

PROJECT:

CEDAR CITY ARMORY - RESTROOM REMODEL

PROJECT ADDRESS - 106 N AIRPORT ROAD CEDAR CITY, UTAH 84721-8411

DFCM PROJECT NO. 09160480



State of Utah - Department of Administrative Services

DIVISION OF FACILITIES CONSTRUCTION AND MANAGEMENT

4110 State Office Building/Salt Lake City, Utah 84114/538-3018

CODE ANALYSIS

APPLICABLE CODES

Code	Year	Code	Year
International Building Code	2006	National Electrical Code	2008
International Mechanical Code	2006	Uniform Code for Building Conservation	1991 UCBC
International Plumbing Code	2006	ADA Accessibility Guidelines	ADAAG + UFAS
International Fire Code	2006		
International Energy Conservation Code	2006		

- A. Occupancy and Group: A-3 F-1
- Change in Use: Yes No x Mixed Occupancy: Yes No
- Special Use and Occupancy (e.g. High Rise, Covered Mall):
- B. Seismic Design Category: D Design Wind Speed: 90 mph

C. Type of Construction (circle one):

I II III IV V VI

A B A B A B HT A B

D. Fire Resistance Rating Requirements for the Exterior Walls based on the fire separation distance (in hours):

North: South: East: West:

E. Mixed Occupancies: Nonseparated Uses:

F. Sprinklers:

Required: Provided: Type of Sprinkler System:

G. Number of Stories: Building Height:

H. Actual Area per Floor (square feet):

I. Tabular Area:

J. Area Modifications:

$$A_a = A_t + \left[\frac{A_t I_r}{100} \right] + \left[\frac{A_t I_s}{100} \right] \quad I_r = 100 \left[\frac{F}{P} - 0.25 \right] \frac{W}{30}$$

b) Sum of the Ratio Calculations for Mixed Occupancies:

$$\frac{\text{Actual Area}}{\text{Allowable Area}} \leq 1$$

- c) Total Allowable Area for:
- One Story:
 - Two Story: A_a(2)
 - Three Story: A_a(3)
- d) Unlimited Area Building: Yes No Code Section:

K. Fire Resistance Rating Requirements for Building Elements (hours).

Element	Hours	Assembly Listing	Element	Hours	Assembly Listing
Exterior Bearing Walls			Floors - Ceiling Floors		
Interior Bearing Walls			Roofs - Ceiling Roofs		
Exterior Non-Bearing Walls			Exterior Doors and Windows		
Structural Frame			Shaft Enclosures		
Partitions - Permanent			Fire Walls		
Fire Barriers			Fire Partitions		
			Smoke Partitions		

L. Design Occupant Load:

Exit Width Required: Exit Width Provided:

- M. Minimum Number of Required Plumbing Facilities:
- Water Closets - Required (m) (f) Provided (m) (f)
 - Lavatories - Required (m) (f) Provided (m) (f)
 - Bath Tubs or Showers:
 - Drinking Fountains: Service Sinks:

- FOOTNOTES:
- In case of conflict with the U.S. Department of Justice Federal Registers Parts I through V - ADA Guidelines and specific reference to the International Building Code Accessibility Chapters, the more restrictive requirement shall govern.
 - Additional Code Information shall be provided at the discretion of the Building Official for Complex Buildings. Including, but not limited to:
 - High Rise Requirements.
 - Atriums.
 - Performance Based Criteria.
 - Means or Egress Analysis.
 - Fire Assembly Locator Sheet.
 - Exterior and Interior Accessibility Route.
 - Fire Stopping, Including Tested Design Number.

INDEX TO DRAWINGS

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A-102	MENS FLOOR PLANS
A-103	WOMENS REFLECTED CEILING PLAN
A-104	MENS REFLECTED CEILING PLAN
A-401	WOMENS INTERIOR ELEVATIONS
A-402	MENS INTERIOR ELEVATIONS
A-403	MENS SHOWER INTERIOR ELEVATIONS
A-501	ARCHITECTURAL DETAILS
M-001	GENERAL NOTES & SCHEDULES
M-002	SPECIFICATIONS
M-003	SPECIFICATIONS
M-201	MENS PLUMBING & MECH FLOOR PLAN
M-202	WOMENS PLUMBING & MECH FLOOR PLAN
M-601	DETAILS
E-101	ELECTRICAL SYMBOLS & NOTES
E-201	WOMENS ELECTRICAL PLANS
E-202	MENS ELECTRICAL PLANS



6465 South 3000 East
Suite 205
Salt Lake City, UT 84121
Ph: 801.733-2500
Fax: 801.733-2501
www.jsa-llc.com

CREATED BY: JSA ARCH.

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BUILDING NAME:

CEDAR CITY ARMORY

UTAH NATIONAL GUARD

PROJECT TITLE:

RESTROOM REMODEL

PROJECT TEAM

ARCHITECT	INTERIOR DESIGNER	CIVIL ENGINEER	STRUCTURAL ENGINEER	MECHANICAL ENGINEER	ELECTRICAL ENGINEER	LANDSCAPE ARCHITECT
JSA ARCHITECTS, LLC 6465 SOUTH 3000 EAST SUITE 205 SALT LAKE CITY, UTAH 84121 PHONE: (801) 733-2500	JSA/OWNER	N/A	N/A	PVE INC 1040 N 2200 W SALT LAKE CITY, UTAH 84116 801-359-3158	PVE INC 1040 N 2200 W SALT LAKE CITY, UTAH 84116 801-359-3158	N/A

APPROVALS

PRIME AGENCY	DATE
DFCM	
APPROVAL DOES NOT RELIEVE A/E OF DESIGN LIABILITY	
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DFCM	
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ABBREVIATIONS

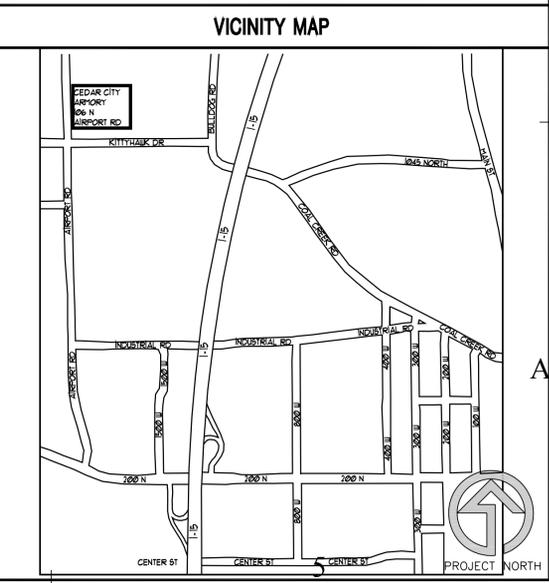
NUMBER	FOUNDATION	N.I.C.	NOT IN CONTRACT
AT	FOUNDATION	N.T.S.	NOT TO SCALE
ANG	FIRE EXTINGUISHER	O.C.	ON CENTER
ANCHOR BOLT	FINISH FLOOR	O.D.	OUTSIDE DIAMETER
ABV.	FIN.	O.F.	OUTSIDE FACE
ADJ.	FLR.	PERP.	PERPENDICULAR
AFF.	FT.	PL.	PLATE
ALUMN.	FTG.	PLT.	PAINTED
ALUMN. DEFORMED BAR ANCHOR	G.A.	QTY.	QUANTITY
BD.	GALV.	R.D.	ROUGH DRAIN
BLDG.	GPM	RAD.	RADIUS
B.M.	GND.	REIN.	REINFORCED
B.D.	GOVT.	REQD.	REQUIRED
BOTTOM OF	G.Y.F. BD.	R.F.	ROUGH OPENING
BOT.	H.C.	R.O.	ROUGH OPENING
B.P.	HARDWARE	SCHED.	SCHEDULE
BRG.	H.M.	SHT.	SHEET
B.TUN.	HORIZ.	SIM.	SIMILAR
C.J.	H.S.A.	SPEC.	SPECIFICATION
CLG.	HT.	STC	SOUND TRANSMISSION
CLR.	HVAC	STD.	STANDARD
CMU	COL.	STIFF.	STIFF
CONC.	CONC.	STRUC.	STRUCTURAL
CONT.	CONT.	SUSP.	SUSPENDED
CONSTR.	C.T.J.	INFO.	INFORMATION
CONTRACT JOINT	DBL.	INSUL.	INSULATION
CONTRACT JOINT	DET./DTL.	LAV.	LAVATORY
CONTRACT JOINT	DIA.	LT.	LIGHT
CONTRACT JOINT	DUGS.	LT. WT.	LIGHT WEIGHT
CONTRACT JOINT	EF.	MAINT.	MAINTENANCE
CONTRACT JOINT	E.J.	MANUF.	MANUFACTURE
CONTRACT JOINT	EL/ELEV.	MAX.	MAXIMUM
CONTRACT JOINT	EQ.	MAT.	MATERIAL
CONTRACT JOINT	EW.	M.C.J.	MASONRY CONTROL JOINT
CONTRACT JOINT	EXIST.	MECH.	MECHANICAL
CONTRACT JOINT	EXP.	MIN.	MINIMUM
CONTRACT JOINT	EXT.	MISC.	MISCELLANEOUS
CONTRACT JOINT	EW/C.	M.O.	MASONRY OPENING
CONTRACT JOINT	F.D.	M.P.	METAL

MATERIALS / LEGEND

	CONCRETE MASONRY UNIT
	BRICK VENEER
	STONE VENEER
	CONCRETE
	GYPSUM BOARD OR GROUT MORTAR
	BATT INSULATION
	RIGID INSULATION
	PLYWOOD
	ROUGH WOOD-CONTINUOUS
	ROUGH WOOD-BLOCKING
	WOOD TRIM
	STEEL
	GRAVEL
	EARTH
	TILE

GRAPHIC SYMBOLS

	FLOOR OR POINT ELEVATION
	CENTER LINE
	DIAMETER
	KEY NOTE
	WALL TYPE
	DOOR NUMBER
	WINDOW NUMBER
	FIXTURE TAG
	REVISION TAG
	DETAIL
	INTERIOR ELEVATION
	ENTRY
	ROOM NAME & NUMBER
	BUILDING OR WALL ELEVATION
	WALL SECTION
	BUILDING SECTION
	MASTER GRID LINES
	PARKING GRID LINES
	BUILDING GRID LINES



MARK	DATE	DESCRIPTION
1	08/17/09	DFCM

ISSUE TYPE: CONSTRUCTION SET

ISSUE DATE: AUG 17, 2009

DFCM PROJECT NO: 09160480
 CAD PROJECT NO: 09045
 CAD DWG FILE:
 DRAWN BY: MHF
 CHK'D BY: CDJ
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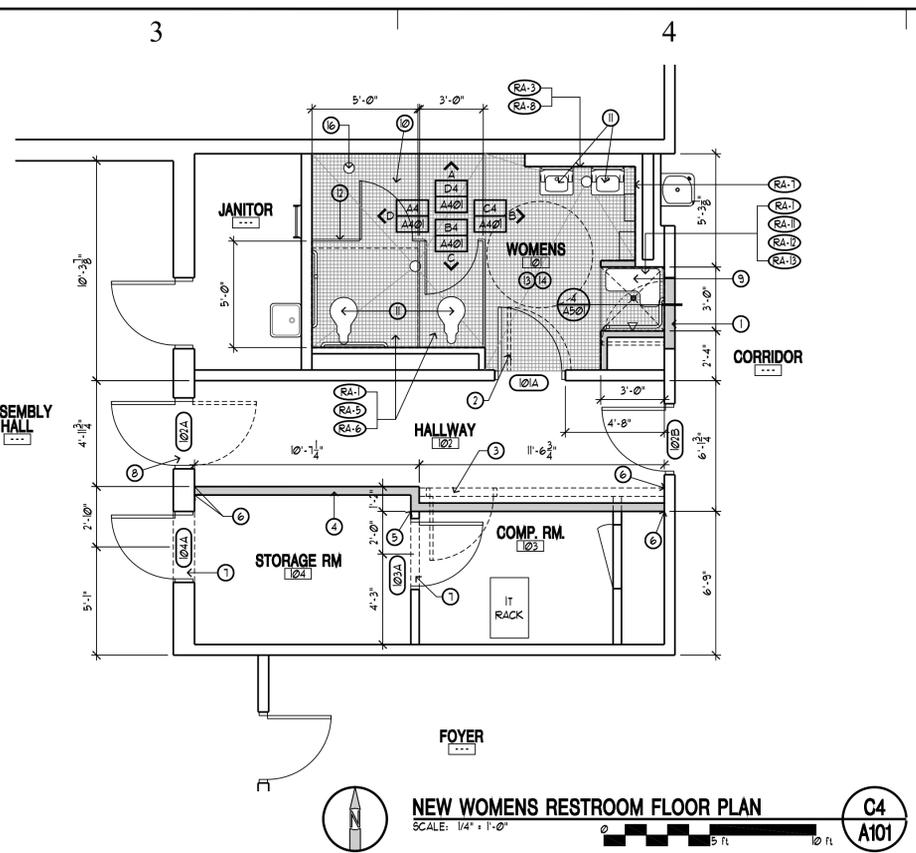
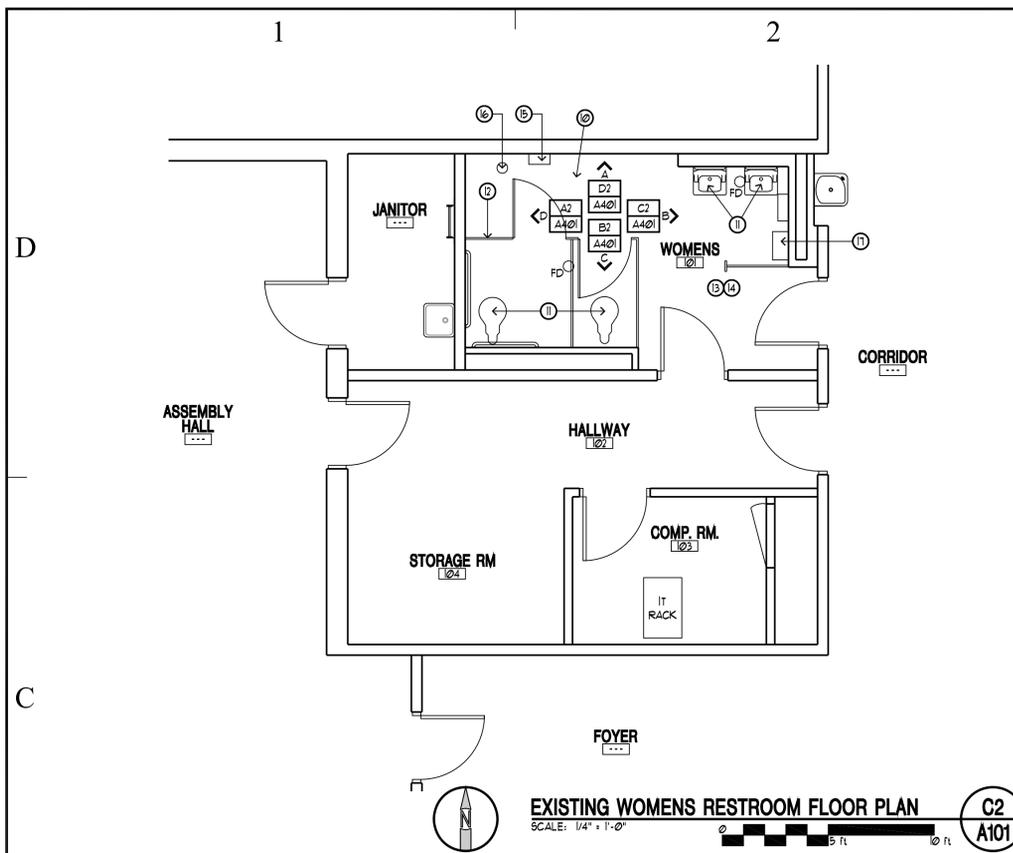
SHEET TITLE

COVER SHEET

SHEET NUMBER

G-001

SHEET 01 OF 18



FLOOR PLAN LEGEND

HATCH PATTERN	SECTION	DESCRIPTION
[Hatch Pattern]	000000	(E) EXISTING WALL TO REMAIN - SEE FINISH SCHEDULE AS WALL MAY BE REFINISHED
[Hatch Pattern]	000000	(N) NEW WALL OF 3/8" TYPE 'X' GYP. BOARD OVER 3-3/8" METAL STUDS @ 16" O.C. ANCHOR SOLIDLY TO STRUCTURE ABOVE WHERE TILE OCCURS OMIT GYP BOARD AND INSTALL CEMENTITIOUS BACKER BOARD AT TILE LOCATIONS ONLY.
[Hatch Pattern]	000000	NEW IN FLOOR TILE

- ### FLOOR PLAN KEY NOTES
- 000000 1 REMOVE EXISTING DOOR AND FRAME. INFILL WALL TO MATCH EXISTING WHICH IS 6"x8"x16" CMU AND PAINT TO MATCH ADJACENT SURFACES. APPLY NEW 1/4" RUBBER BASE TO MATCH COLOR OF EXISTING.
- 000000 2 RELOCATE EXISTING DOOR AND DOOR FRAME. INSTALL NEW HARDWARE - SEE DOOR SCHEDULE.
- 000000 3 REMOVE EXISTING PARTITION, DOOR AND FRAME.
- 000000 4 PROVIDE NEW PARTITION FROM FLOOR TO STRUCTURE ABOVE - SEE FLOOR PLAN LEGEND FOR DETAILS, PAINT AND RUBBER BASE EACH SIDE.
- 000000 5 REPAIR REMAINING WALL SURFACE TO MATCH ADJACENT SURFACES.
- 000000 6 WHERE NEW PARTITION ATTACHES TO EXISTING WALL, PROVIDE CAULK FULL LENGTH OF WALL, EACH SIDE, COLOR TO MATCH WALL.
- 001100 10 PROVIDE NEW HM. DOOR FRAME / HARDWARE AND MATCHING WOOD DOOR IN EXISTING PARTITION - SEE DOOR SCHEDULE.
- 001100 8 RE-PREP EXISTING HM. DOOR FRAME AS REQUIRED TO RECEIVE NEW MATCHING WOOD DOOR AND HARDWARE.
- 000000 9 PROVIDE NEW ADA SHOWER WITH FOLD-UP BENCH, GRAB BARS AND CURTAIN AS DETAILED. AT NEW SHOWER FLOOR, REMOVE EXISTING CONCRETE FLOOR AS REQUIRED AND REPLACE WITH NEW SLOPED WATER PROOF SHOWER FLAN - REINSTALL AS PER TCA B421-05, B415-05. DRAIN PER ADA MINIMUM SLOPE - SEE DETAIL 4/A501, SAW CUT FLOOR, TRENCH AND PATCH AS REQUIRED TO CONNECT NEW SHOWER DRAIN TO NEAREST EXISTING FLOOR DRAIN - SEE 5/A501.
- 000000 10 REMOVE EXISTING CERAMIC TILE FLOOR AND EXISTING MORTAR BED. REPLACE WITH NEW CERAMIC TILE AS SPECIFIED. SLOPE NEW MORTAR BED TO EXISTING, OR NEW DRAINS AS SHOWN IN THE NEW FLOOR PLAN. REINSTALL PER TCA F112-05.
- 000000 11 REMOVE EXISTING LAVATORIES, TOILETS, URINALS AND FITTINGS. REPLACE WITH NEW FIXTURES AND FITTINGS AS SCHEDULED. SEE DETAIL 6/A501 FOR REQUIRED SILE CLEARANCE AT ADA TOILETS. SEE 19/A501 FOR ADA REQUIREMENTS - PRIOR TO INSTALLING.
- 001103 12 REMOVE EXISTING TOILET PARTITIONS - SEE NEW FLOOR PLAN FOR NEW PARTITION LAYOUT.
- 000000 13 ALL EXISTING TILE, GYP. BOARD (BOTH WALL & CEILING), PLUMBING FIXTURES, ELECTRICAL FIXTURE, HVAC VENTS & GRILLS, RESTROOM ACCESSORIES, TOILET COMPARTMENTS TO BE REMOVED AND REPLACED WITH NEW WALLS TO RECEIVE NEW 3/8" TYPE 'X' GYP. BOARD. FOR CEILING - SEE A-103 & A-104 COMPLETE FOR A SMOOTH PAINTED FINISH. - SEE FINISH SCHEDULE AND KEY NOTE #1, 14.
- 000000 14 REMOVE EXISTING WAINSCOT TILE AND WALL BOARD AT NEW TILE LOCATIONS. INSTALL CEMENTITIOUS BACKER BOARD (CBB) IN-LIEU OF GYP. BOARD. SEE KEY NOTE #3. PROVIDE BLOCKING FOR RESTROOM ACCESSORIES PER DETAIL 7/A501. EXTENT OF CBB AND TILE IS SHOWN ON NEW ELEVATIONS ON A-101 - A-103.
- 000000 15 REMOVE ENTIRE CONCRETE FLOOR IN MEN'S SHOWER 103 TO INSTALL NEW PERIMETER TRENCH DRAIN SEE DETAIL 3/A501. PROVIDE NEW CONCRETE FLOOR AND CERAMIC TILE WITH ADEQUATE SLOPE TO NEW TRENCH DRAINS. REINSTALL AS PER TCA B421-05, B415-05.
- 000000 16 EXISTING FLOOR COVER PLATE TO REMAIN.
- 000000 17 EXISTING RESTROOM ACCESSORY TO BE REPLACED WITH NEW - SEE SCHEDULE.
- 000000 18 DASHED LINES INDICATE BOX OUT HUNG FROM CEILING TO REMAIN.

WOMEN'S ROOM DOOR SCHEDULE

MARK	DOOR				FRAME				FIRE RATING	HARDWARE	REMARKS				
	WIDTH	HEIGHT	THICKNESS	MATERIAL	TYPE	FINISH	HEAD	JAMB				SILL	MATERIAL	TYPE	FINISH
101A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	RELOCATED EXISTING DOOR & FRAME
102A	3'-0"	7'-0"	3/4"	WD	DI	CLEAR SEAL	-	-	-	-	EXSTG	FI	-	-	REPREP EXISTING FRAME FOR NEW DOOR
102B	-	-	-	-	-	-	-	-	-	-	-	-	-	-	EXISTING TO REMAIN AS-IS
103A	3'-0"	7'-0"	3/4"	WD	DI	CLEAR SEAL	-	-	-	-	HM	F2	PAINTED	-	FRAME AND DOOR TO MATCH EXISTING
104A	3'-0"	7'-0"	3/4"	WD	DI	CLEAR SEAL	-	-	-	-	HM	FI	PAINTED	-	FRAME AND DOOR TO MATCH EXISTING

ROOM FINISH SCHEDULE

RM #	ROOM NAME	HEIGHT AFF.	CEILING TYPE	WALLS				FLOOR & BASE FINISH		COUNTER TOP	REMARKS	
				NORTH	EAST	SOUTH	WEST	BASE	FLOOR			
101	WOMENS	8'-0"	C-1	UF-1, UT	UF-1, UT	FF-1	N/A	UT - SEE ELEV				
102	HALLWAY	8'-0"	C-1	UF-1	UF-1	UF-1	UF-1	UF-1	UF-1	FF-2	N/A	-
103	COMPUTER ROOM	8'-0"	C-1	UF-1	UF-1	UF-1	UF-1	UF-1	UF-1	FF-2	N/A	-
104	STORAGE ROOM	8'-0"	C-1	UF-1	UF-1	UF-1	UF-1	UF-1	UF-1	FF-2	N/A	-

CEILING FINISH SCHEDULE (C-)

MARK	MATERIAL	MANUFACTURER	MANUFACTURER ITEM	COLOR NAME	SHEEN	LOCATION	REMARKS
C-1	GYP. BD. - PAINTED	KUAL PAINT	AS SEL.	AS SEL.	SATIN - (2) COATS	SEE PLANS	SMOOTH TEXTURE, TYPE 4

WALL FINISH SCHEDULE (WF-, WT-)

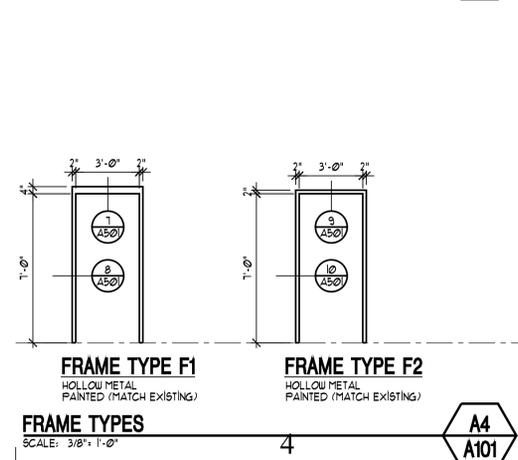
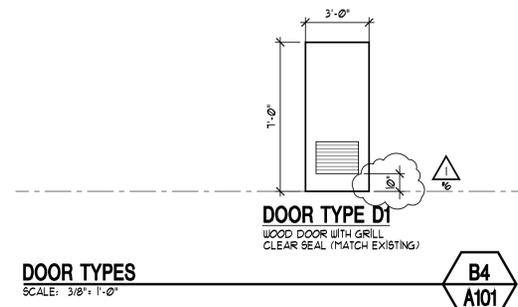
MARK	MATERIAL	MANUFACTURER	MFR. #	COLOR	SHEEN	COATS	GLAZE	DETAIL	SAMPLE REQUIRED	REMARKS
WF-1	PAINT	KUAL PAINT	AS SEL.	AS SEL.	SATIN	2	N/A	N/A	YES	SMOOTH TEXTURE, TYPE 3 OR 4
WT-1	CERAMIC TILE	DAL-TILE	AS SEL.	AS SEL.	N/A	N/A	N/A	-	YES	-
WT-2	CERAMIC TILE	DAL-TILE	AS SEL.	AS SEL.	N/A	N/A	N/A	-	YES	-
WT-3	CERAMIC TILE	DAL-TILE	AS SEL.	AS SEL.	N/A	N/A	N/A	-	YES	-
WT-4	CERAMIC TILE	DAL-TILE	AS SEL.	AS SEL.	N/A	N/A	N/A	-	YES	-
WF-5	RUBBER	JOANSONITE OR EQ	AS SEL.	AS SEL.	SATIN	2	N/A	N/A	YES	-

FLOOR FINISH SCHEDULE (FF-)

MARK	MATERIAL	MANUFACTURER	MFR. #	PATTERN/STYLE	COLOR	THICKNESS	DETAIL	SAMPLE REQUIRED	REMARKS
FF-1	MOSAIC TILE	DAL-TILE	AS SEL.	AS SEL.	AS SEL.	AS SEL.	-	YES	A MIX OF FT-1 THRU FT-4, SEE SPEC.
FF-2	CARPET TILE	MATCH EXIST.	AS SEL.	AS SEL.	AS SEL.	AS SEL.	-	YES	-

TOILET ROOM ACCESSORY SCHEDULE (COORDINATE WITH SPEC SECTION 10800)

MARK	ROOM	DESCRIPTION	MANUFACTURER	MODEL NO.	COLOR	INSTALL DETAIL	SAMPLE REQ'D	REMARKS
RA-1	WOMENS / MENS	GRAB BAR	BOBRICK	SERIES 6806	STAINLESS	-	YES	SEE 15 AND 19 / A-101 FOR MOUNTING REQUIREMENTS
RA-2	WOMENS / MENS	UTILITY SHELF	BOBRICK	B-795	STAINLESS	-	-	-
RA-3	WOMENS / MENS	MIRROR	BOBRICK	B-165	STAINLESS	-	YES	-
RA-4	WOMENS / MENS	TOILET TISSUE DISP	BOBRICK	B-16861	STAINLESS	-	YES	-
RA-5	WOMENS / MENS	SEAT COVER DISP	BOBRICK	B-721	STAINLESS	-	YES	-
RA-6	WOMENS	SANITARY WIPEN DISPOSAL	BOBRICK	B-754	STAINLESS	-	YES	SURFACE MOUNTED
RA-7	WOMENS / MENS	TOWEL DISP / WASTE	BOBRICK	B-3947	STAINLESS	-	YES	SURFACE MOUNTED
RA-8	WOMENS / MENS	SOAP DISPENSER	BOBRICK	B-2111	STAINLESS	-	YES	SEMI RECESSED
RA-9	WOMENS / MENS	SOAP DISH	BOBRICK	B-4390	STAINLESS	-	YES	SURFACE MOUNTED
RA-10	WOMENS	VENDOR	BOBRICK	B-282 25	STAINLESS	-	YES	RECESSED
RA-11	WOMENS / MENS	CURTAIN ROD / HOOKS	BOBRICK	B-6047	STAINLESS	-	YES	SURFACE MOUNTED
RA-12	WOMENS / MENS	SHOWER CURTAIN	BOBRICK	204-2	VINYL	-	YES	-
RA-13	WOMENS / MENS	SHOWER SEAT	BOBRICK	B-5181	PHENOLIC	-	YES	-
RA-14	WOMENS / MENS	UNDER LAVATORY GUARD	TRUEBRO LAVGUARD	2 EZ	VINYL	-	YES	SEE 19/A-101 FOR MOUNTING REQUIREMENTS
RA-15	WOMENS / MENS	TOWEL DISPENSER	BOBRICK	B-262	STAINLESS	-	YES	SEE 15/A-501 FOR MOUNTING HEIGHT



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 CAD PROJECT NO: 09045
 CAD DWG FILE:
 DRAWN BY: MHF
 CHK'D BY: CDJ
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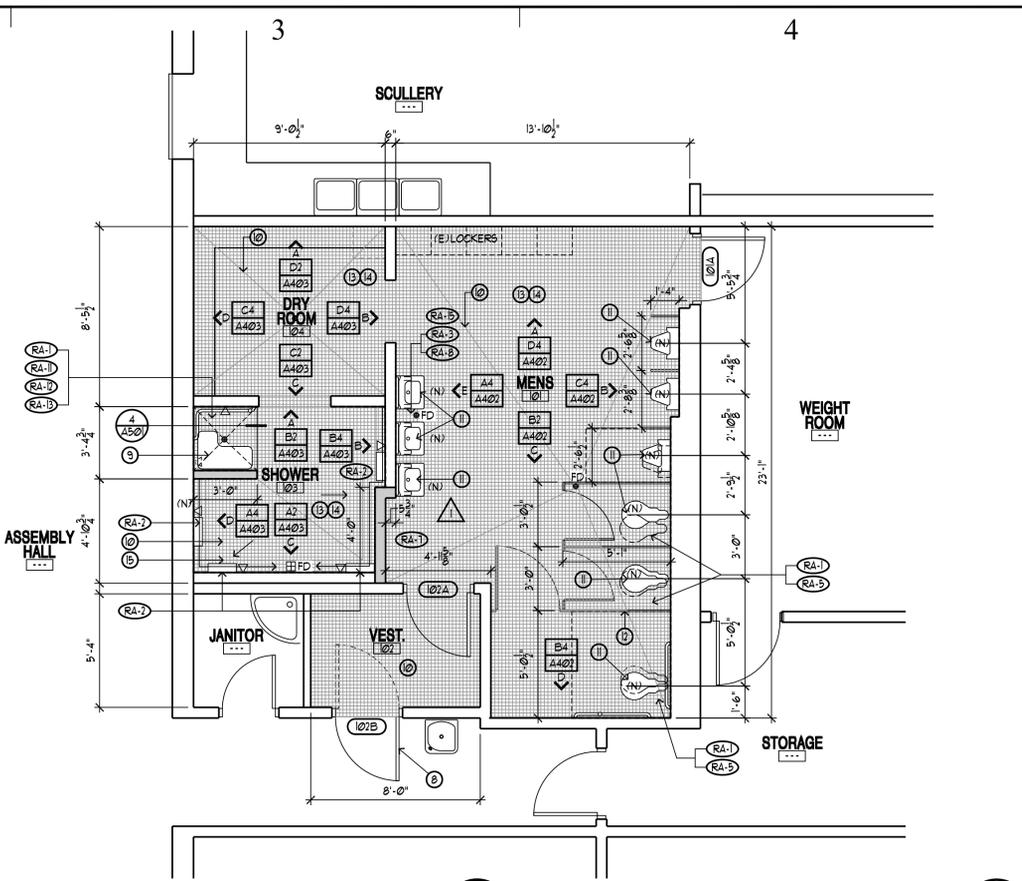
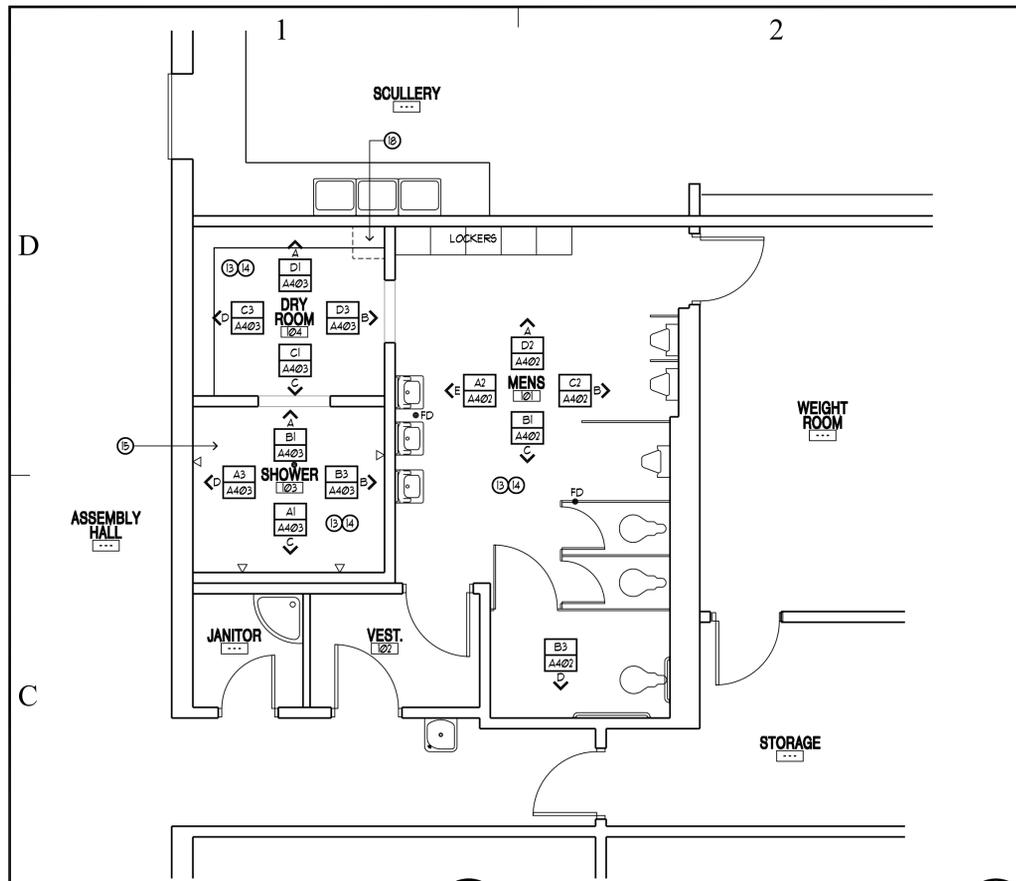
SHEET TITLE

WOMENS FLOOR PLANS

SHEET NUMBER

A-101

SHEET 02 OF 18



FLOOR PLAN LEGEND

HATCH PATTERN	SECTION	DESCRIPTION
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[Hatch Pattern]	000000	NEW 1M FLOOR TILE

- ### FLOOR PLAN KEY NOTES
- 000000 1 REMOVE EXISTING DOOR AND FRAME. INFILL WALL TO MATCH EXISTING WHICH IS 6"x8"x16" CMU AND PAINT TO MATCH ADJACENT SURFACES. APPLY NEW 4" RUBBER BASE TO MATCH COLOR OF EXISTING.
- 000000 2 RELOCATE EXISTING DOOR AND DOOR FRAME. INSTALL NEW HARDWARE - SEE DOOR SCHEDULE.
- 000000 3 REMOVE EXISTING PARTITION, DOOR AND FRAME.
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- 102103 12 REMOVE EXISTING TOILET PARTITIONS - SEE NEW FLOOR PLAN FOR NEW PARTITION LAYOUT.
- 000000 13 ALL EXISTING TILE, GYP. BOARD (BOTH WALL & CEILING), PLUMBING FIXTURES, ELECTRICAL FIXTURE, HVAC VENTS & GRILLS, RESTROOM ACCESSORIES, TOILET COMPARTMENTS TO BE REMOVED AND REPLACED WITH NEW WALLS TO RECEIVE NEW 3/8" TYPE 'X' GYP. BOARD. FOR CEILING - SEE A-103 & A-104 COMPLETE FOR A SMOOTH PAINTED FINISH. - SEE FINISH SCHEDULE AND KEY NOTE #1, 14.
- 000000 14 REMOVE EXISTING WAINSCOT TILE AND WALL BOARD AT NEW TILE LOCATIONS. INSTALL CEMENTIOUS BACKER BOARD (CBB) IN-LEU OF GYP. BOARD. SEE KEY NOTE #3. PROVIDE BLOCKING FOR RESTROOM ACCESSORIES PER DETAIL 2/A501. EXTENT OF CBB AND TILE IS SHOWN ON NEW ELEVATIONS ON A-101 - A-102.
- 000000 15 REMOVE ENTIRE CONCRETE FLOOR IN MENS SHOWER 102 TO INSTALL NEW PERIMETER TRENCH DRAIN SEE DETAIL 3/A501. PROVIDE NEW CONCRETE FLOOR AND CERAMIC TILE WITH ADEQUATE SLOPE TO NEW TRENCH DRAINS. REINSTALL AS PER TCA B421-05, B415-05.
- 000000 16 EXISTING FLOOR COVER PLATE TO REMAIN.
- 000000 17 EXISTING RESTROOM ACCESSORY TO BE REPLACED WITH NEW - SEE SCHEDULE.
- 000000 18 DASHED LINES INDICATE BOX OUT HUNG FROM CEILING TO REMAIN.

MEN'S ROOM DOOR SCHEDULE

MARK	DOOR						FRAME						REMARKS		
	WIDTH	HEIGHT	THICKNESS	MATERIAL	TYPE	FINISH	HEAD	JAMB	SILL	MATERIAL	TYPE	FINISH		FIRE RATING	HARDWARE
101A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	EXISTING TO REMAIN AS-IS
102A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	EXISTING TO REMAIN AS-IS
102B	3'-0"	7'-0"	3/4"	WD	DI	CLEAR SEAL	-	-	-	EXSTG	FI	-	-	-	PREP EXISTING FRAME FOR NEW DOOR

ROOM FINISH SCHEDULE

RM #	ROOM NAME	HEIGHT AFF.	CEILING TYPE	WALLS				FLOOR & BASE FINISH			COUNTER TOP	REMARKS
				NORTH	EAST	SOUTH	WEST	BASE	FLOOR	FINISH		
101	MENS	9'-6"	C-1	WF-1, WT	WF-1, WT	WF-1, WT	WF-1, WT	WT	FF-1	NA	NA	WT-SEE ELEVATIONS FOR PATTERN
102	VESTIBULE	9'-6"	C-1	WF-1, WT	WF-1, WT	WF-1, WT	WF-1, WT	WT	FF-1	NA	NA	WT-SEE ELEVATIONS FOR PATTERN
103	SHOWER	9'-6"	C-1	WF-1, WT	WF-1, WT	WF-1, WT	WF-1, WT	WT	FF-1	NA	NA	WT-SEE ELEVATIONS FOR PATTERN
104	DRYROOM	9'-6"	C-1	WF-1, WT	WF-1, WT	WF-1, WT	WF-1, WT	WT	FF-1	NA	NA	WT-SEE ELEVATIONS FOR PATTERN

CEILING FINISH SCHEDULE (C-)

MARK	MATERIAL	MANUFACTURER	MANUFACTURER ITEM	COLOR NAME	SHEEN	LOCATION	REMARKS
C-1	GYP. BD. - PAINTED	KUAL PAINT	AS SEL.	AS SEL.	SATIN - (2) COATS	SEE PLANS	SMOOTH TEXTURE, TYPE 4

WALL FINISH SCHEDULE (WF-, WT-)

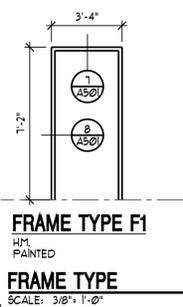
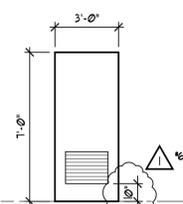
MARK	MATERIAL	MANUFACTURER	MFR #	COLOR	SHEEN	COATS	GLAZE	DETAIL?	SAMPLE REQUIRED	REMARKS
WF-1	PAINT	KUAL PAINT	AS SEL.	AS SEL.	SATIN	2	N/A	N/A	YES	SMOOTH TEXTURE, TYPE 3 OR 4
WT-1	CERAMIC TILE	DAL-TILE	AS SEL.	AS SEL.	N/A	N/A	N/A	-	YES	-
WT-2	CERAMIC TILE	DAL-TILE	AS SEL.	AS SEL.	N/A	N/A	N/A	-	YES	-
WT-3	CERAMIC TILE	DAL-TILE	AS SEL.	AS SEL.	N/A	N/A	N/A	-	YES	-
WT-4	CERAMIC TILE	DAL-TILE	AS SEL.	AS SEL.	N/A	N/A	N/A	-	YES	-

FLOOR FINISH SCHEDULE (FF-)

MARK	MATERIAL	MANUFACTURER	MFR #	PATTERN/STYLE	COLOR	THICKNESS	DETAIL?	SAMPLE REQUIRED	REMARKS
FF-1	MOSAIC TILE	DAL-TILE	AS SEL.	AS SEL.	AS SEL.	AS SEL.	-	YES	A MIX OF FT-1 THRU FT-4, SEE SPEC

TOILET ROOM ACCESSORY SCHEDULE (COORDINATE WITH SPEC SECTION 10800) 1/2, 3

MARK	ROOM	DESCRIPTION	MANUFACTURER	MODEL NO.	COLOR	INSTALL DETAIL	SAMPLE REQ'D	REMARKS
RA-1	WOMENS / MENS	GRAB BAR	BOBRICK	SERIES 6006	STAINLESS	-	YES	SEE 15 AND 19 / A-101 FOR MOUNTING REQUIREMENTS
RA-2	WOMENS / MENS	UTILITY SHELF	BOBRICK	B-295	STAINLESS	-	-	-
RA-3	WOMENS / MENS	MIRROR	BOBRICK	B-165	STAINLESS	-	YES	-
RA-4	WOMENS / MENS	TOILET TISSUE DISP	BOBRICK	B-16861	STAINLESS	-	YES	-
RA-5	WOMENS / MENS	SEAT COVER DISP	BOBRICK	B-221	STAINLESS	-	YES	SURFACE MOUNTED
RA-6	WOMENS	SANITARY NAPKIN DISPOSAL	BOBRICK	B-294	STAINLESS	-	YES	SURFACE MOUNTED
RA-7	WOMENS / MENS	TOILEL DISP / WASTE	BOBRICK	B-3942	STAINLESS	-	YES	SEMI RECESSED
RA-8	WOMENS / MENS	SOAP DISPENSER	BOBRICK	B-2111	STAINLESS	-	YES	SURFACE MOUNTED
RA-9	WOMENS / MENS	SOAP DISH	BOBRICK	B-4390	STAINLESS	-	-	RECESSED
RA-10	WOMENS	VENDOR	BOBRICK	B-283-25	STAINLESS	-	YES	SURFACE MOUNTED
RA-11	WOMENS / MENS	CURTAIN ROD / HOOKS	BOBRICK	B-6041	STAINLESS	-	YES	-
RA-12	WOMENS / MENS	SHOWER CURTAIN	BOBRICK	204-2	VNYL	-	YES	-
RA-13	WOMENS / MENS	SHOWER SEAT	BOBRICK	B-5181	FMENOLIC	-	YES	SEE 19/A-101 FOR MOUNTING REQUIREMENTS
RA-14	WOMENS / MENS	UNDERLAVATORY GUARD	TRUEBRO LAVGUARD	2 EZ	VNYL	-	YES	-
RA-15	WOMENS / MENS	TOILEL DISPENSER	BOBRICK	B-262	STAINLESS	-	YES	SEE 15/A-501 FOR MOUNTING HEIGHT



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6465 South 3000 East
Suite 205
Salt Lake City, UT 84121
Ph: 801.733-2500
Fax: 801.733-2501
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BUILDING NAME:

CEDAR CITY ARMORY

UTAH NATIONAL GUARD

PROJECT TITLE:

RESTROOM REMODEL

MARK	DATE	DESCRIPTION
1	08/17/09	DFCM

ISSUE TYPE: CONSTRUCTION SET

ISSUE DATE: AUG 17, 2009

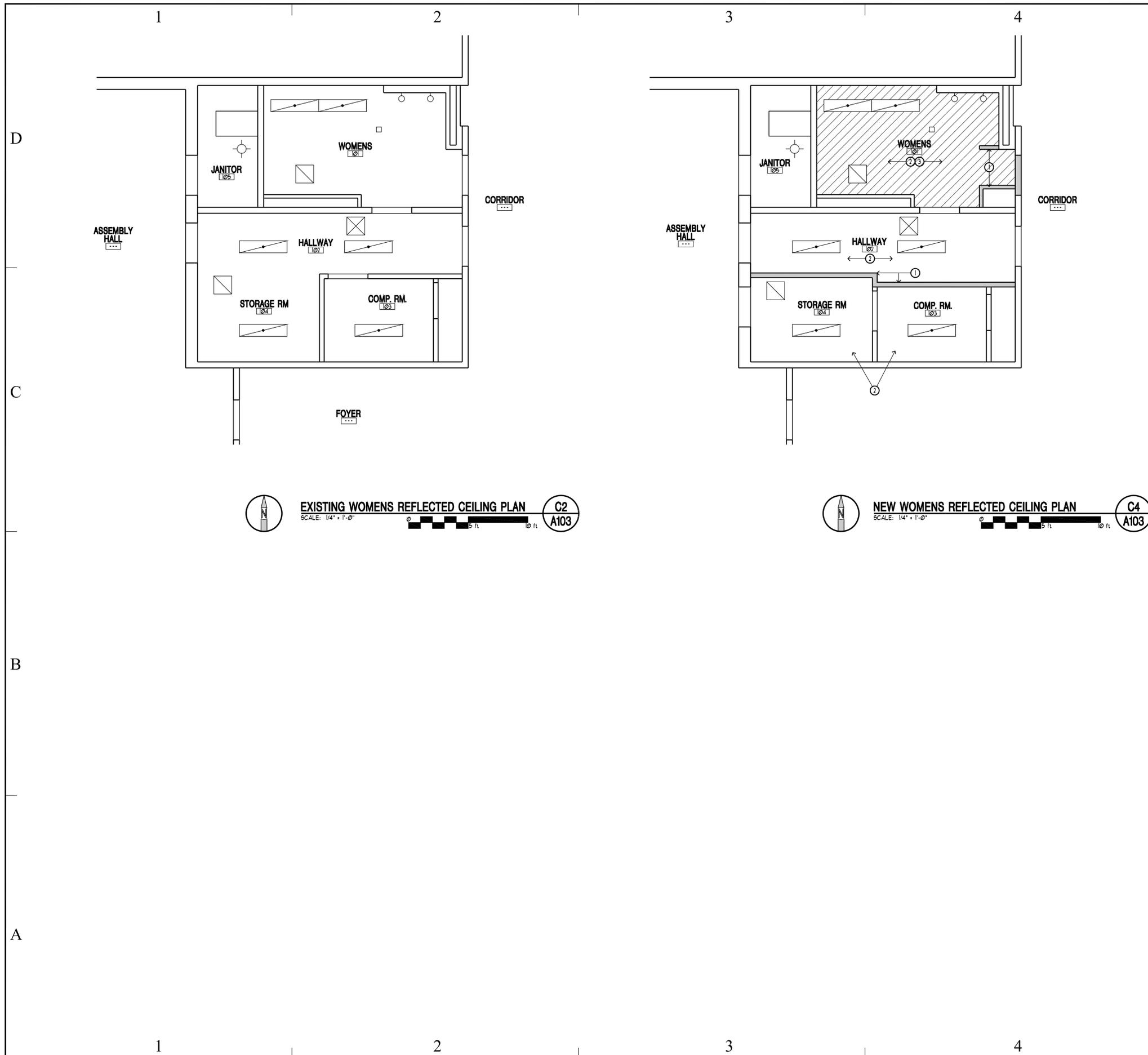
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CAD PROJECT NO: 09045
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SHEET TITLE
MENS FLOOR PLANS

SHEET NUMBER

A-102

SHEET 03 OF 18



REFLECTED CEILING PLAN LEGEND		
PATTERN/SYMBOL	SECTION	DESCRIPTION
[Hatched Box]	00000	GYP. BOARD, PAINTED

REFLECTED CEILING PLAN KEY NOTES	
SECTION	DESCRIPTION
00000	① ATTACH PARTITION TO STRUCTURE ABOVE.
00000	② REMOVE EXISTING LIGHT FIXTURES AND CLEAN EXISTING GRILLES BEFORE REPAINTING CEILING. AFTER PAINTING IS COMPLETED, RE-INSTALL LIGHT FIXTURES, AS PER ELECTRICAL DRAWINGS.
00000	③ REPLACE CEILING WITH NEW 1/2" GYPSUM CEILING PANELS. TAPE, SAND & SMOOTH.

REFLECTED CEILING PLAN GENERAL NOTES		
1 - ALL CEILING HEIGHTS ARE MEASURED FROM TOP OF FINISHED FLOOR TO BOTTOM OF CEILING FRAMING UNO.		
2 - COORDINATE WITH ELECTRICAL DRAWINGS FOR ALL LIGHTING, POWER, AND DATA REQUIREMENTS.		



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CAD PROJECT NO: 09045

CAD DWG FILE:

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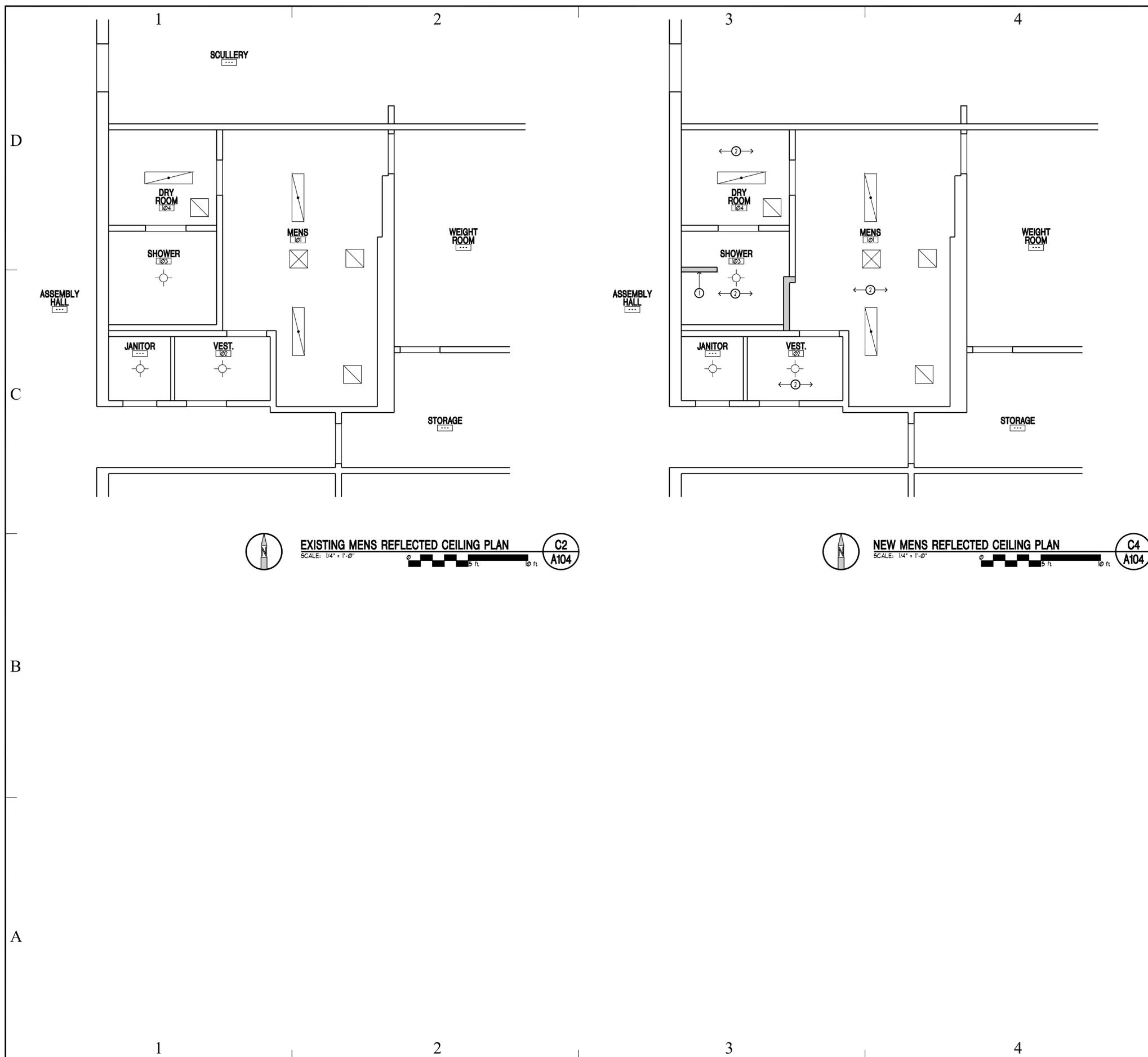
SHEET TITLE

WOMENS REF. CEILING PLAN

SHEET NUMBER

A-103

SHEET 04 OF 18



EXISTING MENS REFLECTED CEILING PLAN
 SCALE: 1/4" = 1'-0"
 C2
 A104

NEW MENS REFLECTED CEILING PLAN
 SCALE: 1/4" = 1'-0"
 C4
 A104

REFLECTED CEILING PLAN LEGEND		
PATTERN/SYMBOL	SECTION	DESCRIPTION
	00000	GYP. BOARD, PAINTED

REFLECTED CEILING PLAN KEY NOTES	
SECTION	DESCRIPTION
00000	1 ATTACH PARTITION TO STRUCTURE ABOVE.
00000	2 REMOVE EXISTING LIGHT FIXTURES AND CLEAN EXISTING GRILLES BEFORE REPAINTING CEILING. AFTER PAINTING IS COMPLETED, RE-INSTALL LIGHT FIXTURES, AS PER ELECTRICAL DRAWINGS.
00000	3 REPLACE CEILING WITH NEW 1/2" GYPSUM CEILING PANELS. TAPE, SAND & SMOOTH.

REFLECTED CEILING PLAN GENERAL NOTES		
1 - ALL CEILING HEIGHTS ARE MEASURED FROM TOP OF FINISHED FLOOR TO BOTTOM OF CEILING FRAMING UNDO.		
2 - COORDINATE WITH ELECTRICAL DRAWINGS FOR ALL LIGHTING, POWER, AND DATA REQUIREMENTS.		



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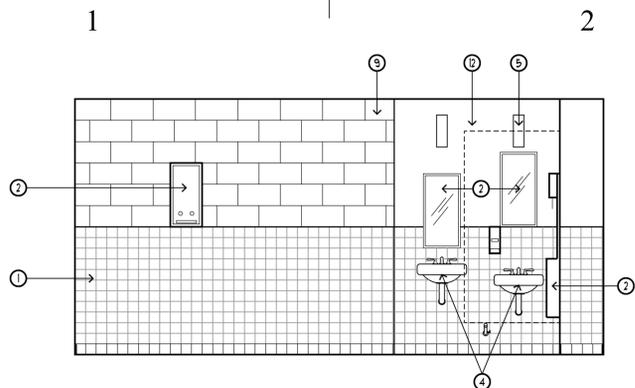
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MENS REF. CEILING PLAN

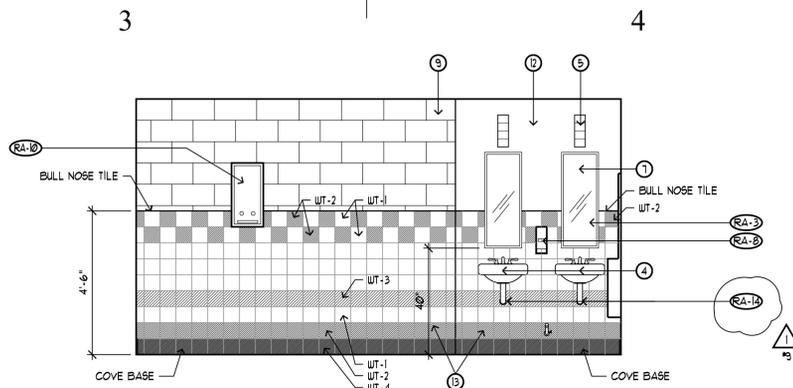
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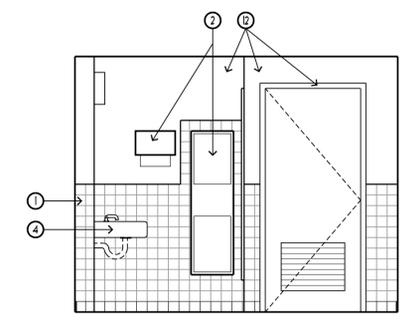
SHEET 05 OF 18



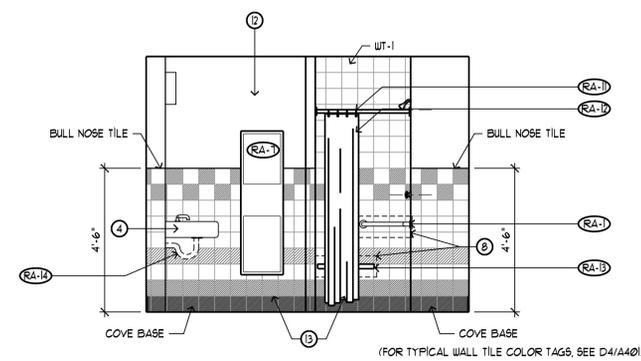
WOMENS EXISTING NORTH ELEVATION 'A'
SCALE: 3/8" = 1'-0"
D2
A401



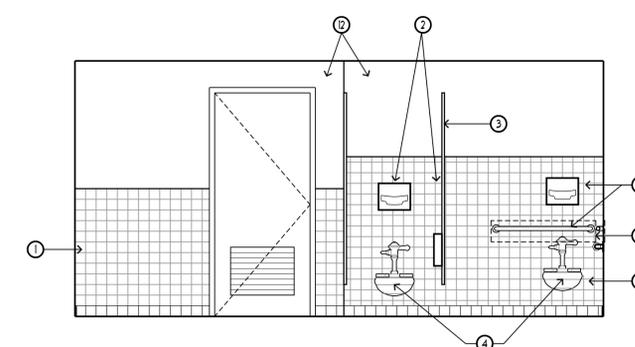
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SCALE: 3/8" = 1'-0"
D4
A401



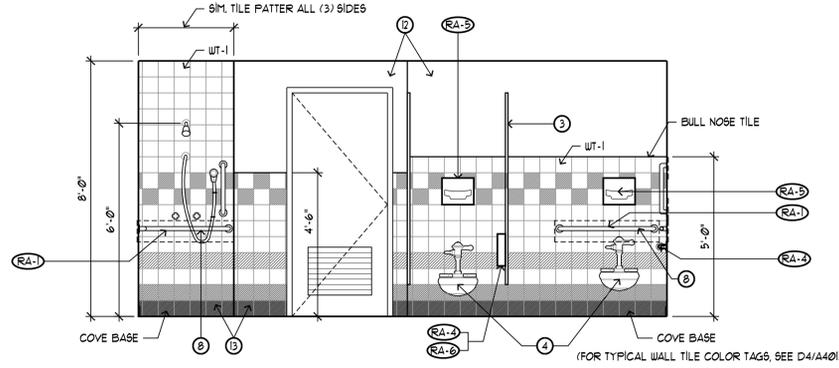
WOMENS EXISTING EAST ELEVATION 'B'
SCALE: 3/8" = 1'-0"
C2
A401



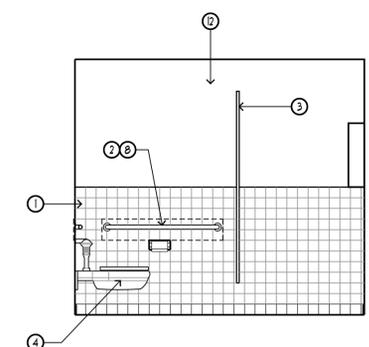
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SCALE: 3/8" = 1'-0"
C4
A401



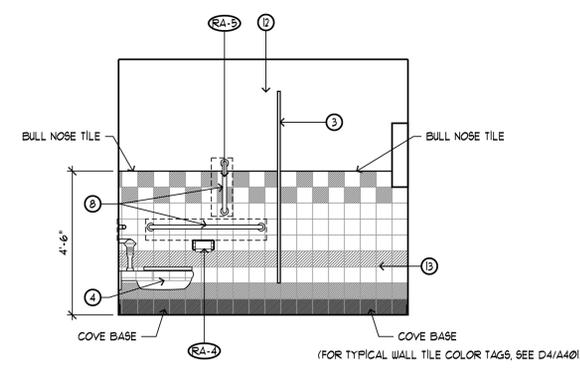
WOMENS EXISTING SOUTH ELEVATION 'C'
SCALE: 3/8" = 1'-0"
B2
A401



WOMENS NEW SOUTH ELEVATION 'C'
SCALE: 3/8" = 1'-0"
B4
A401



WOMENS EXISTING WEST ELEVATION 'D'
SCALE: 3/8" = 1'-0"
A2
A401



WOMENS NEW WEST ELEVATION 'D'
SCALE: 3/8" = 1'-0"
A4
A401

INTERIOR ELEVATION LEGEND		
HATCH PATTERN	SECTION	DESCRIPTION
[Pattern]	000000	INTERIOR FINISH TAG - SEE SHEET IDU FOR FINISH SCHEDULES
[Pattern]	000000	TOILET ROOM ACCESSORY TAG - SEE SCHEDULE ON SHEET A-101
[Pattern]	000000	CMU
[Pattern]	000000	GYP. BOARD, PAINTED
[Pattern]	000000	TILE - SEE NOTES & SCHEDULE ON A-101 & A-102.

INTERIOR ELEVATION KEY NOTES

- | SECTION | DESCRIPTION |
|---------|--|
| 000000 | 1 REMOVE EXISTING WAINSCOT TILE AND BACKER BOARD. |
| 000000 | 2 REMOVE TOILET ACCESSORIES ON EXISTING TILE WAINSCOT WALLS |
| 000000 | 3 REMOVE EXISTING TOILET PARTITIONS. |
| 000000 | 4 REMOVE EXISTING LAVATORIES, TOILETS, URINALS AND FITTINGS REPLACE WITH NEW FIXTURES AND FITTINGS AS SCHEDULED. SEE DETAIL 6/A501 FOR REQUIRED SIDE CLEARANCE AT ADA TOILETS. SEE 19/A501 FOR ADA REQUIREMENTS - PRIOR TO INSTALLING. |
| 000000 | 5 REMOVE EXISTING LIGHT FIXTURES BEFORE REPAINTING EXISTING WALLS. AFTER PAINTING IS COMPLETED, INSTALL NEW LIGHT FIXTURES. |
| 000000 | 6 NEW CERAMIC TILE WAINSCOT. SEE FINISH SCHEDULE, SHEET A-101 |
| 000000 | 7 NEW MIRRORS. FIT SNUGLY INTO WAINSCOT AS SHOWN. SEE TOILET ACCESSORIES SCHEDULE SHEET A-101. |
| 000000 | 8 PROVIDE IN-WALL SOLID BLOCKING AT EACH GRAB BAR, SHOWER SEAT AND ALL RESTROOM ACCESSORIES. SEE 15 AND 19/A-501 FOR MOUNTING REQUIREMENTS. |
| 000000 | 9 REPAINT WALLS AND DOOR FRAMES. SEE FINISH SCHEDULE. |
| 000000 | 10 REMOVE EXISTING LOCKERS, STORE AND REINSTALL AFTER ROOM FINISHES ARE COMPLETE. INSTALL NEW ROBE HOOKS - SEE RESTROOM ACCESSORY SCHEDULE. |
| 000000 | 11 SEE PLUMBING SCHEDULE FOR SHOWER FIXTURE REQUIREMENTS. |
| 000000 | 12 REMOVE EXISTING GYPSUM BOARD AND REPLACE WITH NEW 5/8" MOISTURE RESISTANT GYP BOARD, TAPE AND SAND SMOOTH. |
| 000000 | 13 NEW CERAMIC TILE. SEE FINISH SCHEDULE. |

INTERIOR ELEVATION GENERAL NOTES

1. SEE 19/A-501 FOR ACCESSIBLE MOUNTING HEIGHT REQUIREMENTS AND CLEARANCES.



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Ph: 801.733-2500
Fax: 801.733-2501
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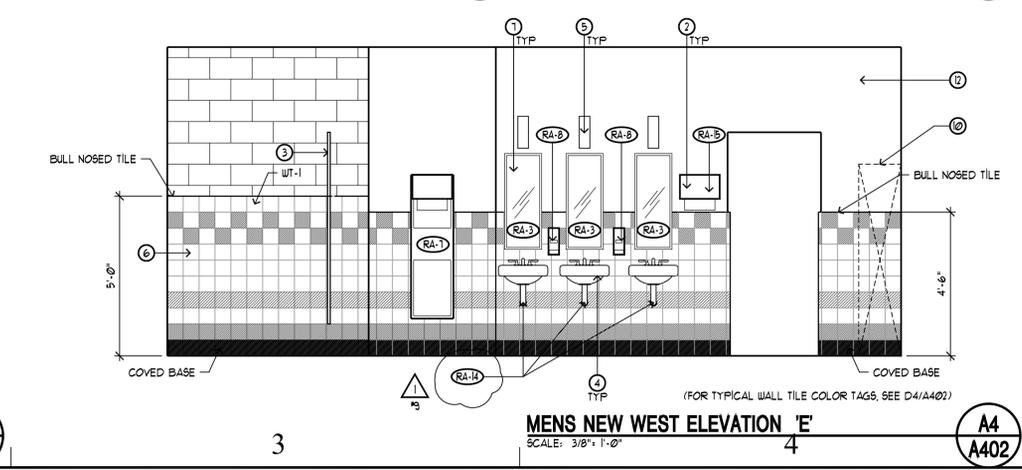
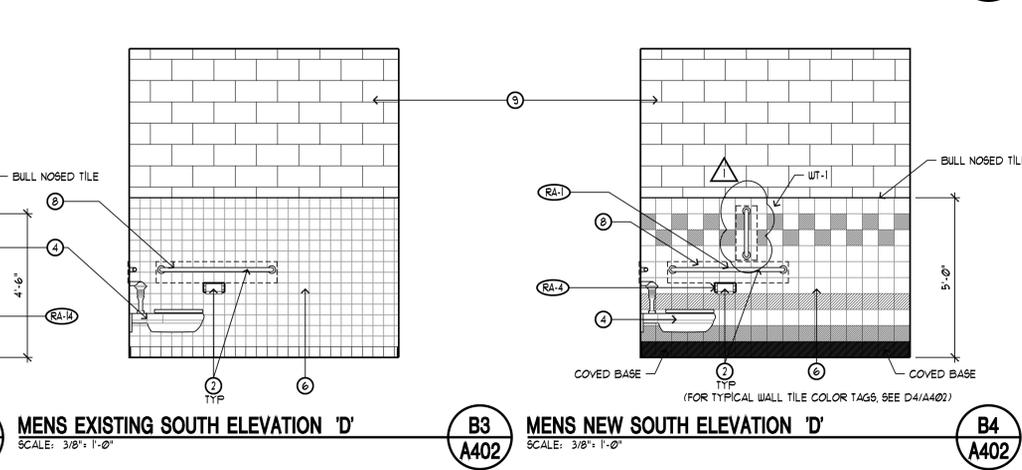
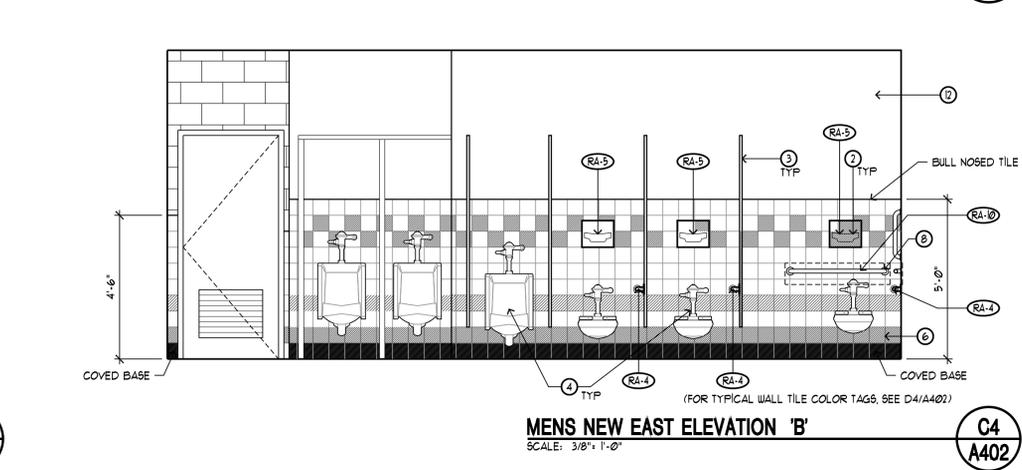
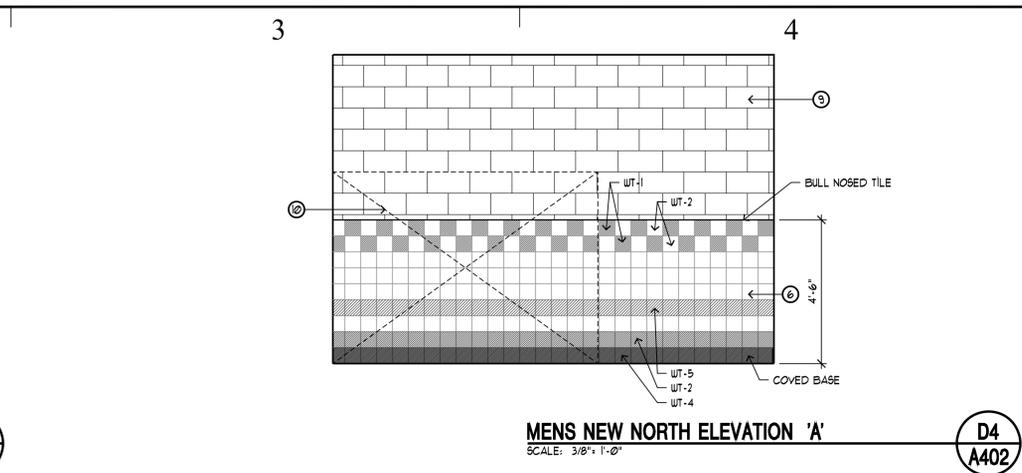
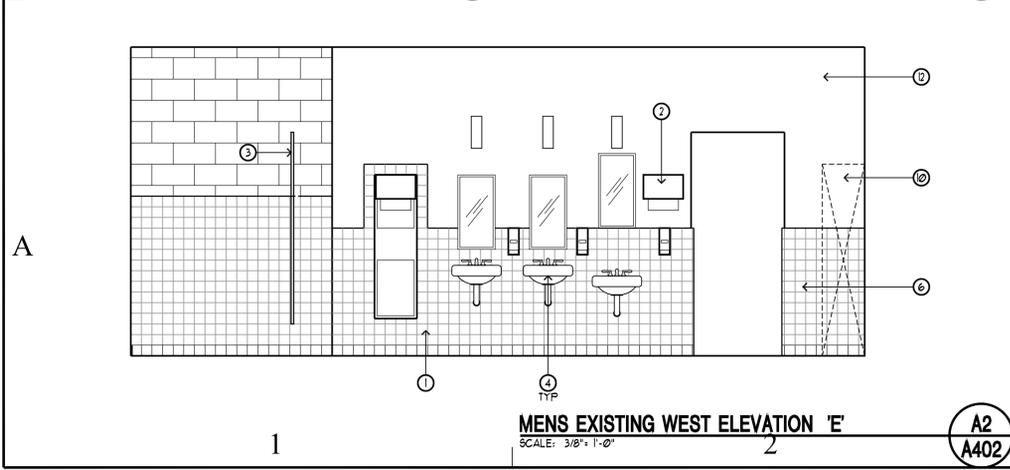
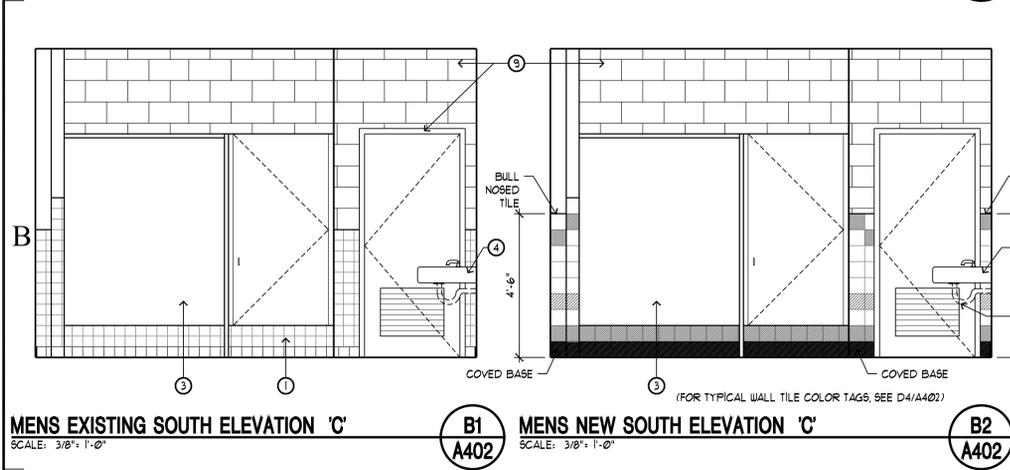
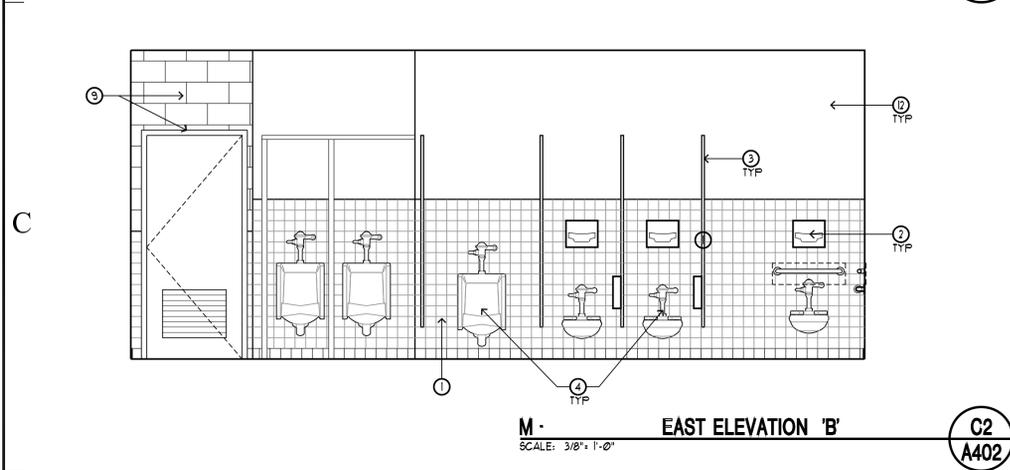
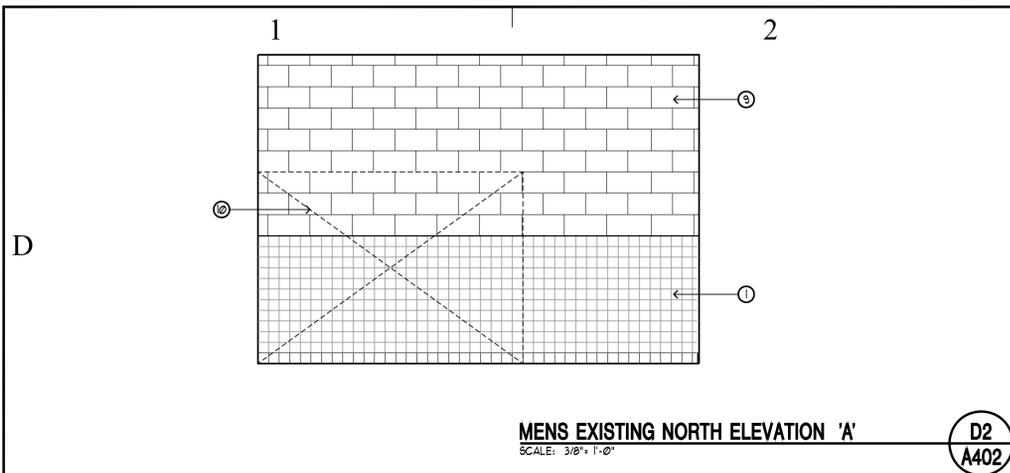
WOMENS INTERIOR ELVs.

SHEET NUMBER

A-401

SHEET 06 OF 18





INTERIOR ELEVATION LEGEND

HATCH PATTERN	SECTION	DESCRIPTION
[Symbol]	000000	INTERIOR FINISH TAG - SEE SHEET IDU FOR FINISH SCHEDULES
[Symbol]	000000	TOILET ROOM ACCESSORY TAG - SEE SCHEDULE ON SHEET A-101
[Symbol]	000000	CMU
[Symbol]	000000	GYP. BOARD, PAINTED
[Symbol]	000000	TILE - SEE NOTES & SCHEDULE ON A-101 & A-102.

INTERIOR ELEVATION KEY NOTES

SECTION	DESCRIPTION
000000	1 REMOVE EXISTING WAINSCOT TILE AND BACKER BOARD.
000000	2 REMOVE TOILET ACCESSORIES ON EXISTING TILE WAINSCOT WALLS
000000	3 REMOVE EXISTING TOILET PARTITIONS.
000000	4 REMOVE EXISTING LAVATORIES, TOILETS, URINALS AND FITTINGS REPLACE WITH NEW FIXTURES AND FITTINGS AS SCHEDULED. SEE DETAIL 6/A501 FOR REQUIRED SIDE CLEARANCE AT ADA TOILETS. SEE 19/A501 FOR ADA REQUIREMENTS - PRIOR TO INSTALLING.
000000	5 REMOVE EXISTING LIGHT FIXTURES BEFORE REPAINTING EXISTING WALLS. AFTER PAINTING IS COMPLETED, INSTALL NEW LIGHT FIXTURES.
000000	6 NEW CERAMIC TILE WAINSCOT. SEE FINISH SCHEDULE, SHEET A-101
000000	7 NEW MIRRORS, FIT SNUGLY INTO WAINSCOT AS SHOWN, SEE TOILET ACCESSORIES SCHEDULE SHEET A-101.
000000	8 PROVIDE IN-WALL SOLID BLOCKING AT EACH GRAB BAR, SHOWER SEAT AND ALL RESTROOM ACCESSORIES. SEE 15 AND 19/A-501 FOR MOUNTING REQUIREMENTS.
000000	9 REPAINT WALLS AND DOOR FRAMES. SEE FINISH SCHEDULE.
000000	10 REMOVE EXISTING LOCKERS, STORE AND REINSTALL AFTER ROOM FINISHES ARE COMPLETE. INSTALL NEW ROBE HOOKS - SEE RESTROOM ACCESSORY SCHEDULE.
000000	11 SEE PLUMBING SCHEDULE FOR SHOWER FIXTURE REQUIREMENTS.
000000	12 REMOVE EXISTING GYPSUM BOARD AND REPLACE WITH NEW 5/8" MOISTURE RESISTANT GYP BOARD, TAPE AND SAND SMOOTH.
000000	13 NEW CERAMIC TILE. SEE FINISH SCHEDULE.

INTERIOR ELEVATION GENERAL NOTES

1. SEE 19/A-501 FOR ACCESSIBLE MOUNTING HEIGHT REQUIREMENTS AND CLEARANCES.

0 5 ft 10 ft

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6465 South 3000 East
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CEDAR CITY ARMORY

UTAH NATIONAL GUARD

PROJECT TITLE:
RESTROOM REMODEL

MARK	DATE	DESCRIPTION
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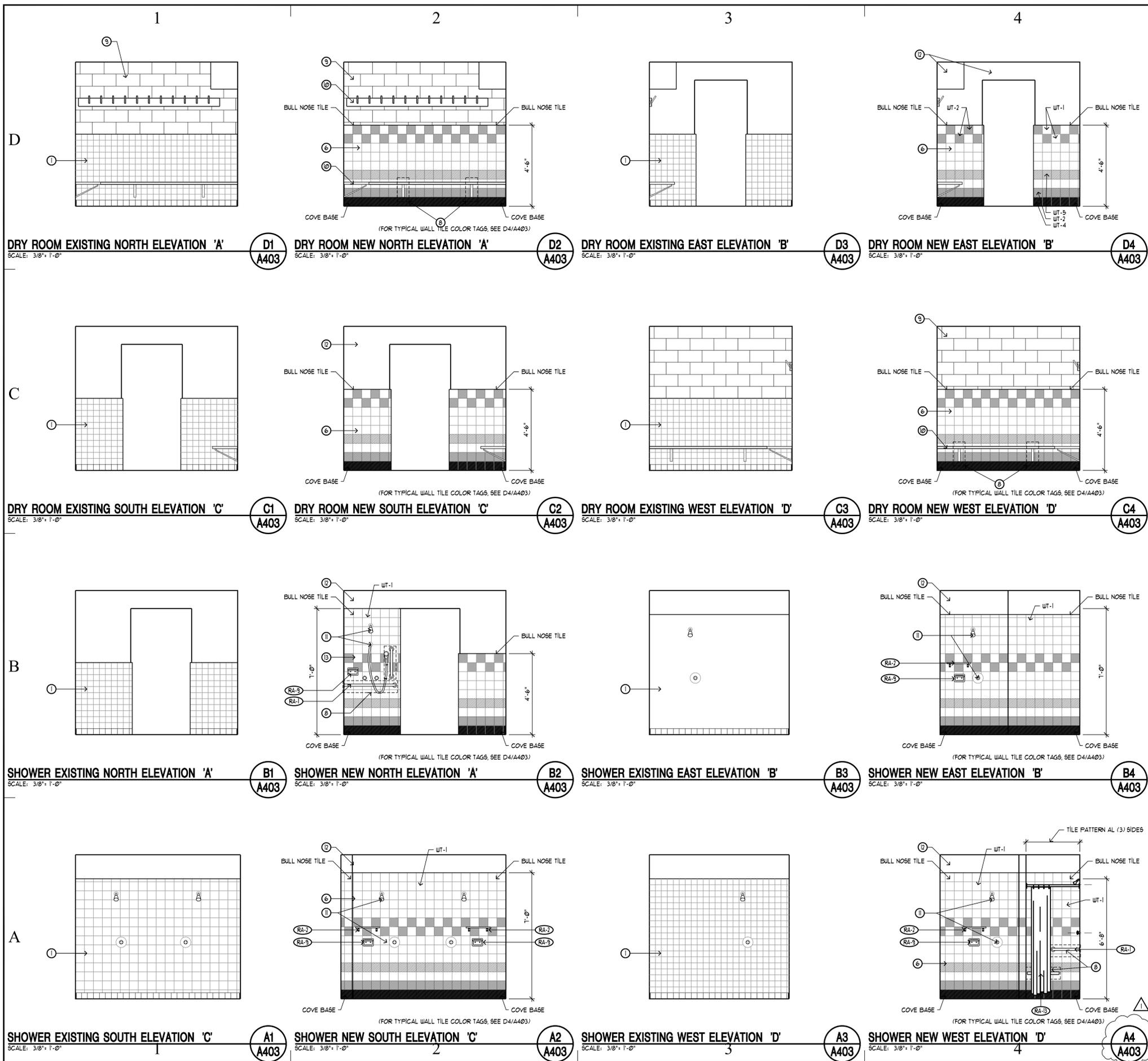
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SHEET TITLE
MENS INTERIOR ELVs.

SHEET NUMBER
A-402
SHEET 07 OF 18



5 INTERIOR ELEVATION LEGEND

HATCH PATTERN	SECTION	DESCRIPTION
[Pattern]	000000	INTERIOR FINISH TAG - SEE SHEET IDU FOR FINISH SCHEDULES
[Pattern]	000000	TOILET ROOM ACCESSORY TAG - SEE SCHEDULE ON SHEET A-101
[Pattern]	000000	CMU
[Pattern]	000000	GYP. BOARD, PAINTED
[Pattern]	000000	TILE - SEE NOTES & SCHEDULE ON A-101 & A-102.

INTERIOR ELEVATION KEY NOTES

SECTION	DESCRIPTION
000000	1 REMOVE EXISTING WAINSCOT TILE AND BACKER BOARD.
000000	2 REMOVE TOILET ACCESSORIES ON EXISTING TILE WAINSCOT WALLS
000000	3 REMOVE EXISTING TOILET PARTITIONS.
000000	4 REMOVE EXISTING LAVATORIES, TOILETS, URINALS AND FITTINGS REPLACE WITH NEW FIXTURES AND FITTINGS AS SCHEDULED. SEE DETAIL 6/A501 FOR REQUIRED SIDE CLEARANCE AT ADA TOILETS. SEE 19/A501 FOR ADA REQUIREMENTS - PRIOR TO INSTALLING.
000000	5 REMOVE EXISTING LIGHT FIXTURES BEFORE REPAINTING EXISTING WALLS. AFTER PAINTING IS COMPLETED, INSTALL NEW LIGHT FIXTURES.
000000	6 NEW CERAMIC TILE WAINSCOT. SEE FINISH SCHEDULE, SHEET A-101
000000	7 NEW MIRRORS, FIT SNUGLY INTO WAINSCOT AS SHOWN, SEE TOILET ACCESSORIES SCHEDULE SHEET A-101.
000000	8 PROVIDE IN-WALL SOLID BLOCKING AT EACH GRAB BAR, SHOWER SEAT AND ALL RESTROOM ACCESSORIES. SEE 15 AND 19/A-501 FOR MOUNTING REQUIREMENTS.
000000	9 REPAINT WALLS AND DOOR FRAMES. SEE FINISH SCHEDULE.
000000	10 REMOVE EXISTING LOCKERS, STORE AND REINSTALL AFTER ROOM FINISHES ARE COMPLETE. INSTALL NEW ROBE HOOKS - SEE RESTROOM ACCESSORY SCHEDULE.
000000	11 SEE PLUMBING SCHEDULE FOR SHOWER FIXTURE REQUIREMENTS.
000000	12 REMOVE EXISTING GYPSUM BOARD AND REPLACE WITH NEW 5/8\"/>

INTERIOR ELEVATION GENERAL NOTES

1. SEE 19/A-501 FOR ACCESSIBLE MOUNTING HEIGHT REQUIREMENTS AND CLEARANCES.

jsa architects
*architects
 planners
 interior designers*

6465 South 3000 East
 Suite 205
 Salt Lake City, UT 84121
 Ph: 801.733-2500
 Fax: 801.733-2501
 www.jsa-llc.com

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BUILDING NAME:
CEDAR CITY ARMORY

UTAH NATIONAL GUARD

PROJECT TITLE:
RESTROOM REMODEL

MARK	DATE	DESCRIPTION
1	08/17/09	DFCM

ISSUE TYPE: CONSTRUCTION SET

ISSUE DATE: AUG 17, 2009

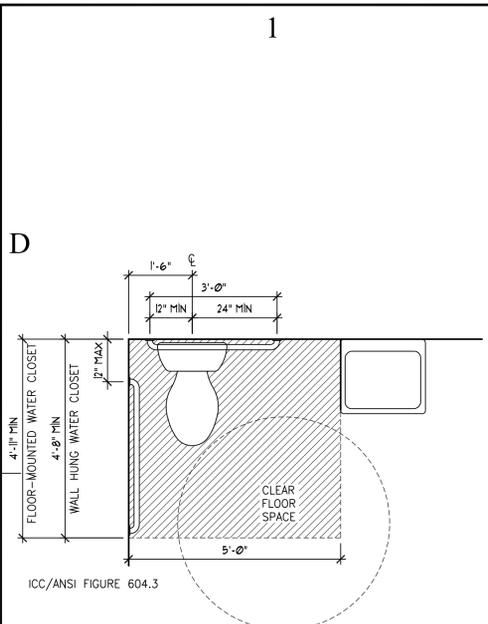
DFCM PROJECT NO: 09160480
 CAD PROJECT NO: 09045
 CAD DWG FILE:
 DRAWN BY: MHF
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SHEET TITLE
MENS SHOWER INTERIOR ELEV.

SHEET NUMBER
A-403

SHEET 08 OF 18





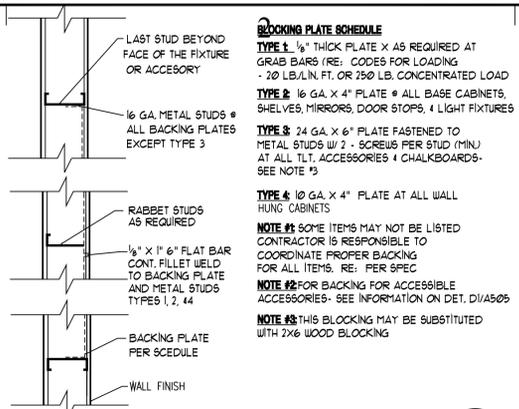
ICC/ANSI FIGURE 604.3

ICC/ANSI 604

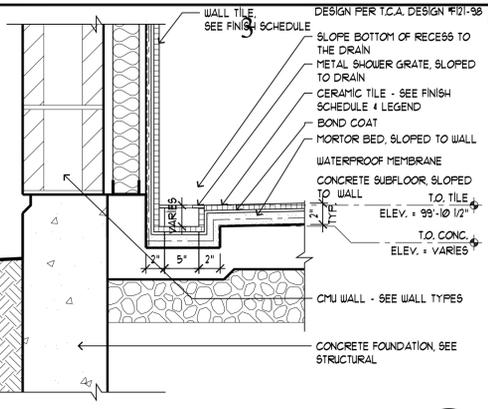
604.3.2 OVERLAP. THE REQUIRED CLEARANCE AROUND THE WATER CLOSET SHALL BE PERMITTED TO OVERLAP THE WATER CLOSET, ASSOCIATED GRAB BARS, PAPER DISPENSERS, SANITARY NAPKIN RECEPTACLES, COAT HOOKS, SHELVES ACCESSIBLE ROUTES, CLEAR FLOOR SPACE AT OTHER FIXTURES AND THE TURNING SPACE. NO OTHER FIXTURES OR OBSTRUCTIONS SHALL BE WITHIN THE REQUIRED WATER CLOSET CLEARANCE.

604.6 FLUSH CONTROLS. FLUSH CONTROLS SHALL BE HAND OPERATED OR AUTOMATIC. HAND OPERATED FLUSH CONTROLS SHALL COMPLY WITH SECTION 309. FLUSH CONTROLS SHALL BE LOCATED ON THE OPEN SIDE OF THE WATER CLOSET.

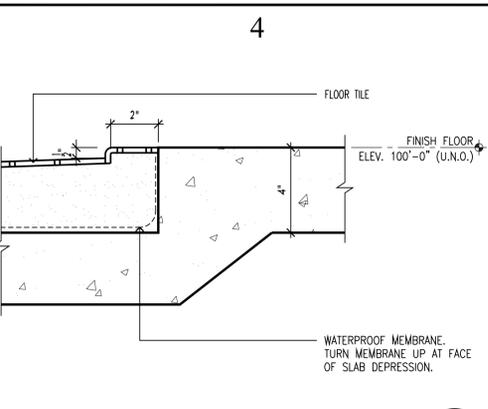
6 WATER CLOSET - CLEAR FLOOR SPACE
SCALE: 1/2" = 1'-0"



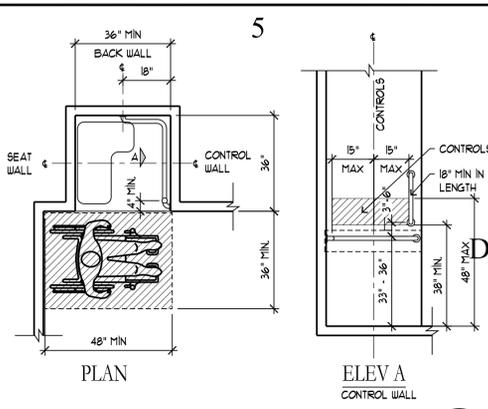
2 BLOCKING REQUIREMENT DETAIL
SCALE: NA = 1'-0"



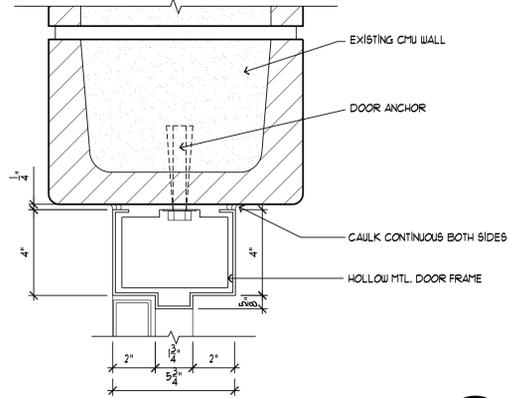
3 DRAIN DETAIL - WER
SCALE: 1/2" = 1'-0"



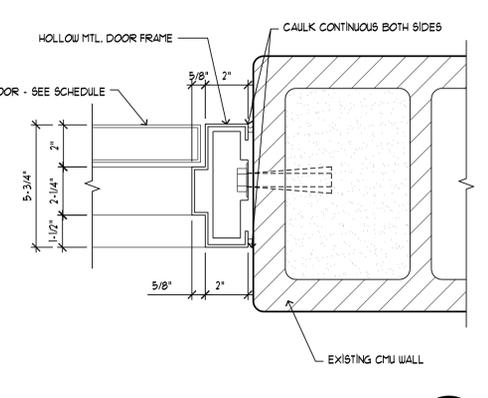
4 ACCESSIBLE SHOWER CURB
SCALE: 3/4" = 1'-0"



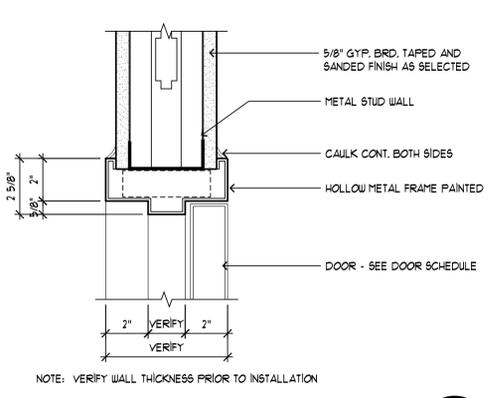
5 ADA TRANSFER SHOWER
SCALE: NTS = 1'-0"



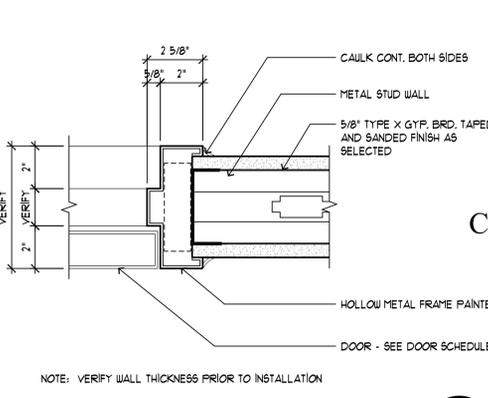
7 DOOR HEAD DETAIL - MASONRY WALL
SCALE: 3/4" = 1'-0"



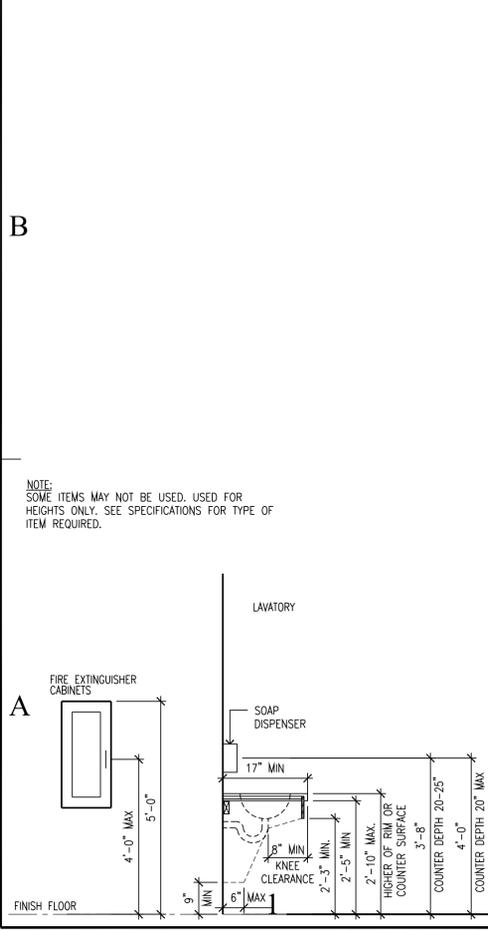
8 DOOR JAMB DETAIL - MASONRY WALL
SCALE: 3/4" = 1'-0"



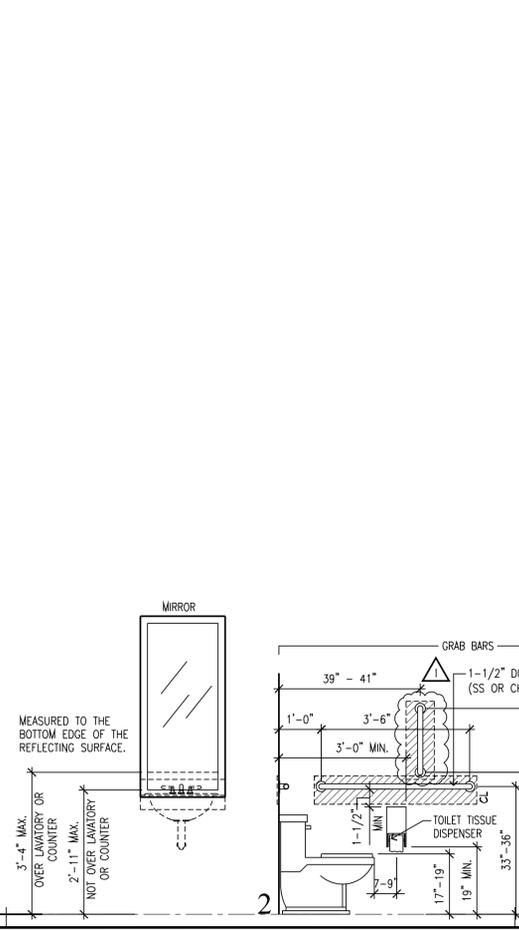
9 DOOR HEADER DETAIL
SCALE: 3/4" = 1'-0"



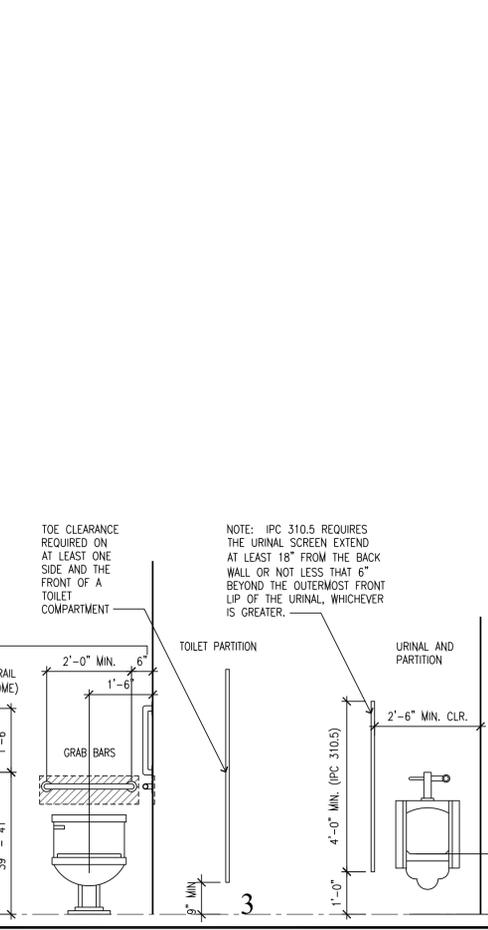
10 DOOR JAMB DETAIL
SCALE: 3/4" = 1'-0"



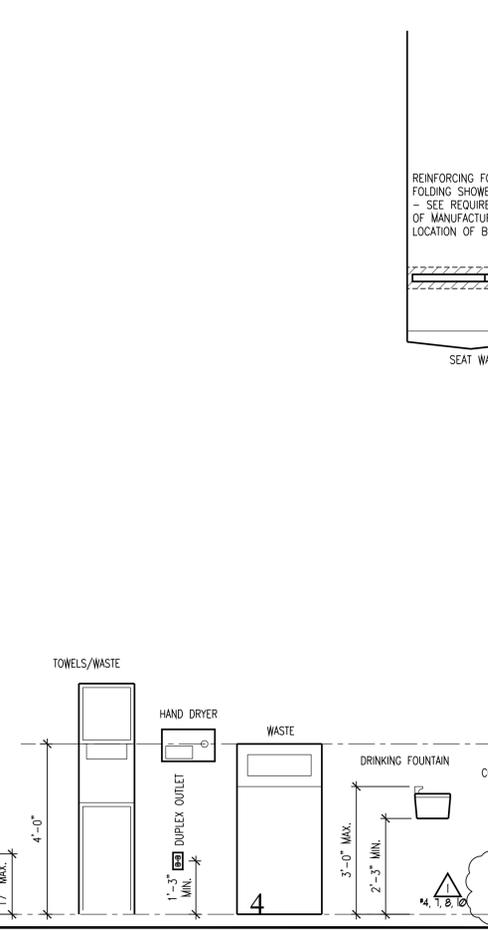
6 LAVATORY
SCALE: 1/2" = 1'-0"



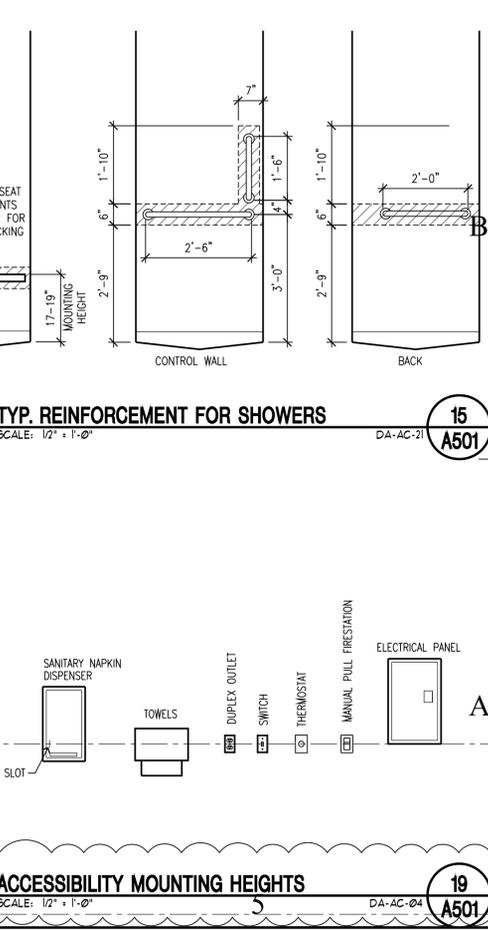
7 TOILET PARTITION
SCALE: 1/2" = 1'-0"



8 URINAL AND PARTITION
SCALE: 1/2" = 1'-0"



9 TOWELS/WASTE
SCALE: 1/2" = 1'-0"



10 ACCESSIBILITY MOUNTING HEIGHTS
SCALE: 1/2" = 1'-0"

jsa architects
architects
planners
interior designers

6465 South 3000 East
Suite 205
Salt Lake City, UT 84121
Ph: 801.733.2500
Fax: 801.733.2501
www.jsa-llc.com

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BUILDING NAME:

CEDAR CITY ARMORY

UTAH NATIONAL GUARD

PROJECT TITLE:

RESTROOM REMODEL

MARK	DATE	DESCRIPTION
1	08/17/09	DFCM

ISSUE TYPE: CONSTRUCTION SET

ISSUE DATE: AUG 17, 2009

DCFM PROJECT NO: 09160480
CAD PROJECT NO: 09045
DRAWN BY: MHF
CHK'D BY: CDJ
COPYRIGHT: STATE OF UTAH

ARCHITECTURAL DETAILS

SHEET NUMBER

A-501

SHEET 09 OF 18

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By: aspen@pve, Aug 17, 2009 - 9:38am, AS:\projects\2009\09101001 - UTNG - Richfield Cedar City\02\0003 - 09101001.dwg

DIVISION 15 - MECHANICAL

SECTION 15000 MECHANICAL GENERAL PROVISIONS

A. GENERAL CONDITIONS

- 1. DRAWINGS AND GENERAL PROVISIONS OF CONTRACT, INCLUDING GENERAL AND SUPPLEMENTARY CONDITIONS AND ALL OTHER SPECIFICATION SECTIONS ARE A PART OF THIS CONTRACT AND APPLY TO THIS AND THE OTHER SECTIONS OF DIVISION 15.
2. THE CONTRACTOR FOR THIS WORK IS REQUIRED TO READ THE ENTIRE SPECIFICATIONS AND REVIEW DRAWINGS FOR ALL OTHER TRADES.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING HIS SUBCONTRACTORS WITH A FULL SET OF BID SET DOCUMENTS (INCLUDING SPECIFICATIONS) AND THE COORDINATION OF HIS WORK AND INSPECTIONS AND THE WORK AND INSPECTIONS OF HIS SUBCONTRACTORS WITH ALL OTHER TRADES ON SITE CONFORMING TO THE GENERAL CONTRACTOR'S TIME SCHEDULE.
4. THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO SUBMITTING HIS BID TO DETERMINE CONDITIONS AFFECTING THE WORK. BIDS SHALL SERVE AS EVIDENCE REQUIRED TO MEET THE INTENT OF THE DRAWINGS AND SPECIFICATIONS. FAILURE TO VISIT THE SITE DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY IN PERFORMANCE OF WORK.
5. WHEN USED, THE TERM "PROVIDED BY CONTRACTOR" SHALL BE INTERPRETED AS MEANING "FURNISHED AND INSTALLED" WITH THE EXCEPTION WHERE ITEMS ARE "PROVIDED BY TENANT" WHICH MEANS "FURNISHED ONLY" (INSTALLED BY CONTRACTOR), EXCEPT AS SPECIFICALLY NOTED OTHERWISE.

B. GENERAL REQUIREMENTS

- 1. THE CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIAL, EQUIPMENT, SERVICES, TOOLS, TRANSPORTATION, INCIDENTALS AND DETAILS NECESSARY TO PROVIDE A COMPLETE AND FULLY FUNCTIONAL MECHANICAL SYSTEM AS SHOWN ON THE DRAWINGS, CALLED FOR THE SPECIFICATIONS, AND AS REQUIRED BY JOB CONDITIONS. ALL WORK NOT SPECIFICALLY NOTED AS BEING BY THE LANDLORD SHALL BE PROVIDED BY THE MECHANICAL CONTRACTOR. CLOSELY COORDINATE THE ENTIRE INSTALLATION WITH THE LANDLORD, AS REQUIRED. FIELD VERIFY THE EXACT TYPE, SIZE AND LOCATION, ETC. OF EXISTING PIPE AND DUCTS IN THE TENANT SPACE PRIOR TO BID.
2. THE DRAWINGS AND SPECIFICATIONS ARE INTENDED TO SUPPLEMENT EACH OTHER AND ANY MATERIAL OR LABOR CALLED FOR IN ONE SHALL BE PROVIDED EVEN THOUGH NOT SPECIFICALLY MENTIONED IN BOTH. ANY MATERIAL OR LABOR WHICH IS NEITHER SHOWN ON THE DRAWINGS NOR CALLED FOR IN THE SPECIFICATIONS, BUT WHICH IS OBVIOUSLY NECESSARY TO COMPLETE THE WORK, AND WHICH IS USUALLY INCLUDED IN WORK OF SIMILAR CHARACTER, SHALL BE PROVIDED AS PART OF CONTRACT.
3. WHERE THE DRAWINGS OR SPECIFICATIONS CALL FOR ITEMS WHICH EXCEED CODES OR THE LANDLORD'S TENANT CRITERIA, THE CONTRACTOR IS STILL RESPONSIBLE FOR PROVIDING THE SYSTEM AS DESIGNED AND DESCRIBED ON THESE DRAWINGS, UNLESS SPECIFICALLY NOTED OTHERWISE.
4. ALL MECHANICAL WORK SHALL BE INSTALLED SO AS TO BE READILY ACCESSIBLE FOR OPERATING, SERVICING, MAINTAINING, AND REPAIRING. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING SUFFICIENT ACCESS TO ALL EQUIPMENT FOR SERVICE.
5. THE CONTRACTOR SHALL DO ALL CUTTING, CORE DRILLING, CHASING OR CHANNELING AND PATCHING REQUIRED FOR ANY WORK UNDER THIS DIVISION. CUTTING SHALL HAVE PRIOR APPROVAL BY THE TENANT'S CONSTRUCTION MANAGER AND THE LANDLORD. PATCHING SHALL MATCH A FINISH OF SURROUNDING AREA.

C. CODES

- 1. ALL WORK SHALL BE PERFORMED IN A NEAT PROFESSIONAL MANNER USING GOOD ENGINEERING PRACTICES. ALL WORK SHALL CONFORM TO THE LANDLORD'S ORDINANCES, SAFETY AND HEALTH CODES, NFPA CODES, ENERGY CODES, AND ALL OTHER APPLICABLE CODES AND REQUIREMENTS. THE CONTRACTOR SHALL INQUIRE INTO AND COMPLY WITH ALL APPLICABLE CODES, ORDINANCES, AND REGULATIONS. AFTER CONTRACT IS ISSUED, NO ADDITIONAL COST DUE TO CODE ISSUES SHALL BE REIMBURSED BY THE TENANT TO THE CONTRACTOR.

D. LICENSES, PERMITS, INSPECTIONS & FEES

- 1. THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL LICENSES, PERMITS, INSPECTIONS, AND FEES REQUIRED OR RELATED TO HIS WORK.
2. FURNISH TO THE TENANT'S CONSTRUCTION MANAGER ALL CERTIFICATES OF INSPECTION AND FINAL INSPECTION APPROVAL AT SUBSTANTIAL COMPLETION DATE OF PROJECT.

E. DRAWINGS

- 1. DRAWINGS (PLANS, SPECIFICATIONS, AND DETAILS) ARE DIAGRAMMATIC AND INDICATE THE GENERAL LOCATION AND INTENT OF THE MECHANICAL SYSTEMS. BECAUSE OF THE SMALL SCALE OF THE DRAWINGS, IT IS NOT POSSIBLE TO INDICATE ALL DUCT AND PIPING OFFSETS, FITTINGS AND ACCESSORIES THAT MAY BE REQUIRED.
2. THE LAYOUT SHOWN ON THE DRAWINGS IS BASED ON A PARTICULAR MAKE OF EQUIPMENT. IF ANOTHER MAKE OF EQUIPMENT IS USED WHICH REQUIRES MODIFICATION OR CHANGE OF ANY DESCRIPTION FROM THE DRAWINGS OR SPECIFICATIONS, THE CONTRACTOR SHALL BE RESPONSIBLE AS PART OF THIS WORK FOR MAKING ALL SUCH MODIFICATIONS AND CHANGES, INCLUDING THOSE INVOLVING OTHER TRADES WITH THE COST THEREOF INCLUDED IN HIS BID. IN SUCH CASE, CONTRACTOR SHALL SUBMIT DRAWINGS AND SPECIFICATIONS PRIOR TO STARTING WORK SHOWING ALL SUCH MODIFICATIONS AND CHANGES. HIS PROPOSAL SHALL BE SUBJECT TO THE APPROVAL OF THE TENANT'S CONSTRUCTION MANAGER.

B. EXISTING SHELL SPACE CONDITIONS

- 1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COORDINATION OF THE DEMOLITION OF EXISTING MECHANICAL WORK SHOWN ON THE MECHANICAL DRAWINGS AND THE MECHANICAL DEMOLITION SHOWN ON THE ARCHITECTURAL DRAWINGS.
2. THE CONTRACTOR SHALL INCLUDE, AND WILL BE HELD RESPONSIBLE FOR, THE REMOVAL OF ALL EXISTING FIRE PROTECTION, PLUMBING FIXTURES, PIPING, HVAC UNITS, REFRIGERANT RECAPTURE, EXHAUST FAN, ETC. AND ASSOCIATED ROOF CURBS NOT TO BE REUSED ON THIS PROJECT, UNLESS SPECIFICALLY NOTED OTHERWISE. CONTRACTOR MUST VERIFY WITH THE LANDLORD ALL PRESUMED ABANDONED EQUIPMENT, PIPES, DUCTWORK, AND EQUIPMENT PRIOR TO REMOVAL. ROOF CURBS SHALL BE REMOVED AND THE ROOF PATCHED UNLESS NOTED FOR REUSE OR RECONFIGURATION ON PLANS. ROOF PATCHING SHALL BE PERFORMED AT THE CONTRACTOR'S EXPENSE BY A ROOFING CONTRACTOR APPROVED BY THE LANDLORD. ALL EXTRANEIOUS ITEMS IN THE SPACE OR ON THE ROOF (ABOVE THIS SPACE) NOT APPLICABLE TO THE NEW WORK OR PART OF THE LANDLORD'S OR ANOTHER TENANT'S ACTIVE SYSTEM MUST BE REMOVED AND ROOF/WALL/FLOOR/PATCHED/REPAIRED TO MATCH EXISTING STRUCTURE. EXISTING ABANDONED PIPES, DUCTS, OR EQUIPMENT IN THE FLOOR, EMBEDDED IN CONCRETE, OR OTHERWISE INACCESSIBLE ARE TO BE CUT OFF AND SEALED BELOW OR WITHIN FLOOR OR WALL LEVEL WHEN THEY ARE NOT TO BE REUSED IN THIS PROJECT. IF REQUIRED BY LANDLORD OR CODES, ABANDONED PIPING AND/OR DUCTWORK MUST BE REMOVED TO POINT OF ORIGIN. CONFIRM THE EXTENT OF DEMOLITION PRIOR TO BID AND INCLUDE IN BID PROPOSAL.
3. ACTIVE LANDLORD OR OTHER TENANT SERVICES ENCOUNTERED IN WORK SHALL BE PROTECTED AND SUPPORTED. IF EXISTING SERVICES NOT ANTICIPATED REQUIRE RELOCATION, CONTACT THE TENANT'S CONSTRUCTION MANAGER IMMEDIATELY. ALL COSTS FOR REPAIR OF DAMAGES TO ACTIVE LANDLORD OR OTHER TENANT SERVICES DURING CONSTRUCTION SHALL BE PAID FOR BY THE CONTRACTOR CAUSING THE DAMAGE.

- 4. TIE-INS AND MODIFICATIONS TO EXISTING LANDLORD SERVICES MUST BE DONE WITH MINIMUM INTERRUPTION OF LANDLORD OPERATION AND DURING HOURS SPECIFIED BY THE LANDLORD. THE CONTRACTOR IS RESPONSIBLE FOR CONFIRMING EXACT WORKING HOURS OF THIS WORK WITH THE LANDLORD PRIOR TO SUBMITTING HIS BID. THE CONTRACTOR SHALL INCLUDE IN HIS BID, ALL PREMIUM TIME REQUIRED TO PERFORM MODIFICATIONS DURING OTHER THAN NORMAL WORKING HOURS. ALL SUCH WORK MUST BE COORDINATED WITH THE LANDLORD.
5. DISCREPANCIES IN DOCUMENTS

- 1. DRAWINGS (PLANS, SPECIFICATIONS, AND DETAILS) ARE DIAGRAMMATIC AND INDICATE THE GENERAL LOCATION AND INTENT OF THE MECHANICAL SYSTEMS. WHERE DRAWINGS, EXISTING SITE CONDITIONS, SPECIFICATIONS OR OTHER TRADES CONFLICT OR ARE UNCLEAR, ADVISE THE GENERAL CONTRACTOR IN WRITING, PRIOR TO SUBMITTAL OF BID. THE GENERAL CONTRACTOR IS RESPONSIBLE TO ADVISE THE TENANT'S CONSTRUCTION MANAGER, IN WRITING, OTHERWISE, TENANT'S CONSTRUCTION MANAGER'S INTERPRETATION OF CONTRACT DOCUMENTS OR CONDITIONS SHALL BE FINAL WITH NO ADDITIONAL COMPENSATION PERMITTED.

H. TRADE NAMES AND MANUFACTURERS

- 1. WHERE TRADE NAMES AND MANUFACTURERS ARE USED ON THE DRAWINGS OR IN THE SPECIFICATIONS, THE EXACT EQUIPMENT SHALL BE USED AS A MINIMUM STANDARD FOR THE BASE BID. MANUFACTURERS CONSIDERED AS AN EQUAL OR BETTER IN ALL ASPECTS TO THAT SPECIFIED WILL BE SUBJECT TO APPROVAL IN WRITING BY THE TENANT'S CONSTRUCTION MANAGER PRIOR TO ACCEPTANCE. THE USE OF ANY UNAUTHORIZED EQUIPMENT SHALL BE SUBJECT TO REMOVAL AND REPLACEMENT AT THE CONTRACTOR'S EXPENSE.

I. SHOP DRAWINGS

- 1. SUBMIT SIX COPIES OF MATERIAL LISTS AND SHOP DRAWINGS FOR ALL EQUIPMENT AND DUCT FABRICATION DRAWINGS TO THE TENANT'S CONSTRUCTION MANAGER FOR APPROVAL PRIOR TO ORDERING EQUIPMENT. SUBMISSIONS MUST BE EARLY ENOUGH TO ALLOW THE TENANT'S CONSTRUCTION MANAGER EIGHT WORKING DAYS FOR REVIEW WITHOUT CAUSING DELAYS OR CONFLICTS TO THE JOB'S PROGRESS. SUBMITTALS SHALL BE IN ACCORDANCE WITH THE GENERAL CONDITIONS USING THE MANUFACTURER'S LISTED ON THE DRAWINGS. SHOP DRAWINGS SHALL INCLUDE ALL DATA THAT PERTAINS TO THE REQUIREMENTS SET FORTH ON THE DRAWINGS AND IN THE SPECIFICATIONS. THE SUBMITTAL SHALL INCLUDE BUT NOT LIMITED TO CUTS OR CATALOGS INCLUDING DESCRIPTIVE LITERATURE AND CHARACTERISTICS OF EQUIPMENT SHALL SHOW MAJOR DIMENSIONS, ROUGH-IN DATA, CAPACITY, CURVES, PRESSURE DROP, CODE COMPLIANCE, MOTOR AND DRIVE DATA AND ELECTRICAL DATA. OBSERVE SPECIAL INSTRUCTIONS WHEN REQUIRED. SUBMITTALS SHALL BEAR THE STAMP OF THE GENERAL AND SUB-CONTRACTOR SHOWING THAT HE HAS REVIEWED AND CONFIRMED THAT THEY ARE IN CONFORMANCE WITH THE CONTRACT DRAWINGS AND SPECIFICATIONS OR INDICATE WHERE EXCEPTIONS TAKE PLACE. LACK OF SUCH CONTRACTOR'S REVIEW AND APPROVAL WILL BE CAUSE FOR REJECTION WITHOUT REVIEW BY TENANT'S CONSTRUCTION MANAGER. ALL SHOP DRAWINGS MUST APPEAR IN THE OPERATION AND MAINTENANCE MANUALS LEFT ON SITE AT JOB COMPLETION.

- 2. TENANT'S CONSTRUCTION MANAGER'S REVIEW OF SHOP DRAWINGS OR SCHEDULES SHALL NOT RELIEVE THE CONTRACTOR FROM RESPONSIBILITY FOR ERRORS, OMISSIONS OR OTHER DEFICIENCIES OR DEVIATIONS IN THE SHOP DRAWING FROM THE CONTRACT DRAWINGS AND SPECIFICATIONS.

J. RECORD DRAWINGS

- 1. THE CONTRACTOR SHALL MAINTAIN ONE COPY OF DRAWINGS AND SPECIFICATIONS ON THE JOB SITE TO RECORD DEVIATIONS FROM CONTRACT DRAWINGS, SUCH AS:

- A. LOCATION OF CONCEALED PIPING VALVES AND DUCTS.
B. REVISIONS, ADDENDUM'S, AND CHANGE ORDERS.
C. SIGNIFICANT DEVIATIONS MADE NECESSARY BY FIELD CONDITIONS, APPROVED EQUIPMENT SUBSTITUTIONS, AND CONTRACTOR'S COORDINATION WITH OTHER TRADES.
D. EXACT ROUTING OF ALL SANITARY AND DOMESTIC WATER PIPING UNDER FLOOR.

- 2. AT COMPLETION OF THE PROJECT AND BEFORE FINAL APPROVAL, THE CONTRACTOR SHALL MAKE ANY FINAL CORRECTIONS TO DRAWINGS AND CERTIFY THE ACCURACY OF EACH PRINT BY SIGNATURE THEREON. THE DRAWINGS ARE TO BE TURNED OVER TO THE TENANT.

K. GUARANTEE

- 1. THE CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORK UNDER HIS CONTRACT AND SHALL MAKE GOOD, REPAIR OR REPLACE AT HIS OWN EXPENSE, ANY DEFECTIVE WORK, MATERIAL, OR EQUIPMENT WHICH MAY BE DISCOVERED WITHIN A PERIOD OF 12 MONTHS FROM THE DATE OF ACCEPTANCE (IN WRITING) OF THE INSTALLATION BY THE TENANT'S CONSTRUCTION MANAGER. PROVIDE EXTENDED WARRANTIES AS SPECIFIED WITH INDIVIDUAL EQUIPMENT. IN CASE OF REPLACEMENT OR REPAIR OR EQUIPMENT DUE TO FAILURE WITHIN GUARANTEE PERIOD, GUARANTEE ON THAT PORTION OF WORK SHALL BE EXTENDED FOR A PERIOD OF ONE (1) YEAR FROM DATE OF SUCH REPLACEMENT OR REPAIR.

L. OPERATIONS MANUALS

- 1. ONE COPY OF EACH OPERATION AND MAINTENANCE MANUAL FOR ALL EQUIPMENT FURNISHED ON JOB SHALL BE COLLECTED AND INSERTED IN A 3" THREE RING BINDER AND TURNED OVER TO THE TENANT. EACH NOTEBOOK SHALL INCLUDE BUT NOT BE LIMITED TO INSTALLATION, MAINTENANCE AND OPERATING INSTRUCTIONS, PAMPHLETS OR BROCHURES APPROVED SHOP DRAWINGS AND WARRANTIES OBTAINED FROM EACH MANUFACTURER OF PRINCIPAL ITEMS OF EQUIPMENT.

M. SLEEVES

- 1. THE CONTRACTOR SHALL PROVIDE SLEEVES TO PROTECT EQUIPMENT OR FACILITIES IN THE INSTALLATION. EACH SLEEVE SHALL EXTEND THROUGH IT'S RESPECTIVE FLOOR, WALL OR PARTITION AND SHALL BE CUT FLUSH WITH EACH SURFACE EXCEPT SLEEVES THAT PENETRATE THE FLOOR, WHICH SHALL EXTEND 2" ABOVE THE FLOOR.
2. ALL SLEEVES AND OPENINGS THROUGH FIRE RATED WALLS AND/OR FLOORS SHALL BE FIRE SEALED WITH CALCIUM SILICATE, SILICONE "RTV" FOAM, "3M" FIRE RATED SEALANTS OR EQUAL SO AS TO RETAIN THE FIRE RATING OF THE FLOOR OR WALL. CONFORM TO U.L. ASSEMBLY RATING OF FLOOR OR WALL.
3. SLEEVES IN BEARING AND MASONRY WALLS, FLOORS, AND PARTITIONS SHALL BE STANDARD WEIGHT STEEL PIPE FINISHED WITH SMOOTH EDGES. FOR OTHER THAN MASONRY PARTITIONS, THROUGH SUSPENDED CEILINGS, OR FOR CONCEALED VERTICAL PIPING, SLEEVES SHALL BE NO. 22 U.S.G. GALVANIZED STEEL MINIMUM.
4. DUCT SLEEVES TO BE MINIMUM 14 GAUGE STEEL.

N. HANGERS

- 1. HANGERS SHALL INCLUDE ALL MISCELLANEOUS STEEL SUCH AS ANGLE IRON, BANDS, C-CLAMPS WITH RETAINING CLIPS, CHANNELS, HANGER RODS, ETC., NECESSARY FOR THE INSTALLATION OF WORK.
2. HANGER SHALL BE FASTENED TO BUILDING STEEL, CONCRETE, OR MASONRY, BUT NOT TO PIPING OR DUCTWORK. HANGING FROM METAL DECK IS NOT PERMITTED. HANGERS MUST BE ATTACHED TO UPPER CHORD OF BAR JOIST. WHERE INTERFERENCE'S OCCUR, IN ORDER TO SUPPORT DUCTWORK OR PIPING, THE CONTRACTOR MUST INSTALL TRAPEZE TYPE HANGERS OR SUPPORTS WHICH SHALL BE LOCATED WHERE THEY DO NOT INTERFERE WITH ACCESS TO FIRE DAMPERS, VALVES, ACCESS DOORS AND OTHER EQUIPMENT SERVICE REQUIREMENTS AND/OR OTHER TRADES. HANGER TYPES AND INSTALLATION METHODS ARE SUBJECT TO LANDLORD CRITERIA.
3. HANGERS FOR ALL INSULATED PIPING SHALL BE SIZED AND INSTALLED FOR THE OUTER DIAMETER OF INSULATION. INSTALL 6" LONG SPLIT CIRCLE GALVANIZED SADDLE BETWEEN THE HANGER AND THE PIPE INSULATION.
4. HANGERS AND PIPING OF DISSIMILAR METALS SHALL BE DI-ELECTRICALLY SEPARATED FROM ONE ANOTHER.

O. ACCESS DOORS

- 1. FURNISH STEEL ACCESS DOORS AND FRAMES, MIN 16" X 20" OR AS SHOWN ON DRAWINGS, TO GENERAL CONTRACTOR FOR ALL LOCATIONS WHERE NECESSARY TO PROVIDE ACCESS TO CONCEALED VALVES, AND OTHER EQUIPMENT REQUIRING SERVICE OR INSPECTION. LOCATION, TYPE, SIZE AND NUMBER AS DETERMINED BY CONTRACTOR AND APPROVED BY TENANT CONSTRUCTION MANAGER TO SUIT EQUIPMENT REQUIREMENTS. GENERAL CONTRACTOR WILL INSTALL ACCESS DOORS AND FRAMES.
2. ACCESS DOORS LOCATED IN FIRE-RATED WALL, FLOOR, CEILING-FLOOR OR CEILING-ROOF ASSEMBLIES SHALL BE FIRE RATED, UNDERWRITER'S LABORATORIES, INC., LISTED AND LABELED.
3. ACCESS DOORS SHALL BE FLUSH TYPE, MANUFACTURED FROM NO. 14 GAUGE STEEL, COMPLETE WITH FLUSH FLANGE TYPE FRAMES MANUFACTURED FROM NO. 16 GAUGE STEEL, PROVIDED WITH ANCHORS. ACCESS DOORS SHALL BE SUITABLE FOR INSTALLATION IN WALL OR CEILING MATERIALS SHOWN IN ROOM FINISH SCHEDULES.

DIVISION 15 - MECHANICAL

SECTION 15400 PLUMBING PIPING

A. SCOPE OF WORK

- 1. THE MECHANICAL/ PLUMBING CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, SERVICES, TOOLS, TRANSPORTATION AND FACILITIES NECESSARY FOR, REASONABLY IMPLIED AND INCIDENTAL TO, THE FURNISHING, INSTALLATION, COMPLETION AND TESTING OF ALL THE WORK FOR THE MECHANICAL/ PLUMBING SYSTEMS AS SHOWN ON THE DRAWINGS, CALLED FOR IN THE SPECIFICATIONS, AND AS REQUIRED BY JOB CONDITIONS, TO INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
A. PLUMBING FIXTURES, EQUIPMENT, AND APPURTENANCES.
B. CURBS AND STEEL FRAMING FOR SUPPORT (AS APPLICABLE, REFER TO PLANS).
C. TESTING, ADJUSTING, AND BALANCING.
D. OPERATIONS MANUALS.
E. TEMPERATURE CONTROLS AND RELATED DIAGRAMS.
F. SEQUENCE OF OPERATION.
G. CONNECTION TO ANY LANDLORD EXISTING SYSTEMS.

- 2. BEFORE STARTING WORK, THIS CONTRACTOR SHALL EXAMINE THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL PLANS AND SPECIFICATIONS TO SEQUENCE, COORDINATE, AND INTEGRATE THE VARIOUS ELEMENTS OF THE HVAC SYSTEM, MATERIALS, AND EQUIPMENT WITH OTHER CONTRACTORS TO AVOID INTERFERENCES AND CONFRONTATIONS.

B. PLUMBING PIPING

- 1. PREPARATION:
A. REAM PIPE AND TUBE ENDS. REMOVE BURRS. BEVEL PLAIN END FERROUS PIPE.
B. REMOVE SCALE AND DIRT, ON INSIDE AND OUTSIDE, BEFORE ASSEMBLY.

C. PREPARE PIPING CONNECTIONS TO EQUIPMENT WITH FLANGES OR UNIONS.

- 2. INSTALLATION:
A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
B. PROVIDE NON-CONDUCTING DIELECTRIC CONNECTIONS WHEREVER JOINTING DISSIMILAR METALS.
C. ROUTE PIPING IN ORDERLY MANNER AND MAINTAIN GRADIENT. ROUTE PARALLEL AND PERPENDICULAR TO WALLS. INSTALL PIPING TO MAINTAIN HEADROOM, CONSERVE SPACE, AND NOT INTERFERE WITH USE OF SPACE.
D. GROUP PIPING TO ALLOW FOR EXPANSION AND CONTRACTION WITHOUT STRESSING PIPE, JOINTS OR CONNECTED EQUIPMENT.
E. PROVIDE CLEARANCE IN HANGERS AND FROM STRUCTURE AND OTHER EQUIPMENT FOR INSTALLATION OF INSULATION ACCESS TO VALVES AND FITTINGS.
F. PROVIDE ACCESS WHERE VALVES AND FITTINGS ARE NOT EXPOSED.
G. INSTALL VENT PIPING PENETRATING ROOFED AREAS TO MAINTAIN INTEGRITY OF ROOF ASSEMBLY.
H. PENETRATIONS SHALL BE PERFORMED BY THE LANDLORD'S APPROVED ROOF CONTRACTOR. COST OF ROOF PENETRATIONS SHALL BE INCLUDED IN THE MECHANICAL/ PLUMBING CONTRACTOR'S BID.
I. INSTALL BELL AND SPIGOT PIPE WITH BED END UPSTREAM.
J. INSTALL VALVES WITH STEMS UPRIGHT OR HORIZONTAL, NOT INVERTED.
K. INSTALL PIPING TO ASME B31.9.
L. SLEEVE PIPES PASSING THROUGH PARTITIONS, WALLS AND FLOORS.
M. PIPE HANGERS AND SUPPORTS:
I. INSTALL IN ACCORDANCE WITH ASME B31.9.
2. SUPPORT HORIZONTAL PIPING AS SCHEDULED.
3. INSTALL HANGERS TO PROVIDE MINIMUM 1/2 INCH (15 mm) SPACE BETWEEN FINISHED COVERING AND ADJACENT WORK.
4. PLACE HANGERS WITHIN 12 INCHES (300 mm) OF EACH HORIZONTAL ELBOW.
5. USE HANGERS WITHIN 12 INCHES (40 mm) MINIMUM VERTICAL ADJUSTMENT. DESIGN HANGERS FOR PIPE MOVEMENT WITHOUT DISENGAGEMENT OF SUPPORTED PIPE.
6. WHERE SEVERAL PIPES CAN BE INSTALLED IN PARALLEL AND AT SAME ELEVATION, PROVIDE MULTIPLE OR TRAPEZE HANGERS.
7. PROVIDE COPPER PLATED HANGERS AND SUPPORTS FOR COPPER PIPING.
8. SUPPORT CAST IRON DRAINAGE PIPING ON BOTH SIDES AT EVERY JOINT.

- 3. APPLICATION:
A. INSTALL UNIONS DOWNSTREAM OF VALVES AND AT EQUIPMENT OR APPARATUS CONNECTIONS.
B. INSTALL BALL OR BUTTERFLY VALVES FOR SHUT-OFF AND TO ISOLATE EQUIPMENT, PART OF SYSTEMS, OR VERTICAL RISERS.
4. ERECTION TOLERANCES:
A. DRAIN PIPING: ESTABLISH INVERT ELEVATIONS WITH 1/2 INCH (10 mm) VERTICALLY OF LOCATION INDICATED AND SLOPE TO DRAIN AT 1/4 INCH PER FOOT (1:50) SLOPE.
B. WATER PIPING: SLOPE AT MINIMUM OF 1/32 INCH PER FOOT (1:400) AND ARRANGE TO DRAIN AT LOWEST POINTS.

C. PRODUCTS

- 1. SANITARY SEWER PIPING, BURIED WITHIN 5 FEET (1500 mm) OF BUILDING
A. CAST IRON PIPE: ASTM A 74, EXTRA HEAVY WEIGHT.
I. FITTINGS: CAST IRON.
II. JOINTS: HUB-AND-SPIGOT, CISPI HSN COMPRESSION TYPE WITH ASTM C 564 NEOPRENE GASKETS OR LEAD AND OAKUM.
B. CAST IRON PIPE: CISPI 301, HUBLESS.
I. FITTINGS: CAST IRON.
II. JOINTS: CISPI 310, NEOPRENE GASKETS AND STAINLESS STEEL CLAMP-AND-SHIELD ASSEMBLIES.
2. SANITARY SEWER PIPING, ABOVE GRADE
A. CAST IRON PIPE: ASTM A 74, SERVICE WEIGHT.
I. FITTINGS: CAST IRON.
II. JOINT SEALS: ASTM C 564 NEOPRENE GASKETS, OR LEAD AND OAKUM.
B. CAST IRON PIPE: CISPI 310, HUBLESS, SERVICE WEIGHT.
I. FITTINGS: CAST IRON
II. JOINTS: CISPI 310, NEOPRENE GASKETS AND STAINLESS STEEL CLAMP-AND-SHIELD ASSEMBLIES.
3. WATER PIPING, ABOVE GRADE
A. COPPER TUBE: ASTM B 88 (ASTM 88M), TYPE L (B), DRAWN (H).
I. FITTINGS: ASME B 16.18, CAST COPPER ALLOY OR ASME B12.22, WROUGHT COPPER AND BRONZE.
II. JOINTS: ASTM B 32, ALLOY LEAD FREE FOR ALL PIPE 2 INCH AND SMALLER, SIL/FOS OR PHASCO FOR ALL 2 1/2 INCH AND LARGER AND FOR ALL BELOW GRADE LOCATIONS. ALL FLUX SHALL BE NON CORROSIVE TYPE.
4. PIPE HANGERS AND SUPPORTS

- A. PLUMBING PIPING - DRAIN, WASTE AND VENT:
1. CONFORM TO ASME B31.9.
2. HANGERS FOR PIPE SIZES 1/2 INCH (15 mm) TO 1 1/2 INCHES (40 mm): MALLEABLE IRON, ADJUSTABLE SWIVEL, SPLIT RING.
3. HANGERS FOR PIPE SIZES 2 INCHES (50 mm) AND OVER: CARBON STEEL, ADJUSTABLE, CLEVIS.
4. MULTIPLE OR TRAPEZE HANGERS: STEEL CHANNELS WITH WELDED SUPPORTS OR SPACERS AND HANGER RODS.
5. WALL SUPPORT FOR PIPE SIZES TO 3 INCHES (80 mm): CAST IRON HOOK.
6. WALL SUPPORT FOR PIPE SIZES 4 INCHES (100 mm) AND OVER: WELDED STEEL BRACKET AND WROUGHT STEEL CLAMP.
7. VERTICAL SUPPORT: STEEL RISER CLAMP.
8. FLOOR SUPPORT: CAST IRON ADJUSTABLE PIPE SADDLE, LOCK NUT, NIPPLE, FLOOR FLANGE AND CONCRETE PIER OR STEEL SUPPORT.
9. COPPER PIPE SUPPORT: CARBON STEEL RING, ADJUSTABLE, COPPER PLATED.
B. PLUMBING PIPING - WATER:
1. CONFORM TO ASME B31.9.
2. HANGERS FOR PIPE SIZES 1/2 INCH (15 mm) TO 1 1/2 INCHES (40 mm): MALLEABLE IRON, ADJUSTABLE SWIVEL, SPLIT RING.
3. HANGERS FOR PIPE SIZES 2 INCHES (50 mm) AND OVER: CARBON STEEL, ADJUSTABLE, CLEVIS.
4. MULTIPLE OR TRAPEZE HANGERS: STEEL CHANNELS WITH WELDED SUPPORTS OR SPACERS AND HANGER RODS.
5. MULTIPLE OR TRAPEZE HANGERS FOR HOT PIPE SIZES 6 INCHES (150 mm) AND OVER: STEEL CHANNELS WITH WELDED SUPPORTS OR SPACERS AND HANGER RODS, CAST IRON ROLL.
6. WALL SUPPORT FOR PIPE SIZES TO 3 INCHES (80 mm): CAST IRON HOOK.
7. WALL SUPPORT FOR PIPE SIZES 4 INCHES (100 mm) AND OVER: WELDED STEEL BRACKET AND WROUGHT STEEL CLAMP.
8. WALL SUPPORT FOR HOT PIPE SIZES 6 INCHES (150 mm) AND OVER: WELDED STEEL BRACKET AND WROUGHT STEEL CLAMP WITH ADJUSTABLE STEEL YOKE AND CAST IRON PIPE ROLL.
9. VERTICAL SUPPORT: STEEL RISER CLAMP.

- 5. BALL VALVES
A. CONSTRUCTION, 4 INCHES (100 mm) AND SMALLER: MSS SP-110, CLASS 150, 400 psi (2780 kPa) CWP, BRONZE, TWO PIECE BODY, CHROME PLATED BRASS BALL, REGULAR PORT, TEFLOW SEATS AND STUFFING BOX RING, BLOW-OUT PROOF STEM, LEVEL HANDLE WITH BALANCING STOPS, SOLDER ENDS WITH UNION.
6. FIRE STOP SYSTEMS
A. GENERAL PURPOSE FIRE STOPPING SEALANT:
I. WATER BASED, NONSLUMPING, PREMIXED SEALANT WITH INTUMESCENT PROPERTIES, RATED FOR 3 HOURS PER ASTM E 814 AND UL 1479.
B. GENERAL PURPOSE VIBRATION RESISTANT FIRE STOPPING SEALANT:
I. SILICONE BASED, NONSLUMPING, PREMIXED SEALANT WITH INTUMESCENT PROPERTIES, VIBRATION AND MOISTURE RESISTANT, RATED FOR 3 HOURS PER ASTM E 814 AND UL 1479.
7. PIPING INSULATION

- A. INSTALL IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
B. EXPOSED PIPING: LOCATE INSULATION AND COVER SEAMS IN LEAST VISIBLE LOCATIONS.
C. INSULATED PIPES CONVEYING FLUIDS BELOW AMBIENT TEMPERATURE: INSULATE ENTIRE SYSTEM INCLUDING FITTINGS, VALVES, UNIONS, FLANGES, STRAINERS, FLEXIBLE CONNECTIONS AND EXPANSION JOINTS.
D. GLASS FIBER INSULATED PIPES CONVEYING FLUIDS BELOW AMBIENT TEMPERATURE:
I. PROVIDE VAPOR BARRIER JACKETS, FACTORY-APPLIED OR FIELD-APPLIED. SECURE WITH SELF-SEALING LONGITUDINAL LAPS AND BUTT STRIPS WITH PRESSURE SENSITIVE ADHESIVE. SECURE WITH OUTWARD CLINCH EXPANDING STAPLES AND VAPOR BARRIER MASTIC.
II. INSULATE FITTINGS, JOINTS AND VALVES WITH MOLDED INSULATION OF LIKE MATERIAL AND THICKNESS AS ADJACENT PIPE. FINISH WITH GLASS CLOTH AND VAPOR BARRIER ADHESIVE OR PVC FITTING COVERS.
E. GLASS FIBER INSULATED PIPES CONVEYING FLUIDS ABOVE AMBIENT TEMPERATURE:
I. PROVIDE STANDARD JACKETS, WITH OR WITHOUT VAPOR BARRIER, FACTORY-APPLIED OR FIELD-APPLIED. SECURE WITH OUTWARD CLINCH EXPANDING STAPLES.

A. SCOPE OF WORK

- 1. THE HVAC CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, SERVICES, TOOLS, TRANSPORTATION AND FACILITIES NECESSARY FOR, REASONABLY IMPLIED AND INCIDENTAL TO, THE FURNISHING, INSTALLATION, COMPLETION AND TESTING OF ALL THE WORK FOR THE MECHANICAL SYSTEMS AS SHOWN ON THE DRAWINGS, CALLED FOR IN THE SPECIFICATIONS, AND AS REQUIRED BY JOB CONDITIONS, TO INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
A. HVAC UNITS, EQUIPMENT, AND APPURTENANCES.
B. DUCTWORK, FITTINGS, DAMPERS, AND INSULATION.
C. HYDRONIC PIPING AND INSULATION (AS APPLICABLE, REFER TO PLANS).
D. REFRIGERANT PIPING (AS APPLICABLE, REFER TO PLANS).
E. DIFFUSERS, GRILLS, AND REGISTERS.
F. CURBS AND STEEL FRAMING FOR SUPPORT (AS APPLICABLE, REFER TO PLANS).
G. TESTING, ADJUSTING, AND BALANCING.
H. OPERATIONS MANUALS.
I. TEMPERATURE CONTROLS AND RELATED DIAGRAMS.
J. SEQUENCE OF OPERATION.
K. CONNECTION TO ANY LANDLORD ENERGY MANAGEMENT SYSTEM.
2. BEFORE STARTING WORK, THIS CONTRACTOR SHALL EXAMINE THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL PLANS AND SPECIFICATIONS TO SEQUENCE, COORDINATE, AND INTEGRATE THE VARIOUS ELEMENTS OF THE HVAC SYSTEM, MATERIALS, AND EQUIPMENT WITH OTHER CONTRACTORS TO AVOID INTERFERENCES AND CONFRONTATIONS.

C. SCHEDULES

- 1. THE INSULATION THICKNESS SPECIFIED HEREIN SHALL BE CONSIDERED MINIMUM ACCEPTABLE STANDARDS. WHERE LOCAL CODE OR APPLICABLE ENERGY CODE REQUIREMENTS EXCEED THE MINIMUM REQUIREMENTS CONTAINED HEREIN, THE APPLICABLE CODE REQUIREMENTS SHALL TAKE PRECEDENCE.
2. DOMESTIC COLD AND HOT WATER PIPING:
I. 1/2 INCH THICKNESS ON ALL PIPING AND ALL PIPE SIZE RANGES.
3. ROOF DRAIN PIPING:
I. 1/2 INCH THICKNESS ON ALL PRIMARY DRAIN PIPING.
4. ROOF AND OVERFLOW DRAIN BOWLS:
I. 1/2 INCH THICKNESS.
5. CONDENSATE DRAIN PIPING:
I. 1/2 INCH THICKNESS ON ALL PIPING.

DIVISION 15 - MECHANICAL

SECTION 15500 HEATING, VENTILATION, AND AIR CONDITIONING

A. SCOPE OF WORK

- 1. THE HVAC CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, EQUIPMENT, SERVICES, TOOLS, TRANSPORTATION AND FACILITIES NECESSARY FOR, REASONABLY IMPLIED AND INCIDENTAL TO, THE FURNISHING, INSTALLATION, COMPLETION AND TESTING OF ALL THE WORK FOR THE MECHANICAL SYSTEMS AS SHOWN ON THE DRAWINGS, CALLED FOR IN THE SPECIFICATIONS, AND AS REQUIRED BY JOB CONDITIONS, TO INCLUDE, BUT NOT BE LIMITED TO THE FOLLOWING:
A. HVAC UNITS, EQUIPMENT, AND APPURTENANCES.
B. DUCTWORK, FITTINGS, DAMPERS, AND INSULATION.
C. HYDRONIC PIPING AND INSULATION (AS APPLICABLE, REFER TO PLANS).
D. REFRIGERANT PIPING (AS APPLICABLE, REFER TO PLANS).
E. DIFFUSERS, GRILLS, AND REGISTERS.
F. CURBS AND STEEL FRAMING FOR SUPPORT (AS APPLICABLE, REFER TO PLANS).
G. TESTING, ADJUSTING, AND BALANCING.
H. OPERATIONS MANUALS.
I. TEMPERATURE CONTROLS AND RELATED DIAGRAMS.
J. SEQUENCE OF OPERATION.
K. CONNECTION TO ANY LANDLORD ENERGY MANAGEMENT SYSTEM.

- 2. BEFORE STARTING WORK, THIS CONTRACTOR SHALL EXAMINE THE ARCHITECTURAL, STRUCTURAL, MECHANICAL AND ELECTRICAL PLANS AND SPECIFICATIONS TO SEQUENCE, COORDINATE, AND INTEGRATE THE VARIOUS ELEMENTS OF THE HVAC SYSTEM, MATERIALS, AND EQUIPMENT WITH OTHER CONTRACTORS TO AVOID INTERFERENCES AND CONFRONTATIONS.

B. METAL DUCTWORK - NO FIBERGLASS DUCT ALLOWED

- 1. NO DUCTWORK SHALL BE FABRICATED PRIOR TO APPROVAL BY THE TENANT'S CONSTRUCTION MANAGER. SIGNIFICANT DEVIATIONS FROM DESIGN MUST BE APPROVED BY TENANT'S CONSTRUCTION MANAGER PRIOR TO FABRICATION OR INSTALLATION. ALL DUCT MAINS ARE TO BE RECTANGULAR UNLESS NOTES OTHERWISE. ALL DUCT BRANCHES TO DIFFUSERS ARE TO BE ROUND RIGID DUCT. (FLEXIBLE DUCT CONNECTIONS TO THE DIFFUSER ARE NOT TO EXCEED 5' - 0").
2. EXCEPT AS OTHERWISE INDICATED, FABRICATE AND INSTALL RECTANGULAR DUCTS WITH GALVANIZED SHEET STEEL, IN ACCORDANCE WITH SMACNA "HVAC DUCT CONSTRUCTION STANDARDS" OF THIS LATEST EDITION. CONFORM TO THE REQUIREMENTS IN THE REFERENCED STANDARD FOR METAL THICKNESS, REINFORCING TYPES AND INTERVALS, THE ROD APPLICATIONS, AND JOINT TYPES AND INTERVALS.

- 3. EXCEPT WHERE OTHERWISE INDICATED, CONSTRUCT DUCT SYSTEMS TO THE FOLLOWING PRESSURE CLASSIFICATIONS: (VERIFY WHETHER RETURN OR EXHAUST DUCT IS POSITIVE OR NEGATIVE PRESSURE).
A. SUPPLY DUCTS: 2 INCHES WATER GAUGE, POSITIVE PRESSURE.
B. RETURN AND EXHAUST DUCTS: 2 INCHES WATER GAUGE, NEGATIVE PRESSURE.

- 4. PRESSURE TEST DUCTS FOR LEAKAGE. REMAKE LEAKING JOINTS AND APPLY SEALANTS AS REQUIRED TO FABRICATE A SYSTEM THAT DOES NOT EXCEED 5% LEAKAGE OR LESS AS STATED BY PRESSURE CLASS RATINGS IN SMACNA STANDARDS.

- 5. AS A MINIMUM, CROSSBREAK ALL FLAT SURFACES OR REINFORCE WITH A BEAD APPROXIMATELY 3/8" WIDE X 3/16" DEEP ON 12" CENTERS TO PREVENT VIBRATIONS.

- 6. INSTALL DOUBLE THICKNESS TURNING VANES IN ALL RIGHT ANGLE ELBOWS.
7. INSTALL RIGID ROUND AND RECTANGULAR METAL DUCT WITH SUPPORT SYSTEMS INDICATED IN SMACNA STANDARDS. SUPPORT HORIZONTAL DUCTS WITH 2 FEET OF EACH ELBOW AND WITHIN 4 FEET OF EACH BRANCH INTERSECTION USING DOUBLE STRAP HANGERS ON EACH SIDE OF FITTING. SUPPORT VERTICAL DUCTS AT A MAXIMUM INTERVAL OF 16 FEET AND AT EACH FLOOR. NO WOOD SHALL BE USED TO SUPPORT OR BRACE DUCTS. PROVIDE SWAY AND SEISMIC BRACING AS REQUIRED BY STATE AND LOCAL CODES OR BY LANDLORD.

- 8. WHERE DUCTS PASS THROUGH ROOFS AND FLOORS, PROVIDE AS MINIMUM 1-1/2"x1-1/2"x1/4" STEEL ANGLE FRAMES AT EACH SIDE OF OPENING. THE ANNULAR SPACE BETWEEN DUCT AND ANGLE FRAMES SHALL BE CAULKED WITH SILICONE SEALANT OR FIREPROOFED AS REQUIRED BY ASSEMBLY FIRE RATING.

- 9. ALL TRAVERSE JOINTS AND SEAMS IN SUPPLY AIR DUCT SHALL BE SEALED AIR TIGHT WITH DAP CMC DUCT SEALER. JOINTS ALSO SHALL BE RIVETED OR CONNECTED WITH SHEET METAL SCREWS.

- 10. SOFT ELASTOMER BUTYL GASKET WITH ADHESIVE BACKING SHALL BE USED TO SEAL FLANGED JOINTS.
11. DUCT TRANSITIONS SHALL NOT EXCEED 30 DEGREES SLOPE EXCEPT AS SPECIFICALLY NOTED OTHERWISE.

- 12. PROVIDE ACCESS TO ALL MOTORIZED DAMPERS, FIRE DAMPERS, CONTROLS, AND OTHER ITEMS IN DUCTWORK THAT REQUIRE SERVICE OR INSPECTION. IF THE ACCESS PANEL LOCATION IS IN AN EXPOSED AREA, IT MUST BE APPROVED BY THE TENANT'S CONSTRUCTION MANAGER PRIOR TO INSTALLATION. LAY-IN SUPPLY AND RETURN AIR DIFFUSERS, GRILLES AND REGISTERS WITH PLASTER FRAMES MAY BE USED AS ACCESS LOCATIONS.

- 13. FLEXIBLE CONNECTIONS:
A. FLEXIBLE COLLARS SHALL BE PROVIDED IN ALL CONNECTIONS BETWEEN VIBRATING EQUIPMENT (FANS, ROOFTOP UNITS, AIR HANDLERS, FAN POWERED VAV BOXES, ETC.) AND DUCTS OR CASINGS. ALSO PROVIDE FLEXIBLE CONNECTIONS WHERE DUCTS CROSS FLOOR EXPANSION JOINTS.



6465 South 3000 East
Suite 205
Salt Lake City, UT 84121
Ph: 801.733-2500
Fax: 801.733-2501
www.jsa-llc.com

CREATED BY: JSA ARCH.

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BUILDING NAME:

NAME RM#

PROJECT TITLE:

UTNG ARMORY

CEDAR CITY, UTAH

Table with 3 columns: MARK, DATE, DESCRIPTION. Contains empty rows for project details.

ISSUE TYPE: CONSTRUCTION SET

ISSUE DATE: 8/17/2009

DFCM PROJECT NO: XXXXXXXX

CAD PROJECT NO: 05-XXX

CAD DWG FILE:

DRAWN BY: JB

CHK'D BY

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By: aspendlove; Aug 17, 2009 - 9:37 am, X:\Projects\2009\09101.00.01 - UTNG Richfield Cedar City\M002.M003- 09101.00.01.dwg



jsa architects
*architects
 planners
 interior designers*
 6465 South 3000 East
 Suite 205
 Salt Lake City, UT 84121
 Ph: 801.733-2500
 Fax: 801.733-2501
 www.jsa-llc.com

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BUILDING NAME:

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 RM#

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UTNG ARMORY

CEDAR CITY,
 UTAH

MARK	DATE	DESCRIPTION

ISSUE TYPE: CONSTRUCTION SET

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CAD PROJECT NO: 05-XXX

CAD DWG FILE:

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SPECIFICATION SHEET

SHEET NUMBER

M-003

SHEET 12 OF 18

- B. FLEXIBLE CONNECTIONS SHALL BE CONSTRUCTED OF NEOPRENE-COATED FLAMEPROOF FABRIC. PROVIDE ADEQUATE JOINT FLEXIBILITY TO ALLOW FOR MOVEMENT AND PREVENT THE TRANSMISSION OF VIBRATION.
- C. FLEXIBLE CONNECTION IS TO BE RATED FOR THE OPERATING PRESSURE OF THE SYSTEM.
- 14. FLEXIBLE AIR DUCT:
 - A. FLEXIBLE AIR DUCT SHALL BE 1" INSULATED CLASS 1 AND RATED FOR THE OPERATING PRESSURE OF THE SYSTEM. DUCT CONSTRUCTION MATERIAL (PLASTIC, CLOTH, ALUMINUM) MUST ADHERE TO LOCAL CODES AND LANDLORD'S REQUIREMENTS AND BE INCLUDED AS SUCH IN THE BID.
 - B. FLEXIBLE AIR DUCT MAY ONLY BE USED IN VERTICAL APPLICATIONS WITH PRIOR APPROVAL FROM TENANT'S CONSTRUCTION MANAGER.
 - C. FLEXIBLE DUCT SHALL NOT EXTEND OVER 5'-0" IN LENGTH AT ANY ONE LOCATION.
- 15. SUPPLY AIR TAKE-OFF FITTINGS:
 - A. PROVIDE CONICAL OR "BELL-MOUTH" TAKE-OFFS FROM MAIN DUCTWORK TO ROUND BRANCHES. INSTALL PER MANUFACTURER'S INSTRUCTIONS.
 - B. PROVIDE 45° RECTANGULAR TAKE-OFFS FROM MAIN DUCTWORK TO RECTANGULAR BRANCHES.
- 15. DAMPERS:
 - A. PROVIDE MANUAL LOCKING QUADRANT VOLUME CONTROL DAMPERS WITH HANDLE OPERATORS IN EACH BRANCH DUCT AND AS SHOWN ON PLANS TO FACILITATE AIR BALANCING.
 - B. WHERE ACCESS TO BALANCING DAMPER IS RESTRICTED, YOUNG'S REGULATORS SHALL BE USED.
 - C. ALL RECTANGULAR DAMPERS IN OUTSIDE AIR, RELIEF AIR, OR RETURN AIR DUCTS ARE TO BE OF OPPOSED BLADE TYPE. ALL OUTSIDE AIR DUCT DAMPERS MUST ALSO BE OF THE LOW LEAKAGE TYPE.
 - D. ALL MOTORIZED DAMPERS NOT FURNISHED WITH EQUIPMENT ARE TO BE HONEYWELL DAMPERS.
- 15. DIFFUSERS, GRILLES, AND REGISTERS:
 - A. PROVIDE DIFFUSERS, GRILLES AND REGISTERS AS SCHEDULED. DEVICES TO BE COMPLETE WITH DAMPERS FRAMES AND ALL ACCESSORIES. FINISH AS INDICATED.
 - B. INSTALL ALL AIR DEVICES AS LOCATED ON THE ARCHITECTURAL REFLECTED CEILING PLAN.
 - C. APPROVED MANUFACTURERS: PRICE IS SPECIFIED, EQUALS BY METALAIR OR KRUEGER IS ACCEPTABLE.
- 15. DUCTWORK INSULATION:
 - A. INSTALL INSULATION PRODUCTS IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS, AND IN ACCORDANCE WITH RECOGNIZED INDUSTRY PRACTICES. INSULATION MUST COMPLY WITH NFPA 90A.
 - B. DUCT SIZES SHOWN ON DRAWINGS ARE INSIDE CLEAR DIMENSIONS. INSULATE SUPPLY AND RETURN AIR RECTANGULAR DUCTWORK. DUCTWORK SHALL BE INTERNALLY INSULATED WITH 1" THICK, 1-1/2 LB. DENSITY LINER (C=0.28 @ 75°F). LINER IS TO HAVE A COATED SURFACE EXPOSED TO AIRSTREAM TO PREVENT EROSION. APPLY ADHESIVES AND MECHANICAL FASTENERS AS RECOMMENDED BY SMACNA AND THE MANUFACTURER TO PREVENT LINER SEPARATION FROM THE DUCT. ALL TRANSVERSE EDGES TO BE COATED WITH ADHESIVE.
 - C. INSULATED WITH A MINIMUM OF 1" THICK, 1-1/2 LB. DENSITY (R=5.6) DUCT WRAP WITH VAPOR BARRIER. VAPOR BARRIER IS TO BE MAINTAINED THROUGHOUT DUCT SYSTEM. ALL JOINTS MUST BE TAPED SO THAT NO INSULATION FIBER IS VISIBLE. EXTEND DUCTWORK INSULATION WITHOUT INTERRUPTION THROUGH WALLS, FLOORS, AND SIMILAR PENETRATIONS.
 - D. ALL INSULATION SHALL HAVE A FLAME SPREAD RATING OF NOT MORE THAN 25 AND A SMOKE DEVELOPED RATING OF NO HIGHER THAN 50 WHEN TESTED IN ACCORDANCE WITH ASTM C411, OR AS REQUIRED BY LOCAL CODES.
- 15. SYSTEM CLEANOUT:
 - A. DUCTWORK AND AIR HANDLING EQUIPMENT IS TO BE CLEANED OUT AND BLOWN OUT BEFORE PAINTING IS STARTED BY THE GENERAL CONTRACTOR.
 - B. FILTERS MUST BE IN UNITS AT ANY TIME FANS ARE OPERATED.
- C. PIPING
 - 1. GENERAL INSTALLATION:
 - A. INSTALL WATER MAINS WITHOUT PITCH. USE ECCENTRIC REDUCING COUPLINGS AT CHANGES IN SIZE WITH THE TOP OF PIPES AT SAME ELEVATION. MAKE CHANGES IN DIRECTION WITH FITTINGS.
 - B. BRANCHES TO UNITS BELOW MAINS TO BE TAKEN FROM BOTTOM OF MAINS AT A 45 DEGREE ANGLE, PITCH DOWNWARD TOWARD UNITS. BRANCHES TO UNITS ABOVE MAINS TO BE TAKEN FROM TOP OF MAINS AT A 45 DEGREE ANGLE PITCHED UPWARD TOWARDS UNITS. PITCH NOT LESS THAN 1 INCH TO 10 FEET.
 - C. HANGERS SHALL BE SIZED AND INSTALLED FOR THE OUTSIDE DIAMETER OF THE INSULATED PIPE. INSTALL 6 INCHES LONG SPLIT ORICLE GALVANIZED SADDLE BETWEEN THE HANGER AND PIPE INSULATION.
 - D. HANGERS AND PIPING OF DISSIMILAR METALS SHALL BE DIALECTICALLY SEPARATED FROM ONE ANOTHER. SEE PLANS FOR APPLICABLE DETAILS.
 - E. ALL PRESSURE PIPING SYSTEMS INSTALLED SHALL CONFORM TO THE REQUIREMENTS OF THE STATE PIPING AND WELDING CODES.
 - F. INSTALL VALVES AT LOW POINTS FOR DRAINING EACH SYSTEM AND INSTALL MANUAL VENTS TO ALL HIGH POINTS OF EQUIPMENT AND PIPING IN THE SYSTEM TO PROPERLY REMOVE ENTRAPPED AIR.
 - D. SYSTEM TESTING, ADJUSTING, AND BALANCING
 - 1. TESTING, ADJUSTING AND BALANCING OF ALL WORK SHALL BE MADE BY AN INDEPENDENT CONTRACTOR WHO IS CURRENTLY LICENSED ASSOCIATED AIR BALANCING COUNCIL (AABC) OR NATIONAL ENVIRONMENTAL BALANCING BUREAU (NEBB) BALANCING CONTRACTOR. NO OTHER BALANCE REPORTS WILL BE REVIEWED OR ACCEPTED. ALL BALANCING WORK MUST BE COMPLETE AND DONE IN ACCORDANCE WITH THE MOST RECENT STANDARDS OF THEIR SOCIETY. PAYMENT OF ALL COSTS FOR TESTING SHALL BE MADE BY THE HVAC CONTRACTOR.
 - 2. THE HVAC CONTRACTOR SHALL INSTALL NEW FILTERS IN ALL UNITS PRIOR TO THE AIR BALANCE. THE COMPLETE AIR BALANCE SHALL TAKE PLACE WITH OUTSIDE AIR DAMPERS IN MINIMUM POSITION.
 - 3. BALANCE AIR AND WATER QUANTITIES TO WITHIN + 5% OF THAT INDICATED ON THE DRAWINGS. ANY REQUIRED CHANGES IN SHEAVES, BELTS, PULLEYS, OR THE ADDITION OF DAMPERS REQUIRED TO ACHIEVE SPECIFIED FLOW RATES SHALL BE PERFORMED BY THE HVAC CONTRACTOR WITH NO ADDITIONAL COST TO THE TENANT.
 - 4. THE BALANCE REPORT SHALL INCLUDE AS A MINIMUM THE FOLLOWING INFORMATION:
 - A. AABC OR NEBB CERTIFICATION NUMBER AND SIGNATURE OF BALANCING CONTRACTOR.
 - B. INSTRUMENTATION LIST WITH LAST CALIBRATION DATES.
 - C. MAKE AND MODEL NUMBERS OF ALL HVAC EQUIPMENT TESTED.
 - D. AIR CFM AND STATIC PRESSURE READINGS (DISCHARGED AND SUCTION) AS MEASURED BY PITOT TUBE DUCT TRAVERSE AT THE UNIT.
 - E. MOTOR NAMEPLATE DATA WITH ACTUAL FIELD VOLTAGE AND AMPERAGE READINGS FOR EACH LEG.
 - F. MOTOR AND FAN RPMs, SHEAVE SIZES AND BELT SIZES.
 - G. OUTSIDE RETURN, MIXED AND SUPPLY AIR TEMPERATURES AT FULL COOLING.
 - H. WATER BALANCE DATA INCLUDING GPM WITH INLET AND OUTLET TEMPERATURE AND PRESSURE READINGS (WHERE APPLICABLE).
 - I. MAKE AND MODEL NUMBERS OF ALL AIR DISTRIBUTION EQUIPMENT.
 - J. FINAL BALANCED AIR VOLUMES AT ALL OUTLETS (INCLUDING RETURNS WHERE DUCTED).
 - K. INDEXED PLAN WITH DIFFUSER AND RETURN LOCATIONS.
- 5. ALL CONTROL SEQUENCES SHALL BE TESTED (INTERLOCKED EQUIPMENT, SMOKE DETECTORS, SMOKE EVACUATION, ECONOMIZER, ETC.) AND OPERATING STATUS RECORDED IN THE REPORT.
- 6. THREE COPIES OF THE BALANCE REPORT SHALL BE SUBMITTED THROUGH THE GENERAL CONTRACTOR TO THE TENANT'S CONSTRUCTION MANAGER FOR APPROVAL.
- 7. THE BALANCING CONTRACTOR SHALL PERFORM ALL APPLICABLE TESTING AND BALANCING FUNCTIONS REQUIRED FOR THE SYSTEM DESIGNED IN THESE DRAWINGS. THE BALANCING CONTRACTOR SHALL RECHECK ANY ITEMS THAT THE TENANT DEEMS NECESSARY AT NO ADDITIONAL COST TO THE TENANT.
- 8. FINAL BALANCE REPORT SHALL BE INCLUDED IN THE OPERATION AND MAINTENANCE MANUALS.
- E. FINAL HVAC INSPECTIONS
 - 1. ASIDE FROM NORMAL INTERIM INSPECTIONS OF WORK IN PLACE, THE TENANT SHALL HAVE THE RIGHT TO AN INDEPENDENT HVAC CONTRACTOR INSPECT THE FINISHED HVAC INSTALLATION UPON COMPLETION FOR COMPLIANCE WITH THE PLANS, SPECIFICATIONS, AND CODES. THE INSTALLING CONTRACTOR WILL BE RESPONSIBLE TO BRING ALL ITEMS REPORTED BY THE INDEPENDENT HVAC CONTRACTOR UP TO PLANS AND SPECIFICATION REQUIREMENTS AT NO COST TO TENANT.

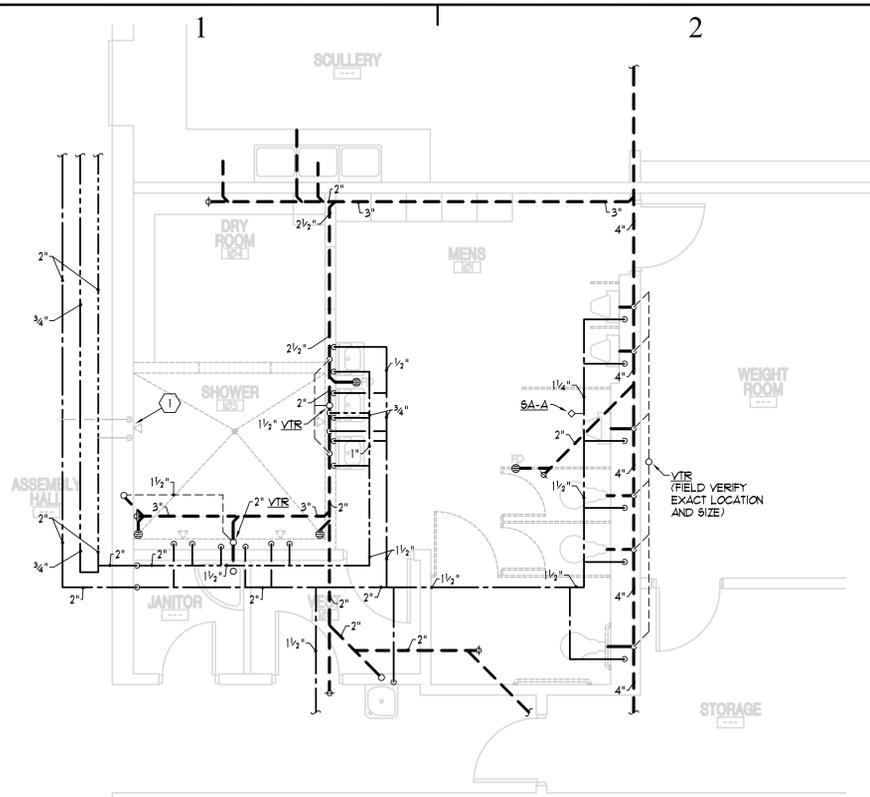


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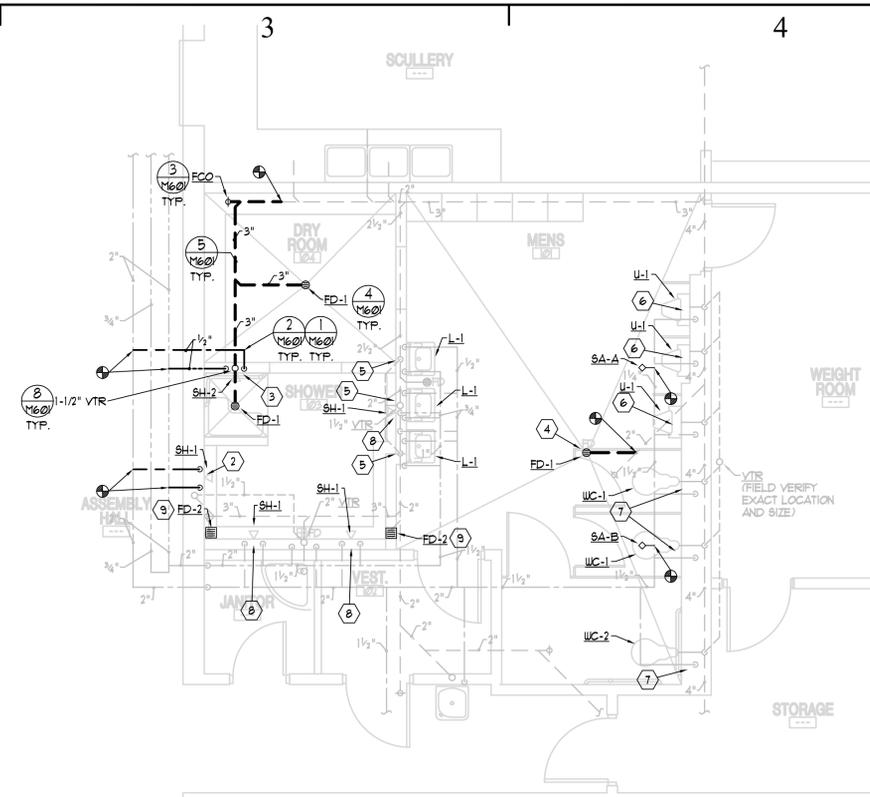
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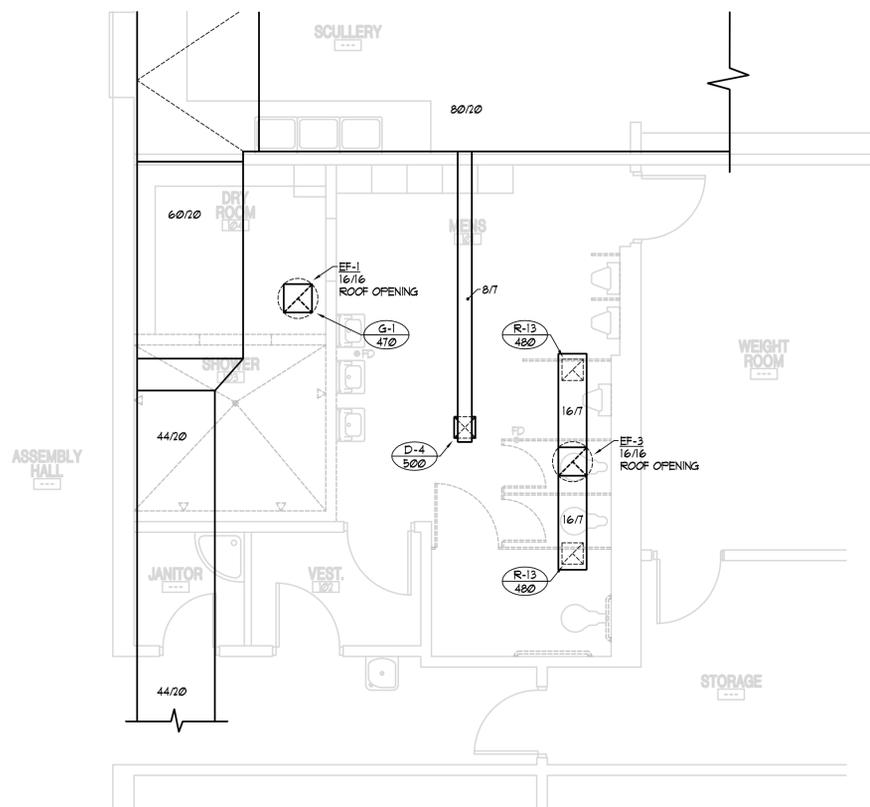
By: aspendev; Aug 17, 2009 - 9:38am, X:\Projects\2009\09101.00.01 - UTNG Richfield Cedar City\M201 - 09101.00.01.dwg



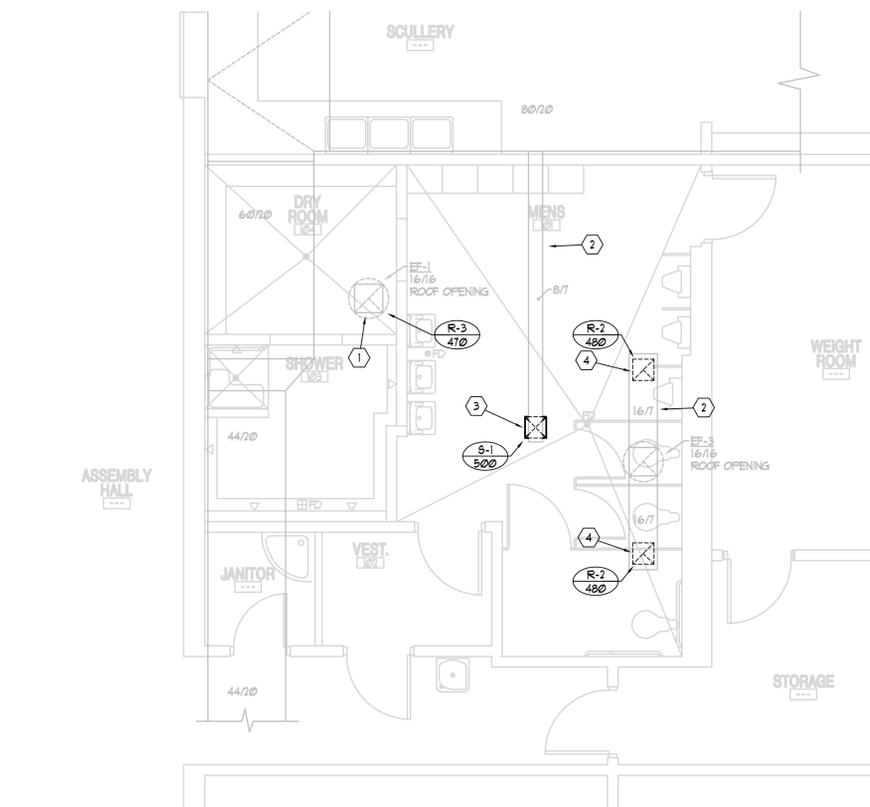
1 DEMO/ EXISTING PLUMBING FLOOR PLAN
 M201 SCALE: 1/4" = 1' - 0"
 3' 0" 2' 4' 6' 8'



2 NEW PLUMBING FLOOR PLAN
 M201 SCALE: 1/4" = 1' - 0"
 3' 0" 2' 4' 6' 8'



3 DEMO/ EXISTING MECHANICAL FLOOR PLAN
 M201 SCALE: 1/4" = 1' - 0"
 3' 0" 2' 4' 6' 8'



4 NEW MECHANICAL FLOOR PLAN
 M201 SCALE: 1/4" = 1' - 0"
 3' 0" 2' 4' 6' 8'

KEYED NOTES:

- 1 REMOVE AND RELOCATE EXISTING WATER LINES TO NEW LOCATION FOR USE WITH NEW SHOWER FIXTURE. SEE 2/11-201 FOR MORE INFORMATION.
- 2 RELOCATED WATER LINE FROM DEMO TO NEW SHOWER FIXTURE.
- 3 NEW 1/2" HOT AND COLD WATER LINES DOWN TO NEW ADA SHOWER.
- 4 NEW LOCATED FLOOR DRAIN FROM DEMO. CONNECT TO WASTE LINE PER CODE REQUIREMENTS
- 5 EXISTING HOT, COLD, WASTE AND VENT LINES TO BE REUSED FOR NEW LAVATORY FIXTURE. PROVIDE/INSTALL ANY/ ALL MAINTENANCE NEEDED.
- 6 EXISTING HOT, COLD, WASTE AND VENT LINES TO BE REUSED FOR NEW URINAL FIXTURE. PROVIDE/INSTALL ANY/ ALL MAINTENANCE NEEDED.
- 7 EXISTING HOT, COLD, WASTE AND VENT LINES TO BE REUSED FOR NEW SHOWER CLOSET. PROVIDE/INSTALL ANY/ ALL MAINTENANCE NEEDED.
- 8 EXISTING HOT AND COLD WATER LINES TO BE REUSED FOR NEW SHOWER FIXTURE. PROVIDE/INSTALL ANY/ ALL MAINTENANCE NEEDED.
- 9 REPLACE FLOOR DRAIN WITH NEW FLOOR DRAIN. CONNECT TO EXISTING SEWER LINE.

GENERAL NOTES:

1. P.C. IS TO FIELD VERIFY ALL EXISTING PLUMBING LOCATIONS.
2. P.C. IS TO VERIFY WORKING CONDITIONS OF EXISTING PLUMBING AND IS TO MAKE REPAIRS OR REPLACEMENTS AS NECESSARY TO MEET CURRENT ADOPTED CODES.

KEYED NOTES:

- 1 M.C. IS TO PERFORM ANY/ ALL MAINTENANCE TO EXHAUST FAN NEEDED TO MAINTAIN PROPER FUNCTION. PROVIDE WITH NEW EXHAUST GRILLE.
- 2 M.C. IS TO TAKE CARE AS TO NOT DAMAGE EXISTING DUCTWORK. ALSO IS TO PERFORM ANY MAINTENANCE REPAIRS NEEDED TO MAINTAIN PROPER OPERATION.
- 3 PROVIDE/ INSTALL NEW SUPPLY DIFFUSER.
- 4 PROVIDE/ INSTALL NEW EXHAUST GRILLE.



jsa architects
 architects
 planners
 interior designers
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 Suite 205
 Salt Lake City, UT 84121
 Ph: 801.733-2500
 Fax: 801.733-2501
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BUILDING NAME:

NAME
 RM#

PROJECT TITLE:

UTNG ARMORY

CEDAR CITY,
 UTAH

MARK	DATE	DESCRIPTION

ISSUE TYPE: CONSTRUCTION SET

ISSUE DATE: 8/17/2009

DFCM PROJECT NO: XXXXXXXX

CAD PROJECT NO: 05-XXX

CAD DWG FILE:

DRAWN BY: JB

CHK'D BY: ADS

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SHEET TITLE

MENS PLUMBING & MECH FLR PLAN

SHEET NUMBER

M-201

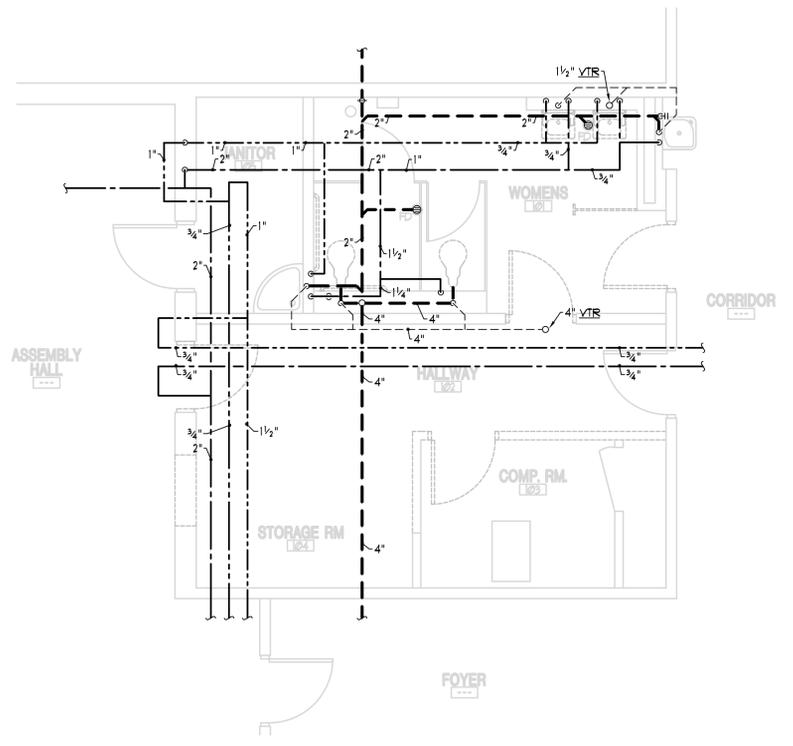
SHEET 13 OF 18



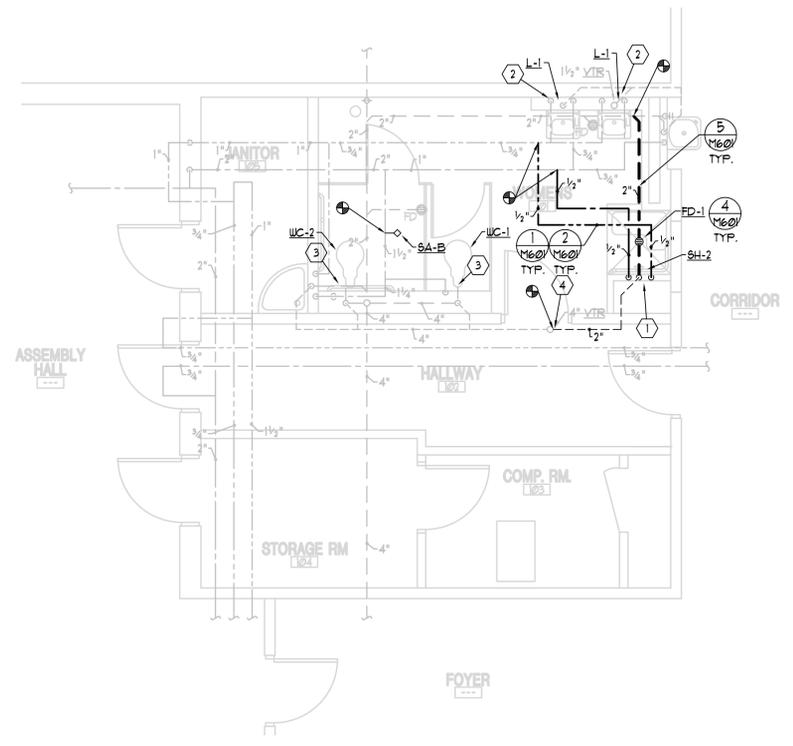
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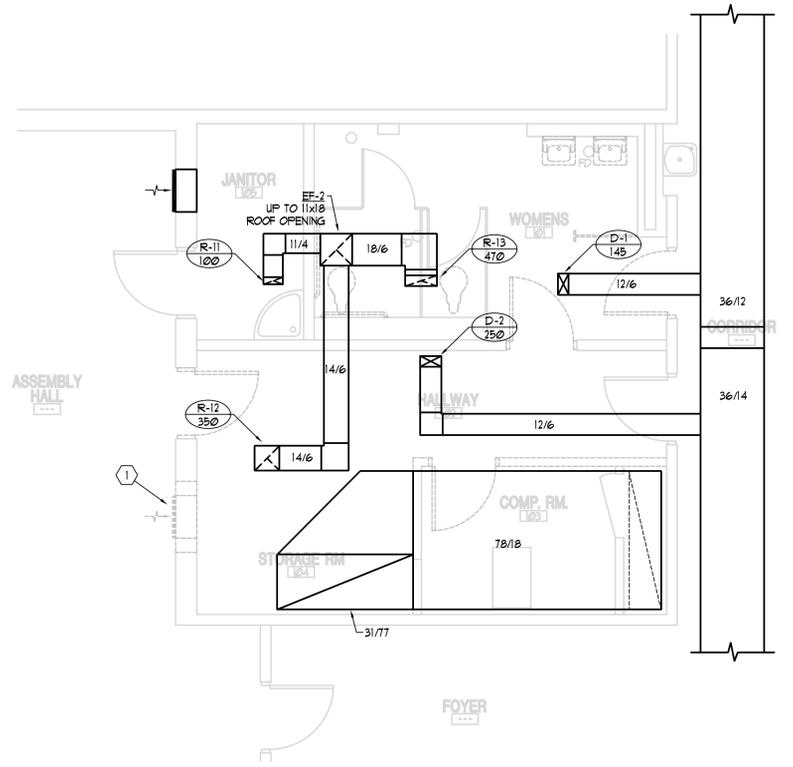
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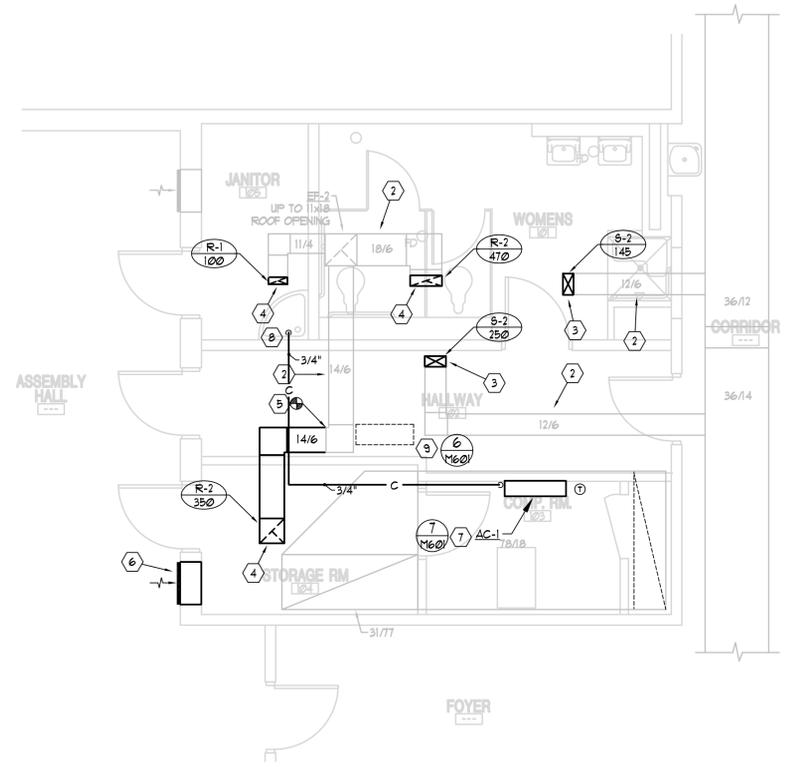
1 DEMO/ EXISTING PLUMBING FLOOR PLAN
 M202 SCALE: 1/4" = 1' - 0"



2 NEW PLUMBING FLOOR PLAN
 M202 SCALE: 1/4" = 1' - 0"



3 DEMO/ EXISTING MECHANICAL FLOOR PLAN
 M202 SCALE: 1/4" = 1' - 0"



4 NEW MECHANICAL FLOOR PLAN
 M202 SCALE: 1/4" = 1' - 0"

- KEYED NOTES:**
- 1 DROP NEW 1/2" HOT AND COLD WATER LINES DOWN TO NEW ADA SHOWER.
 - 2 EXISTING HOT, COLD, WASTE AND VENT LINES TO BE REUSED FOR NEW LAVATORY FIXTURE. PROVIDE/ INSTALL ANY/ ALL MAINTENANCE NEEDED.
 - 3 EXISTING COLD, WASTE AND VENT LINES TO BE REUSED FOR NEW WATER CLOSET. PROVIDE/ INSTALL ANY/ ALL MAINTENANCE NEEDED.
 - 4 CONNECT 2" VENT PIPING TO EXISTING VTR. P.C. TO FIELD VERIFY AND LOCATE EXACT LOCATION

- GENERAL NOTES:**
1. P.C. IS TO FIELD VERIFY ALL EXISTING PLUMBING LOCATIONS.
 2. P.C. IS TO VERIFY WORKING CONDITIONS OF EXISTING PLUMBING AND IS TO MAKE REPAIRS OR REPLACEMENTS AS NECESSARY TO MEET CURRENT ADOPTED CODES.

- KEYED NOTES:**
- 1 FIELD VERIFY. DEMO OUT SUPPOSED TRANSFER AIR AND RELOCATE TO NEW LOCATION SHOWN IN 2/M202.
 - 2 M.C. IS TO TAKE CARE AS TO NOT DAMAGE EXISTING DUCTWORK. ALSO IS TO PERFORM ANY MAINTENANCE REPAIRS NEEDED TO MAINTAIN PROPER OPERATION.
 - 3 PROVIDE/ INSTALL NEW SUPPLY DIFFUSER.
 - 4 PROVIDE/ INSTALL NEW EXHAUST GRILLE.
 - 5 PROVIDE/ INSTALL NEW 14/6 DUCTWORK TO ROUTE TO NEW EXHAUST GRILLE.
 - 6 RELOCATED SUPPOSED TRANSFER AIR. M.C. IS TO MATCH DUCTWORK AND GRILLES (IF APPLICABLE) TO EXISTING.
 - 7 MOUNT AC-1 HIGH ON WALL. RIN REFRIGERANT LINES AS RECOMMENDED BY MANUFACTURER UP TO CONDENSER. SEE DETAIL 7/M202.
 - 8 AIR GAP DRAIN LINE TO SERVICE SINK.
 - 9 CONDENSER FOR AC-1. MOUNT ON EQUIPMENT PAD ON THE ROOF. SEE DETAIL 6/M202. SEAL WEATHER/WATER TIGHT.



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 Suite 205
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BUILDING NAME:

NAME
 RM#

PROJECT TITLE:

UTNG ARMORY

CEDAR CITY,
 UTAH

MARK	DATE	DESCRIPTION

ISSUE TYPE: CONSTRUCTION SET

ISSUE DATE: 8/17/2009

DFCM PROJECT NO: XXXXXXXX

CAD PROJECT NO: 05-XXX

CAD DWG FILE:

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SHEET TITLE

WOMENS PLUMBING & MECH FLR PLAN

SHEET NUMBER

M-202

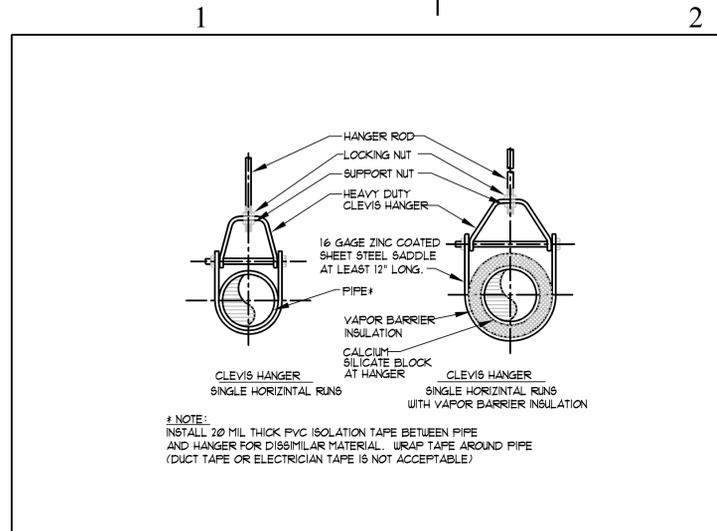
SHEET 14 OF 18



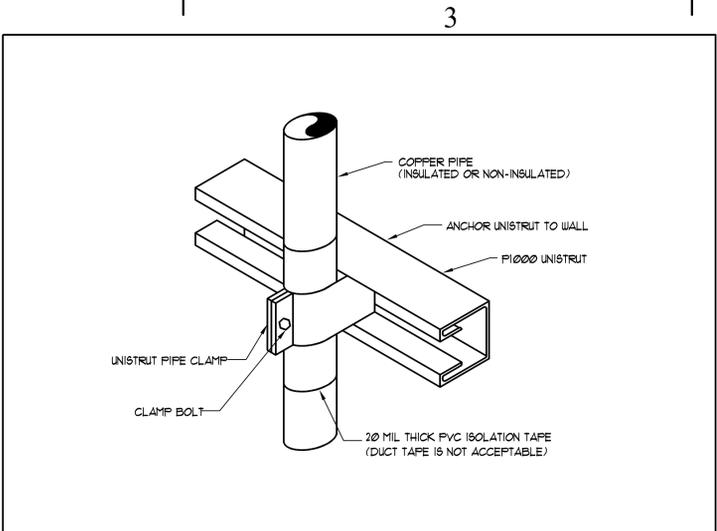
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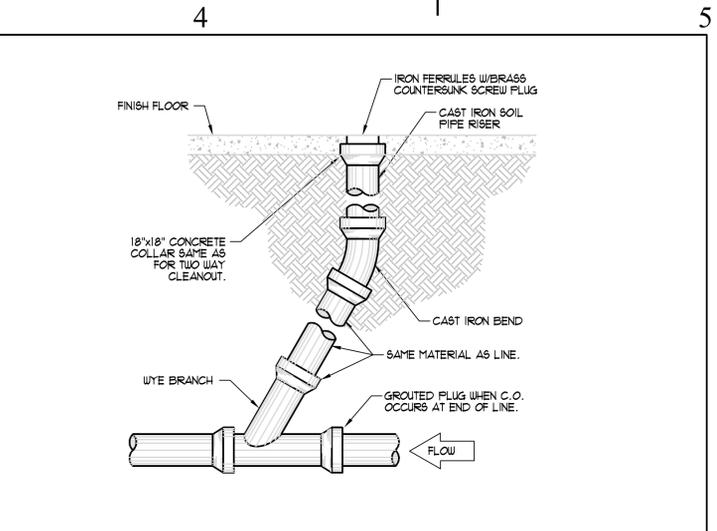
By: aspendave; Aug 17, 2009 - 9:38am; X:\Projects\2009\09101.00.01 - UTNG Richfield Cedar City\M601 - 09101.00.01.dwg



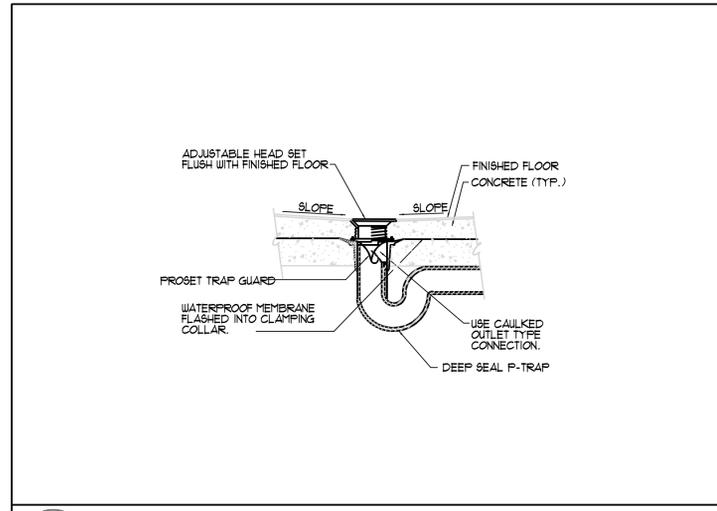
1 PIPE HANGERS DETAIL
NO SCALE



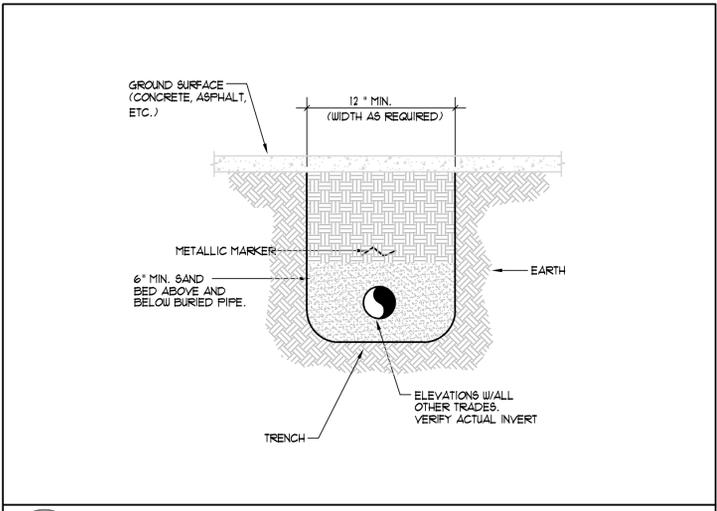
2 PIPE SUPPORT DETAIL
NO SCALE



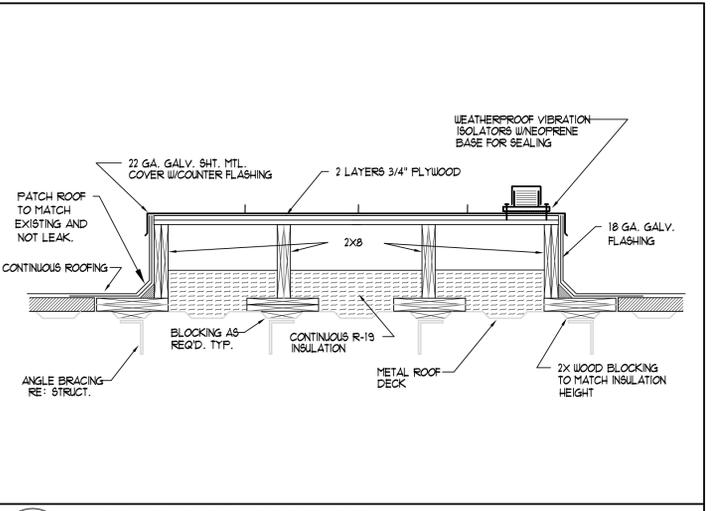
3 FLOOR CLEANOUT DETAIL
NO SCALE



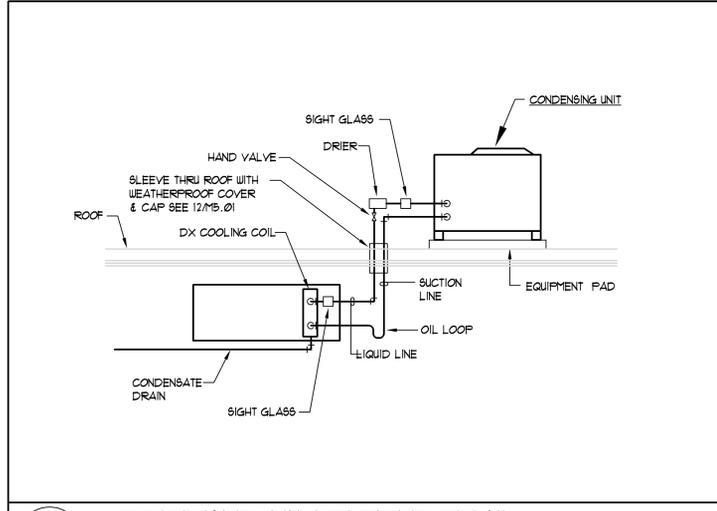
4 FLOOR DRAIN W/TRAP GUARD DETAIL
NO SCALE



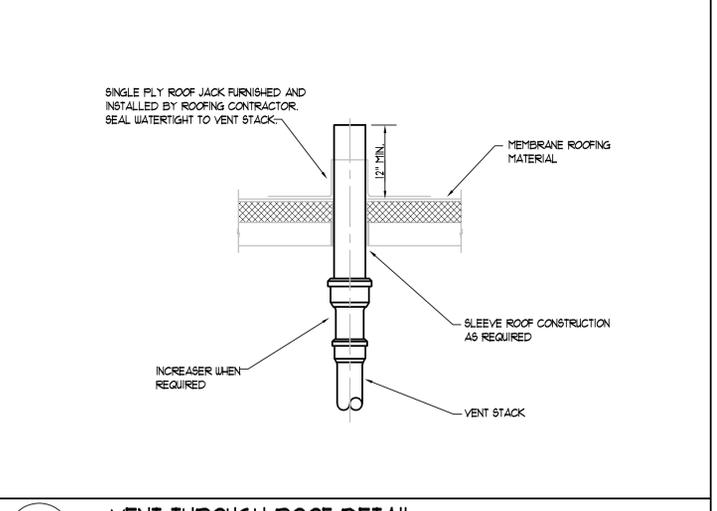
5 BURIED PIPE DETAIL
NO SCALE



6 EQUIPMENT SUPPORT DETAIL
NO SCALE



7 CONDENSING UNIT-FCU PIPING DETAIL
NO SCALE



8 VENT THROUGH ROOF DETAIL
NO SCALE



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architects
planners
interior designers
6465 South 3000 East
Suite 205
Salt Lake City, UT 84121
Ph: 801.733-2500
Fax: 801.733-2501
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BUILDING NAME:

NAME
RM#

PROJECT TITLE:

UTNG ARMORY
CEDAR CITY,
UTAH

MARK	DATE	DESCRIPTION

ISSUE TYPE: CONSTRUCTION SET

ISSUE DATE: 8/17/2009

DFCM PROJECT NO: XXXXXXXX

CAD PROJECT NO: 05-XXX

CAD DWG FILE:

DRAWN BY: JB

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SHEET TITLE

DETAILS

SHEET NUMBER

M-601

SHEET 15 OF 18



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Table with columns for SYMBOL, DESCRIPTION, MOUNTING HEIGHT, and SYMBOL, DESCRIPTION, MOUNTING HEIGHT. It is divided into sections: ELECTRICAL WIRING, LIGHTING CONTROL, AUDIO / VIDEO, ELECTRICAL POWER, LIGHTING, ELECTRICAL CONNECTIONS, ELECTRICAL DISTRIBUTION, TELECOMMUNICATIONS, SECURITY, and ELECTRICAL DEVICES. Includes a 'REFERENCE SYMBOLS' section at the bottom.

Table titled 'ABBREVIATIONS' with columns for SYMBOL, DESCRIPTION, and SYMBOL, DESCRIPTION. It lists various abbreviations used in the schedule, such as AFF for ABOVE FINISHED FLOOR and EWC for ELECTRICAL WATER COOLER.

GENERAL NOTES: 1. THE ELECTRICAL CONTRACTOR SHALL REVIEW AND COORDINATE WITH ARCHITECTURAL, CIVIL, STRUCTURAL, MECHANICAL, PLUMBING AND OTHER DRAWINGS PRIOR TO BID. 2. SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH THE SPECIFICATIONS BOUND IN A THREE RING BINDER... 3. IT IS THE INTENT OF THESE DRAWINGS AND SPECIFICATIONS TO ESTABLISH A STANDARD OF QUALITY... 4. CONTRACTOR SHALL SECURE AND PAY FOR ALL NECESSARY BUILDING PERMITS AND INSPECTION FEES... 5. ALL IMPACT FEES ASSOCIATED WITH CITY, UTILITY OR SERVICE COMPANIES FOR BUT NOT LIMITED TO POWER, TELEPHONE, FIBER OPTIC & INTERNET SHALL BE THE RESPONSIBILITY OF THE OWNER... 6. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE TO COORDINATE WITH THE GENERAL CONTRACTOR TO PROVIDE AND INSTALL TEMPORARY POWER FOR PROJECT CONSTRUCTION AS REQUIRED... 7. THE ELECTRICAL CONTRACTOR SHALL NOTIFY AND COOPERATE WITH THE MECHANICAL CONTRACTOR... 8. DO NOT SCALE DRAWINGS VERIFY DIMENSIONS IN FIELD PRIOR TO MAKING ANY ROUGHING... 9. VERIFY EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN... 10. CONSULT ARCHITECTS REFLECTED CEILING PLANS FOR EXACT LOCATIONS OF LIGHTING FIXTURES, SPEAKERS, SMOKE DETECTORS ETC... 11. ELECTRICAL CONTRACTOR SHALL MEET WITH THE CEILING AND MECHANICAL CONTRACTORS TO COORDINATE LOCATIONS, CLEARANCES, CEILING TYPES AND ROUGH-IN REQUIREMENTS OF ALL LIGHTING FIXTURES PRIOR TO DUCT, PIPING AND CEILING INSTALLATIONS... 12. VERIFY EXACT LOCATION OF EQUIPMENT TO BE FURNISHED BY OTHERS PRIOR TO ROUGH-IN... 13. ELECTRICAL CONTRACTOR SHALL VERIFY ALL EQUIPMENT DIMENSIONS AND LOCATIONS BEFORE BEGINNING ROUGHING... 14. ELECTRICAL ROOM DRAWINGS ARE FOR REFERENCE ONLY OF EQUIPMENT QUANTITIES... 15. CONTRACTOR SHALL VERIFY ACTUAL ELECTRICAL LOADS FROM NAMEPLATE RATINGS OF EACH PIECE OF EQUIPMENT... 16. WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER PER INDUSTRY STANDARD AND TO THE SATISFACTION OF THE ARCHITECT AND ENGINEER... 17. WORK MATERIALS AND EQUIPMENT SHALL CONFORM TO THE LATEST EDITIONS OF LOCAL, STATE AND NATIONAL CODES, STANDARDS AND ORDINANCES... 18. FINAL CONNECTIONS TO EQUIPMENT SHALL BE MADE AS PER MANUFACTURERS WRITTEN INSTRUCTIONS AND APPROVED WIRING DIAGRAMS AND DETAILS... 19. ALL EMPTY RACEWAY SYSTEMS SHALL HAVE A 200LB RATED RULL GORD INSTALLED AND SHALL BE IDENTIFIED AT EACH JUNCTION, RULL AND TERMINATION POINT... 20. ALL PENETRATIONS OF FIRE RATED FLOORS, CEILING AND WALLS SHALL BE SEALED WITH LISTED AND RATED FIRE STOP MATERIAL... 21. ELECTRICAL BOXES SHALL NOT BE LOCATED IN MASONRY OR CONCRETE CEILING, BOND BEAMS OR GROUTED CELLS OF MASONRY WALLS ADJACENT TO JOINTS WITHOUT COORDINATION WITH THE MASONRY CONTRACTOR... 22. WIRE FOR GENERAL USE SHALL BE COPPER 75° C RATED... 23. CONDUCTORS HAVE BEEN SIZED FOR VOLTAGE DROP AS PER PLANS AND DIRECT ROUTING... 24. ALL WIRING IN PATIENT TREATMENT AREAS SHALL BE ENCLOSED IN METAL RACEWAYS... 25. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL UTILITY METERING EQUIPMENT TO COMPLY WITH THE STANDARDS OF THE LOCAL OR PROJECT SPECIFIC POWER COMPANY... 26. VERIFY EXACT LOCATIONS OF ALL NEW AND EXISTING UNDERGROUND SITE UTILITIES, PIPING AND RACEWAY SYSTEMS PRIOR TO TRENCHING... 27. PROVIDE RECORD DRAWINGS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS... 28. THE CONTRACTOR SHALL GUARANTEE THE INSTALLATION AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP WHICH MAY OCCUR UNDER NORMAL USAGE FOR A PERIOD OF ONE YEAR AFTER SUBSTANTIAL COMPLETION... 29. ALL CABLES AND RACEWAYS INSTALLED UNDER METAL CORRUGATED ROOF DECK SHALL BE INSTALLED AND SUPPORTED TO THE NEAREST OUTSIDE SURFACE... 30. PROVIDE RECORD DRAWINGS IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS... 31. THE CONTRACTOR SHALL GUARANTEE THE INSTALLATION AGAINST DEFECTS IN MATERIALS AND WORKMANSHIP WHICH MAY OCCUR UNDER NORMAL USAGE FOR A PERIOD OF ONE YEAR AFTER SUBSTANTIAL COMPLETION... 32. ALL CABLES AND RACEWAYS INSTALLED UNDER METAL CORRUGATED ROOF DECK SHALL BE INSTALLED AND SUPPORTED TO THE NEAREST OUTSIDE SURFACE...

ELECTRICAL SPECIFICATIONS SECTION 16000 - GENERAL PROVISIONS WORK CONSISTS OF FURNISHING LABOR, MATERIALS, EQUIPMENT AND SERVICES REQUIRED FOR THE COMPLETE INSTALLATION OF ELECTRICAL WORK SHOWN IN THE CONTRACT DOCUMENTS AND SPECIFIED IN DIVISION 16. INCLUDE ALL PARTS AND LABOR WHICH ARE INCIDENTAL AND NECESSARY FOR A COMPLETE AND OPERABLE INSTALLATION EVEN THOUGH NOT SPECIFICALLY MENTIONED IN THE CONTRACT DOCUMENTS... SECTION 16020 - GENERAL PROVISIONS DO NOT DISTURB NORMAL USE OF THE FACILITY... SECTION 16030 - BUILDING LIGHTING PROVIDE LIGHTING FIXTURES AS SCHEDULED CAJ HOUSING LAMPS, LAMP HOLDERS, REFLECTORS, BALLASTS & WIRING... SECTION 16040 - ELECTRICAL DEVICES PROVIDE ALL NECESSARY LIGHTING FIXTURES W/ 4" IDGA WIRES INDEPENDENT FROM CEILING SUPPORT SYSTEM...

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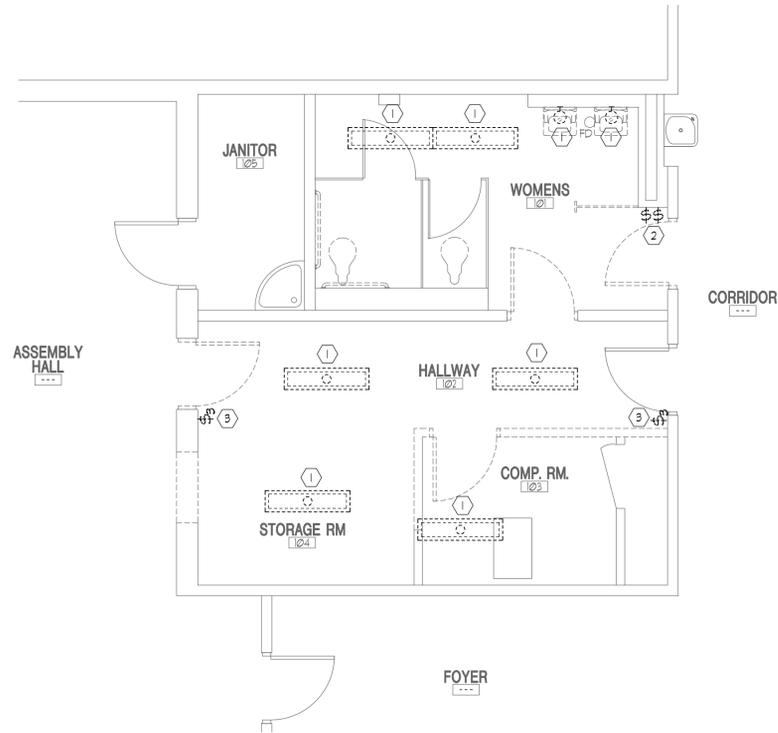
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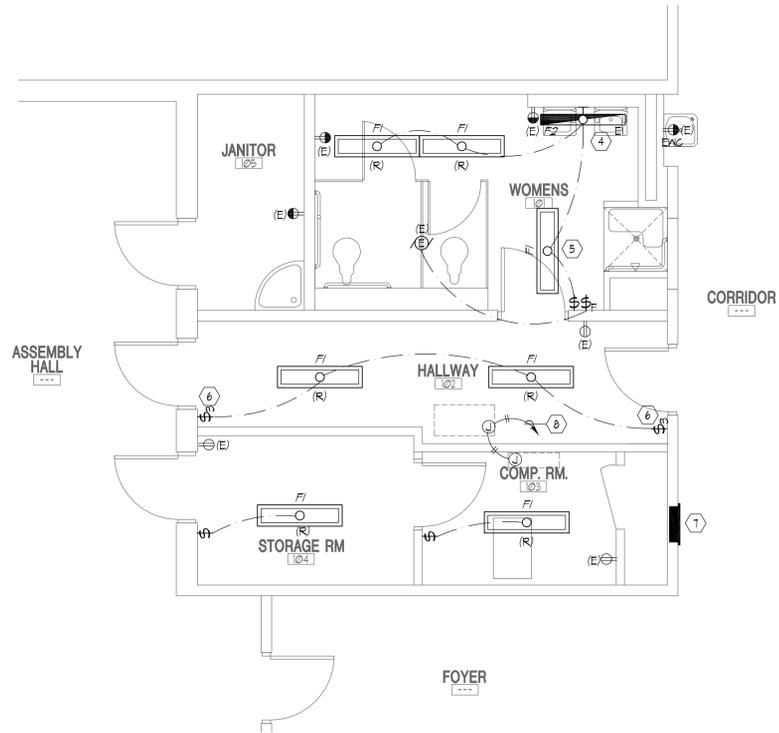
C

B

A



A EXISTING WOMEN'S RESTROOM - DEMOLITION
E201 SCALE: 1/4" = 1'-0"



B NEW WOMEN'S RESTROOM - ELECTRICAL
E201 SCALE: 1/4" = 1'-0"



LIGHT FIXTURE SCHEDULE									
FIXTURE NUMBER	FIXTURE MANUFACTURER	FIXTURE CATALOG #	DESCRIPTION	LAMPS			FIXTURE		REMARKS
				TYPE	QTY.	VOLTS	WATTS	MOUNTING	
F1	METALUX DAYBRITE	MS-252A-EBB1 CAN252-1/2B	1X4 SURFACE FLUORESCENT (2 LAMP)	F32T8/SP55 ECO	2	120	66	SURFACE CEILING	PROVIDE WITH ELECTRONIC BALLAST
F2	DAYBRITE METALUX	CD_252M-2/1-EB BE-252-EBB1	48" WALL MTD. FLUORESCENT WITH 2-LAMP	F32T8/SP55 ECO	2	120	66	SURFACE WALL	PROVIDE WITH ELECTRONIC BALLAST
F3	LITMARK DAYBRITE	FLV5-C66-26 VFN26CU-C-L-P-6	FLUORESCENT CEILING MOUNTED	26DIT	1	120	21	SURFACE CEILING	PROVIDE WITH ELECTRONIC BALLAST
E1	BODINE IOTA	B50 1-920	EMERGENCY BALLAST ((2)-4 FOOT T-8 LAMP)	----	----	120	----	----	EMERGENCY BALLAST (1)-4 FOOT T8 LAMP, 100 LUMENS MIN. VERIFY COMPATIBILITY BEFORE ORDERING

NOTE:
ELECTRICAL CONTRACTOR SHALL PROVIDE A "QUICK DISCONNECT HARNESS" FOR EACH FLUORESCENT LIGHTING FIXTURE TO SERVE AS A MEANS OF DISCONNECT TO ALLOW THE FIXTURE BALLAST TO BE SERVICED IN PLACE, AS PER THE NATIONAL ELECTRICAL CODE 2008, ARTICLE 410.150 (6).

GENERAL NOTES:

- DUPLEX RECEPTILES MARKED WITH AN 'E1' ARE EXISTING TO REMAIN. REMOVE DEVICE AND COVERPLATE AND REPLACE WITH A NEW DEVICE AND COVERPLATE.

KEYED NOTES (⊙):

- LIGHTING FIXTURE TO BE REMOVED.
- SWITCHES TO BE REMOVED. REMOVE CONDUIT AND WIRE BACK TO NEAREST JUNCTION BOX OR PANELBOARD.
- EXISTING SWITCHES AND COVERPLATES TO BE REMOVED.
- EMERGENCY LIGHT FIXTURE TO BE SWITCHED (SEE EMERGENCY BALLAST OPERATION DETAIL).
- NEW LIGHTING FIXTURE TO BE ADDED.
- REPLACE EXISTING SWITCHES WITH NEW DEVICE AND COVERPLATE.
- EXISTING PANELBOARD.
- PROVIDE AND INSTALL A 3/4" CONDUIT WITH (2)-#12 THIN COPPER + (1)-#12 THIN COPPER GROUND TO EXISTING PANELBOARD. PROVIDE AND INSTALL A NEW 20A/2P BREAKER IN THE PANELBOARD.



jsa architects
architects
planners
interior designers
6465 South 3000 East
Suite 205
Salt Lake City, UT 84121
Ph: 801.733-2500
Fax: 801.733-2501
www.jsa-lc.com

CREATED BY: JSA ARCH.

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CONSULTANT



1040 North 2200 West, Suite 100
Salt Lake City, UT 84116
Phone: (801) 359-3158
Fax: (801) 521-4114

PROJECT TITLE:

UTNG ARMORY

CEDAR CITY, UTAH

MARK	DATE	DESCRIPTION

ISSUE TYPE: CONSTRUCTION SET

ISSUE DATE: August 17, 2009

DFCM PROJECT NO: 09160480
PVE PROJECT NO: 09101.00.01
CAD DWG FILE: E201-E202-09101.01-CC
DESIGNED BY: KJH
CHECKED BY: RKR
COPYRIGHT: STATE OF UTAH

SHEET TITLE

SHEET NUMBER

E201

SHEET 17 OF 18



1 2 3 4 5

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 By: kbrooke, Aug 25, 2004 - 3:39 PM. Date Plotted: Aug 25, 2004 - 3:39 PM. X:\Projects\2004\0101\001 - JMS Richfield Cedar City\E201-E202 - 0101.01 - CC.dwg

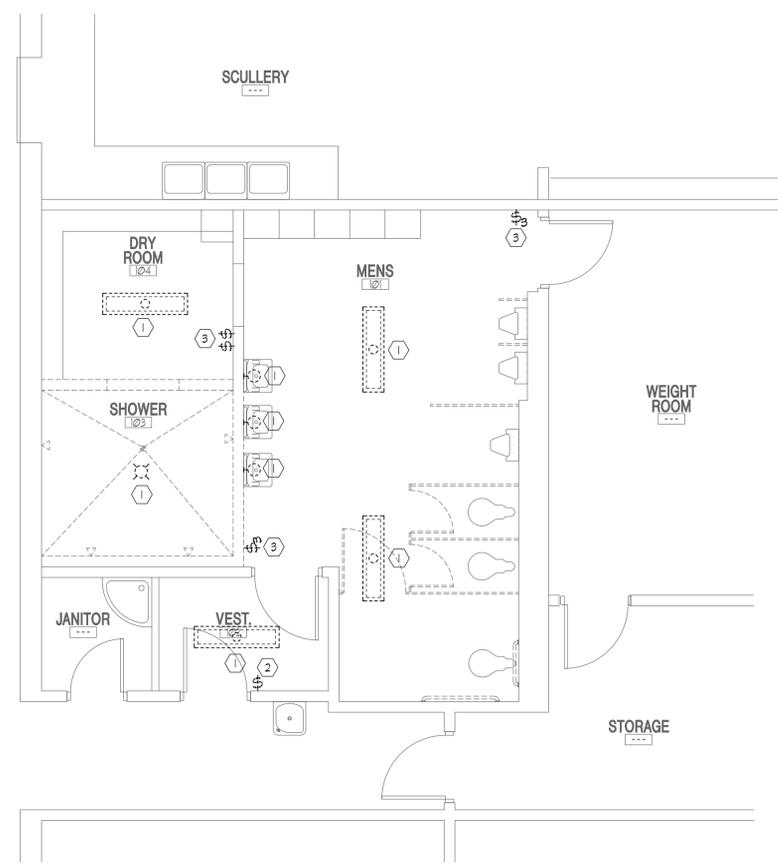
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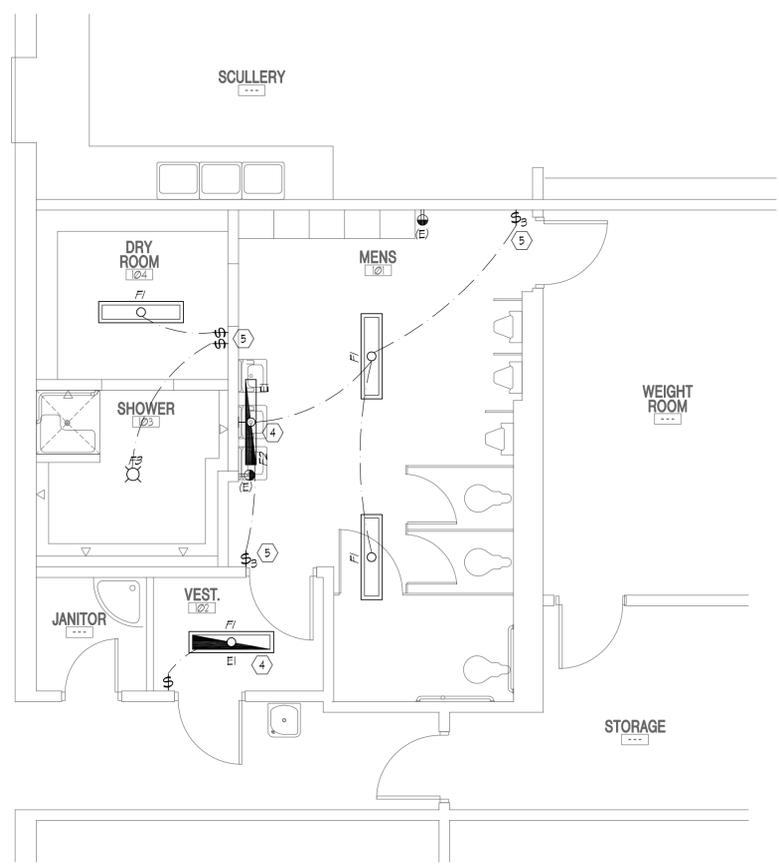
C

B

A



A EXISTING MEN'S RESTROOM - DEMOLITION
 E202 SCALE: 1/4" = 1'-0"



B NEW MEN'S RESTROOM - ELECTRICAL
 E202 SCALE: 1/4" = 1'-0"

GENERAL NOTES:

- DUPLEX RECEPTLES MARKED WITH AN 'E' ARE EXISTING TO REMAIN. REMOVE DEVICE AND COVERPLATE AND REPLACE WITH A NEW DEVICE AND COVERPLATE.

KEYED NOTES (⊙):

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- SWITCHES TO BE REMOVED. REMOVE CONDUIT AND WIRE BACK TO NEAREST JUNCTION BOX OR PANELBOARD.
- EXISTING SWITCHES AND COVERPLATES TO BE REMOVED.
- EMERGENCY LIGHT FIXTURE TO BE SWITCHED (SEE EMERGENCY BALLAST OPERATION DETAIL).
- REPLACE EXISTING SWITCHES WITH NEW DEVICE AND COVERPLATE.



jsa architects

architects
 planners
 interior designers

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 Suite 205
 Salt Lake City, UT 84121
 Ph: 801.733-2500
 Fax: 801.733-2501
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 Salt Lake City, UT 84116
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SHEET 18 OF 18



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