SHOWER REPAIRS FOR

YORK COUNTY MOSS JUSTICE CENTER

BUILDING #6 UNITS I & J BLOCK

PROJECT TEAM

ARCHITECT

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JAMES CAMPBELL STEWART REGISTERED ARCHITECT 1666 SOUTH CAROLINA GASTONIA N.C.

2024.03.20

NOTE:

ALL NOTES APPLY TO ALL DRAWINGS AND ALL TRADES. IT IS THE RESPONSIBILITY OF ALL CONTRACTORS AND TRADES TO COORDINATE THE INSTALLATION OF THEIR WORK WITH THE INSTALLATION OF WORK BY ALL OTHER CONTRACTORS AND TRADES. THE REQUIREMENTS OF THE DRAWINGS, GENERAL REQUIREMENTS AND ALL ITEMS OF THE CONTRACT DOCUMENTS ARE EQUALLY BINDING ON ALL CONTRACTORS AND TRADES. EACH CONTRACTOR IS REQUIRED TO MAINTAIN FULL SETS OF THE CONTRACT DOCUMENTS ON SITE FOR HIS/HER EMPLOYEES USE ON THE PROJECT TO ASSURE THAT ALL WORK IS PROPERLY COORDINATED AND INSTALLED WITH THE WORK OF OTHER CONTRACTORS AND TRADES.

NOTE: CONTRACTOR MUST FIELD MEASURE AND VERIFY ALL DIMENSIONS PRIOR TO FABRICATING ANY COMPONENT OF THE SHOWER. ALL PLUMBING , MECHANICAL AND ELECTRICAL INSTALLATION MUST BE FIELD VERIFIED PRIOR TO INSTALLATION

DRAWING INDEX

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COVER SHEET

Scale: 1 1/2" = 1'-0"

Sheet No. 1.00

SHOWER REPAIRS FOR

YORK COUNTY MOSS JUSTICE CENTER

BUILDING #6 UNITS I & J

The Scope of the Work

The work is located in I-Block and J-Block and involves the demolition, resurfacing existing showers and installing new stainless steel showers and accessories and modesty panels.

I-Block work details:

A. Clean all first floor shower by removing metal pans, sand blast or bead blast to properly prepare for epoxy base and floor finish.
B. Clean all metal surfaces including the ceiling and wall. Use a cleaner that will thoroughly clean the surface coating. Coat any rust areas with POR 15 Rust Converter.
C. Test all surfaces for adhesive bond over existing surfaces.
D. Install all stainless steel ceiling and wall panels as detailed using specified adhesive and theft resistant security screws applied in the same locations as the original metal panel. All stainless steel ceilings and panels must be properly shored in place until the adhesive is cured and the security screws are in place.

The drawings fully describe the complete details of the I-Block showers on both the first level and second level.

J-Block work details:

A. Remove all existing showers on both levels of J-Block.
B. Clean the entire area where existing showers are removed.
C. Eight (8) new standard showers are to be installed in J-Block and one (1) shower on the lower level will be custom made stainless steel similar to those in I-Block.
D. These showers will have custom made privacy extension panels similar to the existing.
E. These showers will be complete with all accessories as detailed and shown.

General Notes that apply to all Showers:

A. All showers shall have custom overhead shower head as detailed. They must have all cutouts for lights, shower heads, fire protection, ventilation and all other accessories or items.
B. All screws, bolts and components shall be vandal resistant “Tork” Security Fasteners.
C. All sealant exposed to inmates shall be pick proof.
D. All components in the showers shall be made of rust resistant materials such as stainless steel, chrome plated brass or aluminum. All items must be Vandal Resistant and Ligature Resistant.
E. All seams, laps and joints must be fully back sealed with adhesive.
F. All fasteners of ceiling and wall panels of custom fabricated showers shall follow the line and path of the original fasteners. Supplement where required. Use “Lock-Tite” on all fasteners.
G. All existing concrete floors shall be completely cleaned by chemical cleaning, bead blasting, sand blasting or other methods which are approved by the manufacturer of the epoxy flooring and its components prior to any installation being performed. The floor surface must be inspected by the manufacturer and receive approval prior to application of epoxy components and materials.

Special Notes:

All custom fabricated shower components shall be individually measured and documented prior to fabrication and final installation.

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SCOPE OF WORK

Scale: 1/4" = 1'-0"

Sheet No. 1.01

NOTE:

-SHOWER REPAIR LOCATIONS

SHOWER
I115

SHOWER
I133

I-BLOCK

J-BLOCK

1
4.30

SHOWER
J108

SHOWER
I169

SHOWER
I151

1 LOWER FLOOR PLAN (BUILDING 6)
1/16" = 1'-0"

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LOWER LEVEL FLOOR PLAN

Scale: 1/16" = 1'-0"

Sheet No. 2.01

NOTE:

-SHOWER REPAIR LOCATIONS

SHOWER
I209

SHOWER
I225

I-BLOCK

J-BLOCK

1
4.40

SHOWER
J202

SHOWER
I259

SHOWER
I243

1 UPPER LEVEL FLOOR PLAN (BUILDING 6)
1/16" = 1'-0"

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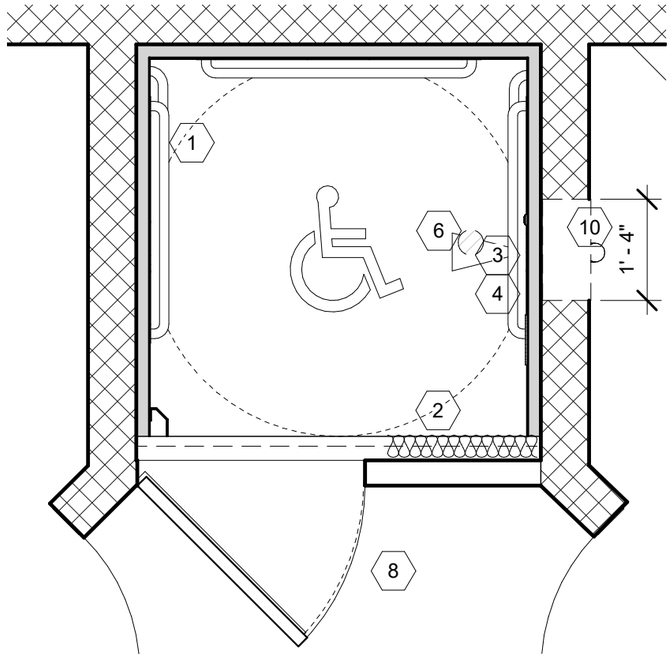
UPPER LEVEL FLOOR PLAN

Scale: 1/16" = 1'-0"

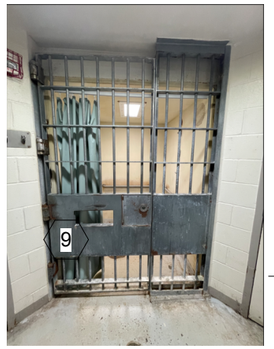
Sheet No. 2.02

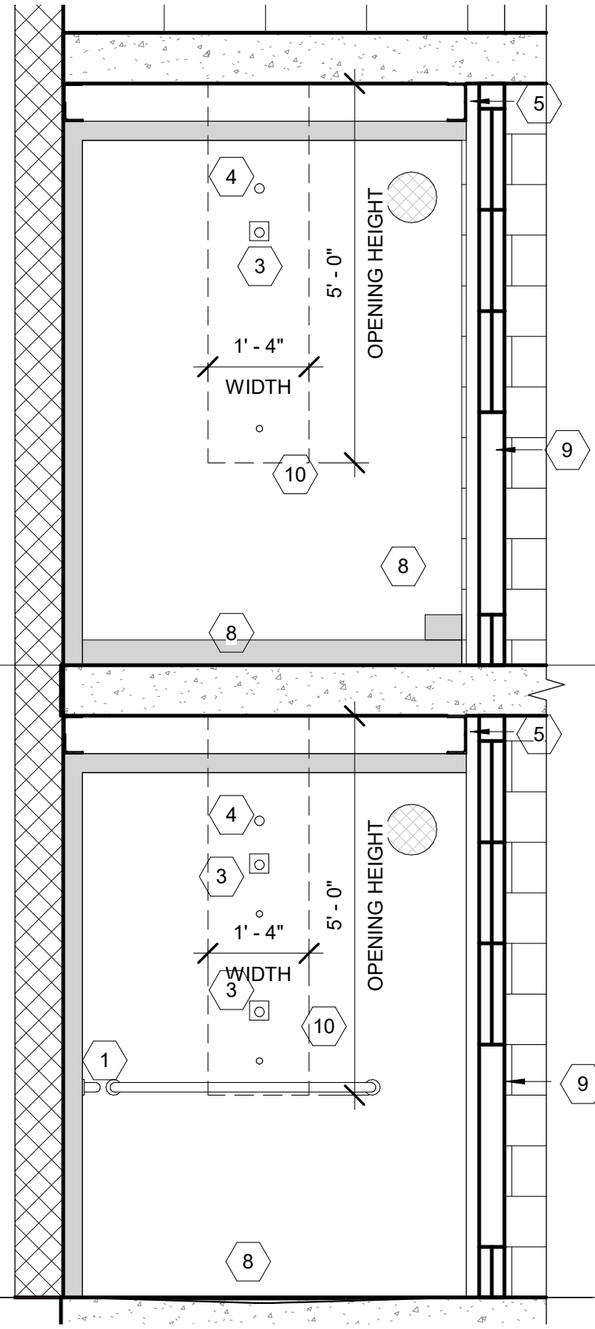


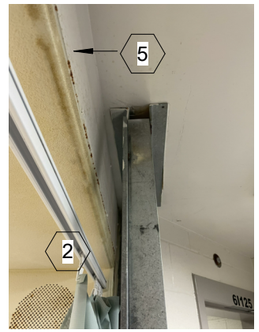
2 TYPICAL SINGLE SHOWER ENLARGED PLAN

1/2" = 1'-0"

LOCATION: I-BLOCK







1 TYPICAL SINGLE SHOWER DEMOLITION SECTION

1/2" = 1'-0"

DEMOLITION KEYED NOTES :

1. - REMOVE EXISTING GRAB BARS, CLEAN AND RE-INSTALL TO ORIGINAL LOCATION OVER NEW SHOWER CABINET
2. - REMOVE AND DISPOSE EXISTING CURTAIN AND CURTAIN ROD
3. - REMOVE AND REPLACE EXISTING SHOWER HEAD AND PLATES
4. - REMOVE AND REPLACE EXISTING SPRINKLER HEAD.
5. - REMOVE EXISTING PAINTED STEEL PLATE.
6. - REMOVE AND REPLACE FLOOR DRAIN GRILL, SEE PLUMBING PLAN.
7. - REMOVE AND REPLACE LIGHT DIFFUSERS, SEE ELECTRICAL PLAN.
8. - CLEAN AND PREPARE FLOOR AND WALL SURFACES.
9. - CLEAN STEEL DOOR AND FRAME FROM RUST AND RESIDUE.
10. - CUT CMU WALL TO SIZE FOR BETTER WORK CLEARANCE

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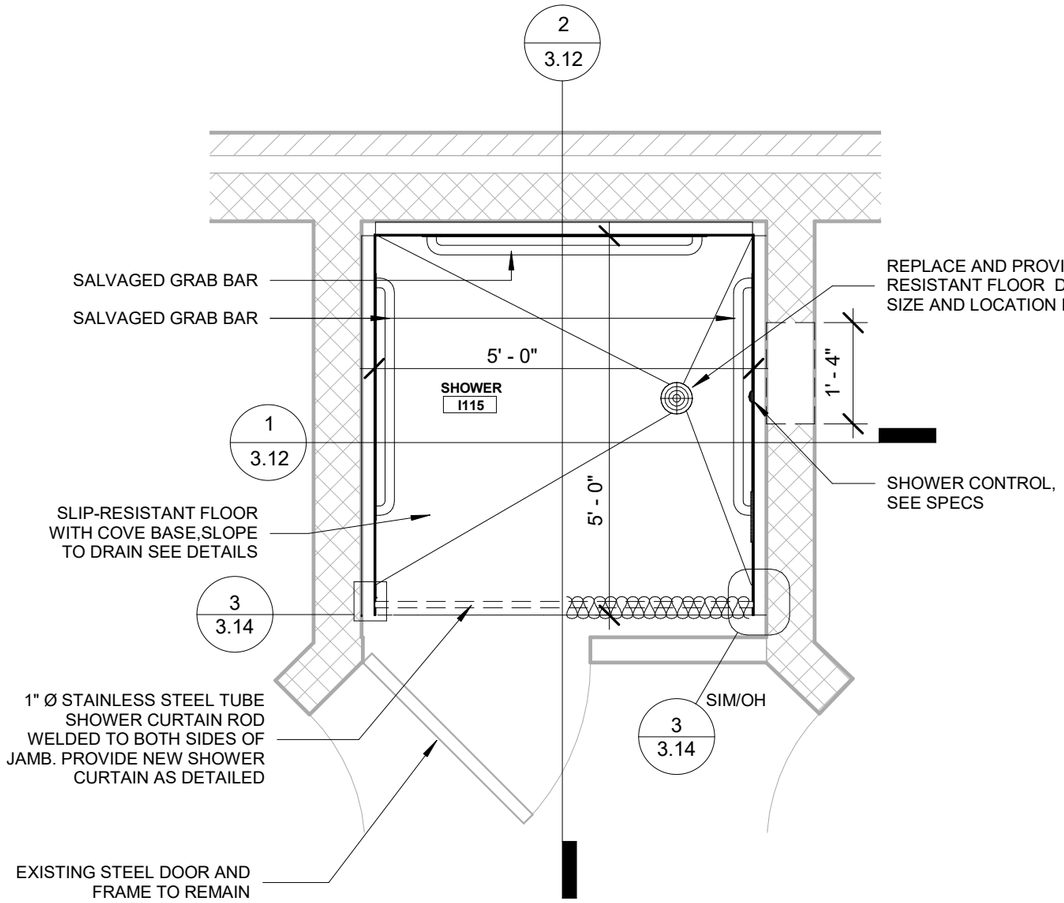
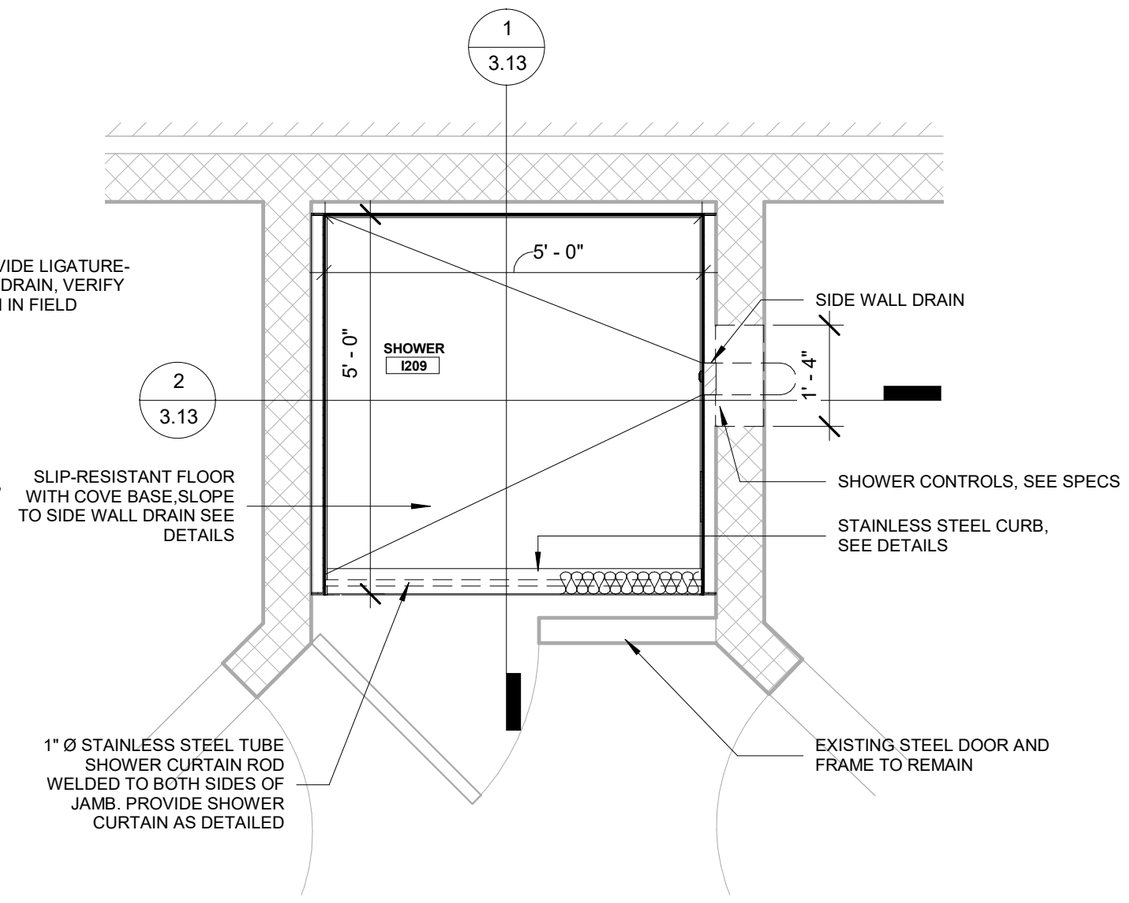
I-BLOCK UNIT TYPICAL SHOWER DEMOLITION PLAN & NOTES

Scale: As indicated

Sheet No. 3.10





NOTE:
1. REPAIRS DONE SHALL BE SIMILAR TO I-UNIT SHOWER#s I133, I151 & I169.
2. TEK-CRETE COVE BASE BASIS OF DESIGN: DEX-O-TEX OR SHERWIN WILLIAMS

1 ENLARGED PLAN (ADA SHOWER STALL TYPICAL)
1/2" = 1'-0"
LOCATION: LOWER LEVEL

NOTE:
1. SHOWER REPAIR SHALL BE SIMILAR TO I-UNIT SHOWER#s : I225, 1243 & I259
2. TEK-CRETE COVE BASE BASIS OF DESIGN: DEX-O-TEX OR SHERWIN WILLIAMS

2 ENLARGED PLAN (NON-ADA SHOWER CABINET, TYPICAL)
1/2" = 1'-0"
LOCATION: UPPER LEVEL

NOTE: CONTRACTOR MUST FIELD MEASURE AND VERIFY ALL DIMENSIONS PRIOR TO FABRICATING ANY COMPONENT OF THE SHOWER. ALL PLUMBING , MECHANICAL AND ELECTRICAL INSTALLATION MUST BE FIELD VERIFIED PRIOR TO INSTALLATION

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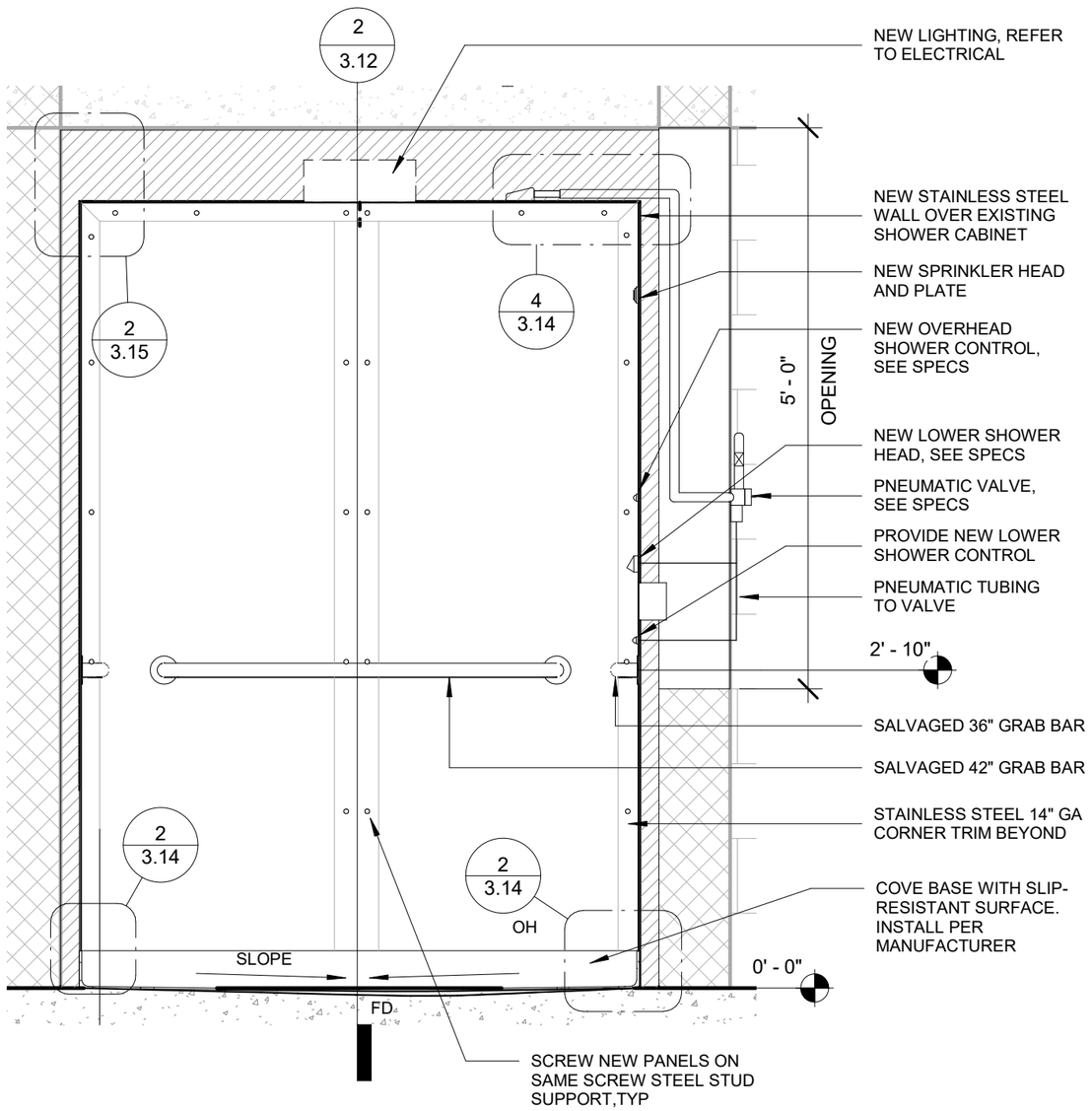
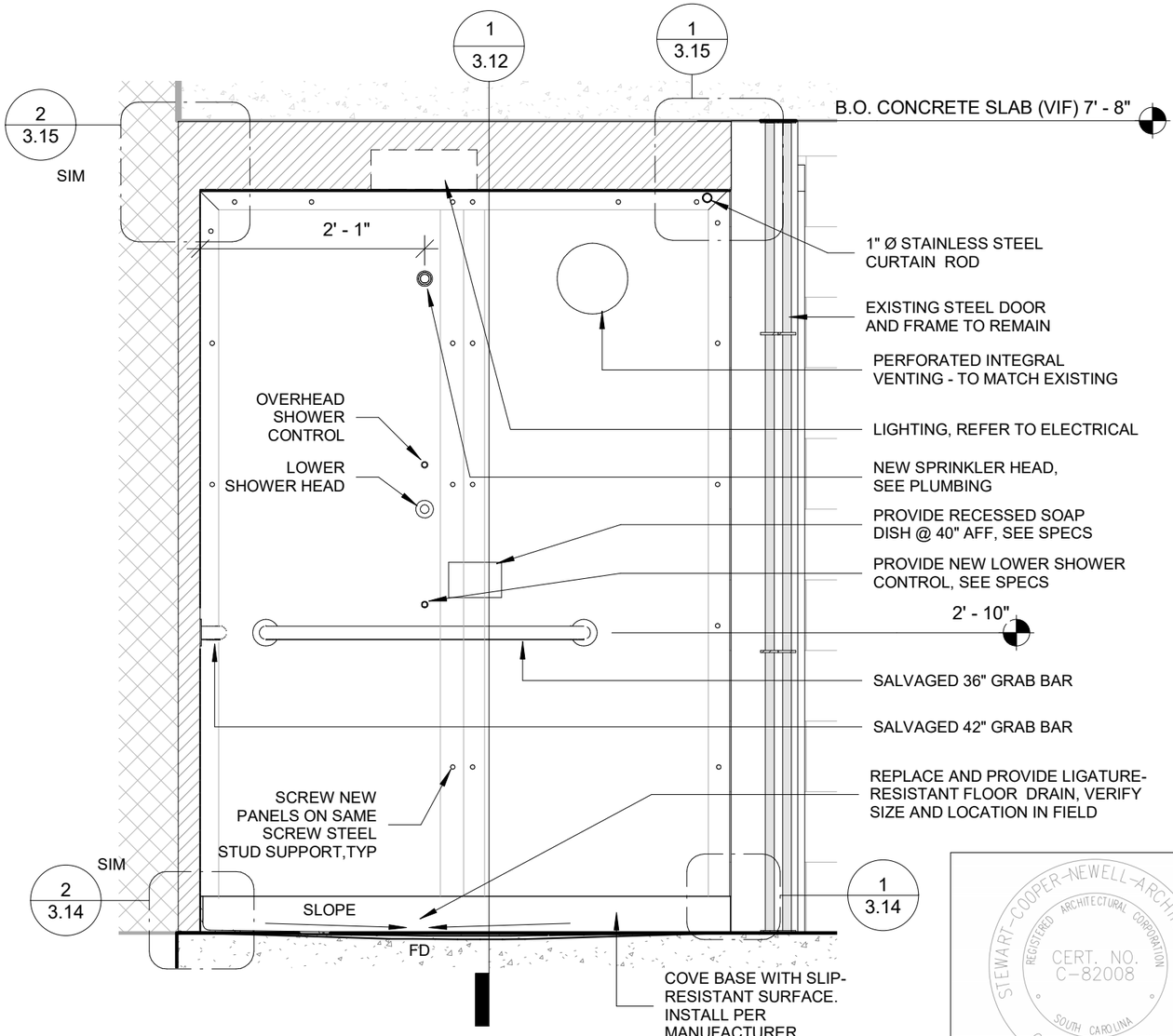
I-BLOCK UNIT TYPICAL SHOWER REPAIR PLANS AND NOTES

Scale: 1/2" = 1'-0"

Sheet No. 3.11



1 TYPICAL SHOWER SECTION (ADA)
3/4" = 1'-0" LOCATION: LOWER LEVEL



2 TYPICAL SHOWER SECTION (ADA)
3/4" = 1'-0" LOCATION: LOWER LEVEL

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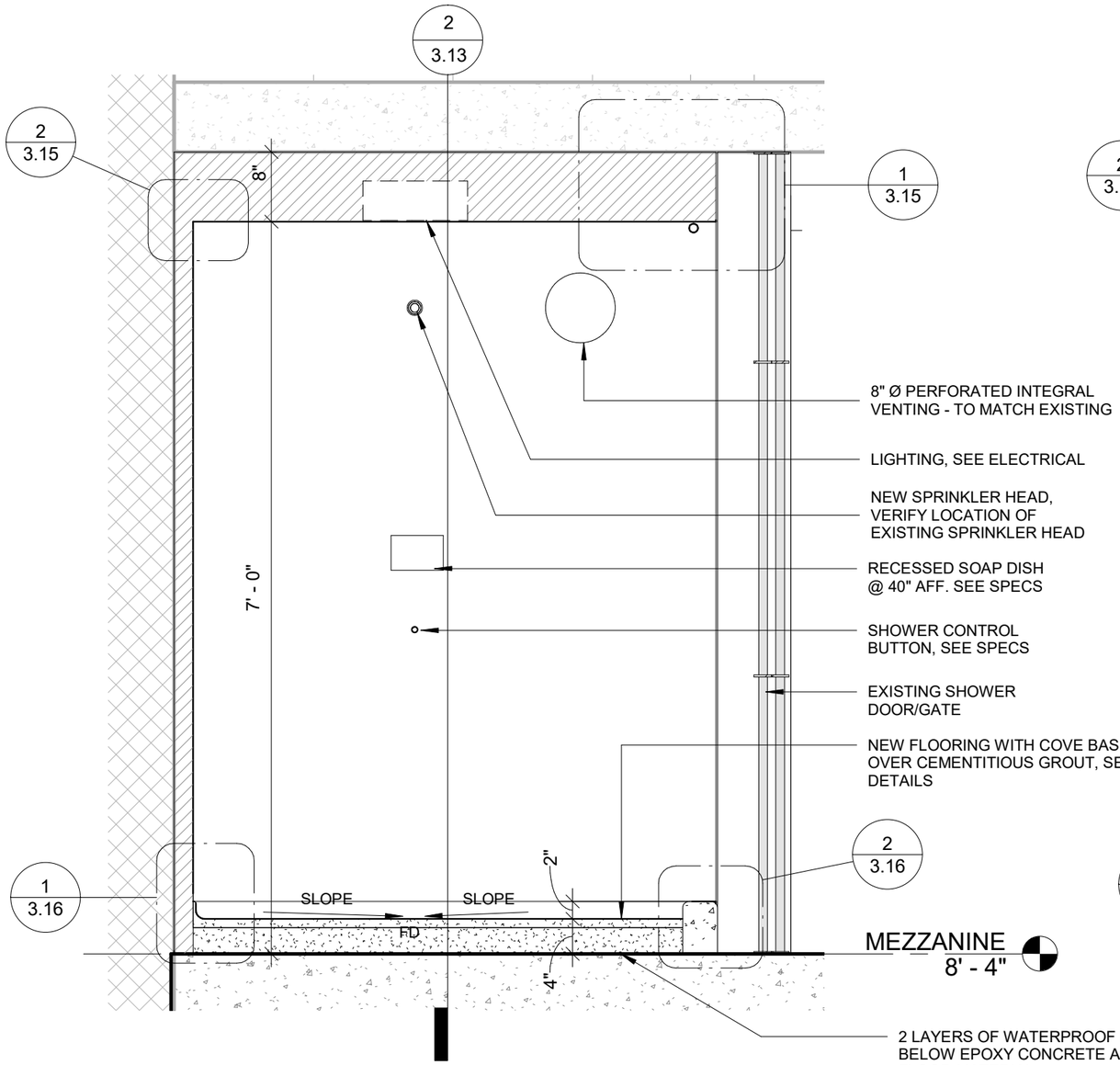
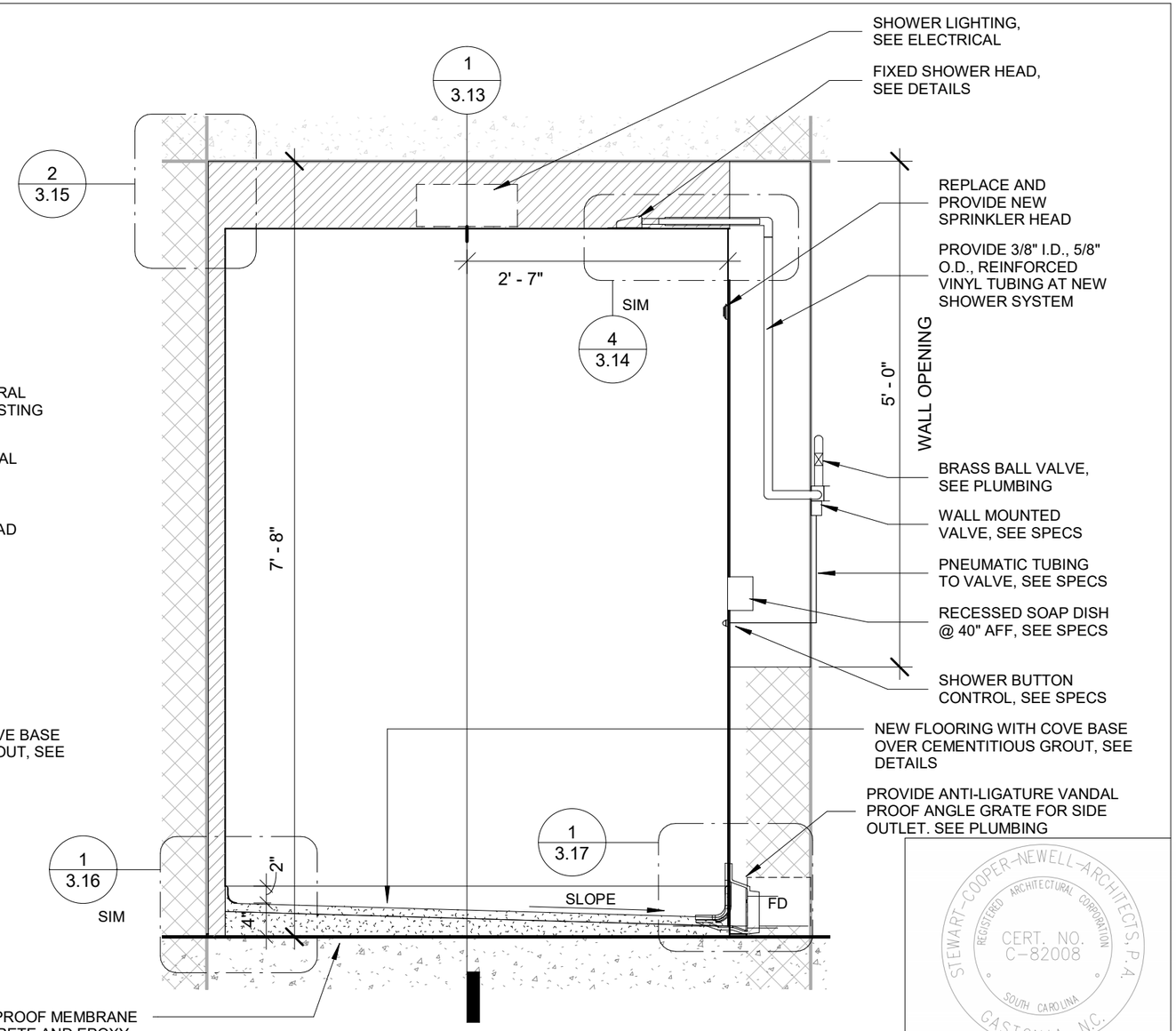
ADA TYPICAL CABINET SECTION (I -BLOCK)
Scale: 3/4" = 1'-0"

Sheet No. 3.12



1 TYPICAL SHOWER SECTION NON-ADA
3/4" = 1'-0" LOCATION: UPPER LEVEL



2 TYPICAL SHOWER SECTION NON-ADA
3/4" = 1'-0" LOCATION: UPPER LEVEL

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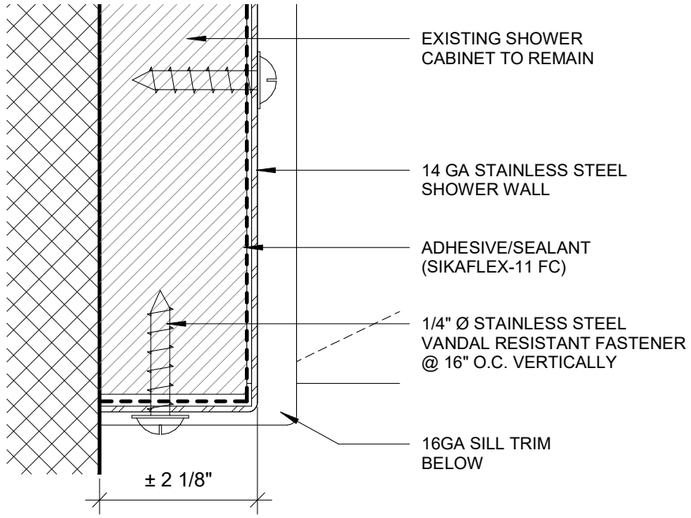
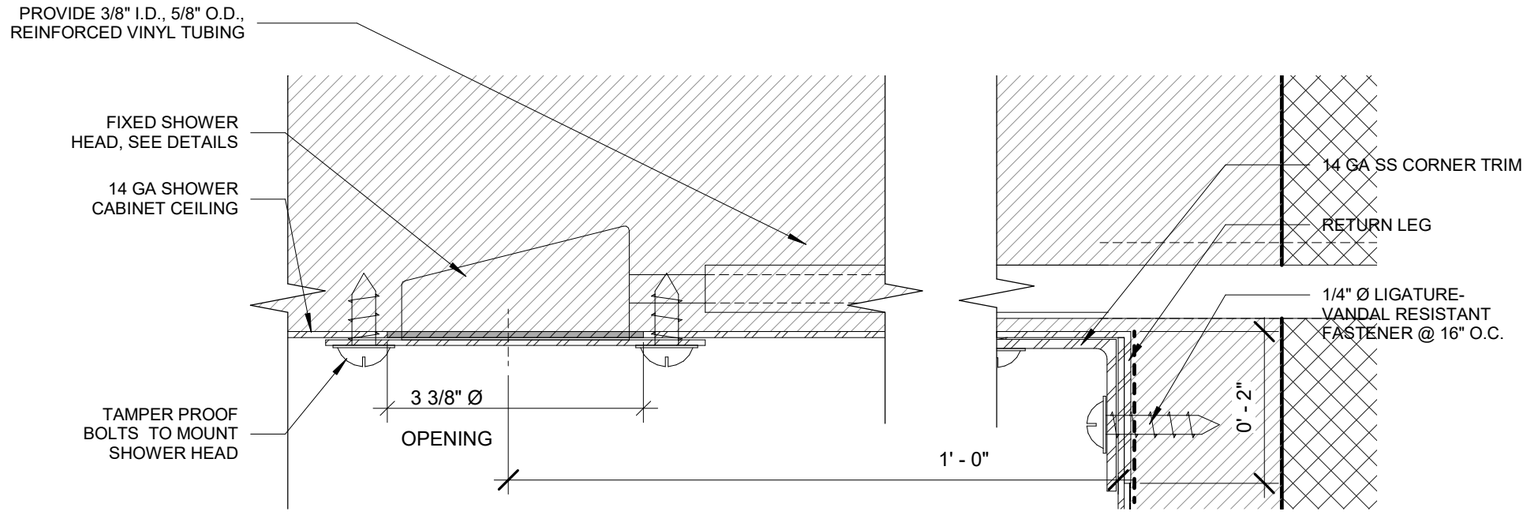
NON-ADA SHOWER CABINET SECTION (I-BLOCK)
Scale: 3/4" = 1'-0"

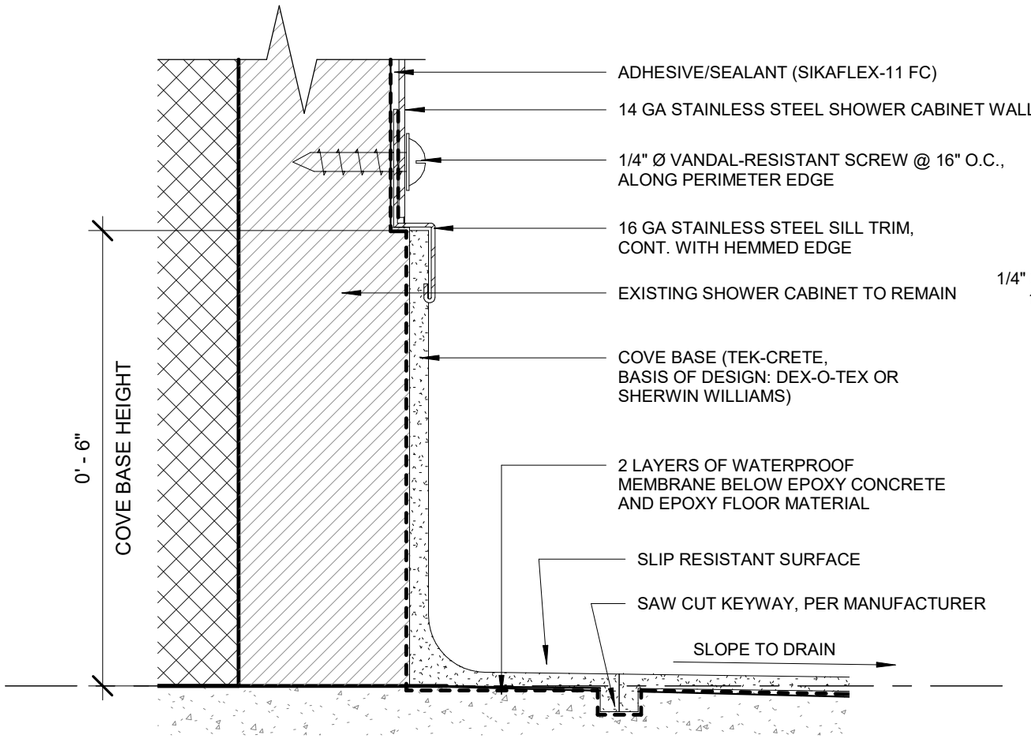
Sheet No. 3.13



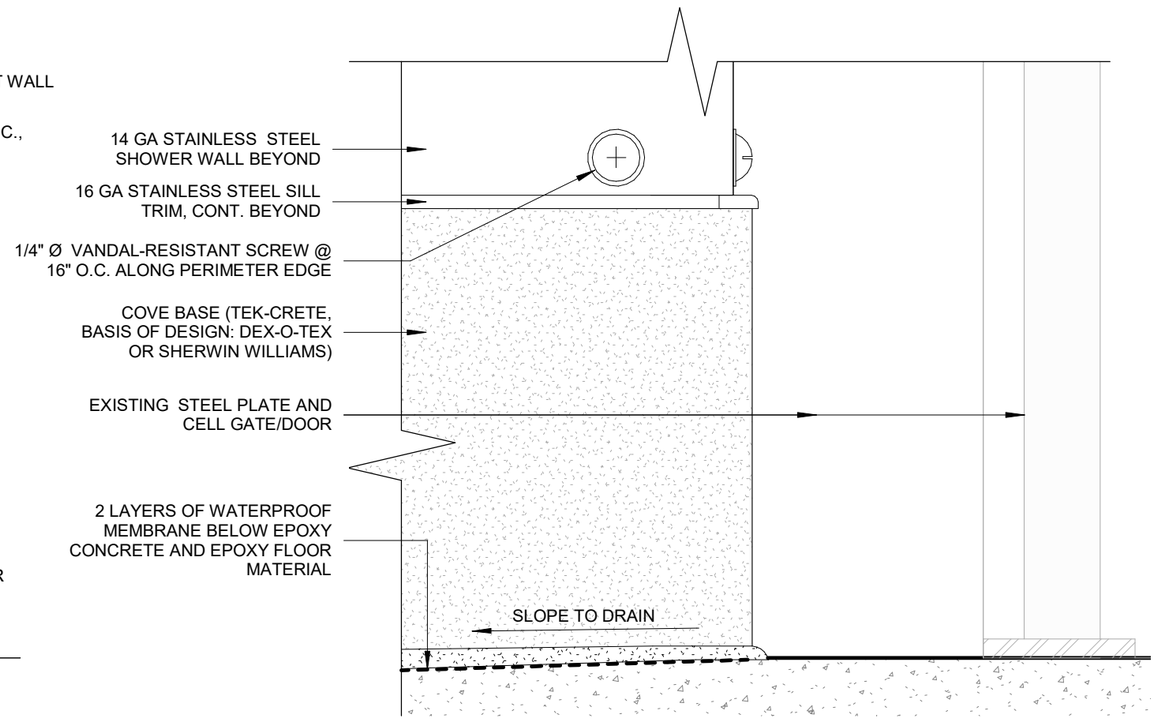
3 PLAN SECTION DETAIL
6" = 1'-0"



4 SECTION DETAIL
6" = 1'-0"



2 SECTION DETAIL
6" = 1'-0"



1 SECTION DETAIL
6" = 1'-0"

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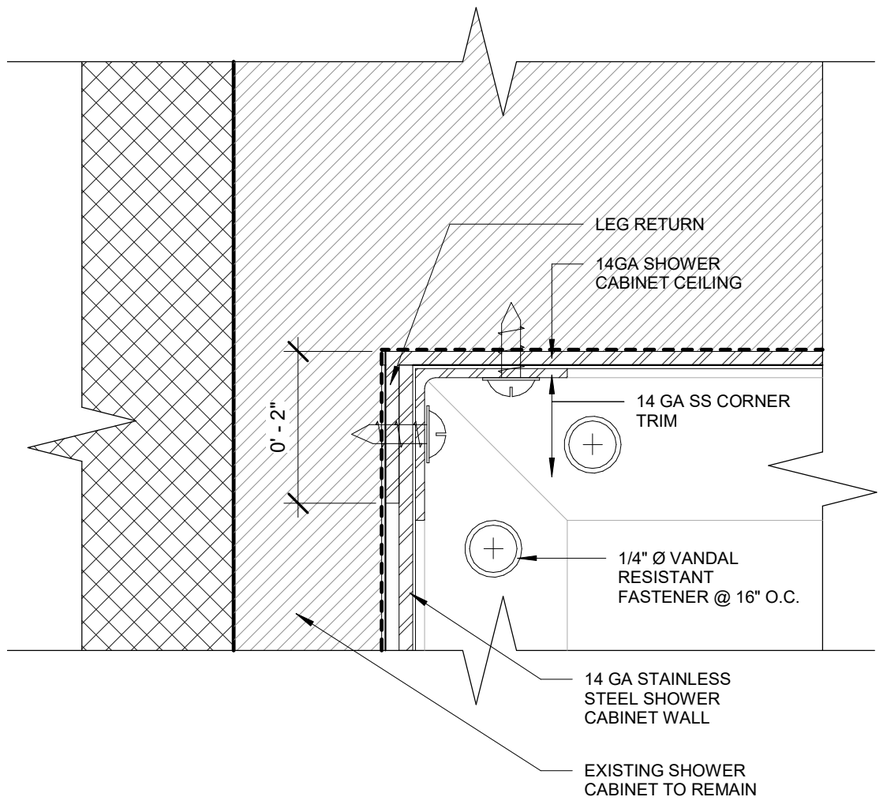
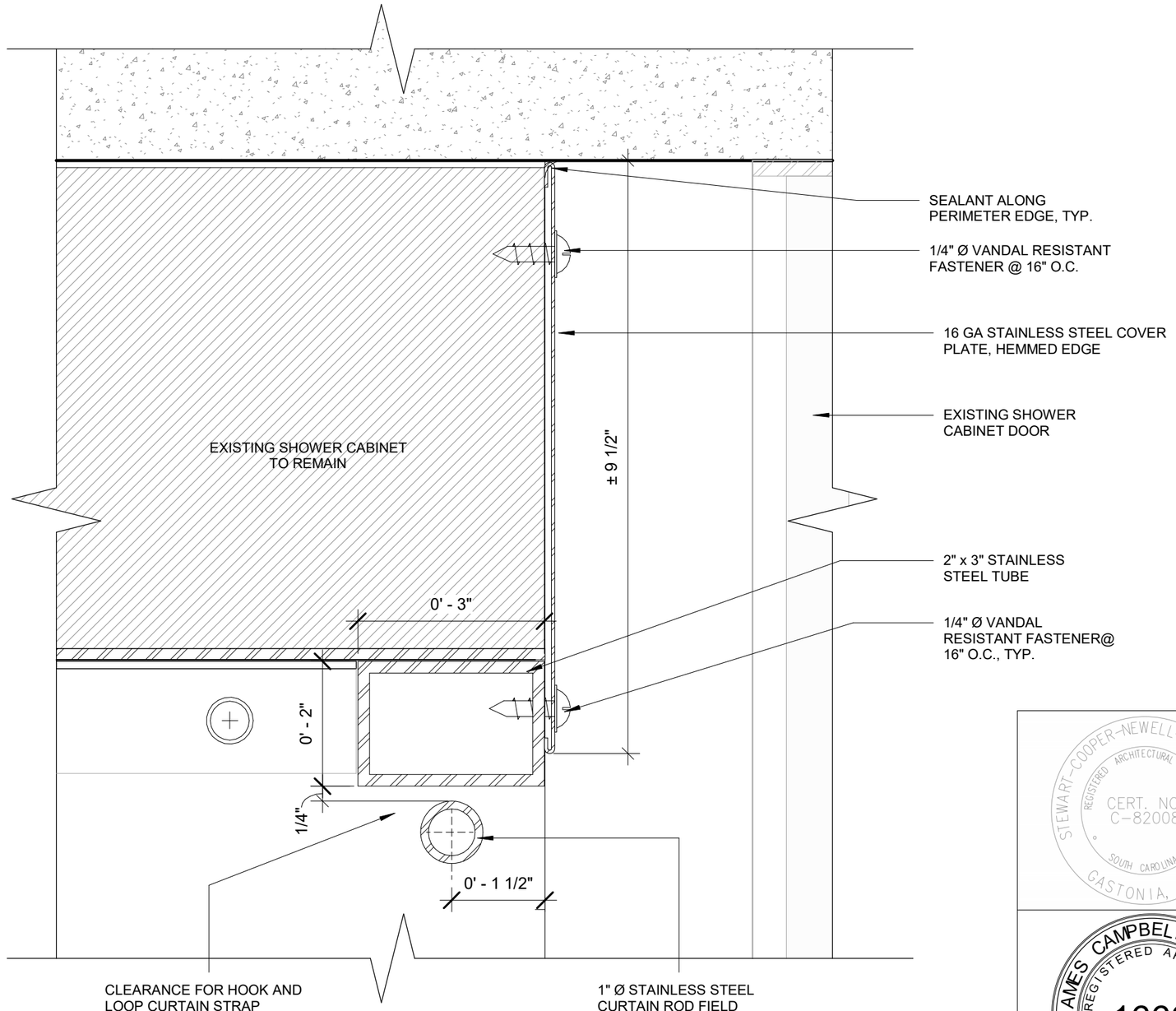
ENLARGED SECTION DETAILS

Scale: 6" = 1'-0"

Sheet No. 3.14



2 ENLARGED SECTION DETAILS
6" = 1'-0"



1 ENLARGED SECTION DETAILS
6" = 1'-0"

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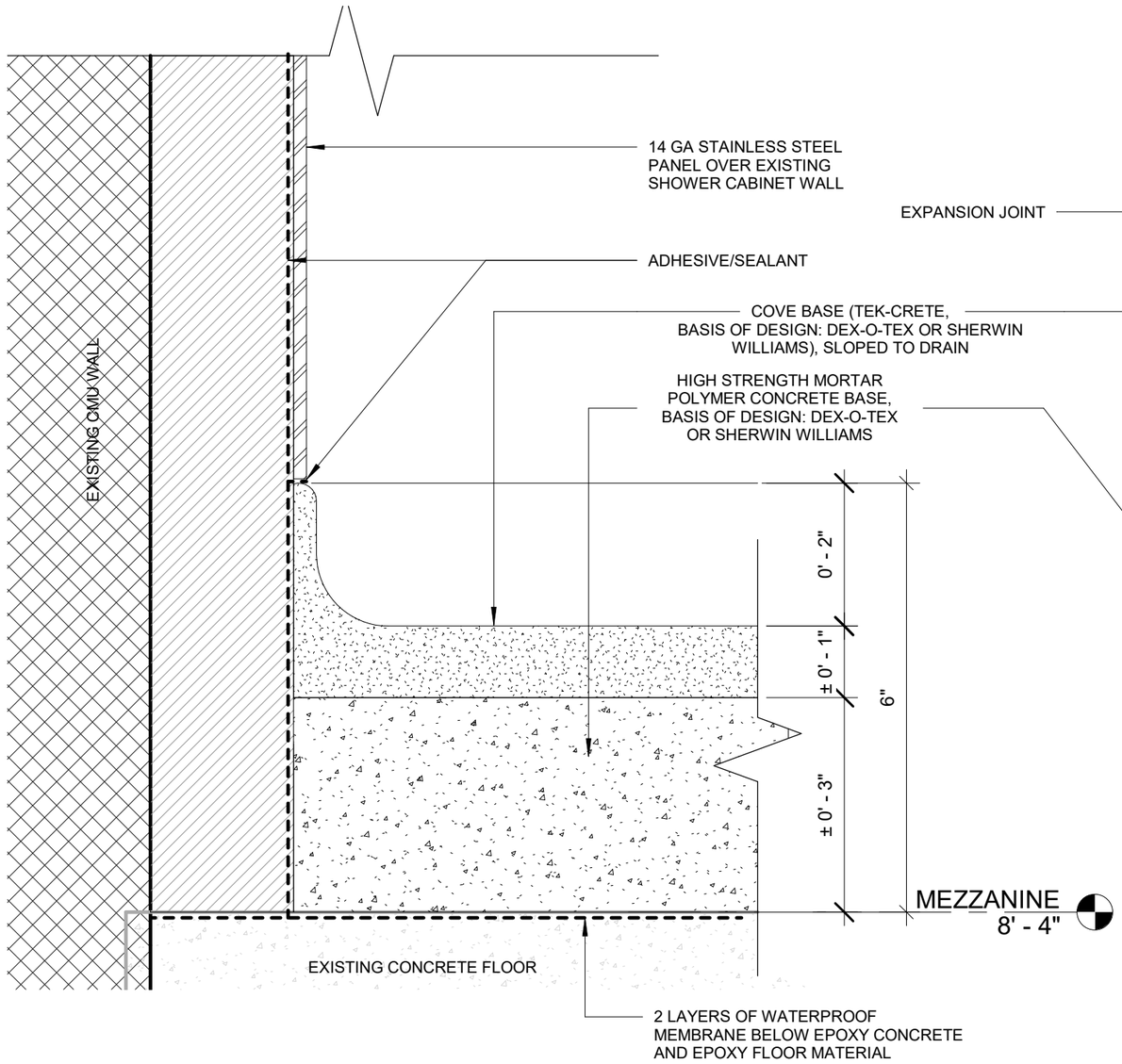
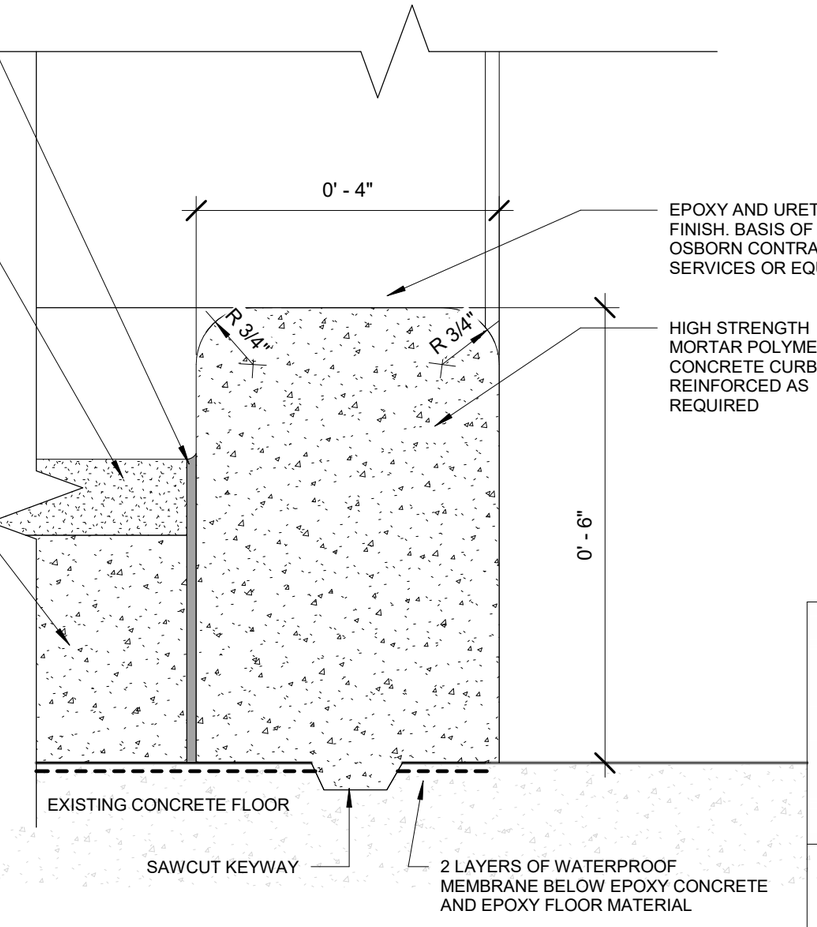
ENLARGED SECTION DETAILS

Scale: 6" = 1'-0"

Sheet No. 3.15



1 SECTION DETAIL
6" = 1'-0"



2 SECTION DETAIL
6" = 1'-0"

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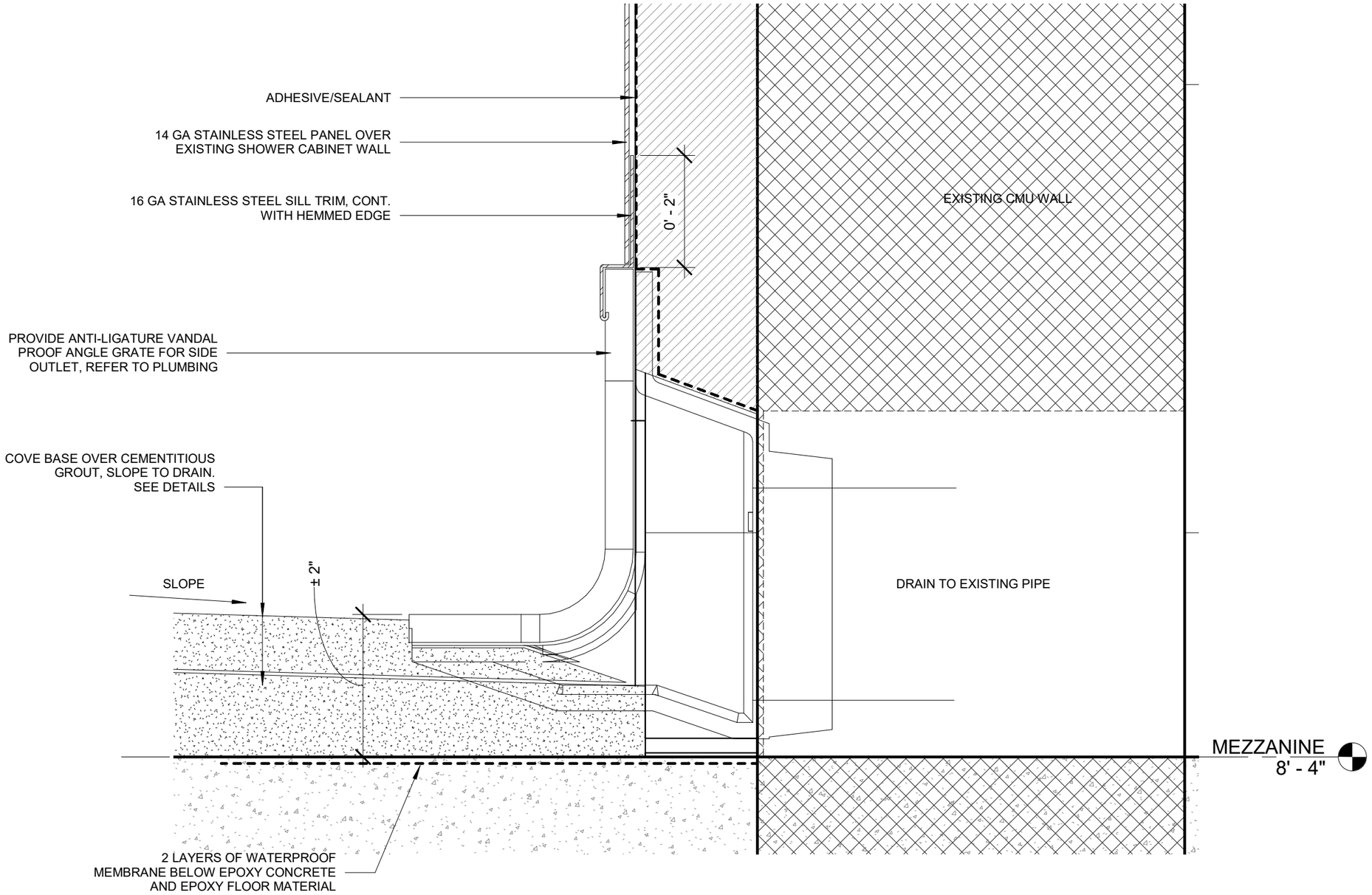
ENLARGED SECTION DETAILS - BASE AND CURB

Scale: 6" = 1'-0"

Sheet No. 3.16



1 ENLARGED SECTION DETAIL- SIDE DRAIN
6" = 1'-0"

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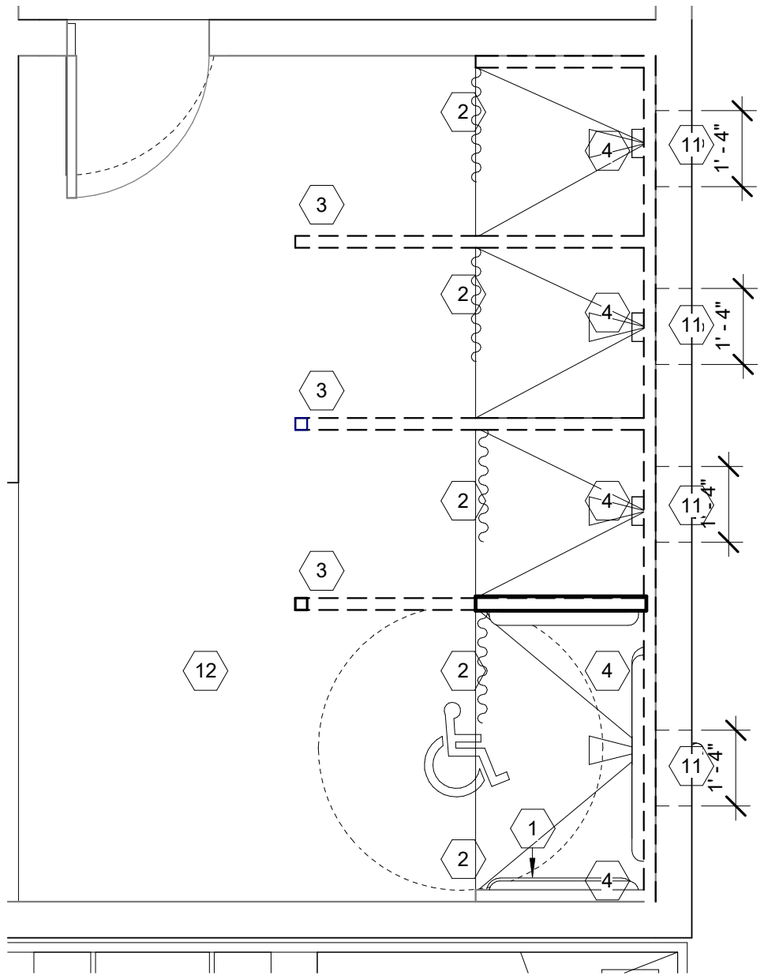
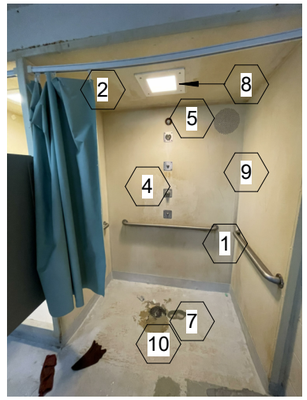
ENLARGED SECTION DETAIL - SIDE DRAIN

Scale: 6" = 1'-0"

Sheet No. 3.17

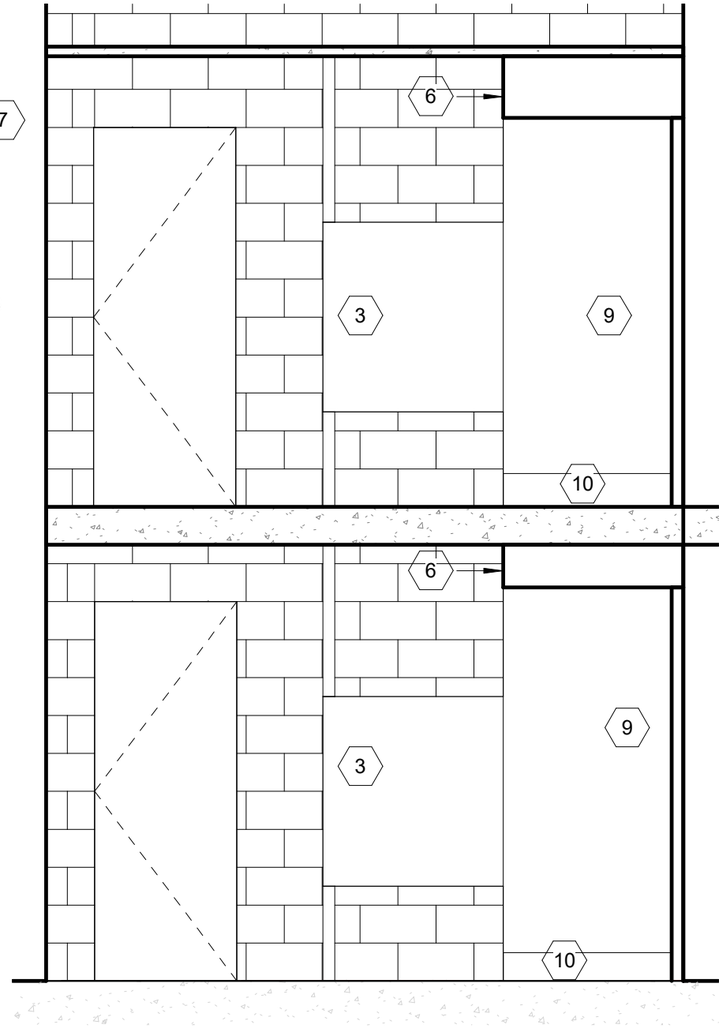


1 GANG SHOWER PLAN (1ST FLOOR)
3/8" = 1'-0"



DEMOLITION KEYED NOTES :

1. - CAREFULLY REMOVE EXISTING GRAB BARS, CLEAN AND REINSTALL AS DIRECTED
2. - REMOVE EXISTING CURTAIN AND CURTAIN ROD
3. - REMOVE EXISTING EXTENSION PANELS/PARTITION, POST AND OVERHEAD SUPPORT.
4. - REMOVE AND REPLACE EXISTING SHOWER HEAD AND PLATES, REFER TO NEW PLAN DETAILS.
5. - REMOVE AND REPLACE EXISTING SPRINKLER HEAD.
6. - REMOVE EXISTING PAINTED STEEL PLATE.
7. - REMOVE AND REPLACE FLOOR DRAIN GRILL, SEE PLUMBING PLAN.
8. - REMOVE AND REPLACE LIGHT DIFFUSERS, SEE ELECTRICAL PLAN.
9. - DEMO SHOWER WALL PANELS AND CURB.
10. - PREPARE FLOOR AND WALLS FOR NEW SHOWER PANELS.
11. - DEMO/CREATE WALL OPENING, REFER TO NEW PLAN FOR HEIGHT AND WIDTH.
12. REMOVE EXISTING SHOWER FLOOR COATING AND PREPARE FOR NEW FLOOR FINISH



3 GANG SHOWER DEMOLITION SECTION
3/8" = 1'-0"

NOTE: 1. PATCH CEILINGS AS REQUIRED.
2. PRIMER AND PAINT TO MATCH ADJACENT.

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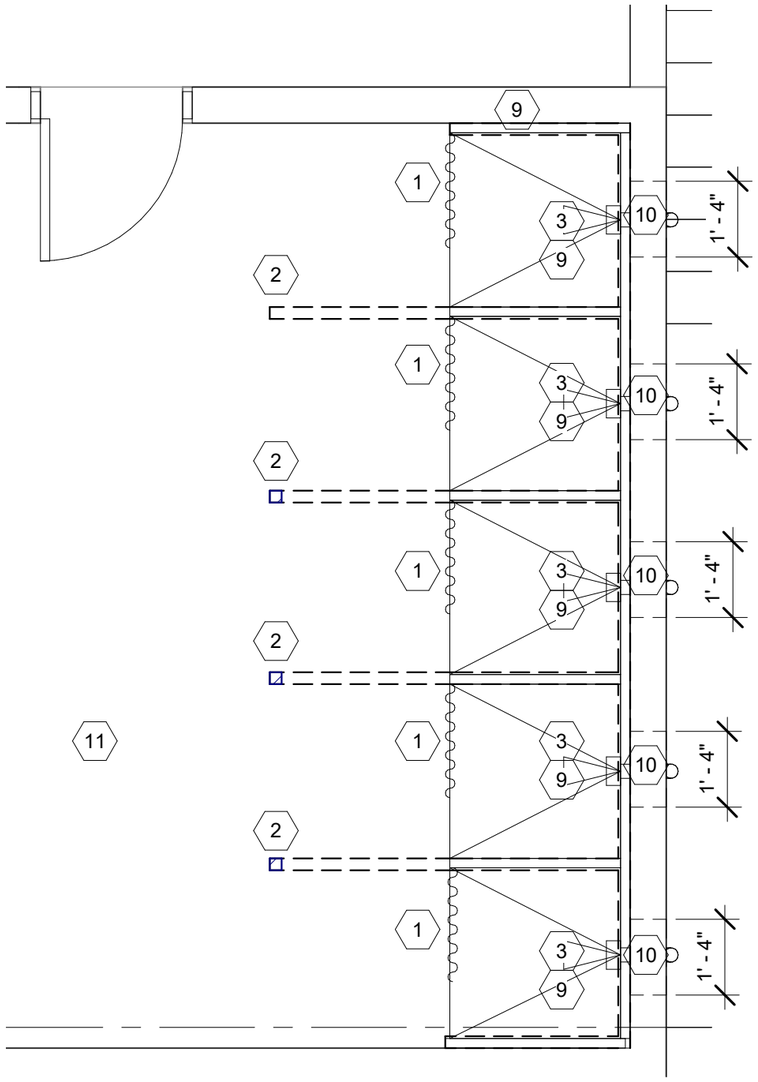
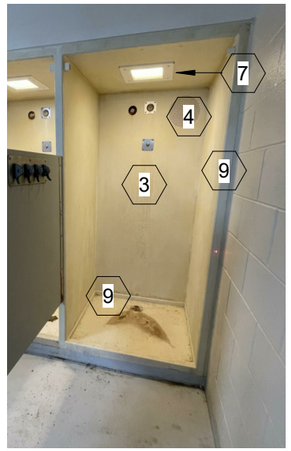
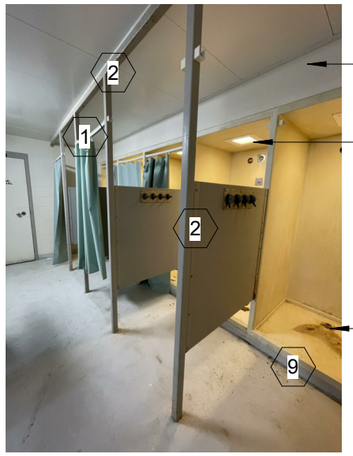
J-BLOCK GANG SHOWER DEMOLITION PLAN (1ST FLOOR)
Scale: As indicated

Sheet No. 4.10



1 GANG SHOWER DEMOLITON PLAN
3/8" = 1'-0"





DEMOLITION KEYED NOTES :

1 - REMOVE EXISTING CURTAIN AND CURTAIN ROD

2 - REMOVE EXISTING EXTENSION PANELS/PARTITION, POST AND OVERHEAD SUPPORT.

3 - REMOVE AND REPLACE EXISTING SHOWER HEAD AND PLATES, REFER TO NEW PLAN DETAILS.

4 - REMOVE AND REPLACE EXISTING SPRINKLER HEAD.

5 - REMOVE EXISTING PAINTED STEEL PLATE.

6 - REMOVE AND REPLACE FLOOR DRAIN GRILL, SEE PLUMBING PLAN.

7 - REMOVE AND REPLACE LIGHT DIFFUSERS, SEE ELECTRICAL PLAN.

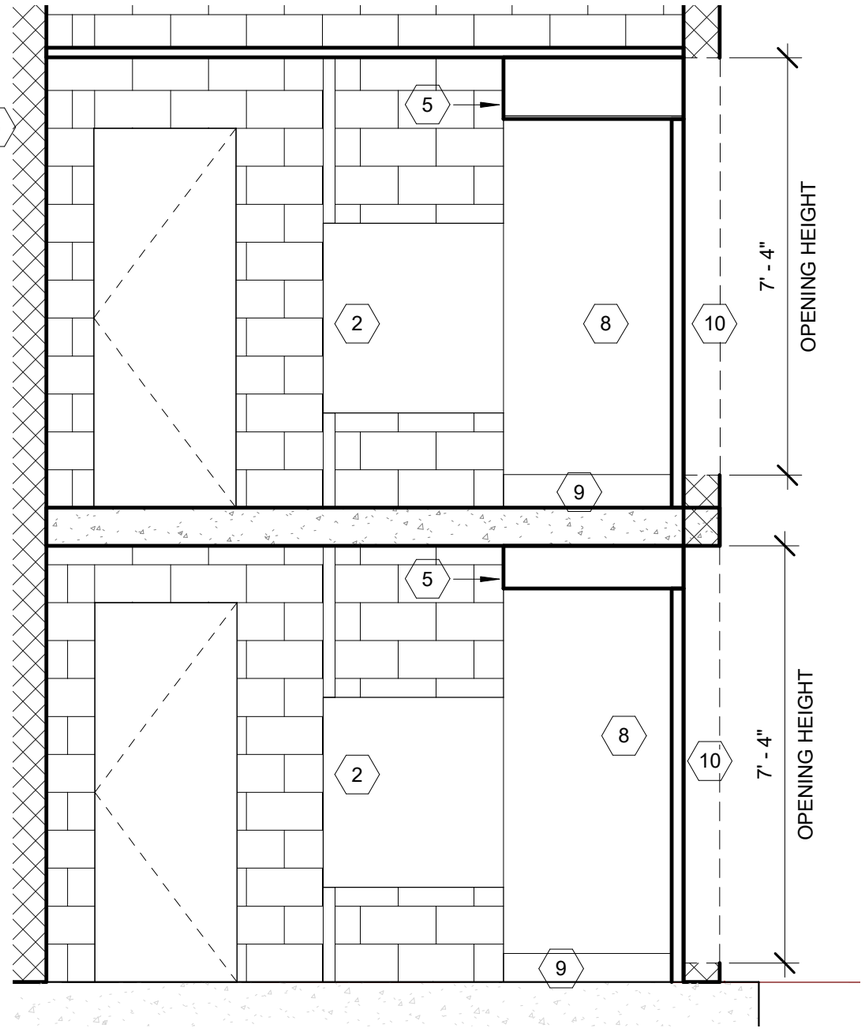
8 - DEMO SHOWER WALL PANELS AND CURB.

9 - PREPARE FLOOR AND WALLS FOR NEW SHOWER PANELS.

10 - DEMO/CREATE WALL OPENING, REFER TO NEW PLAN FOR HEIGHT AND WIDTH.

11 REMOVE EXISTING SHOWER FLOOR COATING AND PREPARE FOR NEW FLOOR FINISH

NOTE: 1. PATCH CEILINGS AS REQUIRED.
2. PRIMER AND PAINT TO MATCH ADJACENT.



3 GANG SHOWER DEMOLITION SECTION
3/8" = 1'-0"

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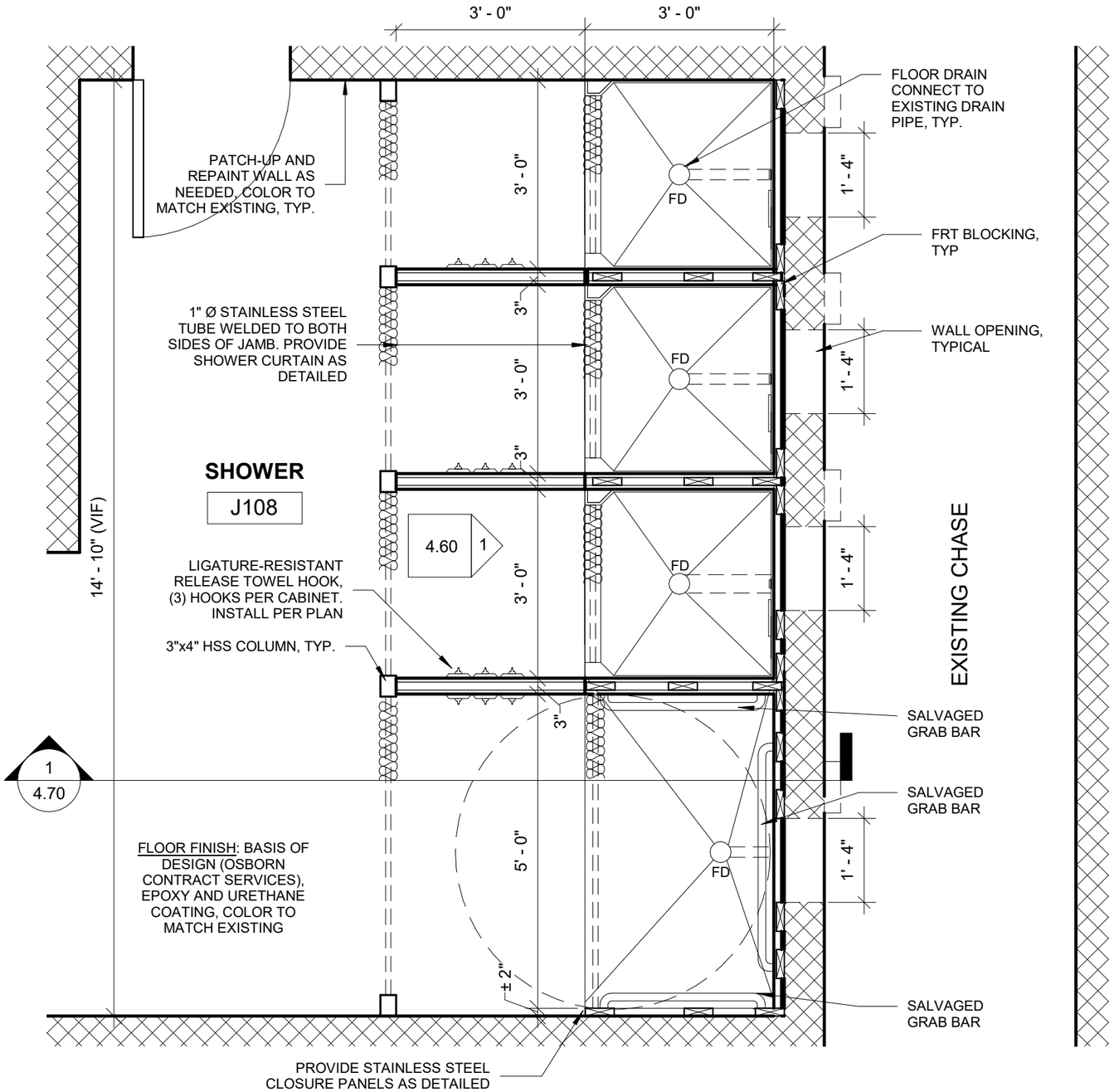
J-BLOCK GANG SHOWER DEMOLITION PLAN (2ND FLOOR)
Scale: As indicated

Sheet No. 4.20



1 J-BLOCK GANG SHOWER PLAN
1/2" = 1'-0"
LOCATION: LOWER LEVEL

NOTE: GC TO VERIFY IN FIELD ALL EXISTING LOCATIONS OF SPRINKLER HEAD, VENTS/EXHAUST, FLOOR DRAIN, WALLS AND ALL DIMENSIONS PRIOR TO FABRICATION. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS.

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CERT. NO. C-82008
SOUTH CAROLINA
GASTONIA, N.C.

JAMES CAMPBELL STEWART
REGISTERED ARCHITECT
1666
SOUTH CAROLINA
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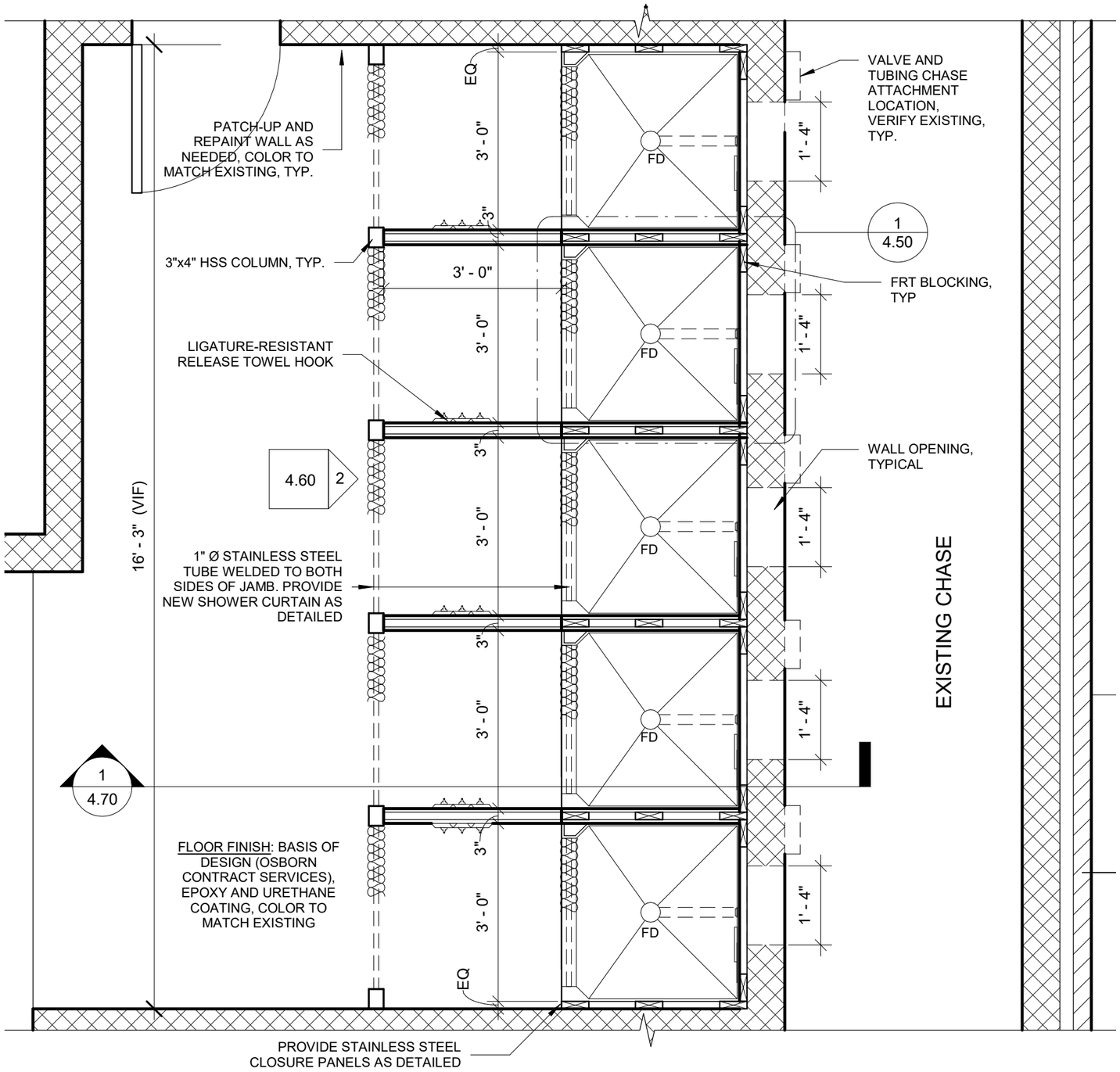
J-BLOCK GANG SHOWER PLAN AND NOTES (LOWER LEVEL)
Scale: 1/2" = 1'-0"

Sheet No. 4.30



1 GANG SHOWER PLAN AND NOTES (UPPER LEVEL)
1/2" = 1'-0"

NOTE: GC TO VERIFY IN FIELD ALL EXISTING LOCATIONS OF SPRINKLER HEAD, VENTS/EXHAUST, FLOOR DRAIN, WALLS AND ALL DIMENSIONS PRIOR TO FABRICATION. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS.

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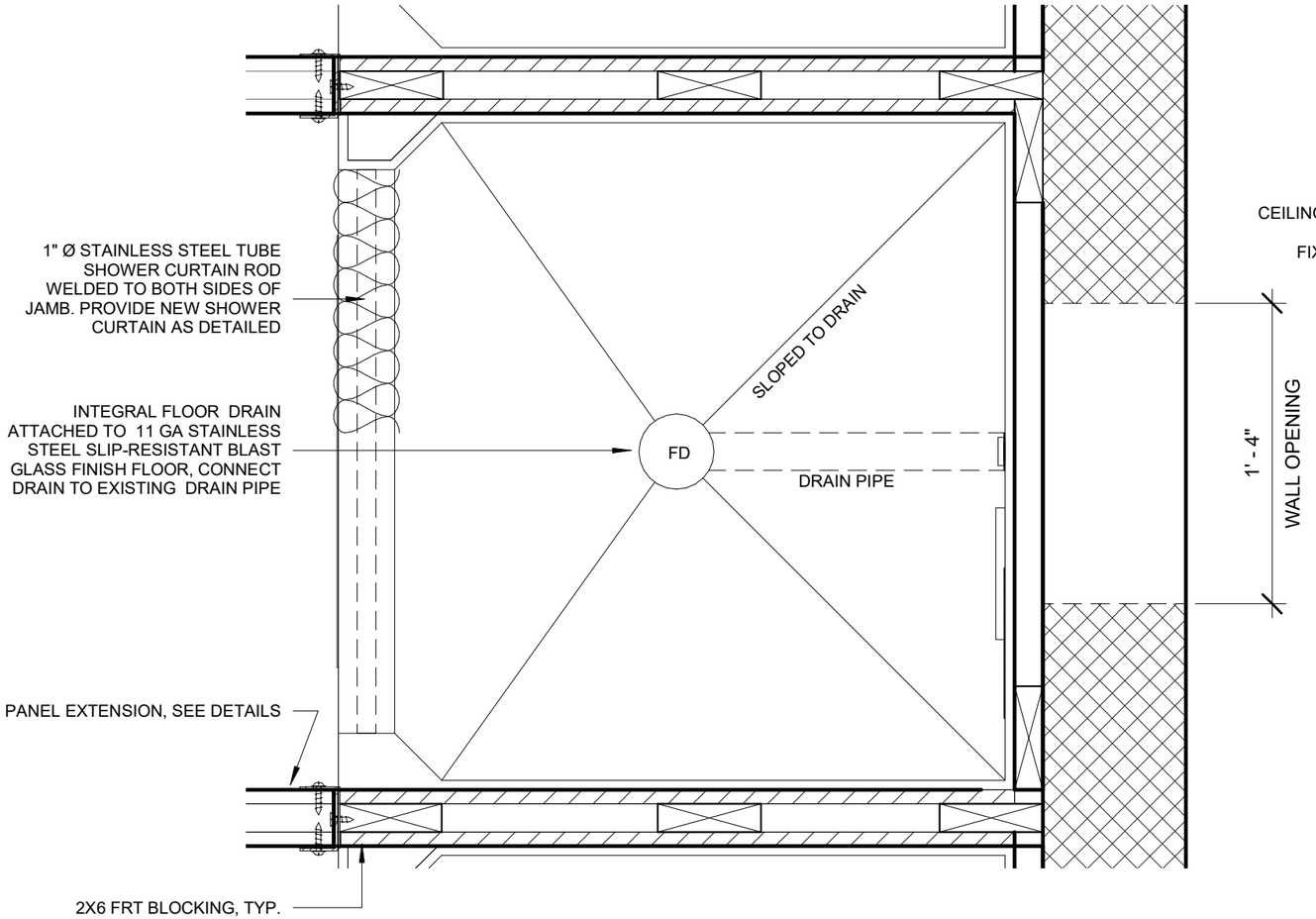
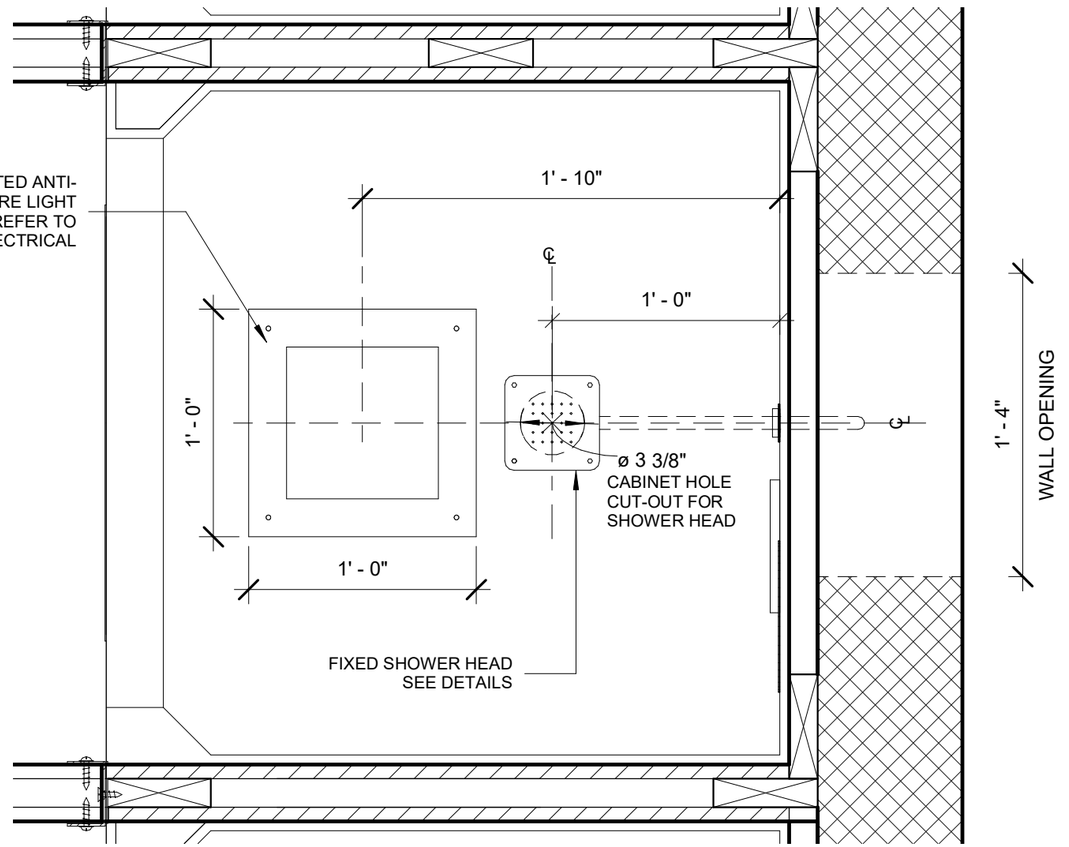
J-BLOCK GANG SHOWER PLAN AND NOTES (UPPER LEVEL UNITS)

Scale: 1/2" = 1'-0"

Sheet No. 4.40



1 CABINET SHOWER PLAN, TYP
1 1/2" = 1'-0"



2 CABINET SHOWER RCP, TYP
1 1/2" = 1'-0"

BASIS OF DESIGN: WILLOUGHBY INDUSTRIES FRONT ACCESS CABINET SHOWERS

NOTE: CONTRACTOR MUST FIELD MEASURE AND VERIFY ALL DIMENSIONS PRIOR TO FABRICATING ANY COMPONENT OF THE SHOWER. ALL PLUMBING , MECHANICAL AND ELECTRICAL INSTALLATION MUST BE FIELD VERIFIED PRIOR TO INSTALLATION

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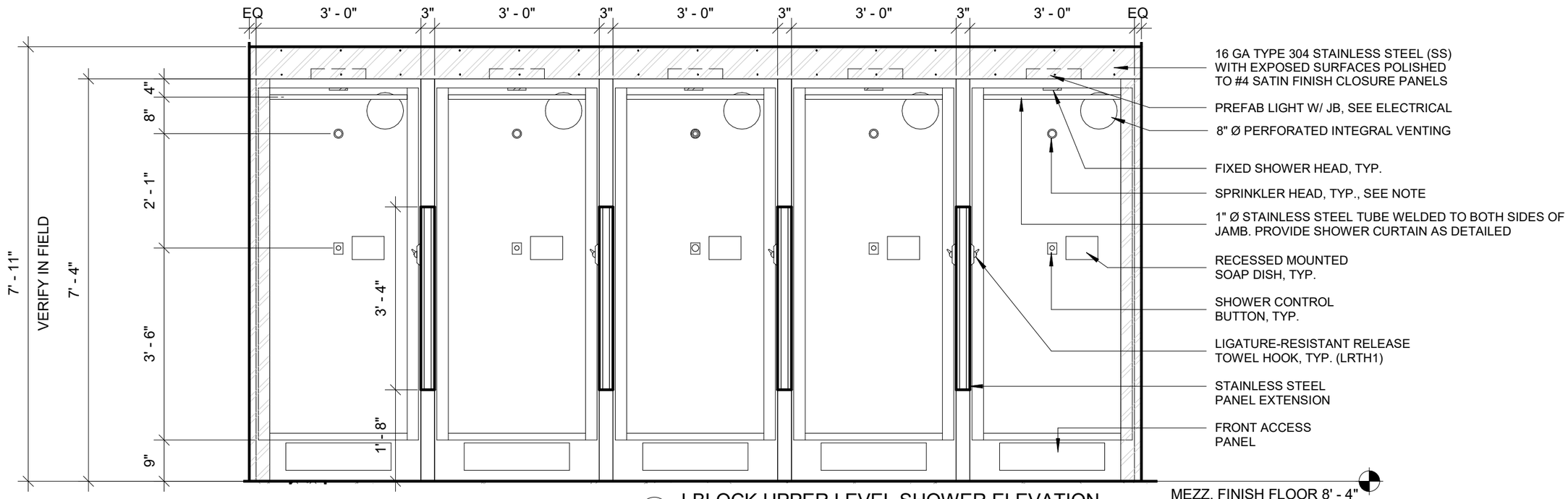
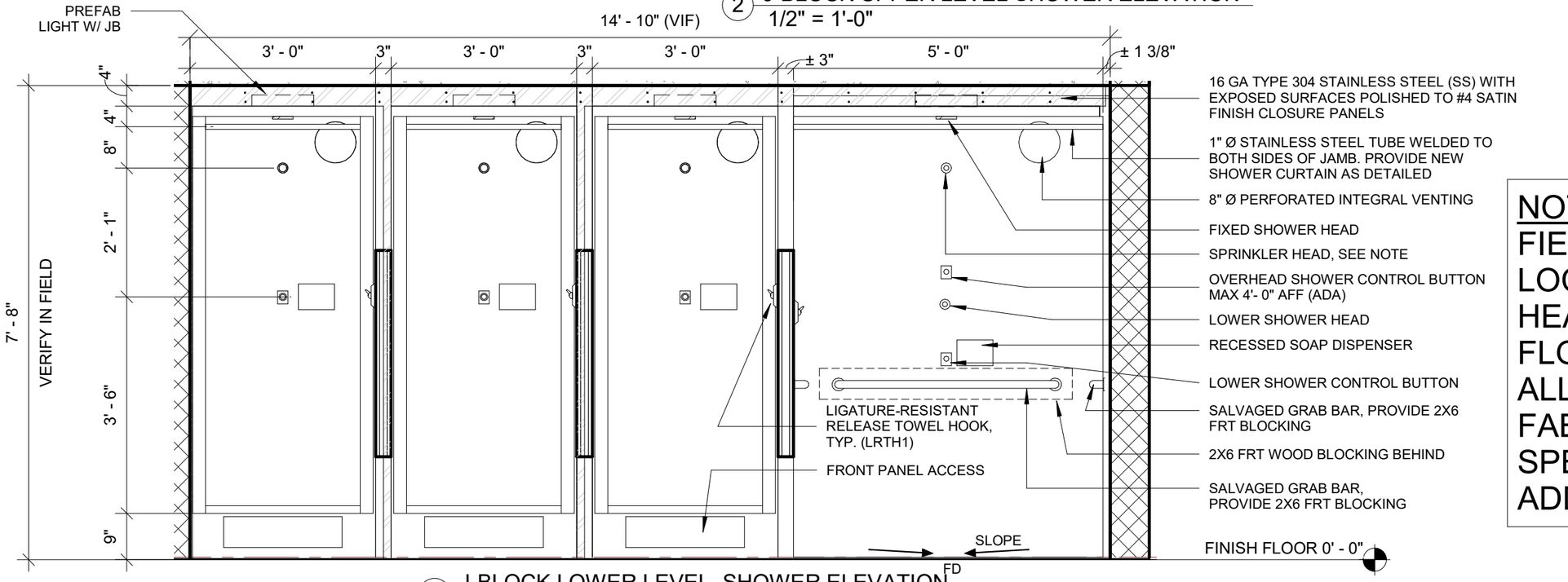
J-BLOCK TYPICAL 36X36 FRONT ACCESS CABINET SHOWER PLAN

Scale: 1 1/2" = 1'-0"

Sheet No. 4.50



2 J-BLOCK UPPER LEVEL SHOWER ELEVATION
1/2" = 1'-0"



1 J-BLOCK LOWER LEVEL SHOWER ELEVATION
1/2" = 1'-0"

NOTE: GC TO VERIFY IN FIELD ALL EXISTING LOCATIONS OF SPRINKLER HEAD, VENTS/EXHAUST, FLOOR DRAIN, WALLS AND ALL DIMENSIONS PRIOR TO FABRICATION. REFER TO SPECIFICATIONS FOR ADDITIONAL DETAILS.

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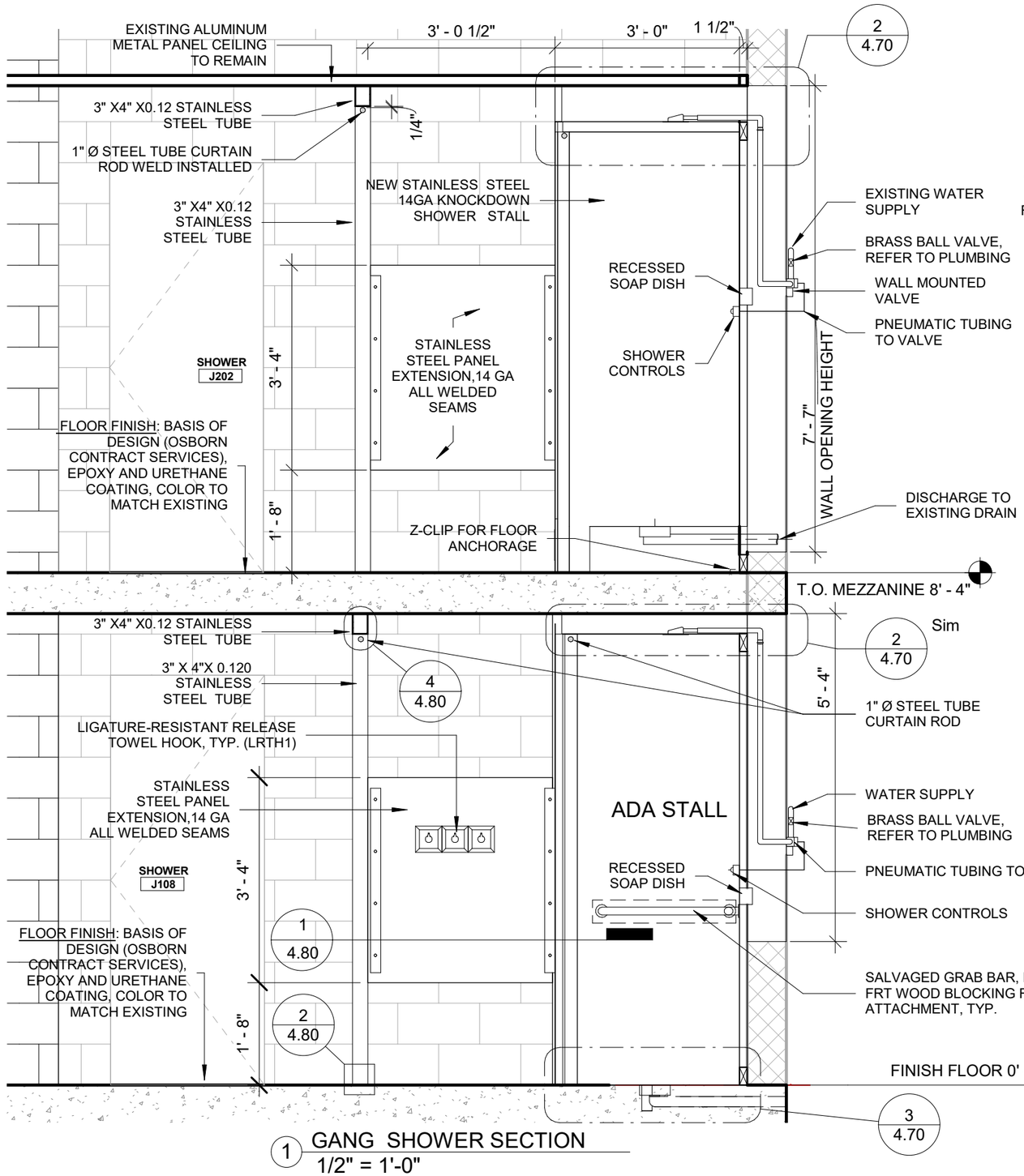
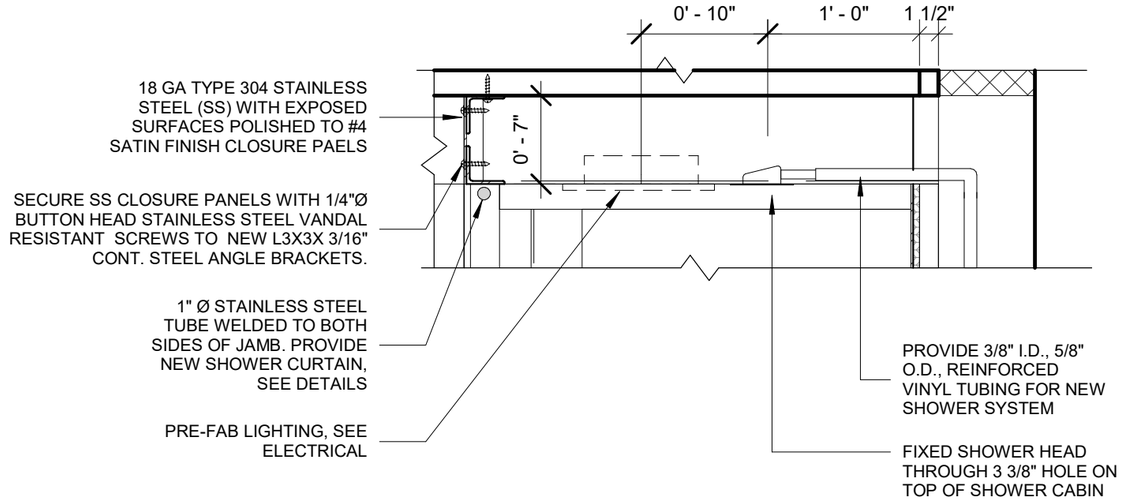
J-BLOCK GANG SHOWER ELEVATIONS
Scale: 1/2" = 1'-0"

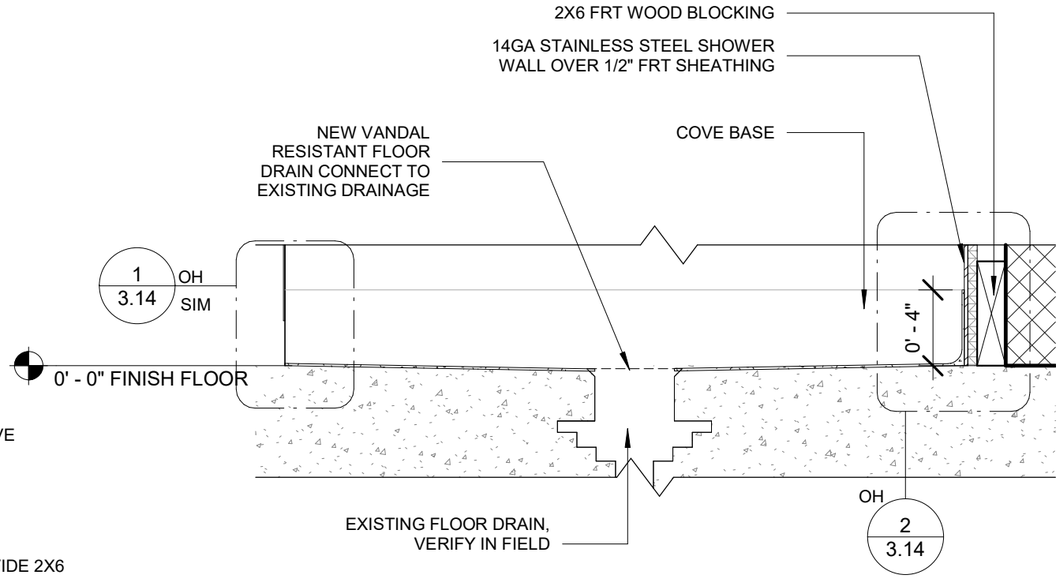
Sheet No. 4.60



1 GANG SHOWER SECTION
1/2" = 1'-0"



2 CABINET SHOWER SECTION HEAD DETAIL
1" = 1'-0"



3 ADA CABINET SHOWER SECTION SILL DETAIL
1 1/2" = 1'-0"

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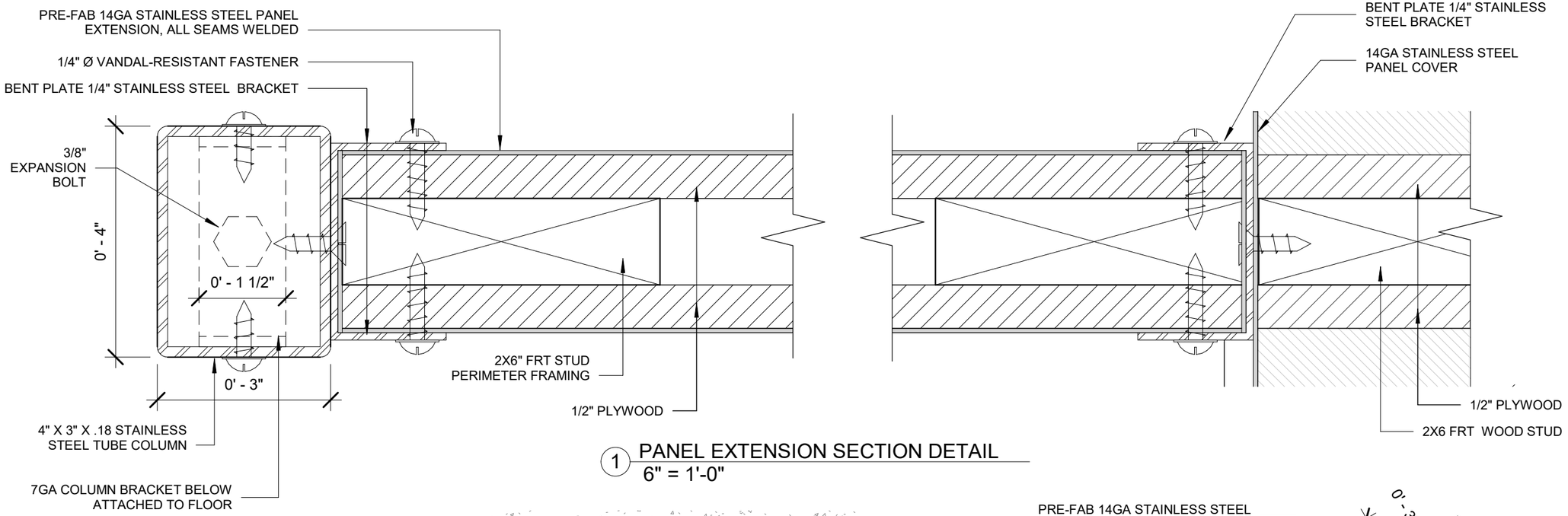
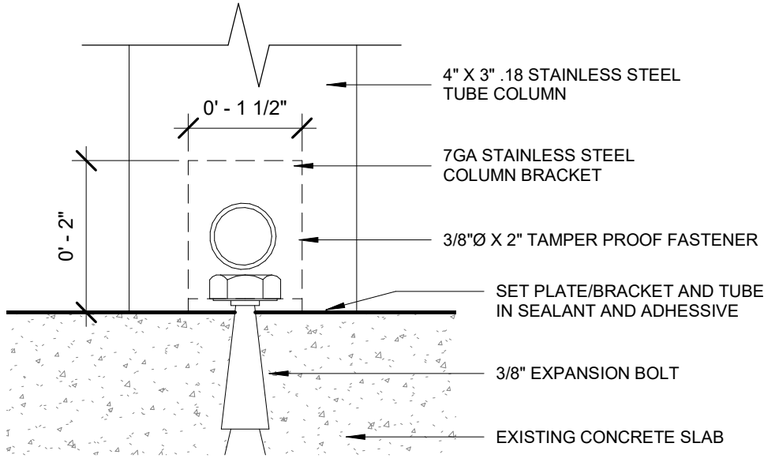
SECTION DETAILS - GANG SHOWER

Scale: As indicated

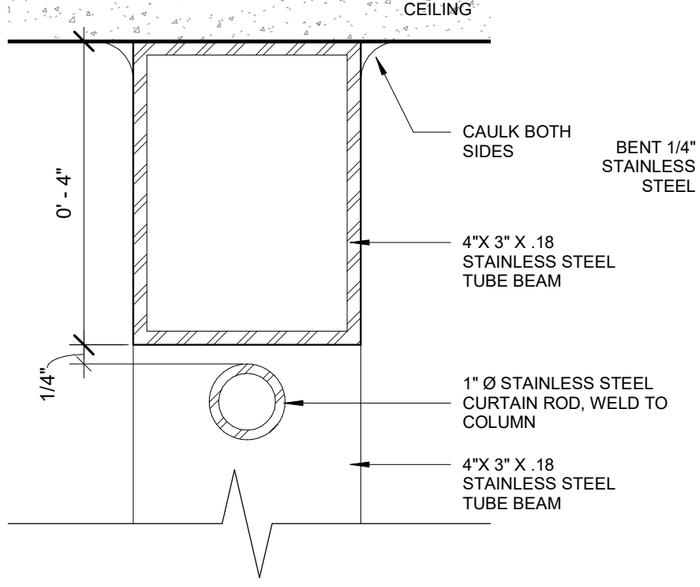
Sheet No. 4.70



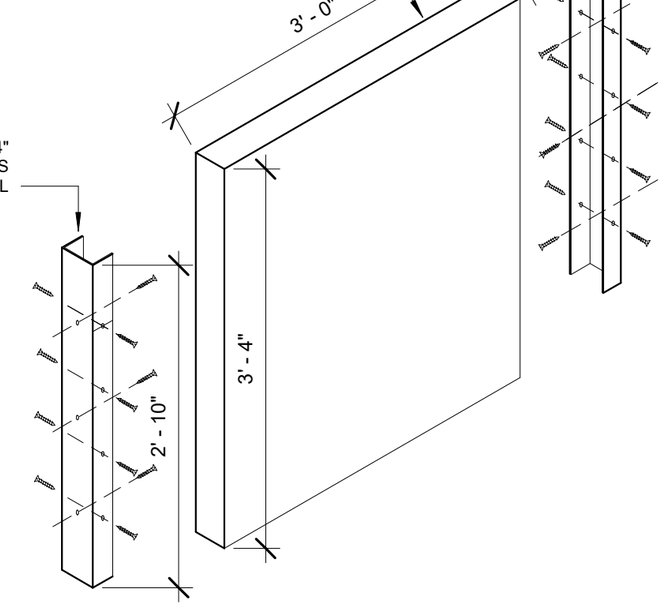
1 PANEL EXTENSION SECTION DETAIL
6" = 1'-0"



2 STAINLESS STEEL TUBE SILL DETAIL
6" = 1'-0"



4 STAINLESS STEEL TUBE HEADER DETAIL
6" = 1'-0"



3 PANEL EXTENSION DETAIL
3/4" = 1'-0"

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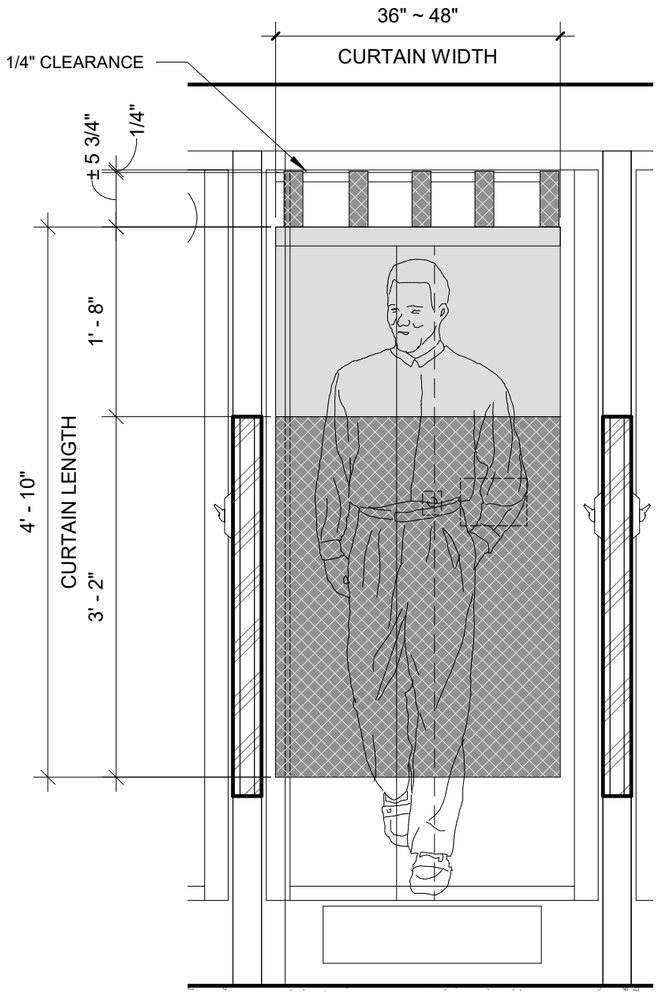
SECTION DETAILS - PANEL EXTENSION ATTACHMENT

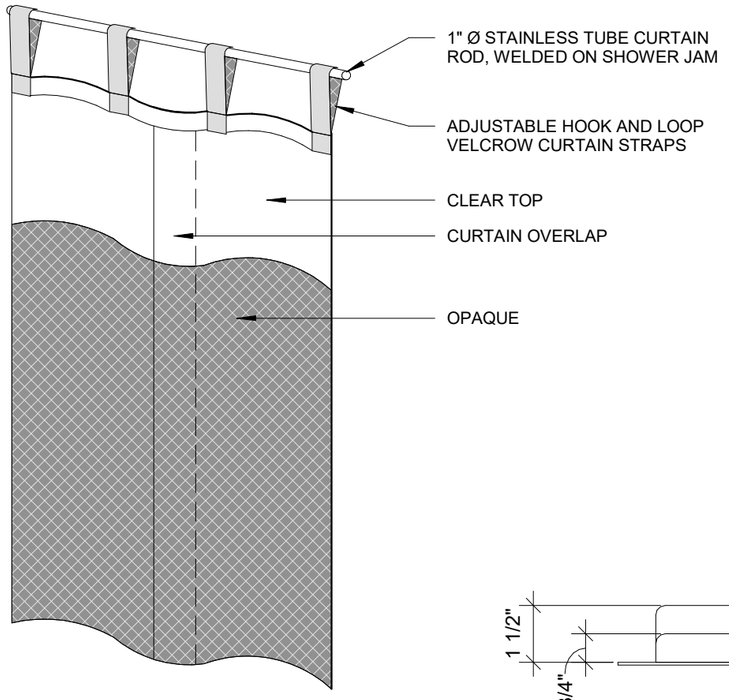
Scale: As indicated

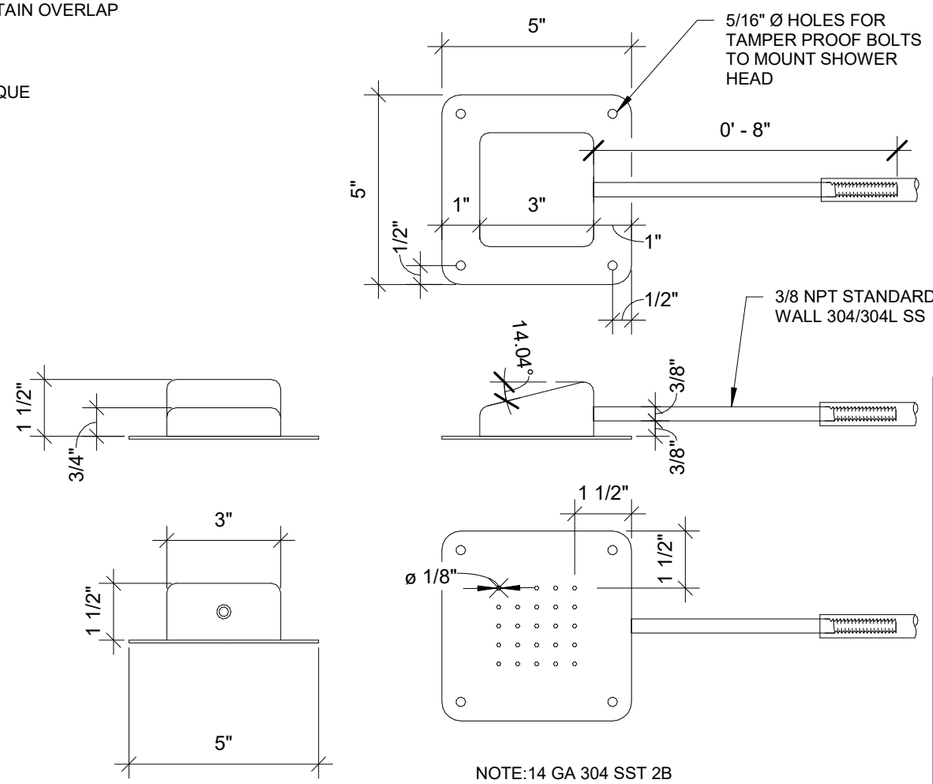
Sheet No. 4.80

NOTE: CONTRACTOR MUST FIELD MEASURE AND VERIFY ALL DIMENSIONS PRIOR TO FABRICATING ANY COMPONENT OF THE SHOWER. ALL PLUMBING , MECHANICAL AND ELECTRICAL INSTALLATION MUST BE FIELD VERIFIED PRIOR TO INSTALLATION



1 J-BLOCK TYPICAL FRONT ACCESS SHOWER ELEVATION
3/4" = 1'-0"





NOTE:14 GA 304 SST 2B

2 FIXED SHOWER HEAD DETAILS
3" = 1'-0"

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SHOWER CURTAIN AND SHOWER HEAD DETAILS

Scale: As indicated

Sheet No. 4.90

SECTION 224601 - SECURITY SHOWERS

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
1. Stainless steel security showers (knock down).
2. Custom stainless-steel ceiling and wall panels.
3. Cut-outs, holes and other items to accommodate all items installed in the showers.
4. Adjustable pneumatic valves.
5. Custom stainless-steel showerheads.
6. Shower curtains.
7. Supports, wall mounting plates, brackets, security fasteners and accessories.

B. Related Requirements:
1. Coordinate all work with the mechanical, plumbing, fire protection and electrical with all trades for a complete properly functioning project.

1.2 DEFINITIONS

A. Accessible Service Space: Service area in secure space behind wall-mounted fixtures.

B. Back-Access Fixture: Security plumbing fixture designed to mount on wall sleeve built into wall or on wall, so installation and removal of fixture, piping, and other components are accessible only from service space behind wall.

1.3 ACTION SUBMITTALS

A. Product Data:
1. Construction details, material descriptions, dimensions of individual components and profiles, and finishes for security plumbing fixtures.
2. Rated capacities, operating characteristics, and furnished specialties and accessories.

B. Samples of each component of shower piping system including pneumatic valve, push button and connecting lines.

1.4 CLOSEOUT SUBMITTALS

A. Maintenance Data: For security plumbing fixtures and components.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Extra Stock Material: Furnish extra materials to Owner that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.
1. Pneumatic Valves – Provide **six** (6) of each type.
2. Pneumatic – Valve Repair Kits: Provide **six** (6) of each type.
3. Shower Heads – Provide **four** (4).
4. Provide **three (3)** sets of Torx security fastener tools for each size of fastener used on the project. Provide **one (1)** box for each size of Torx security fastener used.

PART 2 - PRODUCTS

2.0 STAINLESS STEEL SHOWERS

A. Showers – Stainless steel, Back-access, Cabinet, Standard and Accessible
1. Project Description: This project involves the demolition of the following showers, and the installation of new replacement stainless steel showers or recovering the existing showers in I-Unit with stainless steel as follows:
a. I-Unit – Oversized showers approximately 5'-0"x 5'-0" +/-
1st Floor – Four (4) showers, fully ADA accessible.
2nd Floor – Four (4) showers.
Total showers in I-Unit Eight (8).
b. J-Unit – Standard Cabinet Showers as detailed.
1st Floor – Three (3) Standard Showers.
One (1) Handicapped Shower – custom fabricated.
2nd Floor – Five (5) Standard Showers.
Total Showers in J-Unit Nine (9)
Total Number of Showers to be Replaced = Seventeen (17)

2.1 SOURCE LIMITATIONS

A. Obtain each product type from a single manufacturer or as required by the drawings or specifications.

B. Showers shall be knock-down or custom fabricated for oversize showers.

2.2 PERFORMANCE REQUIREMENTS

A. Comply with ASME A112.19.3/CSA B45.4 for stainless steel plumbing fixtures.

B. Comply with ASME A112.18.1/CSA B125.1 for plumbing supply fittings.

C. Comply with ASME A112.18.2/CSA B125.2 for plumbing waste fittings.

D. Comply with ASME A112.6.1M for plumbing fixture supports.

E. Comply with ICC A117.1 for ADA-compliant, accessible plumbing fixtures and installation.

2.3 STAINLESS STEEL SHOWERS

A. Showers - Stainless Steel, Back-access, Cabinet, Standard, and Accessible.
1. Manufacturers: subject to compliance with requirements, provide products by one of the following:
a. Willoughby Industries
b. Acorn Engineering Company
2. Fixture:
a. Material: 14-gauge, Type 304 stainless steel, seamless welded construction.
b. Finish: Satin polished finish on exposed surfaces.
c. Type and Configuration: cabinet type or custom type with floor, walls, top and privacy panel wall extension between cabinet units.
d. Provide cut-outs and holes for light fixtures, sprinklers, soap dish, shower heads, pneumatic valve push button control, and perforations for exhaust.
e. Provide new stainless-steel front access panels above all showers. Remove the old painted panels.
f. Provide shower rods welded to jamb of openings for shower curtains as detailed in the drawings.
g. Provide shower curtains as detailed for each shower and privacy cubicle. Provide a second set for each shower and privacy cubicle as owners replacement stock.
h. Water supply valves shall be brass only pneumatic, push-button, single-temperature, fully adjustable metering valves. Valves shall be equal to Bradley S67-506 complete with push button assembly S45-1713 and PEX or white poly tubing R68-600008 plus bushing and plugs.
PLASTIC VALVES WILL NOT BE ALLOWED.
i. Shower head shall be stainless steel, ceiling mounted, custom fabricated by:
Alert Metal Works, Inc
105 Yates Street
Dallas, NC
Steven Lingerfelt 704-922-3152
j. Manufacturer of Shower Components shall precut the ceiling opening for the custom fabricated shower head. One shower head will be furnished for fit and fabrication.
k. Soap dish: recessed, stainless steel for each shower.
l. Optional features: where indicated, provide ADA compliant and ligature resistant.
m. Provide ½" Jenkins Brass Ball Valves cut off for each shower with a mounting clamp or bracket.
n. Provide a galvanized wall mounting plate for each pneumatic valve with wall anchoring hardware.
o. Mounting: bolts through wall sleeve into accessible service spaces.
p. Wall sleeve: galvanized steel frame of dimensions required to match fixture.
3. See drawings for complete detail of components to be provided and installed.

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JAMES CAMPBELL STEWART REGISTERED ARCHITECT 1666 SOUTH CAROLINA GASTONIA N.C.

2024.03.20

1761 **YORK COUNTY MOSS JUSTICE #6 SHOWER REPAIR**

Stewart · Cooper · Newell Architects

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SPECIFICATIONS

Scale: 1/4" = 1'-0"

Sheet No. 5.10

2.4 MANUFACTURERS AND PRODUCTS

A. Manufacturers and products of equal quality may be considered by the Owner.
B. Substitution must be received 10 days prior to the bid date.
C. Custom components shall be manufactured and supplied as detailed.

PART 3 – EXECUTION

3.1 EXAMINATION

A. Examine roughing-in for water supply and sanitary drainage and vent piping systems to verify actual locations of piping connections before fixture installation.
B. Examine walls and floors for suitable conditions where showers will be installed.
C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 FABRICATION AND INSTALLATION

A. Custom fabricated showers to be installed over existing shower surfaces. Clean existing coated surfaces of all residue and rough surfaces by sanding.
B. Prime exposed metal surfaces. Locate existing screw locations and plan to install new security screws in the same lines. This is required at ceilings and wall panels.
C. After the ceilings and walls are cleaned and inspected, apply a heavy layer of Sika Adhesive over the entire surfaces where Stainless-Steel Ceiling and Wall panels are to be installed. Use “Sikadur 31”, Hi-Mod Gel (1:1 Mix Ratio) structural epoxy paste adhesive or the type recommended by Sika. Support all panels until the bond is obtained.
D. Install tamper-proof security fasteners in the same line as the original security screws and in the quantity to assure proper anchorage of the new panels over the existing.
E. Install knock down security showers level and plumb.
F. Install back-access, stainless steel showers as follows:
   1. Install wall sleeve in wall if indicated and cut out existing masonry as indicated on drawings.
   2. Install shower, as indicated, with access from accessible service space.
   3. Extend supply piping from existing service space to shower.
   4. Install soil and waste piping from shower and extend into service space or into existing floor drain as required. Install new stainless-steel ligature-resistant floor drains at each location.
   5. Install fixture trap in service space instead of below fixture drain.
G. Install fixture outlets with gasket seals.
H. Install fixtures designated “accessible” in accordance with ICC A117.1 for heights, dimensions, and clearances. All components and accessories shall be ligature resistant.
I. Install protective shielding pipe covers and enclosures on exposed supplies and waste piping of accessible fixtures. Comply with requirements in “Plumbing Piping Insulation.”
J. Seal joints between fixtures, floors, and walls using sanitary-type, one-part, pick-resistant, mildew-resistant sealant. Match sealant color to fixture color. Comply with sealant requirements specified in “Joint Sealants”.
K. Install wall flanges or escutcheons at piping wall penetrations in exposed, finished locations. Use deep-pattern escutcheons if required to conceal protruding fittings.
L. Provide ligature-resistant grab bars and shower curtain rods.
M. All exposed screws and bolts shall be stainless steel Torx tamper resistant security fasteners.

3.3 PIPING CONNECTIONS

A. Connect fixtures with water supplies, stops, and risers and with traps, soil, waste, and vent piping. Use size fittings required to match fixtures.
B. Comply with requirements for water piping, as required, in Building Code, “Domestic Water Piping”.
C. Comply with requirements for soil and waste drainage piping as required in Building Code “Sanitary Waste and Vent Piping”.

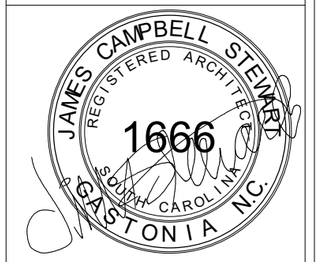
3.4 ADJUSTING

A. Operate and adjust pneumatic valves and flow-control valves on fixtures. Replace damaged and malfunctioning fixtures, fittings, and controls.
B. Adjust water pressure at fixtures to produce proper flow.

3.5 CLEANING AND PROTECTION

A. After installing showers, inspect and replace damaged finishes.
B. Clean showers and other fittings with manufacturers’ recommended cleaning methods and materials.
C. Provide protective covering for installed fixtures and fittings.
D. Do not allow use of fixtures for temporary facilities unless approved in writing by Owner.

END OF SECTION 224601



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SPECIFICATIONS

Scale: 1/4" = 1'-0"

Sheet No. 5.11

PRODUCT DATA FOR STAINLESS STEEL PANEL INSTALLATION

BASIS OF DESIGN: Sikaflex®-11 FC.

Products of equal quality and performance must be submitted to the architect for approval.

One part advanced polyurethane, elastomeric sealant/adhesive

PRODUCT DESCRIPTION

Sikaflex®-11 FC is a one-component, gun-grade, adhesive and sealing compound of permanent elasticity. This dual-purpose material is based on a special moisture-cured polyurethane with an accelerated curing time that meets ASTM C920 Type S, Grade NS, Class 12.5, Use NT, I, M, G, A, O. and Federal Specification TT-S-00230C.

USES

As an elastic adhesive for:
- Cover plates, gaskets and coverings.
- Light weight construction materials.
- Wood or metal and door frames.

As an elastic joint sealer for:
- Air ducts.
- Gaskets in openings in walls for ducts.
- Reservoirs or water retaining structures.
- Stainless Steel Panel fabrication.
- Screwed lap joints.

CHARACTERISTICS / ADVANTAGES

- Excellent adhesion on all cement-based materials, brick, ceramics, glass, metals, wood, epoxy, polyester and acrylic resin.
- Fast cure rate.
- Good weathering and water resistance.
- Non-corrosive.
- Can be painted over with water, oil, and rubber-based paints. (Preliminary tests recommended).
- High durability.
- Can be used in tamper resistant joints

PRODUCT INFORMATION (Follow Manufacturers directions completely)

Packaging	10.1 fl.oz. (.300 ml) plastic cartridges, 24/case. 20 fl.oz. (600 ml) uni-pac sausages, 20/case.
Color	White
Storage Conditions	Store at 40–95 °F (4–35 °C). Condition material to 65–75 °F before using.
Volatile organic compound (VOC) content	28.5 g/L

TECHNICAL INFORMATION

Shore A Hardness	40–45	(73 °F (23 °C) and 50 % R.H.) (ASTM D-2240)
Tensile Strength	225 psi	(73 °F (23 °C) and 50 % R.H.) (ASTM D-412)
Elongation at Break	600 %	(73 °F (23 °C) and 50 % R.H.) (ASTM D-412)
Elastic Recovery	>90 %	(73 °F (23 °C) and 50 % R.H.) (ASTM C-719)
Lap Shear Strength	165 psi	(73 °F (23 °C) and 50 % R.H.) (ASTM D-1002 modified, glass substrate)
Chemical Resistance	Good resistance to water, weak acids, weak alkalis, sewerage, mineral oils, vegetable oils, fats, fuels. (Not resistant to organic solvents, paint thinner, strong acids, strong alkalis). Consult Technical Service for specific data.	
Service Temperature	-40 °F to 170 °F	
Resistance to Weathering	Excellent	

APPLICATION INFORMATION

Coverage

Width/Depth	1/4"	3/8"	1/2"
1/4"	24.3		
3/8"	16.2	10.8	
1/2"	12.1	8.1	6.1
3/4"	8.1	5.4	4.0
1"			3.0
1.25"			2.4
1.5"			2.0

Product Temperature		
Ambient Air Temperature	40 °F to 100 °F. Sealant should be installed when joint is at mid-range of its anticipated movement.	
Curing Rate	**Tack-free Time (TT-S-00230C)**	1 to 2 hours depending on climate
	Final Cure	3 to 5 days

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

Clean all surfaces. Joint walls must be sound, clean, dry, frost-free, and free of oil and grease. Curing compound residues and any other foreign matter must be thoroughly removed. A roughened surface will also enhance bond.

LOCATE ALL EXISTING SECURITY FASTENERS, FOLLOW SAME LINE WITH NEW SECURITY FASTENERS.

Priming

Priming is not usually necessary for anodized aluminum, steel, non-absorbent materials such as glass, ceramics, stoneware and tiles. Most substrates only require priming if testing indicates a need or where sealant will be subjected to water immersion after cure. Consult Technical Service at 1-800-933-SIKA for additional information on priming.

APPLICATION METHOD / TOOLS

Recommended application temperatures: 40–100 °F. For cold weather application, condition material to 65–75 °F before using. Place nozzle of gun into bottom of the joint and fill entire joint or surface area where S.S. Panels are to be installed. Spread adhesive evenly over entire area where panels are to be installed. Keep the nozzle in the sealant;

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STEEL PANEL INSTALLATION SPECS

Scale: 1/4" = 1'-0"

Sheet No. 5.12

continue on with a steady flow of adhesive sealant preceding the nozzle to avoid air entrapment. Avoid overlapping of sealant to eliminate entrapment of air.

SECURE S.S. PANELS TO EXISTING AREA. SHORE PANELS IN PLACE AND INSTALL SECURITY FASTENERS.

Tooling and Finishing
Tool as required. Joint dimension should allow for 1/4 inch minimum and 1/2 inch maximum thickness for sealant. Proper design is 2:1 width to depth ratio.

Removal
In case of spills of leaks, wear suitable protective equipment, contain spill, collect with absorbent material, and transfer to suitable container. Ventilate area. Avoid contact. Dispose of in accordance with current, applicable local, state, and federal regulations. In case of emergency, call chemtrec 1-800-424-9300.

LIMITATIONS

- Allow 5 day cure at standard conditions when using Sikaflex®-11 FC in total water immersion situations and prior to painting.
- Avoid exposure to high levels of chlorine. (Maximum level is 5ppm).
- Maximum depth of sealant must not exceed 1/2 in.; minimum depth is 1/4 in.
- Maximum expansion and contraction should not exceed 12.5 % of average joint width.
- Avoid contact with alcohol and other solvent cleaners during cure.
- Do not apply when moisture-vapor-transmission condition exists from the substrate as this can cause bubbling within the sealant.
- Use opened cartridges the same day.
- When applying sealant, avoid air-entrapment.
- Since system is moisture-cured, permit sufficient exposure to air.
- White color tends to yellow slightly when exposed to ultraviolet rays.
- The ultimate performance of Sikaflex®-11 FC depends on proper application, good design and proper preparation of joint surfaces.
- Not for use in expansion joints.
- Heavier substrates may require additional support during the cure period.
- Do not use in contact with bituminous/asphaltic materials.

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STEEL PANEL INSTALLATION SPECS

Scale: 1/4" = 1'-0"

Sheet No. 5.13

PLUMBING MATERIALS AND NOTES

DOMESTIC WATER PIPING:

1. DOMESTIC WATER PIPING AND JOINTS ABOVE GRADE: PROVIDE TYPE 'L' HARD DRAWN SEAMLESS COPPER TUBING (ASTM B 88) AND CAST COPPER ALLOY FITTINGS (ASME B16.18). JOINTS 2" AND SMALLER SHALL BE LEAD FREE 95–5 TIN/SILVER SOLDER JOINTS (ASTM B 32), JOINTS 2½" AND LARGER SHALL BE BCUP SILVER/PHOSPHORUS/COPPER BRAZED JOINTS (AWS A5.8). ALTERNATELY PRESS FITTINGS MAY BE USED FOR JOINTS. SEALING ELEMENTS FOR PRESS FITTINGS SHALL BE EPDM. SEALING ELEMENTS SHALL BE FACTORY INSTALLED. PRESS FITTINGS SHALL ALLOW IDENTIFICATION OF AN UNPRESSED FITTING DURING PRESSURE TESTING.

2. STERILIZE THE DOMESTIC WATER SYSTEM IN ACCORDANCE WITH THE AMERICAN WATER WORKS ASSOCIATION'S SPECIFICATIONS AND LOCAL HEALTH DEPARTMENT REGULATIONS.

3. INSULATE DOMESTIC WATER PIPING ABOVE GRADE (EXCEPT EXPOSED CONNECTIONS TO PLUMBING FIXTURES) WITH GLASS FIBER INSULATION HAVING A VAPOR BARRIER AND JACKET. PIPE INSULATION SHALL HAVE A CONDUCTIVITY NOT EXCEEDING 0.27 BTUH x SQ. FT. FOLLOW SCHEDULE BELOW:

SERVICE TYPE	PIPE SIZES	INSULATION THICKNESS
DOMESTIC HOT WATER & CIRCULATION	½" – 1¼"	1"

4. DOMESTIC WATER PIPING INSULATION, JACKETS, COVERINGS, SEALERS, MASTICS AND ADHESIVES ARE REQUIRED TO MEET A FLAME–SPREAD RATING OF 25 OR LESS AND A SMOKE–DEVELOPED RATING OF 50 OR LESS, AS TESTED BY ASTM E84 (NFPA 255) METHOD AND SHALL BE PLENUM RATED. PROVIDE PVC JACKET FOR EXPOSED PIPING IN MECHANICAL ROOMS. INSULATION SHALL BE CONTINUOUS THROUGH ALL WALLS AND AT ALL HANGERS. PROVIDE GALVANIZED STEEL SHIELD BETWEEN PIPE HANGER AND INSULATION.

5. PROVIDE TWO–PIECE, BRONZE OR BRASS BODY, FULL PORT, 600 PSI WOG, BALL TYPE SHUT–OFF VALVES WITH BLOW–OUT PROOF STEMS AND ADJUSTABLE PACKING GLANDS. VALVES SHALL BE LEAD FREE PER NSF 61, ANNEX G REQUIREMENTS. INSTALL VALVES IN A LOCATION THAT PERMITS ACCESS FOR SERVICE WITHOUT DAMAGE TO THE BUILDING OR FINISHED MATERIALS.

6. PROTECT COPPER PIPING AGAINST CONTACT WITH DISSIMILAR METALS. ALL HANGERS, SUPPORTS, ANCHORS AND CLIPS SHALL BE COPPER OR COPPER PLATED. WHERE COPPER PIPING IS CARRIED ON TRAPEZE HANGERS WITH OTHER PIPING, PROVIDE A PERMANENT ELECTROLYTIC ISOLATION MATERIAL TO PREVENT CONTACT WITH DISSIMILAR OTHER METALS.

7. DOMESTIC WATER SUPPLY PIPING SHALL BE TESTED AND PROVED WATERTIGHT UNDER A WATER PRESSURE OF NO LESS THAN THE WORKING PRESSURE OF THE SYSTEM, OR AN AIR TEST OF NO LESS THAN ONE–HUNDRED (100) PSI. THIS PRESSURE SHALL BE HELD FOR AT LEAST FIFTEEN (15) MINUTES. WATER USED IN TESTING SHALL BE OBTAINED FROM A POTABLE SOURCE OF SUPPLY.

SANITARY WASTE / VENT PIPING:

1. SANITARY WASTE PIPING BELOW GRADE: PROVIDE SERVICE WEIGHT CAST IRON HUB AND SPIGOT PIPE (ASTM A 74) WITH COMPRESSION JOINTS (CISPI HSN) AND NEOPRENE GASKETS (ASTM C 564) OR NO–HUB PIPE AND FITTINGS (CISPI 301) WITH NEOPRENE GASKET/STAINLESS STEEL CLAMP JOINTS (HEAVY DUTY, ASTM C1540–15).

2. SANITARY WASTE/VENT PIPING ABOVE GRADE: PROVIDE SERVICE WEIGHT CAST IRON NO–HUB PIPE AND FITTINGS (CISPI 301) WITH NEOPRENE GASKET/STAINLESS STEEL CLAMP JOINTS (HEAVY DUTY, ASTM C1540–15).

3. SLOPE SANITARY WASTE PIPING AT ¼" PER FOOT MINIMUM FOR PIPING 2½" AND SMALLER AND ⅛" PER FOOT MINIMUM FOR PIPING 3" AND LARGER UNLESS NOTED OTHERWISE.

4. SANITARY WASTE AND VENT SYSTEMS SHALL BE TESTED AND PROVED WATER TIGHT UNDER A HEAD PRESSURE OF NO LESS THAN 10 FT. THIS PRESSURE SHALL BE HELD FOR A PERIOD OF NO LESS THAN 15 MINUTES.

PLUMBING LEGEND

EXISTING PIPING	NEW PIPING	ABBR.	DESCRIPTION
—·—·— (E) —	———	CW	COLD WATER PIPING
—·—·— (E) —	———	HW	HOT WATER PIPING
——— ——— (E) —	———	W	SANITARY WASTE PIPING
– – – – – (E) –	– – – – –	V	SANITARY VENT PIPING
– – – – – (E) – – – – –		–	EXISTING PIPING TO BE REMOVED
		–	ELBOW DOWN
		–	ELBOW UP
		–	PIPE CONTINUES
		–	BALL VALVE
		CV	CHECK VALVE
		FCO	FLOOR CLEAN OUT
		YCO	YARD CLEAN OUT
		FD	FLOOR DRAIN
		HB	HOSE BIBB/WALL HYDRANT
		CTE	CONNECT TO EXISTING
			POINT OF DEMOLITION

ADDITIONAL ABBREVIATIONS

AFF	ABOVE FINISHED FLOOR	T&P	TEMPERATURE AND PRESSURE
BFF	BELOW FINISHED FLOOR	TW	TEMPERED WATER
CONT	CONTINUATION	TYP	TYPICAL
DN	DOWN	VB	VACUUM BREAKER
EX	EXISTING	VTR	VENT THRU ROOF
FFE	FINISHED FLOOR ELEVATION	WC	WATER COLUMN
GPM	GALLONS PER MINUTE		
INV	INVERT ELEVATION	EC	ELECTRICAL CONTRACTOR
IW	INDIRECT WASTE	GC	GENERAL CONTRACTOR
MH	MOUNTING HEIGHT	MC	MECHANICAL CONTRACTOR
PSI	POUNDS PER SQUARE INCH	PC	PLUMBING CONTRACTOR

PLUMBING GENERAL NOTES

GENERAL REQUIREMENTS:

1. PLUMBING WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE SOUTH CAROLINA STATE PLUMBING CODE AND WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.

2. CONTRACTOR MUST FIELD MEASURE AND VERIFY ALL DIMENSIONS PRIOR TO FABRICATING ANY COMPONENT OF THE SHOWER. ALL PLUMBING, MECHANICAL, AND ELECTRICAL INSTALLATION MUST BE FIELD VERIFIED PRIOR TO INSTALLATION.

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PLUMBING LEGEND AND NOTES
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Sheet No. 8.01

OPTIMA #: 23-0170

PLUMBING FIXTURE AND SPECIALTIES SCHEDULE

SYM.	DESCRIPTION	CONNECTIONS (IN.)				SPECIFICATION	REMARKS
		W	V	CW	HW		
P6	CUSTOM STAINLESS STEEL SHOWER ENCLOSURE, DEXOTEX FLOOR, PUSH–BUTTON OPERATOR, SHOWER HEAD, SHOWER VALVE	2"	1½"	–	½" (TW)	SHOWER ENCLOSURE AND SYSTEM: CUSTOM BY G.C. SEE SPEC ON SHEET 5.10. DRAIN: FD2	SEE NOTE 1 BELOW.
P6A	CUSTOM ADA COMPLIANT STAINLESS STEEL SHOWER ENCLOSURE, DEXOTEX FLOOR, PUSH–BUTTON OPERATOR, SHOWER HEAD, SHOWER VALVE	2"	1½"	–	½" (TW)	SHOWER ENCLOSURE AND SYSTEM: CUSTOM BY G.C. SEE SPEC ON SHEET 5.10. DRAIN: FD1	SEE NOTE 1 BELOW.
P6B	36" x 36" STAINLESS STEEL SHOWER ENCLOSURE, RECESSED SOAP DISH, VANDAL RESISTANT SHOWER HEAD, FRONT ACCESS	2"	1½"	–	½" (TW)	SHOWER ENCLOSURE AND SYSTEM: CUSTOM BY G.C. SEE SPEC ON SHEET 5.10. DRAIN: INTEGRAL TO SHOWER STALL	PROVIDE SHOWER STALL WITH INTEGRAL P–TRAP AT DRAIN WHERE INDICATED ON PLUMBING PLANS. SEE NOTE 1 BELOW.
FD1	FLOOR DRAIN, CAST IRON BODY WITH DEXOTEX FLANGE, ROUND ADJUSTABLE NICKEL BRONZE TOP	SEE DWG	–	–	–	DRAIN: ZURN ZN–400–5BL–VP STRAINER: 5" DIAMETER, TYPE BL P–TRAP: DEEP SEAL (MATCH DRAIN SIZE)	–
FD2	SCUPPER SHOWER DRAIN, CAST IRON BODY WITH 90° OUTLET AND VANDAL PROOF TOP	SEE DWG	–	–	–	DRAIN: ZURN ZN–189–VP–90 STRAINER: FLUSH TYPE STRAINER P–TRAP: DEEP SEAL (MATCH DRAIN SIZE)	–

NOTES:

1. PROVIDE AND INSTALL INTERCONNECTING PIPING BETWEEN SHOWER VALVE AND SHOWER HEAD. PIPING SHALL BE EQUAL TO FLEXIBLE TUBING PROVIDED IN PRE–MANUFACTURED PENAL–WARE SHOWER CABINETS BY ACORN OR WILLOUGHBY.

APPROVED MANUFACTURERS:

THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE MODEL WHICH MOST CLOSELY MATCHES THE SPECIFIED PRODUCT. PROVIDE PRODUCTS MADE BY ANY OF THE MANUFACTURER'S LISTED. NO PRIVATE LABELED MATERIALS WILL BE ACCEPTED AS EQUALS TO PRODUCTS SPECIFIED HEREIN.
ALL FIXTURES OF THE SAME TYPE AND/OR MATERIAL SHALL BE PROVIDED BY A SINGLE MANUFACTURER.

MIXING/SHOWER VALVES	BRADLEY, LEONARD, SYMMONS, LAWLER
DRAINS, CARRIERS, CLEANOUTS	ZURN, J.R. SMITH, WADE, JOSAM, WATTS

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PLUMBING SCHEDULES AND NOTES
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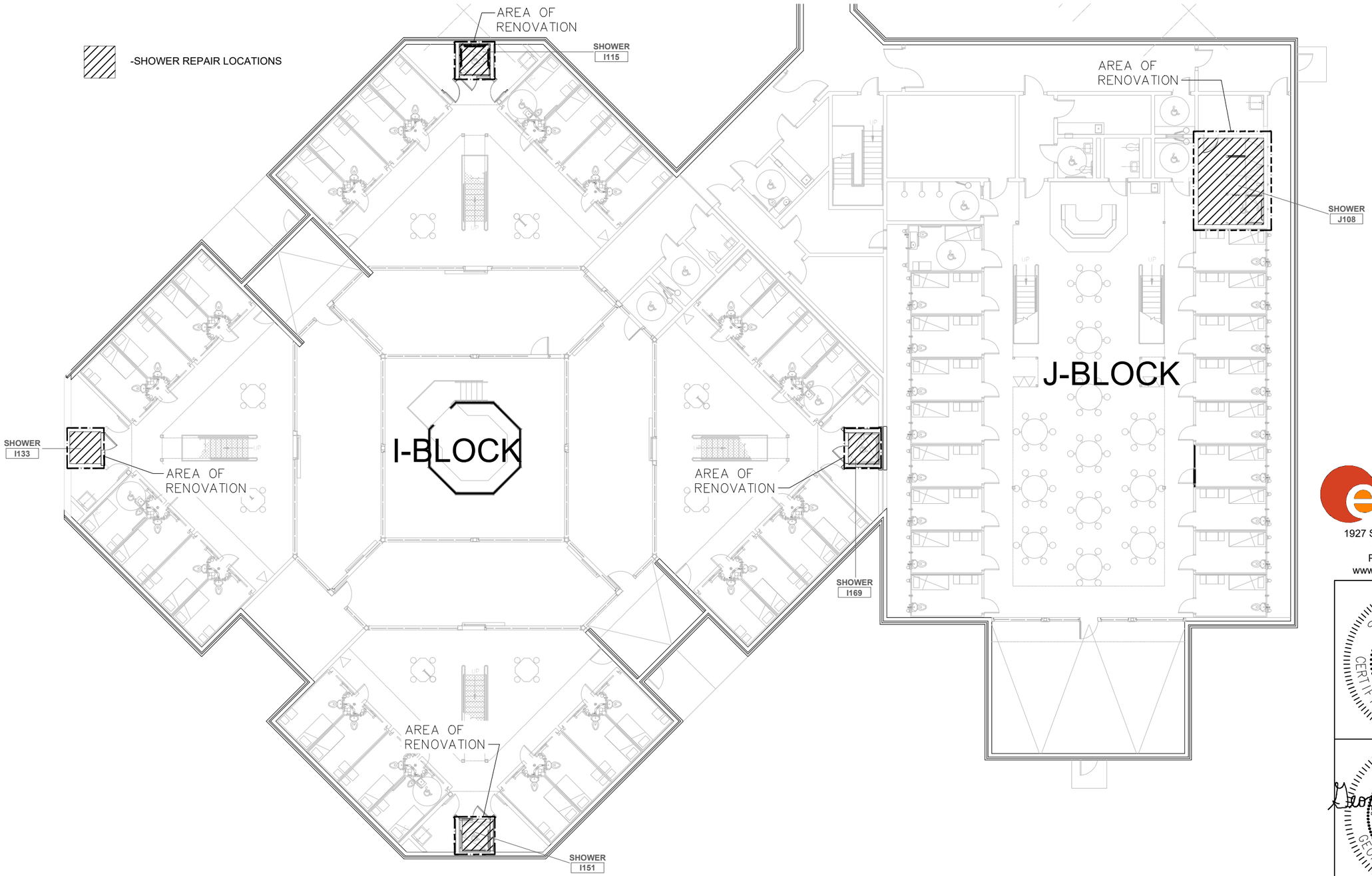
Sheet No. 8.02

OPTIMA #: 23-0170



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LOWER LEVEL FLOOR PLAN
PLUMBING
Scale: 1/16" = 1'-0"

Sheet No.
8.11

OPTIMA #: 23-0170

NOTE:

-SHOWER REPAIR LOCATIONS

AREA OF RENOVATION

SHOWER
I209

AREA OF RENOVATION

I-BLOCK

J-BLOCK

SHOWER
J202

SHOWER
I225

AREA OF RENOVATION

AREA OF RENOVATION

SHOWER
I259

AREA OF RENOVATION

SHOWER
I243

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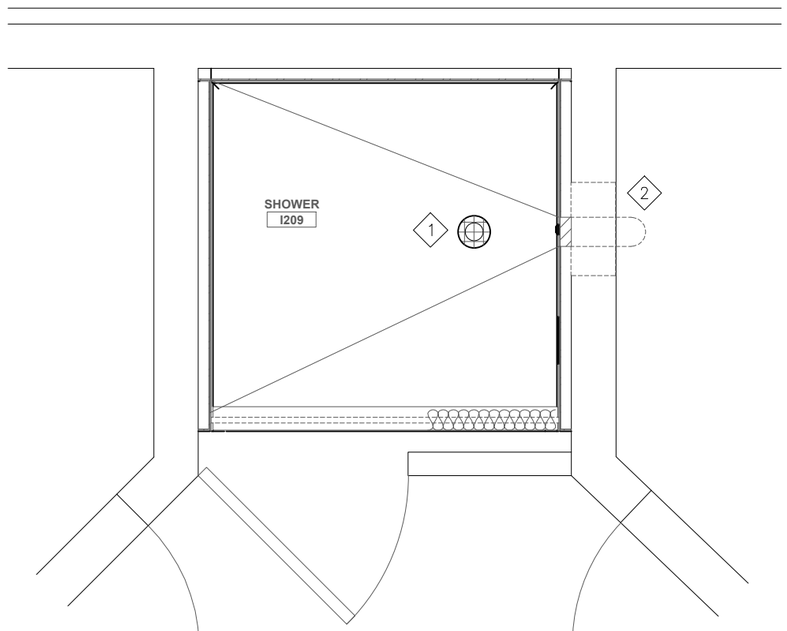
UPPER LEVEL FLOOR PLAN
PLUMBING

Scale: 1/16" = 1'-0"

Sheet No.
8.12

OPTIMA #: 23-0170

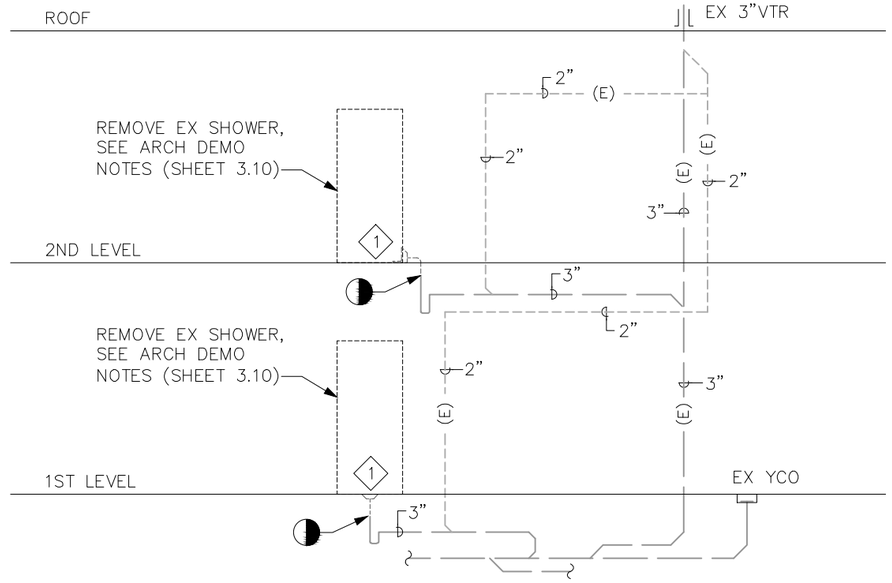


ENLARGED TYPICAL SHOWER PLUMBING DEMOLITION

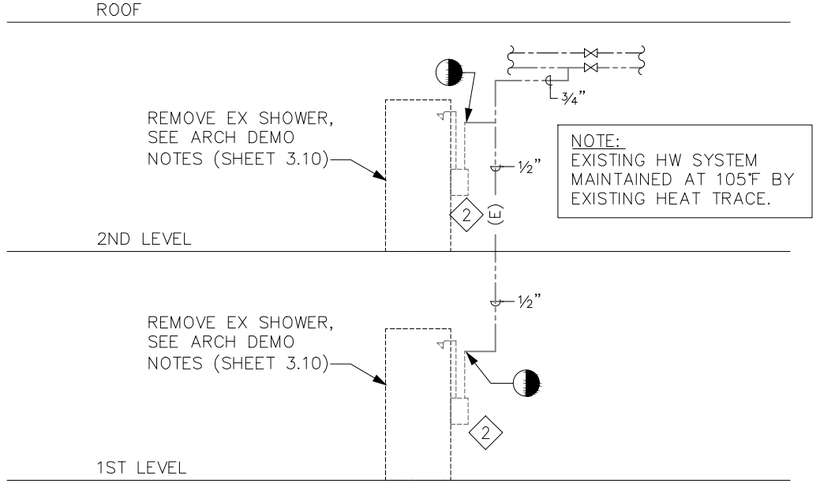
1 — 1/2" = 1'-0" — I-BLOCK

NOTES THIS SHEET:

1. REMOVE EXISTING FLOOR DRAIN COMPLETE. EXISTING WASTE AND VENT SERVICES SHALL BE REUSED FOR NEW FLOOR DRAIN.
2. REMOVE EXISTING SHOWER HEAD, SHOWER VALVE, AND INTERCONNECTING WATER PIPING BACK TO CHASE SPACE. EXISTING HOT WATER LINE SHALL BE REUSED FOR NEW SHOWER.



SHOWER RISER DIAGRAM – DRAINAGE DEMOLITION
I-BLOCK



SHOWER RISER DIAGRAM – SUPPLY DEMOLITION
I-BLOCK

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No. C00710

SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER
GEORGE C. FOWLER III
No. 21021
George C. Fowler III
2024.01.31

1761 **YORK COUNTY MOSS JUSTICE #6**
SHOWER REPAIR

Stewart · Cooper · Newell Architects

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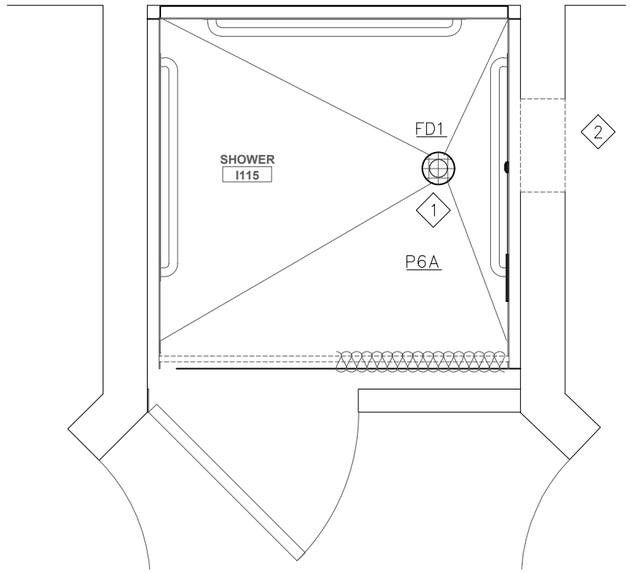
I-BLOCK UNIT TYPICAL SHOWER PLUMBING DEMOLITION PLAN
Scale: AS INDICATED

Sheet No. 8.21

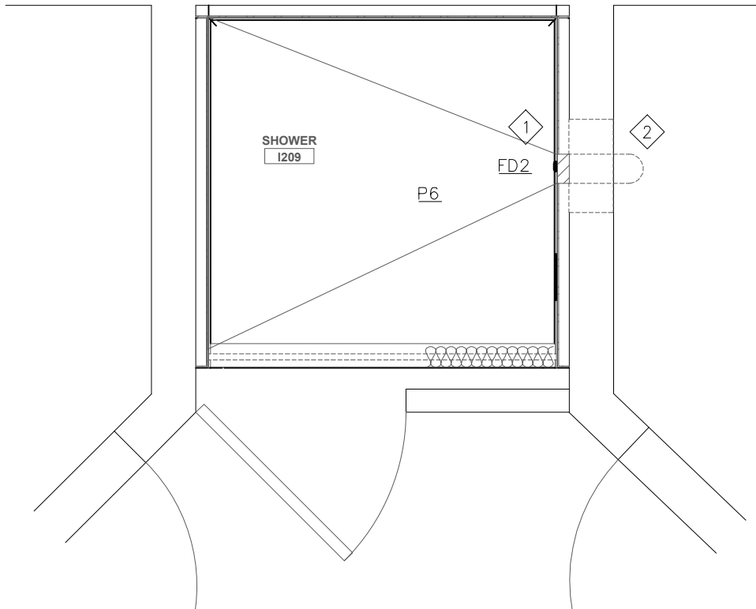
OPTIMA #: 23-0170



NOTE:
1. REPAIRS DONE SHALL BE SIMILAR TO 1-UNIT SHOWERS: I115, I133, I151, AND I169.

1 ENLARGED TYPICAL SHOWER PLUMBING RENOVATION

1/2" = 1'-0" 1-BLOCK (LOWER LEVEL)



NOTE:
1. REPAIRS DONE SHALL BE SIMILAR TO 1-UNIT SHOWERS: I209, I225, I243, AND I259.

2 ENLARGED TYPICAL SHOWER PLUMBING RENOVATION

1/2" = 1'-0" 1-BLOCK (UPPER LEVEL)

NOTES THIS SHEET:

1. CONNECT NEW FLOOR DRAIN TO EXISTING WASTE LINE REMAINING FROM DEMOLISHED DRAIN.
2. EXTEND EXISTING ½" HW LINE TO NEW SHOWER SYSTEM (SHOWER VALVE, HEAD, ETC.). NEW SHOWER SYSTEM BY G.C. SEE SHEET 5.10 FOR SPECIFICATION.

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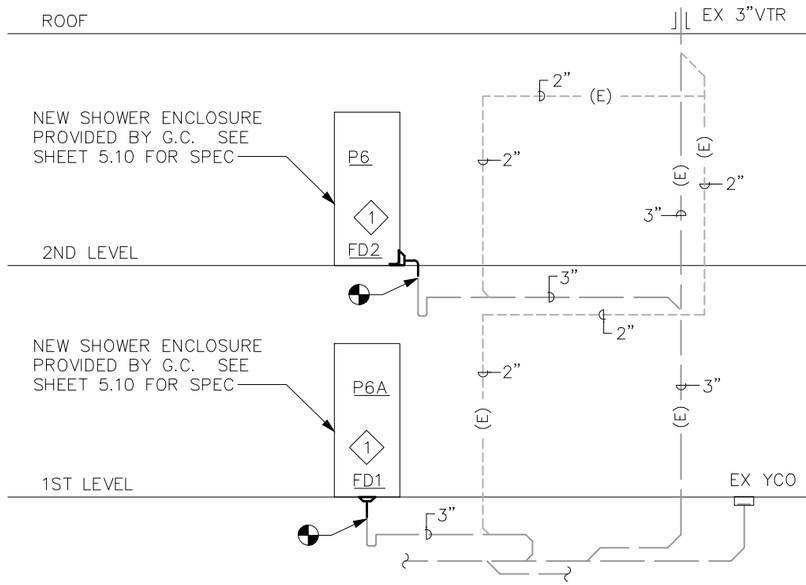
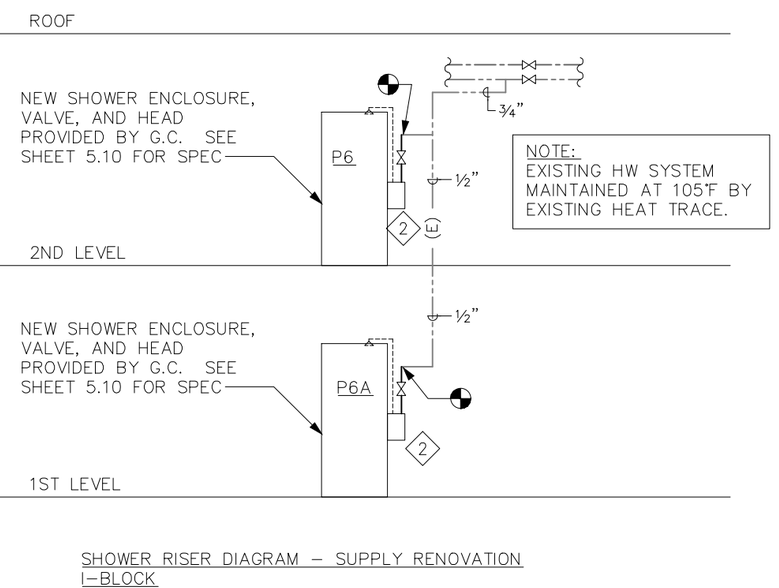
I-BLOCK UNIT TYPICAL SHOWER PLUMBING RENOVATION PLAN
Scale: AS INDICATED

Sheet No. 8.22

OPTIMA #: 23-0170



SHOWER RISER DIAGRAM – DRAINAGE RENOVATION
I–BLOCK



SHOWER RISER DIAGRAM – SUPPLY RENOVATION
I–BLOCK

NOTES THIS SHEET:

1. CONNECT NEW FLOOR DRAIN TO EXISTING WASTE LINE REMAINING FROM DEMOLISHED DRAIN.
2. EXTEND EXISTING ½" HW LINE TO NEW SHOWER SYSTEM (SHOWER VALVE, HEAD, ETC.). NEW SHOWER SYSTEM BY G.C. SEE SHEET 5.10 FOR SPECIFICATION.

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I-BLOCK UNIT TYPICAL SHOWER
PLUMBING RENOVATION RISERS

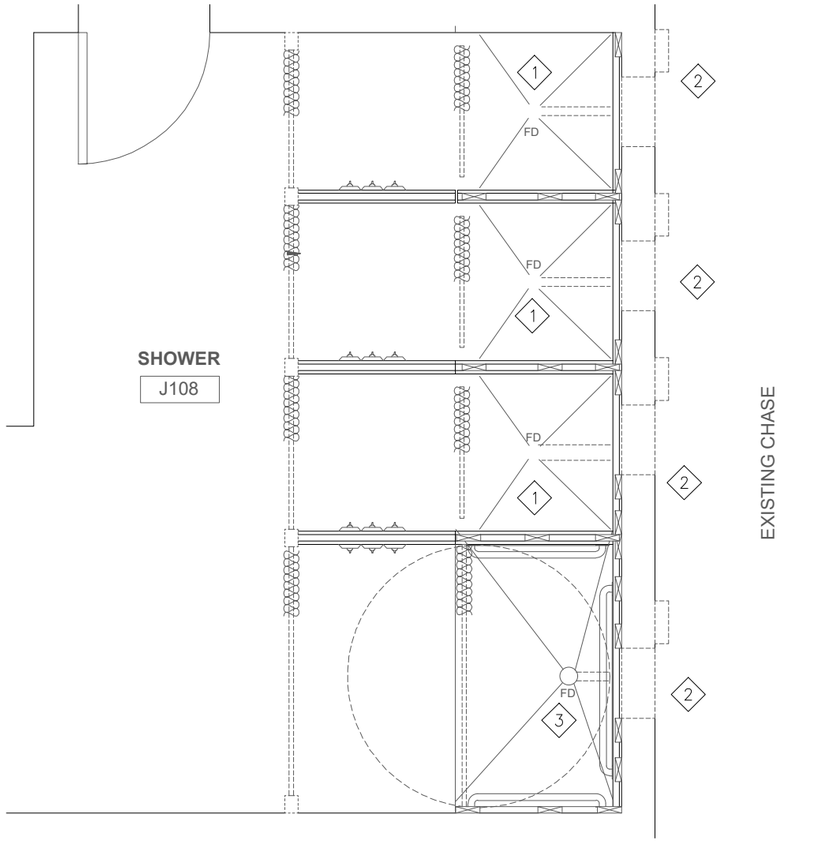
Scale: AS INDICATED

Sheet No.
8.23

OPTIMA #: 23-0170

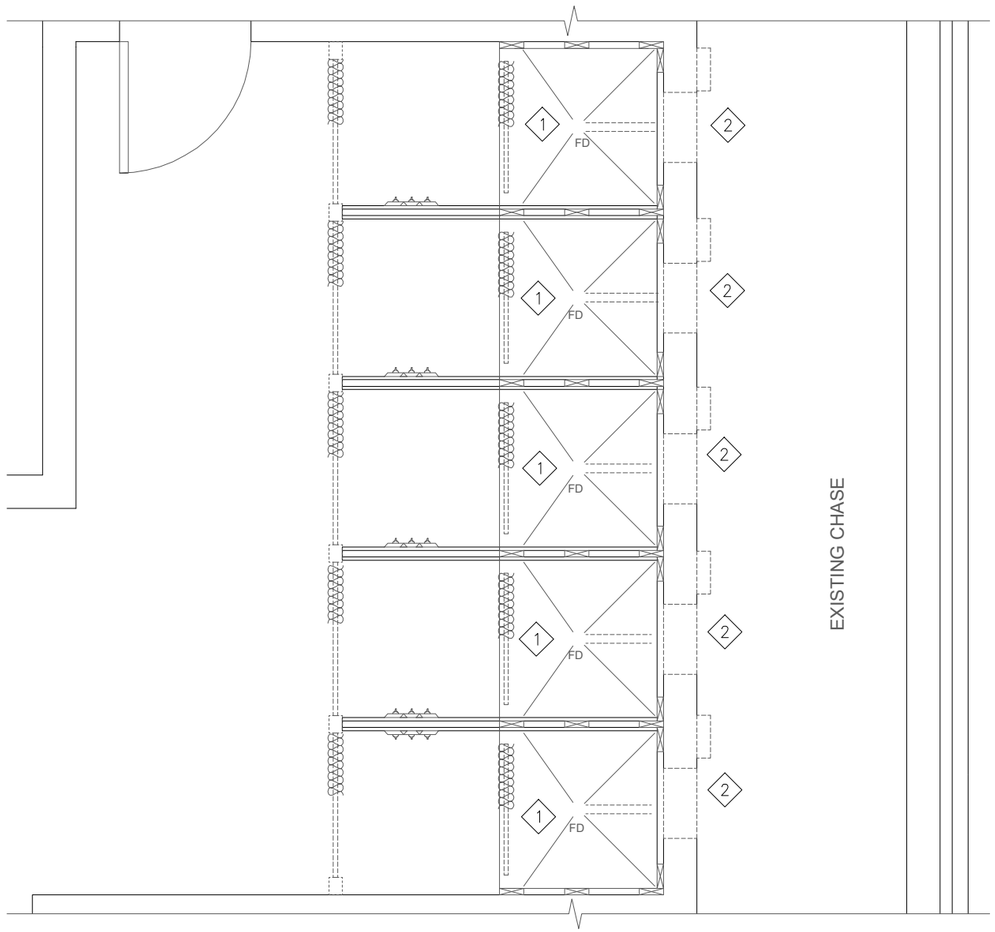
NOTES THIS SHEET:

1. REMOVE EXISTING SHOWER STALL AND DRAIN COMPLETE. EXISTING WASTE AND VENT SERVICES SHALL BE REUSED FOR NEW SHOWER STALL.
2. REMOVE EXISTING SHOWER HEAD, SHOWER VALVE, AND INTERCONNECTING WATER PIPING BACK TO CHASE SPACE. EXISTING HOT WATER SERVICE SHALL BE REUSED FOR NEW SHOWER STALL.
3. REMOVE EXISTING FLOOR DRAIN COMPLETE. EXISTING WASTE AND VENT SERVICES SHALL BE REUSED FOR NEW FLOOR DRAIN.



1 GANG SHOWER PLAN - 1ST FLOOR PLUMBING DEMOLITION

3/8" = 1'-0" J-BLOCK



2 GANG SHOWER PLAN - 2ND FLOOR PLUMBING DEMOLITION

3/8" = 1'-0" J-BLOCK

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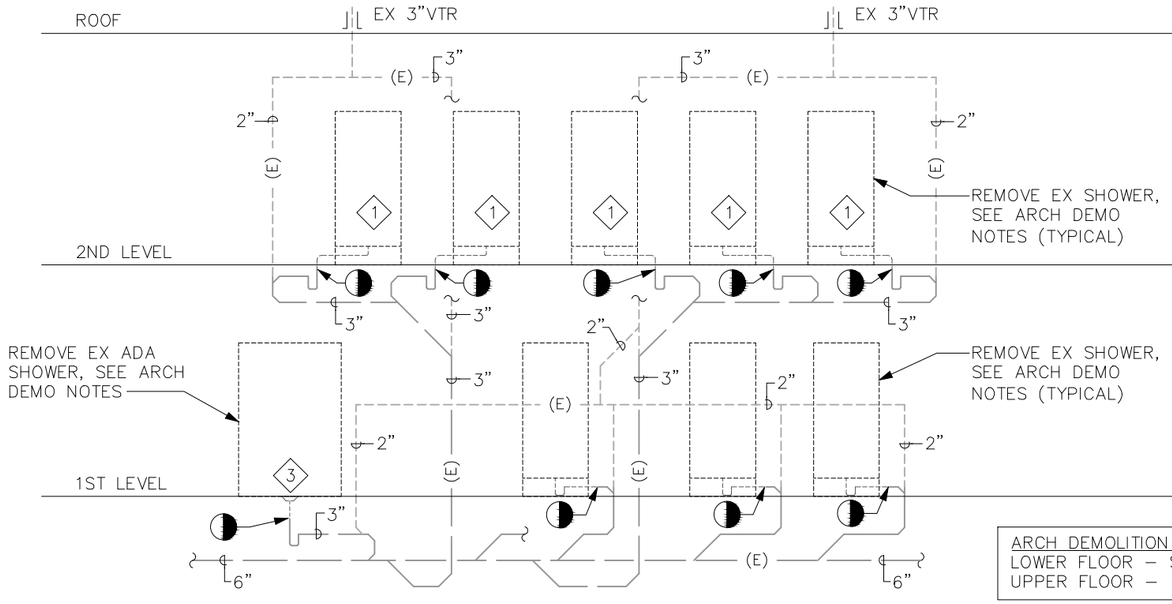
J-BLOCK UNIT TYPICAL SHOWER PLUMBING DEMOLITION PLANS

Scale: AS INDICATED

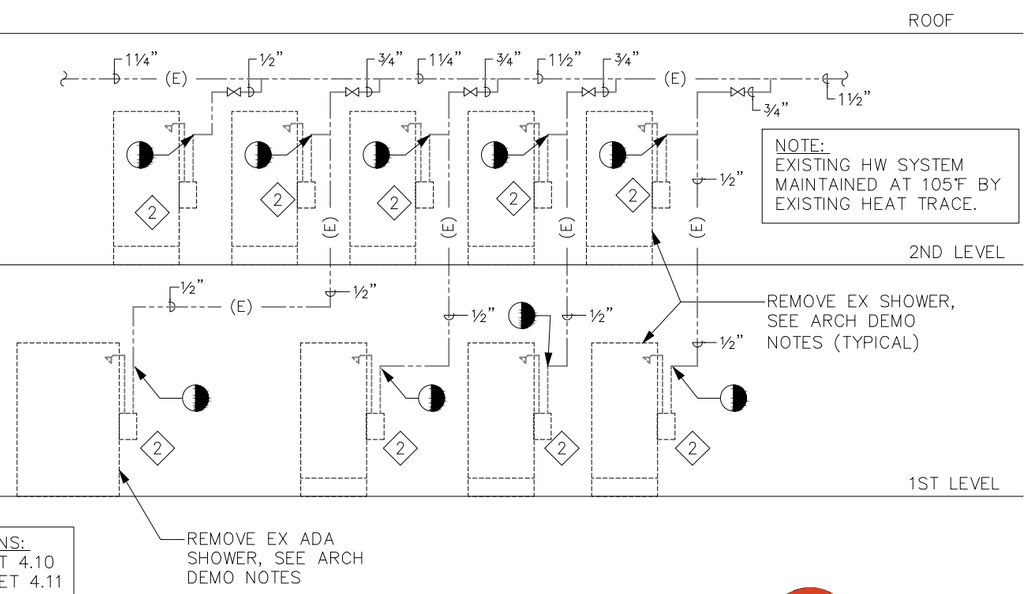
Sheet No. 8.31

OPTIMA #: 23-0170



SHOWER RISER DIAGRAM – DRAINAGE DEMOLITION
J–BLOCK

ARCH DEMOLITION PLANS:
LOWER FLOOR – SHEET 4.10
UPPER FLOOR – SHEET 4.11



SHOWER RISER DIAGRAM – SUPPLY DEMOLITION
J–BLOCK

NOTES THIS SHEET:

1. REMOVE EXISTING SHOWER STALL AND DRAIN COMPLETE. EXISTING WASTE AND VENT SERVICES SHALL BE REUSED FOR NEW SHOWER STALL.
2. REMOVE EXISTING SHOWER HEAD, SHOWER VALVE, AND INTERCONNECTING WATER PIPING BACK TO CHASE SPACE. EXISTING HOT WATER SERVICE SHALL BE REUSED FOR NEW SHOWER STALL.
3. REMOVE EXISTING FLOOR DRAIN COMPLETE. EXISTING WASTE AND VENT SERVICES SHALL BE REUSED FOR NEW FLOOR DRAIN.

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J-BLOCK UNIT TYPICAL SHOWER PLUMBING DEMOLITION RISERS

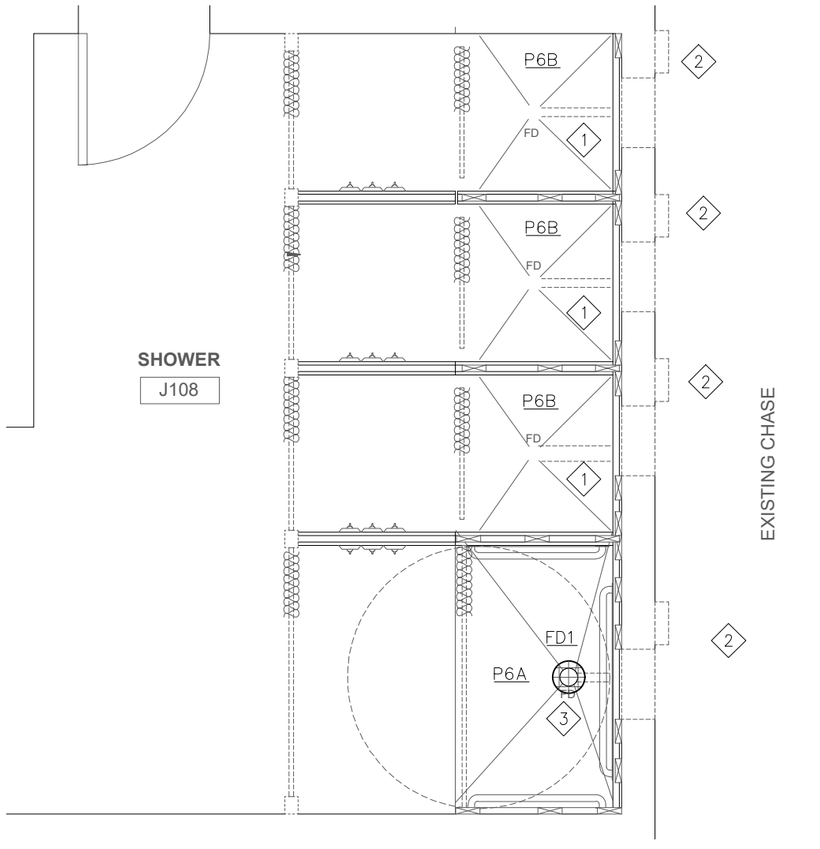
Scale: AS INDICATED

Sheet No. 8.32

OPTIMA #: 23-0170

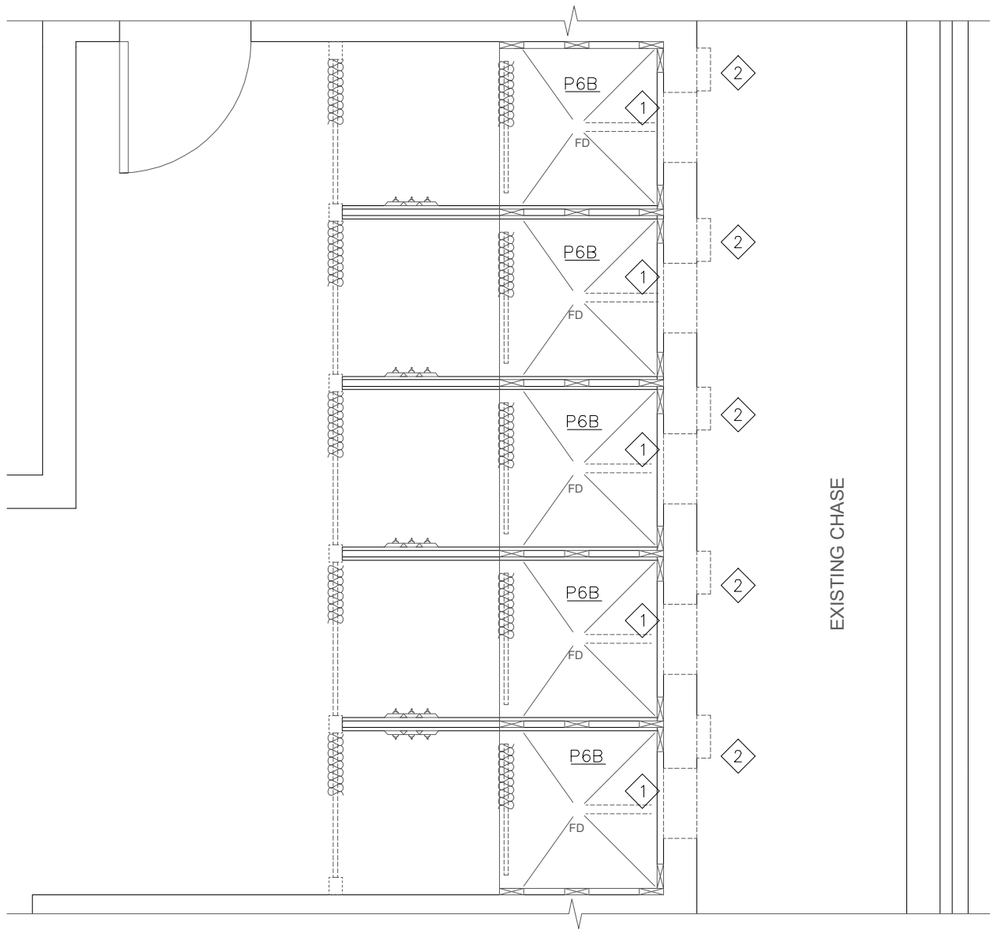
NOTES THIS SHEET:

1. EXTEND AND CONNECT SHOWER WASTE LINE TO EXISTING WASTE AND VENT SERVICES IN THE EXISTING PLUMBING CHASE.
2. EXTEND EXISTING ½" HW LINE TO NEW SHOWER SYSTEM (SHOWER VALVE, HEAD, ETC.). NEW SHOWER SYSTEM BY G.C. SEE SHEET 5.10 FOR SPECIFICATION.
3. CONNECT NEW FLOOR DRAIN TO EXISTING WASTE LINE REMAINING FROM DEMOLISHED DRAIN.



1 GANG SHOWER PLAN - 1ST FLOOR PLUMBING RENOVATION

3/8" = 1'-0" J-BLOCK



2 GANG SHOWER PLAN - 2ND FLOOR PLUMBING RENOVATION

3/8" = 1'-0" J-BLOCK

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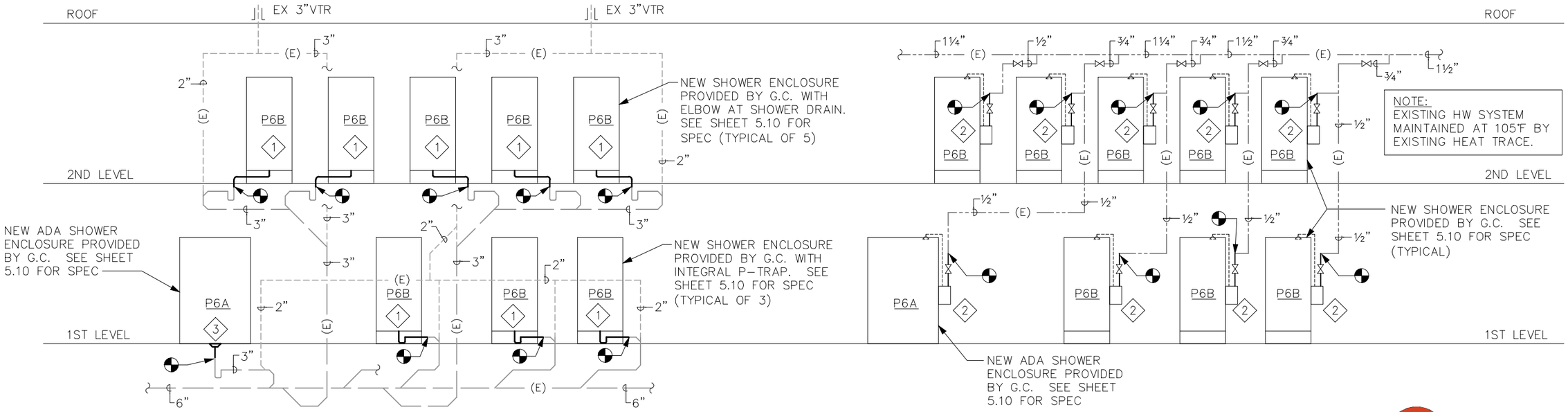
J-BLOCK UNIT TYPICAL SHOWER PLUMBING RENOVATION PLANS

Scale: AS INDICATED

Sheet No. 8.33

OPTIMA #: 23-0170



SHOWER RISER DIAGRAM – DRAINAGE RENOVATION
J-BLOCK

SHOWER RISER DIAGRAM – SUPPLY RENOVATION
J-BLOCK

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NOTES THIS SHEET:

1. EXTEND AND CONNECT SHOWER WASTE LINE TO EXISTING WASTE AND VENT SERVICES IN THE EXISTING PLUMBING CHASE.
2. EXTEND EXISTING ½" HW LINE TO NEW SHOWER SYSTEM (SHOWER VALVE, HEAD, ETC.). NEW SHOWER SYSTEM BY G.C. SEE SHEET 5.10 FOR SPECIFICATION.
3. CONNECT NEW FLOOR DRAIN TO EXISTING WASTE LINE REMAINING FROM DEMOLISHED DRAIN.

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J-BLOCK UNIT TYPICAL SHOWER PLUMBING RENOVATION RISERS

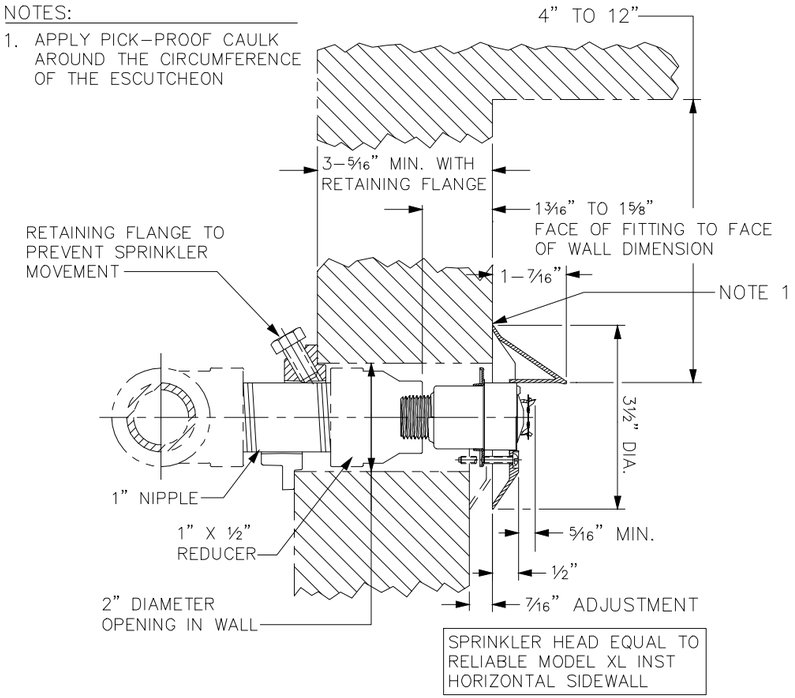
Scale: AS INDICATED

Sheet No. 8.34

OPTIMA #: 23-0170

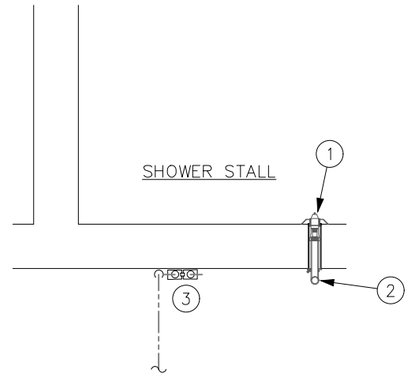
NOTES:

1. APPLY PICK–PROOF CAULK AROUND THE CIRCUMFERENCE OF THE ESCUTCHEON



2 TYPICAL INST. SIDEWALL SPRINKLER

NO SCALE



PLAN VIEW

KEYED NOTES:

1. REPLACE EXISTING SPRINKLER HEAD WITH NEW INSTITUTIONAL TYPE SIDEWALL SPRINKLER HEAD, BY SPRINKLER CONTRACTOR. SEE 2/8.50 FOR CONTINUATION.
2. EX SPRINKLER BRANCH LINE DROP IN CHASE SERVING SPRINKLER HEAD
3. DOMESTIC WATER SERVICE TO SHOWER VALVE

1 CELL CHASE FIRE PROTECTION

SCALE: NONE

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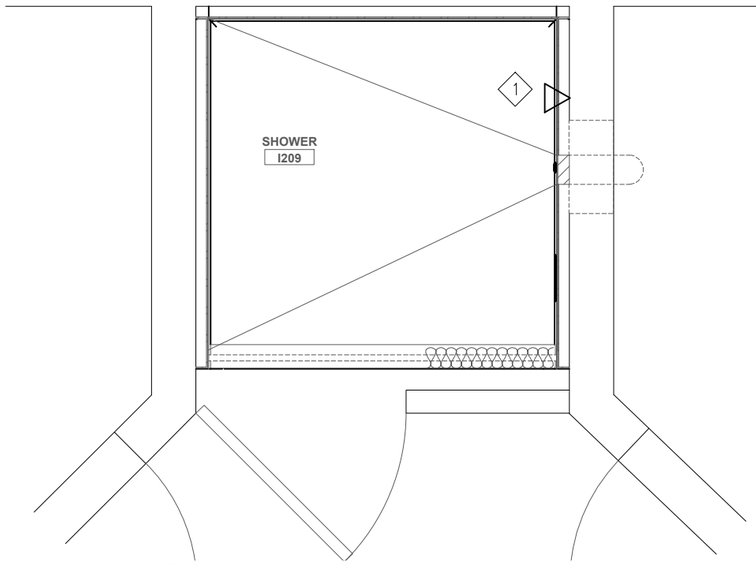
FIRE PROTECTION NOTES AND SCHEMATICS

Scale: NO SCALE

Sheet No. 8.50

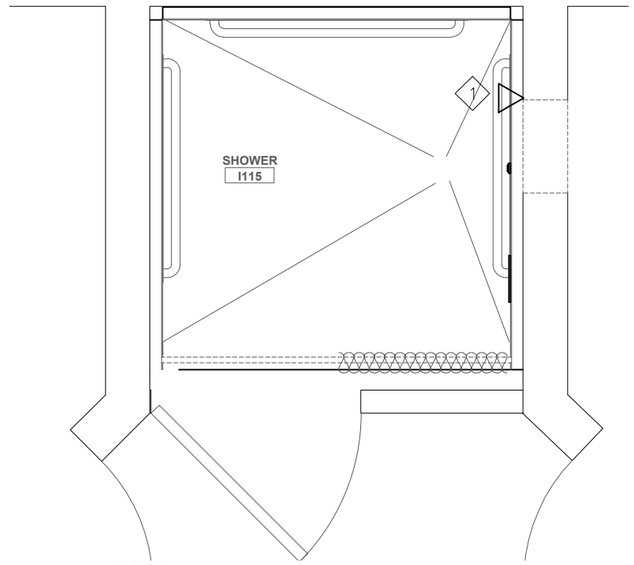
OPTIMA #: 23-0170



NOTE:
1. REPAIRS DONE SHALL BE SIMILAR TO I-UNIT SHOWERS: I209, I225, I243, AND I259.

1 ENLARGED TYPICAL SHOWER FIRE PROTECTION RENOVATION

1/2" = 1'-0" I-BLOCK



NOTE:
1. REPAIRS DONE SHALL BE SIMILAR TO I-UNIT SHOWERS: I115, I133, I151, AND I169.

2 ENLARGED TYPICAL SHOWER FIRE PROTECTION RENOVATION

1/2" = 1'-0" I-BLOCK

NOTES THIS SHEET:

1. REMOVE EXISTING SPRINKLER HEAD AND REPLACE WITH NEW INSTITUTIONAL TYPE SPRINKLER HEAD. SPRINKLER HEAD SHALL BE LIGATURE RESISTANT AND CORROSION RESISTANT. COORDINATE EXACT LOCATION AT EACH SHOWER STALL.

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I-BLOCK UNIT TYPICAL SHOWER FIRE PROTECTION RENOVATION PLAN

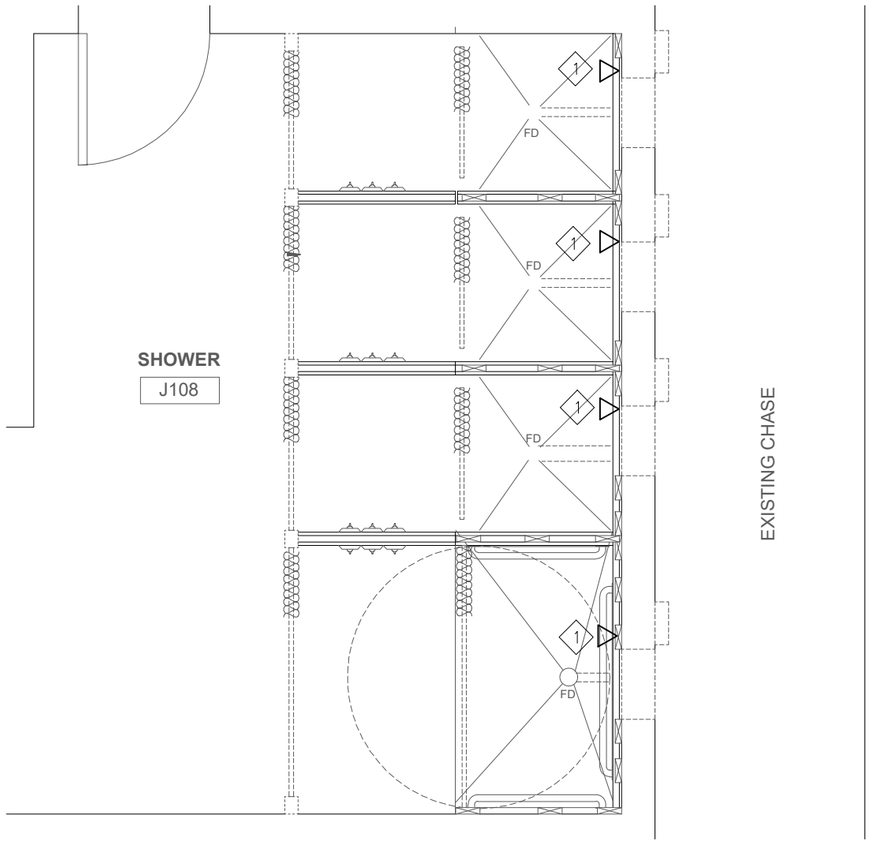
Scale: AS INDICATED

Sheet No. 8.51

OPTIMA #: 23-0170

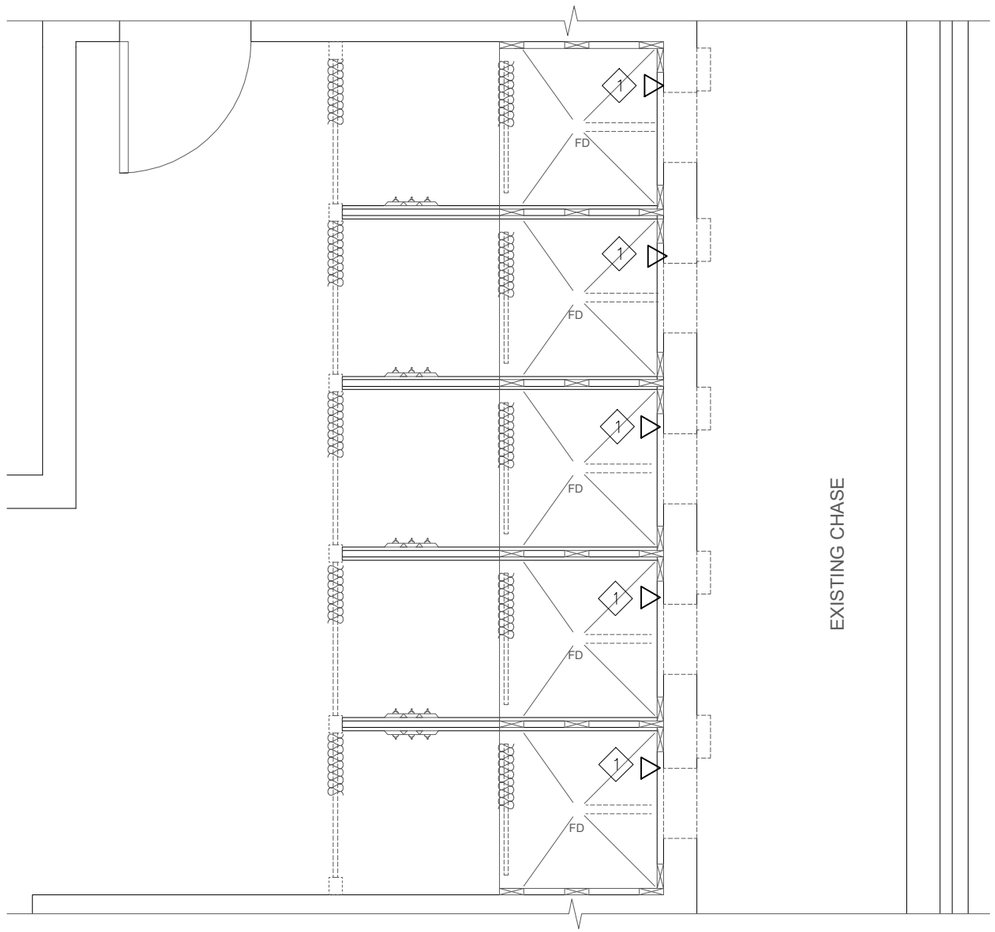
NOTES THIS SHEET:

1. REMOVE EXISTING SPRINKLER HEAD AND REPLACE WITH NEW INSTITUTIONAL TYPE SPRINKLER HEAD. SPRINKLER HEAD SHALL BE LIGATURE RESISTANT AND CORROSION RESISTANT. COORDINATE EXACT LOCATION AT EACH SHOWER STALL.



GANG SHOWER PLAN - 1ST FLOOR FIRE PROTECTION RENOVATION

1 3/8" = 1'-0" J-BLOCK



GANG SHOWER PLAN - 2ND FLOOR FIRE PROTECTION RENOVATION

2 3/8" = 1'-0" J-BLOCK

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J-BLOCK UNIT TYPICAL SHOWER FIRE PROTECTION RENOVATION PLAN
Scale: AS INDICATED

Sheet No. 8.52

OPTIMA #: 23-0170

SYMBOL SCHEDULE

2009 SOUTH CAROLINA ENERGY CONSERVATION CODE

COMMERCIAL ENERGY EFFICIENCY – ELECTRICAL SUMMARY

C401 METHOD OF COMPLIANCE

- ■ 2009 SCECC CHAPTER 4
- ☐ SC SPECIFIC COMCHECK PROVIDED
- ☐ N/A BASED ON PROJECT SCOPE
- ☐ ASHRAE 90.1–2013

C406 ADDITIONAL EFFICIENCY PACKAGE OPTIONS

- ☐ C406.2 EFFICIENT MECH EQUIPMENT
- ☐ C406.5 ON–SITE RENEWABLE ENERGY
- ■ C406.3 REDUCED LTG DENSITY
- ☐ C406.6 DEDICATED OA SYSTEM
- ☐ C406.4 ENHANCED DIGITAL LTG CNTLS
- ☐ C406.7 HI–EFF SERVICE WTR HTG
- ☐ NOT APPLICABLE BASED ON PROJECT SCOPE
- ☐ C406.7.1 WTR HTG LOAD FRACTION

C408 – SYSTEM COMMISSIONING:

- ☐ BUILDING IS LESS THAN 10,000 SQUARE FEET AND IS EXEMPT FROM THE SYSTEM COMMISSIONING REQUIREMENTS OF SECTION C408.
- ■ BUILDING IS GREATER THAN 10,000 SQUARE FEET AND REQUIRES SYSTEM COMMISSIONING PER SECTION C408.

C405.2 – LIGHTING CONTROLS (MANDATORY REQUIREMENTS):

- ■ LIGHTING SYSTEMS ARE PROVIDED WITH CONTROLS AS REQUIRED PER SECTION C405.2, EXCEPT WHERE EXEMPT.
- ☐ NOT APPLICABLE

C405.3 – EXIT SIGNS (MANDATORY REQUIREMENTS):

- ☐ INTERNALLY ILLUMINATED EXIT SIGNS DO NOT EXCEED 5 WATTS PER SIDE.
- ■ NOT APPLICABLE

C405.4 – INTERIOR LIGHTING POWER REQUIREMENTS (PRESCRIPTIVE) (NON–EXEMPT):

- ☐ NOT APPLICABLE PER 2009 SCECC C503.1, EXCEPTION 2.G.

C405.4.1 – TOTAL CONNECTED INTERIOR LIGHTING POWER:

136 WATTS SPECIFIED

65 % REDUCTION OF SPECIFIED VS. ALLOWED (APPLICABLE IF C406.1.2 IS SELECTED)

C405.4.2 – TOTAL ALLOWABLE INTERIOR LIGHTING POWER:

METHOD OF COMPLIANCE:

- ☐ BUILDING AREA METHOD
- ■ SPACE–BY–SPACE METHOD

394 WATTS ALLOWED

C405.5.1 – EXTERIOR BUILDING LIGHTING POWER (NON–EXEMPT):

- ■ NOT APPLICABLE

TOTAL CONNECTED EXTERIOR LIGHTING POWER:

_____ WATTS SPECIFIED

TOTAL ALLOWABLE EXTERIOR LIGHTING POWER:

_____ WATTS ALLOWED

C405.6 – ELECTRICAL ENERGY CONSUMPTION (DWELLING UNITS):

- ☐ SEPARATE ELECTRICAL METERING HAS BEEN PROVIDED FOR EACH DWELLING UNIT IN GROUP R–2 BUILDINGS.
- ■ NOT APPLICABLE

C405.7 – ELECTRICAL TRANSFORMERS (MANDATORY REQUIREMENTS):

- ☐ ELECTRICAL TRANSFORMERS HAVE BEEN SPECIFIED TO MEET MINIMUM EFFICIENCY REQUIREMENTS PER C405.7, EXCEPT WHERE EXEMPT.
- ■ NOT APPLICABLE

C405.8 – ELECTRICAL MOTORS (MANDATORY REQUIREMENTS):

- ☐ ELECTRICAL MOTORS HAVE BEEN SPECIFIED TO MEET MINIMUM EFFICIENCY REQUIREMENTS PER C405.8, EXCEPT WHERE EXEMPT.
- ■ NOT APPLICABLE

NOTE:

CONTRACTOR MUST FIELD MEASURE AND VERIFY ALL DIMENSIONS PRIOR TO FABRICATING ANY COMPONENT OF THE SHOWER. ALL PLUMBING, MECHANICAL AND ELECTRICAL INSTALLATION MUST BE FIELD VERIFIED PRIOR TO INSTALLATION.

DEVICES AND PATHWAYS

- WIRING SYSTEM CONCEALED IN WALL OR CEILING. WHEN SHOWN, CROSS LINES INDICATE NUMBER OF WIRES. (GROUND WIRES ARE NOT SHOWN)
- WIRING SYSTEM CONCEALED IN OR UNDER SLAB OR UNDERGROUND.
- WIRING SYSTEM EXPOSED
- CONDUIT TURNED UP TO FLOOR ABOVE.
- CONDUIT TURNED DOWN TO FLOOR BELOW.
- BRANCH CIRCUIT HOMERUN TO PANEL.

FIRE ALARM

- FACP — FIRE ALARM CONTROL UNIT
- AIM N — ADDRESSABLE IMPUT/OUTPUT MODULE, N DENOTES NUMBER OF INPUTS AND OUTPUTS
- F — PULL STATION/FIRE ALARM
- SMOKE DETECTOR/SENSOR (DEFAULT PHOTOELECTRIC TYPE)
- MC — DETECTOR – MULTI CRITERIA TYPE (MC)
- 15 — VISUAL ONLY APPLIANCE (WALL MOUNTED)
- 15 — AUDIBLE/VISUAL APPLIANCE (WALL MOUNTED)
- 15 — VISUAL ONLY APPLIANCE (CEILING MOUNTED)
- 15 — AUDIBLE/VISUAL APPLIANCE (CEILING MOUNTED)

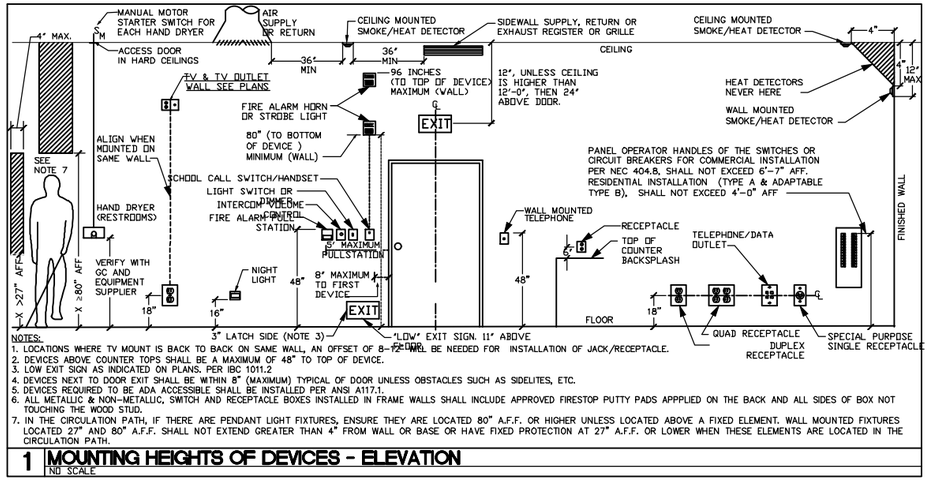
LIGHTING (SEE FIXTURE SCH.)

- LED LIGHTING FIXTURE. SEE FIXTURE SCHEDULE. SUSPEND FOUR CORNERS WITH WIRE TO STRUCTURE. DO NOT ALLOW GRID ALONE TO SUPPORT FIXTURE.
- LED LIGHTING FIXTURE.
- LED FIXTURE ON LIFE SAFETY CIRCUIT. SEE FIXTURE SCHEDULE FOR FIXTURE TYPE.
- S — SINGLE POLE SWITCH, 20 AMP, 120/277 VOLT, COOPER AH 1221, OR EQUAL BY HUBBELL, LEVITON, AND PASS & SEYMOUR.
- S_3 — THREE WAY SWITCH, 20 AMP, 120/277 VOLT, COOPER 1223, THREE WAY SWITCH, 20 AMP, 120/277 VOLT, COOPER 1223, OR EQUAL BY HUBBELL, LEVITON, AND PASS & SEYMOUR.
- S_K — KEY OPERATED SWITCH

ELECTRICAL SHEET INDEX

ABBREVIATIONS

+42"	DIMENSION INDICATES HEIGHT ABOVE FINISHED FLOOR AT WHICH CENTER OF DEVICE IS TO MOUNTED. SEE PLANS.
3R	NEMA 3R
AFF	ABOVE FINISHED FLOOR
AHJ	AUTHORITY HAVING JURISDICTION
AHU	AIR HANDLER UNIT
C.B.	CIRCUIT BREAKER
EC	EMPTY CONDUIT WITH PULL CORD
E.C.	ELECTRICAL CONTRACTOR
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
FACP	FIRE ALARM CONTROL PANEL
FPN	FUSE PER NAMEPLATE
LC	LIGHTING CONTACTOR
M.C.	MECHANICAL CONTRACTOR
P.C.	PLUMBING CONTRACTOR
U.G.	UNDERGROUND
WP	WEATHERPROOF
S.E.	SERVICE ENTRANCE
EM	EMERGENCY FIXTURE WITH BATTERY OR GEN. BACK–UP
ER	EXISTING ITEM RELOCATED TO THIS LOCATION.
RL	EXISTING ITEM TO BE RELOCATED.
EX	EXISTING ITEM TO REMAIN.
RP	EXISTING ITEM TO BE REPLACED.
RV	EXISTING ITEM TO BE REMOVED.
RC	RE–CONNECT
Isc	RMS SYMMETRICAL SHORT CIRCUIT CURRENT
AIC	AMPERE INTERRUPTING CAPACITY (EQUIPMENT RATING)



NOTES:

1. LOCATIONS WHERE TV MOUNT IS BACK TO BACK ON SAME WALL, AN OFFSET OF 8–12" MAY BE NEEDED FOR INSTALLATION OF JACK/RECEPTACLE.
2. DEVICES ABOVE COUNTER TOPS SHALL BE A MAXIMUM OF 48" TO TOP OF DEVICE.
3. LOW EXIT SIGN AS INDICATED ON PLANS. PER IBC 1011.2
4. DEVICES NEXT TO DOOR EXIT SHALL BE WITHIN 8" (MAXIMUM) TYPICAL OF DOOR UNLESS OBSTACLES SUCH AS SIDELITES, ETC.
5. DEVICES REQUIRED TO BE ADA ACCESSIBLE SHALL BE INSTALLED PER ANSI A117.1.
6. ALL METALLIC & NON–METALLIC, SWITCH AND RECEPTACLE BOXES INSTALLED IN FRAME WALLS SHALL INCLUDE APPROVED FIRESTOP PUTTY PADS APPPLIED ON THE BACK AND ALL SIDES OF BOX NOT TOUCHING THE WOOD STUD.
7. IN THE CIRCULATION PATH, IF THERE ARE PENDANT LIGHT FIXTURES, ENSURE THEY ARE LOCATED 80" A.F.F. OR HIGHER UNLESS LOCATED ABOVE A FIXED ELEMENT. WALL MOUNTED FIXTURES LOCATED 27" AND 80" A.F.F. SHALL NOT EXTEND GREATER THAN 4" FROM WALL OR BASE OR HAVE FIXED PROTECTION AT 27" A.F.F. OR LOWER WHEN THESE ELEMENTS ARE LOCATED IN THE CIRCULATION PATH.

1 MOUNTING HEIGHTS OF DEVICES – ELEVATION
NO SCALE

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2024.01.31

1761 **YORK COUNTY MOSS JUSTICE #6 SHOWER REPAIR**

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ELECTRICAL NOTES & LEGENDS

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Sheet No. 10.01

OPTIMA #: 23-0170

1. GENERAL:

A. THE WORK COVERED BY THESE SPECIFICATIONS CONSISTS OF FURNISHING ALL LABOR, EQUIPMENT, MATERIAL,S AND SUPPLIES AS NECESSARY FOR THE COMPLETE AND SATISFACTORY OPERATING ELECTRICAL SYSTEMS AS SHOWN ON THE PLANS.
B. ALL WORK SHALL BE IN ACCORDANCE WITH LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE, NFPA, STATE BUILDING CODE, AND ANY OTHER LOCAL REQUIREMENTS THAT MAY APPLY.
C. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL ELECTRICAL PERMITS AND INSPECTION FEES.
D. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND SHALL BE LISTED BY THE UNDERWRITER'S LABORATORIES, INC. OR BY A STATE APPROVED THIRD PARTY TESTING AGENCY FOR THE USE INTENDED WHERE A STANDARD FOR SUCH MATERIALS AND USE EXISTS. ALL ITEMS OF THE SAME TYPE AND RATING SHALL BE IDENTICAL AND OF THE SAME MANUFACTURER.
E. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND CATALOG DATA IN ELECTRONIC FORMAT (PDF) FOR ALL ELECTRICAL ITEMS IN THE SCOPE OF WORK, INCLUDING, BUT NOT LIMITED TO, RACEWAYS, BOXES, FITTINGS, CONDUCTORS, LUMINAIRES, LAMPS, BALLASTS, WIRING DEVICES, SAFETY SWITCHES, DISCONNECTS, FIRE ALARM, TELECOMMUNICATIONS, ETC. FOR APPROVAL AS APPLICABLE FOR THE PROJECT. ONE COMPLETE SET OF APPROVED SUBMITTALS SHALL BE MAINTAINED AT THE JOB SITE.
F. ALL COST ASSOCIATED WITH SUBSTITUTED EQUIPMENT TO COMPLY WITH THE BASIS OF DESIGN, INCLUDING PROVIDING MAINTENANCE ACCESS, CLEARANCE, CONDUIT, WIRING, REPLACEMENT OF OTHER SYSTEM COMPONENTS, BUILDING ALTERATIONS, METHODS, ETC., SHALL BE INCLUDED IN THE ORIGINAL BASE BID. NO ADDITIONAL COSTS ASSOCIATED WITH SUBSTITUTED EQUIPMENT WILL BE APPROVED AFTER BIDS HAVE BEEN ACCEPTED AND ALL COSTS WILL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. CREDITS SHALL BE GIVEN TO THE OWNER WHERE SUCH EQUIPMENT AND METHODS RESULT IN LESS EXPENSE TO THE CONTRACTOR.
G. ONE COMPLETE SET OF THE LATEST CONSTRUCTION PLANS OF ALL TRADES SHALL BE MAINTAINED AT THE JOB SITE. IN ADDITION, ALL ADDENDUMS, BULLETINS, AND/OR SKETCHES SHALL BE INCORPORATED INTO THE ON-SITE CONSTRUCTION PLANS AS THE JOB PROGRESSES.
H. COMPLETELY ADEQUATE HOUSING SHALL BE PROVIDED FOR ALL MATERIALS STORED ON JOB SITE. ONLY CONDUIT MAY BE STORED OUTSIDE, BUT NOT IN CONTACT WITH THE GROUND.
I. THE CONDUIT AND NEUTRAL SYSTEM SHALL BE GROUNDED AT THE MAIN SERVICE EQUIPMENT. GROUNDING ELECTRODE SYSTEM SHALL BE INSTALLED PER NEC 250.
J. PROVIDE AN INTERSYSTEM BONDING TERMINATION DEVICE AT THE MAIN ELECTRICAL SERVICE PER NEC 250.94.
K. WIRING SHALL BE TESTED FOR CONTINUITY AND GROUNDS BEFORE BEING ENERGIZED. FAULTY WIRING SHALL BE REPLACED AT NO ADDITIONAL EXPENSE TO THE OWNER.
L. PROVIDE ALL CUTTING AND PATCHING FOR INSTALLATION OF WORK AND REPAIR ANY DAMAGE DONE.
M. THE ELECTRICAL CONTRACTOR SHALL CONNECT ALL EQUIPMENT REQUIRING ELECTRICAL CONNECTIONS (UNLESS OTHERWISE NOTED), EXCEPT FOR CONTROL WIRING FOR EQUIPMENT NOT PROVIDED BY THE ELECTRICAL CONTRACTOR. CONTROL WIRING FOR SUCH EQUIPMENT SHALL BE PROVIDED BY THE RESPECTIVE DISCIPLINE.
N. ALL ELECTRICAL JUNCTION BOXES, CABLING, ETC. SHALL BE LABELED ACCORDING TO PANEL/RACK AND CIRCUIT NUMBER.
O. UPON COMPLETION OF WORK, CONTRACTOR SHALL PRESENT ENGINEER WITH CERTIFICATE OF APPROVAL FROM LOCAL INSPECTOR AND/OR AUTHORITY HAVING JURISDICTION BEFORE WORK WILL BE APPROVED FOR FINAL PAYMENT.
P. CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIALS FOR A PERIOD OF ONE YEAR EFFECTIVE THE DATE THE PROJECT IS ACCEPTED BY THE OWNER. ANY IMPERFECT MATERIALS OR WORKMANSHIP SHALL BE REPLACED WITHOUT ADDED COST TO THE PROJECT.
Q. IT SHALL NOT BE THE INTENT OF ISSUED PLANS AND/OR SPECIFICATIONS TO SHOW EVERY MINOR DETAIL OF CONSTRUCTION. THE ELECTRICAL CONTRACTOR IS EXPECTED TO FURNISH AND INSTALL ALL NECESSARY ITEMS FOR A COMPLETE AND OPERATING SYSTEM.
R. THE WORD "PROVIDE" MEANS THAT THIS CONTRACTOR SHALL FURNISH, FABRICATE, ERECT, CONNECT, AND COMPLETELY INSTALL SYSTEMS IN PROPER OPERATING CONDITION. ALL LABOR, PRODUCT OPTIONS, ACCESSORIES AND INCIDENTAL MATERIALS REQUIRED SHALL BE INCLUDED AS PART OF THIS WORK TO COMPLETE THE INSTALLATION.
S. THE WORD "CONNECT" MEANS THAT THIS CONTRACTOR SHALL PROVIDE (SEE DEFINITION ABOVE) ALL DISCONNECTING MEANS, OVERCURRENT PROTECTION AND WIRING REQUIRED TO PLACE THE EQUIPMENT AND SYSTEMS IN PROPER OPERATING CONDITION AND TO COMPLY WITH CODE REQUIREMENTS.
T. ELECTRICAL CONTRACTOR SHALL NOT SCALE PLANS. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATIONS OF ALL EQUIPMENT, UNLESS OTHERWISE NOTED.
U. IF DURING THE COURSE OF WORK, THE CONTRACTOR DISCOVERS A PROBLEM WITH THE PERFORMANCE OF THE INSTALLATION RELATIVE TO THE PLANS AND SPECIFICATIONS, THE NEC, OR OTHER CODES OR REQUIREMENTS, THE CONTRACTOR SHALL IMMEDIATELY BRING THE PROBLEM TO THE ATTENTION OF THE ARCHITECT AND/OR ENGINEER FOR RESOLUTION PRIOR TO THE EXECUTION OF THE WORK.
V. WHERE THERE ARE CONFLICTS BETWEEN THE PLANS AND SPECIFICATIONS, THE CONTRACTOR SHALL BRING THE ISSUE TO THE ATTENTION OF THE ENGINEER FOR RESOLUTION PRIOR TO THE EXECUTION OF THE WORK OR ORDERING ANY MATERIALS. NO ADDITIONAL COSTS SHALL BE WARRANTED WITHOUT A CHANGE TO THE PROJECT SCOPE.
W. EACH BIDDER SHALL VISIT THE JOB SITE PRIOR TO BIDDING TO FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS AND TO ASCERTAIN THE EXTENT OF WORK REQUIRED. FAILURE TO VISIT SITE SHALL NOT EXCUSE CONTRACTOR FROM PERFORMING REQUIRED WORK NOR SHALL IT BE AN ACCEPTABLE REASON FOR REQUESTING ADDITIONS TO THE CONTRACT.

2. RACEWAY:

A. CONDUIT SHALL BE MANUFACTURED BY ALLIED, WHEATLAND, REPUBLIC CONDUIT, WESTERN TUBE, OR APPROVED EQUIVALENT.
B. FOR INTERIOR WORK, CONDUIT SHALL BE ZINC COATED EMT EXCEPT WHERE NOT PERMITTED BY CODE. USE SCHEDULE 40 PVC BELOW CONCRETE SLAB, IN DUCTBANKS, AND FOR EXTERIOR WORK WHERE NOT SUBJECT TO DAMAGE. USE IMC WHERE SUBJECT TO PHYSICAL DAMAGE.
C. EMT FITTINGS SHALL BE COMPRESSION GLAND TYPE, OF MALLEABLE STEEL. CONNECTORS SHALL HAVE INSULATED THROATS. CAST, SET SCREW, OR INDENTER TYPE FITTINGS ARE NOT ACCEPTABLE. ALL FITTINGS FOR EMT SHALL BE MADE OF STEEL.
D. ALL RACEWAY SHALL BE RUN CONCEALED, UNLESS OTHERWISE NOTED. FISH ALL NEW OUTLETS IN EXISTING WALLS, WHERE POSSIBLE. ALL RUNS SHALL BE NEAT AND SQUARE.
E. LOW VOLTAGE CABLING NOT SPECIFIED TO BE INSTALLED IN CONDUIT, SHALL BE INSTALLED IN A CABLE TRAY SYSTEM OR J-HOOK SYSTEM CONSISTING OF MINIMUM 2" DIAMETER HOOKS LOCATED ON 3'-0" CENTERS IN ALL ACCESSIBLE CEILINGS. WHERE THERE ARE INACCESSIBLE CEILINGS, PROVIDE CONDUIT FOR ENTIRE LENGTH OF INACCESSIBILITY.
F. RACEWAYS USED FOR LOW VOLTAGE SYSTEMS SUCH AS TELECOMMUNICATIONS, FIRE ALARM, SECURITY, CCTV, CONTROLS, AND SIMILAR CONDUITS ABOVE THE CEILING AND BACKBOARD(S) SHALL BE PROVIDED WITH INSULATED THROAT BUSHINGS AT EACH CONDUIT TERMINATION. THESE BUSHINGS SHALL BE BE INSTALLED PRIOR TO PULLING LOW-VOLTAGE CABLES.
G. RACEWAY PENETRATIONS THROUGH FLOOR SLABS AND FIRE-RATED WALLS SHALL BE FILLED WITH IMPERVIOUS, NON-SHRINK GROUT SUFFICIENTLY TIGHT TO PREVENT THE TRANSFER OF SMOKE, WATER, AND DUST. ROOF PENETRATIONS SHALL BE WITHIN THE EQUIPMENT ROOF CURB.
H. SUPPORT ALL CONDUIT WITH STRAPS AND CLAMPS.
I. ALL CONDUIT SHALL BE RUN PARALLEL OR PERPENDICULAR TO BUILDING LINES, WHETHER EXPOSED OR NOT AND SUPPORTED FROM STRUCTURE AND PROPERLY SECURED.
J. WHERE CONDUITS PASS THROUGH A BUILDING EXPANSION JOINT, PROVIDE GALVANIZED EXPANSION FITTINGS WITH BONDING JUMPERS.
K. MINIMUM CONDUIT SIZE SHALL BE 3/4" FOR INTERIOR WORK, 1" FOR EXTERIOR WORK.
L. PROVIDE MINIMUM 210# TEST NYLON PULL CORD AND NYLON BUSHINGS IN ALL EMPTY RACEWAYS.
M. LIQUID-TIGHT METAL CONDUIT SHALL ONLY BE USED FOR FINAL CONNECTIONS TO EQUIPMENT AND ALL OTHER ROTATING AND VIBRATING EQUIPMENT, MAXIMUM LENGTH OF 3'-0".
N. FLEXIBLE METAL CONDUIT, MINIMUM SIZE 3/8", SHALL ONLY BE USED FOR FINAL CONNECTION TO LIGHTING FIXTURES, MAXIMUM LENGTH OF 6'-0".
O. PROVIDE PULL BOXES, SUCH THAT NO SINGLE CONDUIT RUN HAS BENDS IN EXCESS OF 360°. PULL BOXES SHALL BE SUITABLE AND APPROVED FOR THE INTENDED USE. WHERE CONDUITS PASS UNDER PAVED AREAS, THEY SHALL BE RGS.
P. ALL CONDUIT BENDS/ELBOWS EMERGING FROM UNDERGROUND SHALL BE IMC AND SHALL EXTEND A MINIMUM OF 18" BELOW GRADE.
Q. ALL UNDERGROUND RACEWAYS SHALL BE THOROUGHLY COATED WITH TWO COATS OF ASPHALTUM BITUMASTIC.

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ELECTRICAL SPECIFICATIONS

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Sheet No. 10.02

OPTIMA #: 23-0170

R. ALL CONDUITS INSTALLED UNDERGROUND OR IN CONCRETE SHALL HAVE JOINTS MADE WATERTIGHT BY USE OF POLYETRA–FLUOROETHYLENE TAPE.
S. THE USE OF AC OR NM CABLE IS NOT PERMITTED.
T. MC CABLE SHALL NOT BE USED WITH EXCEPTION OF LIGHTING FIXTURE CONNECTIONS WITH A MAXIMUM OF 3'–0" OF MC CABLE TO FIXTURE.

3. OUTLET BOXES:

A. JUNCTION AND PULL BOXES SHALL BE CODE GAUGE GALVANIZED STEEL. ACCEPTED MANUFACTURERS SHALL BE STEEL CITY (THOMAS & BETTS), RACO, CROUSE–HINDS, APPLETON (EMERSON), OR APPROVED EQUIVALENT.

4. CONDUCTORS:

A. CONDUCTORS SHALL BE MANUFACTURED BY SOUTHWIRE (SIMPULL), ENCORE (SUPERSLICK), UNITED COPPER (SLK), CERRO (SLP), OR APPROVED EQUAL, "PRE–LUBRICATED" BY THE MANUFACTURER.
B. ALL CONDUCTORS SHALL BE COPPER, RATED 75° C WET/DRY EXCEPT WHERE OTHERWISE NOTED OR REQUIRED BY U.L. OR OTHER CODES.
C. ALL CONDUCTORS SHALL BE SINGLE INSULATED CONDUCTOR, THHN/THWN–2. SIZES #10 AWG AND SMALLER SHALL BE SOLID, SIZES #8 AWG AND LARGER SHALL BE STRANDED.
D. BRANCH CIRCUITS SHALL NOT BE SMALLER THAN #12 AWG. CONTROL WIRING MAY BE #14 AWG.
E. CONDUCTORS SHALL BE COLOR CODED BLACK/RED/BLUE FOR 120/208 VOLT SYSTEMS AND BROWN/ORANGE/YELLOW FOR 277/480 VOLT SYSTEMS FOR A, B, AND C PHASES, RESPECTIVELY. NEUTRAL SHALL BE WHITE FOR 120/208 VOLT SYSTEMS AND NATURAL GRAY FOR 277/480 VOLT SYSTEMS. GROUND CONDUCTOR SHALL BE GREEN ON ALL SYSTEMS. ALL CONDUCTOR SIZES SHALL HAVE COLOR–CODED INSULATION. THE USE OF COLORED TAPE ON LARGER WIRE SIZES SHALL NOT BE ALLOWED.
F. INSULATION SHALL BE DUAL RATED TYPE THHN/THWN–2 FOR FEEDERS AND BRANCH CIRCUITS. FIXTURE TAPS SHALL BE #12 THHN/THWN–2 IN FLEX WITH GREEN #12 AWG GROUNDING CONDUCTOR.
G. ALL CONDUCTORS SHALL BE IN CONDUIT.
H. WIRING TO LIGHTING FIXTURES SHALL BE AS REQUIRED BY UL LABEL.
I. MULTI–WIRE BRANCH CIRCUITS SHALL NOT BE ALLOWED.
J. JOINTS IN #10 AWG AND SMALLER SHALL BE MADE UP WITH CRIMPED CONNECTORS WITH INSULATING CAPS (NO TAPE) OR WIRENUTS (MAXIMUM OF 3 CONDUCTORS UNDER ANY CONNECTOR OR WIRENUT). LARGER WIRE SHALL USE SPLIT BOLTS OR BOLTED CLAMPS.
K. ALL WIRING LUGS THROUGHOUT THE PROJECT, INCLUDING, BUT NOT LIMITED TO, BREAKERS, PANELBOARD/SWITCHBOARD LUGS, SAFETY SWITCH LUGS, MOTOR STARTER LUGS, TRANSFORMERS LUGS, WIRING DEVICE TERMINALS, AND ALL EQUIPMENT LUGS/TERMINALS SHALL BE RATED FOR USE WITH 75 DEGREE INSULATED CONDUCTORS AT THEIR 75 DEGREE AMPACITY AND SHALL BE SIZED AND SELECTED TO MATCH THE CONDUCTOR SIZE AND MATERIAL.
L. CIRCUIT JOINTS SHALL NOT BE MADE ON DEVICE TERMINALS.
M. WIRE WITHIN PANELBOARDS SHALL BE NEATLY TRAINED, SQUARED, BUNCHED, AND TAGGED.
N. ALL SYSTEM FURNITURE CONNECTIONS SHALL COMPLY WITH NEC 605.
O. GROUND ALL EQUIPMENT PER NEC ARTICLE 250. BOND WHERE CONDUITS ENTER ENCLOSURES THROUGH CONCENTRIC KNOCKOUTS. ALL FLEX, INCLUDING FIXTURE TAPS, SHALL INCLUDE GREEN GROUNDING CONDUCTOR, #12 AWG MINIMUM. PROVIDE GREEN INSULATED EQUIPMENT GROUNDING CONDUCTOR IN EACH CONDUIT AND FOR EACH CIRCUIT, SIZED PER NEC 250–122.
P. ALL CONDUCTORS INSTALLED IN VERTICAL RACEWAYS SHALL BE SUPPORTED AT INTERVALS AS REQUIRED PER NEC 300–19.
Q. THE ELECTRICAL CONTRACTOR SHALL FOLLOW AND APPLY THE TABLE BELOW, REGARDLESS WHAT THE PANEL SCHEDULE INDICATES, FOR SIZING ALL 120V & 277V, 20 AMP BRANCH CIRCUITS (COPPER CONDUCTORS) TO ALLOW A MAXIMUM OF 3% VOLTAGE DROP FROM THE CIRCUIT BREAKER TO THE FIRST DEVICE ON THE BRANCH CIRCUIT AND ACHIEVE A MAXIMUM OF 5% VOLTAGE DROP ACROSS THE ENTIRE BRANCH CIRCUIT:

VOLTAGE	CONDUCTOR LENGTH *	BRANCH CIRCUIT
120	0' – 50'	#12
120	51' – 90'	#10
120	91' – 140'	#8
120	141' – 225'	#6
277	0' – 125'	#12
277	126' – 200'	#10
277	201' – 330'	#8
277	331' – 525'	#6

5. SUPPORTS:

A. ALL EQUIPMENT SHALL BE ADEQUATELY SUPPORTED FROM STRUCTURE.
B. INSERTS IN MASONRY SHALL BE LEAD OR FIBER IN DRILLED HOLES, OR CAST IN PLACE.
C. NAILS OR POWDER ACTUATED FASTENERS SHALL NOT BE USED.
D. EMT/IMC/RGS SUPPORTS SHALL BE A MAXIMUM OF 8'–0" APART AND A MAXIMUM OF 3'–0" FROM BOXES.
E. LIGHTING FIXTURES MOUNTED IN OR ON CEILING SHALL BE SUPPORTED FROM STRUCTURE VIA 12 GAUGE STEEL WIRE. PROVIDE A MINIMUM OF FOUR WIRES, ONE ATTACHED TO EACH CORNER OF LAY–IN FIXTURES. RECESSED DOWNLIGHT FIXTURES SHALL BE SUPPORTED THE SAME. DO NOT SUPPORT RACEWAY OR FIXTURES FROM CEILING GRID OR DUCT WORK. USE U.L. LISTED GRID CLIPS ON ALL LAY–IN FIXTURES.

7. LIGHTING FIXTURES:

A. TYPES AND MANUFACTURERS ARE SCHEDULED ON THE PLANS. EQUIVALENT FIXTURES BY OTHERS MAY BE SUBMITTED ONLY AS INDICATED ON THE PLANS AND ARE SUBJECT TO THE APPROVAL OF THE OWNER AND ENGINEER.
B. ALL FIXTURES SHALL BE U.L. LISTED AND LABELED.
C. LED DRIVERS AND/OR BALLASTS SHALL BE AS INDICATED IN THE LIGHTING FIXTURE SCHEDULE OR AS OTHERWISE NOTED.
D. ALL FIXTURES SHALL BE PROVIDED FOR PROPER VOLTAGE BASED ON THE CIRCUIT ASSIGNMENT INDICATED ON THE PLANS.
E. CATALOG NUMBERS ARE FOR GENERAL IDENTIFICATION OF FIXTURES ONLY. ALL RELATED PARTS, SUCH AS PLASTER RINGS, JUNCTION BOXES, LOUVERS, SHIELDS, MOUNTING STEMS, CANOPIES, CONNECTORS, STRAPS, NIPPLES, HARDWARE, ACCESSORIES, ETC., TO FIT THEM PROPERLY TO THE CONSTRUCTION, SHALL BE FURNISHED AND INSTALLED BY THIS CONTRACTOR. CONTRACTOR SHALL PROVIDE SUITABLE TRIM AND APPURTENANCES TO MOUNT FIXTURES IN TYPE OF CEILING OR WALL AS SPECIFIED IN ARCHITECTURAL FINISH SCHEDULES REGARDLESS OF CATALOG NUMBER GIVEN.
F. ALL FIXTURES SHALL BE GROUNDED PER THE NEC.
G. FIXTURES CONNECTED WITH FLEX TO THE RIGID RACEWAY PORTION OF THE WIRING SYSTEM SHALL CARRY A GREEN BONDING JUMPER WITHIN THE FLEX. THE JUMPER SHALL BE FASTENED TO BOTH THE FIXTURE AND THE RACEWAY SYSTEM WITH A STEEL CITY "G" CLIP OR APPROVED EQUIVALENT. PHASE AND GROUND CONDUCTORS RUN IN FLEX SHALL BE #12 AWG MINIMUM. MAXIMUM FLEX LENGTH SHALL BE 6'–0".
H. MOUNT ALL FIXTURES PLUMB AND SQUARE WITH ROWS ALIGNED.
I. SEE ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF FIXTURES.
J. CONTRACTOR SHALL COORDINATE FIXTURE TYPE AND TRIM WITH CEILING CONSTRUCTION AND ADJUST ACCORDINGLY WITHOUT ADDITIONAL EXPENSE.
K. ALL LIGHTING FIXTURES SHALL BE THERMALLY PROTECTED PER THE NEC.
L. FIXTURES IN CONTACT WITH INSULATION SHALL BE IC RATED.
M. FOR RECESSED LIGHTING FIXTURES IN FIRE RATED CEILINGS, PROVIDE A MANUFACTURER APPROVED AND LISTED FIRE RATED COVER/ASSEMBLY OVER THE FIXTURE TO MAINTAIN THE INTEGRITY OF THE CEILING FIRE RATING. ANY LIGHTING FIXTURES INSTALLED UNDER THE FIRE RATED CAP SHALL BE SUITABLE FOR THE INSTALLATION.

10. EQUIPMENT IDENTIFICATION:

A. PROVIDE ENGRAVED PHENOLIC NAMEPLATES FOR ALL ELECTRICAL EQUIPMENT SUPPLIED FOR THE PROJECT, INCLUDING BUT NOT LIMITED TO, WIRING TROUGHS, SAFETY SWITCHES, DISCONNECTS, ETC. NAMEPLATE SHALL INDICATE THE DEVICE NAME, SYSTEM VOLTAGE

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ELECTRICAL SPECIFICATIONS
Scale: NOT TO SCALE
Sheet No. 10.03

OPTIMA #: 23-0170

(VOLTAGE/PHASE/WIRE), AND UPSTREAM DEVICE AND CIRCUIT. PROVIDE NAMEPLATES FOR CIRCUIT BREAKERS IN SWITCHGEARS, SWITCHBOARDS AND DISTRIBUTION PANELS.

B. NAMEPLATE COLORS SHALL BE AS FOLLOWS:

120/208V EQUIPMENT	BLUE SURFACE WITH WHITE CORE
277/480V EQUIPMENT	BLACK SURFACE WITH WHITE CORE
EMERGENCY SYSTEMS	GREEN SURFACE WITH WHITE CORE

C. NAMEPLATES UP TO 8 SQUARE INCHES SHALL NOT BE LESS THAN 1/16" THICK. NAMEPLATES LARGER THAN 8 SQUARE INCHES SHALL NOT LESS THAN 1/8" THICK.

D. LETTERING HEIGHT SHALL BE 1/2" MINIMUM.

E. NAMEPLATES SHALL BE ATTACHED WITH SELF-DRILLING/SELF-TAPPING SCREWS, EXCEPT RIVETS SHALL BE USED WHERE END OF SCREW IS NOT PROTECTED. QUANTITY AS FOLLOWS:
   UP TO 5 SQUARE INCHES: 2 SCREWS.
   5 TO 12 SQUARE INCHES: 4 SCREWS.
   ABOVE 12 SQUARE INCHES: 6 SCREWS.

12. FIRE STOPPING:

A. ALL PENETRATIONS OF RATED ASSEMBLIES SHALL BE SEALED WITH RATED MATERIALS MEETING ASTM E-814.

B. PROVIDE FIRESTOPPING DEVICE(S) OR SYSTEM(S) WHICH HAVE BEEN TESTED AND LISTED AS COMPLYING WITH ASTM E-814. INSTALL THE DEVICE(S) OR SYSTEM(S) IN ACCORDANCE WITH THE CONDITIONS OF THEIR LISTING. PROVIDE THE APPROPRIATE DEVICE(S) OR SYSTEM(S) WITH AN 'F' RATING EQUAL TO THE RATING OF THE ASSEMBLY BEING PENETRATED.

C. DEVICE(S) AND/OR SYSTEM(S) SHALL BE BY HILTI, 3M OR EQUIVALENT.

13. DEMOLITION NOTES:

A. PARTIAL AND TOTAL DEMOLITION OF PORTIONS SHALL BE PERFORMED ALONG WITH ALL NECESSARY MODIFICATIONS TO THAT PORTION OF THE EXISTING BUILDING WHICH SHALL REMAIN SO THAT IT CONTINUES TO FUNCTION UNAFFECTED BY THE DEMOLITION AND ASSOCIATED NEW CONSTRUCTION.

B. WHERE INCLUDED AS PART OF THE CONTRACT DOCUMENTS, THE DRAWINGS INDICATE THE GENERAL AREAS OF WORK INVOLVED. HOWEVER, THE ELECTRICAL CONTRACTOR SHALL PERFORM WORK OUTSIDE THOSE AREAS SHOWN AS IS NECESSARY TO COMPLY WITH THE INTENT OF THIS SECTION.

C. THE ELECTRICAL CONTRACTOR SHALL FAMILIARIZE THEMSELVES WITH THE EXISTING BUILDING AND WITH THE WORK OF ALL OTHER TRADES AND INCLUDE ALL WORK NECESSARY TO COMPLY WITH THE INTENT OF THE DEMOLITION.

D. IT SHALL BE UNDERSTOOD THAT FIELD CONDITIONS MAY BE ENCOUNTERED DURING THE EXECUTION OF THIS CONTRACT WHICH WILL REQUIRE EXTENSION OR RELOCATION OF EXISTING SYSTEMS OR EQUIPMENT WHICH ARE NOT SPECIFICALLY SHOWN ON THE DRAWINGS, BUT WHICH ARE REQUIRED TO MEET THE STATED INTENT THAT THE BUILDING CONTINUE TO FUNCTION UNAFFECTED BY THE DEMOLITION AND ASSOCIATED NEW CONSTRUCTION. THE ELECTRICAL CONTRACTOR SHALL INCLUDE SUCH WORK AS WOULD NORMALLY BE EXPECTED IN AN EXISTING BUILDING OF THIS AGE AND TYPE.

E. THE ELECTRICAL CONTRACTOR SHALL PROVIDE ALL TOOLS, EQUIPMENT, LABOR, ETC. IN ORDER TO ACCOMPLISH THE DEMOLITION PORTION OF THE PROJECT.

F. THE DEMOLITION OF CERTAIN AREAS OF THE EXISTING BUILDING SHALL BE PERFORMED BY THE GENERAL CONTRACTOR. IT SHALL BE THE ELECTRICAL CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE GENERAL CONTRACTOR TO DIFFERENTIATE THE SCOPE OF WORK BETWEEN SEPARATE TRADES.

G. THE ELECTRICAL CONTRACTOR SHALL INCLUDE COORDINATION WITH THE GENERAL CONTRACTOR AND SUCH DEMOLITION OF THE EXISTING ELECTRICAL SYSTEMS AS IS NECESSARY SO THAT THE DEMOLITION WORK OF THE GENERAL CONTRACTOR SHALL NOT DAMAGE THOSE PORTIONS OF THE ELECTRICAL SYSTEMS WHICH ARE TO REMAIN IN SERVICE, ARE TO BE REUSED, OR ARE TO BECOME THE PROPERTY OF THE OWNER.

H. TURN OVER TO OWNER, UPON REQUEST OR AS NOTED, ITEMS SHOWN AS BEING REMOVED AND NOT REINSTALLED. ITEMS NOT DIRECTED OR REQUESTED TO BE TURNED OVER TO THE OWNER SHALL BE DISPOSED OF BY THE ELECTRICAL CONTRACTOR.

I. EQUIPMENT OR MATERIALS WHICH ARE TO BE REUSED OR TURNED OVER TO THE OWNER SHALL BE CAREFULLY REMOVED, CLEANED, AND STORED IN A CLEAN AND DRY AREA. SHOULD THE ELECTRICAL CONTRACTOR ENCOUNTER SUCH EQUIPMENT WHICH IS NOT IN SATISFACTORY CONDITION FOR REUSE AND NOT IN WORKING ORDER, THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE ARCHITECT/ENGINEER IMMEDIATELY.

J. DISCONNECT ELECTRICAL SERVICES TO ALL EQUIPMENT REQUIRING REMOVAL. CONDUIT SHALL BE REMOVED BACK TO THE POINT WHERE IT WILL BE CONCEALED AT THE COMPLETION OF THIS CONTRACT. WIRE AND CABLE SHALL BE REMOVED BACK TO THE FIRST OUTLET BOX, CABINET, OR TERMINATION POINT WHICH IS TO REMAIN. CIRCUITS WHICH ARE NOT REUSED SHALL BE REMOVED BACK TO THE SOURCE IN THEIR ENTIRETY.

K. REMOVE AND REINSTALL CEILINGS IN THE EXISTING BUILDING AS REQUIRED FOR THE WORK. COORDINATE WITH THE GENERAL CONTRACTOR. IN SUCH AREAS, REMOVE AND REINSTALL ALL ELECTRICAL DEVICES WHICH ARE TO REMAIN IN OR ON THE CEILING.

L. WHERE NEW CEILINGS CONFLICT WITH EXISTING ELECTRICAL WORK WHICH IS TO REMAIN, RELOCATE THE ELECTRICAL WORK INVOLVED TO CLEAR THE NEW CONSTRUCTION.

M. WHERE NEW WALL OR FLOOR FINISHES CONFLICT WITH EXISTING ELECTRICAL WORK WHICH IS TO REMAIN, RELOCATE THE ELECTRICAL WORK INVOLVED OR PROVIDE BOX EXTENSIONS OR SIMILAR DEVICES AND REINSTALL ON THE NEW FINISH.

N. WHERE EXISTING BRANCH CIRCUITS AND SYSTEMS ARE INTERRUPTED BY NEW WORK OR SYSTEMS (ELECTRICAL, MECHANICAL, PLUMBING, FIRE PROTECTION, ETC.), EXTEND AND RECONNECT THOSE CIRCUITS AND SYSTEMS. WHERE THOSE CIRCUITS OR SYSTEMS MUST REMAIN IN SERVICE DURING THE EXECUTION OF THIS CONTRACT, PROVIDE TEMPORARY CONNECTIONS UNTIL FINAL CONNECTIONS ARE COMPLETE.

NOTE:

CONTRACTOR MUST FIELD MEASURE AND VERIFY ALL DIMENSIONS PRIOR TO FABRICATING ANY COMPONENT OF THE SHOWER. ALL PLUMBING, MECHANICAL AND ELECTRICAL INSTALLATION MUST BE FIELD VERIFIED PRIOR TO INSTALLATION.

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ELECTRICAL SPECIFICATIONS

Scale: NOT TO SCALE

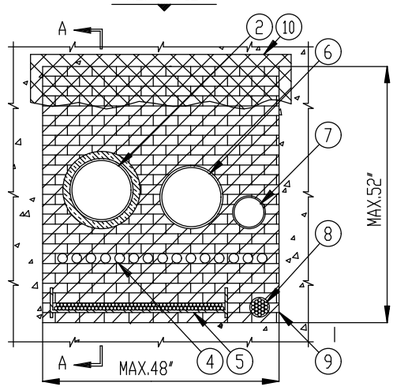
Sheet No. 10.04

OPTIMA #: 23-0170

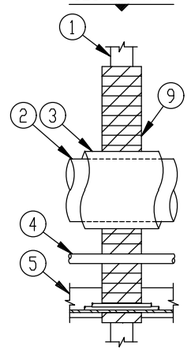
U.L. SYSTEM NO. WJ8007
MULTIPLE PENETRATING ITEMS THROUGH CONCRETE FLOOR OR WALL

F RATING = 4-HR.
T RATING = 0-HR.

FRONT VIEW



SECTION A-A



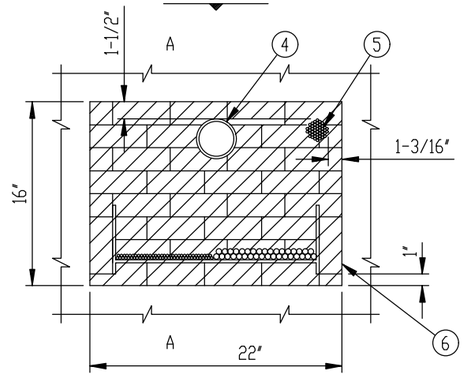
1. CONCRETE FLOOR OR WALL ASSEMBLY (MINIMUM 4-1/2" THICK).
2. MAXIMUM 12" DIAMETER STEEL PIPE OR MAXIMUM 6" DIAMETER COPPER PIPE.
3. MAXIMUM 1-1/2" THICK GLASS-FIBER PIPE INSULATION.
4. 1-1/2" DIAMETER STEEL CONDUIT (MAXIMUM QUANTITY = 15).
5. STEEL OR ALUMINUM CABLE TRAY (MAXIMUM SIZE : 36" x 6") WITH ANY OF THE FOLLOWING TYPES OF CABLE MAY BE USED WITH MAXIMUM 30% FILL OF CABLE TRAY :
   A. MAXIMUM 500 KCMIL SINGLE CONDUCTOR POWER CABLE.
   B. MAXIMUM 7/C NO. 12 AWG COPPER CONDUCTOR CABLE.
   C. MAXIMUM 300 PAIR NO. 24 AWG TELEPHONE CABLES.
6. MAXIMUM 30" DIAMETER STEEL PIPE (12" DIAMETER PIPE SHOWN).
7. 6" DIAMETER STEEL PIPE.
8. MAXIMUM 4" DIAMETER CABLE BUNDLE TO INCLUDE ANY OF THE FOLLOWING :
   A. FIBER-OPTIC CABLE (MAX. 1/2" DIA).
   B. ROMEX (2/C NO. 10 +GROUND).
   C. 25 PAIR NO. 24 AWG TELEPHONE CABLES.
   D. 7/C NO. 12 AWG CABLES.
   E. RG 62A COAXIAL CABLES.
   F. METAL CLAD CABLE (MAX. 3/4" DIA.).
9. HILTI FS 657 INTUMESCENT FIRESTOP BLOCK (2" TALL x 5" WIDE x 8" DEEP, REF: FRONT VIEW).
10. SEE NOTE NO. 4 BELOW.

NOTES : 1. ANNULAR SPACING FOR CABLE TRAY = MINIMUM 1-1/2".
2. ANNULAR SPACING FOR PIPE AND CABLE PENETRATIONS = MINIMUM 1".
3. INSTALL HILTI FS-ONE HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT IN ANY VOID THAT MAY EXIST (AROUND CABLE TRAY, CABLES, OR PIPE PENETRATIONS).
4. IF THE ANNULAR SPACE IS GREATER THAN 5", PROVIDE A STEEL WIRE MESH (NOMINAL 2" SQUARES, NO. 16 SWG). INSTALL ON EACH SIDE OF WALL ASSEMBLY.
5. MAXIMUM AREA OF OPENING = 2496 SQUARE INCHES.

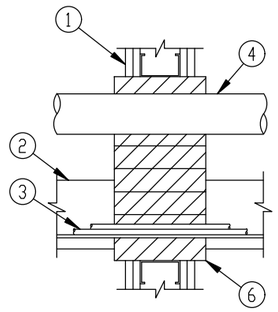
U.L. SYSTEM NO. WL8013
MULTIPLE PENETRATIONS THROUGH 1-HR. OR 2-HR. GYPSUM WALL

F RATING = 1-HR. OR 2-HR.
T RATING = 0-HR.
L RATING AT AMBIENT = 5 CFM/SQ. FT.
L RATING AT 400°F = 2 CFM/SQ. FT.

FRONT VIEW



SECTION A-A



1. GYPSUM WALL ASSEMBLY (1-HR. OR 2-HR. FIRE-RATING)X(2-HR. SHOWN).
2. STEEL OR ALUMINUM CABLE TRAY (MAXIMUM SIZE : 18" x 6").
3. ANY OF THE FOLLOWING TYPES OF CABLE MAY BE USED WITH MAX. 30% FILL ON CABLE TRAY :
   A. 500 KCMIL SINGLE CONDUCTOR POWER CABLE.
   B. 7/C NO. 12 AWG COPPER CONDUCTOR CABLE.
   C. 300 PAIR NO. 24 AWG TELEPHONE CABLE.
4. MAXIMUM 3" DIAMETER PVC PLASTIC PIPE (SCHEDULE 40)CLOSED OR VENTED PIPING SYSTEM).
5. CABLE BUNDLE (MAX. 2" DIA.) TO CONSIST OF ANY OF THE FOLLOWING:
   A. FIBER-OPTIC CABLE.
   B. RG 59 COAXIAL CABLE.
   C. 25 PAIR NO. 24 AWG TELEPHONE CABLE.
   D. 7/C NO. 12 AWG COPPER CONDUCTOR.
6. HILTI FS 657 FIRESTOP BLOCKS (2" x 5" x 8" DEEP, REF: FRONT VIEW).

NOTES : 1. NOT SHOWN: PENETRATING ITEMS MAY ALSO INCLUDE A MAX. 4" DIA. STEEL OR COPPER PIPE, EMT, OR STEEL CONDUIT WITH A MAX. 1-1/2" GLASS-FIBER PIPE INSULATION OR NON-INSULATED MAX. 4" STEEL PIPE, EMT, OR CONDUIT.
2. ANNULAR SPACE = MINIMUM 1".
3. INSTALL HILTI FS-ONE HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT IN ANY VOID THAT MAY EXIST (AROUND PENETRATING ITEMS, OR BETWEEN BLOCKS).

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WALL PENETRATION DETAILS

Scale: NOT TO SCALE

Sheet No. 10.05

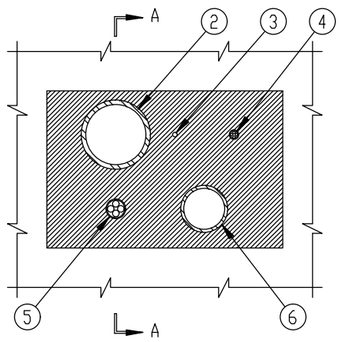
OPTIMA #: 23-0170

U.L. SYSTEM NO. WL8004

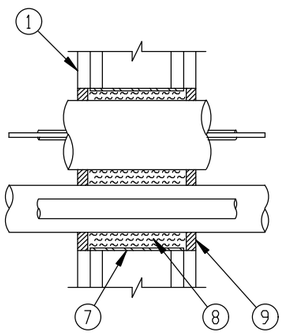
MULTIPLE METAL PIPE AND CABLE THROUGH 2-HR. GYPSUM WALL

F RATING = 2-HR.
T RATING = 1/4-HR.
L RATING AT AMBIENT = LESS THAN 1 CFM/SQ. FT.
L RATING AT 400°F = 4 CFM/SQ. FT.

FRONT VIEW



SECTION A-A



1. GYPSUM WALL ASSEMBLY (2-HR. FIRE-RATING).
2. MAXIMUM 3" DIAMETER ELECTRICAL METALLIC TUBING (EMT).
3. MAXIMUM 25 PAIR NO. 24 AWG (OR SMALLER) TELEPHONE CABLES.
4. MAXIMUM 3/C NO. 10 AWG NM (WITH GROUND) POWER CABLE WITH PVC INSULATION.
5. MAXIMUM 300 KCMIL (OR SMALLER) POWER CABLE WITH PVC INSULATION & NYLON JACKET.
6. MAXIMUM 2" DIAMETER STEEL PIPE, COPPER PIPE, EMT, OR STEEL CONDUIT.
7. NO. 8 STEEL WIRE MESH, 4-3/4" LONG (OR STANDARD METAL DRYWALL TRACK SCREWED SECURELY IN PLACE) CENTERED IN OPENING.
8. MINIMUM 4" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED.
9. MIN. 1/2" DEPTH HILTI FS-ONE HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT.

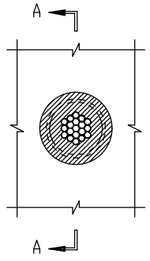
NOTES : 1. MAXIMUM AREA OF OPENING = 96 SQUARE INCHES WITH A MAX. DIM. OF 12".
2. DISTANCE BETWEEN ITEMS = MINIMUM 1-3/4", MAXIMUM 7".
3. DISTANCE FROM EDGE OF OPENING = MINIMUM 1/2", MAXIMUM 7". (EXCEPTION: 300 KCMIL POWER CABLE MUST BE MINIMUM 1-1/2" FROM EDGE OF OPENING.

U.L. SYSTEM NO. WL3065

CABLE BUNDLE THROUGH 1-HR. OR 2-HR. FIRE-RATED GYPSUM WALL

F RATING = 1-HR. OR 2-HR.
T RATING = 0-HR.
L RATING AT AMBIENT = 5 CFM/SQ. FT.
L RATING AT 400°F = 2 CFM/SQ. FT.

FRONT VIEW



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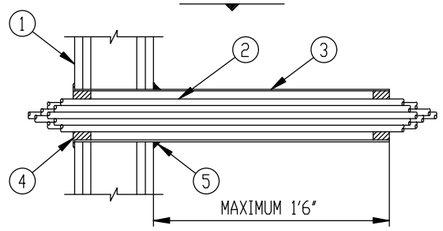

1. GYPSUM WALL ASSEMBLY (1-HR. OR 2-HR. FIRE-RATING)(2-HR. SHOWN).
2. CABLE BUNDLE TO CONSIST OF ANY OF THE FOLLOWING :
   A. 7/C NO. 12 AWG CAGLES.
   B. 12 PAIR 24 AWG PHONE CABLES.
   C. 25 PAIR 24 AWG PHONE CABLES.
   D. RG 59 COAXIAL CABLES.
   E. 2/C (+GND) NO. 14 AWG METAL-CLAD CABLES.
   F. 2/C NO. 8 AWG METAL-CLAD CABLES.
   G. MAXIMUM 1/2" DIAMETER FIBER-OPTIC CABLES.
3. OPTIONAL : MAX. 4" NOM. DIA. STEEL PIPE SLEEVE (SCH. 40 OR THINNER)(SEE NOTE NO. 4).
4. HILTI FS-ONE HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT :
   A. MINIMUM 5/8" DEPTH OF SEALANT FOR A 1-HR. FIRE-RATING.
   B. MINIMUM 1-1/4" DEPTH OF SEALANT FOR A 2-HR. FIRE-RATING.
5. SEE NOTE NO. 4 BELOW.

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 4-1/2".
2. CABLES TO FILL MAXIMUM 33% OF AREA OF OPENING.
3. ANNULAR SPACE = MINIMUM 1/4", MAXIMUM 3/4".
4. STEEL SLEEVE MAY BE FLUSH WITH WALL SURFACE OR EXTEND UP TO 18" BEYOND WALL SURFACE IN ANY COMBINATION. WHEN SLEEVE IS FLUSH WITH WALL, APPLY HILTI FS-ONE FIRESTOP SEALANT ONTO WALL SURFACE. WHEN SLEEVE IS EXTENDED BEYOND ONE OR BOTH SIDES OF WALL, APPLY 1/2" CROWN HILTI FS-ONE FIRESTOP SEALANT TO WALL/SLEEVE INTERFACE.

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WALL PENETRATION DETAILS

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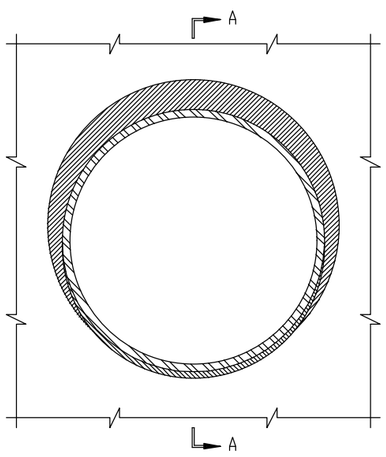
Sheet No. 10.06

OPTIMA #: 23-0170

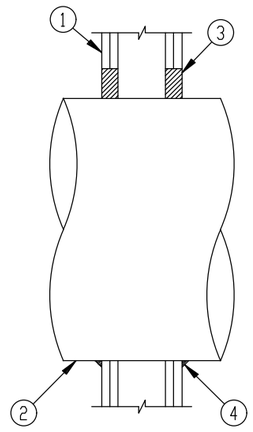
U.L. SYSTEM NO. WL1054
METAL PIPE THROUGH GYPSUM WALL ASSEMBLY

F RATING = 1-HR. OR 2-HR.
T RATING = 0-HR.
L RATING AT AMBIENT = LESS THAN 1 CFM/SQ. FT.
L RATING AT 400°F = LESS THAN 4 CFM/SQ. FT.

FRONT VIEW



SECTION A-A



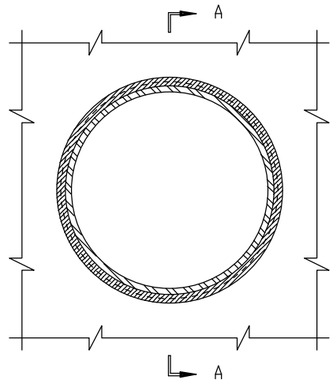
1. GYPSUM WALL ASSEMBLY (1-HR. OR 2-HR. FIRE-RATING)(2-HR. SHOWN).
2. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :
   A. MAXIMUM 30" DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
   B. MAXIMUM 6" DIAMETER COPPER PIPE.
   C. MAXIMUM 6" DIAMETER STEEL CONDUIT.
   D. MAXIMUM 4" DIAMETER STEEL EMT.
3. HILTI FS-ONE HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT :
   A. MINIMUM 5/8" DEPTH OF SEALANT FOR A 1-HR. FIRE-RATING.
   B. MINIMUM 1-1/4" DEPTH OF SEALANT FOR A 2-HR. FIRE-RATING.
4. MINIMUM 1/2" BEAD HILTI FS-ONE HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT AT POINT OF CONTACT.

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 32-1/4".
2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 2-1/4".

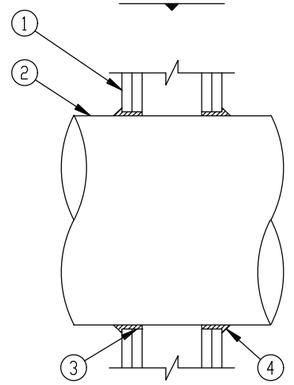
U.L. SYSTEM NO. WL1085
EMT THROUGH 1-HR. OR 2-HR. GYPSUM WALL ASSEMBLY

F RATING = 1-HR. AND 2-HR.
T RATING = 0-HR.
L RATING AT AMBIENT = LESS THAN 1 CFM/SQ. FT.
L RATING AT 400°F = 4 CFM/SQ. FT.

FRONT VIEW



SECTION A-A



1. GYPSUM WALL ASSEMBLY (1-HR. OR 2-HR. FIRE-RATING)(2-HR. SHOWN).
2. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :
   A. MAXIMUM 12" DIAMETER STEEL PIPE (SCHEDULE 20 OR HEAVIER).
   B. MAXIMUM 12" DIAMETER CAST IRON PIPE.
   C. MAXIMUM 6" DIAMETER COPPER PIPE.
   D. MAXIMUM 6" DIAMETER EMT.
   E. MAXIMUM 6" DIAMETER STEEL CONDUIT.
3. HILTI FS-ONE HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT FORCED INTO ANNULAR SPACE TO MAXIMUM EXTENT.
4. MINIMUM 1/2" BEAD HILTI FS-ONE HIGH PERFORMANCE INTUMESCENT FIRESTOP SEALANT AT PIPE/GYPSUM WALLBOARD INTERFACE.

NOTE : ANNULAR SPACE = MINIMUM 0", MAXIMUM 1/4".

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WALL PENETRATION DETAILS

Scale: NOT TO SCALE

Sheet No. 10.07

OPTIMA #: 23-0170

LIGHTING FIXTURE SCHEDULE

TYPE	DESCRIPTION	MINIMUM LUMENS	CCT	TOTAL FIXTURE WATTAGE	BALLAST/DRIVER	VOLTAGE	MANUFACTURER	MODEL	REMARKS
R1	1X1 RECESSED LED FIXTURE	800	3500K	8W	INTEGRAL LED DRIVER	UNIV	FAIL SAFE HOLOPHANE KENALL	FMR-X12-1-LD4-1STD-35-UNV-80/86-EDC1-WL-SF3-HS-SWBR	3500K HIGH SECURITY WET LOCATION SWING OUT BRACKETS

NOTE:

CONTRACTOR MUST FIELD MEASURE AND VERIFY ALL DIMENSIONS PRIOR TO FABRICATING ANY COMPONENT OF THE SHOWER. ALL PLUMBING, MECHANICAL AND ELECTRICAL INSTALLATION MUST BE FIELD VERIFIED PRIOR TO INSTALLATION.

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17011
ZANE KUSEYBI
2024.01.31

1761 **YORK COUNTY MOSS JUSTICE #6**
SHOWER REPAIR

Stewart · Cooper · Newell
Architects

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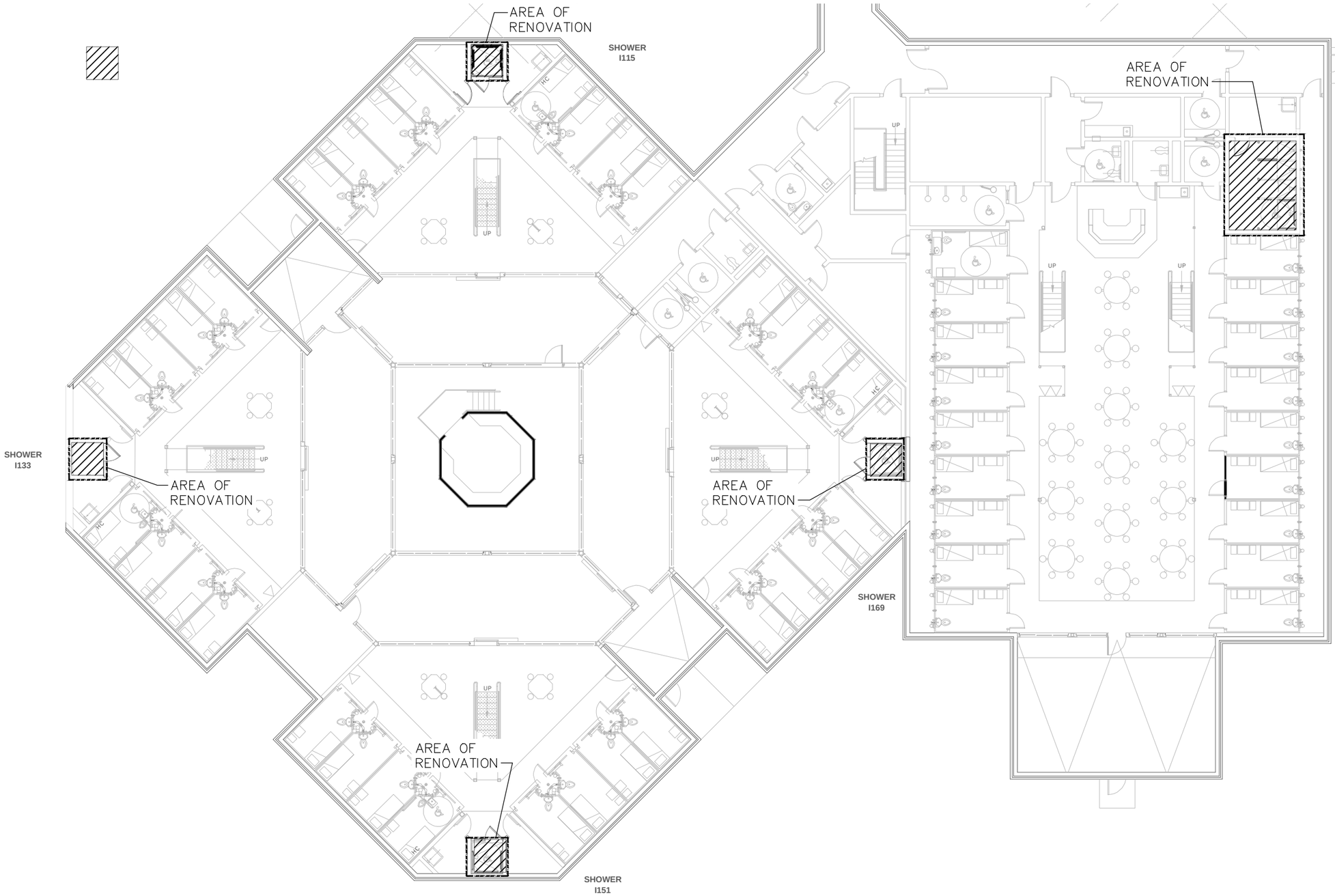
ELECTRICAL SCHEDULES

Scale: NOT TO SCALE

Sheet No.
10.08

OPTIMA #: 23-0170



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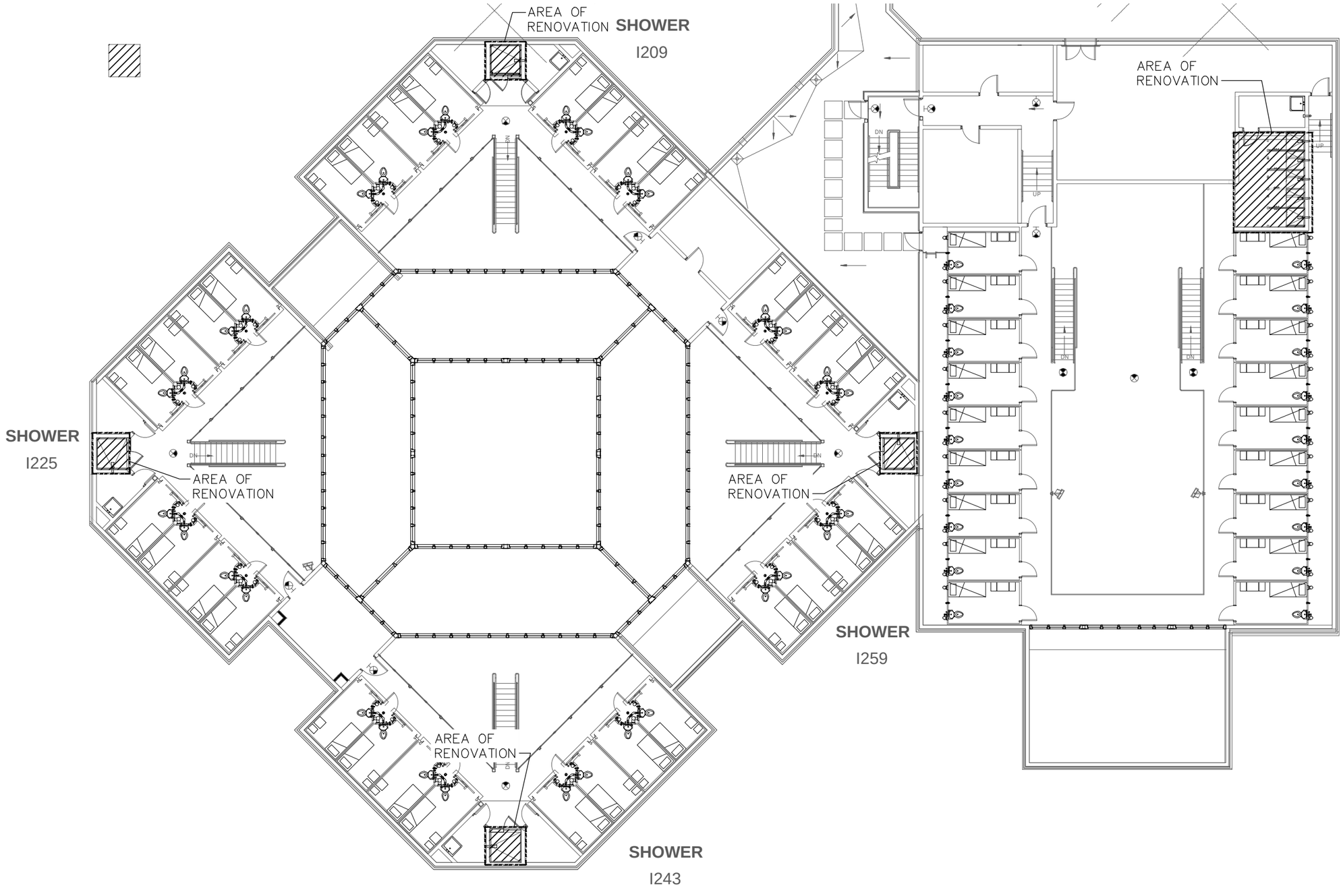
LOWER LEVEL FLOOR PLAN
ELECTRICAL

Scale: 1/16" = 1'-0"

Sheet No.
10.11

OPTIMA #: 23-0170



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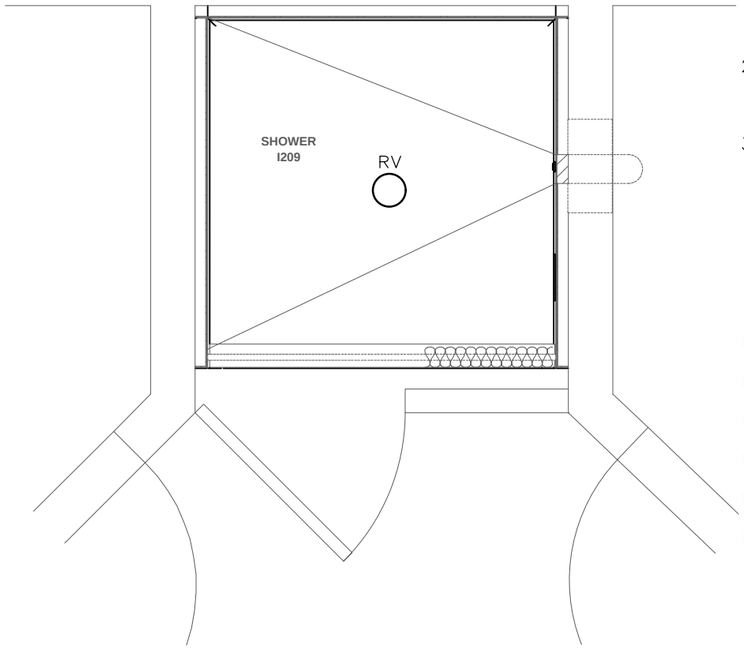
UPPER LEVEL FLOOR PLAN
ELECTRICAL

Scale: 1/16" = 1'-0"

Sheet No.
10.12

OPTIMA #: 23-0170

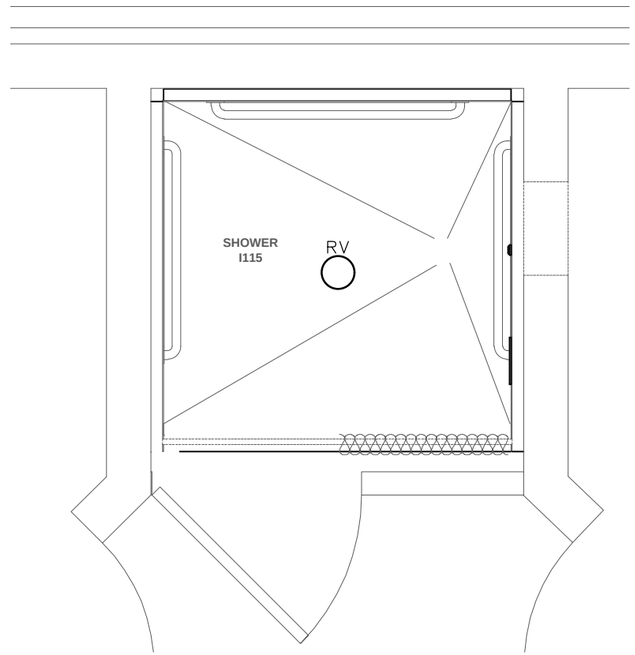


GENERAL NOTES:

1. RETAIN ALL PATHWAYS FROM DEMOLITION FOR REUSE. SEE RENOVATION DRAWINGS FOR NEW FIXTURE LOCATIONS.
2. MAINTAIN ALL EXISTING CONNECTIONS FOR DEVICES NOT SHOWN IN SCOPE OF WORK.
3. CONTRACTOR MUST FIELD MEASURE AND VERIFY ALL DIMENSIONS PRIOR TO FABRICATING ANY COMPONENT OF THE SHOWER. ALL PLUMBING, MECHANICAL AND ELECTRICAL INSTALLATION MUST BE FIELD VERIFIED PRIOR TO INSTALLATION.

DEMOLITION NOTES:

RV	EXISTING DEVICE TO BE REMOVED
RM	EXISTING DEVICE TO REMAIN
RP	EXISTING DEVICE TO BE REPLACED
RL	EXISTING DEVICE TO BE RELOCATED
ER	EXISTING DEVICE RELOCATED HERE



1 ENLARGED TYPICAL SHOWER ELECTRICAL DEMOLITION

1/2" = 1'-0" I-BLOCK

2 ENLARGED TYPICAL SHOWER ELECTRICAL DEMOLITION

1/2" = 1'-0" I-BLOCK

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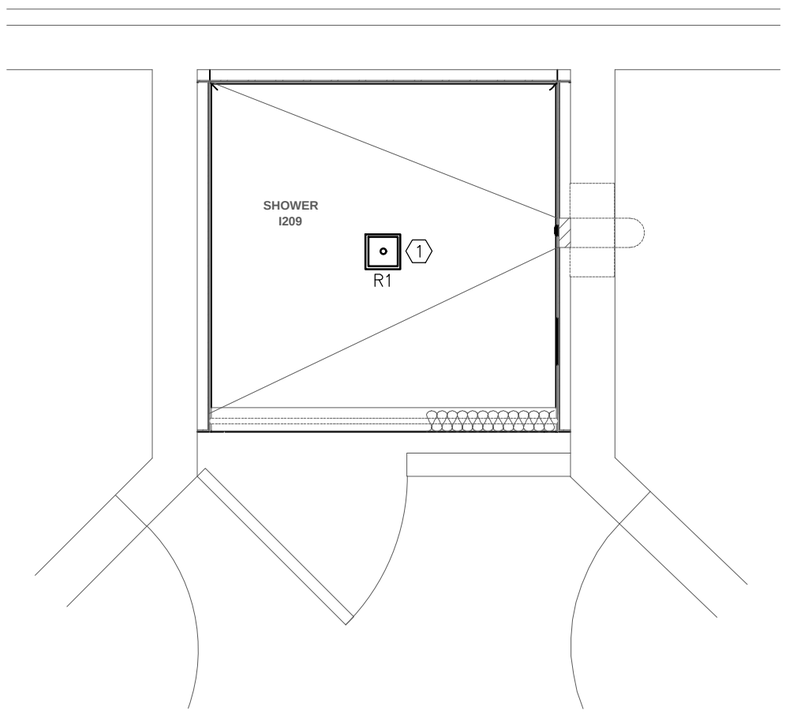
I-BLOCK UNIT TYPICAL SHOWER ELECTRICAL DEMOLITION PLAN

Scale: 1/2" = 1'-0"

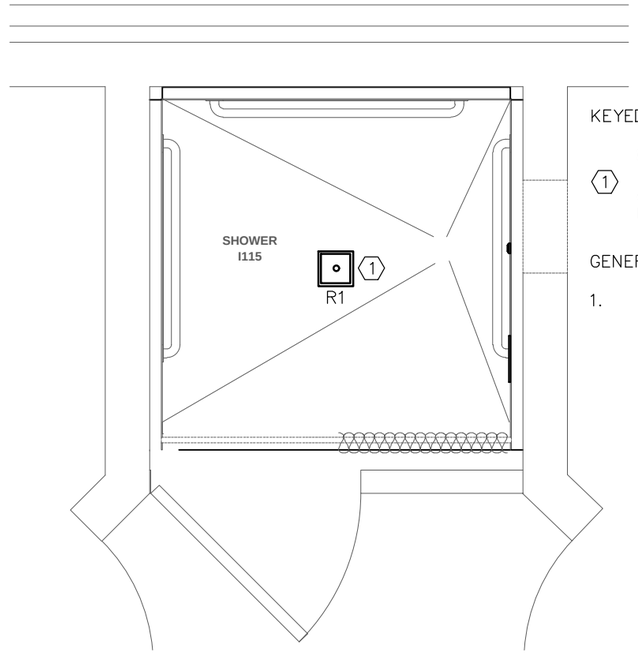
Sheet No. 10.21

OPTIMA #: 23-0170



1 ENLARGED TYPICAL SHOWER ELECTRICAL RENOVATION

1/2" = 1'-0" I-BLOCK



2 ENLARGED TYPICAL SHOWER ELECTRICAL RENOVATION

1/2" = 1'-0" I-BLOCK

KEYED NOTES: (X)

(1) CONNECT NEW LIGHT FIXTURE TO EXISTING LIGHTING CIRCUIT AND CONTROLS RETAINED FROM DEMOLITION IN THIS SPACE.

GENERAL NOTES:

1. CONTRACTOR MUST FIELD MEASURE AND VERIFY ALL DIMENSIONS PRIOR TO FABRICATING ANY COMPONENT OF THE SHOWER. ALL PLUMBING, MECHANICAL AND ELECTRICAL INSTALLATION MUST BE FIELD VERIFIED PRIOR TO INSTALLATION.

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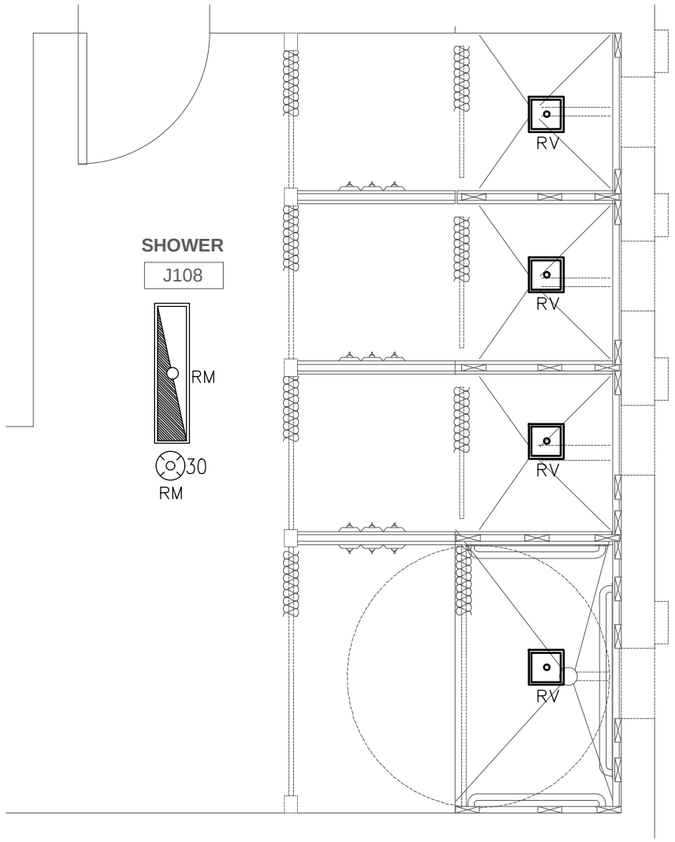
I-BLOCK UNIT TYPICAL SHOWER ELECTRICAL RENOVATION PLAN

Scale: 1/2" = 1'-0"

Sheet No. 10.22

OPTIMA #: 23-0170



GENERAL NOTES:

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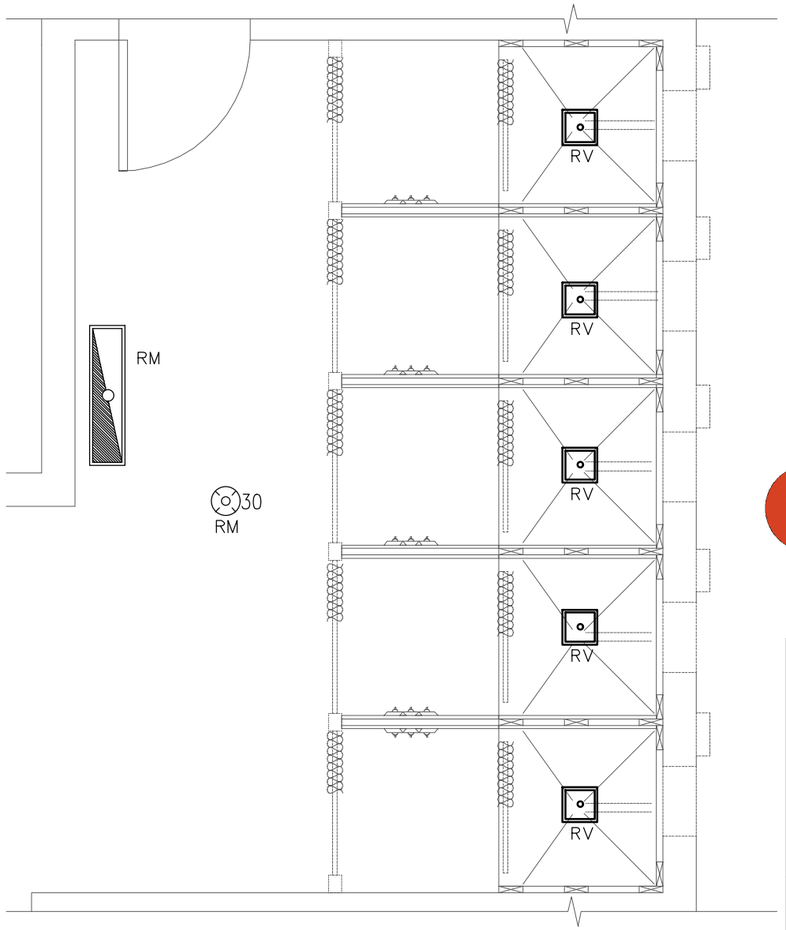
RM	EXISTING DEVICE TO REMAIN
RP	EXISTING DEVICE TO BE REPLACED
RL	EXISTING DEVICE TO BE RELOCATED
ER	EXISTING DEVICE RELOCATED HERE

1 GANG SHOWER PLAN - 1ST FLOOR ELECTRICAL DEMOLITION

3/8" = 1'-0" J-BLOCK



2 GANG SHOWER PLAN - 2ND FLOOR ELECTRICAL DEMOLITION

3/8" = 1'-0" J-BLOCK

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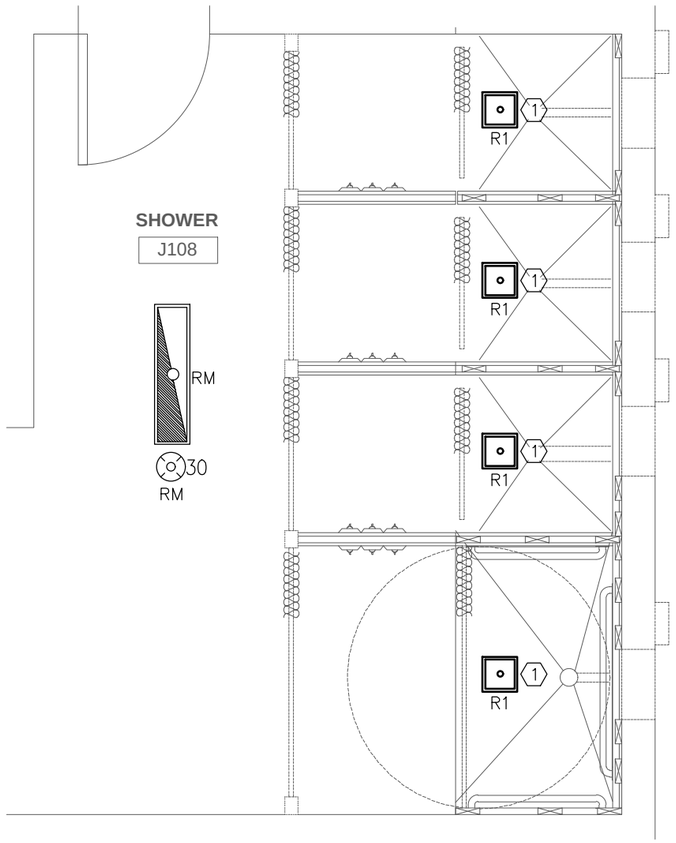
J-BLOCK UNIT TYPICAL SHOWER ELECTRICAL DEMOLITION PLAN

Scale: 3/8" = 1'-0"

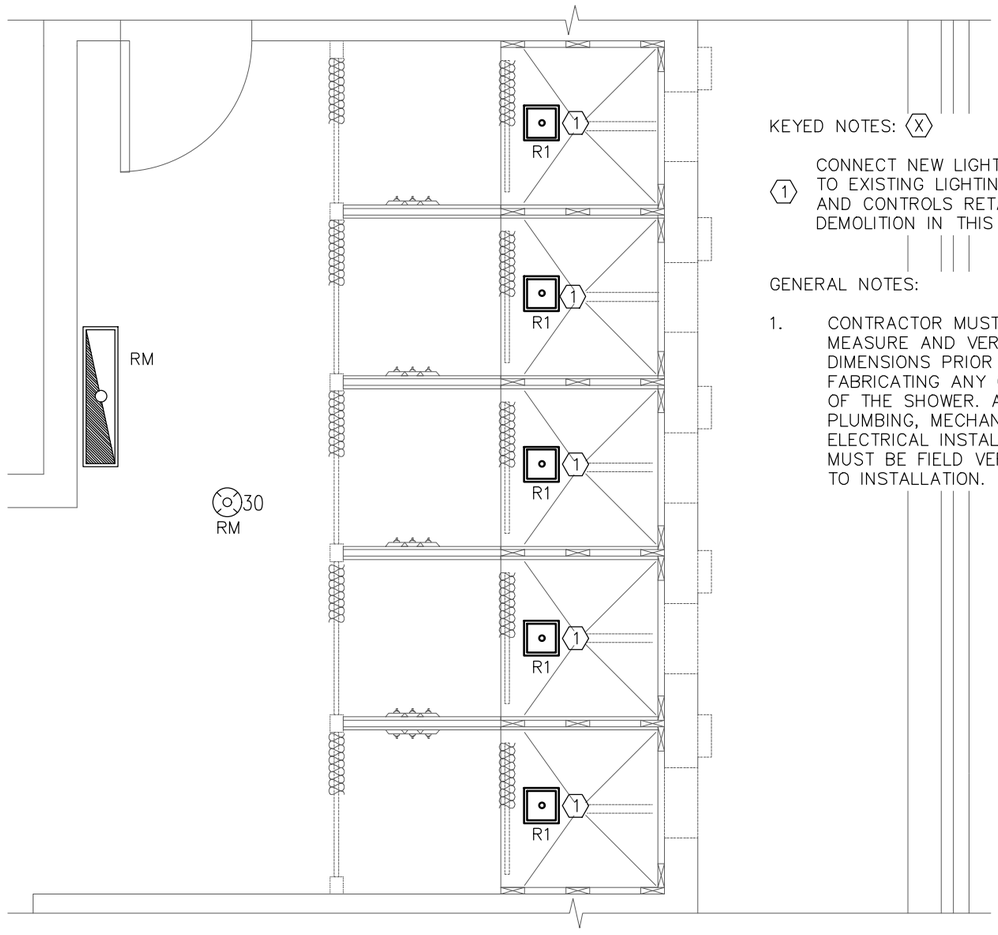
Sheet No. 10.31

OPTIMA #: 23-0170



GANG SHOWER PLAN - 1ST FLOOR ELECTRICAL RENOVATION

1 — 3/8" = 1'-0" — J-BLOCK



GANG SHOWER PLAN - 2ND FLOOR ELECTRICAL RENOVATION

2 — 3/8" = 1'-0" — J-BLOCK

KEYED NOTES: ⟨X⟩

⟨1⟩ CONNECT NEW LIGHT FIXTURE TO EXISTING LIGHTING CIRCUIT AND CONTROLS RETAINED FROM DEMOLITION IN THIS SPACE.

GENERAL NOTES:

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J-BLOCK UNIT TYPICAL SHOWER ELECTRICAL RENOVATION PLAN
Scale: 3/8" = 1'-0"

Sheet No. 10.32

OPTIMA #: 23-0170