

Hale House Development for
Hamblen County
Government
Morristown, Tennessee

Project Data

owner

Hamblen County Government
Hamblen County Courthouse
511 West Second North Street
Morristown, TN 37814
phone: 423-586-1993

project

Hale House Development for
Hamblen County Government
514 & 534 West 2nd North Street
Morristown, TN 37814

project square footage

Main Floor - 1957 sq. ft.
Basement - 539 sq.ft.

occupancy classification

Business Group B

construction type

type V - unprotected; unsprinklered
2 story

IECC Climate Zone

4

Codes and Ordinances

2012 International Existing Building Code
2012 International Mechanical Code
2012 International Plumbing Code
2012 International Fuel Gas Code
2017 National Electric Code, NFPA 70
2012 International Fire Prevention Code
2012 International Energy Conservation Code with
amendments ISPSC, ICC A117.1-2009
2010 ADA Standards for Accessibility Design

Drawing Index

DS1.1 Drawing Standards

HALE HOUSE PROPER

Architectural

A1.1 Basement Plan
A1.2 Demolition Plan — Main Floor
A1.3 Main Floor Plan
A1.4 Second Floor Plan, Handicapped Toilet, Elevations, Notes,
& Toilet Accessory Schedule
A1.5 Room Finish Schedule & Details
A1.6 Door Schedule & Handicapped Ramp Details

Mechanical

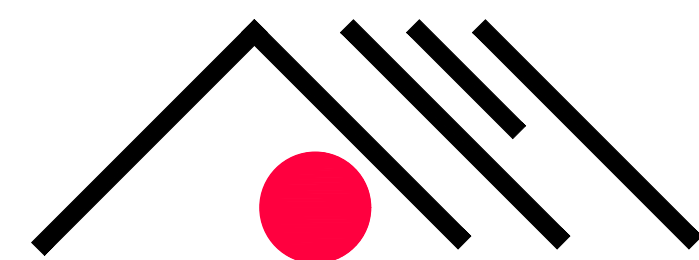
M1.1 H.V.A.C. Plan — Main Floor & Basement

Plumbing

P1.1 Waste & Venting Plan — Main Floor & Basement
P1.2 Water Piping Plan — Main Floor & Basement
P1.3 Gas Piping Plan

Electrical

E1.1 Basement Lighting Plan
E1.2 First Floor Lighting Plan
E1.3 Second Floor Lighting Plan
E2.1 Basement Power Plan
E2.2 First Floor Power Plan
E2.3 Second Floor Power Plan
E3.1 One-Line Diagram, Details, & Schedules
E3.2 Electrical Specifications



a. dave wright
architect

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Greeneville, TN. 37743
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Fax: (423) 525-5095

STRUCTURAL ENGINEERS

J.L. Jacobs & Associates

Greeneville, Tennessee

MECHANICAL ENGINEERS

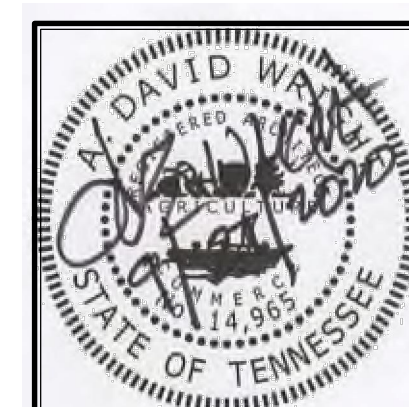
Maynard W. Robertson,
Consulting Engineer

Greeneville, Tennessee

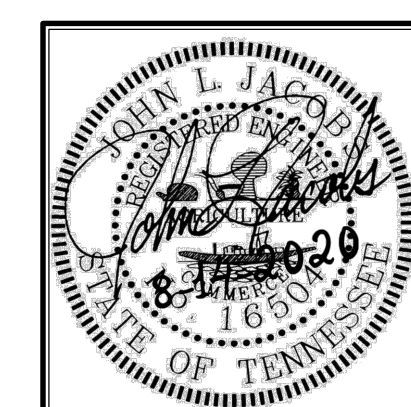
ELECTRICAL ENGINEERS

Blaser Engineering

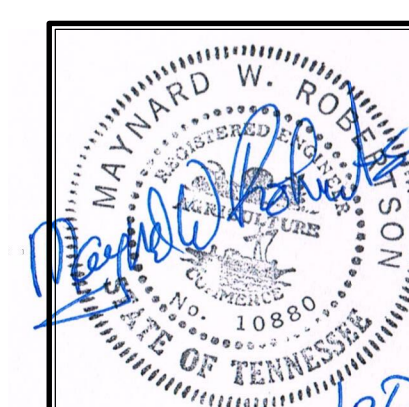
Bristol, Virginia



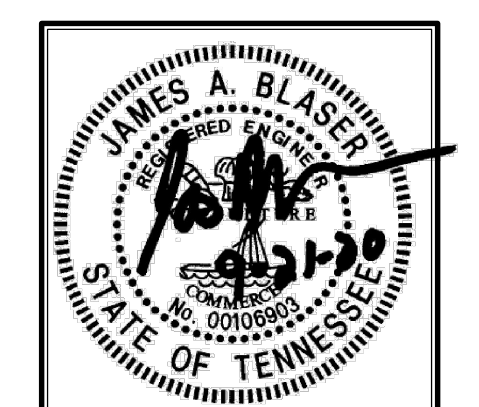
Architect



Structural Engineer



Mechanical Engineer



Electrical Engineer

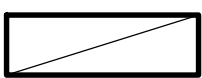
Abbreviations

ab	anchor bolt	kit	kitchen
act	acoustical tile	ko	knockout
adh	adhesive	kd	knockdown
adj	adjustable		
aff	above finish floor	lam	laminated
alt	alternative, alternate	lav	lavatory
alum	aluminum	lf	linear feet
anod	anodized	lkr	locker
arch	architect, architectural	lt	light
asph	asphalt		
au	ash urn	mas	masonry
		matl	material
bd	board (architectural)	mbh	map & broom holder
bg	bumper guard	mech	mechanical
bitum	bituminous	mir	mirror
bdg	building	m/s	mirror with shelf
blk	blocking	mo	masonry opening
bm	beam	mr	map rack
brk	brick	mtg	mounting
brz	bronze	mtl	metal
bur	built-up roofing	mul	mullion
bwk	brick work		
		n/a	non applicable
cab	cabinet	nic	not in contract
cct	cubicle curtain track	nom	nominal
cg	corner guard	nrc	noise reduction coefficient
c.i.p.	cast-in-place	nts	not to scale
cj	control joint		
cl	center line	oa	overall (dimension)
clg	ceiling	oc	on center
clo	closet	od	outside diameter
clr	clear	opng	opening
cmu	concrete masonry unit	opp	opposite
col	column		
conc	concrete	pc	precast
cont	continuous	plas	plaster
corr	corridor	p lam	plastic laminate
cpt	carpet (architectural)	pnl	panel
cr	curtain rod (shower)	proj	projection, project
ct	ceramic tile (architectural)	ptd	paper towel dispenser
		pwd	plywood
		pt	paint
		ps	purse shelf
demo	demolish, demolition	qt	quarry tile
det	detail		
df	drinking fountain	r.o.w.	right of way
dia	diameter	rd	roof drain
dim	dimension	ref	refrigerator
dn	down	reinf	reinforced, reinforcement
dr	door	reqd	required
ds	downspout	rh	robe hook
dti	detail	ro	rough opening
dw	dumbwaiter		
dwg	drawing		
dwr	drawer		
		sched	schedule
ea	each	sd	soap dish
edf	elect. drink. fountain	sdp	soap dispenser
ej	expansion joint	sect	section
el	elevation	sf	square foot (feet)
elec	electric(al)	sgt	structural glazed tile
elev	elevator	sht	sheet
epx	epoxy	shth	sheathing
eq	equal	slm	similar
equip	equipment	snd	sanitary napkin disposal
ew	each way	snv	sanitary napkin vendor
exp	exposed	specs	specifications
ext	exterior	ss	stainless steel
		stc	sound transmission coefficient
fac	fire apparatus cabinet	std	standard
fd	floor drain	stor	storage
fe	fire extinguisher	stl	steel
fec	fire extinguisher cabinet	struc	structure or structural
ffe	finish floor elevation	susp	suspended
fhc	fire hose cabinet	sv	sheet vinyl
fin	finish		
fir	floor(ing)	t	tempered
fluo	fluorescent	t/conc	top of concrete
f.o.f.	face of finish	t/s	top of steel/slab
furr	furring	t/w	top of wall
		t&g	tounge and groove
ga	gauge	tb	towel bar
galv	galvanized	tel	telephone
gb	grab bar	thk	thick(ness)
gc	general contractor	tlt	toilet
gwb	gypsum wallboard	tpd	toilet paper dispenser
		typ	typical
hc	handicapped		
hdw	hardware	uc	undercut
hm	hollow metal	ul	underwriters laboratory
hor	horizontal	ur	urinal
hr	handrail	usu	utility shelf unit
ht	height		
hvac	heating/ventilating/air cond.	vct	vinyl composition tile
hv	homogenous vinyl	vert	vertical
		vest	vestibule
		vinc	vinyl wall covering
i.d.	inside diameter	wd	wood
in	inches	wg	wire glass
ins	Insulation	wt	weight
int	Interior	wr	waste receptacles
jan	janitor		
jt	joint		

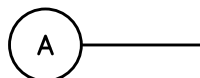
Materials and Symbols



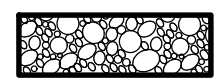
earth



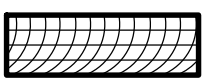
blocking



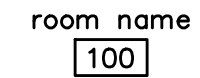
column center line



gravel



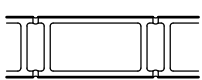
plywood



room name and number



concrete



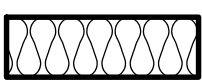
glass block



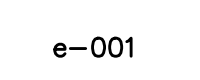
door number



cast stone



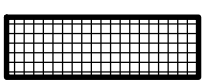
batt insulation



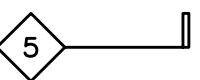
equipment number



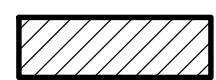
cmu



rigid insulation



partition type



brick



foam insulation



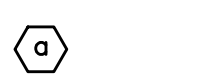
revision



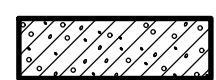
struct. clay tile



acoustical tile



window type



stone



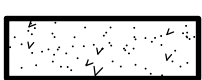
ceramic tile



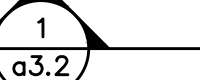
exterior elevation



marble



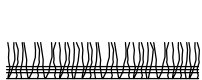
terazzo



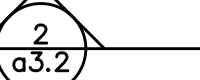
building section



steel



carpet



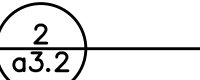
wall section



structural steel



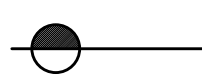
project north



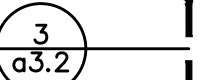
detail section



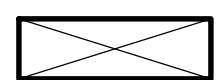
wood finish



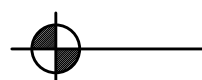
match line



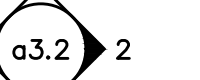
detail section



wood rough framing

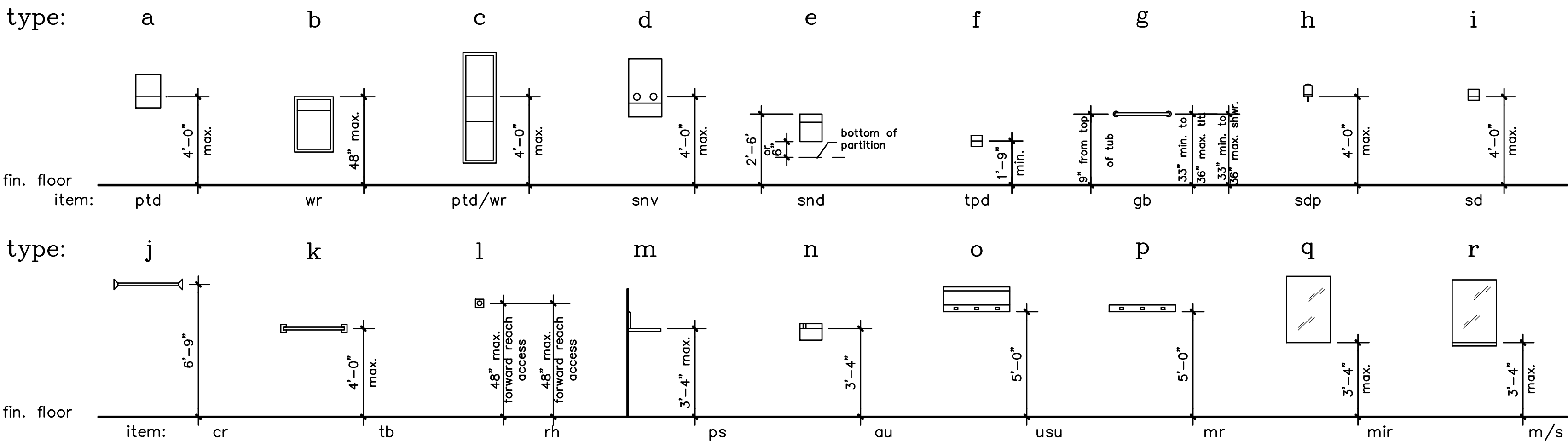


level line



interior elevation

Accessories



Note:
Refer to manufacturer's installation guidelines for further ADA clarification.

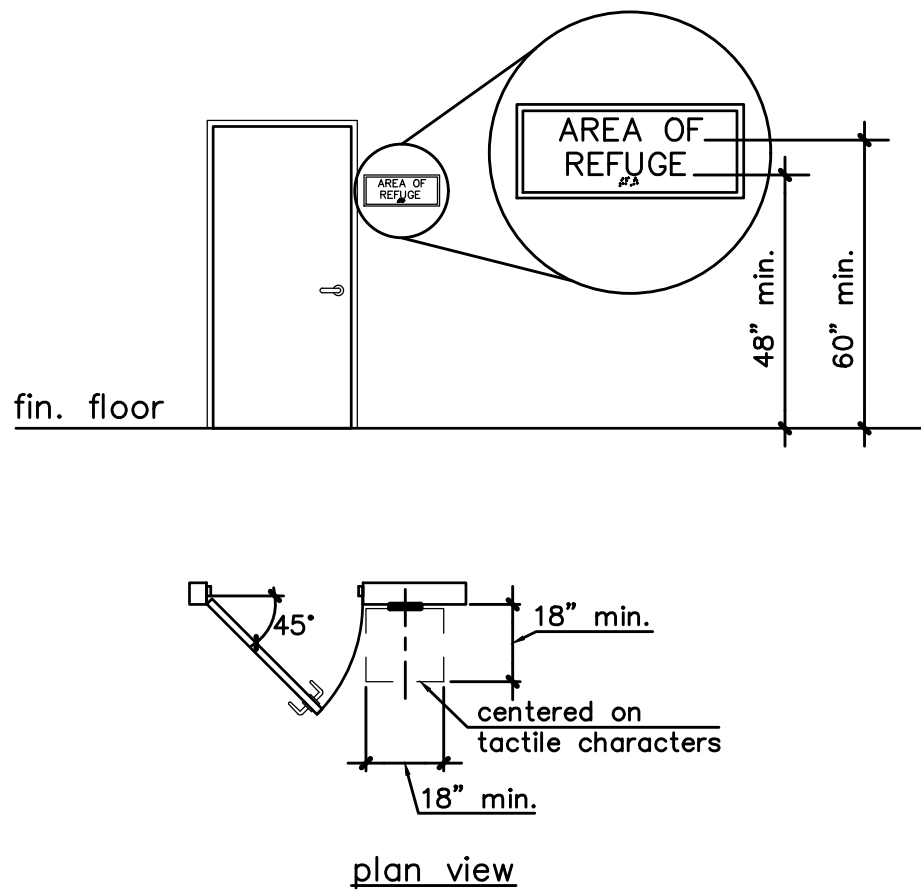
Grab Bar Requirements
@ Bathrooms

- 1 1/4" to 1 1/2" outside diameter.
- 1 1/2" clear handspace between the inner face of the grab bar & the finished wall.
- Must support a 250 pound load.
- Must be located not less than 33" or more than 36" above the finished floor.

General Notes

- Do not scale drawings – use dimensions only. For dimensions not shown or in question, contractor shall request clarification from architect before proceeding.
- Unless otherwise noted, interior partition dimensions are given face to face of finished stud wall/CMU and to column centerline. Millwork detail dimensions are from face of finish surfaces. (GWB, plaster, etc.)
- Elevations and levels are shown to top of finished hard surfaces (concrete floor slab), exclusive of applied finishes (carpet, VCT, other thinset finish materials.
- Contractor shall verify all existing dimensions, conditions, and equipment locations in the field. Discrepancies shall be brought to the attention of the Architect.
- Electric panels, alarm boxes, fire equipment cabinets and other recessed boxes greater than 16 square inches that are located in rated walls shall be backed by gypsum wall board layers sufficient to maintain the designated rating.
- Ceiling and access panels shall be provided in non-accessible ceilings below the following mechanical and plumbing devices:
 - valves
 - flow measuring devices
 - mixing boxes
 - power operated dampers
 - access panels in ductwork
 - volume and balancing devices
 - water flow switches
 - sprinkler system drains and test connections
 - pressure switches
- All existing work, furnishings, equipment or material to remain that are damaged by Contractor's operation under this contract shall be rectified or repaired at no additional cost to owner.

Signage



Revisions	Description	Date	No.

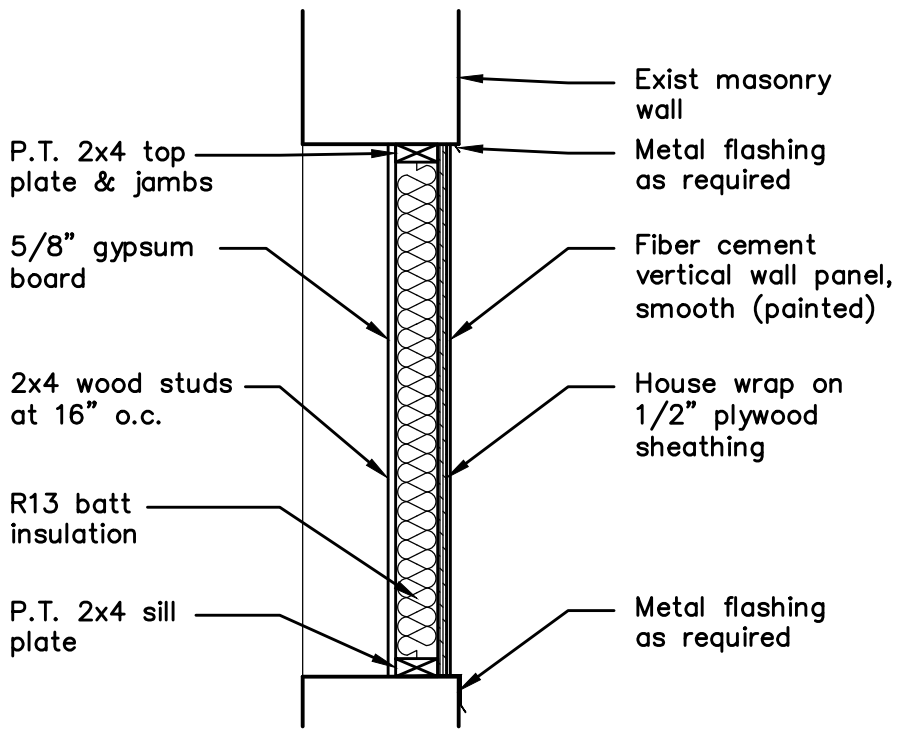
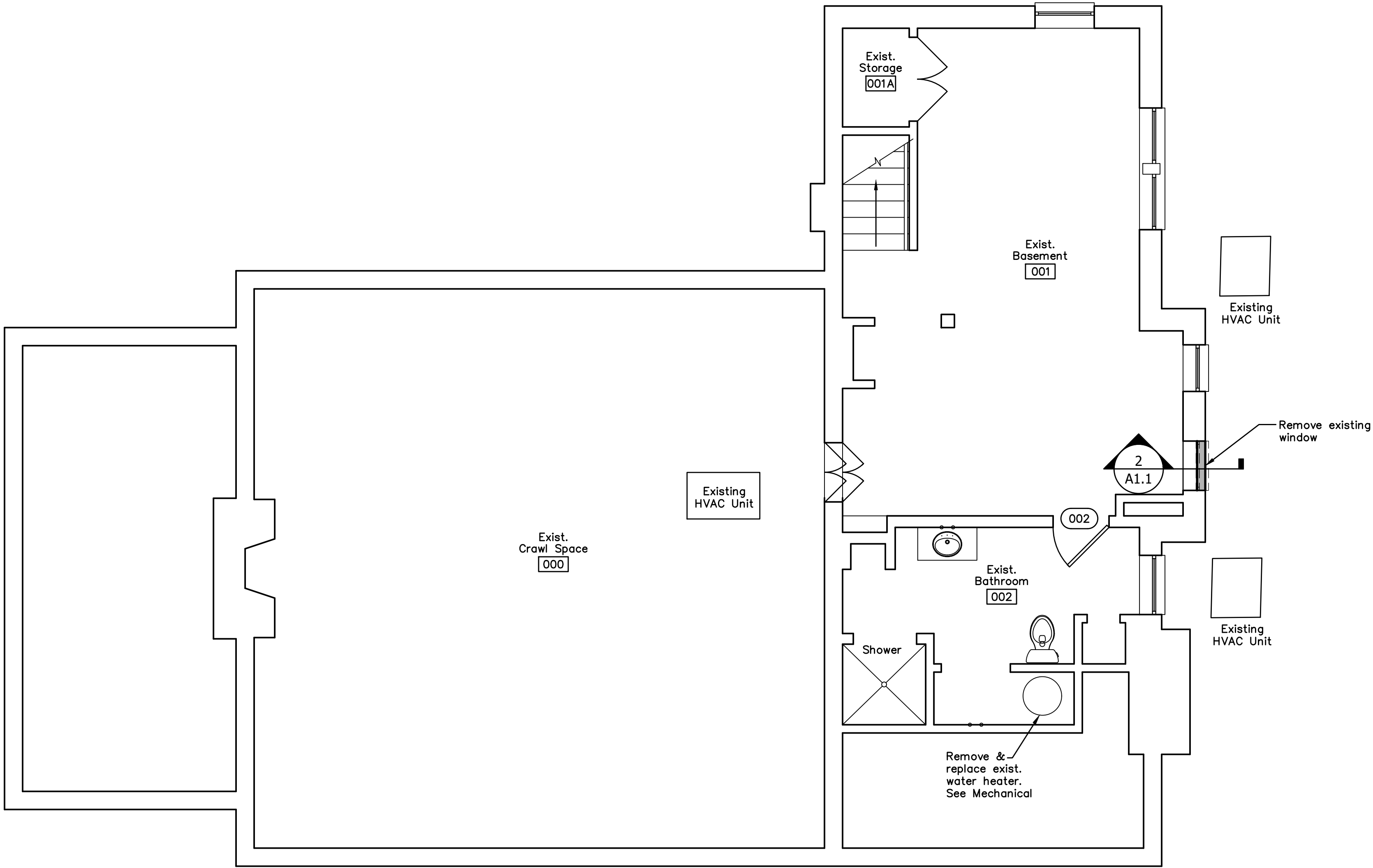


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Hamblen County Government
Morristown, Tennessee



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Drawn:	
Checked:	
Job No:	19-166
Scale:	as noted
Date:	09-21-20
File Name:	
Drawing Title:	Drawing Standards
Sheet No.	DS1.1



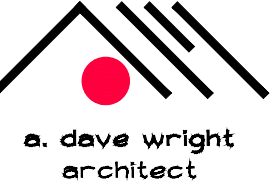
2 Window In-fill Detail
A1.1 Scale: 3/4"=1'-0"

1 Basement Plan
A1.1 Scale: 1/4"=1'-0"

Revisions	
No.	Description



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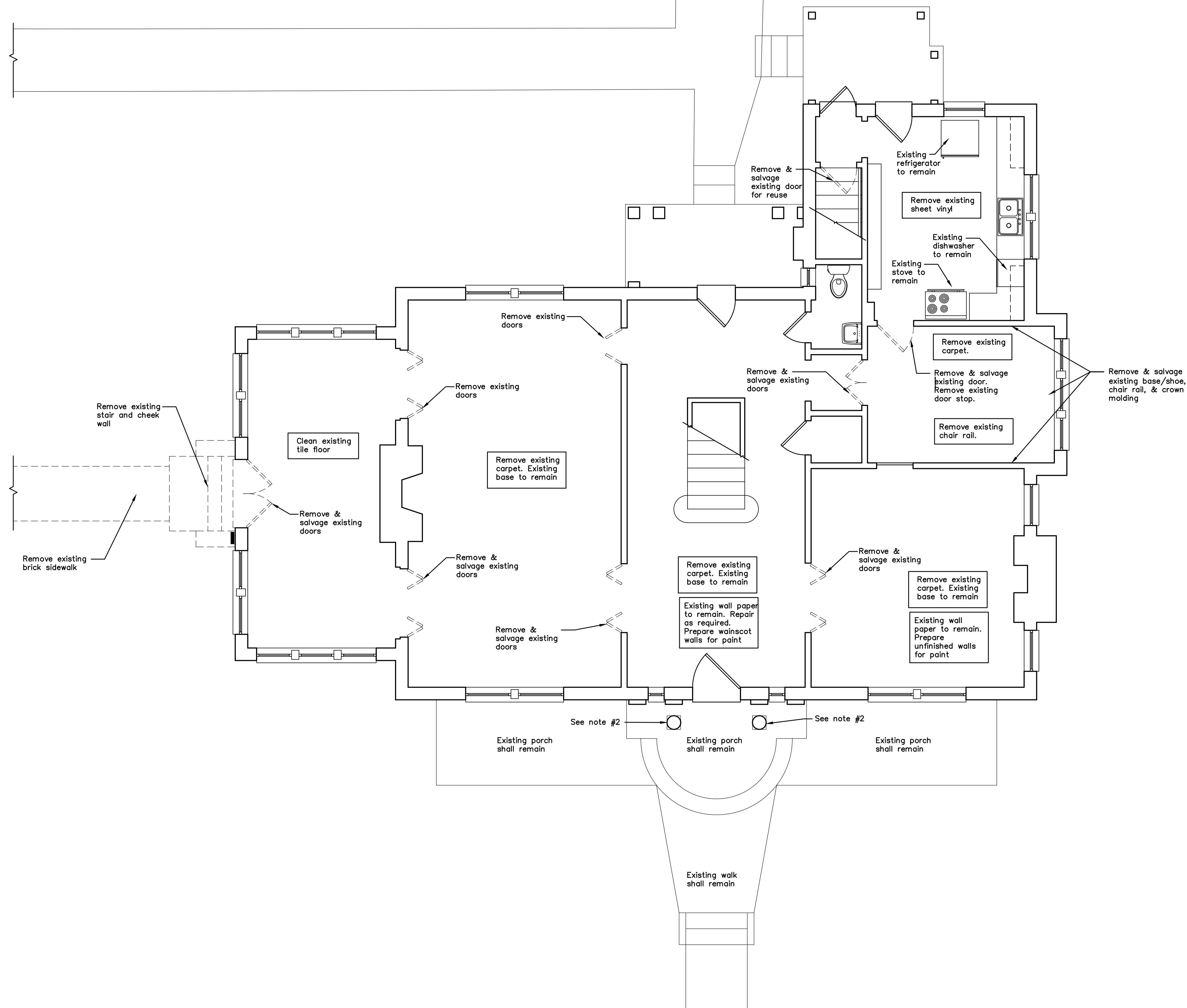
a. dove wright
architect

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Drawn:	y.c.Miller /a.k.Stacy
Checked:	a.d.Wright
Job No:	19-166
Scale:	as noted
Date:	09-21-20
File Name:	a-base-plan
Drawing Title:	Basement Plan

Sheet No.
A1.1



General Notes

1. Remove existing doors as noted on the drawing. The Contractor shall turn over the doors to the Owner.

2. Existing column repair. Store up entry porch roof. Remove and salvage existing columns. Replace existing base. Remove existing paint and prepare columns and new base to receive new primer and paint. Reinstall columns.

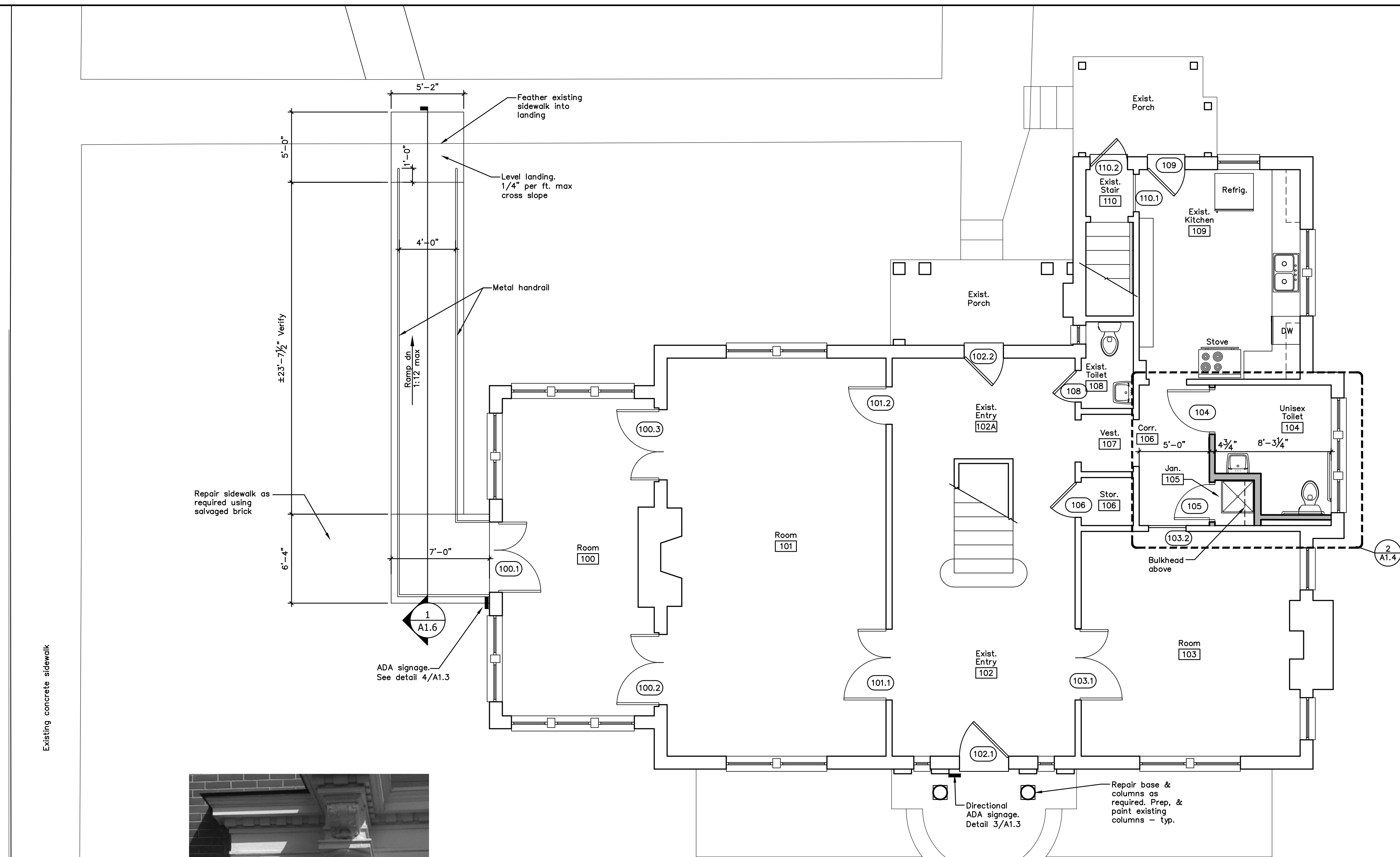
1 Demolition Plan - Main Floor
A1.2 Scale: 1/4"=1'-0"



Hale House Development for
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Morristown, Tennessee



Drawn:	y.c.Miller / a.k.Stacy
Checked:	a.d.Wright
Job No:	19-166
Scale:	as noted
Date:	09-21-20
File Name:	a-base-plan
Drawing Title:	Demolition Plan Main Floor
Sheet No.	A1.2



2 Column Detail
A1.3 Scale: NTS



3 ADA Accessible Entrance Directional
A1.3 Scale: NTS



4 ADA Accessible Entrance
A1.3 Scale: NTS

1 Main Floor Plan
A1.3 Scale: 1/4"=1'-0"

- Note:
1. Prep, repair as required, and reglaze all existing windows.
 2. Prep, repair as required, and paint all exterior doors, windows and trim.
 3. Prep, repair as required, and paint existing metal roof.
Alternate: Replace existing roof with standing seam metal roofing to match existing.
 4. Prep, repair as required, and paint existing wood columns.

Legend	
	Existing wall.
	2x4 studs at 16" o.c. Install sound attenuation in new toilet room walls.

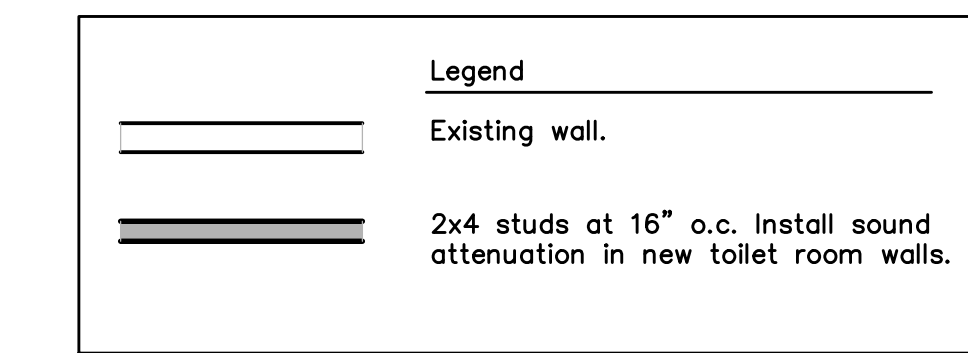
Revisions	
No.	Description



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Drawn: y.c.Miller/a.k.Stacy
Checked: a.d.Wright
Job No: 19-166
Scale: as noted
Date: 09-21-20
File Name: a-base-plan
Drawing Title: Main Floor Plan
Sheet No. A1.3



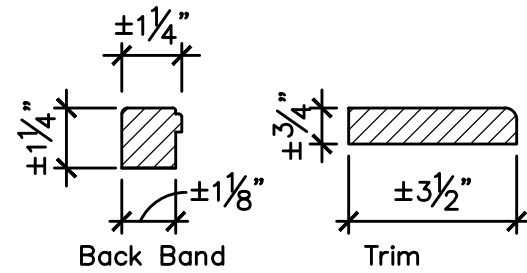
Toilet Accessory Schedule				
Item No.	Description	Bobrick	ASI	Remarks
1	mirror	b-165 1836	0620-1836	18" x 36"
2	soap dispenser	b-40	0340	—
3	toilet tissue dispenser	b-4288	9030	—
4	paper towel dispenser	b-4262	0042	—
5	grab bar	b-6806-36	3800-36	36" long
6	grab bar	b-6806-42	3800-42	42" long

3 Handicaped Toilet Elevation
A1.4 Scale: 1/2"=1'-0"

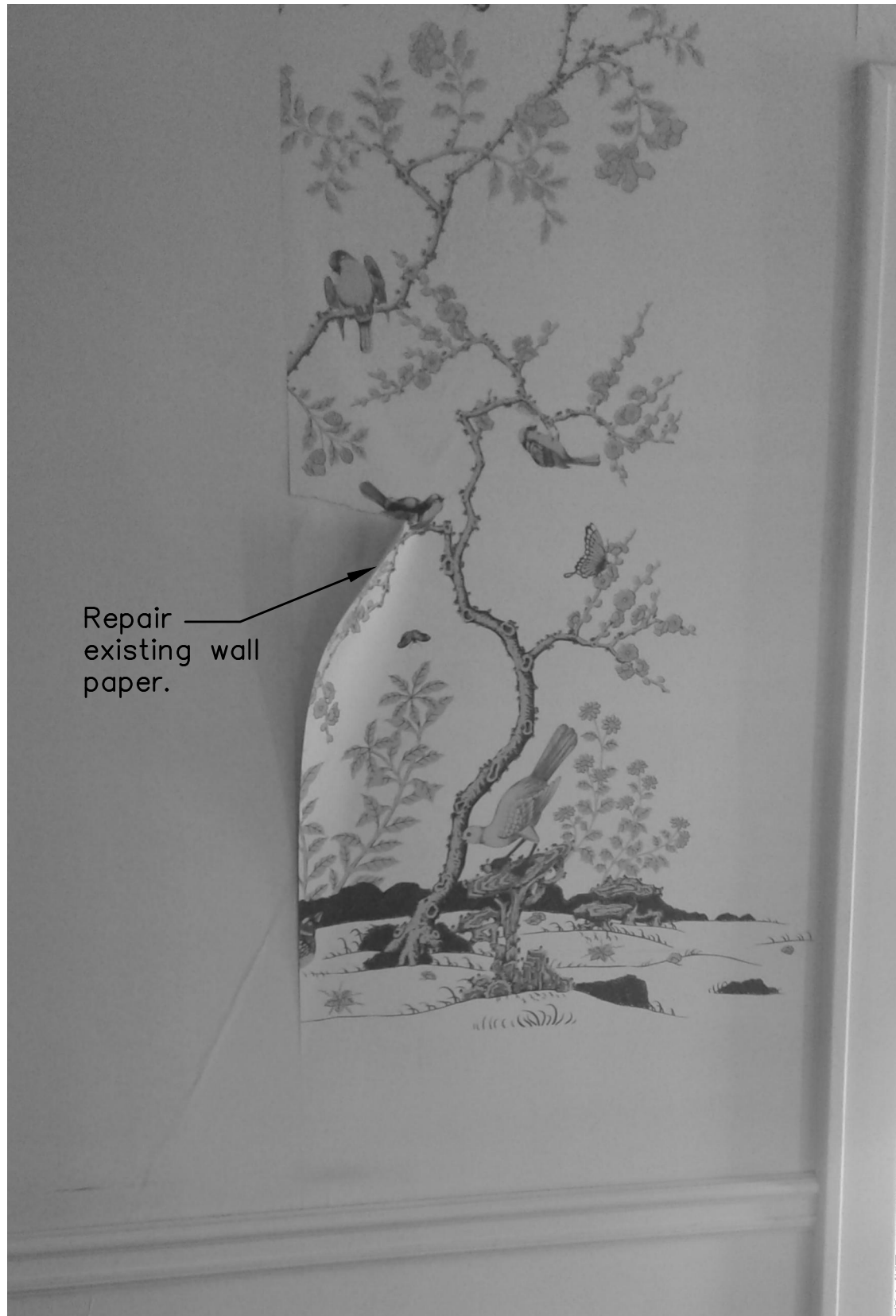
Room Finish Schedule										
Basement Floor Plan										
no	room	floor	base	walls				ceilings		remarks
				north	south	east	west	mat	finish	
000	Existing Crawl Space	ETR	—	—	—	—	—	—	—	—
001	Existing Basement	ETR	—	ETR	ETR	ETR	ETR	—	—	—
002	Bathroom	ETR	WD	PT	PT	PT	PT	ETR	PT	7,8
Main Floor Plan										
no	room	floor	base	walls				ceilings		remarks
				north	south	east	west	mat	finish	
100	Room	ETR	ETR	PT	PT	PT	PT	ETR	PT	1,2,3
101	Room	ETR	ETR	PT	PT	PT	PT	ETR	PT	1,2
102	Exist. Front Entry	ETR	ETR	PT/ETR	PT/ETR	PT/ETR	PT/ETR	ETR	PT	1,2,11
103	Room	ETR	ETR	ETR	ETR	PT	ETR	ETR	PT	1,2,12
104	Unisex Toilet	LVP	CB	CT/PT	CT/PT	CT/PT	CT/PT	ETR	PT	1,2,5,10
105	Janitor	LVP	WB-2	PT	PT	PT	PT	ETR	PT	1,2
106	Corridor	ETR	WB-1	PT	PT	PT	PT	ETR	PT	4
107	Vestibule	ETR	ETR	PT	PT	PT	PT	ETR	PT	1,2
108	Exist. Toilet	ETR	ETR	ETR	ETR	ETR	ETR	ETR	PT	2
109	Exist. Kitchen	LVP	ETR	PT	PT	PT	PT	ETR	PT	1,2,6,12
Second Floor Plan										
no	room	floor	base	walls				ceilings		remarks
				north	south	east	west	mat	finish	
200	Room	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	1
200A	Storage	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	—
200B	Bath	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	—
201	Room	ETR	ETR	PT	PT	PT	PT	ETR	ETR	1,12
201A	Storage	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	—
202	Room	ETR	ETR	PT/ETR	—	ETR	ETR	ETR	ETR	1,11
202A	Storage	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	—
202B	Stair	ETR	ETR	PT/ETR	—	PT/ETR	PT/ETR	ETR	ETR	1,11
203	Room	ETR	ETR	ETR	ETR	PT	ETR	ETR	ETR	1,12
204	Room	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	1
204A	Storage	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	—
204B	Storage	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	—
205	Bath	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	1
206	Corridor	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	1
207	Storage	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	—
204	Room	ETR	ETR	ETR	ETR	ETR	ETR	ETR	ETR	1

Finish Notes

- Paint all existing wood trim with the exception of wood stair handrail. Paint shall be eggshell. Owner/Tenant shall select color.
- Paint existing ceiling. Paint shall be a flat ceiling paint.
- Clean existing tile.
- Install salvaged base/shoe molding on new walls.
- Ceramic tile wainscot/paint above.
- Paint wood cabinets.
- Bath 002 – Tape and mud existing drywall on walls and ceiling. Paint with one coat primer and 2 coats paint. Walls shall be eggshell paint; ceiling shall be flat paint. See Note #8 for shower.
- Prepare floors, walls, and ceiling as required to install ceramic tile.
- Install stock wood base in Bath 002.
- Install sound attenuation blanket in toilet room walls.
- Existing wallpaper above wainscot shall remain. Paint wainscot walls. Paint shall be eggshell finish, Owner/Tenant shall select color.
- Paint wall with eggshell paint. wner/Tenent shall select color. One coat primer any unprimed walls before painting.



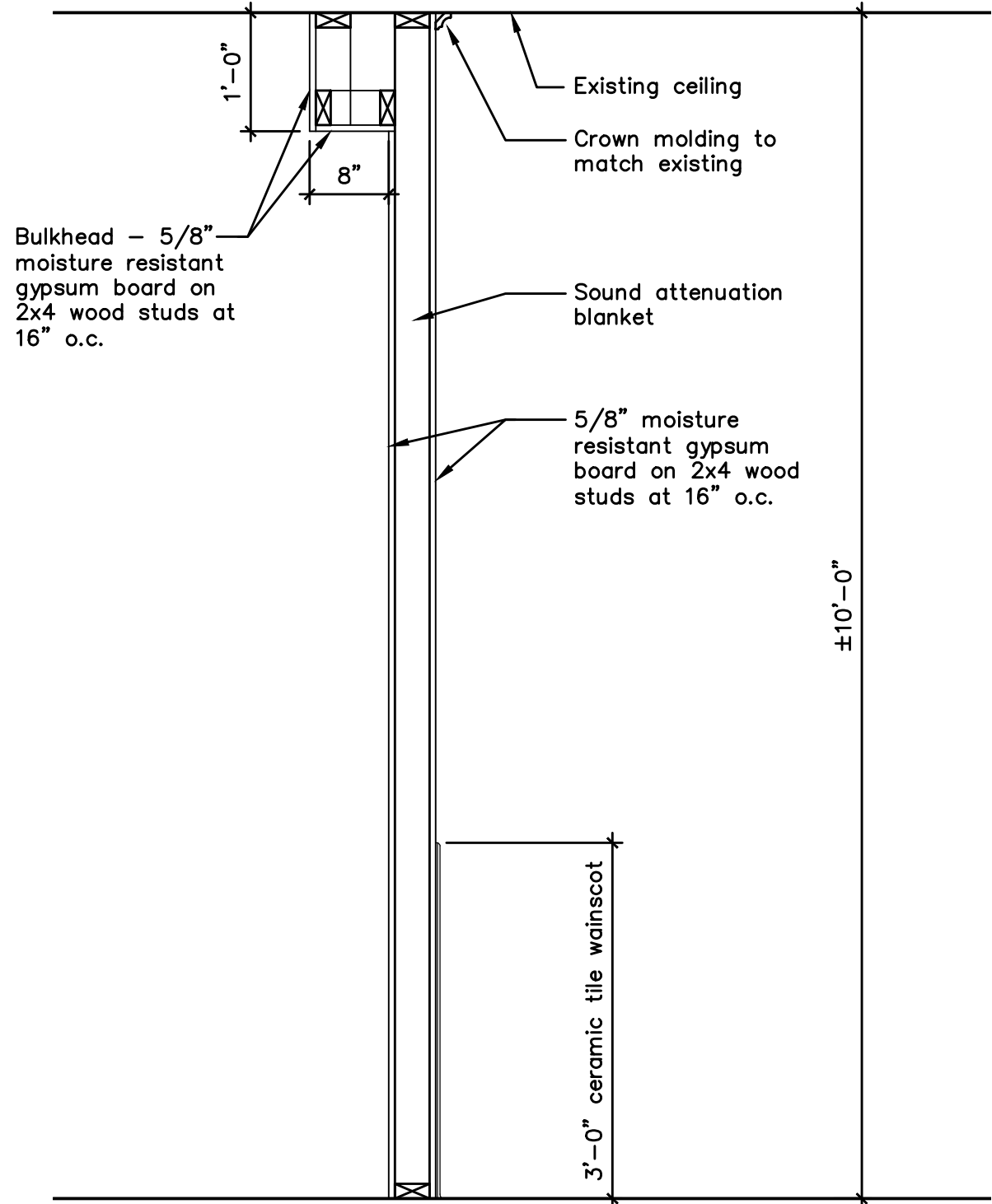
1 Door Casing Detail
A1.5 Scale: 3/4"=1'-0"



2 Wallpaper Detail
A1.5 Scale: NTS

Finish Legend

- CT Ceramic wall tile
CB Ceramic base
ETR Existing to remain
GB Gypsum board
LVP Luxury vinyl plank, water resistant
PT Paint
WB-1 Wood base, salvaged
WB-2 Wood base, standard

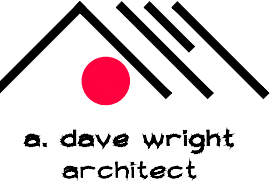


3 Wall Section
A1.5 Scale: 3/4"=1'-0"

Revisions				
No.	Date	Description		
-	-	-		



Hale House Development for
Hamblen County Government
Morristown, Tennessee


a.dave wright
architect
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Drawn: g.k.Stacy
Checked: a.d.Wright
Job No: 19-166
Scale: as noted
Date: 09-21-20
File Name: a-base-plan
Drawing Title: Room Finish Schedule & Details

Sheet No.
A1.5

Basement

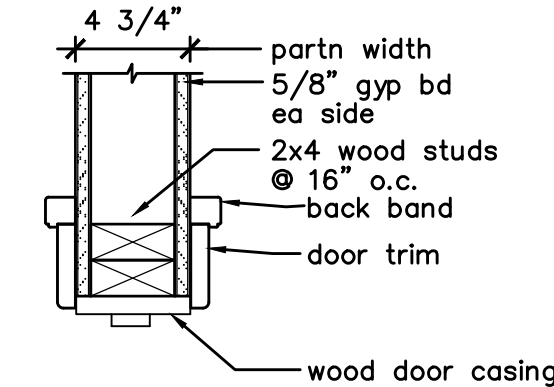
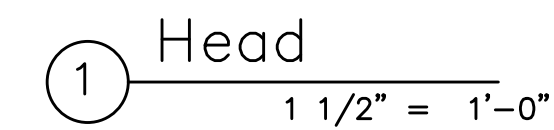
Main Floor

Second Floor

Door & Frame Legend

[illegible]

1. Hardware allowance – \$600.00 per door. Labor not included
2. Door hardware – exterior and interior passage doors with latching hardware must be equipped with operating hardware devices that comply with accessibility requirements (e.g. lever handle, push/pull latch, etc.)
3. Keying: coordinate with Users requirements.
4. Hardware finish shall match existing.
5. Match existing wood door casing and trim.
6. Reuse and rework existing door casing and trim when adding door/doors.
7. Door shall remain closed.
8. Install salvaged door into existing frame.
9. All doors and hardware in Basement Floor are existing to remain.
10. All doors and hardware on the Second Floor are existing to remain.
11. All doors and hardware in the Basement area are existing to remain.



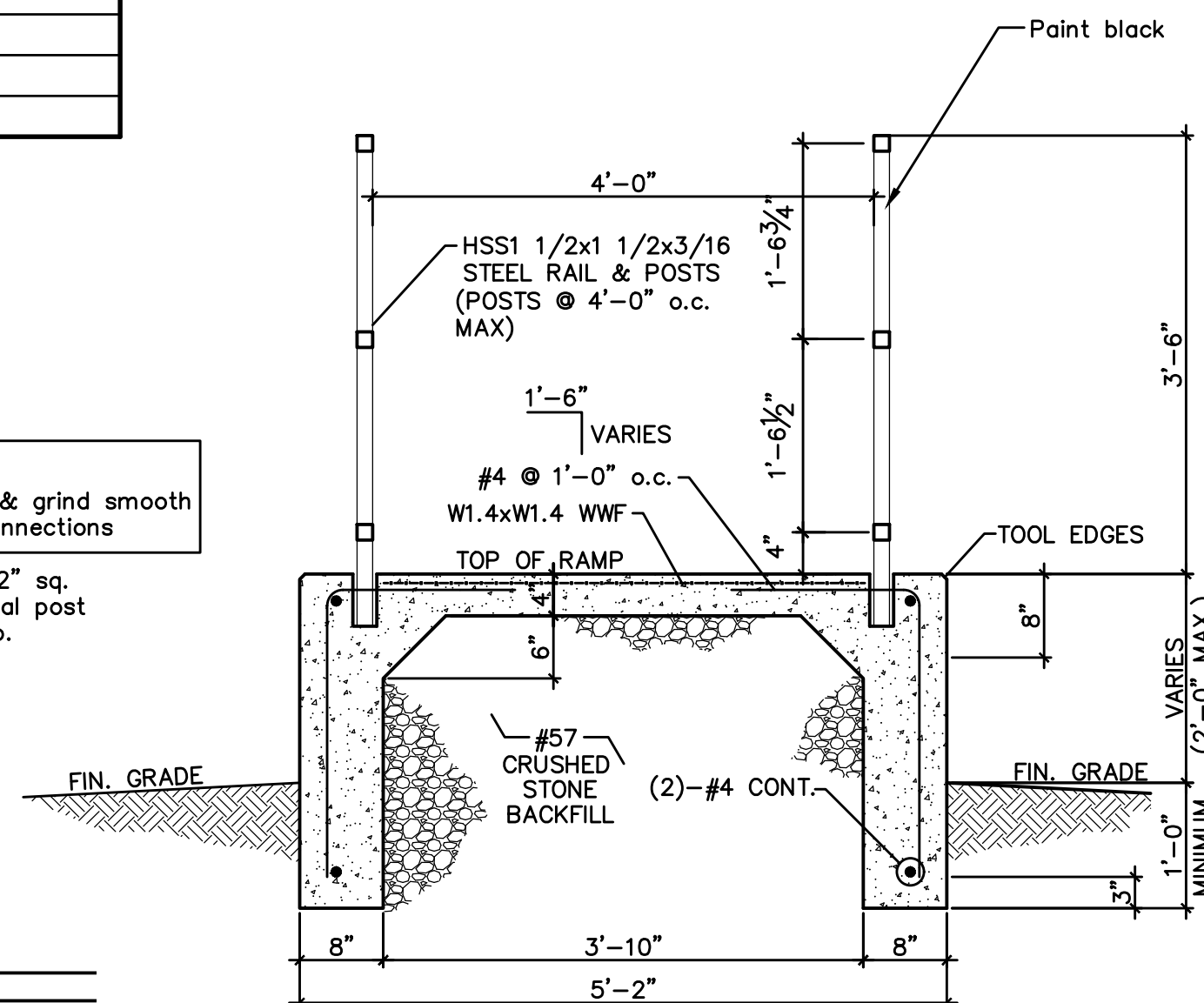
① jamb $1\frac{1}{2}" = 1'-0"$

Diagram (A) shows a door with a height of 7'-0" and a width of 5'-0". The door is divided into two vertical panels, each containing a 3x3 grid of lites. The top of the door is labeled 5'-0" and the bottom is labeled 7'-0". The width is divided into 3'-0" and 2'-0" sections. The door is labeled (A) below it.

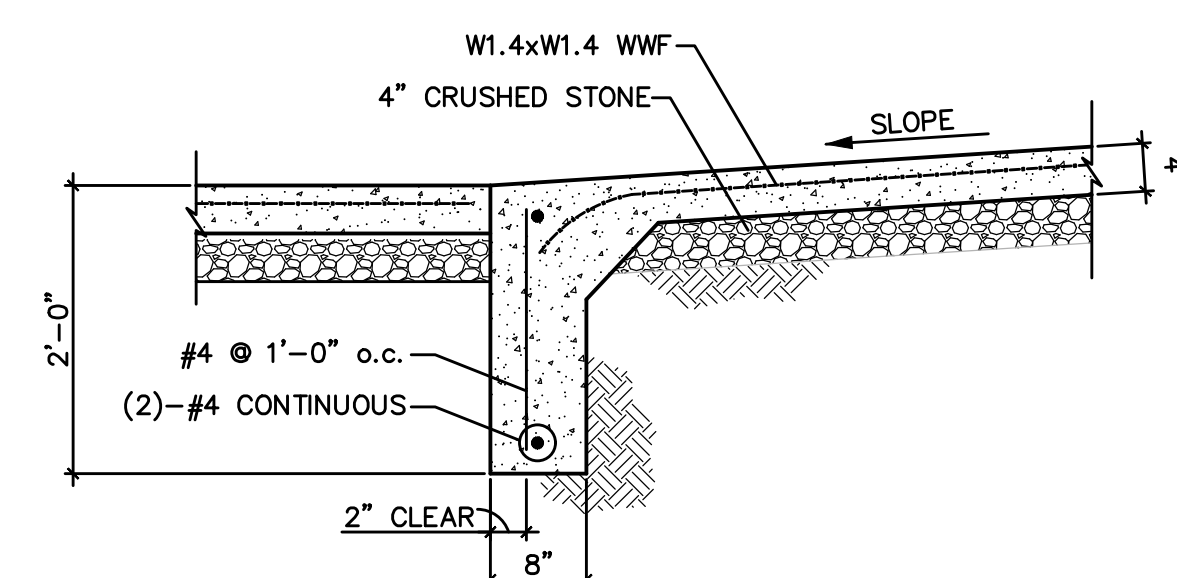
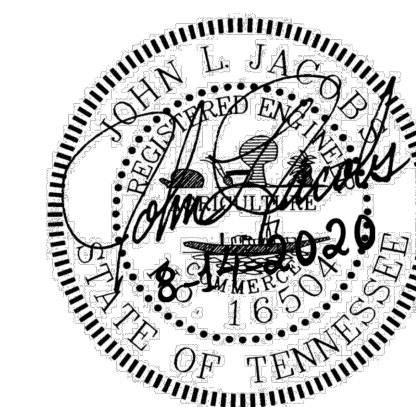
Diagram (B) shows a door with a height of 7'-0" and a width of 5'-0". The door is divided into two vertical panels, each containing a 3x3 grid of lites. The top of the door is labeled 5'-0" and the bottom is labeled 7'-0". The width is divided into 2'-0" and 3'-0" sections. The door is labeled (B) below it.

Diagram (C) shows a door with a height of 7'-0" and a width of 5'-0". The door is divided into two vertical panels, each containing a single lite. The top of the door is labeled 5'-0" and the bottom is labeled 7'-0". The width is divided into 2'-0" and 3'-0" sections. The door is labeled (C) below it.

Diagram of a wood frame. The height is labeled as 7'-0". The width is labeled as "See Sched.". A note at the top right states $1/4" = 1'-0"$. The frame is labeled "Wood Frame" at the bottom.



2 Section Through Ramp
A1.6 Scale: 3/4"=1'-0"



3 Turn-down Slab
A1.6 Scale: 3/4"=1'-0"

[illegible]

Hamble County Government
Hale House Development for
Morristown, Tennessee

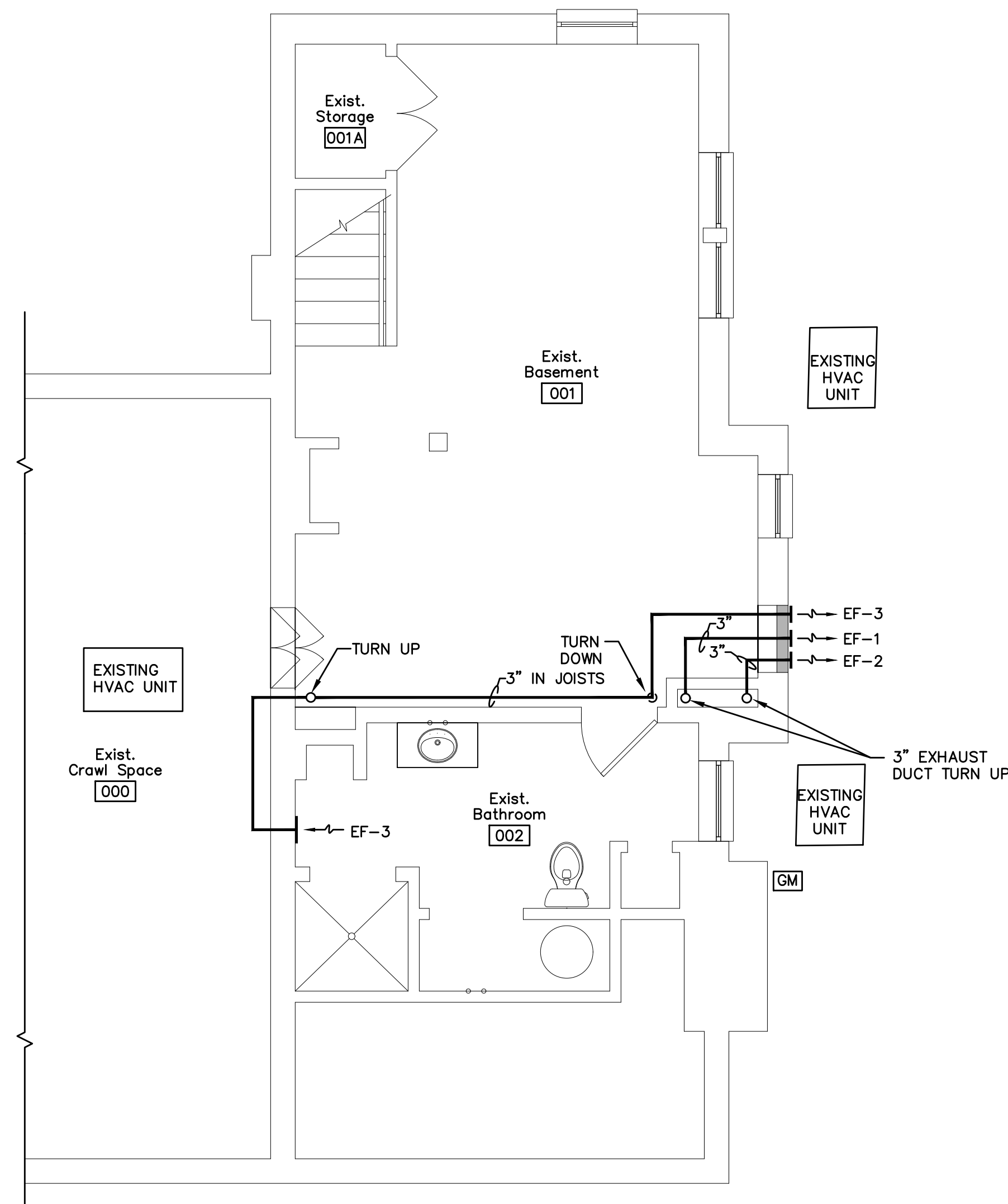


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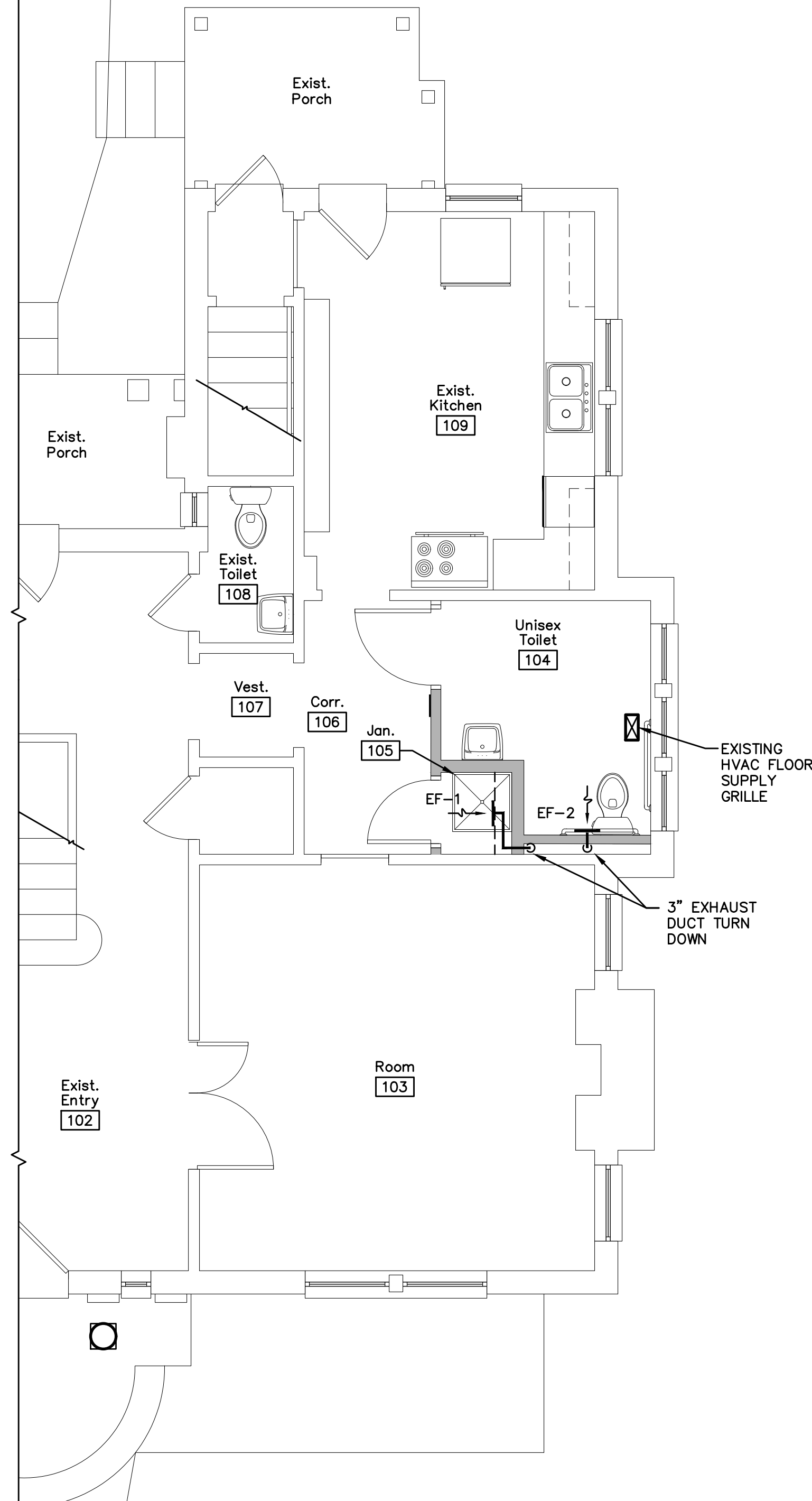
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Written by:	g.k.Stacy
Checked by:	a.d.Wright
No:	19-166
Due:	as noted
Date:	09-21-20
Project Name:	a-base-plan
Project Title:	Door Schedule. & Handicapped Ramp Details

et No.
A1.6



1 H.V.A.C. Floor Plan – Basement
M1.1 Scale: 1/4"=1'-0"



2 H.V.A.C. Floor Plan – Main Floor
M1.1 Scale: 1/4"=1'-0"

HVAC LEGEND

SYMBOL	DEFINITION
	FLOOR SUPPLY DIFFUSER GRILLE
	EXHAUST FAN
	EXHAUST / RETURN AIR DUCT (FIRST DIMENSION IS SIDE SHOWN)
	PIPE TURNING DOWN
	PIPE TURNING UP
ACU	AIR-COOLED CONDENSING UNIT
AFF	ABOVE FINISHED FLOOR
AHU	AIR HANDLING UNIT
CFM	CUBIC FEET PER MINUTE (AIR FLOW)
EF	EXHAUST FAN
	GAS METER
	SIDEWALL DIFFUSER OR DIFFUSER IN SIDE OF DUCT

EXHAUST FAN SCHEDULE

MARK	AREA SERVED	LOCATION	CFM	STATIC PRESS. IN. W.G.	RPM	DRIVE	HP	V/PH/HZ	CONTROL	DUCT	MODEL NO.	REMARKS
EF-1	JANITOR 105	SIDEWALL	50	0.25	—	DIRECT	0.12	120/1	WALL SWITCH/AUTO	3"	BROAN 670	1,6
EF-2	UNISEX TOILET 104	SIDEWALL	110	0.25	—	DIRECT	0.12	120/1	WALL SWITCH/AUTO	3"	BROAN AE100	1,6
EF-3	EXIST. BATHROOM 002	SIDEWALL	110	0.25	—	DIRECT	0.12	120/1	WALL SWITCH/AUTO	3"	BROAN AE100	1,6

- NOTES: 1. PROVIDE SEPARATE EXHAUST FAN SWITCH WITH BATH LIGHT SWITCH.
2. INTERLOCK FANS TO LOUVERS/DAMPER.
3. MOTORIZED DAMPERS WITH FIXED BLADES.
4. SPEED CONTROL – VFD
5. WEATHERHOOD WITH MESH BIRDSCREEN.
6. PROVIDE BRAND/MODEL OR APPROVED EQUAL

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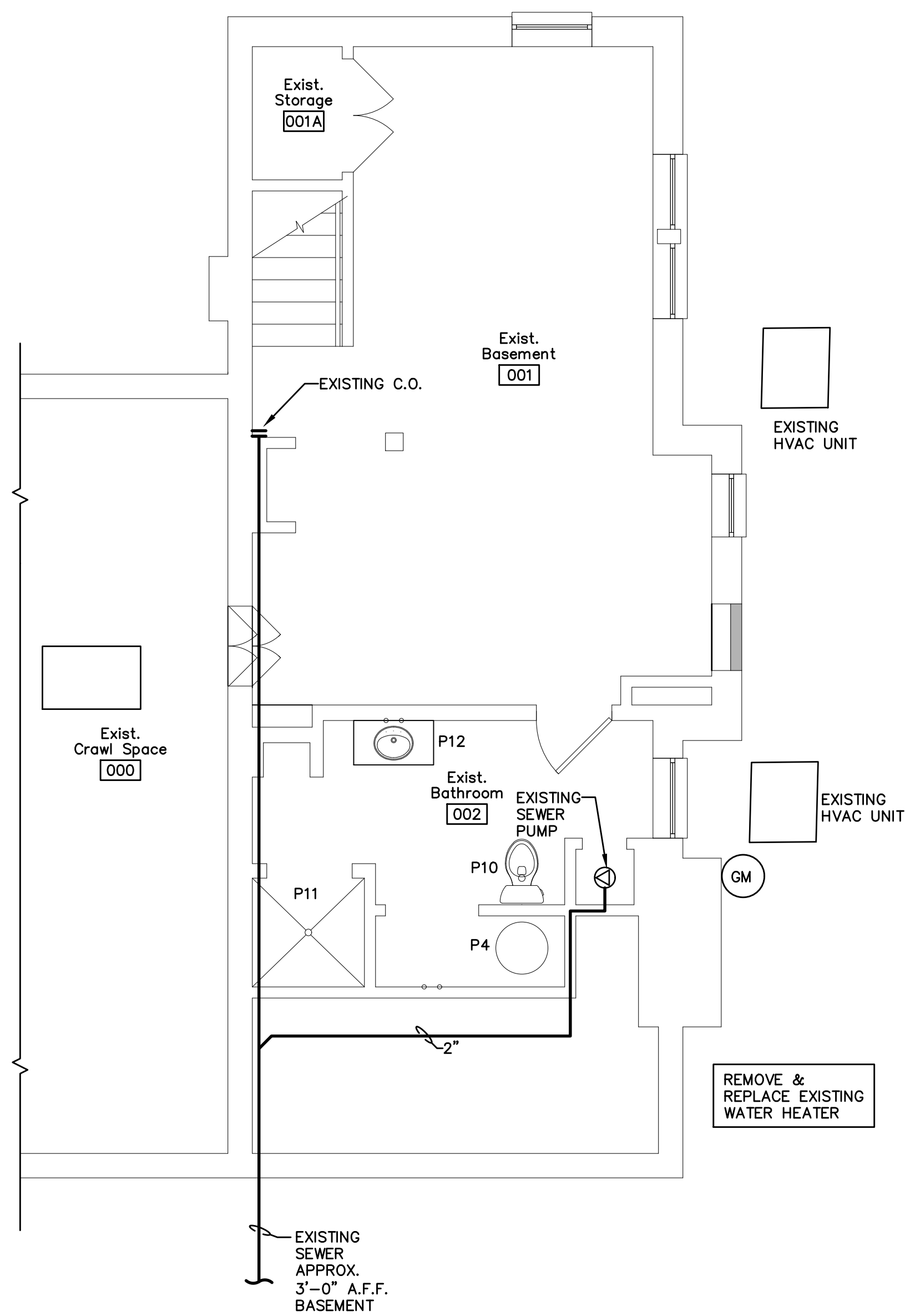
Hale House Development for
Hamblen County Government
Morristown, Tennessee



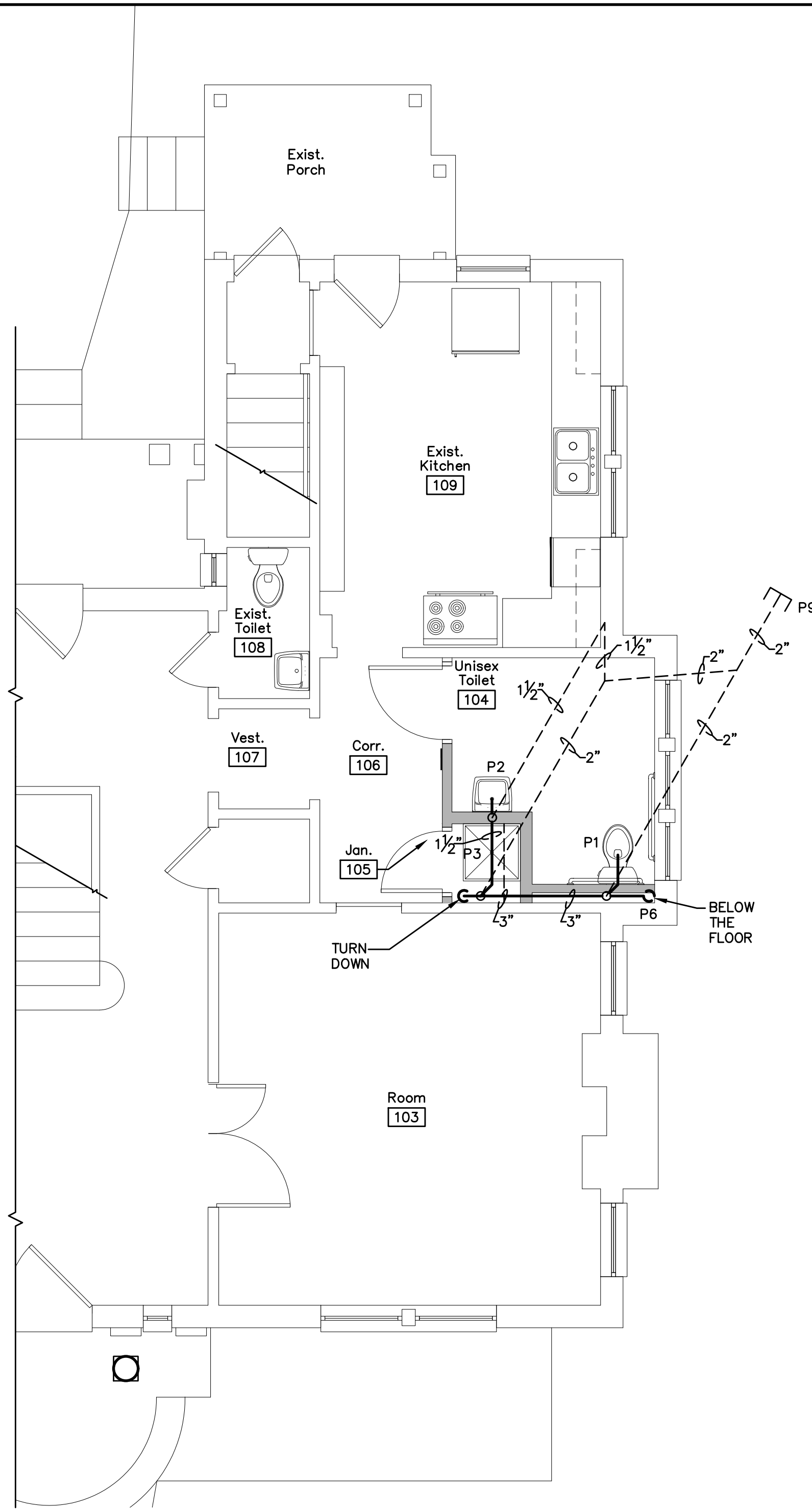
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Drawn: g.k.Stacy
Checked: m.w.Robertson
Job No: 19-166
Scale: as noted
Date: 08-13-20
File Name: m-base-plan
Drawing Title:
H.V.A.C. Floor Plan
– Basement &
Main Floor

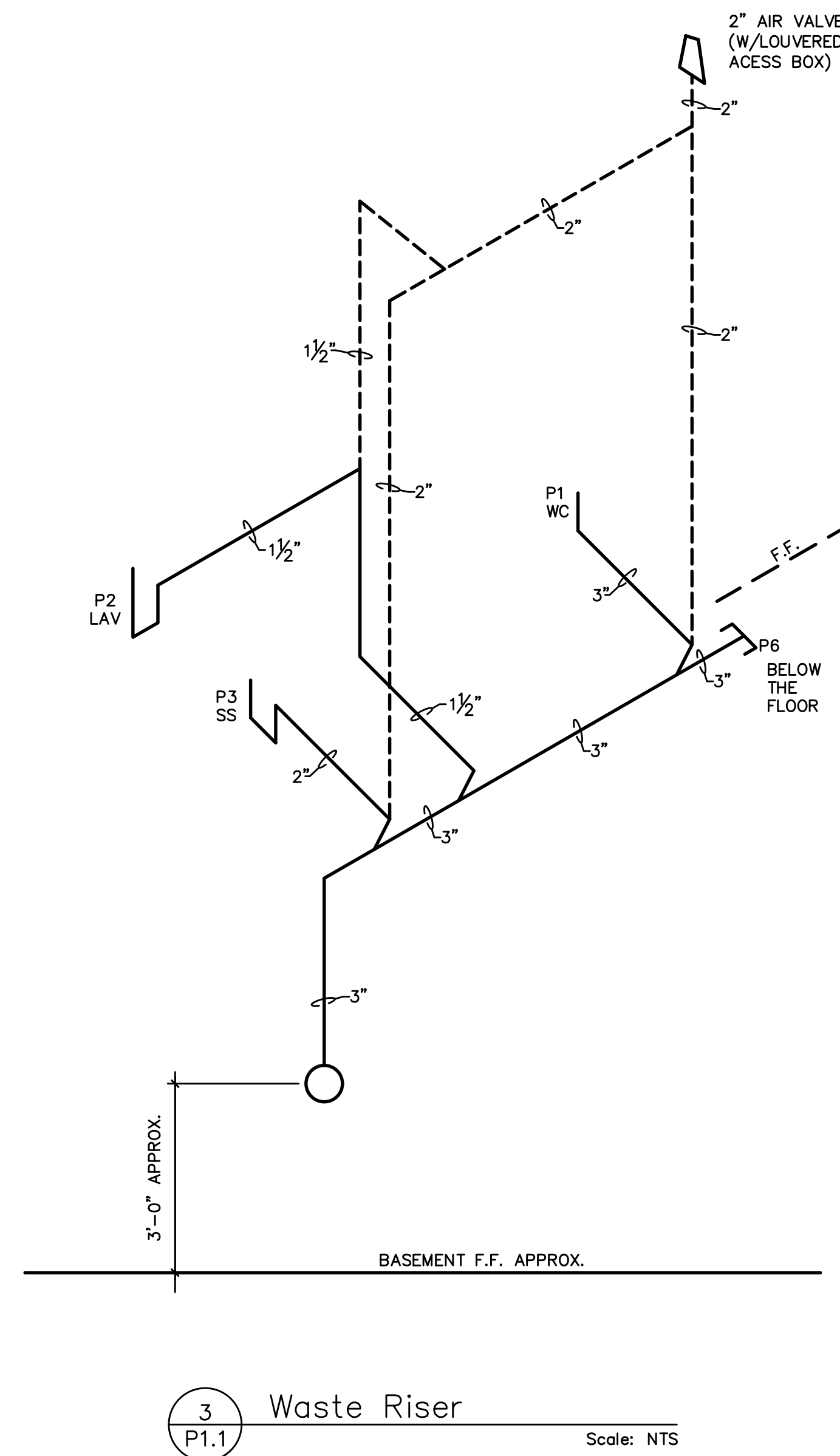
Sheet No.
M1.1



1 Waste & Venting Plan - Basement
P1.1 Scale: 1/4"=1'-0"



2 Waste & Venting Plan - Main Floor
P1.1 Scale: 1/4"=1'-0"



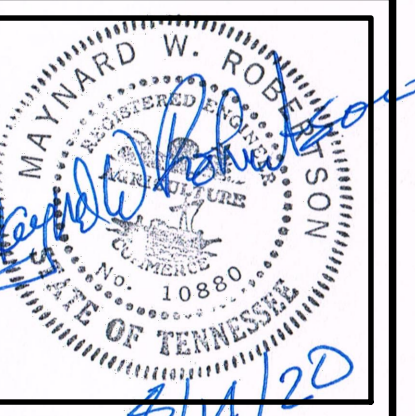
PLUMBING LEGEND

---	COLD WATER SUPPLY	---	WATER HAMMER ARRESTOR
---	HOT WATER SUPPLY	---	CAP ON END OF PIPE
---	HOT WATER RETURN	---	FLOOR CLEANOUT
---	SANITARY SEWER LINE	---	W.C.O.
---	SANITARY VENT LINE	---	Y.C.O.
ST	STORM SEWER	---	PROPANE GAS
---	PRESSURE REDUCING VALVE	---	BALL SERVICE VALVE
---	GATE VALVE	---	CLEANOUT
---	CHECK VALVE	---	POINT OF CONNECTION (NEW TO EXISTING)
---	REDUCED PRESSURE BACKFLOW PREVENTER	AFF	ABOVE FINISHED FLOOR
---	FLOOR DRAIN	CW	COLD WATER
---	ROOF DRAIN	HW	HOT WATER
---	PIPE TURN DOWN	P#	FIXTURE IDENTIFICATION NUMBER
---	PIPE TURN UP	WH	WATER HEATER
---	PLUMBING FIXTURE SERVICE CONNECTION	VTR	VENT THRU ROOF
---	REDUCER	V	VENT

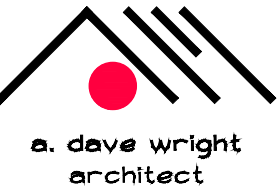
NOTE:

- CONTRACTOR SHALL REPLACE ALL SUPPLY CONNECTIONS ON ALL EXISTING LAVATORIES, TOILETS, AND KITCHEN SINK IN THE BUILDING.

No.	Description	Date



Hale House Development for
Hamblen County Government
Morristown, Tennessee

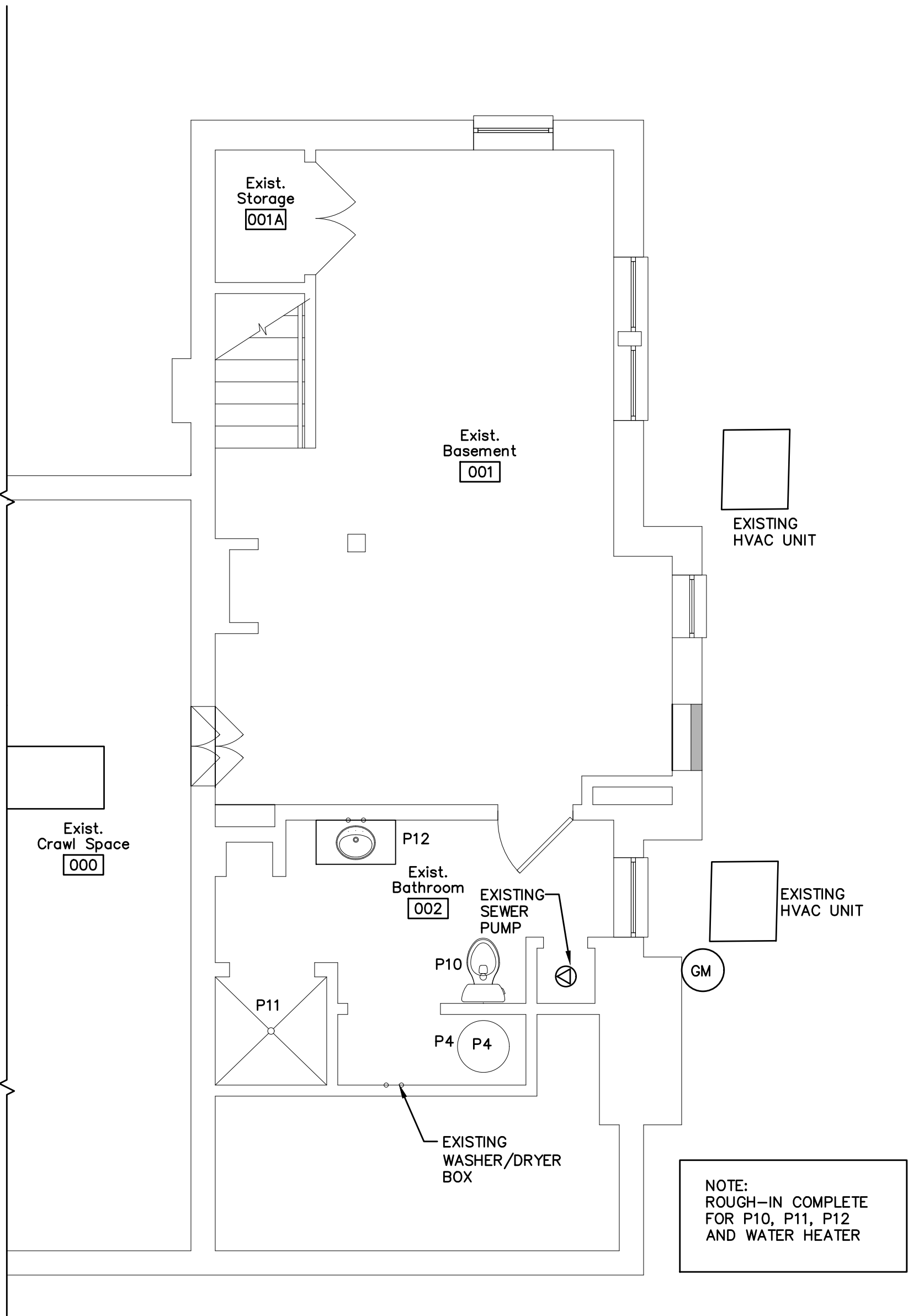


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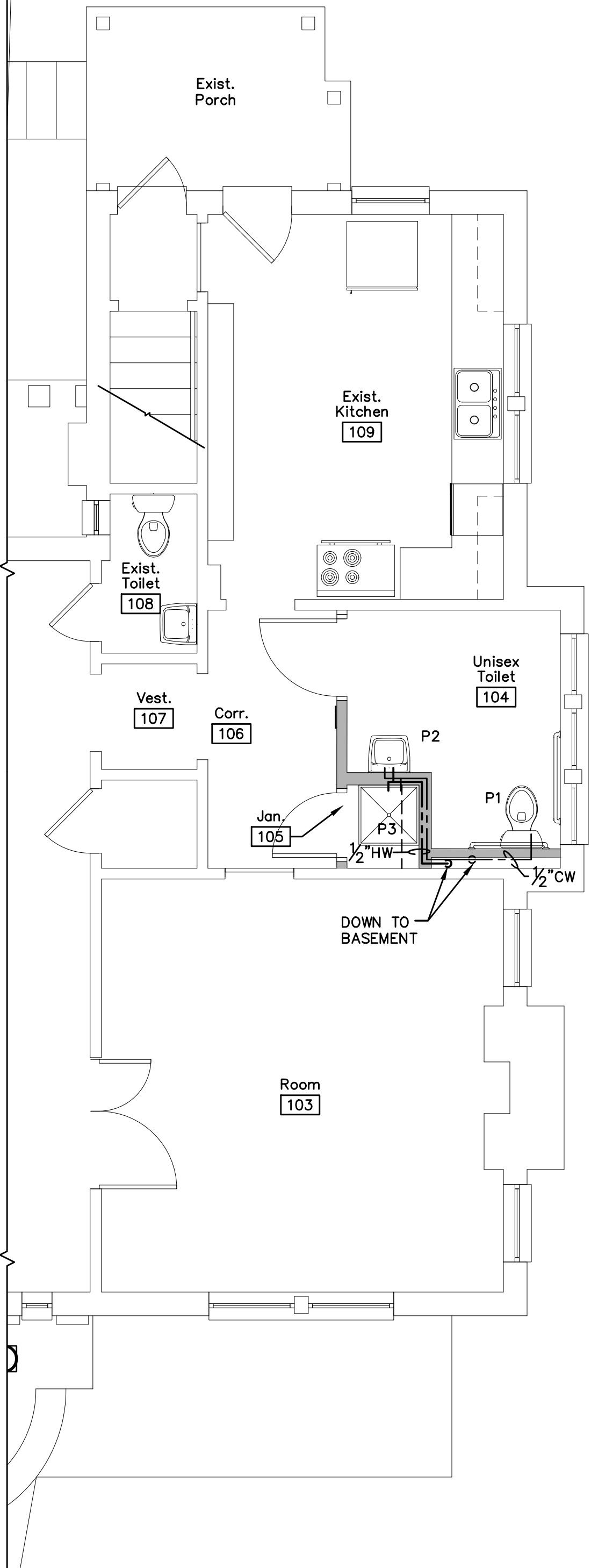
Drawn: g.k.Stacy
Checked: m.w.Robertson
Job No: 19-166
Scale: as noted
Date: 08-13-20
File Name: p-base-plan
Drawing Title:
Waste & Venting
Plan - Basement
& Main Floor

Sheet No.
P1.1

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1 Water Piping Plan – Main Floor
P1.2 Scale: 1/4"=1'-0"



2 Water Piping Plan – Main Floor
P1.2 Scale: 1/4"=1'-0"

PLUMBING NOTES:

- ALL SANITARY WASTE PIPING ABOVE GRADE IS TO BE PVC PIPE.
- ALL SANITARY VENT PIPING IS TO BE SCHEDULE 40 PVC PIPE. ALL SANITARY WASTE PIPING BELOW GRADE IS TO BE SCH 40 PVC
- HOT WATER AND COLD WATER PIPING TO BE TYPE "L" HARD DRAWN COPPER ABOVE GRADE. JOINTS SHALL BE SWEAT TYPE USING 95-5 (TIN-ANTIMONY) SOLDER HAVING A MAXIMUM LEAD CONTENT OF 0.2 OF 1%.
- WATER PIPING ROUTED BELOW SLAB SHALL BE TYPE "K" ANNEALED COPPER TUBING WITH NO JOINTS BELOW SLAB.
- DOMESTIC WATER PIPING TO BE RUN IN CEILING SPACES, ATTICS, CRAWL SPACES AND IN AND BETWEEN WALL STUDS ETC.
- ALL HOT WATER AND COLD WATER PIPING SHALL BE INSULATED WITH 1/2" CLOSED CELL INSULATION.
- ALL EXPOSED PIPING CONNECTING TO HANDICAP FIXTURES SHALL BE INSULATED WHERE THERE IS A POSSIBILITY OF INCIDENTAL BODILY CONTACT. INSULATE USING MOLDED PVC JACKETS SUCH AS HANDI LAV-GUARD BY TRUEBRO, INC OR USE PREWRAPPED FITTINGS SUCH AS PROWRAP BY MCGUIRE MFG. CO. (OR APPROVED EQUALS). COMPLY WITH ALL ADA REQUIREMENTS.
- CONTRACTOR SHALL COORDINATE PLUMBING WORK WITH THE WORK OF OTHER TRADES AND SHALL NOTIFY OTHERS OF ANY CHASES OR ACCESS REQUIREMENTS FOR HIS PORTION OF THE
- INSTALL PLUMBING IN ACCORDANCE WITH NATIONAL, STATE AND LOCAL CODES AND WITH THE AUTHORITY HAVING JURISDICTION.
- CONTRACTOR TO PAY FOR ALL PERMITS, FEES, INSPECTIONS AND CONNECTIONS AS MAY BE REQUIRED FOR THIS WORK.
- ALL VENT PIPING TO PENETRATE ROOF A MINIMUM OF 12" ABOVE ROOF. FLASH AND SEAL TO ROOF WEATERTIGHT.
- ALL WASTE AND VENT PIPING 2" AND SMALLER TO SLOPE A MINIMUM OF 1/4" PER FT.; 3" AND LARGER TO SLOPE A MINIMUM OF 1/8" PER FT.
- THE PLUMBING DRAWINGS ARE DIAGRAMMATIC AND SHOW THE RELATIONSHIP BETWEEN FIXTURES AND CONNECTIONS. DO NOT SCALE THE DRAWINGS FOR EXACT LOCATIONS. VERIFY LOCATIONS WITH ARCHITECTURAL DRAWINGS.
- CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING SANITARY SEWER, DOMESTIC WATER SERVICE AND GAS MAIN SERVING BUILDING SITE.
- CONTRACTOR SHALL VISIT SITE AND BECOME FAMILIAR WITH ANY EXISTING CONDITIONS WHICH MAY EFFECT HIS WORK. REPORT ANY DISCREPANCIES BETWEEN THE PLANS AND ACTUAL FIELD CONDITIONS TO THE ARCHITECT/ENGINEER PRIOR TO THE COMMENCEMENT OF DEMOLITION WORK.
- SLEEVES SHALL BE INSTALLED WHERE PIPING PENETRATES NON-RATED PARTITIONS FOUNDATION WALLS, FLOORS OR ROOF. SLEEVES SHALL BE MINIMUM 16 GA. GALV. STEEL. PACK SLEEVES WHERE REQUIRED TO SEAL WEATERTIGHT. INSTALL FLASHING AS REQUIRED. PIPE PENETRATIONS THRU FLAT ROOFS SHALL BE THRU INDUSTRY STANDARD PITCH POCKETS OR OTHER SIMILAR WATER TIGHT AND APPROVED PENETRATION APPARATUS. SEE TYPICAL DETAIL LOCATED IN THESE DRAWINGS FOR UL RATED PENETRATIONS THRU FIRE WALLS.
- EXISTING PLUMBING FIXTURES ARE TO BE REUSED IN PLACE. ANY FIXTURES REMOVED IN ORDER TO FACILITATE NEW CONNECTIONS SHALL BE STORED AND PROTECTED UNTIL REINSTALLED. ALL FIXTURES SHALL BE CLEANED AND MINOR REPAIR OR ADJUSTMENTS MADE PRIOR TO COMPLETION OF PROJECT.
- COORDINATE WITH ARCHITECTURAL PLANS FOR ALL FIRE RATED BUILDING ASSEMBLIES. PROVIDE AND INSTALL U.L. RATED FIRE STOP ASSEMBLIES IN ANY SUCH AREAS AS REQUIRED BY CODE.
- WORKMANSHIP: PLUMBING FIXTURES AND ACCESSORIES SHALL BE INSTALLED IN A NEAT WORKMANLIKE MANNER. UNSIGHTLY INSTALLATIONS SHALL BE REMOVED OR REWORKED AT NO EXPENSE TO THE OWNER.
- REFER TO MECHANICAL DRAWINGS FOR ADDITIONAL COORDINATION WITH THESE DRAWINGS.
- SEAL ALL WALL, ROOF AND FLOOR PENETRATIONS BY PLUMBING SERVICE AIRTIGHT.
- PROVIDE CHROME-PLATED ESCUTCHEONS AT ALL EXPOSED PIPE PENETRATIONS THROUGH WALLS.
- COORDINATE ALL PENETRATIONS OF FLOOR SLABS, ROOF AND WALLS WITH STRUCTURAL DRAWINGS.
- INSTALL HEAT TAPE, AS PER SPECIFICATIONS, TO ALL WATER-CONTAINING PIPE SUBJECT TO FREEZING.
- DEMOLITION WORK SHALL BE PHASED TO ACCOMPLISH REPLACEMENT WITH MINIMUM AMOUNT OF DOWNTIME. SCHEDULE NEW AND DEMOLITION WORK IN ADVANCE WITH THE OWNER.
- MINIMUM FIXTURE SUPPLY PIPE SIZES SHALL BE AS FOLLOWS
UNLESS OTHERWISE NOTED:
LAVATORY & SINK 1/2"
WATER CLOSET (FLUSH VALVE) 1-1/4"
URINAL, SERVICE SINK & WALL HYDRANT 3/4"
- PROVIDE WATER STOP VALVES AT EACH EQUIPMENT ITEM.
- ALL FLOOR DRAINS AND OPEN HUB DRAINS SHALL BE INSTALLED WITH DEEP SEAL P-TRAPS. PROVIDE TRAP PRIMERS WHERE SHOWN ON PLAN AND AT ALL LOCATIONS REQUIRED BY CODE AND LOCAL AUTHORITY.
- SLOPES OF SANITARY WASTE AND VENT SHALL BE ESTABLISHED AND VERIFIED BY CONTRACTOR PRIOR TO PIPING BEING INSTALLED IN ORDER THAT PROPER SLOPES WILL BE MAINTAINED AND NECESSARY INVERT ELEVATIONS OBTAINED.
- CONTRACTOR SHALL PROVIDE ALL VALVES, PRESSURE REDUCING VALVES, SHOCK ABSORBERS AND ACCESSORIES TO COMPLETELY INSTALL ALL EQUIPMENT TO MAKE A COMPLETE INSTALLATION.
- THE CONTRACTOR SHALL INSTALL ALL OWNER FURNISHED EQUIPMENT WITH ALL ITEMS TO MAKE EQUIPMENT OPERABLE.
- ALL VENTING OF FIXTURES SHALL COMPLY WITH LOCAL CODES AND ORDINANCES.
- USE DIELECTRIC UNIONS WHERE PIPE OF DIFFERENT METALS ARE JOINED.
- MAKE PROPER HOT & COLD WATER, WASTE, VENT ETC. PIPING CONNECTIONS TO ALL FIXTURES AND EQUIPMENT EVEN THOUGH ALL BRANCH RUNS, ELBOWS AND CONNECTIONS ARE NOT SHOWN.
- PVC OR OTHER PLASTIC COMPOSITE PIPING SHALL NOT BE INSTALLED IN RETURN AIR PLENUMS.
- CLEANOUTS FOR SOIL AND WASTE LINES SHALL BE INSTALLED WHERE INDICATED ON THE DRAWINGS AND EVERY 90° CHANGE IN DIRECTION.
- SEE SITE PLAN FOR EXTENT OF ALL PIPING LEAVING OR ENTERING THE BUILDING.
- CONTRACTOR SHALL COORDINATE THE EXACT LOCATION OF SANITARY AND WATER TIE-IN POINTS WITH THE LOCAL WATER AND SEWER AUTHORITIES.
- VERIFY ALL TOP OF MANHOLE AND CATCH BASIN ELEVATIONS AND INVERTS WITH ARCHITECTS FINAL AND APPROVED SITE GRADING PLAN.
- SERVICE VALVES SHALL BE FURNISHED AND INSTALLED ON ALL HOT AND COLD WATER LINES AT EQUIPMENT IN AN ACCESSIBLE POSITION.
- ALL FLOOR OPENINGS ARE TO BE SEALED WATERTIGHT BY MEANS OF SLEEVES.
- INDIRECT WASTE LINES REQUIRED FOR STANDARD AND/OR FABRICATED ITEMS OF KITCHEN EQUIPMENT SHALL BE FURNISHED, INSTALLED AND EXTENDED TO DRAIN POSITION.
- ALL HORIZONTAL AND VERTICAL PIPING LINES EXTENDED AND CONNECTED TO EQUIPMENT SHALL BE RUN AT THE HIGHEST POSSIBLE ELEVATION AND NOT LESS THAN 4" ABOVE FLOOR TO PROVIDE CLEARANCE FOR CLEANING. AT WALL OR COLUMN LOCATIONS, PIPING ROUGH IN SHALL BE STUBBED IN WALLS WHEREVER POSSIBLE.
- PEX PIPING IS ACCEPTABLE IN LIEU OF COPPER. INCREASE PIPE SIZE TO NEXT LARGER SIZE, EXCEPT FOR DEVELOPED LENGTHS LESS THAN 25 FEET WHERE ICC 2012 AS SIZE SHOWN ON TABLE 604.5, ALLOWS 3/8 INCH PIPE PEX IS ACCEPTABLE.

PLUMBING FIXTURE & EQUIPMENT SCHEDULE

NOTE: ALL FIXTURE APPURTENANCES SUCH AS P-TRAPS, LOOSE KEY STOPS, NIPPLES, ESCUTCHEONS & FLEXIBLE CONNECTIONS SHALL BE SUPPLIED BY THE FIXTURE MANUFACTURER.

MARK	FIXTURE TYPE	MODEL	SEAT	VALVE	FAUCET	FINISH	SUPPLY PIPE	DRAIN	CARRIER	CONNECTION SIZE				OPTIONS
										WASTE	VENT	CW	HW	
P1	WATER CLOSET (ADA)	Z: Z5555.000.11.03.36	Z: Z5955SS-EL-ST5	-	-	WHITE	Z: Z8804	-	-	3"	2"	1 1/2"	-	ADA COMPLIANT
P2	LAVATORY (ADA)	Z: 5354.007.3.01.01.6	-	-	Z: 82200-XL-CP4	WHITE	-	Z: Z8746	-	1 1/4"	1 1/4"	1/2"	1/2"	ADA COMPLIANT - BUNDLED
P3	SERVICE SINK (MOP)	Z: 1996.06.215.3.04.04	-	-	Z: Z843M1-RC	NATURAL	-	-	-	3"	2"	1/2"	1/2"	-
P4	WATER HEATER	BW: RE340S6	-	-	-	-	-	-	-	-	-	3/4"	3/4"	40 GAL. T&P VALVE
P5	FLOOR DRAIN	Z: ZN-415B-P	-	-	-	BRONZE	-	-	-	3"	2"	1/2"	1/2"	TRAP PRIMER
P6	FLOOR CLEANOUT	Z: Z1400-HD	-	-	-	BRONZE	-	-	-	SAP	3"	-	-	-
P7	WALL CLEANOUT	Z: Z1468	-	-	-	CHROME	-	-	-	SAP	-	-	-	-
P8	YARD CLEANOUT	Z: Z1400HD	-	-	-	-	-	-	-	-	-	-	-	-
P9	AIR ADMITTANCE VALVE	SU: REDI-VENT	-	-	-	-	-	-	-	-	2"	-	-	AIR ADMITTANCE VALVE:BOX
P10	WATER CLOSET	Z: Z5552-K	Z: Z5958SS-EL	-	-	WHITE	Z: Z8800CR	-	-	3"	-	1/2"	-	-
P11	SHOWER	Z: Z7000 HW	-	-	Z: Z7000 HW	-	-	Z: Z461	-	-	-	-	-	-
P12	BY OWNER	-	-	-	-	-	-	-	-	-	-	-	-	-

THE FOLLOWING ABBREVIATIONS HAVE BEEN USED IN THIS SCHEDULE

AM: AMERICAN STANDARD
AMT: AMTROL
BR: BRADLEY CORPORATION
B: BECO
BW: BRADFORD-WHITE
CA: CASH-ACME
CH: CHURCH
D: DELTA
E: ELJER
EL: ELKAY
F: FEBCO
G: GUY GRAY
H: HALSEY TAYLOR
J: JUST
K: KOHLER
L: LOCHINVAR
O: OASIS
S: SLOAN
ST: STATE
SU: STUDER
WA: WADE
W: WATTS
Z: ZURN

NOTE:
ROUGH-IN COMPLETE
FOR P10, P11, AND P12

NOTE:

- CONTRACTOR SHALL REPLACE ALL SUPPLY CONNECTIONS ON ALL EXISTING LAVATORIES, TOILETS, AND KITCHEN SINK IN THE BUILDING.

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Revisions			
No.	Date	Description	
1	-	-	

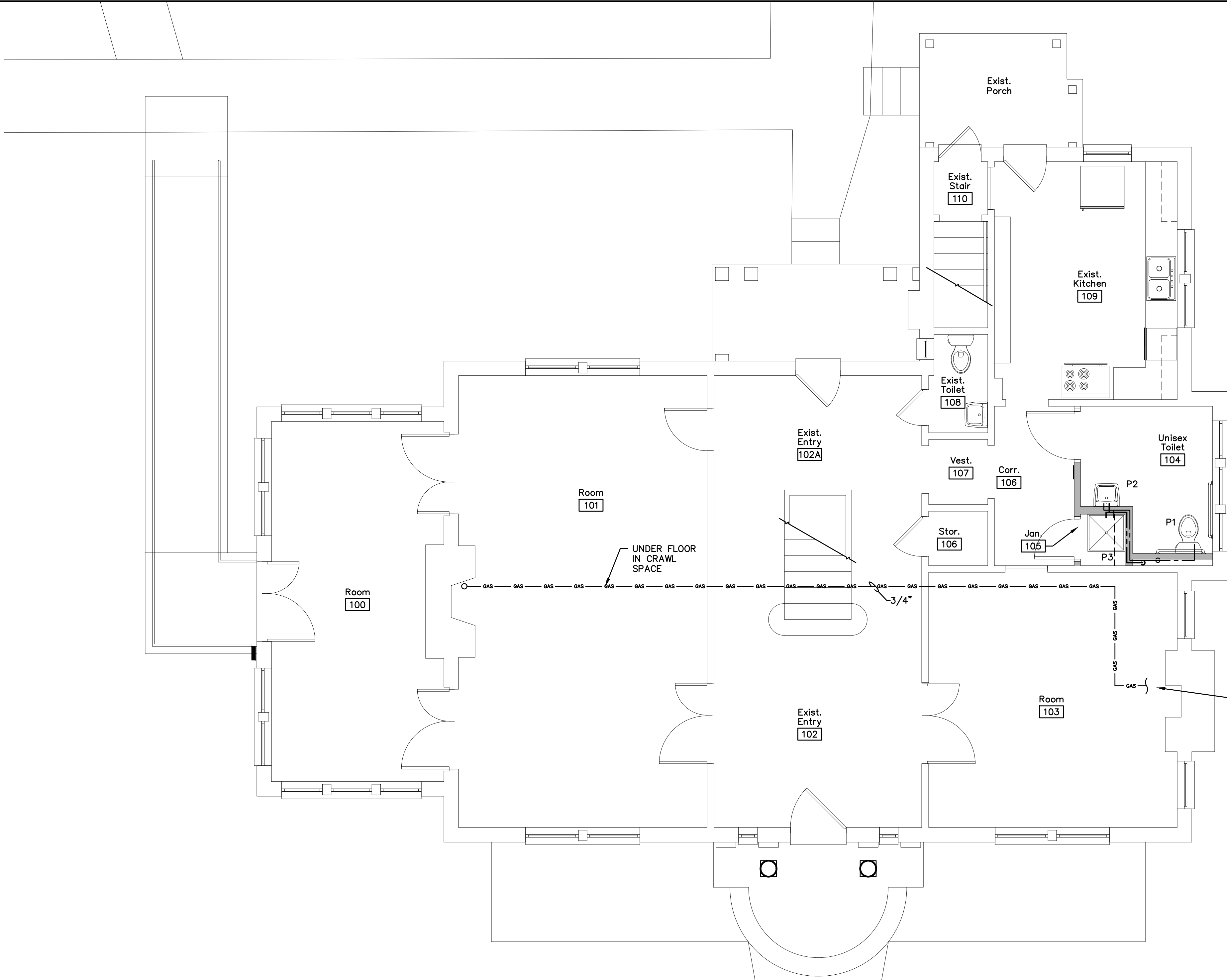


Hale House Development for
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Morristown, Tennessee

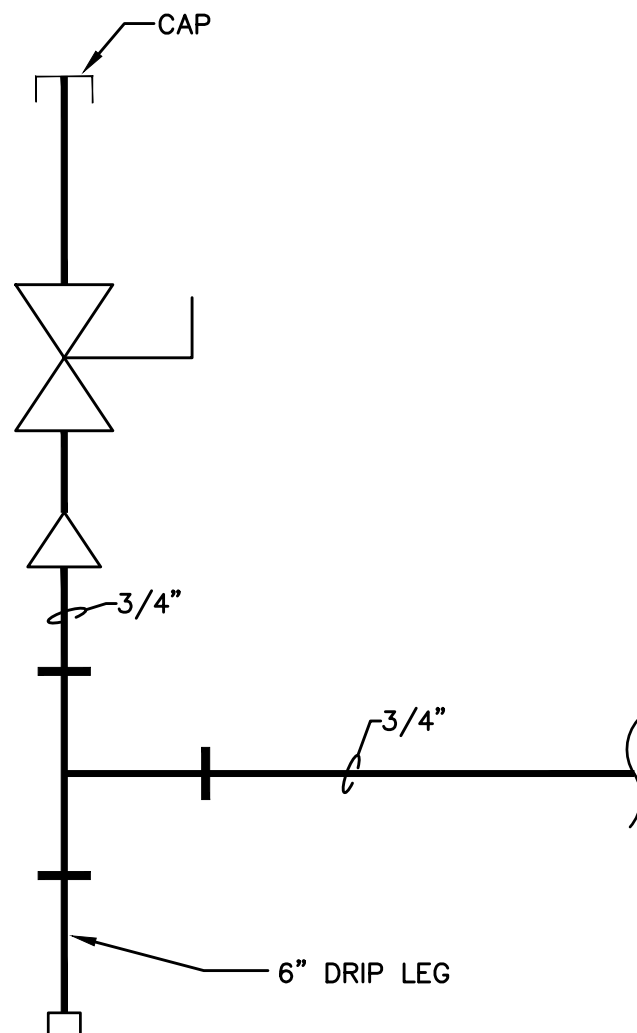


Drawn: g.k.Stacy
Checked: m.w.Roberson
Job No: 19-166
Scale: as noted
Date: 08-13-20
File Name: M-base-plan
Drawing Title:
Water Piping Plan
- Basement &
Main Floor
Sheet No.

P1.2

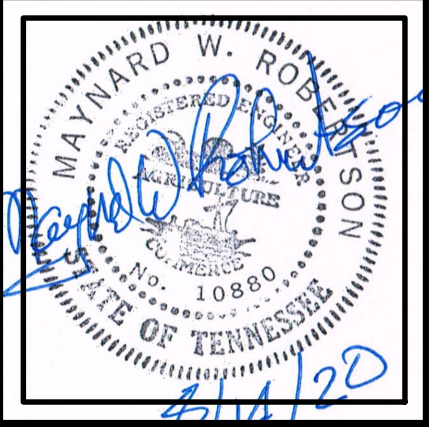


1 Gas Piping Plan – Main Floor
Scale: 1/4"=1'-0"

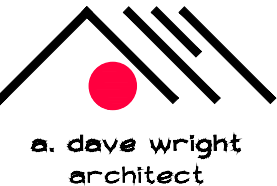


2 Fireplace Detail
Scale: NTS

Revisions	
No.	Description



Hale House Development for
Hamblen County Government
Morristown, Tennessee



a. dove wright
architect

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Drawn: g.k.Stacy
Checked: m.w.Roberson
Job No: 19-166
Scale: as noted
Date: 08-13-20
File Name: M-base-plan
Drawing Title: Gas Piping Plan – Main Floor
Sheet No. P1.3

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1. SOME SYMBOLS MAY NOT BE USED.
2. MOUNTING HEIGHTS ARE TO TOP.

SYMBOLS LIST NOTES:

1. STRAIGHT LINES BETWEEN DEVICES INDICATE SWITCHED CIRCUIT.
2. ALL SPECIAL SWITCHES DENOTED AS 3, 4, ETC. SHALL HAVE ALL REQUIRED WIRING PROVIDED TO HAVE AN OPERABLE SYSTEM AS INTENDED BY THE ENGINEER. THIS INCLUDES ALL POWER, NEUTRAL, AND TRAVELER WIRES AS REQUIRED.
3. ALL DEVICES WITH SUBSCRIPT "E" ARE EXISTING TO REMAIN.
4. ALL DEVICES WITH SUBSCRIPT "D" ARE EXISTING TO BE REMOVED.
5. ALL DEVICES WITH SUBSCRIPT "R" ARE TO BE RELOCATED AS SHOWN ON THE DRAWINGS. CONTRACTOR SHALL EXTEND THE EXISTING CIRCUITS TO THE NEW DEVICE LOCATION.

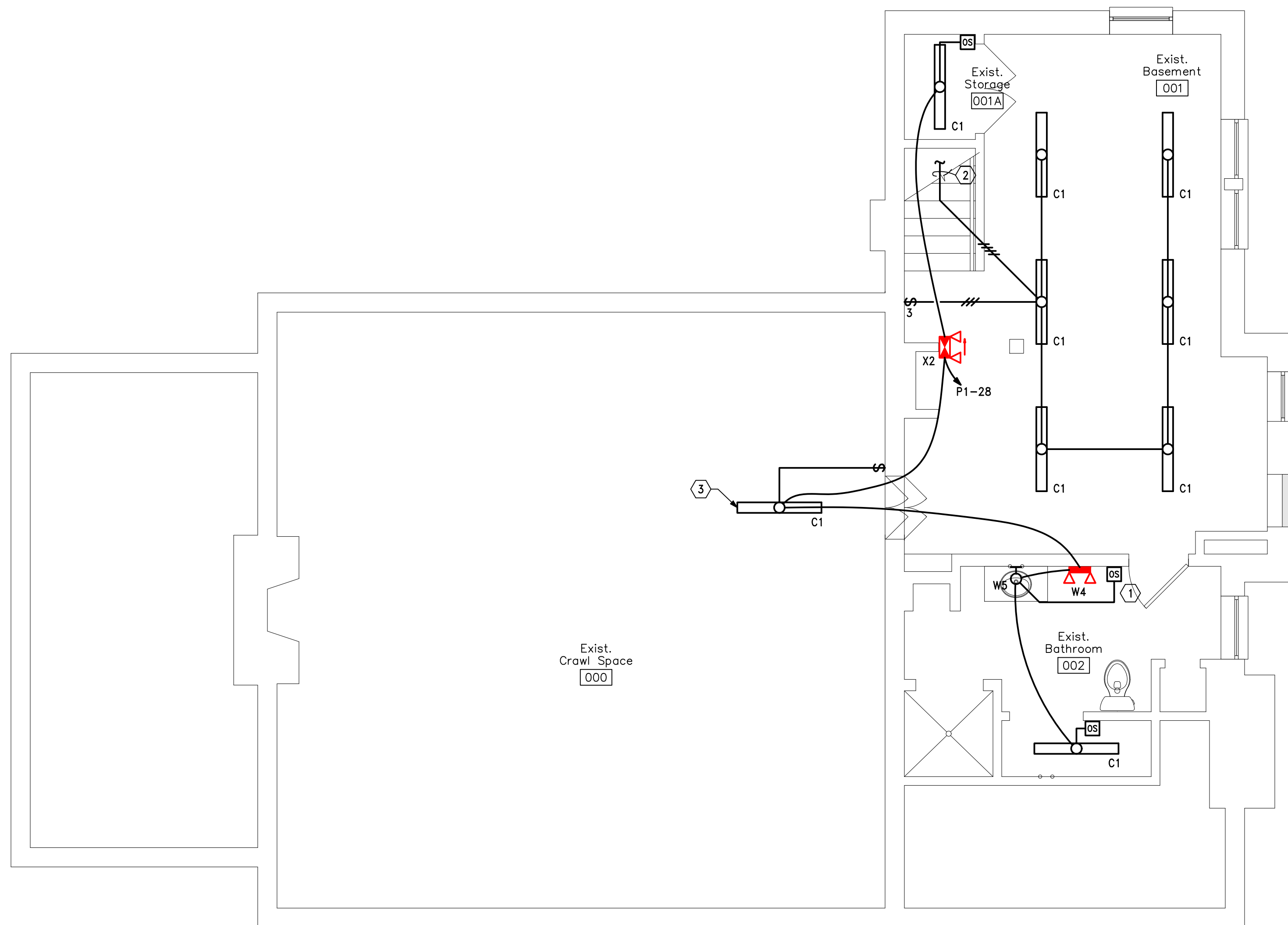
GENERAL NOTES

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF LIGHTING FIXTURES.
2. ALL EMERGENCY FIXTURES SHALL HAVE THE UNSWITCHED POWER TO THE EMERGENCY BATTERY COME FROM THE SAME CIRCUIT AS THE SWITCHED CIRCUIT CONTROLLING THE FIXTURE PER NEC 700.17.
3. ROOMS SHOWN WITH BOTH OCCUPANCY SENSORS AND SWITCHES SHALL BE WIRED TO HAVE THE SWITCH WIRED BETWEEN THE OCCUPANCY SENSOR AND THE LIGHTS, SO THAT IF THE SWITCH IS LEFT ON, THE OCCUPANCY SENSOR WILL AUTOMATICALLY TURN OFF THE ROOM LIGHTS.
4. ALL EXISTING NON-METALLIC SHEATHED CABLE SHALL BE REMOVED FROM THE BUILDING. OTHER CIRCUITS RUN IN CONDUIT OR MC CABLE MAY REMAIN IF THEY ARE IN GOOD CONDITION AND THE DEVICE OR EQUIPMENT IS TO REMAIN.
5. CONTRACTOR SHALL REMOVE ALL WIRING FROM CIRCUITS TO BE DEMOLISHED AND REMOVE ALL UNUSED EXPOSED CONDUITS.
6. CONTRACTOR SHALL REMOVE ALL DEVICES SCHEDULED FOR DEMOLITION. REFUSED ANY DOWN STREAM DEVICES TO REMAIN. SEE ARCHITECTURAL PLANS FOR EXTENT OF DEMOLITION.
7. ALL DEVICES SHOWN WITH SUBSCRIPT (D) ARE SCHEDULED FOR DEMOLITION. OTHER DEVICES MAY BE NOTED AS EXISTING TO REMAIN

- (E), OR RELOCATED (R).

 CODED NOTES

1. EXHAUST FAN TO BE CONTROLLED BY ROOM OCCUPANCY SENSOR(S) BY DUAL POLE WALL MOUNTED OCCUPANCY SENSOR SHARED WITH LIGHTING CONTROLS. PROVIDE POWER FOR FAN FROM THE LIGHTING CIRCUIT.
2. TO LIGHT AND 3-WAY SWITCH AT THE TOP OF THE STEPS.
3. MOUNT LIGHT FIXTURE IN THE CRAWL SPACE ADJACENT TO THE HVAC UNIT.



Basement Lighting Plan

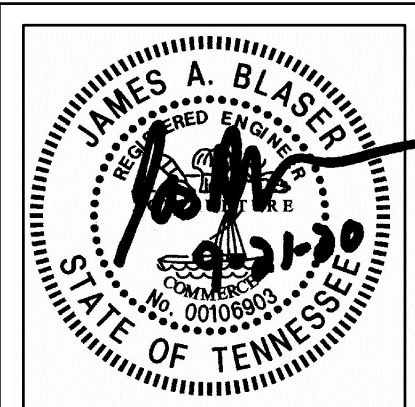
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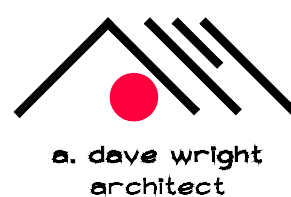
Blaser Engineering

342 Moore Street
Bristol, VA 24201
Phone: (423) 349-8380

BLASER ENG JOB# 20-123

[illegible]

Hale House Development for
Hamblen County Government
Morristown, Tennessee



110 S. Main Street
Greeneville, TN. 37743

Phone: (423) 525-5093
Fax: (423) 525-5095
Cell: (423) 329-2876

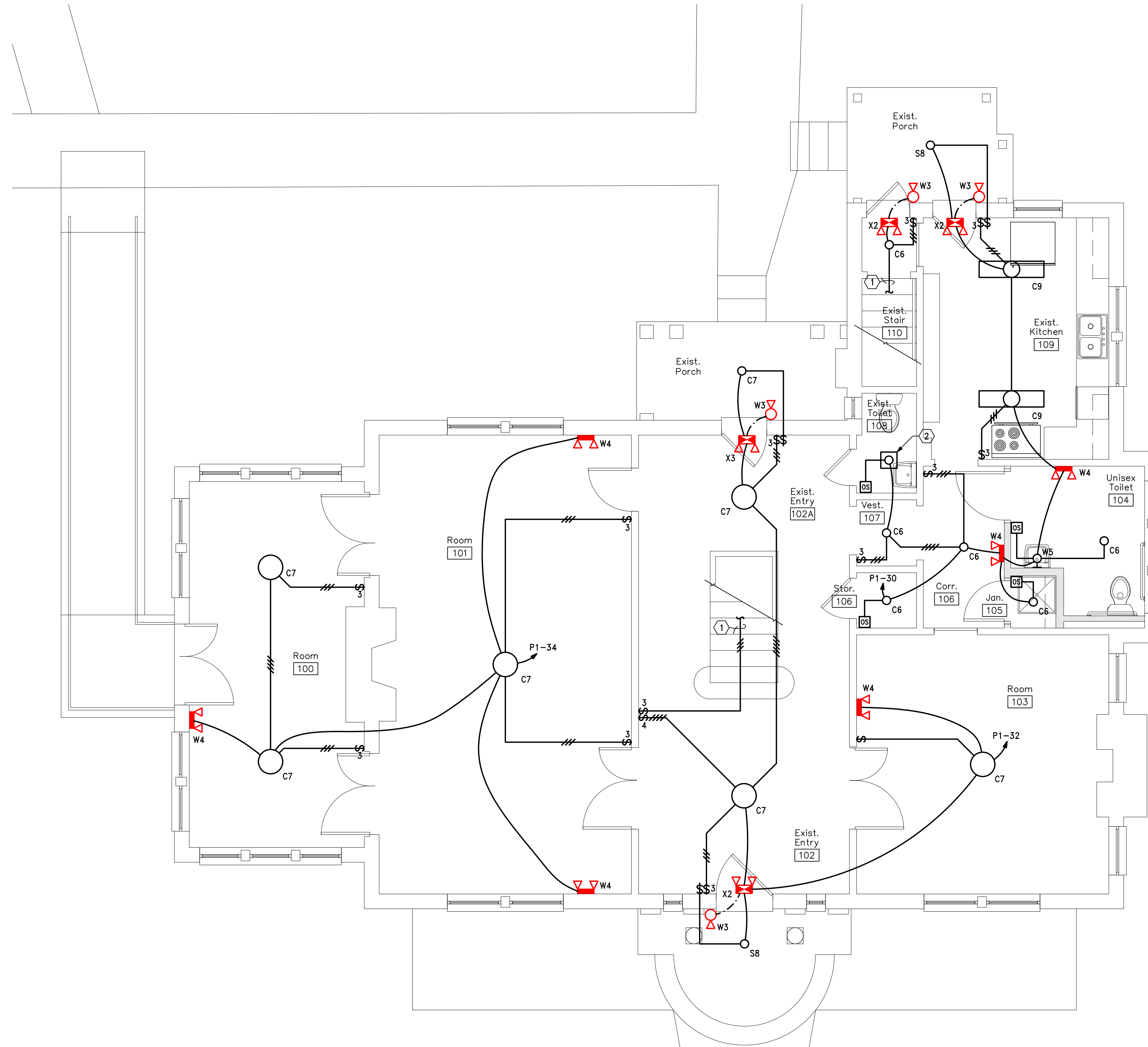
Drawn:	J. Blaser
Checked:	J. Blaser
Job No:	19-166
Scale:	as noted
Date:	09-21-20
File Name:	20123 electrical
Drawing Title:	Basement Lighting Plan
Sheet No.	

1. REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF LIGHTING FIXTURES.
2. ALL EMERGENCY FIXTURES SHALL HAVE THE UNSWITCHED POWER TO THE EMERGENCY BATTERY COME FROM THE SAME CIRCUIT AS THE SWITCHED CIRCUIT CONTROLLING THE FIXTURE PER NEC 700.17.
3. ROOMS SHOWN WITH BOTH OCCUPANCY SENSORS AND SWITCHES SHALL BE WIRED TO HAVE THE SWITCH WIRE BETWEEN THE OCCUPANCY SENSOR AND THE LIGHTS, SO THAT IF THE SWITCH IS LEFT ON, THE OCCUPANCY SENSOR WILL AUTOMATICALLY TURN OFF THE ROOM LIGHTS.
4. ALL EXISTING NON-METALLIC SHEATHED CABLE SHALL BE REMOVED FROM THE BUILDING. OTHER CIRCUITS RUN IN CONDUIT OR MC CABLE MAY REMAIN IF THEY ARE IN GOOD CONDITION AND THE DEVICE OR EQUIPMENT IS TO REMAIN.
5. CONTRACTOR SHALL REMOVE ALL WIRING FROM CIRCUITS TO BE DEMOLISHED AND REMOVE ALL UNUSED EXPOSED CONDUITS.
6. CONTRACTOR SHALL REMOVE ALL DEVICES SCHEDULED FOR DEMOLITION. REFUSED ANY DOWN STREAM DEVICES TO REMAIN. SEE ARCHITECTURAL PLANS FOR EXTENT OF DEMOLITION.
7. ALL DEVICES SHOWN WITH SUBSCRIPT (D) ARE SCHEDULED FOR DEMOLITION. OTHER DEVICES MAY BE NOTED AS EXISTING TO REMAIN

8. EXISTING CONDITIONS WERE TAKEN FROM A SITE VISIT AND PHOTOS AND MAY NOT REFLECT "AS-BUILT" CONDITIONS. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS. CAREFULLY COORDINATE NEW WORK AND DEMOLITION WITH ALL OTHER DISCIPLINES AND EXISTING CONDITIONS.
9. ANY REMOVED EQUIPMENT IS THE PROPERTY OF THE OWNER AND SHALL BE OFFERED TO THE OWNER AS SALVAGE. IF THE OWNER DOES NOT WANT EQUIPMENT, THE CONTRACTOR SHALL DISPOSE OF IT PROPERLY.
10. ALL EXISTING RECEPTACLE, PHONE, AND SWITCH LOCATIONS SHALL BE REMOVED AND PATCHED TO MATCH EXISTING SURFACES. NEW DEVICES IN THE SAME LOCATION SHALL BE MOUNTED AT PER THE LEGEND ON THESE DRAWINGS UNLESS NOTED OTHERWISE.
11. ALL NEW WIRING SHALL BE FISHED IN THE EXISTING WALLS, MINIMIZING DAMAGE TO THE EXISTING WALLS. COORDINATE ALL WALL PENETRATIONS WITH THE OWNER AND THE ARCHITECT PRIOR TO STARTING ANY WORK.

1. TO LIGHTS AND 3-WAY SWITCH IN BASEMENT.
2. EXISTING FAN/LIGHT UNIT TO REMAIN.

1. TO LIGHTS AND 3-WAY SWITCH IN BASEMENT.
2. EXISTING FAN/LIGHT UNIT TO REMAIN.



1 First Floor Lighting Plan
E1.2 Scale: 1/4"=1'-0"

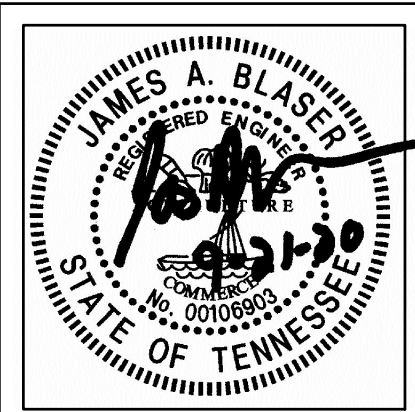
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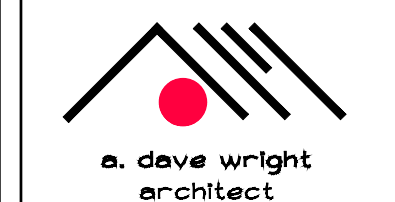
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BLASER ENG JOB# 20-123

Revisions		
No.	Date	Description
*	*	*



Hale House Development for
Hamblen County Government
Morristown, Tennessee



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Greeneville, TN. 37743

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Drawn:	J. Blaser
Checked:	J. Blaser
Job No:	19-166
Scale:	as noted
Date:	09-21-20
File Name:	20123 electrical
Drawing Title:	First Floor Lighting Plan

Sheet No. E1.2

plotted: 9/21/2020 2:14:03 PM

 file: 20123 ELECTRICAL.DWG

GENERAL NOTES

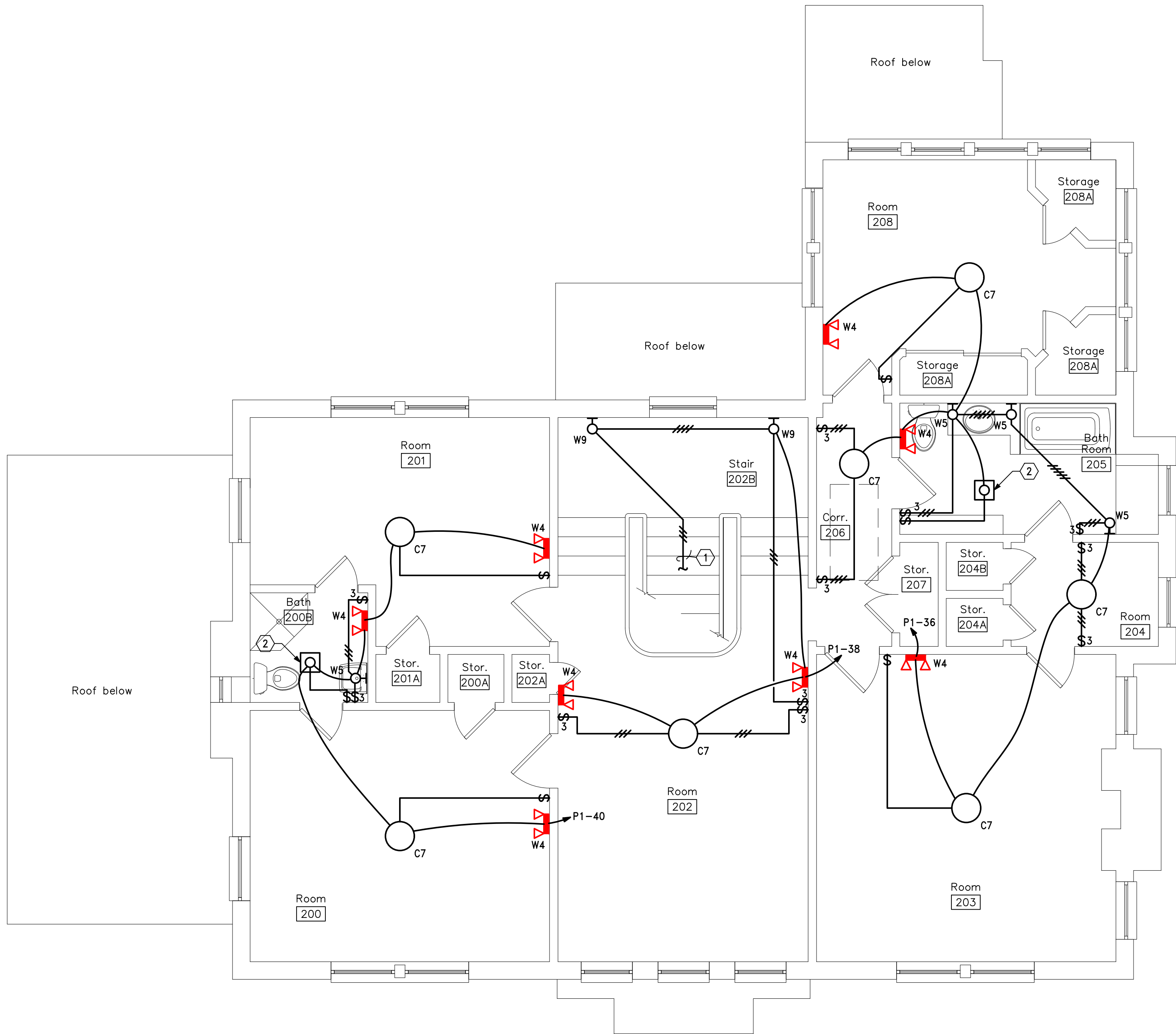
- REFER TO ARCHITECTURAL REFLECTED CEILING PLANS FOR EXACT LOCATION OF LIGHTING FIXTURES.
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- CONTRACTOR SHALL REMOVE ALL DEVICES SCHEDULED FOR DEMOLITION. REFEED ANY DOWN STREAM DEVICES TO REMAIN. SEE ARCHITECTURAL PLANS FOR EXTENT OF DEMOLITION.
- ALL DEVICES SHOWN WITH SUBSCRIPT (D) ARE SCHEDULED FOR DEMOLITION. OTHER DEVICES MAY BE NOTED AS EXISTING TO REMAIN

(E), OR RELOCATED (R).

- EXISTING CONDITIONS WERE TAKEN FROM A SITE VISIT AND PHOTOS AND MAY NOT REFLECT "AS-BUILT" CONDITIONS. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS. CAREFULLY COORDINATE NEW WORK AND DEMOLITION WITH ALL OTHER DISCIPLINES AND EXISTING CONDITIONS.
- ANY REMOVED EQUIPMENT IS THE PROPERTY OF THE OWNER AND SHALL BE OFFERED TO THE OWNER AS SALVAGE. IF THE OWNER DOES NOT WANT EQUIPMENT, THE CONTRACTOR SHALL DISPOSE OF IT PROPERLY.
- ALL EXISTING RECEPTACLE, PHONE, AND SWITCH LOCATIONS SHALL BE REMOVED AND PATCHED TO MATCH EXISTING SURFACES. NEW DEVICES IN THE SAME LOCATION SHALL BE MOUNTED AT PER THE LEGEND ON THESE DRAWINGS UNLESS NOTED OTHERWISE.
- ALL NEW WIRING SHALL BE FISHED IN THE EXISTING WALLS, MINIMIZING DAMAGE TO THE EXISTING WALLS. COORDINATE ALL WALL PENETRATIONS WITH THE OWNER AND THE ARCHITECT PRIOR TO STARTING ANY WORK.

CODED NOTES

- TO SWITCH BELOW.
- EXISTING EXHAUST FAN TO REMAIN IN THIS ROOM.



1

Second Floor Lighting Plan

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

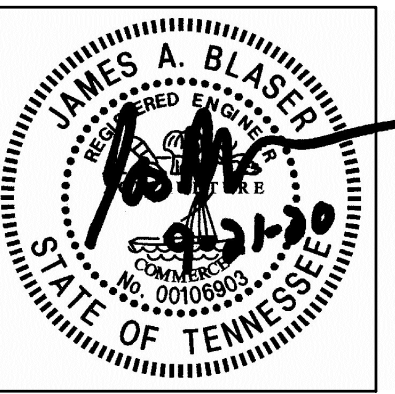
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Revisions	Description	Date	No.



Hale House Development for
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Drawn:	J. Blaser
Checked:	J. Blaser
Job No:	19-166
Scale:	as noted
Date:	09-21-20
File Name:	20123 electrical
Drawing Title:	Second Floor Lighting Plan
Sheet No.	E1.3

plotted: 9/21/2020 2:14:17 PM

 file: 20123 ELECTRICAL.DWG

GENERAL NOTES

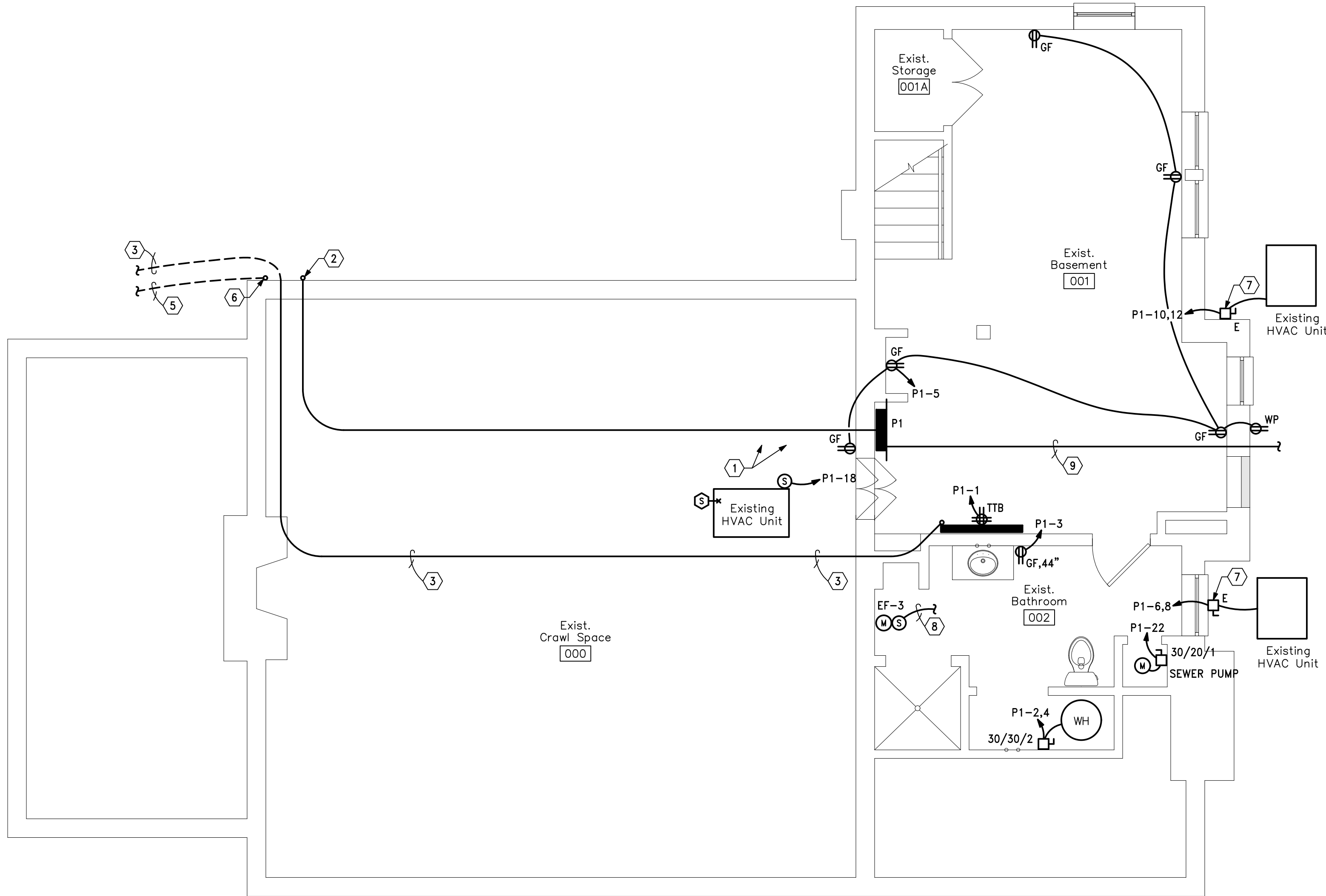
- COORDINATE CEILING MOUNTED DEVICES WITH ARCHITECTURAL REFLECTED CEILING PLAN.
- ALL DEVICES SHALL BE TAMPER RESISTANT.
- PROVIDE #2 AWG GROUND WIRE FROM THE MAIN SERVICE GROUNDING BUS TO THE TELEPHONE TERMINAL BOARD. PROVIDE 0.25" X 2" X 12" COPPER GROUNDING BUS BAR MOUNTED ON INSULATED STANDOFFS ANCHORED WITH STAINLESS STEEL BRACKETS EQUAL TO ERICO TGB-A12L06PT.
- PROVIDE CAT 6 WIRING FROM EACH PHONE/DATA JACKS TO THE TELEPHONE TERMINAL BOARD (TTB) IN THE BASEMENT. EACH RUN SHALL HAVE 3 RUNS OF CAT 6 WIRING RUN IN 1" FLEXIBLE CONDUIT WHERE CONCEALED IN WALLS OR CEILING.
- ALL EMPTY CONDUITS SHALL BE PROVIDED WITH A PULL STRING.
- CONTRACTOR SHALL COORDINATE ALL ADDITIONAL REQUIREMENTS WITH EACH UTILITY COMPANY AND TO INCLUDE IN THEIR BID ALL COSTS ASSOCIATED WITH CONNECTION TO THE UTILITY SERVICES.
- PER NEC 210.8, ALL GROUND FAULT RECEPTACLES ARE TO BE IN A READILY ACCESSIBLE LOCATION. IF NOT, PROVIDE A GROUND FAULT CIRCUIT BREAKER IN THE PANEL, OR A DEAD FRONT GROUND FAULT DEVICE IN AN ACCESSIBLE LOCATION SERVING THE INACCESSIBLE DEVICE.

- COORDINATE ACTUAL MOUNTING LOCATIONS OF ALL EQUIPMENT WITH CONTRACTOR PROVIDING THE EQUIPMENT.
- PROVIDE FINAL CONNECTIONS TO ALL EQUIPMENT SUPPLIED BY OTHERS.
- PROVIDE NEMA 3R RATED SAFETY SWITCHES WHERE LOCATED OUTDOORS.
- PROVIDE MATCHING PLUG, PIGTAIL, AND CONNECTIONS TO EQUIPMENT FOR ALL SPECIAL PURPOSE RECEPTACLES.
- ALL KITCHEN RECEPTACLES SHALL BE GROUND FAULT PROTECTED PER NEC 210.8(B).
- COORDINATE RECEPTACLE PLACEMENT WITH ARCHITECTURAL SECTIONS AND ELEVATIONS.
- ALL EXISTING NON-METALLIC SHEATHED CABLE SHALL BE REMOVED FROM THE BUILDING. OTHER CIRCUITS RUN IN CONDUIT OR MC CABLE MAY REMAIN IF THEY ARE IN GOOD CONDITION AND THE DEVICE OR EQUIPMENT IS TO REMAIN.
- CONTRACTOR SHALL REMOVE ALL WIRING FROM CIRCUITS TO BE DEMOLISHED AND REMOVE ALL UNUSED EXPOSED CONDUITS.
- CONTRACTOR SHALL REMOVE ALL DEVICES SCHEDULED FOR DEMOLITION. REFEED ANY DOWN STREAM DEVICES TO REMAIN. SEE ARCHITECTURAL PLANS FOR EXTENT OF DEMOLITION.

- ALL DEVICES SHOWN WITH SUBSCRIPT (D) ARE SCHEDULED FOR DEMOLITION. OTHER DEVICES MAY BE NOTED AS EXISTING TO REMAIN (E), OR RELOCATED (R).
- EXISTING CONDITIONS WERE TAKEN FROM A SITE VISIT AND PHOTOS AND MAY NOT REFLECT "AS-BUILT" CONDITIONS. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS. CAREFULLY COORDINATE NEW WORK AND DEMOLITION WITH ALL OTHER DISCIPLINES AND EXISTING CONDITIONS.
- ANY REMOVED EQUIPMENT IS THE PROPERTY OF THE OWNER AND SHALL BE OFFERED TO THE OWNER AS SALVAGE. IF THE OWNER DOES NOT WANT EQUIPMENT, THE CONTRACTOR SHALL DISPOSE OF IT PROPERLY.
- CONTRACTOR SHALL CHANGE ALL EXISTING NON-GFI TYPE RECEPTACLES WITH-IN SIX FEET OF A SINK TO GFI TYPE RECEPTACLES.
- ALL EXISTING RECEPTACLE, PHONE, AND SWITCH LOCATIONS SHALL BE REMOVED AND PATCHED TO MATCH EXISTING SURFACES. NEW DEVICES IN THE SAME LOCATION SHALL BE MOUNTED AT PER THE LEGEND ON THESE DRAWINGS UNLESS NOTED OTHERWISE.
- ALL NEW WIRING SHALL BE FISHED IN THE EXISTING WALLS, MINIMIZING DAMAGE TO THE EXISTING WALLS. COORDINATE ALL WALL PENETRATIONS WITH THE OWNER AND THE ARCHITECT PRIOR TO STARTING ANY WORK.

CODED NOTES

- EXISTING PANELS TO BE REMOVED.
- PROVIDE FEEDER UP TO DISCONNECT SWITCH ON THE EXTERIOR OF THE BUILDING.
- PROVIDE 1 – 2" COMMUNICATIONS CONDUIT THROUGH THE CRAWLSPACE OUT TO THE UTILITY POINT OF CONNECTION.
- PROVIDE 1 – 2" UNDERGROUND COMMUNICATIONS CONDUIT FROM THE BUILDING TO THE UTILITY POINT OF CONNECTION. COORDINATE EXACT LOCATION WITH THE COMMUNICATIONS UTILITY COMPANIES.
- UNDERGROUND SERVICE ENTRANCE FEEDER TO UTILITY COMPANY TRANSFORMERS. COORDINATE ADDITIONAL REQUIREMENTS WITH THE LOCAL UTILITY COMPANY. SEE ONE-LINE DIAGRAM FOR FEEDER SIZE.
- PROVIDE UNDERGROUND FEEDER FROM UTILITY COMPANY UP TO METER BASE ON THE BUILDING. SEE SHEET E2.2 FOR METER LOCATION.
- EXISTING 60 AMP CONDENSING UNIT DISCONNECT TO REMAIN.
- EXHAUST FAN TO BE CONTROLLED BY ROOM OCCUPANCY SENSOR(S) BY DUAL POLE WALL MOUNTED OCCUPANCY SENSOR SHARED WITH LIGHTING CONTROLS. PROVIDE POWER FOR FAN FROM THE LIGHTING CIRCUIT.
- PROVIDE 1" CONDUIT WITH PULL STRING TO OUTSIDE OF THE BUILDING FOR FUTURE PARKING LOT LIGHTING. SEE PARKING LOT LIGHTING PLANS FOR ADDITIONAL INFORMATION.



1
 E2.1

Basement Power Plan

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

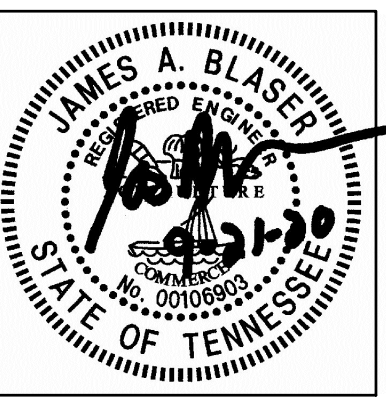
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BLASER ENG JOB# 20-123

Revisions	Description	Date	No.



Hale House Development for
 Hamblen County Government
 Morristown, Tennessee



Drawn:	J. Blaser
Checked:	J. Blaser
Job No:	19-166
Scale:	as noted
Date:	09-21-20
File Name:	20123 electrical
Drawing Title:	Basement Power Plan

Sheet No.
 E2.1

1. COORDINATE CEILING MOUNTED DEVICES WITH ARCHITECTURAL REFLECTED CEILING PLAN.
2. ALL DEVICES SHALL BE TAMPER RESISTANT.
3. PROVIDE #2 AWG GROUND WIRE FROM THE MAIN SERVICE GROUNDING BUS TO THE TELEPHONE TERMINAL BOARD. PROVIDE 0.25" X 2" X 12" COPPER GROUNDING BUS BAR MOUNTED ON INSULATED STANDOFFS ANCHORED WITH STAINLESS STEEL BRACKETS EQUAL TO ERICO TGB-A12LOBPT.
4. PER CAT 6 WIRING FROM EACH PHONE/DATA JACKS TO THE TELEPHONE TERMINAL BOARD (TTB) IN THE BASEMENT, EACH RUN SHALL HAVE 3 RUNS OF CAT 6 WIRING RUN IN 1" FLEXIBLE CONDUIT WHERE CONCEALED IN WALLS OR CEILING.
5. ALL EMPTY CONDUITS SHALL BE PROVIDED WITH A PULL STRING.
6. CONTRACTOR SHALL COORDINATE ALL ADDITIONAL REQUIREMENTS WITH EACH UTILITY COMPANY AND TO INCLUDE IN THEIR BID ALL COSTS ASSOCIATED WITH CONNECTION TO THE UTILITY SERVICES.
7. PER NEC 210.8, ALL GROUND PANEL RECEPTACLES ARE TO BE IN A READILY ACCESSIBLE LOCATION, IF NOT, PROVIDE A GROUND FAULT CIRCUIT BREAKER IN THE PANEL, OR A DEAD FRONT GROUND FAULT DEVICE IN AN ACCESSIBLE LOCATION SERVING THE INACCESSIBLE DEVICE.

8. COORDINATE ACTUAL MOUNTING LOCATIONS OF ALL EQUIPMENT WITH CONTRACTOR PROVIDING THE EQUIPMENT.
9. PROVIDE FINAL CONNECTIONS TO ALL EQUIPMENT SUPPLIED BY OTHERS.
10. PROVIDE NEMA 3R RATED SAFETY SWITCHES WHERE LOCATED OUTDOORS.
11. PROVIDE MATCHING PLUG, PIGTAIL, AND CONNECTIONS TO EQUIPMENT FOR ALL SPECIAL PURPOSE RECEPTACLES.
12. ALL KITCHEN RECEPTACLES SHALL BE GROUND FAULT PROTECTED PER NEC 210.8(B).
13. COORDINATE RECEPTACLE PLACEMENT WITH ARCHITECTURAL SECTIONS AND ELEVATIONS.
14. ALL EXISTING NON-METALLIC SHEATHED CABLE SHALL BE REMOVED FROM THE BUILDING. OTHER CIRCUITS RUN IN CONDUIT OR MC CABLE MAY REMAIN IF THEY ARE IN GOOD CONDITION AND THE DEVICE OR EQUIPMENT IS TO REMAIN.
15. CONTRACTOR SHALL REMOVE ALL WIRING FROM CIRCUITS TO BE DEMOLISHED AND REMOVE ALL UNUSED EXPOSED CONDUITS.
16. CONTRACTOR SHALL REMOVE ALL DEVICES SCHEDULED FOR DEMOLITION. REFEED ANY DOWN STREAM DEVICES TO REMAIN. SEE ARCHITECTURAL PLANS FOR EXTENT OF DEMOLITION.

17. ALL DEVICES SHOWN WITH SUBSCRIPT (D) ARE SCHEDULED FOR DEMOLITION. OTHER DEVICES MAY BE NOTED AS EXISTING TO REMAIN (E), OR RELOCATED (R).
18. EXISTING CONDITIONS WERE TAKEN FROM A SITE VISIT AND PHOTOS AND MAY NOT REFLECT "AS-BUILT" CONDITIONS. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS. CAREFULLY COORDINATE NEW WORK AND DEMOLITION WITH ALL OTHER DISCIPLINES AND EXISTING CONDITIONS.
19. ANY REMOVED EQUIPMENT IS THE PROPERTY OF THE OWNER AND SHALL BE OFFERED TO THE OWNER AS SALVAGE. IF THE OWNER DOES NOT WANT EQUIPMENT, THE CONTRACTOR SHALL DISPOSE OF IT PROPERLY.
20. CONTRACTOR SHALL CHANGE ALL EXISTING NON-GFI TYPE RECEPTACLES WITH-IN SIX FEET OF A SINK TO GFI TYPE RECEPTACLES.
21. ALL EXISTING RECEPTACLE, PHONE, AND SWITCH LOCATIONS SHALL BE REMOVED AND PATCHED TO MATCH EXISTING SURFACES. NEW DEVICES IN THE SAME LOCATION SHALL BE MOUNTED AT PER THE LEGEND ON THESE DRAWINGS UNLESS NOTED OTHERWISE.
22. ALL NEW WIRING SHALL BE FISHED IN THE EXISTING WALLS, MINIMIZING DAMAGE TO THE EXISTING WALLS. COORDINATE ALL WALL PENETRATIONS WITH THE OWNER AND THE ARCHITECT PRIOR TO STARTING ANY WORK.

1. DOWN TO UNDERGROUND SERVICE ENTRANCE FEEDER. SEE SHEET E2.1 FOR CONTINUATION.
2. ROUTE FEEDER DOWN INTO CRAWLSPACE. SEE SHEET E2.1 FOR CONTINUATION.
3. UTILITY COMPANY METERING.
4. SERVICE ENTRANCE EXTERIOR DISCONNECT SWITCH. SEE ONE-LINE DIAGRAM FOR SIZE.
5. ORIGINAL FUSE BOX CURRENTLY BEING USED AS A JUNCTION BOX. REMOVE ALL CONDUCTORS AND SEAL THE OPENINGS INTO THE BUILDING.
6. PROVIDE GFI RECEPTACLE UNDER THE SINK FOR THE DISHWASHER, PROVIDE 120 VOLT, 1Ø (NEMA 5-20) PIGTAIL ON THE DISHWASHER, ROUTED TO THE DISHWASHER RECEPTACLE.
7. PROVIDE A SWITCHED GFI RECEPTACLE UNDER THE SINK FOR THE DISPOSAL, PROVIDE 120 VOLT, 1Ø (NEMA 5-20) PIGTAIL ON THE DISPOSAL, ROUTED TO THE SWITCHED DISPOSAL RECEPTACLE.
8. EXHAUST FAN TO BE CONTROLLED BY ROOM OCCUPANCY SENSOR(S) BY DUAL POLE WALL MOUNTED OCCUPANCY SENSOR SHARED WITH LIGHTING CONTROLS. PROVIDE POWER FOR FAN FROM THE LIGHTING CIRCUIT.
9. PROVIDE FIRE ALARM AUDIO/VISUAL DEVICE FOR OCCUPANT NOTIFICATION TIED TO THE DUCT SMOKE DETECTORS IN BOTH HVAC UNITS.



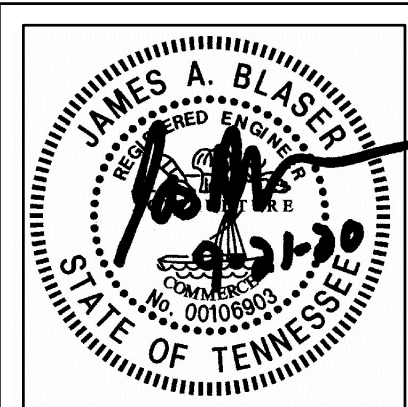
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Drawn:	J. Blaser
Checked:	J. Blaser
Job No:	19-166
Scale:	as noted
Date:	09-21-20
File Name:	20123 electrical
Drawing Title:	First Floor Power Plan

Sheet No. E2.2

Revisions		
No.	Date	Description
1	11/11/2011	1. Initial design
2	12/11/2011	2. Revised design
3	13/11/2011	3. Final design
4	14/11/2011	4. Revised design
5	15/11/2011	5. Final design
6	16/11/2011	6. Revised design
7	17/11/2011	7. Final design
8	18/11/2011	8. Revised design
9	19/11/2011	9. Final design
10	20/11/2011	10. Revised design
11	21/11/2011	11. Final design
12	22/11/2011	12. Revised design
13	23/11/2011	13. Final design
14	24/11/2011	14. Revised design
15	25/11/2011	15. Final design
16	26/11/2011	16. Revised design
17	27/11/2011	17. Final design
18	28/11/2011	18. Revised design
19	29/11/2011	19. Final design
20	30/11/2011	20. Revised design
21	31/11/2011	21. Final design
22	1/12/2011	22. Revised design
23	2/12/2011	23. Final design
24	3/12/2011	24. Revised design
25	4/12/2011	25. Final design
26	5/12/2011	26. Revised design
27	6/12/2011	27. Final design
28	7/12/2011	28. Revised design
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30	9/12/2011	30. Revised design
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39	18/12/2011	39. Final design
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42	21/12/2011	42. Revised design
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48	27/12/2011	48. Revised design
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65	13/1/2012	65. Final design
66	14/1/2012	66. Revised design
67	15/1/2012	67. Final design
68	16/1/2012	68. Revised design
69	17/1/2012	69. Final design
70	18/1/2012	70. Revised design
71	19/1/2012	71. Final design
72	20/1/2012	72. Revised design
73	21/1/2012	73. Final design
74	22/1/2012	74. Revised design
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80	28/1/2012	80. Revised design
81	29/1/2012	81. Final design
82	30/1/2012	82. Revised design
83	31/1/2012	83. Final design
84	1/2/2012	84. Revised design
85	2/2/2012	85. Final design
86	3/2/2012	86. Revised design
87	4/2/2012	87. Final design
88	5/2/2012	88. Revised design
89	6/2/2012	89. Final design
90	7/2/2012	90. Revised design
91	8/2/2012	91. Final design
92	9/2/2012	92. Revised design
93	10/2/2012	93. Final design
94	11/2/2012	94. Revised design
95	12/2/2012	95. Final design
96	13/2/2012	96. Revised design
97	14/2/2012	97. Final design
98	15/2/2012	98. Revised design
99	16/2/2012	99. Final design
100	17/2/2012	100. Revised design



Hale House Development for
Hamblen County Government
Morristown, Tennessee



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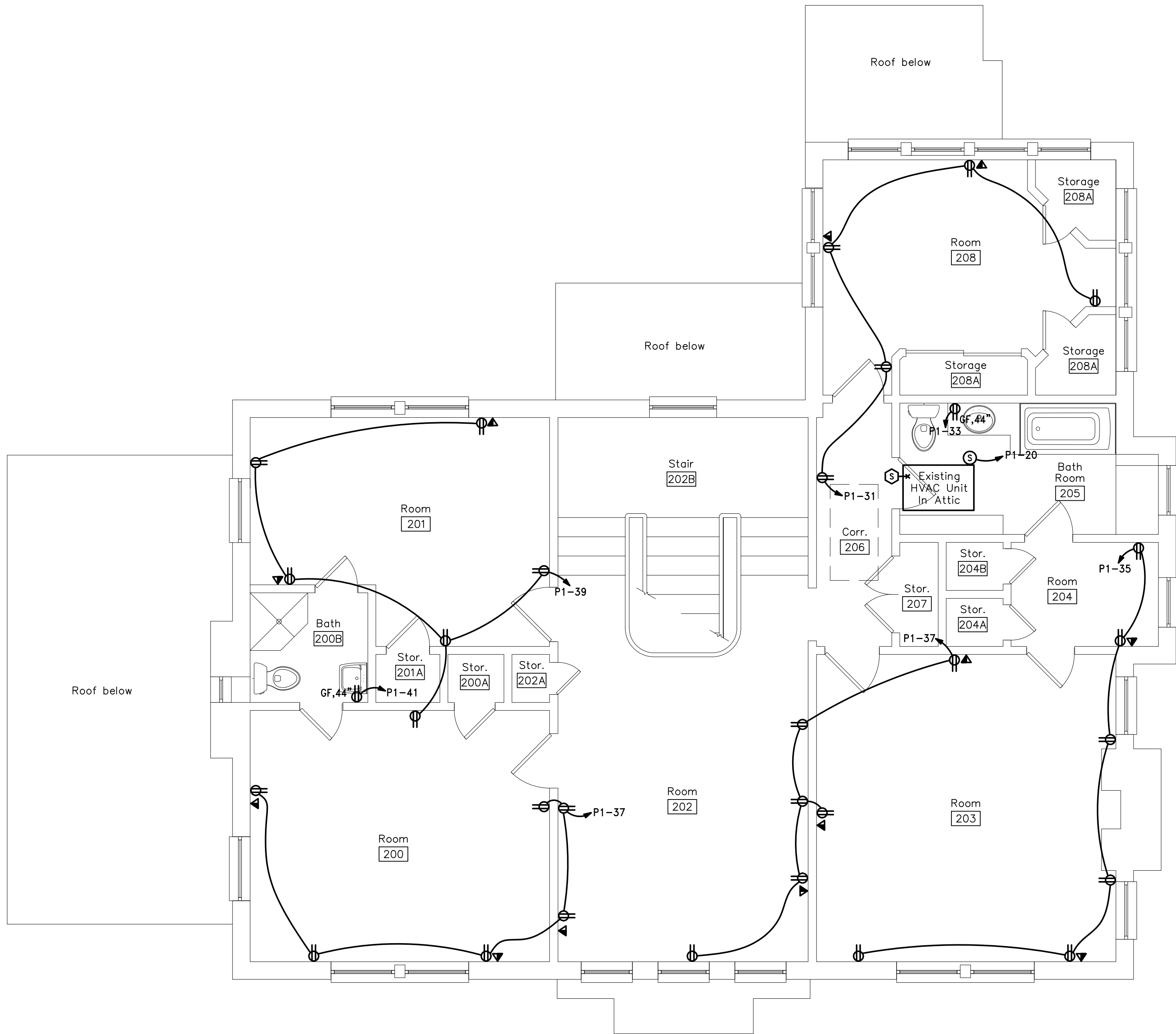
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GENERAL NOTES

- COORDINATE CEILING MOUNTED DEVICES WITH ARCHITECTURAL REFLECTED CEILING PLAN.
- ALL DEVICES SHALL BE TAMPER RESISTANT.
- PROVIDE #2 AWG GROUND WIRE FROM THE MAIN SERVICE GROUNDING BUS TO THE TELEPHONE TERMINAL BOARD. PROVIDE 0.25" X 2" X 12" COPPER GROUNDING BUS BAR MOUNTED ON INSULATED STANDOFFS ANCHORED WITH STAINLESS STEEL BRACKETS EQUAL TO ERICO TGB-A12L06PT.
- PROVIDE CAT 6 WIRING FROM EACH PHONE/DATA JACKS TO THE TELEPHONE TERMINAL BOARD (TTB) IN THE BASEMENT. EACH RUN SHALL HAVE 3 RUNS OF CAT 6 WIRING RUN IN 1" FLEXIBLE CONDUIT WHERE CONCEALED IN WALLS OR CEILING.
- ALL EMPTY CONDUITS SHALL BE PROVIDED WITH A PULL STRING.
- CONTRACTOR SHALL COORDINATE ALL ADDITIONAL REQUIREMENTS WITH EACH UTILITY COMPANY AND TO INCLUDE IN THEIR BID ALL COSTS ASSOCIATED WITH CONNECTION TO THE UTILITY SERVICES.
- PER NEC 210.8, ALL GROUND FAULT RECEPTACLES ARE TO BE IN A READILY ACCESSIBLE LOCATION. IF NOT, PROVIDE A GROUND FAULT CIRCUIT BREAKER IN THE PANEL, OR A DEAD FRONT GROUND FAULT DEVICE IN AN ACCESSIBLE LOCATION SERVING THE INACCESSIBLE DEVICE.

- COORDINATE ACTUAL MOUNTING LOCATIONS OF ALL EQUIPMENT WITH CONTRACTOR PROVIDING THE EQUIPMENT.
- PROVIDE FINAL CONNECTIONS TO ALL EQUIPMENT SUPPLIED BY OTHERS.
- PROVIDE NEMA 3R RATED SAFETY SWITCHES WHERE LOCATED OUTDOORS.
- PROVIDE MATCHING PLUG, PIGTAIL, AND CONNECTIONS TO EQUIPMENT FOR ALL SPECIAL PURPOSE RECEPTACLES.
- ALL KITCHEN RECEPTACLES SHALL BE GROUND FAULT PROTECTED PER NEC 210.8(B).
- COORDINATE RECEPTACLE PLACEMENT WITH ARCHITECTURAL SECTIONS AND ELEVATIONS.
- ALL EXISTING NON-METALLIC SHEATHED CABLE SHALL BE REMOVED FROM THE BUILDING. OTHER CIRCUITS RUN IN CONDUIT OR MC CABLE MAY REMAIN IF THEY ARE IN GOOD CONDITION AND THE DEVICE OR EQUIPMENT IS TO REMAIN.
- CONTRACTOR SHALL REMOVE ALL WIRING FROM CIRCUITS TO BE DEMOLISHED AND REMOVE ALL UNUSED EXPOSED CONDUITS.
- CONTRACTOR SHALL REMOVE ALL DEVICES SCHEDULED FOR DEMOLITION. REFEED ANY DOWN STREAM DEVICES TO REMAIN. SEE ARCHITECTURAL PLANS FOR EXTENT OF DEMOLITION.

- ALL DEVICES SHOWN WITH SUBSCRIPT (D) ARE SCHEDULED FOR DEMOLITION. OTHER DEVICES MAY BE NOTED AS EXISTING TO REMAIN (E), OR RELOCATED (R).
- EXISTING CONDITIONS WERE TAKEN FROM A SITE VISIT AND PHOTOS AND MAY NOT REFLECT "AS-BUILT" CONDITIONS. FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO SUBMITTING BIDS. CAREFULLY COORDINATE NEW WORK AND DEMOLITION WITH ALL OTHER DISCIPLINES AND EXISTING CONDITIONS.
- ANY REMOVED EQUIPMENT IS THE PROPERTY OF THE OWNER AND SHALL BE OFFERED TO THE OWNER AS SALVAGE. IF THE OWNER DOES NOT WANT EQUIPMENT, THE CONTRACTOR SHALL DISPOSE OF IT PROPERLY.
- CONTRACTOR SHALL CHANGE ALL EXISTING NON-GFI TYPE RECEPTACLES WITH-IN SIX FEET OF A SINK TO GFI TYPE RECEPTACLES.
- ALL EXISTING RECEPTACLE, PHONE, AND SWITCH LOCATIONS SHALL BE REMOVED AND PATCHED TO MATCH EXISTING SURFACES. NEW DEVICES IN THE SAME LOCATION SHALL BE MOUNTED AT PER THE LEGEND ON THESE DRAWINGS UNLESS NOTED OTHERWISE.
- ALL NEW WIRING SHALL BE FISHED IN THE EXISTING WALLS, MINIMIZING DAMAGE TO THE EXISTING WALLS. COORDINATE ALL WALL PENETRATIONS WITH THE OWNER AND THE ARCHITECT PRIOR TO STARTING ANY WORK.



1

E2.3

Second Floor Power Plan

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

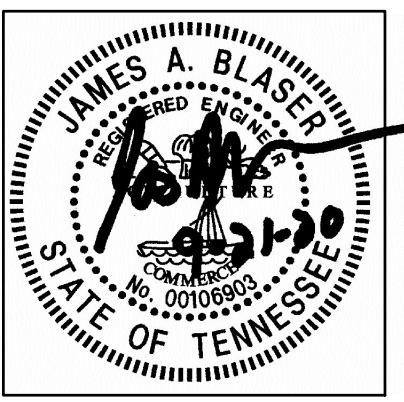
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BLASER ENG JOB# 20-123

Revisions	Description	Date	No.



Hale House Development for
Hamblen County Government
 Morristown, Tennessee



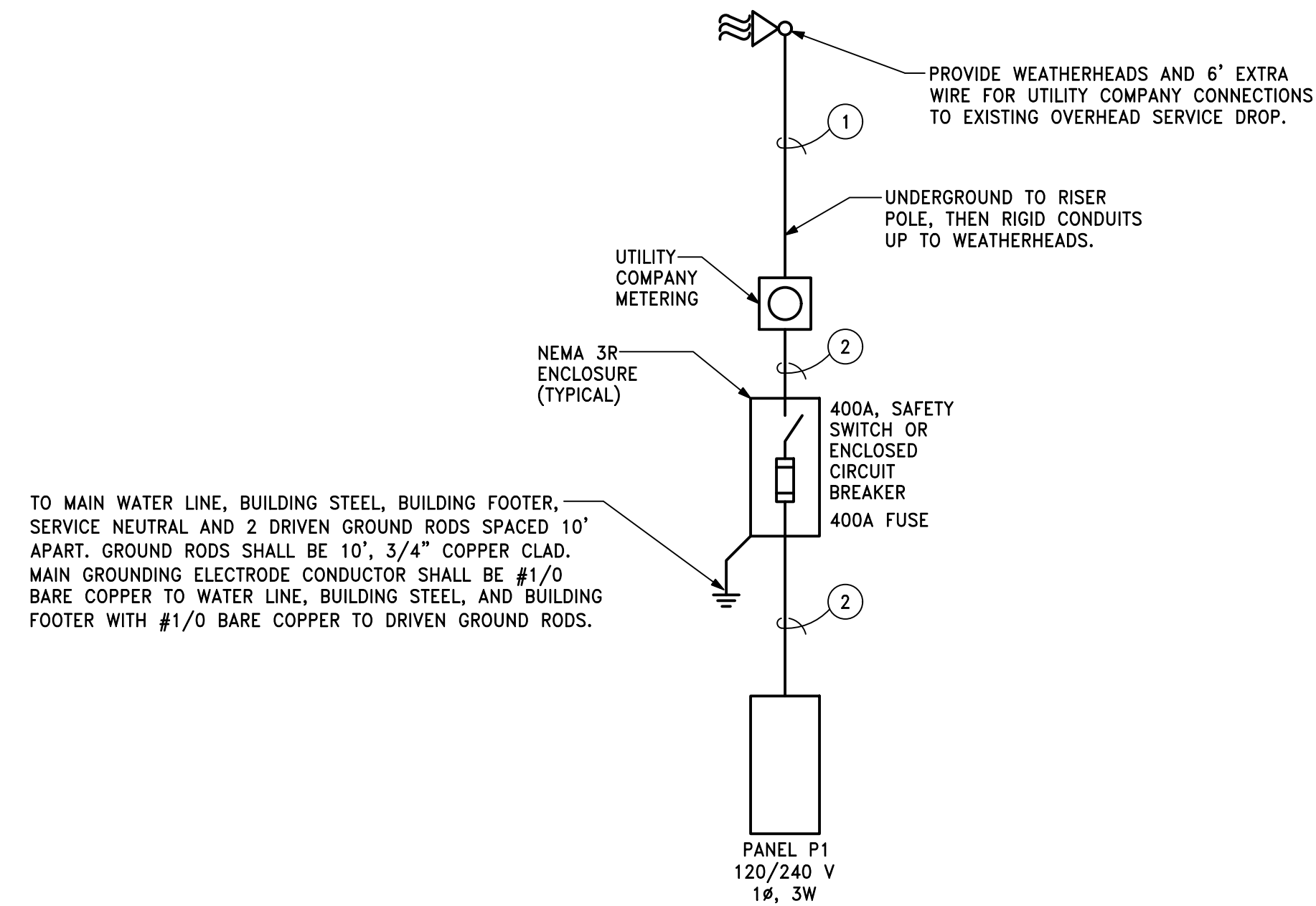
Drawn:	J. Blaser
Checked:	J. Blaser
Job No:	19-166
Scale:	as noted
Date:	09-21-20
File Name:	20123 electrical
Drawing Title:	Second Floor Power Plan

Sheet No.

E2.3

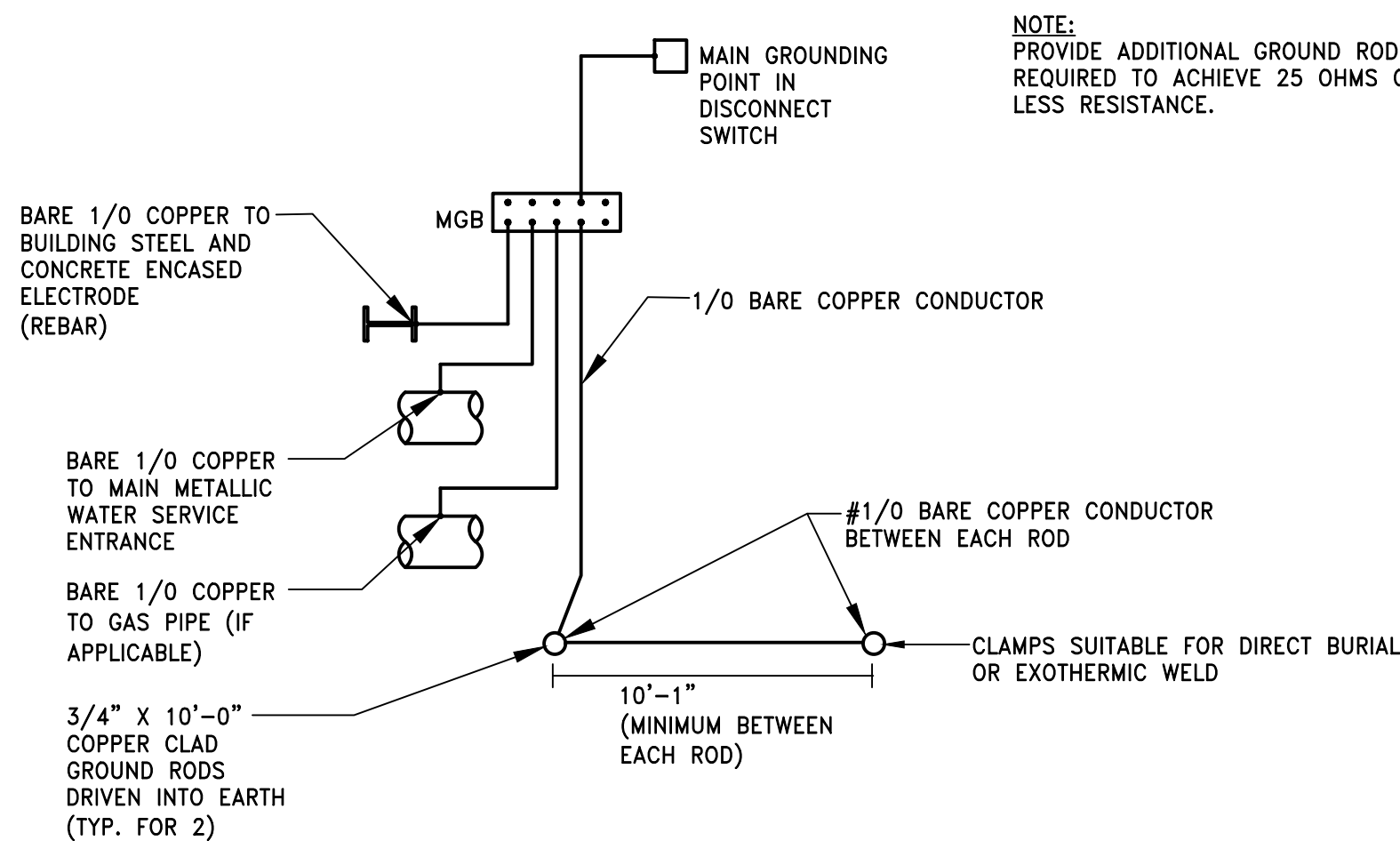
PANEL ID:		P1		VOLTAGE:		120/240					
LOCATION:		BASEMENT 001		PHASE:		1					
MOUNTING:		SURFACE		WIRE:		3					
MAIN TYPE:		LUGS		MAIN SIZE:		400		AMPS		AIC RATING: 22,000	
LEGEND:											
LO: LOCK ON DEVICE											
PROVIDE ALL CIRCUITS IN A SINGLE PANEL TUB											
+: PROVIDE CIRCUIT WITH FULL SIZED NEUTRAL CONDUCTOR											
V: VERIFY BREAKER SIZE WITH GARAGE PANEL PRIOR TO BID											
PROVIDE PANEL WITH INTEGRAL SURGE PROTECTION DEVICE (SPD) BE-JOB# 20-123											
GND SIZE	WIRE SIZE	BRANCH CIRCUIT DESCRIPTION	CIRCUIT BREAKER	LOAD KVA	CIRCUIT NUMBER	LOAD KVA	CIRCUIT BREAKER	BRANCH CIRCUIT DESCRIPTION	WIRE SIZE	GND SIZE	
12	12	TTB	20/1	0.36	1 2	2.25	30/2	WATER HEATER	10	10	
12	12	RECEPTACLES	20/1	0.18	3 * 4	2.25	-	-	10	-	
12	12	RECEPTACLES	20/1	1.08	5 * 6	3.00	60/2	EX. CONDENSING	4	10	
12	12	DISPOSAL	20/1	1.25	7 * 8	3.00	-	UNIT	4	-	
12	12	DISHWASHER	20/1	1.50	9 * 10	3.00	60/2	EX. CONDENSING	4	10	
12	12	RECEPTACLES	20/1	0.36	11 * 12	3.00	-	UNIT	4	-	
12	12	REFRIGERATOR	20/1	1.25	13 14	4.00	50/2+	ELECTRIC	6	10	
12	12	RECEPTACLES	20/1	0.36	15 16	4.00	-	RANGE	6	-	
12	12	RECEPTACLES	20/1	0.36	17 18	0.70	20/1	EX. GAS FURNACE	12	12	
12	12	RECEPTACLES	20/1	0.36	19 20	0.70	20/1	EX. GAS FURNACE	12	-	
12	12	RECEPTACLES	20/1	1.08	21 22	1.50	20/1	EX. SEWER PUMP	12	12	
12	12	RECEPTACLES	20/1	1.08	23 24	3.00	50/2 +,V	GARAGE BUILDING	6	10	
12	12	RECEPTACLES	20/1	1.08	25 26	3.00	-	-	6	-	
12	12	RECEPTACLES	20/1	1.08	27 28	0.34	20/1	LIGHTING	12	12	
12	12	RECEPTACLES	20/1	0.90	29 30	0.45	20/1	LIGHTING	12	12	
12	12	RECEPTACLES	20/1	0.90	31 32	0.50	20/1	LIGHTING	12	12	
12	12	RECEPTACLES	20/1	0.18	33 34	0.30	20/1	LIGHTING	12	12	
12	12	RECEPTACLES	20/1	1.08	35 36	0.55	20/1	LIGHTING	12	12	
12	12	RECEPTACLES	20/1	1.08	37 38	0.30	20/1	LIGHTING	12	12	
12	12	RECEPTACLES	20/1	1.08	39 40	0.35	20/1	LIGHTING	12	12	
12	12	RECEPTACLES	20/1	0.18	41 42	0.28	20/1	PARKING LOT LIGHT	10	10	
		SPARE	20/1	43 44		20/1		SPARE			
		SPARE	20/1	45 46		20/1		SPARE			
		SPARE	20/1	47 48		20/1		SPARE			
		SPARE	20/1	49 50		20/1		SPARE			
		SPARE	20/1	51 52		20/1		SPARE			
		SPARE	20/1	53 54		20/1		SPARE			
		SPACE		55 56				SPACE			
		SPACE		57 58				SPACE			
		SPACE		59 60				SPACE			
PANEL LOAD SUMMARY:				LIGHTING:	3.06	KVA					
				RECEPT & MISC:	12.78	KVA	27.83	KVA PHASE A			
				MOTORS:	23.65	KVA	25.42	KVA PHASE B			
				HEATING:	13.75	KVA					
				TOTAL:	53.24	KVA					

NOTES:	FIXTURE NUMBER, LETTER PREFIX INDICATES TYPE OF MOUNTING AS FOLLOWS: C--CEILING MOUNTED; S--SUSPENDED; W--WALL MOUNTED; R--CEILING RECESSED; WR--WALL RECESSED; CV--COVE MOUNTED; U--UNDERCABINET; P--POST; G--GROUND MOUNTED; X--UNIVERSAL MOUNTED; T--TRACK. ALL FIXTURES SHALL BE 80 CRI MINIMUM, UNLESS NOTED OTHERWISE PARTIAL MODEL NUMBERS MAY BE SHOWN AND ARE INTENDED TO INDICATE ACCEPTABLE MANUFACTURER'S PRODUCT LINE. EXACT MODEL NUMBERS MEETING THE FIXTURE DESCRIPTION SHALL BE OBTAINED FROM MANUFACTURER'S AGENT. ALL FIXTURES MAY NOT BE USED. REFER TO PLANS FOR FIXTURE QUANTITIES. FIXTURE DIMENSIONS MAY VARY BETWEEN MANUFACTURERS. REFER TO SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.			
	BE-JOB # 20-123			
FIXTURE NUMBER	FIXTURE DESCRIPTION	FIXTURE VOLTAGE	LAMP TYPE	APPROVED MANUFACTURERS
C1	2.125" x 2.125" x 48", SURFACE MOUNTED LED DIRECT LIGHTING FIXTURE, STEEL HOUSING, END CAPS, LENSED, AIRCRAFT CABLE SUSPENSION, WHITE FINISH, COLOR TEMP. 3500K, 80+ CRI, 3,966 LUMENS 5 YEAR WARRANTY, UL LISTING. MOUNT AT 9'-0" FIXTURE: 30 WATTS, 3,966 LUMENS	MVOLT	LED W/FIXTURE	LITHONIA ZL1D-L48-3000LM-FST-MVOLT-35K- 80CRI-WH SERIES OR EQUAL
X2	19" x 8" x2", UNIVERSAL MOUNTED EXIT SIGN / EMERGENCY EGRESS COMBO UNIT, SINGLE FACE L.E.D. EXIT SIGN, WHITE THERMOPLASTIC HOUSING, RED LETTERS, DIRECTIONAL ARROWS, 2-1.5 WATT LED HEADS, DUAL VOLTAGE, 90 MIN SEALED UNIT POWER SUPPLY, HIGH OUTPUT BATTERY FOR 2 REMOTE LED HEADS WHERE INDICATED. FIXTURE: 4.3 WATTS	MVOLT	W/FIXTURE	LITHONIA LHQM-LED-R-HO DUAL-LITE EVCURW OR EQUAL
W3	9" X 7", 2 LAMP, 1.5 WATT LED, WALL MOUNTED EMERGENCY EGRESS REMOTE FIXTURE, MOUNTED AT 7 A.F.F. ON STRIKE SIDE OF THE DOOR, SEALED AND GASKETED THERMOPLASTIC HOUSING, LOW VOLTAGE WIRING CONNECTED TO EXIT SIGN AS SHOWN ON DRAWINGS. WET LOCATION UL LISTING. FIXTURE: 2 WATTS	9.6 V	W/FIXTURE	LITHONIA ELA-LED-T-QWP DUAL-LITE EVOBD OR EQUAL
W4	4" x 5" x 10", 2 HEAD, WALL MOUNTED EMERGENCY EGRESS FIXTURE, ADJUSTABLE 2.4 WATT/220 LUMEN LED HEADS, THERMOPLASTIC HOUSING, TEST SWITCH LED, DUAL VOLTAGE, 90 MINUTE SEALED UNIT POWER SUPPLY FIXTURE: 1.09 WATTS	MVOLT	W/FIXTURE	LITHONIA ELM2L DUAL-LITE EV2 OR EQUAL
W5	VANITY LIGHT TO BE SELECTED BY THE OWNER FIXTURE SHALL HAVE LED LAMPS, 50 WATTS MAXIMUM PROVIDE \$250 ALLOWANCE PER FIXTURE	120 V	LED	SELECTED BY THE OWNER
C6	7.5" DIAM X 1.25" DEEP, LED SURFACE MOUNTED DOWNLIGHT, ALUMINUM TRIM FRAME WITH WHITE FINISH, LED'S MOUNT DIRECTLY TO HEATINGK, FIXTURE MOUNTS DIRECTLY TO 4" SQ JUNCTION BOX, 1000 LUMENS, 90 CRI, 3000K LED SOURCE, UL LISTING. FIXTURE: 15 WATTS, 1000 LUMENS	120 V	LED W/ FIXTURE	JUNO 6RLS-G2-10LM-30K-90CRI SERIES OR EQUAL
C7	CEILING MOUNTED FIXTURE TO BE SELECTED BY THE OWNER FIXTURE SHALL HAVE LED LAMPS, 100 WATTS MAXIMUM PROVIDE \$500 ALLOWANCE PER FIXTURE	120 V	LED	SELECTED BY THE OWNER
S8	SUSPENDED PENDANT MOUNTED FIXTURE TO BE SELECTED BY THE OWNER FIXTURE SHALL HAVE LED LAMPS, 100 WATTS MAXIMUM PROVIDE \$500 ALLOWANCE PER FIXTURE	120 V	LED	SELECTED BY THE OWNER
W9	WALL MOUNTED SCENCE TO BE SELECTED BY THE OWNER FIXTURE SHALL HAVE LED LAMPS, 50 WATTS MAXIMUM PROVIDE \$250 ALLOWANCE PER FIXTURE	120 V	LED	SELECTED BY THE OWNER
C9	9" x 48" x 2.5 , CEILING MOUNTED LED WRAP FIXTURE, ACRYLIC PRISMATIC LENS, WHITE BAKED ENAMEL STEEL HOUSING, LENS HINGED FROM EITHER SIDE, 3500 COLOR TEMPERATURE, 80 CRI, 7209 LUMENS, L90/50,000 LUMEN MAINTENANCE FACTOR, DAMP LOCATION UL LISTING. FIXTURE: 62 WATTS, 7209 LUMENS	MVOLT	LED W/FIXTURE	LITHONIA SBL4-72L-80CRI-35K SERIES OR EQUAL



FEEDER SCHEDULE							
NOTE NUMBER	FEEDER AMPS	NUMBER OF SETS	PHASE WIRE QUANTITY - SIZE	NEUTRAL WIRE QUANTITY - SIZE	GROUND SIZE	CONDUIT SIZE PER SET	COMMENTS/REMARKS
1	400	1	2 - #600	1 - #600	-	4"	SERVICE ENTRANCE
2	400	1	2 - #400	1 - #600	#3	4"	-

FEEDERS BASED ON COPPER CONDUCTORS; SUBSTITUTION OF CODE SIZED ALUMINUM CONDUCTORS FOR PANEL FEEDERS IS ALLOWED BASED ON FEEDER AMPS IN THE SCHEDULE



MAIN GROUNDING SYSTEM

N.T.S.

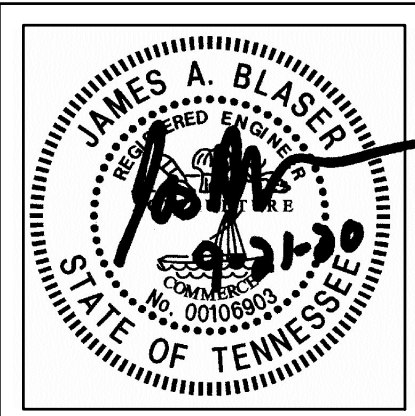
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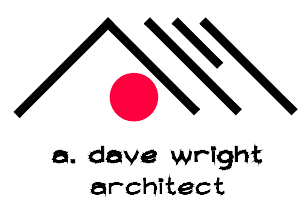
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BLASER ENG JOB# 20-123

Revisions		
No	Date	Description
*	*	*



Hale House Development for
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Job No:	19-166
Scale:	as noted
Date:	09-21-20
File Name:	20123 electrical
Drawing Title:	One-Line Diagram, Details, & Schedules

Sheet No

E3.1

DIVISION 26 - ELECTRICAL

SECTION 26 00 05 ELECTRICAL GENERAL PROVISIONS

1. REFERENCE

A. REFER TO INSTRUCTIONS TO BIDDERS, GENERAL CONDITIONS, SPECIAL CONDITIONS, DIVISION 1 – GENERAL REQUIREMENTS, FOR SPECIFIC REQUIREMENTS, RESPONSIBILITIES AND METHODS RELATING TO ELECTRICAL WORK.
2. DESCRIPTION

A. FURNISH ALL MATERIALS, LABOR, TOOLS AND EQUIPMENT TO COMPLETE AND LEAVE READY FOR OPERATION ALL ELECTRICAL SYSTEMS AS CALLED FOR IN THESE SPECIFICATIONS OR SHOWN ON THE DRAWINGS AND ANY AND ALL DETAILS ESSENTIAL TO COMPLETE THE WORK.
3. QUALITY

A. CONTRACTOR SHALL PROVIDE WORK OF HIGHEST QUALITY, CONFORMING TO THE ACCEPTED PRACTICES AND STANDARDS OF THE TRADES INVOLVED. FURTHER DEFINITION OF QUALITY IS GIVEN BY VARIOUS LAWS, CODES, STANDARDS AND REGULATIONS.
4. CODES

A. ALL WORK SHALL BE IN COMPLIANCE WITH ALL APPLICABLE STATE AND LOCAL CODES.

B. ALL EQUIPMENT SHALL BE PROPERLY RATED FOR THE SEISMIC ACTIVITY ZONE FOR WHICH IT IS INSTALLED.
5. CONTRACT DRAWINGS

A. DRAWINGS ARE SCHEMATIC AND SHOW APPROXIMATE LOCATIONS AND EXTENT OF WORK. EXACT LOCATIONS MUST BE COORDINATED WITH OTHER TRADES AND VERIFIED IN THE FIELD. THE RIGHT IS RESERVED TO RELOCATE ANY ELEMENT UP TO TEN (10) FEET AT NO INCREASE IN COST PROVIDED THE CONTRACTOR IS NOTIFIED BEFORE COMMENCEMENT OF WORK.
6. PERMITS, FEES AND NOTICES

A. UNLESS OTHERWISE EXCLUDED IN THE CONTRACT DOCUMENTS, EACH CONTRACTOR SHALL SECURE AND PAY FOR ALL PERMITS AND GOVERNMENTAL FEES, LICENSES AND INSPECTIONS NECESSARY FOR THE PROPER EXECUTION AND COMPLETION OF HIS WORK.
7. GUARANTEE

A. CONTRACTOR SHALL GUARANTEE HIS WORKMANSHIP AND MATERIALS FOR A PERIOD OF ONE YEAR FROM THE DATE OF SUBSTANTIAL COMPLETION.
8. EXAMINATION OF SITE

A. CONTRACTOR SHOULD VISIT THE SITE OF THE PROPOSED PROJECT. CERTAIN EXISTING CONDITIONS MAY AFFECT THE MANNER OR SEQUENCE OF THE PERFORMANCE OF THE WORK.
9. RECORD DRAWINGS

A. CONTRACTOR SHALL MAINTAIN AT THE JOB SITE, ONE COPY OF THE DRAWINGS WHICH SHALL BE USED EXCLUSIVELY FOR RECORDING ANY INSTALLATION DEVIATION FROM THE CONTRACT DRAWINGS. SUBMIT DRAWINGS TO ARCHITECT UPON COMPLETION OF PROJECT.
10. CUTTING AND PATCHING

A. EACH CONTRACTOR SHALL PERFORM ALL CUTTING AND PATCHING REQUIRED FOR HIS OWN WORK. WORK MUST BE ACCOMPLISHED IN A NEAT AND WORKMANLIKE MANNER, ACCEPTABLE TO THE ARCHITECT. PATCH TO MATCH ADJACENT SURFACE CONSTRUCTION.
11. TESTS

A. THE CONTRACTOR SHALL BEAR ALL COSTS OF SUCH INSPECTIONS, TESTS OR APPROVALS, AS REQUIRED BY LOCAL AUTHORITIES.
12. SUBMITTALS

A. MATERIALS AND EQUIPMENT INSTALLED IN THIS WORK SHALL MEET ALL THE REQUIREMENTS OF THE CONTRACT DOCUMENTS AND NO MATERIALS OR EQUIPMENT SHALL BE ORDERED UNTIL SUBMITTALS ARE REVISED AND APPROVED BY THE ARCHITECT OR ENGINEER.

B. REQUIRED SUBMITTALS INCLUDE:

1) WIRING DEVICES AND PLATES

2) LIGHTING FIXTURES

3) LIGHTING CONTROLS & OCCUPANCY SENSORS

4) CIRCUIT BREAKER PANELBOARD & SAFETY SWITCHES

5) SURGE SUPPRESSION DEVICE (SPD)

SECTION 26 05 19 CONDUCTORS AND CONNECTORS

1. FURNISH AND INSTALL ALL ELECTRICAL CONDUCTORS FOR FEEDERS, BRANCH CIRCUIT WIRING, AND SYSTEM WIRING.
2. ALL WIRE SHALL BE UL LISTED COPPER, 600 VOLT RATED.
3. ALL WIRE SHALL BE STRANDED IN SIZES #8 AND LARGER.
4. WIRE SHALL BE TYPE THHN/THWN.
5. MINIMUM WIRE SIZE SHALL BE NO. 12 AWG.
6. ALL 120 VOLT CIRCUITS OVER 75 FEET IN LENGTH SHALL HAVE ALL OF THE CONDUCTORS UPSIZED ONE WIRE SIZE. (I.E. ALL #12 AWG WILL BECOME #10 AWG)
7. ALL CONDUCTORS ARE TO BE IDENTIFIED, BRANCH CIRCUITS AND FEEDERS BY COLOR CODING AS FOLLOWS:

120/240V
PHASE A – BLACK
PHASE B – RED
NEUTRAL – WHITE
GROUND – GREEN
8. THE COLOR CODING ON #6 AND SMALLER CONDUCTORS SHALL BE CONTINUOUS IN LENGTH. NO TAPING, PAINTING OR OTHER MEANS OF CODING WILL BE ACCEPTABLE. THE COLOR CODING ON #4 AND LARGER CONDUCTORS SHALL BE IN THE FORM OF COLORED TAPE VISIBLE AT EACH POINT OF ACCESS OR VIEW. COLOR CODING SHALL CONFORM TO THE REQUIREMENTS OF NEC ARTICLE 200.6.
9. FOR #10 AND SMALLER BRANCH CIRCUIT AND FIXTURE CONDUCTOR SPLICES, USE "LIVE SPRING", PRESSURE CABLE CONNECTORS LISTED FOR 600 VOLT (1000 VOLT WHEN ENCLOSED IN FIXTURE OR SIGN).
10. FOR TERMINAL CONNECTIONS ON COPPER, NO. 8 OR LARGER, OR WHERE MULTIPLE CONNECTIONS ARE MADE TO ONE TERMINAL, USE SOLDERLESS LUGS, MECHANICAL TYPE AS NECESSARY.
11. FOR SPLICES ON CONDUCTORS LARGER THAN #10, COMPRESSION TYPE BARREL SPLICES SHALL BE USED.

SECTION 26 05 26 GROUNDING

1. GROUNDING OF THE ELECTRICAL SYSTEM SHALL BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE.
2. METAL ENCLOSURES, CABLE TRAYS, OR RACEWAYS FOR CONDUCTORS OR EQUIPMENT SHALL BE GROUNDED.
3. EXPOSED NONCURRENT-CARRYING METAL PARTS OF FIXED EQUIPMENT LIKELY TO BECOME ENERGIZED SHALL BE GROUNDED.
4. BONDING SHALL BE PROVIDED AND CONFORM TO ALL REQUIREMENTS OF NEC ARTICLE 250 PART V.
5. ALL RACEWAYS SHALL CONTAIN A GROUNDING CONDUCTOR.

SECTION 26 05 33 PANELBOARDS, WIRING DEVICES, AND PLATES

1. THE FOLLOWING ARE THE ONLY APPROVED MANUFACTURERS FOR PANELBOARDS, AND SAFETY SWITCHES:

A. SQUARE D

B. SIEMENS

C. EATON

D. GENERAL ELECTRIC
2. PANELBOARDS:

A. CIRCUIT BREAKERS: QUICK-MAKE, QUICK-BREAK, THERMAL-MAGNETIC, TRIP INDICATING, WITH COMMON TRIP ON ALL MULTI-POLE BREAKERS. BRANCH CIRCUIT BREAKERS, FEEDING CONVENIENCE OUTLETS SHALL HAVE SENSITIVE INSTANTANEOUS TRIP SETTINGS OF NOT MORE THAN 10 TIMES THE TRIP RATING OF THE BREAKER IN ORDER TO GIVE "FLASH PROTECTION" FOR FRAYED STRANDED WIRE CORDS. CONNECTIONS TO THE BUS BOLT-ON TYPE.

B. ALL BREAKERS USED TO PANEL SWITCH LIGHTING CIRCUITS SHALL BE UL LISTED SWD (SWITCHING DUTY) RATED AT APPLIED VOLTAGE. ALL BREAKERS USED TO SERVE PACKAGE TYPE AIR CONDITIONING EQUIPMENT SHALL BE UL LISTED "HACR".

C. BUS BAR CONNECTIONS TO THE BRANCH CIRCUIT BREAKERS SHALL BE "PHASE SEQUENCE" TYPE. THREE-PHASE, FOUR-WIRE BUSSING SHALL BE SUCH THAT ANY THREE ADJACENT SINGLE-POLE BREAKERS ARE INDIVIDUALLY CONNECTED TO EACH OF THE THREE DIFFERENT PHASES. ALL BUSSING SHALL BE COPPER.

D. FRONTS SHALL INCLUDE DOORS AND HAVE FLUSH, C.P. STEEL, CYLINDER LOCKS WITH CATCHES AND SPRING-LOADED DOOR PULLS. FRONTS SHALL HAVE ADJUSTABLE INDICATING TRIM CLAMPS WHICH ARE CONCEALED WHEN THE DOORS ARE CLOSED. DOORS SHALL BE MOUNTED BY CONCEALED HINGES. FRONTS SHALL NOT BE REMOVABLE WITH DOOR IN LOCKED POSITION. A CIRCUIT DIRECTORY FRAME AND CARD WITH A CLEAR PLASTIC COVERING SHALL BE PROVIDED ON THE INSIDE OF THE DOOR. FRONTS SHALL BE OF CODE GAUGE, FULL FINISHED STEEL WITH RUST-INHIBITING PRIMER AND BAKED ENAMEL FINISH. MINIMUM PANELBOARD WIDTH TO BE 20".

E. FOR EACH PANEL, FURNISH ONE CIRCUIT BREAKER LOCK OFF DEVICE.

F. DIRECTORY CARDS SHALL BE TYPED AND PROTECTED WITH CLEAR PLASTIC. INDICATE CIRCUITS USE SUCH AS "LIGHTING-OFFICE 105". VERIFY PROPER ROOM IDENTIFICATION.
3. WIRING DEVICE:

A. DEVICES SHALL BE "SPECIFICATION" GRADE AND TAMPER RESISTANT.

B. RECEPTACLES SHALL BE 20 AMP; HAVE GROUNDING TERMINAL AND SHALL BE "SELF-GROUNDING".

C. DEVICES SHALL BE GRAY IN COLOR, OR AS SELECTED BY THE ARCHITECT.

D. PLATES SHALL BE SAME MANUFACTURER AS DEVICES AND SHALL BE 0.04" THICK BRUSHED STAINLESS STEEL.

E. DEVICES ON OPPOSITE SIDES OF A RATED PARTITION SHALL BE SEPARATED BY A MINIMUM OF 24".
4. SAFETY SWITCHES:

A. SHALL BE OF FUSIBLE AND OF HEAVY DUTY CONSTRUCTION.

B. PROVIDE NEMA 3R RATED SWITCHES OUTDOORS.

SECTION 26 05 33.13 RACEWAYS, FITTINGS, AND SUPPORTS

1. ALL CONDUCTORS SHALL BE ENCLOSED IN A CONTINUOUS GROUNDED RACEWAY SYSTEM.
2. ALL CONDUITS SHALL BE RUN WITH-IN THE WALL CAVITY. AREAS WHERE CONCEALED CONDUITS ARE NOT POSSIBLE SHALL BE APPROVED BY THE ARCHITECT PRIOR TO ANY WORK PROCEEDING.
3. ALL CONDUITS SHALL BE RIGID HEAVY WALL GALVANIZED STEEL, UNLESS NOTED BELOW, MINIMUM 3/4 INCH TRADE SIZE.
4. EMT MAY BE USED AS FOLLOWS:

A. IN INTERIOR PARTITIONS INSIDE BUILDING

B. ABOVE SUSPENDED CEILINGS INSIDE BUILDING

C. EXPOSED ABOVE 9 FOOT A.F.F. INSIDE BUILDING (EXCEPT HAZARDOUS LOCATIONS) IN UNFINISHED AREAS.
5. INTERMEDIATE GALVANIZED STEEL CONDUIT MAY BE USED IN LIEU OF RIGID STEEL CONDUIT WITHIN THE BUILDING INTERIOR.
6. MC CABLE MAY BE USED AS FOLLOWS:

A. TYPE "MC" CABLE MAY BE USED FOR CONCEALED BRANCH CIRCUIT WIRING IN DRY LOCATIONS (IN WALLS OR ABOVE CEILINGS) BETWEEN LIGHTING FIXTURES, OR POWER OUTLETS. HOWEVER, MULTI-WIRE BRANCH CIRCUITS, AND CIRCUIT RUNS WITH – MULTIPLE CIRCUITS SHALL OCCUR IN CONDUIT. CONVERSION FROM "MC" CABLE TO CONDUIT SHALL OCCUR WITHIN 10 FEET OF FIRST UTILIZATION DEVICE CONNECTION TO CIRCUIT.

B. THREE CONDUCTOR, THHN/THWN INSULATED, ALUMINUM OR GALVANIZED STEEL INTERLOCKED ARMOR TYPE MC POWER CABLE FOR USE IN CIRCUITS NOT EXCEEDING 600 VOLTS PHASE TO PHASE AT CONDUCTOR TEMPERATURES OF 90°C IN DRY LOCATIONS FOR NORMAL OPERATION.

C. CABLE ASSEMBLY SHALL INCLUDE FULL-SIZE GROUNDING CONDUCTOR, AND FULL-SIZE ISOLATED GROUNDING CONDUCTOR (IF APPLICABLE), WITH SUITABLE FILLERS AND BINDER TAPE.

D. TYPE "MC" CABLE SHALL BE OF THE SINGLE CIRCUIT TYPE ONLY.
7. FLEXIBLE STEEL CONDUIT (UP TO THREE FEET IN LENGTH) SHALL BE USED FOR CONNECTIONS TO MOTORS, VIBRATING EQUIPMENT, AND CONNECTIONS FOR WHICH RIGID, IMC, OR EMT CONDUIT IS NOT APPLICABLE. FLEXIBLE STEEL CONDUIT UP TO SIX FEET IN LENGTH SHALL BE USED FOR CONNECTIONS TO LIGHTING FIXTURES. A GREEN GROUNDING CONDUCTOR SHALL BE INSTALLED IN EACH FLEXIBLE CONDUIT. ALL RUNS SHALL BE TERMINATED IN INSULATED FLEXIBLE CONDUIT FITTINGS. MINIMUM SIZE TO BE 1/2 INCH.

8. LIQUID TIGHT FLEXIBLE STEEL CONDUIT (UP TO THREE FEET IN LENGTH) AND APPROPRIATE FITTINGS SHALL BE USED FOR CONNECTIONS TO MOTORS AND VIBRATING EQUIPMENT IN AREAS EXPOSED TO THE WEATHER OR LIKELY TO BECOME DAMP.
9. PVC CONDUIT MAY ONLY BE USED UNDERGROUND OUTSIDE THE BUILDING OR UNDER CONCRETE SLABS ON GRADE WITHIN THE BUILDING. CONDUITS AND ELBOWS TURNING UP INTO THE BUILDING SPACE SHALL BE RIGID STEEL.
10. FLEXIBLE CONDUIT OR TYPE MC CABLE MAY BE USED TO CONNECT OUTLETS INSTALLED WITHIN BUILT UP CASEWORK.
11. CONDUITS LARGER THAN ONE INCH SHALL HAVE GROUNDING TYPE BUSHINGS.
12. ALL CONDUIT AND EMT FITTINGS SHALL BE DIE CAST ZINC OR GALVANIZED STEEL. CONNECTORS AND COUPLINGS SHALL BE THREADED, COMPRESSION OR SETSCREW TYPE, CONCRETE TIGHT. CONDUIT BODIES SHALL BE MALLEABLE IRON, THREADED FOR HEAVYWALL CONDUIT AND COMPRESSION OR SETSCREW TYPE FOR EMT. WITH CADMIUM FINISH AND CADMIUM PLATED SHEET STEEL COVERS. PROVIDE NEOPRENE COVER GASKETS FOR CONDUIT BODY COVERS EXPOSED TO THE WEATHER.
13. OUTLETS, JUNCTION, PULL BOXES, ETC. WHEN OVERHEAD SHALL BE INDEPENDENTLY SUPPORTED AND SHALL NOT DEPEND UPON CONDUIT FOR SUPPORT. WHERE RUN IS NOT SUPPORTED BY SLABS, WALLS, ETC., USE GALVANIZED PIPE STRAPS, TRAPEZE HANGERS, BEAM CLAMPS, CHANNEL AND FITTINGS, ETC. SUPPORT WITHIN 3' OF EACH OUTLET BOX, JUNCTION BOX, CABINET OR FITTING. SUPPORT AT LEAST EVERY 10 FEET.

SECTION 26 09 23 OCCUPANCY SENSORS

1. OCCUPANCY SENSORS SHALL BE MANUFACTURED BY SENSORSWITCH OR EQUAL.
2. WALL BOX OCCUPANCY SENSOR USED IN OFFICES AND PRIVATE TOILETS SHALL HAVE PIR TECHNOLOGY AND MICROPHONICS, SENSORSWITCH WSX-PDT SERIES.
3. WALL BOX OCCUPANCY SENSORS WITH DIMMING SHALL HAVE PIR TECHNOLOGY AND MICROPHONICS, SENSORSWITCH WSX-PDT-D SERIES.
4. WALL BOX OCCUPANCY SENSOR USED IN PRIVATE TOILETS WITH EXHAUST FANS SHALL HAVE PIR TECHNOLOGY AND MICROPHONICS, 2 POLE, SENSORSWITCH WSX-PDT-2P SERIES.
5. CEILING MOUNTED OCCUPANCY SENSORS USED IN RESTROOMS SHALL HAVE PIR TECHNOLOGY AND MICROPHONICS, SENSORSWITCH CM-PDT SERIES OVER THE TOILET STALLS, AND PIR ONLY IN THE RESTROOM VESTIBULE AREA, SENSORSWITCH CM SERIES.
6. CEILING MOUNTED OCCUPANCY SENSORS USED IN HIGH HUMIDITY AREAS SUCH AS SHOWER AREAS SHALL BE RATED FOR HIGH HUMIDITY.
7. CEILING MOUNTED OCCUPANCY SENSORS USED IN TRAINING AND CONFERENCE ROOMS SHALL HAVE PIR TECHNOLOGY AND MICROPHONICS, SENSORSWITCH CM-PDT SERIES.
8. CEILING CORNER MOUNTED OCCUPANCY SENSORS USED IN PRIVATE OFFICES SHALL HAVE PIR TECHNOLOGY AND MICROPHONICS, SENSORSWITCH WV-PDT SERIES.
9. CEILING MOUNTED OCCUPANCY SENSORS USED IN OFFICES SHALL HAVE PIR TECHNOLOGY AND MICROPHONICS, SENSORSWITCH CM-PDT SERIES.
10. CONTRACTOR SHALL PROVIDE THE PROPER OCCUPANCY SENSOR MODEL FOR THE CEILING HEIGHT AND SQUARE FOOTAGE OF THE ROOM/AREA SERVED.
11. SWITCHPACKS SHALL BE HEAVY DUTY, 120/277 VOLT, 20 AMP OUTPUT. UNIT SHALL ALSO PROVIDE LOW VOLTAGE TO POWER OCCUPANCY SENSORS.
12. OCCUPANCY SENSORS SHALL BE INITIALLY SET TO TURN THE LIGHTS OFF AFTER 15 MINUTES OF NOT SENSING MOVEMENT, AND SHALL BE MANUAL "ON".

SECTION 26 21 16 UNDERGROUND ELECTRICAL SERVICE

1. UNDERGROUND RACEWAYS SHALL BE SCHEDULE 40 PVC OR RIGID STEEL CONDUIT UNLESS SPECIFICALLY NOTED OTHERWISE.
2. UN-ENCASED UNDERGROUND RACEWAYS TO BE IDENTIFIED WITH 6-INCH WIDE PLASTIC IMPRINTED TAPE. COLOR AND WORDING TO IDENTIFY UNDERGROUND UTILITY.
3. ALL UNDERGROUND RACEWAYS TO BE BURIED A MINIMUM OF 30 INCHES BELOW GRADE. INCOMING UTILITY SERVICES TO BE BURIED PER UTILITY COMPANY REQUIREMENTS.
4. METER BASE WILL BE SUPPLIED BY THE POWER COMPANY AND WILL BE INSTALLED BY THE CONTRACTOR. THE METER WILL BE PROVIDED BY THE POWER COMPANY.
5. SECONDARY CONDUCTORS SHALL BE RUN IN CONDUITS FROM THE BUILDING MAIN DISCONNECTING MEANS TO THE RISER POLE WEATHERHEADS AND BEYOND WITH APPROXIMATELY 6 FOOT LEADS FROM THE WEATHERHEADS FOR FINAL CONNECTION TO THE TRANSFORMERS BY THE POWER COMPANY.
6. CONTRACTOR SHALL COORDINATE ALL ADDITIONAL REQUIREMENTS WITH EACH UTILITY COMPANY AND TO INCLUDE IN THEIR BID ALL COSTS ASSOCIATED WITH CONNECTION TO THE UTILITY SERVICES. ITEMIZE AS A SEPARATE LINE ITEM ON THE BID FORM.

SECTION 26 30 00 TELEPHONE SERVICE

1. PROVIDE THE NECESSARY CONDUITS, OUTLETS, PLATES, CABINETS, AND PLYWOOD MOUNTING BOARDS AS SHOWN AND/OR AS REQUESTED BY THE TELEPHONE UTILITY.
2. UNLESS SPECIFICALLY NOTED, MINIMUM CONDUIT SIZE SHALL BE 3/4". CONDUIT SERVING 2 OR MORE PHONES SHALL BE 1" OR LARGER, AS NOTED.
3. TELEPHONE BACKBOARDS SHALL BE 3/4" GRADE B-C PLYWOOD OF WIDTH SHOWN IN DRAWINGS, AND 6 FOOT HIGH, MOUNTED 2 FEET ABOVE THE FLOOR.
4. PROVIDE EMPTY CONDUIT SYSTEMS FOR TELEPHONE COMPANY.
5. PROVIDE CAT 6 WIRING IN CONDUIT SYSTEMS FOR TELEPHONE WIRING BACK TO TTb (TELEPHONE TERMINAL BOARD).

SECTION 26 43 13 SURGE SUPPRESSION

1. SPD UNITS AND ALL COMPONENTS SHALL BE DESIGNED, MANUFACTURED, AND TESTED IN ACCORDANCE WITH THE LATEST APPLICABLE UL STANDARD (ANSI/UL 1449 3RD EDITION).
2. THE MANUFACTURER SHALL BE ISO 9000 CERTIFIED AND HAVE PRODUCED SIMILAR ELECTRICAL EQUIPMENT FOR A MINIMUM PERIOD OF FIVE (5) YEARS.
3. ELECTRICAL REQUIREMENTS:

3.1. MAXIMUM CONTINUOUS OPERATING VOLTAGE (MCOV) SHALL NOT BE LESS THAN 125% OF THE SYSTEM OPERATING VOLTAGE.

3.2. THE SUPPRESSION SYSTEM SHALL INCORPORATE THERMALLY PROTECTED METAL-OXIDE VARISTORS (MOVS) AS THE CORE SURGE SUPPRESSION COMPONENT FOR THE SERVICE ENTRANCE AND ALL OTHER DISTRIBUTION LEVELS.

3.3. PROTECTION MODES – THE SPD MUST PROTECT ALL MODES OF THE ELECTRICAL SYSTEM. THE REQUIRED PROTECTION MODES ARE L-N, L-G, L-L, N-G

4. NOMINAL DISCHARGE CURRENT (IN) – ALL SPDs APPLIED TO THE DISTRIBUTION SYSTEM SHALL HAVE A 20KA IN RATING REGARDLESS OF THEIR TYPE OR VOLTAGE. SPDs HAVING AN IN LESS THAN 20KA SHALL BE REJECTED.
5. ANSI/UL 1449 3RD EDITION VOLTAGE PROTECTION RATING (VPR) – THE MAXIMUM ANSI/UL 1449 3RD EDITION VPR FOR THE DEVICE SHALL NOT EXCEED THE FOLLOWING:

MODES 208Y/120

L-N; L-G; N-G 700

L-L 1200
6. SPD DESIGN:

6.1. THE SPD SHALL BE MAINTENANCE FREE AND SHALL NOT REQUIRE ANY ANY USER INTERVENTION THROUGHOUT ITS LIFE.

6.2. THE UNIT SHALL INCLUDE A HIGH-PERFORMANCE EMI/RFI NOISE REJECTION FILTER. NOISE ATTENUATION FOR ELECTRIC LINE NOISE SHALL BE UP TO 50 DB FROM 10 KHZ TO 100 MHZ.

6.3. THE SPD SHALL PROVIDE THE FOLLOWING INTEGRAL MONITORING OPTIONS:

6.3.1. UNIT SHALL HAVE A GREEN / RED SOLID-STATE INDICATOR LIGHT THAT REPORTS THE STATUS OF THE PROTECTION ON EACH PHASE.

6.3.2. THE SPD MUST INCLUDE FORM C DRY CONTACTS (ONE NO AND ONE NC) FOR REMOTE ANNUNCIATION OF ITS STATUS. BOTH THE NO AND NC CONTACTS SHALL CHANGE STATE UNDER ANY FAULT CONDITION.

6.3.3. SPD SHALL CONTAIN AN AUDIBLE ALARM THAT WILL BE ACTIVATED UNDER ANY FAULT CONDITION. THERE SHALL ALSO BE AN AUDIBLE ALARM SILENCE BUTTON USED TO SILENCE THE AUDIBLE ALARM AFTER IT HAS BEEN ACTIVATED.

6.3.4. SPD SHALL BE EQUIPPED WITH AN LCD DISPLAY THAT INDICATES TO THE USER HOW MANY SURGES HAVE OCCURRED. ONGOING SURGE COUNT SHALL BE STORED IN NON-VOLATILE MEMORY.
- 6.4. SAFETY REQUIREMENTS:

6.4.1. THE SPD SHALL MINIMIZE POTENTIAL ARC FLASH HAZARDS BY CONTAINING NO USER SERVICEABLE / REPLACEABLE PARTS AND SHALL BE MAINTENANCE FREE. SPDs CONTAINING ITEMS SUCH AS REPLACEABLE MODULES, REPLACEABLE FUSES, OR REPLACEABLE BATTERIES SHALL NOT BE ACCEPTED. SPDs REQUIRING ANY MAINTENANCE OF ANY SORT SUCH AS PERIODIC TIGHTENING OF CONNECTIONS SHALL NOT BE ACCEPTED.

6.4.2. SPDs DESIGNED TO INTERFACE WITH THE ELECTRICAL ASSEMBLY VIA CONDUCTORS SHALL REQUIRE NO USER CONTACT WITH THE INSIDE OF THE UNIT. SUCH UNITS SHALL HAVE ANY REQUIRED CONDUCTORS BE FACTORY INSTALLED.
- 6.5. SYSTEM APPLICATION:

6.5.1. ALL SPDs SHALL BE TESTED AND DEMONSTRATE SUITABILITY FOR APPLICATION WITHIN ANSI/IEEE C62.41 CATEGORY C, B, AND A ENVIRONMENTS.

6.5.2. MINIMUM SURGE CURRENT CAPACITY BASED ON ANSI/IEEE C62.41. DEVICE IS CAPABLE OF WITHSTANDING AS FOLLOWS:

CATEGORY APPLICATION PER PHASE PER MODE

C SERVICE ENTRANCE PANEL 120 KA 60 KA
7. SPD TYPE – ALL SPDs INSTALLED ON THE LINE SIDE OF THE SERVICE ENTRANCE DISCONNECT SHALL BE TYPE 1 SPDs. ALL SPDs INSTALLED ON THE LOAD SIDE OF THE SERVICE ENTRANCE DISCONNECT SHALL BE TYPE 1 OR TYPE 2 SPDs.
8. THE MANUFACTURER SHALL PROVIDE A FULL FIVE (5) YEAR WARRANTY FROM THE DATE OF SHIPMENT AGAINST ANY SPD PART FAILURE WHEN INSTALLED IN COMPLIANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS AND ANY APPLICABLE NATIONAL OR LOCAL CODE.

SECTION 26 50 00 LIGHTING FIXTURES

1. FURNISH LIGHTING FIXTURES, LAMPS AND DRIVERS/BALLAST AS INDICATED ON THE DRAWINGS OR APPROVED EQUALS TO SPECIFIED FIXTURES.
2. FURNISH ALL REQUIRED INSTALLATION ACCESSORIES FOR THE FIXTURES AS REQUIRED FOR THE SPECIFIC LOCATION WHETHER OR NOT INCLUDED IN THE MANUFACTURER'S CATALOG NUMBER. SUCH ACCESSORIES INCLUDE PLASTER FRAMES, RINGS, FLANGES, CANOPIES, STEM HANGERS, AND SUSPENSION STRAPS.
3. INSTALL LAMPS IN ALL FIXTURES INSTALLED UNDER THIS CONTRACT IN ACCORDANCE WITH THE FIXTURE SCHEDULE ON THE DRAWINGS.
4. ALL LIGHT FIXTURES SHALL BE UL LISTED.
5. FIXTURES SHALL BE SECURELY MOUNTED TO ELEMENTS OF THE BUILDING OR TO SUSPENDED CEILING SYSTEMS. WIRE SUPPORTED FROM THE STRUCTURE SHALL BE PROVIDED FOR FIXTURES INSTALLED IN LAY-IN CEILINGS. PROVIDE MEANS OF SUPPORT AS REQUIRED IN NEC ARTICLE 410.16.
6. FLUSH FIXTURES WITH LIGHT SPILLING BETWEEN FRAME AND CEILING TO HAVE FELT GASKETS INSTALLED BETWEEN TRIM AND CEILING.
7. ALL BALLASTED FIXTURES SHALL HAVE A DISCONNECT MEANS AT THE FIXTURE PER THE REQUIREMENTS OF NEC 410.130.

SECTION 28 31 00 FIRE ALARM SYSTEM

1. PROVIDE A STAND ALONE DUCT SMOKE DETECTION SYSTEM. THE SYSTEM SHALL ANNUNCIATE WITH AUDIBLE AND VISUAL MEANS WITH-IN THE SPACE.
2. DUCT SMOKE DETECTION SYSTEM SHALL BE A STAND ALONE 120 VOLT SYSTEM. PROVIDE POWER FROM NEAREST ELECTRICAL PANEL.
3. FIRE ALARM INSTALLATION SHALL BE UL LISTED AND CONFORM TO THE REQUIREMENTS OF NFPA 72, NFPA 101, LOCAL BUILDING CODES, AND THE NEC.
4. CONTROL FUNCTIONS SHALL INCLUDE AIR HANDLING UNIT SHUTDOWN.
5. CONTRACTOR SHALL PROVIDE FIRE ALARM SHOP DRAWINGS FOR THE BUILDING DEPARTMENT REVIEW AND APPROVAL PRIOR TO THE INSTALLATION OF THE FIRE ALARM SYSTEM.

END OF SPECIFICATIONS

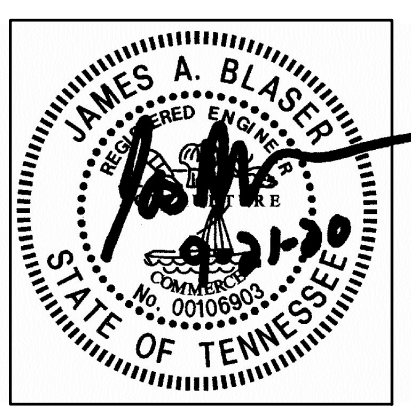
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Hale House Development for
Hamblen County Government
Morristown, Tennessee



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