02.05.2024

STEPHENM WILLIAMS

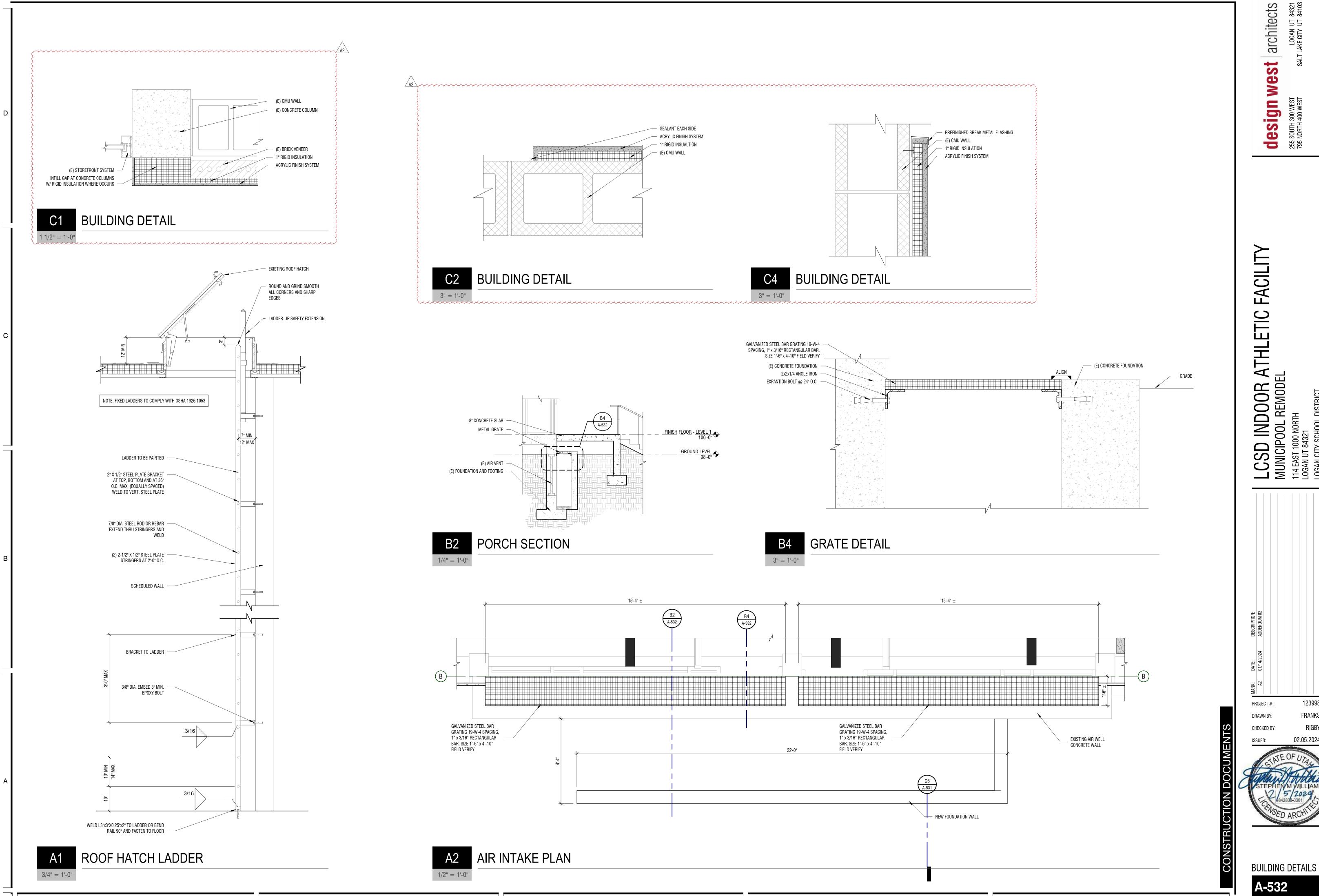
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DETAILS -INTERIORS

A-505

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**FACILITY** 

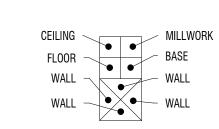
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# GENERAL NOTES

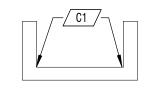
- 1. ROOM FINISH TAGS FOR EACH ROOM REPRESENT TYPICAL FINISHES. SPECIFIC WALLS IN SELECTED AREAS MAY HAVE MULTIPLE FINISHES WHICH WILL BE INDICATED IN INTERIOR ELEVATIONS.
- 2. FIELD VERIFY ALL DIMENSIONS PRIOR TO FABRICATION OF CASEWORK AND FINISH ASSEMBLIES
- 3. SEE INTERIOR ELEVATIONS FOR ADDITIONAL FINISH INFORMATION
- 4. SEE REFLECTED CEILING PLANS FOR ADDITIONAL FINISH INFORMATION
- 5. FOR FINISH LEGEND SEE SHEET A-111.2
- 6. FLOOR MATERIAL TRANSITIONS WILL OCCUR BELOW DOORS. U.N.O.
- 7. FOR TYPICAL TRANSITION/FINISH DETAILS SEE SHEET A-505
- 8. SEE SHEET A-611 FOR SIGNAGE TYPES AND DESCRIPTIONS 9. TILED WALLS TO BE FULL HEIGHT OF WALL, U.N.O.
- 10. POLISHED OR SEALED CONCRETE <u>DOES</u> EXTEND UNDER CASEWORK OR MILLWORK
- 11. FLOOR COVERING <u>DOES NOT</u> EXTEND UNDER MILLWORK OR CASEWORK, U.N.O.
- 12. FLOOR TILE EXPANSION JOINTS INSTALLED.
- 13. ALL EXPOSED STRUCTURE TO BE PAINTED U.N.O.

# **LEGEND**

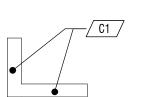


**ROOM FINISH TAG** 

FINISH TAG - INDICATES SPECIFIC APPLIED FINISH



INDICATES FINISH IS APPLIED TO AREA BETWEEN ARROWS



INDICATES FINISH IS APPLIED TO FACE OF SURFACE(S)

INDICATES SIGNAGE LOCATION

INDICATES CORNER GUARD

SCHEDULE - FINISH

PROJECT #:

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**FACILITY** 

3

**ATHLE** 

LCSD INDOOR AMUNICIPOOL REMODE
114 EAST 1000 NORTH
LOGAN UT 84321
LOGAN CITY SCHOOL DISTRICT

LOGAN UT 8 LAKE CITY UT 8

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RIGBY

DRAWN BY:

CHECKED BY

**SPECIFICATIONS** 

A. Product Data: Submit manufacturers' data on manufactured products showing compliance with specified

1.02 QUALITY ASSURANCE A. Perform work of this section in accordance with ACI SPEC-301 and ACI CODE-318.

B. Follow recommendations of ACI PRC-305 when concreting during hot weather. Follow recommendations of ACI PRC-306 when concreting during cold weather.

PART 2 PRODUCTS 2.01 FORMWORK

1.01 SUBMITTALS

A. Form Materials: Contractor's choice of standard products with sufficient strength to withstand hydrostatic

head without distortion in excess of permitted tolerances. 1. Form Coating: Release agent that will not adversely affect concrete or interfere with application of

2. Form Ties: Cone snap type that will leave no metal within 1-1/2 inches (38 mm) of concrete surface. 2.02 REINFORCEMENT MATERIALS

A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi) (420 MPa).

Type: Deformed billet-steel bars. Finish: Unfinished, unless otherwise indicated.

requirements and installation instructions.

B. Reinforcement Accessories: 1. Chairs, Bolsters, Bar Supports, Spacers: Sized and shaped for adequate support of reinforcement during concrete placement.

Provide galvanized, plastic, or plastic coated steel components for placement within 1-1/2 inches (38 mm) of weathering surfaces. 2.03 CONCRETE MATERIALS

A. Cement: ASTM C150/C150M, Type I - Normal Portland type.

B. Fine and Coarse Aggregates: ASTM C33/C33M. C. Water: Clean and not detrimental to concrete. ASTM C 94/C 94M and Potable

2.04 ADMIXTURES

A. Do not use chemicals that will result in soluble chloride ions in excess of 0.1 percent by weight of cement. 2.05 ACCESSORY MATERIALS

A. Underslab Vapor Retarder:

2.06 CONCRETE MIX DESIGN

A. Proportioning Normal Weight Concrete: Comply with ACI PRC-211.1 recommendations.

B. Fiber Reinforcement: Add to mix at rate of 1.5 pounds per cubic yard (0.89 kg per cu m), or as recommended by manufacturer for specific project conditions. C. Normal Weight Concrete:

1. Compressive Strength, when tested in accordance with ASTM C39/C39M at 28 days: As indicated on

Water-Cement Ratio: Maximum as noted on structural drawings. Total Air Content: as noted on structural drawings, determined in accordance with ASTM

C173/C173M.

Maximum Slump: 4 inches (100 mm). Maximum Aggregate Size: As noted on structural drawings.

3.02 INSTALLING REINFORCEMENT AND OTHER EMBEDDED ITEMS

PART 3 EXECUTION 3.01 PREPARATION

> A. Formwork: Comply with requirements of ACI SPEC-301. Design and fabricate forms to support all applied loads until concrete is cured and for easy removal without damage to concrete.

A. Comply with requirements of ACI SPEC-301. Clean reinforcement of loose rust and mill scale, and accurately position, support, and secure in place to achieve not less than minimum concrete coverage required for protection.

3.03 PLACING CONCRETE

A. Place concrete in accordance with ACI PRC-304.

3.04 CONCRETE FINISHING

 Repair surface defects, including tie holes, immediately after removing formwork. B. Unexposed Form Finish: Rub down or chip off fins or other raised areas 1/4 inch (6 mm) or more in height.

C. Concrete Slabs: Finish to requirements of ACI PRC-302.1 and as follows:

Decorative Exposed Surfaces: Trowel as described in ACI 302.1R; use steel-reinforced plastic trowel blades instead of steel blades to avoid black-burnish marks: decorative exposed surfaces include surfaces to be stained or dyed, pigmented concrete, surfaces to receive liquid hardeners, surfaces to be polished, and all other exposed slab surfaces.

3.05 CURING AND PROTECTION

A. Comply with requirements of ACI PRC-308. Immediately after placement, protect concrete from premature drying, excessively hot or cold temperatures, and mechanical injury.

> **SECTION 04 2000 UNIT MASONRY**

PART 1 GENERAL 1.01 SUBMITTALS

A. Product Data: Provide data for masonry units, fabricated wire reinforcement, mortar, and masonry

B. Shop Drawings: Indicate pertinent dimensions, materials, anchorage, size and type of fasteners, and accessories for brickwork support system.

C. Samples: Submit four samples of decorative block units to illustrate color, texture, and extremes of color

1.02 QUALITY ASSURANCE

A. Comply with provisions of TMS 402/602, except where exceeded by requirements of Contract Documents. PART 2 PRODUCTS

2.01 CONCRETE MASONRY UNITS

A. Concrete Block: Comply with referenced standards and as follows: Size: Standard units with nominal face dimensions of 16 by 8 inches (400 by 200 mm) and nominal

depth of 8 inches (200 mm). Special Shapes: Provide nonstandard blocks configured for corners.

Load-Bearing Units: ASTM C90, medium weight.

 Hollow block. 2.02 MORTAR AND GROUT MATERIALS

A. Masonry Cement: ASTM C91/C91M, Type S.

1. Colored Mortar: Premixed cement as required to match Architect's color sample. B. Portland Cement: ASTM C150/C150M, Type I; color as required to produce approved color sample.

C. Hydrated Lime: ASTM C207, Type S.

D. Mortar Aggregate: ASTM C144.

E. Grout Aggregate: ASTM C404.

F. Water: Clean and potable.

G. Accelerating Admixture: Nonchloride type for use in cold weather. H. Packaged Dry Material for Mortar for Unit Masonry: Premixed Portland cement, hydrated lime, and sand; complying with ASTM C1714/C1714M and capable of producing mortar of the specified strength in accordance with ASTM C270 with the addition of water only.

Type: Type S.

Color: As selected by Architect. Packaged Dry Material for Grout for Masonry: Premixed cementitious materials and dried aggregates; capable of producing grout of the specified strength in accordance with ASTM C476 with the addition of water only.

 Type: Fine. 2.03 REINFORCEMENT AND ANCHORAGE

A. Reinforcing Steel: ASTM A615/A615M, Grade 60 (60,000 psi) (420 MPa), deformed billet bars; uncoated. B. Masonry Veneer Anchors: 2-piece anchors that permit differential movement between masonry veneer

and structural backup, hot dip galvanized to ASTM A 153/A 153M, Class B. Vertical adjustment: Not less than 3-1/2 inches (89 mm). 2. Seismic Feature: Provide lip, hook, or clip on end of wire ties to engage or enclose not less than one

continuous horizontal joint reinforcement wire of 0.1483 inch (3.8 mm) diameter. C. Metal-to-Metal Fasteners: Self-drilling, self-tapping screws; corrosion resistant finish or hot dip galvanized to ASTM A153/A153M.

2.04 FLASHINGS

A. Metal Flashing Materials: Copper, as specified in Section 07 6200.

B. Factory-Fabricated Flashing Corners and End Dams: Stainless steel.

C. Flashing Sealant/Adhesives: Silicone, polyurethane, or silyl-terminated polyether/polyurethane or other

type required or recommended by flashing manufacturer; type capable of adhering to type of flashing used. D. Termination Bars: Stainless steel; compatible with membrane and adhesives.

E. Drip Edge: Copper; angled drip with hemmed edge; compatible with membrane and adhesives.

2.05 ACCESSORIES

2.06 MORTAR AND GROUT MIXING A. Mortar for Unit Masonry: ASTM C270, using the Proportion Specification.

Masonry below grade and in contact with earth: Type S. Exterior, loadbearing masonry: Type S. Exterior, non-loadbearing masonry: Type N.

4. Interior, loadbearing masonry: Type S.

Interior, non-loadbearing masonry: Type O. B. Colored Mortar: Proportion selected pigments and other ingredients to match Architect's sample, without exceeding manufacturer's recommended pigment-to-cement ratio. PART 3 EXECUTION

3.01 COLD AND HOT WEATHER REQUIREMENTS A. Comply with requirements of TMS 402/602 or applicable building code, whichever is more stringent.

3.02 COURSING

Establish lines, levels, and coursing indicated. Protect from displacement.

B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness C. Concrete Masonry Units: Bond: Running.

Coursing: One unit and one mortar joint to equal 8 inches (200 mm). Mortar Joints: Concave. 3.03 PLACING AND BONDING

 A. Lay hollow masonry units with face shell bedding on head and bed joints. B. Perform job site cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.

3.04 REINFORCEMENT AND ANCHORAGE - GENERAL, SINGLE WYTHE MASONRY, AND CAVITY WALL

MASONRY A. See Structural Drawings.

3.05 LINTELS

A. Install loose steel lintels over openings.

Install reinforced unit masonry lintels over openings as indicated on structural drawings.

**SECTION 05 5000 METAL FABRICATIONS** 

PART 1 GENERAL 1.01 SUBMITTALS

A. Shop Drawings: Indicate profiles, sizes, connection attachments, reinforcing, anchorage, size and type of fasteners, and accessories. Include erection drawings, elevations, and details where applicable. PART 2 PRODUCTS

2.01 MATERIALS - STEEL

A. Steel Sections: ASTM A36/A36M.

B. Steel Tubing: ASTM A501/A501M hot-formed structural tubing. C. Plates: ASTM A283/A283M.

D. Pipe: ASTM A53/A53M, Grade B Schedule 40, black finish. E. Touch-Up Primer for Galvanized Surfaces: SSPC-Paint 20, Type I - Inorganic, complying with VOC limitations of authorities having jurisdiction.

2.02 FABRICATION

Fit and shop assemble items in largest practical sections, for delivery to site.

B. Fabricate items with joints tightly fitted and secured.

C. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, flush, and hairline. Ease exposed edges to small uniform radius.

2.03 FABRICATED ITEMS A. Bollards: Steel pipe, concrete filled, crowned cap, as detailed; prime paint finish.

B. Ledge Angles, Shelf Angles, Channels, and Plates Not Attached to Structural Framing: For support of metal decking; prime paint finish.

C. Lintels: As detailed; prime paint finish.

D. Recessed Mat Frames: As detailed; steel, galvanized finish.

2.04 FINISHES - STEEL A. Prime paint steel items.

1. Exceptions: Galvanize items to be embedded in concrete, items to be embedded in masonry, and items specified for _____ finish.

PART 3 EXECUTION

3.01 INSTALLATION A. Install items plumb and level, accurately fitted, free from distortion or defects.

> **SECTION 05 5135** LADDERS

PART 1 GENERAL

1.01 SUBMITTALS A. Submit under provisions of Section 01300.

B. Product Data: Manufacturer's data sheets on each product.

Detail fabrication and erection of each ladder indicated. Include plans, elevations, sections, and details of metal fabrications and their connections.

1.02 WARRANTY

A. Manufacturer has responsibility for an extended Corrective Period for work of this Section for a period of 5 years commencing on the shipment date of the product against all the conditions indicated below, and when notified in writing from Owner, manufacturer shall promptly and without inconvenience and cost to Owner correct said deficiencies.

Defects in materials and workmanship. 2. Deterioration of material and surface performance below minimum OSHA standards as certified by independent third party testing laboratory. Ordinary wear and tear, unusual abuse or neglect

3. Within the warranty period, the manufacturer shall, at its option, repair, replace, or refund the

purchase price of defective ladder. B. Manufacturer shall be notified immediately of defective products, and be given a reasonable opportunity to inspect the goods prior to return. Manufacturer will not assume responsibility, or compensation, for unauthorized repairs or labor. Manufacturer makes no other warranty, expressed or implied, to the merchantability, fitness for a particular purpose, design, sale, installation, or use, of the ladder; and shall not be liable for incidental or consequential damages, losses of or expenses, resulting from the use of

PART 2 PRODUCTS 2.01 MANUFACTURERS

ladder products.

A. Basis of Design: O'Keeffe's, Inc.; 100 N Hill Drive, Suite 12, Brisbane, CA 94005. Toll Free Tel: (888) 653-3333. Tel: (415) 824-4900. Fax: (415) 824-5900. Email: info@okeeffes.com. Web:

Requests for substitutions will be considered in accordance with provisions of Section 01600.

A. Fixed Access Ladder: Standard Duty Channel Rail.

PART 3 EXECUTION

2.02 APPLICATIONS/SCOPE

 a. Model 500 as manufactured by O'Keeffe's Inc. 2.03 FINISHES

 A. Mill finish. As extruded. Clear Anodic Finish: AA-M10C22A41 Mechanical finish as fabricated. Architectural Class I, clear coating 0.018 mm or thicker.

2.04 ACCESSORIES A. Ladder Safety Post: Retractable hand hold and tie off. B. Fall Arrest System: Provide Honeywell, Gridloc Fall Arrest System. 3.01 EXAMINATION

A. Coordinate anchorages. Furnish setting drawings, templates, and anchorage structural loads for fastener

B. Do not begin installation until supporting structure is complete and ladder installation will not interfere with supporting structure work.

C. If supporting structure is the responsibility of another installer, notify Architect of unsatisfactory supporting work before proceeding.

A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AND IN PROPER RELATIONSHIP WITH ADJACENT CONSTRUCTION.

> SECTION 05 5200 STEEL PIPE AND TUBE RAILINGS

1.01 SUBMITTALS A. Shop drawings which specify material sizes, shapes, plans, sections, install details and finishes per requirements.

 B. Product data for rail systems and finishes. C. Samples of rail materials and finish.

One year manufacturer's warranty for materials and installation at project completion.

E. Forward warranty on finish; when applicable; to owner at project completion. PART 2 - PRODUCTS

2.01 MATERIALS

3.02 INSTALLATION

PART 1- GENERAL

A. Provide metal free from pitting, seam marks, roller marks, grinding marks and stains at areas exposed to view on completed rail units.

 Stainless Steel - Exterior a. Pipe and tubing: ASTM A 269 Type 304 or Type 316. Fittings: ASTM A 276/ A 479 Type 304 or Type 316.

Exposed Fasteners: No exposed bolts or screws.

 a. Steel Tube: ASTM A500/A500MGrade B cold-formed structural tubing. b. Welding Fittings: Factory- or shop-welded from matching pipe or tube; seams continuously welded; joints and seams ground smooth.

2.02 FINISHES A. Stainless Steel

 #4 (180 grit) directional. B. Steel Primed and painted

2.03 FABRICATION

A. Fabricate handrails and guardrails in accordance to approved shop drawing and field dimensions using mitered and welded joints with bends where indicated on shop drawings.

C. Form bends to uniform radius, free of distortion, twists, cracks and grain separation. D. Top rails shall be continuous over posts for strength with splices for expansion located within 6 to 12 inches

B. Shop fabricate in greatest possible lengths to eliminate field splicing, but not to exceed 20'-0" in length.

E. Splices and expansion joints shall utilize internal splice connectors with set screws to allow for rail expansion over ambient temperature change.

F. Weld all shop assembled connections continuous without undercut and or distortion of rail materials. G. Grind and/or dress exposed welds smooth and flush to corner or fillet without weakening rail connection.

H. Remove all burrs and sharp edges from exposed ends of final rail assemblies. Lightly sand and blend with fine grit paper all light scratches prior to rail finishing. J. Provide drainage and weep holes within rail assemblies to prevent entrapment of water within rail

assemblies. Note that caution should be used when pressure washing rails assemblies to prevent water entry to non- vented areas under pressure. K. Provide compatible radius anchor for surface mounting typical.

3.02 INSTALLATION

 Install in accordance with shop drawings utilizing established working points. Set railings with anchor bolts. Maintain slab edge distances and rail locations per shop drawings.

D. Make all adjustments to alignment for satisfactory rail appearance and to plumb posts prior to final tightening of fasteners or pouring of holes.

G. After installation is complete clean product using non-abrasive mild soap and water. Do not utilize any

**SECTION 06 1000** ROUGH CARPENTRY

PART 1 GENERAL 1.01 SUBMITTALS

A. Product Data: Provide technical data on wood preservative materials.

PART 2 PRODUCTS 2.01 GENERAL REQUIREMENTS

A. Sizes: Nominal sizes as indicated on drawings, S4S.

 A. Dimension Lumber: Comply with PS 20 and requirements of specified grading agencies. Species: Douglas Fir, unless otherwise indicated. See structural dwgs Grading Agency: Grading agency whose rules are approved by the Board of Review, American

Lumber Standard Committee at www.alsc.org, and who provides grading service for the species and grade specified; provide lumber stamped with grade mark unless otherwise indicated. 2.02 DIMENSION LUMBER FOR CONCEALED APPLICATIONS

C. Stud Framing (2 by 2 through 2 by 6 (50 by 50 mm through 50 by 150 mm) ): Grade: No. 2. or better D. Joist, Rafter, and Small Beam Framing (2 by 6 through 4 by 16 (50 by 150 mm through 100 by 400 mm)):

Machine stress-rated (MSR) as follows: Species: Douglas Fir.

 Lumber: S4S, No. 2 or Standard Grade. Boards: Standard or No. 3. 2.03 CONSTRUCTION PANELS

A. Sheathing: See Drawings

2.04 ACCESSORIES Metal and Finish: Hot-dipped galvanized steel complying with ASTM A153/A153M for high humidity

B. Water-Resistive Barrier: See Section 07 2500. 2.05 UNDERLAYMENT:

A. Self adhering sheet underlaymentpolyethylene faced (ice and water shield): ASTM D 1970, min of 40 mils thick; slip-resisting, polyethylene-film-reinforced top surface laminated to SBS-modified asphalt adhesive, with release-paper backing; cold applied

2.06 FACTORY WOOD TREATMENT

1.01 SUBMITTALS A. Product Data: Provide data on system materials, product characteristics, performance criteria, and system

A. EIFS Manufacturer Qualifications: Provide EIFS products other than insulation from the same manufacturer with qualifications as follows: Manufacturer of EIFS products for not less than 5 years.

B. Do not prepare materials or apply EIFS during inclement weather unless areas of installation are protected. Protect installed EIFS areas from inclement weather until dry.

A. Provide manufacturer's standard material warranty, covering a period of not less than 12 years. PART 2 PRODUCTS 2.01 EXTERIOR INSULATION AND FINISH SYSTEM

components of specified system and substrate(s) in tested samples. B. Fire Characteristics: Flammability: Pass, when tested in accordance with NFPA 285.

Texture: Dryvit, Finesse (Basis of Design).

A. Finish Coating Top Coat: Water-based, air curing, acrylic or polymer-based finish with integral color and

reinforcing mesh, Class PB. Reinforcing Mesh: Balanced, open weave glass fiber fabric, treated for compatibility and improved bond with coating, weight, strength, and number of layers as required to meet required system impact rating.

D. Expanded Polystyrene (EPS) Board Insulation: Complies with ASTM C578. Grooved Board: Back side of board adjacent to sheathing grooved with vertical channels designed to allow moisture to drain; at drainage points provide board configuration that permits drainage to the

Board Edges: Square.

Surface Burning Characteristics: Flame spread/Smoke developed index of 25/450, when tested in accordance with ASTM E84.

by EIFS manufacturer. 2.03 ACCESSORIES

project and including starter track and drainage accessories. C. Sealant Materials: Compatible with EIFS materials and as recommended by EIFS manufacturer.

 A. Install in accordance with EIFS manufacturer's instructions and ASTM C1397. 3.02 INSTALLATION - WATER-RESISTIVE BARRIER

A. Install in accordance with manufacturer's instructions.

C. Fill gaps greater than 1/16 inch (1.6 mm) with strips or shims cut from the same insulation material. 3.04 INSTALLATION - CLASS PB FINISH

A. Base Coat: Apply in thickness as necessary to fully embed reinforcing mesh, wrinkle free, including backwrap at terminations of EIFS. Install reinforcing fabric as recommended by EIFS manufacturer.

> **SECTION 07 9200** JOINT SEALANTS

1.01 SUBMITTALS A. Product Data: Submit manufacturer's technical datasheets for each product to be used; include the 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color

Substrates the product should not be used on. B. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.

A. Sealants and Primers: Provide products having lower volatile organic compound (VOC) content than indicated in SCAQMD 1168. 2.02 NONSAG JOINT SEALANTS

continuous water immersion or traffic. Movement Capability: Plus and minus 25 percent, minimum. Nonstaining to Porous Stone: Nonstaining to light-colored natural stone when tested in accordance

Cure Type: Single-component, neutral moisture curing. Service Temperature Range: Minus 20 to 180 degrees F (Minus 29 to 82 degrees C).

C. Mildew-Resistant Silicone Sealant: ASTM C920, Grade NS, Uses M and A; single component, mildew resistant; not expected to withstand continuous water immersion or traffic.

**EXTERIOR INSULATION AND FINISH SYSTEMS PART 1 GENERAL** 

A. Wall Sheathing: Secure with long dimension perpendicular to wall studs, with ends over firm bearing and

**SECTION 07 2400** 

B. Shop Drawings: Indicate wall and soffit joint patterns, joint details, and molding profiles. 1.02 QUALITY ASSURANCE

PART 3 EXECUTION

3.02 INSTALLATION OF CONSTRUCTION PANELS

staggered, using nails, screws, or staples.

1.03 FIELD CONDITIONS A. Do not prepare materials or apply EIFS under conditions other than those described in the manufacturer's

1.04 WARRANTY

A. Exterior Insulation and Finish System: DRAINAGE type; reinforced finish coating on mechanically-fastened insulation board over sheet-type combination drainage layer/water-resistive barrier over substrate; provide a complete system that has been tested to show compliance with the following characteristics; include all

Ignitibility: No sustained flaming when tested in accordance with NFPA 268. 2.02 MATERIALS

Color: By architect from full range of colors. B. Base Coat: Fiber-reinforced, acrylic or polymer-based product compatible with insulation board and

1. Provide min 20 oz mesh below top of door, min 12 oz mesh above top of door.

Board Thickness: 2 inches (50 mm). Type and Board Density: Type II, 1.35 pcf (22 kg/cu m), minimum.

E. Combination Drainage Layer/Water-Resistive Barrier: Air- and water-resistive sheet complying with ASTM E1677 Type I, dimpled or otherwise profiled to maintain air and drainage space between insulation board and sheathing; minimum water vapor permeance of 20 perms (1149 ng/Pa s sq m); furnished or approved

A. Insulation Fasteners: Fastener and plate system appropriate for substrate and as recommended by EIFS

PART 3 EXECUTION 3.01 INSTALLATION - GENERAL

A. Mechanically attach sheet materials to substrate using fasteners and fastener spacing recommended by EIFS manufacturer. 3.03 INSTALLATION - INSULATION

B. Place boards in a method to maximize tight joints. Stagger vertical joints and interlock at corners. Butt edges and ends tight to adjacent board and to protrusions. Achieve a continuous flush insulation surface, with no gaps in excess of 1/16 inch (1.6 mm).

List of backing materials approved for use with the specific product.

C. Preinstallation Field Adhesion Test Reports: Submit filled out Preinstallation Field Adhesion Test Reports log within 10 days after completion of tests; include bagged test samples and photographic records.

A. Non-Staining Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand

with ASTM C1248. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.

B. Silicone Sealant: ASTM C920, Grade NS, Uses M and A; not expected to withstand continuous water Movement Capability: Plus and minus 25 percent, minimum.

b. W.R.Grace Install a second 24 inch wide layer at the joint between asphalt shingles and standing seam metal

PART 3- EXECUTION 3.01 EXAMINATION A. Verify that field conditions are acceptable and ready to receive work.

C. Assemble rails fitting splices together to form tight hairline joints while allowing for thermal expansion as

E. Locate wall brackets per shop drawings and set anchors within concrete or into blocking within sheetrock walls. Use wall rails to insure proper location and plumb at ends. F. Install wall rail onto brackets using fasteners supplied per the drawings.

cleaners containing any type of acid.

H. Use touch up paint and touch up kit to repair any areas damaged during installation.

B. Moisture Content: S-dry or MC19.

E. Miscellaneous Framing, Blocking, Nailers, Grounds, and Furring:

A. Fasteners and Anchors: and preservative-treated wood locations, unfinished steel elsewhere.

 Products: High temperature products only. Carlile Coating.:

PART 2 PRODUCTS 2.01 JOINT SEALANTS - GENERAL

**PART 1 GENERAL** 

Color: To be selected by Architect from manufacturer's full range.

Color: To be selected by Architect from manufacturer's full range.

B. Trim: EIFS manufacturer's standard PVC or galvanized steel trim accessories, as required for a complete

 Movement Capability: Plus and minus 50 percent, minimum. 2. Color: To be selected by Architect from manufacturer's full range.

E. Polyurethane Sealant for Continuous Water Immersion: ASTM C920, Grade NS, Uses M and A; single or multi-component; explicitly approved by manufacturer for continuous water immersion; suitable for traffic exposure when recessed below traffic surface.

Movement Capability: Plus and minus 35 percent, minimum.

Color: To be selected by Architect from manufacturer's full range. F. Non-Sag "Traffic-Grade" Polyurethane Sealant: ASTM C920, Grade NS, Uses M and A; single or multicomponent; explicitly approved by manufacturer for continuous water immersion and traffic without the necessity to recess sealant below traffic surface.

1. Movement Capability: Plus and minus 25 percent, minimum.

2. Color: To be selected by Architect from manufacturer's full range.

G. Polysulfide Sealant for Continuous Water Immersion: Polysulfide; ASTM C920, Grade NS, Uses M and A; single component; explicitly approved by manufacturer for continuous water immersion; not expected to withstand traffic.

1. Movement Capability: Plus and minus 25 percent, minimum. Color: To be selected by Architect from manufacturer's full range.

2.03 SELF-LEVELING JOINT SEALANTS

 Flexible Polyurethane Foam: Single-component, gun grade, and low-expanding. Color: White.

2.04 ACCESSORIES

A. Overlay Extrusion for Glazing System Joint Protection: Rubber profiled extrusions placed over joints in glazing system and provided with watertight seal.

Profile: As required to match existing metal glazing cap requirements. Color: As required to match existing conditions.

3. Durometer Hardness, Type A: 65, minimum, when tested in accordance with ASTM D2240.

C. Primers: Type recommended by sealant manufacturer to suit application; nonstaining.

4. Tensile Strength: 1,139 psi (7.8 MPa), in accordance with ASTM D412. B. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and

recommended by tape and sealant manufacturers for specific application.

#### PART 3 EXECUTION

### 3.01 EXAMINATION

A. Preinstallation Adhesion Testing: Install a sample for each test location indicated in the test plan.

Test each sample as specified in PART 1 under QUALITY ASSURANCE article.

Notify Architect of date and time that tests will be performed, at least seven days in advance. Record each test on Preinstallation Adhesion Test Log as indicated.

4. If any sample fails, review products and installation procedures, consult manufacturer, or take other measures that are necessary to ensure adhesion; retest in a different location; if unable to obtain satisfactory adhesion, report to Architect.

5. After completion of tests, remove remaining sample material and prepare joints for new sealant installation.

#### 3.02 INSTALLATION

A. Install this work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.

B. Provide joint sealant installations complying with ASTM C1193.

Install bond breaker backing tape where backer rod cannot be used.

D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.

E. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

#### **SECTION 08 1113 HOLLOW METAL DOORS AND FRAMES**

## PART 1 GENERAL

1.01 SUBMITTALS

A. Product Data: Materials and details of design and construction, hardware locations, reinforcement type and locations, anchorage and fastening methods, and finishes.

B. Shop Drawings: Details of each opening, showing elevations, glazing, frame profiles, and any indicated finish requirements.

## 1.02 DELIVERY, STORAGE, AND HANDLING

A. Comply with NAAMM HMMA 840 or ANSI/SDI A250.8 (SDI-100) in accordance with specified

## PART 2 PRODUCTS

# 2.01 PERFORMANCE REQUIREMENTS

A. Requirements for Hollow Metal Doors and Frames:

1. Steel Sheet: Comply with one or more of the following requirements; galvannealed steel complying with ASTM A653/A653M, cold-rolled steel complying with ASTM A1008/A1008M, or hot-rolled pickled and oiled (HRPO) steel complying with ASTM A1011/A1011M, commercial steel (CS) Type B, for

Accessibility: Comply with ICC A117.1 and ADA Standards.

Exterior Door Top Closures: Flush end closure channel, with top and door faces aligned. Door Edge Profile: Manufacturers standard for application indicated.

Typical Door Face Sheets: Flush.

Glazed Lights: Non-removable stops on non-secure side; sizes and configurations as indicated on drawings. Style: Manufacturer's standard.

Hardware Preparations, Selections and Locations: Comply with NAAMM HMMA 830 and NAAMM HMMA 831 or BHMA A156.115 and ANSI/SDI A250.8 (SDI-100) in accordance with specified

8. Zinc Coating for Typical Interior and/or Exterior Locations: Provide metal components zinc-coated (galvanized) and/or zinc-iron alloy-coated (galvannealed) by the hot-dip process in accordance with ASTM A653/A653M, with manufacturer's standard coating thickness, unless noted otherwise for

specific hollow metal doors and frames. a. Based on SDI Standards: Provide at least A40/ZF120 (galvannealed) when necessary, coating not required for typical interior door applications, and at least A60/ZF180 (galvannealed) for

B. Combined Requirements: If a particular door and frame unit is indicated to comply with more than one type of requirement, comply with the specified requirements for each type; for instance, an exterior door that is also indicated as being sound-rated must comply with the requirements specified for exterior doors and for sound-rated doors; where two requirements conflict, comply with the most stringent.

## 2.02 HOLLOW METAL FRAMES

A. Comply with standards and/or custom guidelines as indicated for corresponding door in accordance with applicable door frame requirements.

B. Frame Finish: Factory primed and field finished.

C. Exterior Door Frames: Full profile/continuously welded type.

Galvanizing: Components hot-dipped zinc-iron alloy-coated (galvannealed) in accordance with ASTM A653/A653M, with A40/ZF120 coating.

Frame Metal Thickness: 18 gauge, 0.042 inch (1.0 mm), minimum.

Weatherstripping: Separate, see Section 08 7100.

D. Interior Door Frames, Non-Fire Rated: Full profile/continuously welded type. 1. Frame Metal Thickness: 18 gauge, 0.042 inch (1.0 mm), minimum.

E. Frames for Wood Doors: Comply with frame requirements in accordance with corresponding door.

F. Borrowed Lites Glazing Frames: Construction and face dimensions to match door frames, and as indicated

G. Provide mortar guard boxes for hardware cut-outs in frames to be installed in masonry or to be grouted.

H. Frames in Masonry Walls: Size to suit masonry coursing with head member 4 inches (102 mm) high to fill opening without cutting masonry units.

2.03 FINISHES

A. Primer: Rust-inhibiting, complying with ANSI/SDI A250.10, door manufacturer's standard.

B. Bituminous Coating: Cold-applied asphalt mastic, compounded for 15 mil, 0.015 inch (0.4 mm) dry film thickness (DFT) per coat; provide inert-type noncorrosive compound free of asbestos fibers, sulfur components, and other deleterious impurities.

## 2.04 ACCESSORIES

A. Grout for Frames: Mortar grout complying with ASTM C476 with maximum slump of 4 inches (102 mm) as measured in accordance with ASTM C143/C143M for hand troweling in place; plaster grout and thinner pumpable grout are prohibited.

B. Silencers: Resilient rubber, fitted into drilled hole; provide three on strike side of single door, three on center mullion of pairs, and two on head of pairs without center mullions.

C. Temporary Frame Spreaders: Provide for factory- or shop-assembled frames.

#### PART 3 EXECUTION

3.01 INSTALLATION

A. Install doors and frames in accordance with manufacturer's instructions and related requirements of

specified door and frame standards or custom guidelines indicated. B. Coordinate frame anchor placement with wall construction.

### **SECTION 08 4313**

# PART 1 GENERAL

### 1.01 SUBMITTALS

A. Product Data: Provide component dimensions, describe components within assembly, anchorage and

ALUMINUM-FRAMED STOREFRONTS

fasteners, glass and infill, door hardware, and internal drainage details.

B. Shop Drawings: Indicate system dimensions, framed opening requirements and tolerances, affected elated work, expansion and contraction joint location and details, and field welding required.

A. Correct defective Work within a five year period after Date of Substantial Completion.

B. Provide five year manufacturer warranty against failure of glass seal on insulating glass units, including interpane dusting or misting. Include provision for replacement of failed units.

C. Provide five year manufacturer warranty against excessive degradation of exterior finish. Include provision for replacement of units with excessive fading, chalking, or flaking.

#### PART 2 PRODUCTS

2.01 BASIS OF DESIGN -- FRAMING FOR INSULATING GLAZING

A. Center-Set Style, Wind-Borne-Debris Resistance Tested: Vertical Mullion Dimensions: 2 inches wide by 4-1/2 inches deep (50 mm wide by 114 mm deep).

2.02 BASIS OF DESIGN -- FRAMING FOR MONOLITHIC GLAZING

A. Center-Set Style, Wind-Borne-Debris Resistance Tested: 1. Vertical Mullion Dimensions: 2 inches wide by 4-1/2 inches deep (51 mm wide by 114 mm deep).

2.03 BASIS OF DESIGN -- SWINGING DOORS A. Wind-Borne-Debris Resistance Tested:

> Thickness: 1-3/4 inches (43 mm). B. Medium Stile, Monolithic Glazing:

 Thickness: 1-3/4 inches (43 mm). C. Medium Stile, Insulating Glazing, Thermally-Broken:

### Thickness: 1-3/4 inches (43 mm).

### 2.04 ALUMINUM-FRAMED STOREFRONT

A. Aluminum-Framed Storefront: Factory fabricated, factory finished aluminum framing members with infill, and related flashings, anchorage and attachment devices.

Glazing Position: Front-set.

Finish: Superior performing organic coatings. Factory finish all surfaces that will be exposed in completed assemblies.

b. Touch-up surfaces cut during fabrication so that no natural aluminum is visible in completed assemblies, including joint edges.

Finish Color: As selected by Architect from manufacturer's standard line.

Fabrication: Joints and corners flush, hairline, and weatherproof, accurately fitted and secured; prepared to receive anchors and hardware; fasteners and attachments concealed from view; reinforced as required for imposed loads.

Construction: Eliminate noises caused by wind and thermal movement, prevent vibration harmonics, and prevent "stack effect" in internal spaces. System Internal Drainage: Drain to the exterior by means of a weep drainage network any water

B. Performance Requirements

1. Wind Loads: Design and size components to withstand the specified load requirements without damage or permanent set, when tested in accordance with ASTM E330/E330M, using loads 1.5 times the design wind loads and 10 second duration of maximum load.

entering joints, condensation occurring in glazing channel, and migrating moisture occurring within

a. Member Deflection: Limit member deflection to flexure limit of glass in any direction, with full recovery of glazing materials. Water Penetration Resistance on Manufactured Assembly: No uncontrolled water on interior face,

when tested in accordance with ASTM E331 at pressure differential of 8 psf (390 Pa). Air Leakage: 0.06 cfm/sq ft (0.3 L/sec sq m) maximum leakage of storefront wall area when tested in

#### accordance with ASTM E283/E283M at 1.57 psf (75 Pa) pressure difference. 2.05 COMPONENTS

A. Aluminum Framing Members: Tubular aluminum sections, thermally broken with interior section insulated from exterior, drainage holes and internal weep drainage system. Glazing Stops: Flush.

Structurally Reinforced Members: Extruded aluminum with internal reinforcement of structural steel

B. Swing Doors: Glazed aluminum. Thickness: 1-3/4 inches (43 mm).

Top Rail: 4 inches (100 mm) wide.

Vertical Stiles: 4-1/2 inches (115 mm) wide. Bottom Rail: 10 inches (254 mm) wide.

Glazing Stops: Square. Finish: Same as storefront.

## 2.06 MATERIALS

A. Extruded Aluminum: ASTM B221 (ASTM B221M).

B. Fasteners: Stainless steel.

2.07 HARDWARE For each door, include weatherstripping, sill sweep strip, and threshold.

B. Weatherstripping: Wool pile, continuous and replaceable; provide on all doors.

C. Sill Sweep Strips: Resilient seal type, retracting, of neoprene; provide on all doors. D. Threshold: Extruded aluminum, one piece per door opening, ribbed surface; provide on all doors.

# 3.01 INSTALLATION

Install wall system in accordance with manufacturer's instructions.

B. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other

C. Align assembly plumb and level, free of warp or twist. Maintain assembly dimensional tolerances, aligning with adjacent work.

#### **SECTION 08 4523** FIBERGLASS SANDWICH PANEL ASSEMBLIES

#### PART 1 GENERAL 1.01 SUBMITTALS

A. Submit manufacturer's product data. Include construction details, material descriptions, profiles and finishes of components.

B. Submit shop drawings. Include plans, elevations and details.

Submit manufacturer's color charts showing the full range of colors available for factory finished aluminum. When requested, submit samples for each exposed finish, in 5" long sections for the same thickness and material indicated for the work.

## 1.02 WARRANTY

A. Provide manufacturer's and installer's written warranty agreeing to repair or replace panel system work, which fails in materials or workmanship within one year from the date of delivery. Failure of materials or workmanship shall include excessive deflection, deterioration of finish on metal in excess of normal weathering, defects in accessories, insulated translucent sandwich panels and other components of the

## PART 2 PRODUCTS

## 2.01 MANUFACTURER

A. The basis for this specification is for products manufactured by Kalwall Corporation. Other manufacturers may bid this project subject to compliance with the performance requirements of this specification and submission of evidence thereof. Listing other manufacturers' names in this specification does not constitute approval of their products or relieve them of compliance with all the performance requirements contained herein.

B. Kalwall Corporation, Tel: (800) 258-9777 - Fax: (603) 627-7905 - Email: info@kalwall.com 1. Distributed locally by Alder Sales Corporation, Tel: (801) 262-9700 2.02 PANEL COMPONENTS

A. Face Sheets:

Translucent faces: Manufactured from glass fiber reinforced thermoset resins, formulated specifically for architectural use.

b. Interior face sheet: Smooth, .045" thick and White in color.

Appearance:

2.03 PANEL CONSTRUCTION

A. Provide sandwich panels of flat fiberglass reinforced translucent face sheets laminated to a grid core of mechanically interlocking I-beams. The adhesive bonding line shall be straight, cover the entire width of

the I-beam and have a neat, sharp edge.

 Thickness: 2-3/4 inches Visible Light Transmittance (VLT):

a. Visible LT (NFRC 202 - Center of Glazing (Panel)) by NFRC certified laboratory: 26%. Solar heat gain coefficient 31

Panel U-factor by NFRC certified laboratory: a. 2-3/4" thermally broken grid 23

1) 2-3/4" aluminum grid 29 5. Complete insulated panel system shall have NFRC certified U-factor of .28 for TB panels and .37 for

6. Grid pattern as viewed: Nominal size 12" x 24"; pattern shoji. B. Standard panels shall deflect no more than 1.9" at 30 PSF in 10'-0" span without a supporting frame by

a. Exterior face sheet: Smooth, .070" thick and Crystal in color.

## 2.04 BATTENS AND PERIMETER CLOSURE SYSTEM

A. Closure system (Wall):

B. Finish:

Manufacturer's factory applied finish, which meets the performance requirements of AAMA 2604. Color to be selected from manufacturer's standards.

#### PART 3 EXECUTION 3.01 INSTALLATION

A. Install the panel system in accordance with the manufacturer's suggested installation instructions and approved shop drawings.

> Anchor component parts securely in place by permanent mechanical attachment system. Accommodate thermal and mechanical movements. Set perimeter framing in a full bed of sealant compound, or with joint fillers or gaskets to provide

weather-tight construction. B. Install joint sealants at perimeter joints and within the panel system in accordance with manufacturer's suggested installation instructions and approved shop drawings.

#### **SECTION 08 7100** DOOR HARDWARE

#### PART 1 GENERAL 1.01 SUBMITTALS

A. Shop Drawings - Door Hardware Schedule: Submit detailed listing that includes each item of hardware to be installed on each door. Use door numbering scheme as included in Contract Documents.

Prepared by or under supervision of Architectural Hardware Consultant (AHC).

Provide complete description for each door listed. B. Shop Drawings - Electrified Door Hardware: Submit diagrams for power, signal, and control wiring for

elevations and diagrams for each electrified door opening as follows: 1. Prepared by or under supervision of Architectural Hardware Consultant (AHC) and Electrified Hardware Consultant (EHC).

Elevations: Submit front and back elevations of each door opening showing electrified devices with

electrified door hardware that include details of interface with building safety and security systems. Provide

connections installed and an operations narrative describing how opening operates from either side at Diagrams: Submit point-to-point wiring diagram that shows each device in door opening system with

A. Manufacturer's Warranty: Provide warranty against defects in material and workmanship for period indicated. Complete forms in Owner's name and register with manufacturer.

Locksets and Cylinders: Three years, minimum. Other Hardware: Two years, minimum.

related colored wire connections to each device.

#### 2.01 DESIGN AND PERFORMANCE CRITERIA A. Provide specified door hardware as required to make doors fully functional, compliant with applicable

PART 2 PRODUCTS

B. Provide individual items of single type, of same model, and by same manufacturer.

#### C. Provide door hardware products that comply with the following requirements: Applicable provisions of federal, state, and local codes.

codes, and secure to extent indicated.

A. Finishes: Provide door hardware of same finish, unless otherwise indicated. PART 3 EXECUTION

3.01 INSTALLATION Install hardware in accordance with manufacturer's instructions and applicable codes.

B. Install hardware on fire-rated doors and frames in accordance with applicable codes and NFPA 80. C. Install hardware for smoke and draft control doors in accordance with NFPA 105.

d. Exit Devices: 40-5/16 inch (1024 mm).

D. Use templates provided by hardware item manufacturer. E. Door Hardware Mounting Heights: Distance from finished floor to center line of hardware item. As

indicated in following list; unless noted otherwise in Door Hardware Schedule or on drawings.

 Mounting heights in compliance with ADA Standards: Locksets: 40-5/16 inch (1024 mm).

b. Push Plates/Pull Bars: 42 inch (1067 mm). Deadlocks (Deadbolts): 48 inch (1219 mm).

e. Door Viewer: 43 inch (1092 mm); standard height 60 inch (1524 mm).

# **SECTION 08 8000**

**GLAZING** 

## PART 1 GENERAL

1.01 SUBMITTALS A. Product Data on Insulating Glass Unit, Glazing Unit, Plastic Film, and Spandrel Glazing Types: Provide structural, physical and environmental characteristics, size limitations, special handling and installation

B. Product Data on Glazing Compounds and Accessories: Provide chemical, functional, and environmental

C. Samples: Submit two samples 12 by 12 inch (304.8 by 304.8 mm) in size of glass units, showing

1.02 QUALITY ASSURANCE A. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years of documented experience.

B. Installer Qualifications: Company specializing in performing work of the type specified and with at least

characteristics, limitations, special application requirements, and identify available colors.

three years documented experience.

A. Insulating Glass Units: Provide a five (5) year manufacturer warranty to include coverage for seal failure, interpane dusting or misting, including providing products to replace failed units. PART 2 PRODUCTS

Trulite Glass & Aluminum Solutions, LLC: www.trulite.com/#sle.

2.01 MANUFACTURERS

B. Float Glass Manufacturers: Guardian Glass, LLC: www.guardianglass.com/#sle.

2.02 PERFORMANCE REQUIREMENTS - EXTERIOR GLAZING ASSEMBLIES

Substitutions: See Section 01 6000 - Product Requirements.

Pilkington North America Inc: www.pilkington.com/na/#sle. Vitro Architectural Glass (formerly PPG Glass): www.vitroglazings.com/#sle. 4. Substitutions: See Section 01 6000 - Product Requirements.

1. Design Pressure: Calculated in accordance with ASCE 7. 2. Comply with ASTM E1300 for design load resistance of glass type, thickness, dimensions, and maximum lateral deflection of supported glass.

A. Provide type and thickness of exterior glazing assemblies to support assembly dead loads, and to

withstand live loads caused by positive and negative wind pressure acting normal to plane of glass.

Provide glass edge support system sufficiently stiff to limit the lateral deflection of supported glass edges to less than 1/175 of their lengths under specified design load.

Glass thicknesses listed are minimum.

B. Weather-Resistive Barrier Seals: Provide completed assemblies that maintain continuity of building enclosure water-resistive barrier, vapor retarder, and/or air barrier.

1. In conjunction with weather barrier related materials described in other sections, as follows: 2. To maintain a continuous vapor retarder and/or air barrier throughout glazed assembly from glass pane to heel bead of glazing sealant.

indicated. Performance properties are in accordance with manufacturer's published data as determined with the following procedures and/or test methods:

1. Center of Glass U-Value: Comply with NFRC 100 using Lawrence Berkeley National Laboratory

(LBNL) WINDOW 6.3 computer program. Center of Glass Solar Heat Gain Coefficient (SHGC): Comply with NFRC 200 using Lawrence

Annealed Type: ASTM C1036, Type I - Transparent Flat, Class 1 - Clear, Quality - Q3. Kind HS - Heat-Strengthened Type: Complies with ASTM C1048.

used in hazardous locations. 4. Thicknesses: As indicated; provide greater thickness as required for exterior glazing wind load

### 2.04 INSULATING GLASS UNITS

Tint: Clear.

Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or magnetic sputter vapor deposition (soft-coat) type coatings on flat glass; coated vision glass, Kind CV; coated

Spacer Color: Black.

Edge Seal: a. Dual-Sealed System: Provide polyisobutylene sealant as primary seal applied between spacer and glass panes, and silicone, polysulfide, or polyurethane sealant as secondary seal applied

Color: Black.

Purge interpane space with dry air, hermetically sealed.

a. Breather Tubes: Seal or crimp breather tubes upon installation in accordance with insulating glass fabricator's requirements.

fabricator's and installer's requirements. B. Insulating Glass Units: Vision glass, double glazed.

Applications: Exterior glazing unless otherwise indicated. Space between lites filled with air. 3. Outboard Lite: Annealed float glass, 1/4 inch (6.4 mm) thick, minimum.

Total Thickness: 1 inch (25.4 mm). Thermal Transmittance (U-Value), Summer - Center of Glass: .26, nominal. Visible Light Transmittance (VLT): 32% to 64% percent, nominal.

 Applications: Glazed lites in exterior doors.

 Other locations indicated on drawings. Space between lites filled with air.

Glass Type: Same as Type IG-1 except use fully tempered float glass for both outboard and inboard

Total Thickness: 1 inch (25.4 mm). Thermal Transmittance (U-Value), Summer - Center of Glass: .26, nominal.

Visible Light Transmittance (VLT): 32% to 64% percent, nominal.

9. Visible Light Reflectance, Outside: 64 percent, nominal.

A. Basis of Design - Insulating Glass Units: Vision glazing, with low-e coating. Applications: Exterior insulating glass glazing unless otherwise indicated.

2. Coated Glass: Comply with requirements of ASTM C1376 for pyrolytic (hard-coat) or magnetic

Spacer Color: Black. Edge Seal:

Color: Black. Purge interpane space with dry air, hermetically sealed. Basis of Design - Vitro Architectural Glass (formerly PPG Glass): www.vitroglazings.com/#sle.

b. Glass: Clear. Inboard Lite: Heat-strengthened float glass, 1/4 inch (6.4 mm) thick.

product of another acceptable manufacturer.

2.06 GLAZING UNITS A. Monolithic Exterior Vision Glazing:

Glass Type: Annealed float glass. Tint: Clear.

Thickness: 1/4 inch (6.4 mm), nominal. B. Monolithic Interior Vision Glazing:

Thickness: 1/4 inch (6.4 mm), nominal. Butt-glazing (no interior mullions allowed): a. Thickness:

1) 1/4" tempered for heights up to 5'-0"

2) 3/8" tempered for heights over 5'-0" up to 8'-0"

5) 3/4" tempered for heights over 12'-0" up to 14'-0" 6) 7/8" tempered for heights over 14'-0" up to 16'-0"

#### 7) 1" tempered for heights over 16'-0" up to 18'-0" b. Provide engineering data with submittals for all butt glazed window units 2.07 GLAZING COMPOUNDS

2.08 ACCESSORIES A. Setting Blocks: Silicone, with 80 to 90 Shore A durometer hardness; ASTM C864 Option II. Length of 0.1 inch for each square foot (25 mm for each square meter) of glazing or minimum 4 inch (100 mm) by width of glazing rabbet space minus 1/16 inch (1.5 mm) by height to suit glazing method and pane weight and

one half the height of the glazing stop by thickness to suit application, self adhesive on one face.

Option II; color black.

integral resilient spacer rod applicable to application indicated; 5 to 30 cured Shore A durometer hardness; D. Glazing Splines: Resilient silicone extruded shape to suit glazing channel retaining slot; ASTM C864

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**SPECIFICATIONS** 

C. Thermal and Optical Performance: Provide exterior glazing products with performance properties as

Berkeley National Laboratory (LBNL) WINDOW 6.3 computer program. 3. Solar Optical Properties: Comply with NFRC 300 test method.

## 2.03 GLASS MATERIALS

A. Float Glass: Provide float glass based glazing unless otherwise indicated.

3. Fully Tempered Safety Glass: Complies with ANSI Z97.1 or 16 CFR 1201 criteria for safety glazing

 A. Insulating Glass Units: Types as indicated. Durability: Certified by an independent testing agency to comply with ASTM E2190.

overhead glass, Kind CO; or coated spandrel glass, Kind CS. Metal-Edge Spacers: Aluminum, bent and soldered corners.

around perimeter.

Capillary Tubes: Provide tubes from air space for insulating glass units without inert type gas that have a change of altitude greater than 2500 feet (762 m) between point of fabrication and point of installation to permit pressure equalization of air space.

b. Inert gas may be installed in the field into air space in accordance with insulating glass

 b. Coating: Self-cleaning type, on #1 surface. Coating: Low-E (passive type), on #2 surface. 4. Inboard Lite: Annealed float glass, 1/4 inch (6.4 mm) thick, minimum. a. Tint: Clear.

Solar Heat Gain Coefficient (SHGC): 0.19 to 0.27, nominal. 9. Visible Light Reflectance, Outside: 64 percent, nominal. C. Insulating Glass Units: Safety glazing.

> b. Glazed sidelights and panels next to doors. Other locations required by applicable federal, state, and local codes and regulations.

8. Solar Heat Gain Coefficient (SHGC): 0.19 to 0.27, nominal. 2.05 BASIS OF DESIGN - INSULATING GLASS UNITS

sputter vapor deposition (soft-coat) type coatings on flat glass; coated vision glass, Kind CV; coated overhead glass, Kind CO; or coated spandrel glass, Kind CS.

Outboard Lite: Annealed float glass, 1/4 inch (6.4 mm) thick, minimum. a. Low-E Coating: Vitro Architectural Glass (formerly PPG Glass) Solarban 70 glass on #2 surface.

# 10. Other Manufacturers: Provide either the product identified as "Basis of Design" or an equivalent

Applications: As scheduled.

Applications: Interior glazing unless otherwise indicated. Glass Type: Annealed float glass.

> 3) 1/2" tempered for heights over 8'-0" up to 10'-0" 4) 5/8" tempered for heights over 10'-0" up to 12'-0"

A. Type GC-2 - Butyl Sealant: Single component; ASTM C920 Grade NS, Class 12-1/2, Uses M and A, Shore A hardness of 10 to 20; black color.

B. Spacer Shims: Neoprene, 50 to 60 Shore A durometer hardness; ASTM C864 Option II. Continuous by C. Glazing Tape, Back Bedding Mastic Type: Preformed, butyl-based, 100 percent solids compound with

E. Glazing Clips: Manufacturer's standard type.

coiled on release paper; black color.

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PART 3 EXECUTION 3.01 INSTALLATION - DRY GLAZING METHOD (GASKET GLAZING)

A. Place setting blocks at 1/4 points with edge block no more than 6 inch (152 mm) from corners.

B. Rest glazing on setting blocks and push against fixed stop with sufficient pressure on gasket to attain full

Install removable stops without displacing glazing gasket; exert pressure for full continuous contact.

3.02 INSTALLATION - WET GLAZING METHOD (SEALANT AND SEALANT) A. Place setting blocks at 1/4 points and install glazing pane or unit.

B. Install removable stops with glazing centered in space by inserting spacer shims both sides at 24 inch (610 mm) intervals, 1/4 inch (6.4 mm) below sight line.

C. Fill gaps between glazing and stops with silicone type sealant to depth of bite on glazing, but not more than 3/8 inch (9 mm) below sight line to ensure full contact with glazing and continue the air and vapor seal. D. Apply sealant to uniform line, flush with sight line. Tool or wipe sealant surface smooth.

3.03 INSTALLATION - BUTT JOINT GLAZING METHOD (SEALANT ONLY)

A. Permit sealant to cure then remove foam backer rod, and then apply sealant to opposite side, tool smooth to concave profile.

3.04 INSTALLATION - PLASTIC FILM

A. Install plastic film with adhesive, applied in accordance with film manufacturer's instructions.

B. Place without air bubbles, creases or visible distortion.

**SECTION 09 2116 GYPSUM BOARD ASSEMBLIES** 

PART 1 GENERAL 1.01 SUBMITTALS

Provide data on metal framing, gypsum board, accessories, and joint finishing system.

PART 2 PRODUCTS 2.01 GYPSUM BOARD ASSEMBLIES

A. Provide completed assemblies complying with ASTM C840 and GA-216.

B. Interior Partitions, Indicated as Acoustic: Provide completed assemblies with the following characteristics: Acoustic Attenuation: STC as indicated calculated in accordance with ASTM E413, based on tests conducted in accordance with ASTM E90.

C. Fire-Resistance-Rated Assemblies: Provide completed assemblies with the following characteristics: Fire Rated Shaft Walls: where indicated on the drawings.

2. Gypsum Association File Numbers: Comply with requirements of GA-600 for the particular assembly. 2.02 BOARD MATERIALS

A. Gypsum Wallboard: Paper-faced gypsum panels as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.

Application: Use for vertical surfaces and ceilings, unless otherwise indicated.

Mold Resistance: Score of 10, when tested in accordance with ASTM D3273. a. Mold-resistant board is required whenever board is being installed before the building is enclosed

3. At Assemblies Indicated with Fire-Resistance Rating: Use type required by indicated tested assembly; if no tested assembly is indicated, use Type X board, UL or WH listed.

Thickness: Vertical Surfaces: 5/8 inch (16 mm).

b. Ceilings: 5/8 inch (16 mm). c. Multi-Layer Assemblies: Thicknesses as indicated on drawings.

B. Impact Resistant Wallboard:

Application: High traffic areas: 4'-0" A.F.F. at Stairways and Corridors.

Surface Abrasion: Level 3, minimum, when tested in accordance with ASTM C1629/C1629M. Indentation: Level 1, minimum, when tested in accordance with ASTM C1629/C1629M.

Mold Resistance: Score of 10, when tested in accordance with ASTM D3273. Type: Fire-resistance-rated Type X, UL or WH listed.

Thickness: 5/8 inch (16 mm).

Edges: Tapered.

C. Backing Board For Wet Areas: One of the following products:

Application: Surfaces behind tile in wet areas including tub and shower surrounds and shower

ANSI Cement-Based Board: Non-gypsum-based; aggregated Portland cement panels with glass fiber mesh embedded in front and back surfaces complying with ANSI A118.9 or ASTM C1325.

D. Exterior Soffit Board: Exterior gypsum soffit board as defined in ASTM C1396/C1396M; sizes to minimize joints in place; ends square cut.

Application: Ceilings and soffits in protected exterior areas, unless otherwise indicated.

Types: Regular, in locations indicated.

Regular Type Thickness: 1/2 inch (13 mm).

Edges: Tapered.

2.03 GYPSUM BOARD ACCESSORIES

A. Acoustic Putty Packs installed at back boxes in sound rated walls and at interior of exterior fured walls. Products by 3M, Hilti, or equivilent.

B. Joint Materials: ASTM C475/C475M and as recommended by gypsum board manufacturer for project

1. Paper Tape: 2 inch (50 mm) wide, creased paper tape for joints and corners, except as otherwise

C. Screws for Fastening of Gypsum Panel Products to Cold-Formed Steel Studs Less than 0.033 inches (0.84 mm) in Thickness and Wood Members: ASTM C1002; self-piercing tapping screws, corrosion-resistant.

PART 3 EXECUTION

3.01 FRAMING INSTALLATION 3.02 ACOUSTIC ACCESSORIES INSTALLATION

A. Acoustic Insulation: Place tightly within spaces, around cut openings, behind and around electrical and mechanical items within partitions, and tight to items passing through partitions.

3.03 BOARD INSTALLATION A. Comply with ASTM C840, GA-216, and manufacturer's instructions. Install to minimize butt end joints,

especially in highly visible locations. B. Single-Layer Nonrated: Install gypsum board in most economical direction, with ends and edges occurring

 Double-Layer, Nonrated: Use gypsum board for first layer, placed parallel to framing or furring members, with ends and edges occurring over firm bearing. Use glass mat faced gypsum board at exterior walls and

at other locations as indicated. Place second layer perpendicular to framing or furring members. Offset joints of second layer from joints of first layer. D. Fire-Resistance-Rated Construction: Install gypsum board in strict compliance with requirements of

E. Exterior Soffits: Install exterior soffit board perpendicular to framing, with staggered end joints over framing

F. Cementitious Backing Board: Install over steel framing members and plywood substrate where indicated, in accordance with ANSI A108.11 and manufacturer's instructions.

3.04 JOINT TREATMENT

A. Finish gypsum board in accordance with levels defined in ASTM C840, as follows:

1. Level 4: Walls and ceilings to receive paint finish or wall coverings, unless otherwise indicated. 2. Level 2: In utility areas, behind cabinetry, and on backing board to receive tile finish.

3. Level 1: Fire-resistance-rated wall areas above finished ceilings, whether or not accessible in the

completed construction. 3.05 TEXTURE FINISH

A. Apply finish texture coating by means of spraying apparatus in accordance with manufacturer's instructions and to match approved sample.

> **SECTION 09 5100** ACOUSTICAL CEILINGS

PART 1 GENERAL 1.01 SUBMITTALS

A. Product Data: Provide data on suspension system components and acoustical units. PART 2 PRODUCTS

2.01 ACOUSTICAL UNITS

A. Acoustical Units - General: ASTM E1264, Class A.

B. Acoustical Panels: Mineral fiber with scrubbable finish, with the following characteristics:

Classification: ASTM E1264 Type IX.

Panel Edge: Square.

Suspension System: Exposed grid.

Location: As indicated on drawings.

C. Acoustical Panels: Painted mineral fiber, ASTM E1264 Type III, with the following characteristics:

Thickness: 5/8 inches (15 mm).

3. Light Reflectance: 87 percent, determined in accordance with ASTM E1264.

Surface Color: As indicated on drawings. Surface Pattern: Beveled. Location: General

2.02 SUSPENSION SYSTEM(S)

Edge: Tegular.

A. Metal Suspension Systems - General: Complying with ASTM C635/C635M; die cut and interlocking components, with perimeter moldings, hold down clips, stabilizer bars, clips, and splices as required.

B. Exposed Steel Suspension System: Formed steel, commercial quality cold rolled; heavy-duty. Profile: Tee; 15/16 inch (24 mm) wide face.

Construction: Double web.

Finish: White. 2.03 ACCESSORIES

A. Support Channels and Hangers: Galvanized steel; size and type to suit application, seismic requirements, and ceiling system flatness requirement specified.

B. Hanger Wire: 12 gauge, 0.08 inch (2 mm) galvanized steel wire.

C. Perimeter Moldings: Same metal and finish as grid.

PART 3 EXECUTION

3.01 INSTALLATION - SUSPENSION SYSTEM A. Install suspension system in accordance with ASTM C636/C636M, ASTM E580/E580M, ASTM C636/C636M, ASTM E580/E580M, ASTM C636/C636M, and ASTM E580/E580M and as supplemented in

this section 3.02 INSTALLATION - ACOUSTICAL UNITS

Install acoustical units in accordance with manufacturer's instructions.

B. Fit acoustical units in place, free from damaged edges or other defects detrimental to appearance and function.

> SECTION 09 6813 TILE CARPETING

PART 1 GENERAL 1.01 SUBMITTALS

A. Sustainable Design Submittal: Submit VOC content documentation for adhesives.

B. Maintenance Materials: Furnish the following for Owner's use in maintenance of project. See Section 01 6000 - Product Requirements, for additional provisions.

2. Extra Carpet Tiles: Quantity equal to 5 percent of total installed of each color and pattern installed. 1.02 WARRANTY

A. Special Warranty for Carpet Tiles: Manufacturer agrees to repair or replace components of carpet tile

installation that fail in materials or workmanship within specified warranty period. 1. Warranty does not include deterioration or failure of carpet tile due to unusual traffic, failure of

Warranty: Commercial Lifetime. PART 2 PRODUCTS

2.01 MANUFACTURERS A. Tile Carpeting:

> See drawings and finish schedule for manufacturers and patterns. Substitutions: See Section 01 6000 - Product Requirements.

2.02 MATERIALS A. Tile Carpeting: Tufted, manufactured in one color dye lot.

1. Basis of Design Product: See drawings and finish schedule for patterns manufactured by see drawings

substrate, vandalism, or abuse.

Color: See Finish Schedule. Pattern: See Finish Schedule.

Critical Radiant Flux: Minimum of 0.22 watts/sq cm, when tested in accordance with ASTM E648 or

Surface Flammability Ignition: Pass ASTM D2859 (the "pill test").

Maximum Electrostatic Charge: 3 Kv. at 20 percent relative humidity.

3.01 EXAMINATION

 A. Edge Strips: Embossed aluminum, color as selected by Architect PART 3 EXECUTION

A. Verify that subfloor surfaces are smooth and flat within tolerances specified for that type of work and are ready to receive carpet tile.

B. Concrete Slabs: Verify finishes comply with requirements specified in Section 03 3000 "Cast-in-Place Concrete" and surfaces are free of cracks, ridges, depressions, scale, and foreign deposits.

1. Moisture Testing: Perform tests so that each test area does not exceed 200 sq. ft., and perform no fewer than three tests in each installation area and with test areas evenly spaced in installation areas.

 Proceed with installation only after unsatisfactory conditions have been corrected. 3.02 INSTALLATION A. Blend carpet from different cartons to ensure minimal variation in color match.

B. Cut carpet tile clean. Fit carpet tight to intersection with vertical surfaces without gaps. 3.03 PROTECTION

A. Protect installed carpet tile in compliance with CRI 104 "Standard for Installation of Commercial Carpet -September 2015." B. Protect carpet tile against damage from construction operations and placement of equipment and fixtures

during the remainder of construction period. Use protection methods indicated or recommended in writing

**SECTION 09 9123** INTERIOR PAINTING

PART 1 GENERAL

PART 2 PRODUCTS

by carpet tile manufacturer.

1.01 SECTION INCLUDES A. Scope: Finish interior surfaces exposed to view, unless fully factory-finished and unless otherwise

B. Do Not Paint or Finish the Following Items:

Items factory-finished unless otherwise indicated; materials and products having factory-applied primers are not considered factory finished. Items indicated to receive other finishes. Items indicated to remain unfinished.

of equipment.

4. Fire rating labels, equipment serial number and capacity labels, bar code labels, and operating parts 5. Floors, unless specifically indicated. Glass.

Concealed pipes, ducts, and conduits. 1.02 SUBMITTALS

A. Product Data: Provide complete list of products to be used, with the following information for each: Manufacturer's name, product name and/or catalog number, and general product category (e.g.,

MPI product number (e.g., MPI #47). 3. Cross-reference to specified paint system products to be used in project; include description of each

B. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches (216 by 279 mm) in size, illustrating range of colors available for each finishing product specified. Where sheen is specified, submit samples in only that sheen.

A. Paints and Finishes: Ready-mixed, unless intended to be a field-catalyzed paint.

2.01 MANUFACTURERS

otherwise indicated.

A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions, See finish schedule in drawings for additional information. 2.02 PAINTS AND FINISHES - GENERAL

dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.

production run

Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.

B. Colors: See Finish Schedule. 2.03 PAINT SYSTEMS - INTERIOR

A. Interior Surfaces to be Painted, Unless Otherwise Indicated: Including gypsum board and shop primed steel and excluding glazed CMU. Two top coats and one coat primer.

Top Coat(s): Interior Latex: MPI #43, 44, 52, 53, 54, or 114. Top Coat Sheen: a. Satin: MPI gloss level 4: use this sheen for items subject to frequent touching by occupants.

including door frames and railings. Primer: As recommended by top coat manufacturer for specific substrate.

B. Medium Duty Door/Trim: For surfaces subject to frequent contact by occupants, including metals: Two top coats and one coat primer. Top Coat(s): DTM Acrylic.

Semi-Gloss: MPI gloss level 5; use this sheen at all locations. Primer: As recommended by top coat manufacturer for specific substrate. C. Dry Fall: Metals; exposed structure and overhead-mounted services, including shop primed steel deck, structural steel, metal fabrications, galvanized ducts, galvanized conduit, and galvanized piping.

Top Coat: Alkyd Dry Fall; MPI #55, 89, or 225. Top Coat Sheen: a. Eggshell: MPI gloss level 3; use this sheen at all locations.

3. Primer: As recommended by top coat manufacturer for specific substrate. D. Acoustic Sound Panel. Waterborne Acrylic Dryfall.

Coverage 336-450 per gallon. Cross spray at right angles if necessary. Airless spray or conventional spray per manufacturer's recommendation.

Concrete Floors to be Painted. 1. Two top coats and one coat primer. Top Coat(s): Alkyd Floor Enamel, Gloss; MPI #27.

Top Coat Sheen: a. Semi-Gloss: MPI gloss level 5; use this sheen at all locations. 4. Primer: As recommended by top coat manufacturer for specific substrate. F. Epoxy Coating:

Number of coats: Two. Product Characteristics: Top Coat(s): Polyamide Epoxy; MPI #77.

Sheen: Gloss.

2.04 PRIMERS

3.01 EXAMINATION

3.03 APPLICATION

Wet mils 3.5-5.0 dry mls 1.5-2.0.

Indicated surface brush or roller is not allowed.

Top Coat Sheen:

A. Primers: Provide primers as required or recommended by manufacturer of top coats. PART 3 EXECUTION

A. Measure moisture content of surfaces using an electronic moisture meter. Do not apply finishes unless moisture content of surfaces is below the following maximums:

Concrete Floors and Traffic Surfaces: 8 percent. 3.02 PREPARATION

Gypsum Wallboard: 12 percent.

A. Clean surfaces thoroughly and correct defects prior to application. B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

A. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".

B. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.

**SECTION 10 1400** SIGNAGE

PART 1 GENERAL

2.01 SIGNAGE APPLICATIONS

1.01 SUBMITTALS A. Product Data: Manufacturer's printed product literature for each type of sign, indicating sign styles, font,

foreground and background colors, locations, overall dimensions of each sign. B. Signage Schedule: Provide information sufficient to completely define each sign for fabrication, including room number, room name, other text to be applied, sign and letter sizes, fonts, and colors.

C. Samples: Submit two samples of each type of sign, of size similar to that required for project, illustrating

sign style, font, and method of attachment. D. Selection Samples: Where colors are not specified, submit two sets of color selection charts or chips. PART 2 PRODUCTS

 A. Accessibility Compliance: Signs are required to comply with ADA Standards and ICC A117.1 2017, unless otherwise indicated; in the event of conflicting requirements, comply with the most comprehensive and

B. Room and Door Signs: Provide a sign for every doorway, whether it has a door or not, not including corridors, lobbies, and similar open areas. Sign Type: Flat signs with engraved panel media as specified.

Provide "tactile" signage, with letters raised minimum 1/32 inch (0.8 mm) and Grade II braille. Office and Classroom: Identify with room numbers to be determined later, not the numbers indicated on drawings; in addition, provide "window" section for replaceable occupant name. Conference and Meeting Rooms: Identify with room numbers to be determined later, not the numbers

indicated on drawings; in addition, provide "window" section with sliding "In Use/Vacant" indicator.

Service Rooms: Identify with room names and numbers to be determined later, not those indicated Rest Rooms: Identify with pictograms, the names "MEN" and "WOMEN", and braille.

C. Building Identification Signs: Use individual metal letters.

Mount on outside wall in location indicated on drawings.

Edges: Square.

 D. Plaque: See Allowance for details. 2.02 SIGN TYPES A. Flat Signs: Signage media without frame.

Corners: Radiused. Clear Cover: For customer produced sign media, provide clear cover of polycarbonate plastic, glossy on back, non-glare on front. Wall Mounting of One-Sided Signs: Tape adhesive.

Character Font: Helvetica, Arial, or other sans serif font.

Character Case: Upper case only. Background Color: manufactures full range of colors. Character Color: Contrasting color. 2.03 PLAQUES

B. Color and Font: Unless otherwise indicated:

A. Metal Plaques: Metal: Aluminum casting. Metal Thickness: 1/8 inch (3 mm), minimum.

SOLID PLASTIC SHOWER AND DRESSING COMPARTMENTS

PART 1 GENERAL 1.01 SUBMITTALS

A. Submittals for Review: 1. Shop Drawings: Include dimensioned layout, elevations, trim, closures, and accessories.

1.02 WARRANTIES

A. Provide manufacturer's 25 year warranty against breakage, corrosion, and delamination under normal

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Basis of Design: Scranton Products.

1. High density polyethylene (HDPE), fabricated from polymer resins compounded under high pressure, forming single thickness panel.

Fire hazard classification: Not required.

A. Install compartments in accordance with manufacturer's instructions and approved Shop Drawings.

 B. Install rigid, straight, plumb, and level. Not Acceptable: Evidence of cutting, drilling, or patching.

PART 1 GENERAL 1.01 SUBMITTALS

A. Product Data: Submit data on accessories describing size, finish, details of function, and attachment

2.01 MANUFACTURERS

A. Accessories - General: Shop assembled, free of dents and scratches and packaged complete with

anchors and fittings, steel anchor plates, adapters, and anchor components for installation. B. Keys: Provide 2 keys for each accessory to Owner; master key lockable accessories. C. Stainless Steel Sheet: ASTM A666, Type 304.

F. Zinc Alloy: Die cast, ASTM B86. G. Mirror Glass: Annealed float glass, ASTM C1036 Type I, Class 1, Quality Q2, with silvering, protective and

C. Baked Enamel: Pretreat to clean condition, apply one coat primer and minimum two coats epoxy baked

B. Paper Towel Dispenser: Owner furnished, Contractor installed.

tamperproof hanging system; satin finish. E. Grab Bars: Stainless steel, smooth surface. 1. Heavy Duty Grab Bars: Floor supports are not acceptable.

thickness, exposed flange mounting, 1-1/2 inch (38 mm) clearance between wall and inside of Length and Configuration: As indicated on drawings.

 A. Specified in 22 4000 - Plumbing Fixtures. PART 3 EXECUTION

A. Install accessories in accordance with manufacturers' instructions in locations indicated on drawings. Install plumb and level, securely and rigidly anchored to substrate. Mounting Heights: As required by accessibility regulations, unless otherwise indicated.

1.01 SUBMITTALS

Fire rating certifications. Manufacturer's installation instructions. B. Shop Drawings: For custom fabricated equipment indicate, in large scale detail, construction methods;

A. Provide 3 year manufacturer warranty for parts, finshes, and labor. PART 2 PRODUCTS

2.02 INDOOR CONTAINMENT

1.02 WARRANTY

A. Indoor Batting Cages: 1. Enclosure Material: Netting on top and sides with sewn rope border allowing for additional material or sides to rest on floor to retain balls within batting cage.

A. Wall Padding: Foam filling bonded to backing board, wrapped in covering; each panel fabricated in one

B. Substitutions: See Section 01 6000 Product Requirements. 2.02 MATERIALS

A. Doors, Panels and Pilasters: Waterproof and nonabsorbent, with self-lubricating surface, resistant to marks by pens, pencils,

markers, and other writing instruments. 1 inch thick with radiused edges.

B. Aluminum Extrusions: ASTM B221, 6463-T5 alloy and temper. C. Shower Curtains: Vinyl, 42 inches wide x 72 inches high, hung with aluminum curtain hooks with self-

PART 3 EXECUTION 3.01 INSTALLATION

**TOILET, BATH, AND LAUNDRY ACCESSORIES** 

B. Samples: Submit two samples of each accessory, illustrating color and finish. PART 2 PRODUCTS

2.02 MATERIALS

D. Stainless Steel Tubing: ASTM A269/A269M, Grade TP304 or TP316. E. Galvanized Sheet Steel: Hot-dipped galvanized steel sheet, ASTM A653/A653M, with G90/Z275 coating.

2.03 FINISHES A. Stainless Steel: Satin finish, unless otherwise noted.

2.04 COMMERCIAL TOILET ACCESSORIES A. Toilet Paper Dispenser: Owner furnished, Contractor installed.

1. Annealed Float Glass: Silvering, protective and physical characteristics in compliance with ASTM 2. Size: as shown on the drawings. Frame: 0.05 inch (1.3 mm)angle shapes, with mitered and welded and ground corners, and

b. Dimensions: 1-1/2 inch (38 mm) outside diameter, minimum 0.125 inch (3.17 mm) wall

2.05 UNDER-LAVATORY PIPE AND SUPPLY COVERS

A. Product Data: Provide manufacturer's data showing configuration, sizes, materials, finishes, hardware, and

elevations and dimensions; minimum one cross section.

2.01 GENERAL REQUIREMENTS A. Provide mounting plates, brackets, and anchors of sufficient size and strength to securely attach equipment to building structure; comply with requirements of Contract Documents.

Netting: Black, No.36 nylon, 1-3/4 inches (44 mm) square. Size: See drawings.

2.03 WALL PADDING

(SDI) of 450 or less, Class A, when tested in accordance with ASTM E84 as a complete panel. Flammability: Comply with NFPA 286. 3. Covering: Vinyl-coated polyester fabric, mildew and rot resistant; stapled to back of board.

**SPECIFICATIONS** 

2.04 ACCESSORIES Tape Adhesive: Double sided tape, permanent adhesive.

> A. Install in accordance with manufacturer's instructions. B. Install neatly, with horizontal edges level.

**SECTION 10 2119** 

1. Where MPI paint numbers are specified, provide products listed in Master Painters Institute Approved Product List, current edition available at www.paintinfo.com, for specified MPI categories, except as

PART 3 EXECUTION

3.01 INSTALLATION

Size: 24 x 24 inches (600 x 600 mm).

Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly

3. Supply each paint material in quantity required to complete entire project's work from a single

A. Provide products of each category type by single manufacturer.

B. Chrome/Nickel Plating: ASTM B456, SC 2, polished finish, unless otherwise noted.

physical characteristics complying with ASTM C1503.

C. Soap Dispenser: Owner furnished. Contractor installed D. Mirrors: Stainless steel framed, 1/4 inch (6 mm) thick annealed float glass; ASTM C1036.

a. Push/Pull Point Load: Minimum 1000 pound-force (4448.2 N), minimum.

**SECTION 11 6623 GYMNASIUM EQUIPMENT** PART 1 GENERAL

method of attachment or installation; type and gage of metal, hardware, and fittings; plan front elevation;

B. Hardware: Heavy duty steel hardware, as recommended by manufacturer.

Upper Support Frame: At least 1-1/2 inches (38 mm) diameter aluminum pipe and necessary fittings to provide symmetrical layout with uniform spacing. Support Cables: Steel cables at least 1/8 inch (3.2 mm) in diameter with minimum of 1800 pounds (816 kg) tensile strength spaced to align with support frame horizontal members providing uniform load distribution and stability.

1. Surface Burning Characteristics: Flame spread index (FSI) of 25 or less, smoke developed index

with local building code, including safety factors.

members within accessible locations.

thermosetting top coat.

2.06 FINISHES

PART 3 EXECUTION 3.01 INSTALLATION

C. Maintenance Devices: Provide as necessary within wheelchair lift system, supported on structural

1. Color: As selected by Architect from manufacturer's standard line.

A. Baked-On Factory Finish for Structural Metal Surfaces: Clean surfaces of rust, oil, or grease and wipe clean with solvent; apply manufacturer's standard two-coat, baked-on finish consisting of primer and

A. Install wheelchair lift system and components in accordance with manufacturer's written installation

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architect

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**SPECIFICATIONS** 

PROJECT #:

DRAWN BY:

CHECKED BY

LEIKIS