

EXPLORE PARK FLEX POD "A" BATHHOUSE

CHESTNUT RIDGE ROAD
TAX MAP # 080.00-05-24.00-0000
ROANOKE COUNTY, VIRGINIA
BALZER PROJECT NO. 04180001.00



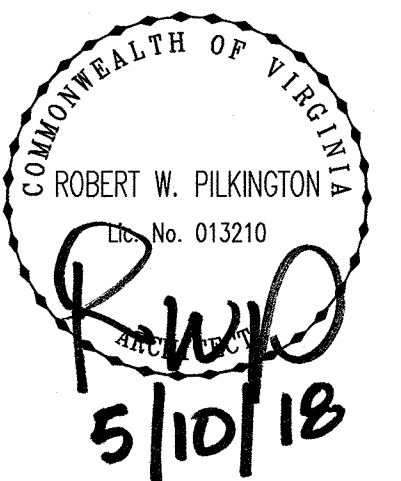
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WETLAND DELINEATIONS & STREAM EVALUATIONS

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DRAWING ABBREVIATIONS

AFF	ABOVE FINISH FLOOR	MH	MAN HOLE
AP	ACCESS PANEL	MFR	MANUFACTURER
ACT	ACOUSTIC CEILING TILE	MAS	MASONRY
ACPL	ACOUSTICAL PLASTER	MO	MASONRY OPENING
A/C	AIR CONDITIONING	MTL	MATERIAL
ALUM	ALUMINUM	MAX	MAXIMUM
AN	ANCHOR BOLT	MECH	MECHANICAL
AND	AND/OR	MTL	METAL
APPROX	APPROXIMATELY	MTL BLDG MFR	METAL BUILDING MANUFACTURER
ARCH	ARCHITECTURAL	MED	METAL FLOOR DECKING
ASPH	ASPHALT	MFR	METAL ROOF DECKING
BP	BASE PLATE	MIN	MINIMUM
BSMT	BASMENT	MISC	MISCELLANEOUS
BS	BEARING	MOLD	MOLDING, MOLDING
BSG	BEARING	MTG	MOUNTING
BT	BITUMINOUS	NOM	NOMINAL
BLKG	BLUICKING	NC	NOT IN CONTRACT
BD	BOARD	NTE	NOT TO SCALE
BD	BOTTOM	NO.	NUMBER
BRK	BRICK	OC	ON CENTER
BLDG	BUILDING	OP	OPENING
CPT	CARPET	OPP	OPPOSITE
CSMT	CASED OPENING	OPH	OPPOSITE HAND
CLC	CASEMENT	OD	OUTSIDE DIAMETER
C/H	CEILING HEIGHT	OF	OUTSIDE FACE
CT	CERAMIC TILE	OH	OVERHANG
CR	CHAR RAIL	PNL	PANEL
CLS	CLEARANCE	PMT	PAVEMENT
CLS	COLUMN	PBD	PARTIAL BOARD
CONC	CONCRETE	PL	PLASTER
CONC	CONCRETE MASONRY UNIT	PLAM	PLASTIC LAMINATE
CONST	CONSTRUCTION	PL	PLATE
CONT	CONTINUOUS	PLGL	PLYWOOD
CJ	CONTROL JOINT	PVC	POLYVINYL CHLORIDE
CORR	CORROSION	PWF	PORTABLE FIRE EXTINGUISHER
CRS	COURSE	PWF	POUND
DEM	DEMOLITION	PSF	POUNDS/SQUARE FOOT
DEPT	DEPARTMENT	PC CONC	PRECAST CONCRETE
DIAG	DIAGONAL	PRETN	PRETENSIONED
DIA	DIAMETER	PL	PROPERTY LINE
DM	DIMENSION	PROP	PROPOSED
DO	DITCH	QT	QUARRY TILE
DW	DWELLING	RAD	RADIUS
DR	DOOR	R	RISER
DR	DOUBLE HUNG	REC	RECEPTACLE/ELECTRICAL
DS	DOWN SPOUT	REF	REFRIGERATOR
DRN	DRAIN	REG	REGISTER
DT	DRAIN TILE	REIN	REINFORCED
DWG	DRAWING	REM	REMOVE
ELEC	ELECTRIC	RES	REQUIRED
EW	ELECTRIC WATER COOLER	RES	RESIDENT
EP	ELECTRICAL PANEL BOARD	RET	RETURN
ELEV	ELEVATION	RA	RETURN AIR
EMER	EMERGENCY	REV	REVISION
ENCL	ENCLOSURE	REV	RIGHT HAND
ENG	ENGINEERING	ROW	RIGHT OF WAY
ENT	ENTRANCE	RD	ROAD
EQ	EQUAL	RM	ROOM
EQUIP	EQUIPMENT	RO	ROUGH OPENING
EXH	EXHAUST	SCH	SCHEDULE
EXIST	EXISTING	SEC	SECTION
EXP	EXPANSION BOLT	SETH	SHEATHING
EXT	EXTERIOR	SHT	SHEET
FB	FACE BRICK	SIM	SIMILAR
FOB	FACE OF BRICK	SIM	SIMILAR
FT	FEET, FOOT	SC	SOLID CORE
FN	FENCE	SCW	SOLID CORE WOOD
FIN	FINISH	SYP	SOUTHERN YELLOW PINE
FIN FL	FINISH FLOOR	SPEC	SPECIFICATION
FIN	FINISH FLOOR	SFR	SPRINKLER
FE	FIRE EXTINGUISHER CABINET	SS	STAINLESS STEEL
PHC	FIRE HOSE CABINET	STOR	STORAGE
PFL	FIREPLACE	STR	STRUCTURAL
FLR	FLOORING	SUSP	SUSPENDED
FD	FLOOR DRAIN	SYS	SYSTEM
FLUOR	FLUORESCENT	TELE	TELEPHONE
FOOTING	FOOTING	TV	TELEVISION
FON	FOUNDATION	THK	THICKNESS
FRA	FRESH AIR	THP	THIN COAT PLASTER
FBO	FURNISHED BY OTHERS	THRU	THROUGH
GA	GAGE, GAUGE	THRU	THROUGH
GALV	GALVANIZED	TOIL	TOILET
GC	GENERAL CONTRACTOR	T&G	TONGUE AND GROOVE
GL	GLASS	T&G	TONGUE AND GROOVE
GLB	GLASS BLOCK	T&G	TONGUE AND GROOVE
GD	GRADE, GRADING	T&G	TONGUE AND GROOVE
OWB	GYPSUM WALL BOARD	T&G	TONGUE AND GROOVE
HC	HANDICAP	T&G	TONGUE AND GROOVE
HW	HARDWARE	T&G	TONGUE AND GROOVE
HW	HARDWOOD	T&G	TONGUE AND GROOVE
HR	HEADER	T&G	TONGUE AND GROOVE
HTG	HEATING	T&G	TONGUE AND GROOVE
PHAC	HEATING/VENTING/AIR CONDITIONING	T&G	TONGUE AND GROOVE
HCT	HEAVY DUTY	T&G	TONGUE AND GROOVE
HCT	HEIGHT	T&G	TONGUE AND GROOVE
HOC	HOLLOW CORE	T&G	TONGUE AND GROOVE
HM	HOLLOW METAL	T&G	TONGUE AND GROOVE
HORIZ	HORIZONTAL	T&G	TONGUE AND GROOVE
HUB	HUB, BBS	T&G	TONGUE AND GROOVE
HW	HOT WATER HEATER	T&G	TONGUE AND GROOVE
ID	INSIDE DIAMETER	T&G	TONGUE AND GROOVE
INCL	INCLUDE(D)(ING)	T&G	TONGUE AND GROOVE
INSUL	INSULATE	T&G	TONGUE AND GROOVE
INT	INTERIOR	T&G	TONGUE AND GROOVE
JAN	JANITOR'S CLOSET	T&G	TONGUE AND GROOVE
KIT	KITCHEN	T&G	TONGUE AND GROOVE
KN	KNOCK DOWN	T&G	TONGUE AND GROOVE
KN	KNOCKOUT	T&G	TONGUE AND GROOVE
L	LABEL	T&G	TONGUE AND GROOVE
LAM	LAMINATE(D)	T&G	TONGUE AND GROOVE
LH	LEFT HAND	T&G	TONGUE AND GROOVE
LH	LENGTH, LONG	T&G	TONGUE AND GROOVE
LW	LIGHTWEIGHT	T&G	TONGUE AND GROOVE
LTL	LIGHTWEIGHT	T&G	TONGUE AND GROOVE
LL	LIVE LOAD	T&G	TONGUE AND GROOVE
LVR	LOUVER	T&G	TONGUE AND GROOVE

SYMBOLS & MATERIALS

DOOR NUMBER TAG	WALL TAG
ROOM NUMBER TAG	NOTE TAG
WINDOW NUMBER TAG	REVISION TAG
LETTER/NUMBER COMBINATION INDICATES ELEVATION OR DETAIL	DETAIL
SHEET NUMBER WHERE ELEVATION, SECTION OR DETAIL IS DRAWN	
DRAWING DESIGNATION	BUILDING SECTION
WALL SECTION	
REVISION CLOUD	ELEVATION
COLUMN LINE	USE NUMBERS HORIZONTALLY, LEFT TO RIGHT USE LETTERS VERTICALLY, TOP TO BOTTOM
EXISTING WALLS & DOORS	
NEW WALLS & DOORS	
DEMOLITION WALLS & DOORS	
EMERGENCY EGRESS LIGHT W/ BACKUP BATTERY	
EXISTING ILLUMINATED EXIT LIGHT	
ILLUMINATED EXIT LIGHT	
ALUMINUM	PLYWOOD LARGE SCALE
BRICK (SECTION)	POROUS FILL
CONCRETE	STEEL
C.M.U.	WOOD BLOCKING
EARTH OR COMPACTED FILL	WOOD SHIMS
INSULATION BATTS	WOOD FINISH
INSULATION RIGID	



PLANNERS • ARCHITECTS
ENGINEERS • SURVEYORS

PROJECT DIRECTORY

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CODE ANALYSIS

THIS PROJECT IS A NEW BUILDING DESIGNED UNDER THE 2012 VIRGINIA CONSTRUCTION CODE (VCC).

CODE EDITION: 2012 Virginia Construction Code (VCC)
(2012 IBC w/ Virginia Amendments)

USE GROUPS: U (bathroom/restroom building)
CONSTRUCTION TYPE: VB ("5B")
TABULAR ALLOWABLE AREA: 5,500 S.F.
SPRINKLER INCREASE: N/A
TOTAL ALLOWABLE AREA: 5,500 S.F.
DESIGNED BUILDING AREA: 1,350 S.F. (under roof area)

TABULAR ALLOWABLE BLDG. HEIGHT: 2 ST./40' per IBC Table 503
DESIGNED BUILDING HEIGHT: 1 ST./ ±20'

FIRE PROTECTION SYSTEM (VCC/IBC Chapter 9):
A. Automatic Fire Sprinkler System NOT REQUIRED per VCC Section 903 (no requirement for U-use).
B. Fire Alarm/Detection System NOT REQUIRED per VCC Section 907.2.2 (no requirement for U-use).

OCCUPANT LOAD (VCC/IBC TABLE 1004.1.1): 1,350 S.F. @ 1:100= 14 Occupants

EXIT REQUIREMENTS (VCC/IBC Chapter 10):
Minimum Building Exits Required: 1 exit req. per VCC 1015.1 and 1014.3. (1 exit provided from ea room)
Minimum Egress Width (VCC Table 1005.1): 33" for doors (33" clear doors provided)
Maximum Exit Travel (VCC Table 1014.3): 75' (20' max. provided to outside of structure roof)
Exit Access Corridors (VCC Table 1018.1): Fire-rated corridors not required (no corridors).
Exit Remoteness: N/A (single exit required from each occupied space)

ACCESSIBILITY (IBC Chapter 11):
• Accessible route provided to building, see site plan.
• Accessible parking provided, see site plan.
• Passenger Loading Area not required; no accessible passenger loading area provided.
• Accessible entry provided to each restroom space.
• Accessible bathing rooms/restrooms provided.
• Accessible showers provided in accessible bathing rooms, utilizing an "Alternate Roll-in Shower" per 2012 ANSI A117.1, Section 608.2.3.
• Accessible signage to be provided in locations required by VCC/IBC 1110, including the following:
1. Accessible parking spaces.
2. Accessible toilet rooms.
3. Accessible entrances.

PLUMBING FIXTURE REQUIREMENTS (VCC Table 2902.1 & VCC Section 2902.2):
Building is designed for bathing and toilet facilities for the campground. As such, there are no specific toilet/lavatory requirements specific to the building use for Table 2902.1.

ENERGY CODE/BUILDING ENVELOPE REQUIREMENTS:
2012 Virginia Energy Conservation Code (VECC)
For Climate Zone 4 (Virginia), the following minimum requirements for building envelope elements shall be used or exceeded per VECC Table C402.2:
Above-grade CMU Walls= R-5.7 continuous + core-fill in cmu cells
Wood-Frame Attic Roof= R-38
Slab= R-10 (perimeter insulation)
Doors= 0.81 U-factor

REQUIRED FIRE RATING OF BUILDING ELEMENTS (TABLE 601):
STRUCTURAL FRAME: 0 HOURS
EXTERIOR WALLS: 0 HOURS (0 hours required for fire separation distance)
NONBEARING WALLS AND PARTITIONS: 0 HOURS
EXIT ACCESS CORRIDORS: 0 HOURS
FLOOR CONSTRUCTION: N/A
ROOF CONSTRUCTION: 0 HOURS

STRUCTURAL LOADS:
SEE STRUCTURAL DRAWINGS FOR ALL STRUCTURAL LOADS.

GENERAL CODE NOTES:
1. PROVIDE EMERGENCY EGRESS LIGHTING PER VCC 1006. MAINTAIN MINIMUM 1FC
LIGHT LEVELS IN ALL SPACES PROVIDING EXIT ACCESS, PER VCC 1006.2.
2. PROVIDE EMERGENCY EXIT SIGNS PER VCC 1011. EXIT SIGNAGE SHALL BE INTERNALLY LIGHTED PER VCC 1011.5, AND SHALL BE CONNECTED TO AN EMERGENCY BACKUP POWER SOURCE PER VCC 1011.6.3.
3. INTERIOR FINISH MATERIALS SHALL BE CLASS C OR BETTER IN ROOMS AND CLASS B OR BETTER IN EXIT ACCESS CORRIDORS AND OTHER EXITWAYS PER VCC TABLE 803.9.
4. ALL LOCKS AND LATCHES SHALL COMPLY WITH VCC 1008.1.9. ALL DOORS TO BE EQUIPPED WITH LEVER HANDLES AS REQUIRED PER VCC. (SEE SCHEDULE)
5. ALL NEW PIPING (PLUMBING, GAS, ETC.) USED IN THIS PROJECT SHALL BE LABELED ON SITE IN ACCORDANCE WITH ALL 2012 IBC, IMC & IPC APPLICABLE PROVISIONS.
6. ALL INTERIOR OCCUPIED SPACES SHALL BE PROVIDED WITH EITHER NATURAL OR MECHANICAL VENTILATION IN ACCORDANCE WITH VCC 1203.1.

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EXPLORE PARK
FLEX POD "A" BATHHOUSE

COVER

EXPLORE PARK
COUNTY OF ROANOKE, VIRGINIA

DRAWN BY RWP
DESIGNED BY RWP
CHECKED BY ---
DATE 05/10/2018
SCALE
REVISIONS:

SHEET NO.
T1.1
JOB NO. 04180001.00

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<p>EXPLORE PARK FLEX POD "A" BATHHOUSE STRUCTURAL NOTES</p> <p>EXPLORE PARK COUNTY OF ROANOKE, VIRGINIA</p>		
<p>DRAWN BY <u>MJF</u> DESIGNED BY <u>MJF</u> CHECKED BY <u>RWT</u> DATE <u>05/10/2018</u> SCALE _____ REVISIONS: _____</p>		
<p>SHEET NO. S0.1 JOB NO. 04170081.00</p>		

COLUMN SCHEDULE

MARK	SIZE	BASE	ANCHORS	REMARKS
C1	5 1/4" X 5 1/4" P.T. SYP #2	SIMPSON ABW66	1/2" X 8" EMBED. A307	ALL METAL TO BE GALV. @ EXTERIOR

FOOTING SCHEDULE

MARK	SIZE (W x L x D)	LONG. REINF.	TRANSV. REINF.	REMARKS
TD1.5	1'-6" x CONT. x 2'-0" (MIN.)	(2) #5's CONT. @ BOTTOM (1) #5's CONT. @ TOP	---	TURNDOWN CONT. FOOTING.
WF2.0	2'-0" x CONT. x 1'-0"	(3) #5's CONT. @ BOTTOM	#4's 12" O.C. @ BOTTOM	CONT. FOOTING

GENERAL FOUNDATION NOTES:

1. SEE SITE PLAN FOR EXACT WALKWAY/CURB, ETC. LOCATIONS AND FOR CONTINUATION REQUIREMENTS.

2. FOOTING SIZES BASED ON AN ASSUMED 1,500 psf BEARING CAPACITY. OWNER/CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ON SITE SOILS ARE SUITABLE FOR BUILDING MEET OR EXCEED THIS DESIGN CAPACITY.

3. FOOTING ELEVATIONS SHOWN ARE APPROXIMATE ONLY. ACTUAL FOOTING STEP LOCATIONS SHALL BE AS REQUIRED IN FIELD TO MAINTAIN DEPTH BELOW FINISH GRADE. ADDITIONAL STEPS MAY BE REQUIRED TO OBTAIN SUITABLE BEARING.

4. ALL EARTHWORK CUT AND FILL OPERATIONS SHALL BE OBSERVED BY A LICENSED GEOTECHNICAL ENGINEER AS STIPULATED IN THE PROJECT STATEMENT OF SPECIAL INSPECTIONS. NOTIFY ENGINEER OF RECORD OF ANY ADVERSE SOIL CONDITIONS DISCOVERED THAT MAY AFFECT THE DESIGN OF ANY FOUNDATION ELEMENTS.

5. ONSITE SOILS MAY BE USED FOR STRUCTURAL BACKFILLING OPERATIONS WHEN STATED IN THE PROJECT GEOTECHNICAL ENGINEER'S REPORT. SUITABLE SOILS MUST BE CLASSIFIED AS CL, ML, SC, SM, SP, SW, GC, GM, GP, OR GW PER ASTM D2487. BACKFILL MUST BE PLACED AT OPTIMUM MOISTURE CONTENT AND IN 8" MAXIMUM LIFT INCREMENTS AND COMPACTED TO AT LEAST 95% OF THE MAXIMUM DRY DENSITY PER ASTM D698. ALL BACKFILLING OPERATIONS AND FOUNDATION TRENCHES ARE TO BE OBSERVED BY AND PERFORMED IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL ENGINEER.

CONCRETE SLAB NOTES:

1. SUB-BASE GRADE FOR GROUND FLOOR SLAB SHALL BE PROOF-ROLLED IN CONSULTATION WITH THE GEOTECH ENGINEER. SLABS SHALL OVERLAY A MINIMUM 4" SUCH LAYER. FILL MAY CONSIST OF VDOT #57, #21A, STONE SCREENINGS, RECYCLED CONCRETE, OR OTHER SUITABLE MATERIAL SUBJECT TO APPROVAL OF GEOTECH ENGINEER.

2. INTERIOR CONCRETE FLOOR SLAB SHALL BE A MINIMUM THICKNESS AS NOTED ON THE PLAN AND BELOW. CONCRETE FOR SLABS ON GRADE SHALL BE REINFORCED WITH WELDED WIRE FABRIC OR EMBEDDED FIBER REINFORCEMENT FOR SHRINKAGE CRACK CONTROL AND RESIDUAL STRENGTH. SLABS SHALL BE PROPERLY CURED TO PREVENT EXCESSIVE SHRINKAGE AS WELL AS EDGE CURLING AND OTHER FIELD ISSUES. A 7-DAY WET CURE IS RECOMMENDED. SLABS SHALL BE SUITABLY FLAT AND LEVEL FOR THE INTENDED USE AS ACCEPTABLE TO THE OWNER.

3. SLOPE ALL INTERIOR CONCRETE SLABS 1% TO FLOOR DRAINS.

4. SAW CUT CONTROL JOINTS SHALL BE PROVIDED IN THE SLAB PRIOR TO CURING IN A REGULAR RECTANGULAR GRID, AS BEST AS POSSIBLE. JOINTS SHALL BEGIN AT COLUMN ISOLATION JOINTS AND/OR RE-ENTRANT CORNERS AND SHALL PANELIZE THE SLAB IN RECTANGULAR SEGMENTS APPROXIMATELY 2:1 OR SQUARE IN LENGTH/WIDTH RATIO. JOINTS SHALL BE SPACED NO FURTHER THAN 36X SLAB THICKNESS. ADJUST ACTUAL SPACING OF JOINTS AS NECESSARY BASED UPON SELECTED PERFORMANCE CRITERIA AND FIBER REINFORCEMENT DOSAGE RATE.

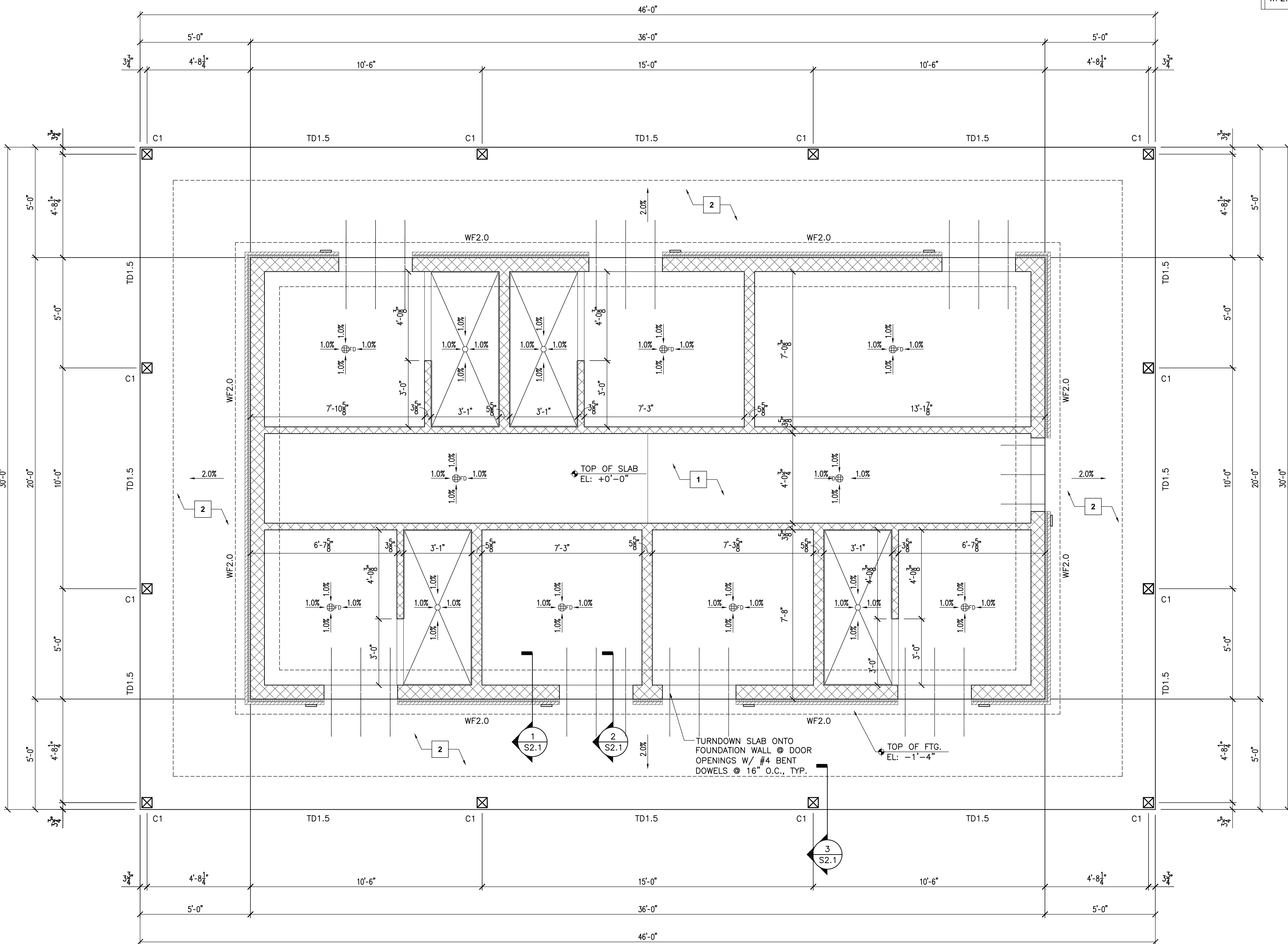
5. SEE PLAN FOR GROUND FLOOR SLAB ELEVATIONS AND STEPS. COORDINATE WITH ARCHITECTURAL AND MEP DRAWINGS FOR SLAB CUTOUTS, DEPRESSIONS, AND PENETRATIONS NOT SHOWN ON FOUNDATION PLAN. STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR COORDINATION OF OTHER TRADES WITH THE CONCRETE.

6. SEE ARCHITECTURAL DRAWINGS FOR SLAB FINISHES, COVERINGS, AND/OR TOPPINGS. FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS FOR COVERINGS AND TOPPINGS WITH REGARDS TO SLAB THICKNESS, SLOPE, FLATNESS/LEVELNESS, MOISTURE, PERMEABILITY, HARDNESS, JOINT SPACING, AND ANY OTHER COMPATIBILITY ISSUE. STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR COORDINATION OF FINISH REQUIREMENTS.

CONCRETE SLABS TYPES:

1 INTERIOR SLAB: 4" 3000 PSI CONCRETE SLAB ON GRADE W/ 4x4-W2.0XW2.0 REINFORCEMENT OVER VAPOR RETARDER OVER 4" COMPACTED STONE FILL. SLOPE TO DRAINS.

2 EXTERIOR SLAB: 4" 4000 PSI AIR-ENTRAINED CONCRETE SLAB ON GRADE W/ 4x4-W2.0XW2.0 REINFORCEMENT OVER 4" COMPACTED STONE FILL. SLOPE 2% AWAY FROM BUILDING.



FOUNDATION PLAN

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

LINTEL SCHEDULE				
MARK	SIZE	REINF.	MIN. BEARING	REMARKS
L1	8X16 CMU U-LINTEL	(1) #5 CONT. BOTT. GROUT SOLID	8" EACH END	U-BLOCK BOND BLOCK W/ KNOCK OUT COURSE(S) ABV
L2	(2) 4X8 PRECAST CMU	(1) #3 CONT. T&B	8" EACH END	PRECAST BLOCKS TO MATCH CMU WALL THICKNESS

GENERAL CONCRETE/MASONRY NOTES:

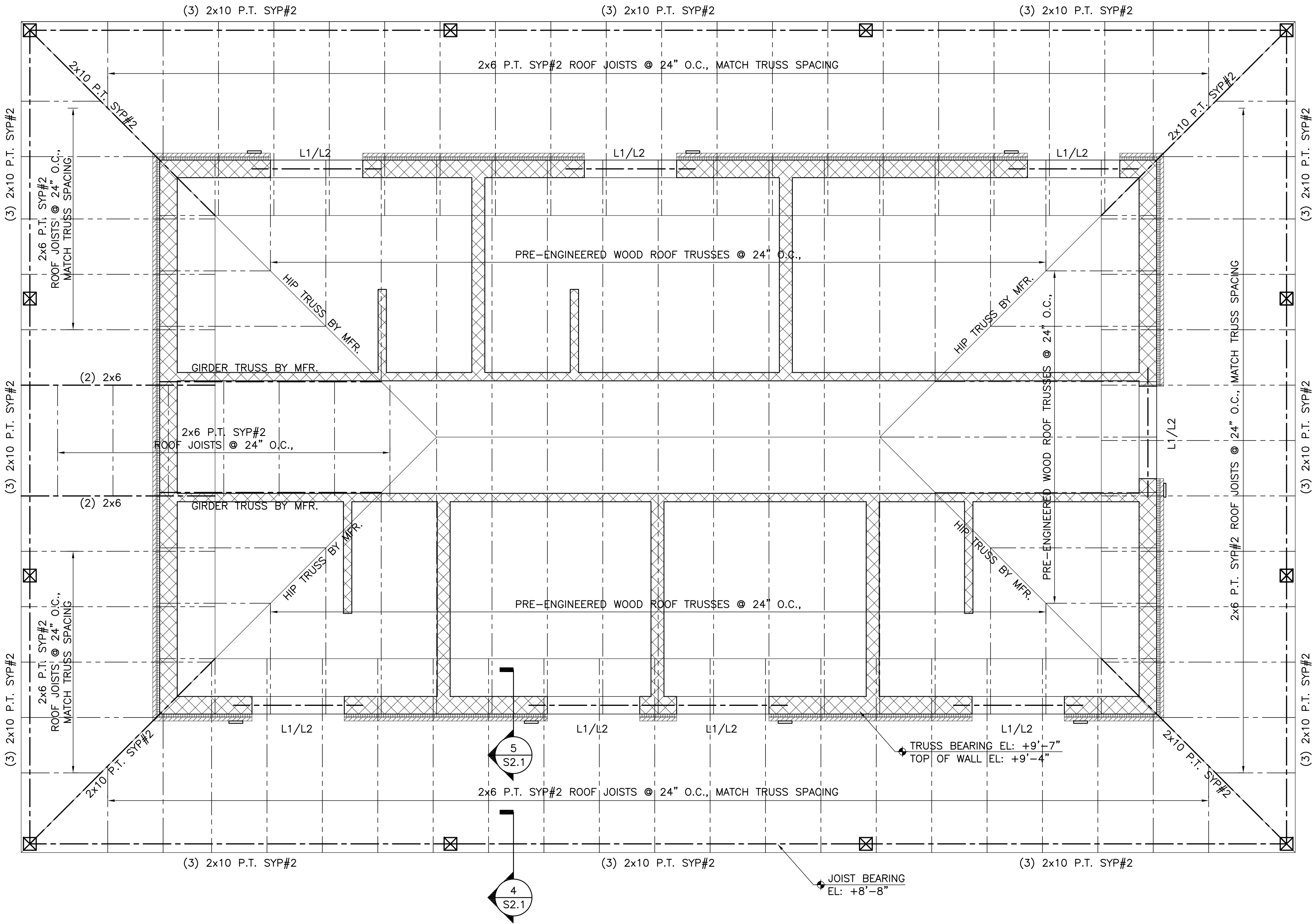
- EXTERIOR CONCRETE MASONRY WALLS THIS LEVEL SHALL BE 8" CMU U.N.O. PROVIDE #5 VERTICAL BARS AT 48" O.C. AND 9GA. TRUSS-TYPE HORIZONTAL JOINT REINFORCEMENT AT 16" O.C. GROUT SOLID AT ALL REINFORCED CELLS. PROVIDE (2) #5'S VERT. EA. CELL FOR (2) CELLS EA. SIDE OF EA. OPENING & AT ALL CORNERS (6 TOTAL BARS AT CORNERS). PROVIDE CONTINUOUS KNOCK-OUT COURSE WITH CONTINUOUS #5 BAR TRUSS BEARING/TOP OF WALL.
- INTERIOR CONCRETE MASONRY WALLS THIS LEVEL SHALL BE AS NOTED ON ARCHITECTURAL PLANS PROVIDE 9GA. TRUSS-TYPE HORIZONTAL JOINT REINFORCEMENT AT 16" O.C.
- CONTRACTOR SHALL PROVIDE VERTICAL CONTROL JOINTS IN ALL CMU WALLS >8'-0" IN HEIGHT AND >24'-0" IN LENGTH. JOINTS SHALL BE LOCATED AT ONE END OF ALL OPENINGS AND/OR WHERE INDICATED ON ARCHITECTURAL ELEVATIONS. JOINTS SHALL BE SPACED NO MORE THAN 24'-0" ON CENTER.
- LINTELS NOTED ON PLAN AS L1/L2 ARE TWO OPTIONS FOR HEADER SELECTIONS AS NOTED IN THE LINTEL SCHEDULE.
- ALL LINTELS SHALL CONFORM TO ARCHITECTURAL HEAD DETAILS. REFER TO ARCH. DWGS. FOR ALL FELT WRAP, FLASHING, WEEP, AND SEALANT REQUIREMENTS.

GENERAL WOOD FRAMING NOTES:

- PROVIDE 24/16 SPAN-RATED 1 1/2" OSB ROOF SHEATHING TO ROOF TRUSSES W/ 10d NAILS @ 6" O.C. ALONG PANEL EDGES & 10d NAILS @ 12" O.C. @ INTERMEDIATE SUPPORTS (6/12 PATTERN). LONG DIMENSION OF PANELS SHALL BE PERPENDICULAR TO TRUSSES. SHEATHING SHALL BE CONTINUOUS TO ENDS OF ROOF FRAMING MEMBERS, EVEN UNDERNEATH OVERBUILD FRAMING. PROVIDE ADD'L SOLID BLOCKING AT PANEL EDGES IF/WHERE CALLED OUT ON PLANS. TYPICAL DIAPHRAGM ATTACHMENT THIS LEVEL.
- REFER TO THE "AMERICAN PLYWOOD ASSOCIATION CONSTRUCTION GUIDE" FOR ADDITIONAL SHEATHING INSTALLATION INFORMATION.
- AS A MINIMUM, ALL TRUSS BOTTOM CHORDS SHALL BE BRACED WITH 2X LATERAL BRACES LOCATED AT 10'-0" O.C. MAX., EXCEPT BRACING IS NOT REQUIRED IN ATTIC ACCESS AREAS SHEATHED WITH PLYWOOD. A LINE OF DIAGONAL BOTTOM CHORD BRACES SHALL BE LOCATED AT 30'-0" O.C. MAX., BUT SHALL BE LOCATED OUTSIDE OF ACCESS WAYS. WEB MEMBER BRACES SHALL BE LOCATED AS REQUIRED BY THE TRUSS MANUFACTURER. PROVIDE DIAGONAL BRACES FOR REQUIRED WEB MEMBERS EVERY 10' TRUSS SPACINGS (20'-0" O.C. MAX.). SEE TRUSS DRAWINGS BY TRUSS MANUFACTURER FOR FURTHER GUIDANCE REGARDING TRUSS BRACING.
- ALL DIMENSIONS ARE TO FACE OF SHEATHING AND/OR FACE OF MASONRY UNLESS NOTED OTHERWISE. SEE ARCHITECTURAL DRAWINGS FOR ALL DIMENSIONS NOT SHOWN.

ROOF TRUSS DESIGN CRITERIA

TOP CHORD LOADING:	
LIVE LOAD	20 psf
DEAD LOAD	10 psf
WIND LOAD	115 mph, EXPOSURE C
SNOW LOADS:	
GROUND	30.0 psf
BALANCED	21.0 psf
UNBALANCED (4'-10" LEE OF RIDGE)	34.5 psf LEEWARD
	6.3 psf WINDWARD
BOTTOM CHORD LOADING:	
DEAD LOAD	10 psf
LIVE LOAD (>42" CLEARANCE BETWEEN CHORDS)	20 psf
CONCENTRATED	300 lbs
MAX ALLOWABLE LIVE LOAD DEFLECTION:	L/240



ROOF FRAMING PLAN

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



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ENVIRONMENTAL & SOIL SCIENCE
WETLAND DELINEATIONS & STREAM EVALUATIONS

Balzer and Associates, Inc.

1208 Corporate Circle
Roanoke, VA 24018
540-772-9580
FAX 540-772-8050



EXPLORE PARK
FLEX POD "A" BATHHOUSE
ROOF FRAMING PLAN

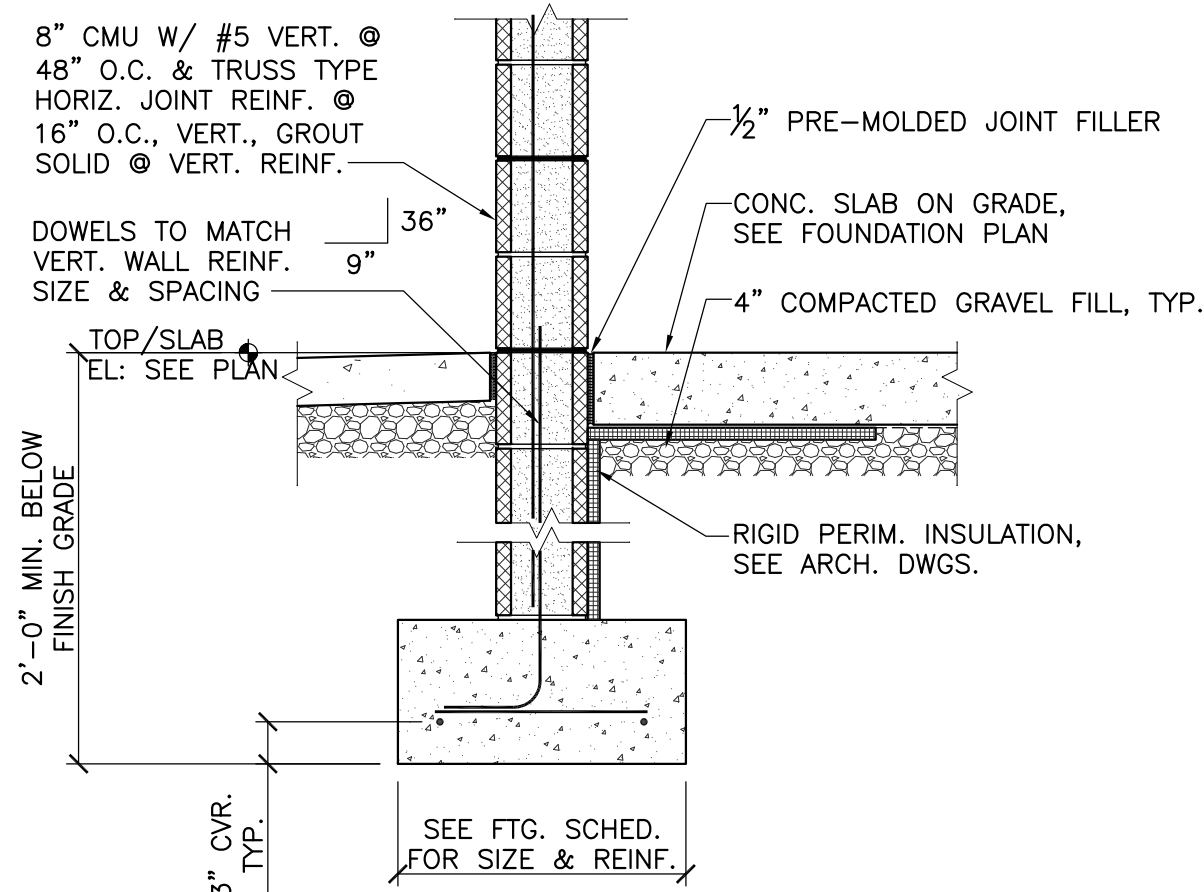
EXPLORE PARK
COUNTY OF ROANOKE, VIRGINIA

DRAWN BY MJF
DESIGNED BY MJF
CHECKED BY RWT
DATE 05/10/2018
SCALE
REVISIONS:

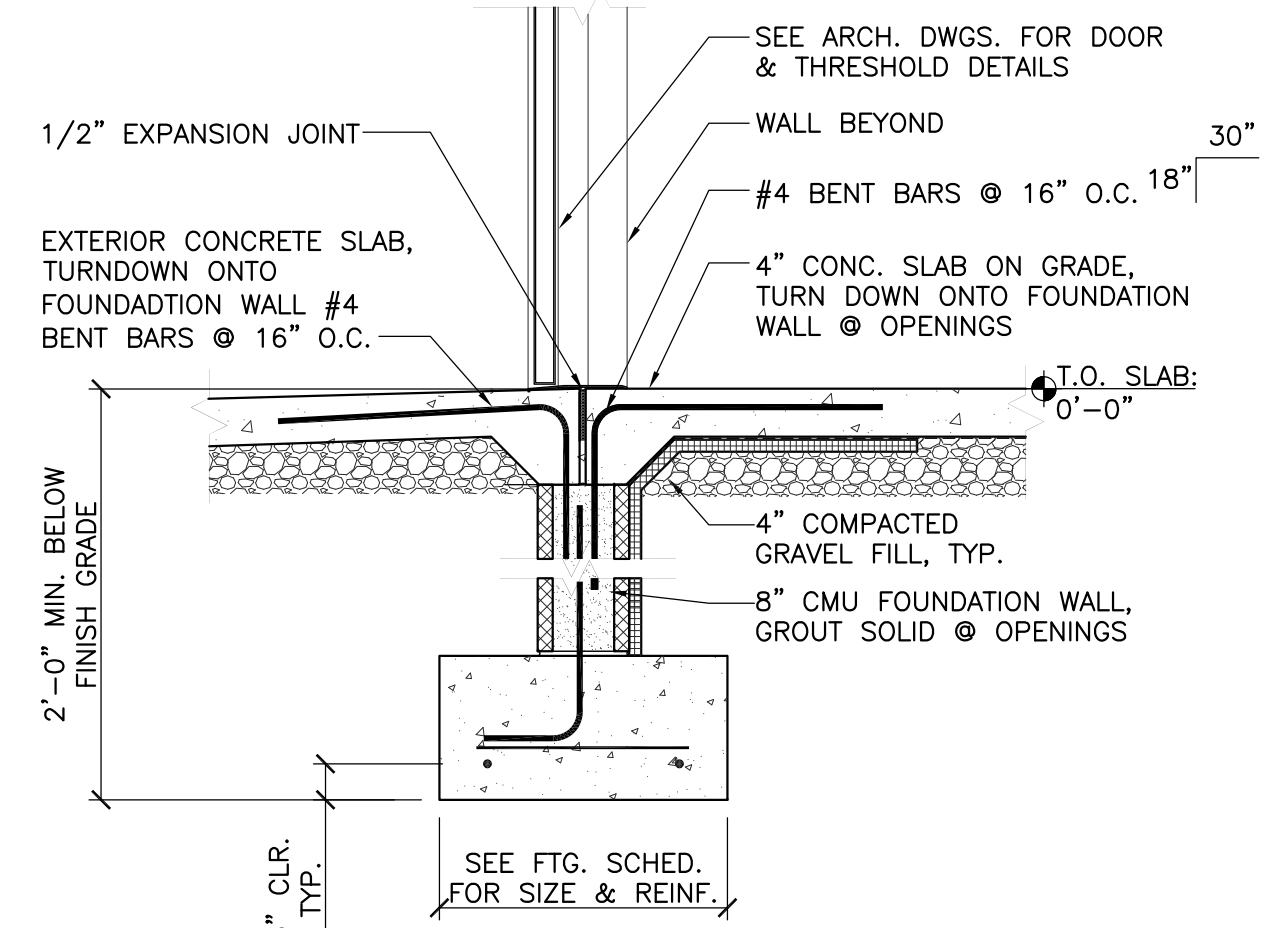
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S1.2

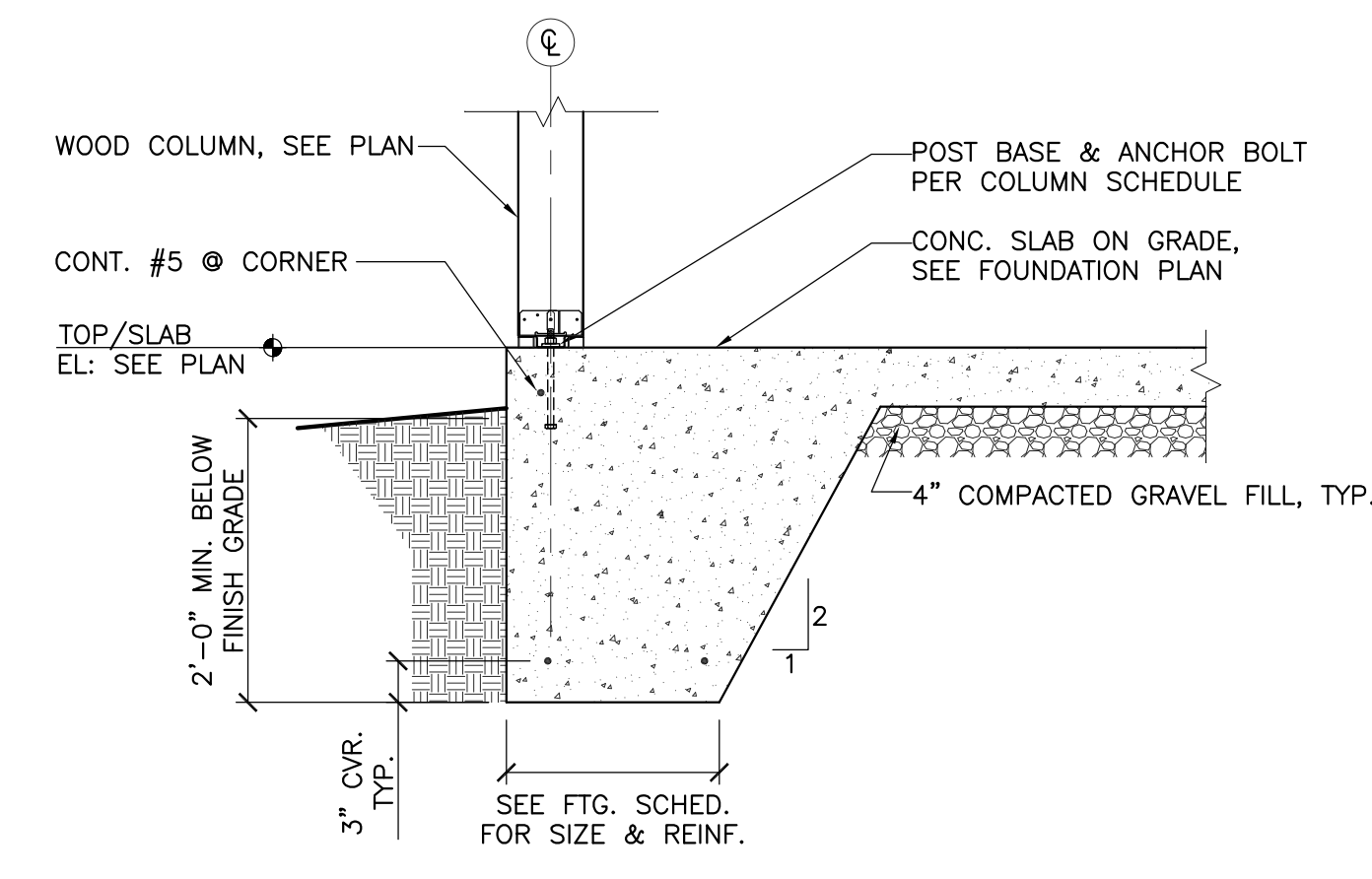
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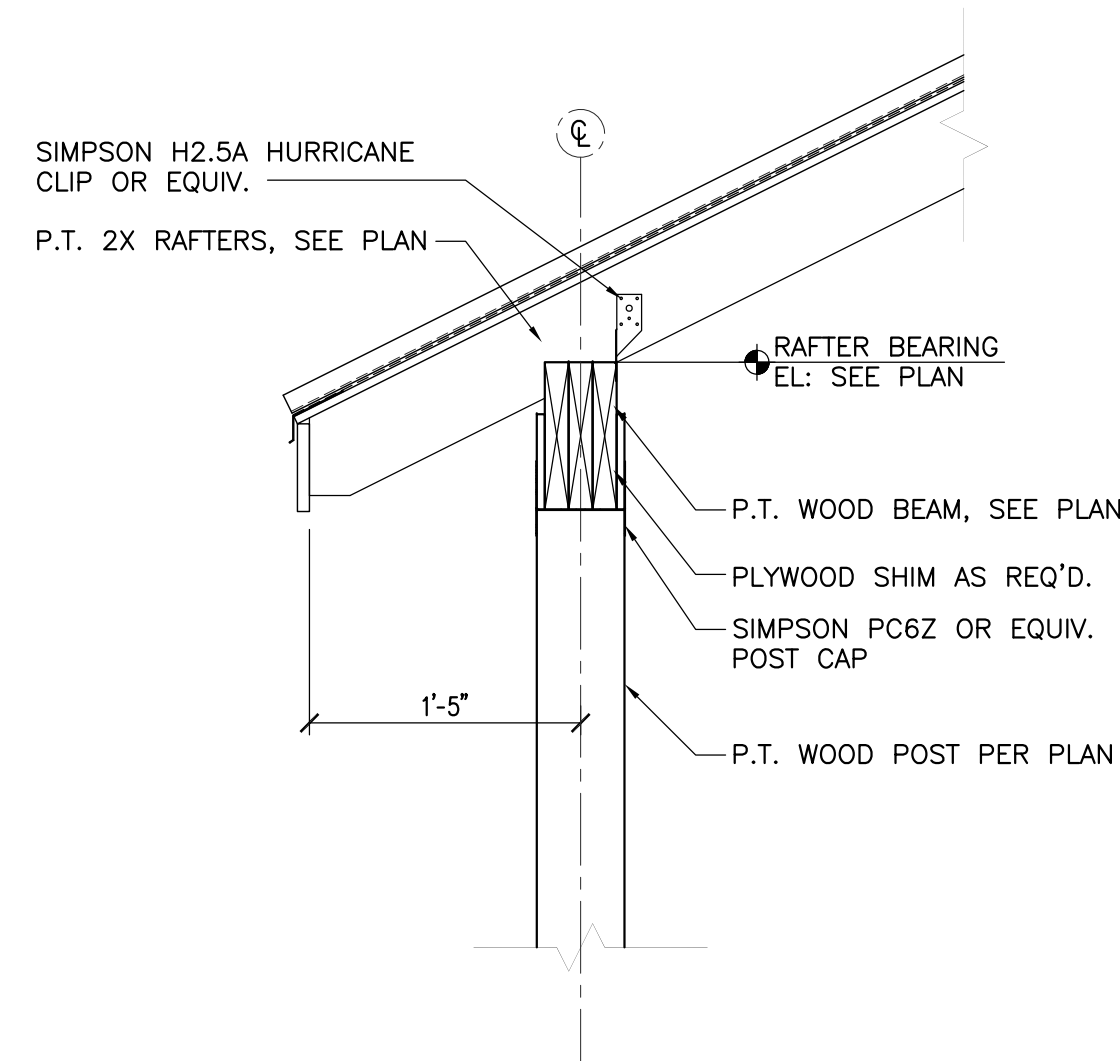
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S2.1
EXTERIOR WALL FOUNDATION
SCALE = 3/4"=1'-0"



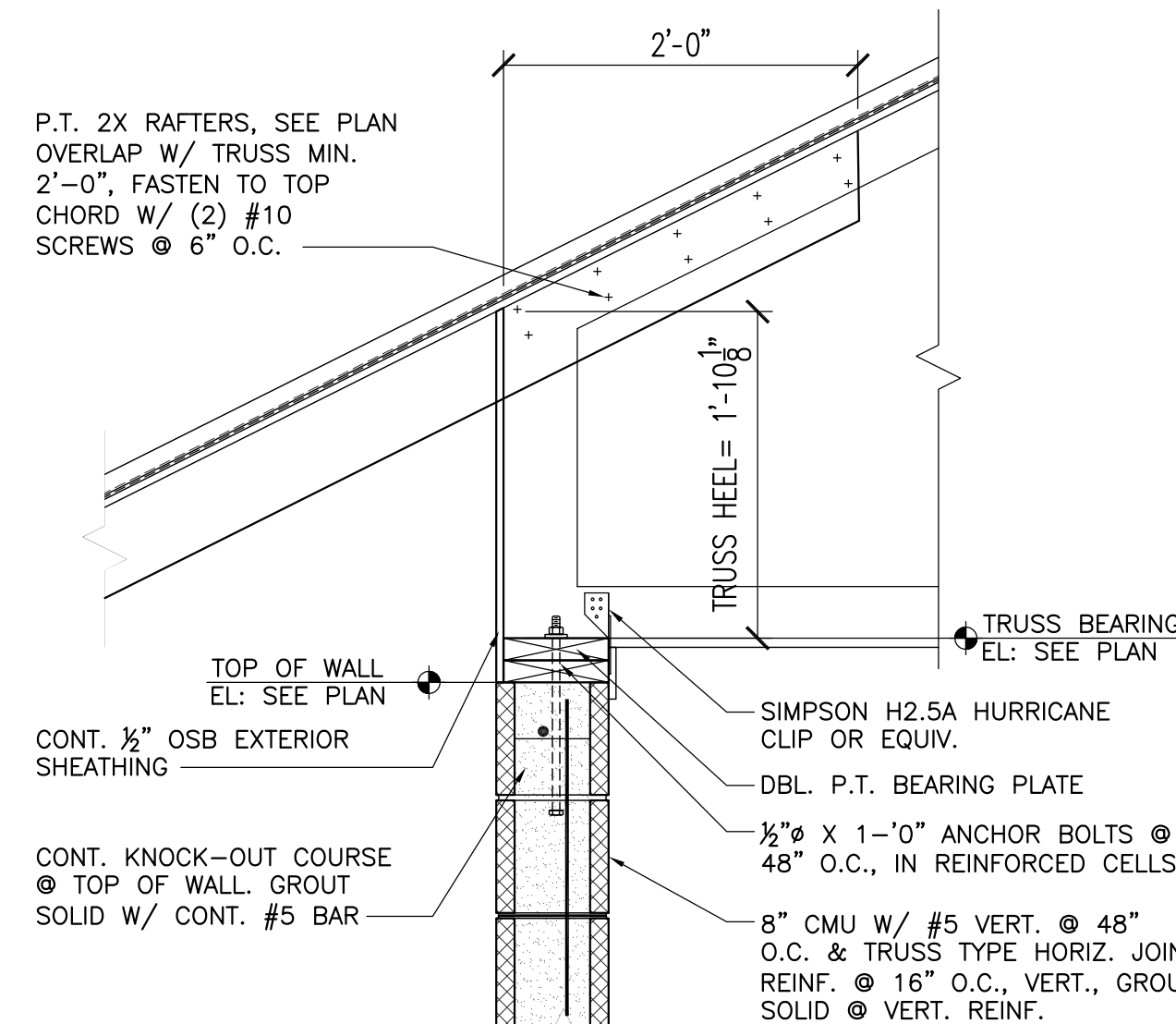
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S2.1
WALL FOUNDATION @ DOOR
SCALE = 3/4"=1'-0"



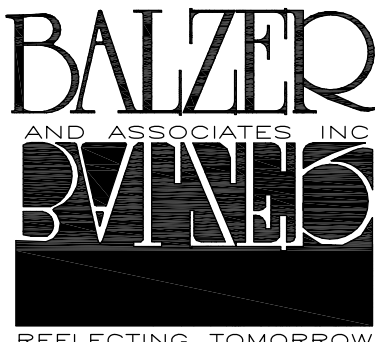
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S2.1
EXTERIOR WALL FOUNDATION
SCALE = 3/4"=1'-0"



4
S2.1
RAFTER BEARING
SCALE = 1"=1'-0"



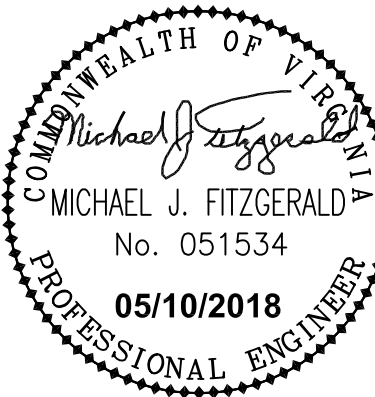
5
S2.1
TRUSS BEARING
SCALE = 1"=1'-0"



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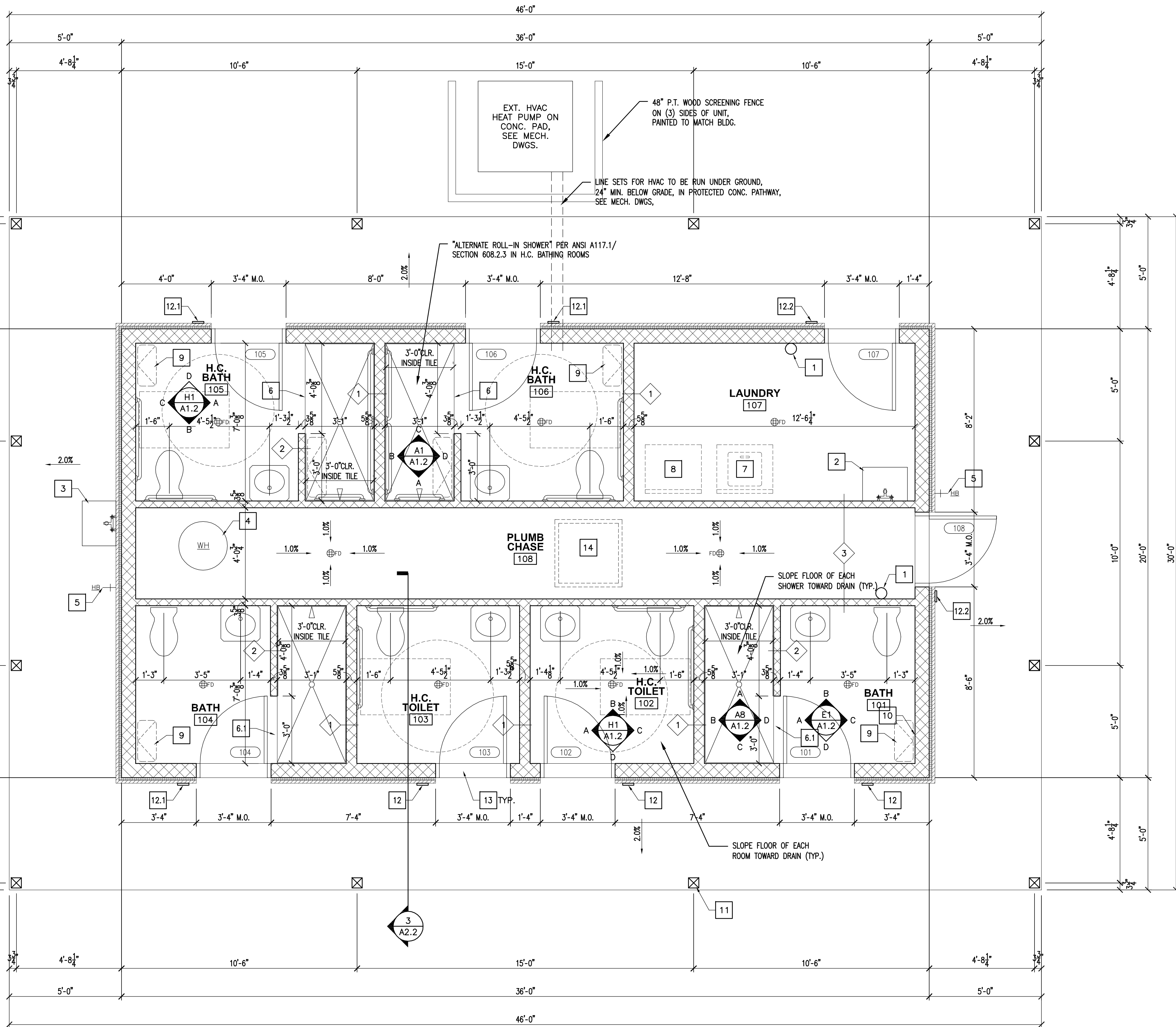
Balzer and Associates, Inc.
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Roanoke, VA 24018
540-772-9580
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**EXPLORE PARK
FLEX POD "A" BATHHOUSE
STRUCTURAL DETAILS**
EXPLORE PARK
COUNTY OF ROANOKE, VIRGINIA

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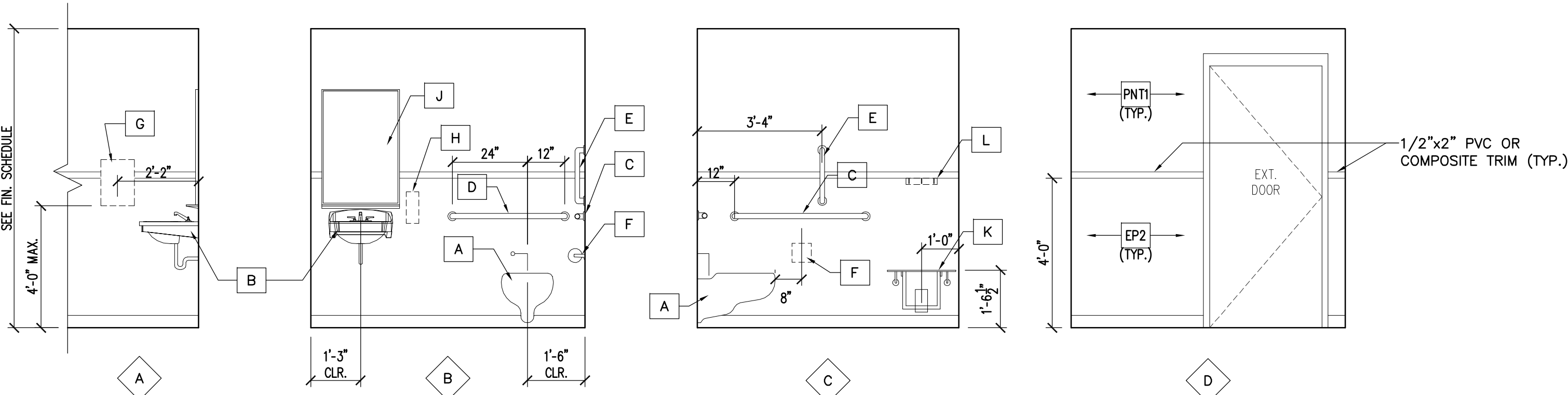
PLAN KEYNOTES

- 1 MULTI-PURPOSE FIRE EXTINGUISHER, DRY CHEMICAL TYPE, UL RATED 4-A-60-B-C, 10# NOMINAL CAPACITY IN ENAMELED STEEL CONTAINER, WALL MOUNTED
- 2 INTERIOR UTILITY SINK, SEE PLUMBING DWGS.
- 3 EXTERIOR UTILITY SINK, SEE PLUMBING DWGS.
- 4 WATER HEATER, SEE PLUMBING DWGS.
- 5 EXTERIOR FROST-PROOF HOSE BIBB, SEE PLUMBING DWGS.
- 6 FLUSH TRANSITION @ SHOWER ENTRY (1/2" OR LESS TOTAL VERT. THRESHOLD) @ H.C. BATHING ROOMS
- 6.1 1"x4" MARBLE SHOWER THRESHOLD @ NON-H.C. BATHING ROOMS
- 7 COMMERCIAL WASHER PROVIDED/INSTALLED BY TENANT/OWNER, G.C. PROVIDE REQUIRED MECH./PLUMBING/ELEC. CONNECTIONS
- 8 COMMERCIAL DRYER PROVIDED/INSTALLED BY TENANT/OWNER, G.C. PROVIDE REQUIRED MECH./ ELEC. CONNECTIONS
- 9 WALL-MOUNTED FOLDING BENCH, SEE SPECS ON SHEET A1.2
- 10 WALL-MOUNTED HANGER HOOKS BY OWNER (N.I.C.)
- 11 P.T. 6X6 WOOD POST, SEE STRUCT. DWGS. & SHEET A2.2 FOR NOTES
- 12 ACCESSIBLE RESTROOM SIGNAGE, SEE ELEVATION/DETAILS ON SHEET A1.2
- 12.1 SIGNAGE MARKING NON-ACCESSIBLE RESTROOM (TO MATCH SIGNAGE UNDER ITEM 12 ABOVE)
- 12.2 SIGNAGE MARKING NON-ACCESSIBLE ROOM (TO MATCH SIGNAGE UNDER ITEM 12 ABOVE)
- 13 H.C. THRESHOLD @ DOOR, NO STEP FROM BLDG. FLOOR TO SIDEWALK.
- 14 MIN. 32"x32" ATTIC ACCESS HATCH ABOVE, G.C. COORDINATE SIZE AND INSTALL W/ ROOF TRUSS MFR.

1
A1.1
BUILDING PLAN
SCALE : 3/8"=1'-0"

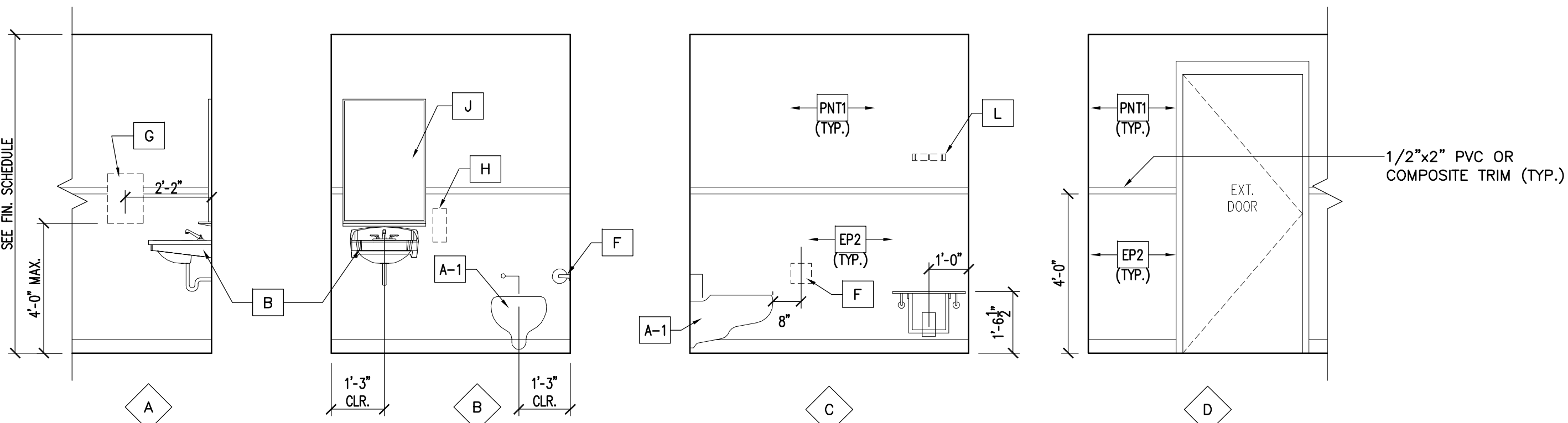
RESTROOM ACCESSORY SCHEDULE					
ID.	DESCRIPTION	MANUFACTURER	MODEL	NOTES	MOUNTING HEIGHT
A	WATER CLOSET- HANDICAP	SEE PLUMBING DWG	SEE PLUMBING DWGS	WHITE W/ SEAT	SEAT 17" A.F.F.
A-1	WATER CLOSET- STANDARD	SEE PLUMBING DWG	SEE PLUMBING DWGS	WHITE W/ SEAT	SEAT 14" A.F.F.
B	LAVATORY (WALL HUNG)	SEE PLUMBING DWG	SEE PLUMBING DWGS	WHITE W/ ADA FAUCET	34" A.F.F. TO TOP OF SINK RIM
C	1-1/2" DIAMETER 42" GRAB BAR	BOBRICK	B-6206.99 X 42	REINFORCED WALL	34.5" A.F.F. TO CENTER OF BAR
D	1-1/2" DIAMETER 36" GRAB BAR	BOBRICK	B-6206.99 X 36	REINFORCED WALL	34.5" A.F.F. TO CENTER OF BAR
D-1	1-1/2" DIAMETER 24" GRAB BAR	BOBRICK	B-6206.99 X 24	REINFORCED WALL	34.5" A.F.F. TO CENTER OF BAR
E	1-1/2" DIAMETER 18" GRAB BAR	BOBRICK	B-6206.99 X 18	REINFORCED WALL	40" A.F.F. TO BOTTOM OF BAR
F	SURFACE-MOUNT T.P. DISPENSER	SUPPLIED & INSTALLED BY OWNER (NIC)		STAINLESS STEEL	24" A.F.F.
G	SURFACE-MOUNT P.T. DISPENSER	SUPPLIED & INSTALLED BY OWNER (NIC)		STAINLESS STEEL	48" A.F.F. TO CENTER
H	WALL-MOUNTED SOAP DISPENSER	SUPPLIED & INSTALLED BY OWNER (NIC)		STAINLESS STEEL	44" A.F.F. TO BOTTOM OF DISPENSER
J	MIRROR/SHELF COMBO 24"x36"	BOBRICK	B166-2436	STAINLESS STEEL	40" A.F.F. TO BOT. OF REFLECTING SURFACE
K	22" FOLDING SEAT	BOBRICK	B-5192	WALL-MOUNTED	18.5" TO TOP OF SEAT
K-1	33" FOLDING SEAT	BOBRICK	B-5181	WALL-MOUNTED	18.5" TO TOP OF SEAT
L	HANGING HOOKS	SUPPLIED & INSTALLED BY OWNER (NIC)		WALL-MOUNTED	48" IN H.C. BATHS; 60" IN STD. BATHS
M	ADJUSTABLE HANDHELD SHOWER BAR	SEE PLUMBING DWG	SEE PLUMBING DWGS	WALL-MOUNTED	54" TO CENTER OF WALL SUPPLY OUTLET

- RESTROOM NOTES:
- INSULATE ALL EXPOSED H.W. SUPPLY AND DRAIN PIPES.
 - ALL SUBSTITUTE FIXTURES SHALL BE ADA COMPLIANT.
 - TOILET LEVER SHALL BE TO WIDE SIDE OF ROOM OR STALL.
 - PROVIDE SOLID GROUTED CMU FOR MOUNTING GRAB BARS AND WALL-MOUNTED FOLDING SEATS.
 - PROVIDE VENTILATION FANS TO OUTSIDE FOR ALL TOILETS, OPERATION TO ACTIVATE WHEN LIGHT IS SWITCHED.
 - ANY VENT PIPE (OR OTHER) PENETRATIONS THROUGH ROOF SHALL BE INSPECTED & VERIFIED BY ROOF INSTALLER OR MANUFACTURER TO INSURE CONTINUANCE OF ROOF WEATHERTIGHTNESS WARRANTY.
 - WATER TEMPERING DEVICE SHALL BE INSTALLED ON ALL LAVATORIES AS REQUIRED PER VPC/IPC 416.5.
 - G.C. REVIEW RESTROOM ACCESSORIES W/ OWNER AND PROVIDE ALTERNATIVE ACCESSORIES IF REQUESTED. COORDINATE W/ OWNER FOR ANY OWNER-SUPPLIED ACCESSORIES.



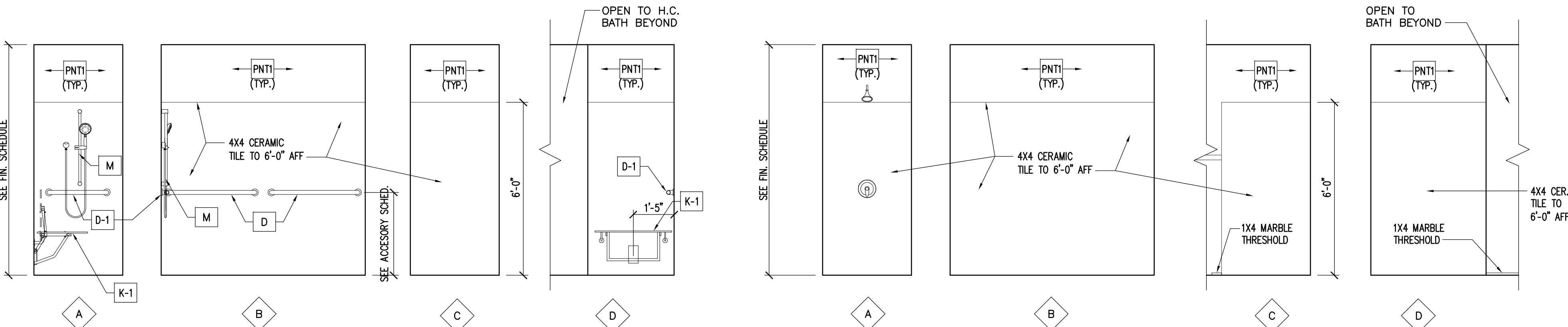
H.C. RESTROOM ELEVATIONS

- SCALE: 3/8"=1'-0"
- NOTES:
- "H.C. TOILET 102" SHOWN
 - "H.C. TOILET 103", "H.C. BATH 105" AND "H.C. BATH 106" SIMILAR.



STD. RESTROOM ELEVATIONS

- SCALE: 3/8"=1'-0"
- NOTE: "BATH 101" SHOWN, "BATH 104" SIMILAR

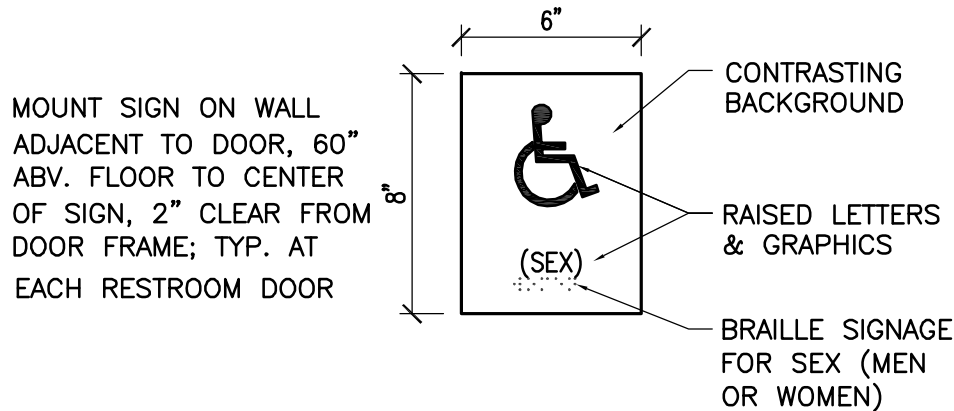


H.C. SHOWER ELEVATIONS

- SCALE: 3/8"=1'-0"
- NOTE: "H.C. BATH 106" SHOWN, "H.C. BATH 105" SIMILAR

STD. SHOWER ELEVATIONS

- SCALE: 3/8"=1'-0"
- NOTE: "BATH 101" SHOWN, "BATH 104" SIMILAR



H.C. RESTROOM SIGN

NOT TO SCALE

DOOR HARDWARE SETS:

- (1-1/2) PAIR HINGES
- (1) CLOSER
- ADA THRESHOLD
- WEATHERSTRIPPING

NOTE: LEVER/LATCH HARDWARE TO BE INSTALLED BY OWNER (N.I.C.)

DOOR SCHEDULE

DR. NO.	SIZE (WIDTH X HEIGHT X THICKNESS)	DOOR MATERIAL	DOOR TYPE	LABEL (MIN.)	GLASS	THRD.	FRAME TYPE	CLOSER	HDWR SET #	REMARKS
101	3'-0"x7'-0"x1-3/4"	MTL	FLUSH	-	-	YES	HM	YES	1	INSULATED MTL. DOOR
102	3'-0"x7'-0"x1-3/4"	MTL	FLUSH	-	-	YES	HM	YES	1	INSULATED MTL. DOOR
103	3'-0"x7'-0"x1-3/4"	MTL	FLUSH	-	-	YES	HM	YES	1	INSULATED MTL. DOOR
104	3'-0"x7'-0"x1-3/4"	MTL	FLUSH	-	-	YES	HM	YES	1	INSULATED MTL. DOOR
105	3'-0"x7'-0"x1-3/4"	MTL	FLUSH	-	-	YES	HM	YES	1	INSULATED MTL. DOOR
106	3'-0"x7'-0"x1-3/4"	MTL	FLUSH	-	-	YES	HM	YES	1	INSULATED MTL. DOOR
107	3'-0"x7'-0"x1-3/4"	MTL	FLUSH	-	-	YES	HM	YES	1	INSULATED MTL. DOOR
108	2'-8"x7'-0"x1-3/4"	MTL	FLUSH	-	-	YES	HM	YES	1	INSULATED MTL. DOOR

GENERAL DOOR NOTES

- ALL EXTERIOR DOOR THRESHOLDS SHALL BE 1/4" OFFSET, ADA ACCESSIBLE.
- PROVIDE WEATHERSTRIPPING FOR ALL EXTERIOR DOORS.
- "MTL" DENOTES HOLLOW CORE METAL DOORS. SEE SPECIFICATIONS ON SHEET T1.2 FOR METAL DOOR REQUIREMENTS.
- DOOR FRAMES SHALL BE 16 GAGE HOLLOW METAL FRAMES, WELDED CORNERS W/ 2" WIDE JAMBS AND 4" HEAD, AND SHALL BE FACTORY PRIME AND FIELD-PAINTED. CONSULT OWNER FOR COLORS. GROUT DOOR FRAMES SOLID WITH CMU.
- ALL GLAZING USED IN DOOR ASSEMBLIES SHALL BE TEMPERED PER VCC/IBC CHAPTER 24.
- DOOR FRAMES SHALL BE FIRE-RATED TO MATCH DOOR FIRE-RATING IF REQUIRED PER SCHEDULE.
- DOORS SHALL "161 PREP" FOR FUTURE HARDWARE INSTALLATION. DOOR LATCH/LOCK HARDWARE SHALL BE PROVIDED AND INSTALLED BY OWNER (N.I.C.).

ROOM FINISH SCHEDULE

SPACE NO.	ROOM	FLOOR	BASE	TRIM	WALLS	CEILING	HEIGHT	REMARKS
101	BATH	EP1	-	NOTE 11	CMU EP2/PNT1	GWB	PNT2 9'-6"	EP2 4'-0" UP WALLS, PNT1 ABOVE
101a	SHOWER	T1	-	NOTE 11	T2/CMU T2/PNT1	GWB	PNT2 9'-6"	EP2 4'-0" UP WALLS, PNT1 ABOVE
102	HANDICAP TOILET	EP1	-	NOTE 11	CMU EP2/PNT1	GWB	PNT2 9'-6"	EP2 4'-0" UP WALLS, PNT1 ABOVE
103	HANDICAP TOILET	EP1	-	NOTE 11	CMU EP2/PNT1	GWB	PNT2 9'-6"	EP2 4'-0" UP WALLS, PNT1 ABOVE
104	BATH	EP1	-	NOTE 11	CMU EP2/PNT1	GWB	PNT2 9'-6"	EP2 4'-0" UP WALLS, PNT1 ABOVE
104a	SHOWER	T1	-	NOTE 11	T2/CMU T2/PNT1	GWB	PNT2 9'-6"	EP2 4'-0" UP WALLS, PNT1 ABOVE
105	HANDICAP BATH	EP1	-	NOTE 11	CMU EP2/PNT1	GWB	PNT2 9'-6"	EP2 4'-0" UP WALLS, PNT1 ABOVE
105a	SHOWER	T1	-	NOTE 11	T2/CMU T2/PNT1	GWB	PNT2 9'-6"	EP2 4'-0" UP WALLS, PNT1 ABOVE
106	HANDICAP BATH	EP1	-	NOTE 11	CMU EP2/PNT1	GWB	PNT2 9'-6"	EP2 4'-0" UP WALLS, PNT1 ABOVE
106a	SHOWER	T1	-	NOTE 11	T2/CMU T2/PNT1	GWB	PNT2 9'-6"	EP2 4'-0" UP WALLS, PNT1 ABOVE
107	LAUNDRY	EP1	-	NOTE 11	CMU EP2/PNT1	GWB	PNT2 9'-6"	EP2 4'-0" UP WALLS, PNT1 ABOVE
108	PLUMBING CHASE	CONC	-	NOTE 11	CMU PNT1	GWB	PNT2 9'-6"	EP2 4'-0" UP WALLS, PNT1 ABOVE

FINISH NOTES

- ALL INTERIOR FINISHES SHALL MEET THE MINIMUM REQUIREMENTS SET FORTH IN IBC CHAPTER 8.
- ALL WALL AND CEILING FINISHES SHALL BE AT LEAST CLASS C (FLAME SPREAD 76-200, SMOKE DEVELOPMENT 0-450) IN ENCLOSED ROOMS AND CLASS B (FLAME SPREAD 26-75, SMOKE DEVELOPMENT 0-450) IN CORRIDORS PER IBC TABLE 803.5.
- FINISHES SHOWN HEREIN ARE SCHEMATIC, CONSULT OWNER FOR ADDITIONAL DETAILS REGARDING INTERIOR FINISHES.
- ALL CLOSETS & AUXILIARY SPACES SHALL HAVE SAME FLOOR AND WALL FINISHES AS ROOMS THEY ARE LOCATED IN, U.N.O. SEE CEILING PLAN FOR CLOSET CEILING FINISHES AND HEIGHTS.
- PROVIDE MOISTURE-RESISTANT GWB FOR ALL CEILINGS.
- SUBSTITUTIONS FOR SPECIFIED PRODUCTS SHALL BE EQUAL TO THOSE SPECIFIED IN COMPOSITION, PHYSICAL PROPERTIES, COLOR/TEXTURE/APPEARANCE, AND ENVIRONMENTAL QUALITIES. ANY/ALL SUBSTITUTIONS SHALL BE SUBMITTED TO THE OWNER WITH BIDS.
- "PAINT" DENOTES INTERIOR PAINTED SURFACES UTILIZING PAINT MATERIALS CONTAINING 0% VOC'S (VOLATILE ORGANIC COMPOUNDS), CONSISTING OF (1) COAT INTERIOR LATEX PRIMER AND (2) COATS LATEX FINISH. INCLUDE BLOCK FILLER ON CMU SURFACES. PAINT FINISH SELECTIONS (COLOR, FINISH, ETC.) TO BE CHOSEN BY OWNER.
- "COOK" UNDER THE HEADING "FLOOR" DENOTES EXPOSED CONCRETE SLAB, TO BE GROUND SMOOTH AND COATED W/ SEALER.
- ALL TRANSITIONS BETWEEN DIFFERENT TYPES OF FLOORING SHALL BE ADA COMPLIANT.
- EPOXY FLOOR COATING SHALL BE "CHEMPROOF POLYMERS PERMACOAT 4000", INSTALLED IN TWO COATS. COLOR TO BE SELECTED BY OWNER FROM MANUFACTURER'S STANDARD COLOR RANGE.
- 1X4 PVC OR COMPOSITE TRIM @ TOP OF WALL, PAINTED.

EP1= EPOXY COATING OVER CONCRETE SLAB
EP2= EPOXY PAINT ON CMU WALLS
T1= PORCELAIN TILE SHOWER FLOORING, 1"x1"
T2= PORCELAIN TILE ON SHOWER WALLS, 4"x4".
PNT1= PAINT 1
PNT2= PAINT 2

INTERIOR PARTITION SCHEDULE

TYPE	DESCRIPTION	RATING (HOURS)	UL DESIGN NO.	HEIGHT
1	6" CMU W/ HORIZ. JOINT REINF., SEE STRUCT. DWGS. PROVIDE P.T. (2)2X6 PLATE ON TOP W/ 3/8"x8" ANCHOR BOLTS INTO GROUTED TOP COURSE. PROVIDE 2X SOLID BLOCKING @ 24"O.C. BETWEEN TRUSSES FOR ALL WALLS PARALLEL TO TRUSSES. FINISH PER SCHEDULE.	0 HOUR	N/A	UNDERSIDE OF ROOF TRUSSES
2	4" CMU W/ HORIZ. JOINT REINF., SEE STRUCT. DWGS. PROVIDE P.T. (2)2X4 PLATE ON TOP W/ 3/8"x8" ANCHOR BOLTS INTO GROUTED TOP COURSE. PROVIDE 2X SOLID BLOCKING @ 24"O.C. BETWEEN TRUSSES FOR ALL WALLS PARALLEL TO TRUSSES. FINISH PER SCHEDULE.	0 HOUR	N/A	UNDERSIDE OF ROOF TRUSSES

GENERAL PARTITION NOTES:

- ALL PARTITIONS SHALL BE FINISHED PER FINISH SCHEDULE.
- PROVIDE BRACING TO STRUCTURE ABOVE AT ALL NEW PARTITION WALLS EXCEEDING 6'-0" IN LENGTH.
- INFORMATION ON THIS SCHEDULE IS TO BE USED IN CONJUNCTION WITH FLOOR PLANS, REFLECTED CEILING PLANS, INTERIOR ELEVATIONS AND SECTIONS.
- EXTERIOR ENVELOPE IS NOT SCHEDULED. REFER TO SECTIONS AND DETAILS FOR TYPICAL BUILDING EXTERIOR WALL DESCRIPTION.
- PARTITION TYPES ARE CONTINUOUS ACROSS DOOR AND WINDOW OPENINGS AND AROUND CORNERS UNLESS OTHERWISE NOTED.
- CMU SHALL BE GROUTED SOLID AT ALL LOCATIONS WHERE WALL-MOUNTED ACCESSORIES, EQUIPMENT, ETC. WILL BE MOUNTED, G.C. COORDINATE IN FIELD AS REQ.

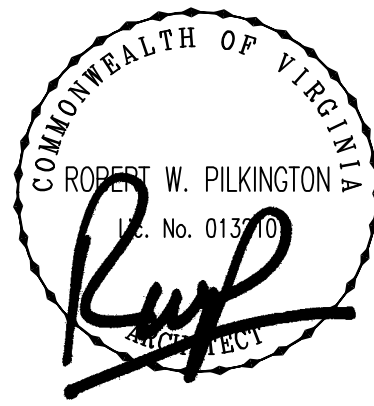
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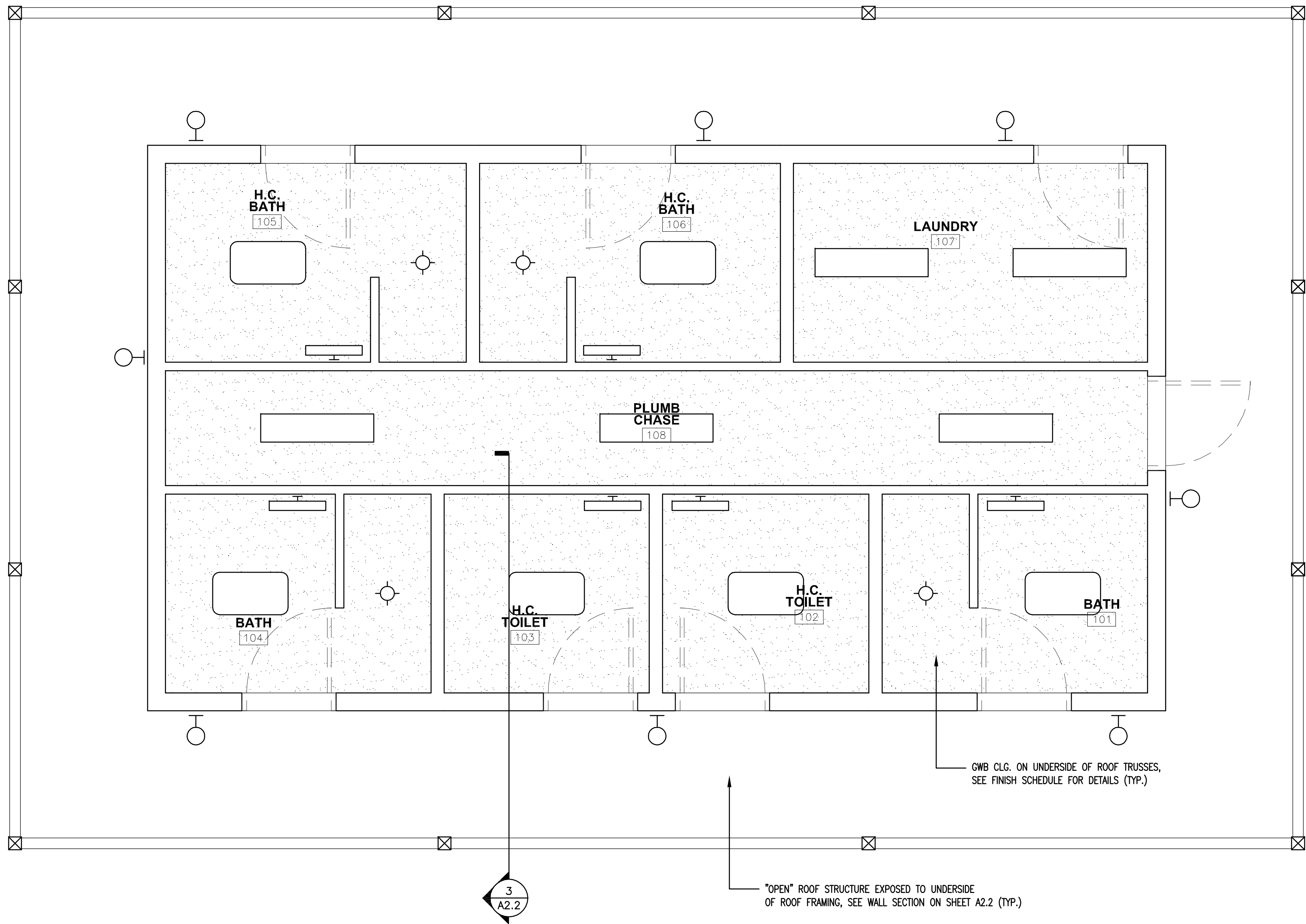
EXPLORE PARK
COUNTY OF ROANOKE, VIRGINIA

DRAWN BY RWP
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DATE 05/10/2018
SCALE ---
REVISIONS:

SHEET NO.

A1.2

JOB NO. 04180001.00



CEILING/LIGHTING LEGEND

ITEM	DESCRIPTION
	SURFACE-MOUNTED FIXTURE W/ LED LAMP(S)
	RECESSED CAN LIGHT W/ LED LAMP (I.C. RATED FOR CONTACT W/ INSULATION, SEALED FOR USE IN WET LOCATIONS)
	WALL MOUNTED EXTERIOR LIGHT FIXTURE
	WALL-MOUNTED DECORATIVE VANITY LIGHT
	1X4 SURFACE-MOUNT FIXTURE W/ LED LAMPS
	WALL-MOUNTED EMERGENCY EGRESS LIGHT W/ BATTERY BACKUP, HARDWIRED TO BLDG. ELEC. SYSTEM
	RESTROOM EXHAUST FAN

GENERAL CEILING/LIGHTING/ELECTRICAL NOTES:

- ALL ELECTRICAL DESIGNS, CONSTRUCTION, MATERIALS AND WORKMANSHIP SHALL COMPLY WITH ALL PROVISIONS OF THE 2012 VCC/IBC, AND THE CURRENT NATIONAL ELECTRIC CODE (NEC), AS A MINIMUM LEVEL OF CONSTRUCTION DETAIL AND QUALITY.
- ALL LIGHTING LAYOUTS SHOWN HERE ARE SCHEMATIC ONLY. SEE ELECTRICAL DRAWINGS FOR EXACT LAYOUT.
- SEE ELECTRICAL DRAWINGS FOR REQUIREMENTS FOR EMERGENCY LIGHTING.
- COORDINATE LOCATIONS OF LIGHTS WITH HVAC GRILLES & DUCTWORK AS REQUIRED.
- G.C. COORDINATE LIGHT SWITCHING REQUIREMENTS (SWITCH LOCATIONS, DUAL SWITCHING IN ROOMS, ETC.) W/ OWNER.
- LIGHTING IN RESTROOMS TO BE 20fc MINIMUM @ 30" ABOVE THE FLOOR. LIGHTING FOR OFFICE SPACES SHALL BE DESIGNED TO PROVIDE MINIMUM 30 f.c. @ 2'-6" A.F.F.

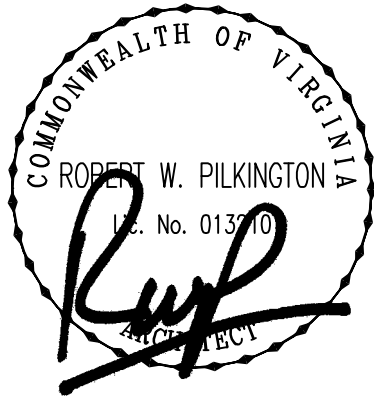
1 REFLECTED CEILING PLAN
A1.3 SCALE : 3/8"=1'-0"

BALZER
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REFLECTING TOMORROW

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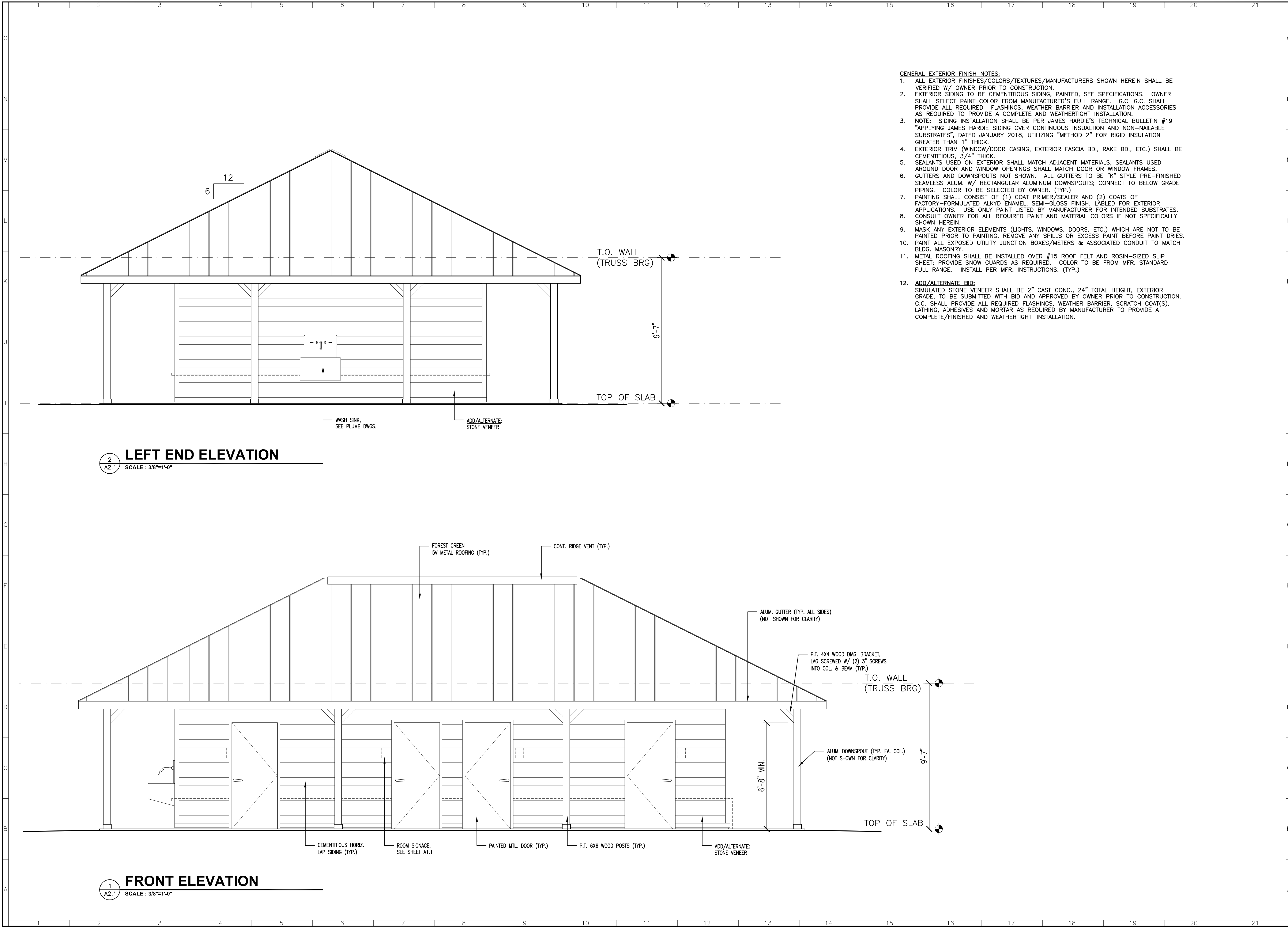
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DRAWN BY RWP
DESIGNED BY RWP
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DATE 05/10/2018
SCALE ---
REVISIONS:



- GENERAL EXTERIOR FINISH NOTES:**
1. ALL EXTERIOR FINISHES/COLORS/TEXTURES/MANUFACTURERS SHOWN HEREIN SHALL BE VERIFIED W/ OWNER PRIOR TO CONSTRUCTION.
 2. EXTERIOR SIDING TO BE CEMENTITIOUS SIDING, PAINTED, SEE SPECIFICATIONS. OWNER SHALL SELECT PAINT COLOR FROM MANUFACTURER'S FULL RANGE. G.C. G.C. SHALL PROVIDE ALL REQUIRED FLASHINGS, WEATHER BARRIER AND INSTALLATION ACCESSORIES AS REQUIRED TO PROVIDE A COMPLETE AND WEATHERTIGHT INSTALLATION.
 3. NOTE: SIDING INSTALLATION SHALL BE PER JAMES HARDIE'S TECHNICAL BULLETIN #19 "APPLYING JAMES HARDIE SIDING OVER CONTINUOUS INSULATION AND NON-NAILABLE SUBSTRATES", DATED JANUARY 2018, UTILIZING "METHOD 2" FOR RIGID INSULATION GREATER THAN 1" THICK.
 4. EXTERIOR TRIM (WINDOW/DOOR CASING, EXTERIOR FASCIA BD., RAKE BD., ETC.) SHALL BE CEMENTITIOUS, 3/4" THICK.
 5. SEALANTS USED ON EXTERIOR SHALL MATCH ADJACENT MATERIALS; SEALANTS USED AROUND DOOR AND WINDOW OPENINGS SHALL MATCH DOOR OR WINDOW FRAMES.
 6. GUTTERS AND DOWNSPOUTS NOT SHOWN. ALL GUTTERS TO BE "K" STYLE PRE-FINISHED SEAMLESS ALUM. W/ RECTANGULAR ALUMINUM DOWNSPOUTS; CONNECT TO BELOW GRADE PIPING. COLOR TO BE SELECTED BY OWNER. (TYP.)
 7. PAINTING SHALL CONSIST OF (1) COAT PRIMER/SEALER AND (2) COATS OF FACTORY-FORMULATED ALKYD ENAMEL, SEMI-GLOSS FINISH, LABELED FOR EXTERIOR APPLICATIONS. USE ONLY PAINT LISTED BY MANUFACTURER FOR INTENDED SUBSTRATES. CONSULT OWNER FOR ALL REQUIRED PAINT AND MATERIAL COLORS IF NOT SPECIFICALLY SHOWN HEREIN.
 8. MASK ANY EXTERIOR ELEMENTS (LIGHTS, WINDOWS, DOORS, ETC.) WHICH ARE NOT TO BE PAINTED PRIOR TO PAINTING. REMOVE ANY SPILLS OR EXCESS PAINT BEFORE PAINT DRIES.
 9. PAINT ALL EXPOSED UTILITY JUNCTION BOXES/METERS & ASSOCIATED CONDUIT TO MATCH BLDG. MASONRY.
 10. METAL ROOFING SHALL BE INSTALLED OVER #15 ROOF FELT AND ROSIN-SIZED SLIP SHEET; PROVIDE SNOW GUARDS AS REQUIRED. COLOR TO BE FROM MFR. STANDARD FULL RANGE. INSTALL PER MFR. INSTRUCTIONS. (TYP.)
 11. ADD/ALTERNATE BID: SIMULATED STONE VENEER SHALL BE 2" CAST CONC., 24" TOTAL HEIGHT, EXTERIOR GRADE, TO BE SUBMITTED WITH BID AND APPROVED BY OWNER PRIOR TO CONSTRUCTION. G.C. SHALL PROVIDE ALL REQUIRED FLASHINGS, WEATHER BARRIER, SCRATCH COAT(S), LATHING, ADHESIVES AND MORTAR AS REQUIRED BY MANUFACTURER TO PROVIDE A COMPLETE/FINISHED AND WEATHERTIGHT INSTALLATION.

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COMMONWEALTH OF VIRGINIA
ROBERT W. PILKINGTON
No. 01570
2015

**EXPLORE PARK
FLEX POD "A" BATHHOUSE
EXTERIOR ELEVATIONS**

DRAWN BY RWP
DESIGNED BY RWP
CHECKED BY ---
DATE 05/10/2018
SCALE ---
REVISIONS:

SHEET NO.
A2.1
JOB NO. 04180001.00

REAR ELEVATION

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

RIGHT END ELEVATION

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

WALL SECTION

SCALE: 3/4"=1'-0"

AIR DEVICE SCHEDULE				
MARK	SERVICE	MOUNTING	FINISH	BASIS OF DESIGN
A	SUPPLY	SURFACE	WHITE	PRICE, 600 - SINGLE DEFLECTION, ALUMINUM.
B	EXHAUST	SURFACE	WHITE	PRICE, 600 - SINGLE DEFLECTION, ALUMINUM.

HEATER SCHEDULE					
MARK	HEATING CAPACITY		ELECTRICAL		BASIS OF DESIGN
	KW	MBH	V / PH	AMPS	
UH-1	3.3	11.2	208 / 1	15.9	MARKEL MODEL F1F5103N, HORIZONTAL UNIT HEATER

NOTES:
1. PROVIDE WITH WALL MOUNTED T-STAT. SET TO 55°F.

EXHAUST FAN SCHEDULE						
MARK	AIR FLOW (CFM)	ESP	NOM HP	DRIVE TYPE	V/FREQ./PH	BASIS OF DESIGN
F-1	460	0.4"	1/10	DIRECT	120/60/1	GREENHECK, G-085-VG
F-2	365	0.4"	1/10	DIRECT	120/60/1	GREENHECK, G-085-VG

NOTES:
1. INTERLOCK BOTH EXHAUST FANS WITH AHU-1 SUPPLY AIR FAN.
2. PROVIDE WITH 12" ROOF CURB AND GRAVITY BACKDRAFT DAMPER.

REMOTE OUTDOOR CONDENSER SCHEDULE (OUTDOOR UNIT)							
MARK	COOLING		ELECTRICAL			UNIT WEIGHT (LBS)	BASIS OF DESIGN
	AIRFLOW (CFM)	FAN HP / #	V / PH / HZ	MCA	MOCp		
CU-1	11,400	1.5 / 1	208 / 1 / 60	5.9	15	305	ABOVE AIR MODEL# WP1-108D-1-00-OA-V-P66

NOTES:

1. UNIT SHALL BE PROVIDED WITH 1 YEAR PARTS ONLY WARRANTY.
2. CAPACITIES BASED ON 95°F OUTDOOR AIR TEMPERATURE.
3. PROVIDE CONCRETE PAD FOR OUTDOOR UNIT TO BE MOUNTED ON.

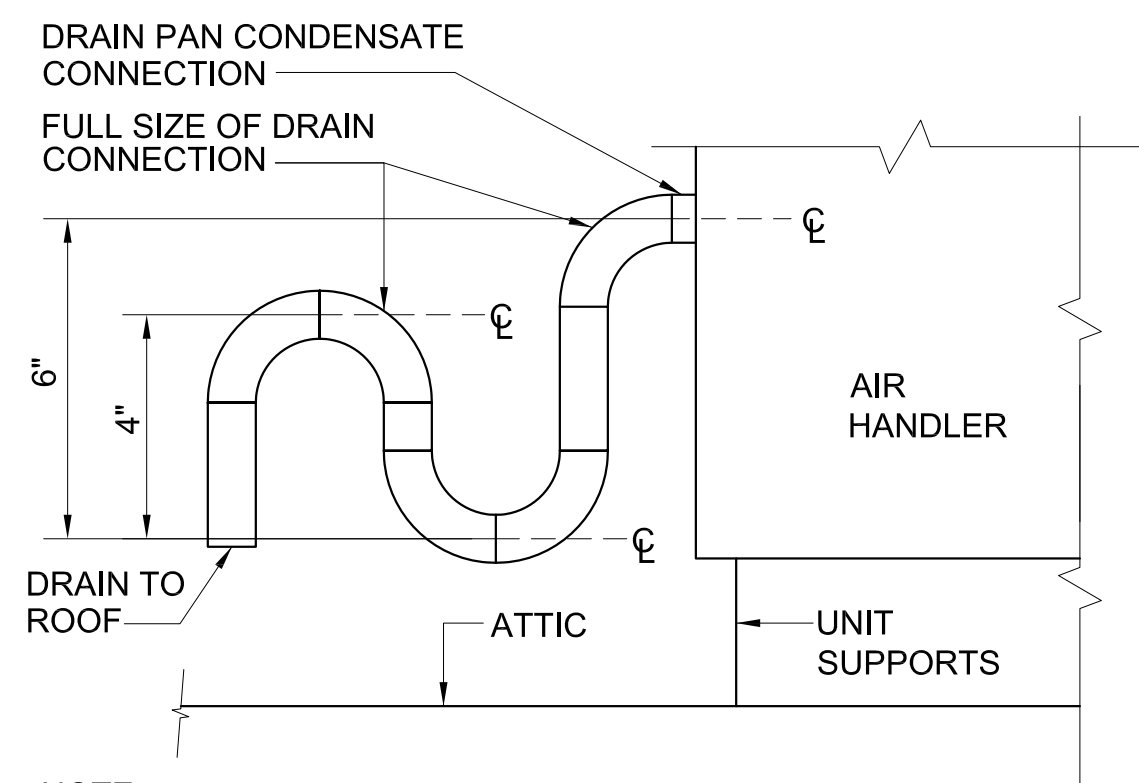
AIR HANDLER UNIT SCHEDULE																				
MARK	SUPPLY FAN					HEATING			COOLING				HOT GAS REHEAT			ELECTRICAL			UNIT WEIGHT (LBS)	BASIS OF DESIGN
	TOTAL AIRFLOW (CFM)	OUTDOOR AIRFLOW (CFM)	EXT. S.P. (IN. W.C.)	FAN MOTOR (BHP)	FAN MOTOR (HP)	HEATING CAPACITY (KW)	V / PH / HZ	EAT/LAT (DB, °F)	GROSS TOTAL CAPACITY (MBH)	GROSS SENSIBLE CAPACITY (MBH)	EAT (DB/WB, °F)	LAT (DB/WB, °F)	EAT (DB/WB, °F)	LAT (DB/WB, °F)	CONTROL	V / PH / HZ	MCA	MOCP		
AHU-1	1,000	1,000	0.5	0.35	0.5	24.0	208 / 1 / 60	16 / 91.4	81.2	43.5	95 / 78	55 / 54.8	53.2	74.0	2-POS ON/OFF	208 / 1 / 60	45.5	60	800	ABOVE AIR MODEL# AEC-072D-1-HGO-00-OA-SF-D1-B

NOTES:

1. DUCT MOUNTED ELECTRIC HEATER TO BE SEPARATELY POWERED. PROVIDE WITH MODULATING SCR CONTROLS.
2. PROVIDE 2" PLEATED DISPOSABLE MERV 8 AIR FILTERS.
3. LEAD COMPRESSOR TO BE DIGITAL SCROLL COMPRESSOR.
3. UNIT SHALL BE PROVIDED WITH 1 YEAR PARTS ONLY WARRANTY FOR ENTIRE UNIT, 5 YEAR COMPRESSOR PARTS WARRANTY.

GENERAL MECHANICAL NOTES:

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE 2012 VIRGINIA UNIFORM STATEWIDE BUILDING CODE ALL FEDERAL, STATE, AND CITY CODES, ORDINANCES, AND STANDARDS.
2. IT IS THE INTENT OF THESE DOCUMENTS THAT THE CONTRACTOR PROVIDE ALL LABOR, MATERIAL, EQUIPMENT AND TOOLS FOR THE COMPLETE INSTALLATION OF ALL WORK SHOWN ON THE PLANS AND/OR DESCRIBED HEREIN, INCLUDING ALL DEVICES AND CONTROLS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONING SYSTEM.
3. THESE DRAWINGS ARE DIAGRAMMATIC IN NATURE. NOT ALL FITTINGS, OFFSETS, VENTS, OR DRAINS ARE SHOWN. THE CONTRACTOR SHALL INCLUDE ALL OFFSETS, VENTS, AND DRAINS AS REQUIRED FOR A FULLY FUNCTIONING SYSTEM.
4. IN AREAS WITH UNFINISHED CEILINGS, DUCTWORK AND PIPING SHALL BE ROUTED AS TIGHT TO THE STRUCTURE AS POSSIBLE.
5. ENSURE MECHANICAL EQUIPMENT IS INSTALLED TO PROVIDE SUFFICIENT CLEARANCE FOR COIL PULL, AND MINIMUM MANUFACTURER RECOMMENDED MAINTENANCE ACCESS TO EQUIPMENT.
6. ALL SUPPLY AIR DIFFUSERS, RETURN, AND EXHAUST GRILLES SHALL BE INSTALLED WITH BALANCING DAMPER LOCATED IN DUCT RUN OUT. DIFFUSERS AND GRILLES SHALL HAVE AN OPPOSED BLADE DAMPER ONLY WHEN DUCT DAMPERS ARE INACCESSIBLE.
7. ALL PIPING SHALL BE LABELED FOR ITS USAGE. ALL EQUIPMENT SHALL BE PROVIDED WITH AN ENGRAVED EQUIPMENT TAG.
8. ALL DUCTWORK CONSTRUCTION AND INSTALLATION SHALL COMPLY WITH THE LATEST EDITION OF THE SMACNA DUCT CONSTRUCTION HANDBOOK.
9. SUPPLY AIR DUCT INSULATION SHALL BE IN COMPLIANCE WITH THE 2012 IECC STANDARDS.
10. ANY SUBSTITUTIONS FOR MATERIALS AND EQUIPMENT MUST BE SUBMITTED WITH BID.



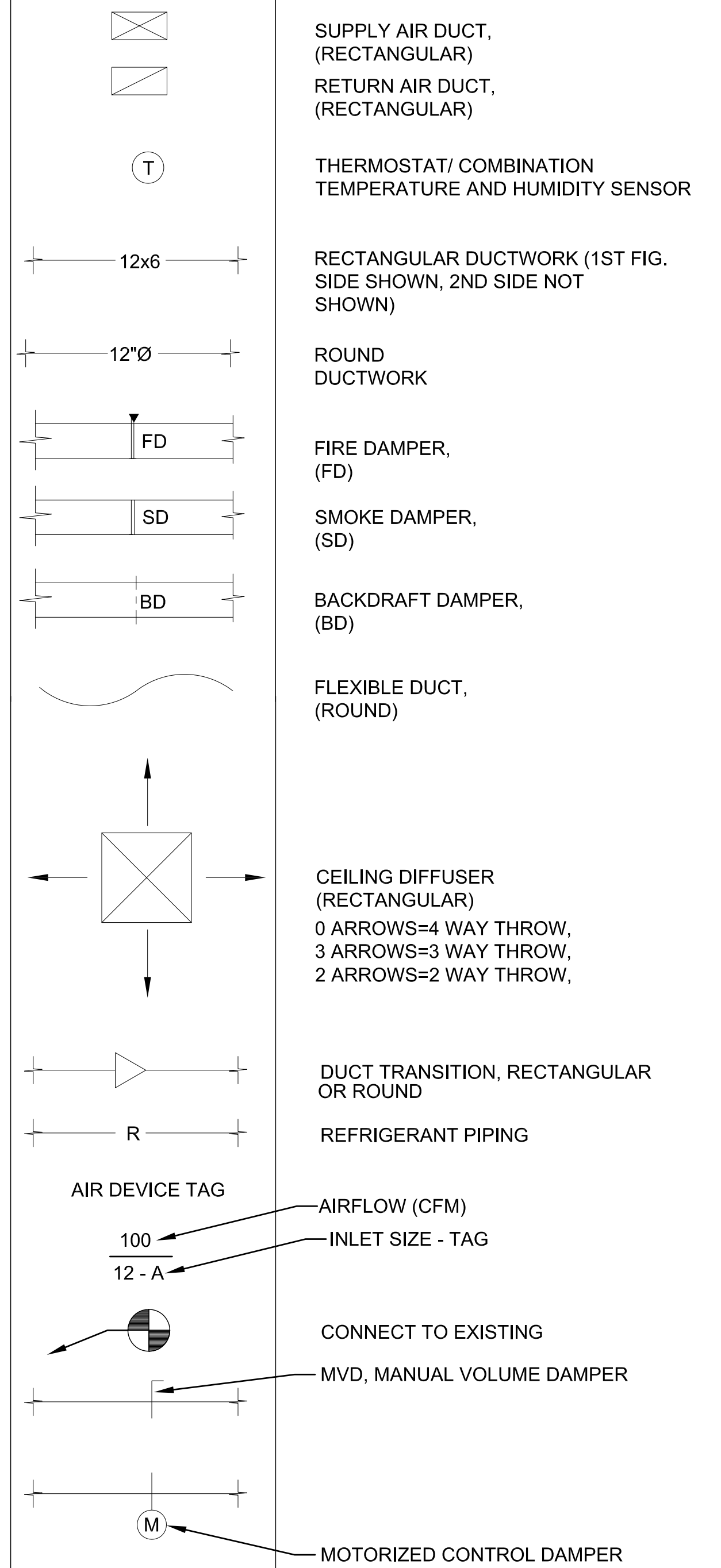
NOTE:
CONDENSATE TRAP SHALL BE CONSTRUCTED OF
GALVANIZED STEEL OR PVC PIPING.

CONDENSATE DRAIN DETAIL

1
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HVAC LEGEND

DUCTWORK



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**EXPLORE PARK
FLEX POD "A" BATHHOUSE**

MECHANICAL COVER SHEET

COUNTY OF ROANOKE, VIRGINIA

DRAWN BY JNB

DESIGNED BY JNB

CHECKED BY JNB

DATE 05/10/2018

SCALE _____

REVISIONS:



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SHEET NO.

M1.1

JOB NO. 04180001.00

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32. SYSTEMS TEST AND BALANCE:
THE REQUIRED TEST & BALANCE OF THE HVAC SYSTEM SHALL BE PERFORMED BY AN APPROVED INDEPENDENT TESTING AGENCY AS SPECIFIED BELOW.
AGENCY QUALIFICATIONS:
TEST & BALANCE AGENCY (TBA) SHALL BE PERFORMED BY AN INDEPENDENT AGENCY ENGAGED SOLELY IN TEST AND BALANCE WORK. AGENCY SHALL BE A MEMBER OF THE ASSOCIATED AIR BALANCE COUNCIL (AABC) AND NATIONAL ENVIRONMENTAL BALANCING BUREAU, (NEBB).
SUBMIT A WRITTEN REPORT WITHIN 30 DAYS OF COMMENCING WORK, WITH ANY RECOMMENDED CHANGES TO INSURE BALANCING CAPABILITY.
SUBMIT A DETAILED TEST PLAN TO THE ARCHITECT ILLUSTRATING ALL FORMATS, DRAWINGS, AND TEST PROCEDURE TO BE USED FOR TESTING THE COMPLETED SYSTEM. THE APPROVED PLAN WILL BE USED FOR TESTING THE SYSTEMS.
PROCEDURES SHALL INCLUDE REQUIREMENTS LISTED IN AABC/NEBB STANDARDS, LATEST EDITION AND ANY SPECIAL REQUIREMENTS FOR THIS PROJECT.
MAKE PROJECT VISITS AS REQUIRED DURING CONSTRUCTION PERIOD INSPECTING FOR PROPER INSTALLATION OF THE SYSTEM AND RELATED BALANCING DEVICES. PROJECT VISIT REPORTS SHALL BE MADE TO THE ARCHITECT IN WRITING.
CONTRACTORS REQUIREMENTS PRIOR TO TEST & BALANCE:
THE CONTRACTOR SHALL PERFORM ALL REQUIRED PRELIMINARY TESTS AND OTHER PREPARATORY WORK, INCLUDING BUT NOT LIMITED TO:
MAKE SURE ALL FANS ARE OPERATING, CHECK ROTATION, RPM, AND AMPS.
CHECK ALL DAMPERS FOR OPERATION.
PUT ALL HVAC EQUIPMENT IN FULL OPERATION INCLUDING AIR UNITS, ACCU'S AND FANS. MAKE SURE ALL HVAC CONTROLS ARE INSTALLED AND FULLY OPERATIONAL. CLEAN/REPLACE FILTERS JUST PRIOR TO TESTING.
PROVIDE ALL BALANCING DEVICES AND DRIVE CHANGES THAT ARE DEEMED NECESSARY BY T&B AGENCY FOR BALANCE AT NO ADDITIONAL COST TO THE OWNER.
TEST & BALANCE AGENCY SHALL BALANCE ALL AIR SYSTEMS FOR OPERATION WITHIN DESIGN CRITERIA. PRIME MOVERS SHALL BE WITHIN 5% OF DESIGN AND TERMINALS WITHIN 10% OF DESIGN.
AIR SYSTEMS SHALL BE BALANCED AS DESCRIBED HEREIN.
TEST REPORT:
THE TBA SHALL PREPARE FIVE (5) COPIES OF A FINAL COMPREHENSIVE TEST REPORT IN THE FOLLOWING FORMAT.
REPORT SHALL BE BOUND 8-1/2 X 11" WITH SUBSTANTIAL COVERS USING APPROVED FORMS. TYPED OR COMPUTER GENERATED REPORTS ARE ACCEPTABLE.
REPORT SHALL BE INDEXED.
TABLE OF CONTENTS SHALL LIST ALL REPORTS.
ALL AIR OUTLETS SHALL BE LOCATED ON CODED DRAWINGS PREPARED BY THE T&B AGENCY. AIR OUTLETS FORMS SHALL BE PREPARED AND CORRELATED TO THE CODED DRAWINGS.
TEST SUMMARY SHALL DESCRIBE FINAL TEST PROCEDURES AND SPECIAL CONDITIONS DURING TESTS (SUCH AS THERMOSTAT OUTSIDE/RETURN AIR RELATIONSHIP), AND DUCT STATIC PRESSURE.
DESCRIBE OTHER DATA THAT MAY ASSIST OPERATING PERSONNEL IN THE CONTINUING OPERATION OF THE SYSTEM.
T&B CONTRACTOR SHALL TAKE AND RECORD ALL NECESSARY READINGS AT THE FINAL BALANCE POINTS, SUCH AS BUT NOT LIMITED TO: AIR QUANTITIES, PRESSURES, SETPOINTS, ENTERING AND LEAVING COIL TEMPERATURES, SPACE INDOOR AND OUTSIDE WET AND DRY BULB TEMPERATURES, OUTDOOR WEATHER CONDITIONS, ELECTRICAL READINGS OF ALL NEW AND EXISTING MOTORS, COMPRESSORS, ETC.
TEST REPORT SHALL CONTAIN TBA CERTIFICATION OF TEST DATA AND SYSTEM CONDITIONS. SUBMIT THE TEST REPORTS, FOR REVIEW, BEFORE SUBSTANTIAL COMPLETION.
END OF MECHANICAL SPECIFICATIONS.



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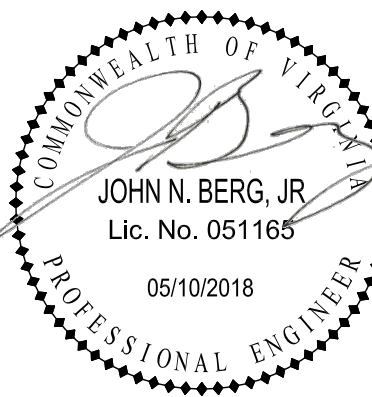
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COMMONWEALTH OF VIRGINIA



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Lic. No. 051165
05/10/2018
PROFESSIONAL ENGINEER

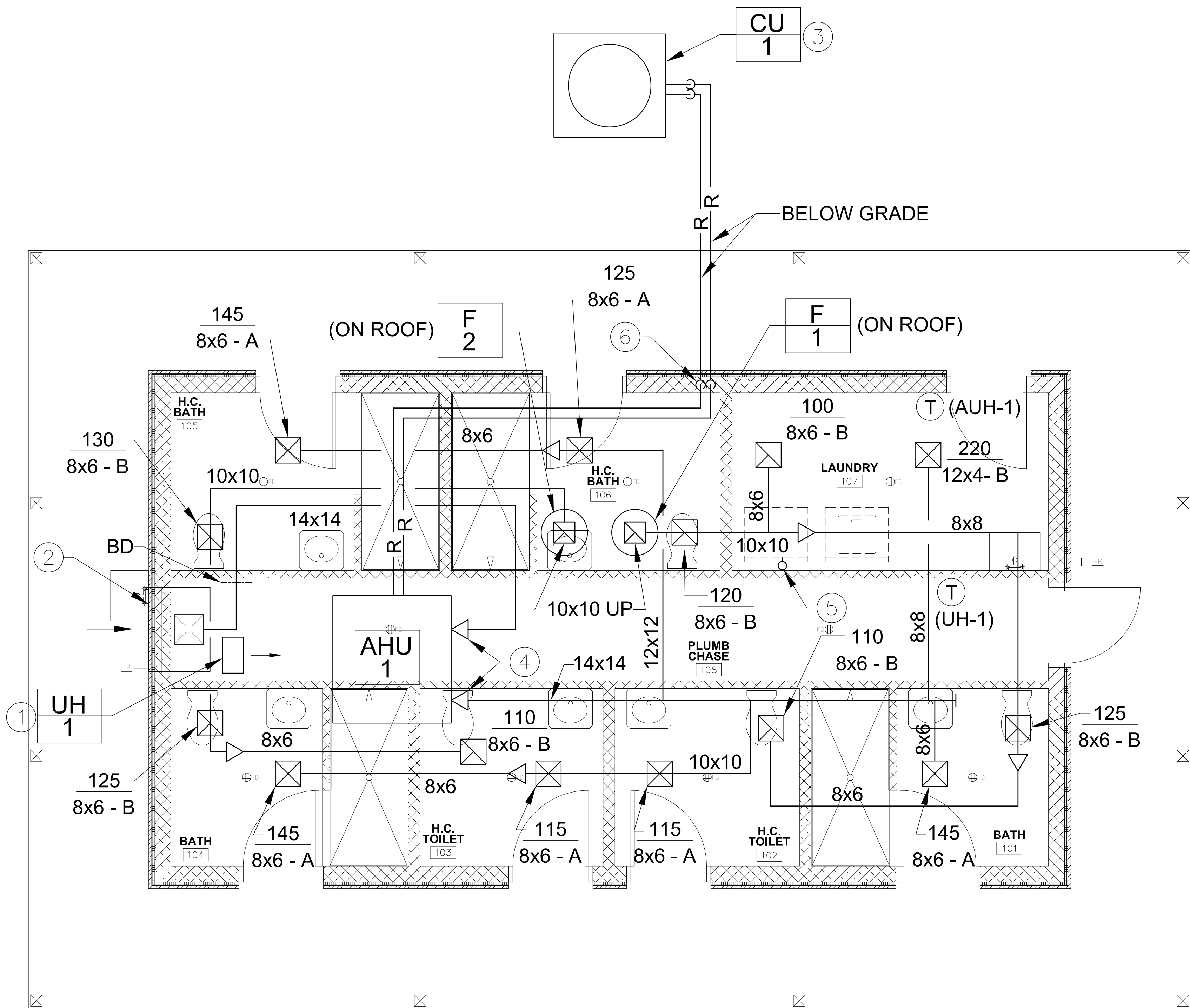
EXPLORE PARK
FLEX POD "A" BATHHOUSE

MECHANICAL SPECIFICATIONS

EXPLORE PARK
COUNTY OF ROANOKE, VIRGINIA

DRAWN BY JNB
DESIGNED BY JNB
CHECKED BY JNB
DATE 05/10/2018
SCALE _____
REVISIONS:

SHEET NO.
M1.3
JOB NO. 04180001.00



MECHANICAL FLOOR PLAN

1
M2.1

SCALE = 3/8"=1'-0"

GENERAL NOTES:

1. ANY SUBSTITUTIONS FOR MATERIALS AND EQUIPMENT MUST BE SUBMITTED WITH BID.
2. LOCATED AHU-1 AND ALL DUCTWORK IN ATTIC SPACE.
3. ROUTE 3/4" CONDENSATE DRAIN WITH TRAP FROM UNIT DRAIN AND ROUTE TO FLOOR DRAIN IN PLUMBING CHASE. PROVIDE SECONDARY DRAIN PAN BELOW UNIT WITH 3/4" DRAIN LINE ROUTED TO FLOOR DRAIN IN PLUMBING CHASE.
4. MOUNT AHU-1 IN ATTIC WITH MIN. 36" CLEARANCE IN FRONT OF ACCESS PANELS.
5. SLOPE ALL DUCTWORK AT 1/8" PER LF. BACK TOWARDS EXHAUST/SUPPLY AIR DEVICE.

KEYED NOTES:

1. LOCATE UNIT HEATER IN PLUMBING CHASE, SUSPEND FROM CEILING.
2. 40" x 16" x 6" DEEP INTAKE LOUVER, EQUIVALENT TO GREENHECK MODEL EHH-601, WITH MINIMUM 36% FREE AREA. EXTERIOR COLOR SHALL SELECTED BY ARCHITECT. PROVIDE SHEET METAL PLENUM BEHIND LOUVER FOR CONNECTION TO DUCTWORK WITH BACK DRAFT DAMPER.
3. PROVIDE 4" THICK REINFORCED CONCRETE PAD ON GRADE FOR OUTDOOR UNIT.
4. PROVIDE FLEXIBLE DUCT CONNECTION AT UNIT.
5. 4" DRYER VENT UP (FLEXIBLE DUCT FROM UNIT TRANSITIONED TO 4" GALVANIZED HARD DUCT. PROVIDE GOOSENECK ON ROOF WITH BACK DRAFT DAMPER.
6. REFRIGERANT LINES DOWN TO BELOW GRADE TO OUTDOOR UNIT ON GRADE. PROVIDE PVC PIPING TRENCH FOR INSULATED REFRIGERANT LINES BELOW GRADE. PIPE SIZING SHALL BE AS RECOMMENDED BY MANUFACTURER.

PLUMBING FIXTURE SCHEDULE:

WC-1	CRANE "RAPIDWAY" MODEL #3464, VITREOUS CHINA ELONGATED SIPHON JET BOWL, WALL MOUNTED, BLACK EXTRA HEAVY DUTY SOLID PLASTIC OPEN FRONT SEAT WITHOUT COVER, CHECK HINGE, ADA COMPLIANT, FLUSH VALVE SHALL BE SLOAN ROYAL #143 OR EQUAL, 1.6 GPF OFFSET CONCEALED CHROME DIAPHRAGM FLUSH VALVE WITH ADA COMPLIANT HANDLE.
LAV-1	AMERICAN STANDARD "DECORUM" 9024.004EC WHITE VITREOUS CHINA WALL HUNG HANDICAP LAVATORY, THREE HOLE MOUNT FOR 4" CENTERS, WITH MOEN 8886 CENTERSET CHROME METERING FAUCET WITH PUSH LEVER ACTIVATION, METAL GRID STRAINER, OFFSET PVC P-TRAP, FLEXIBLE TUBING SUPPLIES, COMPRESSION FITTINGS AND STOPS, PROVIDE TRUEBRO #102W PRE-MOLDED INSULATION ON BOTH WATER SUPPLIES AND DRAIN.
SH-1	MOEN MODEL #8346EP15, HANDICAPPED ANTI-SCALD PRESSURE BALANCED VALVE WITH CHROME WALL PLATE, HAND HELD SHOWER WITH SLIDE BAR, VACUUM BREAKER, ADJUSTABLE LIMIT STOP SET TO 110 DEG.F. AND 1/2" INLETS & OUTLETS, VANDAL RESISTANT, 1.5 GPM MAXIMUM.
SH-2	MOEN MODEL #8375 ANTI-SCALD PRESSURE BALANCED VALVE WITH CHROME WALL PLATE, LEVER HANDLE, ADJUSTABLE LIMIT STOP SET TO 110 DEG. F. AND 1/2" INLETS & OUTLETS, VANDAL RESISTANT, 1.5 GPM MAXIMUM. NOTE: MOEN POSI-TEMP VALVE SHALL BE CONFIGURED FOR TUB/SHOWER WITH TWO 1/2" SUPPLY INLETS AND ONE 1/2" OUTLET FOR SHOWER. 1/2" OUTLET FOR BATHTUB SHALL BE PROVIDED WITH THREADED CAP TO ALLOW DRAINING FOR WINTERIZATION.
SS-1	ELKAY "WELDBILT" MODEL #WNSF8124, 14 GA. TYPE 304 STAINLESS STEEL 27" X 27-1/2" X 14" FLOOR MOUNT SINGLE COMPARTMENT SINK WITH REAR BACKSPASH, ELKAY #LK940BR03L2H CENTERSET WALL MOUNTED CHROME FAUCET ON 8" CENTERS WITH VACUUM BREAKER AND 3" BUCKET HOOK SPOUT, LEVER HANDLES, CENTER DRAIN WITH BASKET STRAINER, CHECK STOPS AND SUPPLIES, ADJUSTABLE LEGS.
WS-1	ELKAY MODEL #EWS2520W6C, 14 GA. TYPE 304 STAINLESS STEEL 25" X 19.5" X 10-1/2" WALL HUNG SINGLE BOWL WASH SINK WITH REAR BACKSPASH, ELKAY #LK940BR03L2H CENTERSET WALL MOUNTED CHROME FAUCET ON 8" CENTERS WITH VACUUM BREAKER AND 3" BUCKET HOOK SPOUT, LEVER HANDLES, REAR CENTER DRAIN WITH BASKET STRAINER, CHECK STOPS AND SUPPLIES, MOUNTING HARDWARE.
WUB-1	GUY GREY #7200TPCPVCHA CLOTHES WASHER UTILITY BOX, 14" X 9-1/4" X 3-5/8", 20 GA. STEEL, WHITE POWDER COAT ON COLD ROLLED STEEL, 2" DRAIN PIPE AND 1/2" CPVC WATER SUPPLY CONNECTIONS, WITH WATER HAMMER ARRESTORS.

PLUMBING EQUIPMENT SCHEDULE:

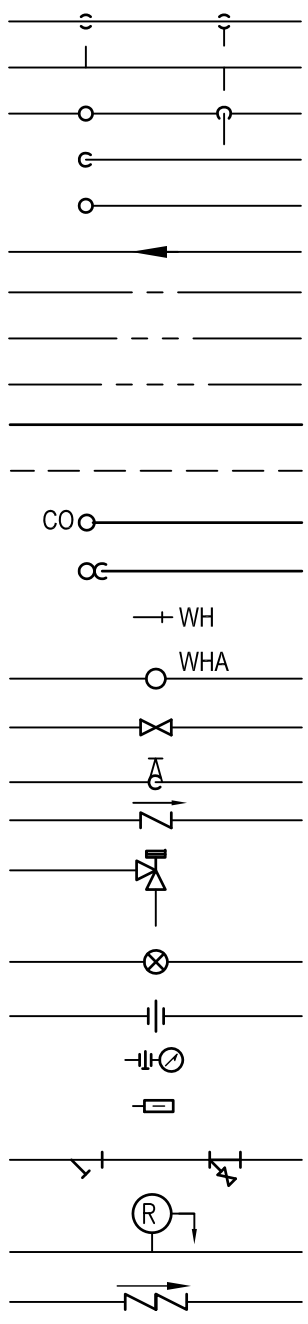
EWH-1	A.O. SMITH #DRE-80 ELECTRIC WATER HEATER, DUAL ELEMENTS, 80 GALLON CAPACITY TANK, 74 GAL./HR. RECOVERY AT 40 DEG.F. ENT AND 90 DEG.F. RISE, 18 KW, 208V/1PH; EXPANSION TANK, PIPING CONNECTIONS INCLUDING T&P RELIEF VALVE ON SIDE OF EQUIPMENT.
EX	AMTROL THERM-X-TROL MODEL #ST-5 THERMAL EXPANSION TANK, 2.0 GALLONS MAXIMUM ACCEPTANCE VOLUME, BUTYL DIAPHRAGM, FACTORY PRECHARGED AT 40 PSI, SET EQUAL TO LINE PRESSURE.
TVM-1	LAWLER #801, HIGH/LOW MIXING VALVE WITH UNION END STOP AND CHECK INLETS WITH REMOVABLE STAINLESS STEEL STRAINERS, PROVIDE WITH BRONZE FINISH DIAL THERMOMETER AND SHUT-OFF VALVE ON ON OUTLET, 18 GPM CAPACITY AT 6 PSI PRESSURE DROP, SET AT 120 DEGREE F LEAVING WATER TEMPERATURE.
TV	WATTS MODEL SERIES LFUSG-B-M2 UNDER-SINK GUARDIAN ASSE 1070 THERMOSTATIC TEMPERING VALVE FOR SINGLE FIXTURE APPLICATIONS, SET VALVE FOR MAXIMUM 109 DEG. F.
HB-1	CHICAGO #293 HOSE BIBB, 1/2" SIZE WITH #293-6 REMOVABLE HANDLE, CHROME FINISH, PROVIDE CHICAGO #E27 SCREW ON TYPE VACUUM BREAKER.
WH	JOSAM #71950-74-72 WALL HYDRANT, 3/4" INLET, NON FREEZE, CAST BRONZE W/ INTEGRAL VACUUM BREAKER, REMOVABLE KEY, UNION ELBOW ASSEMBLY AND WALL CLAMP, NOTE: ALL SUPPLY PIPING SHALL BE CONCEALED IN AN APPROVED MANNER.
WHA	JOSAM #75000 SERIES WATER HAMMER ARRESTER, SIZE AND LOCATION IN ACCORDANCE W/ P.D.I. STD. WH-201, STAINLESS STEEL SHELL, ELASTOMER BELLOWS TYPE, FACTORY PRE-CHARGED WITH THREADED PLUG.
GT-1	PROCEPTOR #GMC 1000 POLYESTER RESIN GREASE INTERCEPTOR WITH INTEGRAL INLET AND OUTLET BAFFLES, 1,000 GALLON, GAS TIGHT MANWAYS WITH GASKETED 24" DIAMETER HEAVY DUTY MANHOLE COVER, ANTI-BOUYANCY SLAB.
FD-A	JOSAM #30000-A FLOOR DRAIN, SATIN FINISH BRONZE TOP, ADJUSTABLE STRAINER, SECURED GRATE, TRAP GUARD INSERT.
FD-B	JOSAM #32100 FLOOR DRAIN, CAST IRON BODY WITH FLASHING COLLAR AND WEEPHOLES, CAST IRON 8" DIAMETER GRATE. NOTE: PROVIDE 3" REVERSIBLE STRAINER FOR DRAINS RECEIVING INDIRECT WASTE OR CONDENSATE. ALL FLOOR DRAINS SHALL BE PROTECTED AGAINST LOSS OF TRAP SEAL BY EVAPORATION BY INSTALLATION OF ELASTOMERIC TRAP GUARD DRAIN INSERT, EQUAL TO PROSET SYSTEMS MODEL #TG.
CO	JOSAM CLEANOUT WALL CHROME FLUSH WALL PLATE, RECESSED PLUG. FLOOR (UNFINISHED) - SATIN NIKALOY BRONZE TOP, RECESSED PLUG.

PLUMBING FIXTURE INSTALLATION SCHEDULE

MARK	FIXTURE	MOUNTING HEIGHT, IN	COLD WATER, IN	HOT WATER, IN	VENT SIZE, IN	WASTE SIZE, IN
WC-1	WATER CLOSET, WALL MTD, HC	17	1/2"	-	2"	4"
LAV-1	PUBLIC LAVATORY, HC	34	1/2"	1/2"	1-1/2"	2"
SH-1	SHOWER, HC	VALVE AT 38" MIN. TO 48" MAX.	1/2"	1/2"	1-1/2"	2"
SH-2	SHOWER	VALVE AT 38", SHOWER ARM 72"	1/2"	1/2"	1-1/2"	2"
SS-1	SERVICE SINK	FLOOR	1/2"	1/2"	1-1/2"	2"
WS-1	WASH SINK	WALL	1/2"	1/2"	2"	2"
WUB-1	WASHER UTILITY BOX	42" BOTTOM OF BOX	1/2"	1/2"	2"	3"

NOTES:
1. SIZES GIVEN ARE FOR ONE FIXTURE ONLY.
2. TRAP AND WASTE PIPE SIZES FOR FLOOR DRAINS, FLOOR SINKS, AND CLEAN OUTS SHALL BE THE SAME SIZE AS THE DRAIN SIZE INDICATED ON PLANS.

LEGEND

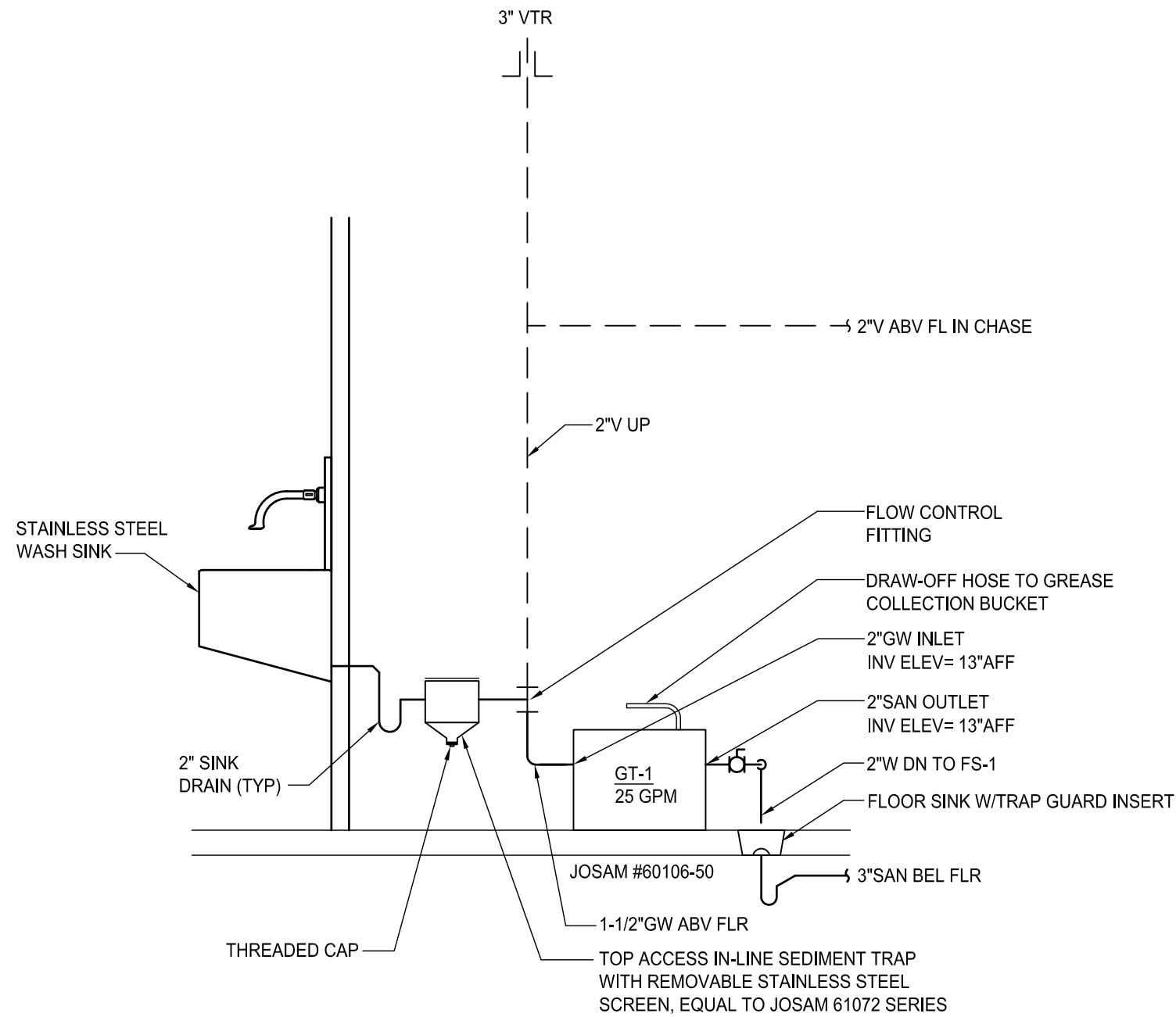


ABBREVIATIONS

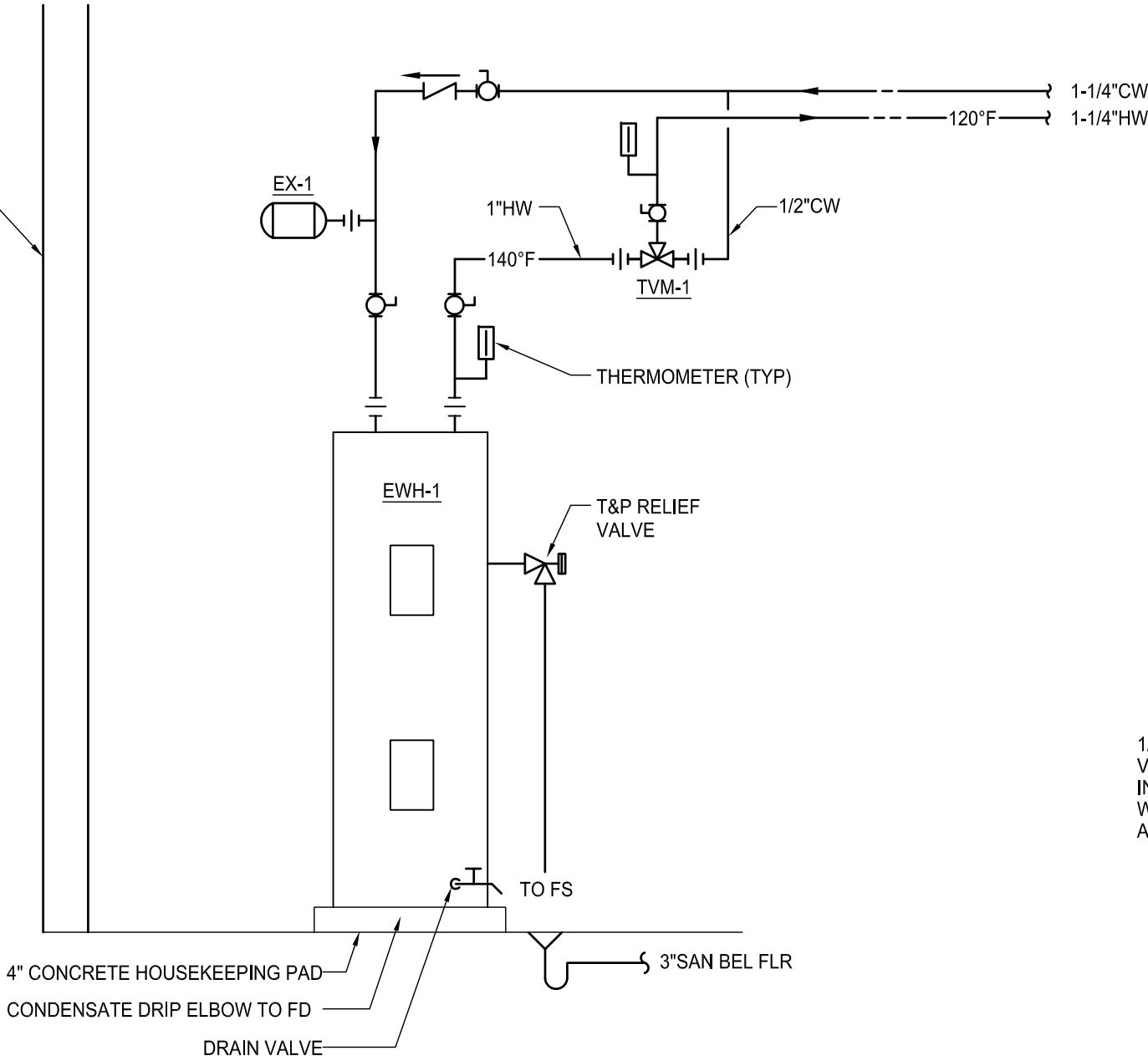
AAV	AIR ADMITTANCE VALVE
ABV	ABOVE
AFB	ABOVE FINISHED FLOOR
BFF	BELOW FINISHED FLOOR
BTU	BRITISH THERMAL UNIT
BEL	BELOW
CLG	CEILING
CO	CLEANOUT
CONN	CONNECT, CONNECTION
CW	COLD WATER
CONT	CONTINUED
DN	DOWN
EA	EACH
ELEV	ELEVATION
EWV	ELECTRIC WATER COOLER
F	DEGREES FAHRENHEIT
FD	FLOOR DRAIN
FIN	FINISHED
FLR	FLOOR
FR	FROM
FT	FEET
GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HC	HANDICAPPED ACCESSIBLE
HW	HOT WATER
HP	HORSEPOWER
IN	INCH, INCHES
INV	INVERT
MAX	MAXIMUM
MBH	THOUSAND BTU PER HOUR
MIN	MINIMUM
SH	SHEET
TYP	TYPICAL
V	SANITARY VENT
VTR	VENT THRU ROOF
W	SANITARY WASTE
WCO	WALL CLEANOUT
WH	WALL HYDRANT
WHA	WATER HAMMER ARRESTER

GENERAL PLUMBING NOTES:

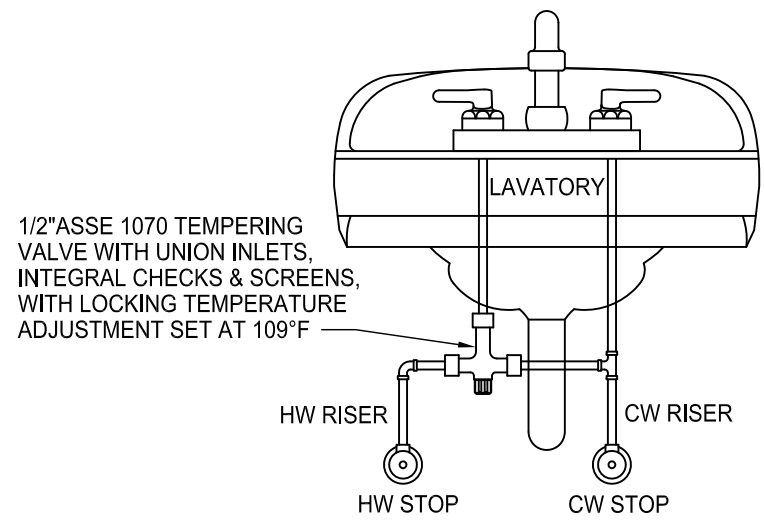
- MAKE PIPING CONNECTIONS AS REQUIRED TO ALL FIXTURES AND EQUIPMENT EVEN THOUGH ALL BRANCH MAINS, ELBOWS AND CONNECTIONS ARE NOT SHOWN.
- REFER TO ARCHITECTURAL WORKING DRAWING BEFORE ROUGHING-IN PLUMBING FIXTURES.
- SLOPES AND INVERT ELEVATIONS OF EXISTING SEWER SHALL BE ESTABLISHED AND VERIFIED BY CONTRACTOR BEFORE ANY PIPING IS INSTALLED IN ORDER THAT PROPER SLOPE WILL BE MAINTAINED AND NECESSARY INVERT ELEVATIONS OBTAINED.
- ALL PIPES SHALL BE COORDINATED WITH OTHER NEW AND EXISTING DUCTS, PIPES, LIGHTS, STRUCTURAL SYSTEM, CEILING SUPPORTS AND FRAMING BEFORE INSTALLATION. MINOR PIPE OFFSETS SHALL BE PROVIDED AS REQUIRED. MEASUREMENTS FOR VERTICAL CLEARANCES SHALL BE TAKEN AT THE JOB SITE BEFORE INSTALLATION OF ANY PIPING.
- WASTE PIPE BELOW FLOOR, VENT PIPING ABOVE CEILING, PIPING OFFSET FOR CLARITY.
- DOMESTIC WATER PIPING SHALL BE INSTALLED ABOVE CEILINGS UNLESS NOTED OTHERWISE. DOMESTIC WATER PIPING SHOWN IN PIPE CHASE WALLS SHALL BE INSTALLED IN CHASE SPACE, PIPING OFFSET FOR CLARITY. DOMESTIC WATER PIPING SHALL NOT BE INSTALLED IN LOCATIONS SUBJECT TO FREEZING OR SPACES EXTERIOR TO BUILDING INSULATION.
- ALL PIPING, FIXTURES AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S PUBLISHED INSTRUCTIONS.
- MATERIALS AND INSTALLATION SHALL COMPLY WITH LOCAL CODES, APPLICABLE PROVISIONS OF LATEST EDITION OF NATIONAL FIRE PROTECTION ASSOCIATION, LOCAL UTILITY REGULATIONS AND GOVERNMENTAL DEPARTMENTS HAVING JURISDICTION.
- WHERE PIPE CONNECTIONS ARE SHOWN CONNECTING TO EXISTING, CONTRACTOR SHALL DETERMINE EXACT LOCATIONS AND CONNECTION SIZES BY FIELD VERIFICATION PRIOR TO INSTALLATION.
- RETURN AIR PLENUM NOTE: ALL PIPING MATERIAL LOCATED IN RETURN AIR PLENUMS SHALL MEET THE REQUIREMENTS OF THE INTERNATIONAL MECHANICAL CODE, SECTION 602.2.1.
- PIPING SHALL NOT BE INSTALLED ABOVE ELECTRICAL PANELS. COORDINATE INSTALLATION OF PIPES WITH ELECTRICAL PANELS WHEN SHOWN NEAR PANELS OR OVER ELECTRICAL ROOMS.



DETAIL - GREASE TRAP (GT-1)
NO SCALE



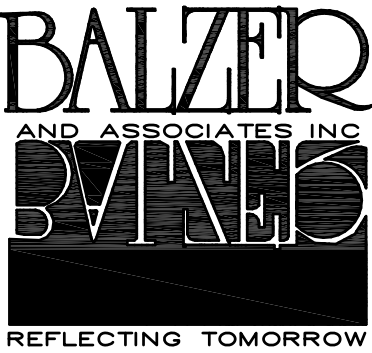
DETAIL - WATER HEATER (EWH-1)
NO SCALE



LAVATORY TEMPERING VALVE DETAIL (TV)
NO SCALE



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EXPLORE PARK
FLEX POD "A" BATHHOUSE
PLUMBING LEGEND, NOTES & DETAILS
EXPLORE PARK
COUNTY OF ROANOKE, VIRGINIA

DRAWN BY JNB
DESIGNED BY JNB
CHECKED BY JNB
DATE 05/10/2018
SCALE
REVISIONS:

SHEET NO.

P1.1

JOB NO. 04180001.00

PLUMBING SPECIFICATIONS

1. GENERAL PROVISIONS
- A. INSTALLATION SHALL BE IN STRICT ACCORDANCE WITH THE VIRGINIA STATEWIDE BUILDING CODE INCLUDING ALL REFERENCED CODES AND STANDARDS AND IN ACCORDANCE WITH MANDATES OF THE LOCAL BUILDING OFFICIALS AND/OR LOCAL AUTHORITY HAVING JURISDICTION.

B. THE GENERAL ARRANGEMENT AND LOCATIONS OF PIPING, FIXTURES AND EQUIPMENT ARE INDICATED BY THE DRAWINGS AND SHALL BE INSTALLED IN ACCORDANCE THEREWITH; WITH THE EXCEPTION OF SUCH CHANGES AS MAY BE REQUIRED ON ACCOUNT OF OTHER TRADES. CONTRACTOR SHALL COORDINATE WORK WITH INSTALLATION OF OTHER SUBCONTRACTORS.

C. PLUMBING WORK SHALL BE COORDINATED WITH THE CONTRACTOR AS TO SCHEDULING, DIMENSIONING AND LOCATION OF EQUIPMENT.

D. MAJOR ITEMS ARE SHOWN ON THE PROJECT PLANS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INCIDENTAL ITEMS REQUIRED TO PROVIDE A COMPLETE AND FUNCTIONAL SYSTEM.

E. ALL PIPING SYSTEMS SHALL EXTEND 5 FEET BEYOND THE BUILDING LINE UNLESS INDICATED OTHERWISE. REFER TO CIVIL DRAWINGS FOR PIPING OUTSIDE THIS AREA.

F. TRADE NAMES AND CATALOG NUMBERS SHALL BE INTERPRETED AS ESTABLISHING A GENERAL DESIGN AND STANDARD OF QUALITY AND SHALL NOT BE CONSTRUED AS LIMITING COMPETITION. UNLESS STATED OTHERWISE, THE CONTRACTOR MAY USE ANY ARTICLE WHICH, IN HIS JUDGEMENT, AND WITH WRITTEN COMMENT FROM THE ARCHITECT/ENGINEER INDICATING NO OBJECTION, IS EQUAL OR SUPERIOR TO THAT SPECIFIED. DRAWINGS SHOWING CHANGES OR REVISIONS REQUIRED BY THE SUBSTITUTION FOR SPECIFIED ITEMS SHALL BE SUBMITTED WITH THE SHOP DRAWING DATA, AND THE COSTS OF ALL SUCH CHANGES SHALL BE BORNE BY THE CONTRACTOR.

G. SIMILAR ITEMS SHALL BE PROVIDED BY A SINGLE MANUFACTURER.

H. ALL REQUIRED WALL OR FLOOR OPENINGS SHALL BE COORDINATED WITH THE CONTRACTOR.

I. ALL PIPING SHALL BE ABOVE CEILING UNLESS INDICATED OTHERWISE.

J. ALL EQUIPMENT SHALL BE WIPED CLEAN, REMOVING ALL TRACES OF OIL, DIRT, OR PAINT SPOTS.

K. PROVIDE SUPPORTS TO RIGIDLY ATTACH ALL EQUIPMENT. APPURTENANCES AND PIPE AS REQUIRED FOR SUPPORT. PRIOR TO INSTALLATION OF HANGERS AND INSERTS, THE CONTRACTOR SHALL COORDINATE LOCATIONS AND REQUIREMENTS TO MINIMIZE CONFLICTS WITH OTHER BUILDING SYSTEMS. INSTALLATION OF PIPE HANGERS AND SUPPORTS SHALL BE IN STRICT ACCORDANCE WITH MSS SP-58, 69 AND 89.

L. CONTRACTOR SHALL MAKE FINAL CONNECTIONS TO ALL EQUIPMENT INDICATED TO BE FURNISHED BY OTHERS.
2. SUBMISSION OF SHOP DRAWINGS, PRODUCT DATA, SAMPLES AND PROJECT INFORMATION
- A. SHOP DRAWINGS SHALL BE SUBMITTED FOR THE FOLLOWING ITEMS:

(1) CLEANOUTS

(2) FLOOR DRAINS

(3) BALL VALVES

(4) CHECK VALVES

(5) SHOCK ABSORBERS

(6) WATER HEATERS

(7) PLUMBING FIXTURES

(8) ALL ITEMS LISTED ON PLUMBING EQUIPMENT SCHEDULE.

B. IDENTIFY ALL PLUMBING SHOP DRAWINGS, PRODUCT DATA AND SAMPLES WITH THE NAME OF THE PROJECT. CLEARLY MARK THE SPECIFIC ITEMS INTENDED FOR USE. SUBMIT ALL RELATED ITEMS AT ONE TIME.

C. PRIOR TO SUBSTANTIAL COMPLETION OF THE PROJECT, SUBMIT THE FOLLOWING INFORMATION FOR REVIEW AND APPROVAL.

(1) "AS BUILT" DRAWINGS.
3. GUARANTEE: ALL MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED TO BE FREE FROM DEFECTS FOR A PERIOD OF ONE (1) YEAR FROM DATE OF ACCEPTANCE AND CONTRACTOR SHALL MAKE GOOD, WITHOUT ADDITIONAL COST TO THE OWNER, ANY DEFECTS WHICH MAY APPEAR WITHIN THAT PERIOD. MANUFACTURER'S WARRANTIES EXTENDING BEYOND ONE YEAR SHALL BE PROCESSED AND TURNED OVER TO THE OWNER.
4. "AS BUILT" DRAWINGS: CONTRACTOR SHALL KEEP AN ACCURATE RECORD OF THE LOCATION OF ALL CONCEALED PIPING, VALVES, CONTROLS, ETC., BOTH INTERIOR AND EXTERIOR. ON COMPLETION OF THE WORK, ONE PRINT EACH OF THE CONTRACT DRAWINGS WHICH ARE APPLICABLE SHALL BE NEATLY AND CLEARLY MARKED IN COLOR TO SHOW ALL VARIATIONS BETWEEN THE WORK ACTUALLY PROVIDED AND THAT INDICATED ON THE CONTRACT DRAWINGS.
5. ACCESS DOORS: ACCESS DOORS SHALL BE PROVIDED FOR ALL CONCEALED VALVES, CONTROLS, AND ANY OTHER EQUIPMENT OR MATERIALS REQUIRING INSPECTION OR MAINTENANCE. ACCESS DOORS SHALL BE FURNISHED FOR FLOORS, WALLS AND CEILINGS, OF ADEQUATE SIZE SO THAT CONCEALED ITEMS WILL BE READILY ACCESSIBLE FOR SERVICING OR FOR REMOVAL AND REPLACEMENT IF NECESSARY.
6. PIPING SPECIALTIES
- A. PIPE ESCUTCHEONS: INSTALL PIPE ESCUTCHEONS ON EACH PIPE PENETRATION THRU FLOORS, WALLS PARTITIONS, AND CEILINGS WHERE PENETRATION IS EXPOSED TO VIEW AND ON EXTERIOR OF BUILDING. SECURE ESCUTCHEON TO PIPE OR INSULATION SO ESCUTCHEON COVERS PENETRATION HOLE, AND IS FLUSH WITH ADJOINING SURFACE. PROVIDE SHEET STEEL ESCUTCHEONS, SOLID OR SPLIT HINGED. FOR AREAS WHERE WATER AND CONDENSATION CAN BE EXPECTED TO ACCUMULATE, PROVIDE CAST BRASS OR SHEET BRASS ESCUTCHEONS, SOLID OR SPLIT HINGED.

B. PIPE SLEEVES: INSTALL PIPE SLEEVES WHERE PIPING PASSES THROUGH WALLS, FLOORS, CEILINGS, AND ROOFS. DO NOT INSTALL SLEEVES THROUGH STRUCTURAL MEMBERS OF WORK, EXCEPT AS DETAILED ON DRAWINGS, OR AS REVIEWED BY ARCHITECT/ENGINEER. SIZE SLEEVES SO THAT PIPING AND INSULATION (IF ANY) WILL HAVE FREE MOVEMENT IN SLEEVE, INCLUDING ALLOWANCE FOR THERMAL EXPANSION; BUT NOT LESS THAN 2 PIPE SIZES LARGER THAN PIPING RUN. INSTALL LENGTH

OF SLEEVE EQUAL TO THICKNESS OF CONSTRUCTION PENETRATED, AND FINISH FLUSH TO SURFACE; EXCEPT FLOOR SLEEVES. EXTEND FLOOR SLEEVES 1/4 INCH ABOVE LEVEL FLOOR FINISH, AND 3/4 INCH ABOVE FLOOR FINISH SLOPED TO DRAIN. PROVIDE TEMPORARY SUPPORT OF SLEEVES DURING PLACEMENT OF CONCRETE AND OTHER WORK AROUND SLEEVES, AND PROVIDE TEMPORARY CLOSURE TO PREVENT CONCRETE AND OTHER MATERIALS FROM ENTERING SLEEVES.

7. INSULATION

- A. FLAME/SMOKE RATINGS: PROVIDE COMPOSITE PLUMBING INSULATION (INSULATION, JACKETS, COVERINGS, SEALERS, MASTICS AND ADHESIVES) WITH FLAME-SPREAD RATING OF 25 OR LESS, AND SMOKE-DEVELOPED RATING OF 50 OR LESS, AS TESTED BY ASTM E84 METHOD. INSULATION SHALL BE LABELED BY THE MANUFACTURER, THE LABEL SHALL INDICATE THE INSULATING VALUE, FLAME SPREAD AND SMOKE-DEVELOPED RATING.
- B. SUBMITTALS: SUBMIT MANUFACTURER'S SPECIFICATIONS AND INSTALLATION INSTRUCTIONS FOR EACH TYPE OF PLUMBING INSULATION. SUBMIT SCHEDULE SHOWING MANUFACTURER'S PRODUCT NUMBER, THICKNESS, AND FURNISHED ACCESSORIES FOR EACH PLUMBING SYSTEM REQUIRING INSULATION.
- C. INSTALLATION: INSULATION SHALL BE APPLIED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS USING ONLY ADHESIVES, MASTICS AND PLUMBING FASTENERS APPROVED BY THE INSULATION MANUFACTURER. INSULATION SHALL NOT BE APPLIED UNTIL AFTER THE EQUIPMENT HAS BEEN TESTED WITH RESULTS ACCEPTABLE TO THE ARCHITECT/ENGINEER. INSULATION WITH A VAPOR BARRIER JACKET SHALL BE APPLIED WITH A CONTINUOUS, UNBROKEN VAPOR SEAL AND ALL JOINTS SHALL BE SEALED WITH A VAPOR BARRIER ADHESIVE UNLESS OTHERWISE INDICATED. STAPLES, STICK CLIPS AND HANGERS SHALL BE VAPOR SEALED WHERE THEY PUNCTURE VAPOR BARRIER JACKETS.
- D. MATERIALS:

(1) GLASS FIBER PIPE INSULATION: HEAVY DENSITY PREFORMED PIPE INSULATION WITH OPERATING TEMPERATURE RANGE OF -60 DEGREES F TO 350 DEGREES F, THERMAL CONDUCTIVITY "K"=0.24 BTU-IN/HOUR-SF-DEG F AT 100 DEGREES F. FACTORY APPLIED JACKET (ASJ) SHALL CONSIST OF WHITE KRAFT PAPER BONDED TO ALUMINUM FOIL AND REINFORCED WITH GLASS FIBER YARN, EQUAL TO OWENS-CORNING ASJ.

(2) CELLULAR FOAM PIPE INSULATION: TUBULAR, FLEXIBLE, FIRE RESISTANT INSULATION WITH OPERATING TEMPERATURE RANGE OF -40 DEGREES F TO 220 DEGREES F, THERMAL CONDUCTIVITY "K"=0.27 BTU-IN/HOUR-SF-DEG F AT 75 DEGREES F. NO JACKET REQUIRED. EQUAL TO ARMSTRONG ARMAFLEX AP.

(3) POLYETHYLENE PIPE INSULATION: INSULATION MATERIALS CORPORATION OF AMERICA (IMCOA), FLEXIBLE CLOSED CELL POLYETHYLENE TUBING, ASTM C534, "K"=0.24 AT 75 DEGREES F, SERVICE TEMPERATURE -110F TO 210F, NO JACKET REQUIRED.

E. PIPE INSULATION

- (1) INSULATION OMITTED: OMIT INSULATION ON EXPOSED PLUMBING FIXTURE RUNOUTS FROM FACES OF WALL OR FLOOR TO FIXTURE; ON UNIONS, FLANGES, STRAINERS, FLEXIBLE CONNECTIONS, AND EXPANSION JOINTS.

(2) COVER VALVES, FITTINGS AND SIMILAR ITEMS IN EACH PIPING SYSTEM WITH EQUIVALENT THICKNESS AND COMPOSITION OF INSULATION AS APPLIED TO ADJOINING PIPE RUN.

(3) EXTEND PIPING INSULATION WITHOUT INTERRUPTION THROUGH WALLS, FLOORS AND SIMILAR PIPING PENETRATIONS, EXCEPT WHERE OTHERWISE INDICATED.

(4) INSTALL PROTECTIVE METAL SHIELDS AND INSULATED INSERTS WHEREVER NEEDED TO PREVENT COMPRESSION OF INSULATION.

(5) PIPE HANGER INSULATION INSERTS: BUTT PIPE INSULATION AGAINST PIPE INSULATION INSERTS. FOR HOT PIPES, APPLY 3 INCH WIDE VAPOR BARRIER TAPE OR BAND OVER THE BUTT JOINTS. FOR COLD PIPING APPLY WET COAT OF VAPOR BARRIER LAP CEMENT ON BUTT JOINTS AND SEAL JOINTS WITH 3 INCH WIDE VAPOR BARRIER TAPE OR BAND.

(6) DOMESTIC WATER PIPING, ABOVE GROUND: PIPING SHALL BE INSULATED WITH GLASS FIBER PIPE INSULATION. CELLULAR FOAM OR POLYETHYLENE PIPE INSULATION MAY BE USED ON PIPE SIZES 1 INCH AND SMALLER. VAPOR SEAL IS NOT REQUIRED ON HOT WATER PIPING.

MATERIAL HANDLED	PIPE SIZE	INSULATION THICKNESS
COLD WATER	ALL SIZES	1/2"
HOT WATER AND HOT WATER RECIRCULATING	ALL SIZES	1/2"

8. PLUMBING PIPING

- A. DOMESTIC WATER PIPING ABOVE GROUND

COPPER TUBE AND FITTINGS ASTM B88, TYPE L HARD DRAWN

FITTINGS: WROUGHT COPPER, ASME B16.22 OR CAST COPPER ALLOY ASME B16.18.

JOINTS: ABV GROUND, ASTM B32 LEAD FREE SOLDER, ASTM B813 LEAD FREE FLUX.
- B. DOMESTIC WATER PIPING ABOVE GROUND

PIPE: SCHEDULE 80 CPVC PLASTIC PIPE ASTM D 2846

FITTINGS: CPVC SOCKET FITTINGS

JOINTS: SOLVENT CEMENT JOINTS FOR CPVC

NOTE: ALL PLASTIC PIPE FOR DOMESTIC WATER USAGE SHALL BE NSF 14 APPROVED, FITTINGS SHALL BE BY SAME MANUFACTURER AS PIPE PROVIDED.
- C. STORM, SOIL, WASTE AND VENT PIPING BELOW GRADE

SIZE: 4 INCHES AND SMALLER

PIPE: SCH. 40 PVC-DWV ASTM D-2665

FITTINGS: PVC SOCKET FITTINGS (DWV)

JOINTS: SOLVENT CEMENT JOINTS
- D. STORM, SOIL, WASTE AND VENT PIPING ABOVE GRADE

SIZE: 4 INCHES AND SMALLER

PIPE: HUBLESS ASTM C-564

FITTINGS: HUBLESS CAST IRON

JOINTS: NEOPRENE SLEEVES AND STAINLESS STEEL BANDS

E. ALL PIPE OF THE SAME SIZE SHALL BE THE SAME MATERIAL.

F. SLOPE ALL DRAIN LINES 1/4 INCH PER FOOT MINIMUM FOR SIZES LESS THAN 4 INCHES; SLOPE 1/8 INCH PER FOOT FOR SIZES 4 INCHES AND LARGER.

G. SOIL, WASTE AND VENT PIPING LOCATED BELOW GRADE SHALL BE MINIMUM 2 INCH SIZE.

H. VENTS SHALL EXTEND 12 INCHES ABOVE THE ROOF. ROOF FLASHING SHALL BE COORDINATED WITH BY THE CONTRACTOR.

- I. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL BELOW GRADE WORK IN ACCORDANCE WITH THE FOLLOWING:

(1) TRENCHES SHALL BE GRADED TO UNIFORM PITCH AND SHALL BE NO WIDER THAN NECESSARY AND FREE FROM LOOSE EARTH.

(2) CLEAN BACKFILL SHALL BE USED AND THOROUGHLY TAMPED IN LAYERS NOT EXCEEDING 6 INCHES TO A MINIMUM DEPTH OF 1 FOOT ABOVE PIPE.

(3) COMPACTED BACKFILL SHALL BE USED FOR ENTIRE DEPTH OF EXCAVATION UNDER SLAB ON GRADE CONSTRUCTION.

J. DOMESTIC HOT AND COLD WATER PIPING SHALL BE 1/2 INCH SIZE UNLESS INDICATED OTHERWISE.

9. CLEANOUTS

- A. CLEANOUTS SHALL BE THE SAME SIZE AS LINE SERVED, BUT NOT LARGER THAN 4 INCHES, AND SHALL BE PROVIDED AT THE BASE OF EACH SOIL AND WASTE STACK, AT ALL POINTS WHERE DIRECTION CHANGE IS MORE THAN 45 DEGREES, AT MINIMUM INTERVALS OF 50 FEET FOR 4 INCH AND SMALLER PIPING, AT MINIMUM INTERVALS OF 100 FEET FOR PIPING LARGER THAN 4 INCHES, AS REQUIRED BY CODE AND AS INDICATED ON THE DRAWINGS. COVERS SHALL BE SET FLUSH WITH FLOOR OR WALL.

10. FLOOR DRAINS & FLOOR SINK

- A. PROVIDE FLOOR DRAINS OF SIZE AND TYPE AS INDICATED ON DRAWINGS. ALL DRAINS CONNECTING TO SANITARY SEWER SYSTEM SHALL BE FURNISHED WITH ELASTOMERIC TRAP SEAL AND P-TRAP. DRAINS SHALL HAVE OUTLET COMPATIBLE WITH PIPING SYSTEM TO WHICH IT IS CONNECTED.

11. PLUMBING VALVES

- A. PROVIDE SHUT-OFF VALVE AND UNION OR EQUIVALENT AT EACH HOT AND COLD WATER EQUIPMENT CONNECTION. PROVIDE SHUT-OFF VALVE ON EACH BRANCH OR RISER THAT SERVES TWO OR MORE PLUMBING FIXTURES.
- B. GATE VALVES 2-1/2 INCHES AND SMALLER: ALL BRONZE, RISING STEM, SOLID WEDGE DISC. STOCKHAM B-100 OR B-108.
- C. GLOBE VALVES: ALL BRONZE, RENEWABLE COMPOSITION DISC. STOCKHAM B-16 OR B-14-T.
- D. CHECK VALVES IN HORIZONTAL PIPES:

(1) 2 INCHES AND SMALLER: ALL BRONZE, REGRINDING BRONZE DISC, HORIZONTAL SWING, Y-PATTERN. STOCKHAM B-319OR B-309.
- E. CHECK VALVES IN VERTICAL PIPES AND PUMP DISCHARGE: SILENT CHECK VALVE WITH SEMI-STEEL BODY, BRONZE TRIM AND STAINLESS STEEL SPRING. METRAFLEX 700 SERIES.
- F. BALL VALVES MAY BE USED IN LIEU OF GATE VALVES 2 INCHES AND SMALLER. BALL VALVES SHALL HAVE BRONZE BODY, BRONZE BALL AND TPE SEATS AND SEALS. STOCKHAM S-216BRR1 OR S-216BRRS.

12. WATER HEATERS

- A. NSF LABELS: PROVIDE WATER HEATERS WHICH HAVE BEEN LISTED AND LABELED BY THE NATIONAL SANITATION FOUNDATION.
- B. UL AND NEMA COMPLIANCE: PROVIDE ELECTRIC MOTORS AND ELECTRICAL COMPONENTS REQUIRED AS PART OF PLUMBING EQUIPMENT, WHICH HAVE BEEN LISTED AND LABELED BY UNDERWRITERS LABORATORIES AND COMPLY WITH NEMA STANDARDS.
- C. NEC COMPLIANCE: COMPLY WITH NATIONAL ELECTRICAL CODE (ANSINFPA 70) AS APPLICABLE TO INSTALLATION AND ELECTRICAL CONNECTIONS OF ANCILLARY ELECTRICAL COMPONENTS OF PLUMBING EQUIPMENT.
- D. ASHRAE COMPLIANCE: WATER HEATERS SHALL COMPLY WITH ASHRAE STANDARD 90.
- E. WATER HEATERS SHALL BE FURNISHED WITH ASME RATED TEMPERATURE AND PRESSURE RELIEF VALVE WITH TEST LEVER.

13. PLUMBING FIXTURES

- A. CODES AND STANDARDS: COMPLY WITH APPLICABLE PORTIONS OF NATIONAL STANDARD PLUMBING CODE AND THE VIRGINIA STATEWIDE BUILDING CODE, PERTAINING TO MATERIALS AND INSTALLATION OF PLUMBING FIXTURES.

(1) ANSI STANDARDS: COMPLY WITH APPLICABLE ANSI STANDARDS PERTAINING TO PLUMBING FIXTURES AND SYSTEMS.

(2) ANSI AND ADA COMPLIANCE: CONSTRUCT AND INSTALL BARRIER FREE PLUMBING FIXTURES IN ACCORDANCE WITH ANSI STANDARD A117.1 "SPECIFICATIONS FOR MAKING BUILDINGS AND FACILITIES ACCESSIBLE TO AND USABLE BY PHYSICALLY HANDICAPPED PEOPLE" AND WITH THE "AMERICANS WITH DISABILITIES ACT GUIDELINES".
- B. ALL EXPOSED FIXTURE SUPPLIES AND WASTE LINES SHALL BE CHROME PLATED, NO EXPOSED COPPER, PVC AND/OR CAST IRON PIPING IS ALLOWED. UTILIZE CHROME NIPPLES AS REQUIRED FOR DOMESTIC ROUGH-IN.
- C. PLUMBING FIXTURES SHALL BE POSITIVELY VENTED AND TRAPPED IN ACCORDANCE WITH THE VIRGINIA STAEWIDE BUILDING CODE, LATEST EDITION. WET VENTING IS ALLOWED IF WASTE PIPING IS OVERSIZED AND IN ACCORDANCE WITH CODE PROVISIONS. LOCATION OF VENT SHALL NOT EXCEED MAXIMUM DISTANCES TO THE TRAP AS ESTABLISHED WITHIN THE CODE.

14. CLEANING AND TESTING

- A. ALL WATER PIPING, VALVES, ETC. SHALL BE THOROUGHLY FLUSHED OF FOREIGN MATTER AND TESTED FOR LEAKS IN ACCORDANCE WITH THE VIRGINIA STATEWIDE BUILDING CODE, LATEST EDITION. ANY LEAKAGE SHALL BE REPAIRED. DISINFECT DOMESTIC WATER PIPING INCLUDING WATER SERVICE PIPING IN ACCORDANCE WITH AWWA C601.
- B. ALL DRAIN, WASTE AND VENT PIPING SHALL BE TESTED FOR LEAKS IN ACCORDANCE WITH THE VIRGINIA STATEWIDE BUILDING CODE, LATEST EDITION. NO VISIBLE DROP IN WATER LEVEL WILL BE ACCEPTABLE.

END OF SPECIFICATIONS



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EXPLORE PARK
FLEX POD "A" BATHHOUSE

PLUMBING SPECIFICATIONS

EXPLORE PARK
COUNTY OF ROANOKE, VIRGINIA

DRAWN BY JNB

DESIGNED BY JNB

CHECKED BY JNB

DATE 05/10/2018

SCALE _____

REVISIONS:



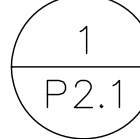
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SHEET NO.

P1.2

JOB NO. 04180001.00



SCALE = 3/8"=1'-0"

2. PROVIDE 25 GPM ON-FLOOR TYPE GREASE TRAP WITH DRAW OFF HOSE AND COLLECTION BUCKET. REFER TO DETAIL SHEET P0.1.



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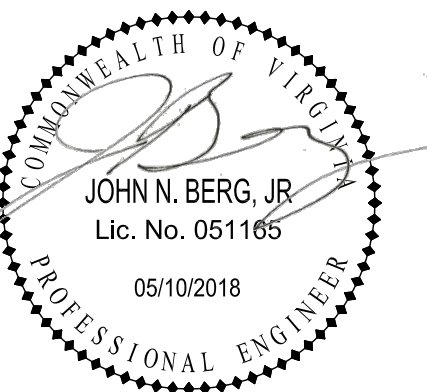
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**EXPLORE PARK
FLEX POD "A" BATHHOUSE**

PLUMBING FLOOR PLAN - W&V

COUNTY OF ROANOKE, VIRGINIA

DRAWN BY JNB

DESIGNED BY JNB

CHECKED BY JNB

DATE 05/10/2018

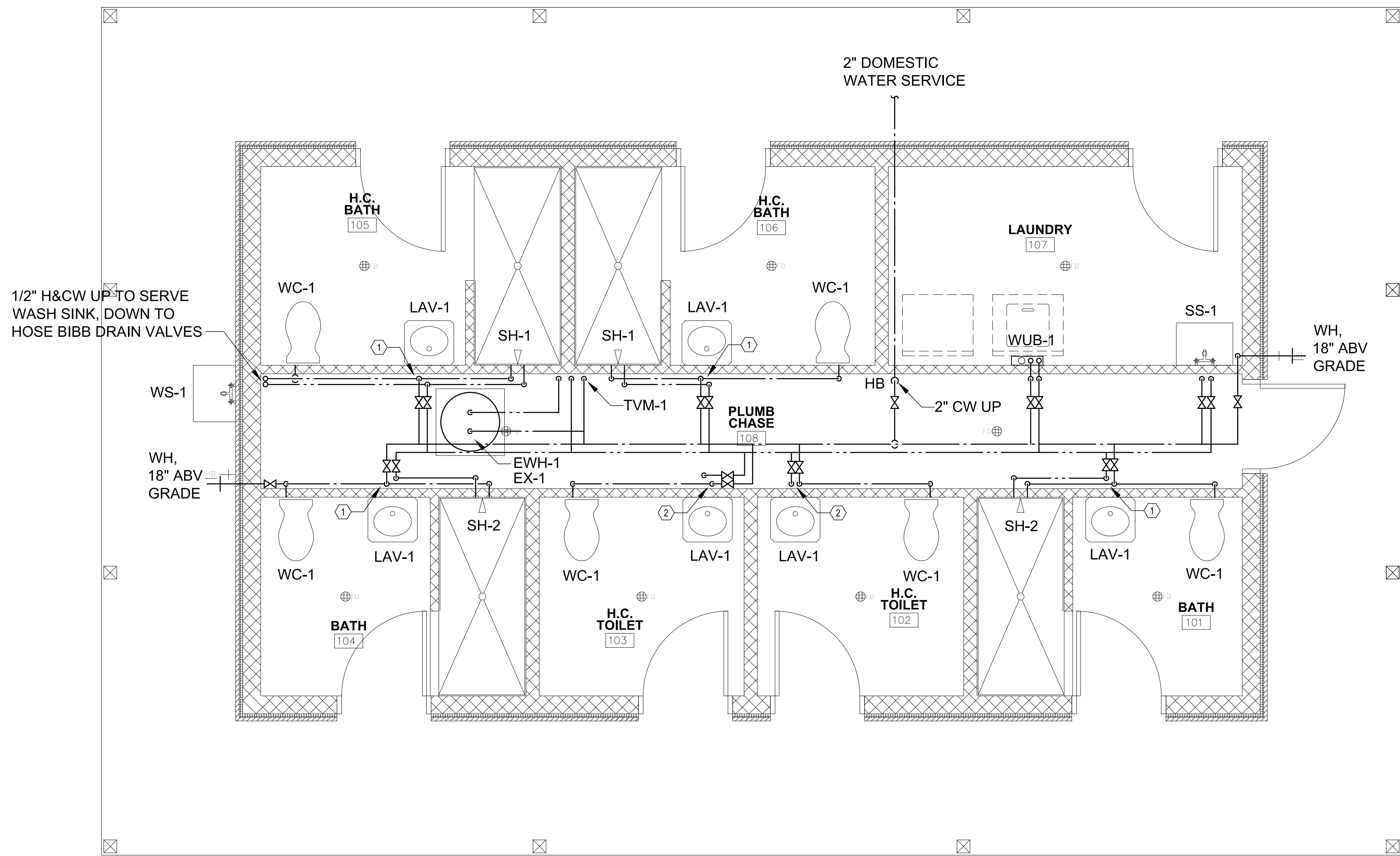
SCALE _____

REVISIONS:

SHEET NO.

P2.1

JOB NO. 04180001.00



1
P2.2

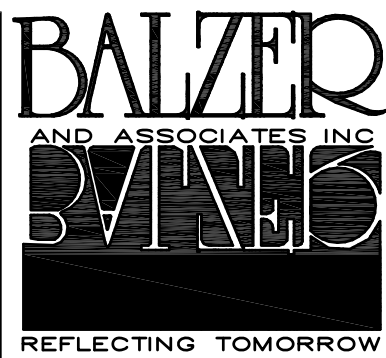
PLUMBING FLOOR PLAN - WATER

SCALE = 3/8"=1'-0"

- GENERAL NOTES:
- COORDINATE WATER SERVICE ENTRANCE LOCATION AND DEPTH OF COVER WITH SITE UTILITY PLAN.
- KEYED NOTES:
- 1 1/4" CW AND 1/2" HW DN SERVING WATER CLOSET, LAVATORY AND SHOWER. SEE RISER DIAGRAM 'A' ON SHEET P3.1.
 - 1 1/4" CW AND 1/2" HW DN SERVING WATER CLOSET AND LAVATORY. SEE RISER DIAGRAM 'B' ON SHEET P3.1.

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ENGINEERING

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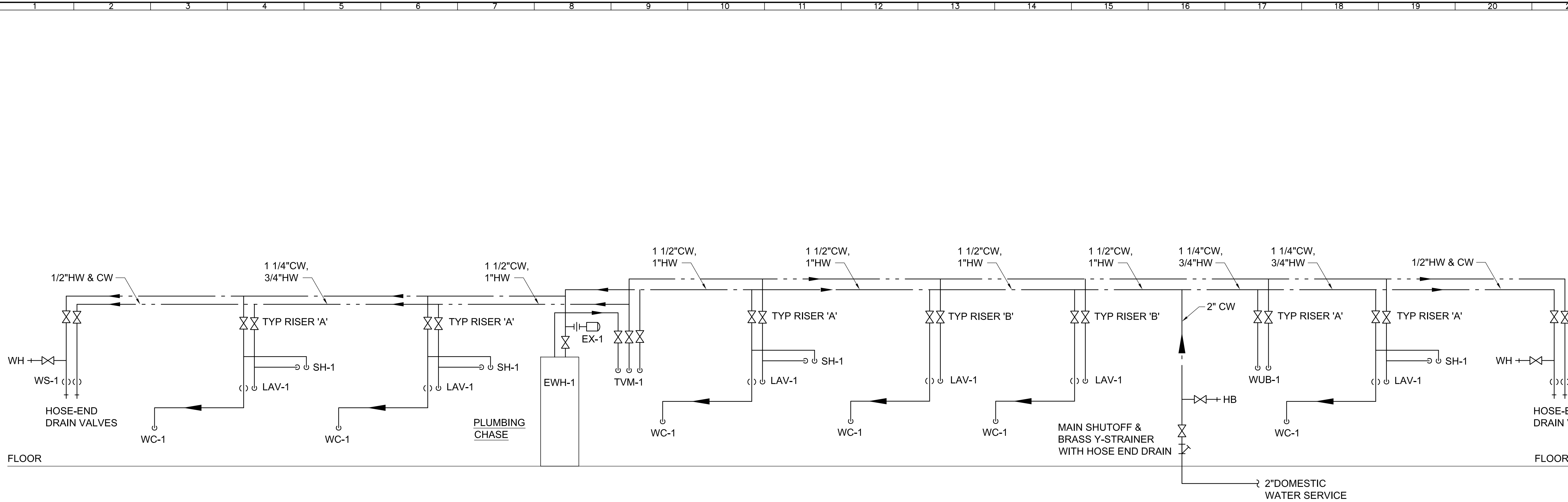
Balzer and Associates, Inc.
1208 Corporate Circle
Roanoke, VA 24018
540-772-9580
FAX 540-772-8050



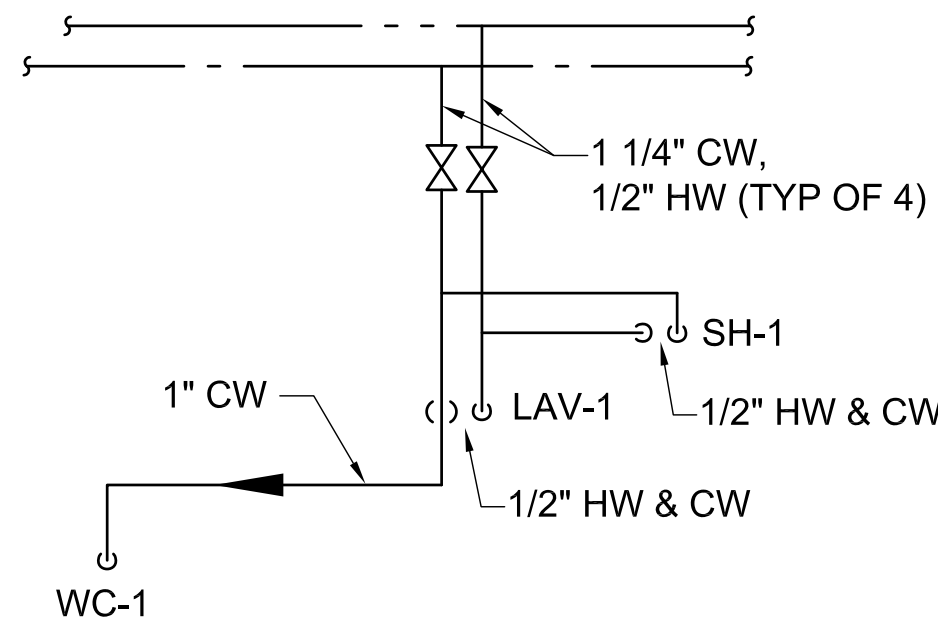
EXPLORE PARK
FLEX POD "A" BATHHOUSE
PLUMBING FLOOR PLAN - WATER

DRAWN BY JNB
DESIGNED BY JNB
CHECKED BY JNB
DATE 05/10/2018
SCALE _____
REVISIONS:

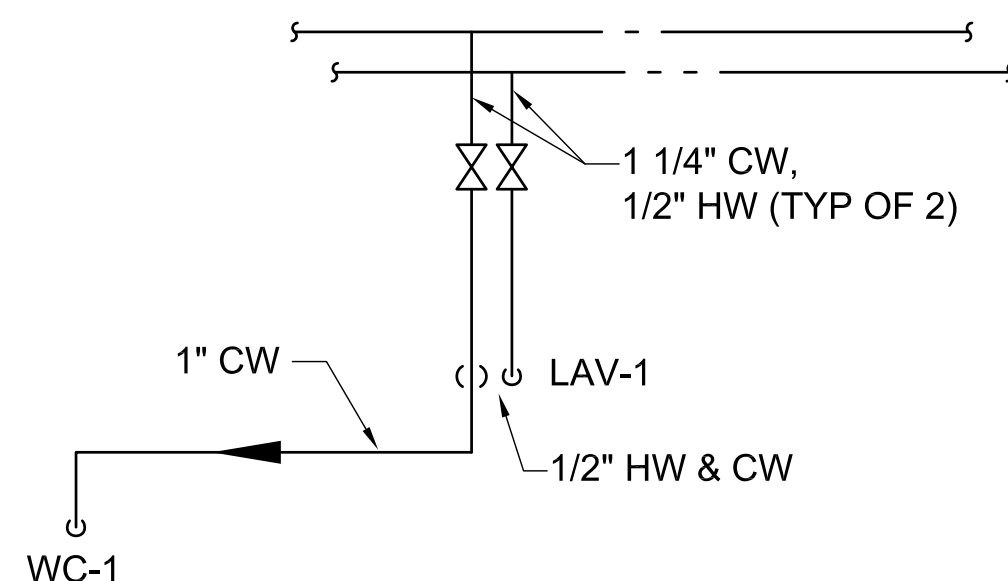
SHEET NO.
P2.2
JOB NO. 04180001.00



1
P3.1
PLUMBING WATER RISER DIAGRAM
NO SCALE

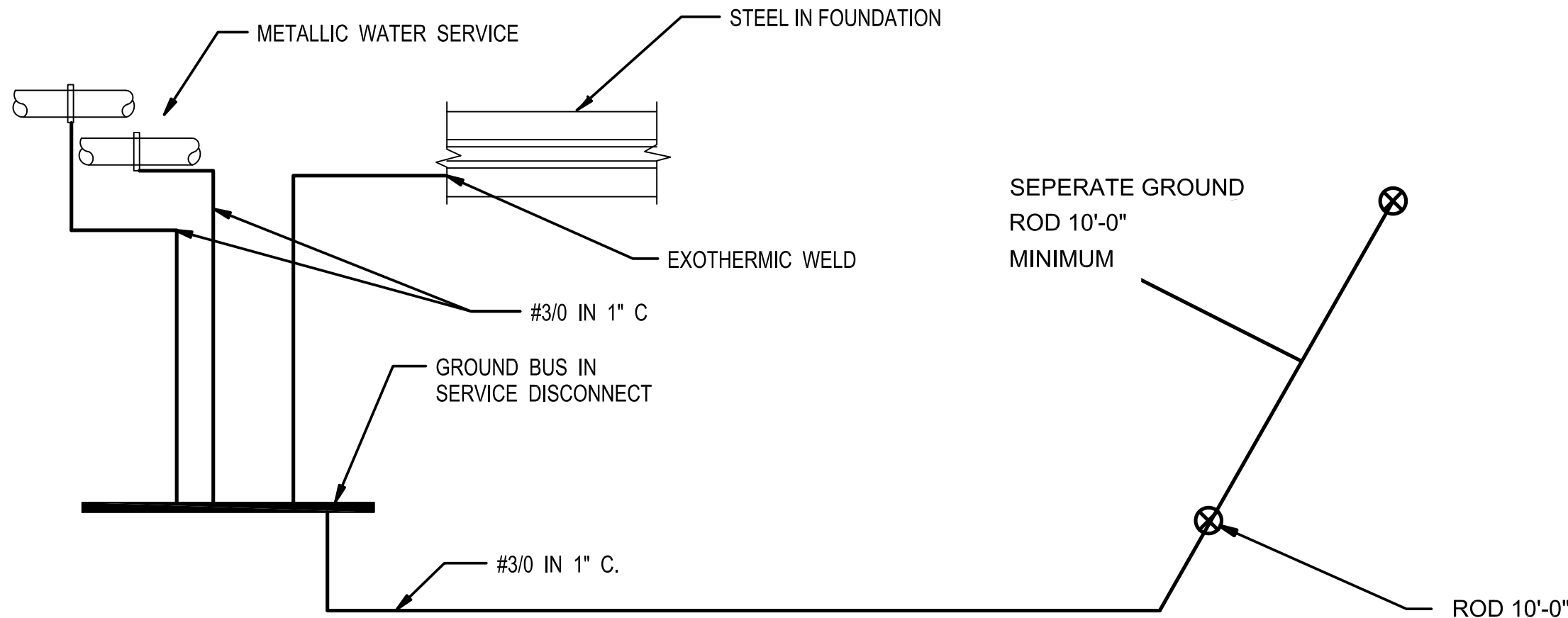


2
P3.1
TYPICAL PLUMBING RISER A - WATER
NO SCALE

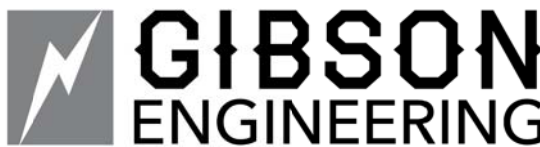
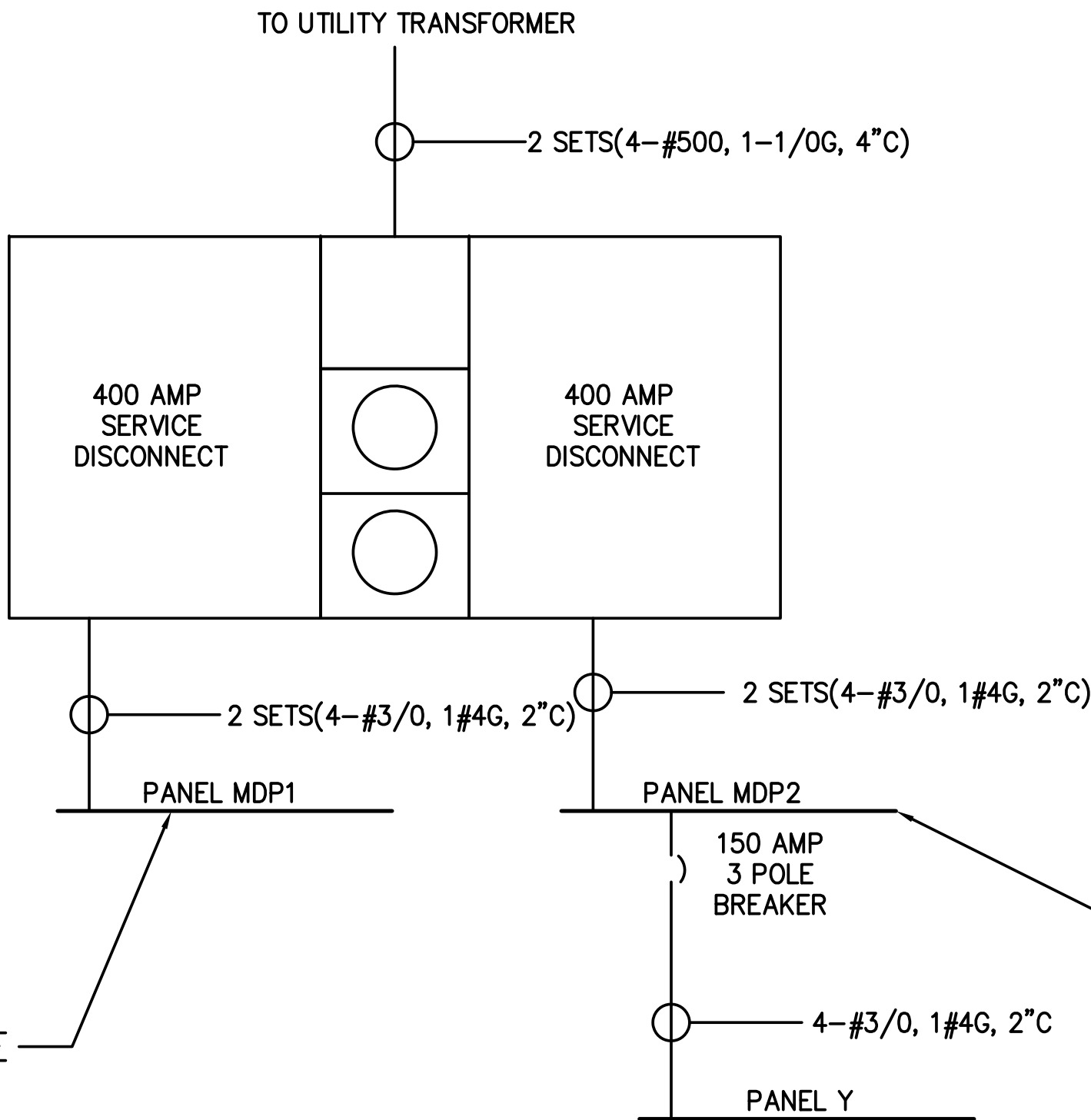


3
P3.1
TYPICAL PLUMBING RISER B - WATER
NO SCALE

GENERAL NOTES		ELECTRICAL LEGEND																
<div>1. MECHANICAL EQUIPMENT IS SHOWN IN APPROXIMATE LOCATIONS. FOR EXACT LOCATIONS OF MECHANICAL EQUIPMENT AND PIPING, SEE MECHANICAL DRAWINGS. SOME MECHANICAL EQUIPMENT IS LOCATED ON THE ROOF. VERIFY LOCATION WITH MECHANICAL AND PROVIDE ALL CONDUIT AND WIRING TO OUTDOOR EQUIPMENT.</div> <div>2. WHERE LIGHT SWITCHES ARE INDICATED TO BE MOUNTED BEHIND DOOR, MOUNT SUCH SWITCHES A MINIMUM OF 3'-9" FROM HINGED SIDE.</div> <div>3. REVISE PANELBOARD SCHEDULES ON PANEL DIRECTORIES TO REFLECT FINAL INSTALLATION CONDITIONS.</div> <div>4. LOCATE ALL RACEWAYS TO AVOID INTERFERENCE WITH DUCTS, PIPES, MECHANICAL EQUIPMENT, WITH REMOVAL OF CEILING TILES, OR WITH ACCESS TO EQUIPMENT WHICH REQUIRES PERIODIC ADJUSTMENT OR MAINTENANCE.</div> <div>5. PROVIDE NAMEPLATES ON THE EXTERIOR OF ALL ELECTRICAL PANELS AND ENCLOSURES WITH THE DEVICE ID, RATING, POWER SOURCE AND INSTALLATION DATE AND BY WHICH SWITCH OR STARTER.</div> <div>6. COUNTER AND TOILET RECEPTACLES TO BE GFI AND COUNTER HEIGHT EXCEPT WHERE NOTED. REFRIGERATOR RECEPTACLE TO BE 36" AFF.</div> <div>7. LIGHT FIXTURE TYPE IS SHOWN ONLY ONCE AS TYPICAL FOR THE ENTIRE ROOM UNLESS SPECIFICALLY INDICATED OTHERWISE.</div> <div>8. UNLESS INDICATED OTHERWISE, SIZE CONDUITS IN ACCORDANCE WITH NFPA 70.</div> <div>9. COORDINATE WITH THE MECHANICAL CONTRACTOR TO ENSURE ALL WORKING CLEARANCE AND DEDICATED WORKING SPACE OF PANELBOARDS.</div> <div>10.COORDINATE ELECTRICAL INSTALLATION WITH ALL CASEWORK TO BE INSTALLED. PROVIDE THE NECESSARY JUNCTION BOXES FOR ALL POWER AND DATA CONNECTIONS INDICATED.</div> <div>11. GROUNDING CONDUCTORS ARE NOT INDICATED IN BRANCH CIRCUIT RACEWAYS. PROVIDE GROUND CONDUCTORS AS REQUIRED BY NEC.</div> <div>12.PROVIDE PLASTIC BUSHING ON THE END OF ALL CONDUIT.</div> <div>13.NO SHARING OF NEUTRAL CONDUCTORS.</div>		<div><div>EM</div><div>A</div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div>J</div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div>	<div>LED LIGHTING FIXTURE, RECESSED, SURFACE OR PENDANT CEILING MOUNTED, 'EM' INDICATES LIGHTING CONNECTED TO EMERGENCY POWERED INVERTER.'A' DESIGNATION INSIDE OF FIXTURE INDICATES FIXTURE TYPE</div> <div>EXIT LIGHTING FIXTURE, SURFACE CEILING MOUNTED, DIRECTIONAL ARROWS AS INDICATED.</div> <div>EXIT LIGHTING FIXTURE, SURFACE WALL MOUNTED, DIRECTIONAL ARROWS AS INDICATED.</div> <div>FURNITURE WHIPS UNLESS INDICATED OTHERWISE, FOR FURNITURE WHIPS PROVIDE DATA AND POWER</div> <div>QUAD- PLEX WALL RECEPTACLE</div> <div>DUPLEX WALL RECEPTACLE, MOUNTING HEIGHT = 1'-6", EXCEPT 'C' SUBSCRIPT INDICATES MOUNTING IN CASEWORK(TYP). 'GFI' SUBSCRIPT INDICATES GROUND FAULT, 'WP' SUBSCRIPT INDICATES WEATHERPROOF, 'EWC' SUBSCRIPT INDICATES BEHIND ELECTRIC WATER COOLER.</div>	<div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div> <div><div>S</div><div></div></div> <div><div>S</div><div></div></div> <div><div></div><div></div></div> <div><div></div><div></div></div>	<div>CONDUCTORS IN CONDUIT CONCEALED IN CEILING OR WALL.</div> <div>BRANCH CIRCUIT HOME RUN TO PANELBOARD. NOTATION INDICATES PANELBOARD & BRANCH CIRCUIT CONNECTION.</div> <div>CONDUCTORS IN CONDUIT CONCEALED IN SLAB OR BELOW GRADE.</div> <div>CONDUCTORS IN CONDUIT TURNED UP.</div> <div>CONDUCTORS IN CONDUIT TURNED DOWN.</div> <div>SINGLE-POLE SWITCH, MOUNTING HEIGHT = 4'-0" TO TOP. LOWER CASE SUBSCRIPT WHEN USED, INDICATES FIXTURES CONTROLLED (TYP).</div> <div>THREE-WAY SWITCH, MOUNTING HEIGHT = 4'-0" TO TOP.</div> <div>PANELBOARD, 208Y/120-VOLT, 3-PHASE, 4-WIRE, MOUNTING HEIGHT=6'-0" TO TOP. SEE PANELBOARD SCHEDULES.</div> <div>DISCONNECT SWITCH, EXTERNALLY OPERATED, 240V, 3 ϕ UNLESS OTHERWISE NOTED. NOTATION INDICATES NUMBER OF POLES AND AMPERAGE CAPACITY. 'NF' SUBSCRIPT INDICATES NON FUSED.</div> <div>LEGEND NOTES: 1. ALL MOUNTING HEIGHTS ARE TO TOP OF DEVICE UNLESS INDICATED OTHERWISE.</div>													



NEW PANEL TO PROVIDE POWER FOR BATH HOUSE



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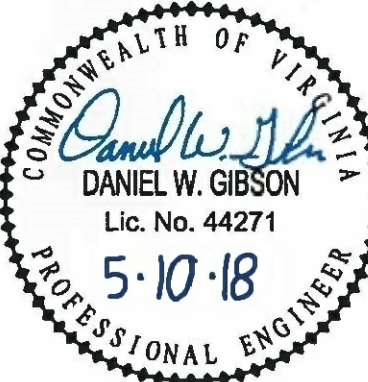
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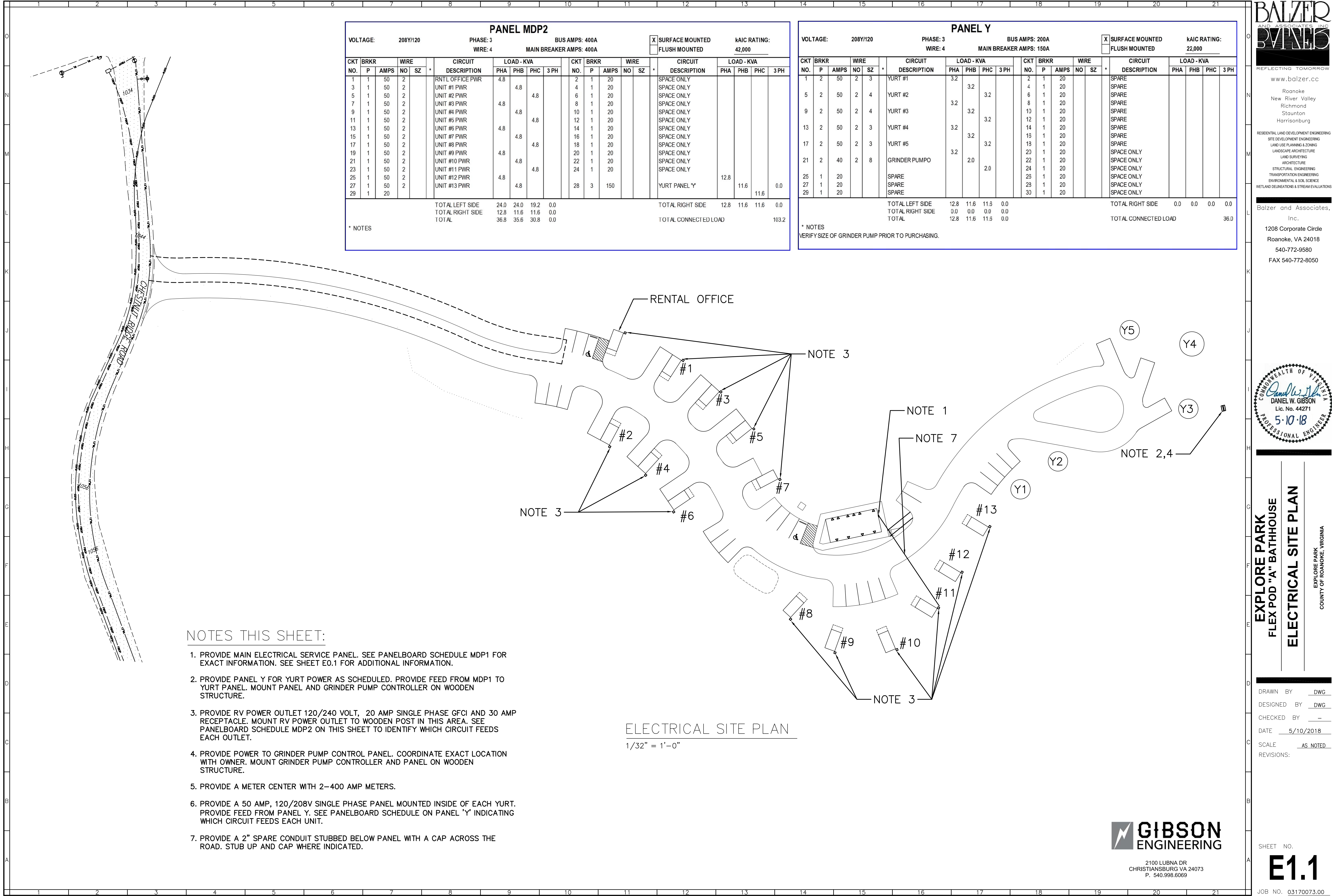
EXPLORE PARK
FLEX POD "A" BATHHOUSE
ELECTRICAL LEGEND & DETAILS

DRAWN BY DWG
DESIGNED BY DWG
CHECKED BY -
DATE 5/10/2018
SCALE AS NOTED
REVISIONS:

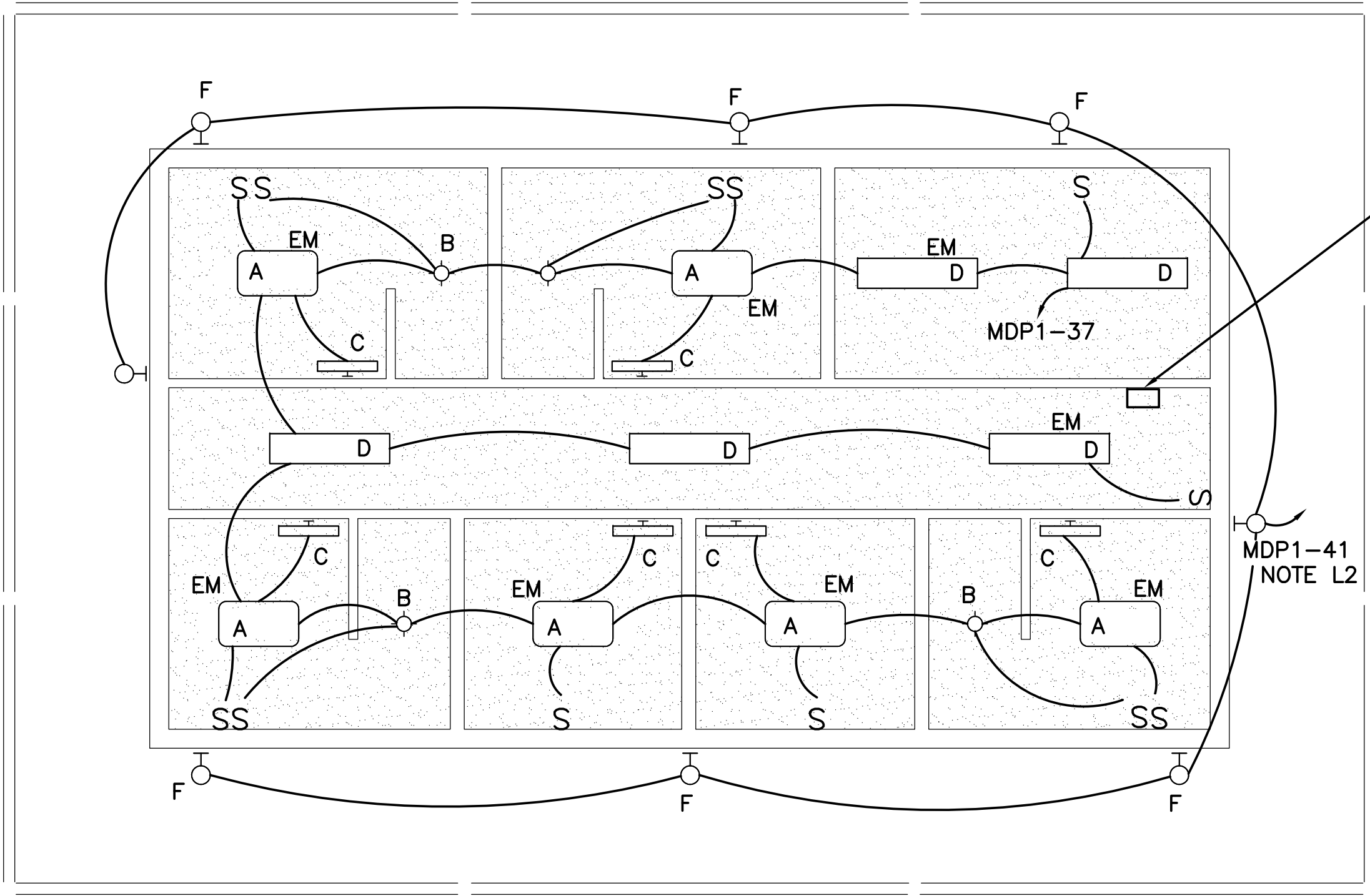
SHEET NO.

E0.1

JOB NO. 03170073.00

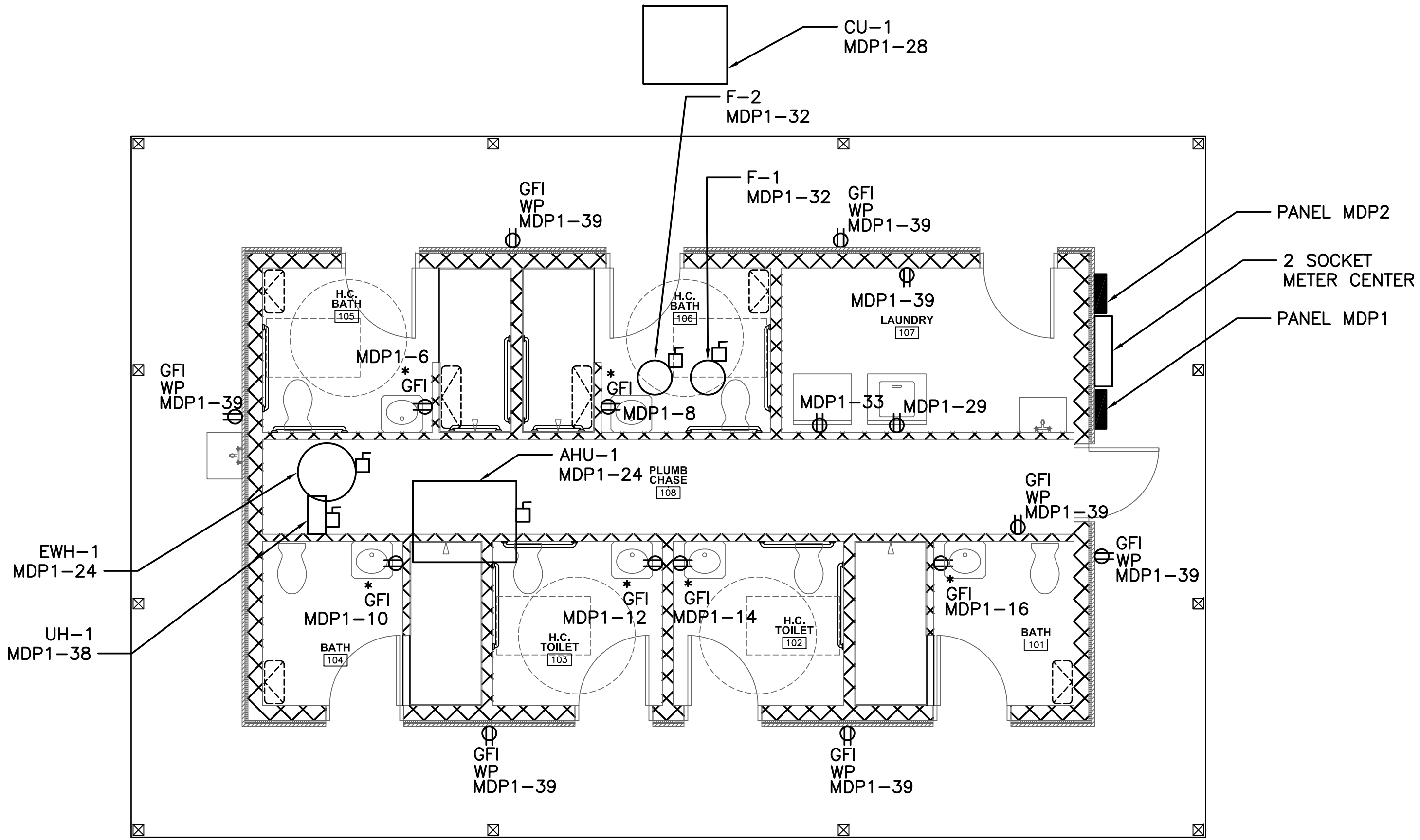


PANEL MDP2																						
VOLTAGE:			208Y/120			PHASE: 3			BUS AMPS: 400A			<input checked="" type="checkbox"/> SURFACE MOUNTED			KAIC RATING:							
						WIRE: 4			MAIN BREAKER AMPS: 400A			<input type="checkbox"/> FLUSH MOUNTED			42,000							
CKT	BRKR		WIRE		CIRCUIT	LOAD - KVA				CKT	BRKR		WIRE		CIRCUIT	LOAD - KVA						
NO.	P	AMPS	NO	SZ	*	DESCRIPTION	PHA	PHB	PHC	3 PH	NO.	P	AMPS	NO	SZ	*	DESCRIPTION	PHA	PHB	PHC	3 PH	
1	1	50	2			RNTL OFFICE PWR	4.8				2	1	20				SPACE ONLY					
3	1	50	2			UNIT #1 PWR		4.8			4	1	20				SPACE ONLY					
5	1	50	2			UNIT #2 PWR			4.8		6	1	20				SPACE ONLY					
7	1	50	2			UNIT #3 PWR	4.8				8	1	20				SPACE ONLY					
9	1	50	2			UNIT #4 PWR			4.8		10	1	20				SPACE ONLY					
11	1	50	2			UNIT #5 PWR				4.8	12	1	20				SPACE ONLY					
13	1	50	2			UNIT #6 PWR	4.8				14	1	20				SPACE ONLY					
15	1	50	2			UNIT #7 PWR			4.8		16	1	20				SPACE ONLY					
17	1	50	2			UNIT #8 PWR				4.8	18	1	20				SPACE ONLY					
19	1	50	2			UNIT #9 PWR	4.8				20	1	20				SPACE ONLY					
21	1	50	2			UNIT #10 PWR			4.8		22	1	20				SPACE ONLY					
23	1	50	2			UNIT #11 PWR				4.8	24	1	20				SPACE ONLY					
25	1	50	2			UNIT #12 PWR	4.8											12.8				
27	1	50	2			UNIT #13 PWR			4.8		28	3	150				YURT PANEL Y		11.6		0.0	
29	1	20																	11.6			
						TOTAL LEFT SIDE	24.0	24.0	19.2	0.0							TOTAL RIGHT SIDE	12.8	11.6	11.6	0.0	
						TOTAL RIGHT SIDE	12.8	11.6	11.6	0.0												
						TOTAL	36.8	35.6	30.8	0.0							TOTAL CONNECTED LOAD	103.2				
* NOTES																						



LIGHTING PLAN

1/4" = 1'-0"



POWER PLAN

1/4" = 1'-0"

LIGHTING FIXTURE SCHEDULE

MARK	MANUFACTURER	MODEL NUMBER	INPUT VOLTAGE	LAMPS			MNTG.	REMARKS
				NO.	WATTS	TYPE		
A	KICHLER LIGHTING	10789 AVON	MVOLT		48W	LED	SURF	32.5" LED SURF MOUNT OLD BRONZE FINISH
B	LITHONIA LIGHTING	LDN6 40/ 25 L06 120 WL	MVOLT		27.1	LED	REC	RECESSED DOWNLIGHT, WET LOCATION LISTED
C	KICHLER LIGHTING	458380ZLED IMPELLO	MVOLT		43	LED	WALL	24.25" WIDE LED OLDE BRONZE FINISH
D	LITHONIA LIGHTING	VAP 6000LM FST MD 120 40K 80CRI DL	MVOLT		62	LED	SURF	DAMP LOCATION, ROUGH LOCATION
F	KICHLER LIGTHING	9028TZ KIRKWOOD	MVOLT		30	LED	WALL	OUTDOOR SCREW IN FIXTURE WITH LED BULB

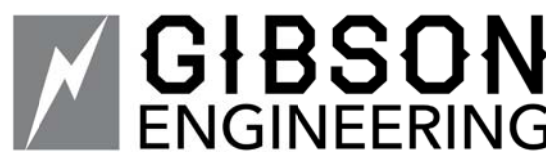
* **NOTE:** ALL LAMPS AND LED FIXTURES ARE TO BE 4000 KELVIN COLOR TEMPERATURE

NOTES THIS SHEET:

L1. PROVIDE A 375 WATT INVERTER UNIT MOUNTED ON WALL IN CHASE COORDINATE LOCATION WITH PLUMBING. INVERTER SHALL BE LITHONIA EAC ISSM 375W MICRO INVERTER

L2. PROVIDE A PHOTOCELL MOUNTED UNDER THE CANOPY TO CONTROL BATH HOUSE EXTERIOR LIGHTING.

PANEL MDP1																			
VOLTAGE: 208Y/120				PHASE: 3				BUS AMPS: 400A				<input checked="" type="checkbox"/> SURFACE MOUNTED		KAIC RATING: 42,000					
				WIRE: 4				MAIN BREAKER AMPS: 400A				<input type="checkbox"/> FLUSH MOUNTED							
CKT NO.	BRKR	WIRE		*	CIRCUIT DESCRIPTION	LOAD - KVA				CKT NO.	BRKR	WIRE		*	CIRCUIT DESCRIPTION	LOAD - KVA			
	P	AMPS	NO			SZ	PHA	PHB	PHC	3 PH		P	AMPS			NO	SZ	PHA	PHB
1	1	20			SPARE					2	1	20	2	12	BATH HOUSE N LTG	1.5			
3	1	20			SPARE					4	1	20	2	12	BATH HOUSE E LTG		1.5		
5	1	20			SPARE					6	1	20	2	12	BATH 105 RCPT			1.5	
7	1	20			SPARE					8	1	20	2	12	BATH 106 RCPT	1.5			
9	1				SPACE ONLY					10	1	20	2	12	BATH 104 RCPT				
11	1				SPACE ONLY					12	1	20	2	12	BATH 103 RCPT			1.5	
13	1				SPACE ONLY					14	1	20	2	12	TOILET 102 RCPT	1.5			
15	1				SPACE ONLY					16	1	20	2	12	BATH 101 RCPT		1.5		
17	1				SPACE ONLY					18	1	20			SPARE				
19	1				SPACE ONLY					20	2	60	2	6	INDOOR UNIT	3.0			
21	1				SPACE ONLY												3.0		
23	1				SPACE ONLY					24	2	60	2	6	DUCT HEATER			4.3	
25	1				SPACE ONLY											4.3			
27	1				SPACE ONLY					28	2	15	2	12	OAU-1		1.0		1.0
29	2	50	2	8	COMM WASHER	2.5		2.5		32	1	20	2	12	FAN F-1, F-2	0.5			
33	2	50	2	8	DRYER		3.5		3.5	34	2	60	2	6	EW-1 WTR HTR		9.0		
37	1	20	2	12	INTERIOR LTG	1.0				38	2	20	2	12	UH-1		1.7		
39	1	20			CONVR CPT												1.7		
41	1	20	2	12	EXTERIOR LIGHTING			1.5		42	1	20			SPARE				
TOTAL LEFT SIDE						3.5	3.5	7.5	0.0	TOTAL RIGHT SIDE						14.0	19.2	17.3	0.0
TOTAL RIGHT SIDE						14.0	19.2	17.3	0.0										
TOTAL						17.5	22.7	24.8	0.0	TOTAL CONNECTED LOAD						65.0			
* NOTES																			



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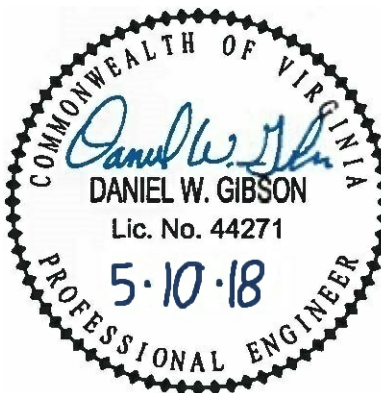
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FAX 540-772-8050



EXPLORE PARK
FLEX POD "A" BATHHOUSE

BATHHOUSE FLOOR PLAN

EXPLORE PARK
COUNTY OF ROANOKE, VIRGINIA

DRAWN BY: DWG

DESIGNED BY: DWG

CHECKED BY: -

DATE: 5/10/2018

SCALE: AS NOTED

REVISIONS:

SHEET NO.

E1.2

JOB NO. 03170073.00

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
	SECTION 16000								PART 2 - PRODUCTS													
	ELECTRICAL SPECIFICATIONS																					
O	PART 1 - GENERAL																					
	1.1 DESCRIPTION OF WORK																					
	Provide new lighting, power, data and low voltage systems as indicated on the plans. Project is a new bathroom and site electrical for camping area.																					
N	1.2 QUALITY ASSURANCE																					
	A. General																					
	a. Comply with IEEE C2, "National Electrical Safety Code".																					
	b. IEEE Compliance: Comply with applicable Institute of Electrical and Electronics Engineers, Inc. standards pertaining to generator construction.																					
	c. NEC Compliance: Comply with NFPA 70, "National Electrical Code" as applicable to construction and installation of products required in this specification.																					
M	d. UL and NEMA Compliance and Labeling: Provide products which have been labeled by Underwriters Laboratories and have been certified to comply with UL requirements.																					
	e. IEEE Compliance: Comply with STD 241, "IEEE Recommended Practice for Electrical Power Systems in Commercial Buildings" pertaining to communication systems.																					
	B. MOTOR CONTROLLERS																					
L	a. UL and NEMA Compliance and Labeling: Provide products which have been labeled by Underwriters' Laboratories and have been certified to comply with UL and NEMA.																					
	C. LIGHTING																					
	a. NEMA Compliance: Comply with applicable requirements of NEMA Std's. Pub/No.'s LE 1 and LE 2 pertaining to lighting equipment.																					
	b. UL Compliance: Comply with UL standards, including UL 486A and B, pertaining to lighting fixtures. Provide lighting fixtures and components which are UL_listed and labeled. Provide exterior fixtures with "Suitable for Wet Location" label.																					
K	c. CBM Labels: Provide fluorescent lamp ballasts which comply with Certified Ballast Manufacturers Association standards and carry the CBM label.																					
	1.3 COORDINATION OF ELECTRICAL WORK																					
	A. General: Refer to the division sections for general coordination requirements applicable to the entire work. It is recognized that the contract documents are diagrammatic in showing certain physical relationships which must be established within the electrical work and in its interface with other work including utilities and mechanical work and that such establishment is the exclusive responsibility of the Contractor.																					
J	a. Arrange electrical work in a neat, well organized manner with conduit and similar services running parallel with primary lines of the building construction and with the maximum headroom possible, but a minimum 7'-0" overhead clearance.																					
	b. Locate operating and control equipment properly to provide easy access and arrange entire electrical work with adequate access for operation and maintenance.																					
	c. Advise other trades of openings required in their work for the subsequent move_in of large units of electrical equipment.																					
	d. Coordinate all work, including power outages, with Owner's Schedule of Operation.																					
I	B. Product Handling: Space at the project for storage of materials and products is limited. Coordinate the deliveries of electrical materials and products with the scheduling and sequencing of the work so that storage requirements at the project are minimized. In general, do not deliver individual items of electrical equipment to the project substantially ahead of the time of installation.																					
	1.3 ELECTRICAL SYSTEM IDENTIFICATION																					
	A. Conduit Systems: Provide adequate marking of primary conduits which are exposed or concealed in accessible spaces. to distinguish each run as either a power or signal/communication conduit. Except as otherwise indicated, use orange banding with black lettering. Provide self_adhesive or snap_on type plastic markers. Indicate voltage ratings of conductors where above 240 V. Locate markers at ends of conduit runs, near switches and other control devices and near items of equipment served by the conductors. Switch_leg conduit and short branches for power connections need not be marked, except where conduit is larger than 1 inch. Label all junction boxes with branch circuit numbers terminated within.																					
H	B. Identification Labels and Warning Signs: Provide engraved plastic laminate or baked enamel labels on major units of electrical equipment including switchboards, motor controllers, disconnect switches, signal and similar systems. Label shall include equipment identification mark and voltage characteristics and shall be melamine plastic, 0.125_inch thick, white with black center core. Provide warning signs where there is hazardous exposure or danger associated with access to or operation of electrical facilities. Provide text of sufficient clarity and lettering of sufficient size, minimum 0.25 inch nominal block style, to convey adequate information at each location; mount permanently in an appropriate and effective location.																					
G	1.4 PAINTING ELECTRICAL WORK																					
	A. General: Except as otherwise indicated, comply with the applicable provisions of Division 9 for electrical_work painting. Electrical equipment shall have factory_applied painting systems which shall meet the requirements of NEMA ICS6. The work of this article shall include general field painting of electrical work.																					
	a. Coordinate the painting with the painting of other work of a similar nature and comply with indicated color and color matching requirements. Except as otherwise indicated, paint surfaces of electrical work which would normally be painted in the application and exposure indicated.																					
F	B. Do not paint over nameplates on equipment, sliding/rotating shaft surfaces, non_ferrous hardware/accessories/trim and similar items where painting would normally be omitted.																					
	1.5 ELECTRICAL SYSTEM PERFORMANCE																					
	A. General: The overall system performances of electrical work are of even greater importance than the specified individual unit_of_work performances. Each unit of electrical work has been designed and specified to perform at minimum levels of output and efficiency and is intended to contribute to and be compatible with the entire system. Compatibility of actual performances by electrical system performances is the Contractor's responsibility.																					
E	B. Adjustments: Where it has been determined that electrical systems do not or will not perform in compliance with the specified performances, adjustments or corrections shall be made to the work as necessary to achieve required performances.																					
	1.6 ELECTRICAL WORK CLOSEOUT																					
	A. Additional Service: Perform services within the above 12-month period not classified as routine maintenance or as warranty work as described in Division 1 Section "Warranties and Bonds" when authorized in writing. Compensation for additional services must be agreed upon in writing prior to performing services.																					
D	B. Closeout Coordination: Coordinate closeout operations with closeout of mechanical systems and other power consuming equipment.																					
	C. Cleaning and Lubrication: After final testing of each electrical system, clean system both externally and internally. Comply with manufacturer's instructions for lubrication of both power and hand operated equipment. Touch_up minor damage to factory_painted finishes and provide one pint of touch-up paint for each color of major equipment installed.																					
C	1.7 SUBMITTALS																					
	A. LIGHTING																					
	1. Product Data: Submit manufacturer's product data and installation instructions on each type building lighting fixture photocell, contactor and component.																					
	2. Shop Drawings: Submit fixture shop drawings where specifically indicated in booklet form with separate sheet for each fixture, assembled in "luminare type" alphabetical or numerical order, with proposed fixture and accessories clearly indicated on each sheet.																					
B	3. Maintenance Data: Submit maintenance data and parts list for each lighting fixture and accessory; including "trouble_shooting" maintenance guide. Include that data, product data, and shop drawings in a maintenance manual.																					
A																						
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	

A. Electrical Grounding Conductors: Unless otherwise indicated, provide electrical grounding conductors for grounding connections matching power supply wiring materials except bare or green insulation and sized according to NEC. Equipment grounding conductors shall have green insulation. Solid conductors shall comply with ASTM B-3, stranded conductors with ASTM B-8.

B. Grounding Connectors: Provide listed and labeled grounding connectors for the required materials. Provide high-conductivity plated pressure connector units or exothermic welded connections.

2.7 COMBINATION MOTOR CONTROLLERS

A. General: Motor circuit protector; molded-case circuit-type breaker type with magnetic-only trip element calibrated to coordinate with the actual locked-rotor current of the connected motor and the controller overload relays. Provide breakers that are factory assembled with the controller, interlocked with unit cover or door, and arranged to disconnect the controller. Provide motor circuit-protectors with field-adjustable trip elements.

2.8 LIGHTING FIXTURES

A. Provide lighting fixtures of sizes, types, and ratings indicated in lighting fixture schedule

B. Wiring: Provide electrical wiring within fixture suitable for connecting to branch circuit.
a. NEC Type AF for 120 volt, minimum No. 18 AWG.

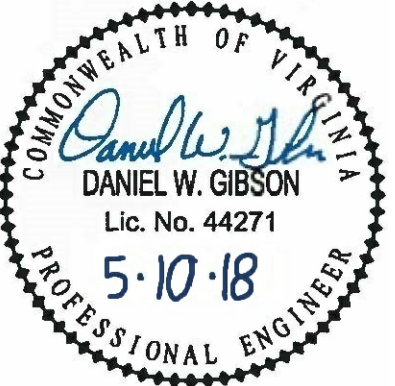


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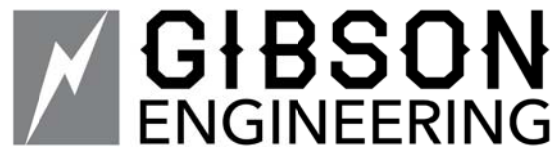
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540-772-9580
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FLEX POD "A" BATHHOUSE
ELECTRICAL SPECIFICATIONS
EXPLORE PARK
COUNTY OF ROANOKE, VIRGINIA

DRAWN BY DWG
DESIGNED BY DWG
CHECKED BY -
DATE 5/10/2018
SCALE AS NOTED
REVISIONS:

SHEET NO.
E1.3
JOB NO. 03170073.00



2100 LUBNA DR
CHRISTIANSBURG VA 24073
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