

BATHROOM UPGRADES CLEARFIELD HUMAN SERVICES BUILDING

CARTWRIGHT
ARCHITECTS & ENGINEERS

2120 NORTH MAIN STREET
LOGAN, UT 84341
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State of Utah—Department of Administrative Services
DIVISION OF FACILITIES CONSTRUCTION
AND MANAGEMENT
4110 State Office Building/Salt Lake City, Utah 84114/538-3018

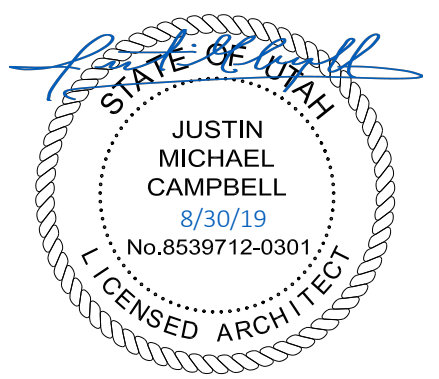
1350 EAST 1450 SOUTH
CLEARFIELD, UT 84015

CARTWRIGHT PROJECT # 119046

DFCM PROJECT # 20155400

8/30/19

DFCM APPROVAL



BATHROOM UPGRADES
CLEARFIELD HUMAN
SERVICES BUILDING
1350 EAST 1450 SOUTH
CLEARFIELD, UT 84015

DFCM PROJECT #	20155400
CARTWRIGHT PROJECT #	119046
DATE:	8/30/19
DRAWN BY:	FWP
CHECKED BY:	RSB
APPROVED BY:	JMC

REVISIONS	DATE	DESCRIPTION

CODE ANALYSIS

APPLICABLE CODES

YEAR	YEAR
INTERNATIONAL BUILDING CODE 2018	NATIONAL ELECTRICAL CODE 2017
INTERNATIONAL MECHANICAL CODE 2018	UNIFORM BASE CODE FOR BUILDING CONSERVATION 1997
INTERNATIONAL PLUMBING CODE 2018	ADA ACCESSIBILITY GUIDELINES N/A
INTERNATIONAL FIRE CODE 2018	
INTERNATIONAL ENERGY CONSERVATION CODE 2018	

A. OCCUPANCY AND GROUP: B
CHANGE IN USE: YES NO MIXED OCCUPANCY: YES NO
SPECIAL USE AND OCCUPANCY (e.g. HIGH RISE, COVERED MALL): NA

B. SEISMIC DESIGN CATEGORY: II DESIGN WIND SPEED: 100 MPH

C. TYPE OF CONSTRUCTION: (CIRCLE ONE)

I	II	III	IV	V	V
A	A	A	HT	A	B

D. FIRE RESISTANCE RATING. REQUIREMENTS FOR THE EXTERIOR WALLS BASED ON THE FIRE SEPARATION DISTANCE (IN FEET):
NORTH: 0 SOUTH: 0 EAST: 0 WEST: 0

E. MIXED OCCUPANCIES: NA NONSEPARATED USES: NA

F. SPRINKLERS:
REQUIRED: NO PROVIDED: NO TYPE OF SPRINKLER SYSTEM: NA

G. NUMBER OF STORIES: 1 BUILDING HEIGHT: 14'

H. ACTUAL AREA PER FLOOR (SQUARE FEET): 24,136

I. TABULAR AREA: NA

J. AREA MODIFICATIONS: NA

K. FIRE RESISTANCE RATING REQUIREMENTS FOR BUILDING ELEMENTS (HOURS):

ELEMENT	HRS ASSEMBLY LISTING	ELEMENT	HRS ASSEMBLY LISTING
EXTERIOR BEARING WALLS	0	FLOORS - CEILING FLOORS	0
INTERIOR BEARING WALLS	0	ROOFS - CEILING ROOFS	0
EXTERIOR NON-BEARING WALLS	0	EXTERIOR DOORS & WINDOWS	0
STRUCTURAL FRAME	0	SHAFT ENCLOSURES	0
PARTITIONS - PERMANENT FIRE BARRIERS	NA	FIRE WALLS	NA
		FIRE PARTITIONS	NA
		SMOKE PARTITIONS	NA

L. DESIGN OCCUPANT LOAD: 161
EXIT WIDTH REQUIRED: 36" EXIT WIDTH PROVIDED: 252"

M. MINIMUM NUMBER OF REQUIRED PLUMBING FACILITIES:
A. WATER CLOSETS: REQUIRED (M) 4 (F) 4 PROVIDED (M) 6 (F) 6
B. LAVATORIES: REQUIRED (M) 3 (F) 3 PROVIDED (M) 4 (F) 4
C. BATH TUBS OR SHOWERS: NA
D. DRINKING FOUNTAINS: 4 SERVICE SINKS: 1

FOOTNOTES:
1. IN CASE OF CONFLICT WITH THE U.S. DEPARTMENT OF FEDERAL REGISTERS PARTS I THROUGH V - ADA GUIDELINES AND SPECIFIC REFERENCE TO THE INTERNATIONAL BUILDING CODE ACCESSIBILITY CHAPTERS, THE MORE RESTRICTIVE REQUIREMENT SHALL GOVERN.
2. ADDITIONAL CODE INFORMATION SHALL BE PROVIDED AT THE DISCRETION OF THE BUILDING OFFICIAL FOR COMPLEX BUILDINGS. INCLUDING, BUT NOT LIMITED TO:
A. HIGH RISE REQUIREMENTS
B. ATRIUMS
C. PERFORMANCE BASED CRITERIA
D. MEANS EGRESS ANALYSIS
E. FIRE ASSEMBLY LOCATOR SHEET
F. EXTERIOR AND INTERIOR ACCESSIBILITY ROUTE
G. FIRE STOPPING, INCLUDING TESTED DESIGN NUMBER

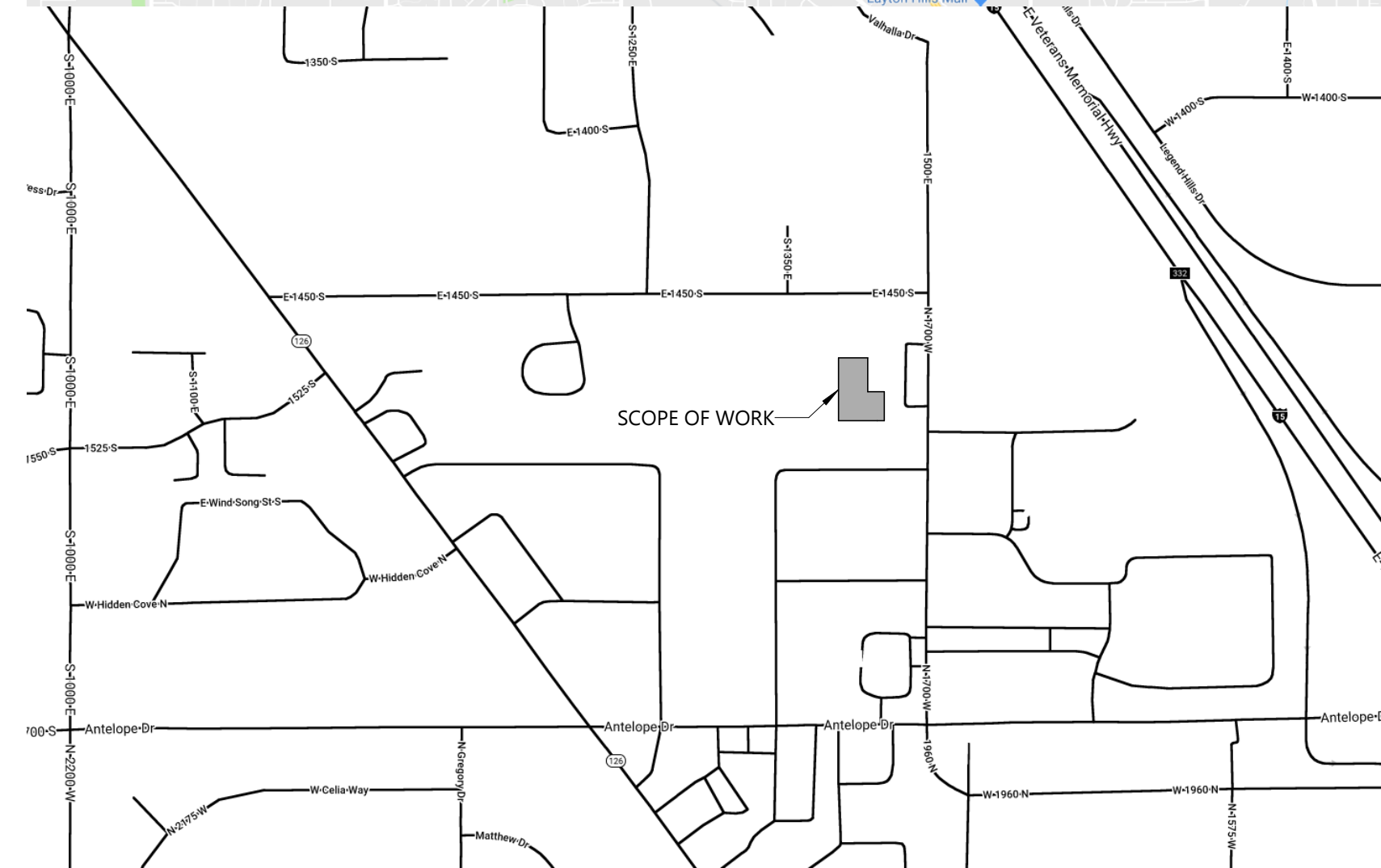
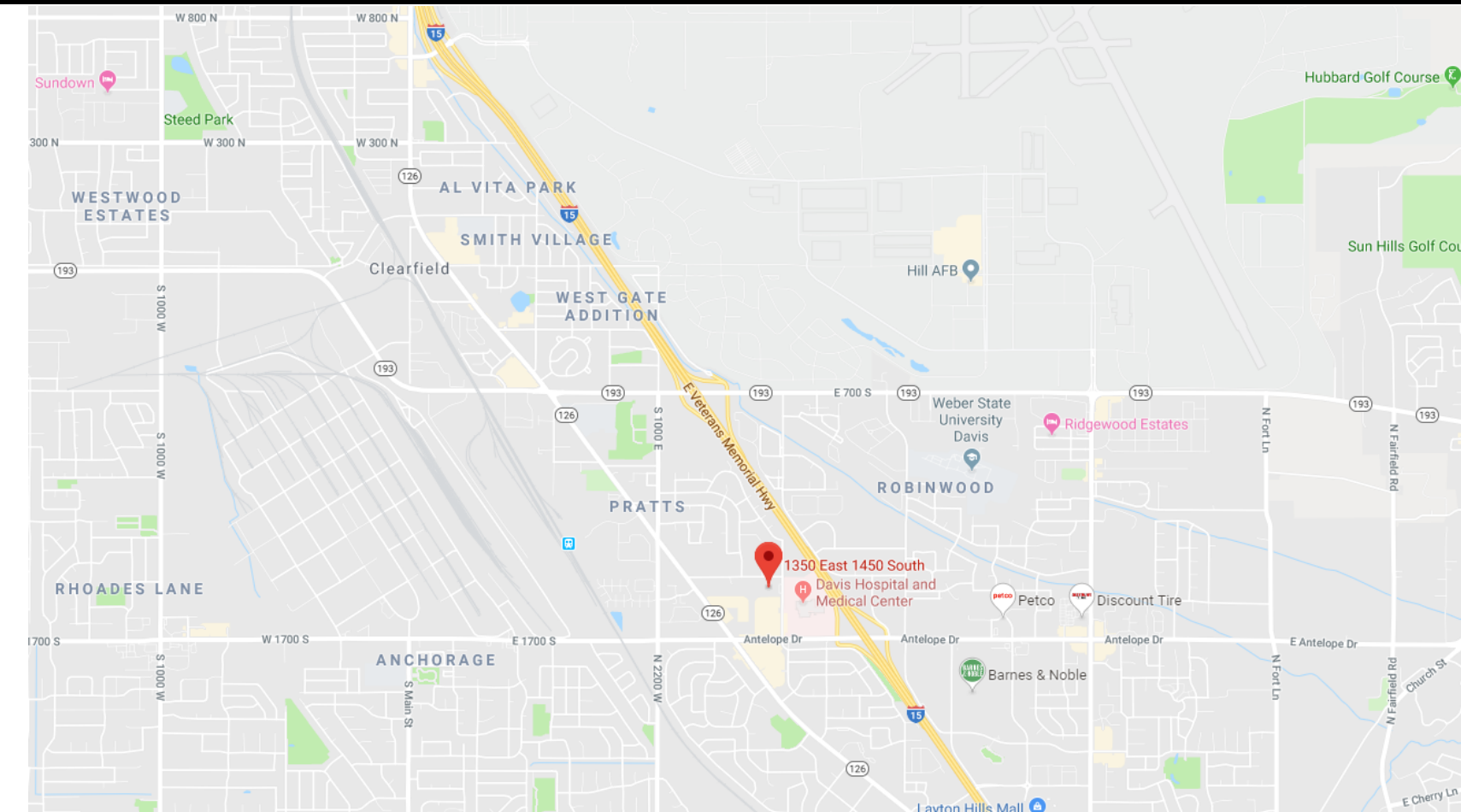
PROJECT DATA

ARCHITECT
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ELECTRICAL ENGINEER
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GODFREY ENGINEERING
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LOGAN, UT
PHONE: (435) 752-3593

VICINITY MAPS



SHEET LIST

SHEET NUMBER	SHEET NAME
GI001	COVER SHEET
AD101	RESTROOM DEMOLITION PLANS
AD102	REFLECTED CEILING DEMOLITION PLANS
AE101	RESTROOM FLOOR PLANS
AE121	REFLECTED CEILING PLANS
AE201	RESTROOM INTERIOR ELEVATIONS
AE501	ARCHITECTURAL DETAILS
AE502	SANITARY FACILITIES DETAILS, DOOR SCHEDULE
EE100	RESTROOM ELECTRICAL SPECIFICATIONS
EE101	RESTROOM ELECTRICAL LIGHTING PLANS
EE102	RESTROOM ELECTRICAL POWER PLANS
ME100	MECHANICAL OVERVIEW
ME101	MECHANICAL DEMOLITION
ME102	MECHANICAL FLOOR PLAN
PE100	PLUMBING OVERVIEW
PE101	PLUMBING DEMOLITION
PE102	MAIN FLOOR PLUMBING
PE103	PLUMBING ISOMETRICS

DEFERRED SUBMITTALS

FIRE ALARM AND SMOKE DETECTOR MODIFICATIONS: MODIFICATIONS TO THE LOCATIONS OF THE SMOKE DETECTORS AND FIRE ALARM WITHIN EACH ROOM. REINSTALL EXISTING SMOKE DETECTORS AND FIRE ALARMS, CONNECT TO EXISTING SYSTEM.
REQUIRED SUBMITTALS:
• SHOP DRAWINGS

OTHER NOTES

IT IS PREFERRED AND THE CONTRACTOR IS ALLOWED TO PUMP CONCRETE THROUGH THE OPENING CREATED FOR THE EXHAUST FAN.

COVER SHEET

GI001

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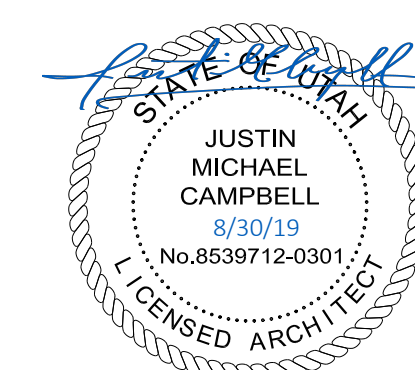
KEYNOTES

#	DESCRIPTION
02BB	REMOVE AND DISCARD TILE FLOOR, BASE, AND CONCRETE FLOOR SLAB THROUGHOUT
02BD	REMOVE AND STORE WATER CLOSET FOR REINSTALLATION
02BE	REMOVE AND STORE URINAL FOR REINSTALLATION
02BF	REMOVE AND DISCARD LAVATORY, REMOVE AND STORE FAUCET FOR REINSTALLATION
02BG	REMOVE AND DISCARD TOILET PARTITIONS AND URINAL SCREEN
02BH	REMOVE AND DISCARD TOILET ROOM ACCESSORIES
02BJ	REMOVE AND DISCARD ELECTRICAL RECEPTACLES AND SWITCHES. ELECTRICAL SWITCHES WILL BE REPLACED WITH MOTION SENSOR
02BK	AT CEILING, REMOVE AND DISCARD LIGHT FIXTURE(S); HVAC GRILLES AND DIFFUSERS AND EXHAUST FAN
02BM	REMOVE AND DISCARD EXISTING WALLS
02GA	KEEP EXISTING WALL. DEMOLISH FINISHES ON BATHROOM SIDE OF WALL. SAFEGUARD AND MAINTAIN FINISHES ON HALLWAY SIDE OF THE WALL OR ADJACENT ROOM
02HA	REMOVE DRINKING FOUNTAIN AND STORE FOR REINSTALLATION AT A DIFFERENT LOCATION. CAP ABANDONED PLUMBING LINES
02HB	REMOVE AND DISCARD DRINKING FOUNTAIN. LAP ABANDONED PLUMBING LINES
02HC	REMOVE AND STORE FIRE ALARM

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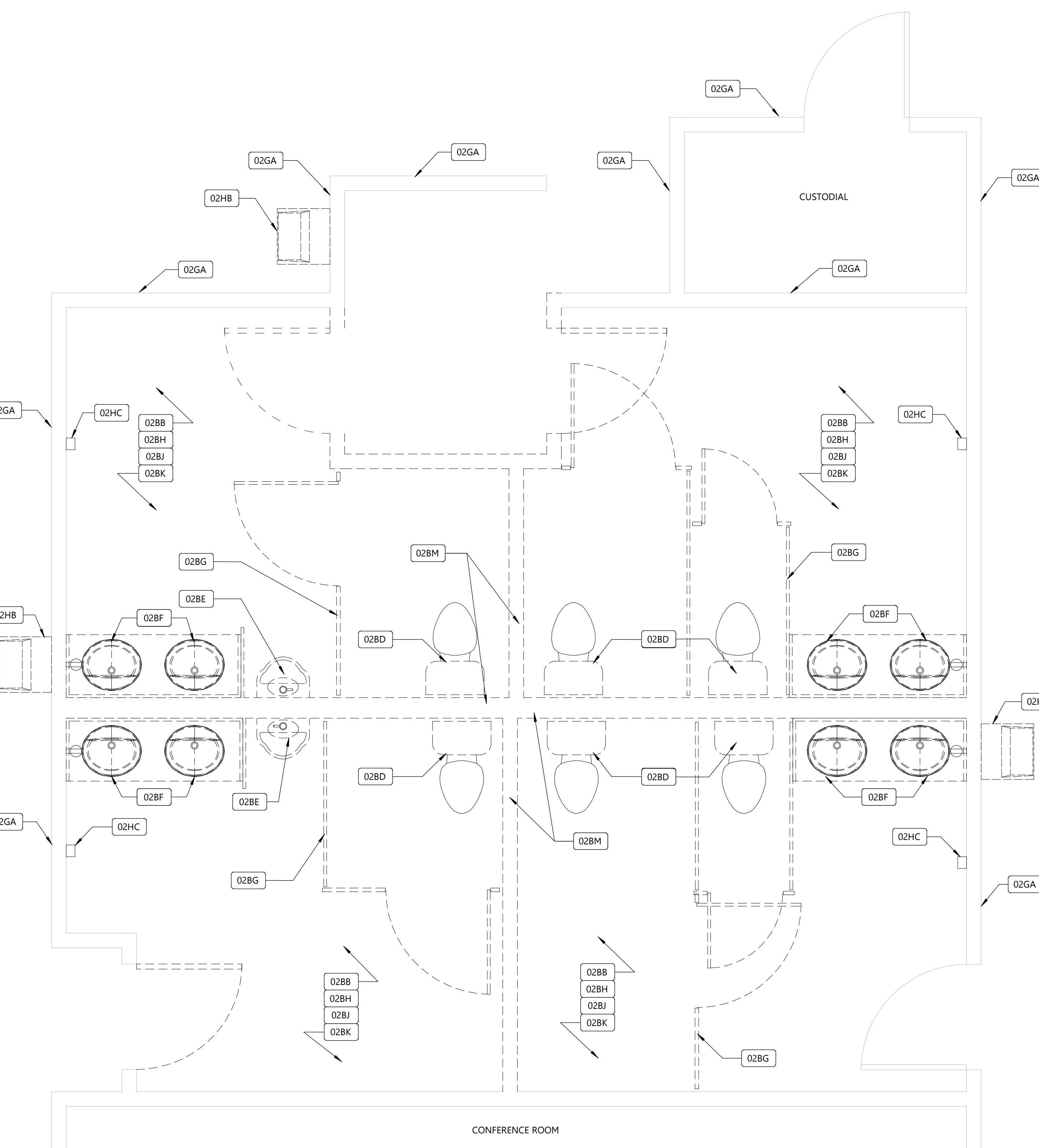
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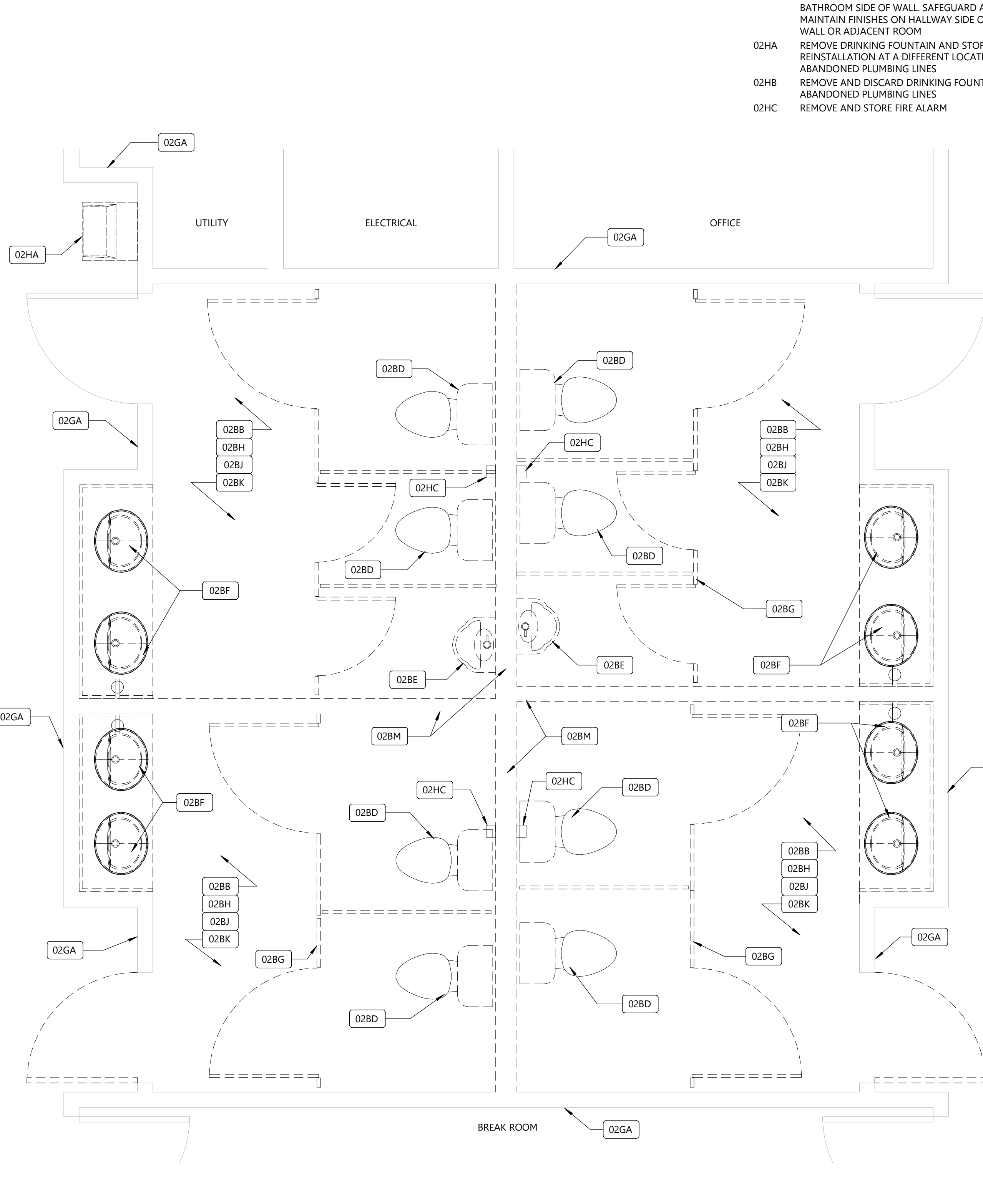
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**RESTROOM DEMOLITION
PLANS**

AD101



A1 EXISTING RESTROOMS DEMOLITION PLAN - AG SIDE
SCALE: 1/2" = 1'-0"



A4 EXISTING RESTROOMS DEMOLITION PLAN - WEST SIDE
SCALE: 1/2" = 1'-0"

PERMIT REVIEW

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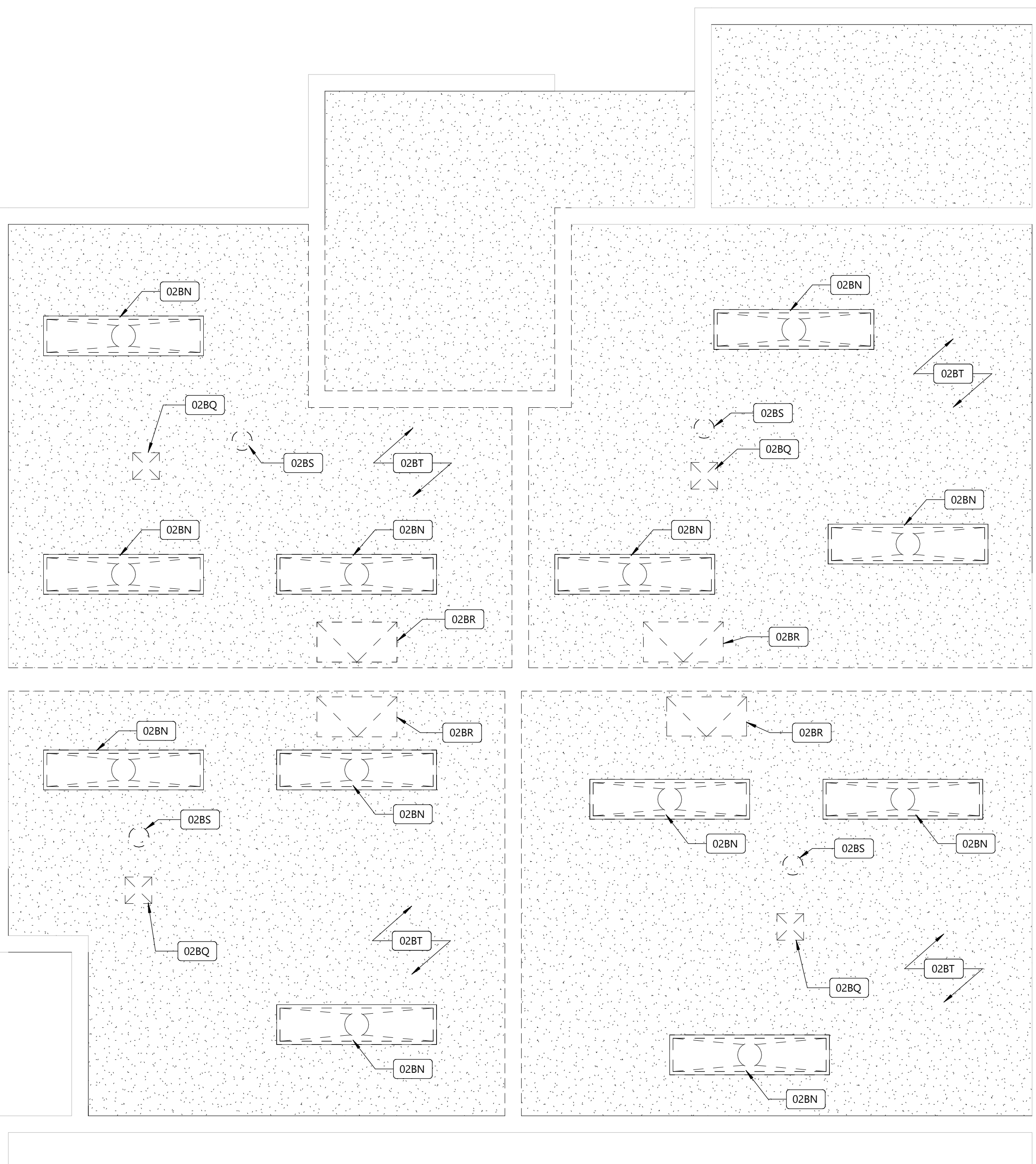
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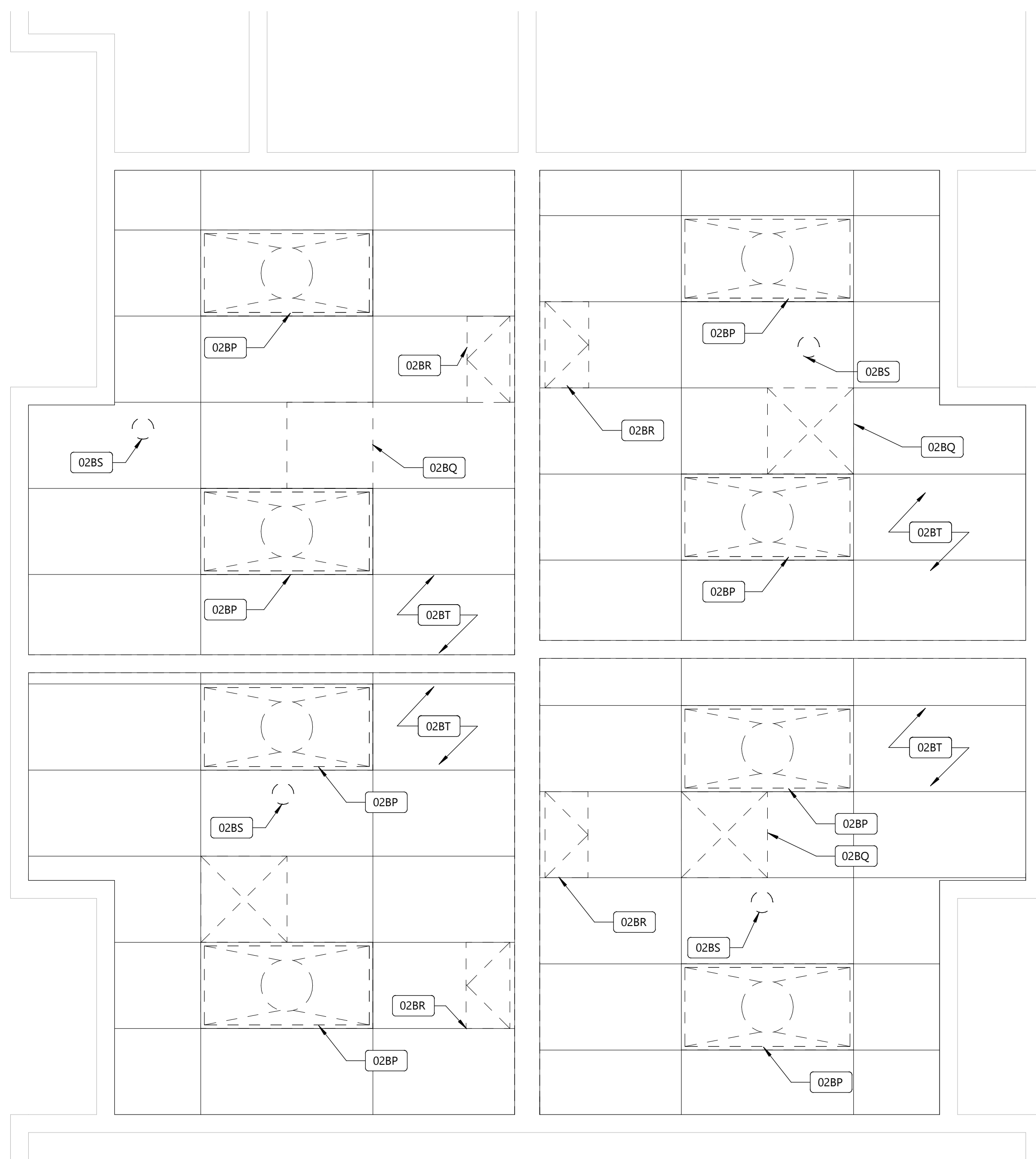
C

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A1 REFLECTED CEILING DEMOLITION PLAN - AG SIDE
SCALE: 1/2" = 1'-0"



A3 REFLECTED CEILING DEMOLITION PLAN - WEST SIDE
SCALE: 1/2" = 1'-0"

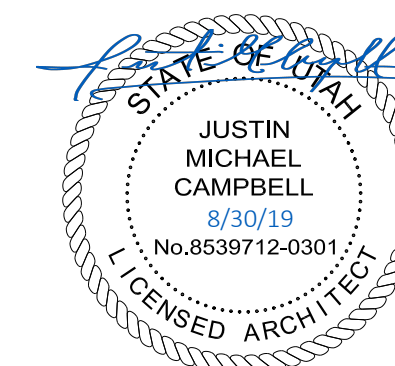
KEYNOTES

#	DESCRIPTION
02BN	REMOVE AND DISCARD 1'x4' LIGHT FIXTURES - REMOVE SERVICE LINES
02BP	REMOVE AND DISCARD 2'x4' LIGHT FIXTURES - REMOVE SERVICE LINES
02BQ	REMOVE AND DISCARD AIR SUPPLY VENT - SUPPLY DUCTWORK TO REMAIN
02BR	REMOVE AND DISCARD EXHAUST VENT AND EXHAUST FAN
02BS	REMOVE SMOKE DETECTOR. STORE FOR REINSTALLATION
02BT	REMOVE AND DISCARD CEILING

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REVISIONS	
DATE	DESCRIPTION

REFLECTED CEILING
DEMOLITION PLANS

AD102

PERMIT REVIEW

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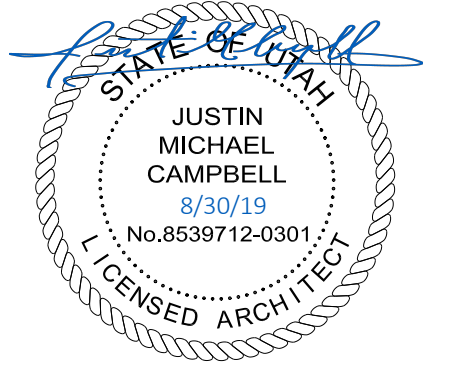
KEYNOTES

#	DESCRIPTION
09CA	4" CONCRETE FLOOR SLAB, SLOPE 1/8" PER FOOT TO FLOOR DRAINS
09CB	CT-1 TILE FLOOR AND BASE
09CC	STONE THRESHOLD
10CA	MINIMUM 36" GRAB BAR
10CB	MINIMUM 42" GRAB BAR
10CC	MINIMUM 18" VERTICAL GRAB BAR
10CD	24" WIDE X 36" HIGH MIRROR
10CH	PAPER TOWEL DISPENSER FURNISHED BY OWNER, INSTALLED BY CONTRACTOR, MECHANICALLY FASTEN FIXTURE TO WALL
10CJ	SOAP DISPENSER FURNISHED BY OWNER, INSTALLED BY CONTRACTOR, MECHANICALLY FASTEN FIXTURE TO WALL
10CK	TOILET TISSUE DISPENSER FURNISHED BY OWNER, INSTALLED BY CONTRACTOR, MECHANICALLY FASTEN FIXTURE TO WALL
10CM	TOILET PARTITION
10CN	URINAL SCREEN
10CQ	WASTEBASKET PROVIDED BY OWNER
10CR	REINSTALL EXISTING FIRE ALARM
22AA	REINSTALL DRINKING FOUNTAIN
22AB	PAPER TOWEL DISPENSER FURNISHED BY OWNER, INSTALLED BY CONTRACTOR, MECHANICALLY FASTEN FIXTURE TO WALL
22DA	REINSTALL ADA WATER CLOSET
22DC	LAVATORY INSTALLED WITH EXISTING FAUCET
22DE	REINSTALL URINAL
22DF	FLOOR DRAIN

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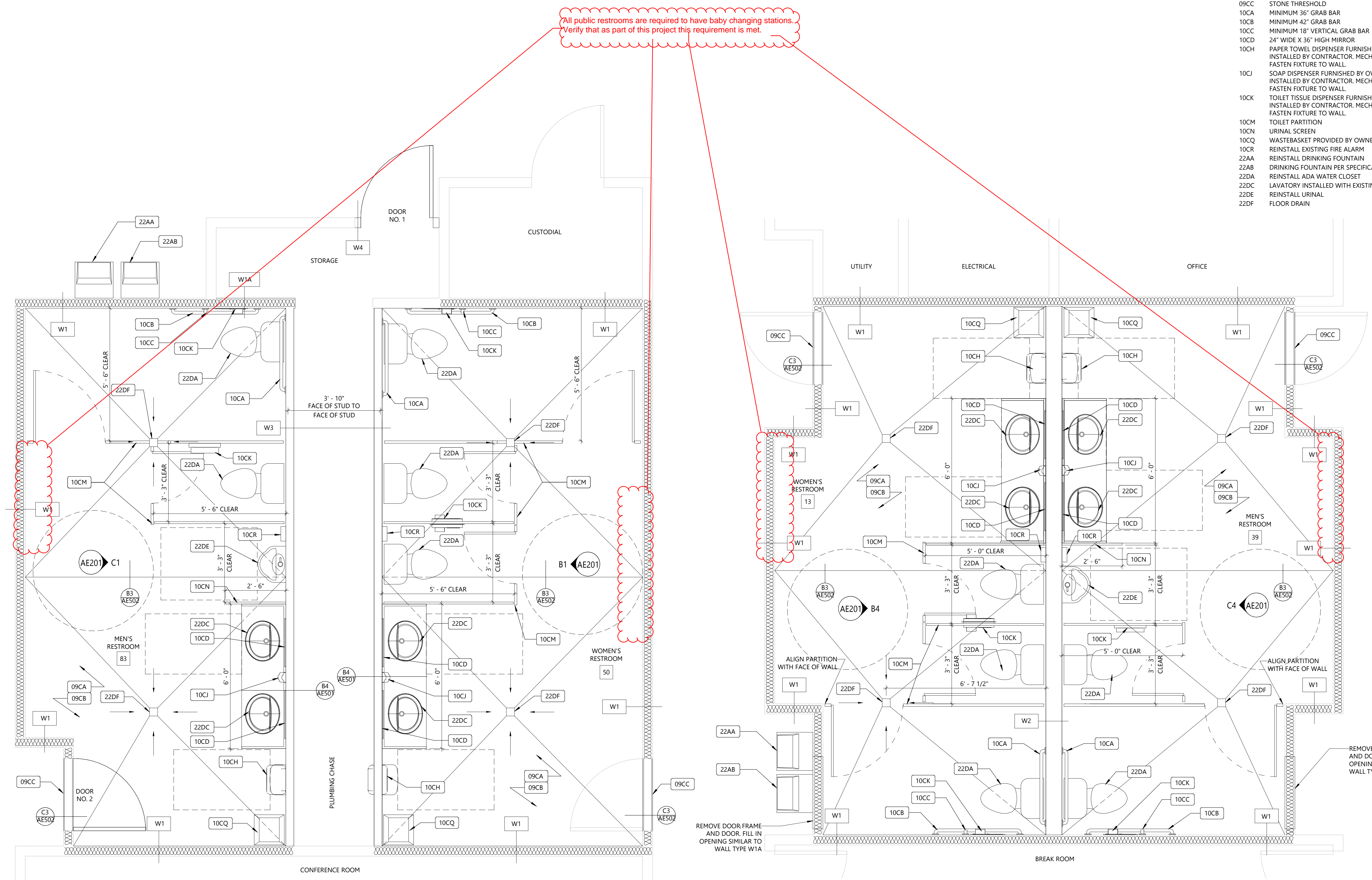
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All public restrooms are required to have baby changing stations. Verify that as part of this project this requirement is met.

D
C
B
A



A1 PROPOSED RESTROOM PLAN - AG WING
SCALE: 1/2" = 1'-0"

A4 PROPOSED RESTROOMS PLAN - WEST WING
SCALE: 1/2" = 1'-0"

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RESTROOM FLOOR PLANS

AE101

PERMIT REVIEW

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KEYNOTES

#	DESCRIPTION
10AA	ATTIC ACCESS DOOR. COORDINATE LOCATION WITHIN ADA STALL AND BETWEEN STRUCTURAL FRAMING.
10DA	REINSTALL SMOKE DETECTOR, CONNECT TO SYSTEM
23AA	SUPPLY DIFFUSER
23AB	EXHAUST FAN
26AA	LED LIGHT FIXTURE

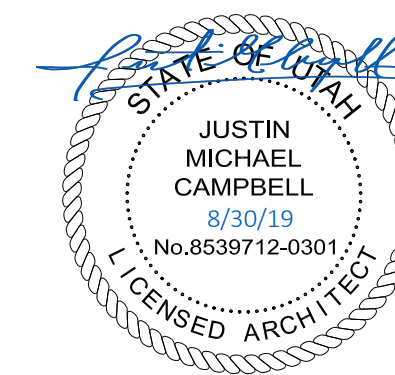
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LEGEND

	OPEN TO STRUCTURE
	GYPSUM CEILING
	EXISTING AIR SUPPLY
	AIR EXHAUST

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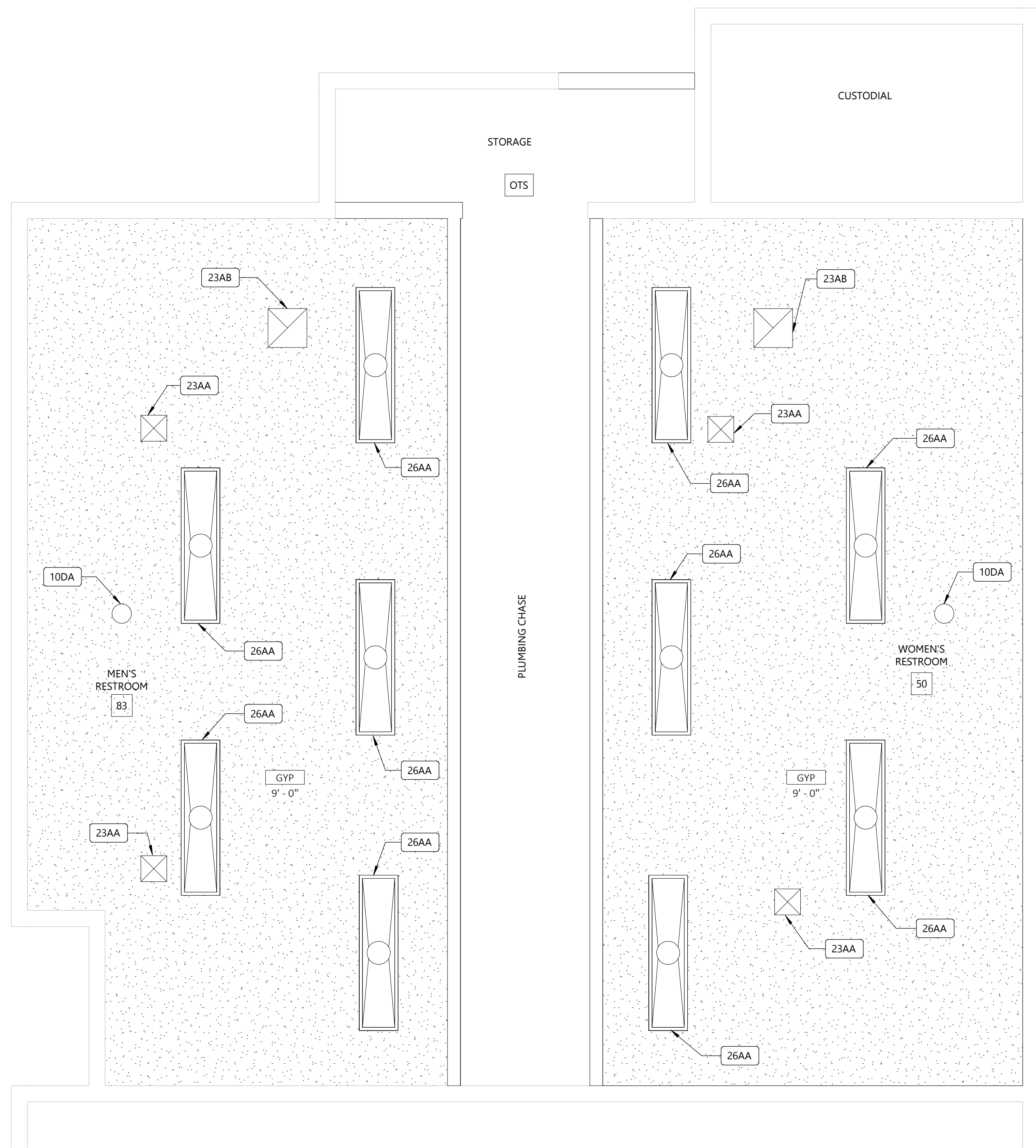


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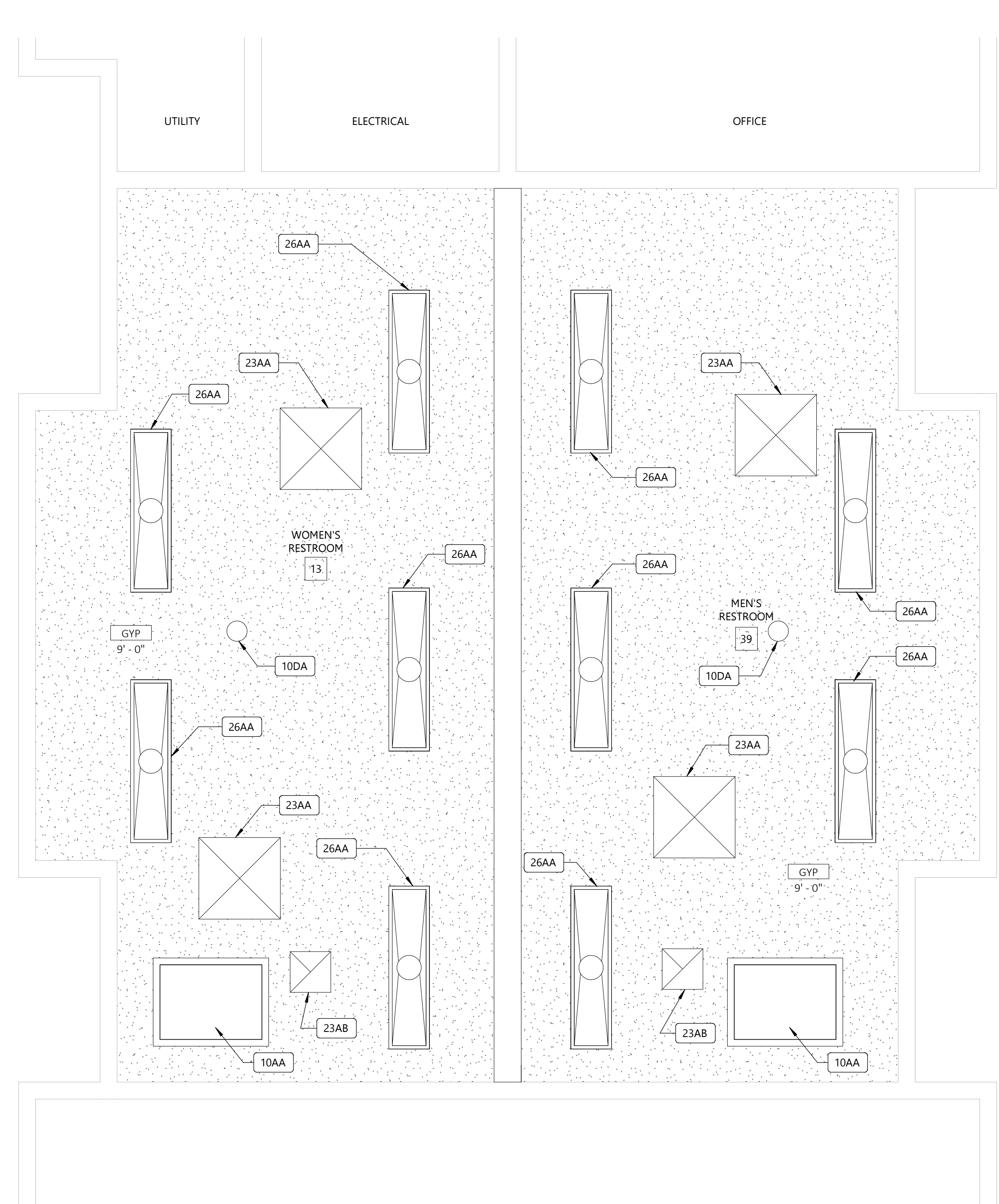
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A1 REFLECTED CEILING PLAN - AG SIDE
SCALE: 1/2" = 1'-0"



A3 REFLECTED CEILING PLAN - WEST SIDE
SCALE: 1/2" = 1'-0"

PERMIT REVIEW

REFLECTED CEILING PLANS

AE121

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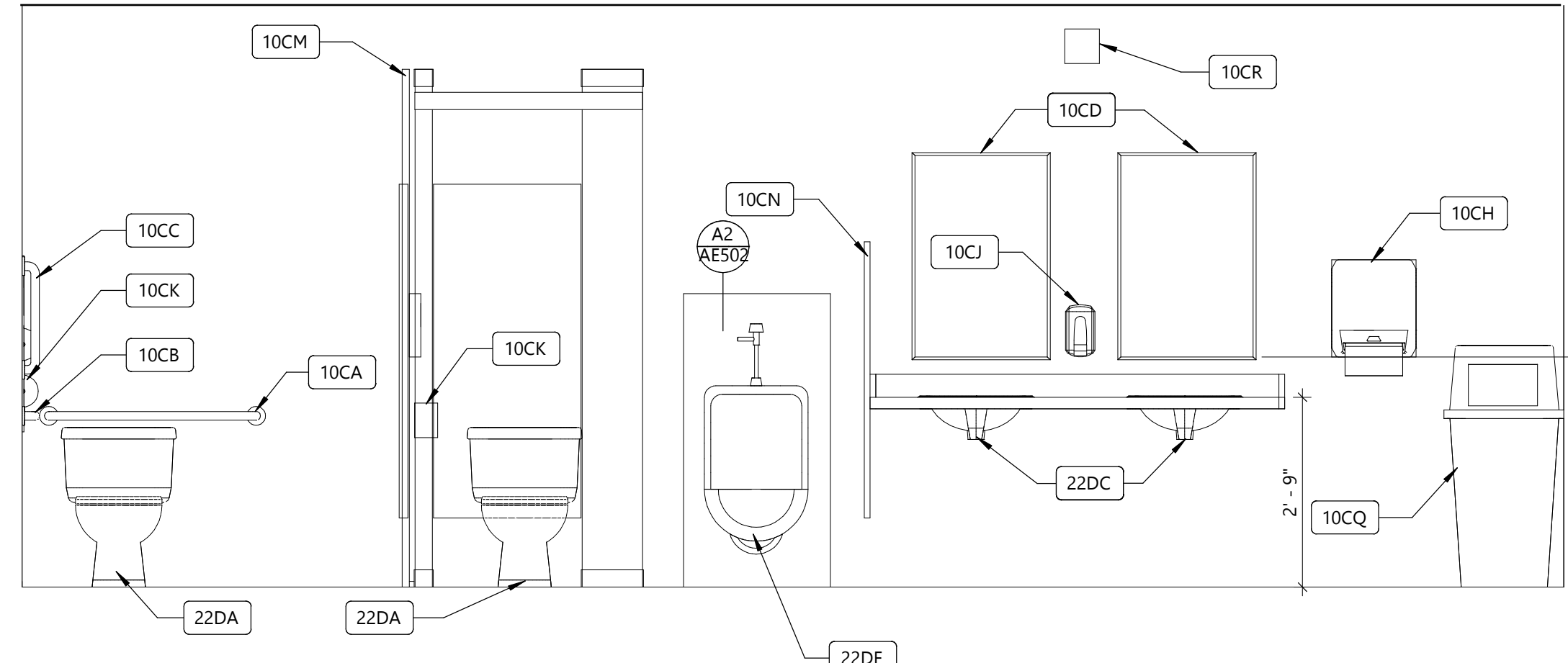
KEYNOTES

#	DESCRIPTION
10CA	MINIMUM 36" GRAB BAR
10CB	MINIMUM 42" GRAB BAR
10CC	MINIMUM 18" VERTICAL GRAB BAR
10CD	24" WIDE X 36" HIGH MIRROR
10CH	PAPER TOWEL DISPENSER FURNISHED BY OWNER, INSTALLED BY CONTRACTOR, MECHANICALLY FASTEN FIXTURE TO WALL.
10CJ	SOAP DISPENSER FURNISHED BY OWNER, INSTALLED BY CONTRACTOR, MECHANICALLY FASTEN FIXTURE TO WALL.
10CK	TOILET TISSUE DISPENSER FURNISHED BY OWNER, INSTALLED BY CONTRACTOR, MECHANICALLY FASTEN FIXTURE TO WALL.
10CM	TOILET PARTITION
10CN	URINAL SCREEN
10CQ	WASTEBASKET PROVIDED BY OWNER
10CR	REINSTALL EXISTING FIRE ALARM
22DA	REINSTALL ADA WATER CLOSET
22DC	LAVATORY INSTALLED WITH EXISTING FAUCET
22DE	REINSTALL URINAL

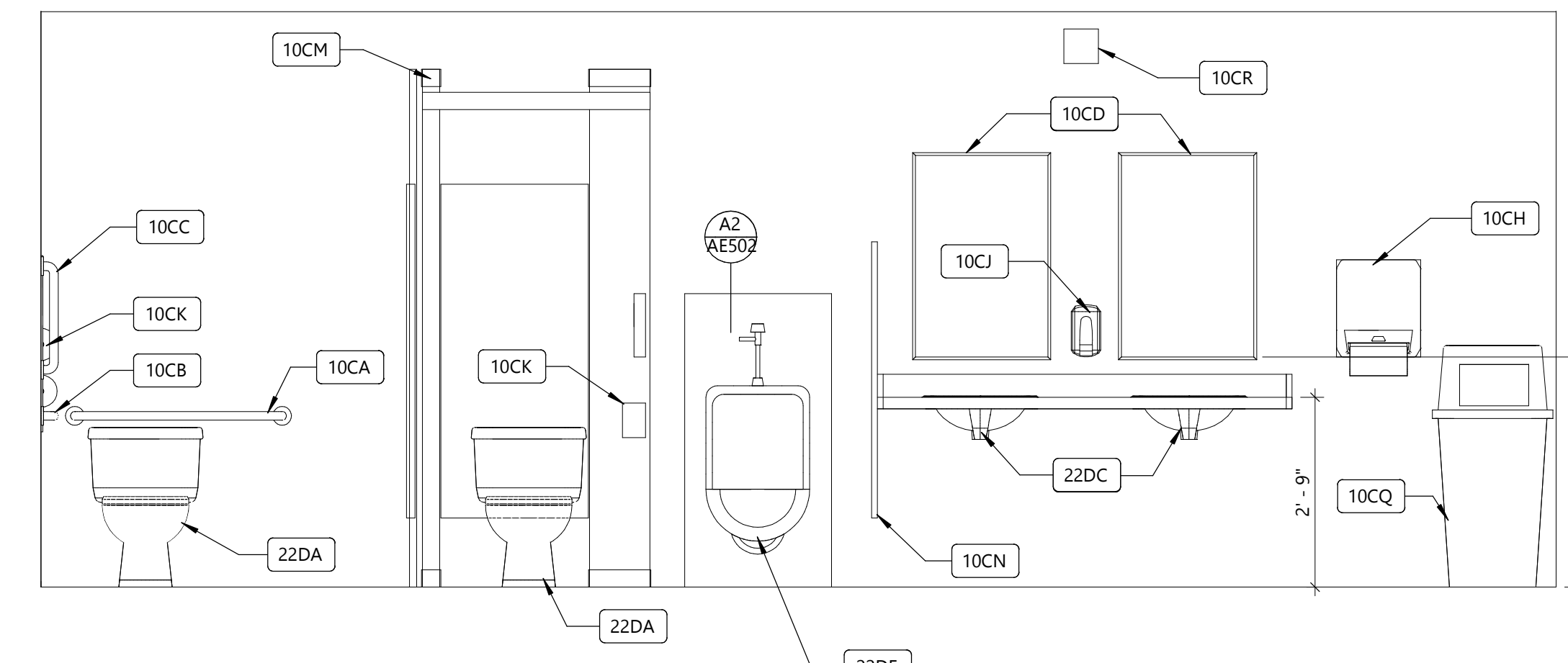
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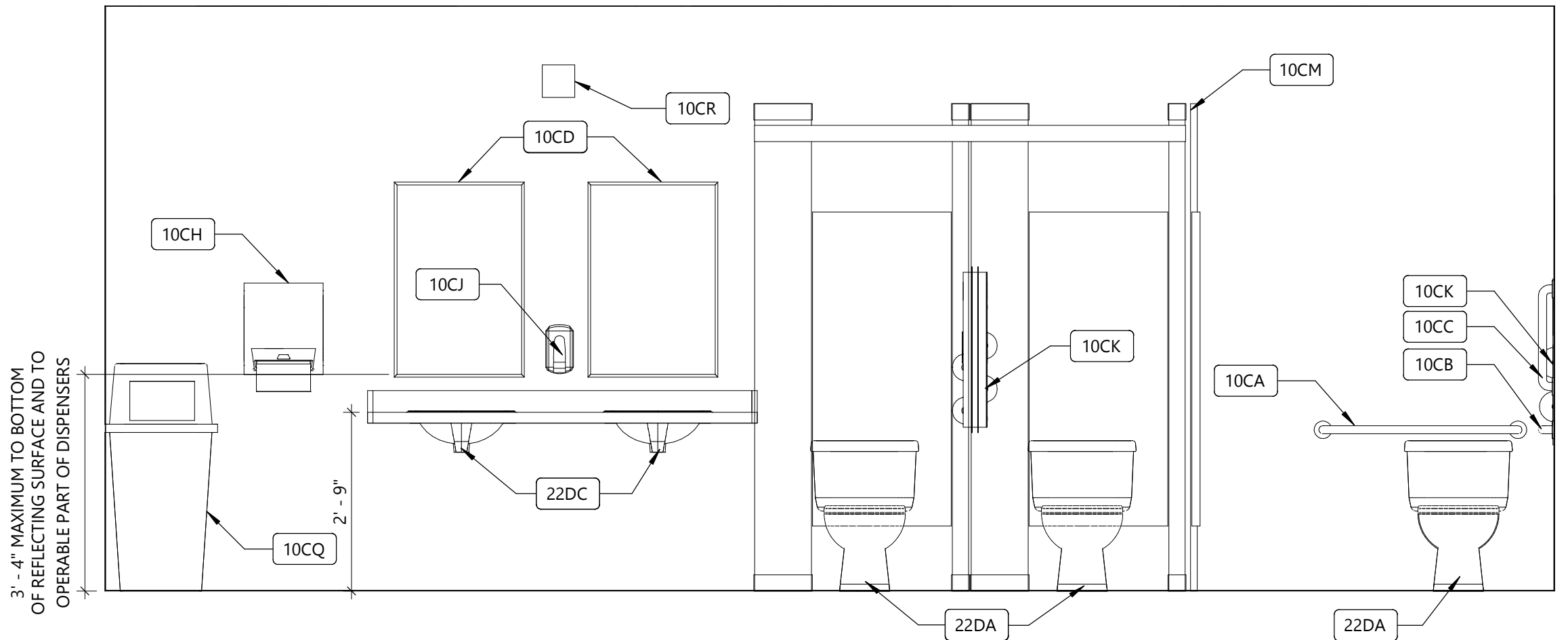
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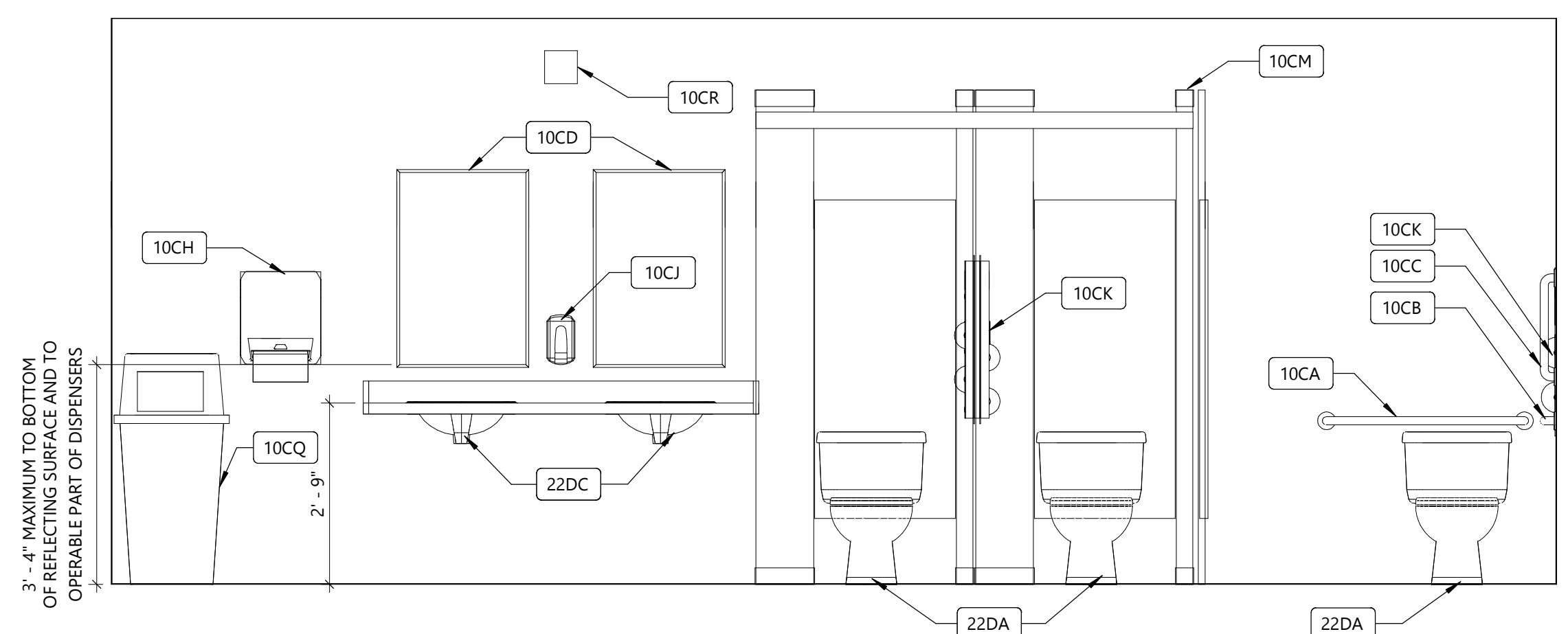
C1 AG WING MEN INTERIOR ELEVATION
SCALE: 1/2" = 1'-0"



C4 WEST WING MEN INTERIOR ELEVATION
SCALE: 1/2" = 1'-0"



B1 AG WING WOMEN INTERIOR ELEVATION
SCALE: 1/2" = 1'-0"



B4 WEST WING WOMEN INTERIOR ELEVATION
SCALE: 1/2" = 1'-0"

NOTE: SEE DETAIL A1/S501 FOR WALL CERAMIC TILE LAYOUT - ALL WALLS IN ALL RESTROOMS

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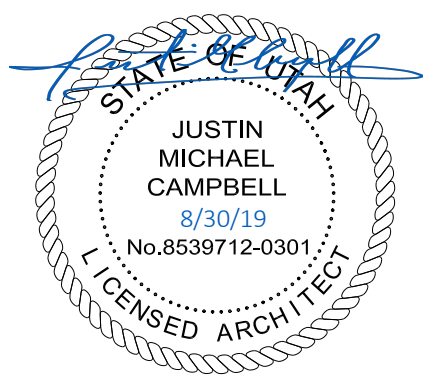
RESTROOM INTERIOR
ELEVATIONS

AE201

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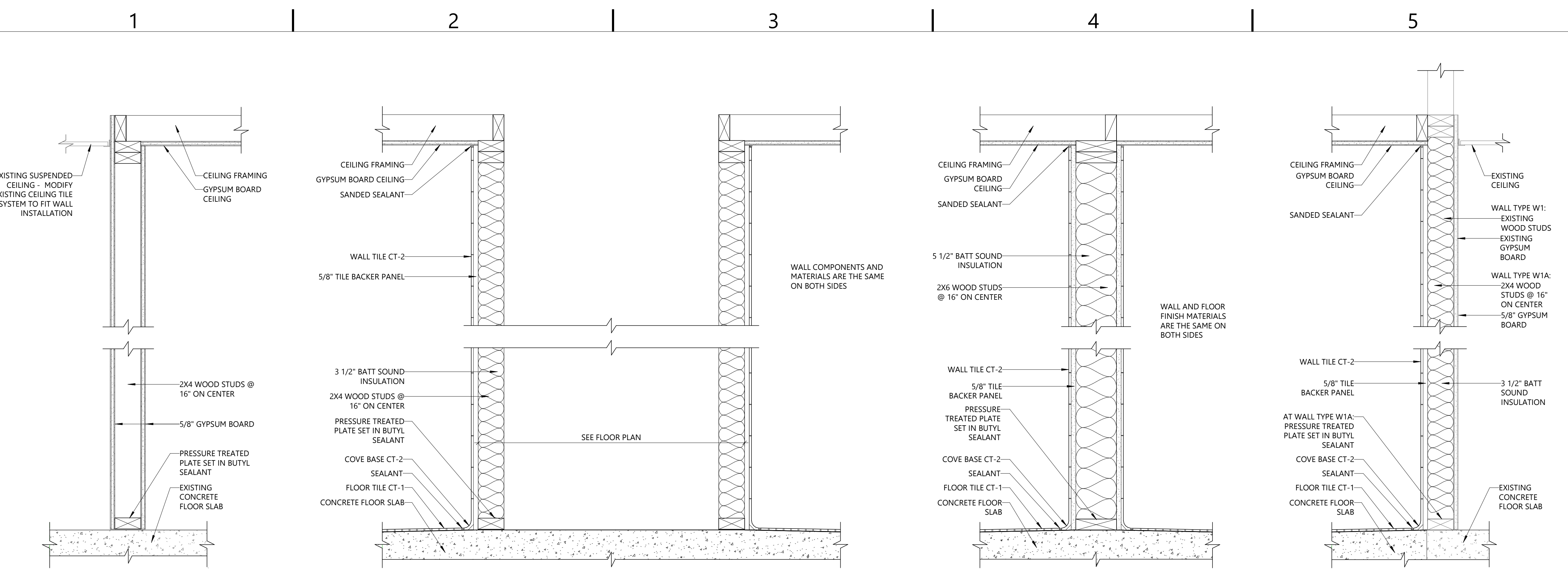
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ARCHITECTURAL DETAILS

AE501

PERMIT REVIEW

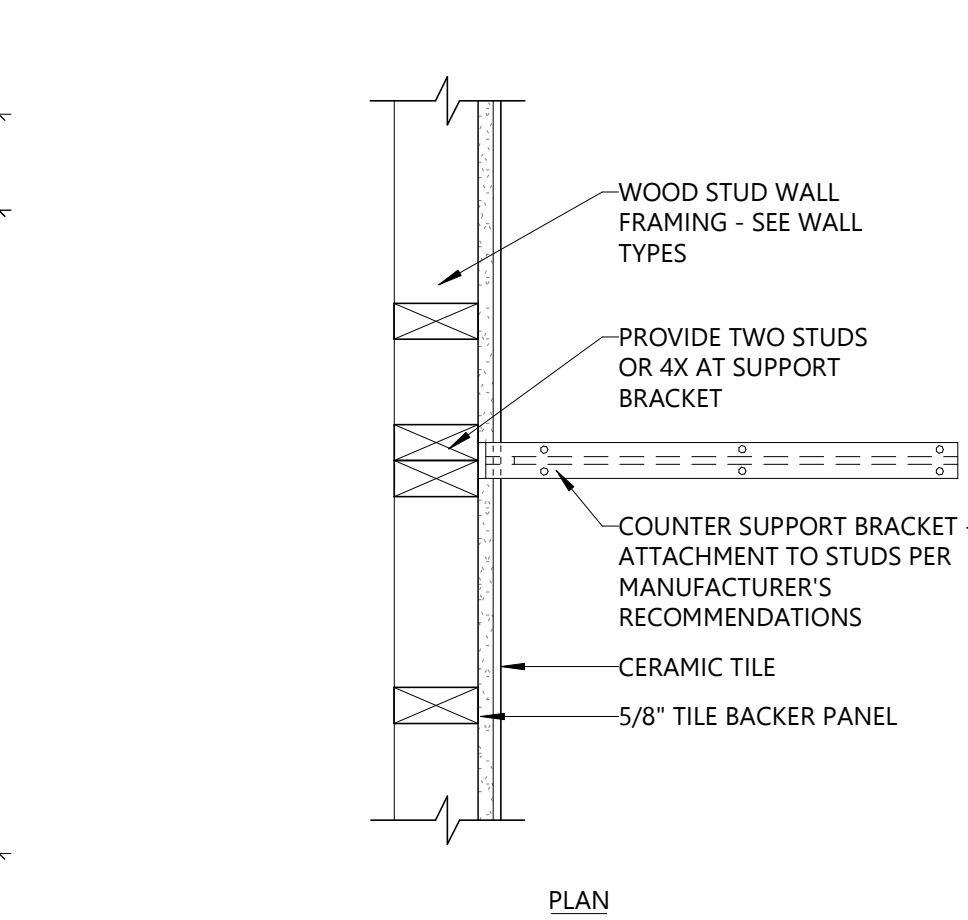
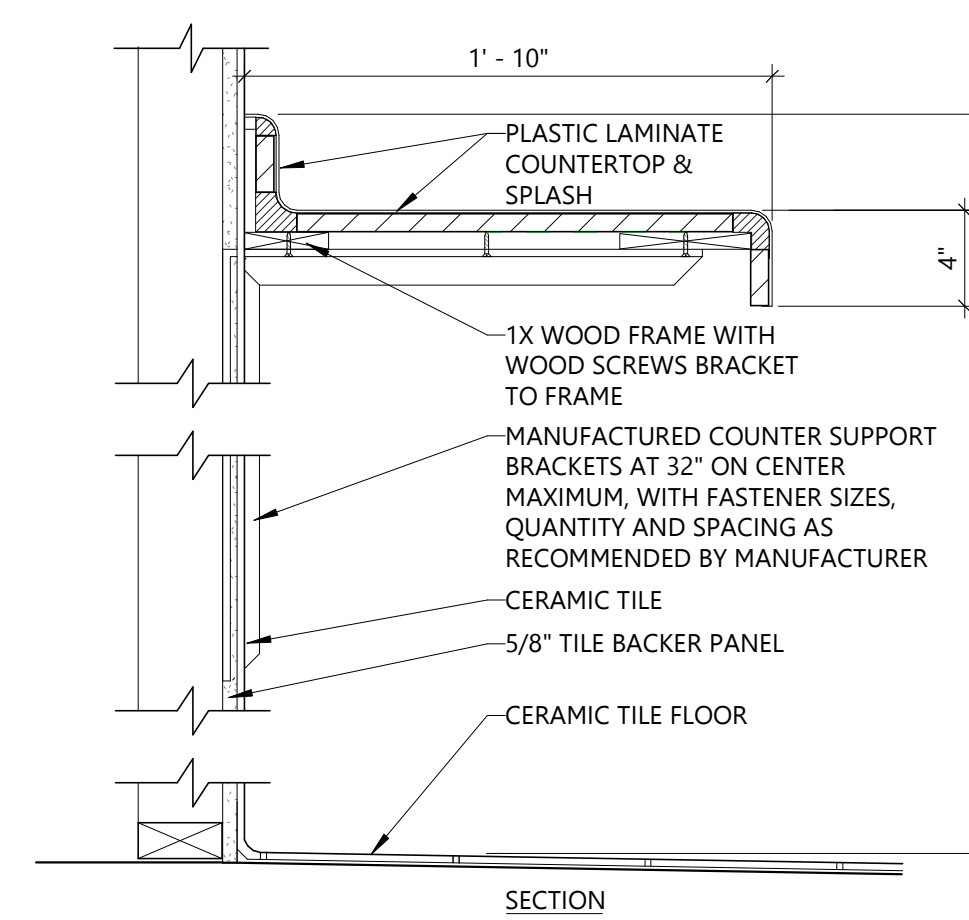
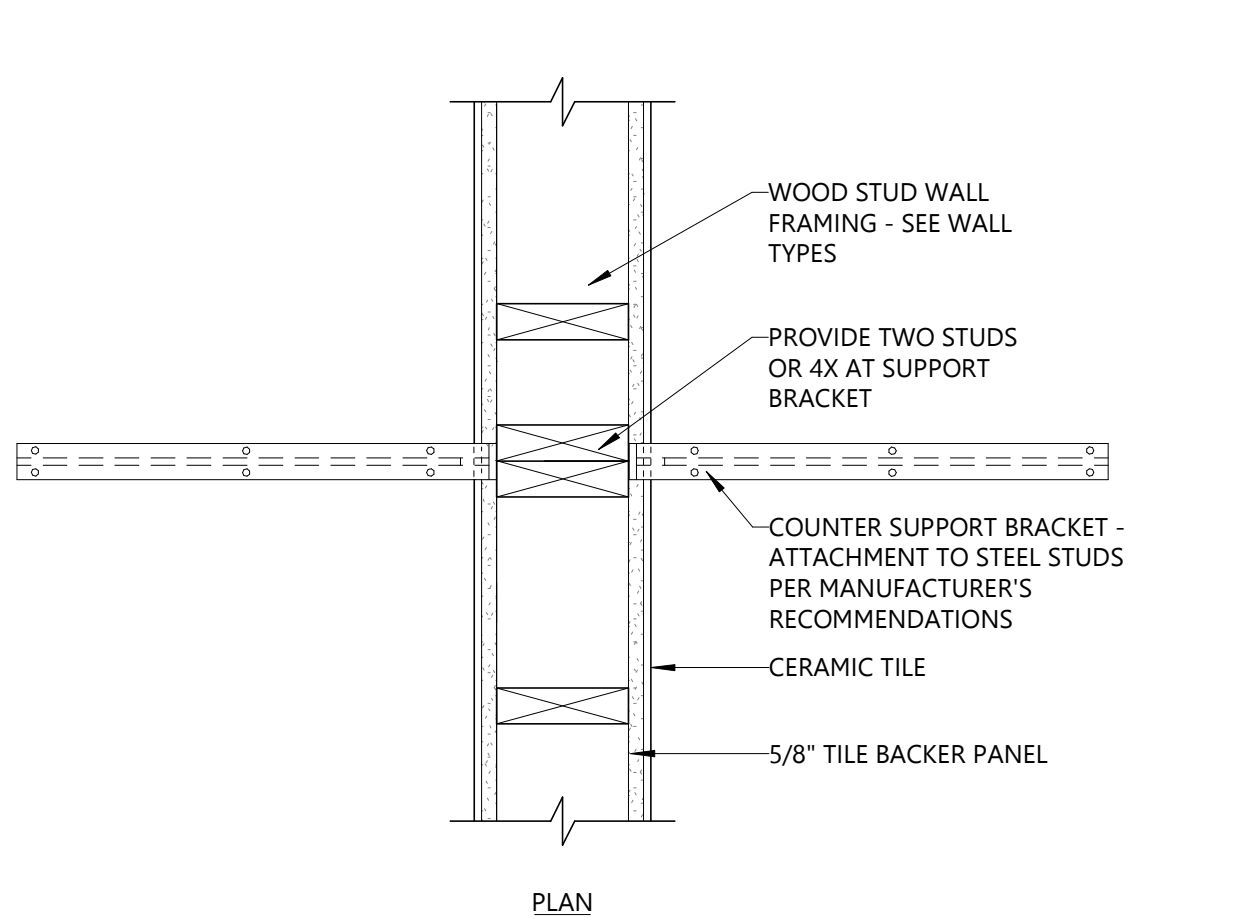
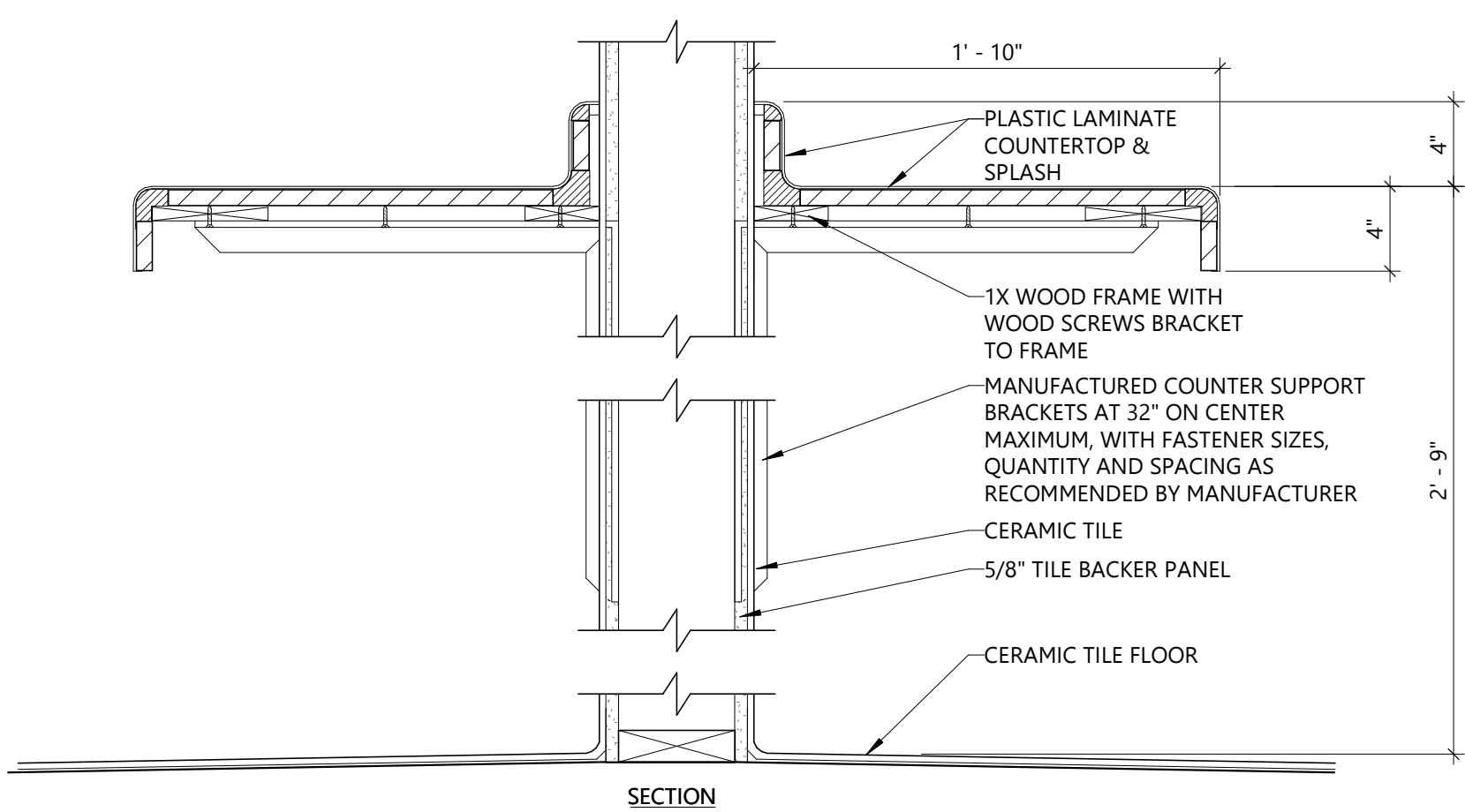


W4 NON-RATED WALL
DESCRIPTION: WOOD STUDS; GYPSUM BOARD ON BOTH SIDES
FIRE RATING: NON-RATED
SOUND: NA

W3 NON-RATED, PLUMBING CHASE WALL
DESCRIPTION: TWO ROWS OF WOOD STUDS, SEPARATED; FULL HEIGHT CERAMIC TILE ON BOTH SIDES
FIRE RATING: NON-RATED
SOUND: NA

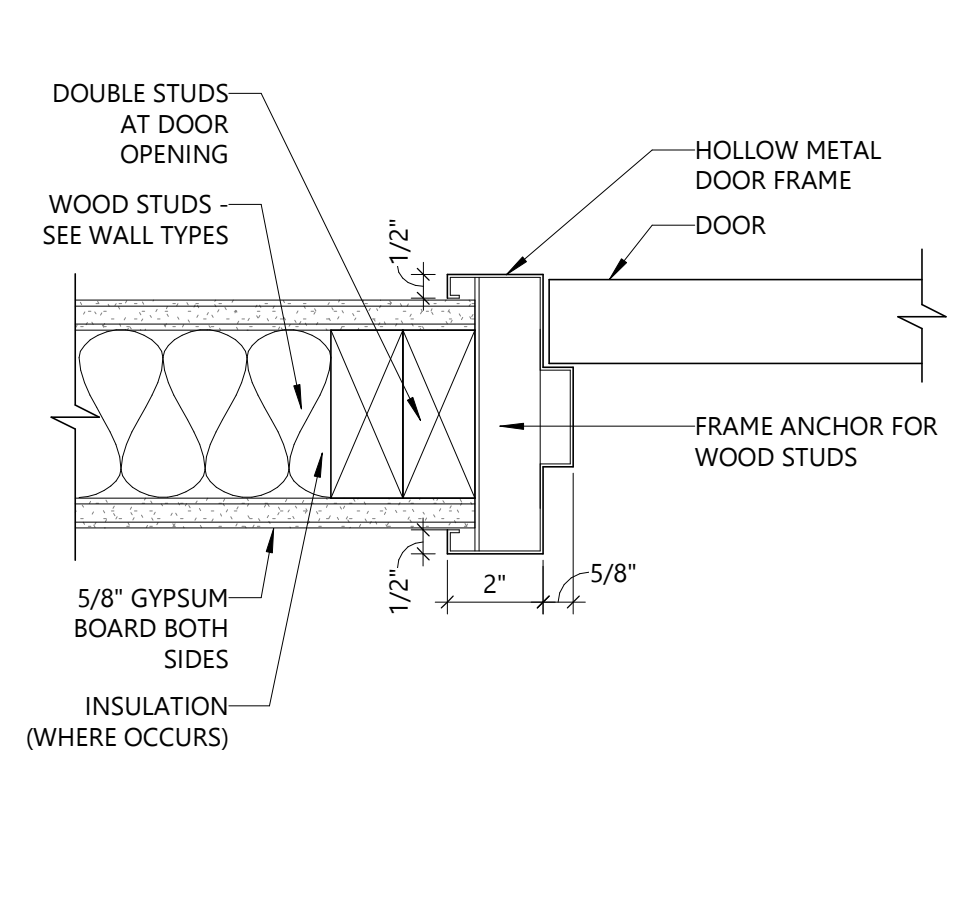
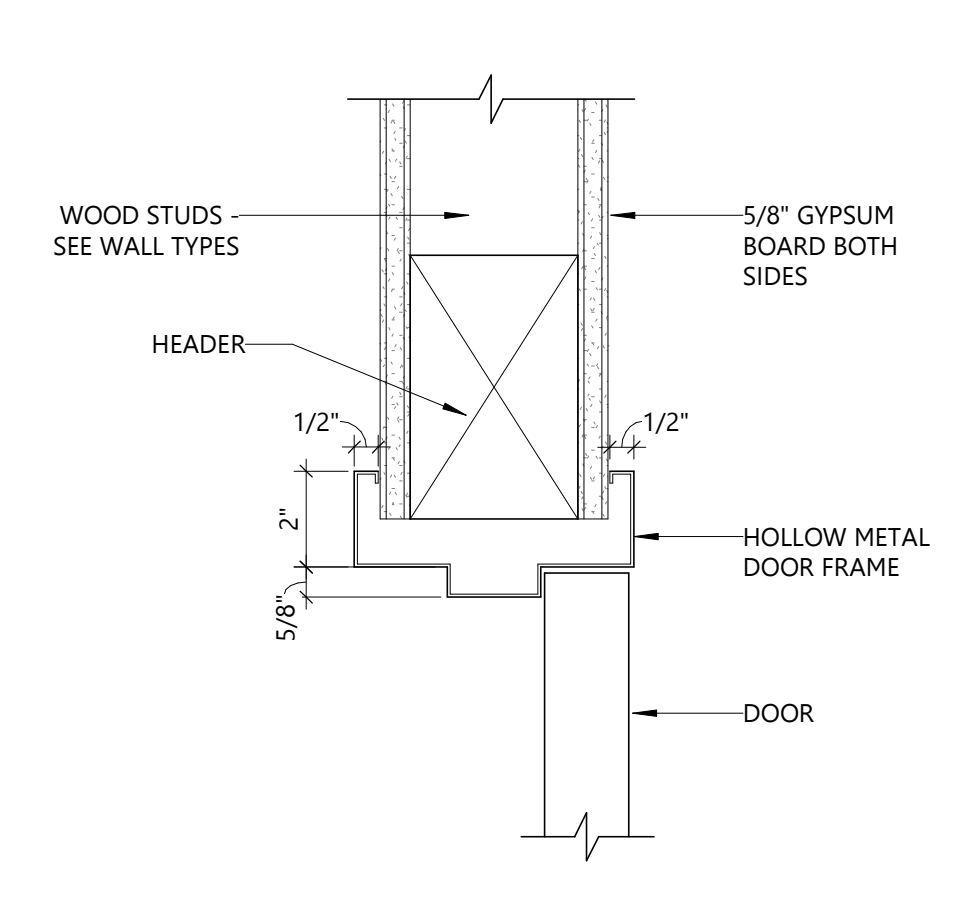
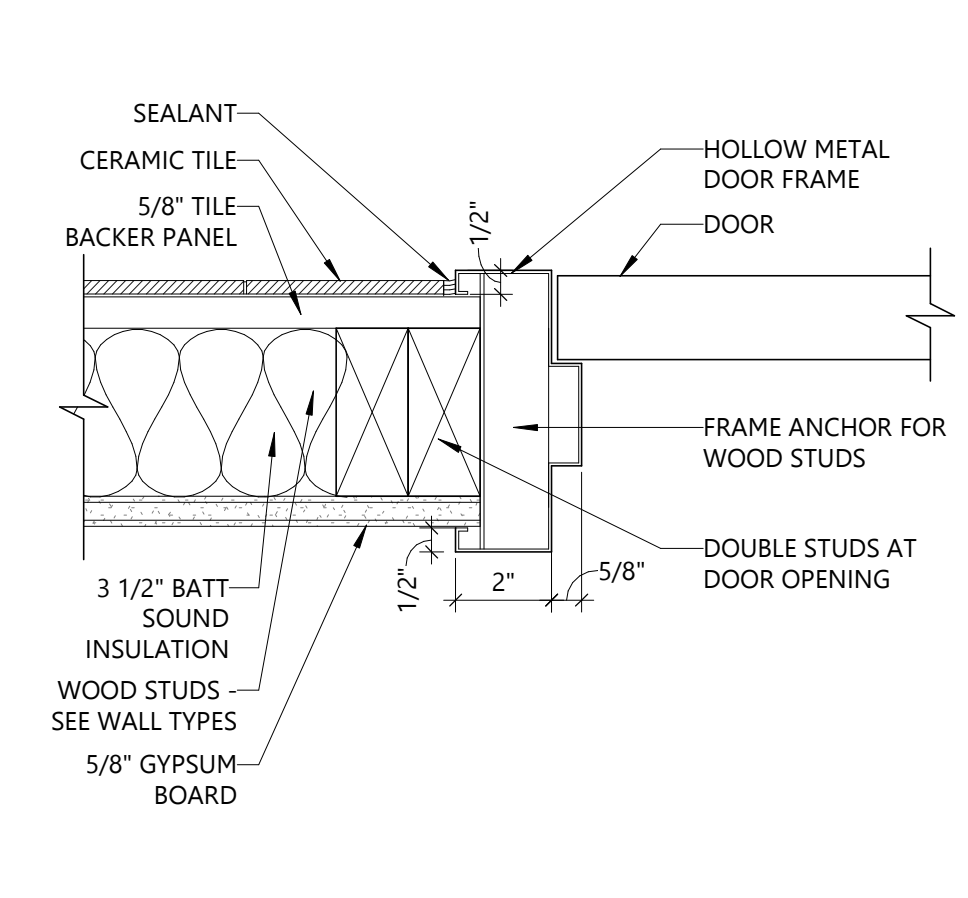
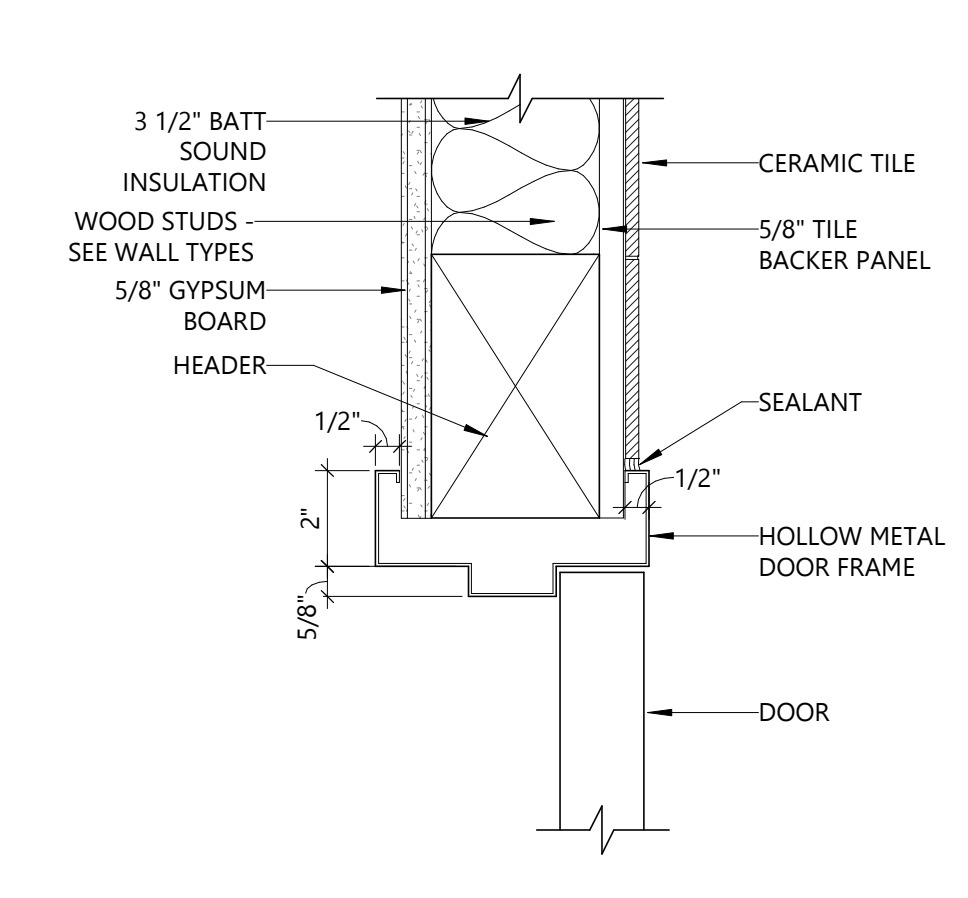
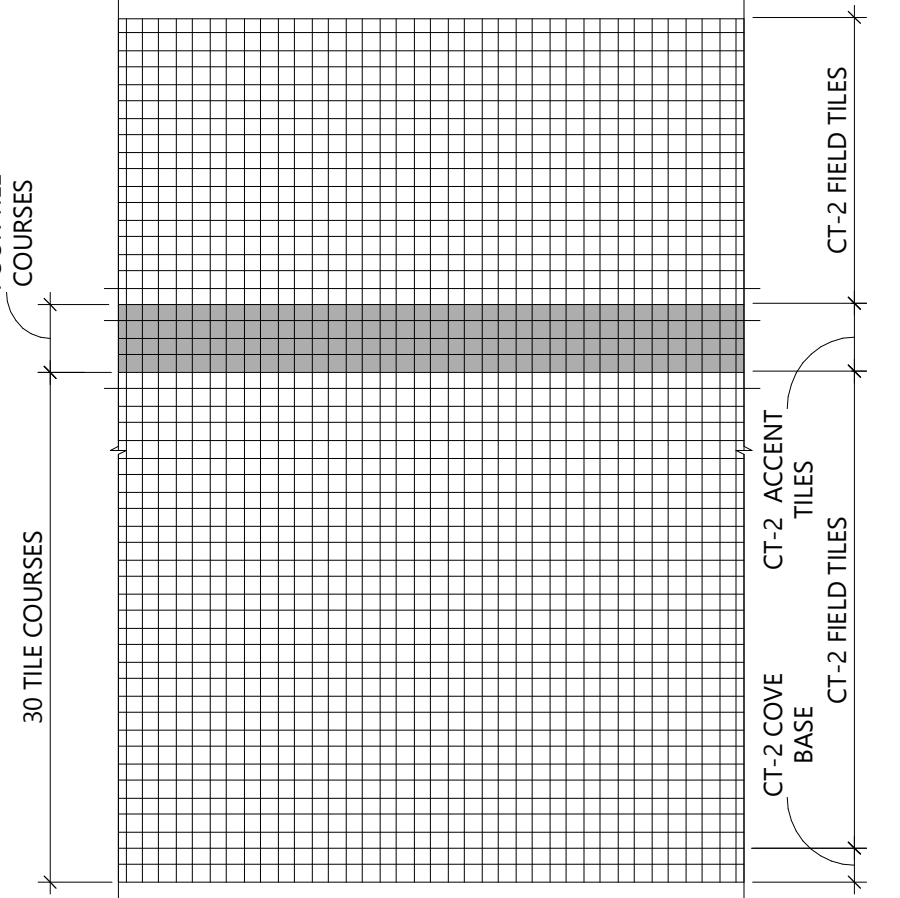
W2 NON-RATED; PLUMBING WALL
DESCRIPTION: WOOD STUDS; FULL HEIGHT CERAMIC TILE ON BOTH SIDES
FIRE RATING: NON-RATED
SOUND: NA

W1, W1A NON-RATED WALL
DESCRIPTION: WOOD STUDS; GYPSUM BOARD ON ONE SIDE; FULL HEIGHT CERAMIC TILE ON OTHER SIDE
FIRE RATING: NON-RATED
SOUND: NA



B1 VANITY COUNTERTOP
SCALE: 1 1/2" = 1'-0"

B4 VANITY COUNTERTOP
SCALE: 1 1/2" = 1'-0"



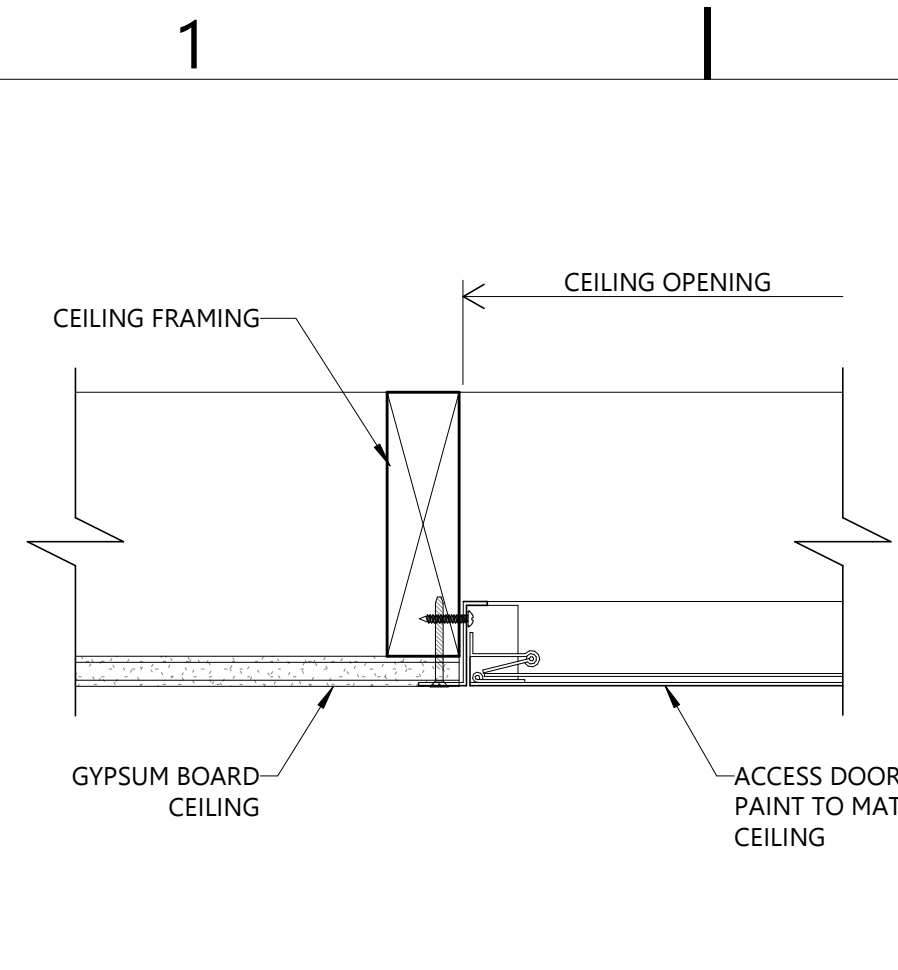
A1 WALL CERAMIC TILE LAYOUT
SCALE: 1/2" = 1'-0"

A2 DOOR HEAD
SCALE: 3" = 1'-0"

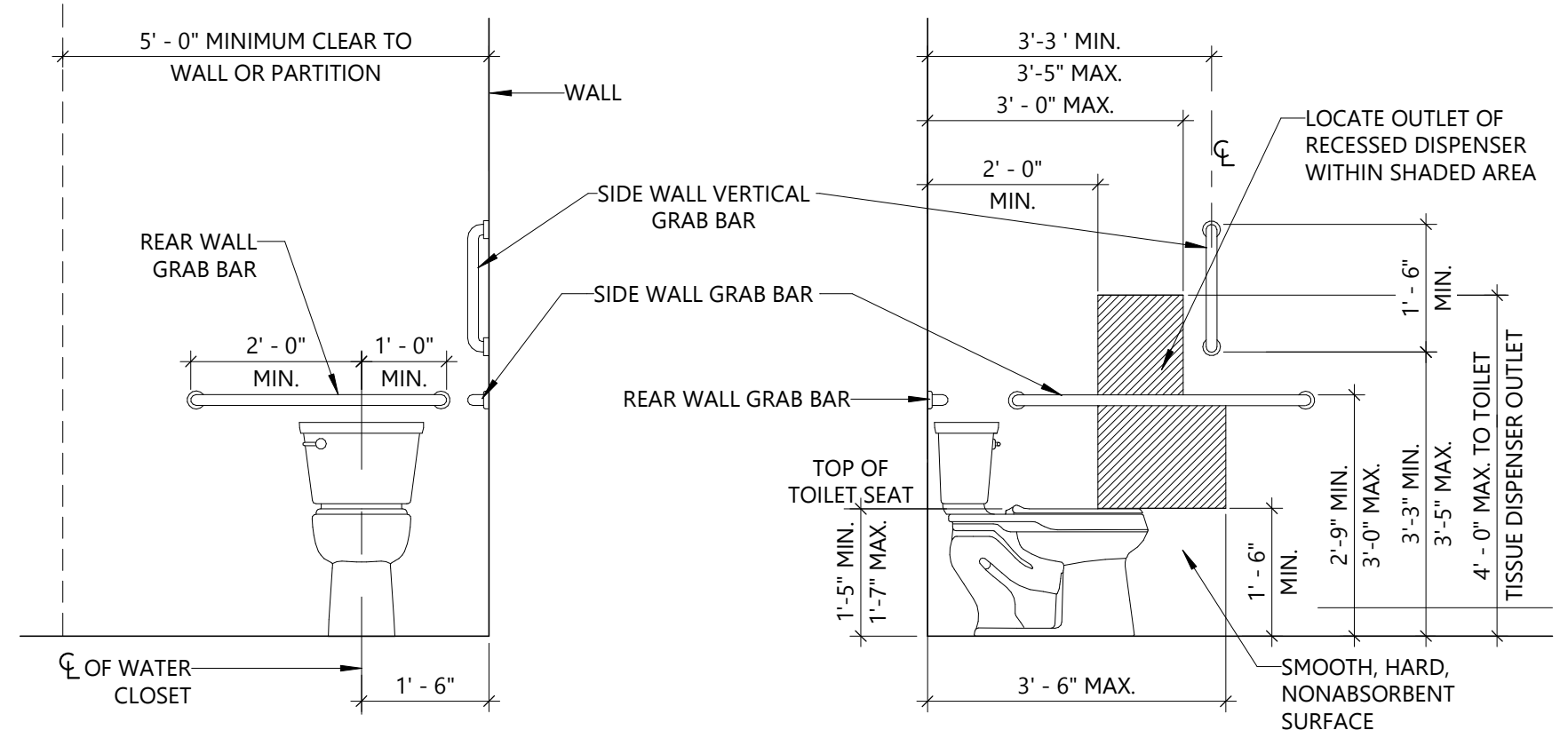
A3 DOOR JAMB
SCALE: 3" = 1'-0"

A4 DOOR HEAD
SCALE: 3" = 1'-0"

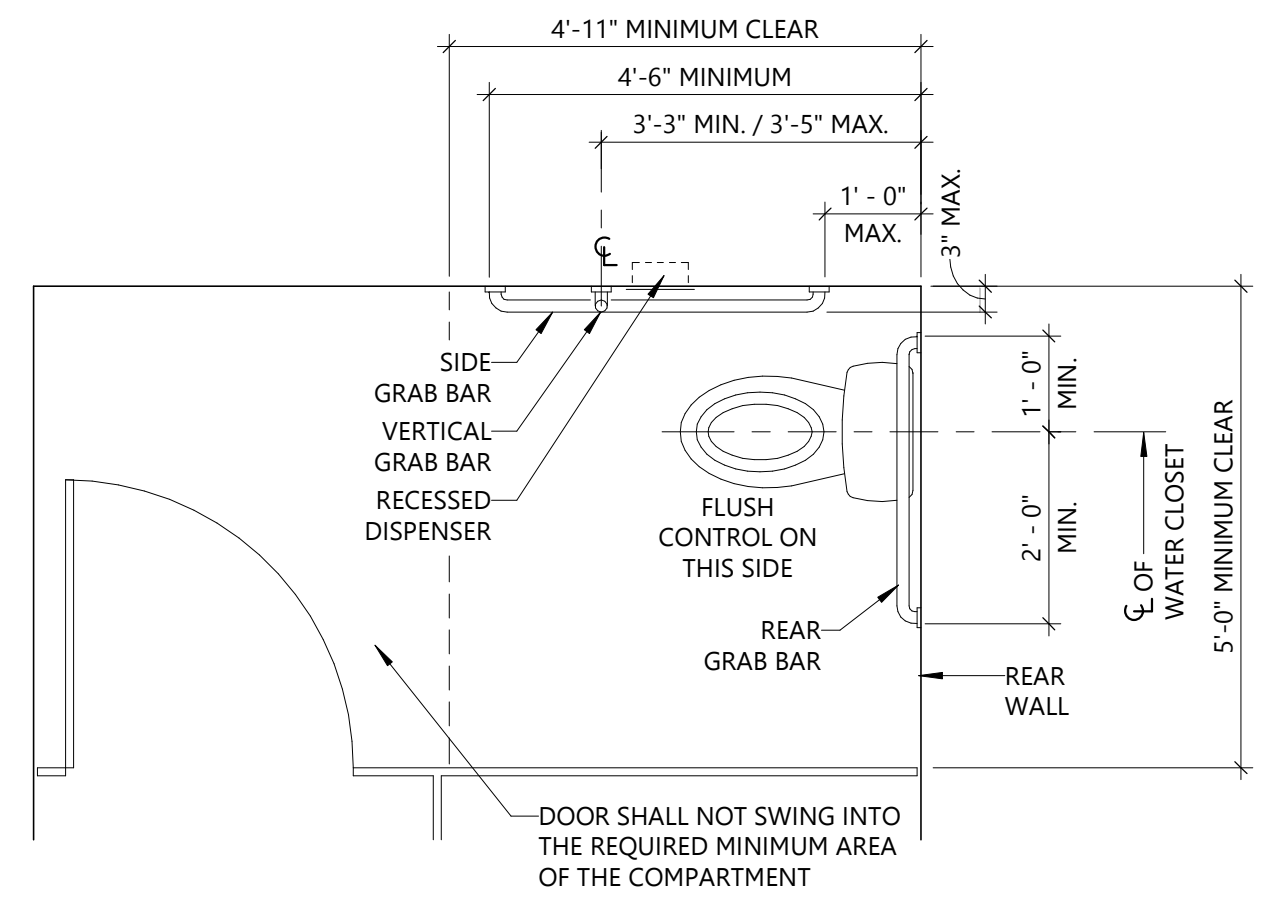
A5 DOOR JAMB
SCALE: 3" = 1'-0"



D1 CEILING ACCESS DOOR DETAIL
SCALE: 3" = 1'-0"



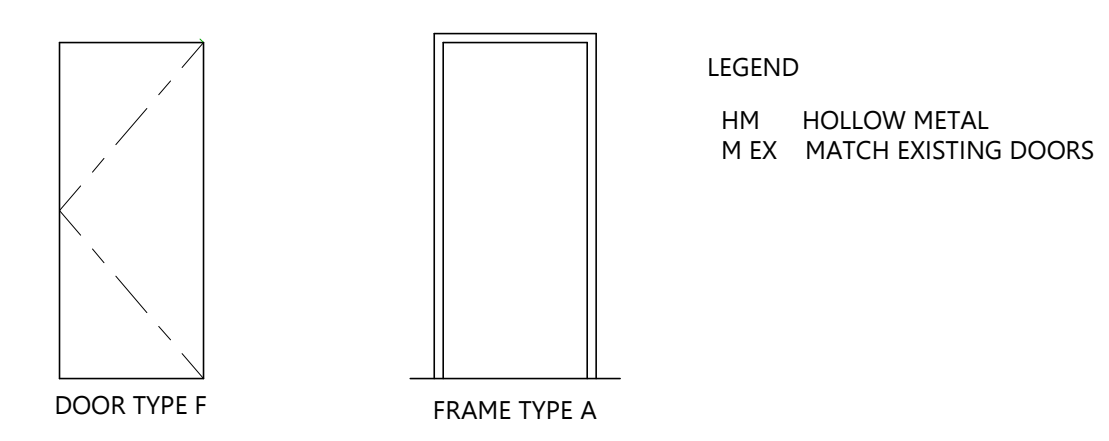
D2 ACCESSIBLE TOILET STALL - ELEVATIONS
SCALE: 1/2" = 1'-0"



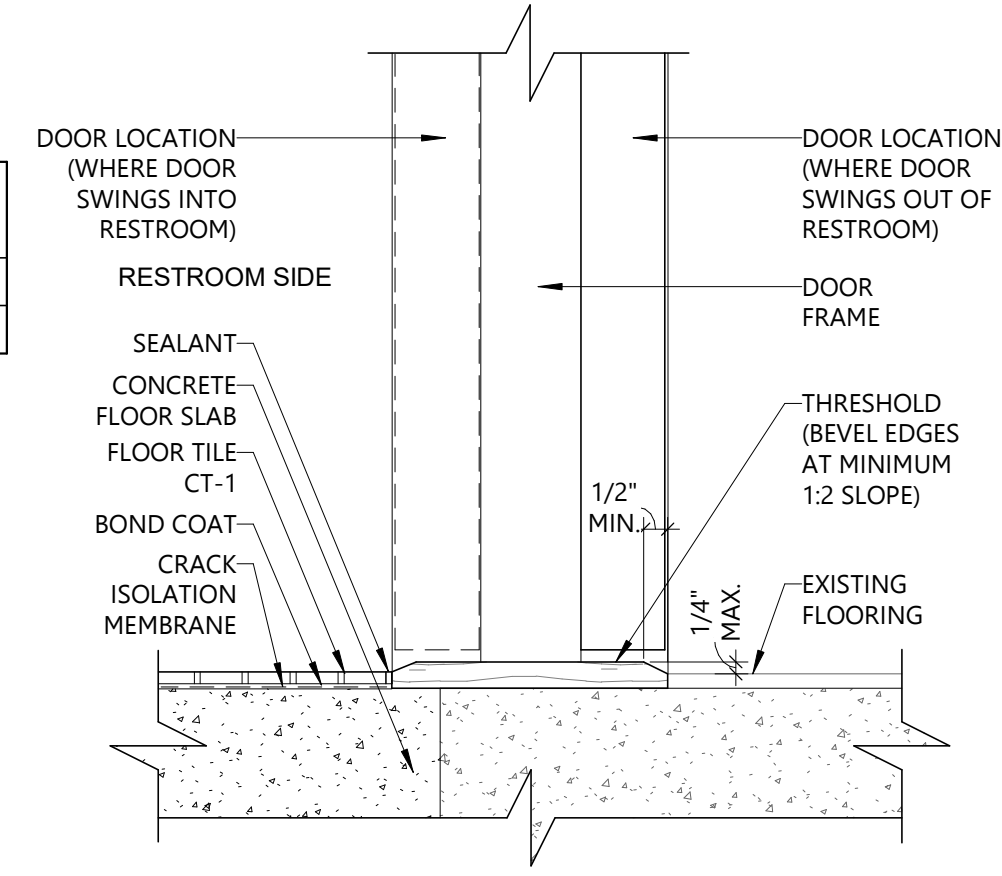
D5 ACCESSIBLE TOILET STALL - PLAN
SCALE: 1/2" = 1'-0"

DOOR SCHEDULE

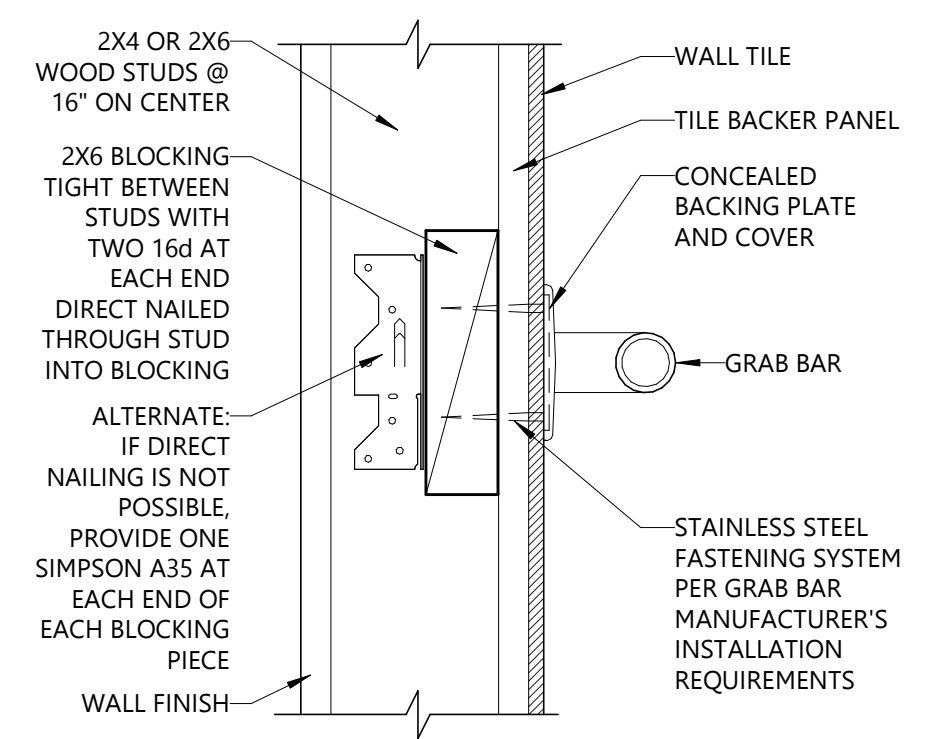
MARK	DOOR						FRAME			HARDWARE GROUP	MARK
	WIDTH	HEIGHT	THICKNESS	TYPE	MATERIAL	FINISH	TYPE	MATERIAL	FINISH		
NO. 1	3'-0"	7'-0"	1 3/4"	F	WOOD	M EX	A	HM	PAINT	HW-01	NO. 1
NO. 2	3'-0"	7'-0"	1 3/4"	F	WOOD	M EX	A	HM	PAINT	HW-02	NO. 2



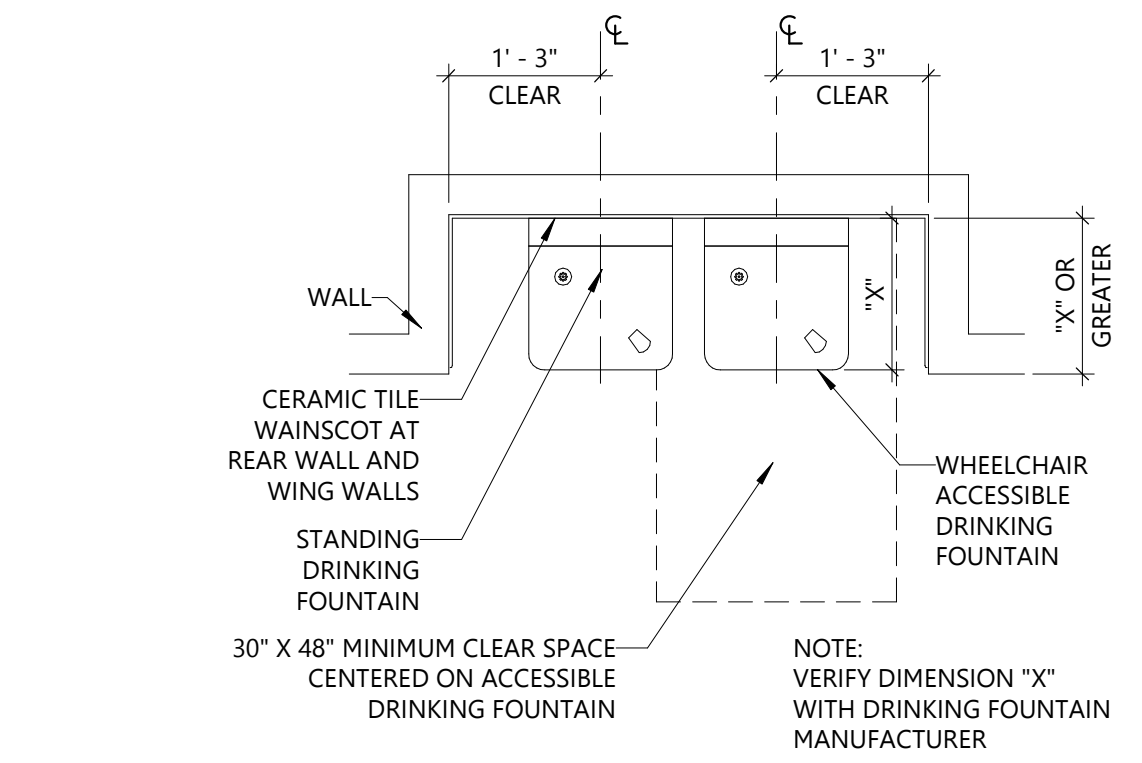
LEGEND
HM HOLLOW METAL
M EX MATCH EXISTING DOORS



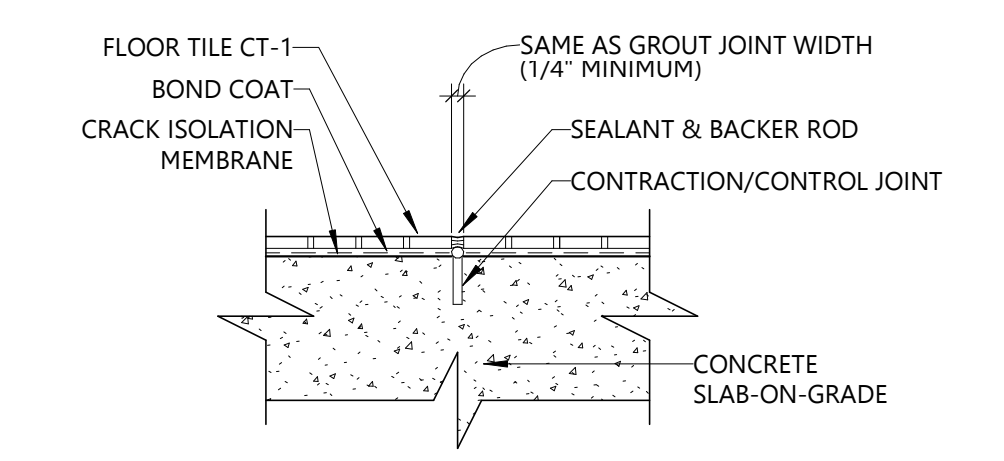
C3 TILE FLOOR THRESHOLD
SCALE: 3" = 1'-0"



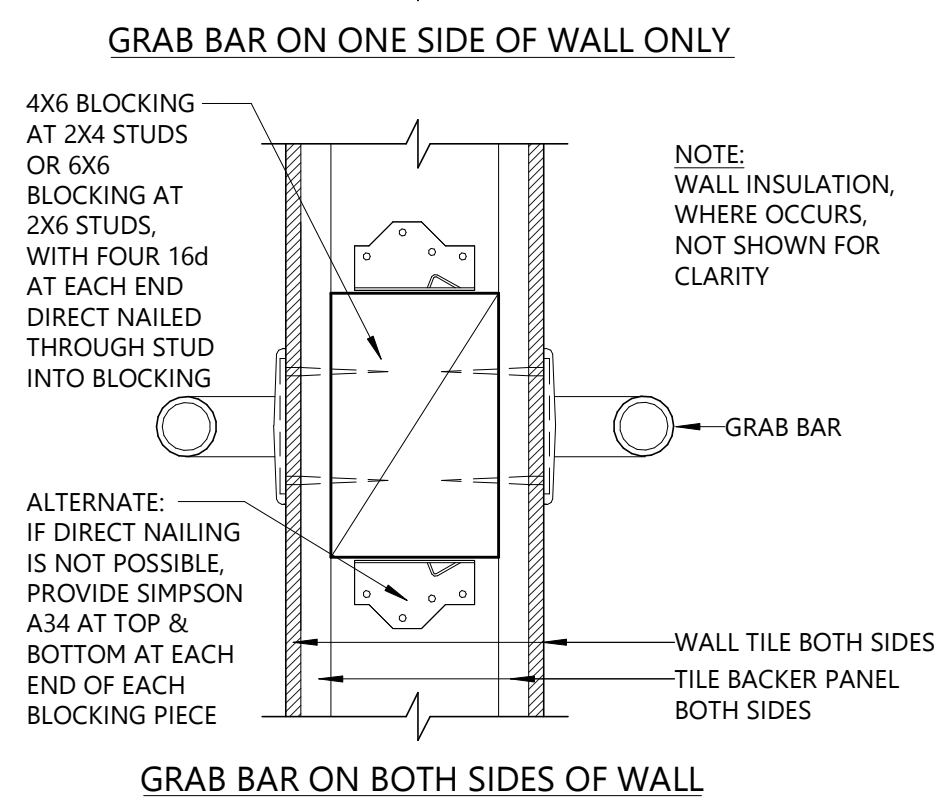
C5 STANDARD TOILET STALL - PLAN
SCALE: 1/2" = 1'-0"



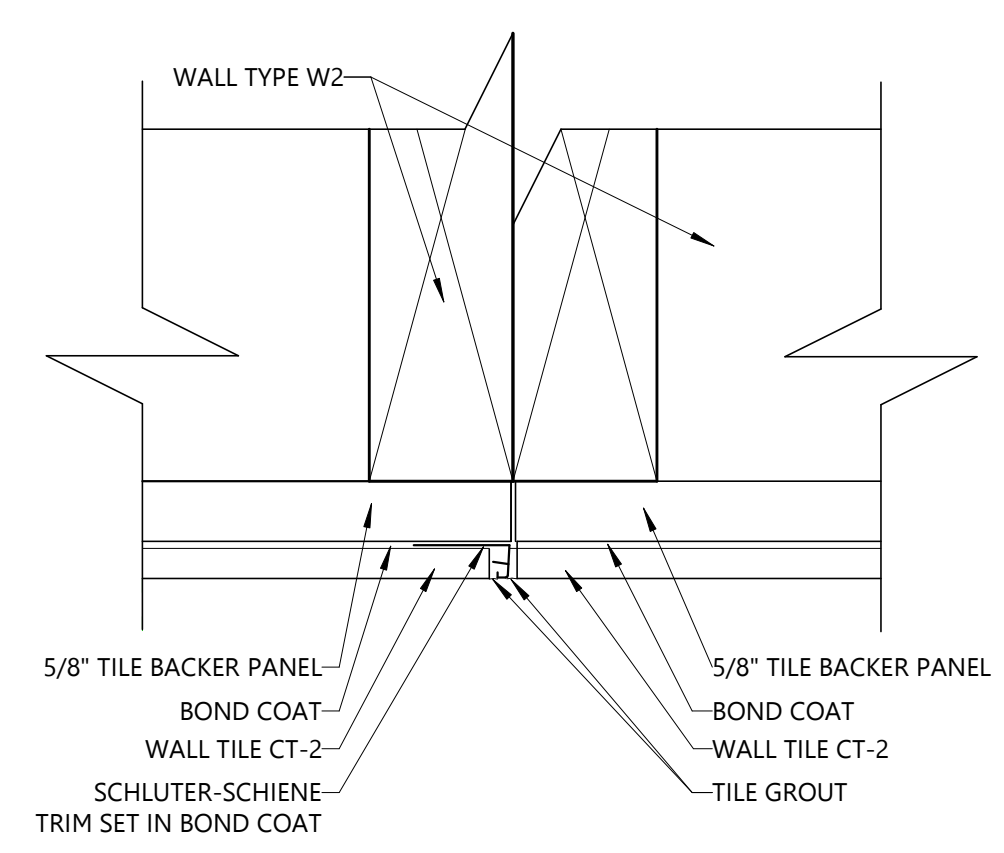
A1 DRINKING FOUNTAIN DETAIL - ALCOVE WALLS
SCALE: 1/2" = 1'-0"



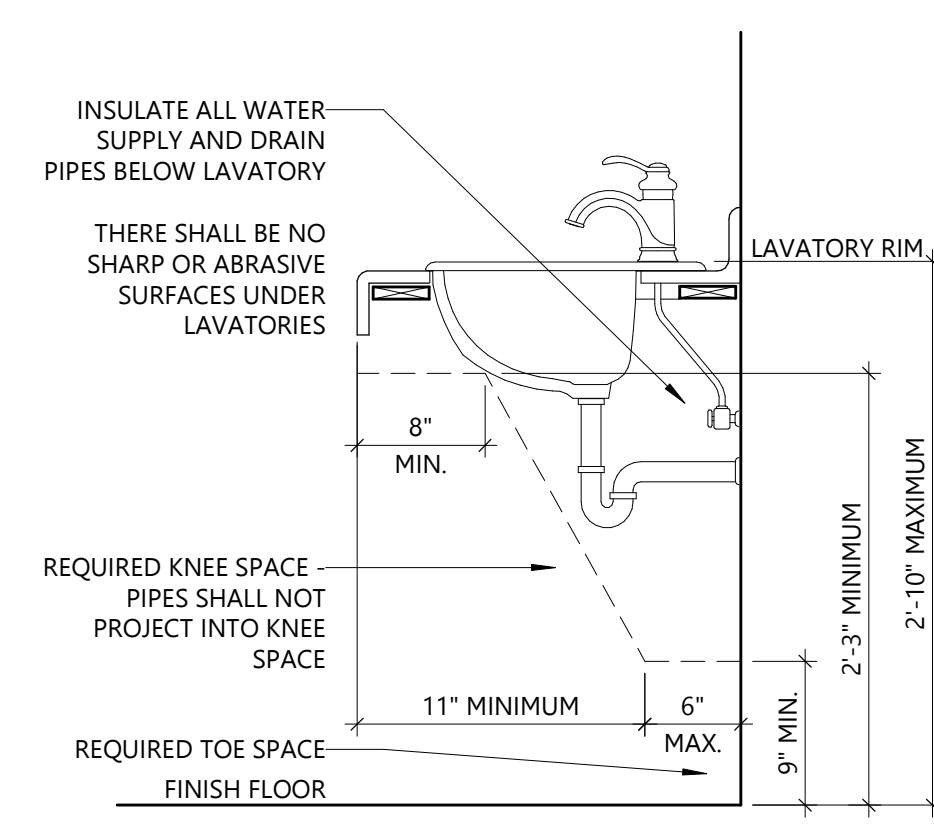
B3 FLOOR TILE CONTRACTION JOINT
SCALE: 3" = 1'-0"



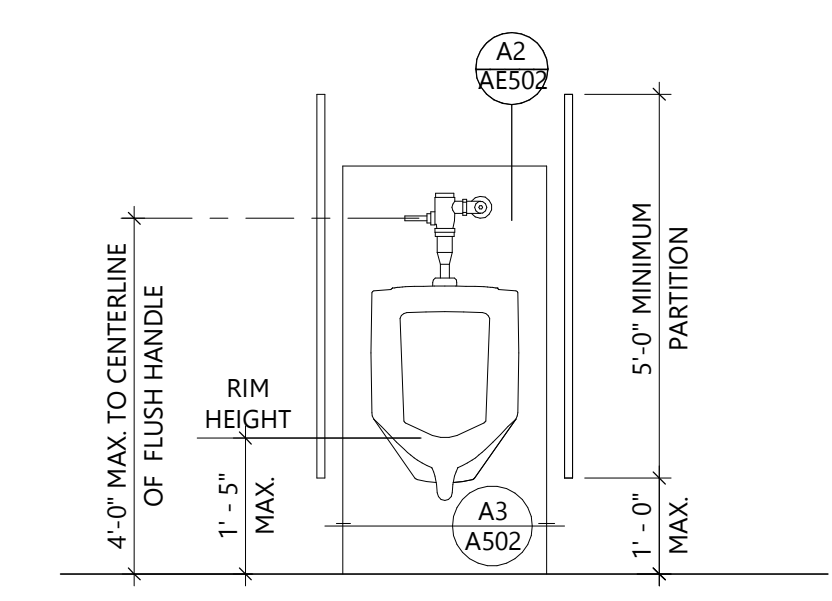
B4 GRAB BAR DETAIL
SCALE: 3" = 1'-0"



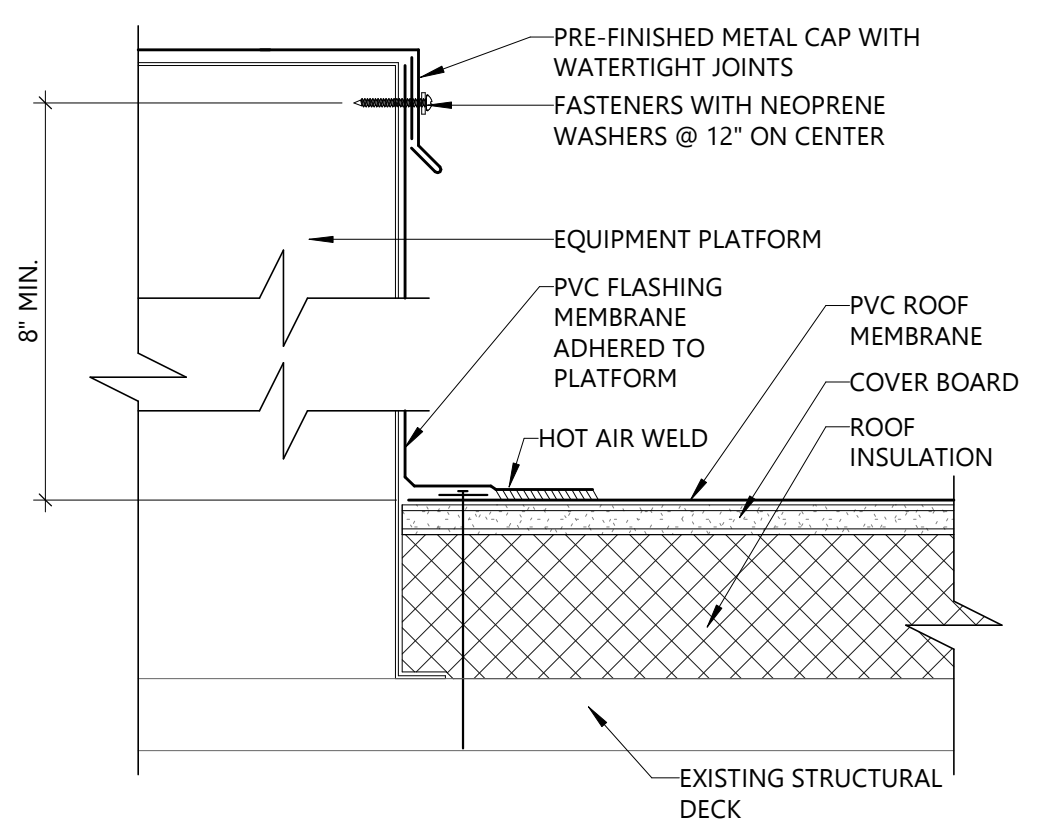
A2 TILE DETAIL AT URINAL
SCALE: 6" = 1'-0"



A3 ACCESSIBLE LAVATORY
SCALE: 1" = 1'-0"



A4 ACCESSIBLE URINAL
SCALE: 1/2" = 1'-0"



A5 EQUIPMENT PLATFORM DETAIL
SCALE: 3" = 1'-0"

SANITARY FACILITIES NOTES

- SEE SPECIFICATIONS FOR FULL DESCRIPTION OF TOILET ROOM ACCESSORIES AND PLUMBING FIXTURES.
- SEE FINISH SCHEDULE AND SPECIFICATIONS FOR TOILET ROOM FINISHES.
- DIMENSIONS ARE TO FINISH SURFACES OF WALLS, FLOORS AND TOILET PARTITIONS, TO EDGES OF PLUMBING FIXTURES, TO ENDS OF GRAB BARS, AND TO EDGES OF TOILET ACCESSORIES, AS INDICATED ON PLANS AND ELEVATIONS.
- AT ALL WATER CLOSETS, MAINTAIN A MINIMUM 1'-3" CLEARANCE FROM THE CENTERLINE OF THE WATER CLOSET TO ANY WALL, PARTITION OR OBSTRUCTION (GRAB BAR, TOILET ACCESSORY, ETC.) ON BOTH SIDES OF THE WATER CLOSET (PLUMBING CODE REQUIREMENT). AT ACCESSIBLE WATER CLOSETS, SET WATER CLOSET 1'-6" (ABSOLUTE DIMENSION) FROM FINISH FACE OF ADJACENT SIDE WALL OR PARTITION TO CENTERLINE OF THE WATER CLOSET. AT ACCESSIBLE WATER CLOSETS, INSTALL FIXTURE SO FLUSH CONTROL (FLUSH VALVE LEVER HANDLE, FLUSH HANDLE ON TANK TYPE TOILET, OR AUTOMATIC SENSOR) IS ON THE WIDE SIDE OF THE WATER CLOSET AREA.
- AT ACCESSIBLE URINALS, CENTER THE URINAL BETWEEN WALLS, PARTITIONS OR OBSTRUCTIONS ON BOTH SIDES OF THE URINAL WITH 1'-3" MINIMUM CLEARANCE ON EACH SIDE. WHERE ADJACENT WALL, PARTITION OR OBSTRUCTION PROJECTS 2'-0" OR MORE FROM REAR WALL, PROVIDE 1'-6" MINIMUM CLEARANCE ON EACH SIDE.

GRAB BARS:
FIXED SIDE-WALL GRAB BARS (ACCESSIBLE TOILETS): FIXED SIDE-WALL GRAB BARS SHALL BE 42 INCHES (1065 MM) MINIMUM IN LENGTH, LOCATED 12 INCHES (305 MM) MAXIMUM FROM THE REAR WALL AND EXTENDING 54 INCHES (1370 MM) MINIMUM FROM THE REAR WALL. IN ADDITION, A VERTICAL GRAB BAR 18 INCHES (455 MM) MINIMUM IN LENGTH SHALL BE MOUNTED WITH THE BOTTOM OF THE BAR LOCATED 39 INCHES (990 MM) MINIMUM AND 41 INCHES (1040 MM) MAXIMUM ABOVE THE FLOOR, AND WITH THE CENTER LINE OF THE BAR LOCATED 39 INCHES (990 MM) MINIMUM AND 41 INCHES (1040 MM) MAXIMUM FROM THE REAR WALL.

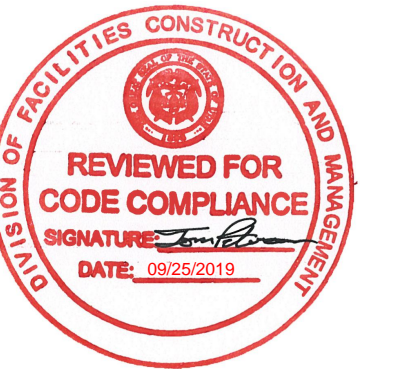
REAR WALL GRAB BARS (ACCESSIBLE TOILETS): THE REAR WALL GRAB BAR SHALL BE 36 INCHES (915 MM) MINIMUM IN LENGTH, AND EXTEND FROM THE CENTERLINE OF THE WATER CLOSET 12 INCHES (305 MM) MINIMUM ON THE SIDE CLOSET TO THE WALL AND 24 INCHES (610 MM) MINIMUM ON THE TRANSFER SIDE.

TOILET PAPER DISPENSERS: WHERE THE DISPENSER IS LOCATED ABOVE THE GRAB BAR, THE OUTLET OF THE DISPENSER SHALL BE LOCATED WITHIN AN AREA 24 INCHES (610 MM) MINIMUM AND 36 INCHES (915 MM) MAXIMUM FROM THE REAR WALL. WHERE THE DISPENSER IS LOCATED BELOW THE GRAB BAR, THE OUTLET OF THE DISPENSER SHALL BE LOCATED WITHIN AN AREA 24 INCHES (610 MM) MINIMUM AND 42 INCHES (1065 MM) MAXIMUM FROM THE REAR WALL. THE OUTLET OF THE DISPENSER SHALL BE LOCATED 18 INCHES (455 MM) MINIMUM AND 48 INCHES (1220 MM) MAXIMUM ABOVE THE FLOOR.

FINISH MATERIALS: TOILET ROOM FLOOR FINISH MATERIALS SHALL HAVE A SMOOTH, HARD, NONABSORBENT SURFACE. THE INTERSECTIONS OF SUCH FLOORS WITH WALLS SHALL HAVE A SMOOTH, HARD, NONABSORBENT VERTICAL BASE THAT EXTENDS UPWARD ONTO THE WALLS NOT LESS THAN 4 INCHES.

WALLS AND PARTITIONS WITHIN 2 FEET OF URINALS AND WATER CLOSETS SHALL HAVE A SMOOTH, HARD, NONABSORBENT SURFACE, TO A HEIGHT OF NOT LESS THAN 4 FEET ABOVE THE FLOOR.

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**BATHROOM UPGRADES
CLEARFIELD HUMAN
SERVICES BUILDING**

1350 EAST 1450 SOUTH
CLEARFIELD, UT 84015

DFCM PROJECT #	20155400
CARTWRIGHT PROJECT #	119046
DATE:	8/30/19
DRAWN BY:	RSB
CHECKED BY:	JMC
APPROVED BY:	JMC

REVISIONS	DATE	DESCRIPTION

ELECTRICAL SPECIFICATIONS:

- 1. INTENT:
COMPLETE AND OPERABLE SYSTEMS OF ELECTRICAL LIGHTING, POWER AND RECEPTACLES, ALTERATIONS AND ADDITIONS INCLUDING CONDUIT WIRING, OUTLETS, FIXTURES, DEVICES, AND LAMPS.

CONNECTION TO ALL A.C. EQUIPMENT AS INDICATED AND REQUIRED, INCLUDING ALL CONDUITS AND WIRES INDICATED, INCLUDING CONTROL CONDUITS AND OUTLETS.
- 2. COMPLIANCE WITH CODES:

ALL WORK AND MATERIALS SHALL COMPLY WITH ALL APPLICABLE CODES, SAFETY ORDERS, LAWS, ORDINANCES AND REGULATIONS OF GOVERNING AUTHORITIES AND OTHER AGENCIES HAVING JURISDICTION, INCLUDING REGULATIONS OF THE STATE FIRE MARSHALL, NEC., ETC.
- 3. INTERPRETATION OF DRAWINGS:

THE ELECTRICAL DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC, IN THAT ALL PROVISIONS NECESSARY TO CONFORM TO STRUCTURAL, ARCHITECTURAL, MECHANICAL, AND PLUMBING SYSTEMS CAN NOT BE SHOWN. ALL INSTALLATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM AN TO AVOID OBSTRUCTIONS, WITHOUT ADDITIONAL COST TO THE OWNER.

ALL WORK, MATERIAL, AND EQUIPMENT CALLED FOR BY NOTES, SCHEDULES OR OTHERWISE INDICATED ON THE DRAWINGS SHALL BE FURNISHED AND INSTALLED AS THOUGH FULLY SET FORTH IN THESE SPECIFICATIONS.
- 4. VISITING THE SITE:

VISIT THE SITE AND BECOME ACQUAINTED WITH THE CONDITIONS TO BE ENCOUNTERED. EXTRA FUNDS WILL NOT BE ALLOWED DUE TO FAILURE TO EXAMINE SITE AND TO INCLUDE EXISTING CONDITIONS IN THE BID PRICE.
- 5. COORDINATION WITH UTILITIES:

THE CONTRACTORS SHALL VERIFY EXACT REQUIREMENTS FOR THE ELECTRIC AND TELEPHONE SERVICES WITH THE UTILITY COMPANY REPRESENTATIVES AND PROVIDE ALL WORK AND PAY ALL THE COSTS FOR COMPLETE AND OPERATING SYSTEMS, AS DIRECTED BY THE GOVERNING UTILITIES.
- 6. MATERIALS AND WORKMANSHIP:

ALL WORK SHALL BE PERFORMED BY SKILLED MECHANICS USING THE BEST STANDARD PRACTICES OF THE TRADE. ALL MATERIALS SHALL, UNLESS OTHERWISE NOTED, BE NEW AND IN PERFECT CONDITION. ALL MATERIAL FOR SIMILAR USE SHALL BE OF THE SAME TYPE, MATERIAL, AND MANUFACTURER FOR EASE OF FUTURE MAINTENANCE.
- 7. EXECUTION:

RACEWAY INSTALLATION; SEPARATE UNDERGROUND CONDUITS IN A COMMON TRENCH 4" MINIMUM HORIZONTALLY, 12" MINIMUM FROM OTHER UTILITY LINES. MINIMUM CONDUIT DEPTH SHALL BE 18". COORDINATE CONDUIT INSTALLATION WITH PIPES, STEEL, AND DUCTS INSTALLED BY OTHER TRADES. INSTALL CONDUIT RUNS EXPOSED IN VIEW PARALLEL OR AT RIGHT ANGLES TO STRUCTURAL MEMBERS, WALLS, OR BUILDING LINES. SUPPORT CONDUIT WITH ONE MANHOLE MALLEABLE FACTORY-MADE PIPE STRAPS, FASTEN WITH SCREWS.
- 8. OPERATING AND ADJUSTING:

THE OWNER RESERVES THE RIGHT TO OPERATE ANY SYSTEMS OF EQUIPMENT PRIOR TO FINAL COMPLETION AND ACCEPTANCE OF THE WORK. SUCH PRELIMINARY OPERATION SHALL NOT BE CONSTRUED AS AN ACCEPTANCE OF WORK. EACH PIECE OF EQUIPMENT AND ALL OF THE SYSTEMS SHALL BE ADJUSTED TO INSURE PROPER FUNCTIONING AND SHALL BE LEFT IN FIRST CLASS OPERATION CONDITION.
- 9. CUTTING AND PATCHING:

DO ALL DRILLING AND CUTTING AS NECESSARY FOR INSTALLATION OF EQUIPMENT. DO CUTTING AND DRILLING OF STRUCTURE ONLY WITH PRIOR APPROVAL OF THE OWNER. WHERE CUTTING AND PATCHING OF WORK IS NECESSARY, USE SAME MATERIALS, WORKMANSHIP, AND FINISH TO NEATLY MATCH ALL SURROUNDING WORK.
- 10. CONDUIT:

PROVIDE ELECTRICAL METALLIC TUBING IN DR LOCATIONS AND INSTALLED IN STRICT ACCORDANCE WITH ELECTRICAL CODE AND FOR ALL SYSTEMS IN BUILDING. IN DAMP OR WET LOCATIONS, USE RIGID STEEL CONDUIT WITH APPROPRIATE FITTINGS. CONDUITS UNDERGROUND OR IN SLAB SHALL BE 40 PVC. INSTALL A GALVANIZED STEEL ELBOW WHERE THESE CONDUITS EMERGE ABOVE GRADE OR SLAB AND WRAP TO REDETERMINATION. ALL CONDUITS WITHOUT CONDUCTORS, TO BE INSTALLED WITH #12 TW PULL WIRE. VERIFY SIZES OF ALL UNDERGROUND CONDUITS NOT INDICATED.
- 11. CONDUCTORS:

TYPE THWN OR THHN COPPER WIRE INSULATED FOR 600V. SMALLEST WIRE SHALL BE #12 AWG UNLESS NOTED. USE APPROVED PULLING COMPOUND FOR ALL PULLS. USE SCOTCHLOCK CONNECTORS FOR ALL SPLICES IN #12 WIRE AND TAPED BOLTED PRESSURE CONNECTORS FOR LARGER WIRE. ALL WIRING SHALL BE COPPER UNLESS APPROVED BY ENGINEER.
- 12. GROUNDING:

ALL CONDUIT SHALL BE CONTINUOUS FOR GROUNDING. ALL GROUNDING CONDUCTORS SHALL BE INSULATED GREEN COPPER, SIZED AS SHOWN.
- 13. DEVICES:

SWITCHES; COMMERCIAL SPEC, GRADE, QUIET TYPE, COLOR PER ARCH., 20 AMPS.

CONVENIENCE OUTLETS; COMMERCIAL SPEC, GRADE DUPLEX GROUNDING TYPE, 20 AMPS AT 125 VOLTS, COLOR PER ARCH., OR GFI IN CODE REQUIRED LOCATIONS.
- 14. DEVICES PLATES:

REQUIRED FOR ALL WIRING DEVICES, OUTLETS AND SIMILAR APPLICATIONS. GANG COVERS FOR GANG BOXES. NYLON, COLOR PER ARCH.
- 15. LIGHTING FIXTURES:

PROVIDE ALL LIGHTING FIXTURES COMPLETE WITH ACCESSORIES AS REQUIRED FOR PROPER INSTALLATION, INCLUDING LAMPS. SEE NOTES ON FIXTURE SCHEDULES SUBSTITUTIONS SHALL BE ACCOMPANIED WITH COPIES OF SPECIFIED ITEMS AND SUBSTITUTIONS FOR COMPARISON BY ENGINEER. ANY RELOCATION SHALL BE APPROVED BY ARCHITECT.
- 16. SERVICE EQUIPMENT:

PANEL BOARDS; CIRCUIT BREAKERS SHALL BE 10,000 AIC MINIMUM. ALL LOCKS KEYED ALIKE AND TYPEWRITTEN DIRECTORIES. ALL PANELS SHALL HAVE A MINIMUM OF 36" WORKING CLEARANCE IN FRONT OF PANEL.
- 17. CLEAN-UP:

UPON COMPLETION OF THE WORK, PRIOR TO FINAL INSPECTION, THOROUGHLY CLEAN ALL EXPOSED FIXTURES, TRIM AND EQUIPMENT, LEAVE THE ENTIRE INSTALLATION IN NEAT, CLEAN AND USABLE CONDITION. REMOVE ALL CEMENT, PAINT, GREASE, OIL, AND OTHER FOREIGN SUBSTANCES.
- 18. TEST:

TEST ALL WIRE FOR SHORTS, OPENS, GROUNDS, OR OTHER DEFECTS. CORRECT ANY DEFECTIVE WORK. DEMONSTRATE CONTINUOUS SATISFACTORY OPERATION OF ALL ELECTRICAL EQUIPMENT.
- 19. GUARANTEE:

PRIOR TO FINAL ACCEPTANCE OF THE PROJECT, DELIVER TO THE OWNER A WRITTEN ONE YEAR GUARANTEE ON ALL THE WORKMANSHIP, MATERIALS, AND EQUIPMENT AND AGREE TO REPAIR OR REPLACE ALL SUCH DEFECTIVE ITEMS PROMPTLY THAT MAY OCCUR DURING THIS PERIOD, INCLUDING REPAIR OR REPLACEMENT OF THE PREMISES THAT MAY BE DAMAGED DUE TO FAULTY WORK AND MATERIALS FURNISHED UNDER THIS SECTION.

DHS CLEARFIELD RESTROOM REMODELS

ENERGY CODE COMPLIANCE CALCULATIONS 2015 INTERNATIONAL ENERGY CONSERVATION CODE TABLE C405.4.2(2) INTERIOR LIGHTING POWER ALLOCATION

AREA SQUARE FT PROPOSED WATTS LPD WATTS ALLOWED

AG WING:

$242 \text{ ft}^2 \times 38.6 \times 5 = 193$ $.98 \text{ w/ft}^2 \times 242 = 237$

EACH INDIVIDUAL REST ROOM IN THE AG WING MEETS CODE REQUIREMENTS

WEST WING:

$224 \text{ ft}^2 \times 38.6 \times 5 = 193$ $.98 \text{ w/ft}^2 \times 224 = 219$

EACH INDIVIDUAL REST ROOM IN THE WEST WING MEETS THE CODE REQUIREMENT

PLUMBING CHASE:

$115 \text{ ft}^2 \times 3 \times 16.36 = 49.08$ $.65 \text{ w/ft}^2 \times 115 = 74$

THE PLUMBING CHASE AREA MEETS THE CODE REQUIREMENTS

ALL AREAS MEETS THE IECC CODE REQUIREMENTS

SHORT CIRCUIT CURRENT CALCULATIONS

THIS PROJECT WILL NOT EFFECT THE SHORT CIRCUIT CURRENT AVAILABLE AT THE PANELS INVOLVED IN THE REMODEL OF THE RESTROOMS.

SYMBOLS LEDGEND

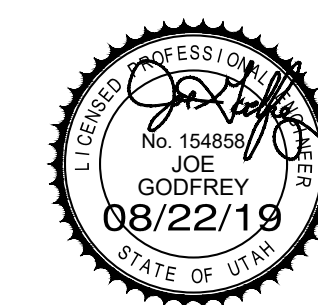
	MAIN SERVICE PANEL / METER / DISCONNECT
	LOAD CENTER BREAKER PANEL
	HEAT PUMP
	FANE COIL
	HEAT RECOVERY VENT
	DATA OUTLET
	DUPLEX OUTLET
	GROUND FAULT CURRENT INTERRUPT OUTLET
	SINGLE POLE SWITCH
	THREE WAY SWITCH
	FOUR WAY SWITCH
	OCCUPANCY SENSOR
	EXHAUST FAN
	RESTROOM EXHAUST FAN
	SURFACE MOUNTED LIGHT
	SURFACE MOUNTED 2'x4' LIGHT
	SUSPENDED CEILING LIGHT (HIGH BAY)
	WALL SURFACE MOUNTED LIGHT
	EXTERIOR WALL PACK LIGHT
	WALL MOUNTED EMERGENCY LIGHT
	EMERGENCY EXIT / EGRESS

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BATHROOM UPGRADES
CLEARFIELD HUMAN
SERVICES BUILDING

1350 EAST 1450 SOUTH
CLEARFIELD, UT 84015

CARTWRIGHT PROJECT #	119046
DATE:	8/22/2019
DRAWN BY:	FWP
CHECKED BY:	RSB
APPROVED BY:	JMC

REVISIONS
DATE DESCRIPTION

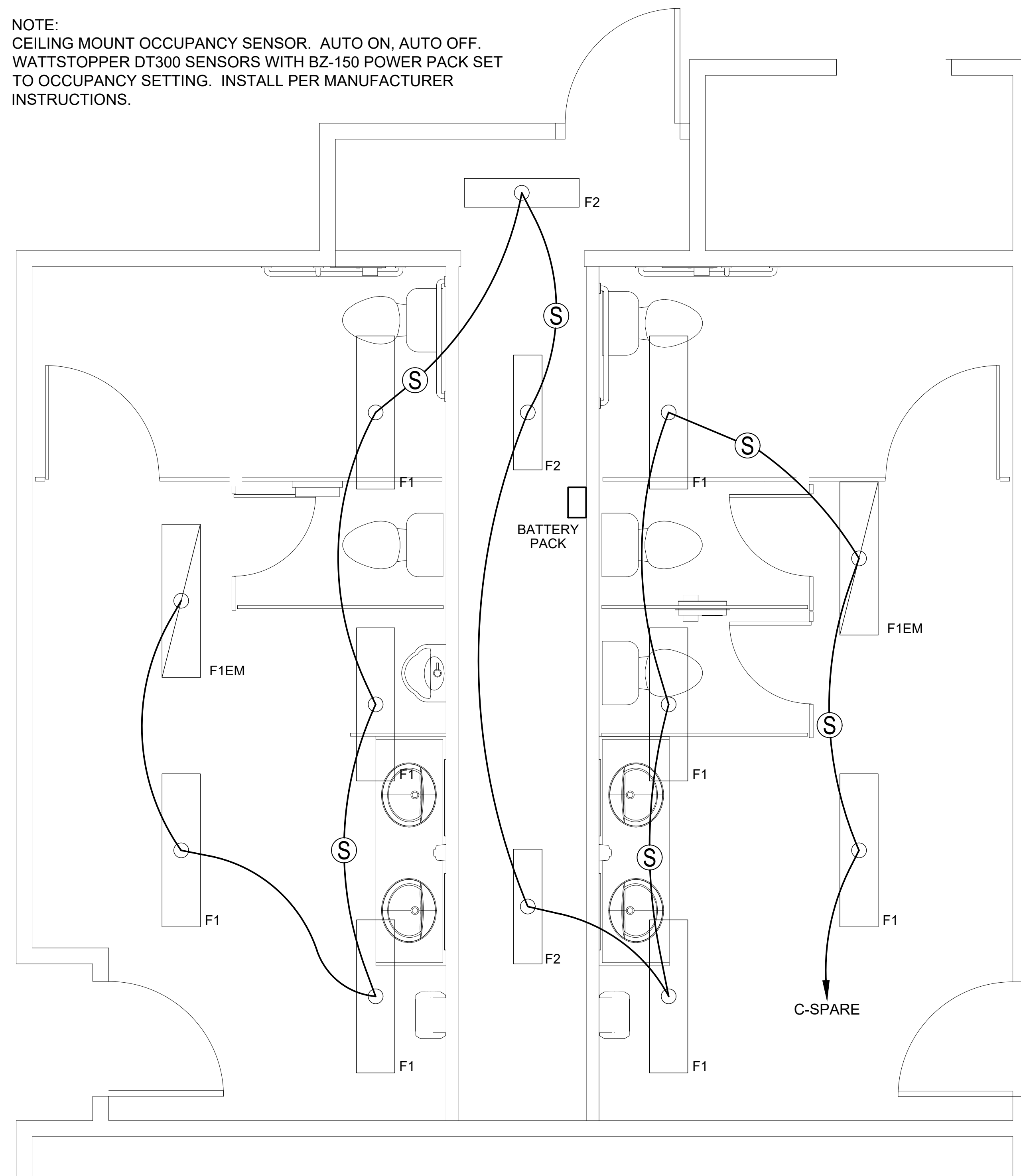
RESTROOM
ELECTRICAL
SPECIFICATIONS

EE100

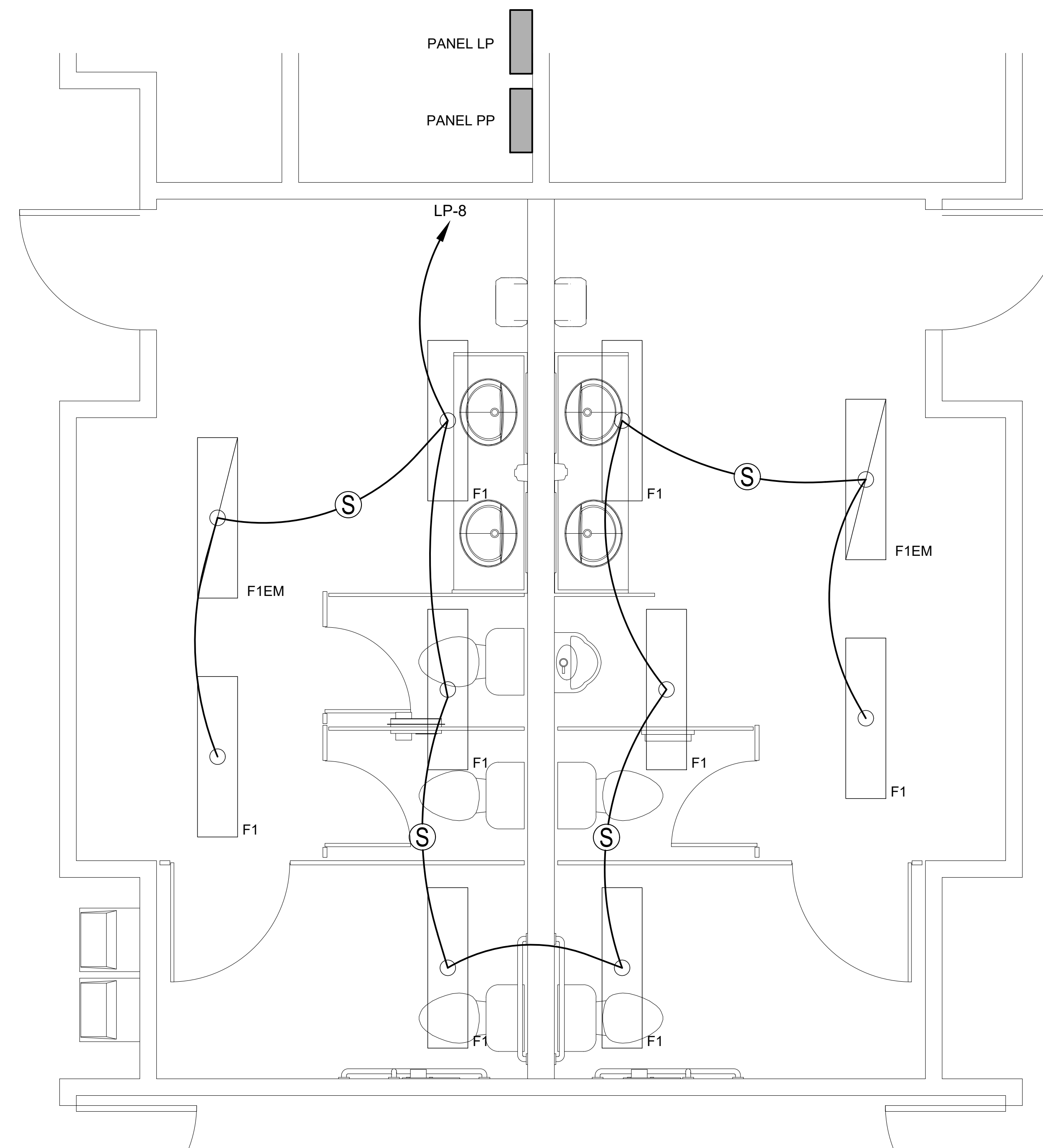
LIGHT FIXTURE SCHEDULE

SYM	MANUFACTURER	FIXT. WATTS	LAMP TYPE	MOUNT	DPT. HT.	LOCATION/REMARKS
○ F1	LITHONIA EPANL LED 1X4	38.6	300 LUMENS	SURFACE	.	ALL REST ROOMS
◡ F1EM	LITHONIA EPANL LED E10WCP 1X4	38.6	300 LUMENS	SURFACE	.	EMERGENCY BATTERY PAC
○ F2	LITHONIA MVOLT EZ10 CLX L365EF RDL	16.36	LED	SUSPEND	10'	PLUMBING CHASE
Ⓢ	SENSOR SWITCH CM PDY	OCCUPANCY SENSOR

NOTE:
 CEILING MOUNT OCCUPANCY SENSOR. AUTO ON, AUTO OFF.
 WATTSTOPPER DT300 SENSORS WITH BZ-150 POWER PACK SET TO OCCUPANCY SETTING. INSTALL PER MANUFACTURER INSTRUCTIONS.



A1 RESTROOM PLAN - AG WING - ELECTRICAL LIGHTING PLAN
 SCALE: 1/2" = 1'-0"



A4 RESTROOMS PLAN - WEST WING - ELECTRICAL LIGHTING PLAN
 SCALE: 1/2" = 1'-0"

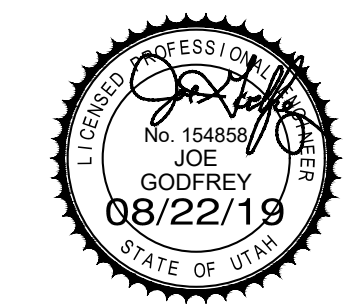
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**BATHROOM UPGRADES
 CLEARFIELD HUMAN
 SERVICES BUILDING**

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 CLEARFIELD, UT 84015

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▲	DATE	

RESTROOM
 ELECTRICAL
 LIGHTING PLANS

EE101

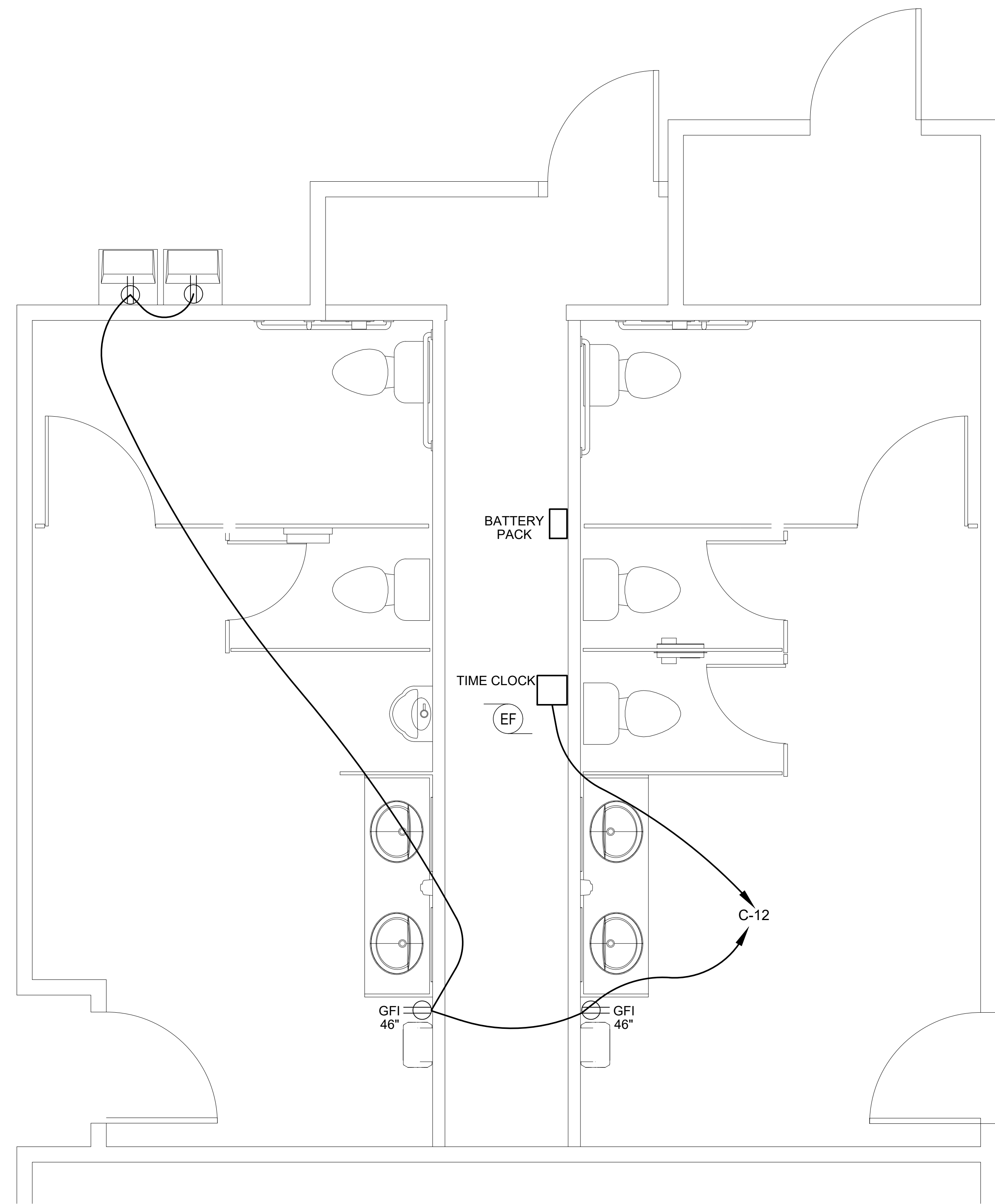
EQUIPMENT SCHEDULE										
SYM	DESCRIPTION	CIR	VOLTS	BREAKER	DISC. SWITCH	FUSE	FEEDER	STARTER	H.P. OR WATTS	F.L.A.
EF-1	EXHAUST FAN	.	120	20A	.	.	#12	.	30	.
EF-2	EXHAUST FAN	.	120	20A	.	.	#12	.	30	.

D

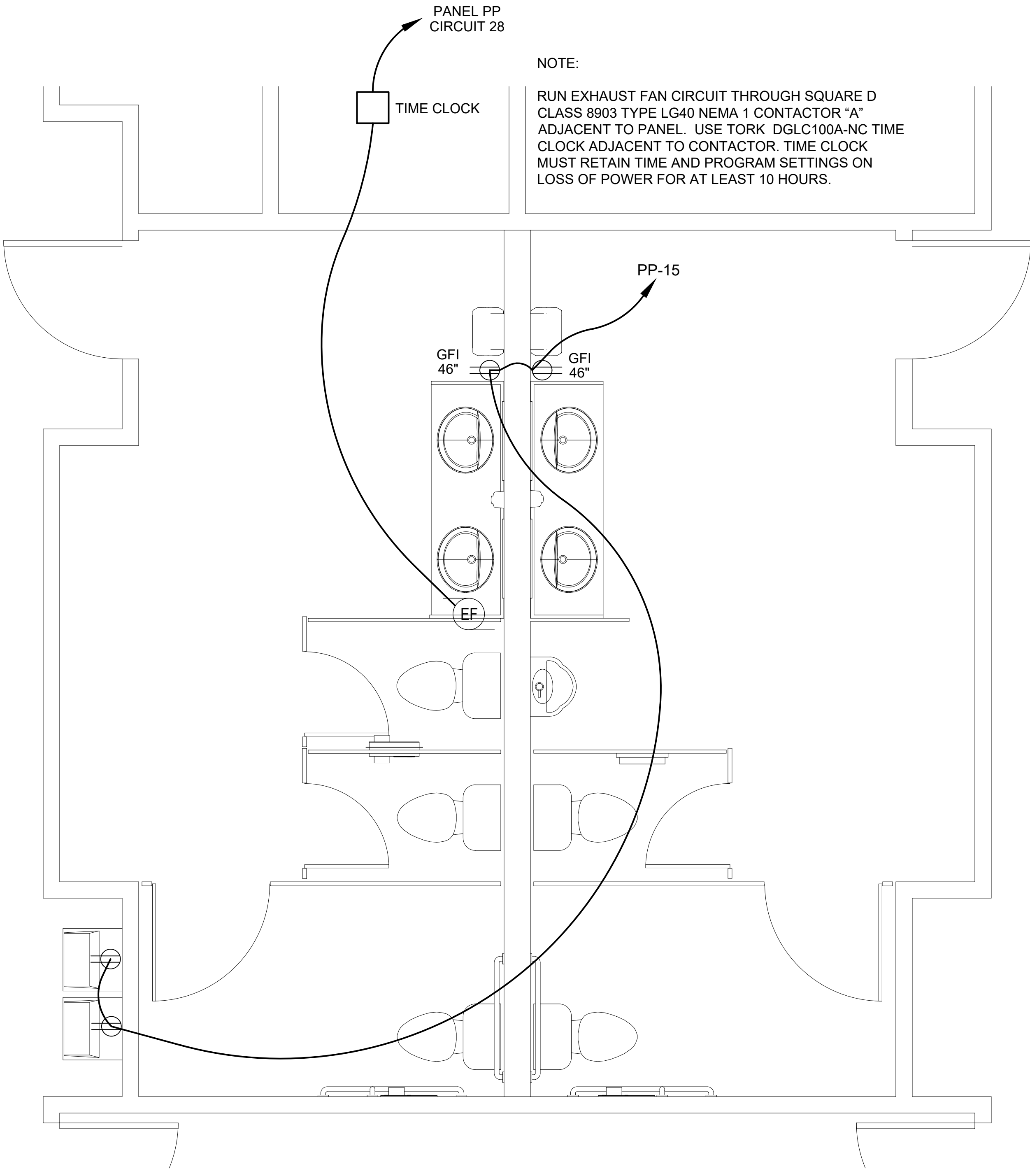
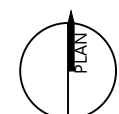
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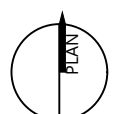
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A1 RESTROOM PLAN - AG WING - ELECTRICAL POWER PLAN
SCALE: 1/2" = 1'-0"



A4 RESTROOMS PLAN - WEST WING - ELECTRICAL POWER PLAN
SCALE: 1/2" = 1'-0"



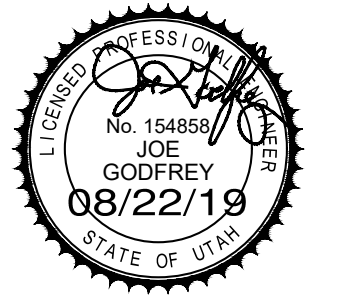
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BATHROOM UPGRADES
CLEARFIELD HUMAN
SERVICES BUILDING
1350 EAST 1450 SOUTH
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REVISIONS	DATE	DESCRIPTION

RESTROOM
ELECTRICAL
POWER PLANS

EE102

GENERAL MECHANICAL NOTES

- Contractor is responsible for all permits, licenses, fees, and charges as required by authority having jurisdiction for the performance of the work as outlined in these contract documents.
- The contractor shall be responsible for installing a complete and functional system in accordance to the intent of the plans and written specifications.
- All plumbing shall be in accordance with the local regulations and the International Plumbing Code of 2015.
- Contractor to coordinate work with other disciplines.
- Drawing is diagrammatic and is not to be scaled. Refer to architectural plans or field measurements for dimensions.
- Contractor shall verify all existing construction prior to submitting his bid. No extras will be paid due to unanticipated existing conditions.
- Coordinate all roof and wall penetrations required with the general contractor. Provide all flashings, sleeves, curbs, reinforcing angles, supporting frames, etc. which is required unless called out to be furnished by others.
- Contractor to provide submittal to Engineer for review prior to acquiring equipment as soon as possible after contract award. Equals will require review from engineer and owner for quality and performance against items specified. All control devices shall be included with submittals. Equipment and fixture substitutions that are not listed on these contract documents shall not be allowed without the prior written approval of the owner.
- Extra charges - any discrepancies and omissions discovered shall be reported to the engineer immediately and prior to tender closing for rectification by addendum.
- The proper performance of the control system is the responsibility of the contractor.
- Shop drawings - submit 1 copy in pdf format to the engineer for approval. Provide 2 printed copies of reviewed shop drawings to owner in 2 O&M manuals within 90 days of acceptance. The contractor shall ensure that equals for the major equipment fit in the allocated space and meet codes and specifications.
- Upon completion contractor shall prepare a set of as-built drawings in AutoCAD/Revit format and provide pdf printouts for review by engineer.
- Maintenance manuals - contractor shall provide 2 copies complete with shop drawings. Three ringer binder style is acceptable. Provide on-site operating seminar to familiarize owner with all functions of new equipment. Submit maintenance manuals within 90 days of project acceptance.
- As-built drawings - mechanical contractor shall keep on site an extra set of drawings and specifications on which changes shall be noted daily. As-built drawings shall also be provided showing location of access doors, clean-outs, and any deviation from design drawings. Submit as-built drawings within 90 days of project acceptance.
- Warranty - mechanical contractor shall provide written warranty on his system for one full year from time of acceptance by the owner.
- Structural - misc. Steel support hangers for unit heaters, fans, heat pumps, etc. Shall be by the mechanical with clamps to structure, not welded. Structural reinforcing for equipment is by general contractor.
- Electrical coordination - motor disconnect switches and starters (including magnetic starters for interlocking) shall be by electrical contractor unless otherwise specified. Disconnects for packaged makeup air units shall be by electrical contractor. Electrical contractor shall wire in low voltage and line voltage thermostats, electric heaters and control transformers provided by mechanical contractor. Mechanical contractor shall complete low voltage controls wiring. Confirm voltages on site before ordering equipment.
- Duct dimensions on plans are finished inside dimensions.
- Sleeving - mechanical contractor shall be on site to sleeve mechanical openings through concrete, to flash and counter flash and to coordinate joist locations away from mechanical shafts.
- Design documents - these design documents are prepared solely for the use by the party with whom the design professional has entered into a contract and there are no representations of any kind made by the design professional to any party with whom the design professional has not entered into a contract.

DUCT INSULATION NOTE

- Insulate all supply and return duct with R-6 duct insulation. Insulation applied to exterior duct must have metal jacket. All components used (insulation, jackets, mastics, adhesives, and tapes) must have flame-spread index of 25 or less, and smoke-developed index of 50 or less when tested in accordance with ASTM E 84 or 723 (be plenum rated).

LOW PRESSURE DUCT NOTE

- Provide all duct with SMACNA standards for 2" WC pressure class. Seal all transverse and longitudinal seams except for welded or locking type longitudinal joints.

PLUMBING IN RETURN AIR PLENUMS

- Treat all ceiling spaces as return air plenums.
- All materials used in return air plenums must have flame-spread index of 25 or less, and smoke-developed index of 50 or less when tested in accordance with ASTM E84 or UL 723 (be plenum rated).

MECHANICAL ALTERNATE NOTE

- Alternate mechanical equipment is acceptable. Alternates must be equal or better in performance, durability, and warranty.

HEATING AND VENTILATION NOTES

- Duct material shall be as follows unless otherwise indicated:
 - Round supply/return air: ASTM A653 Z90 Zinc coating.
 - Rectangular supply/return air: ASTM A653 Z90 Zinc coating.
 - Runouts to diffusers: spiral wound flexible galvanized spiral to SMACNA standards.
 - Exhaust duct: ASTM A653 Z90 Zinc coating.
 - Transitions shall conform to SMACNA.
 - Thickness, fabrication, reinforcement and joints to SMACNA.
 - Flex connections - provide flex connections 1/4" Duro Dyne Excelon PVC coated polyester at inlet and outlets of all forced air units.
 - Flexible duct - Thermaflex S-LP-10 insulated. M-KE insulated, maximum 10 ft connector length per air outlet.
- Duct sealer - MP water-based paste sealer must be applied to seal leaking duct connections, joints and elbows.
- Flues & Breaching
 - Combustion air - shall terminate with spill box and baffle to diffuse cold air and protect water lines.
 - Provide minimum 1" clearance from combustibles for "B" vent and 6" for single wall vent connections.
- Balancing
 - Upon completion balance air flows to values indicated. Contractor is responsible for the provision of balancing dampers, even if not indicated on the drawings. Provide an air balance report to the engineer for review. Report balancing measurements on the as-built drawings. Air and water balancing shall be at +/- 10% of specified complete with design versus actual readings.
 - Fans - supply and exhaust fans, air systems amps, rpm, cfm, suction and discharge static pressure. Grilles - supply, return and exhaust air volumes.
 - Sketch layout of duct systems showing details of balance.
- Control wiring by HVAC contractor. Final connections by HVAC contractor.
- All caulking on building penetrations shall be a 1-component non-sag urethane sealant.
- The HVAC systems shall be constructed in accordance with NFPA 101:7-2 and NFPA 90A "standard for the installation of air conditioning and ventilation systems.
- All HVAC flues and vents shall be constructed in accordance with the International Fuel Gas code of 2015.
- Fire dampers - shall be type "B", UL labeled, with damper blades fully clear of the air stream, seal with Dow Corning RTV silicone foam. Provide access door at all fire dampers.
- Provide sheet metal fire stops tight around ducts passing through fire separations and ceilings. Run to kitchen WC or dryer exhaust ducts inside party or corridor rated walls.
- Mount condensate and refrigerant lines as high as possible.

IECC CLOSE OUT REQUIREMENTS

- Contractor to provide to the owner and design engineer a preliminary equipment testing report prior to final mechanical inspection.
- Contractor to provide to the owner the following items within 90 days of receiving certificate of occupancy.
 - As-Built drawings showing installed equipment.
 - Operating and maintenance manuals including routine maintenance requirements, name and address of servicing agency, narrative of controls, and recommended operating setpoints.
 - System balancing report.
 - Equipment testing report.

GENERAL NOTES

All controls supplied by mechanical. All line voltage by electrical. DC and low voltage by mechanical.

THERMOSTAT NOTES:

Provide 24/7 Programmable thermostat with minimum 4 daily setpoints and auto switchover between heating and cooling, minimum 2-stage heating and cooling capability and night setback mode. Install in thermostat in lockbox. Setback to 55 F heat and 85 F cool. Provide c/w 2 hour occupant override, 10 hour backup and 5 F deadband and setpoint overlap restriction.

SEISMIC CONTROL NOTES

- Install tight to structure.
- Seismic control measures not to jeopardize noise and vibration isolation systems. Provide 1/4" to 3/8" clearance during normal operation of equipment and systems between seismic restraint and equipment.
- Incorporate seismic restraints into vibration isolation system to resist complete isolator unloading.

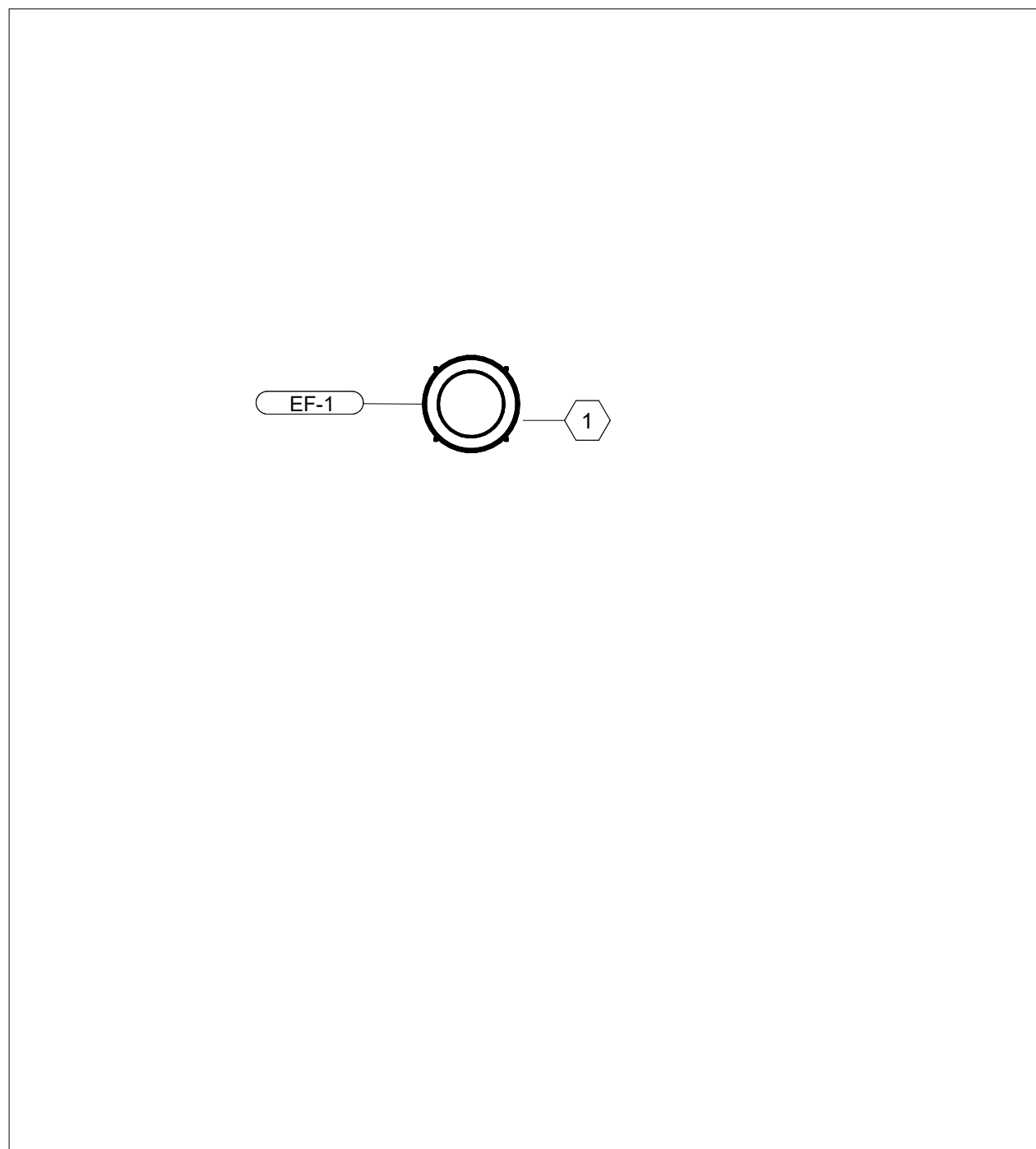
SHEET LIST - MECHANICAL

Sheet Number	Sheet Name	Current Issue	Current Revision Description
ME100	MECHANICAL OVERVIEW		
ME101	MECHANICAL DEMOLITION		
ME102	MAIN FLOOR MECHANICAL		

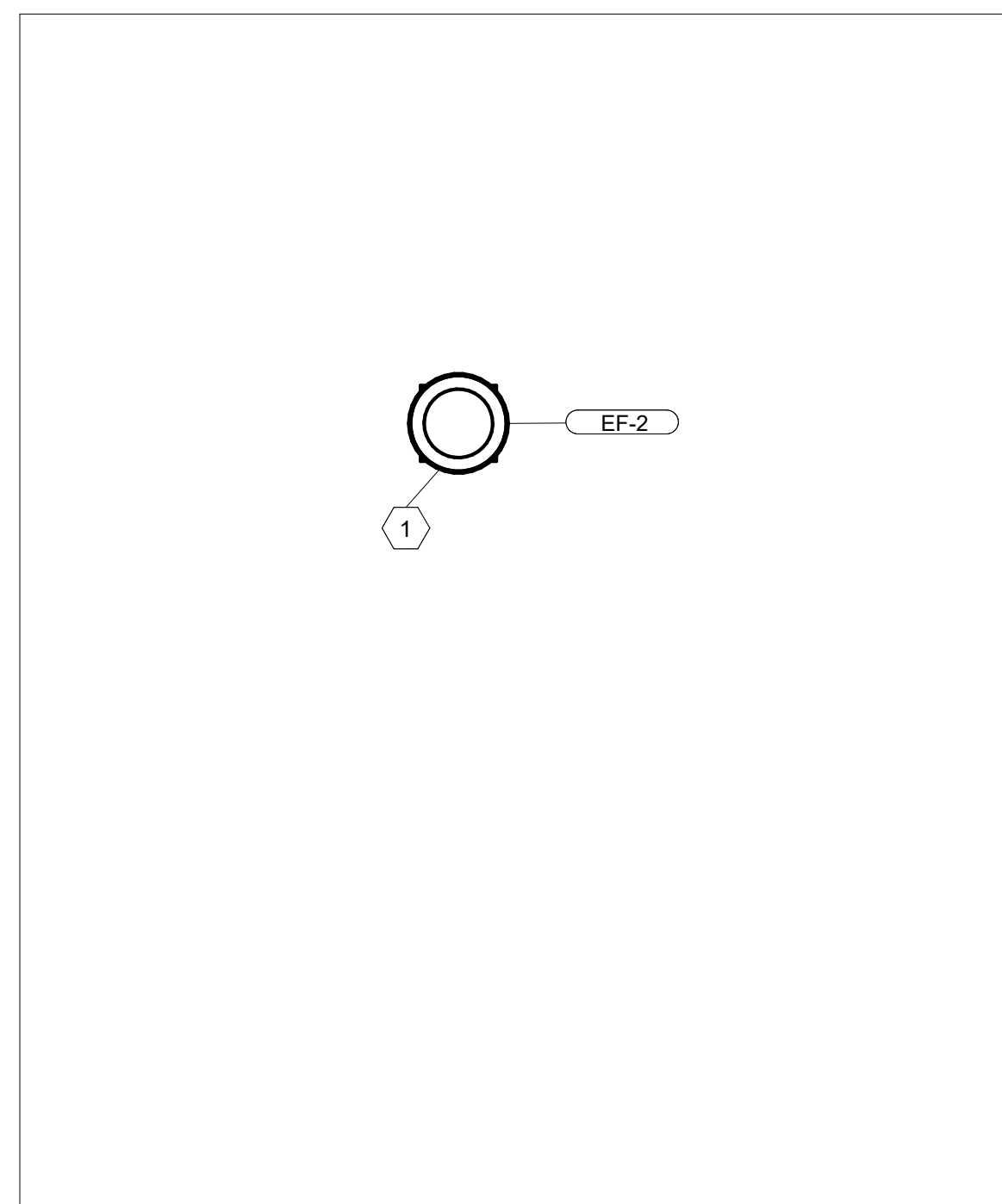
MECHANICAL SMACNA SEISMIC HAZARD LEVEL	
COMPONENT	SHL VALUE
Plumbing	C
Air Side HVAC	C
Wet Side HVAC	D
Ducts	C

- RA = RETURN AIR DUCT
- SA = SUPPLY AIR DUCT
- REA = RELIEF AIR DUCT
- OA = OUTSIDE AIR DUCT
- FLUE = MECHANICAL FLUE
- CA = COMBUSTION AIR
- (T) = THERMOSTAT
- (S) = REMOTE TEMPERATURE SENSOR

MECHANICAL LEGEND



1 2 - ROOF MECHANICAL - AG RESTROOMS
1/4" = 1'-0"



2 3 - ROOF MECHANICAL - WEST WING RESTROOMS
1/4" = 1'-0"

KEYNOTES

ID	DESCRIPTION
1	INSTALL EXHAUST FAN ACCORDING TO MANUFACTURER'S INSTRUCTIONS.

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BATHROOM UPGRADES
CLEARFIELD HUMAN
SERVICES BUILDING

1350 E 1450 S CLEARFIELD, UT 84015

DFCM PROJECT #	2004543
CARTWRIGHT PROJECT #	0
DATE:	7/22/19
DRAWN BY:	ZR
CHECKED BY:	MA
APPROVED BY:	MA

REVISIONS

DATE	DESCRIPTION

MECHANICAL OVERVIEW

ME100

1

2

3

4

5

KEYNOTES

ID	DESCRIPTION
1	DEMOLISH AND DISPOSE OF EXISTING EXHAUST FAN AND ALL SUPPORTING DUCT.
2	DEMOLISH EXISTING SUPPLY GRILLE AND PREPARE DUCT TO INSTALL NEW SUPPLY GRILLE.

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REVISIONS	
#	DESCRIPTION

MECHANICAL
DEMOLITION
ME101

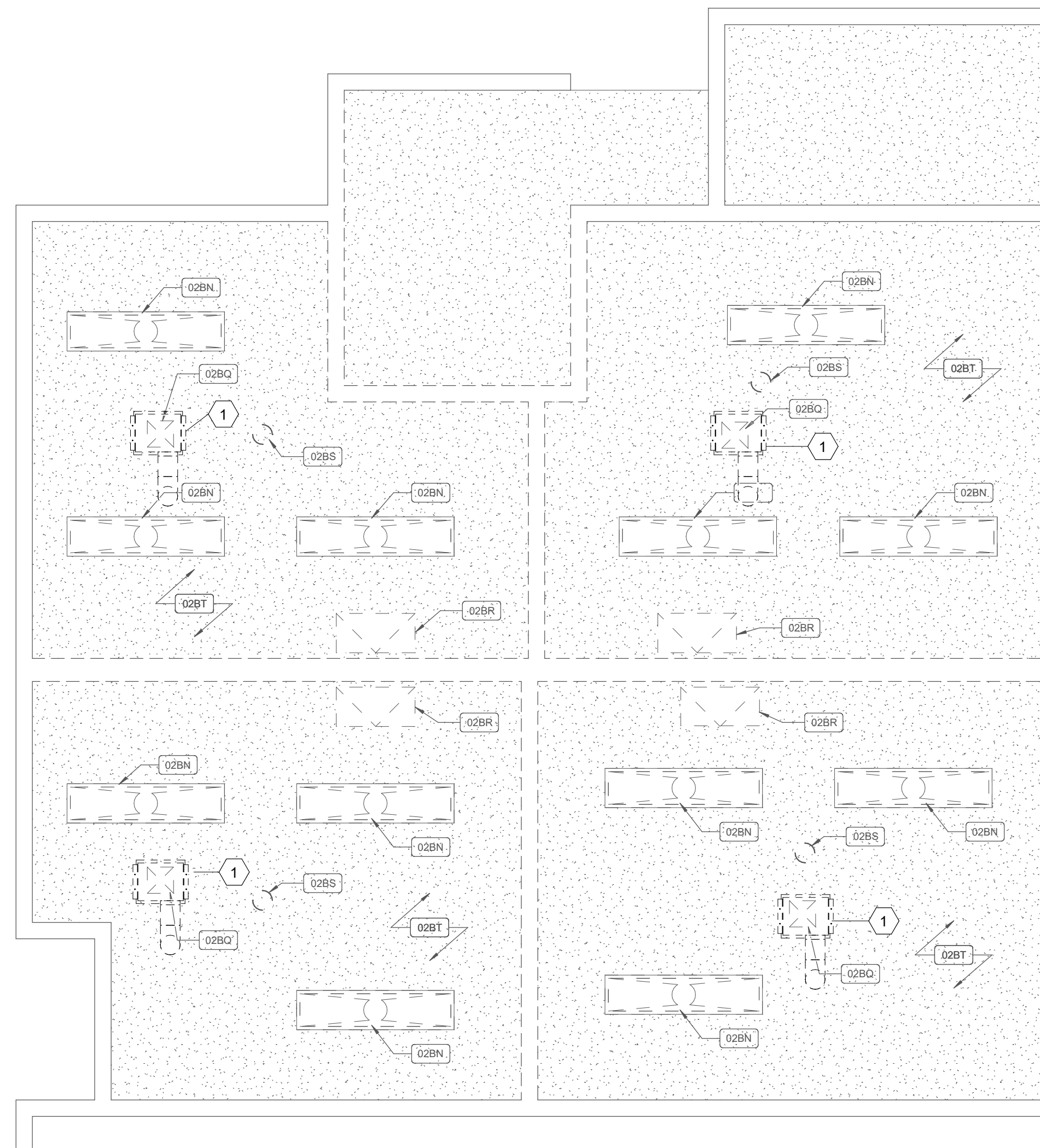
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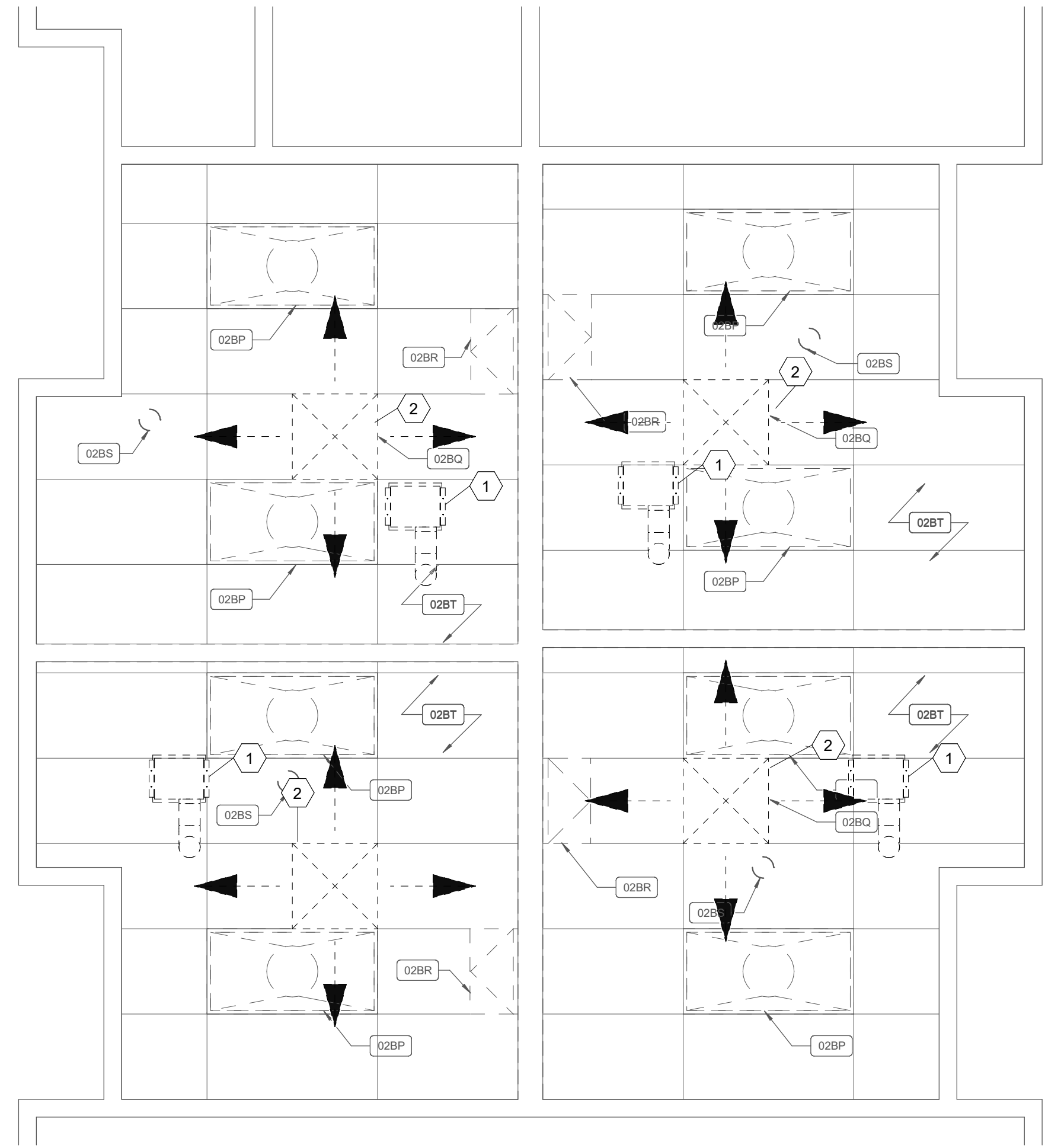
C

B

A



① 1 - MAIN FLOOR MECHANICAL DEMOLITION - AG WING
3/8" = 1'-0"



② 1 - MAIN FLOOR MECHANICAL DEMOLITION - WEST WING
3/8" = 1'-0"

1

2

3

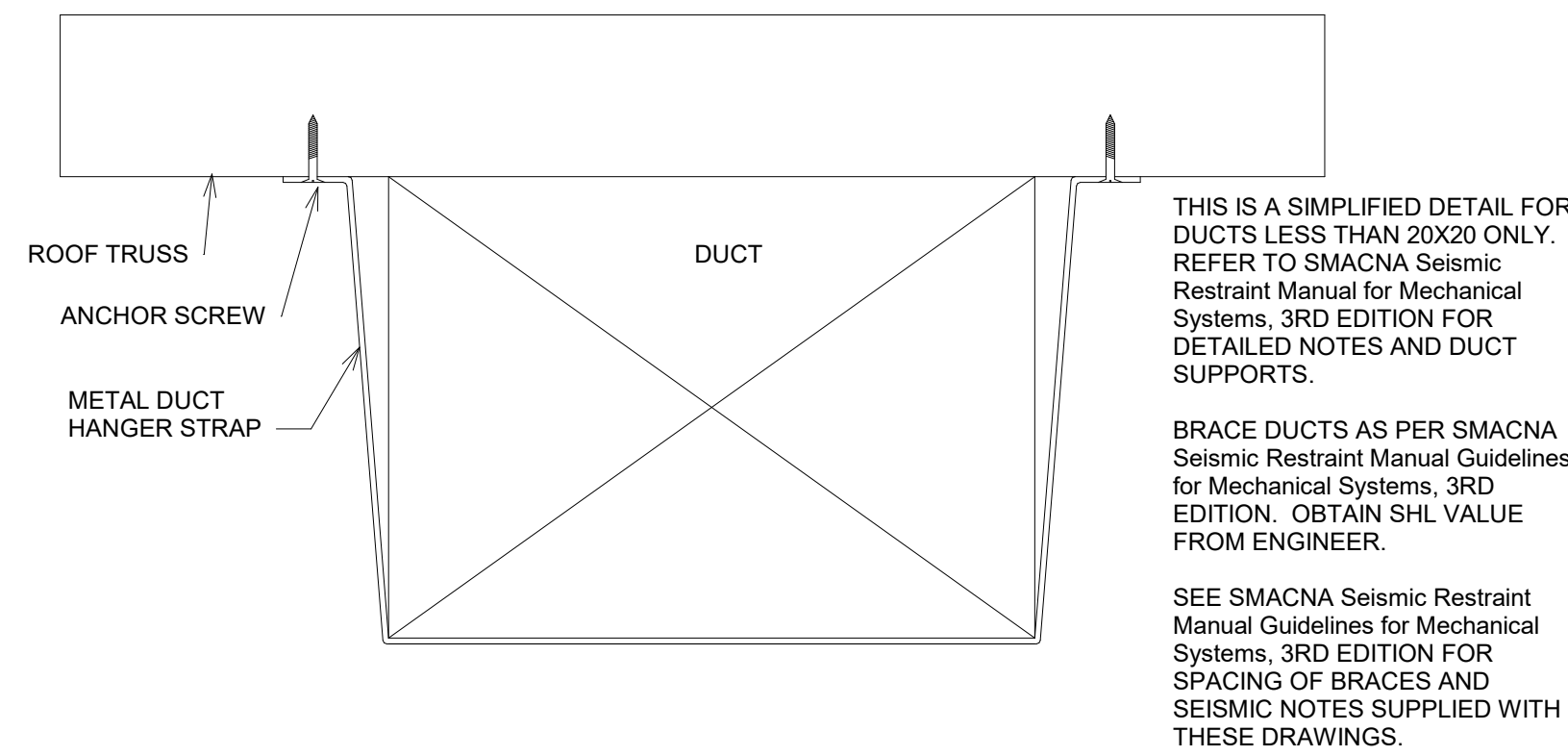
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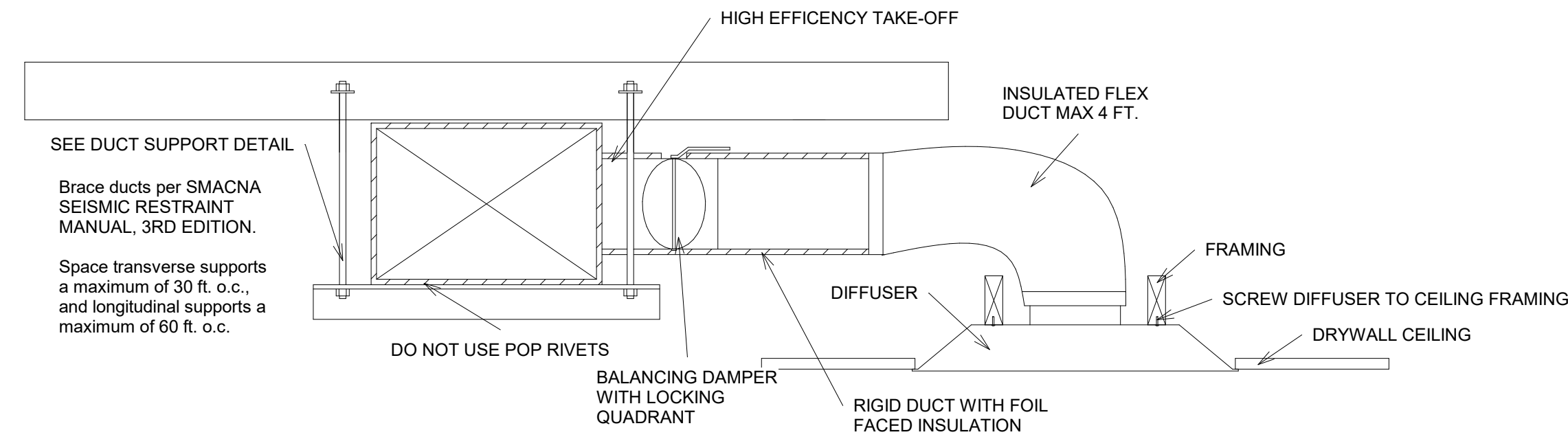
EXHAUST FAN SCHEDULE								
IDENTITY			MECHANICAL		ELECTRICAL			Comments
Mark	Manufacturer	Model	External Static Pressure	Air Flow	Voltage	Phase	Motor Operating HP	
EF-1	Greenheck	CUBE-099-4	0.25 in-wg	300 CFM	115 V	1	186 W	Fan to run continuously.
EF-2	Greenheck	CUBE-099-4	0.25 in-wg	300 CFM	115 V	1	186 W	Fan to run continuously.

AIR TERMINAL SCHEDULE					
TAG	MANUFACTURER	MODEL	SIZE	QTY	Description
EX-1	Price Industries	ECG	6"x6"	4	Drywall Mounted Exhaust Grille.
TG-1	Price Industries	ECG	8"x8"	8	Drywall Mounted Exhaust Grille.

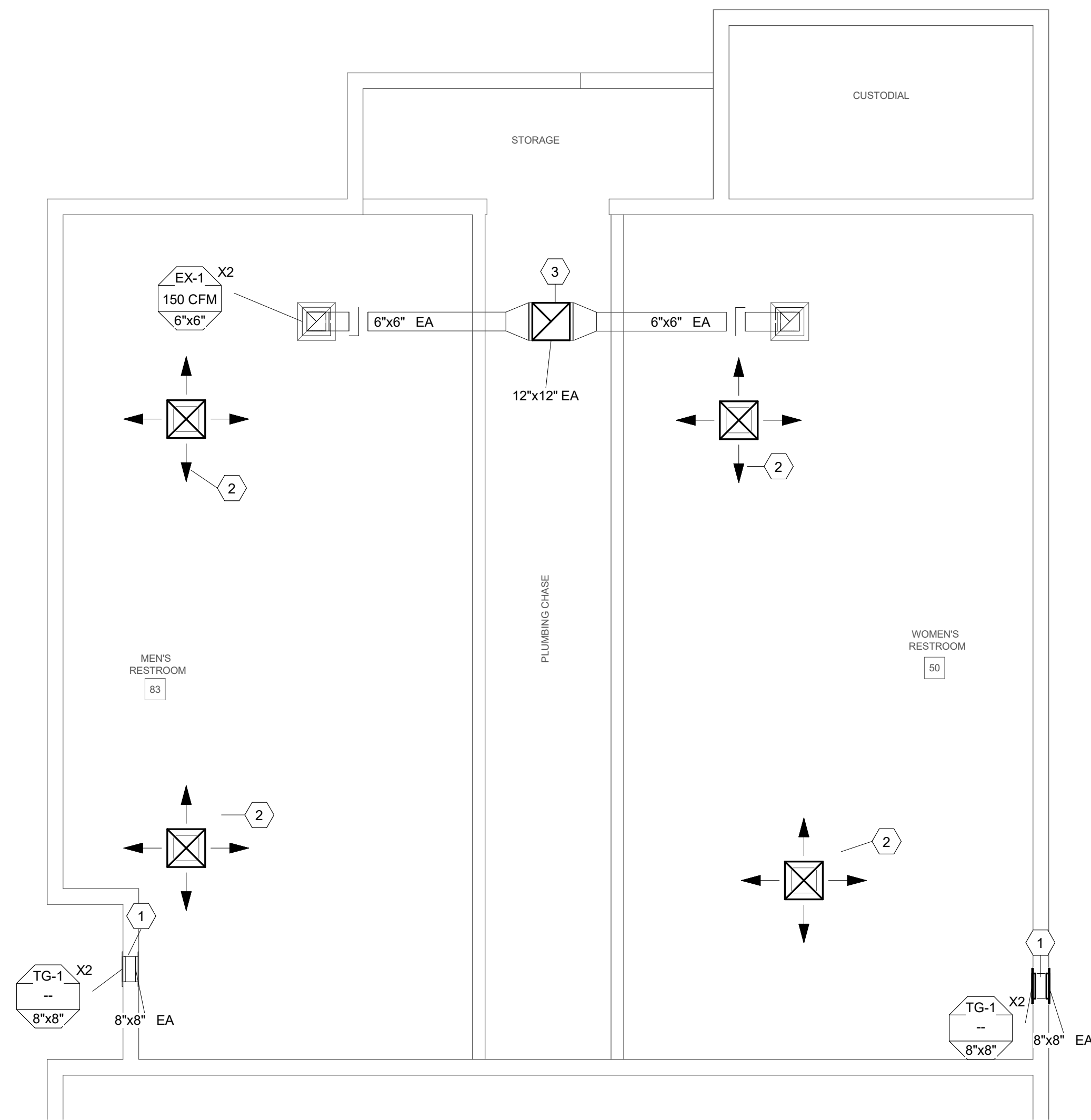
- KEYNOTES
- | ID | DESCRIPTION |
|----|--|
| 1 | INSTALL TRANSFER GRILLE AT HIGH LEVEL ABOVE BATHROOM DOOR. NOISE INSULATE TRANSFER DUCT. |
| 2 | PROVIDE AND INSTALL NEW SUPPLY DIFFUSER TO MATCH SIZE AND STYLE OF EXISTING. |
| 3 | EXHAUST RISE TO ROOFTOP MOUNTED FAN. |



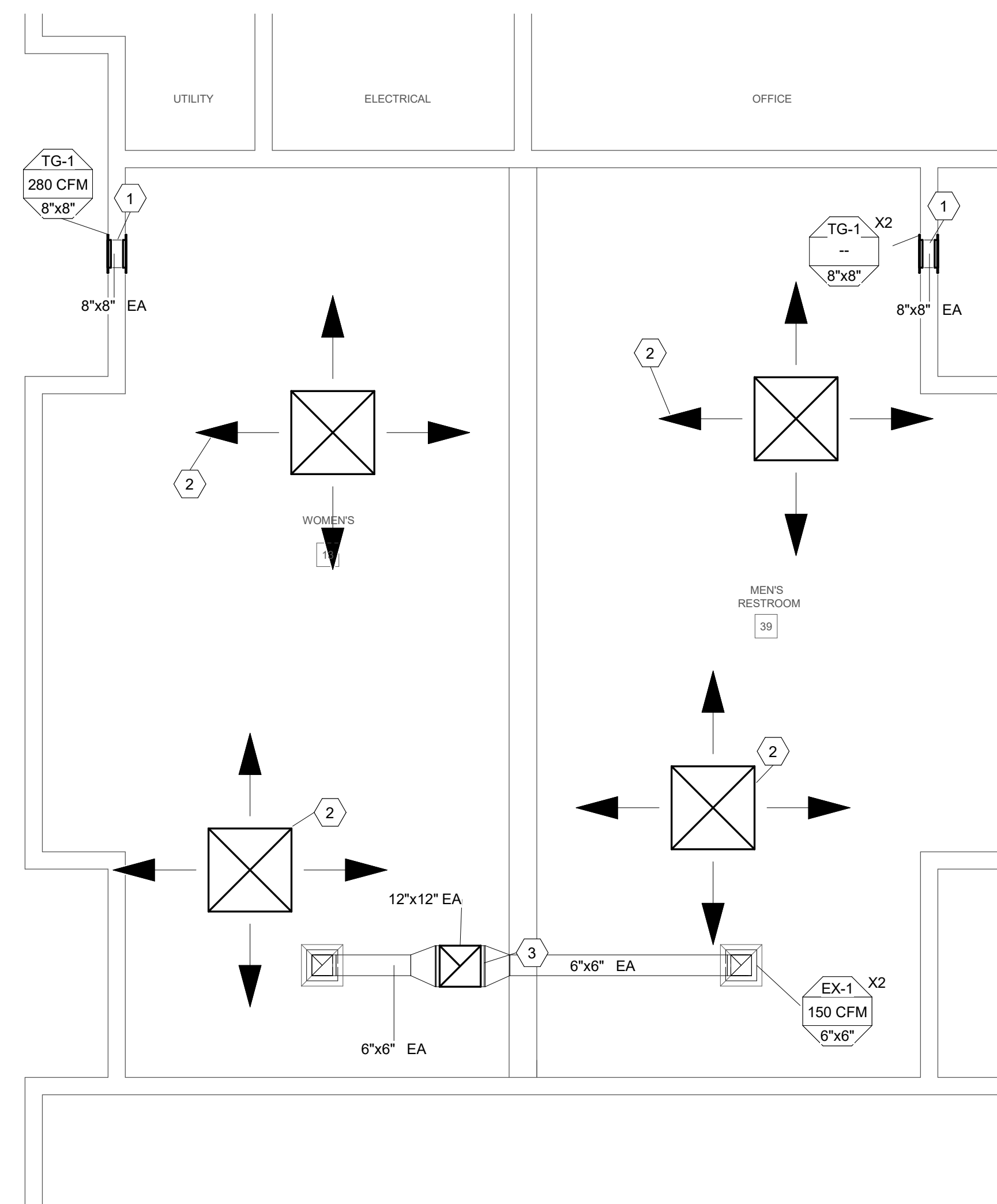
2 Duct - Tight to Structure Rectangular Hanger - Strap
N.T.S.



4 Duct - Square Diffuser - Surface Mount Installation Detail
N.T.S.



3 1 - MAIN FLOOR MECHANICAL - WEST WING
3/8" = 1'-0"



1 1 - MAIN FLOOR MECHANICAL - AG WING
3/8" = 1'-0"

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SERVICES BUILDING

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CARTWRIGHT PROJECT #	0
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CHECKED BY:	MA
APPROVED BY:	MA

REVISIONS	
#	DESCRIPTION

MAIN FLOOR
MECHANICAL

ME102

GENERAL PLUMBING NOTES

- GENERAL
 - Contractor is responsible for all permits, licenses, fees and charges as required by authority having jurisdiction for the performance of the work as outlined in these contract documents.
 - The contractor shall be responsible for installing a complete and functional system in accordance to the intent of the plans.
 - All plumbing shall be in accordance with local regulations and the International Plumbing Code of 2015.
 - Contractor to coordinate work with other disciplines.
 - Drawing is diagrammatic and is not to be scaled. Refer to architectural plans or field measurements for dimensions.
 - Contractor shall verify all existing construction prior to submitting his bid. No extras will be paid due to unanticipated existing conditions.
 - Extra charges - any discrepancies and omissions discovered shall be reported to the engineer immediately and prior to tender closing for rectification by addendum.
 - Shop drawings - submit 1 copy in pdf format to the engineer for approval. Provide 2 printed copies of reviewed shop drawings to owner in 2 O&M manuals. The contractor shall ensure that equals for the major equipment fit in the allocated space and meet codes and specifications.
 - Maintenance manuals - contractor shall provide 2 copies complete with shop drawings. Three ringer binder style is acceptable. Provide on-site operating seminar to familiarize owner with all functions of new equipment
 - Warranty - mechanical contractor shall provide written warranty on his system for one full year from time of acceptance by the owner.
 - Excavation - plumbing contractor shall excavate for his work and back fill to 12" above pipes with sand.
 - Structural - Misc. Steel support hangers for unit heaters, fans, heat pumps, etc. Shall be by the mechanical with clamps to structure, not welded. Structural reinforcing for equipment is by general contractor.
 - As-built drawings - mechanical contractor shall keep on site an extra set of drawings and specifications on which changes shall be noted daily. As-built drawings shall also be provided showing location of access doors, clean-outs, and any deviation from design drawings.
 - Potable water copper piping shall use lead-free solder. testing inside water lines shall hold 100 psi air for 1 hour.
 - Natural gas - plumber shall provide low pressure gas lines to appliances complete with yellow paint coating on pipe where exposed to outdoors. Confirm meter size with local gas utility company. Utility upgrade costs to be borne by owner.
 - Plumbing contractor shall be on site to sleeve Plumbing openings through concrete, to flash and counter flash and to coordinate joist locations away from mechanical shafts.
 - Design documents - these design documents are prepared solely for the use by the party with whom the design professional has entered into a contract and there are no representations of any kind made by the design professional to any party with whom the design professional has not entered into a contract.
 - The written book specification takes precedence over these notes.

GENERAL PLUMBING FIXTURE NOTES

- All plumbing fixtures shall be furnished c/w necessary traps, stops, tailpieces, trim, etc.
- Plumbing contractor to supply and coordinate all plumbing fixture voltage and power requirements with electrical contractor.
- All water heaters and hot water storage tanks shall have a drain valve installed at the bottom of the tank as required by code. All water heaters shall be seismically anchored as per code.
- Provide sanitary venting piping for all fixtures.

IECC CLOSE OUT REQUIREMENTS

- Contractor to provide to the owner and design engineer a preliminary equipment testing report prior to final mechanical inspection.
- Contractor to provide to the owner the following items within 90 days of receiving certificate of occupancy.
 - As-Built drawings showing installed equipment.
 - Operating and maintenance manuals including routine maintenance requirements, name and address of servicing agency, narrative of controls, and recommended operating setpoints.
 - System balancing report.
 - Equipment testing report.

GENERAL SANITARY NOTES

- Provide chrome escutcheon cover plates at all pipe penetrations of finished wall surfaces.
- Vents through roof shall be min. 3" diameter at penetration unless otherwise indicated. Provide all required flashing to make vent penetration waterproof.
- Space floor cleanouts no more than 100ft. Provide floor cleanouts in horizontal drains where the direction change by more than 45 degrees. Cleanout size shall be the same than the piping served.
- Provide a trap guard for all floor drains.
- Mount wall cleanouts at all wall mounted plumbing fixture drains.

GENERAL PLUMBING PROTECTION NOTES

- Install backflow preventers in each water supply to mechanical equipment and systems and to other equipment and systems and to other equipment and water systems that may be sources of contamination. Comply with authorities having jurisdiction.
- Locate backflow preventers in same room as connected equipment or system.
- Install drain for backflow preventers with atmospheric-vent drain connection with air-gap fitting, fixed air-gap fitting, or equivalent positive pipe separation of at least two pipe diameters in drain piping and pipe-to-floor drain. Locate air-gap device attached to or under backflow preventer. Simple air breaks are unacceptable for this application.
- Do not install bypass piping around backflow preventers.
- Provide water pressure regulator when required by authority having jurisdiction and in compliance with the International Plumbing Code of 2015.

GENERAL PIPING NOTES

- Piping material shall be as follows (Unless otherwise indicated in specification):
 - Underground water service: PEX-AL-HDPE with oxygen barrier.
 - Above ground hot and cold water piping: Copper type L in exposed areas or Standard PEX in concealed areas.
 - Drain waste and vent piping: ABS DR22.
 - Gas piping: to ASTM A106 schedule 40.
- Domestic hot, cold water lines and hydronic heating lines shall have 1" thermal insulation complete with vapor barrier, joints to be taped throughout facility. Hangers to have guides to allow for complete pipe insulation.
- Contractor is responsible for routing water piping around zones that would be prone to freezing. The contractor will be responsible for any repairs and corrections to water lines not appropriately routed around freeze prone zones.
- Valves on water lines shall be bronze ball valves. Do not use gate or globe valves. Valve size shall be the same than the inlet pipe size.
- Install water hammer arrestors as indicated by code and where shown on plans. Concealed location arrestors are to be rated.
- All hot and cold domestic water lines to fixtures shall be minimum 1/2".
- Unless a hot water reticulation system has been called for in the contract documents, domestic hot water lines shall be equipped with a heat-trace heating system in compliance with Table C404.5.1 of the current state approved International Energy Conservation Code.
- Plumbing piping shall not be installed above electrical panels. Provide required clearances per "N.E.C." coordinate work with electrical contractor.
- Insulate all above grade domestic hot water lines minimum 1/2" mineral wool and provide canvas jacket.
- Caulk all pipe penetrations through fire rated walls. All caulking on building penetrations shall be a 1-component non-sag urethane sealant.
- Provide intumescent pipe donuts at all penetrations of combustible piping form main floor ceiling space and main floor fire separations.

PLUMBING ALTERNATE NOTE

- Alternate mechanical equipment is acceptable. Alternates must be equal or better in performance, durability, and warranty.

PLUMBING IN RETURN AIR PLENUMS

- Treat all ceiling spaces as return air plenums.
- All materials used in return air plenums must have flame-spread index of 25 or less, and smoke-developed index of 50 or less when tested in accordance with ASTM E84 or UL 723 (be plenum rated).

GAS APPLIANCES AND REGULATIONS NOTES

- All gas piping shall comply with the international Fuel Gas Code of 2015.
- Provide step-down regulators at all appliances and size as per International Fuel Gas Code of 2015.
- Vent natural gas regulators to outdoors. Terminate min. 3 ft from building openings and 10ft from mechanical intakes.

SEISMIC CONTROL NOTES

- Install tight to structure.
- Seismic control measures not to jeopardize noise and vibration isolation systems. Provide 1/4" to 3/8" clearance during normal operation of equipment and systems between seismic restraint and equipment.
- Incorporate seismic restraints into vibration isolation system to resist complete isolator unloading.

- G = GAS METER
- C = WALL CLEANOUT
- C = BALL VALVE
- T = PLUG VALVE
- P = PRESSURE REGULATOR
- DCW = DOMESTIC COLD WATER
- DHW = DOMESTIC HOT WATER
- DHWR = DOMESTIC HOT WATER RECIRCULATION
- SAN = SANITARY
- V = VENT
- S = STORM
- SH = NON-POTTABLE SHOP COLD WATER
- AIR = AIR LINE
- GR-SAN = GREASE SANITARY LINE

PLUMBING LEGEND

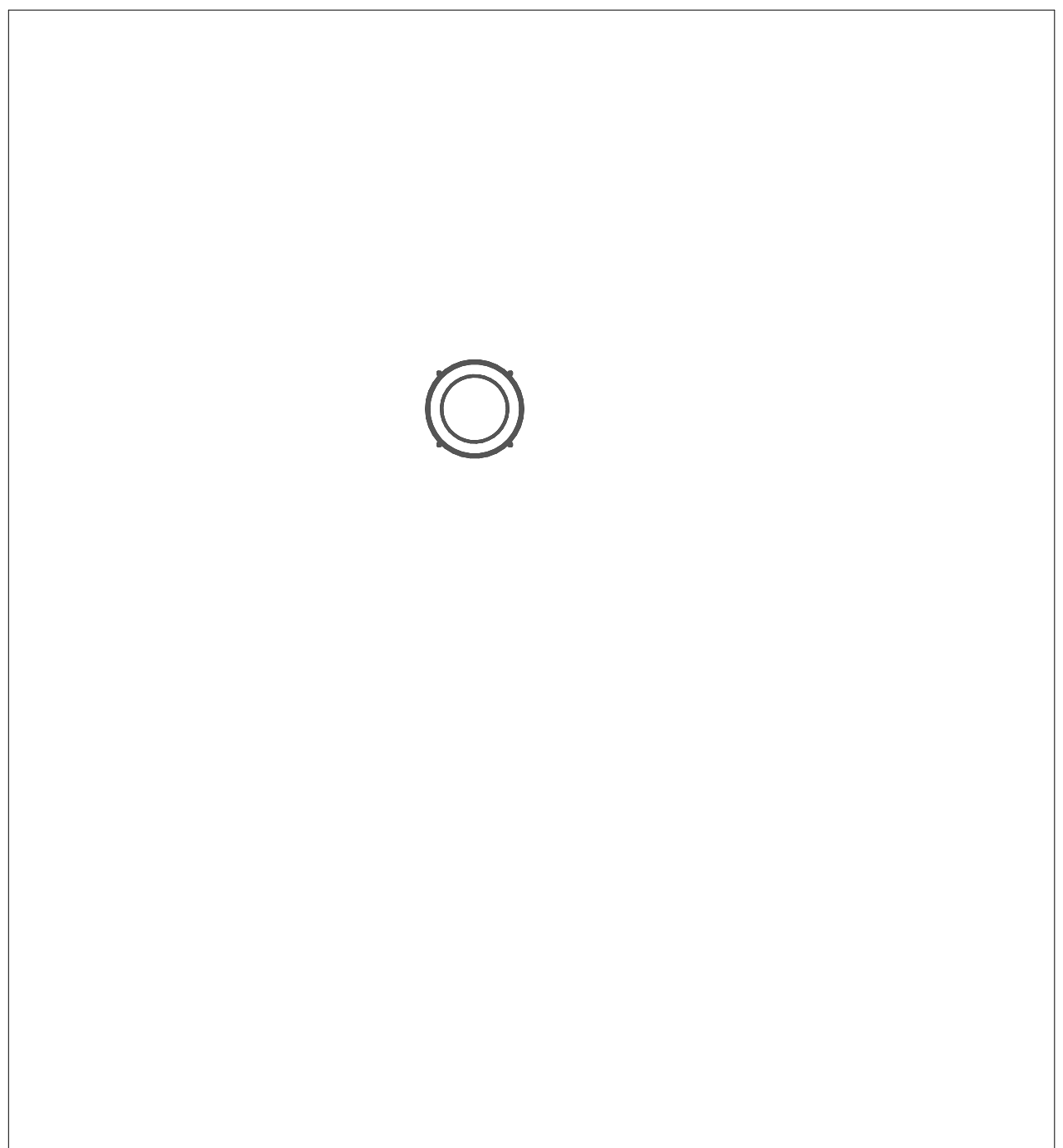
PLUMBING SMACNA SEISMIC HAZARD LEVEL

COMPONENT	SHL VALUE
Plumbing	C

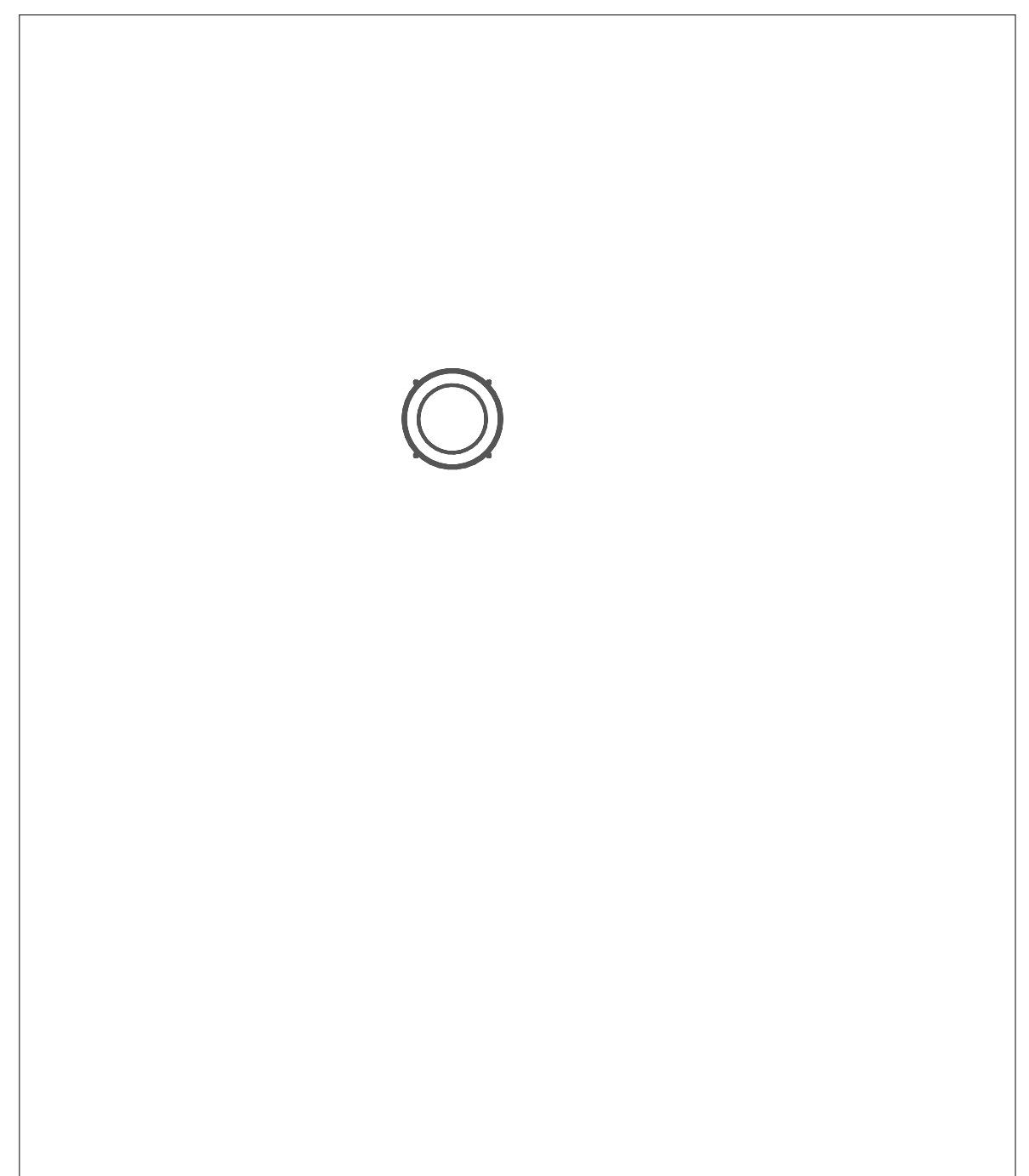
Bac-T Test Note:
Bac-T Test must be performed by contractor upon completion of plumbing system modifications.

SHEET LIST - PLUMBING

Sheet Number	Sheet Name	Current Issue	Current Revision Description
PE100	PLUMBING OVERVIEW		
PE101	PLUMBING DEMOLITION		
PE102	MAIN FLOOR PLUMBING		
PE103	PLUMBING ISOMETRICS		

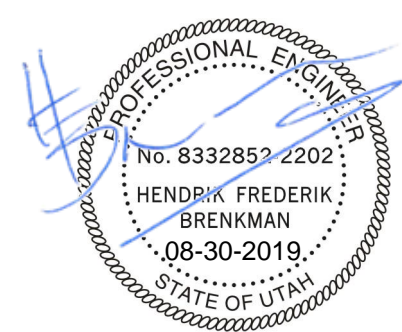
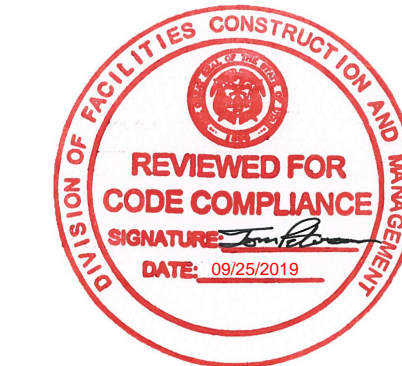


① 2 - ROOF PLUMBING - AG RESTROOMS
1/4" = 1'-0"



② 3 - ROOF PLUMBING - WEST WING RESTROOMS
1/4" = 1'-0"

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BATHROOM UPGRADES
CLEARFIELD HUMAN
SERVICES BUILDING

1350 E 1450 S CLEARFIELD, UT 84015

DFCM PROJECT #	2004543
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DATE:	7/22/19
DRAWN BY:	ZR
CHECKED BY:	MA
APPROVED BY:	MA

REVISIONS	
DATE	DESCRIPTION

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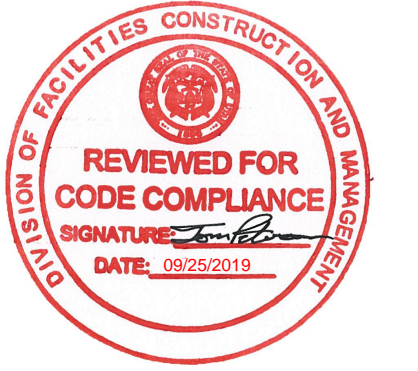
KEYNOTES

ID	DESCRIPTION
1	REMOVE PLUMBING FIXTURE AND PREPARE FOR REINSTALLATION IN NEW LOCATION.

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#	DATE	DESCRIPTION

PLUMBING DEMOLITION
PE101

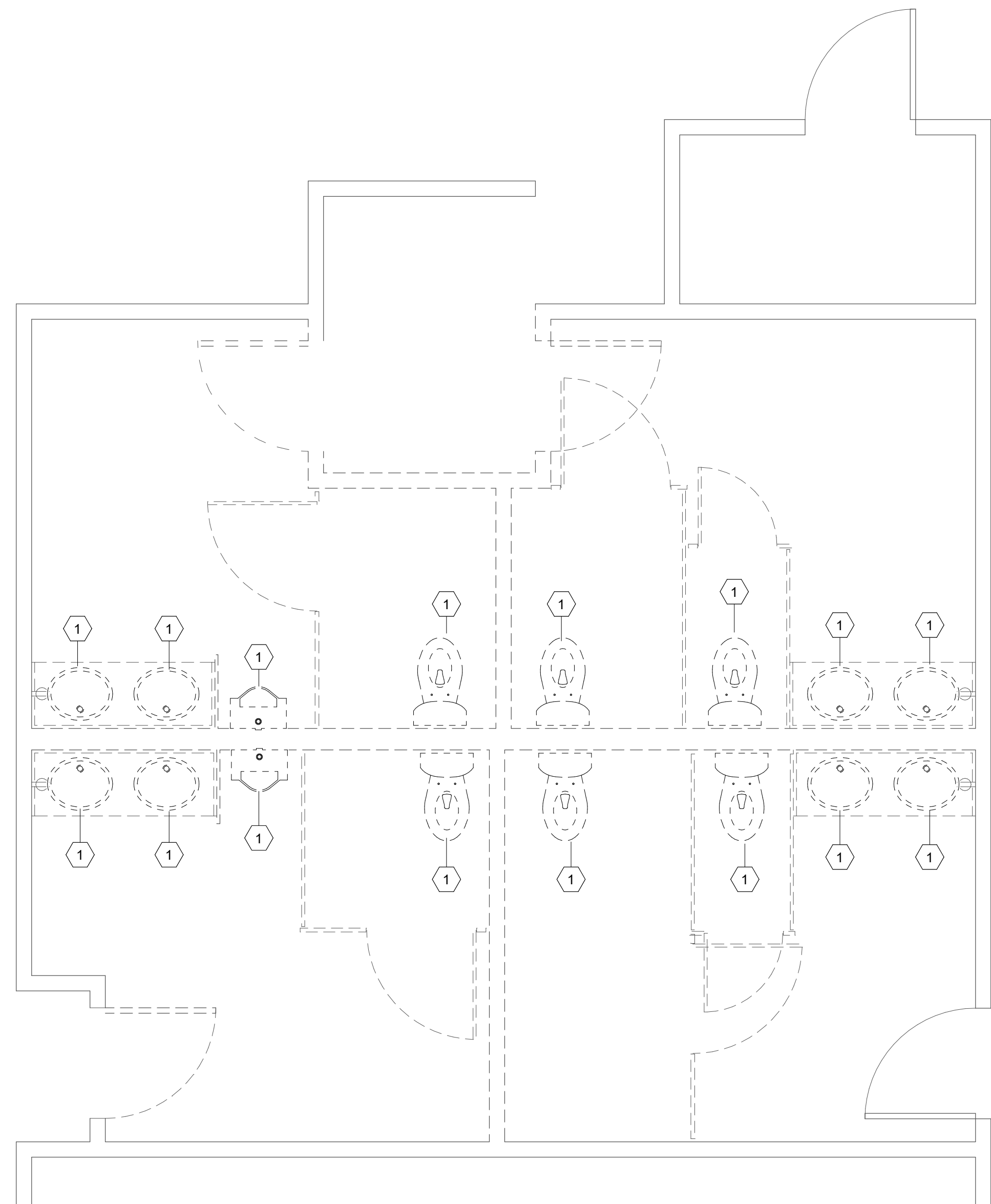
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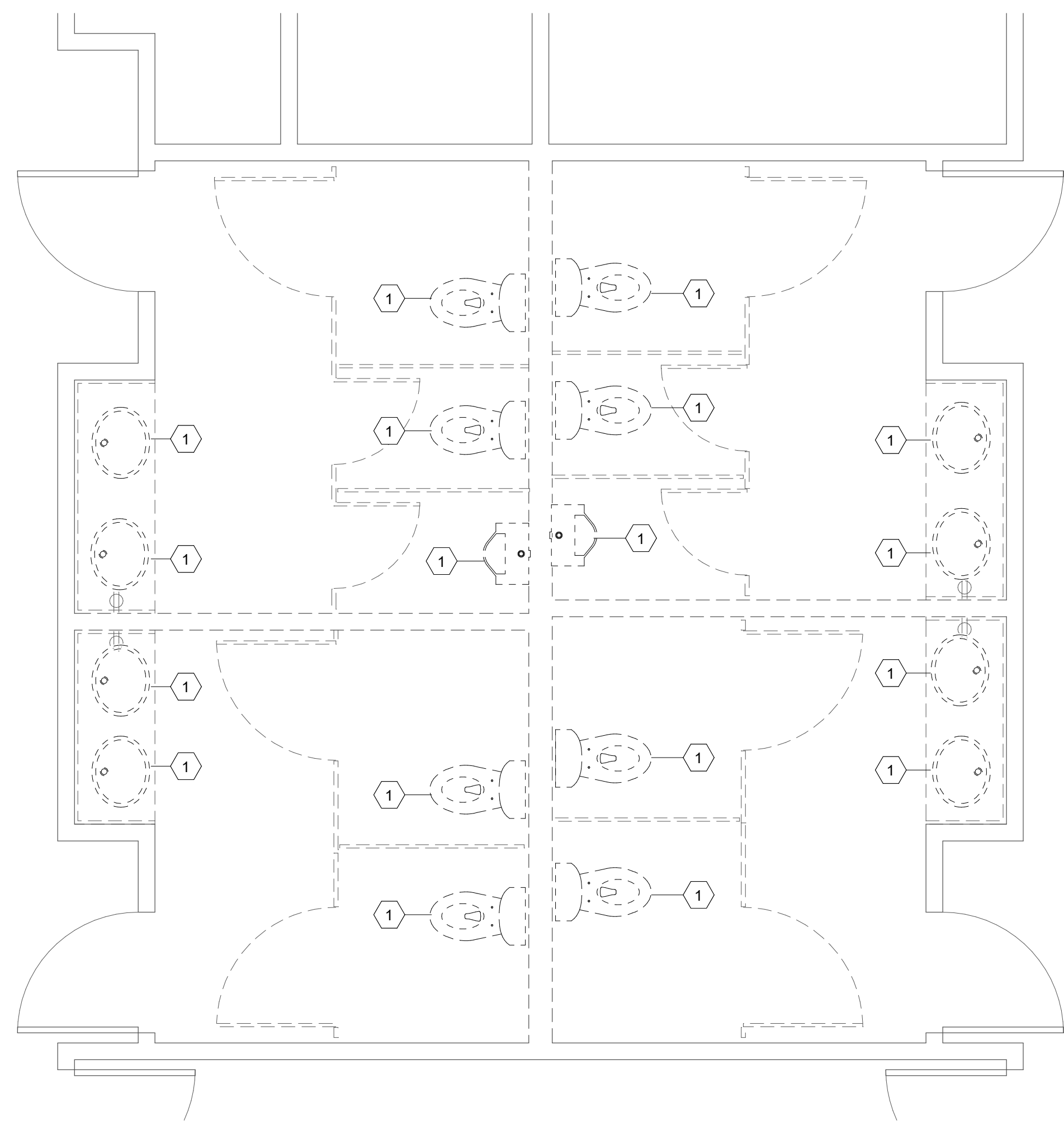
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B

A



① 1 - MAIN FLOOR PLUMBING DEMOLITION - AG WING
3/8" = 1'-0"



② 1 - MAIN FLOOR PLUMBING DEMOLITION - WEST WING
3/8" = 1'-0"

1

2

3

4

5

KEYNOTES

- | ID | DESCRIPTION |
|----|---|
| 1 | CONNECT SAN LINE INTO DRINKING FOUNTAIN. SEE ARCHITECTURAL PLANS FOR DRINKING FOUNTAIN SPECIFICATIONS. |
| 2 | TIE NEW SANITARY LINE INTO EXISTING SEWER. CONTRACTOR TO VERIFY LOCATION, SIZE, AND DEPTH OF EXISTING SEWER. IF EXISTING SEWER IS LESS THAN 4" CONTACT ENGINEER. DEPTH MUST ALLOW FOR MIN SLOPE AS INDICATED. CONTACT ENGINEER IF DEPTH OF EXISTING LINE IS NOT SUITABLE. |
| 3 | CONNECT DCW LINE INTO DRINKING FOUNTAIN. SEE ARCHITECTURAL PLANS FOR DRINKING FOUNTAIN SPECIFICATIONS. |
| 4 | INSTALL EXISTING PLUMBING FIXTURE AT NEW LOCATION. |

PLUMBING ACCESSORY SCHEDULE					
Mark	Manufacturer	Model	Description	Sanitary Connection	DCW Connection
FD-1	Watts	FD-100-A	Epoxy coated cast iron floor drain with anchor flange, reversable clamping collar with primary and secondary weepholes, adjustable round heel proof nickel bronze strainer, and no hub (standard) outlet.	3"	

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REVISIONS		
#	DATE	DESCRIPTION

MAIN FLOOR PLUMBING
PE102

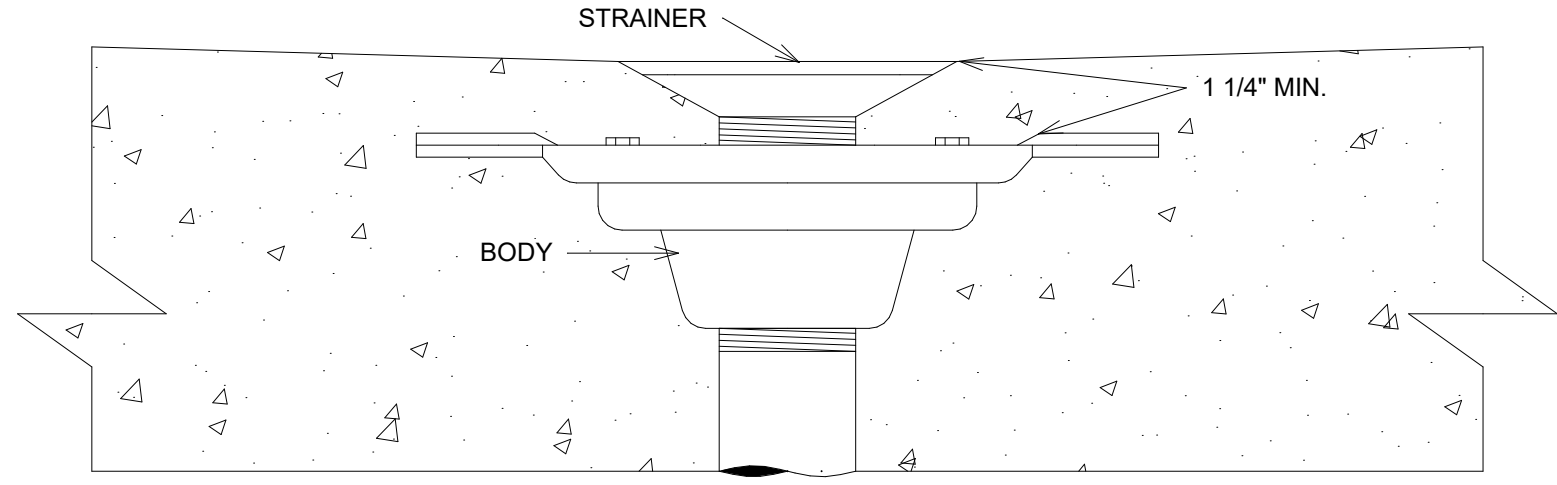
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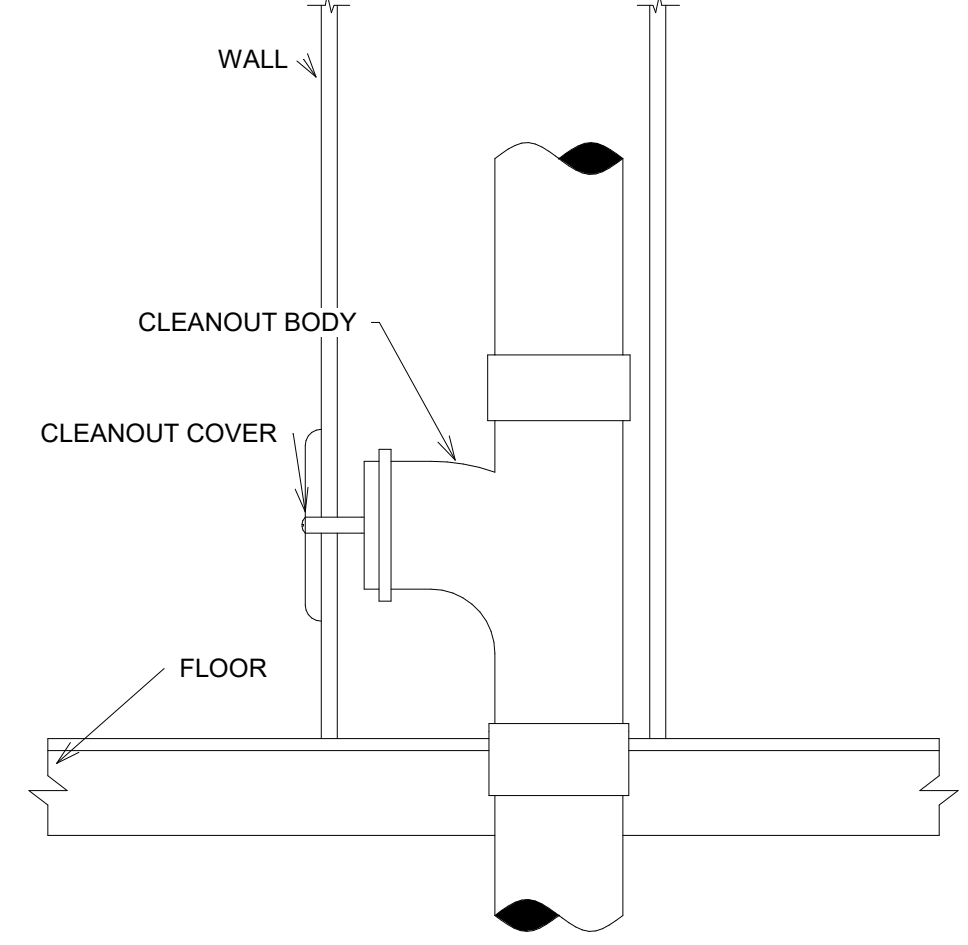
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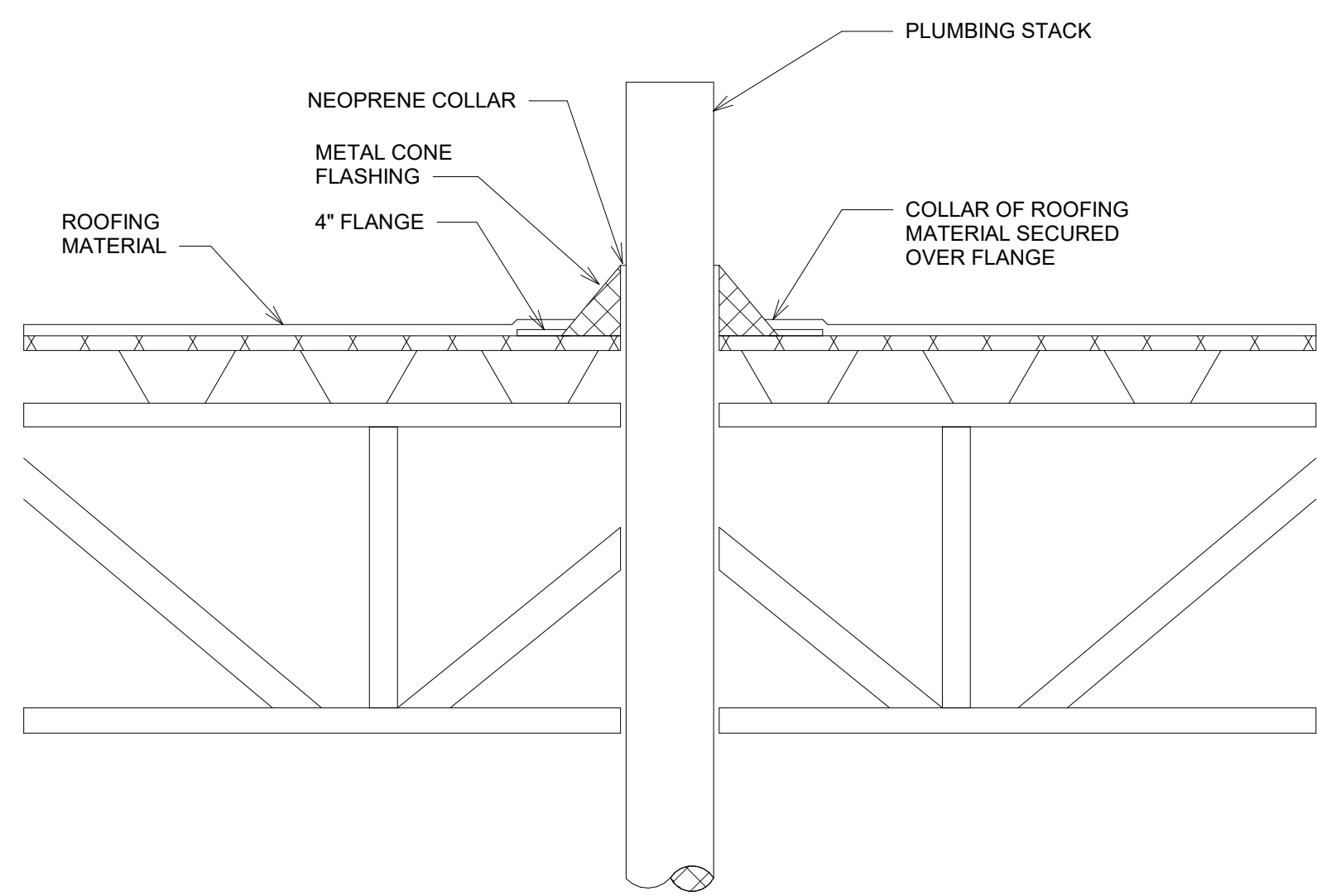
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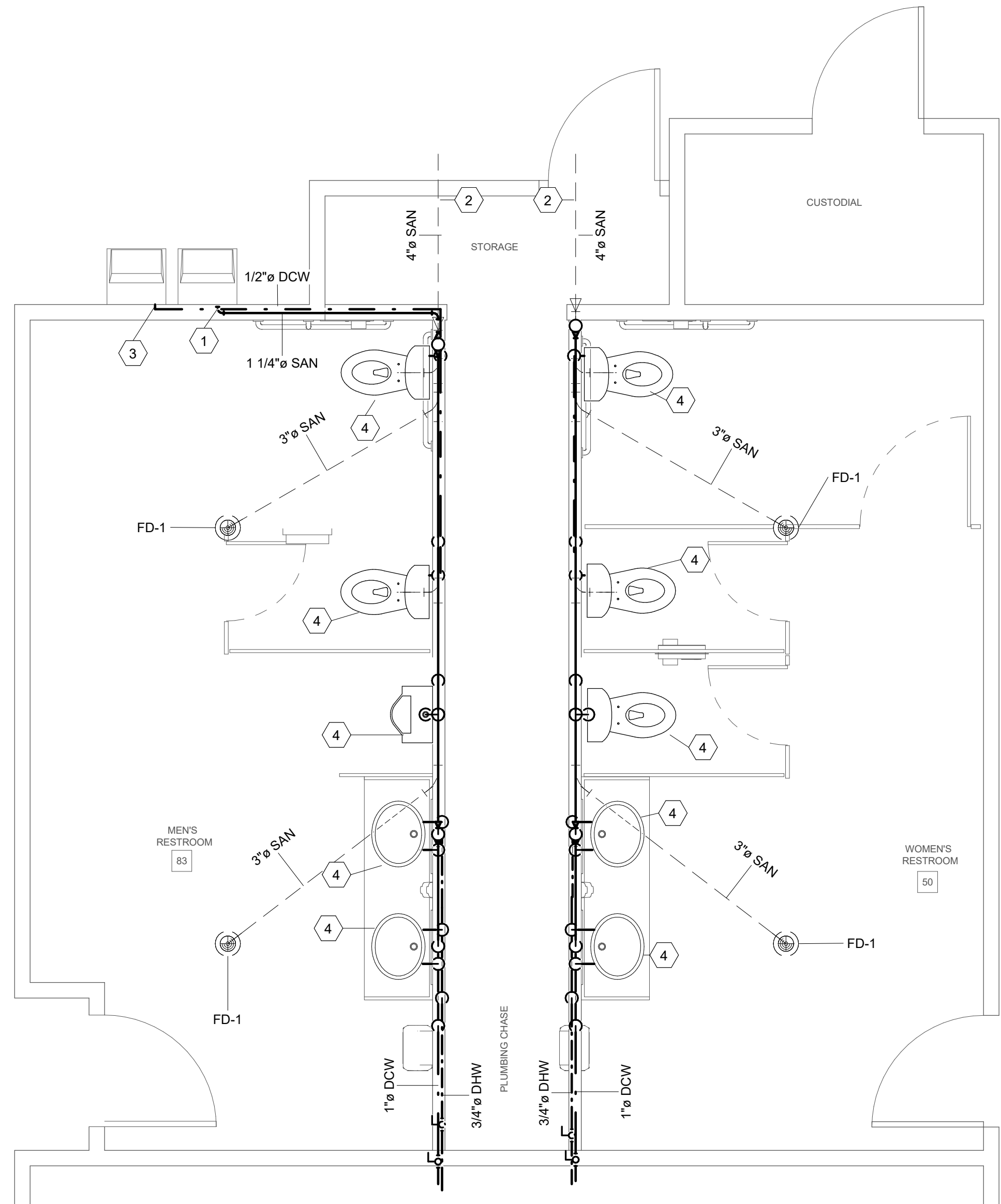
2 Sanitary - Floor Drain
N.T.S.



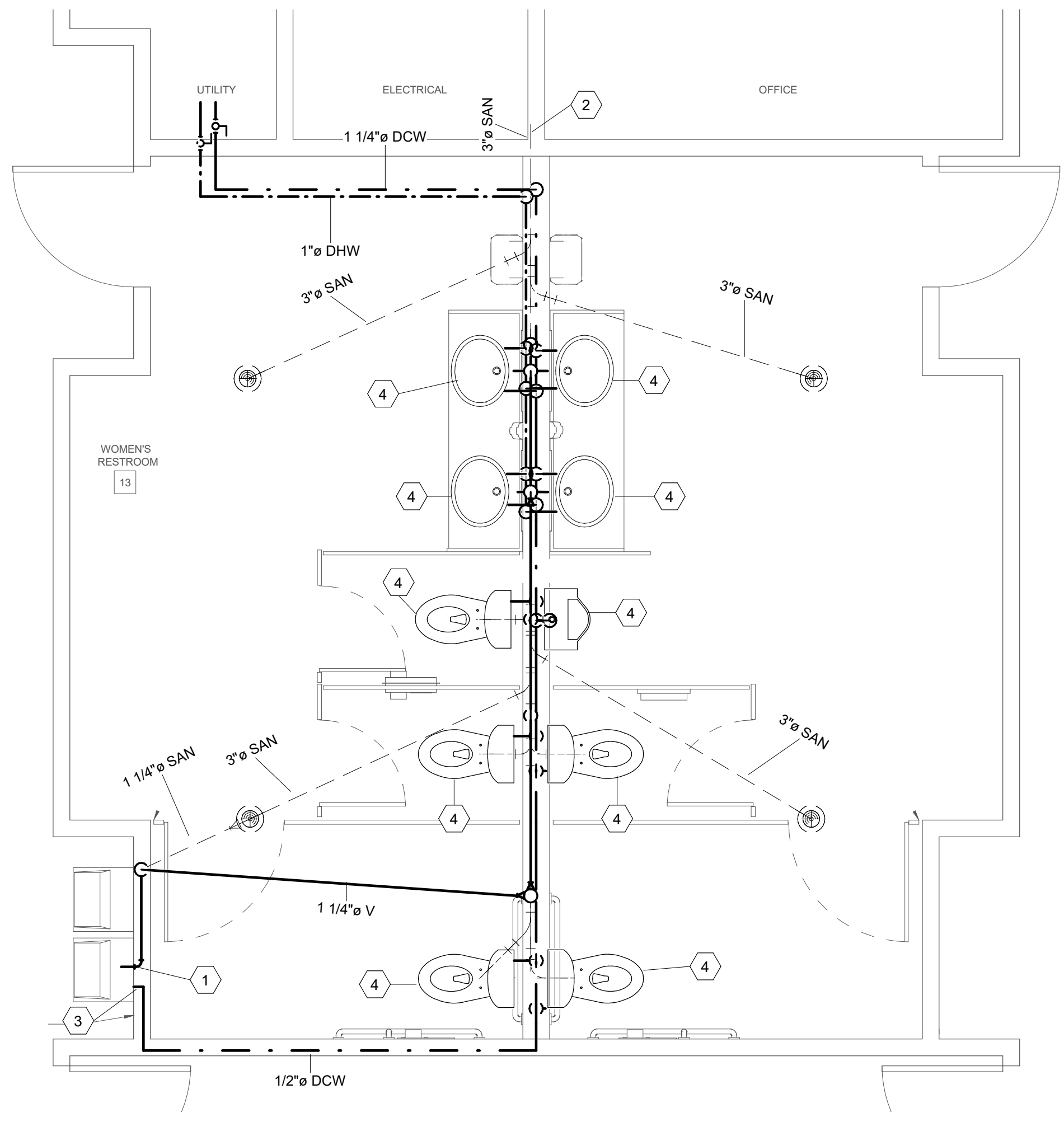
3 Sanitary - Wall Cleanout
N.T.S.



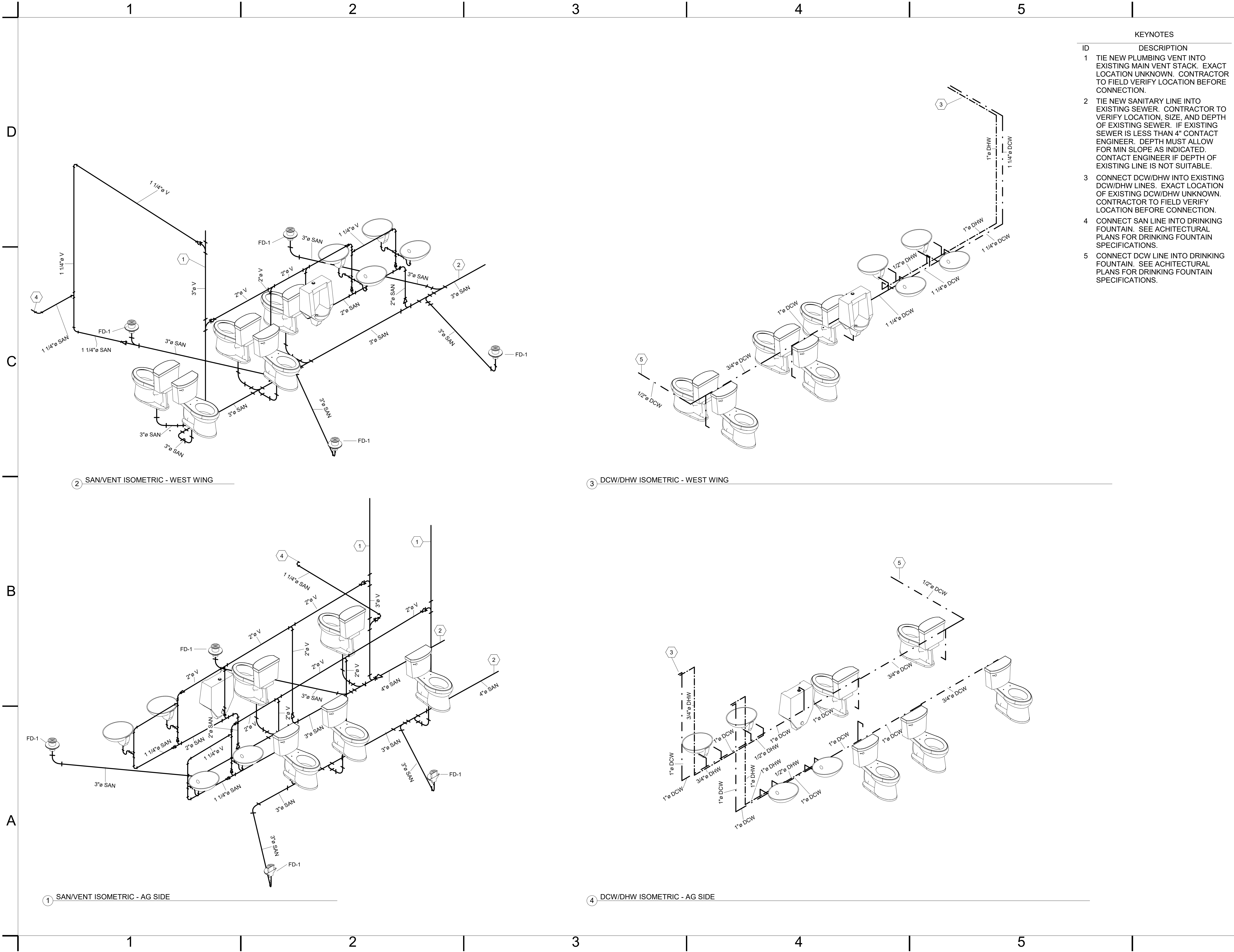
4 Sanitary - Vent Detail
N.T.S.



1 - MAIN FLOOR PLUMBING CONSTRUCTION - AG WING
3/8" = 1'-0"



5 - MAIN FLOOR PLUMBING CONSTRUCTION - WEST WING
3/8" = 1'-0"



- KEYNOTES
- | ID | DESCRIPTION |
|----|---|
| 1 | TIE NEW PLUMBING VENT INTO EXISTING MAIN VENT STACK. EXACT LOCATION UNKNOWN. CONTRACTOR TO FIELD VERIFY LOCATION BEFORE CONNECTION. |
| 2 | TIE NEW SANITARY LINE INTO EXISTING SEWER. CONTRACTOR TO VERIFY LOCATION, SIZE, AND DEPTH OF EXISTING SEWER. IF EXISTING SEWER IS LESS THAN 4" CONTACT ENGINEER. DEPTH MUST ALLOW FOR MIN SLOPE AS INDICATED. CONTACT ENGINEER IF DEPTH OF EXISTING LINE IS NOT SUITABLE. |
| 3 | CONNECT DCW/DHW INTO EXISTING DCW/DHW LINES. EXACT LOCATION OF EXISTING DCW/DHW UNKNOWN. CONTRACTOR TO FIELD VERIFY LOCATION BEFORE CONNECTION. |
| 4 | CONNECT SAN LINE INTO DRINKING FOUNTAIN. SEE ARCHITECTURAL PLANS FOR DRINKING FOUNTAIN SPECIFICATIONS. |
| 5 | CONNECT DCW LINE INTO DRINKING FOUNTAIN. SEE ARCHITECTURAL PLANS FOR DRINKING FOUNTAIN SPECIFICATIONS. |

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DFCM APPROVAL



**BATHROOM UPGRADES
CLEARFIELD HUMAN
SERVICES BUILDING**

1350 E 1450 S CLEARFIELD, UT 84015

DFCM PROJECT #	2004543
CARTWRIGHT PROJECT #	0
DATE:	7/22/19
DRAWN BY:	ZR
CHECKED BY:	MA
APPROVED BY:	MA

REVISIONS	
DATE	DESCRIPTION

PLUMBING ISOMETRICS
PE103

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