

Washoe Housing Authority

1588 WATASHEAMU RD
GARDNERVILLE, NEVADA 89460



DRESSLERVILLE COMMUNITY
(775) 265-2410 • FAX (775) 265-5293

NOTICE TO CONTRACTORS - INVITATION TO BID Stewart Community Building Washoe Stewart LIHTC

NOTICE IS HEREBY given that nonrestrictive open bids will be received by the Washoe Housing Authority (hereinafter referred to as WHA), until 2:00 P.M., **April 30th, 2024**, local time, for furnishing all labor, materials, tools, equipment, and transportation, to perform and complete all work necessary and incidental to construct a project identified as Stewart Community Building (south Carson City).

A general description of the project is as follows:

New construction of a 2,573 sq. ft. community building located at 5106 Dat-So-La-Lee Way, Carson City, Nevada.

-A Pre-Bid Meeting will be held at the project site on **Monday, April 22nd @ 10:00am**. All interested Contractors are required to attend and sign in.

-Bids shall be labeled with the bid title and delivered to Washoe Housing Authority Office located at 1588 Watasheamu Rd. Gardnerville, Nevada 89460. All successful bidders will be contacted within 5 days of bid opening in writing and/or email.

-Any bidder who wishes their bid to be considered is responsible for making certain that their bid is received in the aforementioned location by the proper time. No oral, telegraphic, electronic, facsimile bids or modifications will be considered. Bids received after the scheduled bid opening time will be returned.

-Contractors interested in submitting a bid must meet these requirements, which includes, but is not limited to, be licensed as a contractor with appropriate license limit and class, have adequate license limit, bonding limit and levels of insurance equal to the Total Development Cost (TDC).

-All labor on this project is covered by Davis Bacon and weekly certified payroll will be required in order to be paid by WHA. All applicable laws and regulations per Davis Bacon CFR will be adhered to in the performance of collecting payroll and material documents.

-All bids must be broken down to lump sum material and labor for each portion of the project to also include the percentage (%) of profit and overhead and all other costs associated with the

bidding or execution of the project. Due to Nevada State regulations for Tax Credit requirements, the profit and overhead cannot exceed 14%.

All equipment or other material with lead times for delivery will need to be called out in bids.

-A timeline of the portion of work is required and all bids will need an anticipated time for completion and any lag time anticipated.

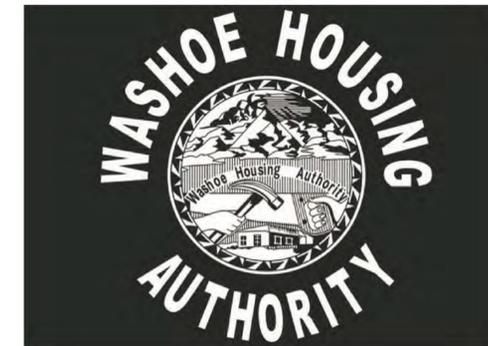
-Requests for information should be directed to Greg Powell greg@whauthority.com All answered RFI's will be transmitted to all registered bidders as they are issued. RFI's MUST be in email form only.

-Any equipment not specifically addressed in plans will be considered with complete submittal, submitted at time of bid.

-Mistakes in bids:

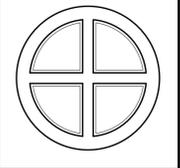
Correction or withdrawal of inadvertently erroneous bid may be permitted, where appropriate, before bid selection by written or telegraphic notice received in the WHA office prior to the set time of bid opening. Any change to bids after scheduled opening time will only be made if the bidder can show convincing evidence that the mistake of a nonjudgmental character was made, the nature of the mistake, and the bid price actually intended. All decisions to allow corrections or withdrawals shall be made by the WHA contracting official. After bid opening there will be no corrections or withdrawals allowed or permitted.

Washoe Housing Authority
COMMUNITY BUILDING
 Washoe Stewart LIHTC



WASHOE HOUSING AUTHORITY

1588 WATASHEAMU ROAD
 GARDNERVILLE NEVADA 89460



BERGER
 HANNAFIN
 ARCHITECTURE

312 WEST 3RD STREET
 CARSON CITY, NV 89703

P: (775) 882.6455
 WWW.BHARCHITECTS.BIZ



PERSPECTIVE



PROJECT TEAM

CLIENT
 WASHOE HOUSING AUTHORITY
 CONTACT: MARK VAN TASSEL
 1588 WATASHEAMU DRIVE
 GARDNERVILLE, NV 89460
 TEL: (775) 265-2410

ARCHITECT
 BERGER HANNAFIN ARCHITECTURE
 CONTACT: DARRIN BERGER
 312 W. 3RD STREET
 CARSON CITY, NV 89703
 TEL: (775) 882-6455

MECHANICAL ENGINEER
 ETCHEMENDY ENGINEERING
 CONTACT: BRANDON ETCHEMENDY
 10597 DOUBLE R BLVD.
 RENO, NV 89521
 TEL: (775) 853-1131 FAX: (775) 852-2352

ELECTRICAL ENGINEER
 JP ENGINEERING
 CONTACT: MARK TATRO
 10597 DOUBLE R BLVD.
 RENO, NV 89521
 TEL: (775) 852-2337 FAX: (775) 852-2352

STRUCTURAL ENGINEER
 RESOURCE CONCEPTS
 CONTACT: KEITH SHAFFER
 340 N MINNESOTA STREET
 CARSON CITY NV 89703
 TEL: (775) 883-1600

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DESIGN CRITERIA

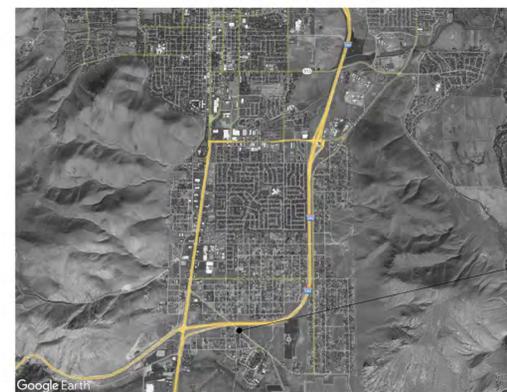
OCCUPANCY:	A - 3
OCCUPANT LOAD:	171
AREA:	2573 SF
TYPE OF CONSTRUCTION:	TYPE 5B
FIRE SPRINKLERS	NONE

CODES and REGULATIONS

2018 International Building Code
 2009 ICC/ANSI A117.1
 2018 Northern Nevada International Fire Code Amendments
 2018 Northern Nevada Amendments
 2018 Uniform Mechanical Code
 2018 Uniform Plumbing Code
 2017 National Electrical Code
 2018 International Energy Conservation Code

Nevada Revised Statutes (NRS) Chapter 444
 Nevada Administrative Code (NAC) Chapter 449

VICINITY MAP



PROJECT LOCATION
 STEWART COLONY
 CARSON CITY, NV

SUBDIVISION MAP

PROJECT:
 Washoe Housing Authority
COMMUNITY BUILDING
 WASHOE STEWART LIHTC

BHA JOB NO.: 2218

DRAWING STATUS:

- PHASE
- SCHEMATIC DESIGN
 - DESIGN DEVELOPMENT
 - CONTRACT DOCUMENTS

USE
 THESE DRAWINGS ARE BEING ISSUED
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- PROGRESS REVIEW
- GOVERNING AGENCY REVIEW
- ESTIMATING
- BIDDING
- OTHER

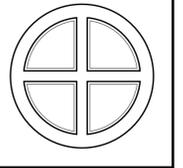
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Revisions	Date

DRAWING TITLE:
COVER SHEET

DRAWING NUMBER:

A0.1



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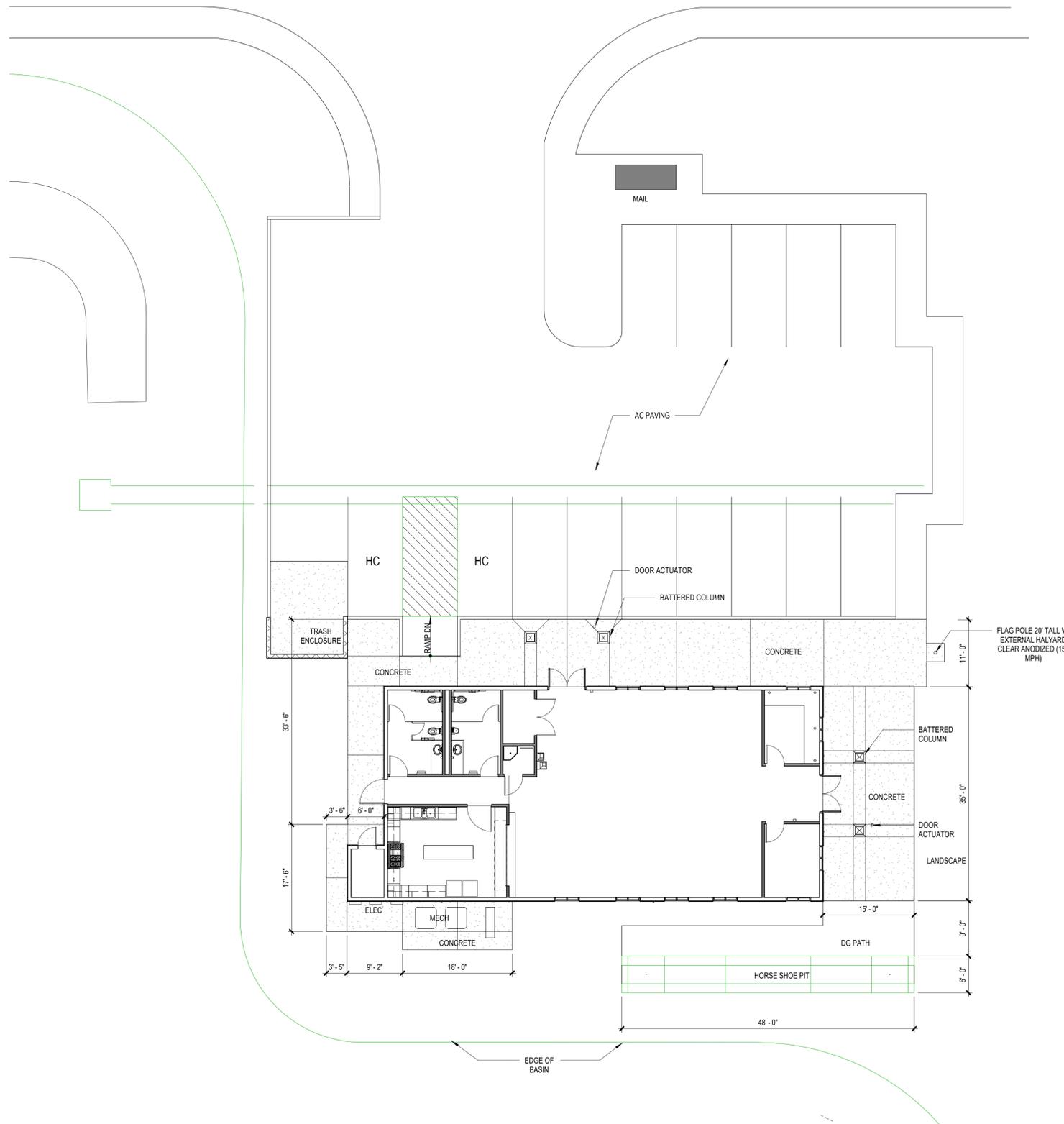
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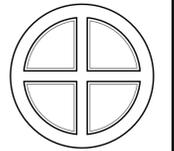
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ARCHITECTURAL SITE PLAN

DRAWING NUMBER:

A1.1



ARCHITECTURAL SITE PLAN
Scale: 1" = 10'-0"



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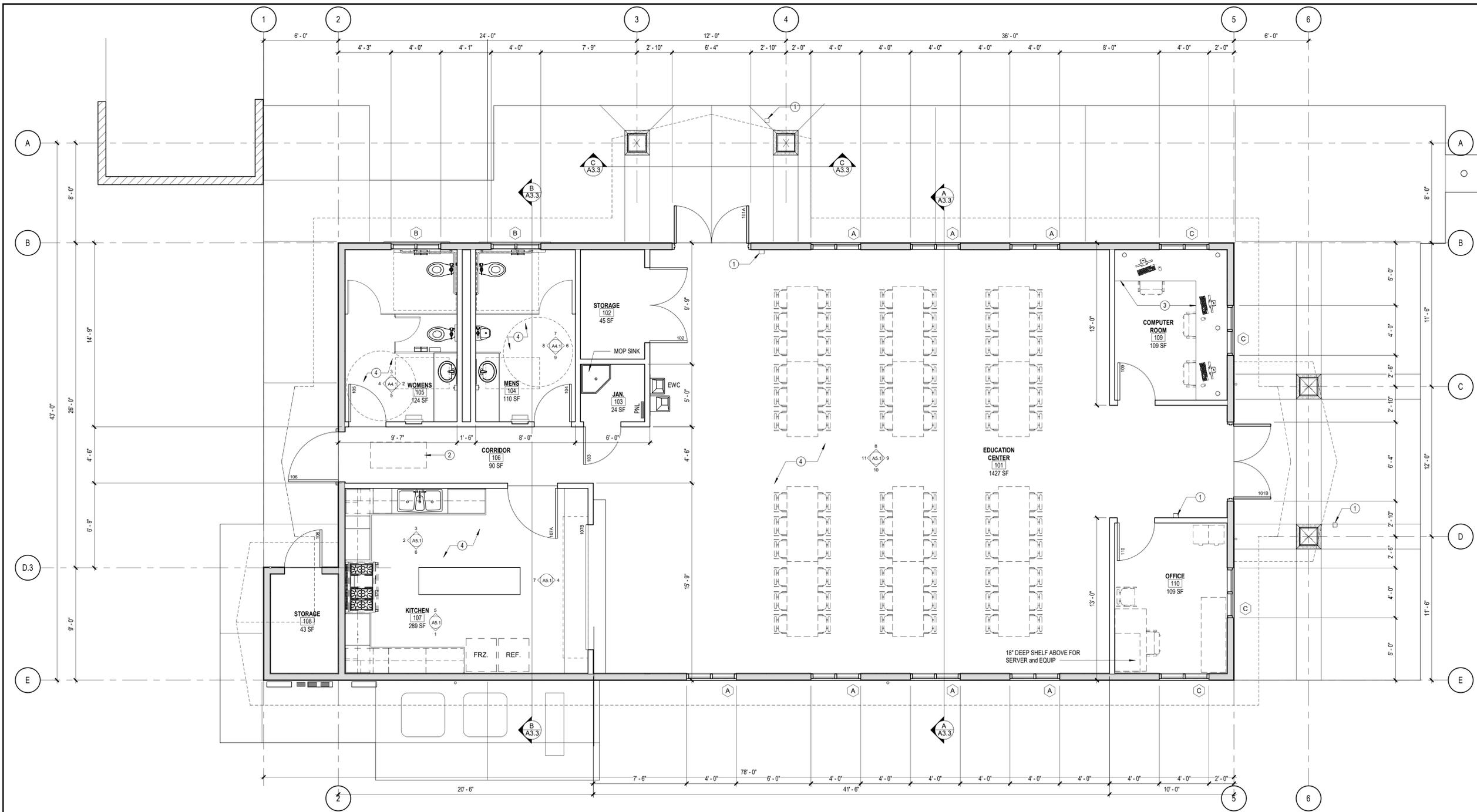
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FLOOR PLAN

DRAWING NUMBER:

A2.1

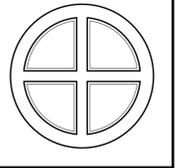


FLOOR PLAN
Scale: 1/4" = 1'-0" 2573 SF

FINISH SPECIFICATIONS	
FLOORING: FL-01 POLISHED CONCRETE - BASIS OF DESIGN: GRIND LEVEL: 3 (SALT and PEPPER), POLISH: CLASS 1 (SATIN), FINISH: CLEAR MATTE	PAINT PT-01 FIELD WALL and CEILING PAINT (UNLESS OTHERWISE SPECIFIED) - BASIS OF DESIGN: SW PROMAR 200 ZERO PRIMER 828W00620, SW DURATION HOME INTERIOR LATEX SATIN A79W151, COLOR: TBD
BASE BS-01 4" RUBBER BASE BASIS OF DESIGN: JOHNSONITE, TRADITIONAL WALL BASE, COLOR: GREY WG 48 BS-02 6" COVED TILE BASE BASIS OF DESIGN: DAL-TILE, VOLUME 1.0, COLOR: V1.72 INTENSITY PEBBLE, SIZE: 6"x12" GROUT: LATICRETE, COLOR: 60 DUSTY GREY	PT-02 ACCENT PAINT - BASIS OF DESIGN: SW PROMAR 200 ZERO PRIMER 828W00620, SW DURATION HOME INTERIOR LATEX SATIN A79W151, COLOR AND LOCATION: TBD, ASSUME 15% OF WALLS
WALL TILE TL-01 GLAZED CERAMIC WALL TILE - BASIS OF DESIGN: DAL-TILE, COLOR WHEEL COLLECTION - LINEAR, SIZE: 6"x18", 1/3 RUNNING BOND, FINISH: SEMI-GLOSS FIELD TILE COLOR: 0190 ARCTIC WHITE, ACCENT TILE COLOR: 0180 CHALKBOARD, (SEE INTERIOR ELEVATIONS FOR ACCENT BAND LOCATION), INSTALL WALL TILE PER 2020 TCNA W243-20, GROUT: LATICRETE, COLOR: 60 DUSTY GREY	PT-03 DOOR / TRIM PAINT - BASIS OF DESIGN: SW PREPRITE PROBLOCK PRIMER B51 SW PRO INDUSTRIAL WATERBASED ALKYD URETHANE SEMI GLOSS B53 SERIES, COLOR: TBD
EDGE TRIM ET-01 ALL TILE WITH AN EXPOSED EDGE TO RECEIVE EDGE TRIM - BASIS OF DESIGN: SCHLUTER, JOLLY TRIM, STAINLESS FINISH	WALL PROTECTION WP-01 FULL HEIGHT FRP - BASIS OF DESIGN: MARLITE, SIZE: STANDARD 4X10, FINISH: PEBBLE, COLOR: P100 WHITE W COMPLETE PVC TRIM ALL AROUND and SEAMS
PLASTIC LAMINATE PL-01 VERTICAL SURFACE (CABINETS) - BASIS OF DESIGN: WILSONART, PREMIUM LAMINATE, COLOR: 5TH AVE. ELM (7969K-12), SOFT GRAIN FINISH, PATTERN TO RUN VERTICALLY	CASEWORK HARDWARE SOLID BRASS WIRE PULLS AMEROCK, ITEM NO: WP4-26D, CENTER: 4", DIAMETER: 1/4", PROJECTION: 1-1/4", FINISH: BRUSHED CHROME
SOLID SURFACE SS-01 COUNTER TOPS and 4" SPLASH - BASIS OF DESIGN: CORIAN, COLOR: ANTARCTICA, 1/4" EASED EDGE WITH 1-1/2" DROP	DOOR SLABS SOLID CORE, PRE-FINISHED, STAINED GRADE, BIRCH VENEER BASIS OF DESIGN: OREGON DOOR OR APPROVED EQUAL, STAIN: WHITE BIRCH CLEAR
	STAINLESS STEEL STL-01 COUNTER TOPS AT PASS THROUGH COUNTER - BASIS OF DESIGN: TYPE 304 STAINLESS STEEL

NEW PLAN NOTES	
1	ACTUATOR FOR POWER ASSISTED DOOR
2	DASHED LINE DENOTES PULL DOWN ATTIC ACCESS LADDER
3	30" HIGH X 30" DEEP PLAM COUNTER WITH PAINTED METAL KICKERS AT 3'-0" OC MAX PROVIDE 2" DIA GROMETS AT EACH WORK STATION
4	POLISHED CONCRETE FLOOR - TYPICAL THROUGHOUT

WALL TYPES	
	EXTERIOR 2X6 WOOD STUD WALL: 2X6 WOOD STUDS AT 16" O.C. WITH R-20 CRAFT FACED BATT INSULATION FULL HT IN ALL STUD CAVITIES. INTERIOR FACE: 5/8" GYPSUM BOARD (LEVEL 4 FINISH - PAINTED, UNO) EXTERIOR FACE: 2 COAT ACRYLIC STUCCO SYSTEM OVER VAPOR BARRIER ON 1/2" CDX PLY SHEATHING. (SEE STRUCTURAL FOR ADDITIONAL INFORMATION)
	INTERIOR 2X4 WOOD STUD WALL: 2X4 WOOD STUDS AT 16" O.C. W/ 5/8" GYPSUM BOARD AT BOTH SIDES OF WALL WERE EXPOSED. FILL WALL CAVITY WITH 3 1/2" SOUND BATTS, TYPICAL. INSTALL WATER RESISTANT GYPSUM BOARD IN ALL WET AREAS INCLUDING TOILET ROOMS, JANITORS CLOSET, KITCHEN and DRINKING FOUNTAIN. LEVEL 4 FINISH (TYPICAL UNO)



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PROJECT:
Washoe Housing Authority

COMMUNITY BUILDING

WASHOE STEWART LIHTC

BHA JOB NO.: 2218

DRAWING STATUS:

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USE

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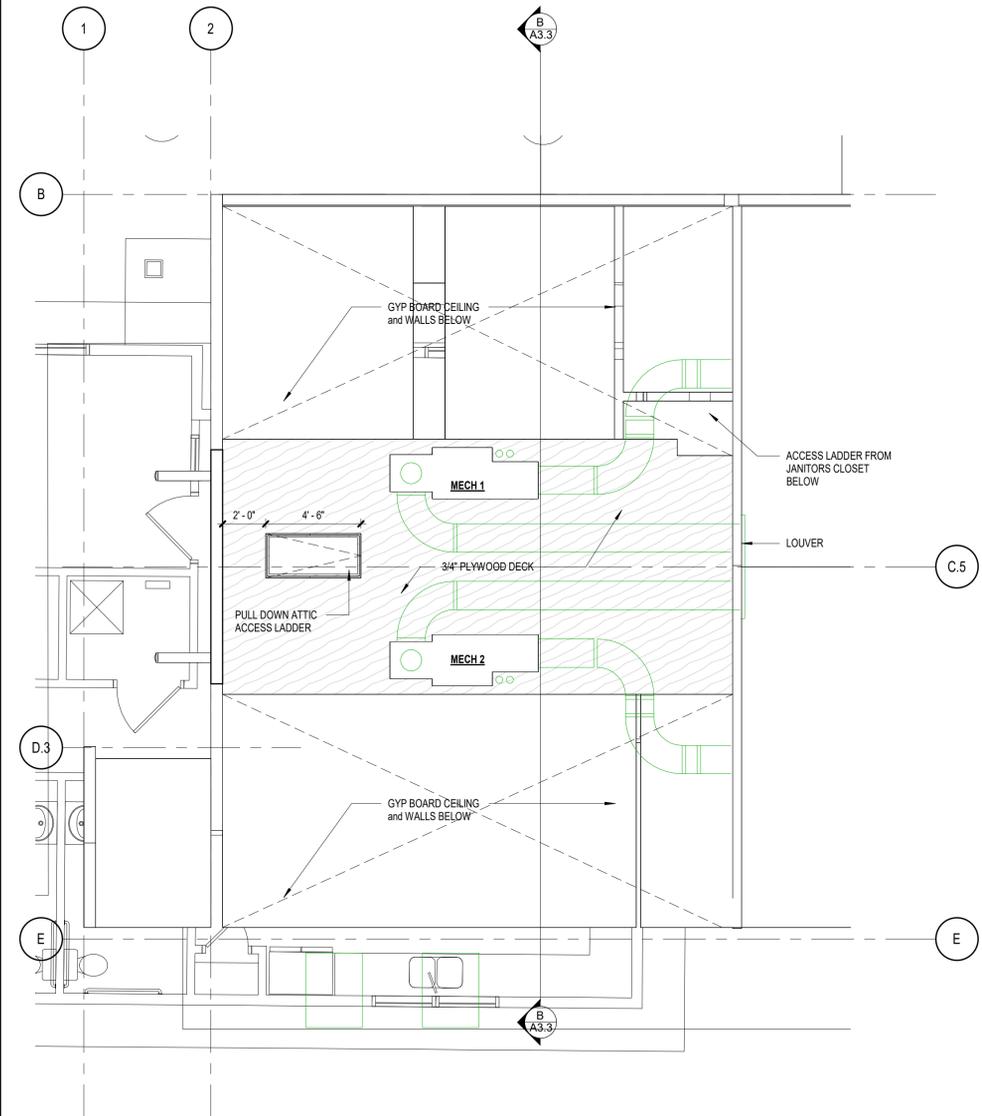
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MECHANICAL
MEZZANINE PLAN

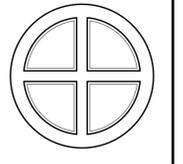
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MECHANICAL MEZZANINE PLAN

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



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PROJECT:
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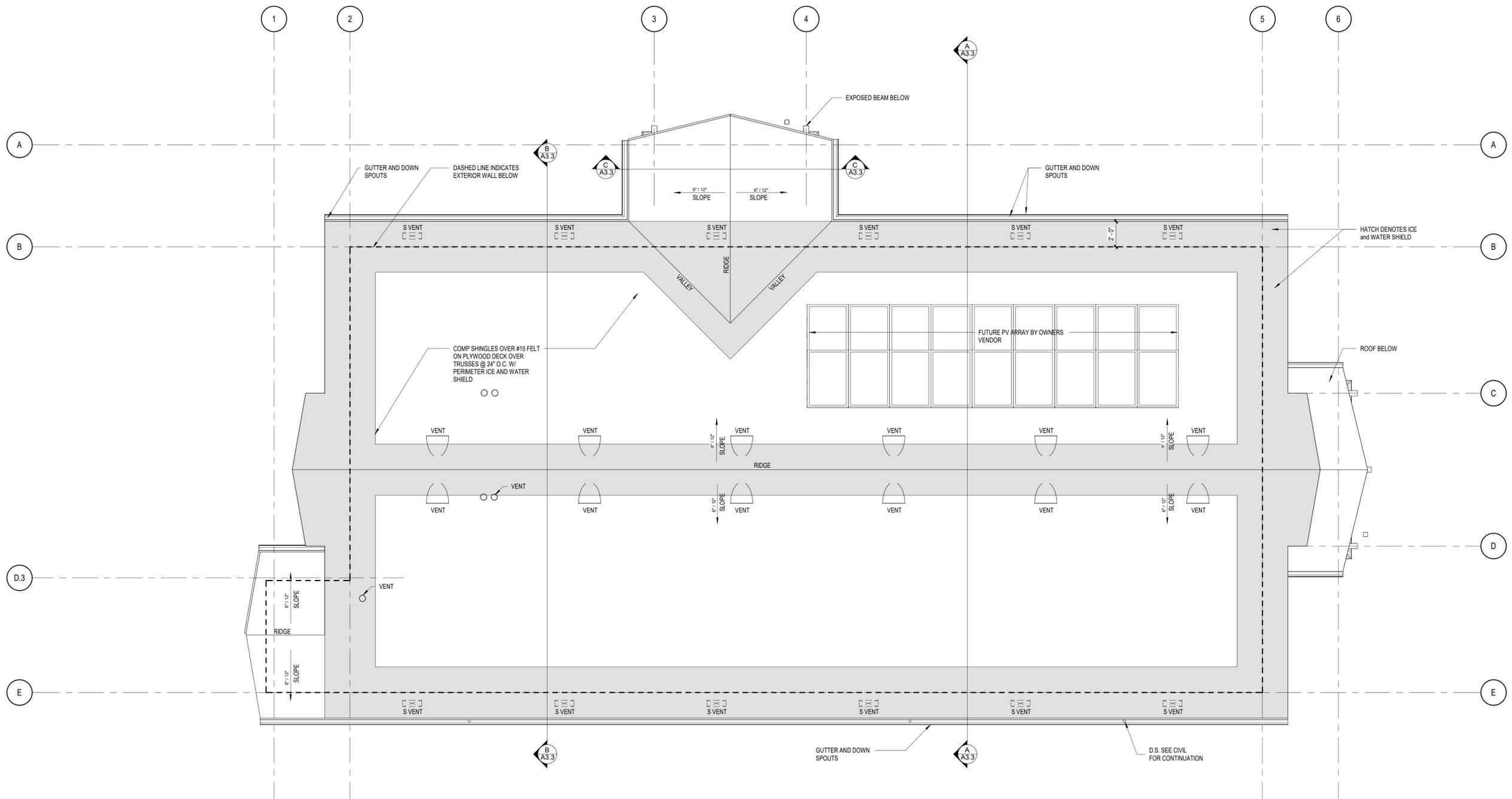
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DRAWING TITLE:
ROOF PLAN

DRAWING NUMBER:

A2.3



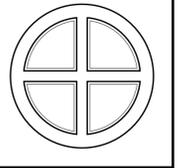
ROOF PLAN

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

ROOF VENTILATION CALCULATIONS

IBC 2018 CH 12
REQUIRED
 $2573/300 = 8.6 \times 144 = 1,238 \text{ SQ. IN. REQUIRED}$

PROVIDED
SOFFIT $12 \times 62 = 744$
ROOF $12 \times 51 = 612$
TOTAL: 1,356 SQ. IN. PROVIDED



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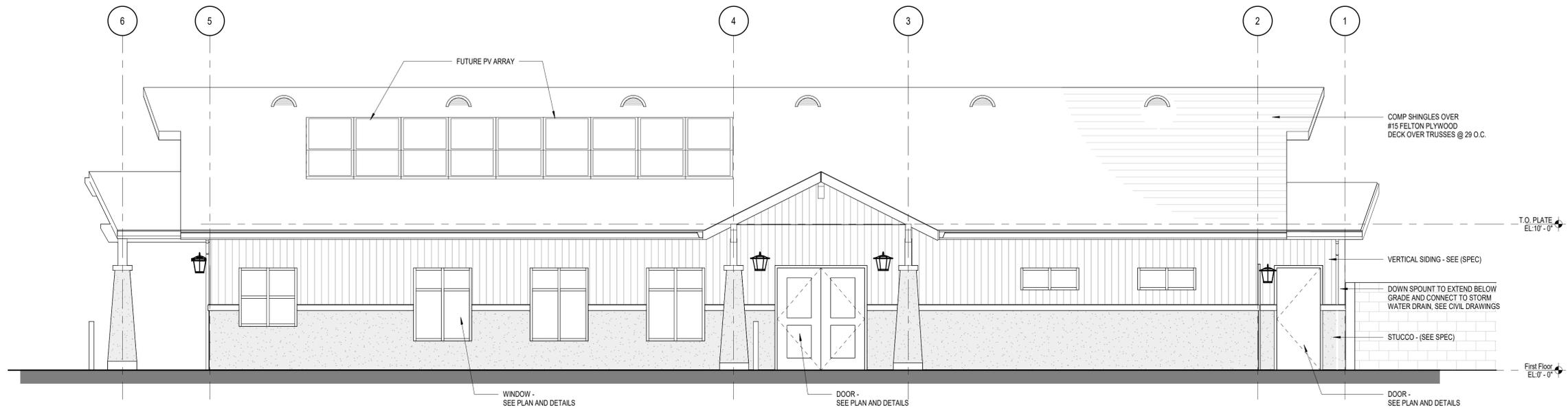
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DRAWING TITLE:
EXTERIOR ELEVATIONS

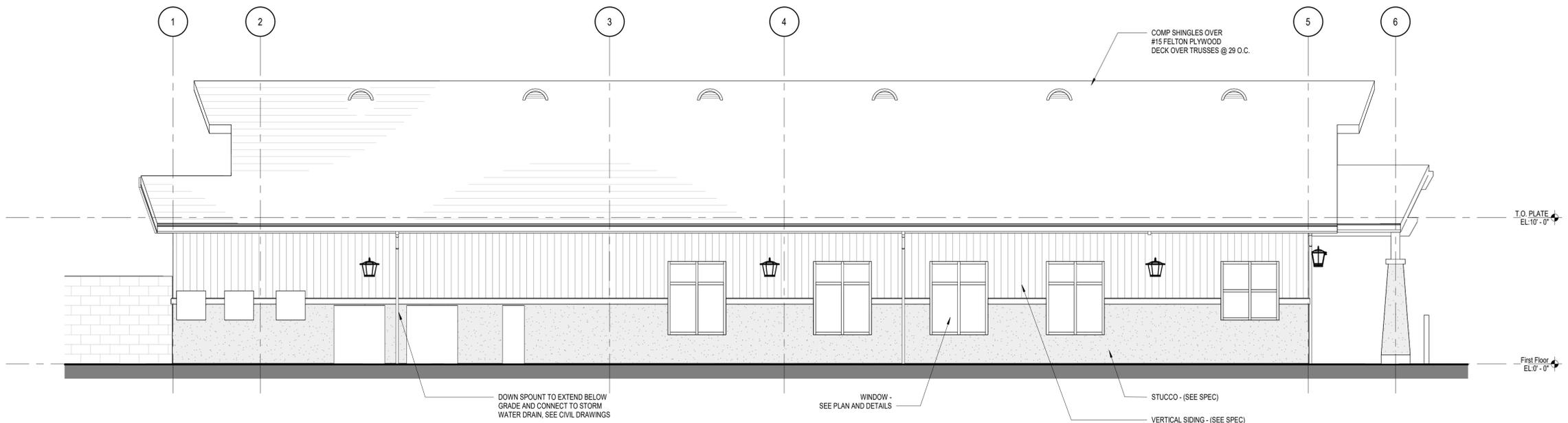
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A3.1



FRONT EXTERIOR ELEVATION

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



REAR EXTERIOR ELEVATION

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

EXTERIOR FINISH SPECIFICATIONS

TWO COAT STUCCO:

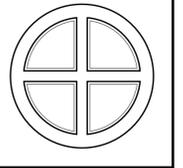
BASIS OF DESIGN: PAREX USA, INC.
2 COAT INTEGRAL COLORED SYSTEM - BASE COAT, OVER REINFORCING MESH, PRIMER AND FINISH. SUBSTRATE: VAPOR BARRIER ON PLYWOOD, MEDIUM IMPACT RESISTANCE, 50/89 IN LBS FINISH. OPTIMUM FINISH: FACTORY BLENDED, 100% ACRYLIC POLYMER BASED, INTEGRALLY COLORED SAND FINE COLOR AS SELECTED BY ARCHITECT

FIBER CEMENT SIDING

BASIS OF DESIGN: JAMES HARDIE. PANEL VERTICAL SIDING AND SOFFIT PANELS, MOLDINGS AND TRIM FACTORY PRIMED (FIELD PAINTED), PATTERN: GROOVES 8" CENTERS, TEXTURE: SIERRA 8 WOOD GRAIN

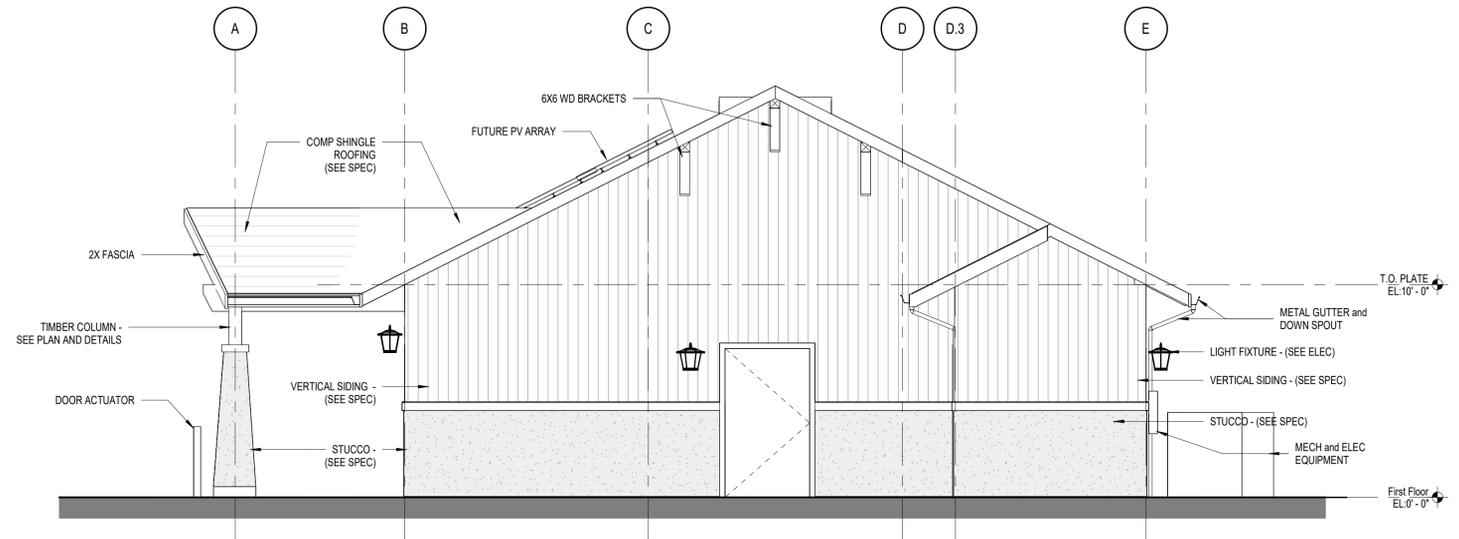
PAINT

PT-04 EXTERIOR PAINT -
BASIS OF DESIGN: SW PROMAR 200 ZERO PRIMER 628W00620, SW DURATION HOME EXTERIOR LATEX SATIN, COLOR: TBD



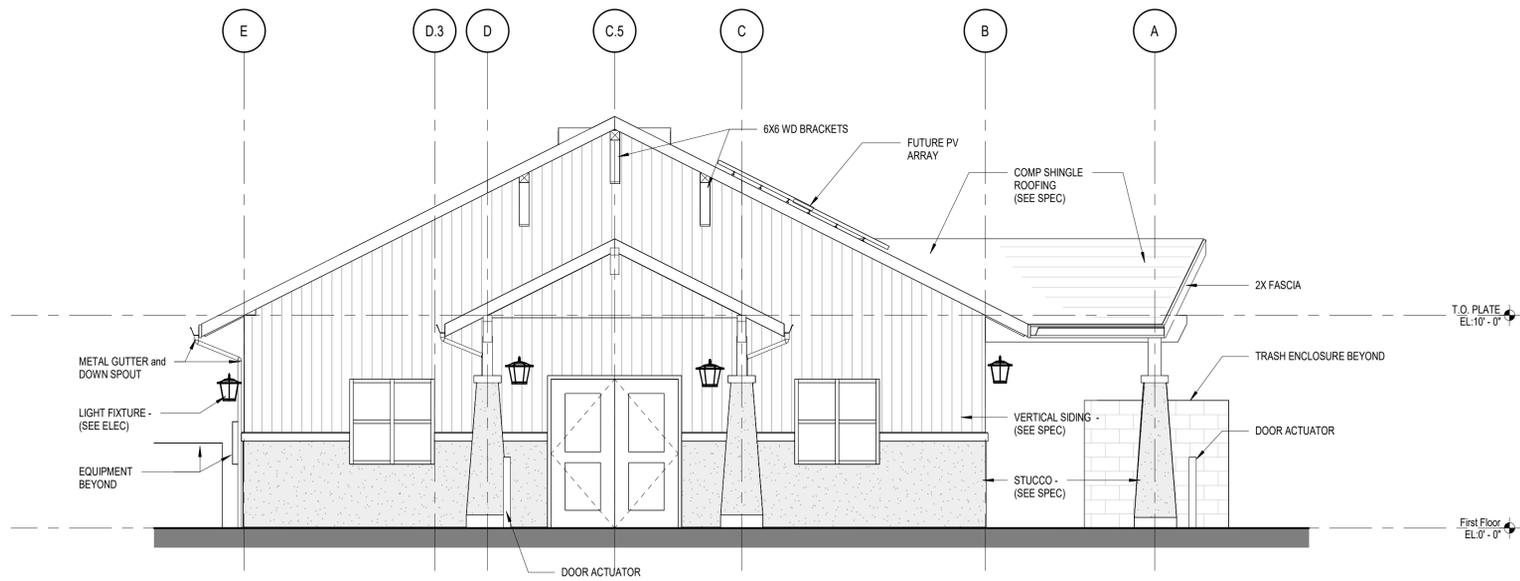
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RIGHT EXTERIOR ELEVATION

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



LEFT EXTERIOR ELEVATION

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

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WASHOE STEWART LIHTC

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- USE
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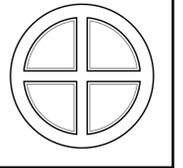
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DRAWING TITLE:
EXTERIOR ELEVATIONS

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A3.2

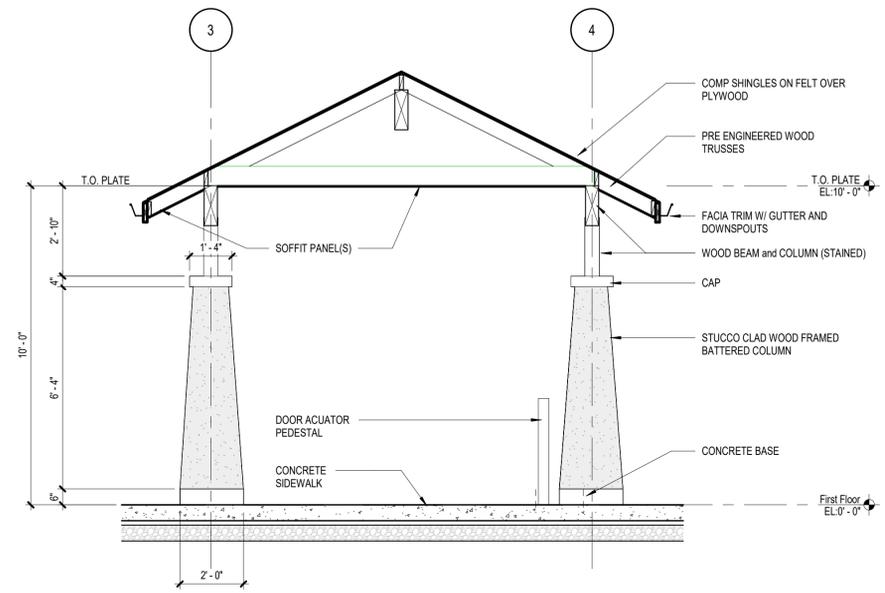


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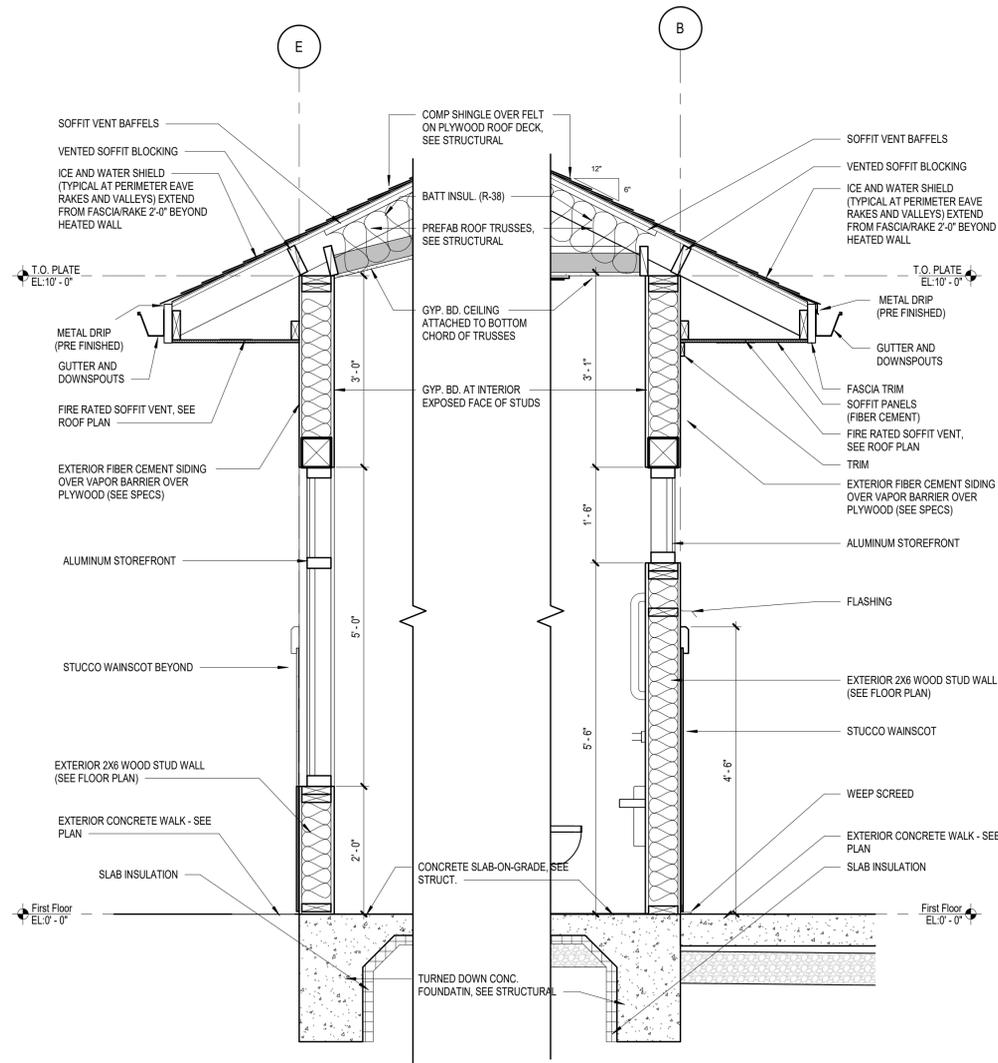
ARCHITECTURE

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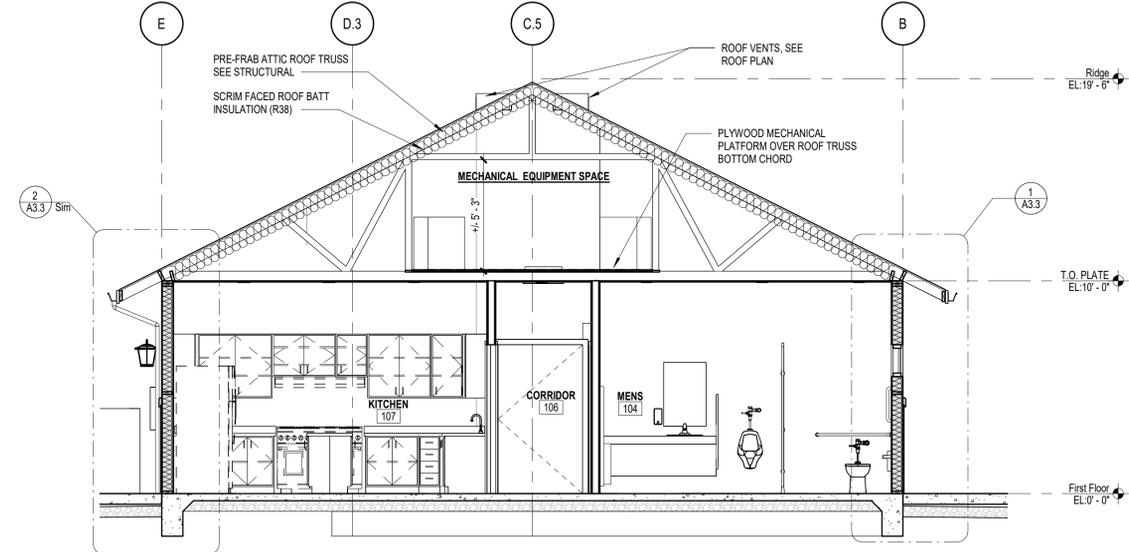


C SECTION AT ENTRY CANOPY
Scale: 3/8" = 1'-0"

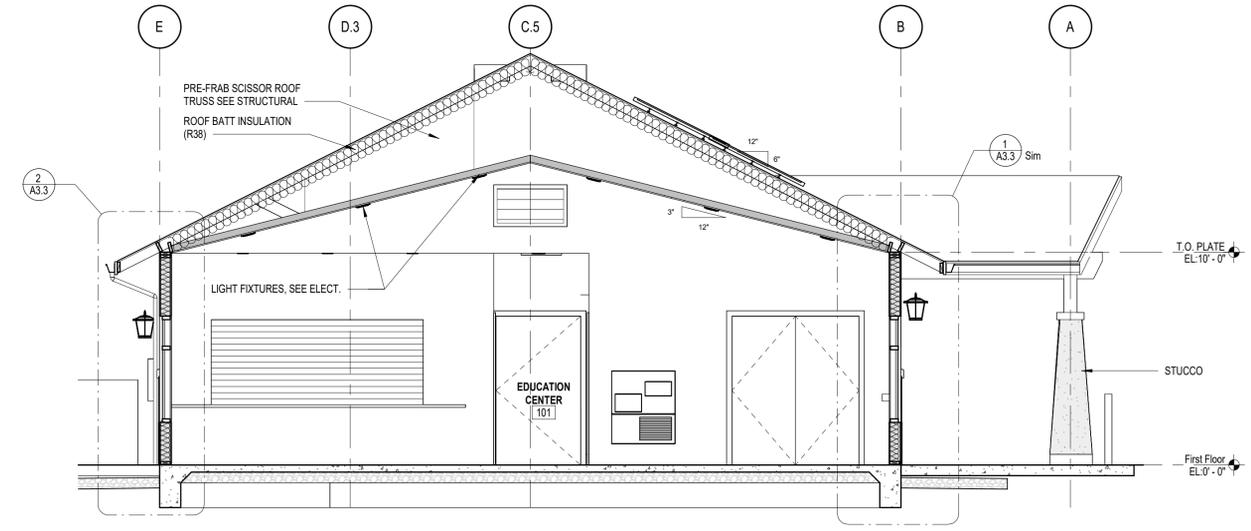


2 WALL SECTION
Scale: 3/4" = 1'-0"

1 WALL SECTION
Scale: 3/4" = 1'-0"



B Building Section
Scale: 1/4" = 1'-0"



A Building Section
Scale: 1/4" = 1'-0"

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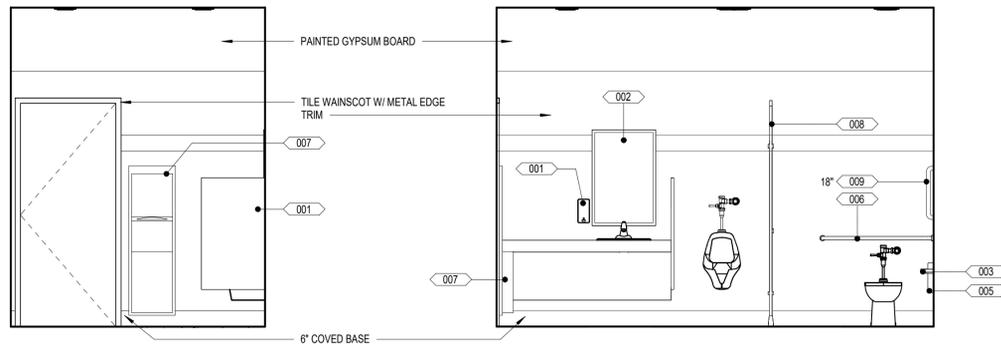
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DRAWING TITLE:
**BUILDING SECTIONS
and WALL SECTIONS**

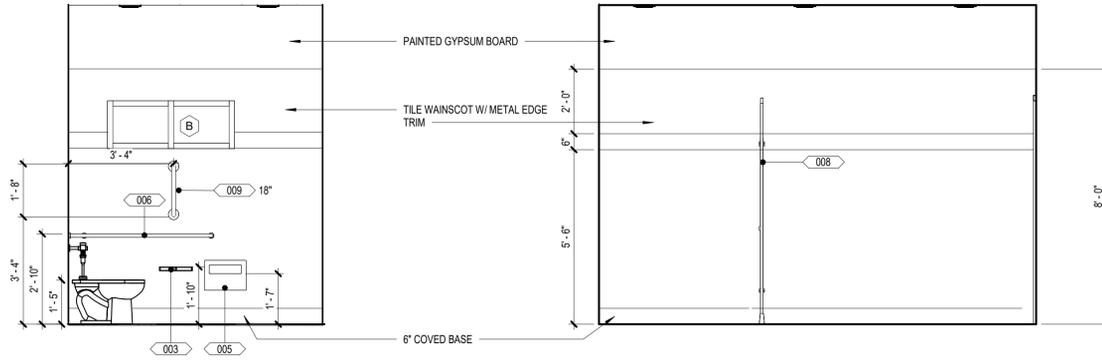
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A3.3



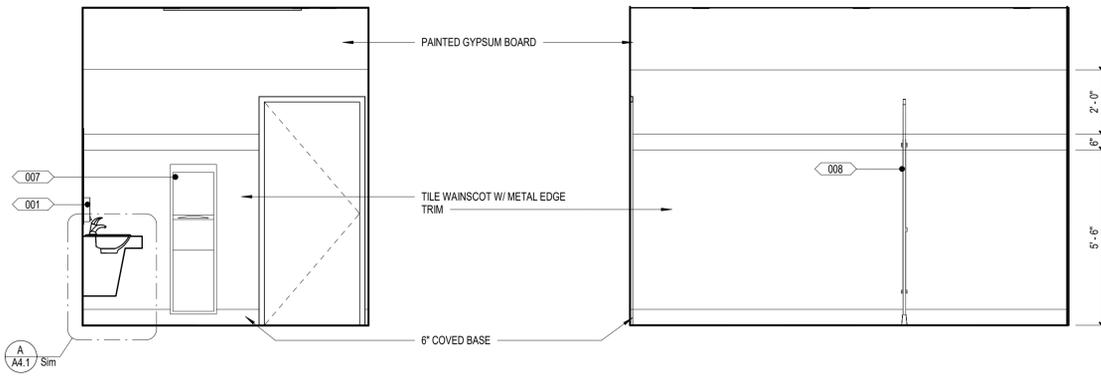
9 INTERIOR ELEVATION - MEN 104 SOUTH
Scale: 3/8" = 1'-0"

8 INTERIOR ELEVATION - MEN 104 WEST
Scale: 3/8" = 1'-0"



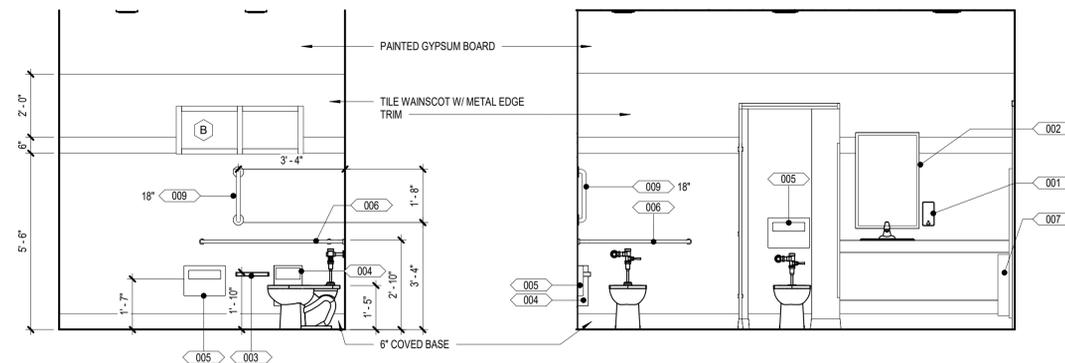
7 INTERIOR ELEVATION - MEN 104 NORTH
Scale: 3/8" = 1'-0"

6 INTERIOR ELEVATION - MEN 104 EAST
Scale: 3/8" = 1'-0"



5 INTERIOR ELEVATION - WOMENS 105 SOUTH
Scale: 3/8" = 1'-0"

4 INTERIOR ELEVATION - WOMENS 105 WEST
Scale: 3/8" = 1'-0"



3 INTERIOR ELEVATION - WOMENS 105 NORTH
Scale: 3/8" = 1'-0"

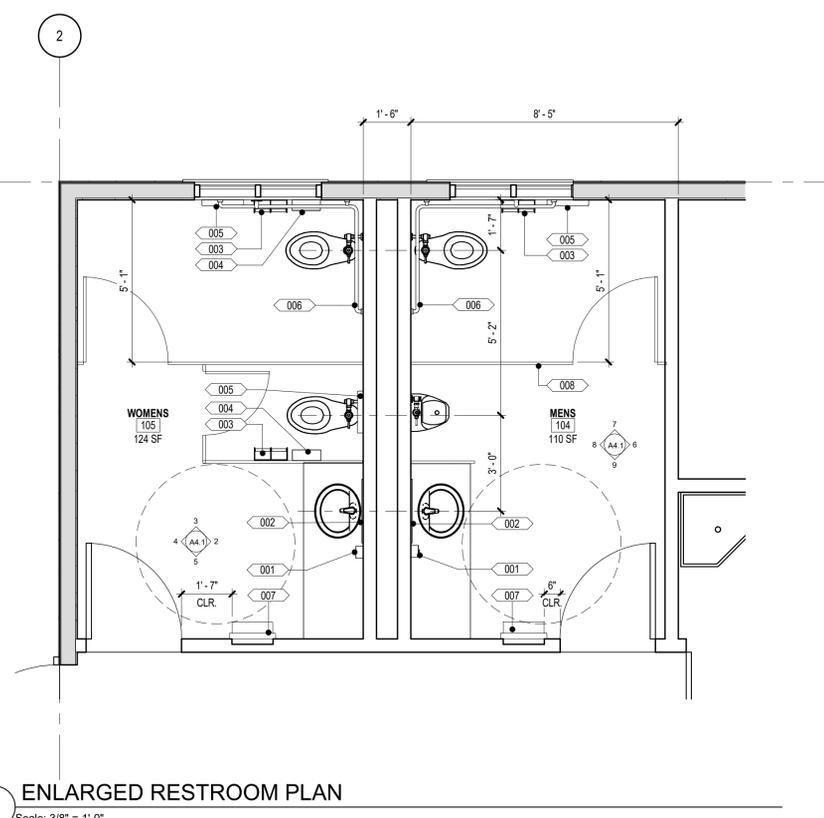
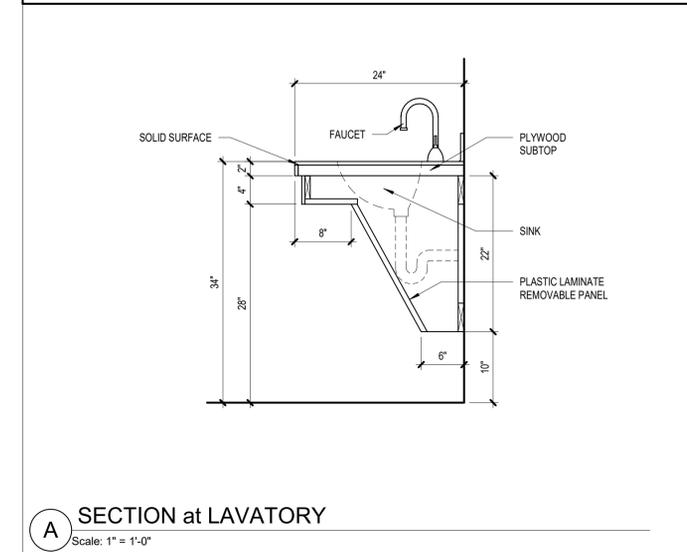
2 INTERIOR ELEVATION - WOMENS 105 EAST
Scale: 3/8" = 1'-0"

ACCESSORY SCHEDULE

NO.	DESCRIPTION	MANUF.	MODEL NO.
001	SOAP DISPENSER	BOBRICK	B-2111
002	RESTROOM MIRROR	BOBRICK	B-165-2436
003	DUAL-ROLL TOILET TISSUE DISP	BOBRICK	B-274
004	SURFACE MOUNTED SANITARY NAPKIN DISPOSAL	BOBRICK	B-254
005	TOILET SEAT COVER DISP	BOBRICK	B-4221
006	1-1/2" O.D. GRAB BAR	BOBRICK	B-5897
007	PAPER TOWEL DISP TRASH RECEPTICLE	BOBRICK	B-5942
008	HEADRAIL BRACED 1" PLASTIC HPDCE TOILET PARTITION	SCRANTRON	HINY HIDERS TRADITIONAL 2600 (COLOR: CHARCOAL GREY)
009	1-1/2" O.D. GRAB BAR	BOBRICK	B-6806

GENERAL NOTES

- PROVIDE SILICON SEALANT AT JOINT BETWEEN ALL RECESSED ACCESSORIES and WALL.
- PROVIDE SOLID BACKING BEHIND ALL GRAB BARS.
- PROVIDE MOLDED PLASTIC-COVERED FOAM PADDED INSULATION OVER ALL EXPOSED DRAIN PIPES and HOT WATER PIPES BELOW WALL MOUNTED LAVATORIES.
- ALL ACCESSORIES ARE SURFACE MOUNTED UNLESS OTHERWISE NOTED.
- ALL FINISHES ARE STAINLESS STEEL UNLESS OTHERWISE NOTED.



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REGISTERED ARCHITECT
No. 5617
STATE OF NEVADA
EXP. 11.07.2022

PROJECT: Washoe Housing Authority

COMMUNITY BUILDING

WASHOE STEWART LIHTC

BHA JOB NO.: 2218

DRAWING STATUS:

PHASE

SCHEMATIC DESIGN

DESIGN DEVELOPMENT

CONTRACT DOCUMENTS

USE THESE DRAWINGS ARE BEING ISSUED FOR THE FOLLOWING USES:

PROGRESS REVIEW

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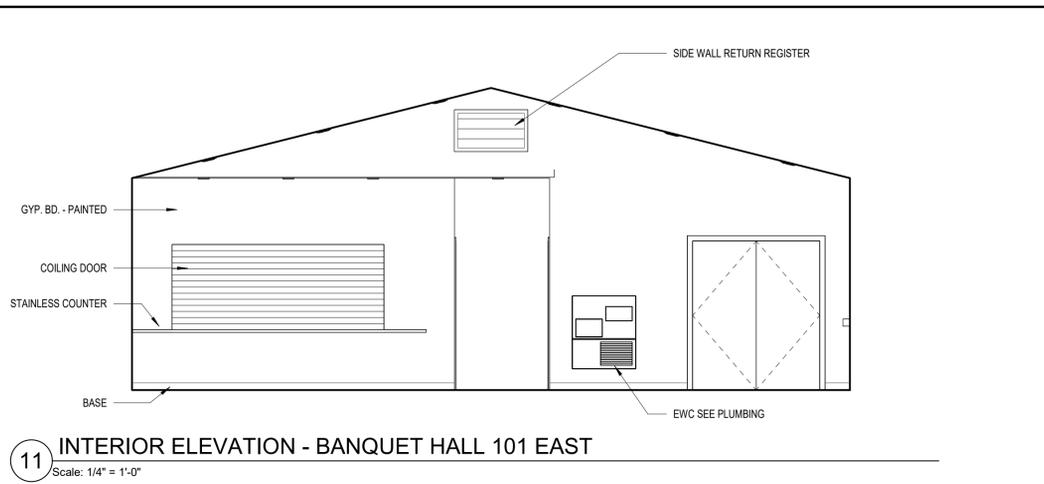
ISSUE DATE: 11.07.2022
DRAWN BY: DMB

Revisions	Date

DRAWING TITLE:
**ENLARGED
RESTROOM PLAN &
INTERIOR
ELEVATIONS**

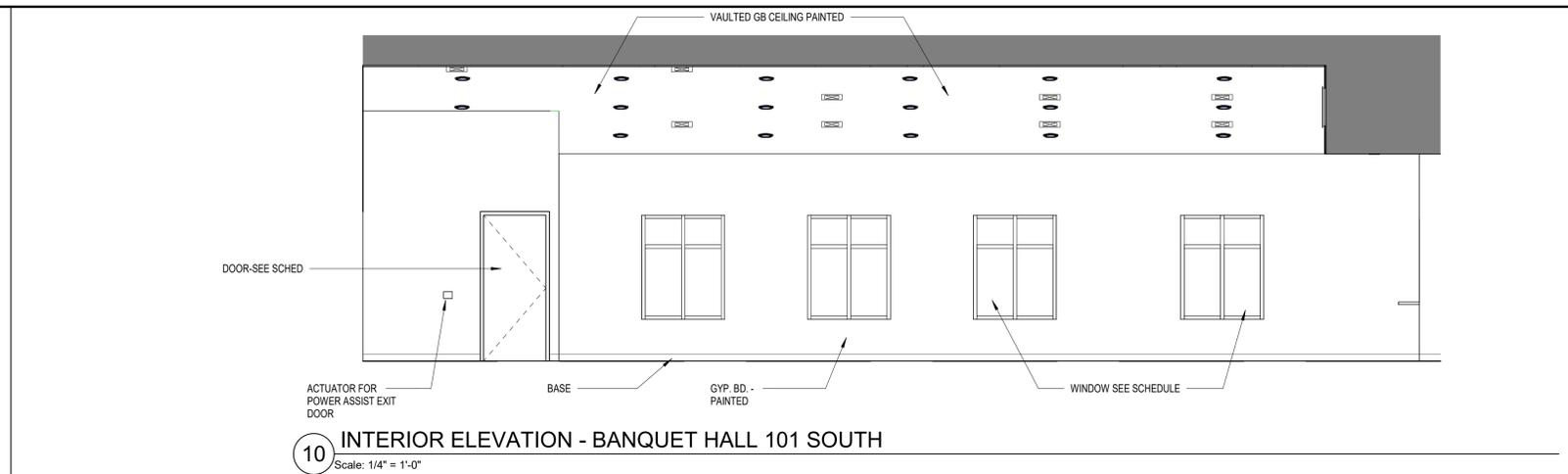
DRAWING NUMBER:

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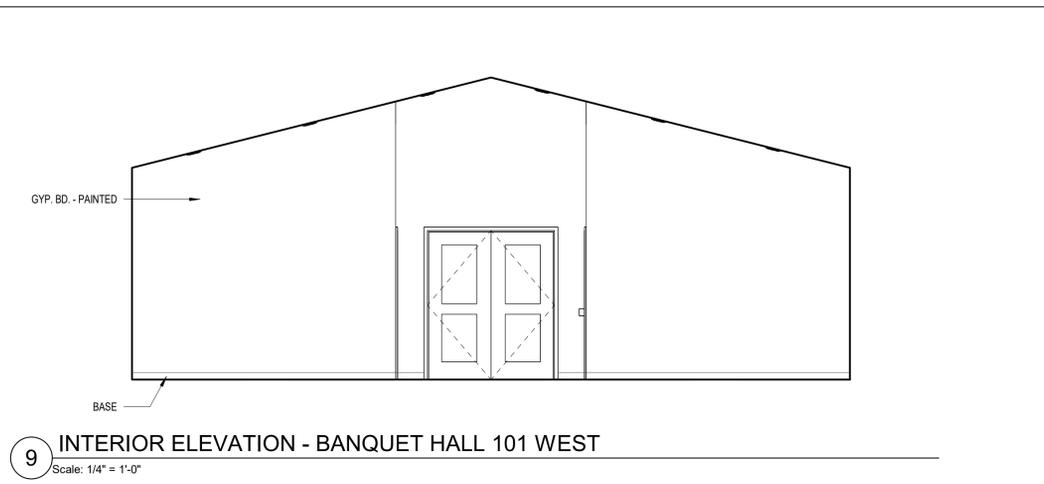
11 INTERIOR ELEVATION - BANQUET HALL 101 EAST

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



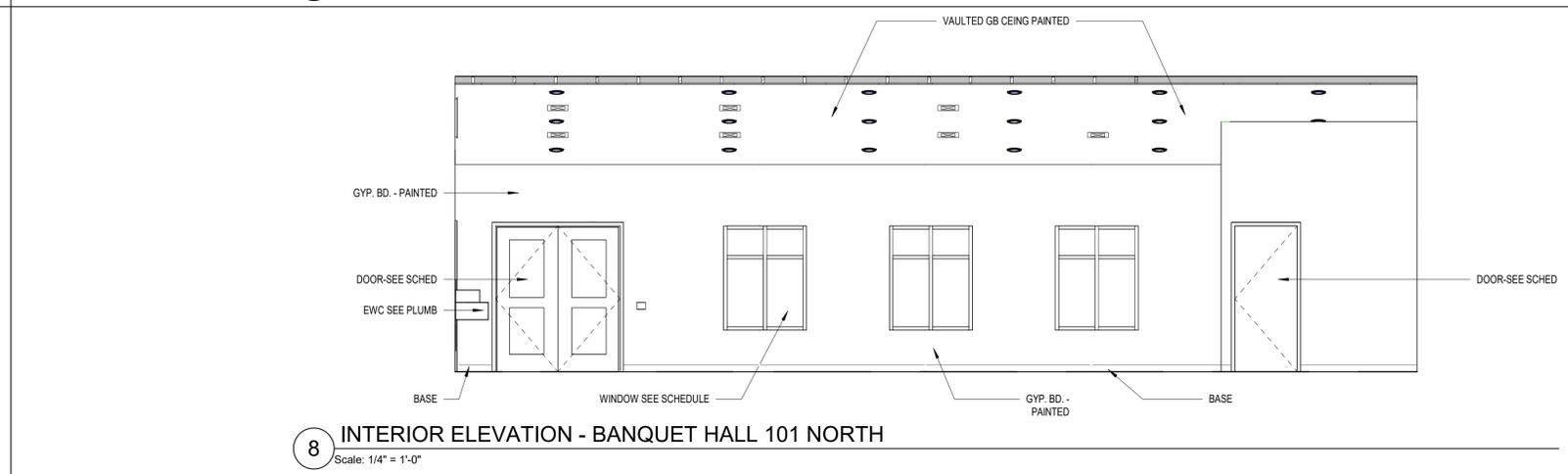
10 INTERIOR ELEVATION - BANQUET HALL 101 SOUTH

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



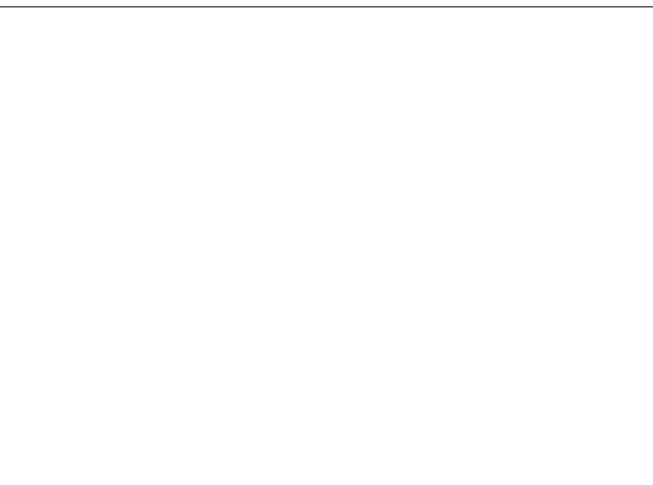
9 INTERIOR ELEVATION - BANQUET HALL 101 WEST

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



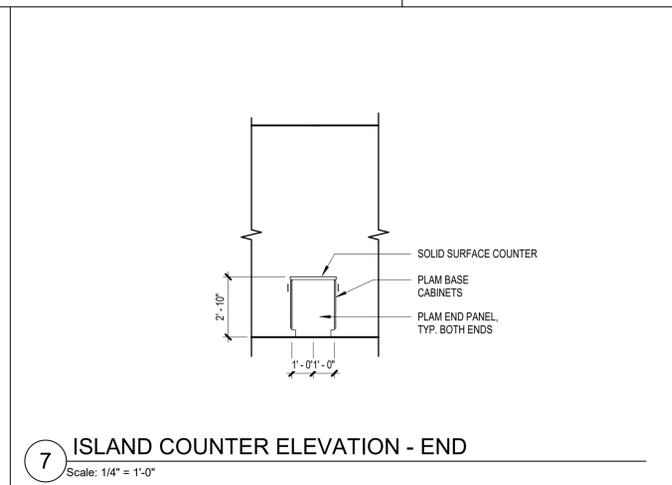
8 INTERIOR ELEVATION - BANQUET HALL 101 NORTH

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



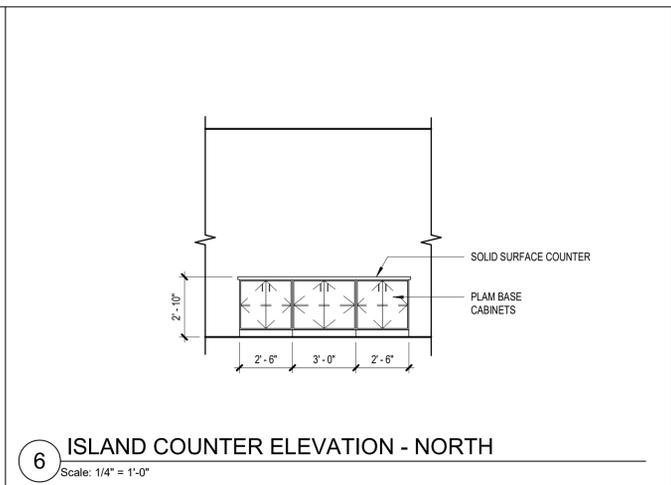
4 INTERIOR ELEVATION - KITCHEN 107 EAST

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



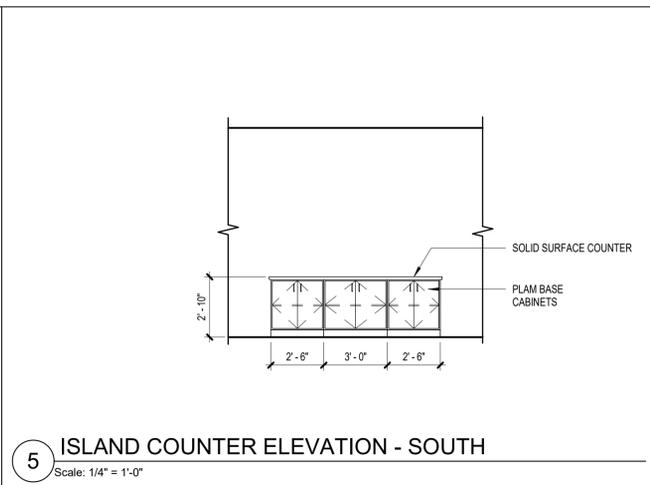
7 ISLAND COUNTER ELEVATION - END

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



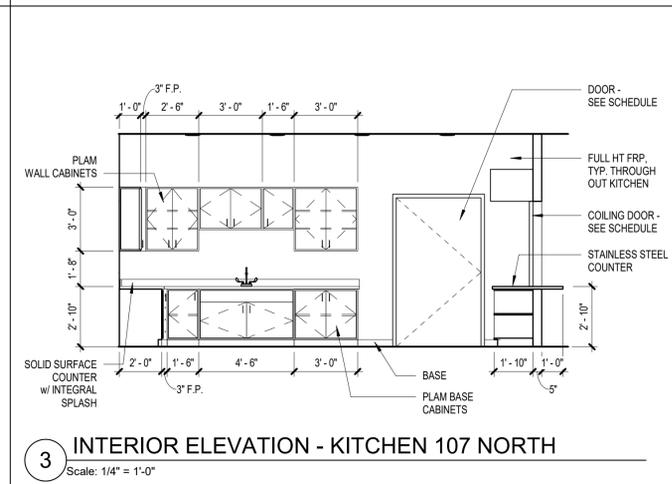
6 ISLAND COUNTER ELEVATION - NORTH

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



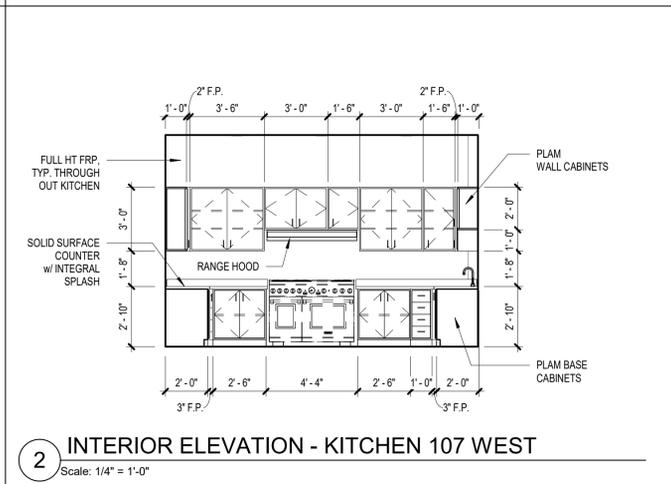
5 ISLAND COUNTER ELEVATION - SOUTH

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



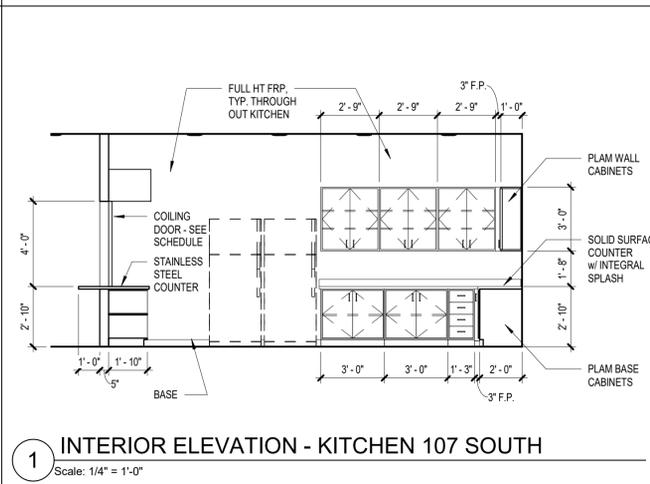
3 INTERIOR ELEVATION - KITCHEN 107 NORTH

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



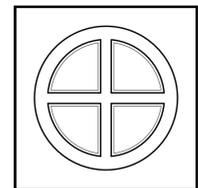
2 INTERIOR ELEVATION - KITCHEN 107 WEST

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



1 INTERIOR ELEVATION - KITCHEN 107 SOUTH

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



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PROJECT:
Washoe Housing Authority
COMMUNITY BUILDING
WASHOE STEWART LIHTC

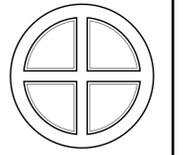
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PHASE
SCHEMATIC DESIGN
DESIGN DEVELOPMENT
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ISSUE DATE: 11.07.2022
DRAWN BY: RLW

Revisions	Date

DRAWING TITLE:
INTERIOR ELEVATIONS

DRAWING NUMBER:
A5.1



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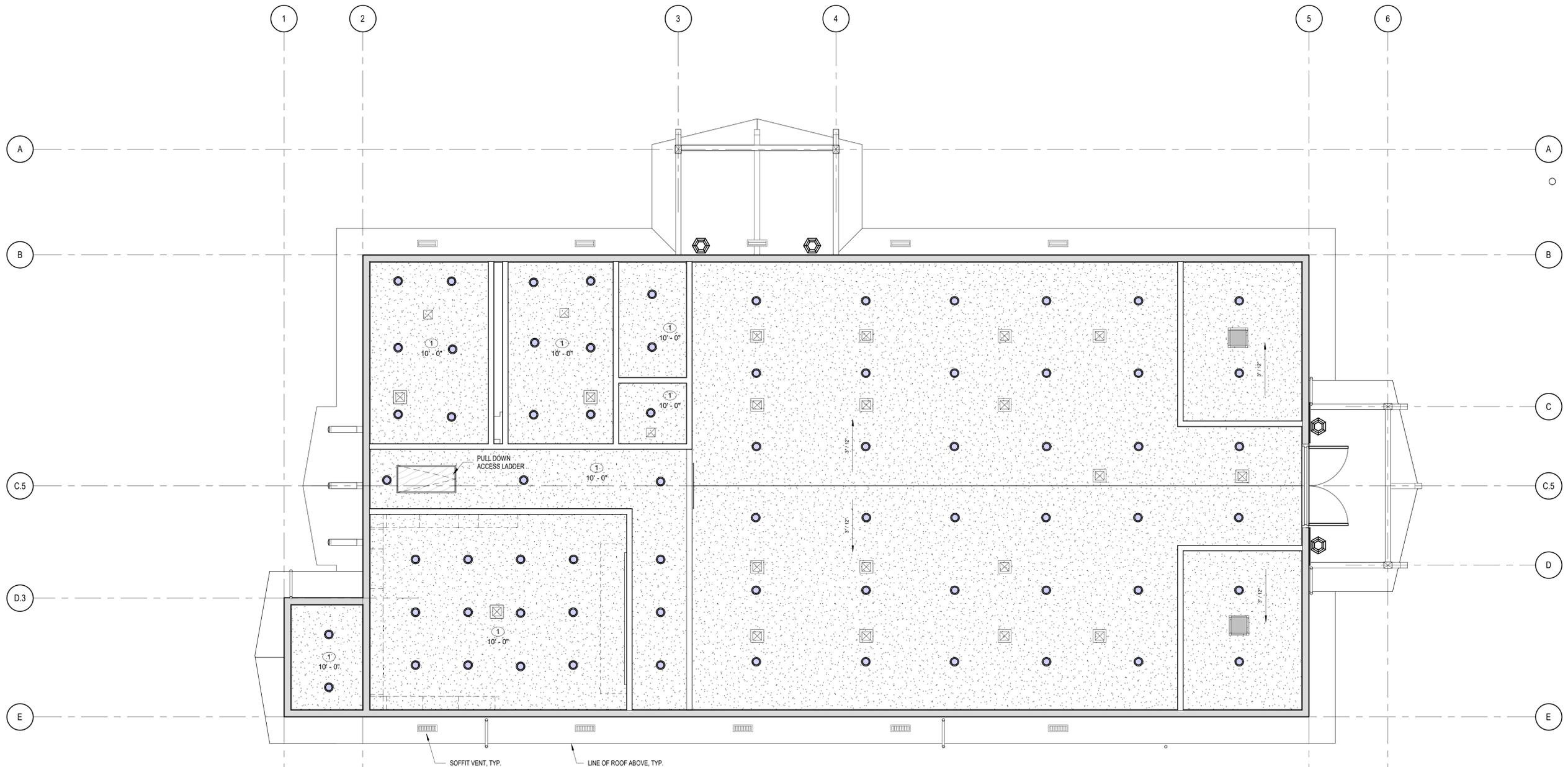
ISSUE DATE: 11.07.2022
DRAWN BY: RLIW

Revisions	Date

DRAWING TITLE:
REFLECTED CEILING PLAN

DRAWING NUMBER:

A6.1



REFLECTED CEILING PLAN

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

CEILING SCHEDULE

NO.	DESCRIPTION	MATERIAL	FRAMING	TYP. DETAILS	REMARKS
1	GYPSUM BOARD	M-1	F-1		
2	SOFFIT PANEL	M-2	F-1		

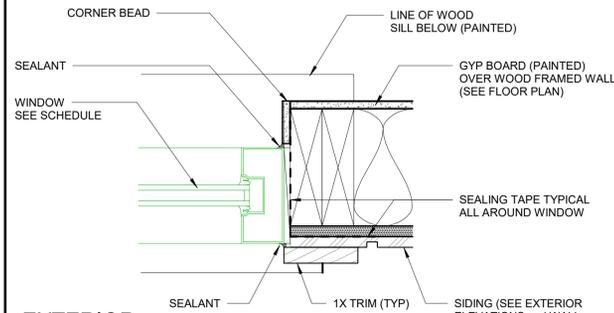
MATERIAL
M-1 GYPSUM BOARD, 5/8" THICK
M-2 FIBER CEMENT, 1/2" THICK

FRAMING
F-1 WOOD FRAMING

CEILING LEGEND

- LIGHTING FIXTURES:**
- EXTERIOR LIGHT FIXTURE - SEE ELECTRICAL
 - RECESS MOUNTED CAN LIGHT FIXTURE - SEE ELECTRICAL
- MECHANICAL FIXTURES:**
- RETURN AIR GRILLE - SEE MECHANICAL
 - SUPPLY AIR GRILLE - SEE MECHANICAL
 - EXHAUST AIR GRILLE - SEE MECHANICAL
- CEILING TYPES:**
- GYPSUM BOARD (PAINTED)

INTERIOR

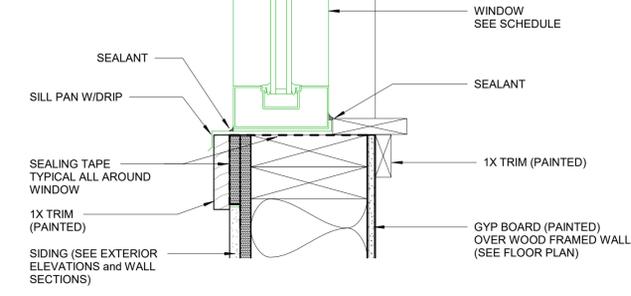


EXTERIOR

4 WINDOW JAMB

Scale: 3" = 1'-0"

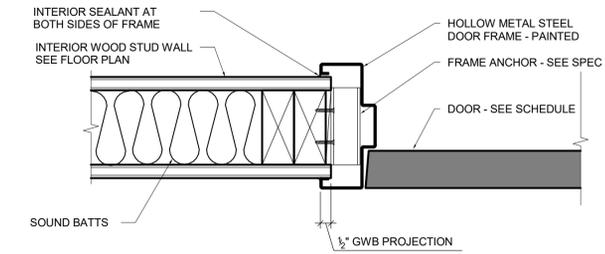
EXTERIOR



INTERIOR

3 WINDOW SILL

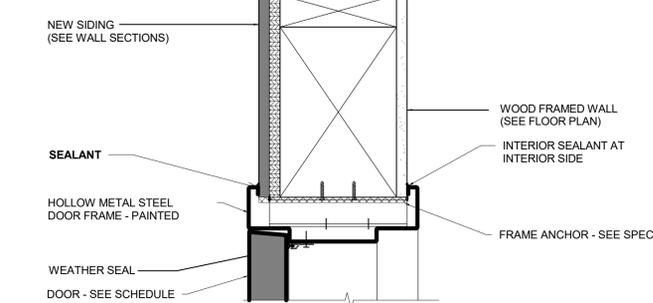
Scale: 3" = 1'-0"



5 INTERIOR DOORS - WOOD DR W/HM FRAME

Scale: 3" = 1'-0"

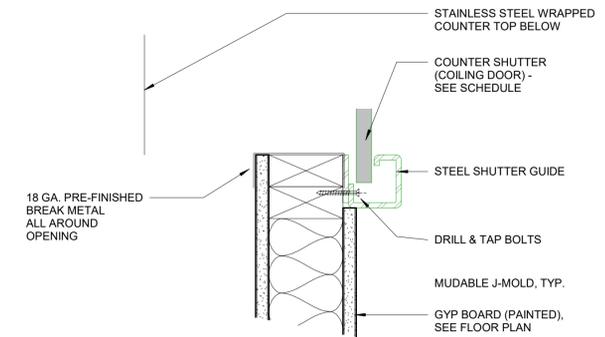
EXTERIOR



INTERIOR

2 EXTERIOR DOOR - HEAD

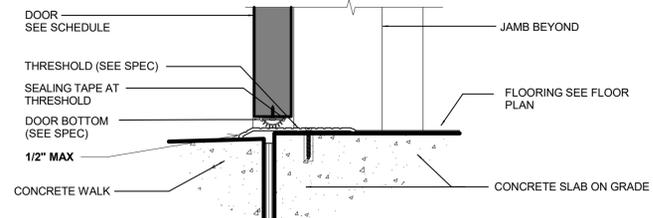
Scale: 3" = 1'-0"



6 COILING DOOR - JAMB

Scale: 3" = 1'-0"

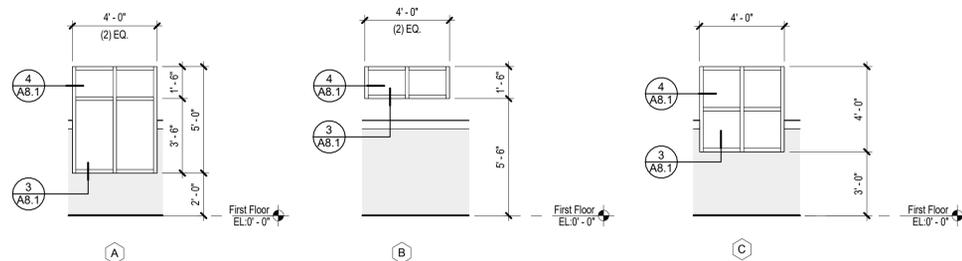
EXTERIOR



INTERIOR

1 EXTERIOR DOOR - SILL

Scale: 3" = 1'-0"



WINDOW ELEVATIONS

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

DOOR SCHEDULE NOTES

- (a) ALL DOOR LEAVES ARE 1-3/4" THICK UNLESS NOTED OTHERWISE.
- (b) DOOR TYPES: REFER TO DOOR TYPES ON THIS DRAWING.
- (c) FOR GLAZING SEE GLAZING SCHEDULE ON THIS DRAWING.
- (d) LABEL - ALL LABEL REQUIREMENTS SHALL BE IN ACCORDANCE WITH I.B.C. SECTION 715. NUMERIC QUANTITY INDICATES FIRE RATING PERIOD SHOWN IN MINUTES, AND INCLUDES FIRE:
 - DOOR LEAF, FRAME, GLAZING, AND ALL HARDWARE.
 - "S" INDICATES SMOKE & DRAFT CONTROL DOOR.
 - FJSAACP: "T" INDICATES DOOR MUST MEET THE REQUIREMENTS OF I.B.C. SECTION 715.3.4.
- (e) FOR HARDWARE GROUPS, SEE SCHEDULE.
- (f) ALL DOOR CLOSERS SHALL BE ADJUSTED TO THE FOLLOWING OPENING FORCES:
 - 1. FIRE DOORS: MINIMUM ALLOWABLE BY THE APPROPRIATE ADMINISTRATIVE AUTHORITY.
 - 2. ALL OTHER DOORS:
 - A. HINGED DOORS 5 LBF. MAXIMUM.
 - B. SLIDING DOORS 5 LBS. MAXIMUM.

DOOR SCHEDULE ABBREVIATIONS:

HC HOLLOW CORE	PP FACTORY PRIMED - FIELD PAINTED
HM HOLLOW METAL - WELDED CORNERS	ST STAINED W/ SEMI GLOSS CLEAR FINISH
	SC SOLID CORE WOOD STAIN GRADE BIRCH

DOOR SCHEDULE

NO.	NOMINAL SIZE (WIDTH x HEIGHT) (a)	DOOR LEAF			FRAME		GLAZING (b)	LABEL	HWDR. GROUP (c)	DETAILS (TYP. U.N.O.)			REMARKS
		TYPE	CONSTR.	FINISH	TYPE	FINISH				HEAD	JAMB	SILL	
FIRST FLOOR													
101A	PR 3'-0" x 7'-0" x 1 3/4"	MS	AL	AN	AL-1	AN	G2	-	1	-	-	-	
101B	PR 3'-0" x 7'-0" x 1 3/4"	MS	AL	AN	AL-1	AN	G2	-	1	-	-	-	
102	PR 3'-0" x 7'-0" x 1 3/4"	F	WD	ST	HM-1	FF	-	-	2	-	-	-	
103	3'-0" x 7'-0" x 1 3/4"	F	WD	ST	HM-1	FF	-	-	3	-	-	-	
104	3'-0" x 7'-0" x 1 3/4"	F	WD	ST	HM-1	FF	-	-	4	-	-	-	
105	3'-0" x 7'-0" x 1 3/4"	F	WD	ST	HM-1	FF	-	-	4	-	-	-	
106	4'-0" x 7'-0" x 1 3/4"	F	HM	FF	HM-1	FF	-	-	5	-	-	-	1
107A	4'-0" x 7'-0" x 1 3/4"	F	WD	ST	HM-1	FF	-	-	6	-	-	-	
107B	10'-0" x 4'-0"	CD	GC	PS	STL	PS	-	-	-	-	-	-	
108	3'-0" x 7'-0" x 1 3/4"	F	HM	FF	HM-1	FF	-	-	7	-	-	-	1
109	3'-0" x 7'-0" x 1 3/4"	F	HM	FF	HM-1	FF	-	-	8	-	-	-	1
110	3'-0" x 7'-0" x 1 3/4"	F	WD	ST	HM-1	FF	-	-	8	-	-	-	

DOOR SCHEDULE ABBREVIATIONS:

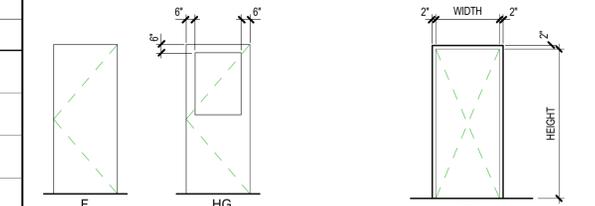
HM HOLLOW METAL - WELDED CORNERS	AL ALUMINUM STOREFRONT	REMARKS:
AT FRAMES	CLEAR ANODIZED	1. HOLLOW METAL DOOR LEAFS TO BE INSULATED.
FF PAINT GRADE (FACTORY PRIMED - FIELD PAINTED)	MS MEDIUM STYLE ALUMINUM STOREFRONT	
PP FACTORY PRE-FINISHED	PS POWDER COATED STEEL	
WD WOOD SOLID CORE	GC GALVANIZED STEEL CURTAIN	
ST STAIN GRADE	CD COILING DOOR (MANUALLY OPERATED)	
F FLUSH	STL STEEL	

GLAZING SCHEDULE

TYPE	DESCRIPTION
G1	1" NOMINAL THICKNESS, DOUBLE-GLAZED, INSULATING GLASS, WITH FACTORY HERMETICALLY SEALED AIR SPACE BETWEEN INT. & EXT. PANES. INTERIOR PANES SHALL BE CLEAR, TEMPERED GLASS. EXTERIOR PANES SHALL CLEAR TEMPERED GLASS.
G2	1" NOMINAL THICKNESS, DOUBLE-GLAZED, INSULATING GLASS, WITH FACTORY HERMETICALLY SEALED AIR SPACE BETWEEN INT. & EXT. PANES. INTERIOR PANES SHALL BE CLEAR, FLOAT GLASS. EXTERIOR PANES SHALL BE CLEAR FLOAT GLASS.

GLAZING SCHEDULE GENERAL NOTES:

- 1. ALL GLAZING PANES SHALL BE MINIMUM 1/4" THICK, U.N.O. INCREASE THICKNESS OF GLAZING WHERE REQUIRED TO MEET IMPACT AND WIND LOADS PER I.B.C. REQUIREMENTS.



DOOR TYPES

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

FRAMES TYPES

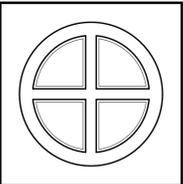
Scale: 1/4" = 1'-0"

DOOR HARDWARE NOTES:

1. **HARDWARE FINISH - US26D**
2. **HINGES**
BALL BEARING MEDIUM DUTY
BASIS OF DESIGN - HAGER BB1279
BALL BEARING HEAVY DUTY
BASIS OF DESIGN - HAGER BB1168
3. **LOCKSETS**
HEAVY DUTY - GRADE 1
BASIS OF DESIGN - BEST 93K SERIES
MEDIUM DUTY - GRADE 2
BASIS OF DESIGN - BEST 7K SERIES
4. **CLOSERS**
REGULAR ARM - GRADE 1
BASIS OF DESIGN - NORTON 8501
5. **DEAD BOLT CYLINDERS**
BASIS OF DESIGN - BEST 83T SERIES and K-TURN NOB
6. **PERIMETER GASKETING**
BASIS OF DESIGN - PEMKO
WEATHER and SOUND SEALS PK55
ASTRIGAL (SPLIT) 303
ASTRIGAL (MEETING STYLE) 369
7. **THRESHOLDS**
SADDLE THRESHOLD
BASIS OF DESIGN - PEMKO 171 for HOLLOW METAL
OFFSET THRESHOLD
BASIS OF DESIGN - PEMKO 158
REQUIRED AT ACCESSIBLE DOORWAYS
8. **SWEEPS**
SWEEPS
BASIS OF DESIGN
SURFACE - PEMKO 315
9. **PUSH/PULLS**
BASIS OF DESIGN - HAGER 33G 4X16
10. **PANIC DEVICES**
RIM EXIT DEVICE
BASIS OF DESIGN - PRECISION HARDWARE 2100 SERIES
LEVER TRIM WITH CYLINDER.
11. **STOPS**
STANDARD WALL MOUNT
BASIS OF DESIGN - TRIMCO 1270WX
OPTIONAL FLOOR MOUNT
BASIS OF DESIGN - TRIMCO 1211
FLOOR STOP W/ HOLDER
BASIS OF DESIGN - TRIMCO 1224-5
12. **KICK PLATE - DOOR WIDTH LESS 2"**

HARDWARE GROUPS

QUANTITY	ITEM	DESCRIPTION	FUNCTION	QUANTITY	ITEM	DESCRIPTION	FUNCTION
Group 1 (PAIR STOREFRONT - EXIT)				Group 5 (REAR EXTERIOR EXIT 4' LEAF)			
2	PIVOTS	TOP and BOTTOM		4	HINGES	HEAVY DUTY	
2	EXIT DEVICE		RIM	1	LOCKSET	HEAVY DUTY	STOREROOM
2	CYLINDER			1	DOOR STOP		
1	REMOVABLE MULLION			1	CLOSER		
2	CLOSER			1	HOLD OPEN	KICK DOWN	
1	THRESHOLD		OFFSET	2	KICK PLATE		
1	GASKETING "WEATHER SEAL"			1	GASKETING "WEATHER SEAL"		
2	SWEEP						
Group 2 (PAIR INTERIOR STORAGE ROOM)				Group 6 (KITCHEN 4' LEAF)			
6	HINGES	HEAVY DUTY		4	HINGES	HEAVY DUTY	
ACTIVE LEAF				1	PUSH PULL		
1	LOCKSET	HEAVY DUTY	STOREROOM	1	DOOR STOP		
INACTIVE LEAF				1	CLOSER		
1	FLUSH BOLTS	SURFACE MOUNT TOP and BOTTOM		2	KICK PLATE		
1	DP STRIKE			1	GASKETING "SOUND SEAL"		
Group 3 (JANITOR)				Group 7 (STORAGE EXTERIOR)			
3	HINGES	MEDIUM DUTY		3	HINGES	HEAVY DUTY	
1	LOCKSET	MEDIUM DUTY	STOREROOM	1	LOCKSET	HEAVY DUTY	
1	DOOR STOP			1	GASKETING "WEATHER SEAL"		
2	KICK PLATE			2	SWEEP		
1	GASKETING "SOUND SEAL"			Group 8 (OFFICE/COMPUTER ROOM)			
Group 4 (TOILET ROOM)				3	HINGES	MEDIUM DUTY	
3	HINGES	MEDIUM DUTY		1	LOCKSET	MEDIUM DUTY	OFFICE
1	PUSH PULL			2	DOOR STOP		
1	DOOR STOP			1	KICK PLATE		
1	CLOSER			1	GASKETING "SOUND SEAL"		
2	KICK PLATE						
1	GASKETING "SOUND SEAL"						



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PROJECT: Washoe Housing Authority
COMMUNITY BUILDING
 WASHOE STEWART LIGHT

BHA JOB NO.: 2218

DRAWING STATUS:

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 DESIGN DEVELOPMENT
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ISSUE DATE: 11.07.2022
 DRAWN BY: DMB

Revisions	Date

DRAWING TITLE:
**DOOR SCHEDULE,
 WINDOW and DOOR
 DETAILS**

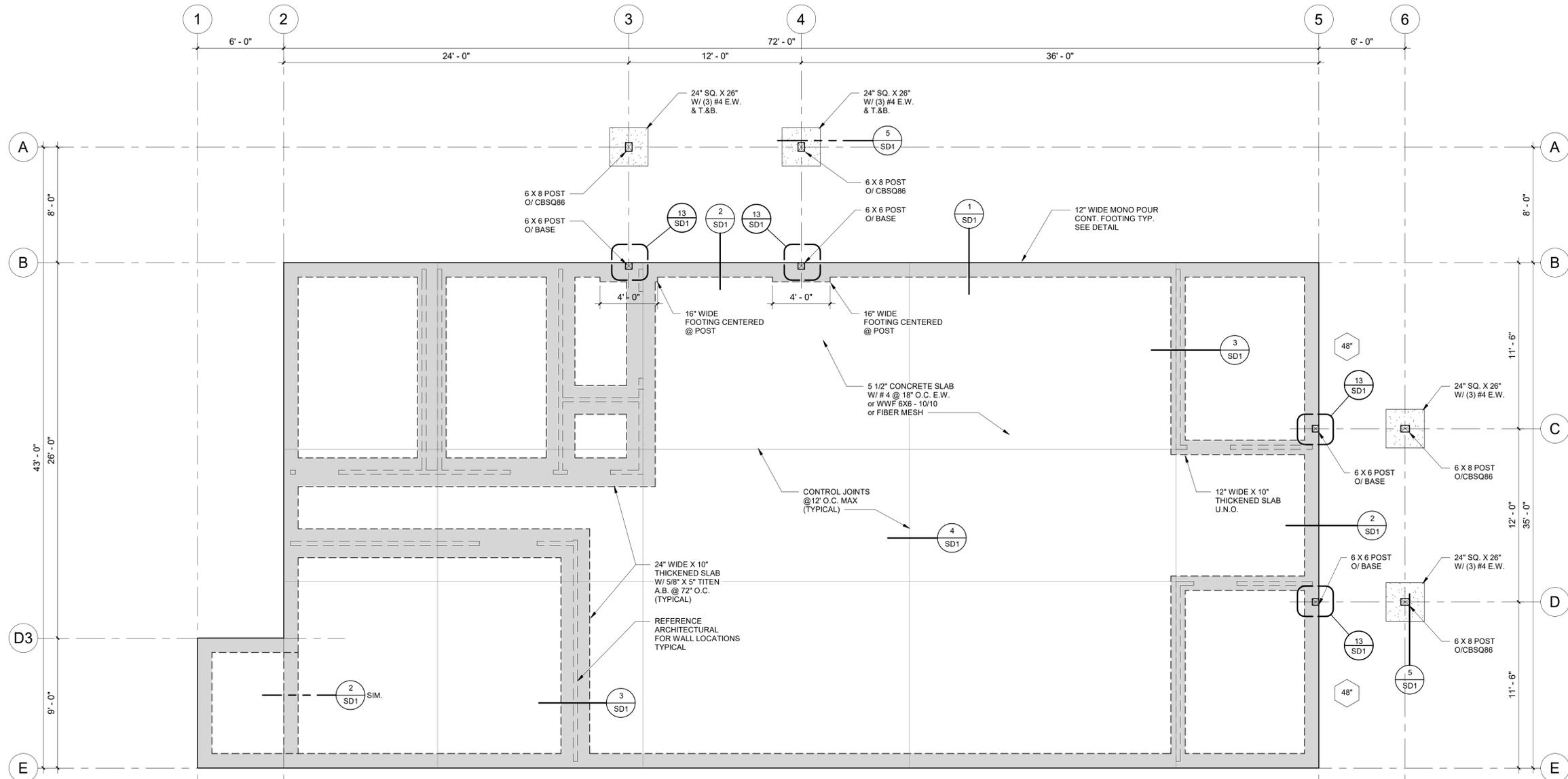
DRAWING NUMBER:

A8.1



11/07/2022

PROJECT:
Washoe Housing Authority
COMMUNITY BUILDING
WASHOE STEWART LIHTC



FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

FOUNDATION PLAN NOTES:

- CONTRACTOR TO VERIFY DIMENSIONS ON ARCHITECTURAL FLOOR PLANS WITH FOUNDATION PLAN. DO NOT SCALE DRAWINGS
- POWDER DRIVEN FASTENERS NOT TO BE USED IN STEM WALL LESS THAN 5 1/2" WIDE OR GREATER THAN 5 1/2' HIGH.
- SLAB VAPOR/MOISTURE BARRIER PER ARCHITECTURAL PLANS.
- SLAB/FLOOR INSULATION PER ARCHITECTURAL PLANS.
- BUILDING DEPT. OFFICIAL TO INSPECT AND APPROVE ALL CONC. EMBEDS AND THEIR INSTALLATIONS PRIOR TO PLACEMENT OF CONCRETE.
- SUB-GRADE SHALL BE FREE OF EXPANSIVE CLAYS, DELETERIOUS MATERIALS AND EXCESSIVE SURFACE WATER. PRESCRIPTIVE BEARING PRESSURE OF 1500 PSF USED.
- CONCRETE SLAB ON GRADE - $f_c = 2500$ PSI - REINFORCED WITH FIBER, WWF6X6/10-10, OR #4 @18" O.C. - PER CONTRACTOR. CONTRACTOR SHALL PLACE CONTROL JOINTS IN ACCORDANCE WITH STANDARD PRACTICE SPACING NOT TO EXCEED 12' O.C.
- 5/8" x 10" ANCHOR J-BOLTS w/ 7" MIN. EMBEDMENT. TO BE AT 72" O.C. U.N.O., MINIMUM OF 2 PER PIECE, NOT MORE THAN 12 INCHES OR LESS THAN 4 INCHES FROM EACH END PIECE & w/ 3"x3"x1/4" PLATE WASHER. NO COUNTER SINKING OF NUTS/WASHERS, U.N.O.
- ALL HARDWARE SHALL BE SIMPSON STRONG TIE, U.N.O.

NON-TYPICAL ANCHOR BOLT SPACING

BHA JOB NO.: 2021.2

DRAWING STATUS:

PHASE

SCHEMATIC DESIGN	<input type="checkbox"/>
DESIGN DEVELOPMENT	<input type="checkbox"/>
CONTRACT DOCUMENTS	<input checked="" type="checkbox"/>

USE THESE DRAWINGS ARE BEING ISSUED FOR THE FOLLOWING USES:

PROGRESS REVIEW	<input type="checkbox"/>
GOVERNING AGENCY REVIEW	<input type="checkbox"/>
ESTIMATING	<input type="checkbox"/>
BIDDING	<input checked="" type="checkbox"/>
OTHER	<input type="checkbox"/>

ISSUE DATE: 11.07.22
DRAWN BY: SCF

Revisions	Date

DRAWING TITLE:
FOUNDATION PLAN

DRAWING NUMBER:
S1



11/07/2022

PROJECT:
Washoe Housing Authority
COMMUNITY BUILDING
WASHOE STEWART LIHTC

BHA JOB NO.: 2021.2

DRAWING STATUS:

PHASE
SCHEMATIC DESIGN
DESIGN DEVELOPMENT
CONTRACT DOCUMENTS

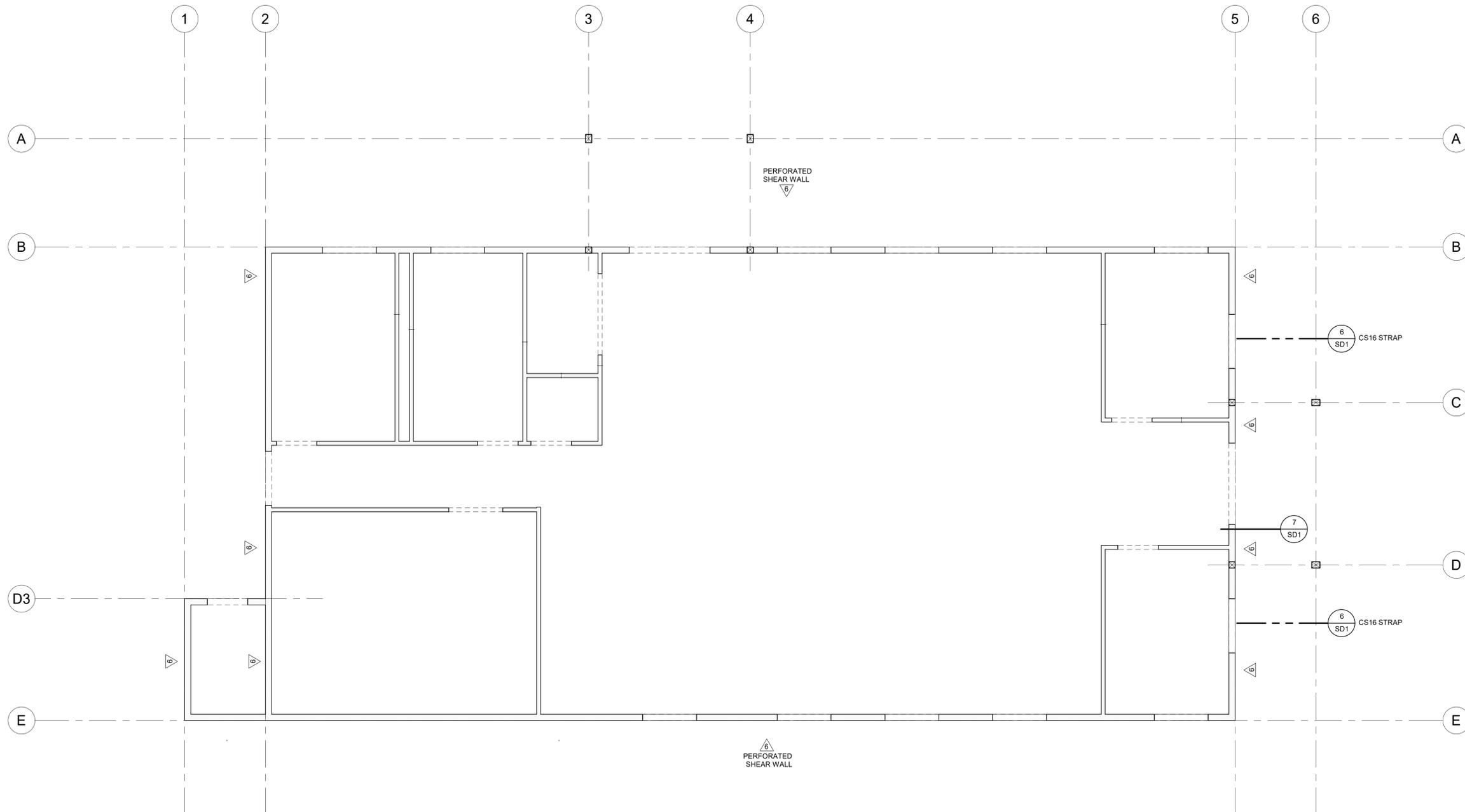
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FOR THE FOLLOWING USES:
PROGRESS REVIEW
GOVERNING AGENCY REVIEW
ESTIMATING
BIDDING
OTHER

ISSUE DATE: 11.07.22
DRAWN BY: SCF

Revisions	Date

DRAWING TITLE:
SHEAR WALL PLAN

DRAWING NUMBER:
S2



SHEAR WALL PLAN
SCALE: 1/4" = 1'-0"

SHEAR WALL SCHEDULE:

MARK	MATERIAL THICKNESS	MATERIAL DESCRIPTION	NAIL SIZE	O.C. NAIL SPACING	
				EDGE	FIELD
	3/8"	APA RATED SHEATHING	8d	6"	12"
	3/8"	APA RATED SHEATHING	8d	4"	12"
	3/8"	APA RATED SHEATHING	8d	3"	12"
3.5	3/8"	APA RATED SHEATHING	8d	2"	12"
	15/32"	APA RATED SHEATHING	10d	6"	12"
	15/32"	APA RATED SHEATHING	10d	4"	12"
3.5	15/32"	APA RATED SHEATHING	10d	3"	12"
3.5	15/32"	APA RATED SHEATHING	10d	2"	12"
	19/32"	APA RATED SHEATHING	10d	6"	12"
	19/32"	APA RATED SHEATHING	10d	4"	12"
3.5	19/32"	APA RATED SHEATHING	10d	3"	12"
3.5	19/32"	APA RATED SHEATHING	10d	2"	12"
	7/16"	APA RATED SIDING W/ SHIPLAP EDGE	8d	6"	12"
	7/16"	APA RATED SIDING W/ SHIPLAP EDGE	8d	4"	12"
	7/16"	APA RATED SIDING W/ SHIPLAP EDGE	8d	3"	12"
3.5	7/16"	APA RATED SIDING W/ SHIPLAP EDGE	8d	2"	12"

SHEAR WALL NOTES:

- SHEATHING AND NAIL SPACING HAS BEEN DESIGNED ASSUMING DOUGLAS FIR-LARCH STUDS AND FRAMING MEMBERS. CONTACT E.O.R. IF DIFFERENT MATERIAL IS USED FOR STUDS.
- STUDS SHALL BE SPACED A MAXIMUM OF 16" O.C. FOR VERTICAL PANEL ORIENTATION. STUDS SHALL BE SPACED A MAXIMUM OF 24" O.C FOR HORIZONTAL PANEL ORIENTATION. CONTRACTOR MAY USE THICKER SHEATHING UP TO 15/32" WITH 8d NAILS.
- FOR SHEAR WALLS WITH 8d NAILS AT 2" O.C. SPACING OR LESS AND SHEAR WALLS WITH 10d NAILS AT 3" O.C. SPACING OR LESS, PROVIDE SINGLE 3" NOMINAL FRAMING MEMBERS OR LARGER AT ALL ADJOINING PANEL EDGES RECEIVING EDGE NAILING. NAILS SHALL BE STAGGERED.
- WHERE PANELS ARE APPLIED ON BOTH FACES OF A WALL AND NAIL SPACING IS LESS THAN 6" O.C., EITHER SIDE, PANEL JOINTS SHALL BE OFFSET TO FALL ON DIFFERENT FRAMING MEMBERS, OR FRAMING SHALL BE 3" NOMINAL OR THICKER AT PANEL EDGES AND NAILS, ON EACH SIDE, SHALL BE STAGGERED.
- DOUBLE 2X NOMINAL FRAMING MEMBERS, STITCHED TOGETHER WITH (2) 16d NAILS AT 6" O.C., MAY BE USED IN LIEU OF 3X FRAMING MEMBERS.
- SHIPLAP EDGES SHALL BE DOUBLE NAILED: ONE NAIL SHALL BE PLACED IN THE UNDERLAP AND A SECOND NAIL IN THE OVERLAP AT THE NAILS SPACING SPECIFIED. MEMBERS.
- FOR SHEATHING USE COMMON OR GALVANIZED BOX NAILS. FOR SIDING USE GALVANIZED NAILS ONLY.
- PERFORATED SHEAR WALLS, AS IDENTIFIED ON PLANS, SHALL HAVE EDGE NAILING AROUND ALL OF ALL OPENINGS.
- PROVIDE BLOCKING OR SOLID FRAMING AT ALL SHEAR WALL PANEL EDGES.
- NAIL ALL SHEATHING WITH EDGE NAIL SPACING AT TOP PLATES, MUD SILLS, ALL PANEL EDGES, AND ALL STUDS OR POSTS WITH HOLD-DOWNS.
- ANCHOR BOLTS SHALL HAVE A 3" SQUARE X 1/4" THICK STEEL PLATE WASHER BETWEEN THE NUT AND THE SILL PLATE. THE PLATE WASHER SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SIDE(S) WITH SHEATHING.



11/07/2022

PROJECT: Washoe Housing Authority
COMMUNITY BUILDING
 WASHOE STEWART LIGHT

BHA JOB NO.: 2021.2

DRAWING STATUS:

- PHASE
- SCHEMATIC DESIGN
- DESIGN DEVELOPMENT
- CONTRACT DOCUMENTS

USE THESE DRAWINGS ARE BEING ISSUED FOR THE FOLLOWING USES:

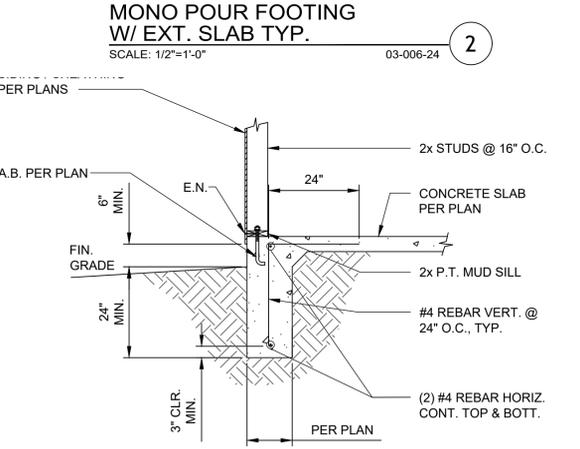
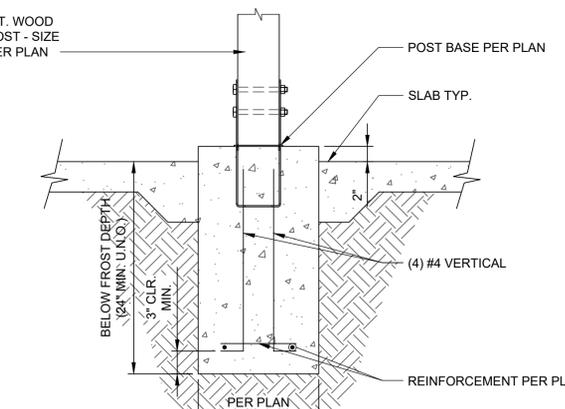
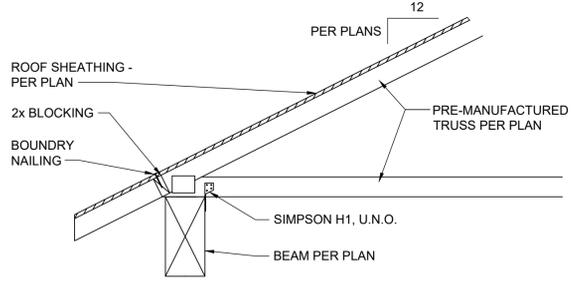
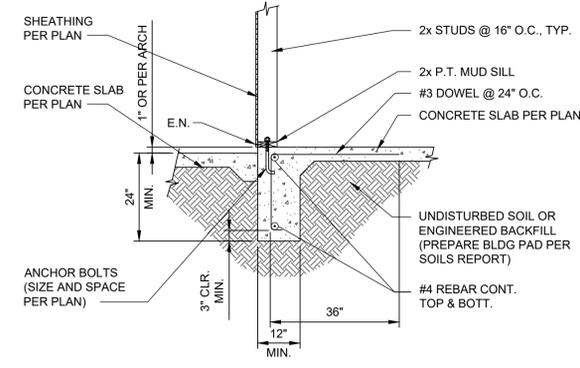
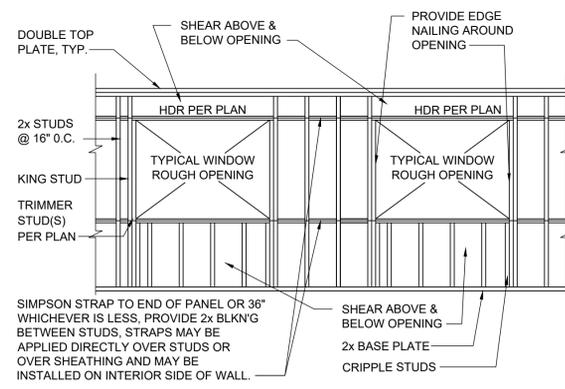
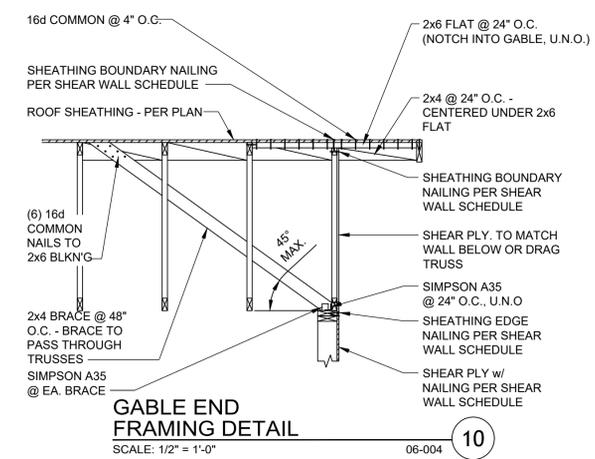
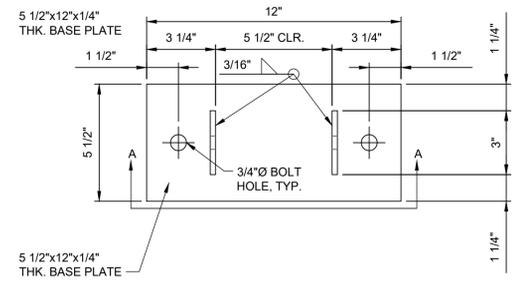
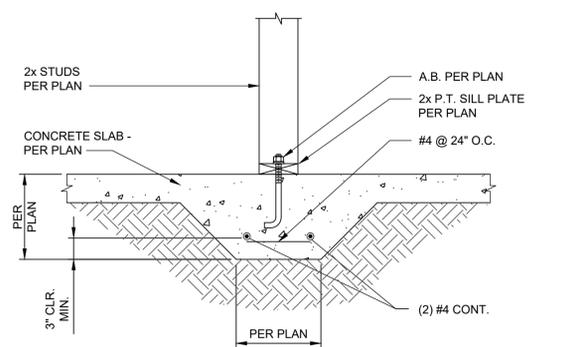
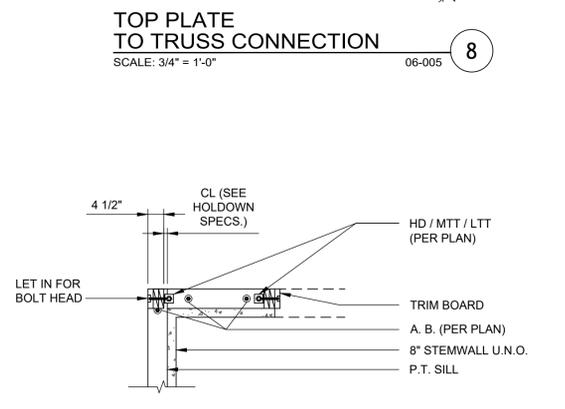
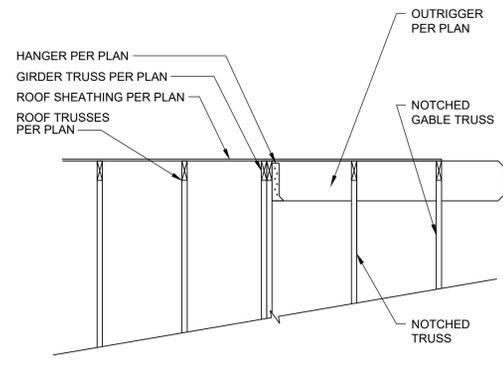
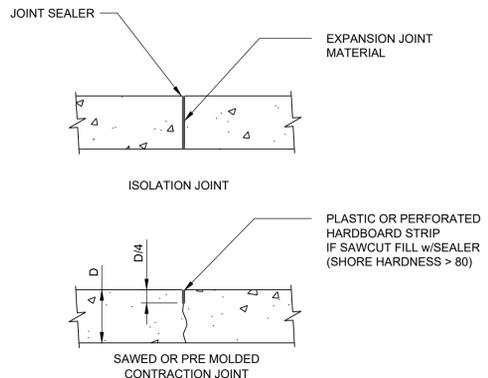
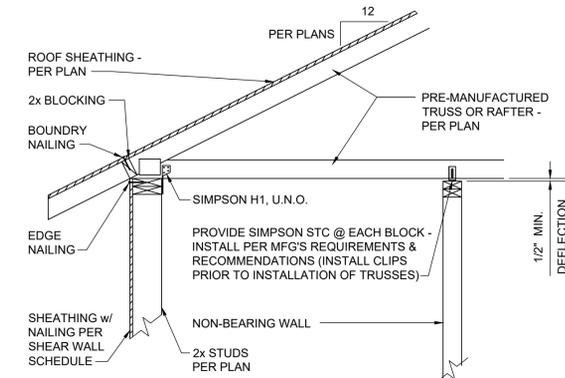
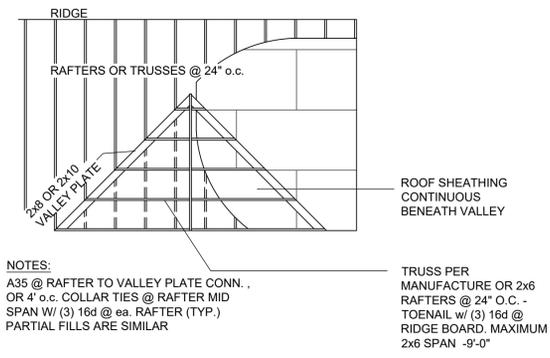
- PROGRESS REVIEW
- GOVERNING AGENCY REVIEW
- ESTIMATING
- BIDDING
- OTHER

ISSUE DATE: 11.07.22
 DRAWN BY: MLM

Revisions	Date

DRAWING TITLE: **STRUCTURAL DETAILS**

DRAWING NUMBER: **SD1**



COMcheck Software Version 4.1.5.5

Envelope Compliance Certificate

Project Information

Energy Code: 2018 IECC
 Project Title: Washoe Housing Authority Community Building
 Location: Reno, Nevada
 Climate Zone: 5b
 Project Type: New Construction
 Vertical Glazing / Wall Area: 10%

Construction Site: Washoe Stewart LIHTC, NV
 Owner/Agent:
 Designer/Contractor: Darrin Berger, Berger Hannafin Architecture, 312 West 3rd Street, Carson City, NV 89701, 775-882-6455, darrin@bharchitects.biz

Additional Efficiency Package(s)

Credits: 1.0 Required, 1.0 Proposed, High Performance HVAC, 1.0 credit

Building Area	Floor Area
1-Convention Center - Nonresidential	2573

Envelope Assemblies

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor _{req}
Roof 1: Attic Roof with Wood Joists [Bldg. Use 1 - Convention Center]	2572	38.0	0.0	0.027	0.027
Floor 1: Slab-On-Grade Unheated [Bldg. Use 1 - Convention Center] (c)	242	—	—	0.730	0.540
NORTH					
Exterior Wall 1: Wood-Framed, 16" o.c., [Bldg. Use 1 - Convention Center]	430	21.0	0.0	0.062	0.064
Door 1: Uninsulated Double-Layer Metal, Swinging [Bldg. Use 1 - Convention Center]	21	—	—	0.140	0.370
EAST					
Exterior Wall 2: Wood-Framed, 16" o.c., [Bldg. Use 1 - Convention Center]	780	21.0	0.0	0.062	0.064
Window 1: Vinyl/Fiberglass Frame Fixed, Perf. Specs.: Product ID Pending ID, SHGC 0.29, PF 0.29, VT 0.51, [Bldg. Use 1 - Convention Center] (b)	92	—	—	0.320	0.380
Door 2: Uninsulated Double-Layer Metal, Swinging [Bldg. Use 1 - Convention Center]	63	—	—	0.140	0.370
SOUTH					
Exterior Wall 3: Wood-Framed, 16" o.c., [Bldg. Use 1 - Convention Center]	430	21.0	0.0	0.062	0.064
Window 2: Vinyl/Fiberglass Frame Fixed, Perf. Specs.: Product ID Pending ID, SHGC 0.29, PF 0.29, VT 0.51, [Bldg. Use 1 - Convention Center] (b)	40	—	—	0.320	0.380

Project Title: Washoe Housing Authority Community Building Report date: 11/07/22
 Data filename: Z:\22000\22102 Stewart Housing Community Building\EC\22102 Washoe Housing Community Page 1 of 15 Building.cck

Assembly	Gross Area or Perimeter	Cavity R-Value	Cont. R-Value	Proposed U-Factor	Budget U-Factor _{req}
Door 3: Uninsulated Double-Layer Metal, Swinging [Bldg. Use 1 - Convention Center]	42	—	—	0.140	0.370
WEST					
Exterior Wall 4: Wood-Framed, 16" o.c., [Bldg. Use 1 - Convention Center]	780	21.0	0.0	0.062	0.064
Window 3: Vinyl/Fiberglass Frame Fixed, Perf. Specs.: Product ID Pending ID, SHGC 0.29, PF 0.29, VT 0.51, [Bldg. Use 1 - Convention Center] (b)	100	—	—	0.320	0.380

(a) Budget U-factors are used for software baseline calculations ONLY, and are not code requirements.
 (b) Fenestration product performance must be certified in accordance with NFRC and requires supporting documentation.
 (c) Slab-On-Grade proposed and budget U-factors shown in table are F-factors.

Envelope PASSES: Design 0.2% better than code

Envelope Compliance Statement

Compliance Statement: The proposed envelope design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed envelope systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title Signature Date

Project Title: Washoe Housing Authority Community Building Report date: 11/07/22
 Data filename: Z:\22000\22102 Stewart Housing Community Building\EC\22102 Washoe Housing Community Page 2 of 15 Building.cck

COMcheck Software Version 4.1.5.5

Mechanical Compliance Certificate

Project Information

Energy Code: 2018 IECC
 Project Title: Washoe Housing Authority Community Building
 Location: Reno, Nevada
 Climate Zone: 5b
 Project Type: New Construction

Construction Site: Washoe Stewart LIHTC, NV
 Owner/Agent:
 Designer/Contractor: Darrin Berger, Berger Hannafin Architecture, 312 West 3rd Street, Carson City, NV 89701, 775-882-6455, darrin@bharchitects.biz

Additional Efficiency Package(s)

Credits: 1.0 Required, 1.0 Proposed, High Performance HVAC, 1.0 credit

Mechanical Systems List

Quantity System Type & Description

2 HVAC System 1 (Single Zone)
 Heating: 1 each - Central Furnace, Gas, Capacity = 100 kBtu/h
 Proposed Efficiency = 96.00% Et, Required Efficiency: 88.00 % Et or 88% AFUE
 Cooling: 1 each - Split System, Capacity = 46 kBtu/h, Air-Cooled Condenser, No Economizer, Economizer exception: None
 Proposed Efficiency = 15.10 SEER, Required Efficiency: 14.30 SEER
 Fan System: FAN SYSTEM 1 | Education Center - Compliance (Motor nameplate HP method) - Passes

Fans:
 FAN 1 Supply, Constant Volume, 1530 CFM, 0.8 motor nameplate hp, 0.0 fan efficiency grade

1 HVAC System 2 (Single Zone)
 Split System Heat Pump
 Heating Mode: Capacity = 30 kBtu/h
 Proposed Efficiency = 11.20 HSPF, Required Efficiency = 9.02 HSPF
 Cooling Mode: Capacity = 36 kBtu/h
 Proposed Efficiency = 20.00 SEER, Required Efficiency: 15.40 SEER
 Fan System: FAN SYSTEM 2 | Office - Compliance (Brake HP method) - Passes

Fans:
 FAN 2 Supply, Constant Volume, 590 CFM, 0.1 motor nameplate hp, 0.1 design brake hp (0.1 max. BHP), 0.0 fan efficiency grade

Mechanical Compliance Statement

Compliance Statement: The proposed mechanical design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed mechanical systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Brandon Echemendy PE
 Name - Title Signature Date 11/07/22

Project Title: Washoe Housing Authority Community Building Report date: 11/07/22
 Data filename: Z:\22000\22102 Stewart Housing Community Building\EC\22102 Washoe Housing Community Page 3 of 15 Building.cck

COMcheck Software Version 4.1.5.5

Inspection Checklist

Energy Code: 2018 IECC

Requirements: 0.0% were addressed directly in the COMcheck software

Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req. ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR1] ¹	Plans and/or specifications provide all information with which compliance can be determined for the building envelope and document where exceptions to the standard are claimed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C103.2 [PR2] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the mechanical systems and equipment and document where exceptions to the standard are claimed. Load calculations per acceptable engineering standards and handbooks.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.4.1 [PR10] ¹	The vertical fenestration area <= 30 percent of the gross above-grade wall area.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.4.1 [PR11] ¹	The skylight area <= 3 percent of the gross roof area.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.4.2 [PR14] ¹	In enclosed spaces > 2,500 ft ² directly under a roof with ceiling heights > 15 ft. and used as an office, lobby, atrium, concourse, corridor, storage, gymnasium/exercise center, convention center, automotive service, manufacturing, non-refrigerated warehouse, retail store, distribution/sorting area, transportation, or workshop, the following requirements apply: (a) the daylight zone under skylights is >= half the floor area; (b) the skylight area to daylight zone is >= 3 percent with a skylight VT >= 0.40, or a minimum skylight effective aperture >= 1 percent.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C406 [PR9] ¹	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 | High Impact (Tier 1) 2 | Medium Impact (Tier 2) 3 | Low Impact (Tier 3)

Project Title: Washoe Housing Authority Community Building Report date: 11/07/22
 Data filename: Z:\22000\22102 Stewart Housing Community Building\EC\22102 Washoe Housing Community Page 4 of 15 Building.cck

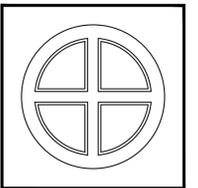
Project Title: Washoe Housing Authority Community Building Report date: 11/07/22
 Data filename: Z:\22000\22102 Stewart Housing Community Building\EC\22102 Washoe Housing Community Page 5 of 15 Building.cck

Section # & Req. ID	Footing / Foundation Inspection	Complies?	Comments/Assumptions
C303.2 [FO4] ¹	Slab edge insulation installed per manufacturer's instructions.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C303.2.1 [FO6] ¹	Exterior insulation protected against damage, sunlight, moisture, wind, landscaping and equipment maintenance activities.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C105 [FO3] ¹	Installed slab-on-grade insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
C402.2.4 [FO7] ¹	Slab edge insulation depth/length. Slab insulation extending away from building is covered by pavement or >= 10 inches of soil.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
C403.12.2 [FO9] ¹	Snow/ice melting system and freeze protection systems have sensors and controls configured to limit service for pavement temperature and outdoor temperature, future connection to controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 | High Impact (Tier 1) 2 | Medium Impact (Tier 2) 3 | Low Impact (Tier 3)

Project Title: Washoe Housing Authority Community Building Report date: 11/07/22
 Data filename: Z:\22000\22102 Stewart Housing Community Building\EC\22102 Washoe Housing Community Page 6 of 15 Building.cck



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11/07/22

PROJECT: Washoe Housing Authority

COMMUNITY BUILDING

WASHOE STEWART LIHTC

JOB NO.: 22102

DRAWING STATUS:

PHASE

SCHEMATIC DESIGN
 DESIGN DEVELOPMENT
 CONTRACT DOCUMENTS

USE THESE DRAWINGS ARE BEING ISSUED FOR THE FOLLOWING USES:

PROGRESS REVIEW
 GOVERNING AGENCY REVIEW
 ESTIMATING
 BIDDING
 OTHER

ISSUE DATE: 11.07.22
 DRAWN BY: BAE

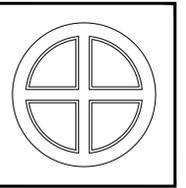
Revisions	Date

DRAWING TITLE:
 ENERGY COMPLIANCE DOCUMENTATION

DRAWING NUMBER:
 EC0.1



DATE: 11/07/22
 PROJECT: WASHOE STEWART LIHTC
 DRAWING: EC0.1



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11/07/22

PROJECT:
Washoe Housing Authority
COMMUNITY BUILDING
WASHOE STEWART LIHTC

JOB NO.: 22102

DRAWING STATUS:

PHASE
SCHEMATIC DESIGN
DESIGN DEVELOPMENT
CONTRACT DOCUMENTS

USE
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GOVERNING AGENCY REVIEW
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BIDDING
OTHER

ISSUE DATE: 11.07.22
DRAWN BY: BAE

Revisions	Date

DRAWING TITLE:
**ENERGY
COMPLIANCE
DOCUMENTATION**

DRAWING NUMBER:

EC0.2

Section # & Req. ID	Framing / Rough-In Inspection	Complies?	Comments/Assumptions
C303.1.3 [FR12] ¹	Fenestration products rated in accordance with NFRC.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C303.1.3 [FR13] ¹	Fenestration products are certified as to performance labels or certificates provided.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.4.3 [FR10] ¹	Vertical fenestration SHGC value.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
C402.4.3, C402.4.3.4 [FR8] ¹	Installed vertical fenestration U-factor and SHGC consistent with label specifications and as reported in plans and COMcheck reports.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
C402.5.1.2.1 [FR19] ¹	The building envelope contains a continuous air barrier that is sealed in an approved manner and material permeability <= 0.004 dfm/ft ² . Air barrier penetrations are sealed in an approved manner.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.5.2, C402.5.4 [FR18] ¹	Factory-built fenestration and doors are labeled as meeting air leakage requirements.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.5.7 [FR17] ¹	Vestibules are installed on all building entrances. Doors have self-closing devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

Project Title: Washoe Housing Authority Community Building Report date: 11/07/22
Data filename: Z:\22000\22102 Stewart Housing Community Building\EC\22102 Washoe Housing Community Page 7 of 15 Building.cck

Section # & Req. ID	Plumbing Rough-In Inspection	Complies?	Comments/Assumptions
C404.5, C404.5.1, C404.5.2 [PL6] ¹	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.5, C404.5.1, C404.5.2 [PL6] ¹	Heated water supply piping conforms to pipe length and volume requirements. Refer to section details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.6.3 [PL7] ¹	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.6.3 [PL7] ¹	Pumps that circulate water between a heater and storage tank have controls that limit operation from startup to <= 5 minutes after end of heating cycle.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.7 [PL8] ¹	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C404.7 [PL8] ¹	Demand recirculation water systems have controls that start the pump upon receiving a signal from the action of a user of a fixture or appliance and limits the temperature of the water entering the cold-water piping to 104°F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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Section # & Req. ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C402.2.6 [ME14] ¹	Thermally ineffective panel surfaces of sensible heating panels have insulation >= R-5.5.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.5.5, C403.2.4.3 [ME3] ¹	Stair and elevator shaft vents have motorized dampers that automatically close. Reference section C403.7.7 for operational details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.7.7 [ME5] ¹	Outdoor air and exhaust systems have motorized dampers that automatically shut when not in use and meet maximum leakage rates. Check gravity dampers where allowed. Reference section language for operational details.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.11.3 [ME61] ¹	HVAC piping insulation insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.11.3 [ME61] ¹	HVAC piping insulation insulated in accordance with Table C403.11.3. Insulation exposed to weather is protected from damage and is provided with shielding from solar radiation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.8.4 [ME142] ¹	Motors for fans that are not less than 1/12 hp and less than 1 hp are electronically commutated motors or have a minimum motor efficiency of 70 percent. These motors have the means to adjust motor speed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.8.4 [ME142] ¹	Motors for fans that are not less than 1/12 hp and less than 1 hp are electronically commutated motors or have a minimum motor efficiency of 70 percent. These motors have the means to adjust motor speed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.8.5 [ME143] ¹	Each DX cooling system > 65 kBtu and chiller water/evaporative cooling system with fans > 1/4 hp are designed to vary the indoor fan airflow as a function of load and comply with detailed requirements of this section.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.8.5 [ME143] ¹	Each DX cooling system > 65 kBtu and chiller water/evaporative cooling system with fans > 1/4 hp are designed to vary the indoor fan airflow as a function of load and comply with detailed requirements of this section.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.12.1 [ME71] ¹	Systems that heat outside the building envelope are radiant heat systems controlled by an occupancy sensing device or timer switch.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.3 [ME55] ¹	HVAC equipment efficiency verified.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Mechanical Systems list for values.

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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Section # & Req. ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.2.2 [ME59] ¹	Natural or mechanical ventilation is provided in accordance with International Mechanical Code Chapter 4. Mechanical ventilation has capability to reduce outdoor air supply to minimum per IMC Chapter 4.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.7.1 [ME59] ¹	Demand control ventilation provided for spaces >500 ft ² and >25 people/1000 ft ² occupant density and served by systems with air side economizer, auto modulating outside air damper control, or design airflow >3,000 cfm.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.7.2 [ME115] ¹	Enclosed parking garage ventilation has automatic contaminant detection and capacity to stage or modulate fans to 50% or less of design capacity.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.7.6 [ME141] ¹	HVAC systems serving guestrooms in Group R-2 buildings with > 50 guestrooms. Each guestroom is provided with controls that automatically manage temperature setpoint and ventilation (see sections C403.7.6.1 and C403.7.6.2).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.7.4 [ME57] ¹	Exhaust air energy recovery on systems meeting Table C403.7.4(1) and C403.7.4(2).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.7.5 [ME116] ¹	Kitchen exhaust systems comply with replacement air and conditioned supply air limitations, and satisfy hood rating requirements and maximum exhaust rate criteria.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.11.1 [ME60] ¹	HVAC ducts and plenums insulated in accordance with C403.11.1 and constructed in accordance with C403.11.2, verification may need to occur during Foundation Inspection.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.4.3.3.2 [ME121] ¹	Closed-circuit cooling tower within heat pump loop have either automatic bypass valve or lower leakage positive closure dampers. Open-circuit tower within heat pump loop have automatic valve to bypass all heat pump water flow around the tower. Open- or closed-circuit cooling towers used in conjunction with a separate heat exchanger have heat loss by shutting down the circulation pump on the cooling tower loop. Open- or closed circuit cooling towers have a separate heat exchanger to isolate the cooling tower from the heat pump loop, and heat loss is controlled by shutting down the circulation pump on the cooling tower loop.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

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Section # & Req. ID	Mechanical Rough-In Inspection	Complies?	Comments/Assumptions
C403.4.1 [ME63] ¹	Heating for vestibules and air curtains with integral heating include automatic controls that shut off the heating system when outdoor air temperatures > 45°F. Vestibule heating and cooling systems controlled by a thermostat in the vestibule with heating setpoint <= 60F and cooling setpoint >= 80F.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.3.3 [ME35] ¹	Hot gas bypass limited to: <=240 kBtu/h - 50% >240 kBtu/h - 25%	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.2 [ME53] ¹	Air outlets and zone terminal devices have means for air balancing.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.5, C403.5.1, C403.5.2 [ME123] ¹	Refrigerated display cases, walk-in coolers or walk-in freezers served by remote compressors and remote condensers not located in a condensing unit, have fan-powered condensers that comply with Sections C403.5.1 and refrigeration compressor systems that comply with C403.5.2.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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Section # & Req. ID	Insulation Inspection	Complies?	Comments/Assumptions
C303.1 [IN3] ¹	Roof insulation installed per manufacturer's instructions. Blown or poured loose-fill insulation is installed only where the roof slope is <=3 in 12.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.2.1 [IN20] ¹	Insulation installed on a suspended ceiling having ceiling tiles is not being specified for roof/ceiling assemblies. Continual insulation installed in 2 or more layers with edge joints offset between layers.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C303.1 [IN10] ¹	Building envelope insulation is labeled with R-value or insulation certificate providing R-value and other relevant data.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C303.2 [IN7] ¹	Above-grade wall insulation installed per manufacturer's instructions.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C303.2.1 [IN14] ¹	Exterior insulation is protected from damage with a protective material. Verification for exposed foundation insulation may need to occur during Foundation Inspection.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C105 [IN6] ¹	Installed above-grade wall insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
C402.2.3 [IN8] ¹	Installed floor insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
C402.2.6 [IN18] ¹	Radiant panels and associated components, designed for heat transfer from the panel surfaces to the occupants or indoor space are insulated with a minimum of R-3.5.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C105 [IN2] ¹	Installed roof insulation type and R-value consistent with insulation specifications reported in plans and COMcheck reports. For some ceiling systems, verification may need to occur during Framing Inspection.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Envelope Assemblies table for values.
C402.5.1 [IN1] ¹	All sources of air leakage in the building thermal envelope are sealed, caulked, gasketed, weather stripped or wrapped with moisture vapor-permeable wrapping material to minimize air leakage.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

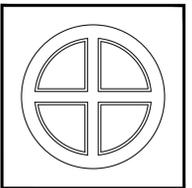
Additional Comments/Assumptions:

1 High Impact (Tier 1) 2 Medium Impact (Tier 2) 3 Low Impact (Tier 3)

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PROJECT: WASHOE STEWART LIHTC
DATE: 11/07/22
DRAWN BY: BAE
CHECKED BY: [Signature]
DATE: 11/07/22
PROJECT: WASHOE STEWART LIHTC



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PROJECT:
Washoe Housing Authority
COMMUNITY BUILDING
WASHOE STEWART LIHTC

JOB NO.: 22102
DRAWING STATUS:
PHASE
SCHEMATIC DESIGN
DESIGN DEVELOPMENT
CONTRACT DOCUMENTS
USE
THESE DRAWINGS ARE BEING ISSUED FOR THE FOLLOWING USES:
PROGRESS REVIEW
GOVERNING AGENCY REVIEW
ESTIMATING
BIDDING
OTHER
ISSUE DATE: 11.07.22
DRAWN BY: BAE

Revisions	Date
▲	
▲	
▲	
▲	
▲	

DRAWING TITLE:
**ENERGY
COMPLIANCE
DOCUMENTATION**

DRAWING NUMBER:
EC0.3

Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C403.2.3 C408.2.5.3 [F18]³	Furnished O&M manuals for HVAC systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.5.6 [F137]²	Weatherseals installed on all loading dock cargo door openings and provide direct contact along the top and sides of vehicles parked in the doorway.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C402.5.8 [F126]²	Recessed luminaires in thermal envelope to limit infiltration and be IC rated and labeled. Seal between interior finish and luminaire housing.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.2 [F127]²	HVAC systems and equipment capacity does not exceed calculated loads.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.1 [F147]²	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.1 [F147]²	Heating and cooling to each zone is controlled by a thermostat control. Minimum one humidity control device per installed humidification/dehumidification system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.1.1 [F142]²	Heat pump controls prevent supplemental electric resistance heat from coming on when not needed.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.4.1.2 [F138]²	Thermostatic controls have a 5 °F deadband.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.1.3 [F120]²	Temperature controls have setpoint overlap restrictions.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.2 [F139]²	Each zone equipped with setback controls using automatic time clock or programmable control system.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.2.1 C403.2.4.2.2 [F140]²	Automatic Controls: Setback to 55°F (heat) and 65°F (cool); 7-day clock, 2-hour occupant override, 10-hour backup	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C403.2.4.2.3 [F141]²	Systems include optimum start controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

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Section # & Req.ID	Final Inspection	Complies?	Comments/Assumptions
C403.2.4.2.3 [F141]²	Systems include optimum start controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.1 [F128]²	Commissioning plan developed by registered design professional or approved agency.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.3.1 [F131]²	HVAC equipment has been tested to ensure proper operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.3.2 [F110]²	HVAC control systems have been tested to ensure proper operation, calibration and adjustment of controls.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.4 [F129]²	Preliminary commissioning report completed and certified by registered design professional or approved agency.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.1 [F17]²	Furnished HVAC as-built drawings submitted within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.3 [F143]²	An air and/or hydronic system balancing report is provided for HVAC systems.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	
C408.2.5.4 [F130]²	Final commissioning report due to building owner within 90 days of receipt of certificate of occupancy.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	

Additional Comments/Assumptions:

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MECHANICAL & PLUMBING SPECIFICATIONS

5.1 GENERAL NOTES. 5.2 SCOPE. THE WORK TO BE COMPLETED UNDER THIS CONTRACT IS TO INCLUDE NECESSARY EQUIPMENT, MATERIALS, LABOR AND INSPECTION NECESSARY IN PROVIDING A FULLY OPERATIONAL SYSTEM PER THE INTENT AND REQUIREMENTS OF THE CONTRACT DRAWINGS AND SPECIFICATIONS. ALL WORK, EQUIPMENT AND FINISHED SYSTEMS ARE TO CONFORM WITH THE BEST MODERN PRACTICES AND STANDARDS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE WORK IS TO BE COMPLETED WITH THE UNDERSTANDING THAT A LIMITED AMOUNT OF DETAIL CAN BE AFFORDED BY THE LARGE SCALE DRAWING REPRESENTATIONS OF THE REQUIRED SYSTEM. DUE TO THE NATURE OF THIS LIMITATION IT IS EXPECTED OF THE CONTRACTOR TO PROVIDE THE NECESSARY PRODUCTS AND LABOR TO MEET THE INTENT OF THE CONTRACT DOCUMENTS AND INFORMATION WHERE THE FULL INTENT CANNOT BE DETERMINED OR IS DETERMINED TO BE ERROR. SUCH OCCURRENCES ARE TO BE ASSUMED AND INCLUDED IN THE CONTRACTOR'S SCOPE OF WORK AND PRICING.

5.3 CODES AND STANDARDS. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST ADOPTED STATE AND NATIONAL CODES AS WELL AS INDUSTRY STANDARDS (I.E. ASHRAE, ASME, ANSI, SMACNA ETC.) GOVERNING SUCH WORK. THIS DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING WORK SHOWN OR SPECIFIED WHICH MAY EXCEED THE REQUIREMENTS OF SUCH ORDINANCES, LAWS, REGULATIONS AND CODES.

5.4 WORKMANSHIP AND INSTALLATION. ALL WORK COMPLETED ON THE PROJECT IS TO BE DONE SO IN A PROFESSIONAL MANNER UTILIZING THE BEST MODERN PRACTICES AND INSTALLATION TECHNIQUES. UNLESS OTHERWISE NOTED ALL EQUIPMENT, PIPING, DUCTWORK, FIXTURES ETC. ARE TO BE INSTALLED LEVEL AND TRUE; PARALLEL AND/OR PERPENDICULAR TO THE BUILDING STRUCTURE AND WALLS. COORDINATION DRAWINGS ARE TO BE COMPLETED BY THE CONTRACTOR PRIOR TO COMMENCEMENT OF ANY WORK PROVIDING THE CONTRACTOR A FULL WORKING KNOWLEDGE OF THE TASK AT HAND. ALL WORK IS TO BE LAID OUT ON SITE BY THE CONTRACTOR TO ENSURE PROPER FIT, ORIENTATION AND COORDINATION WITH OTHER BUILDING TRADES PRIOR TO INSTALLATION. FIELD CHANGES ARE TO BE EXPECTED AS REQUIRED BY ACTUAL CONSTRUCTION CONDITIONS AND THE CONTRACTOR IS TO ALLOW SHIFTS, RELOCATIONS, RECONFIGURATIONS OF ANY EQUIPMENT OR MATERIAL UP TO 10'. LACK OF ADHERENCE TO ANY OF THE ABOVE MENTIONED REQUIREMENTS WILL NOT CONSTITUTE, NOR WILL BE ALLOWED, A CHANGE IN SCOPE OR ALLOWANCE OF ADDITIONAL FEES.

5.5 COPYRIGHT. THESE PLANS, SPECIFICATIONS AND ALL RELATED ADDENDA AND DOCUMENTS CONSTITUTE COPYRIGHTED MATERIALS OF ETCHENDEY ENGINEERING INC. THESE MATERIALS SHALL REMAIN THE SOLE PROPERTY OF ETCHENDEY ENGINEERING INC. AND MAY NOT BE REPRODUCED, DISTRIBUTED TO OTHER OR USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE PRIOR WRITTEN CONSENT OF ETCHENDEY ENGINEERING INC.

5.6 DRAWINGS. DRAWINGS ARE GRAPHICAL REPRESENTATIONS OF THE WORK INTENDED TO BE COMPLETED UNDER THE SCOPE OF THIS PROJECT. ALL DATA PROVIDED ON THESE DRAWINGS IS TO BE FIELD VERIFIED AS THE LARGE SCALE OF PLANS DOES NOT AFFORD EXACT REPRESENTATION OF ALL CONDITIONS. EXAMPLES OF REPRESENTATIONS NOT ALWAYS AFFORDED BY THE LARGE SCALE OF THE DRAWINGS ARE OFFSETS IN DUCTWORK OR PIPING, EXACT LOCATION OF VALVES, FITTINGS, ACTUATORS, AND DAMPERS ETC. IT IS THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH CIVIL, ARCHITECTURAL, AND STRUCTURAL, FIRE AND ELECTRICAL DRAWINGS AND CONTRACTORS TO VERIFY THE VALIDITY OF THE MECHANICAL DRAWINGS GOVERNED UNDER THESE SPECIFICATIONS. THE CONTRACTOR IS TO RECTIFY IN THE FIELD ANY DISCREPANCIES NOTED BY THE EXPRESS DIRECTION AND CONSENT OF THE ENGINEER. DO NOT SCALE THE MECHANICAL DRAWINGS FOR EQUIPMENT, TERMINATIONS, AND FIXTURE LOCATIONS ETC. VERIFY EXACT PROJECT DIMENSIONS AND SCALE WITH THE DIMENSIONED ARCHITECTURAL DRAWINGS. ADDITIONAL FEES OR CHANGE ORDERS WILL NOT BE ALLOWED DUE TO LACK OF COORDINATION WITH OTHER TRADES, DRAWING OR VERIFICATION OF PROPER SCALE BY CONFIGURED DIMENSIONAL ARCHITECTURAL PLANS.

5.7 COORDINATION. CIVIL, ARCHITECTURAL, STRUCTURAL, FIRE PROTECTION AND ELECTRICAL DRAWINGS ALL CONTAIN DETAILING INFORMATION FOR HYDRAULIC AND PLUMBING INSTALLATION. THE CONTRACTOR IS TO REVIEW AND REVISION ALL PROJECT DRAWING, SPECIFICATIONS AND ADDENDA FOR RELEVANT INFORMATION TO THEIR INSTALLATION.

5.8 EXAMINATION OF SITE AND EXISTING CONDITIONS. BEFORE BIDDING ON THE WORK, THE CONTRACTOR IS TO VISIT THE SITE FAMILIARIZE THE PROJECT REQUIREMENTS AND EXISTING CONDITIONS. THE CONTRACTOR SHALL NOT EXTRAS WILL BE ALLOWED BECAUSE OF THE CONTRACTORS LACK OF UNDERSTANDING OF EXISTING CONDITIONS AND THE IMPACT THEIR MAY HAVE OF THE PROJECT. ANY APPARENT VARIATION OR CONFLICT BETWEEN THE SITE CONDITIONS AND THE DRAWINGS OR SPECIFICATIONS IS TO BE BROUGHT TO THE ATTENTION OF THE ENGINEER IMMEDIATELY.

5.9 CONFLICTS. IN THE EVENT OF A CONFLICT BETWEEN THE DRAWINGS, SPECIFICATIONS, OR OTHER TRADES THE ENGINEER IS TO BE NOTIFIED IMMEDIATELY FOR PROPER DIRECTION. SHOULD AN INSTANTANCE OCCUR WHERE THE CONTRACTOR DOES NOT ALLOW FOR PROPER DIRECTION IN THE CONTRACT DOCUMENTS IS TO INCLUDE THE MOST STRINGENT COURSE OF ACTION AS DIRECTED BY THE CONTRACT DOCUMENTS.

5.10 PERMITS. A PERMIT SHALL BE OBTAINED FROM THE AUTHORITY HAVING JURISDICTION TO COMPLETE THE WORK REQUIRED BY THIS PROJECT SCOPE. THE CONTRACTOR WILL BE RESPONSIBLE FOR ALL FEES INSPECTIONS AND CLOSEOUT DOCUMENTS FROM THE AUTHORITY HAVING JURISDICTION.

5.11 SUBSTITUTIONS. ALL EQUIPMENT AND MATERIALS SCHEDULED ON THE DRAWINGS OR LISTED IN THE SPECIFICATIONS ARE THE BASIS OF DESIGN. EQUIPMENT AND MATERIALS USED ON THE PROJECT ARE SUBJECT TO COMPLIANCE WITH ALL LISTED REQUIREMENTS. IN SUBMITTING A BID TO COMPLETE SERVICES IN THIS PROJECT, THE CONTRACTOR REPRESENTS THAT ITS BID IS BASED ON MATERIALS AND EQUIPMENT DESCRIBED IN THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL NOT BE ALLOWED TO SUBSTITUTE MATERIALS OR EQUIPMENT. SUBSTITUTES WILL BE CONSIDERED ONLY IF THEY KEEP WITH THE GENERAL INTENT OF THE CONTRACT DOCUMENTS, INCLUDING QUALITY OF WORK AND PRODUCT, AND ARE FULLY DOCUMENTED. ALL REQUESTS FOR REVIEW OR ALTERNATES SHALL BE SUBMITTED TO THE ENGINEER WORKING DAYS PRIOR TO THE DATE OF BID OPENING. SUBSTITUTES NOT PROPERLY SUBMITTED MAY BE REJECTED WITHOUT CAUSE. IN REQUESTING A REVIEW OF SUBSTITUTES THE CONTRACTOR IS TO PROVIDE AN ITEM-BY-ITEM COMPARISON OF THE ALTERNATE PRODUCT TO THE BASIS OF DESIGN. COMPARISONS SHALL INCLUDE BUT ARE NOT LIMITED TO: SIZE, WEIGHT, CAPACITY, CONSTRUCTION, WARRANTY, FINISH, ETC. CONTRACTORS WILL NOT BE GRANTED EXTENDED CONTRACT TIME OR A SUBSTITUTION OF A SUBSTITUTED ITEM. THE CONTRACTOR SHALL FABRICATE, FURNISH, INSTALL AND PAY FOR ANY ADDITIONAL MATERIALS AND/OR SERVICES BY ANY OTHER TRADE REQUIRED TO FACILITATE THE USE OF A SUBSTITUTED ITEM.

5.12 SUBMITTALS. BEFORE ORDERING ANY EQUIPMENT CONTRACTOR IS TO PROVIDE 4 SETS OF SUBMITTALS FOR ALL EQUIPMENT, ACCESSORIES, TEST AND BALANCE, STARTUP, FIXTURES, ETC. THAT BARE IMPORTANCE ON PROPER PROJECT COMPLETION. ALL CERTIFICATIONS FOR WELDERS, BALANCE CONTRACTORS AND STARTUP TECHNICIANS ARE TO BE PROVIDED IN THEIR APPROPRIATE SECTIONS. SUBMITTALS EXPECTED FOR FINAL REVIEW ARE TO BE SUBMITTED WITHIN A MINIMUM OF 14 WORKING DAYS REQUIRED FOR REVIEW. THE CONTRACTOR IS TO PROVIDE 2 SETS OF SUBMITTALS. THE CONTRACTOR IS INCLUDED 2 REVIEWS OF SAID SUBMITTALS, ANY THE INCURRED BY ADDITIONAL SUBMITTAL REVIEWS CAUSED BY REJECTED OR UNACCEPTABLE SUBMITTALS WILL BE CHARGED TO THE CONTRACTOR AT THE ENGINEER'S DISCRETION. SUBMITTALS NOT BEING ACCEPTED THAT HAVE NOT BEEN REVIEWED AND APPROVED BY THE GENERAL CONTRACTOR AND/OR CONSTRUCTION MANAGER HAVING AUTHORITY ON THE PROJECT. INCOMPLETE SUBMITTALS WILL NOT BE ACCEPTED. A SINGLE FULLY ENCOMPASSING SUBMITTAL IS TO BE PROVIDED BY EACH TRADE. CONTRACTORS WILL NOT BE GRANTED EXTENDED CONTRACT TIME OR FEES IN CONNECTION WITH THE REJECTION OF SUBMITTALS OR DELAYS CAUSED BY UNARRIVED SUBMITTAL DELIVERY.

5.13 OWNER COORDINATION. SHOULD ANY PORTION OF THE SITE BE OCCUPIED DURING ANY PROJECT CONSTRUCTION CONTRACTORS ARE TO COORDINATE WITH OWNERS TO MINIMIZE UNNECESSARY AND UNDESIRABLE OCCUPANT USAGE. WORK IS TO BE PERFORMED AS REQUIRED TO MAINTAIN FULL ACCESS, OPERATION, MOVEMENT AND EXITING OF THE SPACE WITHOUT WRITTEN CONSENT BY THE OWNER/OCCUPANT. A MINIMUM 2 HOUR NOTICE UNLESS LONGER IS REQUIRED BY OWNER/OCCUPANT IS TO BE PROVIDED PRIOR TO THE COMMENCEMENT OF ANY NORMAL FACILITY OPERATION.

5.14 PRODUCT DELIVERY AND STORAGE. PRODUCTS ARE TO BE DELIVERED TO THE SITE IN SUCH A MANNER AS TO PREVENT DAMAGE (EITHER NATURAL OR HUMAN CAUSED) TO THE EQUIPMENT OR MATERIALS. SHIPPING, STORAGE AND DELIVERY IS TO BE COMPLETED AS REQUIRED BY THE MANUFACTURER. PRODUCTS ARE TO BE DELIVERED TO THE SITE IN THE MANUFACTURERS SHIPPING CONTAINER OR PACKAGING WITH MANUFACTURERS LABELS STILL AFFIXED. DELIVERIES OF EQUIPMENT AND MATERIAL ARE TO BE SCHEDULED TO MINIMIZE UNINSTALLED TIME ON SITE. CONTRACTORS ARE TO BE RESPONSIBLE FOR THE PROTECTION AND DEFENSE OF ALL EQUIPMENT AND MATERIALS AND TAKE NECESSARY STEPS TO PROVIDE REPAIR OR REPLACE DAMAGED PIECES PRIOR TO INSTALLATION.

5.15 ACCESSIBILITY. ALL EQUIPMENT, VALVES, ACTUATORS, DAMPERS, ETC. ARE TO BE POSITIONED AND INSTALLED SUCH THAT THEY ARE ACCESSIBLE TO ALL. ACCESSIBILITY IS TO BE TAKEN TO ENSURE PROPER MAINTENANCE AND OPERATIONAL ACCESS AND CLEARANCE IS PROVIDED FOR ADJUSTMENT AND UPKEEP OF THE INSTALLED SYSTEMS.

5.16 PAINTING. HVAC CONTRACTOR IS TO PAINT OUT ALL DIFFUSER, GRILLE AND INTERNAL DUCTWORK PORTIONS VISIBLE BEHIND TERMINATIONS IN SPACE. ALL DUCTWORK INSTALLED EXPOSED WITHIN THE SPACE IS TO BE PAINTED PER THE ARCHITECTURAL REQUIREMENTS. COORDINATE EXACT REQUIREMENTS WITH ARCHITECTURAL DRAWINGS.

5.17 GUARANTEE. THE CONTRACTOR SHALL GUARANTEE THE COMPLETE MECHANICAL, PLUMBING AND FIRE SYSTEMS, AND ALL PORTIONS THEREOF TO BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. SHOULD A PIECE OF EQUIPMENT FAIL AND NEED REPLACEMENT DURING THIS TIME THE GUARANTEE SHALL BE REESTABLISHED FROM THE TIME OF REPLACEMENT. PROMPTLY REMEDY SUCH DEFECTS AND ANY SUBSEQUENT DAMAGE CAUSED BY THE DEFECTS OR REPAIR THEREOF AT NO EXPENSE TO THE OWNER. THE OWNER RESERVES THE RIGHT TO MAKE TEMPORARY CHANGES TO THE SYSTEMS IN ORDER TO MAINTAIN OPERATION WHILE WAITING FOR THE REMEDY FROM THE CONTRACTOR WITHOUT VOIDING THIS GUARANTEE.

5.18 OPERATIONS AND MAINTENANCE MANUALS. CONTRACTOR IS TO PROVIDE THREE COPIES OF A FULL OPERATION AND MAINTENANCE MANUAL TO THE OWNER. EACH PIECE OF MECHANICAL AND PLUMBING EQUIPMENT AND MANUALS ARE TO BE PROVIDED IN A BOUND NOTEBOOK (THREE RING BINDER) AND TO INCLUDE EQUIPMENT CUT SHEETS, MANUFACTURERS INSTALLATION MANUALS, MANUFACTURERS OPERATION AND MAINTENANCE MANUAL AND A SCHEDULE OF ROUTINE MAINTENANCE TO BE PERFORMED FOR THE FIRST TWELVE MONTHS OF OPERATION.

5.19 OWNER DEMONSTRATION AND TRAINING. INSTRUCTIONAL TRAINING IS TO BE PROVIDED TO OWNERS AND OWNERS REPRESENTATIVES ON ALL MECHANICAL AND PLUMBING EQUIPMENT INSTALLED ON THE PROJECT. ALL TRAINING AND MATERIALS ARE TO BE INCLUDED IN THE CONTRACTORS BID AND PROVIDED AT NO EXTRA COST. CONTRACTOR IS TO ASSEMBLE INSTRUCTIVE MATERIALS FOR ALL EQUIPMENT AND GENERATE AN OUTLINE OF THE INSTRUCTIONAL SESSION FOR OWNER'S USE. ALL DOCUMENTATION TO BE PROVIDED TO THE OWNER AND OWNERS REPRESENTATIVE AT THE INSTRUCTIONAL COURSE. A QUALIFIED PRESENTER FOR EACH PIECE OF EQUIPMENT IS TO BE SCHEDULED FOR TRAINING SESSIONS. THIS MAY REQUIRE A FACTORY REPRESENTATIVE ON MORE COMPLEX SYSTEMS. THE INSTRUCTION TRAINING IS TO BE AGREED UPON BY THE MECHANICAL, PLUMBING AND GENERAL CONTRACTORS WITH THE OWNER AND OWNERS REPRESENTATIVE.

5.20 RECORD DRAWINGS. CONTRACTOR IS TO KEEP ACCURATE DOCUMENTATION OF ACTUAL INSTALLATION CONDITIONS. AT THE COMPLETION OF THE PROJECT THE CONTRACTOR IS TO PROVIDE 3 SETS OF RECORD DRAWING AND SUBMITTALS. RECORD DRAWINGS ARE TO BE MARKED UP IN A SINGLE IDENTIFIABLE COLOR AT A DRAFTING OFFICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE BEST MODERN PRACTICES AND STANDARDS. DRAWINGS ARE TO BE MARKED WITH AND EASILY IDENTIFIABLE NOTATION STATING THEY ARE AS-BUILT RECORD DRAWINGS. CONTRACTOR IS ALSO TO PROVIDE A FULL SET OF RECORD SUBMITTALS, IN ADDITION TO OPERATION AND MAINTENANCE MANUALS, CLEARLY MARKING THE SPECIFIC EQUIPMENT USED AND ADHERING TO ALL OTHER REQUIREMENTS OF PROJECT SUBMITTALS.

5.21 PIPING. ALL PIPING IS TO BE SHIPPED, STORED, AND INSTALL IN ACCORDANCE WITH THE BEST MODERN PRACTICES AND THE GENERAL NOTES SECTION OF THIS SPECIFICATION. DRAWINGS INDICATE GENERAL LOCATION AND ROUTING OF ALL PIPING. THE LAYOUT IS SHOWN WAS USED FOR CALCULATIONS CALCULATING OF ALL VARIABLES IN THE PIPING SYSTEMS OPERATIONS AND THUSLY IS TO BE INSTALLED AS DETAILED UNLESS OTHERWISE PERMITTED BY THE ENGINEER.

5.22 PIPING. ALL PIPING IS TO BE INSTALLED CONCEALED FROM VIEW AND PROTECTED CONTACT UNLESS OTHERWISE NOTED. IN ACCESSIBLE CEILING AREAS INSTALL PIPING ALLOWING'S PROPER REMOVAL OF TILES. PIPING IS TO BE INSTALLED FREE OF SAGS AND BENDS AND PARALLEL OR AT RIGHT ANGLES TO MAIN BUILDING STRUCTURAL FEATURES. PIPING IS ALSO TO BE INSTALLED TO FACILITATE ACCESS TO ALL VALVES, FLANGES, UNIONS AND OTHER ACCESSORIES REQUIRED MAINTENANCE AND OPERATION ACCESS.

5.23 REAM THE ENDS OF PIPES TO REMOVE BURRS AND BEVEL THE ENDS OF STEEL PIPES. CAP OPEN ENDS OF PIPING TO PREVENT DEFORMATION OF PIPE ENDS AND CONDUIT. THE ENDS OF THE PIPING MANUFACTURED FITTINGS ARE TO BE USED FOR CHANGE IN DIRECTION AND BRANCH FITTINGS. PIPING IS TO BE INSTALLED AT SLOPES INDICATED ON THE DRAWING OR IN THIS SPECIFICATION. DIELECTRIC UNIONS OR FLANGES ARE TO BE INSTALLED AT CONNECTION OF ALL DISSIMILAR METALS. PROVIDE SWING JOINTS OR UNIONS AT CONNECTION TO EQUIPMENT. AUTOMATIC AIR VENTS ARE TO BE PROVIDED AT THE HIGH POINTS OF ALL CLOSED WATER SYSTEMS.

5.24 PIPING SYSTEMS ARE TO BE CLEANED PRIOR TO USE. FLUSH ENTIRE PIPING SYSTEMS WITH POTABLE WATER UNTIL THE WATER IS NO LONGER DIRTY. FOR POTABLE SYSTEMS AFTER FLUSH FILL ALL PIPING WITH A 200 PART PER MILLION SOLUTIONS OF CHLORINE IN WATER AND LET STAND FOR 3 HOURS. FLUSH SYSTEM AGAIN UNTIL CHLORINATED WATER IS NO LONGER LEAVING PIPING.

5.25 EARTHWORK. CONTRACTOR IS RESPONSIBLE FOR EXCAVATION, SHORING, SIFTING, BACKFILLING AND COMPACTION OF ALL TRENCHES REQUIRED FOR THEIR SCOPE OF WORK. AREA AFFECTED BY TRENCHING IS TO BE RETURNED TO ITS ORIGINAL STATE PRIOR TO STARTING OF WORK INCLUDING ANY HARDSCAPES, ROAD AND WALKWAYS LANDSCAPING AREAS AND FINISHED SLABS ETC. ALSO EXCAVATE TRENCHES TO UNIFORM MANHOLE HANDING, ELEVATIONS UNLESS OTHERWISE SPECIFIED. TRENCH WIDE ENOUGH TO PROVIDE ADEQUATE WORKING ROOM ON EITHER SIDE OF PIPING. TRENCH BOTTOMS SHALL BE UNIFORM AND SLOPED AS REQUIRED TO MAINTAIN PIPE SLOPE OR FLAT WHERE PIPING IS NOT TO BE SLOPED. BACKFILL TRENCHES WITH MATERIAL FREE FROM PARTICLES LARGER THAN 1". BACKFILL MATERIAL IS TO BE PLACED AND COMPACTED IN 4" INCREMENTS FOR HAND COMPACTION AND 8" INCREMENTS FOR MECHANICAL COMPACTION. FILL IS TO BE COMPACTED TO A PERCENTAGE OF NOT LESS THAN 95%. CONTRACTOR IS RESPONSIBLE FOR CORRECTION OF AND SETTLING OCCURRING AT TRENCHED AREAS AS WELL AS INCIDENTAL DAMAGE CAUSE TO AREAS OUTSIDE OF THE TRENCH DUE TO SETTLING AT NO COST TO THE OWNER.

5.26 SUPPORT. ALL BUILDING PIPING SYSTEMS AND PLUMBING EQUIPMENT ARE TO BE SUPPORTED FROM BUILDING STRUCTURAL SUPPORT MEMBERS OR WALLS. HANGERS, SUPPORTS, CLAMPS AND STRUTS ARE TO BE USED FOR SUPPORT. OTHER PIPING CONNECTIONS ARE TO BE USED FOR SUPPORT UNDER ANY CIRCUMSTANCES. SUPPORTS ARE TO BE INSTALLED ALLOWING CONTROLLED MOVEMENT NECESSARY FOR EXPANSION, CONTRACTION AND SEISMIC EVENTS. ALL SUPPORTS ARE TO BE LATERALLY BRACED IN OPPOSING DIRECTIONS TO LIMIT UNNECESSARY MOVEMENT. PROVIDE HANGERS AS REQUIRED BY BELOW MENTIONED CODES AS WELL AS BUILDING STRUCTURAL STANDARDS. SUPPORTS ARE TO BE INSTALLED TO PROVIDE ADEQUATE SUPPORT TO EACH PIECE OF EQUIPMENT. HANGERS ARE TO BE POSITIVELY FASTENED TO CONCRETE, STEEL OR WOOD BUILDING SYSTEMS FOR ADEQUATE SUPPORT. HANGER SHALL BE ADJUSTABLE IN TYPE ALLOWING PROPER SLOPE IN PIPING AND LOAD DISTRIBUTION. HANGER USED FOR INSULATED PIPING ARE TO BE PROVIDED WITH CLAMPS THERMAL SHIELDS SIZED FOR THE OVER O.D. OF PIPING AND INSULATION PREVENTING BREAKS AND DEFORMATION IN THE INSULATING MATERIAL BY CLAMPS. HANGER MATERIAL IS TO MATCH THAT OF THE PIPE BEING SUPPORTED OR TO AVOID DISSIMILAR METAL CONTACT.

5.27 ALL HANGERS ARE TO BE SIZED AND SPACED PER THE REQUIREMENTS OF THE UNIFORM PLUMBING CODES, AMERICAN SOCIETY OF CIVIL ENGINEERS AND STRUCTURAL ENGINEERING INSTITUTE. ALL SUPPORT SYSTEMS REQUIRING ENGINEERING DESIGN UNDER THESE STANDARDS ARE TO BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER WITH CAPACITY TO DO SO. COMPREHENSIVE DESIGN CALCULATIONS AND SHOP DRAWINGS ARE TO BE PROVIDED AS A PART OF THE CONTRACTORS BID AND ARE TO BE PROVIDED TO THE ENGINEER AND AUTHORITY HAVING JURISDICTION FOR REVIEW DURING THE SUBMITTAL PROCESS.

5.28 SEISMIC RESTRAINT. ALL BUILDING PIPING SYSTEMS AND PLUMBING EQUIPMENT AND PIPING IS TO BE SEISMICALLY RESTRAINED PER THE UNIFORM PLUMBING CODES, AMERICAN SOCIETY OF CIVIL ENGINEERS AND STRUCTURAL ENGINEERING INSTITUTE. RESTRAINT SYSTEMS ARE TO BE COMPLETED IN A "DESIGN BUILD" FASHION BY THE AWARDED CONTRACTOR AND ARE TO BE INCLUDED IN THE PROJECT BID. THE CONTRACTOR IS TO ENLIST A QUALIFIED LICENSED PROFESSIONAL TO PROVIDE COMPREHENSIVE DESIGN CALCULATIONS AND SHOP DRAWINGS FOR SAID SYSTEMS. ALL DESIGN DATA IS TO BE PROVIDED TO THE ENGINEER AND AUTHORITY HAVING JURISDICTION FOR REVIEW DURING THE SUBMITTAL PROCESS.

5.29 IDENTIFICATION. IDENTIFICATION LABELS ARE TO BE PROVIDED ON ALL BUILDING PIPING AND EQUIPMENT. BUILDING EQUIPMENT IS TO HAVE A PERMANENTLY AFFIXED ENGRAVED PVC LABEL BARING ITS UNIQUE IDENTIFIER AS CALLED OUT ON THE PROJECT DRAWINGS AND DESCRIPTION OF AREA OR SPACED SERVED. LABELS ARE TO BE 3"X5" AND LOCATED IN PLAIN VIEW. ALL PIPING IS TO HAVE PREPRINTED SELF ADHESIVE LABELS BARING THEIR IDENTIFIER. LABELS ARE TO BE 3"X5" AND LOCATED IN PLAIN VIEW. LABELS ARE TO BE AS PRESCRIBED BY AN OVERSIZED SECTION OF INSULATION EXTENDING OVER THE PIPE INSULATION BY A MINIMUM TWO PIPE DIAMETERS. SENSOR AND TEST CONNECTIONS ARE TO BE INSULATED, INSULATION IS TO BE CUT BACK IN A NEAT CONICAL FORM REDUCING FROM THE INSULATION EXTERIOR TO THE FITTING. BARE INSULATIONS IS TO BE FINISHED AND PROTECTED WITH CEMENT OR MASTIC PER THE MANUFACTURERS REQUIREMENTS.

5.30 INSULATION. ALL PIPING SCHEDULED TO BE INSULATED SHALL ADHERE WITH THE FOLLOWING. IN BUILDING ABOVE GRADE - PREFORMED MINERAL FIBER INSULATION WITH A FACTORY APPLIED ALL SERVICE JACKET. INSULATION SHALL COMPLY WITH ASTM C TYPE I GRADE A STANDARDS. INSULATION SHALL BE JOINED WITH FACTORY APPROVED ADHESIVE INTENDED FOR ADHESION OF INSULATION AND JACKETS TO THEMSELVES. ADHESIVE SHALL HAVE A VOC CONTENT NOT GREATER THAN 80G/L IN ACCORDANCE WITH EPA METHOD 24 AND SHALL COMPLY WITH THE REQUIREMENTS OF THE CALIFORNIA DEPARTMENT OF HEALTH SERVICES "STANDARD PRACTICE FOR THE TESTING OF VOLATILE ORGANIC EMISSIONS FROM VARIOUS SOURCES USING SMALL SCALE ENVIRONMENTAL CHAMBERS". INSULATION SHALL BE CONTINUOUS ALONG THE ENTIRE PIPE LENGTH CONTINUING OVER VALVES, FITTINGS, AND STRAINERS ETC. ELBOWS, TEES AND CONTROL DEVICES ARE TO BE INSULATED WITH PREFORMED FITTINGS FILLED WITH MINERAL FIBER INSULATION MEETING THE REQUIREMENTS OF THE PIPE INSULATION. FITTINGS ARE TO BE INSULATED WITH A PREFORMED FITTING. INSULATION SHALL BE CONTINUOUS ALONG THE ENTIRE PIPE LENGTH CONTINUING OVER VALVES, FITTINGS, AND STRAINERS ETC. ELBOWS, TEES AND CONTROL DEVICES ARE TO BE INSULATED WITH PREFORMED FITTINGS FILLED WITH MINERAL FIBER INSULATION MEETING THE REQUIREMENTS OF THE PIPE INSULATION. FITTINGS ARE TO BE INSULATED WITH A PREFORMED FITTING. INSULATION SHALL BE CONTINUOUS ALONG THE ENTIRE PIPE LENGTH CONTINUING OVER VALVES, FITTINGS, AND STRAINERS ETC. ELBOWS, TEES AND CONTROL DEVICES ARE TO BE INSULATED WITH PREFORMED FITTINGS FILLED WITH MINERAL FIBER INSULATION MEETING THE REQUIREMENTS OF THE PIPE INSULATION. FITTINGS ARE TO BE INSULATED WITH A PREFORMED FITTING. INSULATION SHALL BE CONTINUOUS ALONG THE ENTIRE PIPE LENGTH CONTINUING OVER VALVES, FITTINGS, AND STRAINERS ETC. ELBOWS, TEES AND CONTROL DEVICES ARE TO BE INSULATED WITH PREFORMED FITTINGS FILLED WITH MINERAL FIBER INSULATION MEETING THE REQUIREMENTS OF THE PIPE INSULATION. FITTINGS ARE TO BE INSULATED WITH A PREFORMED FITTING.

5.31 INSULATION. ALL PIPING SCHEDULED TO BE INSULATED SHALL ADHERE WITH THE FOLLOWING. INSULATION SHALL BE CONTINUOUS ALONG THE ENTIRE PIPE LENGTH CONTINUING OVER VALVES, FITTINGS, AND STRAINERS ETC. ELBOWS, TEES AND CONTROL DEVICES ARE TO BE INSULATED WITH PREFORMED FITTINGS FILLED WITH MINERAL FIBER INSULATION MEETING THE REQUIREMENTS OF THE PIPE INSULATION. FITTINGS ARE TO BE INSULATED WITH A PREFORMED FITTING. INSULATION SHALL BE CONTINUOUS ALONG THE ENTIRE PIPE LENGTH CONTINUING OVER VALVES, FITTINGS, AND STRAINERS ETC. ELBOWS, TEES AND CONTROL DEVICES ARE TO BE INSULATED WITH PREFORMED FITTINGS FILLED WITH MINERAL FIBER INSULATION MEETING THE REQUIREMENTS OF THE PIPE INSULATION. FITTINGS ARE TO BE INSULATED WITH A PREFORMED FITTING. INSULATION SHALL BE CONTINUOUS ALONG THE ENTIRE PIPE LENGTH CONTINUING OVER VALVES, FITTINGS, AND STRAINERS ETC. ELBOWS, TEES AND CONTROL DEVICES ARE TO BE INSULATED WITH PREFORMED FITTINGS FILLED WITH MINERAL FIBER INSULATION MEETING THE REQUIREMENTS OF THE PIPE INSULATION. FITTINGS ARE TO BE INSULATED WITH A PREFORMED FITTING.

5.32 OUTSIDE OF BUILDING ABOVE GRADE - INSULATION IS TO MEET ALL OF THE REQUIREMENTS OF IN BUILDING ABOVE GRADE INSULATION WITH THE ADDITION OF A FIELD INSTALLED ALUMINUM SERVICE JACKET OVERLAPPING THE EQUIPMENT AND TERMINATION. LABELS ARE TO BE 3"X5" AND LOCATED IN PLAIN VIEW. LABELS ARE TO BE AS PRESCRIBED BY AN OVERSIZED SECTION OF INSULATION EXTENDING OVER THE PIPE INSULATION BY A MINIMUM TWO PIPE DIAMETERS. SENSOR AND TEST CONNECTIONS ARE TO BE INSULATED, INSULATION IS TO BE CUT BACK IN A NEAT CONICAL FORM REDUCING FROM THE INSULATION EXTERIOR TO THE FITTING. BARE INSULATIONS IS TO BE FINISHED AND PROTECTED WITH CEMENT OR MASTIC PER THE MANUFACTURERS REQUIREMENTS.

5.33 OUTDOOR UNDERGROUND PIPING - INSULATION IS TO MEET ALL OF THE REQUIREMENTS OF IN BUILDING ABOVE GRADE INSULATION WITH THE ADDITION OF A MANUFACTURER APPROVED DIRECT BURIAL JACKET. SYSTEM SHALL BE SEALED WATER TIGHT WITH A MANUFACTURER APPROVED SEALANT.

5.34 ALL INSULATION ON PIPING OPERATING BELOW AMBIENT CONDITIONS IS TO BE FULLY VAPOR SEALED. ALL INDOOR INSULATION, JACKETS MATERIAL, ADHESIVES, MASTICS TAPES AND CEMENTS ARE TO COMPLY WITH THE UNIFORM MECHANICAL CODES, AMERICAN SOCIETY OF CIVIL ENGINEERS AND STRUCTURAL ENGINEERING INSTITUTE. RESTRAINT SYSTEMS ARE TO BE COMPLETED IN A "DESIGN BUILD" FASHION BY THE AWARDED CONTRACTOR AND ARE TO BE INCLUDED IN THE PROJECT BID. THE CONTRACTOR IS TO ENLIST A QUALIFIED LICENSED PROFESSIONAL TO PROVIDE COMPREHENSIVE DESIGN CALCULATIONS AND SHOP DRAWINGS FOR SAID SYSTEMS. ALL DESIGN DATA IS TO BE PROVIDED TO THE ENGINEER AND AUTHORITY HAVING JURISDICTION FOR REVIEW DURING THE SUBMITTAL PROCESS.

5.35 INSULATION. ALL DUCTWORK SCHEDULED TO BE INSULATED SHALL ADHERE WITH THE FOLLOWING.

5.36 PIPING IS TO BE INSULATED PER THE FOLLOWING SCHEDULE. DOMESTIC HOT WATER AND HOT WATER RETURN PIPING 1/2" - 1 1/2" INSTALL 1" THICK INSULATION 2" THICK CONDENSATE PIPING 1/2" - 1 1/2" INSTALL 1" THICK INSULATION 1 1/2" THICK

5.37 SLEEVES. CONTRACTOR IS TO PROVIDE SLEEVES WHERE PIPING PENETRATES FLOOR SLABS EXTERIOR WALLS AND ROOFS. SLEEVES ARE NOT REQUIRED WHERE HOLES ARE CORE DRILLED AND CORES ALLOW A MINIMUM OF 1" CLEAR SPACE AROUND THE PIPE PASSING THROUGH GALVANIZED PIPE SLEEVES WITH SLEEVE SEAL SYSTEM ARE TO BE INSTALLED AT ANY PENETRATIONS THROUGH SLAB ON GRADE AND EXTERNAL WALL PENETRATIONS. SLEEVES SYSTEMS ARE TO BE SIZED TO ALLOW 1" CLEAR SPACE AROUND THE PIPE. GALVANIZED PIPE SLEEVES ARE TO BE INSTALLED ON INTERIOR FLOOR PENETRATIONS AND ROOF PENETRATIONS.

5.38 ESCUTCHEONS. ESCUTCHEONS ARE TO BE PROVIDED ON ALL PIPE PENETRATIONS OF FLOORS, WALLS AND CEILINGS. ESCUTCHEONS ARE TO BE ONE-PIECE STAMPED STEEL WITH A CHROME FINISH AND SPRING POSITIONING CLAMPS. ESCUTCHEONS ARE TO BE SIZED AS MINIMALLY AS POSSIBLE TO FIT OVER PIPE AND INSULATION AND TO COVER THE PENETRATION EXTERIOR TO THE BUILDING. ESCUTCHEONS ARE TO BE FINISHED WITH SILICONE COLOR TO MATCH THE SURFACE. ON MILL METAL FINISHES CLEAR SILICONE IS TO BE USED.

5.39 PIPING SCHEDULE. PIPING TO BE INSTALLED IN THE BUILDING SHALL BE DONE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE

5.40 PIPING SCHEDULE. PIPING TO BE INSTALLED IN THE BUILDING SHALL BE DONE IN ACCORDANCE WITH THE FOLLOWING SCHEDULE. PIPING OUTSIDE OF BUILDING BELOW GRADE: SANITARY, GREASE WASTE AND VENT PIPING: SHALL BE SCHEDULED 40 SOLID WALL PVC DIVV. PVC PIPE SHALL MEET ASTM D 2465 AND FITTINGS SHALL MEET ASTM D 2465 AND ASTM D 3381.

5.41 GAS PIPING. SCHEDULE 40 BLACK STEEL, TYPE "E" OR "S" GRADE B MEETING ASTM A 53/A53B PIPE SHALL HAVE FACTORY-APPLIED, THREE-LAYER COATING OF EPOXY, ADHESIVE, AND PE. PIPING SHALL NOT BE LAPPED FACE. JOINTS SHALL HAVE COVER KITS CONSISTING OF EPOXY PAINT, ADHESIVE, AND HEAT-SHRINK PE SLEEVES.

5.42 DOMESTIC COLD WATER PIPING. CPVC PIPE MEETING ASTM F441/F441M. SOCKET FITTING SHALL MEET ASTM F438 FOR SCHEDULE 40 AND ASTM F439 FOR SCHEDULE 80.

5.43 PIPING OUTSIDE OF BUILDING ABOVE GRADE: SANITARY, GREASE WASTE AND VENT PIPING: SHALL BE SCHEDULED 40 SOLID WALL CPVC DIVV. CPVC PIPE SHALL MEET ASTM D 2465 AND FITTINGS SHALL MEET ASTM D 2465 AND ASTM D 3381. CAST IRON W-HUB PIPE MAY BE USED IN LIEU OF CPVC. CAST IRON PIPE SHALL MEET ASTM A 14, ANSI A 125.1 AND CISPI 30. FITTINGS ARE TO MEET CISPI 30 AND ASTM C2171.

5.44 DOMESTIC COLD WATER PIPING: SHALL BE TYPE "L" HARD COPPER MEETING ASTM B8 WITH WROUGHT-COPPER FITTINGS MEETING ASME B31R. JOINTS SHALL BE SOLDERED WITH LEAD FREE SOLDER MEETING ASTM B 32 AND WATER FLUSHABLE FLUX MEETING ASTM B 83.

5.45 CONDENSATE PIPING: SHALL BE TYPE "L" HARD COPPER MEETING ASTM B8 WITH WROUGHT-COPPER FITTINGS MEETING ASME B31R. JOINTS SHALL BE SOLDERED WITH LEAD FREE SOLDER MEETING ASTM B 32 AND WATER FLUSHABLE FLUX MEETING ASTM B 83.

5.46 GAS PIPING. SCHEDULE 40 BLACK STEEL, TYPE "E" OR "S" GRADE B MEETING ASTM A 53/A53B PIPE SHALL HAVE FACTORY-APPLIED, THREE-LAYER COATING OF EPOXY, ADHESIVE, AND PE. PIPING SHALL NOT BE LAPPED FACE. JOINTS SHALL HAVE COVER KITS CONSISTING OF EPOXY PAINT, ADHESIVE, AND HEAT-SHRINK PE SLEEVES.

5.47 PIPING INSIDE OF BUILDING BELOW GRADE: SANITARY, GREASE WASTE AND VENT PIPING: SHALL BE SCHEDULED 40 SOLID WALL PVC DIVV. PVC PIPE SHALL MEET ASTM D 2465 AND FITTINGS SHALL MEET ASTM D 2465 AND ASTM D 3381.

5.48 COLD WATER/TRANSFORM PRIMER CROSS-LINKED POLYETHYLENE (PEX) PIPING WITH LEAD-FREE, MECHANICAL JOINTS AND COMPRESSOR FITTINGS. CRIMP AND/OR CLAMP STYLE FITTINGS WILL NOT BE ACCEPTED. THE DOMESTIC WATER SYSTEM IS TO COMPLY WITH ANS/NF STANDARD 14, COMPLY WITH ANS/NF STANDARD 8, SHOW COMPLIANCE WITH ASTM F811, SHOW COMPLIANCE WITH ASTM F811, SHOW COMPLIANCE WITH ASTM F811 AND ANS/NF 28 THROUGH CERTIFICATION LISTINGS WITH UNDERWRITERS LABORATORIES, INC. (UL). SHOW COMPLIANCE WITH ASTM F811 THROUGH CERTIFICATION LISTINGS WITH UNDERWRITERS LABORATORIES, INC. (UL). RATING TO MEET OR EXCEED 200°F AT 80 PSI, 80°F AT 100 PSI, 14°F AT 160 PSI. JOINTS BELOW THE SLAB WILL NOT BE ACCEPTABLE.

5.49 PIPING INSIDE OF BUILDING ABOVE GRADE: SANITARY, GREASE WASTE AND VENT PIPING: SHALL BE SCHEDULED 40 SOLID WALL PVC DIVV MEETING ASTM D 2465 AND FITTINGS SHALL MEET ASTM D 2465 AND ASTM D 3381. CAST IRON W-HUB PIPE MAY BE USED IN LIEU OF PVC. CAST IRON PIPE SHALL MEET ASTM A 14, ANSI A 125.1 AND CISPI 30. FITTINGS ARE TO MEET CISPI 30 AND ASTM C2171. ALL PIPING DOWNSTREAM OF CARBONATORS OR DRAINS FROM CARBONATED SYSTEMS SHALL BE PVC DIVV THRU SECOND POINT OF DILUTION.

5.50 DOMESTIC COLD, HOT WATER 1 HOT WATER RETURN: SHALL BE TYPE "L" HARD COPPER MEETING ASTM B8 WITH WROUGHT-COPPER FITTINGS MEETING ASME B31R. JOINTS SHALL BE SOLDERED WITH LEAD FREE SOLDER MEETING ASTM B 32 AND WATER FLUSHABLE FLUX MEETING ASTM B 83.

5.51 CONDENSATE PIPING: SHALL BE TYPE "L" HARD COPPER MEETING ASTM B8 WITH WROUGHT-COPPER FITTINGS MEETING ASME B31R. JOINTS SHALL BE SOLDERED WITH LEAD FREE SOLDER MEETING ASTM B 32 AND WATER FLUSHABLE FLUX MEETING ASTM B 83.

5.52 INDIRECT WASTE: SHALL BE TYPE "L" HARD COPPER MEETING ASTM B8 WITH WROUGHT-COPPER FITTINGS MEETING ASME B31R. JOINTS SHALL BE SOLDERED WITH LEAD FREE SOLDER MEETING ASTM B 32 AND WATER FLUSHABLE FLUX MEETING ASTM B 83.

5.53 GAS PIPING. SCHEDULE 40, BLACK STEEL, TYPE "E" OR "S" GRADE B MEETING ASTM A 53/A53B. PIPING 2-1/2" AND SMALLER IS TO BE JOINED WITH MALLEABLE IRON WELDED FITTINGS MEETING ASTM A 234/A531 234H. PIPING 3" AND LARGER IS TO BE JOINED WITH WROUGHT STEEL WELDED FITTINGS MEETING ASTM A 234/A531 234H.

5.54 REFRIGERANT PIPING. FACTORY ASSEMBLED UNSETS BRAZED WITH AWS A5.8 FILLER.

5.55 AIR HANDLING.

5.56 SUPPORT. ALL BUILDING HVAC SYSTEMS ARE TO BE SUPPORTED FROM BUILDING STRUCTURAL SUPPORT MEMBERS OR WALLS. HANGERS, SUPPORTS, CLAMPS AND STRUTS ARE TO BE USED FOR SUPPORT. OTHER PIPING, DUCTWORK, CONDUIT ETC. SHALL NOT BE USED FOR SUPPORT UNDER ANY CIRCUMSTANCES. CABLE SYSTEMS ARE NOT ACCEPTABLE FOR DUCT SUPPORT. SUPPORTS ARE TO BE INSTALLED ALLOWING CONTROLLED MOVEMENT NECESSARY SEISMIC EVENTS. ALL SUPPORTS ARE TO BE LATERALLY BRACED IN OPPOSING DIRECTIONS TO LIMIT UNNECESSARY MOVEMENT. PROVIDE HANGERS AND SUPPORTS AS REQUIRED BY BELOW MENTIONED CODES.

5.57 ALL HANGERS ARE TO BE SIZED AND SPACED PER THE REQUIREMENTS OF THE UNIFORM MECHANICAL CODES, AMERICAN SOCIETY OF CIVIL ENGINEERS AND STRUCTURAL ENGINEERING INSTITUTE. ALL SUPPORT SYSTEMS REQUIRING ENGINEERING DESIGN UNDER THESE STANDARDS ARE TO BE DESIGNED BY A LICENSED PROFESSIONAL ENGINEER WITH CAPACITY TO DO SO. COMPREHENSIVE DESIGN CALCULATIONS AND SHOP DRAWINGS ARE TO BE PROVIDED AS A PART OF THE CONTRACTORS BID AND ARE TO BE PROVIDED TO THE ENGINEER AND AUTHORITY HAVING JURISDICTION FOR REVIEW DURING THE SUBMITTAL PROCESS.

5.58 SEISMIC RESTRAINT. ALL BUILDING HVAC SYSTEMS, INCLUDING DUCTWORK, IS TO BE SEISMICALLY RESTRAINED PER THE UNIFORM MECHANICAL CODES, AMERICAN SOCIETY OF CIVIL ENGINEERS AND STRUCTURAL ENGINEERING INSTITUTE. RESTRAINT SYSTEMS ARE TO BE COMPLETED IN A "DESIGN BUILD" FASHION BY THE AWARDED CONTRACTOR AND ARE TO BE INCLUDED IN THE PROJECT BID. THE CONTRACTOR IS TO ENLIST A QUALIFIED LICENSED PROFESSIONAL TO PROVIDE COMPREHENSIVE DESIGN CALCULATIONS AND SHOP DRAWINGS FOR SAID SYSTEMS. ALL DESIGN DATA IS TO BE PROVIDED TO THE ENGINEER AND AUTHORITY HAVING JURISDICTION FOR REVIEW DURING THE SUBMITTAL PROCESS.

5.59 IDENTIFICATION. IDENTIFICATION LABELS ARE TO BE PROVIDED ON ALL HVAC EQUIPMENT. BUILDING EQUIPMENT IS TO HAVE A PERMANENTLY AFFIXED ENGRAVED PVC LABEL BARING ITS UNIQUE IDENTIFIER AS CALLED OUT ON THE PROJECT DRAWINGS AND DESCRIPTION OF AREA OR SPACED SERVED. LABELS ARE TO BE 3"X5" AND LOCATED IN PLAIN VIEW. LABELS ARE TO BE AS PRESCRIBED BY AN OVERSIZED SECTION OF INSULATION EXTENDING OVER THE PIPE INSULATION BY A MINIMUM TWO PIPE DIAMETERS. SENSOR AND TEST CONNECTIONS ARE TO BE INSULATED, INSULATION IS TO BE CUT BACK IN A NEAT CONICAL FORM REDUCING FROM THE INSULATION EXTERIOR TO THE FITTING. BARE INSULATIONS IS TO BE FINISHED AND PROTECTED WITH CEMENT OR MASTIC PER THE MANUFACTURERS REQUIREMENTS.

5.60 VIBRATION CONTROL. VIBRATION ISOLATION IS TO PUT IN PLACE BETWEEN ANY HVAC EQUIPMENT WITH FANS, MOTORS AND COMPRESSORS TO PREVENT RESONATION OF MECHANICAL VIBRATION THROUGH BUILDING SYSTEMS. IF EQUIPMENT PROVIDED HAS INTERNAL ISOLATION FROM THE FACTORY ADDITIONAL ISOLATION IS NOT TO BE INSTALLED. EQUIPMENT SUPPORTED FROM THE BUILDING STRUCTURE IS TO HAVE HANGER SPRING ISOLATORS INSTALLED IN THE HANGER SYSTEM BETWEEN THE STRUCTURE AND THE UNIT. ISOLATORS ARE TO BE SIZED AS REQUIRED BUT THE SUPPORTED WEIGHTS AT EACH ISOLATOR. EQUIPMENT SUPPORTED ON THE FLOOR OR PLATFORMS MOUNTED TO THE WALLS ARE TO BE SECURED DOWN WITH BUSHING/SPACERS BETWEEN THE EQUIPMENT AND SUPPORTING SURFACE. NIRO DYNE METAL-FAB TYPE FABRIC FLEXIBLE CONNECTORS ARE TO BE PROVIDED BETWEEN ALL AIR MOVING DEVICES AND DUCTWORK, SUPPLY AND RETURN. STAINLESS STEEL BRAIDED FLEX CONNECTORS ARE TO BE INSTALLED BETWEEN PUMPS AND PIPING 2-1/2" AND SMALLER. CABLE SPHERE RUBBER CONNECTORS ARE TO BE INSTALLED BETWEEN PUMPS AND PIPING 3" AND LARGER.

5.61 ALL EQUIPMENT REQUIRING SEISMIC RESTRAINT AND VIBRATION ISOLATION IS TO BE SEISMICALLY RESTRAINED PER THE UNIFORM MECHANICAL CODES, AMERICAN SOCIETY OF CIVIL ENGINEERS AND STRUCTURAL ENGINEERING INSTITUTE. RESTRAINT SYSTEMS ARE TO BE COMPLETED IN A "DESIGN BUILD" FASHION BY THE AWARDED CONTRACTOR AND ARE TO BE INCLUDED IN THE PROJECT BID. THE CONTRACTOR IS TO ENLIST A QUALIFIED LICENSED PROFESSIONAL TO PROVIDE COMPREHENSIVE DESIGN CALCULATIONS AND SHOP DRAWINGS FOR SAID SYSTEMS. ALL DESIGN DATA IS TO BE PROVIDED TO THE ENGINEER AND AUTHORITY HAVING JURISDICTION FOR REVIEW DURING THE SUBMITTAL PROCESS.

5.62 INSULATION. ALL DUCTWORK SCHEDULED TO BE INSULATED SHALL ADHERE WITH THE FOLLOWING. EXTERNAL DUCT WRAP - SHALL BE FLEXIBLE BLANKET MINERAL OR GLASS INSULATION COMPLYING WITH ASTM C 553, TYPE II AND ASTM C 1240 TYPE III FSK JACKET. INSULATION IS TO BE 2" THICK WITH AN INSTALLED R-VALUE OF 6.0. INSULATION IS TO BE DRAWN TIGHT AND ATTACHED AS REQUIRED BY MANUFACTURER. ALL JOINTS AND SEAMS ARE TO BE BONDED TOGETHER WITH TAPE PER THE MANUFACTURERS RECOMMENDATION.

5.63 INTERNAL DUCT INSULATION - SHALL BE FLEXIBLE MINERAL OR GLASS TYPE INSULATION COMPLYING WITH ASTM C 107, TYPE I. INSULATION IS TO BE 1-1/2" THICK WITH AN INSTALLED R-VALUE OF 6.0. INSULATION IS TO BE DRAWN TIGHT AND ATTACHED AS REQUIRED BY MANUFACTURER. ALL EXPOSED EDGES INSIDE OF DUCTWORK ARE TO BE COATED WITH MANUFACTURER APPROVED HEAT RESISTANT MASTIC. INSULATION ON DRAWINGS ARE NOMINAL INSULATION DIMENSIONS. ALL INTERNALLY LINED DUCTWORK OVERALL DIMENSION TO BE INCREASED TO MAINTAIN FREE OPEN AREA DIMENSIONS CALLED FOR ON THE PLANS.

5.64 INSTALL ALL INSULATION IN A CLEAN TIGHT MANNER WITH EVEN SURFACES FREE OF VOIDS THE LENGTH OF THE DUCTWORK. ALL JOINING COMPOUNDS ARE TO BE INSTALLED PER THE MANUFACTURERS REQUIREMENTS.

5.65 ALL INDOOR INSULATION, JACKETS MATERIAL, ADHESIVES, MASTICS TAPES AND CEMENTS ARE TO COMPLY WITH ASTM E 84 WITH A MAXIMUM FLAME SPREAD INDEX OF 25 AND SMOKE-DEVELOPED INDEX OF 50. ALL OUTDOOR INSULATION, JACKETS MATERIAL, ADHESIVES, MASTICS TAPES AND CEMENTS ARE TO COMPLY WITH ASTM E 84 WITH A MAXIMUM FLAME SPREAD INDEX OF 75 AND SMOKE-DEVELOPED INDEX OF 150.

5.66 ADHESIVE SHALL HAVE A VOC CONTENT NOT GREATER THAN 50G/L IN ACCORDANCE WITH EPA METHOD 24 AND SHALL COMPLY WITH THE REQUIREMENTS OF THE CALIFORNIA DEPARTMENT OF HEALTH SERVICES "STANDARD PRACTICE FOR THE TESTING OF VOLATILE ORGANIC EMISSIONS FROM VARIOUS SOURCES USING SMALL SCALE ENVIRONMENTAL CHAMBERS".

5.67 DUCTWORK IS TO BE INSULATED PER THE FOLLOWING SCHEDULE.

5.68 ALL CONCEALED ROUND OR SQUARE SUPPLY AND RETURN AIR DUCTWORK - EXTERNAL DUCT WRAP

5.69 ALL EXPOSED ROUND OR SQUARE SUPPLY AND RETURN AIR DUCTWORK - NO INSULATION REQUIRED

5.70 ALL DUCTWORK CALLED TO BE INTERNALLY LINED - LINED DUCTWORK

5.71 ALL OUTSIDE SQUARE SUPPLY AND RETURN AIR DUCTWORK - DOUBLE WALL WITH INTERNAL INSULATION

5.72 ALL OUTSIDE AIR AND EXHAUST AIR DUCTWORK - NO INSULATION REQUIRED.

GENERAL NOTES:

STANDARDS AND CODES: LATEST EDITION OF THE UNIFORM MECHANICAL CODE (UMC), AS WELL AS ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES. THIS DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING WORK SHOWN OR SPECIFIED WHICH MAY EXCEED THE REQUIREMENTS OF SUCH ORDINANCES, LAWS, REGULATIONS AND CODES.

COMPLETE INSTALLATION: PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, ACCESSORIES, ETC., NECESSARY TO ACCOMPLISH A COMPLETE MECHANICAL SYSTEM IN ACCORDANCE WITH THE PLANS TOGETHER WITH THE SPECIFICATIONS.

PERMITS: OBTAIN AND PAY FOR ALL BUILDING AND WORKING PERMITS AND INSPECTION FEES REQUIRED FOR THIS PROJECT.

DRAWINGS: DATA PRESENTED ON THESE DRAWINGS SHALL BE FIELD VERIFIED SINCE ALL DIMENSIONS, LOCATIONS, AND LEVELS ARE GOVERNED BY ACTUAL FIELD CONDITIONS. REVIEW ALL ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL AND SPECIALTY SYSTEMS DRAWINGS AND ADJUST ALL WORK TO MEET THE REQUIREMENTS ON CONDITIONS SHOWN THEREON. DO NOT SCALE MECHANICAL PLANS FOR EQUIPMENT, DUCTING, PIPING, APPLIANCE ETC. LOCATIONS. USE CONFIGURED DIMENSIONS IF GIVEN OR CHECK ARCHITECTURAL DRAWINGS.

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LOCATIONS: INDICATED LOCATIONS OF ALL EQUIPMENT, DUCTING, PIPING ETC. ARE SUBJECT TO CHANGE. SHIFT/RELOCATE/RECONFIGURE ANY OR CONNECTION POINT UP TO 10' AS DIRECTED BY ENGINEER, AT NO ADDED COST.

RECORD DRAWINGS: CONTRACTOR SHALL PROVIDE, PRIOR TO FINAL ACCEPTANCE AND OBSERVATION, ONE SET OF REVISED RECORD MECHANICAL CONSTRUCTION DOCUMENTS ON REPRODUCIBLE MEDIUM, INDICATING THE FOLLOWING ADDITIONAL INFORMATION:

RECORD NOTATIONS SHALL BE CLEARLY DRAWN AT A DRAFTING APPEARANCE EQUAL TO THE ORIGINAL DRAWINGS. CONTRACTOR SHALL ALSO PROVIDE ALL OPERATING AND MAINTENANCE MANUALS PRIOR TO FINAL PAYMENT.

EXAMINATION OF SITE AND EXISTING CONDITIONS: BEFORE SUBMITTING A PROPOSAL, CONTRACTOR SHALL EXAMINE THE SITE AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND LIMITATIONS. NO EXTRAS WILL BE ALLOWED BECAUSE OF THE CONTRACTOR'S MISUNDERSTANDING OF THE AMOUNT OF WORK INVOLVED OR HIS LACK OF KNOWLEDGE OF ANY SITE CONDITIONS WHICH MAY AFFECT HIS WORK. ANY APPARENT VARIANCE OF THE DRAWINGS OR SPECIFICATIONS FROM THE EXISTING CONDITIONS AT THE SITE SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER BEFORE SUBMITTING A PROPOSAL.

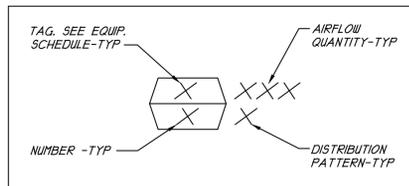
EQUIPMENT: ALL HVAC AND REFRIGERATION EQUIPMENT SHALL NOT CONTAIN CFC OR HALONS.

SEISMIC RESTRAINT: ALL BUILDING HVAC SYSTEMS, INCLUDING DUCTWORK, IS TO BE SEISMICALLY RESTRAINED PER THE UNIFORM MECHANICAL CODES, INTERNATIONAL BUILDING CODE, AMERICAN SOCIETY OF CIVIL ENGINEERS AND STRUCTURAL ENGINEERING INSTITUTE. RESTRAINT SYSTEMS ARE TO BE COMPLETED IN A "DESIGN BUILT" FASHION BY THE AWARDED CONTRACTOR AND ARE TO BE INCLUDED IN THE PROJECT BID. THE CONTRACTOR IS TO ENLIST A QUALIFIED LICENSED PROFESSIONAL TO PROVIDE COMPREHENSIVE DESIGN CALCULATIONS AND SHOP DRAWINGS FOR SAID SYSTEMS. ALL DESIGN DATA AND DETAILED DRAWINGS ARE TO BE PROVIDED TO THE ENGINEER AND AUTHORITY HAVING JURISDICTION FOR REVIEW AND APPROVAL DURING THE SUBMITTAL PROCESS.

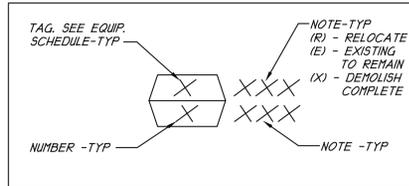
MECHANICAL LEGEND

SYMBOL	ABBREVIATION	INTENT
		RIGID DUCT
		INTERNALLY LINED DUCTWORK
		RIGID EXHAUST DUCT
		DUCT DOWN
		DUCT UP
		TURNING VANES
	D	SUPPLY AIR
	G	RETURN AIR
	EXH	EXHAUST AIR
	D	SUPPLY AIR
	G	RETURN AIR
	MVD	MANUAL VOLUME DAMPER
	AD	AUTOMATIC DAMPER (MOTORIZED)
	FLEX	FLEXIBLE DUCTWORK
		VERTICAL BRANCH WITH DAMPER
	DOWN	PIPE DOWN
	UP	PIPE UP
	Ø	DIAMETER ROUND
	(N)	NEW
	(E)	EXISTING
	●	POINT OF CONNECTION
	⊙	POINT OF DISCONNECT
	AFF	ABOVE FINISHED FLOOR
	BFF	BELOW FINISHED FLOOR
	AFG	ABOVE FINISHED GRADE
	TYP	TYPICAL
	MIN	MINIMUM
	CFM	CUBIC FEET PER MINUTE
	OSA	OUTSIDE AIR
	ESP	EXTERNAL STATIC PRESSURE
	BTU, BTUH	BRITISH THERMAL UNIT PER HOUR
	MBH	THOUSAND BTU
	CLG	COOLING
	HTG	HEATING
	CAP	CAPACITY
	SENS	SENSIBLE
	LTNT	LATENT

DIFFUSER/GRILLE SYMBOL LEGEND



EQUIPMENT SYMBOL LEGEND



EDUCATION CENTER OSA CALCULATIONS

F-1, I-2
ZONE CALCULATIONS
 VBZ = RP/PZ + RA/AZ
 VBZ - BREATHING ZONE OUTDOOR AIRFLOW
 AZ - ZONE FLOOR AREA
 PZ - OCCUPANCY
 RP - OUTDOOR AIR FLOW RATE
 RA - OUTDOOR AIR FLOW RATE

AZ = 1511 FT²
 PZ = 54 PEOPLE
 RP = 10 CFM/PERSON
 RA = 0.12 CFM/FT²
VBZ = 10451 + 0.12(1511) = 122 CFM

ZONE AIR DELIVERY EFFECTIVENESS CALCULATIONS
 VOZ = VBZ / EZ
 VOZ - ZONE OUTDOOR AIRFLOW
 VBZ - BREATHING ZONE OUTDOOR AIRFLOW
 EZ - ZONE AIR DELIVERY EFFECTIVENESS

EZ = 0.8
 VOZ = 122 / 0.8 = 903 CFM

F-1/2 OUTDOOR AIR DAMPERS SET TO A MINIMUM SUM OF 455 CFM EACH.

OFFICE OSA CALCULATIONS

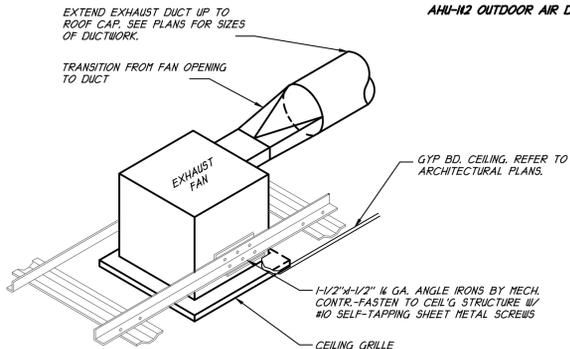
AHJ-1, I-2
ZONE CALCULATIONS
 VBZ = RP/PZ + RA/AZ
 VBZ - BREATHING ZONE OUTDOOR AIRFLOW
 AZ - ZONE FLOOR AREA
 PZ - OCCUPANCY
 RP - OUTDOOR AIR FLOW RATE
 RA - OUTDOOR AIR FLOW RATE

AZ = 109 FT²
 PZ = 1 PEOPLE
 RP = 5 CFM/PERSON
 RA = 0.04 CFM/FT²
VBZ = 541 + 0.04(109) = 151 CFM

ZONE AIR DELIVERY EFFECTIVENESS CALCULATIONS
 VOZ = VBZ / EZ
 VOZ - ZONE OUTDOOR AIRFLOW
 VBZ - BREATHING ZONE OUTDOOR AIRFLOW
 EZ - ZONE AIR DELIVERY EFFECTIVENESS

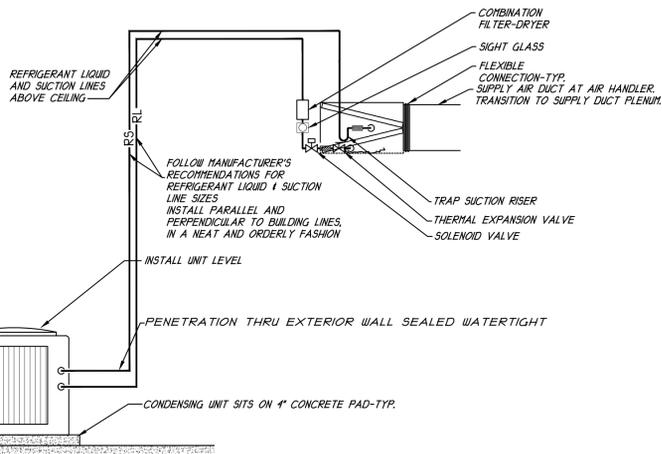
EZ = 0.8
 VOZ = 151 / 0.8 = 144 CFM

AHJ-1/2 OUTDOOR AIR DAMPERS SET TO A MINIMUM SUM OF 15 CFM EACH.



EXHAUST FAN MOUNTING DETAIL

SCALE: NOT TO SCALE



REFRIGERATION SYSTEM INSTALLATION DETAIL

- THE COMPLETE SYSTEM SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
- INSULATE ALL SUCTION PIPING (3/4" ARMAFLEX), WEATHERPROOF FOR OUTDOORS, TRAP ALL SUCTION RISERS, INSTALL FLEXIBLE CONNECTIONS (ANACONDA) AT CONDENSING UNIT AND AT COILS.
- INSTALL FILTER DRYERS ON EACH CIRCUIT WITH SIGHT GLASS IN LIQUID LINES. INSTALL SYSTEM TO ELIMINATE ANY VIBRATION TO STRUCTURAL SYSTEM. SUPPORT ALL LINES SECURELY. USE FACTOR LINE-SETS CHARGE AND TEST SYSTEM COMPLETELY.
- REFER TO THE ARCHITECTURAL DRAWINGS FOR ALL RELATED WALL AND BUILDING SECTIONS.

REFRIGERATION SYSTEM INSTALLATION DETAIL

SCALE: NOT TO SCALE

CONDENSING UNIT SCHEDULE

SYMBOL	DESCRIPTION	MODEL	CAPACITY	SEER	SUCTION	LIQUID	WEIGHT	ELECTRICAL	REMARKS
	AIR COOLED CONDENSING UNIT - F-1	RHEEM MODEL RA6-048AJ	44.0 MBH TOTAL CAP 32.2 MBH SENS CAP	15.1	3/8"	3/8"	240	230V, 1Ø 25 MCA, 45 NOCP	1, 2, 3, 4

- REMARKS:
 1. LOW AMBIENT
 2. SUCTION LINE TRAP
 3. SOLENOID LIQUID LINE VALVE
 4. SIGHT GLASS

FURNACE SCHEDULE

SYMBOL	DESCRIPTION	MODEL	CAPACITY	EFF	AIRFLOW	OSA	WEIGHT	ELECTRICAL	REMARKS
	HIGH EFFICIENCY 2-STAGE HORIZONTAL FLOW GAS FURNACE	RHEEM MODEL R94VA10232MSA	44 MBH CLG CAP 98 MBH HTG INPUT	94%	1530 0.8 ESP	455	152	120V, 1Ø 15 NOCP	1, 2, 3, 4, 5, 6, 7, 8, 9

- REMARKS:
 1. 4 TON COOLING COIL
 2. EXTERNAL 30"x20" BOTTOM FILTER KIT, HINGED DOOR WITH LATCH
 3. 121 SETS HEV-8 FILTERS
 4. CONCENTRIC COMBUSTION AIR/FLUE SIDEWALL KIT
 5. HIGH ALTITUDE KIT
 6. HIGH ALTITUDE PRESSURE SWITCH
 7. CONDENSATE PUMP KIT
 8. CONDENSATE NEUTRALIZER KIT
 9. LP CONVERSION KIT

AIR DISTRIBUTION SCHEDULE

SYMBOL	DESCRIPTION	MODEL	SIZE	FRAME	PANEL	FINISH	ACCESSORIES
	STEEL MODULAR CORE SUPPLY AIR DIFFUSER	KRUEGER MODEL 1240	4"x4"	F22	-	BRITISH WHITE	-
	STEEL MODULAR CORE SUPPLY AIR DIFFUSER	KRUEGER MODEL 1240	8"x8"	F22	-	BRITISH WHITE	-
	LOUVERED FACE RETURN AIR GRILLE 35° DEFLECTION	KRUEGER MODEL 5480	40"x22"	F22	-	MILL	HORIZONTAL FRONT BLADES

SPLIT SYSTEM OUTDOOR HEAT PUMP SCHEDULE

SYMBOL	DESCRIPTION	MODEL	CAPACITY	EFF	SUCTION	LIQUID	WEIGHT	ELECTRICAL	REMARKS
	AIR COOLED HEAT PUMP	DAIKIN MODEL FHW40A1	CLG: 34 MBH HTG: 30.4 MBH	20.0 SEER 11.2 HSPF	3/8"	3/8"	350	240V, 1Ø 24 MCA, 40 NOCP	1

- REMARKS:
 1. DEFROST HEATER

SPLIT SYSTEM INDOOR HEAT PUMP SCHEDULE

SYMBOL	DESCRIPTION	MODEL	CAPACITY	AIRFLOW	ELECTRICAL	WT (LBS)	REMARKS
	MULTI-ZONE WALL MOUNT HEAT PUMP AIR HANDLER	MITSUBISHI MODEL PLYH036AKINA	CLG: 12 MBH HTG: 13.5 MBH	490	240V, 1Ø 34 MCA	55	1, 2

- REMARKS:
 1. INTEGRAL CONDENSATE PUMP
 2. WIRED THERMOSTAT MODEL TAR-CT01MAU-SB

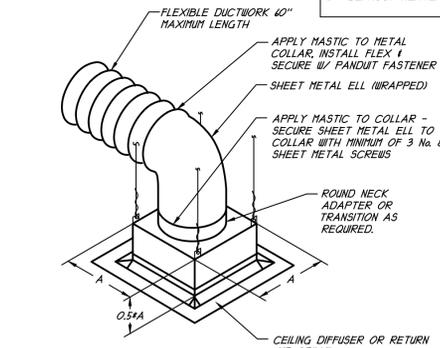
NOTES:
 1. POWERED BY INDOOR UNIT

EXHAUST FAN SCHEDULE

SYMBOL	DESCRIPTION	MODEL	AIRFLOW	ELECTRICAL	WT (LBS)	REMARKS
	NEW CEILING MOUNTED EXHAUST FAN	PANASONIC MODEL FV-15VK1	151 CFM 0.25 ESP	120V, 1Ø 21.7 WATTS	25	1, 2, 3, 4

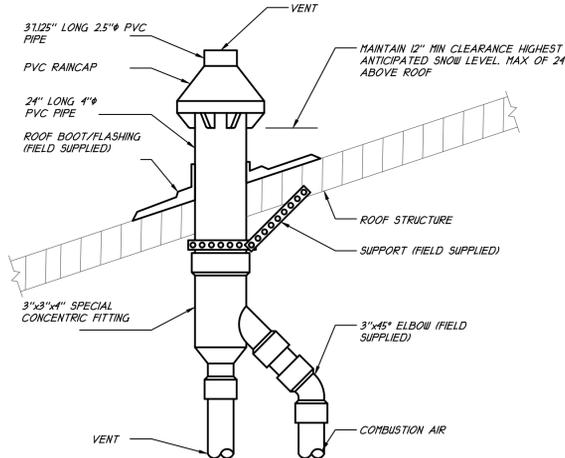
- REMARKS:
 1. BACKDRAFT DAMPER
 2. MOTOR
 3. FACTORY WIRED DISCONNECT
 4. STANDARD PLUG DISCONNECT

NOTES:
 EF-1, 1, 2 SWITCHED WITH LIGHTS
 EF-3 SEPARATELY SWITCHED



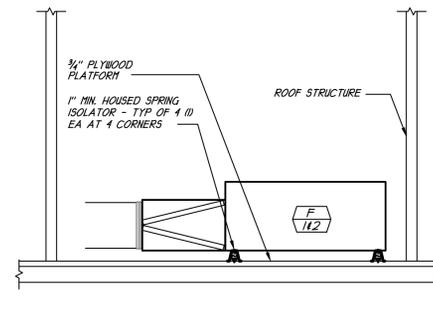
DIFFUSER MOUNTING DETAIL

SCALE: NOT TO SCALE



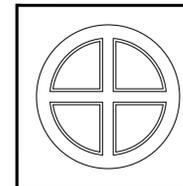
VERTICAL CONCENTRIC FLUE / COMBUSTION AIR

SCALE: NOT TO SCALE



ATTIC FURNACE MOUNTING DETAIL

SCALE: NOT TO SCALE



**BERGER
 HANNAFIN
 ARCHITECTURE**
 312 WEST 3RD STREET
 CARSON CITY, NV 89701

P: (775) 882.6455
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 WWW.BHARCHITECTS.BIZ



11/07/22

PROJECT: Washoe Housing Authority

COMMUNITY BUILDING

WASHOE STEWART LIGHT

JOB NO.: 22102

DRAWING STATUS:

- PHASE
- SCHEMATIC DESIGN
 - DESIGN DEVELOPMENT
 - CONTRACT DOCUMENTS

USE THESE DRAWINGS ARE BEING ISSUED FOR THE FOLLOWING USES:

- PROGRESS REVIEW
- GOVERNING AGENCY REVIEW
- ESTIMATING
- BIDDING
- OTHER

ISSUE DATE: 11.07.22
 DRAWN BY: BAE

Revisions	Date
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DRAWING TITLE:
**MECHANICAL NOTES,
 SCHEDULES &
 DETAILS**

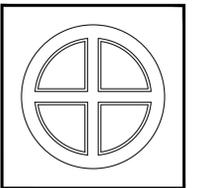
DRAWING NUMBER:

M0.1

DATE: 11/07/22
 PROJECT: WASHOE HOUSING AUTHORITY
 DRAWING: MECHANICAL NOTES, SCHEDULES & DETAILS
 SHEET: M0.1

KEYED NOTES:

- ① PROVIDE 6" EXHAUST DUCT THRU ROOF WITH CAP
- ② 12" OSA DUCT THRU ROOF WITH CAP. BALANCE TO 420CFM
- ③ 4" OSA DUCT THRU ROOF WITH CAP. BALANCE TO 15CFM
- ④ CONCENTRIC COMBUSTION AIR & FLUE DUCT FROM FURNACE UP THRU ROOF. SEE DETAIL 3/10.1
- ⑤ MAINTAIN MIN 10' FROM EXHAUST AND PLUMBING OUTLETS



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PROJECT: Washoe Housing Authority
COMMUNITY BUILDING
WASHOE STEWART LIHTC

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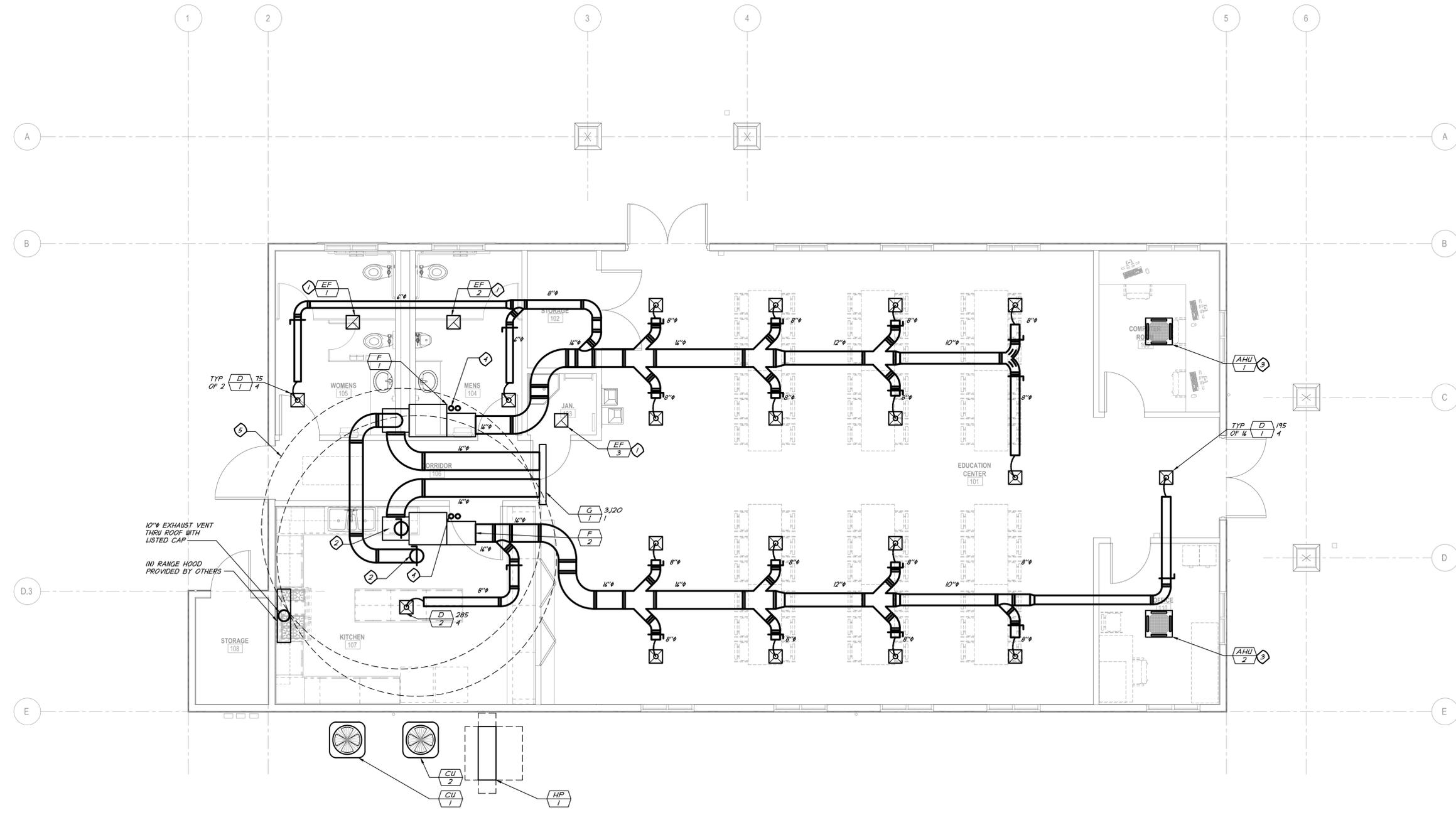
ISSUE DATE: 11.07.22
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Revisions	Date
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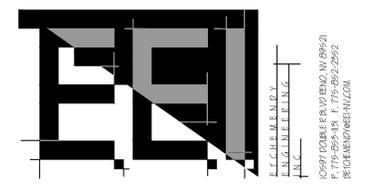
DRAWING TITLE:
MECHANICAL PLAN

DRAWING NUMBER:

M1.1



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



BRANDON A. ETCHINGS
REGISTERED PROFESSIONAL ENGINEER
STATE OF NEVADA
LICENSE NO. 18293
DATE: 11/07/22

GENERAL NOTES:

STANDARDS AND CODES: LATEST EDITION OF THE UNIFORM PLUMBING CODE (UPC), AS WELL AS ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES. THIS DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING WORK SHOWN OR SPECIFIED WHICH MAY EXCEED THE REQUIREMENTS OF SUCH ORDINANCES, LAWS, REGULATIONS AND CODES.

COMPLETE INSTALLATION: PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, ACCESSORIES, ETC., NECESSARY TO ACCOMPLISH A COMPLETE PLUMBING SYSTEM IN ACCORDANCE WITH THE PLANS TOGETHER WITH THE SPECIFICATIONS.

PERMITS: OBTAIN AND PAY FOR ALL BUILDING AND WORKING PERMITS AND INSPECTION FEES REQUIRED FOR THIS PROJECT.

DRAWINGS: DATA PRESENTED ON THESE DRAWINGS SHALL BE FIELD VERIFIED SINCE ALL DIMENSIONS, LOCATIONS, AND LEVELS ARE GOVERNED BY ACTUAL FIELD CONDITIONS. REVIEW ALL ARCHITECTURAL, STRUCTURAL, CIVIL, ELECTRICAL AND SPECIALTY SYSTEMS DRAWINGS AND ADJUST ALL WORK TO MEET THE REQUIREMENTS ON CONDITIONS SHOWN THEREON. DO NOT SCALE PLUMBING PLANS FOR FIXTURE, PIPING, APPLIANCE ETC. LOCATIONS. USE CONFIGURED DIMENSIONS IF GIVEN OR CHECK ARCHITECTURAL DRAWINGS.

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LOCATIONS: INDICATED LOCATIONS OF ALL FIXTURES, PIPING, EQUIPMENT ETC. ARE SUBJECT TO CHANGE. SHIFT/RELOCATE/RECONFIGURE ANY FIXTURE, PIPE, EQUIPMENT OR CONNECTION POINT UP TO 10' AS DIRECTED BY ENGINEER, AT NO ADDED COST.

RECORD DRAWINGS: CONTRACTOR SHALL PROVIDE, PRIOR TO FINAL ACCEPTANCE AND OBSERVATION, ONE SET OF REVISED RECORD PLUMBING CONSTRUCTION DOCUMENTS ON REPRODUCIBLE MEDIUM, INDICATING THE FOLLOWING ADDITIONAL INFORMATION:

RECORD NOTATIONS SHALL BE CLEARLY DRAWN AT A DRAFTING APPEARANCE EQUAL TO THE ORIGINAL DRAWINGS. CONTRACTOR SHALL ALSO PROVIDE ALL OPERATING AND MAINTENANCE MANUALS PRIOR TO FINAL PAYMENT.

EXAMINATION OF SITE AND EXISTING CONDITIONS: BEFORE SUBMITTING A PROPOSAL, CONTRACTOR SHALL EXAMINE THE SITE AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND LIMITATIONS. NO EXTRAS WILL BE ALLOWED BECAUSE OF THE CONTRACTOR'S MISUNDERSTANDING OF THE AMOUNT OF WORK INVOLVED OR HIS LACK OF KNOWLEDGE OF ANY SITE CONDITIONS WHICH MAY AFFECT HIS WORK. ANY APPARENT VARIANCE OF THE DRAWINGS OR SPECIFICATIONS FROM THE EXISTING CONDITIONS AT THE SITE SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER BEFORE SUBMITTING A PROPOSAL.

EXISTING CONDITIONS: ALL (E) SIZES AND LOCATIONS ARE APPROXIMATIONS AND ARE TO BE FIELD VERIFIED BY THE CONTRACTOR PRIOR COMMENCEMENT OF ANY WORK. NO ADDITIONAL FEES WILL BE ALLOWED DUE TO LACK OF FIELD VERIFICATION.

WATER HEATING TESTING: THE WATER HEATING SYSTEM SHALL BE TESTED AND ADJUSTED TO MAINTAIN A DELIVERY WATER TEMPERATURE AS INDICATED ON THE WATER HEATER PIPING DIAGRAM FOR ALL OPERATING CONDITIONS.

PLUMBING SCHEDULE

SYMBOL	DESCRIPTION	MODEL	TRIM	FLOWRATE	CONNECTIONS				ACCESSORIES
					SS	V	CW	HW	
	VITREOUS CHINA ELONGATED BOWL FLUSH VALVE FLOOR MOUNTED WATER CLOSET.	AMERICAN STANDARD "MADERA" EVERCLEAN, MODEL 345L001	CHURCH #21555CT OPEN FRONT SEAT, SLOAN ROYAL III SFSH-L28 BATTERY POWERED FLUSH VALVE	1.28 GPF	1	2	1-1/4	-	-
	VITREOUS CHINA ELONGATED BOWL FLUSH VALVE FLOOR MOUNTED WATER CLOSET, HEIGHT FOR HANDICAPPED USE.	AMERICAN STANDARD "MADERA" EVERCLEAN, MODEL 346L001	CHURCH #21555CT OPEN FRONT SEAT, SLOAN ROYAL III SFSH-L28 BATTERY POWERED FLUSH VALVE	1.28 GPF	1	2	1-1/4	-	-
	VITREOUS CHINA WALL MOUNT URINAL HANDICAPPED MOUNTING HEIGHT	AMERICAN STANDARD "WASHBROOK", MODEL 4590.001	SLOAN ROYAL III SFSH-0.5 BATTERY POWERED FLUSH VALVE	0.5 GPF	2	1-1/2	3/4	-	WALL CARRIER
	VITREOUS CHINA COUNTERTOP MOUNTED LAVATORY	AMERICAN STANDARD "AQUALYN", MODEL 0415.041	SLOAN MODEL EBF-85-CP ADA COMPLIANT BATTERY POWERED FAUCET WITH 4" TRIM PLATE	0.5 GPM	2	1-1/2	1/2	1/2	MCUIRE SPEEDWAY, TRAP, AND PROWRAP PW12S PREINSULATED TRAP, WATTS MODEL LFUSG-B-M2 SET TO 100°F OUTLET
	STAINLESS STEEL SELF RIMMING DOUBLE BOWL ADA DEPTH SINK	ELKAY MODEL LRAD 331R 6-1/2" DEPTH	AMERICAN STANDARD MODEL 4205.104 FAUCET WITH PULL OUT SPRAY	1.0 GPM	2	1-1/2	1/2	1/2	MCUIRE SPEEDWAY, TRAP, AND PROWRAP PW12S PREINSULATED TRAP, INSINKERATOR BADGER S 120V 1/2 HP GARBAGE DISPOSAL, NEOPERL LOGPH AERATOR, WATTS MODEL LFUSG-B-M2 SET TO 100°F OUTLET
	STAINLESS STEEL BARRIER FREE H-HO ELECTRIC WATER COOLER WITH BOTTLE FILLING STATION	ELKAY MODEL LZ5TL8W5	-	-	2	1-1/2	1/2	-	WALL CARRIER 120V, W. 310 WATTS, MODEL 5B00C FILTER, CANE TOUCH SKIRT
	NEO ANGLE TERRAZZO MOP SINK	FLORESTONE MODEL 1/4" - 36234	MR-312 MOP HANGER, MR-310 HOSE, T15 BRASS B-046 BSTR	-	3	1-1/2	3/4	3/4	TRAP GUARD
	WATER HAMMER ARRESTOR	SIOUX CHIEF 453	-	-	-	-	1/2	-	WALL ACCESS PANEL
	CAST IRON FLOOR DRAIN	ZURN MODEL ZN-45B	HEEL PROOF BRONZE VANDAL PROOF STRAINER	-	2	1-1/2	-	-	TRAP PRIMER
	BLADDER EXPANSION TANK	AMTROL "THERM-X-TROL" MODEL 5T-12	-	-	-	-	3/4	-	-

- NOTES:
 1. ALL FIXTURES, EQUIPMENT, PIPING AND MATERIALS SHALL BE LISTED.
 2. ALL PLUMBING FIXTURES SHALL MEET THE REQUIREMENTS SPECIFIED IN THE PLUMBING CODE.
 3. PUBLIC LAVATORIES SHALL HAVE CONTROLS TO LIMIT THE WATER TEMPERATURE TO 100°F MAXIMUM.
 4. ALL FAUCETS SERVICING TRANSIENT PUBLIC SHALL BE SELF-CLOSING METERING FAUCETS PER SECTION 401.4 OF THE UPC

WATER HEATER SCHEDULE

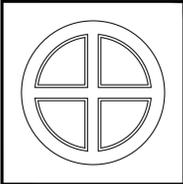
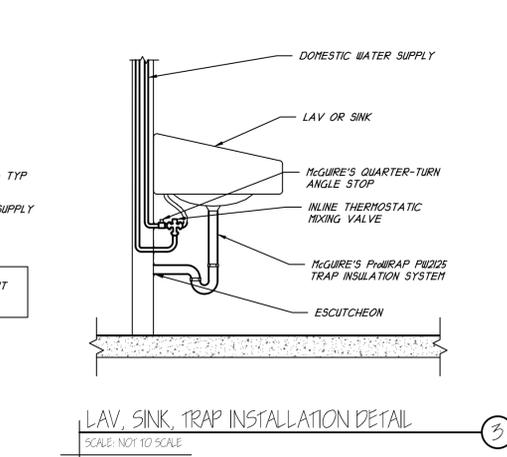
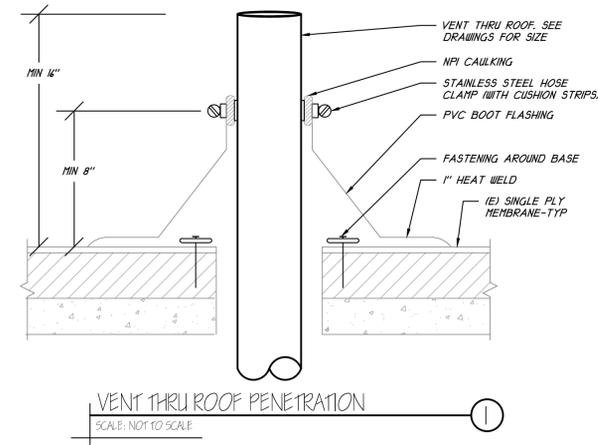
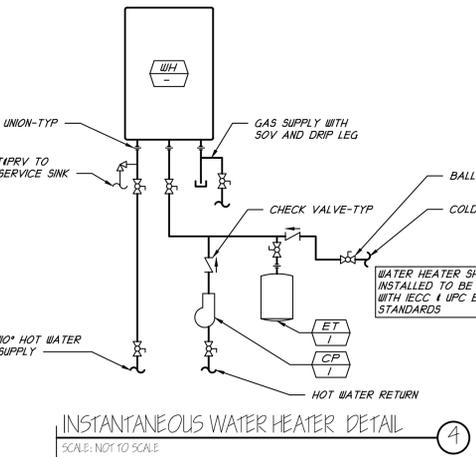
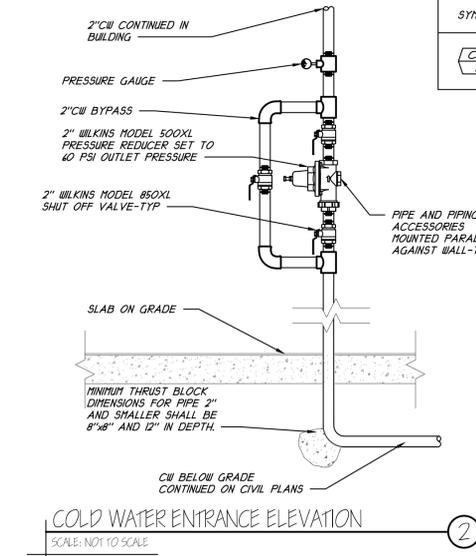
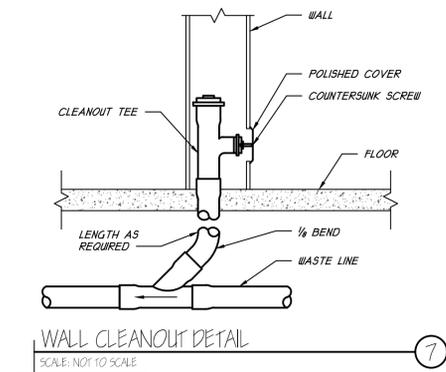
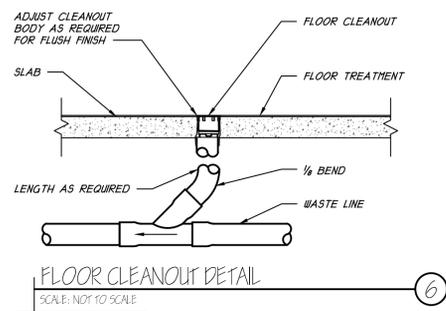
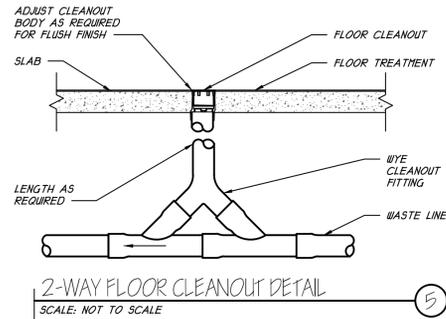
SYMBOL	DESCRIPTION	GAS INPUT	TEMP RISE	CONNECTIONS			WEIGHT	ELECTRICAL	ACCESSORIES
				CW	HW	G			
	TANKLESS LIQUID PROPANE GAS WATER HEATER	199 MBH	5.5 GPM @ 10°F RISE	3/4	3/4	3/4	42	120V, 40Hz	INTEGRATED CONDENSATION TRAP, BUILT-IN CIRCULATION PUMP, LP CONVERSION KIT

CIRCULATING PUMP SCHEDULE

SYMBOL	DESCRIPTION	MODEL	FLOWRATE	PRESSURE DROP	WEIGHT	ELECTRICAL	ACCESSORIES

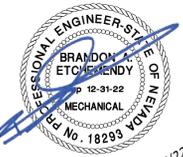
PLUMBING LEGEND

LINE TYPE	ABBREVIATION	INTENT
	SS	SANITARY WASTE PIPING
	GI	GREASE WASTE PIPING
	V	VENT PIPING
	CW	COLD WATER PIPING
	HW	HOT WATER PIPING
	HWR	HOT WATER RETURN PIPING
	G	GAS PIPING
	MPG	MEDIUM PRESSURE GAS PIPING
	LP	LIQUID PROPANE GAS PIPING
	C	CONDENSATE PIPING
	UP	PIPE UP
	DOWN	PIPE DOWN
	POC	POINT OF CONNECTION
	POD	POINT OF DISCONNECT
	VTR	VENT THRU ROOF
		BALANCING VALVE
		BALL VALVE
	(N)	NEW
	(E)	EXISTING
	AFF	ABOVE FINISHED FLOOR
	AFG	ABOVE FINISHED GRADE
	BFF	BELOW FINISHED FLOOR
	BFG	BELOW FINISHED GRADE
	MIN	MINIMUM
	TYP	TYPICAL
	GPF	GALLONS PER FLUSH
	GPH	GALLONS PER HOUR
	GPM	GALLON PER MINUTE
	FCO	FLOOR CLEANOUT
	COTG	CLEANOUT TO GRADE
	WCO	WALL CLEAN OUT
	TDL	TOTAL DEVELOPED LENGTH



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PROJECT: Washoe Housing Authority
COMMUNITY BUILDING
 WASHOE STEWART LIGHT

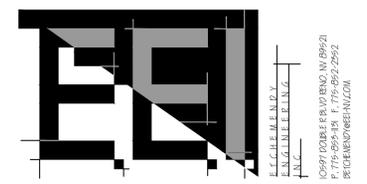
JOB NO.: 22102
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 PHASE
 SCHEMATIC DESIGN
 DESIGN DEVELOPMENT
 CONTRACT DOCUMENTS
 USE THESE DRAWINGS ARE BEING ISSUED FOR THE FOLLOWING USES:
 PROGRESS REVIEW
 GOVERNING AGENCY REVIEW
 ESTIMATING
 BIDDING
 OTHER

ISSUE DATE: 11.07.22
 DRAWN BY: BAE

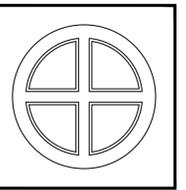
Revisions	Date

DRAWING TITLE:
PLUMBING NOTES, SCHEDULES & DETAILS

DRAWING NUMBER:
P0.1



DATE: 11.07.22
 PROJECT: WASHOE HOUSING AUTHORITY
 DRAWING: PLUMBING NOTES, SCHEDULES & DETAILS
 SHEET: P0.1
 PROJECT NO.: 22102



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11/07/22

PROJECT:
Washoe Housing Authority

COMMUNITY BUILDING

WASHOE STEWART LIGHT

JOB NO.: 22102

DRAWING STATUS:

- PHASE
- SCHEMATIC DESIGN
 - DESIGN DEVELOPMENT
 - CONTRACT DOCUMENTS

- USE
- THESE DRAWINGS ARE BEING ISSUED FOR THE FOLLOWING USES:
- PROGRESS REVIEW
 - GOVERNING AGENCY REVIEW
 - ESTIMATING
 - BIDDING
 - OTHER

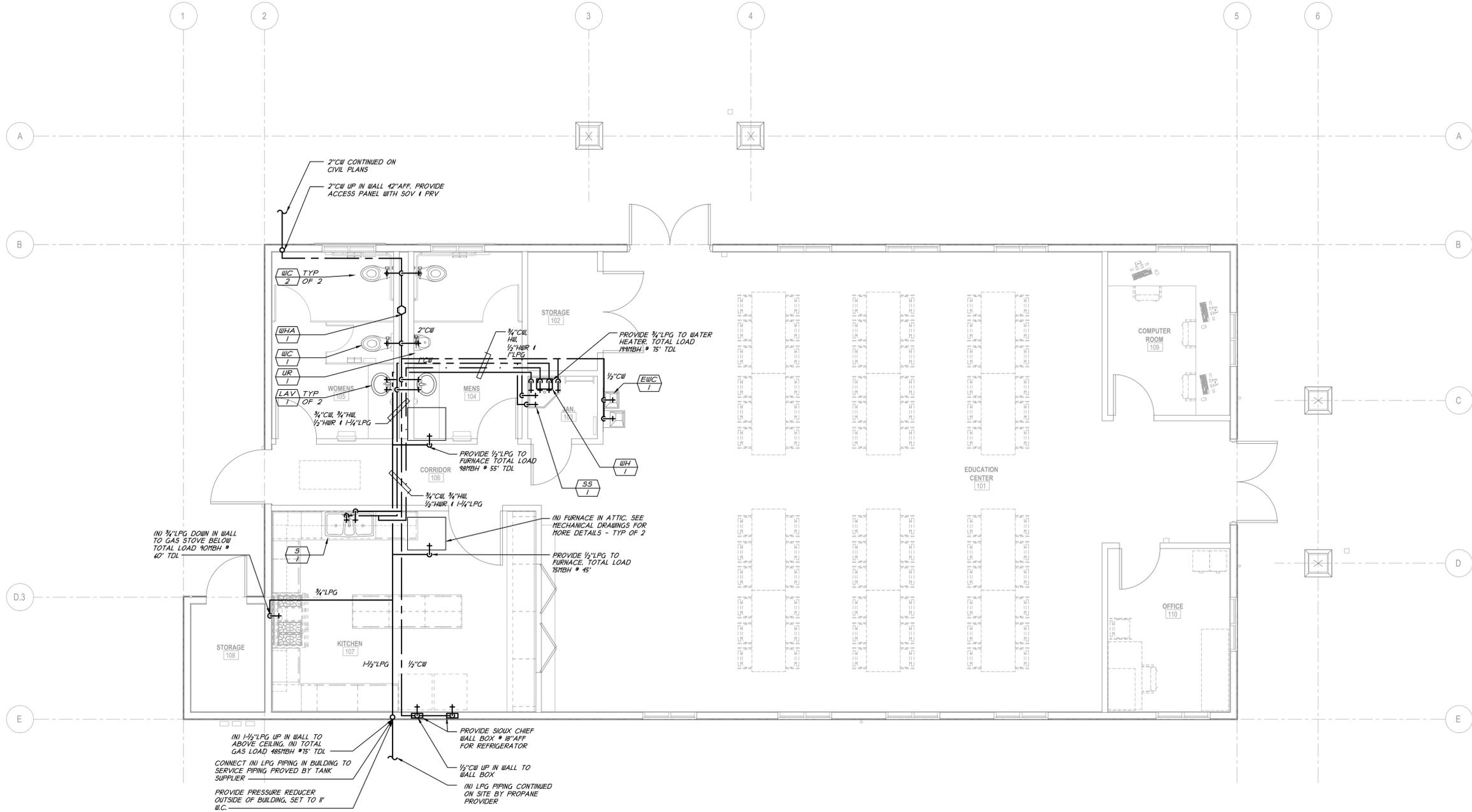
ISSUE DATE: 11.07.22
DRAWN BY: BAE

Revisions	Date

DRAWING TITLE:
WATER & GAS PIPING PLAN

DRAWING NUMBER:

P2.1



WATER & GAS PIPING PLAN
SCALE: 1/4" = 1'-0"



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STATE OF NEVADA
EXPIRES 12/31/25
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SPECIFICATIONS	
ITEM	DESCRIPTION
26.1	STANDARDS AND CODES: ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST EDITION OF THE NATIONAL ELECTRICAL CODE (NEC), AS WELL AS ALL APPLICABLE STATE AND LOCAL CODES AND ORDINANCES. THIS DOES NOT RELIEVE THE CONTRACTOR FROM FURNISHING AND INSTALLING WORK SHOWN OR SPECIFIED WHICH MAY EXCEED THE REQUIREMENTS OF SUCH ORDINANCES, LAWS, REGULATIONS AND CODES.
26.2	COMPLETE INSTALLATION: PROVIDE ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, ACCESSORIES, ETC., NECESSARY TO ACCOMPLISH A COMPLETE ELECTRICAL SYSTEM IN ACCORDANCE WITH THE PLANS TOGETHER WITH THE SPECIFICATIONS.
26.3	PERMITS: OBTAIN AND PAY FOR ALL BUILDING AND WORKING PERMITS AND INSPECTION FEES REQUIRED FOR THIS PROJECT.
26.4	DRAWINGS: DATA PRESENTED ON THESE DRAWINGS SHALL BE FIELD VERIFIED SINCE ALL DIMENSIONS, LOCATIONS, AND LEVELS ARE GOVERNED BY ACTUAL FIELD CONDITIONS. REVIEW ALL ARCHITECTURAL, STRUCTURAL, CIVIL, MECHANICAL AND SPECIALTY SYSTEMS DRAWINGS AND ADJUST ALL WORK TO MEET THE REQUIREMENTS ON CONDITIONS SHOWN THEREON, DO NOT SCALE ELECTRICAL PLANS FOR FIXTURE, DEVICE OR APPLIANCE LOCATIONS. USE CONFIGURED DIMENSIONS IF GIVEN OR CHECK ARCHITECTURAL OR MECHANICAL DRAWINGS.
26.5	COPYRIGHT: THESE PLANS, SPECIFICATIONS AND ALL RELATED APPENDIX AND DOCUMENTS CONSTITUTE COPYRIGHT MATERIALS OF JP ENGINEERING. ALL RIGHTS CONFERRED BY THE COPYRIGHT AND SIMILAR LAWS ARE RESERVED TO JP ENGINEERING. THESE MATERIALS SHALL REMAIN THE SOLE PROPERTY OF JP ENGINEERING AND MAY NOT BE REPRODUCED, DISTRIBUTED TO OTHERS OR USED FOR ANY PURPOSE WHATSOEVER WITHOUT THE PRIOR WRITTEN CONSENT OF JP ENGINEERING.
26.6	LOCATIONS: INDICATED LOCATIONS OF ALL OUTLETS AND EQUIPMENT ARE SUBJECT TO CHANGE. SHIFT/RELOCATE/RECONFIGURE ANY OUTLET, EQUIPMENT OR CONNECTION POINT UP TO 10' AS DIRECTED BY ENGINEER, AT NO ADDED COST.
26.7	RECORD DRAWINGS: CONTRACTOR SHALL PROVIDE, PRIOR TO FINAL ACCEPTANCE AND OBSERVATION, ONE SET OF REVISED RECORD ELECTRICAL CONSTRUCTION DOCUMENTS ON REPRODUCIBLE MEDIUM INDICATING THE FOLLOWING ADDITIONAL INFORMATION: EXACT ROUTING OF ALL CONDUITS LARGER THAN 1" EXACT LOCATION OF ALL SERVICE GROUNDING/BONDING CONNECTIONS CONTRACTORS NAME, ADDRESS AND TELEPHONE NUMBER RECORD NOTATIONS SHALL BE CLEARLY DRAWN AT A DRAFTING APPEARANCE EQUAL TO THE ORIGINAL DRAWINGS. CONTRACTOR SHALL ALSO PROVIDE ALL OPERATING AND MAINTENANCE MANUALS PRIOR TO FINAL PAYMENT.
26.8	EXAMINATION OF SITE AND EXISTING CONDITIONS: BEFORE SUBMITTING A PROPOSAL, CONTRACTOR SHALL EXAMINE THE SITE AND FAMILIARIZE HIMSELF WITH THE EXISTING CONDITIONS AND LIMITATIONS. NO EXTRAS WILL BE ALLOWED BECAUSE OF THE CONTRACTOR'S MISUNDERSTANDING OF THE AMOUNT OF WORK INVOLVED OR HIS LACK OF KNOWLEDGE OF ANY SITE CONDITIONS WHICH MAY AFFECT HIS WORK. ANY APPARENT VARIANCE OF THE DRAWINGS OR SPECIFICATIONS FROM THE EXISTING CONDITIONS AT THE SITE SHALL BE CALLED TO THE ATTENTION OF THE ENGINEER BEFORE SUBMITTING A PROPOSAL.
26.9	EXISTING OUTLETS: EXISTING OUTLETS AND CIRCUITING NOT IN CONFLICT WITH NEW CONDITIONS SHALL REMAIN. EXTEND OUTLETS TO NEW SURFACES, CAULK AND PROVIDE JUMBO PLATES AS REQUIRED TO PRESENT A SERVICEABLE AND FINISHED APPEARANCE.
26.10	EXISTING SWITCHGEAR: REUSE EXISTING SWITCHGEAR AND PANELS IN PLACE WHERE SO INDICATED. MODIFY AS REQUIRED TO ACCOMMODATE NEW WORK. PROVIDE NEW CIRCUIT BREAKERS AND/OR FUSES AS REQUIRED. REARRANGE EXISTING CIRCUITS WITHIN PANELS TO AGREE WITH NEW PANEL SCHEDULES. TRACE AND IDENTIFY ALL EXISTING CIRCUITS ON NEW RECORD PANEL SCHEDULES.
26.11	DEMOLITION: PROVIDE COMPLETE ELECTRICAL DEMOLITION: REMOVE EXISTING OUTLETS AND EQUIPMENT IN CONFLICT WITH NEW CONDITIONS. EXISTING CONDUITS REMOVED FROM SERVICE MAY BE ABANDONED IN PLACE IF IN A CONCEALED LOCATION. REMOVE ALL WIRE FROM ABANDONED RACEWAYS. CONTRACTOR SHALL INSURE CONTINUITY OF EXISTING CIRCUITING PASSING THROUGH DEMOLITION AREAS. EXTEND AND/OR RELOCATE AS NECESSARY. SHIFT/RELOCATE EXISTING EQUIPMENT AND CIRCUITING AS REQUIRED TO ACCOMMODATE NEW WORK.
26.12	SALVAGE: ALL EXISTING EQUIPMENT REMOVED DURING THE COURSE OF THIS PROJECT SHALL BE OFFERED TO OWNER FOR SALVAGE. ANY EQUIPMENT SELECTED BY OWNER SHALL BE DELIVERED TO OWNER ON SITE. ALL REMAINING EQUIPMENT BECOMES THE PROPERTY OF THIS CONTRACTOR AND SHALL BE REMOVED FROM THE SITE.
26.13	TESTING: PRIOR TO PLACING IN SERVICE, ALL ELECTRICAL SYSTEMS SHALL BE TESTED FOR OPENS, GROUNDS, AND PHASE ROTATION. THE MAIN SERVICE GROUND AND ALL LOCAL TRANSFORMER MADE GROUNDS SHALL BE MEGGER-TESTED.
26.14	GROUNDING: TEST EXISTING SERVICE NEUTRAL FOR ADEQUACY AND FOR GROUND CONTINUITY. GROUND ALL EQUIPMENT AND SYSTEM NEUTRAL IN ACCORDANCE WITH ARTICLE 250 OF THE NEC. EQUIPMENT GROUNDS HAVE NOT BEEN SHOWN ON DRAWINGS - WHERE GROUND WIRES HAVE BEEN SHOWN THEY INDICATE AN INSULATED GROUND.
26.15	EQUIPMENT STANDARDS: ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND OF THE HIGHEST QUALITY AVAILABLE ("SPECIFICATION GRADE"). SERVICE EQUIPMENT SHALL BE FACTORY-ASSEMBLED COMMERCIAL-GRADE, CONFIGURED PER SERVING UTILITY STANDARDS. WIRING DEVICES SHALL BE SPECIFICATION GRADE WITH NYLON PLATES, WHITE UNLESS OTHERWISE NOTED, RAISED STEEL BOX COVERS MAY BE USED IN UTILITY AREAS.
26.16	MATCH EXISTING: EXISTING EQUIPMENT AND SYSTEMS SHALL BE CONSIDERED A MINIMUM STANDARD TO BE MET, IF NOT OTHERWISE EXCEEDED BY THESE PLANS AND SPECIFICATIONS. NEW MATERIALS AND EQUIPMENT SHALL MATCH EXISTING IN APPEARANCE AND FUNCTION.
26.17	TAMPER-PROOF: ALL EQUIPMENT AND CIRCUITING ACCESSIBLE BY THE PUBLIC SHALL BE TAMPER-PROOF AND VANDAL RESISTANT. OPENABLE DEVICES AND EQUIPMENT SHALL BE PADLOCKABLE. RECEPTACLES SHALL BE COMPLIANT WITH NATIONAL ELECTRICAL CODE ARTICLE 406.12
26.18	CODE COMPLIANCE: A. WORKING CLEARANCE: • THE CONTRACTOR SHALL VERIFY THAT ALL ELECTRICAL EQUIPMENT MEETS THE CLEARANCE REQUIREMENTS OF NEC 110.26. DRAWINGS REPRESENT CLEARANCES ARE MET AS DESIGNED, ANY DEVIATION SHALL ALSO MEET THIS REQUIREMENT. • ELECTRICAL SWITCHBOARDS RATED 1200 AMPS OR GREATER, IN EXCESS OF 6 FEET IN LENGTH, SHALL REQUIRE TWO (2) EXITS FROM THE ELECTRICAL ROOM UNLESS NEC 110.26(C)(2)(g) OR 110.26(C)(2)(b) ARE MET. B. TRANSFORMERS: • TRANSFORMERS RATED GREATER THAN 112.5 KVA SHALL BE PLACED IN ELECTRICAL ROOMS WITH A 1-HOUR FIRE RATING PER NEC 450.21(B) WHERE THEY DO NOT MEET THE TRANSFORMER SECTION. TRANSFORMERS AS SPECIFIED IN THIS SECTION MEET NEC 450.21(B) EXCEPTION #2 AND ARE NOT REQUIRED TO BE PLACED IN A 1-HOUR RATED ROOM.
26.19	CIRCUITING: ALL WIRING SHALL BE IN CONDUIT, MINIMUM 3/4" O.D., CONCEALED EXCEPT WHERE NOTED. EMT WITH STEEL SET SCREW INSULATED-THROAT FITTINGS MAY BE USED IN DRY, PROTECTED INTERIOR LOCATIONS. PVC SCHEDULE 40 SHALL BE USED BELOW GRADE AT MINIMUM -24". WRAPPED RIGID ELBOWS AND RISERS SHALL BE USED FOR ALL THROUGH-GRADE TRANSITIONS AND STUB-UPS. RGS OR IMC CONDUIT WITH THREADED FITTINGS SHALL BE USED IN ALL LOCATIONS WHERE EXPOSED TO THE ELEMENTS OR SUBJECT TO PHYSICAL DAMAGE. METAL-CLAD CABLE (TYPE MC) WILL NOT BE ACCEPTABLE. HEALTH CARE FACILITY ARMORED CABLE (HCF) IS ACCEPTABLE FROM JUNCTION BOXES TO LIGHTING FIXTURES, WITHIN CASEWORK ONLY, SHALL NOT EXCEED 6 FEET IN LENGTH. TYPE MC CABLE IS NOT ACCEPTABLE. ENT IS NOT ALLOWED. CONNECT RECESSED AND SUSPENDED LIGHTING FIXTURES, MOTORIZED AND VIBRATING EQUIPMENT WITH STEEL FLEX. ALL CONDUIT SHALL HAVE PULL CORD IF OTHERWISE EMPTY. ALL RACEWAYS AND CIRCUITING SHALL COMPLY WITH ARTICLE 517.13
26.20	WIRING: WIRE SHALL BE COPPER UNLESS OTHERWISE INDICATED. MINIMUM WIRE SIZE SHALL BE #12 AWG. WHERE ALUMINUM IS ALLOWED BY WRITTEN AUTHORIZATION BY THE ENGINEER, WIRE SHALL BE TERMINATED IN AN INSULATED CU/AL RATED COMPRESSION TERMINAL FITTING (MAC-ADAPT OR EQUAL). INSULATION SHALL BE THW, THWN OR THHN.
26.21	FUSES: FUSES SHALL BE SIZED PER ACTUAL NAMEPLATE OF EQUIPMENT SERVED. FUSES SHALL BE DUAL-ELEMENT, CURRENT-LIMITING, AND SHALL BE INTERCHANGEABLE BETWEEN FRAME SIZES WITH STANDARD FACTORY FUSE REDUCERS. FUSES SHALL BE AS FOLLOWS UNLESS OTHERWISE INDICATED: a. CIRCUITS 601 TO 6000 AMPERES SHALL BE PROTECTED BY CURRENT LIMITING BUSSMANN LOW-PEAK TIME-DELAY FUSES KRP-C - UL CLASS L b. CIRCUITS 0 TO 600 AMPERES SHALL BE PROTECTED BY CURRENT LIMITING BUSSMANN LOW-PEAK DUAL-ELEMENT FUSES LPN-RK (250 VOLTS) OR LPS-RK (600 VOLTS) - UL CLASS RK1 c. ALL INDIVIDUAL MOTOR CIRCUITS RATED 480 AMPERES OR LESS SHALL BE PROTECTED BY BUSSMANN LOW-PEAK DUAL-ELEMENT FUSES LPN-RK (250 VOLTS) OR LPS-RK (600 VOLTS) - UL CLASS RK1 OR L d. CIRCUIT BREAKER PANELS SHALL BE PROTECTED BY BUSSMANN LOW-PEAK DUAL-ELEMENT FUSES LPN-RK (250 VOLTS), LPS-RK (600 VOLTS) OR BUSSMANN LOW-PEAK KRP-C TIME-DELAY FUSES - UL CLASS RK1 OR L e. ALL DUAL-ELEMENT FUSES SHALL HAVE SEPARATE OVERLOAD AND SHORT-CIRCUIT ELEMENTS. f. PROVIDE SPARE FUSE CABINET AFTER THE COMPLETION OF THE PROJECT WITH ONE SET OF SPARE FUSES FOR EVERY SIZE USED.
26.22	UTILITY SERVICES: PROVIDE POWER AND COMMUNICATIONS SYSTEM SERVICES IN ACCORDANCE WITH THE REQUIREMENTS OF THE SERVING UTILITIES. PROVIDE EXCAVATION, RACEWAY, STRUCTURES, GROUNDING, ETC. AS REQUIRED. CONTACT SERVING UTILITIES AND OBTAIN THEIR PROJECT SPECIFIC REQUIREMENTS PRIOR TO BID. UTILITY WORK INDICATED HEREIN IS FOR BIDDING ASSISTANCE ONLY. THESE PLANS DO NOT PURPORT TO INDICATE ALL WORK REQUIRED. (UTILITY SERVICE CHARGES PAID BY OTHERS)
26.23	TEMPORARY CONSTRUCTION POWER: PROVIDE TEMPORARY ELECTRICAL POWER AND LIGHTING FOR ALL TRADES THAT REQUIRE SERVICE DURING THE COURSE OF THIS PROJECT. PROVIDE TEMPORARY SERVICE AND DISTRIBUTION AS REQUIRED. COMPLY WITH THE NEC AND OSHA REQUIREMENTS. (ENERGY COSTS BY OTHERS).
26.24	SUBMITTALS: BEFORE ORDERING ANY EQUIPMENT, CONTRACTOR SHALL SUBMIT ELECTRONIC PDF COPIES OF FACTORY SHOP DRAWINGS FOR ALL LIGHTING FIXTURES, SWITCHGEAR, PANELS, MOTOR CONTROLLERS, WIRING DEVICES, ETC. PROPOSED FOR THIS PROJECT.
26.25	SUBSTITUTIONS: PROPOSED SUBSTITUTIONS SHALL BE EQUAL OR SUPERIOR TO SPECIFIED ITEMS IN ALL RESPECTS. DETERMINATION OF EQUALITY RESTS SOLELY WITH ENGINEER. SUBSTITUTIONS MUST BE SUBMITTED A MINIMUM OF 10 WORKING DAYS PRIOR TO BID FOR CONSIDERATION. PROPOSED SUBSTITUTIONS PROVIDED LATER WILL NOT BE REVIEWED OR ALLOWED. BID SUBSTITUTED MATERIAL WILL NOT BE ALLOWED IF ACCEPTED IN WRITING BY ENGINEER.
26.26	IDENTIFICATION: PROVIDE ENGRAVED NAMEPLATES FOR ALL SWITCHBOARDS, PANELS, TRANSFORMERS, DISCONNECTS, MOTOR STARTERS, CONTACTORS, TIME SWITCHES AND CABINETS. NAMEPLATES SHALL INCLUDE THE FOLLOWING INFORMATION AS APPLICABLE: DESIGNATION (i.e. PANEL A) FUNCTION (i.e. AIR HANDLER AH-1) VOLTAGE, PHASE, WIRE (i.e. 480 VOLT, 3ø, 4W.) FEEDER SIZE (i.e. 4-#4/0 THHN CU IN 2" C.) SOURCE (i.e. SWITCHBOARD MSB) NAMEPLATES SHALL BE WHITE LETTERS ON BLACK FOR NORMAL EQUIPMENT AND WHITE LETTERS ON RED FOR EMERGENCY EQUIPMENT.
26.27	GUARANTEE: THE COMPLETE ELECTRICAL SYSTEM, AND ALL PORTIONS THEREOF, SHALL BE GUARANTEED TO BE FREE FROM DEFECTS IN WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF FINAL ACCEPTANCE. PROMPTLY REMEDY SUCH DEFECTS AND ANY SUBSEQUENT DAMAGE CAUSED BY THE DEFECTS OR REPAIR THEREOF AT NO EXPENSE TO THE OWNER. LAMPS ARE EXEMPT FROM THIS GUARANTEE, BUT SHALL BE NEW AT TIME OF FINAL ACCEPTANCE.
26.28	SUSPENDED CEILING SYSTEMS: ALL LAY-IN FIXTURES SHALL BE INDEPENDENTLY SUPPORTED BY TWO #12 SLACK WIRES ATTACHED TO TWO OPPOSITE CORNERS OF THE FIXTURE PER UBC & NEC REQUIREMENTS. THESE WIRES SHALL BE SECURED TO THE STRUCTURAL FRAMING SUCH THAT FAILURE OF THE SUSPENDED CEILING SHALL NOT ALLOW THE FIXTURE TO DROP.
26.29	COORDINATION: THE CIVIL, ARCHITECTURAL, MECHANICAL, KITCHEN AND INTERIOR DRAWINGS CONTAIN DETAIL DESCRIPTIONS, CIRCUITING AND CONNECTION REQUIREMENTS WHICH ARE PART OF DIVISION 16 RESPONSIBILITIES. ELECTRICAL CONTRACTOR SHOULD NOT SUBMIT BIDS ON THIS PROJECT BEFORE REVIEWING ALL PROJECT DRAWINGS, SPECIFICATIONS AND APPENDIX.
26.30	FIRE ALARM: PROVIDE NEW FIRE EXTINGUISHING SYSTEM MONITOR WITH CLASS 1 CIRCUITING AS REQUIRED BY LOCAL FIRE MARSHAL AND IN COMPLIANCE WITH ADA REQUIREMENTS. CONTROL PANEL SHALL INCLUDE INTEGRAL STANDBY BATTERIES, CHARGER AND MUNICIPAL TIE MODULE OR AGENCY-APPROVED AUTO-DIALER CONNECTED TO THE TELEPHONE SYSTEM (CONNECTION AND MONITORING CHARGES BY OTHERS). PLANS DO NOT INDICATE ALL DEVICES, CONNECTIONS OR CIRCUITING REQUIRED FOR A COMPLETE SYSTEM. SUBMIT PROPOSED DESIGN TO THE FIRE MARSHAL AND RECEIVE APPROVAL PRIOR TO ROUGH-IN.
26.31	ONGOING OPERATION: CONDUCT WORK TO MINIMIZE DISRUPTION OF OWNER'S ONGOING OPERATIONS. PROVIDE BARRICADES, NOISE ABATEMENT AND DUST CONTAINMENT MEASURES TO ENSURE THE SAFETY AND COMFORT OF PATRONS, STAFF AND WORKERS. INTERRUPTIONS OF EXISTING POWER, COMMUNICATIONS OR FIRE ALARM SYSTEMS SHALL BE PERFORMED ONLY AT SUCH TIMES AS DIRECTED BY RESIDENT ENGINEER. OUTAGES SHALL BE MOMENTARY IN NATURE. EACH SUCH OUTAGE (OR OPERATION WHICH MAY POSE RISK OF AN ACCIDENTAL OUTAGE) SHALL BE SCHEDULED 48 HOURS IN ADVANCE.
26.32	LIGHTING CONTROLS: LIGHTING CONTROL SYSTEMS SHALL BE TESTED TO ENSURE PROPER CALIBRATION, ADJUSTMENT, PROGRAMMING AND OPERATION.

MASTER SYMBOL LIST		
SIGNAL OUTLETS	RECEPTACLES	ABBREVIATIONS
☒ TELEPHONE: 4S BOX WITH SINGLE GANG MUD RING UON, +18" AFF UON	☒ DUPLEX: 20A, 125V, NEMA 5-20, +18" AFF	☒ CENTERLINE
☒ TELEPHONE: 4S BOX WITH SINGLE GANG MUD RING UON, WALL MOUNT +54" AFF UON	☒ DOUBLE DUPLEX: 20A, 125V, NEMA 5-20, +18" AFF	AFF ABOVE FINISHED FLOOR
☒ DATA: 4S BOX WITH SINGLE GANG MUD RING UON, +18" AFF UON	☒ HALF SWITCHED DUPLEX: 20A, 125V, NEMA 5-20, +18" AFF (TOP HALF SWITCHED)	AIC AMPERES INTERRUPTING CAPACITY
☒ VOICE/DATA: 4S BOX WITH SINGLE GANG MUD RING UON, +18" AFF UON	☒ DUPLEX GFCI: 20A, 125V, GFCI, NEMA 5-20 GFR, +18" AFF	AFC ABOVE FINISH CEILING
☒ TELEVISION: 4S BOX WITH SINGLE GANG MUD RING UON, +18" AFF UON	☒ DUPLEX I.G.: 20A, 125V, ISO. GND., NEMA 5-20 IG +18" AFF (WHITE WITH ORANGE TRIANGLE, UON)	BMS BUILDING MANAGEMENT SYSTEM
☒ CAMERA: 4S BOX WITH SINGLE GANG MUD RING UON, +18" AFF UON	☒ DOUBLE DUPLEX I.G.: 20A, 125V, ISO. GND., NEMA 5-20 IG +18" AFF (WHITE WITH ORANGE TRIANGLE, UON)	C CONDUIT
☒ MICROPHONE: 4S BOX WITH SINGLE GANG MUD RING UON, +18" AFF UON	☒ SPECIAL RECEPTACLE - AS INDICATED ON PLANS, +18" AFF	CB CIRCUIT BREAKER
NOTE: DIAMOND SYMBOLS INDICATES DEDICATED CIRCUIT.		CLG CEILING
EQUIPMENT		CIR CIRCUIT
☒ SWITCHBOARD		DPDT DOUBLE POLE DOUBLE THROW
☒ PANELBOARD: SURFACE MOUNTED		DPST DOUBLE POLE SINGLE THROW
☒ PANELBOARD: FLUSH MOUNTED		(E) EXISTING TO REMAIN
☒ TRANSFORMER		ELEV ELEVATOR
☒ RELAY (120V COIL, STEP DN XFMR IF REQUIRED, UON)		EMT ELECTRICAL METALLIC TUBING
☒ CONTACTOR (120V COIL, STEP DN XFMR IF REQUIRED, UON)		EPO EMERGENCY POWER OFF SYSTEM
☒ COMBINATION MAGNETIC STARTER/FUSED DISCONNECT		FBO FURNISHED BY OTHERS
☒ NON-FUSIBLE DISCONNECT SWITCH		FPEN FUSE PER EQUIPMENT NAMEPLATE
☒ FUSIBLE DISCONNECT SWITCH		FLUOR FLUORESCENT
☒ PULLBOX: SIZE AS REQUIRED BY NEC		FU FUSE: DUAL-ELEMENT, TIME DELAY
☒ JUNCTION BOX: SIZE AS REQUIRED BY NEC		GFI/GFCI GROUND FAULT INTERRUPTER
☒ SURFACE RACEWAY WITH OR WITHOUT DEVICES		GND GROUND
☒ TELEPOWER POLE		HOA HAND-OFF-AUTOMATIC
CIRCUITING		HID HIGH INTENSITY DISCHARGE
— — — CONDUIT IN WALL OR ABOVE CEILING		IG ISOLATED GROUND
— — — CONDUIT IN FLOOR OR BELOW GRADE		INCAND INCANDESCENT
===== METAL CLAD CABLE (MC)		K kcmil (300K = 300 kcmil)
—OH— OVERHEAD SERVICE		LGT LIGHTING
— P — PRIMARY		LV LOW VOLTAGE
— S — SECONDARY		MCP MOTOR CIRCUIT PROTECTOR
— T — TELEPHONE		MC MULTI-CONDUCTOR CABLE
—TV— TELEVISION		(N) NEW
— — — LOW VOLTAGE AND/OR CONTROL CIRCUITING		NC NORMALLY CLOSED
— ** — EMERGENCY CIRCUIT		NEUT NEUTRAL
—] — STUB OUT: MARK AND CAP (SITE)		NL NIGHT LIGHT
— S — CIRCUITING UP OR DOWN		NO NORMALLY OPEN
		NTS NOT TO SCALE
		PNL PANEL
		PVC POLYVINYL CHLORIDE CONDUIT
		(R) EXISTING TO BE RELOCATED
		RAC RIGID ALUMINUM CONDUIT
		RSC RIGID STEEL CONDUIT
		SLD SINGLE LINE DIAGRAM
		SO SEAL OFF
		SPDT SINGLE POLE DOUBLE THROW
		SPEN SIZE PER EQUIPMENT NAMEPLATE
		SPST SINGLE POLE SINGLE THROW
		TEL TELECOM
		TYP TYPICAL
		UNSW UNSWITCHED
		UON UNLESS OTHERWISE NOTED
		WP WEATHERPROOF (NEMA 3R)
		WT WATERTIGHT
		(X) EXISTING TO BE REMOVED
		XFMR TRANSFORMER
		XP EXPLOSION PROOF
METHODS		
☒ SHADING INDICATES: FIXTURE, OUTLET, EQUIPMENT, ETC. ON EMERGENCY "X" OR NIGHT LIGHT "NL" CIRCUIT		
☒ DEVICE MOUNTED IN MULTIPLE UNDER COMMON COVER MAXIMUM HEIGHT ON WALL SHALL BE +48" TO TOP UON		
☒ DEVICES MOUNTED IN OR ABOVE COUNTER/BACKSPLASH: MAXIMUM HEIGHT ON WALLS SHALL BE +48" TO TOP UON		
☒ FLUSH FLOOR MOUNTED WIRING DEVICES		
☒ FLUSH FLOOR MOUNTED WIRING DEVICES IN SINGLE MULTI-COMPARTMENT BOX		
☒ RECEPTACLE MOUNTED IN CEILING OR CASEWORK		
☒ FINE DASHING INDICATES EXISTING EQUIPMENT AND DEVICES TO BE REMOVED		
DESIGNATIONS		
☒ LIGHT FIXTURE: F1 = TYPE (SEE FIXTURE SCHEDULE)		
☒ SHEET NOTE		
☒ REVISION DELTA: NUMBER REPRESENTS REVISION		
☒ MECHANICAL AND PLUMBING EQUIPMENT		
☒ MISCELLANEOUS: THESE AND OTHER SYMBOLS AS INDICATED IN TABLES AND SCHEDULES ON THE PLANS.		
MISCELLANEOUS		
☒ THERMOSTAT: AT +48" TO TOP UON (OR PER MECH PLANS)		
☒ EXHAUST FAN: FRACTIONAL HORSEPOWER		
☒ MOTOR: NUMBER = HORSEPOWER		
☒ SIGNAGE CONNECTION		
☒ SHUNT TRIP STATION: +7"-6" AFF, 12" RED TRIANGLE, UON		
☒ CONTROL STATION: AT +48" TO TOP UON		
☒ DUAL LEVEL LIGHTING CONTROL SWITCH 'a' = CENTER (1) LAMP SWITCH 'b' = OUTER (2) LAMPS		
NOTE: THIS IS A MASTER SYMBOL LIST. ALL SYMBOLS SHOWN MAY NOT BE USED WITHIN THIS SET OF PLANS		

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 312 WEST 3RD STREET
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JAMES P. SOLARO
 REGISTERED PROFESSIONAL ENGINEER
 STATE OF NEVADA
 No. 15536
 11/7/22

COMMUNITY BUILDING
 PROJECT: Washoe Housing Authority
 WASHOE STEWART LIGHT

BHA JOB NO.: 2218
 DRAWING STATUS:
 PHASE
 SCHEMATIC DESIGN _____
 DESIGN DEVELOPMENT _____
 CONTRACT DOCUMENTS _____
 USE THESE DRAWINGS ARE BEING ISSUED FOR THE FOLLOWING USES:
 PROGRESS REVIEW _____
 GOVERNING AGENCY REVIEW _____
 ESTIMATING _____
 BIDDING _____
 OTHER _____

ISSUE DATE: 11.7.22
 DRAWN BY: MT

Revisions	Date

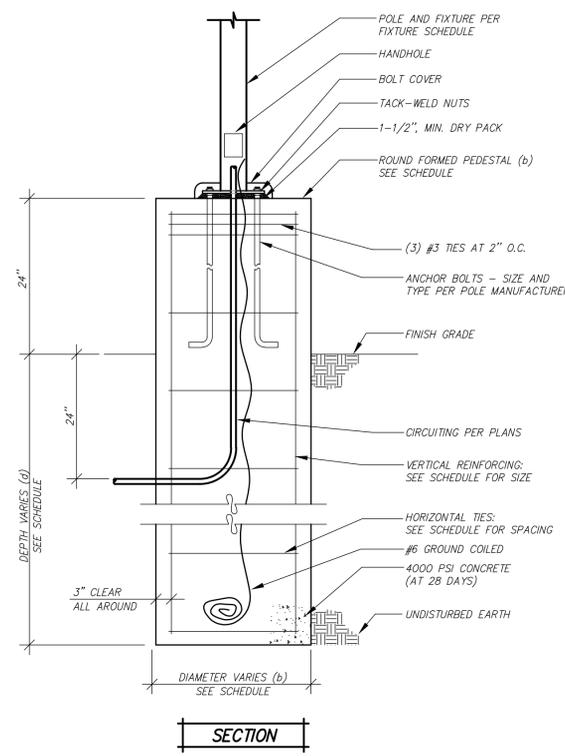
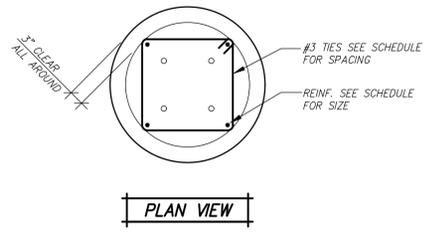
DRAWING TITLE:
SYMBOL LIST AND SPECIFICATIONS

DRAWING NUMBER:
E0.1

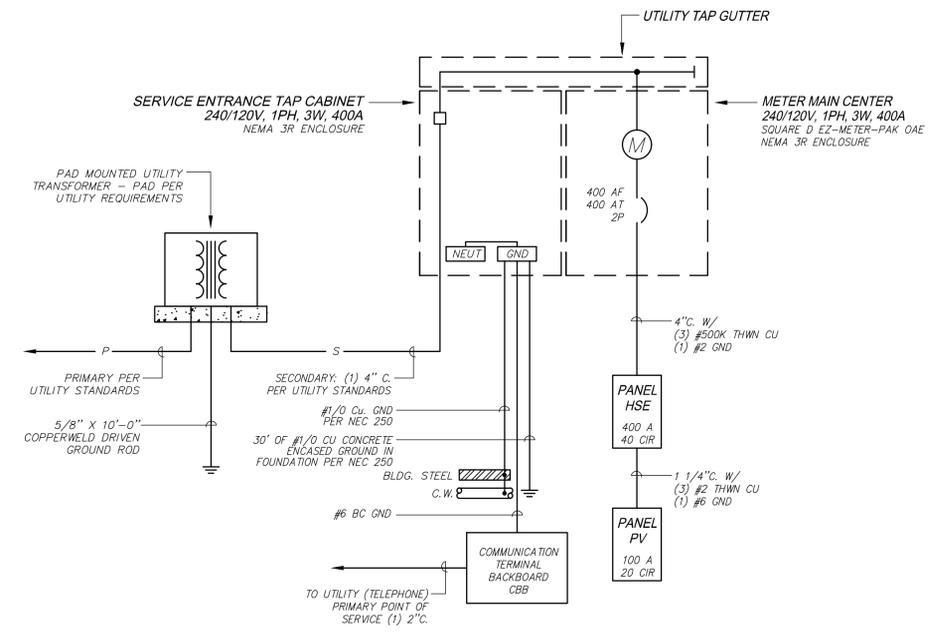
POLE BASE SCHEDULE				
POLE	POLE HEIGHT	DIAMETER (b)	DEPTH (d)	REINFORCING
P01	UP TO 12'-0"	18" DIAMETER	4.25'	(4) #5 VERT, #3 TIES AT 9" O.C.
P02	UP TO 12'-0"	24" DIAMETER	4.00'	(4) #5 VERT, #3 TIES AT 12" O.C.
P03	UP TO 16'-0"	18" DIAMETER	4.75'	(4) #5 VERT, #3 TIES AT 9" O.C.
P04	UP TO 16'-0"	24" DIAMETER	4.25'	(4) #5 VERT, #3 TIES AT 12" O.C.
P05	UP TO 20'-0"	24" DIAMETER	4.75'	(4) #5 VERT, #3 TIES AT 12" O.C.
P06	UP TO 20'-0"	30" DIAMETER	4.50'	(4) #5 VERT, #3 TIES AT 15" O.C.
P07	UP TO 25'-0"	24" DIAMETER	5.50'	(4) #5 VERT, #3 TIES AT 12" O.C.
P08	UP TO 25'-0"	30" DIAMETER	5.00'	(4) #5 VERT, #3 TIES AT 15" O.C.
P09	UP TO 30'-0"	24" DIAMETER	6.00'	(4) #6 VERT, #3 TIES AT 12" O.C.
P10	UP TO 30'-0"	30" DIAMETER	5.50'	(4) #6 VERT, #3 TIES AT 15" O.C.
P11	UP TO 35'-0"	24" DIAMETER	6.50'	(4) #6 VERT, #3 TIES AT 12" O.C.
P12	UP TO 35'-0"	30" DIAMETER	6.00'	(4) #6 VERT, #3 TIES AT 15" O.C.

DESIGN CRITERIA

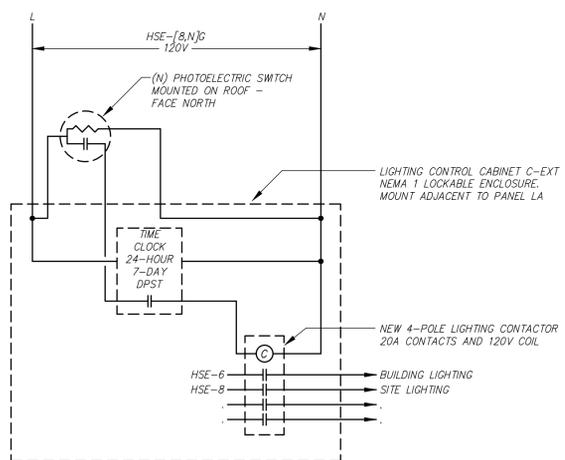
- CODE: 2012 INTERNATIONAL BUILDING CODE
- WIND LOAD: 130 MPH, EXPOSURE C
- ALLOWABLE LATERAL BEARING PRESSURE: 26PPSF/FT
BASE LATERAL BEARING PRESSURE: 100PSF/FT
1/3 INCREASE TAKEN FOR WIND OR SEISMIC LOADS (IBC TABLE 1804.2, FOOTNOTE D)
2X INCREASE, NOT ADVERSELY AFFECTED BY 1/2" MOVEMENT (IBC 1804.3.1)
- NONCONSTRAINED DESIGN ASSUMED
- EFFECTIVE PROJECTED AREA (EPA): (2) FIXTURES X 3.0 SQ. FT. = 6.0 SQ. FT. (2 FIXTURES AT A 180 DEGREE ORIENTATION)
- 4000 PSI CONCRETE (AT 28 DAYS) WITH 6% AIR ENTRAINMENT



C	POLE BASE DETAIL
E0.2	SCALE: NO TO SCALE

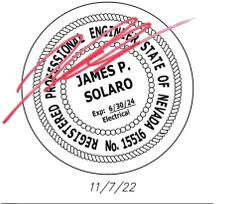


A	SINGLE LINE DIAGRAM
E0.2	SCALE: NOT TO SCALE



B	LIGHTING CONTACTOR C-EXT
E0.2	SCALE: NOT TO SCALE

LIGHTING FIXTURE SCHEDULE		
LIGHTING FIXTURE CATALOG NUMBERS ARE SERIES TYPE ONLY. PROVIDE TRIMS, BALLASTS, MOUNTING EQUIPMENT, FITTINGS AND LAMPS AS REQUIRED BY THE SPECIFICATIONS AND PROJECT CONDITIONS FOR A COMPLETE INSTALLATION. THIS IS NOT A STANDALONE SCHEDULE AND FIXTURES MUST INCORPORATE ALL WORK INDICATED OR IMPLIED THROUGHOUT THE DRAWINGS AND SPECIFICATIONS.		
TYPE	SYMBOL	DESCRIPTION AND MANUFACTURER
LI	○	LED, 6" DOWNLIGHT. MOUNTING HEIGHT: RECESSED LAMP: LED 1200 LUMENS (15 WATTS) VOLTAGE: MVOLT MANUFACTURER: JUNO: JPD26-DC-AL010-SW540-90CRI-JPD26NMGF-MVOLTZT10-WWH SUBSTITUTIONS: ● OR EQUAL ○ SUBJECT TO REVIEW ○ NO EQUAL
LIX	⊞	MOUNTING HEIGHT: ABOVE CEILING LAMP: 50 WATTS VOLTAGE: 120V MANUFACTURER: IOTA: IIS 50 1 SUBSTITUTIONS: ● OR EQUAL ○ SUBJECT TO REVIEW ○ NO EQUAL
WI	⊞	LED WALL MOUNTED FIXTURE WITH TYPE T4M (MEDIUM THROW) OPTICS AND 350mA DRIVER, BLACK FINISH. MOUNTING HEIGHT: 8'-0" LAMP: LED 7,172 LUMENS (13 WATTS) VOLTAGE: 120V MANUFACTURER: LITHONIA: DSKW LED 10C 350 40K T2M MVOLT DBLXD SUBSTITUTIONS: ○ OR EQUAL ● SUBJECT TO REVIEW ○ NO EQUAL
SI	⊞	LED SINGLE HEAD, POLE MOUNTED FIXTURE WITH TYPE T4M (MEDIUM THROW) OPTICS, 1250mA DRIVER, BLACK FINISH ATOP A SQUARE STEEL POLE. MOUNTING HEIGHT: 12'-6" LAMP: LED 13,165 LUMENS (125 WATTS) VOLTAGE: 120V MANUFACTURER: LITHONIA: DSK1 LED P4 40K T4M MVOLT DBLXD SPA POLE: LITHONIA: SSS 10 4C DM19AS DBLXD SUBSTITUTIONS: ○ OR EQUAL ● SUBJECT TO REVIEW ○ NO EQUAL
S2	⊞	LED FLAG POLE, YOKE MOUNTED FIXTURE WITH FLOOD OPTICS AND VISOR, BLACK FINISH. MOUNTING HEIGHT: GROUND LAMP: LED 12,173 LUMENS (93 WATTS) VOLTAGE: 120V MANUFACTURER: LITHONIA: DSKF2 LED P4 40K FL MVOLT DBLXD YKX62 DSKF2UBV-DBLXD-U SUBSTITUTIONS: ○ OR EQUAL ● SUBJECT TO REVIEW ○ NO EQUAL
X1	⊞	LED, COMBINATION EMERGENCY EGRESS FIXTURE AND EXIT SIGN WITH INTEGRAL BATTERY AND CHARGER. MOUNTING HEIGHT: ABOVE DOOR LAMP: INCLUDED VOLTAGE: 120/277V MANUFACTURER: LITHONIA: LHQM S W 3 G 120/277 N SUBSTITUTIONS: ○ OR EQUAL ○ SUBJECT TO REVIEW ● NO EQUAL
X2	⊞	EMERGENCY LIGHTING UNIT, DARK BRONZE FINISH, 90 MINUTE BATTERY BACKUP, SELF CONTAINED, WET LOCATION LISTED. MOUNTING HEIGHT: ABOVE DOOR LAMP: INCLUDED VOLTAGE: 120/277V MANUFACTURER: LITHONIA: AFNX DB EXT SUBSTITUTIONS: ● OR EQUAL ○ SUBJECT TO REVIEW ○ NO EQUAL
X3	⊞	EMERGENCY LIGHTING UNIT, WHITE HOUSING, 90 MINUTE BATTERY BACKUP, SELF CONTAINED. MOUNTING HEIGHT: ABOVE DOOR LAMP: INCLUDED VOLTAGE: 120/277V MANUFACTURER: LITHONIA: ELM2 SUBSTITUTIONS: ○ OR EQUAL ● SUBJECT TO REVIEW ○ NO EQUAL



11/7/22

PROJECT:
Washoe Housing Authority

COMMUNITY BUILDING

WASHOE STEWART LIGHT

BHA JOB NO.: 2218

DRAWING STATUS:

PHASE

SCHEMATIC DESIGN

DESIGN DEVELOPMENT

CONTRACT DOCUMENTS

USE THESE DRAWINGS ARE BEING ISSUED FOR THE FOLLOWING USES:

PROGRESS REVIEW

GOVERNING AGENCY REVIEW

ESTIMATING

BIDDING

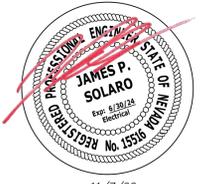
OTHER

ISSUE DATE: 11.7.22 DRAWN BY: MT

Revisions	Date

DRAWING TITLE:
ELECTRICAL SCHEDULES AND SINGLE LINE DIAGRAM

DRAWING NUMBER:
E0.2



11/7/22

PROJECT:
Washoe Housing Authority
COMMUNITY BUILDING
WASHOE STEWART LIGHT

BHA JOB NO.: 2218

DRAWING STATUS:

PHASE
SCHEMATIC DESIGN
DESIGN DEVELOPMENT
CONTRACT DOCUMENTS

USE THESE DRAWINGS ARE BEING ISSUED FOR THE FOLLOWING USES:
PROGRESS REVIEW
GOVERNING AGENCY REVIEW
ESTIMATING
BIDDING
OTHER

ISSUE DATE: 11.7.22
DRAWN BY: MT

Revisions	Date

DRAWING TITLE:
LIGHTING COMPLIANCE DOCUMENTS

DRAWING NUMBER:
E0.3

COMcheck Software Version 4.1.5.5 Interior Lighting Compliance Certificate

Project Information
Energy Code: 2018 IECC
Project Title: WHA Community Center
Project Type: New Construction

Construction Site: Washoe Blvd, Markleeville, CA 96120
Owner/Agent: [Blank]
Designer/Contractor: JP Engineering, LLC, 10597 Double R Blvd, Suite 2, Reno, NV 89521 (775) 852-2337

Additional Efficiency Package(s)
Credits: 1.0 Required 1.0 Proposed
Reduced Lighting Power: 1.0 credit

A Area Category	B Floor Area (ft ²)	C Allowed Watts / ft ²	D Allowed Watts (B X C)
1-Education Center (Common Space Types-Classroom/Lecture/Training)	1544	0.86	1328
2-Restroom (Common Space Types-Restrooms)	291	0.77	224
3-Kitchen (Common Space Types-General Seating Area)	311	0.38	118
4-Storage (Common Space Types-Storage)	131	0.57	75
5-Office/Comp Rm (Common Space Types-Office - Enclosed)	240	0.84	202
Total Allowed Watts =			1946

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
1-Education Center (Common Space Types-Classroom/Lecture/Training) LED 1: L1: See Fixture Schedule: Other	1	33	12	396
2-Restroom (Common Space Types-Restrooms) LED 2: L1: See Fixture Schedule: Other	1	12	12	144
3-Kitchen (Common Space Types-General Seating Area) LED 3: L1: See Fixture Schedule: Other	1	12	12	144
4-Storage (Common Space Types-Storage) LED 4: L1: See Fixture Schedule: Other	1	5	12	60
5-Office/Comp Rm (Common Space Types-Office - Enclosed) LED 5: L1: See Fixture Schedule: Other	1	4	12	48
Total Proposed Watts =				792

Project Title: WHA Community Center
Data filename: J:\2022\22162 - WHA Community Center\22162 - Lighting Compliance.cck
Report date: 10/10/22
Page 1 of 10

Interior Lighting PASSES: Design 59% better than code

Interior Lighting Compliance Statement
Compliance Statement: The proposed interior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed interior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Name - Title: [Blank] Signature: [Blank] Date: [Blank]

Project Title: WHA Community Center
Data filename: J:\2022\22162 - WHA Community Center\22162 - Lighting Compliance.cck
Report date: 10/10/22
Page 2 of 10

COMcheck Software Version 4.1.5.5 Exterior Lighting Compliance Certificate

Project Information
Energy Code: 2018 IECC
Project Title: WHA Community Center
Project Type: New Construction
Exterior Lighting Zone: 2 (Residential mixed use area (LZ2))

Construction Site: Washoe Blvd, Markleeville, CA 96120
Owner/Agent: [Blank]
Designer/Contractor: JP Engineering, LLC, 10597 Double R Blvd, Suite 2, Reno, NV 89521 (775) 852-2337

A Area/Surface Category	B Quantity	C Allowed Watts / Unit	D Tradable Wattage	E Allowed Watts (B X C)
Driveway (Driveway)	5531 ft ²	0.04	Yes	221
Parking (Parking area)	3918 ft ²	0.04	Yes	145
Walkway (Walkway >= 10 feet wide)	1468 ft ²	0.1	Yes	147
Total Tradable Watts (a) =				513
Total Allowed Watts (b) =				513
Total Allowed Supplemental Watts (b) =				400

(a) Wattage tradeoffs are only allowed between tradable areas/surfaces.
(b) A supplemental allowance equal to 400 watts may be applied toward compliance of both non-tradable and tradable areas/surfaces.

A Fixture ID : Description / Lamp / Wattage Per Lamp / Ballast	B Lamps/ Fixture	C # of Fixtures	D Fixture Watt.	E (C X D)
Driveway (Driveway 5531 ft ²) - Tradable Wattage LED 1: S1: See Fixture Schedule: Other	1	1	125	125
Parking (Parking area 3918 ft ²) - Tradable Wattage LED 2: S1: See Fixture Schedule: Other	1	1	125	125
Walkway (Walkway >= 10 feet wide 1468 ft ²) - Tradable Wattage LED 4: W1: See Fixture Schedule: Other	1	7	13	93
Total Tradable Proposed Watts =				468

Exterior Lighting PASSES: Design 49% better than code

Exterior Lighting Compliance Statement
Compliance Statement: The proposed exterior lighting design represented in this document is consistent with the building plans, specifications, and other calculations submitted with this permit application. The proposed exterior lighting systems have been designed to meet the 2018 IECC requirements in COMcheck Version 4.1.5.5 and to comply with any applicable mandatory requirements listed in the Inspection Checklist.

Project Title: WHA Community Center
Data filename: J:\2022\22162 - WHA Community Center\22162 - Lighting Compliance.cck
Report date: 10/10/22
Page 3 of 10

Name - Title: [Blank] Signature: [Blank] Date: [Blank]

Project Title: WHA Community Center
Data filename: J:\2022\22162 - WHA Community Center\22162 - Lighting Compliance.cck
Report date: 10/10/22
Page 4 of 10

COMcheck Software Version 4.1.5.5 Inspection Checklist

Energy Code: 2018 IECC
Requirements: 100.0% were addressed directly in the COMcheck software
Text in the "Comments/Assumptions" column is provided by the user in the COMcheck Requirements screen. For each requirement, the user certifies that a code requirement will be met and how that is documented, or that an exception is being claimed. Where compliance is itemized in a separate table, a reference to that table is provided.

Section # & Req ID	Plan Review	Complies?	Comments/Assumptions
C103.2 [PR4]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the interior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include interior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C103.2 [PR8]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the exterior lighting and electrical systems and equipment and document where exceptions to the standard are claimed. Information provided should include exterior lighting power calculations, wattage of bulbs and ballasts, transformers and control devices.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C406 [PR9]	Plans, specifications, and/or calculations provide all information with which compliance can be determined for the additional energy efficiency package options.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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Section # & Req ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.2 [EL22]	Spaces required to have light-reduction controls have a manual control that allows the occupant to reduce the connected lighting load in a reasonably uniform illumination pattern >= 50 percent.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.1 [EL18]	Occupancy sensors installed in classrooms/lecture/training rooms, conference/meeting/multi-purpose rooms, copy/print rooms, lounges/breakrooms, enclosed offices, open plan office areas, restrooms, storage rooms, locker rooms, warehouse storage areas, and other spaces <= 300 sq ft that are enclosed by floor-to-ceiling height partitions. Reference section language C405.2.1.2 for control function in warehouses and section C405.2.1.3 for open plan office spaces.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.1 [EL19]	Occupancy sensors control function in warehouses. In warehouses, the lighting in aislesways and open areas is controlled with occupant sensors that automatically reduce lighting power by 50% or more when the areas are unoccupied. The occupant sensors control lighting in each aisleway independently and do not control lighting beyond the aisleway being controlled by the sensor.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.1 [EL20]	Occupant sensor control function in open plan office areas. Occupant sensor controls in open office spaces >= 300 sq ft. have controls 1) configured so that general lighting can be controlled separately in control zones with floor areas <= 600 sq ft. within the space, 2) automatically turn off general lighting in all control zones within 20 minutes after all occupants have left the space, 3) are configured so that general lighting power in each control zone is reduced by >= 80% of the full zone general lighting power within 20 minutes of all occupants leaving that control zone, and 4) are configured such that any daylight responsive control will activate space general lighting or control zone general lighting only when occupancy for the same area is detected.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.2 [EL21]	Each area not served by occupancy sensors (per C405.2.1) have time-switch controls and fuses detailed in sections C405.2.2.1 and C405.2.2.2.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

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Section # & Req ID	Rough-In Electrical Inspection	Complies?	Comments/Assumptions
C405.2.3 [EL23]	Daylight zones provided with individual controls that control the lights independent of general area lighting. See code section C405.2.3 2 Daylight-responsive controls for applicable spaces, C405.2.3 3 Daylight-responsive control function and section C405.2.3.2 Sidelit zone.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.4 [EL26]	Separate lighting control devices for specific uses installed per approved lighting plans.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.4 [EL27]	Additional interior lighting power allowed for special functions per the approved lighting plans and is automatically controlled and separated from general lighting.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.5 [EL28]	Manual controls required by the energy code are in a location with ready access to occupants and located where the controlled lights are visible, or identify the area served and their status.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.2.6 [EL30]	Automatic lighting controls for exterior lighting installed. Controls will be daylight controlled, set based on business operation time-of-day, or reduce connected lighting > 30%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.3 [EL6]	Exit signs do not exceed 5 watts per face.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.6 [EL26]	Low-voltage dry-type distribution electric transformers meet the minimum efficiency requirements of Table C405.6.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.7 [EL27]	Electric motors meet the minimum efficiency requirements of Tables C405.7(1) through C405.7(4). Efficiency verified through certification under an approved certification program or the equipment efficiency ratings shall be provided by motor manufacturer (where certification programs do not exist).	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.8.2 [EL28]	Escalators and moving walks comply with ASME A17.1/CSA B44 and have automatic controls configured to reduce speed to the minimum permitted speed in accordance with ASME A17.1/CSA B44 or applicable local code when not conveying passengers.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.9 [EL29]	Total voltage drop across the combination of feeders and branch circuits <= 5%.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

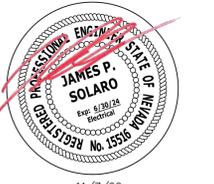
Additional Comments/Assumptions:

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Section # & Req ID	Final Inspection	Complies?	Comments/Assumptions
C303.3 [F17]	Furnished O&M instructions for systems and equipment to the building owner or designated representative.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C405.4.1 [F18]	Interior installed lamp and fixture lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Interior Lighting Fixture schedule for values.
C405.5.1 [F19]	Exterior lighting power is consistent with what is shown on the approved lighting plans, demonstrating proposed watts are less than or equal to allowed watts.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	See the Exterior Lighting Fixture schedule for values.
C408.1.1 [F5]	Building operations and maintenance documents will be provided to the owner. Documents will cover manufacturers' information, specifications, programming, procedures and means of illustrating to owner how building, equipment and systems are intended to be installed, maintained, and operated.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C408.2.5 [F16]	Furnished as-built drawings for electric power systems within 90 days of system acceptance.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.
C408.3 [F13]	Lighting systems have been tested to ensure proper calibration, adjustment, programming, and operation.	<input type="checkbox"/> Complies <input type="checkbox"/> Does Not <input type="checkbox"/> Not Observable <input type="checkbox"/> Not Applicable	Requirement will be met.

Additional Comments/Assumptions:

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11/7/22

PROJECT:
Washoe Housing Authority
COMMUNITY BUILDING
WASHOE STEWART LIHTC

BHA JOB NO.: 2218

DRAWING STATUS:

PHASE
SCHEMATIC DESIGN
DESIGN DEVELOPMENT
CONTRACT DOCUMENTS

USE
THESE DRAWINGS ARE BEING ISSUED
FOR THE FOLLOWING USES:
PROGRESS REVIEW
GOVERNING AGENCY REVIEW
ESTIMATING
BIDDING
OTHER

ISSUE DATE: 11.7.22
DRAWN BY: MT

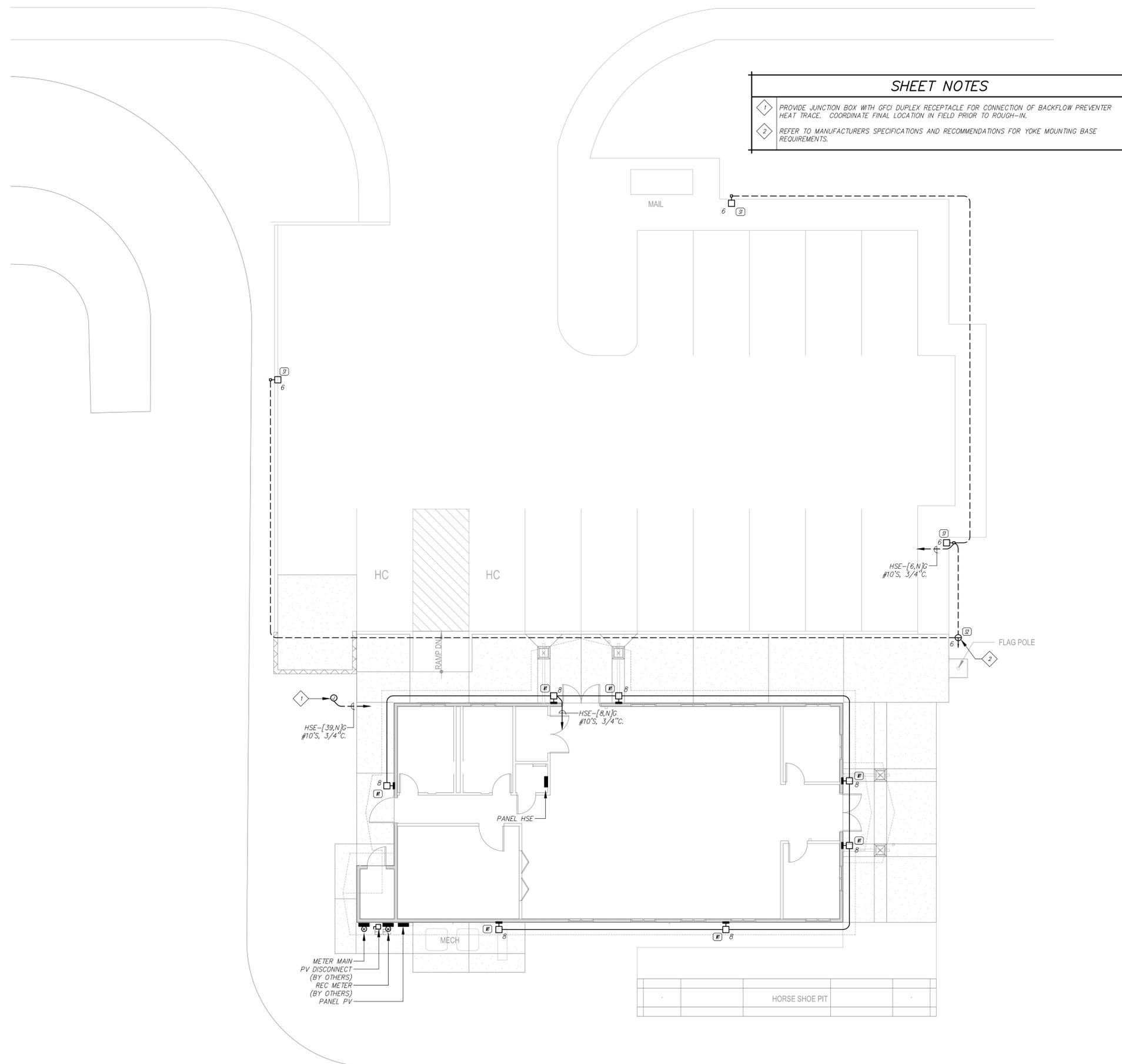
Revisions	Date

DRAWING TITLE:
SITE ELECTRICAL PLAN

DRAWING NUMBER:
E1.1

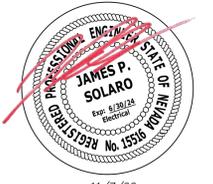
SHEET NOTES

- 1 PROVIDE JUNCTION BOX WITH GFCI DUPLEX RECEPTACLE FOR CONNECTION OF BACKFLOW PREVENTER HEAT TRACE. COORDINATE FINAL LOCATION IN FIELD PRIOR TO ROUGH-IN.
- 2 REFER TO MANUFACTURERS SPECIFICATIONS AND RECOMMENDATIONS FOR YOKE MOUNTING BASE REQUIREMENTS.



A | **SITE ELECTRICAL PLAN** |

E1.1 | SCALE: 1/8" = 1'-0"



11/7/22

PROJECT:
Washoe Housing Authority

COMMUNITY BUILDING

WASHOE STEWART LIGHT

BHA JOB NO.: 2218

DRAWING STATUS:

PHASE	
SCHEMATIC DESIGN	<input type="checkbox"/>
DESIGN DEVELOPMENT	<input type="checkbox"/>
CONTRACT DOCUMENTS	<input checked="" type="checkbox"/>

USE THESE DRAWINGS ARE BEING ISSUED FOR THE FOLLOWING USES:

PROGRESS REVIEW	<input type="checkbox"/>
GOVERNING AGENCY REVIEW	<input type="checkbox"/>
ESTIMATING	<input type="checkbox"/>
BIDDING	<input type="checkbox"/>
OTHER	<input type="checkbox"/>

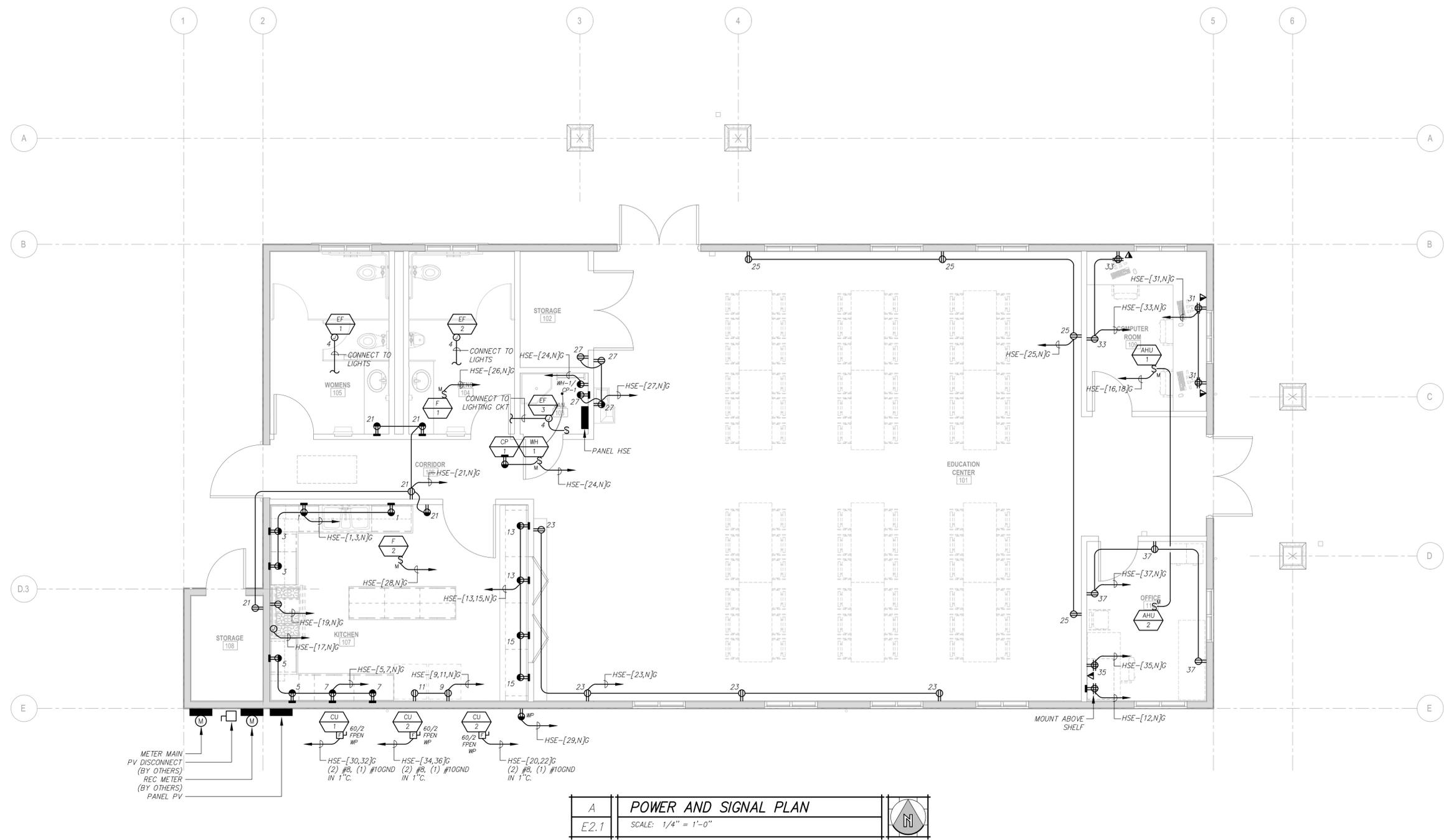
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Revisions	Date

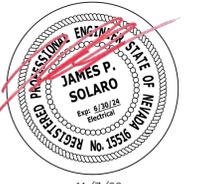
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POWER AND SIGNAL PLAN

DRAWING NUMBER:

E2.1



A	POWER AND SIGNAL PLAN	
E2.1	SCALE: 1/4" = 1'-0"	



11/7/22

PROJECT:
Washoe Housing Authority
COMMUNITY BUILDING
WASHOE STEWART LIGHT

BHA JOB NO.: 2218

DRAWING STATUS:
PHASE
SCHEMATIC DESIGN
DESIGN DEVELOPMENT
CONTRACT DOCUMENTS

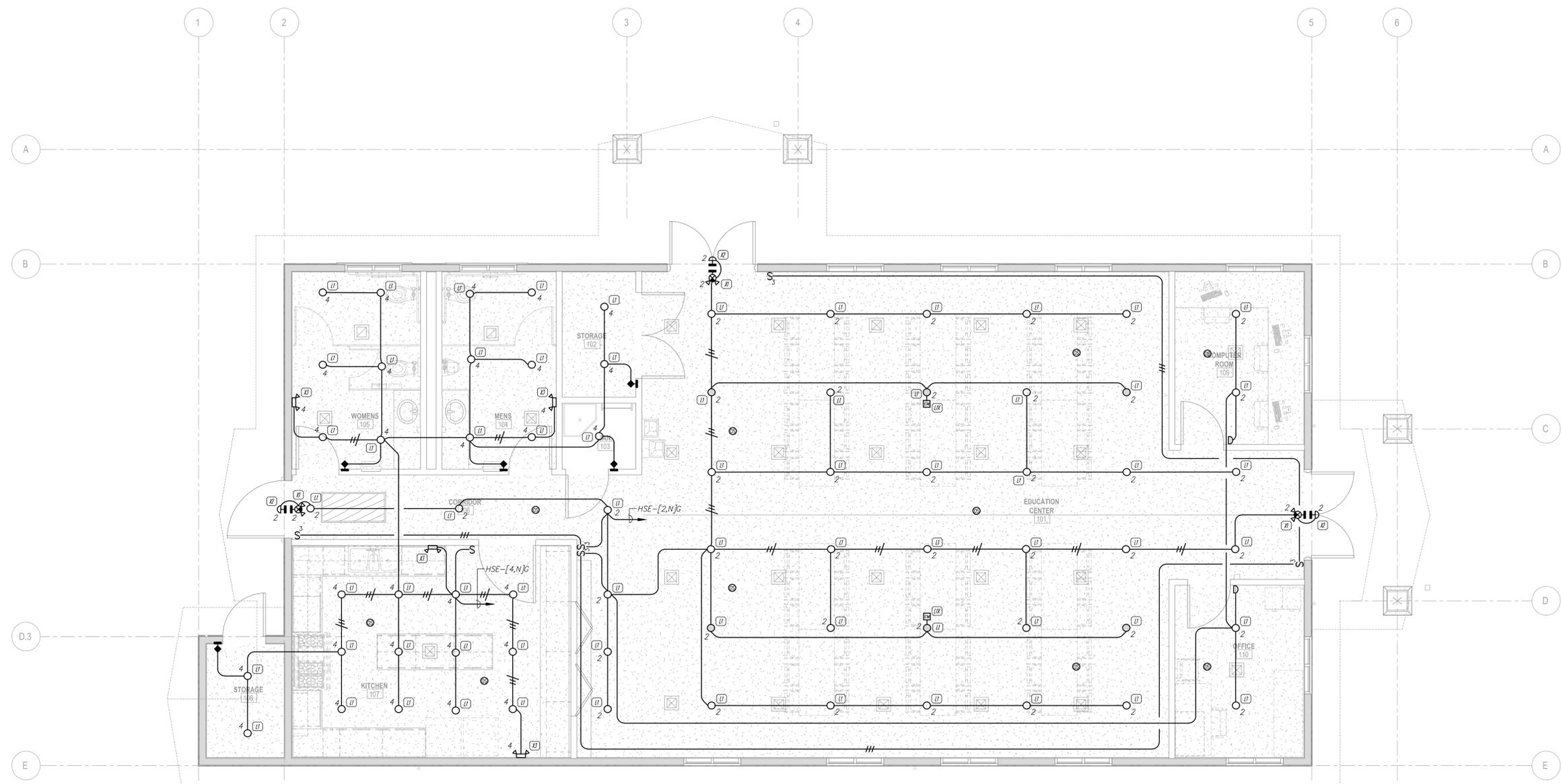
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ESTIMATING
BIDDING
OTHER

ISSUE DATE: 11.7.22
DRAWN BY: MT

Revisions	Date

DRAWING TITLE:
LIGHTING PLAN

DRAWING NUMBER:
E3.1



A	LIGHTING PLAN	
E3.1	SCALE: 1/4" = 1'-0"	