ARCHITECTURAL CONSTRUCTION DOCUMENTS

ANDY GAY PARK IMPROVEMENTS

FOR

CITY OF QUINCY, FLORIDA

116 NORTH ADAMS STREET QUINCY, FLORIDA

NOTE: THIS PLAN SET INCLUDES A PROJECT MANUAL

JOEL SAMPSON
ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014180
850-875-4348

ANDY GAY PARK

JOB NO: 24-014

DATE: 7-15-25

REV:

T1.1

SHEET NO.

SYMBOL LEGEND

- 1 / AE.8 — SECTION CUT REFERENCE (DRAWING NUMBER / SHEET NUMBER)
- 2 / A3.1 — DETAIL REFERENCE
- 3 / A4.1 — ELEVATION REFERENCE
- 1 / 2 A4.1/3 / 4 — INTERIOR ELEVATION REFERENCE (DRAWING NUMBER / SHEET NUMBER)
- A12 — DOOR REFERENCE (REFER SCHEDULE)
- 1 — WINDOW REFERENCE (REFER SCHEDULE)
- B — ACCESSORY REFERENCE (REFER SCHEDULE)
- 12 — WALL TYPE REFERENCE (REFER SCHEDULE)
- 100 — ROOM NUMBER

ABBREVIATIONS

A.F.F.	ABOVE FINISH FLOOR	GYP	GYPSUM
APPROX.	APPROXIMATE	HD	HEAD
A.S.	ACTUAL SIZE	HORIZ	HORIZONTAL
A.B.	ANCHOR BOLT	HT	HEIGHT
BLDG.	BUILDING	IN	INCH
BLKG.	BLOCKING	INSUL.	INSULATION
BM	BEAM	INT.	INTERIOR
BD	BOARD	JT.	JOINT
BOTT	BOTTOM	LLH	LONG LEG HORIZONTAL
BRG.	BEARING	LLV	LONG LEG VERTICAL
B.U.	BUILT-UP	MAX	MAXIMUM
CLG	CEILING	MIN	MINIMUM
CLR	CLEAR	M.O.	MASONRY OPENING
CMU	CONC. MASONRY UNIT	MTL	METAL
COL	COLUMN	N.I.C.	NOT IN CONTRACT
CONC.	CONCRETE	NO.	NUMBER
CONT.	CONTINUOUS	O.C.	ON CENTER
CONTR.	CONTRACTOR	OPNG.	OPENING
COORD.	COORDINATE	PTD	PAINTED
CTR	CENTER	PL	PLATE
DIA.	DIAMETER	PLWD	PLYWOOD
DIM.	DIMENSION	P.T.	PRESSURE TREATED
DBL	DOUBLE	RM	ROOM
DR	DOOR	REINF.	REINFORCING
DN	DOWN	REQ'D	REQUIRED
DS	DOWNSPOUT	R.O.	ROUGH OPENING
DTL	DETAIL	SECT.	SECTION
EA.	EACH	SIM.	SIMILAR
ELEC.	ELECTRICAL	SP	SPACE
ELEV.	ELEVATION	SQ	SQUARE
EQ.	EQUAL	STD	STANDING SEAM
EXIST.	EXISTING	STL	STEEL
EXP.	EXPANSION	STRUCT.	STRUCTURE
EXT.	EXTERIOR	TYP	TYPICAL
FT	FEET	U.N.O.	UNLESS NOTED OTHERWISE
F.V.	FIELD VERIFY		
FIN.	FINISH	VERT.	VERTICAL
FLR	FLOOR	WDW	WINDOW
FOUND.	FOUNDATION	W/	WITH
GALV.	GALVINIZED	WD	WOOD
GA.	GAUGE	WWM	WELDED WIRE MESH

GENERAL NOTES

1. DIMENSIONS ARE TO FACE OF STUD, BLOCK OR CENTERLINE OF STEEL, UNLESS NOTED OTHERWISE.
2. ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE FIELD VERIFIED PRIOR TO PROCEEDING WITH THE WORK HEREIN
3. DO NOT SCALE DRAWINGS TO DETERMINE DIMENSIONS. ANY ITEMS IN QUESTION SHALL BE DIRECTED TO THE ARCHITECT.
4. ANY QUESTIONS OR PERCEIVED DISCREPANCIES REGARDING THESE PLANS SHALL BE PROMPTLY BROUGHT TO THE ATTENTION OF THE ARCHITECT.
5. ALL WORK SHALL BE EXECUTED IN FULL COMPLIANCE WITH ALL FEDERAL, STATE AND LOCAL LAWS AND CODES APPLYING TO THIS PROJECT.
6. PROTECT EXPOSED SURFACES FROM DAMAGE.
7. THE CONTRACTOR SHALL PROVIDE CRAFTSMAN-LIKE INSTALLATION AND FINISH OF ALL EXPOSED MATERIALS AND SYSTEMS.

VICINITY MAP

APPLICABLE CODES

FLORIDA BUILDING CODE - BUILDING 8TH EDITION 2023
FLORIDA BUILDING CODE - EXIST. BLDG. 8TH EDITION 2023
FLORIDA BUILDING CODE - ACCESSIBILITY 8TH EDITION 2023
FLORIDA BUILDING CODE - MECHANICAL 8TH EDITION 2023
FLORIDA BUILDING CODE - PLUMBING 8TH EDITION 2023
FLORIDA BLDG CODE - ENERGY CONSRV. 8TH EDITION 2023
FLORIDA FIRE PREVENTION CODE - 8TH EDITION, 2023
NATIONAL ELECTRICAL CODE - CURRENT EDITION

WALL LEGEND

- EXISTING WALLS
- NEW WALLS
- FIRE RESISTIVE WALL

DRAWING INDEX

DESIGN DATA

OCCUPANCY GROUP - UTILITY

CONSTRUCTION TYPE - VB

NEW BUILDING AREA: 750 SQ. FT.

BLDG. HEIGHT: 28'-0" MAX. BLDG. STORIES= ONE

JOEL SAMPSON
ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014180
850-875-4348

ANDY GAY PARK IMPROVEMENTS

FOR

CITY OF QUINCY, FLORIDA

116 NORTH ADAMS STREET QUINCY, FLORIDA

WEST FRANKLIN STREET

NORTH MONROE STREET

NORTH ADAMS STREET

LOW BRICK WALL/BENCH REFER 3/A1.3

LOW BRICK WALL/BENCH REFER 3/A1.3

18 EXISTING PARKING SPACES

12'

NEW 6' SIDEWALK

LOW BRICK WALL/BENCH REFER 2/A1.3

HC

LOW BRICK WALL/BENCH W/ SIGNAGE REFER 2/A1.3

REMOVE EXISTING SIGNAGE POLE

11'-1"

9'-4"

3'

EXIST. WHITE NATCHEZ CREPE MYRTLE MULTI TRUNK

ANTIQUE STREET LAMP. SEE ELECT. PLANS.

GREENSPACE

LED AREA POLE LIGHTING, TYP. OF 4.

FUTURE BLDG AREA MARKET HOUSE

EXISTING WAYFINDER SIGNAGE

41'-1"

PALM, TYP.

EXISTING PARKING AREA

GREEN SPACE

LOW BRICK WALL/BENCH REFER 1/A1.3

EXISTING SIDEWALK

ANTIQUE STREET LAMP. SEE ELECT. PLANS.

REFER A1.2 FOR ENLARGED PLANS THESE AREAS

FREE STANDING AWNINGS WITH STEEL STRUCTURE

FREE STANDING STEEL AWNING STRUCTURE

ANTIQUE STREET LAMP. SEE ELECT. PLANS.

LANDSCAPE BENCHES TO MATCH EXISTING DOWNTOWN

NEW SIDEWALK

LOW BRICK WALL/BENCH W/ SIGNAGE REFER 1/A1.3

PORCH E

PORCH D

PORCH C

PORCH B

PORCH A

NEW SIDEWALK

GREEN SPACE

PALM, TYP.

EXISTING BUILDING WALL

NEW PAVILION

LANDSCAPING PER CIVIL DRAWINGS, TYP.

EXIST. WHITE NATCHEZ CREPE MYRTLE MULTI TRUNK

MOVIE WALL

PAINT WALL SECTION WHITE FOR MOVIE WALL. AREA 21' WIDE X 15' TALL AND 3' UP FROM GRADE. COORDINATE LOCATION WITH ARCHITECT. SCRAPE, PREP, PRIME WALL AND APPLY TWO COATS OF FINISH.

EXISTING BUILDING WALL

NOTE: REFER TO CIVIL DRAWINGS FOR MORE INFO ON SITE LAYOUT/GEOMETRY.

1 / A1.1 ARCHITECTURAL SITE DIAGRAM

SCALE : 1/16"=1'-0"

NORTH

LANDSCAPE BENCHES NOTE.
PROVIDE 8 BENCHES ON PARK SITE-SEE SITE PLAN "B" DESIGNATION.
NEW BENCHES SHALL MATCH EXISTING ALL STEEL BENCHES DOWNTOWN AND SHALL BE ANCHORED TO PAVEMENT.
NEW BENCHES SHALL BE 4 FOOT, STEEL, POWDER COATED DECORATIVE BENCHES- "LAMPLIGHTER L24" GLOSS BLACK MANUF. BY KEYSTONE RIDGE DESIGNS.

WASTE RECEPTACLES NOTE.
PROVIDE 11 WASTE RECEPTACLES ON PARK SITE AREA-SEE PLAN. RECEPTACLE DESIGNATED WITH "WR" ON PLAN. ANCHOR TO PAVEMENT.
NEW WASTE RECEPTACLE SHALL BE STEEL POWDER COATED 33" TALL 32 GALLON W/ DOME- "MIDTOWN" LITTER RECEPTACLE GLOSS BLACK MANUF. BY KEYSTONE RIDGE DESIGNS (DESIGN BASIS.)

BIKE RACK NOTE.
FABRICATE/PROVIDE 4 BIKE RACKS LOCATED ON THE SITE PLAN - SEE "BR" DESIGNATION.
REFER TO DETAILS AT 4/A1.4

DATE: 9-8-25

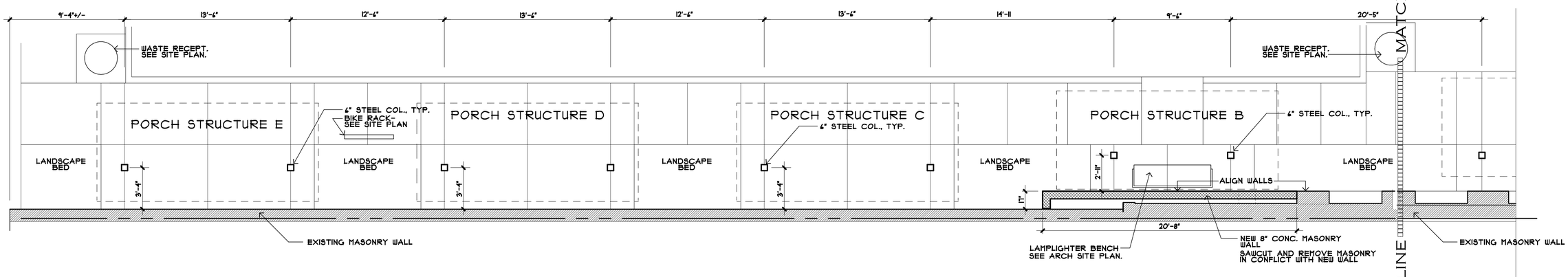
REV:

JOB NO: 24-014

A1.1

SHEET NO.

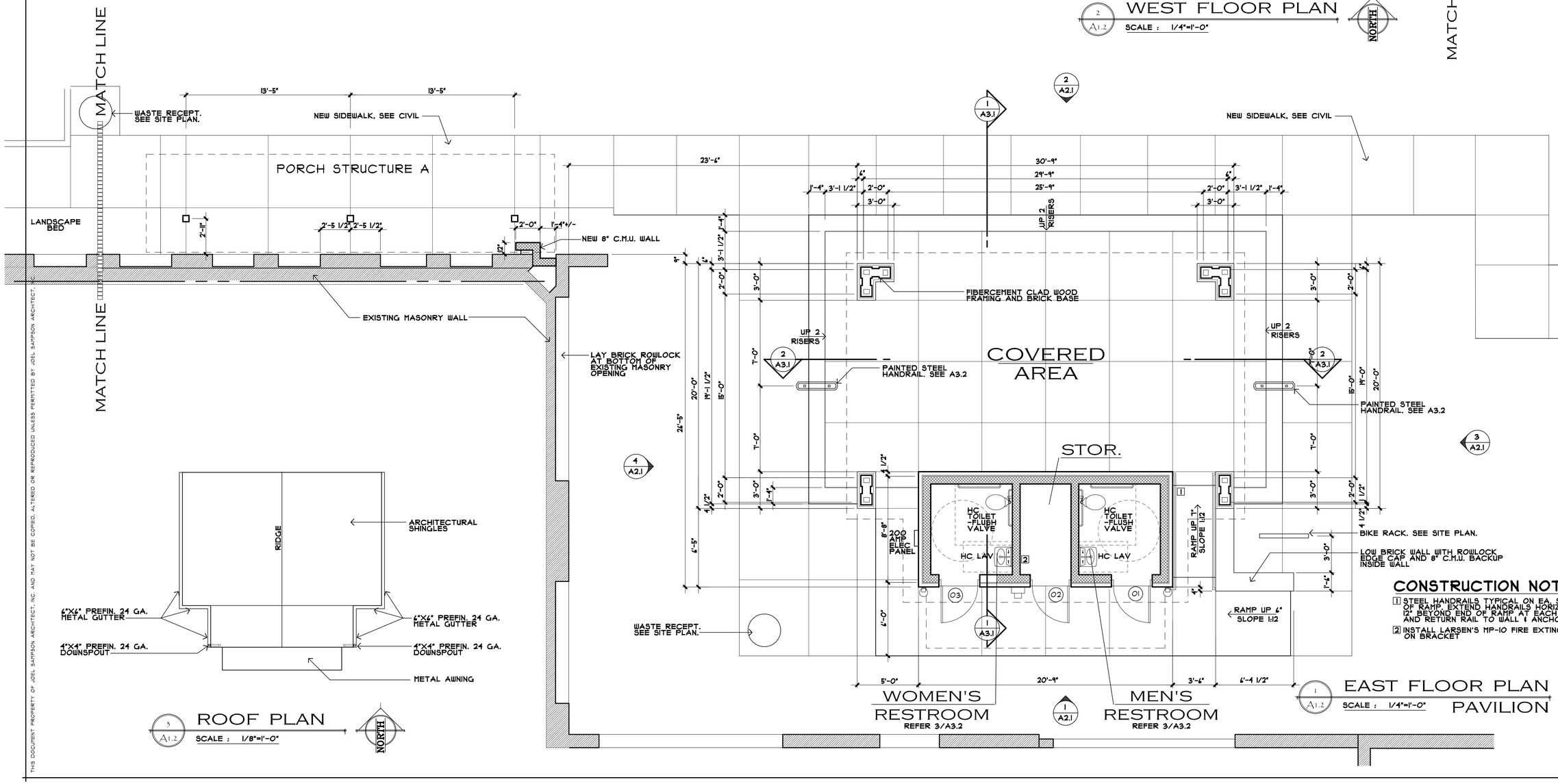
THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, INC. AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT, INC.



2 A1.2 WEST FLOOR PLAN

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

NORTH



CONSTRUCTION NOTES

1. STEEL HANDRAILS TYPICAL ON EA. SIDE OF RAMP. EXTEND HANDRAILS HORIZ. 12" BEYOND END OF RAMP AT EACH END AND RETURN RAIL TO WALL & ANCHOR.
2. INSTALL LARSEN'S MP-10 FIRE EXTINGUISHER ON BRACKET

1 A1.2 EAST FLOOR PLAN PAVILION

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

NORTH

3 A1.2 ROOF PLAN

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

NORTH

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, INC. AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT, INC.

JOEL SAMPSON ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014180
850-875-4348

ANDY GAY PARK IMPROVEMENTS

FOR

CITY OF QUINCY, FLORIDA

116 NORTH ADAMS STREET QUINCY, FLORIDA

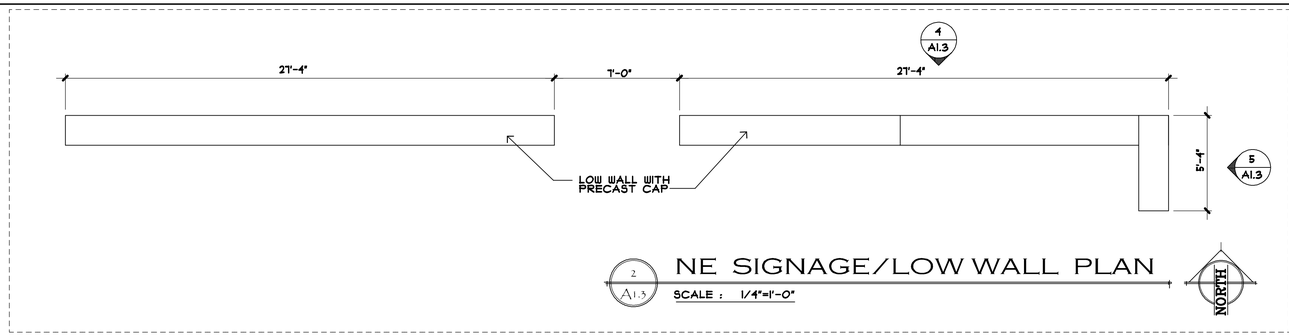
DATE: 9-8-25

REV: 12-16-25

JOB NO: 24-014

A1.2

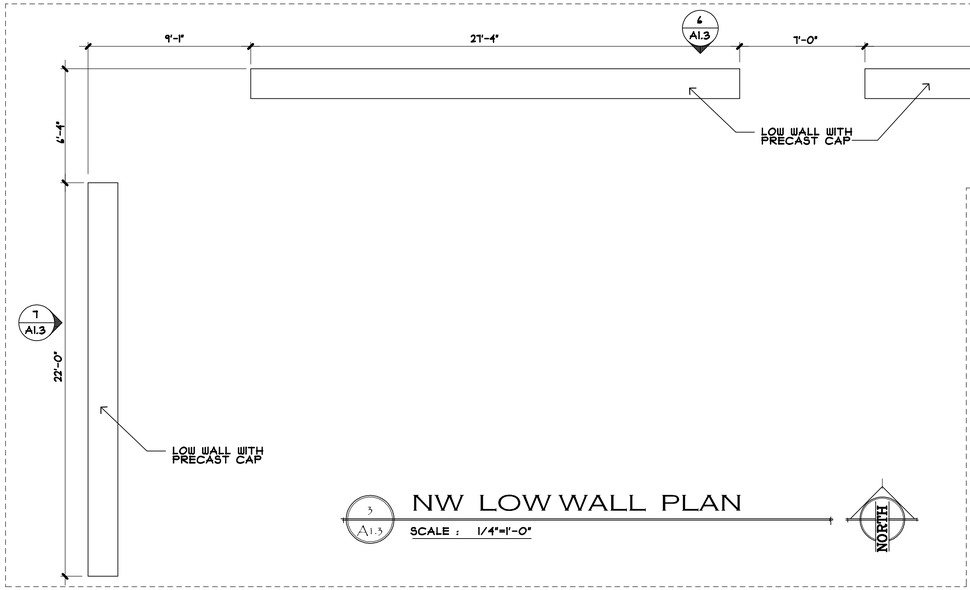
SHEET NO.



2 A1.3 NE SIGNAGE/LOW WALL PLAN

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

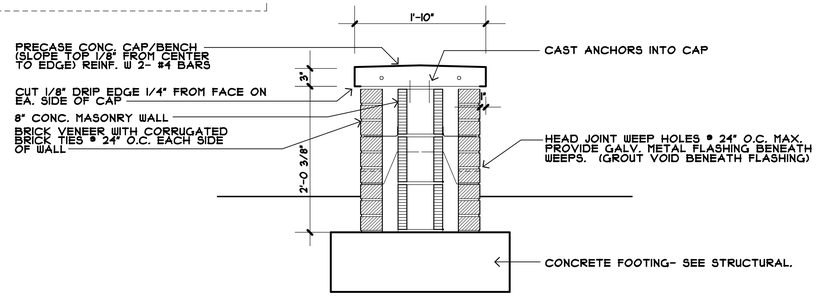
NORTH



3 A1.3 NW LOW WALL PLAN

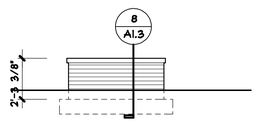
SCALE : 1/4"=1'-0"

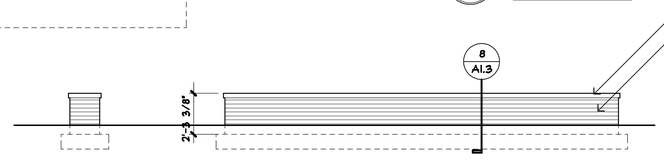
NORTH



8 A1.3 SECTION

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



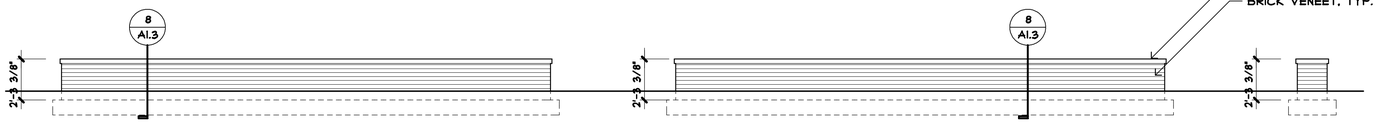


5 A1.3 LOW WALL ELEVATION

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

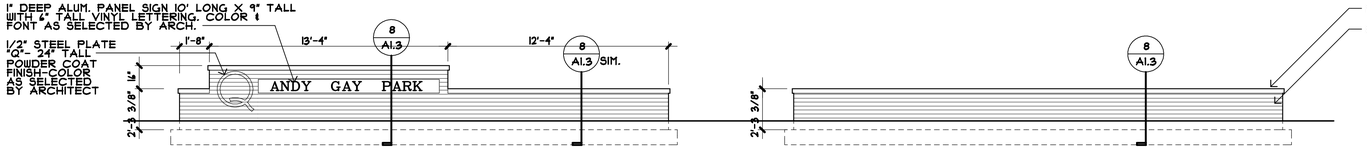
7 A1.3 LOW WALL ELEVATION

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



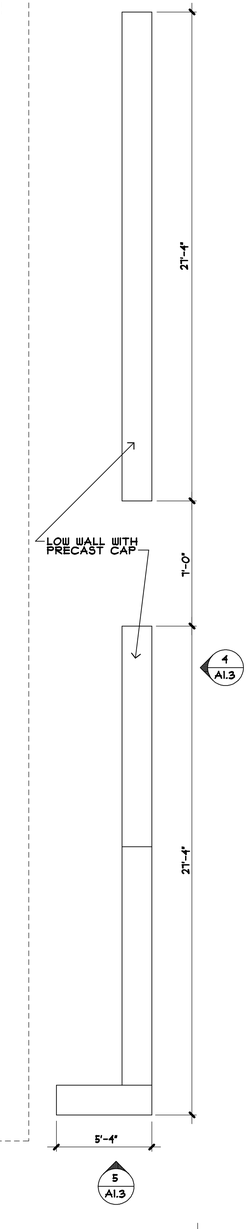
6 A1.3 LOW WALL ELEVATION

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



4 A1.3 SIGNAGE/LOW WALL ELEVATION

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



1 A1.3 SE SIGNAGE/LOW WALL PLAN

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

NORTH

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, INC AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT, INC.

JOEL SAMPSON
ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014780
850-875-4348

ANDY GAY PARK IMPROVEMENTS

FOR

CITY OF QUINCY, FLORIDA

116 NORTH ADAMS STREET QUINCY, FLORIDA

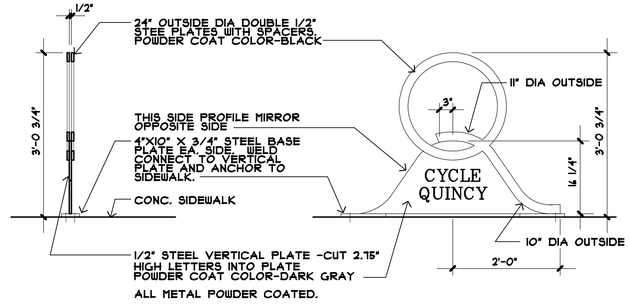
DATE: 9-8-25

REV:

JOB NO: 24-014

A1.3

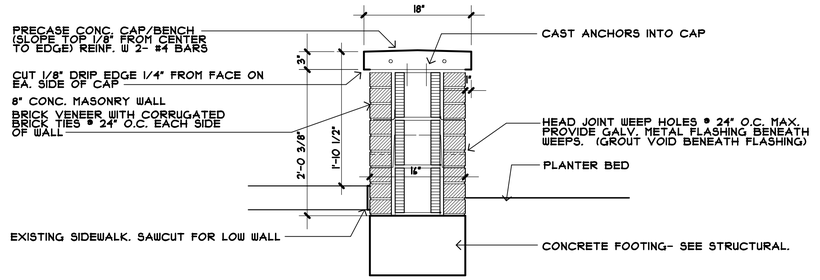
SHEET NO.



BIKE RACK DETAILS

4 / A1.4

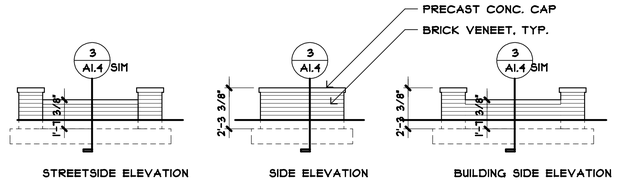
SCALE : 3/4"=1'-0"



SECTION

3 / A1.4

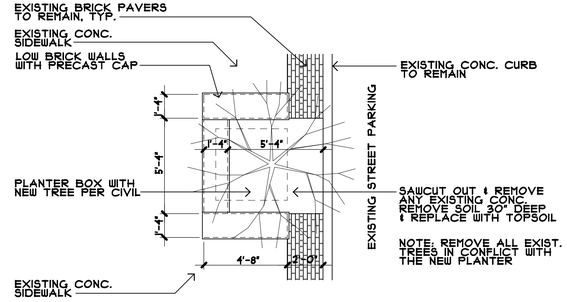
SCALE : 1"=1'-0"



PLANTER ELEVATIONS

2 / A1.4

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



PLANTER PLAN

1 / A1.4

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

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, INC. AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT, INC.

JOEL SAMPSON
ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014180
850-875-4348

ANDY GAY PARK IMPROVEMENTS

FOR

CITY OF QUINCY, FLORIDA

116 NORTH ADAMS STREET QUINCY, FLORIDA

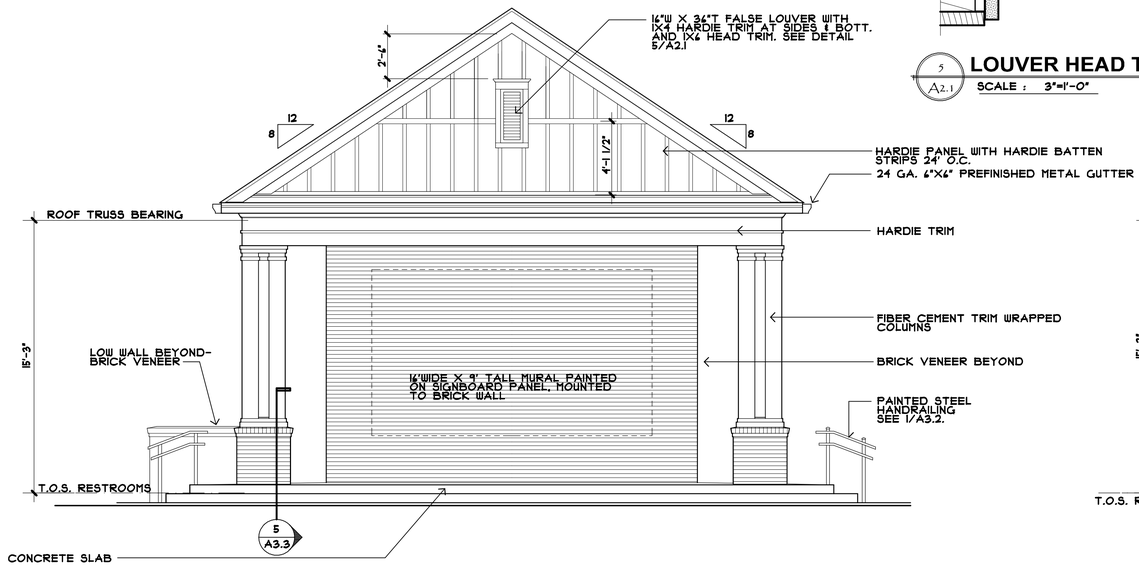
DATE: 9-8-25

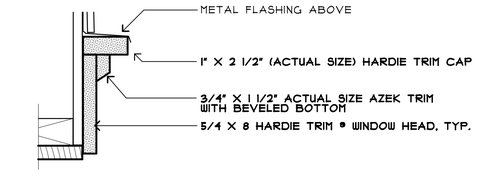
REV:

JOB NO:24-014

A1.4

SHEET NO.



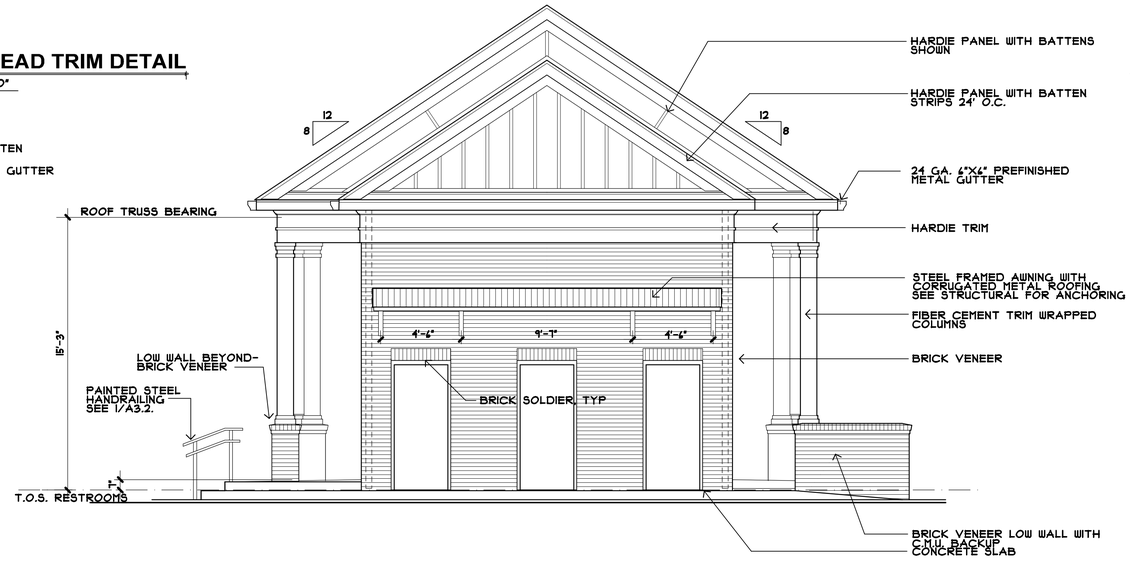


5 A2.1 **LOUVER HEAD TRIM DETAIL**

SCALE : 3"=1'-0"

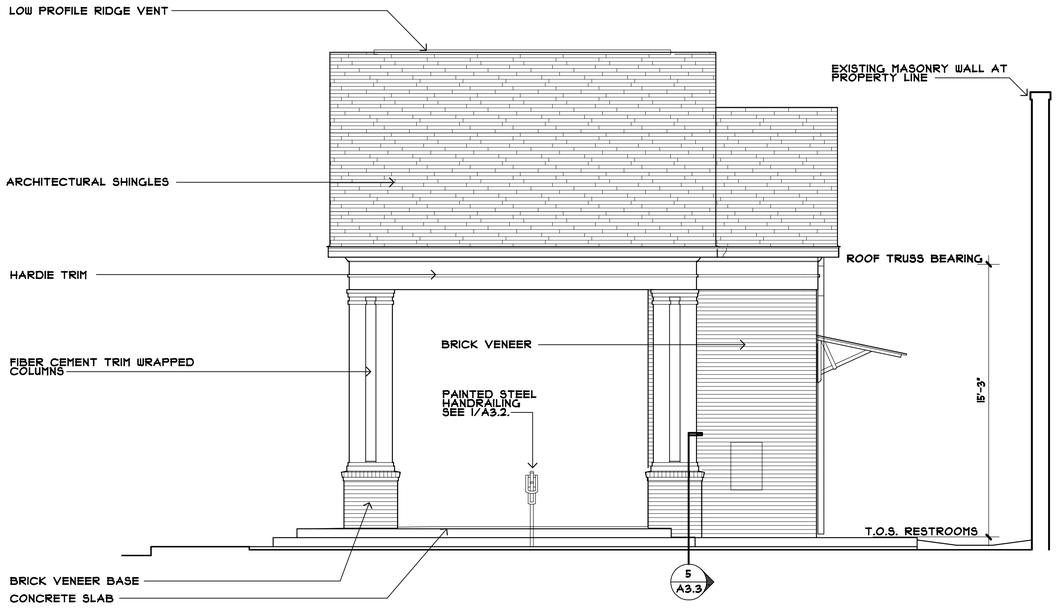
2 A2.1 **NORTH PAVILION ELEVATION**

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



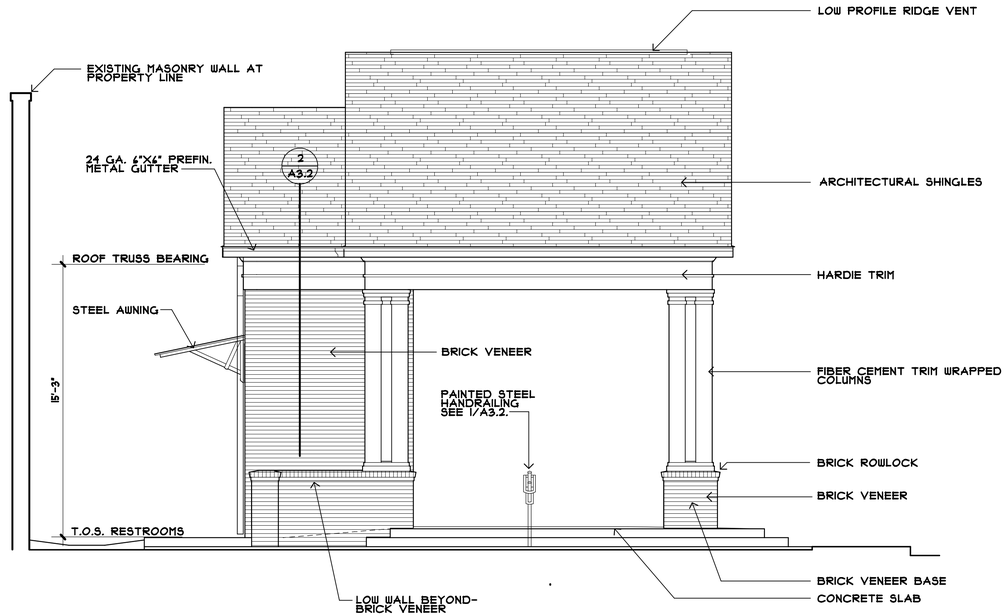
1 A2.1 **SOUTH PAVILION ELEVATION**

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



4 A2.1 **WEST PAVILION ELEVATION**

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



3 A2.1 **EAST PAVILION ELEVATION**

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

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, INC. AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT, INC.

JOEL SAMPSON
ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014180
850-875-4348

ANDY GAY PARK IMPROVEMENTS

FOR

CITY OF QUINCY, FLORIDA

116 NORTH ADAMS STREET QUINCY, FLORIDA

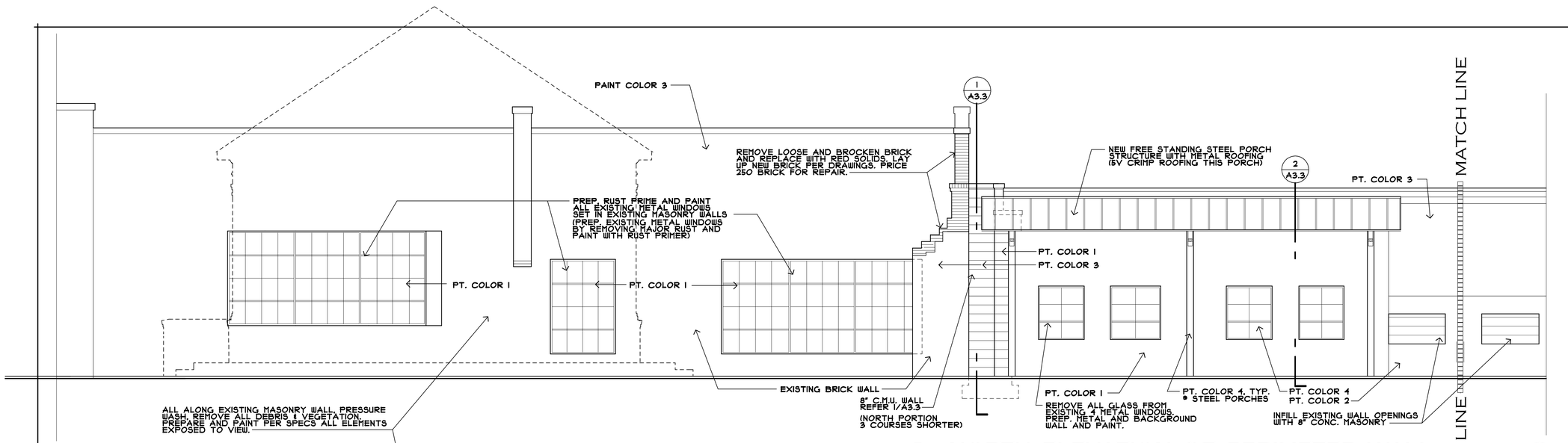
DATE: 9-8-25

REV:

JOB NO:24-014

A2.1

SHEET NO.

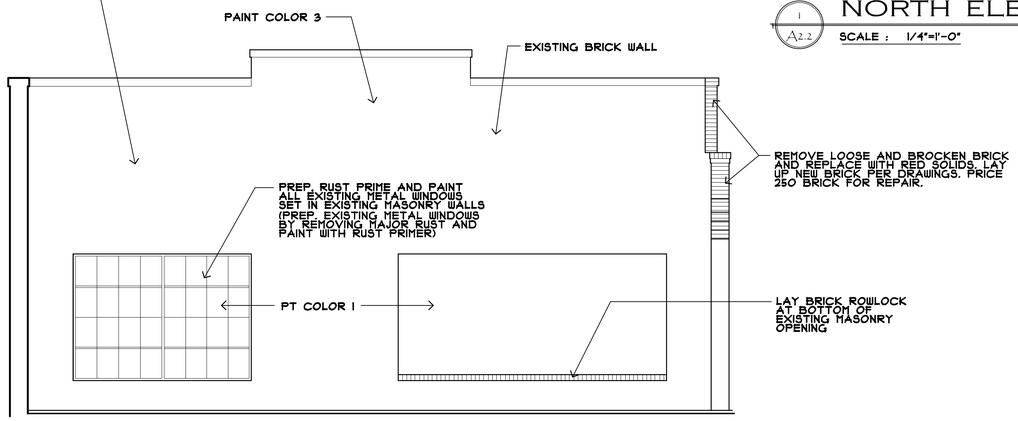


1 A2.2 NORTH ELEVATION OF PERIMETER WALL EAST END

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

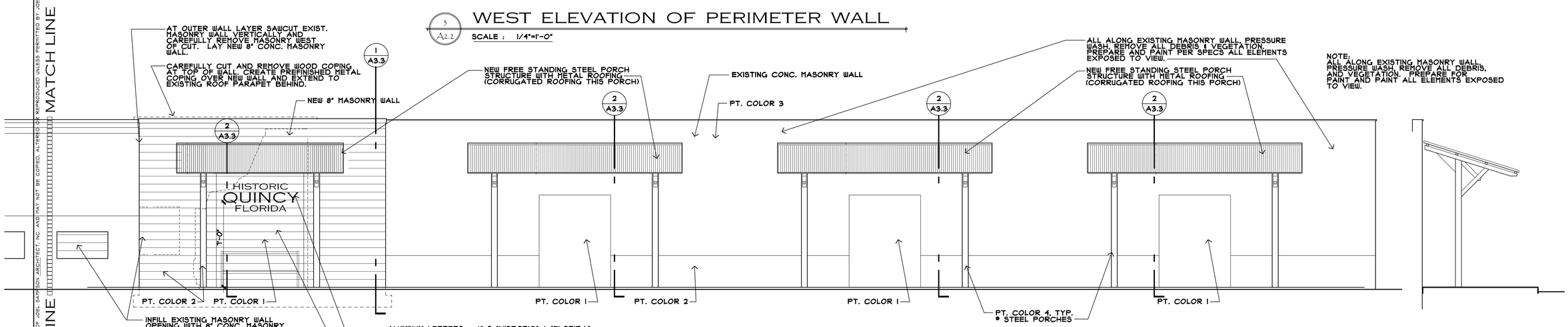
5 A2.2 SIDE ELEVATION

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



3 A2.2 WEST ELEVATION OF PERIMETER WALL

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



2 A2.2 NORTH ELEVATION OF PERIMETER WALL WEST END

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

4 A2.2 SIDE ELEVATION

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

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, INC. AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT, INC.

JOEL SAMPSON
ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014180
850-875-4348

ANDY GAY PARK IMPROVEMENTS

FOR

CITY OF QUINCY, FLORIDA

116 NORTH ADAMS STREET QUINCY, FLORIDA

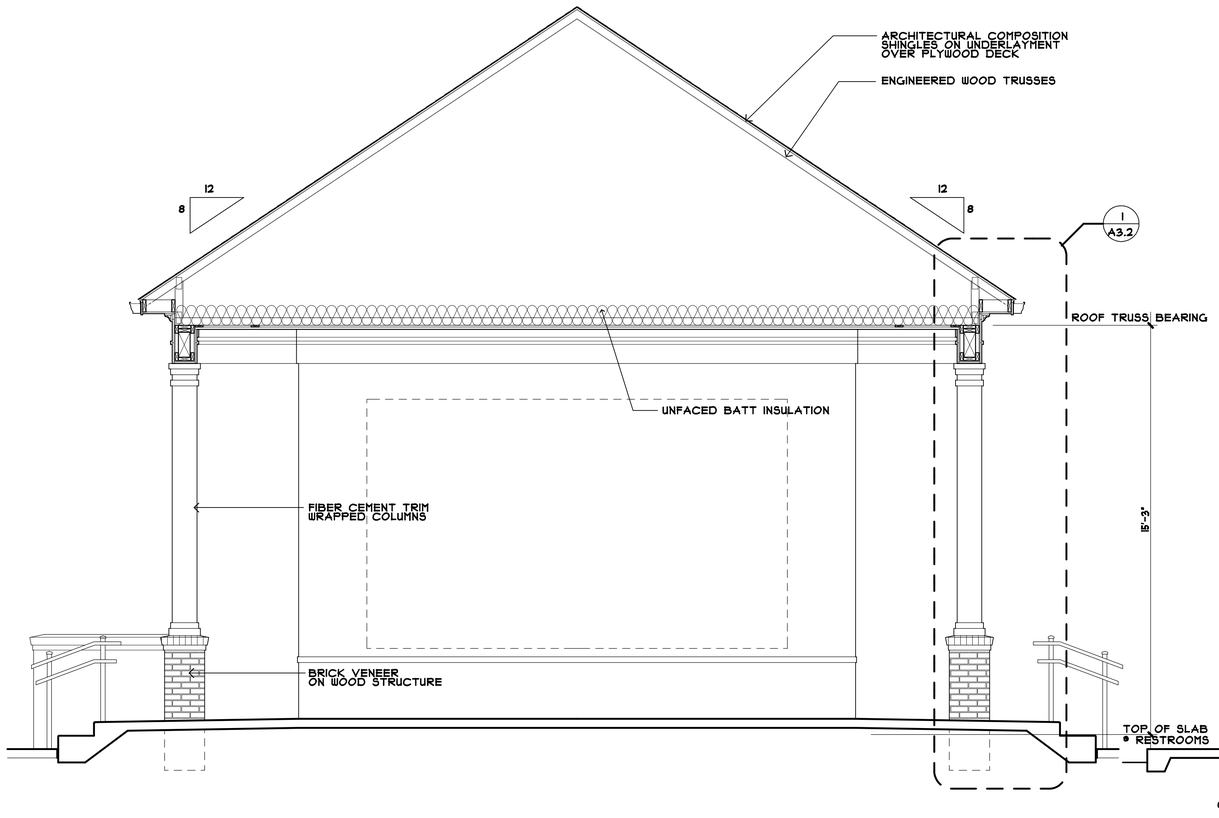
DATE: 9-8-25

REV:

JOB NO:24-014

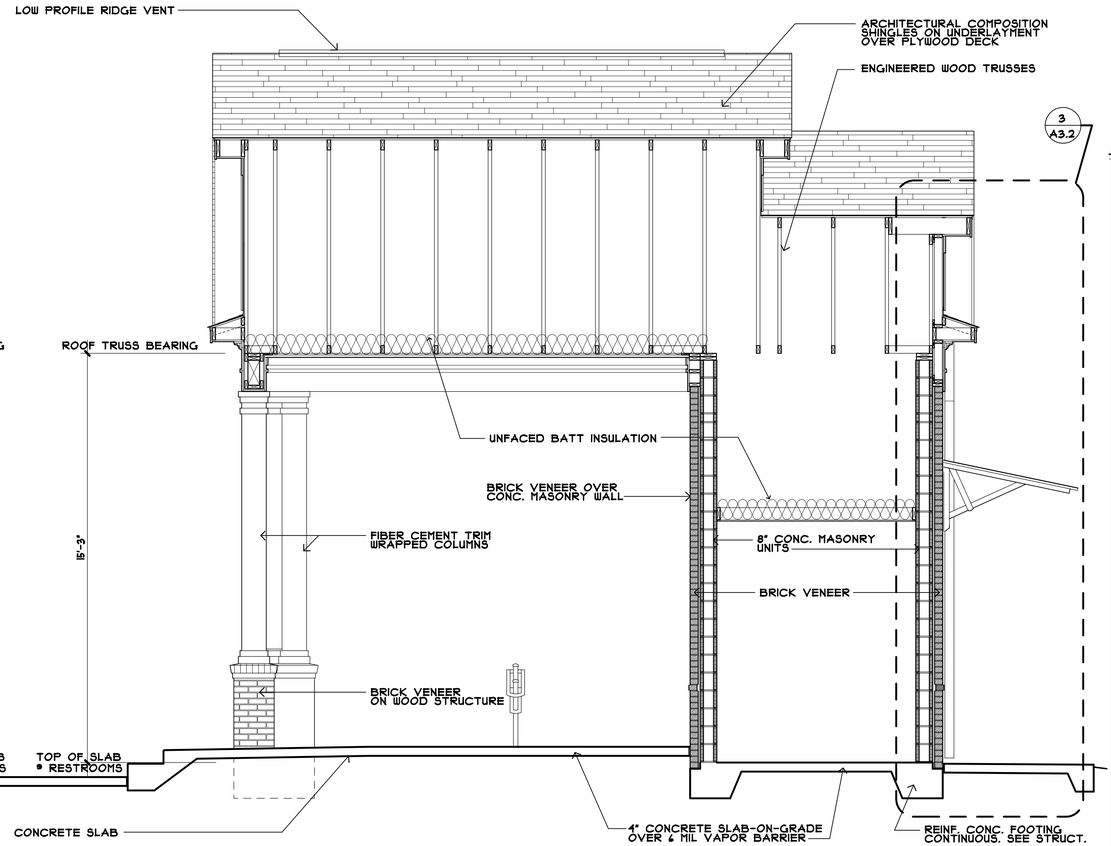
A2.2

SHEET NO.



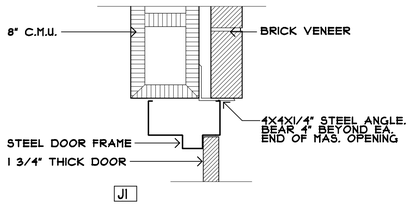
2 A3.1 PAVILION BUILDING SECTION

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



1 A3.1 PAVILION BUILDING SECTION

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



4 A3.1 DOOR JAMB DETAILS

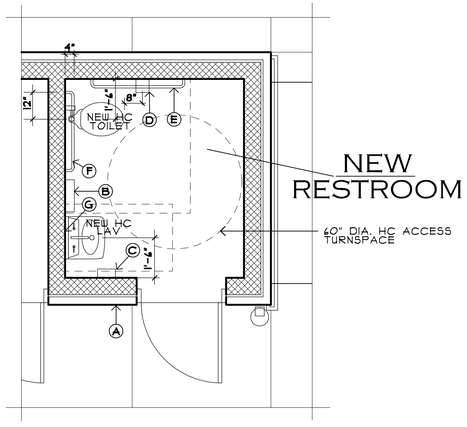
SCALE : 1 1/2"=1'-0"

(A) ACCESSORY SCHEDULE

MARK	ITEM	MANUFACTURER & MODEL NO.	MOUNTG. HEIGHT
A	HANDICAP ACCESS RESTROOM SIGNAGE	BEST SIGNS WITH "MEN'S" OR "WOMEN'S" WORDING (MATCHING ROOM) AND ACCESSIBILITY SYMBOL	60" TO C.L.
B	PAPER TOWEL DISPENSER - SURFACE MOUNTED	AMERICAN SPECIALTIES #0210	40" TO BOTT.
C	LIQUID SOAP DISPENSER - SURFACE MOUNTED	AMERICAN SPECIALTIES #0345	42" TO SPOUT
D	TOILET TISSUE DISPENSER - SURFACE MOUNTED	AMERICAN SPECIALTIES #0030	19" A.F.F. TO C.L.
E	42" STAINLESS STEEL 1 1/2" DIA. H.C. GRAB BAR	AMERICAN SPECIALTIES #3801	33" TO C.L.
F	36" STAINLESS STEEL 1 1/2" DIA. H.C. GRAB BAR	AMERICAN SPECIALTIES #3801	33" TO C.L.
G	FRAMED MIRROR 24" X 36"	AMERICAN SPECIALTIES #0600-B	40" TO BOTT.
H	RECCESSED PAPER TOWEL DISP. & WASTE RECEPT.	AMERICAN SPECIALTIES #0469-2	8" TO BOTT.

NOTES:
1. ALL BATHROOM ACCESSORIES SHALL HAVE STAINLESS STEEL FINISH. HEIGHTS SHOWN ARE ABOVE FINISHED FLOOR (A.F.F.)
2. PROVIDE DEADWOOD BLOCKING AS REQ'D FOR ACCESSORIES
3. MANUFACTURER LISTED ABOVE IS TO BE USED FOR DESIGN INTENT. ALTERNATE ITEMS MATCHING ITEM SPECS MUST BE APPROVED BYTHE ARCHITECT.

HANDICAP ACCESSIBLE RESTROOM NOTES:
1. DRAIN AND HOT WATER PIPES BENEATH LAV. SHALL BE WRAPPED WITH 1/2" INSULATING FOAM JACKETS AS REQ'D.
2. BARS SHALL BE 1 1/2" STAINLESS STEEL AND MOUNTED TO WITHSTAND FORCE OF 250 LBS. FROM ANY DIRECTION.
3. REFER TO ACCESSORY SCHEDULE.
4. MOUNT NEW HC LAV RIM 34" A.F.F.



3 A3.1 ENLARGED FLOOR PLAN

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

NORTH

DOOR SCHEDULE

NO.	DOOR SIZE W X H X TH (INCHES)	MAT'L	TYPE	FIRE RAT'G/LABEL	DOOR FINISH	FRAME MAT'L	FRAME JAMB	FRAME FINISH	HRDWR. SET #	DETAIL	REMARKS
01	36 X 84 X 1 3/4	HM	A	--	PT	HM	J1	PT	HW-1		
02	36 X 84 X 1 3/4	HM	A	--	PT	HM	J1	PT	HW-1		
03	36 X 84 X 1 3/4	HM	A	--	PT	HM	J1	PT	HW-1		

ABBREVIATIONS. MTL/GL: ALUMINUM STOREFRONT SYSTEM WITH INSULATED GLASS MTL/INS: INSULATED METAL DOOR UNFIN: UNFINISHED
PT: PAINT FINISH HM: HOLLOW METAL INSULATED PREFIN: PREFINISHED N STILE: NARROW STILE & RAIL DOOR

DOOR HARDWARE SCHEDULE

SET #	SET CONTENTS
HW-1	1 1/2 BUTT HINGES 1 CLASSROOM LOCKSET 1 DEADBOLT WITH THUMBTURN 1 CLOSER 1 DOOR BOTTOM SET OF WEATHERSTRIPPING 1 THRESHOLD

FINISHES: STAINLESS STEEL U.N.O.

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, INC. AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT, INC.

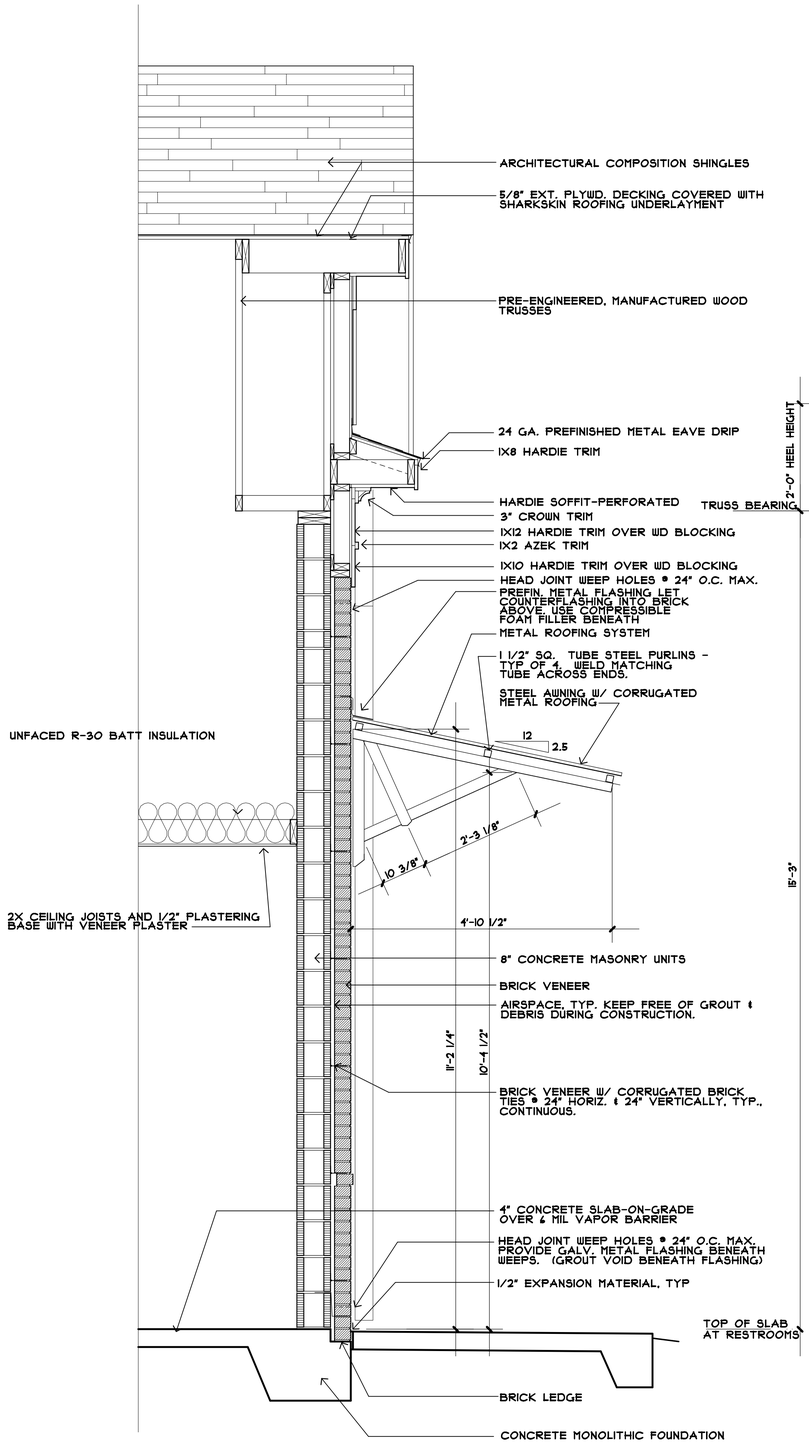
JOEL SAMPSON ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014180
850-875-4348

ANDY GAY PARK IMPROVEMENTS
FOR
CITY OF QUINCY, FLORIDA
116 NORTH ADAMS STREET QUINCY, FLORIDA

DATE: 9-8-25
REV:

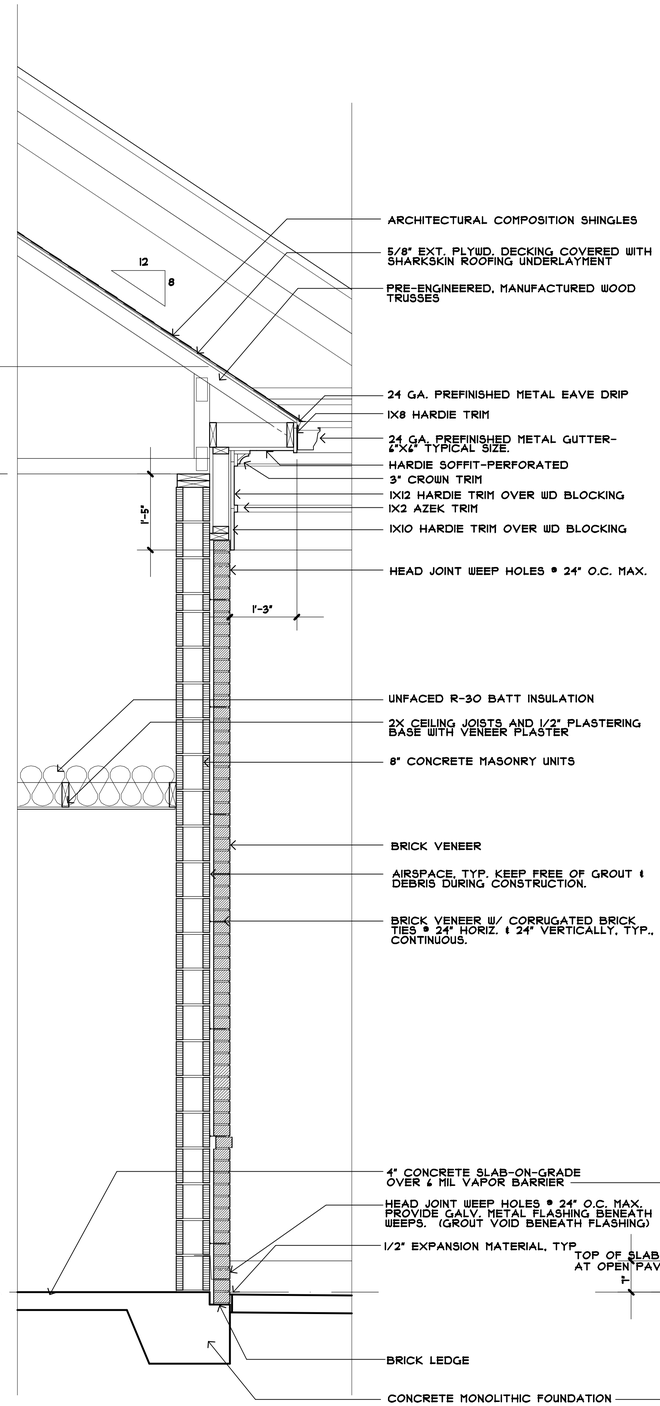
JOB NO: 24-014

A3.1
SHEET NO.



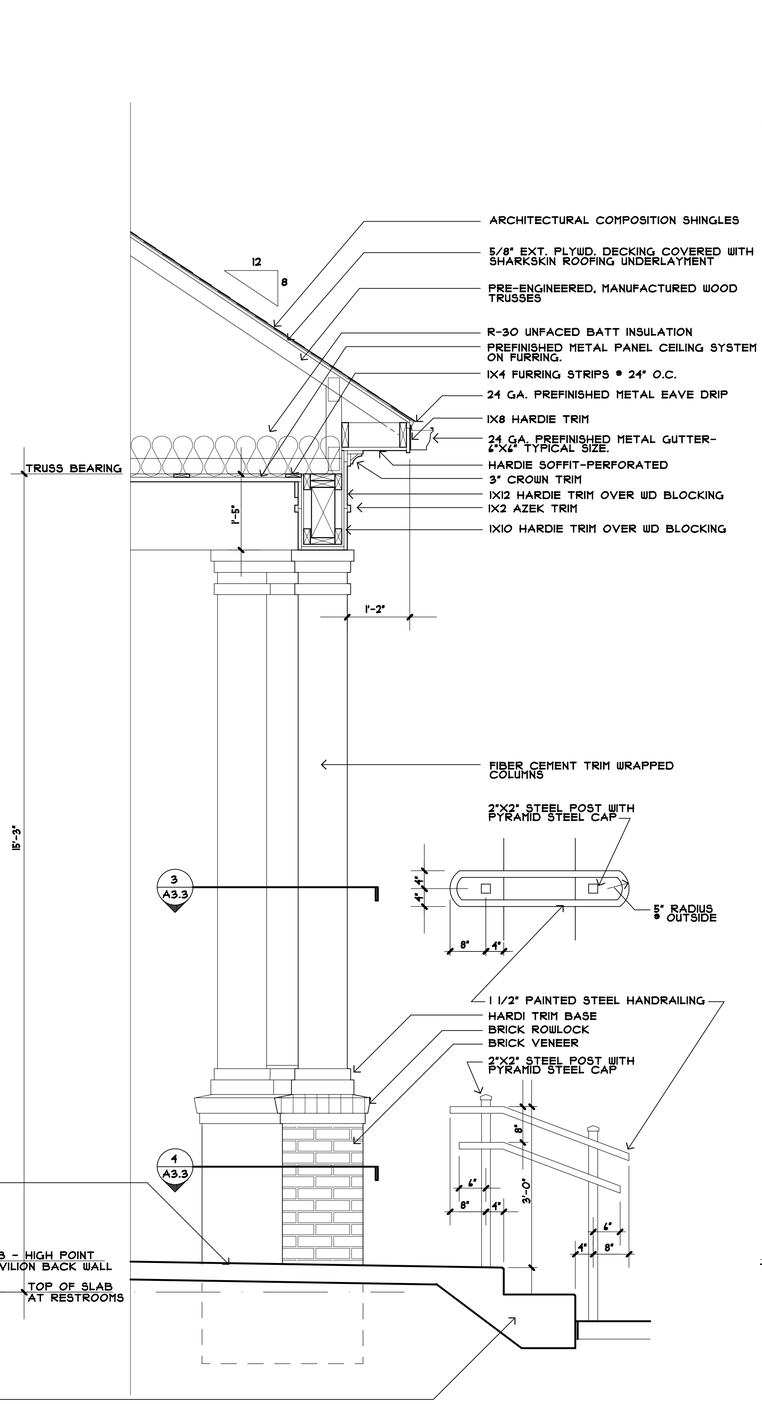
3 A3.2 SECTION

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



2 A3.2 SECTION

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



1 A3.2 SECTION

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

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, INC. AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT, INC.

JOEL SAMPSON
ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014180
850-815-4348

ANDY GAY PARK IMPROVEMENTS

FOR

CITY OF QUINCY, FLORIDA

116 NORTH ADAMS STREET QUINCY, FLORIDA

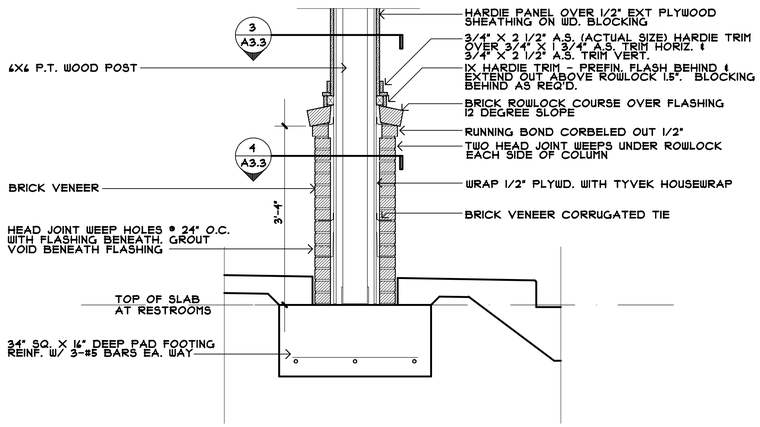
DATE: 9-8-25

REV:

JOB NO: 24-014

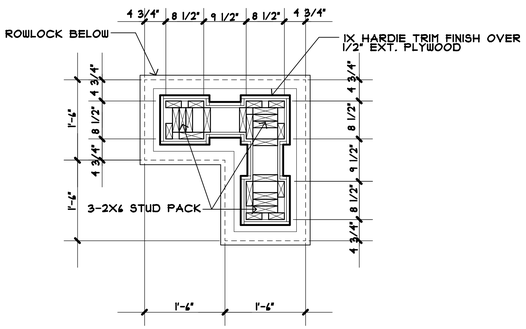
A3.2

SHEET NO.



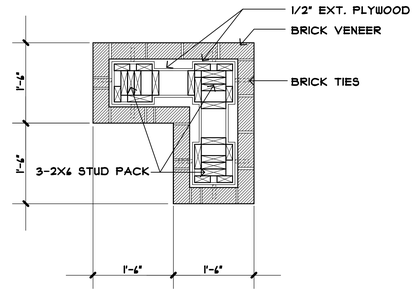
5 A3.3 TYP. COL. SECTION

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



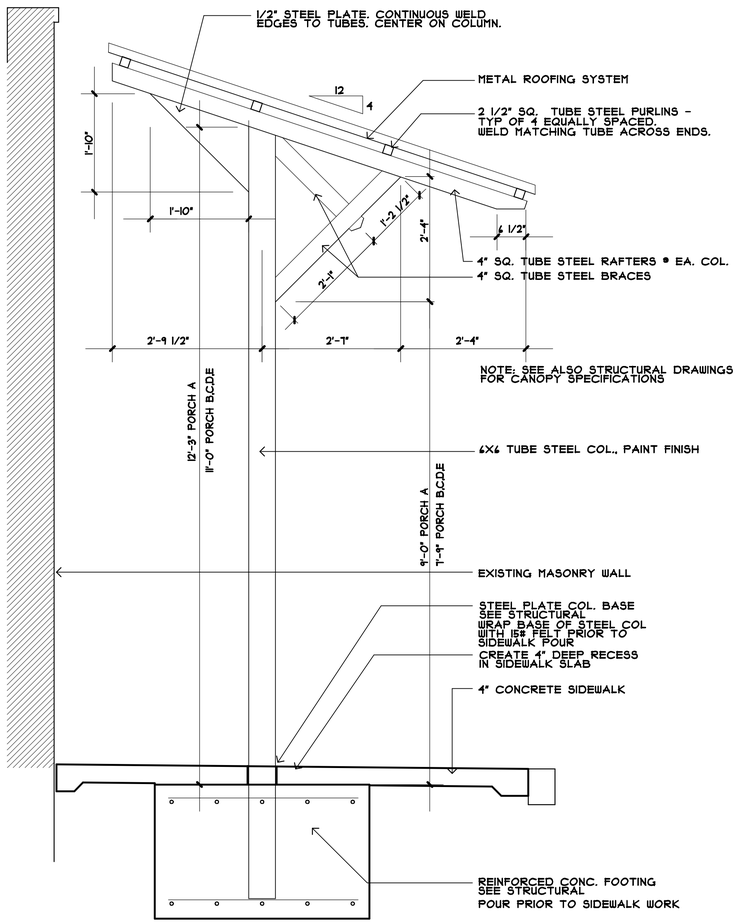
3 A3.3 PLAN SECTION

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



4 A3.3 PLAN SECTION

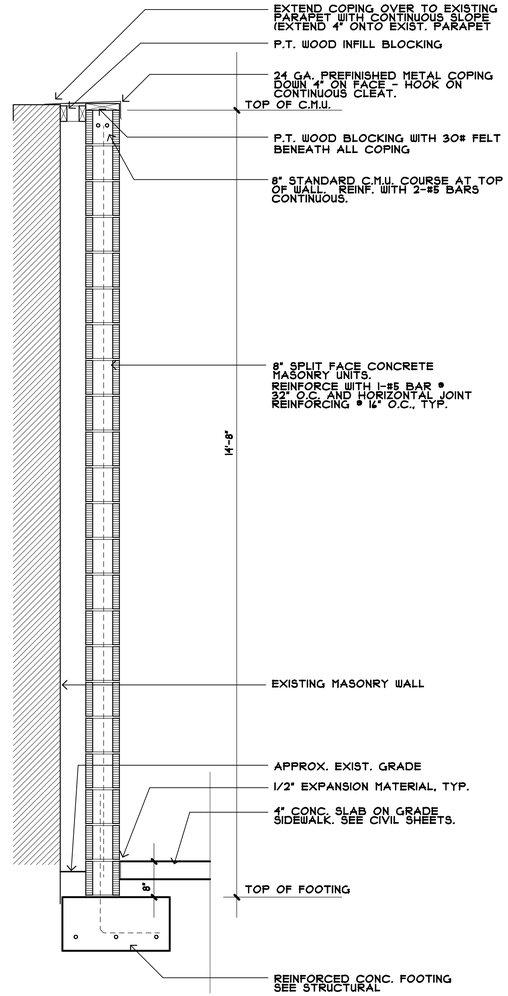
SCALE : 3/4"=1'-0"



NOTE:
CONTINUOUS WELD ALL STEEL CONNECTIONS
AND GRIND SMOOTH. SHOP PRIME ALL STEEL.
ALL STEEL SHALL BE FINISH PAINTED PER SPECS.

2 A3.3 SECTION

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



1 A3.3 SECTION

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

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, INC. AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT, INC.

JOEL SAMPSON
ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014180
850-875-4348

ANDY GAY PARK IMPROVEMENTS

FOR

CITY OF QUINCY, FLORIDA

116 NORTH ADAMS STREET QUINCY, FLORIDA

DATE: 9-8-25

REV:

JOB NO: 24-014

A3.3

SHEET NO.

Structural Notes

Material Requirements:

1. Concrete - Normal weight only, with 28 day compressive strengths of:
   Slabs on grade................................3000 psi
   Elevated slabs.................................3000 psi
   Footings..3000 psi
   Cast in place columns/beams...........5000 psi

2. Steel
   Reinforcing steel bars......................ASTM A615, Grade 60
   Welded wire fabric............................A992, Fy = 50 ksi
   Structural steel shapes.....................ASTM A36, Fy = 36 ksi
   Plates, angles, bars..........................ASTM A36, Fy = 36 ksi
   Pipe...ASTM A53, Grade B, Fy = 35 ksi
   Tubing...ASTM A500, Grade B, Fy = 46 ksi
   Anchor bolts......................................ASTM F1554
   High strength bolts...........................ASTM A325

3. Grout - 5000 psi, non-shrink

Concrete Notes:

1. Concrete work shall conform to all requirements of ACI 301 "Specification for Structural Concrete:, unless noted modified as required for these contract documents.

2. Concrete mix designs shall be established by the supplier in accordance with ACI specifications. Mix designs and back-up data shall be submitted to the engineer for approval prior to placement of concrete.

3. All concrete shall be normal weight (150 pcf) unless noted otherwise on the plans.

4. Air entraining agents conforming to ASTM C260 shall be added to all concrete exposed to freezing and thawing to produce 5% entrained air. Air-entraining admixtures shall not be added to concrete used for trowel finished interior slabs-on-grade or elevated slabs.

5. Concrete for floor slabs shall have a maximum slump of 5 inches at the point of delivery.

6. No calcium chloride shall be used in any concrete.

7. "C.J." on slab and foundation plan indicates a key-formed construction joint or saw-cut contraction joint in the concrete slab. Saw-cut joints shall be 1/4 the slab depth (1" min.) and shall be installed within 24 hours of slab placement. "C.J."'s, if not shown on plans, shall be spaced per note 8. "C.J."'s shall be placed between isolation joints at columns. "C.J."'s shall not be placed in elevated slabs. No control joints allowed in column center lines.

8. Unless noted otherwise, all interior and exterior slabs on grade shown the structural drawings, including steps shall be 4" thick, of the following type:

ACI 360 Type B, Slab with shrinkage control reinforcement -
Reinforce slab with 6 x 6 - W1.4 x W1.4 WWF supported at 1" from top of slab.
WWF shall lap cross wires plus 2" (minimum at splices. "C.J."'s are to divide the slab such that concrete within "C.J."'s is not greater than 12'-0" in either direction.

9. Temporary excavation for footings, pits, pipes or other purposes shall be sloped and braced in accordance with OSHA requirements.

10. Reinforcing steel bar placement shall be inspected by a qualified structural engineer in accordance with ACI 318 section 1.3.

11. Provide bar supports and spacers in accordance with ACI 315 "Details and Detailing of Concrete Reinforcing."

12. Splices not shown on the drawings shall be subject to approval. Lap all tension bars a minimum of 24 bar diameters unless noted otherwise.

13. Welding of reinforcing steel shall not be permitted except as authorized or directed by the structural engineer.

14. Horizontal reinforcement in footings and walls shall be continuous around corners.

15. All field bending of reinforcing bars shall be done cold. Heating of bars is not permitted.

16. Principal openings are shown on structural drawings. See architectural, mechanical, and electrical drawings for additional openings, embeds, sleeves, depressions, slopes, etc.

17. Unless noted otherwise, all openings shall be reinforced with (2) #5 bars, all sides, extended a minimum of 3'-0" beyond opening.

18. Provide a minimum of (2) #4 bars, 4'-0" long at reentrant corners of slabs-on grade and elevated slabs, centered about corner, unless noted otherwise.

19. All debris shall be removed from forms prior to placement of concrete.

20. Unless noted otherwise, vertical control joints in step walls and retaining walls shall be placed no more than 25'-0" apart and shall be 3/4" deep "V" chamfered on both sides. Construction joints shall occur at control joints and shall be keyed. 50% of the specified horizontal reinforcement shall stop 3" each side of the control joint.

21. Foundation walls shall be laterally braced until concrete has attained the specified design strength and all excavations are properly backfilled.

22. Minimum concrete cover for cast-in-place concrete reinforcement:

   Concrete cast against and permanently exposed to earth.............................3 inches

   Concrete exposed to earth or weather:
   No. 6 bars and larger...2 inches
   No. 5 bars and smaller...1 ½ inches

   Concrete not exposed to weather or in contact with ground:
   Slabs, walls, joists (No. 11 bars and smaller)..3/4 inches
   Beams, Columns (All reinforcement)...1 ½ inches

23. Concrete test reports shall be available at job site.

24. All foundation and retaining walls shall be backfilled per geotechnical engineer's recommendations.

Masonry Block Notes:

1. Concrete masonry units shall conform to ACI C90, and run in a common running bond pattern with block offsets by ½ block length unless noted otherwise,

2. All CMU shall possess a minimum compressive strength of 1900 psi per the minimum net area.

3. Unless noted otherwise, all mortar shall be Type S. Architecturally required modifications shall take the following table into consideration.

PHYSICAL PROPERTIES OF MASONRY CEMENTS

Masonry Cement Type	N	S	M
Time of setting Initial set, minimum, hr. Final set, maximum, hr.	 2 24	 1 ½ 24	 1 ½ 24
Compressive strength (average of 3 cubes, min.) 7 days, (psi) 28 days (psi)	 500 900	 1300 2100	 1800 2900

4. Average compressive strength, f'm, shall be 1500 psi min. for CMU/mortar finished construction.

5. Grout used to fill CMU shall conform to ASTM C476.

6. All block cells with reinforcing bars must be grouted solid.

7. All block cells below the level of the finished floor must be grouted solid.

8. All CMU shall be reinforced horizontally using truss shaped joint reinforcement spaced no more than 16" O.C. vertically unless noted otherwise. Overlap joint reinforcement a minimum of 8 inches.

9. Unless noted otherwise, all CMU walls shown in the structural drawings shall be reinforced with #5 bars at 48" O.C. for the full height of the wall, placing the bar at the center of the block cells.

10. Unless noted otherwise, #5 vertical bars shall be placed along openings as follows:

   For openings 4'-0" and less....................One bar in the first cells adjacent to opening
   For openings over 4'-0"..........................One bar in the first two cells adjacent to each side of the opening

11. All bars placed at the sides of openings shall extend the full height of the wall.

12. For openings over 4'-0", the portion of the wall above the opening shall be reinforced with #5 bars at 32" O.C., with the lower end of the bar terminating in the lintel.

13. All cells at corners shall be reinforced.

CHART A
VERTICAL BAR PLACEMENT FOR BLOCK WALL WITH CONCRETE FLOOR SLAB OR JOIST DESIGN

For floor joist design use bond beam with (1) #5 reinforced bar continuous for slab floor, pour into block with welded wire mesh. (See chart below)

In all cases vertical bars shall be placed at either side of openings in wall and at each corner. Vertical bars shall be bent 24" into slab, each reinforced cell shall be filled with concrete.

***Floor system to be placed before backfilling

H (Height of wall)	Width of Block	Vertical Bar Spacing
H <= 32"	8"	No. 5 @ 72" O.C.
32 < H <= 56	8"	No. 5 @ 48" O.C.
56 < H <= 72	8"	No. 5 @ 32" O.C.
72 < H <= 88	12"	No. 5 @ 32" O.C. with bond beam with (1) #5 at mid-height
	8"*	No. 5 @ 32" O.C. *(8" block may be used only if neither side of wall has soil bearing pressure. A bond beam with (1) #5 shall be provided at mid-height.
88 < H <= 120	12"	No. 5 @ 24" O.C. with bond beam with (1) #5 at mid-height
	8"*	No. 5 @ 24" O.C. *(8" block may be used only if neither side of wall has soil bearing pressure. A bond beam with (1) #5 shall be provided at mid-height.
96 < H <= 120	12"	No. 5 @ 16" O.C. (All cells filled with 3000 psi concrete) with bond beam with (1) #5 at mid-height
	8"*	No. 5 @ 24" O.C. *(8" block may be used only if neither side of wall has soil bearing pressure. A bond beam with (1) #5 shall be provided at mid-height.
120 < H <= 132	12"	No. 5 @ 8" O.C. (All cells filled with 3000 psi concrete) with bond beam with (1) #5 at mid-height
	8"*	No. 5 @ 24" O.C. *(8" block may be used only if neither side of wall has soil bearing pressure. A bond beam with (1) #5 shall be provided at mid-height.

DESIGN CRITERIA

Basic Wind Velocity: 120 mph, 3 sec. gust

Importance Factor: 1.00

Building Category: "Enclosed"

Wind Exposure Type: "B"

Internal Pressure Coefficient: +/- 0.18 (Enclosed)

Min. Soil Bearing: 1500 psf

Design Loads:
Floor Live: 100 psf
Roof Live: 20 psf
Mezzanine: 100 psf

All construction shall be provided in accordance with the current recognized versions of the Standard Building Code, Florida Building Code, OSHA, AISC, ACI and ASCE codes as well as all applicable local requirements.

All materials identified by manufacturer name may be substituted with comparable materials that exceed or equal the specifications for the original material.

Work scope has been designed and shall be constructed in accordance with:
Florida Building Code - Building - 2023 - 8th ed.
Florida Accessibility Code - 2023 - 8th ed.

WIND ANALYSIS - 120 MPH, 3 Sec. Gust Wind Velocity/110 MPH Sustained
Calculations as per Section R301.1 FBC, R 2023 rev. 8, ASCE 7

Risk Category: II   Wind Exposure: Exposure B
Internal Pressure Coefficient: +/-0.18
Plans may be used as a master plan by the above contractor: Yes or (No)   Initials: TEB

Mean Roof Height: 20 ft   Stud Species: ☐ SPF or ☐ SYP NA-Masonry
Species for Top Plate: ☐ SPF or ☐ SYP NA-Masonry   Max. Stud Ht. (excluding gable end): NA-Masonry
End Zone Length: 4 ft   Stud Spacing: NA-Masonry
Roof Slope: 8 : 12   Max. Overhang Length (excluding porches): 24 "

HURRICANE CLIPS (HC)

Brand:	Truss Span or Location	Model # @ End Zone	Model # @ Interior Zone
Simpson Strong-Tie	All trusses	2-H2.5A	2-H2.5A

ROOF SHEATHING MATERIAL: 7/16" OSB Sheathing
Fastener 8d Ring-Shank NAILING PATTERN: Edges (perimeter) 4" o.c. Field 6" o.c.

WALL BRACING: NA - Masonry VERIFY NAILING
Fastener NAILING PATTERN: Edges (perimeter) o.c. Field o.c.

ANCHOR BOLTS: 1/2" x 10" with 2" Square washers Spacing: Along Wall 32" o.c. From Each Corner 6" o.c.

General Notes: PLEASE READ!

1 Roof sheathing will be a minimum of 7/16" in thickness with a nailing pattern specified above.

2 Alternative hurricane clips are acceptable, provided they meet the minimum specification for those specified on page 1.

3 Load bearing and shear walls to be 2 x 4 No. 2 SPF studs @ 16" O.C.

4 Bearing wall and shear wall door and window headers are to be 2-2 x 10 SYP with 1/2" CDX fletch for lengths under 6 ft unless otherwise specified on plans.

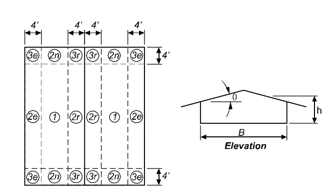
Design Loads:
Live Loads:
Roof: 20 psf
Floor: 40 psf
Dead Loads:
Roof: 10 psf
Wind Loads:
Wind Speed: 120 mph, 3 sec. gust/ 110 mph, sustained
Exposure Category: "B"
Enclosure Classification: "Enclosed"
Risk Category: II

The design plans and specifications submitted as part of the permit application are in compliance with the standards established in rule 62B-33.007, Florida Administrative Code.
Scope of work has been designed and shall be constructed in accordance with the following applicable building codes:
Florida Building Code, Building - 2023 - Rev. 8

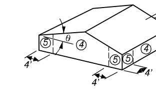
Component and Cladding Design Pressures

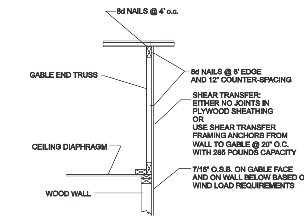
Wall Zones:			
	Design Pressures (psf)		
Zone	10 SF Trib.	100 SF Trib.	500 SF Trib.
4	-13.9	-11.9	-11.9
5	-17.1	-13.3	-13.3
4 and 5	12.7	10.8	10.8

Roof Zones:			
	Design Pressures (psf)		
Zone	10 SF Trib.	100 SF Trib.	500 SF Trib.
Zones 1 and 2e	-18.1	-12.3	-12.3
Zones 2n, 2r and 3e	-28.9	-14.9	-14.9
Zone 3r	-34.4	-17.1	-17.1
All Zones	8.4	5.9	5.9

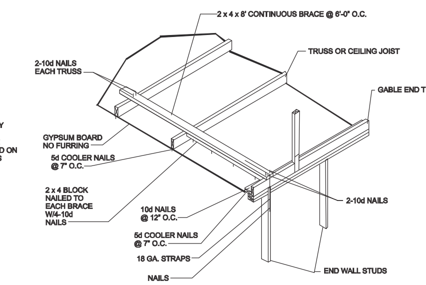


Gable and Flat Roofs, 7°<θ<=45°

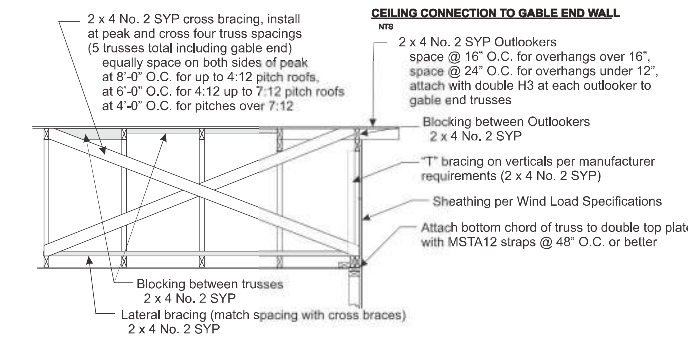

Walls



GABLE END WALL, PLATFORM FRAMING
NTS

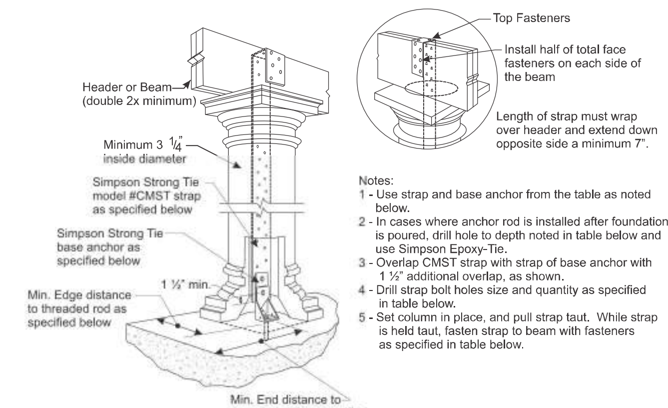


CEILING CONNECTION TO GABLE END WALL
NTS



GABLE END WALL, PLATFORM FRAMING CROSS BRACING OPTION
NTS

GABLE DETAILS



Notes:
1 - Use strap and base anchor from the table as noted below.
2 - In cases where anchor rod is installed after foundation is poured, drill hole to depth noted in table below and use Simpson Epoxy-Tie.
3 - Overlap CMST strap with strap of base anchor with 1 ½" additional overlap, as shown.
4 - Drill strap bolt holes size and quantity as specified in table below.
5 - Set column in place, and pull strap taut. While strap is held taut, fasten strap to beam with fasteners as specified in table below.

USE	Base Anchor Model No.	Base Anchor Dia. (In.)	Anchor Drill Bit Dia. (In.)	Min. Embed. (In.)	Min. Anchor Length (in.)	Min. End Dist. (In.)	Min. Edge Dist. (In.)	Strap Model No.	Strap Bolts Qty.	Strap Bolts Dia.	Drill Bit Dia. (In.) (Strap)	Fasteners Face (Total)	Fasteners Top	Uplift 100	Uplift (133 & 160)
	LTT20B	3/4	7/8	6 3/4	8 3/4	10 1/8	5	CMST14	2	½	9/16	4-10d	2-10d	1750	1750
	MTT28B	3/4	7/8	6 3/4	8 3/4	10 1/8	5	CMST14	4	½	9/16	8-10d	2-10d	3630	4455
X	HTT5	5/8	3/4	5	7	7 ½	4	CMST14	2	5/8	11/16	4-10d	2-10d	2775	2775
	HD5A	5/8 or 3/4	7/8	6 3/4	8 3/4	10 1/8	4	CMST14	2	3/4	13/16	8-10d	2-10d	3375	4010
	HD8A	7/8	1	7 3/4	9 3/4	11 5/8	6	CMST14	3	7/8	15/16	8-10d	2-10d	3430	4435
	HD8A	7/8	1	7 3/4	9 3/4	11 5/8	6	CMST12	3	7/8	15/16	10-10d	2-10d	4865	6305
	HD10A	7/8	1	7 3/4	9 3/4	11 5/8	6	CMST12	4	7/8	15/16	10-10d	2-10d	4865	6305

Hollow Post Uplift Connection - Conventional Strapping
NTS

Structural Only

Digitally signed by Thomas E Beitelman
Date: 2025.09.09 13:59:16 -04'00'

This item has been digitally signed and sealed by Thomas Beitelman on the date adjacent to the seal.

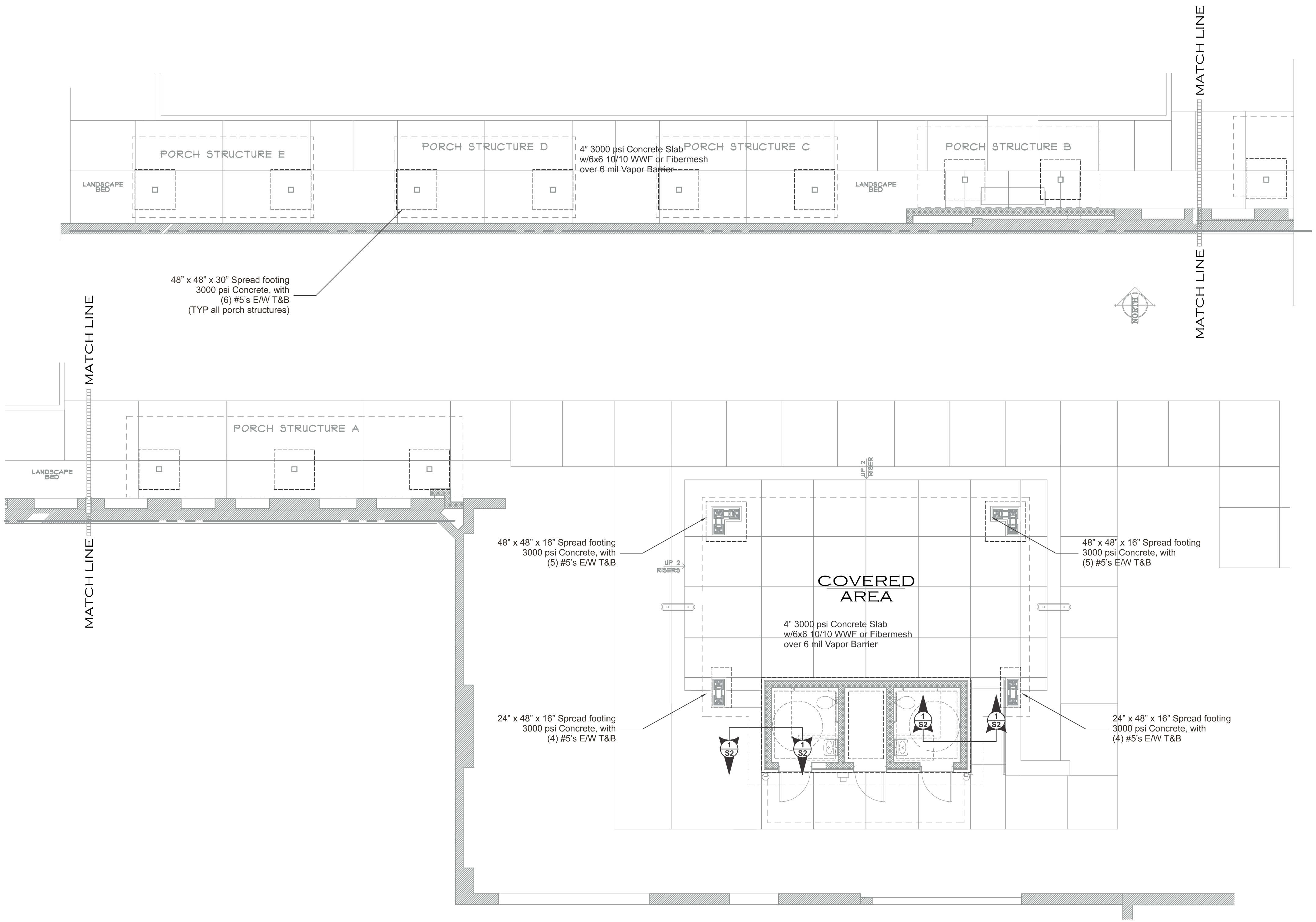
Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Thomas E. Beitelman, PE
Florida PE #51870, SI #2060
2626 E. Park Ave., Unit 4303, Tallahassee, FL 32301
(321) 543-6750 - beitelman@gmail.com

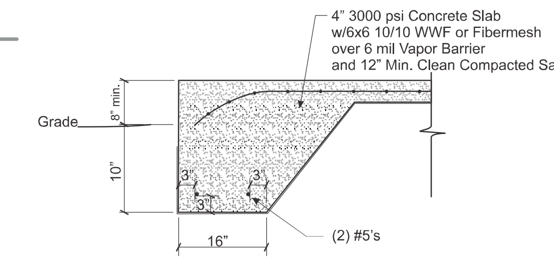
PROJECT: Andy Gay Park Improvements - Structural and Foundation
TITLE: Details
SCALE: Varies
CLIENT:

File Name:		Revision By:	Date:	Description:
Designed:	TEB	TEB	9.9.24	Update to 2023 FBC
Drawn:	TEB			
Checked:	TEB			
Date:	9/8/2025			

Sheet 1 of 4
No.



Foundation Layout
Scale: 3/16" = 1'-0"



(1) **Typical Exterior Grade Beam**
Scale: 3/4"=1'-0"

Structural Only

Digitally signed by Thomas E Beitelman
Date: 2025.09.09 13:58:56 -04'00'

This item has been digitally signed and sealed by Thomas Beitelman on the date adjacent to the seal.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

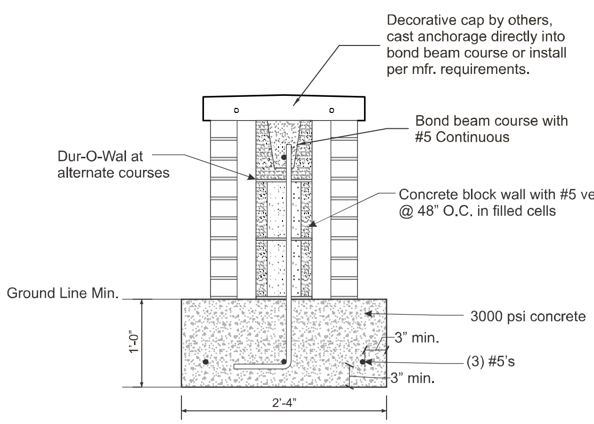
Thomas E. Beitelman, PE
Florida PE #51870, SI #2060
2626 E. Park Ave., Unit 4303, Tallahassee, FL 32301
(321) 543-6750 - beitelman@gmail.com

PROJECT: Andy Gay Park Improvements - Structural and Foundation
TITLE: Details
SCALE: Varies
CLIENT:

File Name:		Revision By:	Date:	Description:
Designed:	TEB	TEB	9.9.24	Update to 2023 FBC
Drawn:	TEB			
Checked:	TEB			
Date:	9/8/2025			

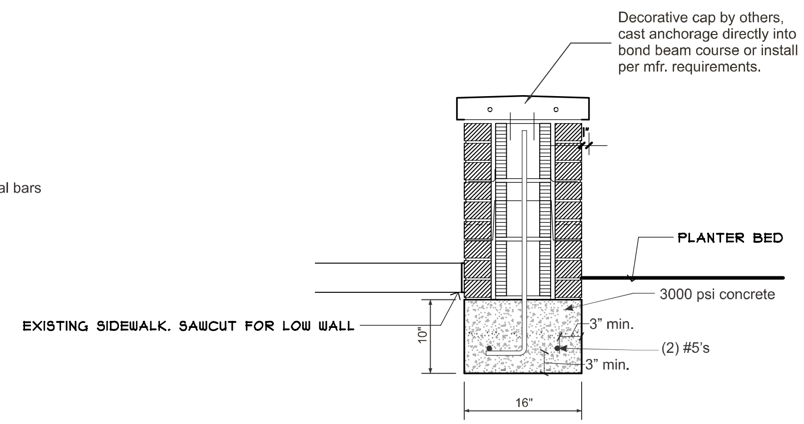
Sheet 2 of 4

No.



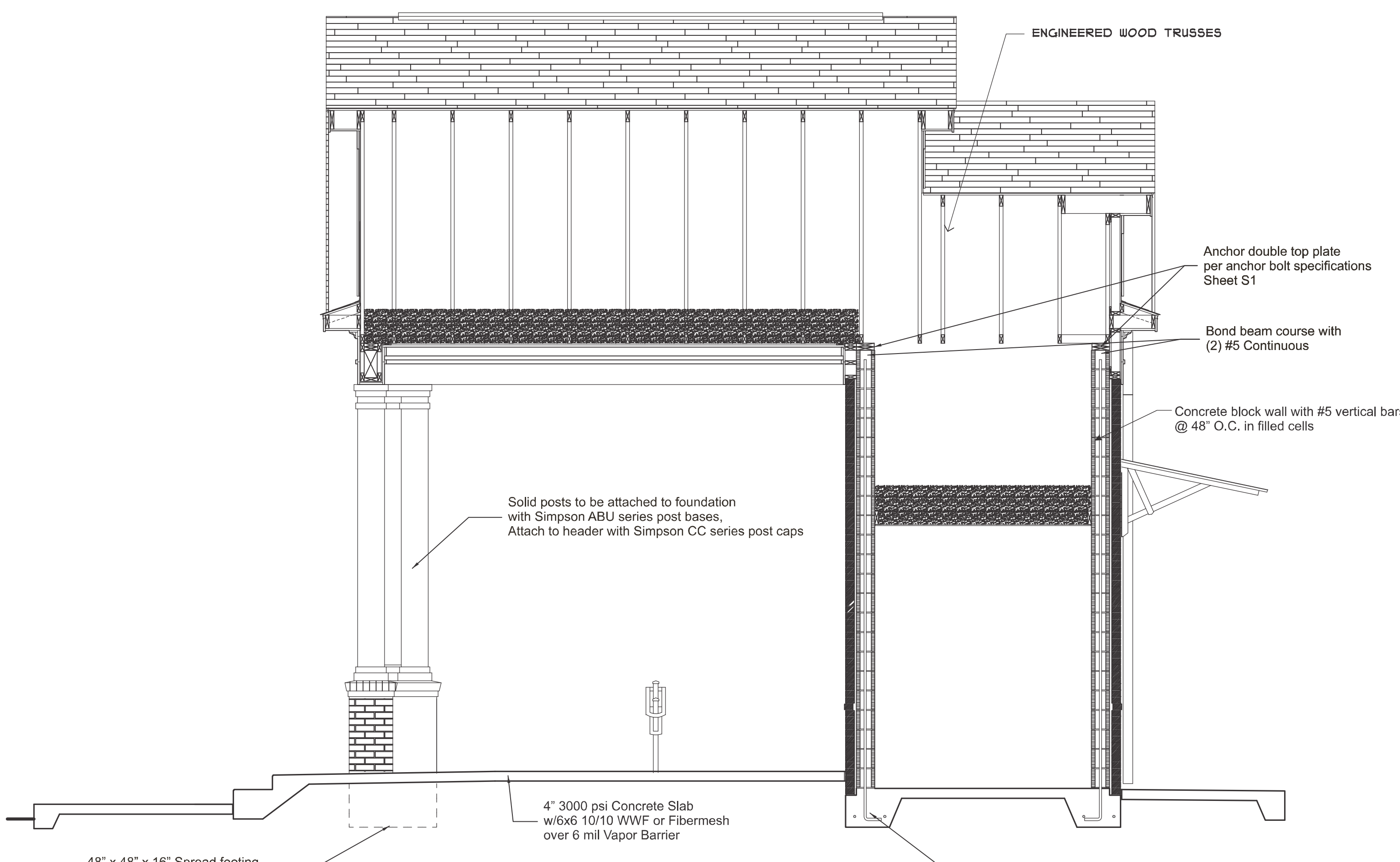
Ref. 8/A1.3 **Wall Section**
Scale: 1" = 1'-0"

Refer to Arch for dimensions and locations

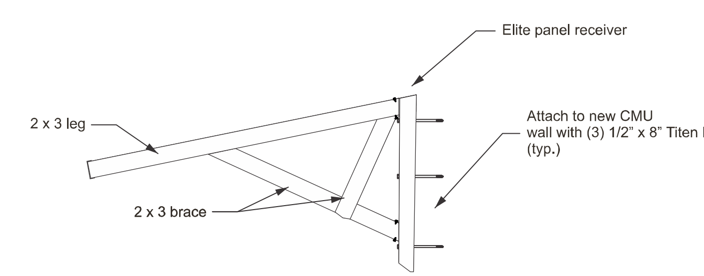


Ref. 3/A1.4 **Planter Section**
Scale: 1" = 1'-0"

Refer to Arch for dimensions and locations



Section Through Pavilion
Scale: 1" = 1'-0"



Awning Section

Scale: NTS

Note: Install Awning frames at 48" O.C.

Structural Only

Digitally signed by
Thomas E Beitelman
Date: 2025.09.09
13:58:36 -04'00'

This item has been digitally signed and sealed by Thomas Beitelman on the date adjacent to the seal.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Thomas E. Beitelman, PE
Florida PE #51870, SI #2060
2626 E. Park Ave., Unit 4303, Tallahassee, FL 32301
(321) 543-6750 - beitelman@gmail.com

PROJECT: Andy Gay Park Improvements - Structural and Foundation

TITLE: Details

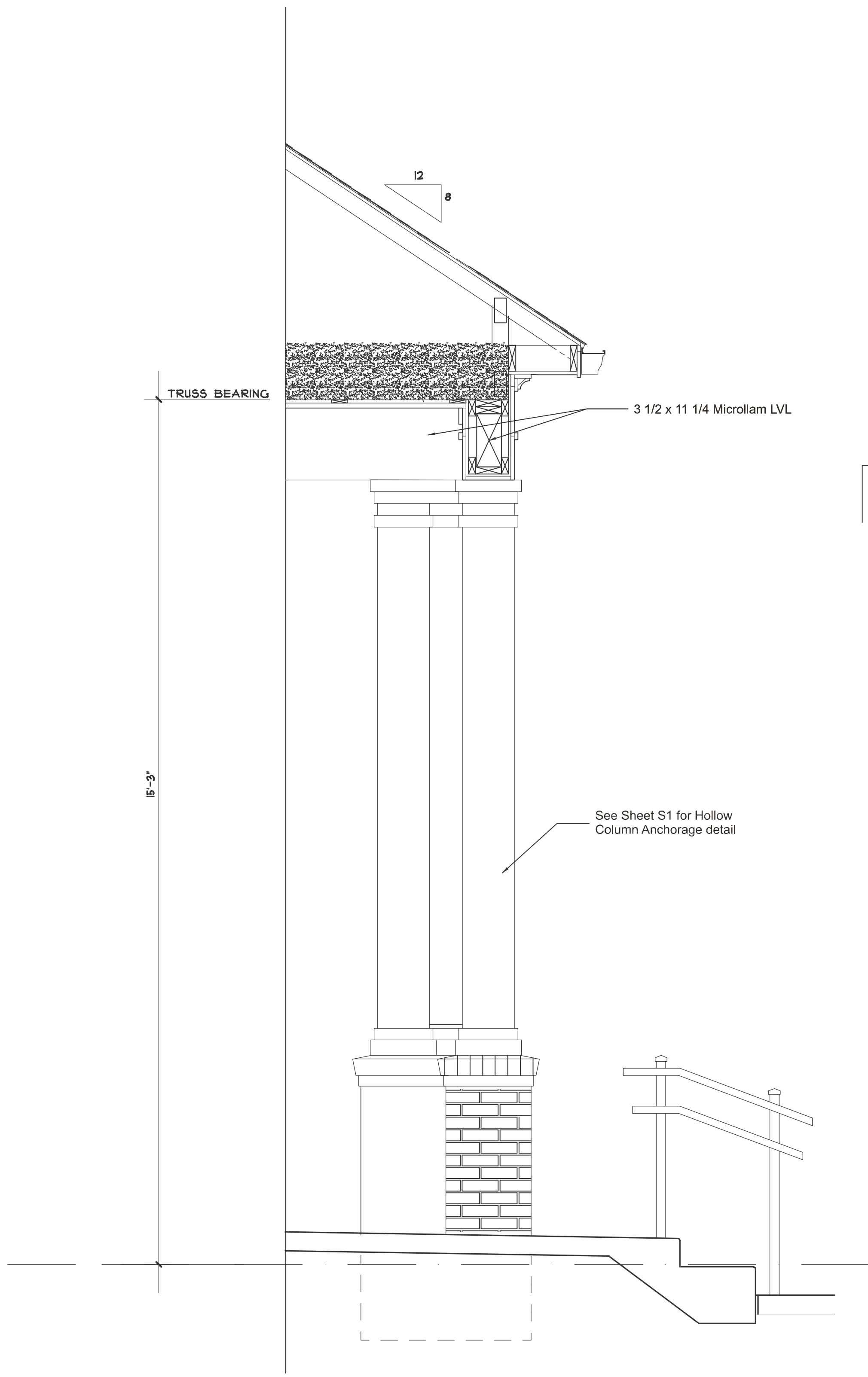
SCALE: Varies

CLIENT:

File Name:		Revision By:	Date:	Description:
Designed:	TEB	TEB	9.9.24	Update to 2023 FBC
Drawn:	TEB			
Checked:	TEB			
Date:	9/8/2025			

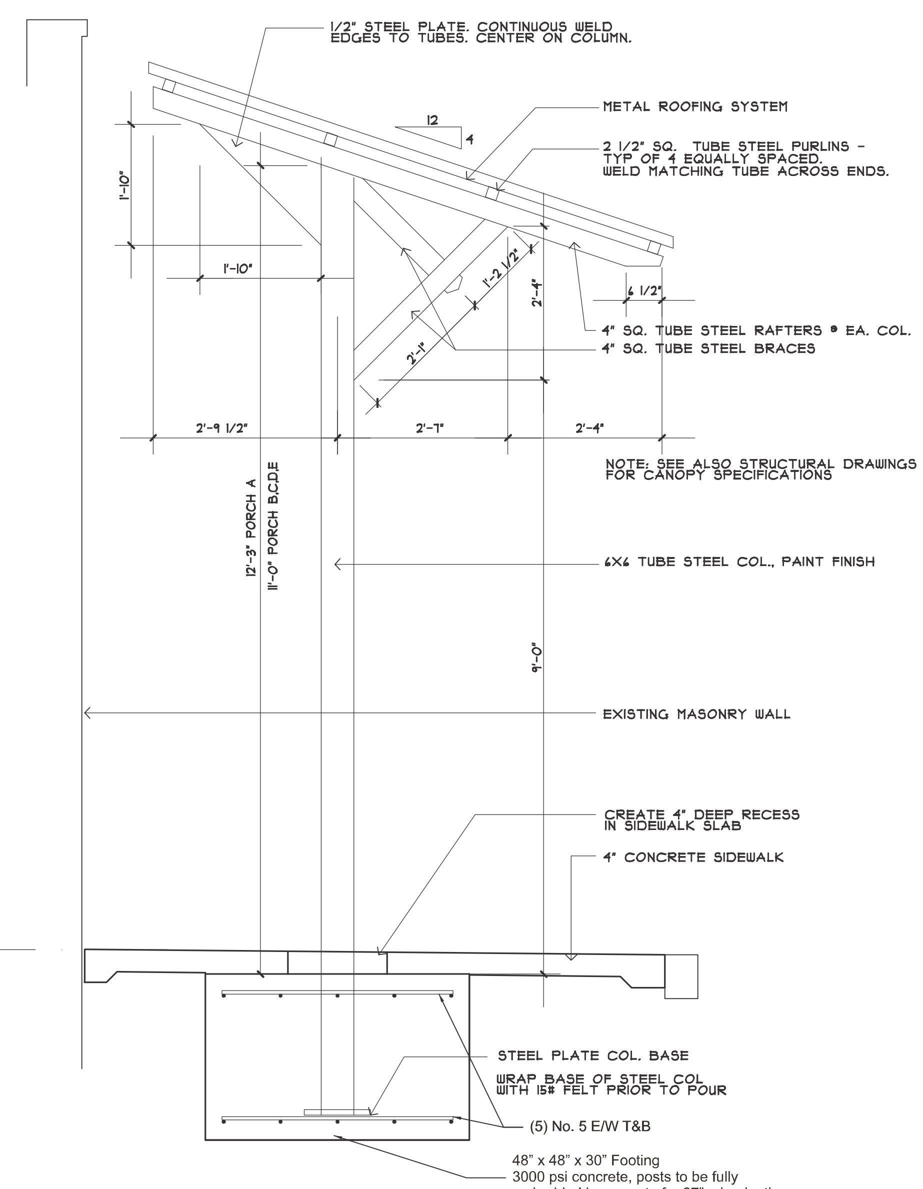
Sheet 3 of 4

No.



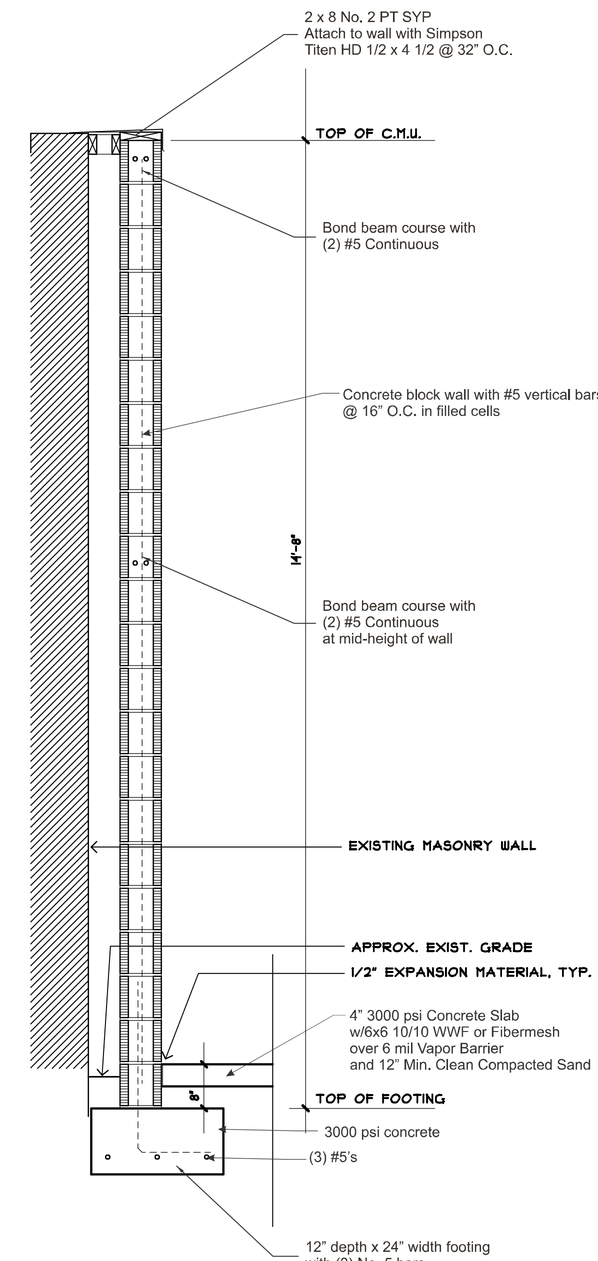
Ref. 1 A3.2 **Section Through Pavilion at Open Area**

Scale: 1" = 1'-0"



Ref. 2 A3.3 **Section Through Free Standing Porch Structure Posts**

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



Ref. 1 A3.3 **Section Through New Wall**

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

Structural Only

Digitally signed by Thomas E Beitelman Date: 2025.09.09 13:58:07 -04'00'

This item has been digitally signed and sealed by Thomas Beitelman on the date adjacent to the seal.

Printed copies of this document are not considered signed and sealed and the signature must be verified on any electronic copies.

Thomas E. Beitelman, PE

Florida PE #51870, SI #2060

2626 E. Park Ave., Unit 4303, Tallahassee, FL 32301

(321) 543-6750 - beitelman@gmail.com

PROJECT: Andy Gay Park Improvements - Structural and Foundation

TITLE: Details

SCALE: Varies

CLIENT:

File Name:		Revision By:	Date:	Description:
Designed:	TEB	TEB	9.9.24	Update to 2023 FBC
Drawn:	TEB			
Checked:	TEB			
Date:	9/8/2025			

Sheet 4 of 4

No.

MECHANICAL MATERIAL SCHEDULE

AIR DISTRIBUTION DUCTS – MATERIAL	AIR DISTRIBUTION DUCTS – DUCT SEALER	REFRIGERANT & CONDENSATE DRAIN PIPING – BELOW FINISHED FLOOR	REFRIGERANT & CONDENSATE DRAIN PIPING – CONDENSATE DRAIN	REFRIGERANT & CONDENSATE DRAIN PIPING – ABOVE FINISHED FLOOR
CLASS "A" GALVANIZED STEEL OR ROLLED STEEL IN COMPLIANCE WITH SMACNA 2005-3RD EDITION LOW-MEDIUM PRESSURE DUCT STANDARDS TABLE 1-1. DUCTS SHALL BE TESTED, VERIFIED & RECORDED IN ACCORDANCE WITH ASHRAE 90.1-2013 & 2015 IMC CODE CODE FOR COMMERCIAL BUILDINGS BASED ON REQUIRED LEAKAGE RATE OF LESS THAN 4% PER 100 SF OF ACTUAL DUCT PER SYSTEM FOR SUPPLY, RETURN OR EXHAUST; EXCEPT KITCHEN HOODS WHICH SHALL COMPLY WITH 2010 NFPA 96 GUIDELINES & REGULATIONS	METAL DUCTS SHALL BE SEALED PRIOR TO EXTERNAL INSULATION WITH APPROVED UL181AM/BM PRODUCT EQUAL TO McGILL AIR-SEAL "UNI-WEATHER" SEALANT BELOW VOCs PER "SCAQMD" USING SOLVENT BASE; WATER BASE DUCT SEALERS ARE NOT APPROVED; APPLIES TO ALL JOINTS & SEAMS INCLUDING DUCTMATE & STANDING SEAMS OR OR SNAP LOCK-JOINTS	COPPER TUBING-TYPE "K" SOFT ANNEALED TEMPER NO JOINTS BELOW FLOOR	COPPER TUBING-TYPE "L" HARD DRAWN TEMPER WITH WROUGHT COPPER FITTINGS & PROPRESS RIDGID CONNEC-TION MEDTHOD FROM UNIT TO SCHEDULE 80 PVC MAIN	COPPER TUBING-TYPE "L" HARD DRAWN TEMPER WITH WROUGHT COPPER FITTINGS & BRAZED JOINTS AT 1100 DEG F; FLUX MATERIAL NOT ALLOWED

PIPING INSULATION – FITTINGS	JACKET	THICKNESS	LOCATION	PIPE HANGERS	PIPE PENETRATIONS
ZESTON FITTING COVERS	UNIVERSAL ALUMINUM JACKET AT OUTSIDE, EXPOSED AREAS & MECH. ROOMS	3/4" TO 1" ARMAFLEX	REFRIGERANT SUCTION & LIQUID LINES	CLEVIS OR UNISTRUIT PRODUCTS WITH THREADED RODS IN COMPLIANCE WITH 2015 INTERNATIONAL PLUMBING CODE SECTION 308, PER TABLE 308.5 FOR HORZ & VERTICAL SPACING	METACAULK UL-CAJ2134 UL-WL2135
		1/2" ARMAFLEX	CONDENSATE DRAIN LINE	WALRAVEN PRODUCT BISMAT 5000 QUICK LOCKING SYSTEM FOR PLASTIC PIPE WITH RUBBER LINING, SPACERS, ETC.	BIS PACIFYRE MK 11 FIRE SLEEVE PER UL AS MANUF BY WALRAVEN

CHILLED WATER PIPING DATA – BELOW FINISHED FLOOR	2" & UNDER ABOVE FLOOR	2-1/2" & UP ABOVE FLOOR
COPPER TUBING-TYPE "K" SOFT ANNEALED TEMPER NO JOINTS BELOW FLOOR	COPPER TUBING-TYPE "L" HARD DRAWN TEMPER WITH WROUGHT COPPER FITTINGS & BRAZED JOINTS AT 1100 DEG F; FLUX MATERIAL NOT ALLOWED	SCHEDULE 40 BLACK IRON STEEL WITH CERTIFIED WELDING; NO THREADED FITTINGS ON SCHEDULE 40 STEEL PIPING
SCHEDULE 40 BLACK IRON STEEL AS NOTED IN SPEC'S	PROPRESS RIDGID TOOL & FITTING PRODUCTS	VICTAULIC FITTINGS & COMPONENTS
MAY USE PP-R RESIN MATERIAL EQUAL TO AQUA-THERM IN COMPLIANCE WITH ASTM-D2774 PER SDR 7.4,9,11 OR 17.6 WITH CERTIFIED FUSION CONNECTIONS	MAY USE PP-R RESIN MATERIAL EQUAL TO AQUA-THERM IN COMPLIANCE WITH ASTM-F-2389 OR CSA B137.11 WITH CERTIFIED FUSION CONNECTIONS	MAY USE PP-R RESIN MATERIAL EQUAL TO AQUA-THERM IN COMPLIANCE WITH ASTM-F-2389 OR CSA B137.11 WITH CERTIFIED FUSION CONNECTIONS

CHILLED-HOT WATER PIPING INSULATION DATA – FITTINGS	JACKET	THICKNESS	LOCATION
ZESTON FITTING COVERS	ALUMINUM JACKET WITH METAL BANDS AT OUTSIDE & EXPOSED MECHANICAL ROOMS AS SO NOTED IN SPECS	2" JOHNS MANVILLE FOAM GLASS	SUPPLY-RETURN CHILLED WATER & HOT WATER LINES
	TRYMER 2000 POLYISOCYANURATE CLOSED CELL INSULATION WITH SARAN VAPOR RETARDER FILM & TAPE	SEE NOTE #1 BELOW 1.5"	SUPPLY-RETURN CHILLED WATER LINES

FLEXIBLE DUCTS – MANUF.	SERIES	MAX. LENGTH	R-VALUE
THERMAFLEX	MKE	6 FT	8.0

EXTERNAL DUCT INSULATION WRAP – MANUF.	SERIES	THICKNESS DENSITY	MIN. R-VALUE	VAPOR BARRIER	SEALER	LOCATION
JOHNS MANVILLE	MICROLITE XL-FSK FORMALDE-HYDE-FREE FSK FACING	3" .75 PCF	10.3 OUT OF THE BOX 8.3 FIELD INSTALLED	FSK	FIRE RATED MASTIC SEAL PER UL-181A-M AT ALL JOINTS-SEAMS; OR APPROVED ACRYLIC FOIL PRESSURE SENSITIVE TAPE PER PER UL-181A-P APPLIED USING SQUEEGEE APPROVED METHOD AT JOINTS-SEAMS; RUBBER BASE TAPES ARE NOT APPROVED	ALL SUPPLY, RETURN & EXHAUST AIR DUCTS SEE NOTE 2
JOHNS MANVILLE	MICROLITE EQ-PSK FORMALDE-HYDE-FREE PSK FACING	2" .75 PCF	6.9 OUT OF THE BOX 5.6 FIELD INSTALLED	PSK	FIRE RATED MASTIC SEAL PER UL-181A-M AT ALL JOINTS-SEAMS; OR APPROVED ACRYLIC FOIL PRESSURE SENSITIVE TAPE PER PER UL-181A-P APPLIED USING SQUEEGEE APPROVED METHOD AT JOINTS-SEAMS; RUBBER BASE TAPES ARE NOT APPROVED	ALL SUPPLY, RETURN & EXHAUST AIR DUCTS SEE NOTE 3

INTERNAL DUCT INSULATION ACOUSTIC LINER – MANUF.	SERIES	MIN. THICKNESS	COATING	LOCATION	MIN-MAX. LENGTH
ARMACELL	AP-COILFLEX ELASTOMERIC CLOSED CELL FOAM; SEE DETAILS & SPECS FOR ADDITIONAL REQUIREMENTS	1.5"	WITH MICROBAN MICROBIAL COATING	ALL SUPPLY, RETURN & EXHAUST AIR DUCTS AT EQUIPMENT	FROM EQUIPMENT OUT AT 5 FT FOR AHUs or HFCs
ARMACELL	AP-COILFLEX ELASTOMERIC CLOSED CELL FOAM; SEE DETAILS & SPECS FOR ADDITIONAL REQUIREMENTS	2.0"	WITH MICROBAN MICROBIAL COATING	ALL SUPPLY, RETURN & OUTSIDE AIR DUCTS AT EQUIPMENT	FROM EQUIPMENT OUT TO 3 FT BELOW FINISHED CEILING INSIDE BUILDING for AHUs & RTU UNITS

NOTES:
1. CONTRACTOR MAY USE PRODUCT EQUAL TO TRYMER 2000 POLYISOCYANURATE CLOSED CELL INSULATION WITH SARAN VAPOR RETARDER FILM & TAPE IN 1.5"-2" THICKNESS PER VENDOR INSTALLATION REQUIREMENTS
2. 3" EXTERNAL DUCT WRAP SHALL BE INSTALLED IN AREAS SUBJECT TO CONDENSATION CONCERNS SUCH AS COOKING SPACES, HIGH HUMIDITY ROOMS, LAUNDRY ROOMS, INDOOR POOL SPACES, ETC.
3. 2" EXTERNAL DUCT WRAP WITH SPECIAL FORMALDEHYDE-FREE MATERIAL WITH CONDENSATION CONTROL & PERMEABILITY PROPERTIES.

DRAWING INFORMATION NOTES

A. INSTALL WALL MOUNTED EXHAUST AIR LOUVER EQUAL TO METALAIRE MODEL 0AL-4 SIZED AT 12" X 12" WITH APPROVED BUG/BIRD SCREEN; LOUVER TO BE HURRICANE RATED AT 120 MPH WIND PER 2015 IMC; LOUVER TO BE PAINTED TO MATCH EXTERIOR WALL.

B. CEILING RADIANT ELECTRIC HEATING PANEL CONTROLLED BY WALL MOUNTED 24 V THERMOSTAT AS INDICATED IN DETAILS THIS SHEET; SEE SCHEDULES FOR ADDITIONAL INFORMATION.

C. 24V WALL MOUNTED THERMOSTAT TO CONTROL CEILING RATED HEATING PANEL; PROVIDE CLEAR BOX LOCKING THERMOSTAT COVER.

D. CEILING MOUNTED CABINET FAN AS REFLECTED IN DETAIL AND SCHEDULES, THIS SHEET.

E. WALL MOUNTED ELECTRIC HEATER AT 18" AFF; USE SURFACE MOUNTED TYPE AS INDICATED IN HEATER SCHEDULE, THIS SHEET.

FAN SCHEDULE

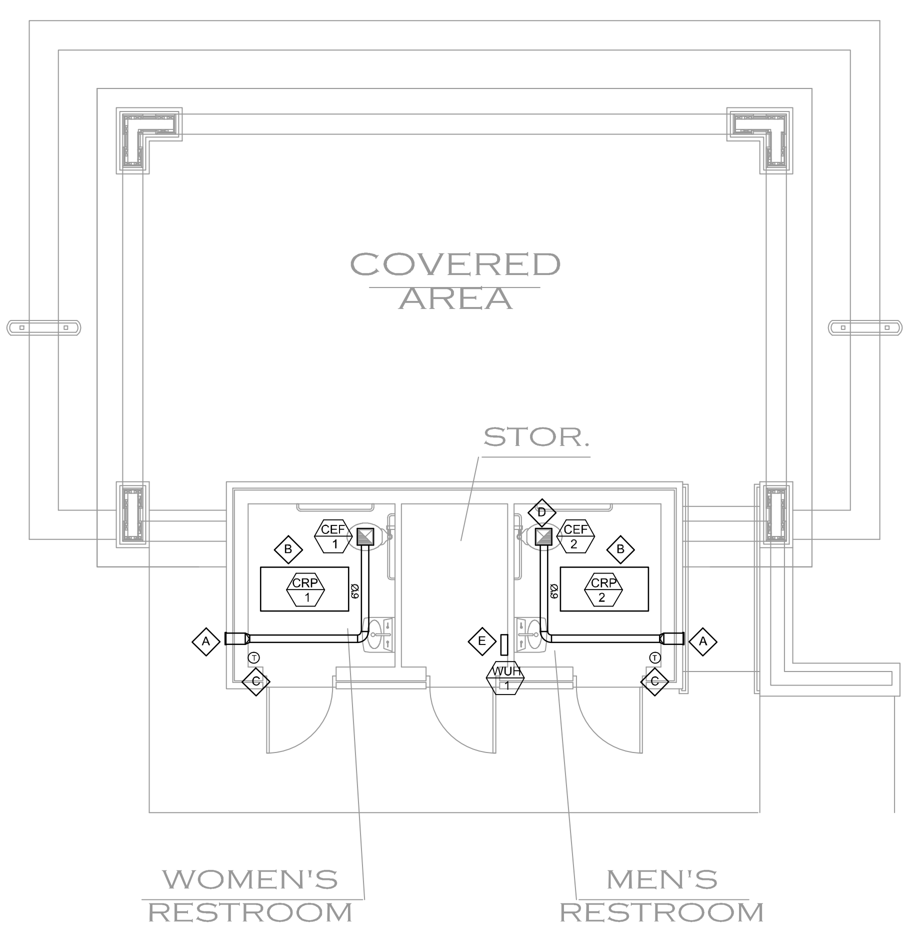
FANS NO.	ROOM NAMES & NOS.	MANUF.	MODEL NO.	ACTUAL FAN LOCATION	FAN TYPE	BLOWER DATA CFM	ESP	TYPE	DRIVE	MOTOR DATA V-PH	WATTS/HP	AMPS	RPM	SONES	BACKDFART DAMPER TYPE	FAN SPEED CONTROL	FAN CONTROL	FLEXIBLE DUCT CONNECTOR	FAN SUPPORT	NOTES
CEF-1 CEF-2	TOILET ROOMS	GREENHECK	SP-A200	CEILING MOUNTED LAY-IN TYPE CABINET FAN	CABINET EXHAUSTER	224	.25"	CTR.	DRT	120-1	56.1 WATTS	0.47	900	2.5	SPRING	SOLID STATE CONTROL	24V WALL T'STAT 80°F	OUTLET ONLY	THREADED RODS WITH NEOPRENE ISOLATORS	1,2,3

FAN NOTES :
1. PROVIDE WITH PERFORATED GRILLE PER DETAIL.
2. CONTROLLED BY ROOM MOTION SENSOR WITH 5 MINUTE DELAY ON BREAK.
3. PROVIDE UL APPROVED DISCONNECT METHOD PER LATEST NEC 70 & VENDOR REQT'S

CABINET UNIT & RADIANT PANEL HEATER SCHEDULE

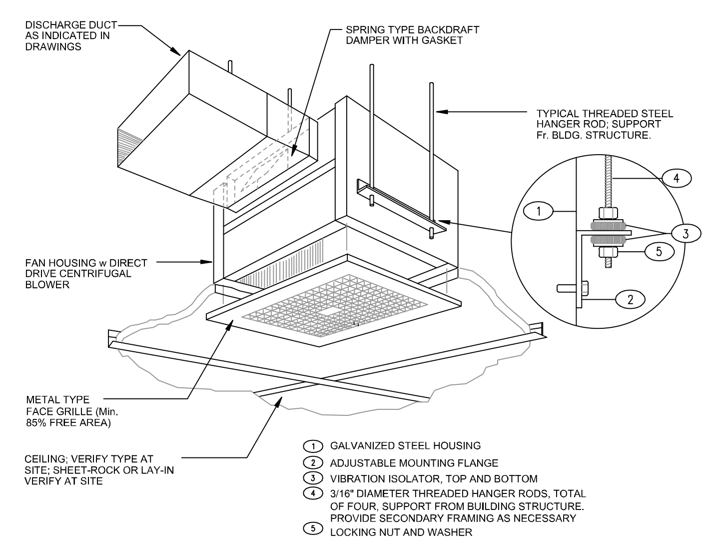
HTR NO.	AREA SERVED	MANUF./ MODEL NO.	TYPE	SYSTEM DATA CFM	OUTLET VEL. FPM	ESP	HEATER DATA V-PH	FLA AMPS	HTR WATTS	INPUT MBH	OUTPUT MBH	AFUE (%)	UNIT WEIGHT (LBS)	VENT SIZE (INCHES)	CONTROLS	NOTES
WUH-1	JANITOR CLOSET	BERKO FRA1512	WALL TYPE ELECTRIC HEATER	-	-	-	120V-1PH	12.5	1500	-	5120	-	-	-	24 HOUR TIME CLOCK AT ELECTRICAL PANEL	1, 2, 3, 4
CRP-1 CRP-2	TOILET ROOMS	QMARK CP751	CEILING TYPE ELECTRIC PANEL RADIANT HEATER	-	-	-	120V-1PH	6.25	750	-	2559	-	-	-	FACTORY MOTION FAN SENSOR	2, 3, 5, 6

HEATER NOTES:
1. INSTALL HEATER AT 18" AFF IN COMPLIANCE WITH MANUF. RECOMMENDATIONS
2. COORDINATE WITH ELECTRICAL CONTRACTOR PER LOCAL CODES
3. WITH UL APPROVED DISCONNECT AND FUSE SYSTEM PER NEC REQUIREMENTS
4. CONTROLLED BY UNIT MOUNTED THERMOSTAT SET AT 65 DEGREES F
5. INSTALL CEILING RANDIANT HEATING PANELS AS INDICATED IN DETAILS ON THIS SHEET.
6. CEILING RADIANT PANELS SO BE CONTROLLED BY 24V WALL THERMOSTAT SET AT 65 DEGREES F

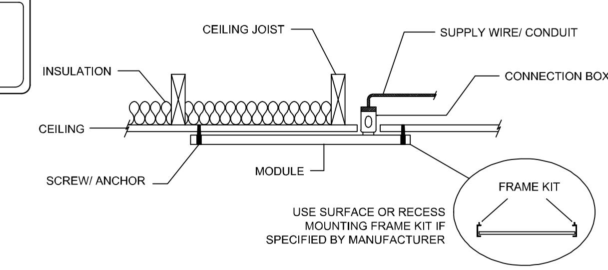


NEW RESTROOM BUILDING
HEATING & VENTILATION PLAN

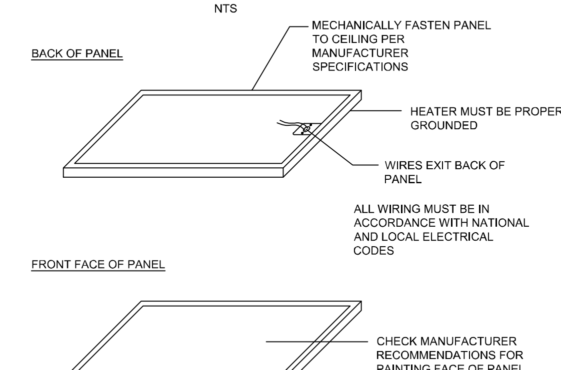
SCALE: 1/4" = 1'-0"



CABINET CEILING EXHAUST FAN DETAIL
NTS



CEILING ELECTRIC RADIANT PAEL
INSTALLATION DETAIL
NTS



CEILING ELECTRIC RADIANT PAEL
NTS

284 POPLAR DR
RAINSVILLE, ALABAMA 35986
(334) 695-0284
thedesigngroupinc@gmail.com
Mechanical-Electrical
Consulting Engineers
FL License No. 31813

confidential-this document & the information contained herein is confidential & may not be disclosed, copied altered or reproduced to any persons except as permitted in writing by "The Design Group, Inc."

the Design Group of Florida inc.
division of The Design Group, Inc.

J. KYLE COX LICENSE NO. 62881 PROFESSIONAL ENGINEER
Digitally signed by J. Kyle Cox Date: 2025.09.30 10:57:36-05'00'

JOEL SAMPSON ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FL A LIC NO AR0014780
850-875-4348

ANDY GAY PARK IMPROVEMENTS
FOR
CITY OF QUINCY, FLORIDA
116 NORTH ADAMS STREET QUINCY, FLORIDA

DATE: 7-15-25
REV:

JOB NO: 24-014

M1.1
SHEET NO.

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT INC. AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT INC.

SECTION 220100-230100-MECHANICAL & PLUMBING SPECIFICATIONS

1.1 SUMMARY:

A. Mechanical Specifications provided in this section and on construction documents are in conjunction to other specifications and documents; when conflict occurs between those noted in bid documents or specifications the most restrictive compliance is required.

B. WARNING: These plans and specifications are each part of an integrated design system. Any modifications, alterations, changes, deletions, additions or substitutions, of or to any specifications(s) or construction document could result in failure of systems designed or property damage, injury, and even death, and requires a full review of the entire system by a licensed professional engineer. Any unauthorized modification of this document may constitute unlicensed practice as a professional engineer and may constitute a felony as set forth by state law.

C. The use of used or counterfeit equipment is not allowed. It shall be the responsibility of the contractor to provide verification that the equipment is genuine. The contractor shall as a minimum, take the following steps to ensure that equipment used on the job meets the proper standards.

1. all equipment on this job shall be supplied through an authorized channel (authorized dealer) of the equipment supplier being used
2. equipment shall not be procured over the internet without prior approval of the engineer or architect; material available over the internet at very low prices is often counterfeit
3. all equipment shall be supplied in the original manufacturer's packaging with the proper documentation

D. Any employees of contractor or sub-contractor on this project that cannot speak English shall be supplied with a translator in order to lessen the communication barrier that would otherwise exist.

1.2 QUALITY ASSURANCE:

A. The Contractor shall not fabricate or order any equipment, air distribution, piping or materials until he/she has verified that sufficient clearances are available for the installation of HVAC systems or plumbing materials considering requirements for piping, light fixtures, ceiling systems, floor systems, foundations, and/or structures.

B. During the construction document phase Engineer has attempted to obtain all the data necessary for adequate design of facility mechanical, HVAC, plumbing, piping systems, etc. However, some of the required floor plans, elevations, civil-site data, wall details, construction sections, building framing systems and fire rated information were not available. Therefore, it is the expressed requirement that no systems be fabricated, ordered, installed or manufactured until site has been visited and sufficient clearances are field verified for satisfactory installation. Any individual or firm not exercising this effort will place complete financial responsibility on themselves or others with no reimbursable expense or approved change orders for said action.

C. Drawings are diagrammatic and indicative of work to be furnished and installed under this contract; refer to architectural, structural, civil and foundations documents for all dimensions.

D. The terms "provide" and "install" shall be considered synonymous with "furnish" and "install".

E. All work shall be installed in a workmanlike manner by experienced tradesmen with at least 5 years' experience in this type project.

F. The submission of a bid or proposal will construed as evidence that the Contractor has familiarized himself/herself with the plans, specifications and building site. Claims made subsequent to the proposal for materials and or labor due to difficulties encountered will not be recognized, unless difficulties could not have been foreseen even though proper examination had been made.

G. Equipment, fixtures, ductwork, dampers, louvers, grilles, registers, diffusers, piping and/or other items noted shall conform to the latest editions of the following:

1. ASHRAE 55-2010, ASHRAE 62.1-2013 & ASHRAE 90.1-2013
2. ASHRAE Fundamentals
3. 2023 FBC Mechanical Code with state Amendments
4. SMACNA (3rd Edition-2005)
5. NFPA-101, NFPA-90A, & NFPA-90B per current state adoption
6. AMCA Standard Handbook 99
7. Air Diffusion Council Test Code 1062R3
8. ANSI
9. ASME guidelines & ASME-B16.22
10. ASPE with referenced data design manuals & guides
11. ASTM-B88, ACI-318, ASTM-B828, ASTM-E53-02, & ASTM-B88-03
12. AGA
13. UL Fire Resistance Directory
14. 2023 FBC Plumbing Code with state Amendments
15. Governing Health Department Regulations
16. Environmental Regulations
17. BOCA Codes
18. Any Local Governing Regulations

H. Deviation from materials, methods and procedures set forth herein must be approved in writing by the Engineer. Approval will not be given unless the Engineer is satisfied that the proposed system is superior in performance, durability, longevity, and reliability to that specified.

I. Approvals of equipment or systems, by the Engineer, must be in written form no less than ten (10) working days prior to project bid date. Any contractor, sub-contractor, manufacturer or representative wishing to bid equal products must comply with this mandatory requirement. Failure to get pre-approval of systems or products prior to this date will result in immediate "NOT APPROVED" signature from Engineer during shop drawing review phase.

J. Systems on schedules, specifications and construction documents are basis for design only; other systems and manufacturers MUST be approved at review by Engineer.

K. Contractor and sub-contractors must pre-qualify with the Engineer prior to bidding project. Qualifications will be reviewed based on contractors/sub-contractors experience with systems proposed, type of facility, time in trade, quality of workmanship, and experience with the Engineer.

L. Contractor or Owner shall not operate HVAC systems, equipment or fans during construction. Failure to comply with this specification item will result in complete cleaning of all fans, blowers, filters, ducts and air distribution systems with approval by Certified Indoor Air Quality Professional.

M. All air distribution systems, piping, equipment, fans, hoods, etc. shall be properly supported from building structural system in compliance with architect and structural engineer requirements; products may NOT be supported from knee trusses or bottom cord-frame wood or steel systems without written approval.

N. In order to comply with Indoor Air Quality standards building mechanical systems may be operated for facility "off-gassing" procedures once Owners have obtained professional services of Certified Indoor Air Quality Professional. If professional is not obtained systems shall not be operated as so noted above.

O. Contractor shall maintain a clean and healthy work premise at all times and shall clean construction site of all his/her debris at the completion of the job or as requested by Owner's representative; this is required prior to release of final project payment to contractor.

P. If required, the project designer or engineer maybe requested to either visit site or review digital photos of project while under construction. This effort is merely an attempt to verify that certain items and requirements set forth under these construction documents have been followed or applied. This in no way shall be used as quality control for said contractor and/or related subs. To assure that noted items have been resolved, modified, corrected, etc. contractor shall address each item indicated in written response on company letterhead with copy sent to engineer for approval. Failure to comply with this request will automatically be assumed that items were not addressed automatically resulting in additional effort by design team at normal billable hourly rate structure payable by related contractor or subs.

Q. Contractor shall be aware of the procedures and tolerances required on this project and must exercise due care to achieve these requirements.

R. The contractor is responsible for the quality of their work and shall coordinate and comply with the Owner's testing agency, threshold inspectors, general contractor's third party control inspectors, architect reports, engineer observations or written statements and the recommendations provided to reduce water and mold intrusion.

1.3 GUARANTEE/WARRANTY:

A. All work and materials shall be guaranteed/warranted (parts and labor) for a period of one year from date of FINAL acceptance by Owner. An additional warranty (parts only) shall be included for a period of four (4) years on all compressors.

1.4 SUBMITTALS/PROJECT MANUALS:

A. Contractor shall supply, to the Engineer, five (5) sets of submittals (in hard three binder form with labeled tabs) for approval on the following:

1. Air Distribution Materials (turning vanes, extractors, spin-in, diffusers, grilles, registers, louvers, etc.)
2. Heating, Ventilation and Air Conditioning equipment
3. Dampers
4. Fans
5. Insulation Materials
6. Controls
7. Plumbing Fixtures
8. Valves, Arrestors, Supports, Circuit Setters, etc.
9. Isolation Devices and Materials
10. Hangers
11. Pumps

B. All submittals must be APPROVED, in writing, by the Engineer prior to contractor ordering or project delivery.

C. Contractor is required to provide timely, complete and accurate submittals per contract documents to allow for review and approval by engineer to ensure a timely start of work on site; review by engineer will be for general performance based on design concept; marking or comments by engineer shall not be construed as relieving the contractor from compliance with the project plans and specifications, nor departures thereof; the contractor remains responsible for details and accuracy for conforming and correlating all quantities and dimensions, for selecting fabrication processes, for techniques of assembly and for performing his/her work in a safe manner.

D. If the contractor employees the services of a third party sub-contractor then this sub shall be daily supervised by original project contractor to assure quality assurance; contractor's superintendent shall also attend control meetings and shall cooperate with third party firm for quality assurances during the entire implementation of said work and shall attend each site observation with project engineer-architect.

E. Contractor shall provide a complete set of reproducible (sepia) "as-built" documents of all equipment, systems, air distribution, controls, piping, etc. This document shall be provided at the completion of the project based on daily recorded information prior to Owner acceptance. As-built documents shall include the location of all cleanouts, shut-off valves, balancing valves, dampers, extractors, etc. with the dimensional location of all exterior utilities. In conjunction, project plumbing contractor shall provide a detailed color camera video for inside area of all underground sanitary sewer and/or storm drain systems in DVD format. Failure to comply with item will result in Architects/Engineers completing effort with professional services payable by this contractor. Marked-up blueprints or site photos by contractor will not constitute compliance with this specification.

F. Operation Instructions/Manuals:

a) Upon completion of work contractor shall supply to the Owner a minimum of four bound sets of all work, tests and necessary instructions for the complete operation and maintenance of all equipment and products installed. Information shall also include equipment input and output capacities with vendor required maintenance requirements.

b) Contractor must provide at least a forty-eight (48) hours' notice to Owner of training task for Owner personnel on operation and basic maintenance all systems installed; training period shall not be less than one (1) eight work day.

c) Manufacturer's advertising information or catalogs will not be accepted for operating and maintenance manuals.

d) Operation and Maintenance Manuals shall include:

1. maintenance and operating instructions for all equipment and products installed at this job
2. characteristics and curves of all equipment
3. date on all the equipment and products installed to include item, make, model, capacity, electrical characteristics, etc.
4. name, address and telephone number of service agent

G. A complete narrative of how each system is intended to operate shall be included with owner's manuals; DVD or videos shall also be provided in available from vendor.

H. Owner supplied manuals shall include HVAC system control maintenance and calibration information, including wiring diagrams, schematics, and control sequence descriptions. Desired or field determined set points must be permanently recorded on control drawings, at control devices, or for digital control systems, in programming comments per ASHRAE 90.1-2007 and 2009 IECC requirements.

1.5 TEST AND BALANCE:

A. A complete certified test and balance report shall supplied by an independent certified test and balance agency per AABC Test and Balance Report Manual (latest edition); this action must take effect prior to Owners final acceptance of the facility. This agency shall actually be an active member, with at least 5 years membership, certified and in good standing with AABC or NEBB national organizations. Licensed professional engineer (PE) working as certified firm agent will not be approved as qualification for this effort.

B. Once Owners have occupied facility agency shall again re-visit site and re-adjust systems based on actual space usage. If this event occurs during one season (cooling or heating) agency shall make an additional adjustment during other remaining season (heating or cooling), as required.

C. Testing shall be for all air distribution, hydronic systems, chilled water, hot water (both domestic and serving mechanical systems), hot water return (domestic), equipment, fans, controls, equipment coils, dampers, etc.

D. Test-n-balance information must contain all coil temperatures (dry bulb/wet bulb), mixed air temperatures, outside entering air temperature (dry bulb/wet bulb), supply-return air temperatures at diffusers, grilles and/or registers, chilled-hot water line temperatures at equipment, pumps and coils, room temperature and humidity levels, system static pressure, filter conditions and type with efficiency rating, and duct leakage amount based on system capacity (ie…1%, 2%, 3%....).

E. Air distribution devices shall be in compliance with construction documents; Test and Balance agency shall provide all sizes, quantities, and "velocities" noted in documents; air velocities (FPM) not indicated in bid documents shall still be recorded at each device for Engineer review; failure to record both CFM's & FPM's will result in complete system retesting and balance; each air device indicated in documents will include the following typical information at either actual product or as so indicated in schedules:

*Product Face Size	Type & Air Pattern
15"x 15"	- CD-4
Quantity (CFM's)	Velocity (FPM's)
300	- 550
Branch duct size serving air device	
w/10" Æ	

*does not include T-bar panel or framing

F. Actual air velocities (FPM) and sound levels MUST be accurately tested and recorded at each air distribution device. See Diffuser, Grille & Register Schedule for additional information. The purpose of this action is to determine if the sound waves and air moving qualities are performing as designed-engineered. Failure to provide this requirement will result in rejection and not-approved status of certified report.

G. Agent shall follow compliance information as set forth in American Air Balance Council Standards for Total System Balance 2002 or National Environmental Balancing Bureau 2005 edition of the Procedural Standards for TAB of Environmental Systems, and the 2nd edition for the Procedural Standards for the Measurement of Sound and Vibration.

H. Firms submitting air distribution reports only will be rejected.

I. Certified Test and Balance agency shall be approved by the Engineer, prior to bidding project.

J. All domestic hot water systems shall also be tested and adjusted to meet design requirements as required by governing codes or as so noted in specifications.

K. All new and renovated building structures shall have air balance systems to assure slight positive air pressure via designed mechanical systems; this effort shall be field verified by "five" blower door test method in compliance with US Army Corps of Engineers "Air Leakage Test Protocol for Building Envelopes" Version 3 dated 11 May 2012; readings to be recorded during typical un-occupied building usage with interior-exterior delta temperature variance of 20 degrees F or greater. Air Barrier Association of America manual "ASTM E779 Standard Test Method for Determining Air Leakage Rate by Fan Pressurization" shall also be used as mandatory guide. CFM75 shall be used as design parameter for leakage value. Agent providing test shall be licensed certified member of Building Performance Institute with 5 years experience. Verify requirements and conditions prior to bid effort.

L. Mechanical drawings reflect both "Outdoor HVAC Design Criteria" and "Indoor Environmental Design Criteria". These stated values, as well as other construction document information, shall be used as tools for certified test-n-balance agent adjustments, calibrations, pressure mapping, etc. Although air filtration maybe slightly higher than values indicated agent must still make effort to assure system performance as related to comfort temperatures, humidity, dehumidification, air changes per hour, ventilation rate and exhaust air rate. Any inconsistences noted shall be immediately reported to the project sub-contractor and engineer prior to acceptance.

1.6 EQUIPMENT/SCHEDULES/FIXTURES:

A. All equipment schedules, fixtures and construction document information notes are hereby noted in specifications and construction documents.

B. All roof curbs for outside air intakes shall be provided and installed by this contractor; coordinate with roofing contractor for all roof systems.

C. Equipment foundations for HP units shall be reinforced concrete 6" thick with pad 6" wider and longer than unit; provide 12" pea-gravel trench, framed in 2" x 12" treated lumber (12" in depth) around entire concrete pad for system defrost and drainage; bottom of unit, not support legs, shall be 6" above finished grade based on FEMA flood level requirements per code.

D. AHUs shall have spring type vibration isolators as manufactured by Mason Industries; isolator products shall properly sized with minimum of one inch deflection.

E. Materials and products specified shall be listed by the Underwriters Laboratories (UL) or National Electrical Manufacturer's Association (NEMA).

F. All AHU's shall have one inch "pleated" air filters at units or grilles, as indicated in drawings equal to American Air Filter (Amair 1300) or Precisionaire (Pleat AC) with rated at MERV 13 per ASHRAE 52.2-1999; fiberglass throw-away type filters are NOT acceptable; provide one extra set of filters to Owner after final acceptance. If odors are present associated with cooking, perfumes, etc then contractor may be requested to provide additional air filter at equipment equal to American Air Filter Amair/C Plus; verify prior to installation.

G. AHU units installed horizontally overhead shall be supported from structures spanning minimum distance of 10 feet. Equipment shall be secured by steel angle with threaded rods and spring type vibration isolators, as manufactured by Mason Industries, with "Unistrut" steel under full length of equipment. Threaded rods must be secured to facility foundation and structure, with approval by structural engineer.

I. Locate all equipment which must be serviced, operated and/or maintained in fully accessible position based on manufacturer recommendations, code requirements, or as so indicated in drawings. Contractor shall review equipment vendor installation instructions for compliance and guidelines to assure proper air movement, component replacement, etc. Doors for access to electric heating coils shall have disconnect switch to break circuits as door is opened. Furnish all doors/panels in accordance with local codes and manufacturer's recommendations for each control valve, control, damper, motor, or other device requiring service.

J. All floor drain grate covers shall be polished brass with floor sink grate covers in nickel bronze finish; verify with architect prior to submittal phase.

1.7 REFRIGERANT PIPING:

A. All piping sizes shown are clear net inside dimensions.

B. Refrigerant piping shall be sized and installed in strict accordance with the manufacturer's recommendations for liquid, vapor horizontal and vapor risers. If piping is not indicated on drawing documents then contractor shall immediately assume that corresponding AHU and HP numbers shall match with piping routed above finished ceiling areas to inside cavity of outside walls. Routing must be sloped, pitched, trapped (with double suction risers) in compliance with manufacturer recommendations. Place steel or metal guard over any piping subject to structural framing nails, anchors and screws.

C. Refrigerant tubing shall be installed with a moisture indicator sight glass located in the liquid line adjacent to the outdoor unit.

D. Thoroughly clean refrigerant pipe and fittings before assembly. All joints are to be made with silver alloy braze with melting above 1100° F. No acid flux shall be used on any joint or pipe.

E. Refrigerant piping under slab floors or below grade shall be installed in PVC schedule 3034 material; piping shall be sized sufficient to allow installation of refrigerant piping, with insulation; seal open ends with proper sealant material and slope per manufacturer recommendations.

F. Brazing Materials: Comply with SFA-5.8, Section II, ASME Boiler and Pressure Vessel Code for brazing filler metal materials appropriate for the materials being joined.

G. All refrigerant piping materials shall be of the following:

1. Refrigerant Piping
   a. below floor-type "L" soft copper
   b. above floor-type "L" hard copper
2. Insulation
   a. refrigerant piping shall be equal to Armaflex "AP or AP-SS" (1" thickness) with aluminum jacket and plastic "Zeston" fitting covers
3. Pipe Hangers
   a. pipe hanger spacing and sizing shall be in accordance with Section 308 of IPC code (2009); hanger strap or bands will not be permitted

H. All refrigerant suction and discharge lines shall be sloped up-ward away from compressor at ½" per 10 feet in accordance with vendor recommendations to prevent oil drainage; verify exact requirements prior to installation.

1.8 PLUMBING/CONDENSATE DRAIN PIPING:

A. All condensate drains shall terminate to floor mounted janitor sink as indicated in Drawing Information Notes. Provide through condensate control device as manufactured by Trent Technologies, in Tyler, Texas called "CostGard"; deep seal P-traps with cleanouts are NOT acceptable for condensate drains at equipment.

B. Unless otherwise noted, all water piping shall be routed above sheet-rock ceilings and/or in walls or chases with offsets, as required, to miss obstacles; coordinate with other trades prior to installation.

C. No PVC piping or other materials shall be routed or installed in return air plenums or free pulling mechanical rooms; insulate vent stacks with PVC materials in these areas with 3" external R-8.3 duct wrap with FSK foil backing and vapor seal with SMACNA approved tape or Armaflex AP-SS tubing insulation (1" thickness).

D. Water piping below slab floor and finished grade shall be sleeved with 3/4" Armaflex tubing insulation; insulation minimum length shall be three feet; piping shall be tested at 300 PSI prior to earth fill and covering.

E. Water hammer arrestors shall be installed at all water closets, urinals, drinking fountains, washing machines, dishwashers, & tubs/showers in accordance with PDI-WH201 & ANSI/ASEE-1010-1996 as manufactured by Wade or Sioux Chief. Devices to be installed within 6 feet of valve served in hot & cold water lines. Size shall be "A" unless noted otherwise. Vent stacking is not permitted for water hammer arrestors.

F. All copper pressure piping for potable water and condensate drains shall be soldered entirely with silver solder with less than 0.2% lead per 2015 IPC.

G. All water piping must be disinfected in accordance with 2009 IPC and verified by written report from the local and State Boards of Health.

H. Utility connections indicated on documents are the best information available to the design engineer and shall be field verified by the contractor prior to installation.

I. All piping inverts will be established after finished floor elevations and utility sewer inverts are determined.

J. Prior to cover-up or back-fill of soil-waste-vent piping (below finished grade/floor areas) systems shall be filled with water and tested at ten (10) foot head with all fittings and joints open for review by Engineer and/or local building inspection department. Any piping not inspected will be removed with damages to be fully repaired by this contractor. After plumbing fixtures have been set and their traps filled with water the entire sanitary sewer system shall be tested with air pressure of not more than 0.1 inches of water column and 1/4 oz peppermint test. Perform the air and smoke test with an approved smoke testing machine which will show a clear passage of smoke and air throughout the entire system. The system shall be proven absolutely tight under such test.

K. All water piping shall be tested at a minimum of 200 PSI for 2 hours, with no leaks, prior to insulation or connections to local utilities; review of test shall be by Engineer or local utility official.

L. Route all temperature-pressure relief lines to outside per 2023 FBC.

M. Route all vent lines to common stacks in order to limit roof penetrations; roof penetrations shall be routed to backside of roof at all times; verity locations and slopes at site.

N. All piping sizes shown are clear net inside dimensions.

O. All piping materials shall be of the following:

1. Soil-Waste-Vent & Interior Storm Drain Piping
   a. se Plumbing Material Schedulechedule ; well casing, thin-wall or core type walls (coextruded core) are NOT approved and will be removed at contractor's expense including building repairs for such
2. Potable Water Piping
   a. below floor-type "K" soft copper (pressure tested) in compliance with ASTM-B.88
   b. above floor-type "L or M" hard drawn copper with ANSI-B16.8 & ASME-B16.22 soldered joint fittings with 95TA tin-antimony soldering; contractor may NOT use Rigid Viega ProPress fitting system in accordance with manufacturer's published instructions
   c. stop valves shall be bronze ball valves with stainless steel balls & Teflon packing & gaskets
   d. contractor may use cpvc material in compliance with ASTM-D2846 & SDR11 above finished floor for lines up to 2" with schedule 80 CPVC for lines above 2"; all piping shall be inside diameter and not copper tube size method; systems must be approved by local Authority Having Jurisdiction
3. Condensate Piping
   a. copper type "L or M" hard drawn or
   b. schedule 40 PVC with solvent welding
4. Insulation
   a. ALL potable water piping, including hot water, hot water return and cold water piping in non-conditioned areas, interior walls, outside walls or exposed in mechanical rooms shall be 1.5" thick fiberglass insulation for pipes up to 1.5" in size with 2" thick fiberglass insulation above 1.5" line size (ASTM C547) with Universal jacket (secured with Foster 85-75); provide protection blocking & shields at each hanger; fittings shall be furnished with "Zeston" plastic fitting covers; all joints shall be finished with Foster 30-36 & reinforced with 20x20 glass fabric;
   b. Armaflex AP or AP-SS elastomeric closed cell foam tubing insulation with 1" thickness is approved in lieu of fiberglass. However, if tubing insulation materials are applied to steel or cast iron piping then contractor must apply approved rust protective paint or coating to piping and fittings to prevent future rusting concerns.
   c. All roof drains shall be insulated with 3/4" Armaflex tubing type material for rated plenum systems from roof drain areas to vertical lines inside insulated walls
5. Pipe Hangers
   a. pipe hanger spacing and sizing shall be in accordance with Section 308 of IPC Code (2012); hanger strap or bands will not be permitted
   b. hangers shall be Fee & Mason Figure 364 with Figure 227 adjustable for copper pipe
   c. hangers for horizontal sanitary piping shall be expansion ring or clevis type spaced no more than 5 feet apart; vertical pipe passing thru slabs shall be supported with Fee & Mason Figure 241 riser clamps
6. Cleanouts
   a. floor cleanouts (FCO) to be equal to Wade #W-6030-SV-2TS
   b. outside cleanouts (COTG) to be equal to Wade #W-6030-SV-2 in 18" square by 6" thick concrete pad flush with finished grade
   c. wall cleanout (WCO) to be equal to J.R. Smith #4420
7. Valves
   a. ball valves for potable water systems shall be equal to Nibco Model TF600ALF Lead free type
   b. check valves equal to Hammond #915
8. Meters
   a. water meter/regulators equal to Hays Model MT Series in underground vault with traffic lid per local code
9. Backflow Preventors
   a. equal to Watts Model 909QT in underground vault with traffic lid or above ground with freeze type protection cover per local code; cover shall be approved by project architect based on type, location, color, etc.

P. All water piping, outside building, shall be buried minimum of 18" below finished grade for freeze protection in accordance with 2009 IPC and local requirements.

Q. All floor drains or floor sinks serving ice machines or similar products shall be insulated with sealed 1/2" Armaflex tubing material from drain to a minimum of 10 feet down stream; purpose is to prevent possible condensation issues; actual length maybe increased if so deemed necessary by Engineer.

R. All trap primers for floor drains shall be sloped to allow proper water discharge for primers to floor drain unit.

S. Upon completion of project contractor shall fill all floor drain traps with liquid mineral oil for air tight seal.

T. Contractor connecting to existing sanitary sewer lines inside or outside of building shall verify that sufficient line capacity is available to satisfy requirements for line usage; this effort may include documentation using digital color camera inside line from fixture connection to local sewer utility main or septic systems.

U. Storm drain lines or sanitary sewer line shall never reduce in direction of flow; for example as 4" sanitary line may not reduce to 3" line in direction of flow.

V. All water piping, drains, venting, floor cleanouts, wall cleanouts, outside cleanouts, floor drains, floor sink, hub drains, etc shall be capped or plugged each day during construction to assure and clean quality line to prevent contamination; taped ends or taped products is not any acceptable method to prevent line concerns; lines shall remain capped until fixtures are provided and tested.

W. Sanitary sewer line shall be installed in compliance with 2009 IPC using lazer beam technology for line guide and grading; set laser equipment to properly align piping to assure required slope based on finished floor elevation and established invert elevation connections to public utility or manholes. Check line or grade with lazer at 25 feet, 50 feet, 100 feet; after 100 feet line shall be checked with lazer at 100 foot intervals. Do NOT lay piping in water or on saturated soil or bedding, or allow water to rise in trench around pipe during installation effort.

X. Trap-Guard method for floor drains or floor sinks is NOT approved unless otherwise indicated. Contractors applying for Value Engineering effort may exclude this from this process unless written permission from project engineer. Those installing such devices in lieu of trap primer method indicated will at their cost saw-cut or provide openings in finished floors, walls, ceilings, etc with repairs and finishes to match existing surroundings.

1.9 PIPING SPECIALTIES:

A. Escutcheons: Chrome-plated, stamped steel, hinged, split-ring escutcheon, with set screw. Inside diameter shall closely fit pipe outside diameter, or outside of pipe insulation where pipe is insulated. Outside diameter shall completely cover the opening in floors, walls, or ceilings. All exposed pipes, refrigerant lines and/or water piping & drains under cabinets or counters shall have escutcheons installed; this action also applies to piping systems installed in mechanical rooms, outside structures or other exposed areas.

B. Unions: Malleable-iron, Class 150 for low pressure service and class 250 for high pressure service; hexagonal stock, with ball-and-socket joints, metal-to-metal bronze seating surfaces; female threaded ends.

C. Dielectric Unions: Provide dielectric unions with appropriate end connections for pipe materials in which installed (screwed, soldered, or flanged), which effectively isolate dissimilar metals, to prevent galvanic action, and stop corrosion.

D. Dielectric Waterway Fittings: Electroplated steel or brass nipple, with an inert and non-corrosive, thermoplastic lining.

E. Y-Type Strainers: Provide strainers full line size of connecting piping, with ends matching piping system materials. Screens shall be Type 304 stainless steel, with 3/64" perforations at 233 per square inch.

F. Sleeves:

1. Sheet-Metal Sleeves; 10 gage, galvanized sheet metal, round tube closed with welded longitudinal joint.
2. Steel Sleeves: Schedule 40 galvanized, welded steel pipe, ASTM A53, Grade A.

G. Mechanical Sleeve Seals: Modular mechanical type, consisting of interlocking synthetic rubber links shaped to continuously fill annular space between pipe and sleeve, connected with bolts and pressure plates which cause rubber sealing elements to expand when tightened, providing watertight seal and electrical insulation.

H. P-Traps and water piping underneath handicapped lavatories, sinks and drinking fountains shall be wrapped with "HANDI LAV-GUARD" kits per American With Disabilities Act, as manufactured by Truebro, Inc.

I. Contractor shall maintain the integrity of all fire walls, structures, ceilings and floor systems with "METACAULK" approved fire system materials per UL-CAJ2134 (ceiling-floor systems) or UL-WL2135 (wall systems); verify actual ratings with architectural construction documents; contact manufacturer "RECTORSEAL" at 800-231-3345 for additional information.

1.10 AIR DISTRIBUTION:

A. All air distribution shall be air tight and free of leaks, with less than 1% air leakage, and must be inspected for leaks prior to installation of fan units or finished ceilings, finished floors or concrete for underground duct systems; ductwork shall be sealed with approved polyurethane air duct sealer, from McGill Air Seal per SMACNA Standards and UL ratings. All ductwork and plenums must be sealed in accordance with ASHRAE Standard 90.1-2007 Table 6.4.A.2A (Table 6.4.A.2B provides definitions of seal levels) and with standard industry practice (per Appendix E).

B. All supply, return, exhaust and outside air ducts (except kitchen exhaust air ducts) shall be galvanized metal with 3" external insulation having vapor, retarding jacket (FSK type) with out-of-the-box rating at R=10.3 and installed value of R=8.3 value equal to Johns Manville "Microlite XG"(formaldehyde-free product). Insulation shall comply with UL 181 and must have flame spread rating of 25 and a smoke developed rating no higher than 50. Apply white mastic fire rated duct insulation sealer to all joints and seams per SMACNA Standards or as indicated in Mechanical Material Schedule using UL approved foil acrylic tape and squeeze application method.

C. No ducts shall be internally insulated, unless otherwise noted.

D. Fibrous Ductboard systems are NOT approved unless otherwise indicated.

E. Install flexible duct connectors at all fans, air handling units, roof-top-units, package units and other air moving equipment.

F. All ducts are to have air extractors (adjustable type) on square or rectangular take-offs with spin-in volume dampers (no scoops) on round or oval take-offs.

G. Square or rectangular 90 degree and 45 degree elbows shall have "air-foil" type turning vanes, installed per SMACNA Standards.

H. Flexible ducts must comply with UL 181 and shall not exceed six feet in length; remaining branch line shall be galvanized metal with R-8.3 external insulation and white fire mastic sealant or UL approved acrylic foil tape; flexible ducts are to have foil backing (FSK type); flexible duct connectors are not approved as flexible ducts for materials on project; to identify flexible duct connector look for UL symbol with circle; flexible ducts have rectangular box around UL symbol.

I. The interior face of all ductwork housing supply, return and exhaust air diffusers, registers or grilles shall be painted "flat-black" so when viewed from below and above nothing beyond surface of air device is visible.

J. Wherever the depth of a trunk duct is less the round run-out duct diameter noted contractor shall provide transition fittings (manufactured) of equivalent area to the round duct.

K. All exhaust (including plumbing vents) shall be separated at least ten (10) feet from air intakes unless otherwise noted.

L. Fire dampers shall be rated at a minimum of 2 hours per UL555, equal to RUSKIN, with approved rated access doors (insulated); dampers shall be FREE area type.

M. Install backdraft dampers, volume dampers, insect screens and approved weather proof wall louvers or door grilles on all outside air intakes.

N. All duct sizes shown are clear net inside dimensions.

O. Ducts shall be properly supported from structure per SMACNA Standards.

P. All square or rectangular ducts 24" wide or larger shall be connected using "Ductmate" type fittings; bar locks, "S" locks, etc. for larger ducts will NOT be accepted for joints; joints smaller than 24" shall be screwed bar lock type with drives with approved duct sealer as indicated previously.

Q. Galvanized metal ducts must be constructed in compliance with SMACNA "HVAC Duct Construction" manual 3rd edition (2005) with Addendums for G90 material using US Steel products; other galvanized metal from other countries (outside the USA) shall be constructed of the following minimum gauge requirements using either cross-breaking, bead construction or mechanical stiffeners:

1) 12" & down........26 gauge
2) 13"-30"........24 gauge
3) 31"-36"........22 gauge
4) 37"-84"........20 gauge
5) OVER 84"........18 gauge

Failure to comply with this requirement will result in complete product removal and replacement at no additional cost to owner.

R. Provide duct liner for all AHU's in compliance with drawings details, Drawing Information Notes and/or Mechanical Material Schedules for acoustics using Armacell elastomeric closed cell foam; sound rating to be tested at 125-1000 Hz or as otherwise indicated; material shall be properly applied, clipped and sealed per SMACNA Standards; elastomeric foam to have hospital sealer with biological treatment; apply lining to both supply and return ducts but NOT outside air intakes. Metal duct is not required to have rust paint in paint grip exposed ducts when installing elastomeric duct liner according to Armacell's installation guidelines. When insulation is installed, the metal surface must be cleaned with denatured alcohol or other cleaner and dried to be ready to accept the adhesive. The liner or wrap must be 100% glued to the sheet metal to prevent any moisture or water from getting under the insulation. If AP Armaflex is used on an exterior application, the foam must also be protected from the UV radiation.

S. All supply, return and exhaust air ducts shall have galvanized elbows with 3" (R-8.3) external duct insulation at diffusers, grilles or registers; this requirement is to prevent air restrictions caused by typical flexible duct materials.

T. All supply main trunk ducts shall extend minimum of 24" beyond last air distribution device for "cushion-head" air balance effect; failure to comply with this request will demand field adjustment by installing contractor at each branch line with new control products and additional re-testing by certified test-n-balance agent.

U. Duct tape may NOT be used as approved duct sealer for metal ducts as so stated in 2015 IECC and ASHRAE 90.1-2013. Duct air leakage test shall be performed prior to external duct wrap-insulation as indicated in drawing tables-charts (indicated in item "A" above) per ASHRAE 90.1-2007. Leakage rate is limited to 4 CFM per 100 SF of duct surface area. Contractor shall provide certified document based on test method reflecting certification of agent and duct testing equipment. Any insulation or similar covering applied before duct leakage test will be completely removed at contractor's expense including any associated trade additions, project time delays, etc.

V. Any volume or balancing dampers over 12" in size shall be opposed blade damper type per SMACNA standards; verify each branch line, duct take-off, etc. prior to effort.

1.11 SPECIAL PROJECT NOTES:

A. Installation of all heating, ventilation, air conditioning and plumbing systems shall comply with ASHRAE 90.1-2013 and/or 2015 International Energy Code Council; verify with local and state building officials prior to effort to assure compliance with proper requirements.

B. Entire building shall be pressure tested during certified test-n-balance effort to assure positive building pressure of at least 2.5 Pascal. Other rooms in building shall also test based on the following requirements:

1. toilet rooms, lockers, kitchens, outside storage or electrical rooms shall be under negative air pressure from 0.0 to -.1 Pascal
2. office areas, work rooms, sanctuary rooms, class rooms, etc. shall be under positive room pressure from 0.00 to 2.5 Pascal

Certified room map testing and recording shall be submitted with certified system report by project approved certified test and balance contractor. Project will not be accepted until this effort has been approved by project engineer. Report shall be recorded on basic floor plan indicating actual room pressure (-+) with instrument used, Pascal digital type, time of report, date of report, equipment calibration date, etc.; any issues for non-compliance shall be reported to engineer immediately.

C. Facility materials used during the construction and operation of building shall in compliance with government regulations for indoor air quality contaminants. Typical levels shall not exceed time weight averages (TWA) for CO (carbon monoxide) of 9 parts per million for 8-hour sampling, CO2 (carbon dioxide) 1000 ppm (TWA) or formaldehyde 0.1 ppm (TWA). All products containing or releasing Volatile Organic Compounds (VOCs) shall comply with US Green Building Council LEED Green Building Design Manual 2009 Edition for Low Emmittance in New Construction and Renovation.

D. Water and sewer systems shall connect to local utilities; verify at site prior to installation and connection; if existing systems are not adequate to handle additional load requirements then contractor shall immediately notify Owners and Engineers.

E. Water heaters shall be mounted in steel pans with drain routed to outside area per code.

F. Provide 7-day, 24-hour quartz time clock, with battery back-up, and day-lite savings program function for all water heaters; locate clock at each device for easy programming and set-up or inside conditioned space as recommended by vendor and architect-engineer. Mechanical type time clock is NOT approved.

G. Install chrome drainage pipe at all sinks, lavatories and water coolers from P-traps with tail-piece to wall sleeve; material to be same size, gauge and type as device specified; PVC products shall not be used for any exposed components (unless otherwise noted).

H. Some supply, return or exhaust air diffusers, grilles or registers are shown on drawings directly below main air trunk ducts for information only; these lines must be routed in such manner as to prevent direct sound noise from main trunk ducts by either side line tap-in with 3 foot flexible duct extensions or bottom drops with same length flexible ducts; verify exact requirements in field with finished ceilings prior to installation.

I. Water piping over 50 feet in "straight" length shall have pipe expansion joint to prevent leaks due to building & thermal movement; expansion joint loop maybe used in lieu of mechanical fitting if approved by project engineer.

J. All domestic hot water piping in facility shall be delivered at 140 degrees F to last fixture from tank unit unless otherwise noted; this is a mandatory requirement in an attempt to control bacteria growth inside systems such as Legionella; tempered mixing valves shall be installed at each point-of-use in compliance with the American Society of Safety Engineers section 1016 for all showers, bath-tubs, lavatories and sinks; these devices shall be Type T/P for control of both temperature and pressure as noted in ASSE 1016 with water tempered for delivery at 110 degrees F.

K. Back side of all ceiling diffusers, return air grilles and exhaust air registers shall have factory applied foil-faced, R-8.3 insulation with 181 UL rating formed to fit contour of product back; insulation shall be continuously glued and sealed around outer perimeter of outer cone to form vapor tight seal; contractor shall seal insulation on connecting duct at product to form a vapor tight seal at duct connection; approved sealant or foil-faced UL approved duct tape maybe used with fire rated mastic as noted in specifications.

L. All wall hung lavatories shall be installed using J.R. Smith wall carriers and Truebro single piece LAV-SHIELD; verify shield requirement with architect-owner prior to installation; if instantaneous water heater or air admittance valves installed shield shall be sized accordingly.

M. Contractor may use "air admittance valve" in soil-waste-vent plumbing systems as approved by local code for venting systems; products shall be as manufactured by Studor for models: Mini-vent, Maxi-vent, Redi-vent or Tec-vent (plenum systems) with no approved equals. Vents must be checked or serviced in compliance with vendor requirements; submit revised SWV plumbing riser indicating items if not so indicated in current documents; products must be installed as recommended by installation and technical manuals from Studor; verify approval prior to bid effort.

N. Plumbing contractor shall install rubber grommet at all wall mounted instantaneous water heaters located under sink or lavatories between unit and wall to limit sound vibration generated during unit operation; flow restrictor faucet aerators supplied with heater shall be installed at each faucet as recommended by vendor.

P. During the entire construction phase of project HVAC contractor shall make every effort to maintain a clean and healthy duct or air distribution system. This action shall include, but not be limited to, completely capping each open duct end, including branch ducts and intakes, with minimum 6 mil plastic material. Failure to comply with this requirement will result in complete duct/system cleaning, flushing and inspection by engineer approved certified agents with associated cost paid by project HVAC-mechanical contractor. The purpose of this effort is to assure overall system indoor air quality.

Q. All major HVAC equipment (ie..RTU, AHU, AC, HP, CU, PAC, PHP, OSA, etc.) shall have factory start-up during certified test-n-balance effort. This action shall not be performed by equipment wholesaler or similar agent unless approved by Engineer. Start-up will include complete data logging, warranty required analysis, and other necessary effort to assure that systems installed are in compliance with vendor mandatory guidelines for installation, sizing, application, service area, etc. Failure to comply with this item will demand complete cost and time spent by Engineer to be due and payable from project HVAC contractor including any additional cost associated for such action.

R. All building floor drains, unless otherwise noted, shall have sloped trap primer product as indicated in detail in lieu of mechanical type; these lines shall be installed as required with proper protection based on building materials; if contractor elects to install mechanical type trap primer or drain boot configuration then all modifications, repairs, patch work, etc. shall be paid by this sub to correct based on original design engineer documents with no additional cost to owner.

S. All ducted air handling units, package units or roof-top-units rated at 1,000 CFM or higher shall have Dwyer filter gauge at unit to allow for proper maintenance or service requirement; if installed in non-conditioned environment product shall be either protected or rated for such application; contractor to submit product information for approval by engineer prior to installation.

1.12 APPROVED MANUFACTURERS

A. The following manufacturers are approved for products specified on construction documents:

1. PLUMBING SYSTEMS
a) Water Closets: Kohler, American Standard or Mansfield
b) Urinals: Kohler, American Standard or Mansfield
c) Lavatories: Kohler, American Standard, Elkay or Dayton
d) Sinks: Kohler, American Standard, Elkay, Silver Cast or Dayton
e) Floor Drains: J.R.Smith or Zurn
f) Floor Sinks: J.R.Smith or Zurn
g) Cleanouts: Wade or Zurn
h) Valves: Hammonds or Chicago
i) Faucets: Kohler, American Standard, Mansfield, Delta or Chicago
j) Water Coolers: Oasis or Hawsley Taylor
k) Water Heaters: A.O.Smith, Rheem/Ruud or State

284 POPLAR DR
RAINSVILLE, ALABAMA 35986
(334) 695-0284
thedesigngroupinc@gmail.com
Mechanical-Electrical
Consulting Engineers
FL License No. 31813

confidential-this document & the information contained herein is confidential & may not be disclosed, copied altered or reproduced to any persons except as permitted in writing by "The Design Group, Inc."

the Design Group of Florida inc.

division of The Design Group, Inc.

J. KYLE COX
LICENSE
NO.62881
STATE OF ...
PROFESSIONAL ENGINEER

Digitally signed by J. Kyle Cox
Date: 2025.09.30 10:57:48-05'00'

JOEL SAMPSON ARCHITECT

212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014780
850-875-4348

ANDY GAY PARK IMPROVEMENTS
FOR
CITY OF QUINCY, FLORIDA
116 NORTH ADAMS STREET QUINCY, FLORIDA

DATE: 7-15-25
REV:

JOB NO: 24-014

MP.1

SHEET NO.

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, INC. AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT, INC.

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, INC. AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT, INC.

SECTION 220100-230100-MECHANICAL & PLUMBING SPECIFICATIONS

2. HEATING & AIR CONDITIONING
a) Carrier, Trane, or Lennox for ducted systems
b) Carrier, Daikin or Mitsubishi for all ductless systems

3. VENTILATION
a) Greenheck, Acme, Penn or Cook

4. AIR DISTRIBUTION
a) Metalaire, Carnes or Titus

1.13 IDENTIFICATION:

A. Equipment and piping identification marking shall be black stenciled 3/4" high letters applied over finished painting and shall comply with ANSI specifications, local codes or as herein described. Identification must include unit number, area served, flow direction (air, water, refrigerant, gas, etc.) and material type (supply air, return air, exhaust air, chilled water supply, chilled water return, etc.). All valve tags are to be applied to valves controlling main, risers and branches. Valve tags shall be plastic not less than 7-1/2" wide with 3/4" high stamped numbers and coded lettering.

B. All equipment, air distribution and piping shall be properly identified and labeled for easy understanding of systems and flows.

C. Water and refrigerant piping shall be labeled with painted color stencils (minimum 1" high) indicated material type (hot, cold, discharge, liquid, etc.) with flow direction.

D. Duct systems (supply, exhaust, and return) to be labeled (same as piping) with directional arrow for air flow; labeling must be at equipment and every 20 feet of systems.

1.14 ELECTRICAL/CONTROLS:

A. All air handling units (AHUs), package air conditioning units (PACs), dedicated 100% outside air systems (DOAS) and/or roof-top-units (RTUs) shall have in-line smoke detectors installed in both supply-return air plenums, or as so noted in construction documents regardless of local code; detectors shall be type as manufactured by "Honeywell", "Johnson-Controls", "FireX", System Sensor, Simplex, or approved equal for photoelectric 4 wire intelligent type for 24 volts DC with 2:1 configuration; sensor tubes installed in duct shall be at least 2/3 duct width, sloped ½"/ft away from sensor for condensation concerns, have inlet conduit openings facing air stream with exhaust tube on opposite side of incoming air conduit, have smoke test clearing feature, short circuit protection, water tight gasket (including duct connection), etc.; units shall automatically sound audible alarm, turn-off fans and send signal to fire control alarm panel per latest edition NFPA72; intent is to have fire alarm contractor (if project demands fire alarm system) provide and wire detectors with actual duct detector installation by project HVAC contractor; verify this requirement with project fire alarm contractor and/or engineer prior to bid effort; detector must completely compatible with facility/building fire alarm system, including necessary wiring, controls and transformers; this compatibility requirement will demand products actually be purchased or arrangement be made between project fire alarm contractor and HVAC contractor to assure system UL rating, certification and warranty; if detectors and wiring are not provided by a fire alarms contractor then HVAC contractor shall install detectors as so indicated in HVAC drawings, details and schedules to include all detectors, transformers, controls, alarms, etc., including monitor module to existing facility alarm panel; all system smoke detectors to have remote indicator light systems located in ceiling area directly above room thermostats served by controlled unit (verify exact location prior to installation).

B. All controls, wiring, relays, transformers, starters, disconnects and accessories for HVAC systems and equipment shall be under this contractor for a complete heating, ventilation and air conditioning system.

C. Room thermostats shall be equal to Carrier Model "thermidistat" or similar device mounted at 54 inches above finished floor; thermostats to be programmable type with night set-up/set-back and 7-day clock functions with battery back-up; digital thermostat controls shall be with bi-metallic actuated adjustment sensing elements and have internal mounting plate and tamper proof blank cover plate in lieu of locking cover device; if manufacturer cannot provide tamper proof product then locking cover product may be substituted (with approval from Engineer); heat pump units shall have outdoor thermostats; all indoor fans shall be cycled "on" (SMART fan control) during normal occupancy for facility air balance with system operating at "auto" fan position during unoccupied periods; heating and cooling cycles must be AUTO switched type; control contractor shall guarantee the control system installed to be free from defects and must provide service for one full year after date of final acceptance by Owner.

D. All control wiring shall be plenum rated cable; wiring in walls and exposed locations shall be installed in EMT per latest edition of the National Electrical Code, with correct turns and pull-boxes.

E. Motor starters shall be supplied by HVAC Contractor and installed by Electrical Contractor; motor starters must be approved with automatic controls capable of making frequent starts as device demands; horsepower rating each starter shall not be less than the motor it controls; each starter shall be equipped with a Twin Break type contact for each ungrounded line to motor.

F. External electrical disconnects for all equipment shall be installed in compliance with latest edition of the National Electrical Code 110-26; this demand will require minimum 3 foot front clearance, 30 inch width in front of disconnect with 6 ft head room height; verify actual conditions with all trades prior to installation; failure may result in relocation of said electrical items or equipment at contractor's expense.

G. If project has ductless or ducted systems designed using Mitsubishi or similar products, where control wiring and indoor unit power is supplied from outside HP condenser then wire (14/4) shall be provided in conduit as required per vendor; shielded cable may be used if in ceiling plenum system or as approved by Engineer.

H. To control building odors design engineer has selected wall mounted VOC sensor equal to BAPI Model BA/VOC-D-BB with sensor verification kit. See Sequence of Operation and/or Drawing Information Notes for additional requirements. The following is a minimum sample listing for VOC sensor:

1.15 PIPING INSTALLATIONS:

A. Ream ends of pipes and tubes, and remove burrs. Bevel plain ends of steel pipe.

B. Remove scale, slag and dirt for both inside and outside of piping and fittings before assembly.

C. Conceal all pipe installations in walls, pipe chases, utility spaces, above ceilings, below grade of floors, unless indicated otherwise.

D. Install piping free of sags or bends and with ample space between piping to permit proper insulation applications.

E. Install exposed piping at right angles or parallel to building walls. Diagonal runs are not permitted, unless expressly indicated on the construction documents.

F. Install piping tight to slabs, beams, joists, columns, walls and other permanent elements of the building. Provide space to permit insulation applications, with 1" clearance outside the insulation. Allow sufficient space above removable ceiling panels to allow for panel removal.

G. Locate groups of pipes parallel to each other, spaced to permit applying full insulation and servicing of valves.

H. Install drains at low points in mains, risers and branch lines consisting of a tee fitting, 3/4" ball valve, and a short 3/4" threaded nipple and cap.

I. Wall Penetrations: Seal all pipe penetrations through interior and exterior walls using sleeves and mechanical sleeve seals. Pipe sleeves smaller than 6" shall be steel; pipe sleeves 6" and larger shall be sheet metal.

J. Fire Barrier Penetrations: Where pipes pas through fire rated walls, partitions, ceilings, or floors, the fire rated integrity shall be maintained with "Metacaulk" material.

K. Use pipe fittings for all changes in directions and all branch connections.

L. Remake leaking joints using new materials.

M. Install strainers on the supply side of each piping control valve, pressure reducing or regulating valve; solenoid valve, and elsewhere as required.

N. Install unions adjacent to each valve and at the final connection to each piece of equipment and plumbing fixture having 2" and smaller connections, and elsewhere as required.

O. Install flanges in piping 2-1/2" and larger, adjacent to each valve, at the final connections.

P. Install dielectric unions to connect piping materials of dissimilar metals in dry and wet piping systems (water, steam, gas, compressed air, vacuum).

Q. Refrigerant lines under slab floors or below grade shall be installed in PVC schedule 3034; seal open ends with proper slope per manufacturer recommendations.

R. All underground piping shall be painted with a minimum of two coats of black asphaltum; material embedded in concrete need not be painted. Pipes protruding through concrete floors shall be bitumastic coated at the point of breach.

1.16 SEQUENCE OF OPERATIONS FOR HVAC SYSTEMS:

A. All heat pump systems whether split remote type or package shall perform as follows:
1) room thermostats shall be digital programmable type with auto change over for heat-cool mode
2) upon pre-determined time of day, approximately one hour before facility scheduled opening, indoor fan shall cycle to "on" position for continued ventilation with room temperature to maintain comfort level between 70-75 degrees F for cooling mode and 68-73 degrees F for heat set-point
3) at the end of scheduled day when building occupants have vacated facility systems shall continue to operate for approximately one additional hour at occupied set-points for both auto changeover and fan ventilation to assure structure purging
4) during occupied and unoccupied periods system dehumidification shall be controlled by wall mounted digital humidistat or thermostat with built-in humidity control component; set-point for this device shall be set at 55% dehumidification or as so noted in construction documents; products shall maintain facility dehumidification requirement by energizing HVAC equipment with true variable speed indoor fan, via hot gas reheat or "heat-pipe" technology; electric re-heat method is not acceptable method for this feature
5) after facility is vacated mechanical system thermostats shall cycle indoor fans to "auto" position with indoor temperatures allowed to rise to 80 degrees F for cooling mode and drop to 55 degrees F for heating mode
6) if systems are designed using "Demand Control Ventilation" (DCV) as provided by Carrier Corporation with remote room sensor, products shall be set to open outside air dampers to full open position upon rise in room carbon-dioxide levels above 700ppm with dampers closing completely or minimum damper setting as so noted in documents
7) effort should be made to program system start-up in morning or occupied period allowing units to be staggered to limit building electric demand charge; this cycle maybe approximately 15 minutes apart or as determined by local utility
8) electric heaters used for auxiliary or secondary heat shall only be energized upon call for system defrost cycle to limit cold air discharge by indoor blowers during heating cycle or when outdoor air temperatures demand based on factory set-point; room thermostat shall have outdoor thermostat to assure this compliance
9) all electric heaters weather used for primary or secondary heat shall be staged in compliance with state energy codes
10) all individual programmable digital thermostats shall have 2 hour occupant override with seven day different automatic set-up/set-back function in compliance with ASHRAE 90.1-2013 and 2015 IECC requirements.

B. Systems with outdoor air for ventilation shall have low leakage 24 volt motorized dampers at louvers, vent caps or hoods controlled by interlock relay at AHU, RTU or PAC units with volume noted in document schedules. These dampers shall open to set position upon activation of indoor fans. Systems using carbon-dioxide detectors for control shall open to minimum damper position when unit indoor fans are energized with full open position from room CO2 detectors. Once room levels have been satisfied by room CO2 sensor then dampers shall move back to minimum setting with products in full closed once indoor fans cycle off.

C. Minimum damper settings shall be adjusted based on building pressure as indicated in specifications. Contractor shall have certified test-n-balance firm assure compliance with this requirement to prevent building from operating under negative pressure.

D. If construction documents demand economizer package with either powered exhaust or barometric relief then effort should be made to operate components based on enthalpy controller as required by vendor manufacturer. Contractor to connect CO2 functions to economizer package for building ventilation as so required by vendor manufacturer.

E. Building systems using natural or LP gas as primary heat source shall be programmed as so noted in this section with heat exchangers staged for low AND high heat depending on facility-space load requirements. Single rooms served by several units (ie. church sanctuary, fellowship hall, auditorium, etc.) shall have gas heating systems set to low heat, unless otherwise noted, to prevent over-heating of spac

F. All HVAC system products shall be equipped from the factory with quality controls to perform functions noted in these specs, schedules and "Drawing Information Notes". If additional components are necessary then vendor shall supply items with factory installation or field factory technician installed to assure compliance. Some additional key devices that shall be provided are: high pressure-low pressure switches for compressors, low ambient controls or controllers (down to -20 degrees F), time delay relays, dirty filter switches (located inside unit with manual reset), start kit for single phase units, phase monitor device to protect three phase systems and brown out control to prevent systems from operating below or above the 197-253 voltage range (same similar device for 460-480 volt systems).

g. All facility exhaust fans, make-up air fans, supply fans and/or fly fans shall be controlled as so noted in schedules. Effort shall include time of day programming for 24-hour, 7-day function as stated with actual building operation determined by owner. Fans controlled by room light switch with time delay on break shall energize room fan when space lights are turned "on" with fans continuing to operate approximately 5 minutes after room light is turned off to purge space of any un-wanted odors.

1.17 OPERATIONS & MAINTENANCE:

A. The requirements of this section must comply with ASHRAE 62.1-2010 for all mechanical and ventilation systems installed and/or renovated at this facility. The ventilation systems shall be operated and maintained at a minimum in accordance with the provisions of noted standard. Scope of work for project shall include complete one year maintenance effort based on equipment requirements, as well as items noted in this section. Failure to comply with this concern may result in complete replacement of said equipment based on Engineer analysis of damaged or non-functioning product.

B. Ventilation system design, operation and maintenance shall be reevaluated when changes in building use or occupancy category, significant building alterations, significant changes in occupancy density, or other changes inconsistent with system design assumptions are made.

C. An operation and maintenance manual, either written or electronic, shall be developed and maintained on site or in a centrally accessible location for working life of the applicable mechanical and ventilation systems. This manual shall be updated as necessary. The manual shall include, at a minimum, the operation and maintenance procedures, final design drawings, operations and maintenance schedules and any changes made thereto, and maintenance requirements and frequencies detailed in ASHRAE 62.1-2010.

D. Mechanical and natural ventilation systems shall be operated and maintained in a manner consistent with the Operations and Maintenance Manual or as required by Table 8-1 "Minimum Maintenance Activity and Frequency" per ASHRAE 62.1-2010.

E. Filters and air cleaning devices shall be replaced or maintained at a minimum of every 30 days during initial start-up with additional cycle of 60-90 days depending on actual building usage and traffic patterns. Additional cleaning and/or replacement may be required as set forth in Operations and Maintenance Manual as recommended by manufacturer. First year maintenance effort and filter replacement shall be provided by project HVAC contractor. After such established date owner shall be responsible for routine requirements. If desirable owner may elect to continue arrangement with said contractor based on "Planned Service" type contract.

F. Outdoor air intake dampers, controls, actuators and indoor fan motors must be checked once every three months. These devices shall be visually inspected or remotely monitored to verify that they are functioning in accordance with Operation and Maintenance manuals. Physical damage to louvers, vent caps, screens, etc. shall be repaired if such damage impairs their function in preventing contaminant entry. The total quantity of outside air to air handling equipment shall be measured and verified once every five years with tolerance rate of 5%+-.

G. Dehumidification coils (AC coils) shall be visually inspected for cleanliness and microbial growth no less than once a year or as specified in Operation and Maintenance manuals and shall be thoroughly cleaned when fouling or microbial growth is observed.

H. Drain pans shall be visually inspected for cleanliness and microbial growth at a minimum of once per year during the cooling season and must be cleaned if necessary. Areas adjacent to drain pans that were subjected to wetting shall be investigated, cleaned if necessary, and the cause of unintended wetting rectified.

I. Outdoor intake louvers, bird-bug screens, mist eliminators, and adjacent areas shall be visually inspected for cleanliness and integrity at a minimum of once every six months and cleaned as needed. When visible debris or visible biological material is observed, it shall be removed. Physical damage to louvers, screens, or mist eliminators shall be repaired if such damage impairs their function in preventing contaminant entry.

J. Sensors whose primary function is dynamic minimum outdoor air control, such as demand control ventilation, carbon-dioxide detectors, flow stations, etc. as well as heating and cooling shall have their accuracy verified at a minimum of every six months. A sensor or control failing to meet the accuracy specified shall be recalibrated or replaced.

K. Outdoor air flow verification shall be checked every five years. If measured minimum air flow rates are less than the design minimum rate (+-10% balancing tolerance) then they shall be adjusted or modified to bring them to the minimum design rate or evaluated to determine if the measured rates are in compliance with standard ASHRAE 62.1-2010.

L. The space provided around mechanical equipment shall be kept clear for routine maintenance, repairs and inspections.

M. Floor drains in mechanical rooms must be installed and maintained to prevent transport of contaminants from the floor drain to the mechanical room in both ducted and plenum type spaces.

N. ANY visible microbial contamination shall be investigated and rectified immediately.

O. Water intrusion or accumulation in ventilation and air conditioning systems or components such as ducts, plenums, air handlers, equipment, etc. shall be investigated and immediately rectified.

P. All pumps, controls, timers, flow switches, circuit setters, mixing values, etc. for water heating systems shall be visually inspected once a year to assure original design performance. Items not functioning properly shall be recalibrated or replaced to maintain compliance.

Q. Water heaters, expansion tanks, etc. shall be inspected and verified a minimum of once every six months. This effort shall include adjustments to assure temperature settings in compliance with design and maintenance manuals. Components not performing must be recalibrated or replaced immediately.

R. All floor drain traps shall be filled with mineral oil semi-annually to prevent sewer gas from leaking into conditioned space.

1.18 EXECUTION:

A. Contractor shall pay for all inspection permits, certificates, meters, connection fees, systems charges and license fees in connection with his/her work.

END OF SECTION 220100-230100

284 POPLAR DR
RAINSVILLE, ALABAMA 35986
(334) 695-0284
thedesigngroupinc@gmail.com
Mechanical-Electrical
Consulting Engineers
FL License No. 31813

confidential-this document & the information contained herein is confidential & may not be disclosed, copied altered or reproduced to any persons except as permitted in writing by "The Design Group, Inc."

the Design Group of Florida inc.
division of The Design Group, Inc.

J. KYLE COX
LICENSE
NO.62881

Digitally signed by J. Kyle Cox
Date: 2025.09.30 10:57:53-05'00'

JOEL SAMPSON ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014780
850-875-4348

ANDY GAY PARK IMPROVEMENTS
FOR
CITY OF QUINCY, FLORIDA
116 NORTH ADAMS STREET QUINCY, FLORIDA

DATE: 7-15-25
REV:

JOB NO: 24-014

MP.2
SHEET NO.

ABBREVIATIONS

A/E ARCHITECT / ENGINEER
AD AREA DRAIN/ACCESS DOOR
AFC ABOVE FINISHED CEILING
AFF ABOVE FINISH FLOOR
AFG ABOVE FINISH GRADE
AG AIR GAP
AP ACCESS PANEL
AS AUTOMATIC SPRINKLER
ASD ADJUSTABLE SPEED DRIVES
ASD AUTOMATIC SPRINKLER DRAIN
ASHRAE AMERICAN SOCIETY OF HEATING, REFRIGERATION, AIR CONDITIONING ENGINEERS
ASME AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASPE AMERICAN SOCIETY OF PLUMBING ENGINEERS
ASR AUTOMATIC SPRINKLER RISER
AV ACID VENT
AW ACID WASTE
BFG BELOW FINISHED GRADE
BFF BELOW FINISHED FLOOR
BFP REDUCED PRESSURE BACKFLOW PREVENTER
BHP BREAK HORSEPOWER
BSP BLACK STEEL PIPE
BT BATHTUB
BTU BRITISH THERMAL UNIT
BTUH BRITISH THERMAL UNIT PER HOUR

C CELSIUS
CA COMPRESSED AIR
CGA COMPRESSED GAS ASSOCIATION
CFM CUBIC FEET PER MINUTE
CI CAST IRON
CO CLEANOUT
CS CLINICAL SINK
CV CONTROL VALVE

DCW DOMESTIC COLD WATER
DFU DRAINAGE FIXTURE UNITS
DHW DOMESTIC HOT WATER
DHWR DOMESTIC HOT WATER RETURN
DHWS DOMESTIC HOT WATER SUPPLY
DI DEIONIZED WATER
DN DOWN
DOE DEPARTMENT OF ENERGY
DS DOWNSPOUT
DW DISHWASHER
DWG DRAWING
DWH DOMESTIC WATER HEATER
DWR DRINKING WATER RETURN
DWS DRINKING WATER SUPPLY
DWV DRAIN WASTE VENT

EL ELEVATION
EMCS ENERGY MONOSERRAT AND CENTRAL SYSTEM
EPA ENVIROMENTAL PROTECTION AGENCY
EPACTENERGY POLICY ACT
ESC ESCUTCHEON
ESH EMERGENCY SHOWER
ET EXPANSION TANK
EWH ELECTRIC WATER HEATER
EWS EYE WASH STATION
EWS/SH EYE WASH/DRENCH SHOWER
EX EXISTING

F FAHRENHEIT
FCO FLOOR CLEANOUT
FCW FILTERED COLD WATER
FD FLOOR DRAIN
FDC FIRE DEPARTMENT (HOSE) CONNECTION
FM FLOW METER
FOP FUEL OIL PUMP
FOR FUEL OIL RETURN
FOS FUEL OIL SUPPLY
FOV FUEL OIL VENT
FS FLOOR SINK
FS FLOW SWITCH
FU FIXTURE UNITS

GAL GALLON
GCO GRADE CLEANOUTS
GPD GALLONS PER DAY
GPH GALLONS PER HOUR
GPM GALLONS PER MINUTE
GPR GAS PRESSURE REGULATOR
GRS GAS REGULATOR STATION
GW GREASE WASTE LINE
GT GREASE TRAP
GVTR GAS VENT THROUGH ROOF
GWH GAS FIRED WATER HEATER

H&CW HOT AND COLD WATER
HB HOSE BIBB
HD HUB DRAIN
HEX HEAT EXCHANGER
HP HORSEPOWER
HS HAND SINK
HST HOT WATER STORAGE TANK (DOMESTIC)
HWB HOT WATER BOILER
HWCP HOT WATER CIRCULATING PUMP
HWP HOT WATER PUMP
HYD HYDRANT

ID INSIDE DIAMETER
IE INVERT ELEVATION
ICW INDUSTRIAL COLD WATER
IHW INDUSTRIAL HOT WATER
INV INVERT
IPC INTERNATIONAL PLUMBING CODE
IRW IRRIGATION WATER
IW INDIRECT WASTE
IWH INSTANTANEOUS WATER HEATER
IWR INDUSTRIAL WATER RETURN
IWS INDUSTRIAL WATER SUPPLY

KW KILOWATT
KWH KILOWATT-HOUR

L/S LITER PER SECOND
LA LABORATORY AIR
LAV LAVATORY
LB&HR POUNDS PER HOUR
LCW LABORATORY COLD WATER
LHW LABORATORY HOT WATER
LNG LIQUID NATURAL GAS

M METER
MA MEDICAL AIR
MAV MANUAL AIR VENT
MBH 1000 BTUH
MED MEDICAL
MER MECHANICAL EQUIPMENT ROOM
MH MANHOLE
MOU MEMORANDUM OF UNDERSTADING
MSB MOP SERVICE BASIN
MV MEDICAL VACUUM

N2 NITROGEN
N2O NITROUS OXIDE
NC NORMALLY CLOSED
NG NATURAL GAS
NIC NOT IN CONTRACT
NO NORMALLY OPEN
NOM. NOMINAL
NPW NON POTABLE WATER
NTS NOT TO SCALE

O2 OXYGEN
OC ON CENTER
OD OUTSIDE DIAMETER
OFD OVERFLOW DRAIN
OR OPERATING ROOM
OVFL OVERFLOW

IPC INTERNATIONAL PLUMBING CODE
PA PASCAL
PD PRESSURE DROP OR DIFFERENCE
PDI PLUMBING AND DRAINAGE INSTITUTE
PG PRESSURE GAGE
PP PLUMBING PUMP
PPM PARTS PER MILLION
PRS PRESSURE REDUCING STATION
PRV PRESSURE REDUCING VALVE
PSI POUNDS PER SQUARE INCH
PSIA POUNDS PER SQUARE INCH ATMOSPHERE
PSIG POUNDS PER SQUARE INCH GAGE
PTRV PRESSURE TEMPERATURE RELIEF VALVE
PW POTABLE WATER

RD ROOF DRAIN
RDL ROOF DRAIN LEADER
RL ROOF LEADER
RP RECIRCULATION PUMP
RO REVERSE OSMOSIS WATER
RWL RAIN WATER LEADER-LINE

SAN SANITARY SEWER
SMACNA SHEET METAL AND AIR CONDITIONING CONTRACTORS NATIONAL ASSOCIATION
SCFM STANDARD CUBIC FOOT/MINUTE
SCW SOFTENED COLD WATER
SDMH STORM DRAIN MANHOLE
SMH SANITARY MANHOLE
SP SUMP PUMP
SPR SPRINKLER LINE
SQFT/SF SQUARE FEET
SS STAINLESS STEEL
ST STORAGE TANK
SW STORM WATER

TCV TEMPERATURE CONTROL VALVE
TD TEMPERATURE DIFFERENCE
TD TRENCH DRAIN
TDH TOTAL DYNAMIC HEAD
TEMP TEMPERATURE
TMV THERMOSTATIC MIXING VALVE
TP TRAP PRIMER
TSTAT THERMOSTAT
TWR TEMPERED WATER RETURN
TWS TEMPERED WATER SUPPLY
TYP TYPICAL

V VENT
VAC VACUUM
VB VACUUM BREAKER
VCO VACUUM CLEANER OUTLET
VP VACUUM PUMP
VS VENT STACK
VSD VARIABLE SPEED DRIVE
VTR VENT THROUGH ROOF

W WASTE
WC WATER CLOSET
WCO WALL CLEANOUT
WG WATER GAGE
WH WALL HYDRANT
WH WATER HEATER
WHA WATER HAMMER ARRESTER
WL WATER LINE
WM WATER METER
WPD WATER PRESSURE DROP
WS WASTE STACK
WSFU WATER SUPPLY FIXTURE UNITS

YCO YARD CLEANOUT
YH YARD HYDRANT

PLUMBING PIPING SYMBOLS

CW — DOMESTIC COLD WATER, COLD WATER
HW — DOMESTIC HOT WATER, HOT WATER
HWR — DOMESTIC HOW WATER RETURN, HOT WATER RETURN
HW-140 — DOMESTIC HOW WATER AT 140°F
HW-160 — DOMESTIC HOW WATER AT 160°F
SAN — SANITARY SEWER, BELOW GRADE OR FLOOR
GREASE — GREASE LINE
OIL — OIL LINE
CA — COMPRESSED AIR
MA — MEDICAL AIR
MV — MEDICAL VACUUM
LA — LABORATORY AIR
LV — LABORATORY VACUUM
OA — ORAL EVACUATION
IA — INDUSTRIAL AIR
D — DRAIN
VENT (SANITARY)
SS — SOIL, WASTE, OR SANITARY SEWER
SD — STORM WATER
SD — STORM WATER, BELOW GRADE
SCW — SOFTEN COLD WATER
FCW — FILTERED COLD WATER
DWS — DRINKING WATER SUPPLY
DWR — DRINKING WATER RETURN
TWS — TEMPERED WATER SUPPLY
TWR — TEMPERED WATER RETURN
N_2O — NITROUS OXIDE
O — OXYGEN
N_2 — NITROGEN
NG — NATURAL GAS
NG — NATURAL GAS, BELOW GRADE
FOD — FUEL OIL DISCHARGE
FOS — FUEL OIL SUPPLY
FOV — FUEL OIL VENT
FOR — FUEL OIL RETURN
TEPID — TEPID WATER

1 HOUR FIRE BARRIER
SMOKE BARRIER WALL (1 HOUR FIRE RATED)
2 HOUR FIRE WALL
2 HOUR FIRE WALL / SMOKE BARRIER

GENERAL PIPING SYMBOLS

DIRECTION OF PIPE PITCH (DOWN)
DIRECTION OF FLOW
ANCHOR
REDUCER OR INCREASER
ECCENTRIC REDUCER
TOP CONNECTION, 45° OR 90°
BOTTOM CONNECTION, 45° OR 90°
SIDE CONNECTION
CAPPED OUTLET
RISE OR DROP IN PIPE
UNION
PIPE UP
PIPE DOWN
POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
LIMIT OF DEMOLITION
INVERTED BUCKET TRAP SET INCLUDING PIPING ACCESSORIES
FLOAT & THERMOSTATIC TRAP SET INCLUDING PIPING ACCESSORIES
STRAINER
THERMOMETER
PRESSURE GAGE
FLOW ELEMENT
NON-FREEZE TYPE HOSE BIB (KEYED LOCK BOX with VACUUM BREAKER)
WATER HAMMER ARRESTER
FLOOR DRAIN
FLOOR SINK
HUB DRAIN
WALL HYDRANT
IN LINE PUMP
FLOOR CLEANOUT
CLEANOUT TO GRADE
WALL CLEANOUT
END OF LINE CLEANOUT
P-TRAP
WATER METER
PIPE TURNED DOWN
PIPE TURNED UP
END OF PIPE; SEE CONTINUATION
TEE FITTING
ELBOW FITTING (90 DEGREE)
LATERAL FITTING
ELBOW FITTING (45 DEGREE)
DOUBLE COMBINATION WYE 1/8 BEND FITTING
COMBINATION WYE 1/8 BEND FITTING
COMBINATION WYE FITTING

PLUMBING VALVE SYMBOLS

PRESSURE REGULATING VALVE
AUTOMATIC FLOW CONTROL VALVE
PRESSURE RELIEF VALVE
MANUAL AIR VENT
TEST PLUG (PRESSURE/TEMPERATURE)
AUTOMATIC AIR VENT
BALANCING VALVE THERMOMEGATECH "CIRCUIT SOLVER" WITH ISOLATION BALL VALVES
BALL VALVE
CHECK VALVE
TWO WAY VALVE
THREE WAY VALVE
OS&Y VALVE
GATE VALVE
STEM VALVE
STEM WITH LOCK VALVE
PLUG
STRAINER
STRAINER WITH DRAIN
TEMPERATURE-PRESSURE RELIEF
BUTTERFLY VALVE
SOLENOID VALVE
RISER
JANITORIAL VAC
PRESSURE VALVE
SAFETY VALVE
QUICK OPEN VALVE
FLOAT VALVE
MOTORIZED GATE VALVE
MOTORIZED GLOBE VALVE
MANUAL AIR VENT
PRESSURE REDUCING VALVE
PRESSURE REGULATING w/FILTER
DIAPHRAM
ZERO STATIC

MISC SYMBOLS

DRAWING REVISION CLOUD TO REFLECT CHANGES; MUST REFERENCE ADDENDUM NO, OR SUPPLEMENTAL INSTRUCTION NO. WITH DATE
VAV BOX TAG NUMBER
DETAIL NUMBER
SHEET ON WHICH DETAIL IS SHOWN
SI-X — SUPPLEMENTAL INSTRUCTION REFERENCE; DATE REQUIRED
ADDENDUM ITEM REFERENCE WITH DATE REQUIRED
DRAWING INFORMATION NOTES
EQUIPMENT TYPE (EF, AHU, RTU, ETC.) SEE SCHEDULES FOR INFORMATION
UNIT NUMBER
PLUMBING FIXTURE NUMBER
EXISTING FIXTURE, PIPING or DRAIN TO BE REMOVED

FIXTURE SYMBOLS

3 Compartment Scullery
Janitor Floor Sink
Laundry Sink
Counter Lavatory
Wall Sink or Lavatory
Single Counter Sink
Double Counter Sink
Tripple Counter Sink
Electric Wall Hung Water Cooler
Flush Valve Water Closet
Tank Type Water Closet
Wall Mounted Urinal
Floor Mounted Urinal
Shower Unit
Outside Can Wash
Ice Machine
Residential Washer
Residential Dryer
Emergency Eye, face or Shower
Handicapped Accessible Tub
Standard Tub Units
Handicapped Accessible Shower
Alternating Booster Pumps
Primary-Jockey Fire Pumps
Commercial Washer
Commerical Gas Dryer

SPECIAL NOTE:

PLEASE NOTE, SOME SYMBOLS & ABBREVIATIONS MAY NOT BE USED ON THESE DRAWINGS OR CONSTRUCTION DOCUMENTS. SEE PROJECT DRAWING INFORMATION NOTES FOR ADDITIONAL DIRECTION & CLARIFICATION.

284 POPLAR DR
RAINSVILLE, ALABAMA 35986
(334) 635-5284
thedesigngroupinc@gmail.com
Mechanical-Electrical
Consulting Engineers
FL license No. 31813

confidential-this document & the information contained herein is confidential & may not be disclosed, copied altered or reproduced to any persons except as permitted in writing by "The Design Group, Inc."

the Design Group of Florida inc.
division of The Design Group, Inc.

J. KYLE COX LICENSE NO.62881 STATE OF FLORIDA PROFESSIONAL ENGINEER
J. Kyle Cox
Digitally signed by J. Kyle Cox
Date: 2025.09.30 10:57:58-05'00'

JOEL SAMPSON ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014780
850-875-4348

ANDY GAY PARK IMPROVEMENTS
FOR
CITY OF QUINCY, FLORIDA
116 NORTH ADAMS STREET QUINCY, FLORIDA

DATE: 7-15-25
REV:

JOB NO: 24-014

P0.0
SHEET NO.

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, CT. INC. AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT, INC.

PROJECT PLUMBING MATERIAL SCHEDULE

SOIL, WASTE, VENT & STORM PIPING	WATER PIPING			INSULATION DATA				CLEANOUT DATA						WATER HAMMER ARRESTORS				VALVES						PIPE HANGERS & SUPPORTS	BACKFLOW DEVICE	WATER METER	PIPE PENETRATIONS	NATURAL GAS PIPING		HOT WATER MIXING VALVES AT LAVATORIES & SINKS	REMARKS
								FLOOR (FCO)		WALL (WCO)		OUTSIDE (COTG)						BALL		GATE		CHECK									
	BELOW FINISHED FLOOR	BELOW GRADE-OUTSIDE	ABOVE FINISHED FLOOR	FITTINGS	JACKET	THICKNESS	LOCATION	MANUF.	MODEL NO.	MANUF.	MODEL NO.	MANUF	MODEL NO.	MANUF.	MODEL	TYPE	LOCATIONS	MANUF.	MODEL NO.	MANUF.	MODEL NO.	MANUF.	MODEL NO.					PRIMARY SUPPLY LINE METER TO REGULATOR	REGULATOR TO EQUIPMENT OR APPLIANCE		
SOLID SCHEDULE 40 PVC WITH SOLVENT WELD PVC FITTINGS EQUAL TO CHARLOTTE PIPE & FOUNDRY; CORE-EXTRUDED, WELL-CASING OR THIN WALL TYPE MATERIALS ARE NOT APPROVED & WILL BE REMOVED AT CONTRACTORS COST	COPPER TUBING-TYPE "K" SOFT ANNEALED TEMPER NO JOINTS BELOW FLOOR	SCHEDULE 80 CPVC WITH SOLVENT WELD CPVC FITTINGS; IF APPROVED BY LOCAL CODES	COPPER TUBING-TYPE "L" HARD DRAWN TEMPER; WROUGHT COPPER FITTINGS; SOLDER JOINTS MAY USE INSIDE DIAMETER SIZED CPVC MATERIAL AS INDICATED IN SPECS	ZESTON	UNIVERSAL	1.5" FIBERGLASS 1" ARMACELL AP-WHITE ELASTOMERIC CLOSED CELL FOAM	ALL HOT WATER & RECIRCULATING PIPE SYSTEMS LOCATED IN CONDITIONED & NON-CONDITIONED AREAS, & ALL COLD WATER PIPING-FITTING FOR SYSTEMS IN NON-CONDITIONED AREAS	WADE	W-6030-SV-2TS	J.R. SMITH	4420 W/STAINLESS STEEL COVER	WADE	W-6030-SV-2	PRECISION	SC500	"A"	WATER CLOSETS, URINALS, SINKS, WATER HEATERS, LAVATORIES & WATER COOLERS INSTALL PER 2015 IPC & DETAIL	NIBCO	TF600ALF LEAD-FREE	NIBCO	T113-LF S113-LF LEAD-FREE	NIBCO	T413Y-LF S412Y-LF	CLEVIS TYPE by UNISTRUT or B-LINE PRODUCTS WITH THREADED RODS IN COMPLIANCE WITH 2015 INTERNATIONAL PLUMBING CODE SECTION 308, PER TABLE 308.5 FOR HORZ & VERTICAL SPACING	WATTS 909QT WILKINS 975 SEE CIVIL DRAWINGS	HAYS MT SERIES; SEE CIVIL DRAWINGS	METACAULK UL-CAJ2134 UL-WL2135	SCHEDULE 40 STEEL PER 2015-IFGC TABLE 402.4 (5) INLET PRESSURE= 2 PSI PRESSURE DROP= 1.0 IN WG SPECIFIC GRAVITY= 0.60	SCHEDULE 40 STEEL PER 2015-IFGC TABLE 402.4 (2) INLET PRESSURE = LESS THAN 2 PSI PRESSURE DROP =0.5 IN WC SPECIFIC GRAVITY= 0.60 OR AS RECOMMENDED BY PRODUCT VENDOR	POWERS MODEL LFLM495; DEVICE TO BE INSTALLED AT PUBLIC RESTROOMS & BREAK ROOM	VERIFY LOCAL UTILITIES PRIOR TO INSTALLATION; SEE CIVIL DRAWINGS FOR ADDITIONAL INFORMATION & INVERT ELEVATION REQ'TS

PIPING SYSTEM PRESSURE TEST TABLE

SYSTEM	MEDIA	PRESS. (*)	PERMISSIBLE PRESS. DROP
BELOW GROUND WATER	WATER	200 PSIG	1 PSIG IN 2 HRS @ 73.4°F
ABOVE GROUND WATER	WATER	200 PSIG	1 PSIG IN 2 HRS
STEAM AND CONDENSATE	WATER	125 PSIG	1 PSIG IN 2 HRS
LAB VACUUM	AIR	75 PSIG	2 PSIG IN 2 HRS
COMPRESSED AIR	AIR	150 PSIG	2 PSIG IN 2 HRS
NATURAL GAS	AIR	100 PSIG	0 PSIG IN 2 HRS
STORM, WASTE AND VENT	WATER	10 FEET	0 LEAKAGE IN 10 MINUTES**

(*) OR 1-1/2 TIMES OPERATING PRESSURE, WHICHEVER IS GREATER.
(**) SMOKE TEST FOR WASTE & VENT INSIDE BUILDING PRIOR TO WALL COVER-FINISH.

SLOPE OF HORIZONTAL DRAINAGE PIPE

SIZE (INCHES)	MINIMUM SLOPE (INCHES PER FOOT)
2-1/2" OR LESS	1/4"
3" TO 6"	1/8"
8" OR LARGER	1/16"

SOURCE: 2015 IPC & ASPE DESIGN MANUAL

DFU for FIXTURE DRAINS-TRAPS

FIXTURE DRAIN OR TRAP SIZE (INCHES)	DRAINAGE FIXTURE UNIT VALUE (DFU)
1-1/4"	1
1-1/2"	2
2"	3
2-1/2"	4
3"	5
4"	6

SOURCE: 2015 IPC & ASPE DESIGN MANUAL

DISTANCE of FIXTURE TRAP from VENT

SIZE OF TRAP (INCHES)	SLOPE (INCH PER FOOT)	DISTANCE FROM TRAP (FEET)
1-1/4"	1/4"	5
1-1/2"	1/4"	6
2"	1/4"	8
3"	1/8"	12
4"	1/8"	16

SOURCE: 2015 IPC & ASPE DESIGN MANUAL

WATER USAGE RATES

Fixture Type	Federal EPAct of 2005 Code Required Flow Rate	Selected Fixture Flow Rate Per Table 604.4
Public Water Closet	1.6 gallons per flush	1.28 gallons per flush
Public Urinals	1.0 gallons per flush	0.5 gallons per flush
Public Lavatory-Sink	2.2 gallons per minute	0.25 gallons per minute
Janitor Mop or Service Sink	2.5 gallons per minute	1.00 gallons per minute
Children Age 2-3 Water Closet	1.6 gallons per flush	1.28 gallons per flush
Shower Heads	2.5 gallons per minute	1.0 gallons per minute
Clothes Washer	9.5 gallons/cycle/cubic feet	8.0 gallons/cycle/cubic feet
Ice Machine	less 300 lbs 24 hours at 25 gallons per 100 lbs	less 300 lbs 24 hours at 25 gallons per 100 lbs
Pre-rinse	less than 1.6 gallons per minute	less than 1.6 gallons per minute
Drinking Fountain	8 gallons per hour at 90°F	8 gallons per hour at 90°F
Metered Faucet	0.25 gallons per minute	0.25 gallons per minute

NOTES:
1. VALUES & PRODUCTS SHOWN MAY NOT BE USED ON PROJECT; VERIFY EXACT AMOUNT BASED ON PROJECT PLUMBING FIXTURE SCHEDULE
2. SAME AS TABLE 604.4 FROM LOCAL BUILDING DEPARTMNT

PIPE, FITTINGS, & JOINT SCHEDULE

SYSTEM	MATERIAL	PIPE STANDARD	FITTINGS STANDARD	JOINT METHOD AND STANDARD
UNDERGROUND SANITARY DRAIN, WASTE, AND VENT (DWV) PIPING	CAST IRON	ASTM A74	ASTM A74	COMPRESSION GASKETS: ASTM C564, TESTED TO ASTM C1563
	PVC	ASTM D2665	ASTM F1866 & ASTM D2665	SOLVENT WELD: ASTM D2855, WITH ASTM D2564 CEMENT & ASTM F656 PRIMER
ABOVE GROUND SANITARY DRAIN, WASTE, AND VENT (DWV) PIPING	CAST IRON	ASTM A888 OR CISPI 301	ASTM A888 OR CISPI 301	COUPLING: ASTM C1277 OR CISPI 310, WITH ASTM C564 GASKET
	PVC	ASTM D2665	ASTM F1866 & ASTM D2665	SOLVENT WELD: ASTM D2855, WITH ASTM D2564 CEMENT & ASTM F656 PRIMER
UNDERGROUND SANITARY DRAIN, WASTE, AND VENT (DWV) PIPING FOR GREASE WASTE	STAINLESS STEEL	ASME A112.3.1	ASME A112.3.1	PUSH-ON SOCKET JOINT WITH EDPM SEALING RING
	PVC	ASTM D2665	ASTM F1866 & ASTM D2665	SOLVENT WELD: ASTM D2855, WITH ASTM D2564 CEMENT & ASTM F656 PRIMER
ABOVE GROUND SANITARY DRAIN, WASTE, AND VENT (DWV) PIPING FOR GREASE WASTE	STAINLESS STEEL	ASME A112.3.1	ASME A112.3.1	PUSH-ON SOCKET JOINT WITH EDPM SEALING RING
	PVC	ASTM D2665	ASTM F1866 & ASTM D2665	SOLVENT WELD: ASTM D2855, WITH ASTM D2564 CEMENT & ASTM F656 PRIMER
UNDERGROUND STORM DRAIN PIPING	CAST IRON	ASTM A74	ASTM A74	COMPRESSION GASKETS: ASTM C564, TESTED TO ASTM C1563
	PVC	ASTM D2665	ASTM F1866 & ASTM D2665	SOLVENT WELD: ASTM D2855, WITH ASTM D2564 CEMENT & ASTM F656 PRIMER
ABOVE GROUND RAIN LEADER PIPING	CAST IRON	ASTM A888 OR CISPI 301	ASTM A888 OR CISPI 301	COUPLING: ASTM C1277 OR CISPI 310, WITH ASTM C564 GASKET
	PVC	ASTM D2665	ASTM F1866 & ASTM D2665	SOLVENT WELD: ASTM D2855, WITH ASTM D2564 CEMENT & ASTM F656 PRIMER
UNDERGROUND DOMESTIC WATER PIPING	COPPER, TYPE K, SOFT	ASTM B88 OR ASTM B251	ASTM B16.15 OR ASTM B16.22	SOLDER JOINT: ASTM B828, WITH ASTM B813 FLUX & ASTM B32 SOLDER
ABOVE GROUND DOMESTIC WATER PIPING	COPPER, TYPE L, HARD	ASTM B88 OR ASTM B251	ASTM B16.15 OR ASTM B16.22	SOLDER JOINT: ASTM B828, WITH ASTM B813 FLUX & ASTM B32 SOLDER
	CPVC	ASTM B88 OR ASTM B251	ASTM D2846 ASTM B16.22	SOLDER JOINT: ASTM B828, WITH ASTM B813 FLUX & ASTM B32 SOLDER
UNDERGROUND NATURAL GAS PIPING	HDPE	ASTM D2513	ASTM D2513	HEAT-FUSION: ASTM D2657
ABOVE GROUND NATURAL GAS PIPING	COPPER, TYPE L, HARD	ASTM B88 OR ASTM B280	ASTM B16.18 OR ASTM B16.22	SOLDER JOINT: ASTM B828, WITH ASTM B813 FLUX & ASTM B32 SOLDER
	BLACK STEEL	ASME B36.10M OR ASTM A53M	ASME B16.3 OR ASME B16.11	THREADED: ASME B1.20.1

WATER HEATER SCHEDULE

ITEM NO.	AREA OR FIXTURES SERVED	DESCRIPTION	TANK CAPACITY	ENTERING WATER TEMP	LEAVING WATER TEMP	RECOVERY @100 DEG. F. RISE	FIRST HOUR RECOVERY	THIRD HOUR RECOVERY	EST STORAGE RECOVERY	INPUT POWER V-PH-Hz	HEATER Kw	GAS CONN.	WATER CONN.	FLUE CONN.	DIMENSIONS-WEIGHT				MANUFACTURER & MODEL	REMARKS
															HEIGHT	DIAMETER	WIDTH	WEIGHT		
WH-1	HOT WATER RESTOOM BUILDING	HIGH EFFICIENT LOW-BOY ELECTRIC WATER HEATER	6 GALLONS	40°F	140°F	6 GPH	11 GPH	7 GPH	63 MINUTES	120-1-60	1.5	-	3/4"	-	15.5"	14.25"	-	35 LBS	A.O.SMITH DEL6S-1.5	6 GALLON ELECTRIC LOW BOY TYPE WATER HEATER LOCATED AT ROOM FINISHED CEILING ABOVE FLOOR MOUNTED JANITOR CLOSET PER DETAIL; HEATER TO BE CONTROLLED BY QUARTZ TIME CLOCK WITH 7 DAY 24 HOUR FUNCTION, BATTERY BACK-UP & DAYLITE SAVINGS PROGRAM

PROJECT PLUMBING FIXTURE SCHEDULE

TAG	FIXTURE	DESCRIPTION	MANUF.	MODEL	MANUAL OR ELECTRONIC	CONNECTIONS				WATER TEMP.	HOT WATER RETURN	ANSI/ADA-A1 17.1-2010 HEIGHT	WATER USAGE GPM/WSFU	DRAIN USAGE GPF/DFU	FIXTURE COLOR FINISH	REMARKS
						CW	HW	WASTE	VENT	°F	°F					
FD-1	FLOOR DRAIN	FLOOR DRAIN WITH TRAP PRIMER	J.R. SMITH	DX2310		3/8"		2"	1-1/2"					2.0 DFUs	NICKEL	INSTALL WITH TRAP PRIMER AND DEEP SEAL TRAP WITH INSULATED BOOT USING ARMACELL CLOSED CELL FOAM 1/2" THICKNESS; EXTEND INSULATION APROX 5 FEET FROM DRAIN
LV-1	LAVATORY	HANDICAPPED WALL LAVATORY	KOHLER SLOAN SYMMONS	K-12636-0 3365320BT 5-210-CK	ELECTRIC	1/2"	1/2"	2"	1 1/4"	110 F		INSTALL PER ADA AT 34" AFF	0.25 GPM		WHITE CHROME	INSTALL WALL MOUNTED LAVATORY WITH JR SMITH WALL CARRIER AND SYMMONS MIXING VALVE AS INDICATED WITH ELECTRIC HANDSFREE FAUCET & LAVSHEILD GUARD
LV-2	LAVATORY	STANDARD WALL LAVATORY	KOHLER SLOAN SYMMONS	K-2861 3365320BT 5-210-CK	ELECTRIC	1/2"	1/2"	2"	1 1/4"	110 F			0.25 GPM		WHITE CHROME	INSTALL WALL MOUNTED LAVATORY WITH JR SMITH WALL CARRIER AND SYMMONS MIXING VALVE AS INDICATED
WC-1	HANDICAPPED WATER CLOSET	HANDIAPPED WALL MOUNTED WATER CLOSET	KOHLER KOHLER SLOAN	K-4325 K-4670-C0 111-1.28 ESS	ELECTRIC	3/4"		3"	2"			INSTALL PER ADA	1.28 GPF		WHITE	WALL MOUNTED WATER CLOSET WITH LOW VOLUME ELECTRIC FLUSH VALVE & JR SMITH WALL CARRIER EPR ADA
WC-2	STANDARD WATER CLOSET	STANDARD WALL MOUNTED WATER CLOSET	KOHLER KOHLER SLOAN	K-4325 K-4670-C0 111-1.28 ESS	ELECTRIC	3/4"		3"	2"				1.28 GPF		WHITE	WALL MOUNTED WATER CLOSET WITH LOW VOLUME RLRVTRIC FLUSH VALVE & JR SMITH WALL CARRIER
WHY	WALL HYDRANT	WALL HYDRANT WITH FREEZE PROTECTION AND VACUUM BREAKER	ZURN	195	MANUAL	3/4"							2.25 GPF			SEE DETAIL FOR ADDITIONAL REQUIREMENTS

SPECIAL NOTES: 1. WSFU = WATER SIZING FIXTURE UNITS 2. DFU = DRAINAGE FIXTURE UNITS 3. GPF = GALLON PER FLUSH 4. GAL/MIN=GALLON PER MINUTE 5. OTHER APPROVED VENDOR PRODUCTS FOR NOTED MANUFACTURERS ARE: MANSFIELD, ELJER, DAYTON, RHEEM/RUUD, WADE, ZURN, SILVER CAST, ELKAY, TOTO AND AMERICAN STANDARD

PIPING SYSTEM PRESSURE TEST TABLE

SYSTEM	MEDIA	PRESS. (*)	PERMISSIBLE PRESS. DROP
ABOVE GROUND WATER	WATER	200 PSIG	1 PSIG IN 2 HRS
STEAM AND CONDENSATE	WATER	125 PSIG	1 PSIG IN 2 HRS
LAB VACUUM	AIR	75 PSIG	2 PSIG IN 2 HRS
COMPRESSED AIR	AIR	150 PSIG	2 PSIG IN 2 HRS
NATURAL GAS	AIR	100 PSIG	0 PSIG IN 2 HRS
STORM, WASTE AND VENT	WATER	10 FEET	0 LEAKAGE IN 10 MINUTES**

(*) OR 1-1/2 TIMES OPERATING PRESSURE, WHICHEVER IS GREATER.
(**) SMOKE TEST FOR WASTE & VENT INSIDE BUILDING PRIOR TO WALL COVER-FINISH.

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, INC. AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT, INC.

JOEL SAMPSON ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014780
850-875-4348

ANDY GAY PARK IMPROVEMENTS

FOR

CITY OF QUINCY, FLORIDA

116 NORTH ADAMS STREET QUINCY, FLORIDA

DATE: 7-15-25
REV:

JOB NO: 24-014

Po.1

SHEET NO.

284 POPLAR DR
RAINSVILLE, ALABAMA 35986
(334) 695-0284
thedesigngroupinc@gmail.com
Mechanical-Electrical
Consulting Engineers
FL License No. 31813

confidential-this document & the information contained herein is confidential & may not be disclosed, copied altered or reproduced to any persons except as permitted in writing by "The Design Group, Inc."

the Design Group of Florida inc.

division of The Design Group, Inc.

J. KYLE COX LICENSE NO.62881 STATE OF ... PROFESSIONAL ENGINEER

Digitally signed by J. Kyle Cox
Date: 2025.09.30 10:58:05-05'00'

WASTE & VENT SIZING FOR INDIVIDUAL PIPES

BUILDING DRAIN - FIXTURE UNITS (FU):	12
SIZE AT 1/16"/FT. SLOPE (Inches)	8
SIZE AT 1/8"/FT. SLOPE (Inches)	3
SIZE AT 1/4"/FT. SLOPE (Inches)	2
SIZE AT 1/2"/FT. SLOPE (Inches)	2

HORIZONTAL BRANCH - FIXTURE UNITS (FU):	12
SIZE OF BRANCH PIPE (Inches)	2 1/2

WASTE STACKS - FIXTURE UNITS (FU)	12
SIZE FOR 1 BRANCH INTERVAL	3
3 OR LESS BRANCH INTERVALS	2 1/2
4 OR MORE BRANCH INTERVALS	2

STACK VENTS - FIXTURE UNITS (FU)	12
DIAMETER OF WASTE STACK	4
TOTAL LENGTH OF VENT (FEET)	28
REQ'D SIZE OF VENT (INCHES)	2

"OTHER" VENTS - FIXTURE UNITS (FU)	12
MINIMUM VENT SIZE (INCH)	1 1/4

	SIZES											
	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12	15
BUILDING DRAINS AND SEWERS (Note a,b)	**MAXIMUM DRAINAGE FIXTURE UNITS**											
1/16"/FT. SLOPE	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1400	2500	3900	7000
1/8"/FT. SLOPE	N/A	N/A	N/A	N/A	36	180	390	700	1600	2900	4600	8300
1/4"/FT. SLOPE	1	3	21	24	42	216	480	840	1920	3500	5600	10000
1/2"/FT. SLOPE	1	3	26	31	50	250	575	1000	2300	4200	6700	12000
HORIZONTAL BRANCHES (Note c)	**MAXIMUM DRAINAGE FIXTURE UNITS**											
TOTAL FOR BRANCH	N/A	3	6	12	20	160	360	620	1400	2500	3900	7000
WASTE STACKS (Note d)	**MAXIMUM DRAINAGE FIXTURE UNITS**											
TOTAL INTO ONE BRANCH INTERVAL	N/A	2	6	9	20	90	200	350	600	1000	1500	(Note e)
STACK OF 3 OR LESS BRANCH INTERVALS	N/A	4	10	20	48	240	540	960	2200	3800	6000	(Note e)
STACK OF MORE THAN 3 BRANCH INTERVALS	N/A	8	24	42	72	500	1100	1900	3600	5600	8400	(Note e)
VENT PIPING												
STACK VENTS:	STACK VENTS ARE THE EXTENSION OF A SOIL OR WASTE STACK ABOVE THE HIGHEST HORIZONTAL DRAIN CONNECTED TO THE STACK.											
VENT STACKS:	A VENT STACK IS A VERTICAL VENT PIPE INSTALLED TO PROVIDE CIRCULATION OF AIR TO AND FROM ANY PART OF THE DRAINAGE SYSTEM.											
"OTHER VENTS":	"OTHER" VENTS INCLUDE INDIVIDUAL VENTS, HORIZONTAL VENTS, BRANCH VENTS, CIRCUIT VENTS, AND RELIEF VENTS. MINIMUM SIZE IS 1/2 THE DIAM. OF THE DRAIN SERVED, BUT NOT LESS THAN 1-1/4". VENTS EXCEEDING 40 FEET IN DEVELOPED LENGTH SHALL BE INCREASED BY ONE NOMINAL PIPE SIZE FOR THE ENTIRE DEVELOPED LENGTH OF THE VENT PIPE.											
NOTES:	a. INCLUDING BRANCHES OF THE BUILDING DRAIN. b. MINIMUM SIZE OF ANY BUILDING DRAIN SERVIAN A WATER CLOSET SHALL BE 3 INCHES. c. DOES NOT INCLUDE BRANCHES OF THE BUILDING DRAIN. USE "BUILDING DRAINS" SIZING, ABOVE. d. STACKS SHALL BE SIZED BASED ON THE TOTAL ACCUMULATED CONNECTED LOAD AT EACH STORY OR BRANCH INTERVAL. STACK DIAMETERS SHALL NOT BE LESS THAN ONE-HALF OF THE DIAMETER OF THE LARGEST STACK SIZE REQUIRED. e. SIZING LOAD BASED ON DESIGN CRITERIA.											

FIXTURE UNIT CALCULATIONS

FIXTURE TYPE	QUANTITY	COLD WATER FIXTURE UNITS		HOT WATER FIXTURE UNITS		COMBINED CW & HW		WASTE FIXTURE UNITS		WATER GPM
		FU EACH	CW FU	FU EACH	HW FU	COMBINED FU - EACH	TOTAL FU	FU EACH	TOTAL FU	
LAVATORY - PUBLIC	2	1.5	3	1.5	3	2.0	4	1.0	2	
SERVICE SINK	1	2.25	2.25	2.25	2.25	3.0	3	2.0	2	
WATER CLOSET - PRIVATE - FLUSH VALVE	2	6	12	0		6.0	12	4.0	8	
WATER CLOSET - PUBLIC - FLUSH VALVE		10		0		10.0		6.0		
WATER CLOSET - PUBLIC - FLUSH TANK		5		0		5.0		4.0		
KITCHEN EQUIPMENT - WATER GPM										0
TOTALS			**17.25**		**5.25**		**19**		**12.0**	**34.2**
			CW WSFU		HW WSFU		COMBINED WSFU		WASTE DFU	WATER GPM

WATER METER SIZING DATA

Table 1 Pressure adjustment factors (60 psi)

Working Pressure at Meter Discharge (psi)	Pressure Adjustment Factor
35	0.74
40	0.80
50	0.90
60	1.00
70	1.09
75	1.13
80	1.17
90	1.25
100	1.34

1. Copyright 2004 American Water Works Association Sizing Water Service Lines and Meters M22, All Rights Reserved.

2. Working pressure at meter discharge = Static pressure in the main. Information is obtained from a fire hydrant flow test.

3. A hydrant flow test is required for a water connection 3" diameter and larger. If connection is 2" and smaller assume a working pressure at meter discharge of 69 psi and a pressure adjustment factor of 1.09.

Table 2 Cold-Water Meters - Displacement Type, Bronze Main Case

Meter Size	Minimum Flow Rate	Normal Operating Range	Recommended Max Rate for Continuous Operations	Head Loss Maximum Flow	Safe Max Operating Capacity
3/4-inch	0.5 gpm	2-30 gpm	15 gpm	15 psi	30 gpm
1-inch	0.75 gpm	3-50 gpm	25 gpm	15 psi	50 gpm
1-1/2 inch	1.5 gpm	5-100 gpm	50 gpm	15 psi	100 gpm
2-inch	2 gpm	8-160 gpm	80 gpm	15 psi	160 gpm

Copyright 2004 American Water Works Association C700-02, All Rights Reserved.

Table 3 Cold-Water Meters - Turbine Type, for Customer Service

Meter Size	Low Flow Registration	Normal Operating Range	Recommended Max Rate for Continuous Operations	Safe Max Operating Capacity
3-inch	-	8-435 gpm	350 gpm	435 gpm
4-inch	-	15-750 gpm	650 gpm	750 gpm
6-inch	-	30-1,600 gpm	1,400 gpm	1,600 gpm
8-inch	-	50-2,800 gpm	2,400 gpm	2,800 gpm
10-inch	-	75-4,200 gpm	3,500 gpm	4,200 gpm
12-inch	-	120-5,300 gpm	4,400 gpm	5,300 gpm

Copyright 2007 American Water Works Association C701-07, All Rights Reserved.

Table 4 Fire Service Lateral Velocity Check

Fire Service Lateral Diameter (in)	Fire Service Lateral Area (sf)	Flow Rate thru Fire Lateral* (gpm)	Flow Rate thru Fire Lateral (cfs)	V (fps) = Q (cfs)/A (sf)
2" diameter	0.02	120	0.264	12.06
3" diameter	0.05	325	0.715	14.57
4" diameter	0.09	600	1.32	15.16
6" diameter	0.20	1250	2.75	14.01
8" diameter	0.35	2200	4.84	13.86
10" diameter	0.54	3500	7.7	14.14
12" diameter	0.79	5000	11	14.01

*If NO fire pump is required - enter the actual fire flow demand per NFPA requirements in this entire column. If a fire pump IS required - enter the pump test demand in this column. The pipe size that returns a velocity less than 15 fps is the target pipe size for the fire service.

WATER PIPE SIZING CALCULATIONS

AVAILABLE WATER PRESSURE CALCULATIONS			PIPE SIZE SCHEDULE (@ MAX. ALLOWABLE PD/100 FT)						
			SIZE	MAX. GPM	VEL.	PSI/100 FT.	MAX. FV FU	MAX. FT FU	SIZE
DEMAND FLOW RATE (GPM)	34		1/2	7	8.5	3.7	#N/A	1	1/2
WATER MAIN PRESSURE (PSIG)	65		3/4	12	6.5	5.2	#N/A	3	3/4
PRESSURE DROP THRU METER (PSIG)	12		1	20	8	3.2	#N/A	8	1
PRESSURE REDUCING VALVE - PRESSURE (IF REQUIRED)	0		1 1/4	36	8	5.5	10	40	1 1/4
PRESSURE DROP THRU BACKFLOW PREVENTER (PSIG)	5		1 1/2	46	7.8	3.6	25	80	1 1/2
STATIC HEIGHT OF HIGHEST FIXTURE ABOVE MAIN (FT)	15	6	2	80	8.6	4.4	120	250	2
PRESSURE DROP THROUGH WATER TREATMENT (PSIG)	0		2 1/2	110	7.0	2.9	300	400	2 1/2
RESIDUAL PRESSURE REQUIRED AT LAST OUTLET (PSIG)	25		3	180	6.5	2.3	750	750	3
PRESSURE AVAILABLE FOR PIPING LOSS (PSIG)	17		4	300	8.0	2.6	1750	1750	4
PRESSURE BOOSTER PUMP (IF REQUIRED) (PSIG)	0	0	5	460	6.8	1.6	3000	3000	5
TOTAL DEVELOPED LENGTH OF LONGEST PIPE RUN (FT)	50		6	700	8.0	1.8	5000	5000	6
MAXIMUM ALLOWABLE PIPE PRESS. DROP (PSIG/100 FT)	**5.7**		8	1200	8.2	1.4	5000	5000	8

JOEL SAMPSON ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014780
850-875-4348

ANDY GAY PARK IMPROVEMENTS
FOR
CITY OF QUINCY, FLORIDA
116 NORTH ADAMS STREET QUINCY, FLORIDA

DATE: 7-15-25
REV:

JOB NO: 24-014

P0.2

SHEET NO.

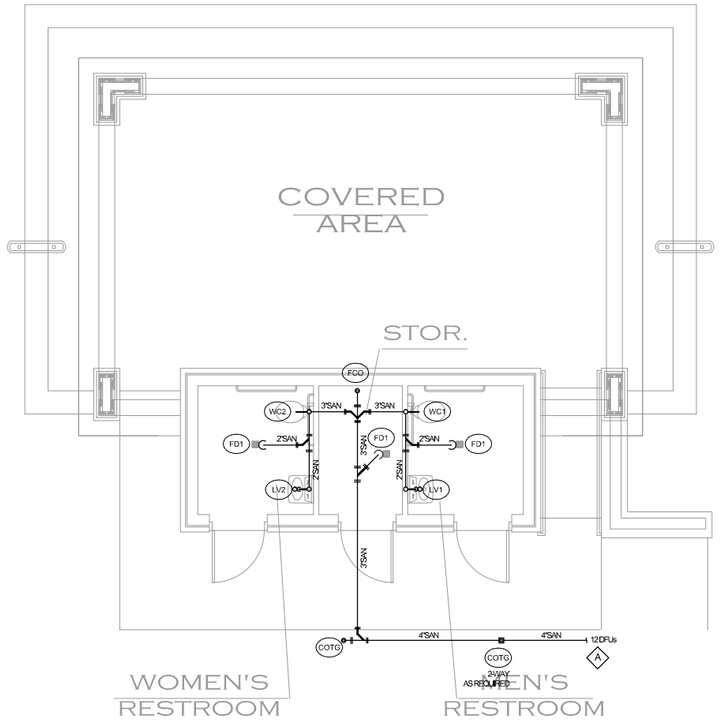
284 POPLAR DR
RAINSVILLE, ALABAMA 35986
(334) 680-0284
thedesigngroupinc@gmail.com
Mechanical-Electrical
Consulting Engineers
FL license No. 31813

confidential-this document & the information contained herein is confidential & may not be disclosed, copied altered or repreduced to any persons except as permitted in writing by "The Design Group, Inc."

the Design Group of Florida inc.
division of The Design Group, Inc.

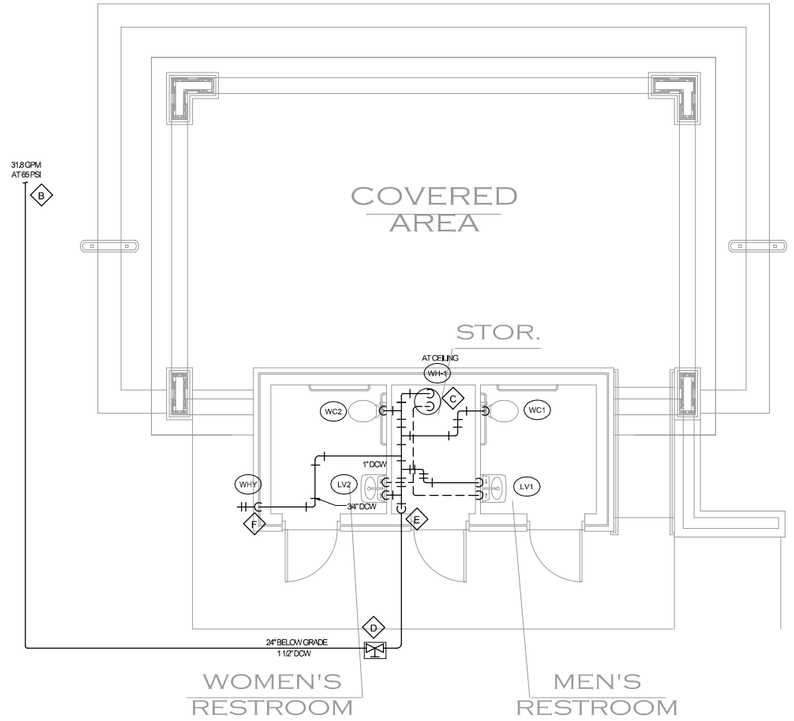
J. KYLE COX LICENSE NO.62881 STATE OF FLORIDA PROFESSIONAL ENGINEER
Digitally signed by J. Kyle Cox
Date: 2025.09.30 10:55:09-05'00'

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, INC. AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT, INC.



NEW RESTROOM BUILDING
SOIL-WASTE-VENT PLUBING PLAN

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



NEW RESTROOM BUILDING
DOMESTIC WATER PIPING PLAN

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

DRAWING INFORMATION NOTES

A. CONTRACTOR TO CONNECT NEW SANITARY SEWER LINE TO LOCAL PUBLIC UTILITY; SEE CIVIL DRAWINGS AND/OR ARCHITECTURAL DOCUMENTS FOR ADDITIONAL INFORMATION RELATED TO INVERTS, MATERIAL TYPE, LINE SIZE, LOCATIONS, ETC.

B. CONNECT TO WATER UTILITY WITH BACKFLOW PROTECTION, 1" METER, TRAFFIC VAULT, ETC. VERIFY METER WITH CITY.

C. ELECTRIC WATER HEATER LOCATED AT FINISHED CEILING AS REFLECTED IN DETAIL.

D. UNDERGROUND ISOLATION VALVE WITH VAULT AND HEAVY-DUTY TRAFFIC LID PER LOCAL UTILITY.

E. ROUTE 1 1/2" DOMESTIC COLD WATER LINE FROM BELOW FINISHED GRADE TO AREA ABOVE FINISHED CEILING; COORDINATE WITH STRUCTURAL SYSTEMS, FOUNDATION, ARCHITECTURAL DRAWINGS, ETC.

F. 3/4" DCW LINE DOWN TO OUTSIDE WALL HYDRANT AS SHOWN WITH LINE INSULATED WITH 3/4" ARMAFLEX TO PREVENT FREEZING; HYDRANT SHALL BE ANCHORED TO PREVENT MOVEMENT DURING HOSE CONNECTION.

SPECIAL PROJECT NOTES

1. SCOPE OF WORK IS TO PROVIDE COMPLETE PLUMBING SYSTEMS IN ACCORDANCE WITH REGULATING CODES & INDUSTRY STANDARDS AS REFLECTED IN THESE DOCUMENTS & ACCOMPANYING DRAWINGS/SPECS FROM OTHER TRADES & DISCIPLINES.

2. DOCUMENTS ARE DIAGRAMMATIC IN NATURE & SHOULD NOT BE CONSIDERED AS-BUILTS OR APPROVED SHOP DRAWINGS. SYSTEMS SHOWN ARE BASED ON THE BEST INFORMATION AVAILABLE TO DESIGN-ENGINEER. FUNDAMENTALLY, THIS MEANS THAT PLUMBING CONTRACTOR OR HIS/HER SELECTED SUBS, SHALL VERIFY ALL FOUNDATIONS, FRAMING, STRUCTURE, ETC AS WELL AS OTHER TRADES PRIOR TO INSTALLATION.

284 POPLAR DR
RAINSVILLE, ALABAMA 35986
(334) 695-0294
thedesigngroupinc@gmail.com
Mechanical-Electrical
Consulting Engineers
FL license No. 31813

confidential-this document & the information contained herein is confidential & may not be disclosed, copied altered or reproduced to any persons except as permitted in writing by "The Design Group, Inc."

the Design Group of Florida inc.

division of The Design Group, Inc.

J. KYLE COX LICENSE NO.62881 STATE OF FLORIDA PROFESSIONAL ENGINEER
Digitally signed by J. Kyle Cox
Date: 2025.09.30 10:55:13-05'00'

JOEL SAMPSON ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014780
850-875-4348

ANDY GAY PARK IMPROVEMENTS
FOR
CITY OF QUINCY, FLORIDA
116 NORTH ADAMS STREET QUINCY, FLORIDA

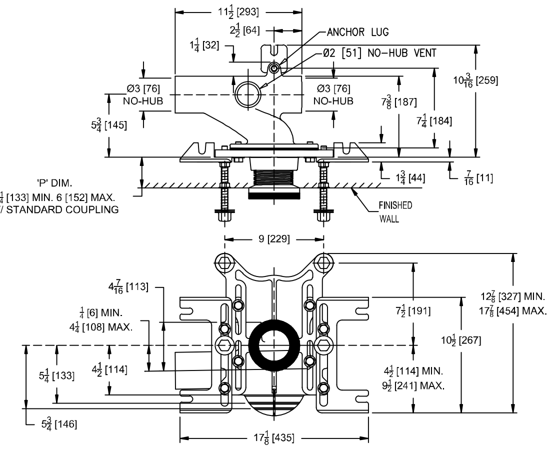
DATE: 7-15-25
REV:

JOB NO: 24-014

P1.1

SHEET NO.

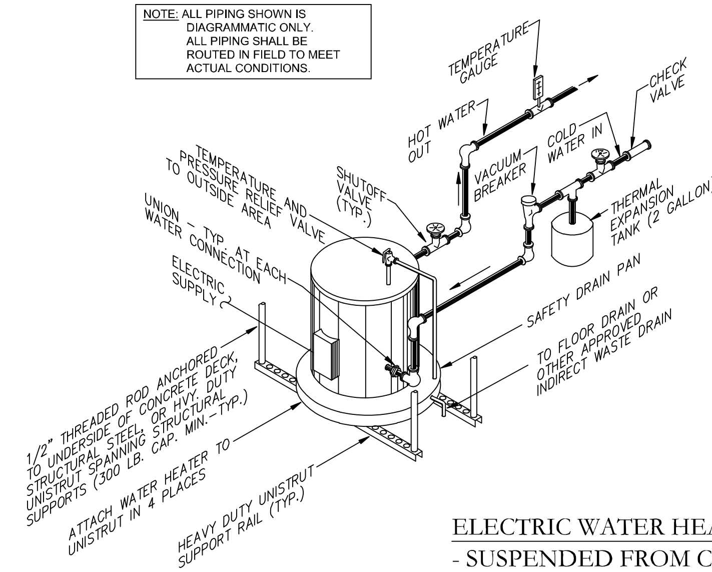
THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, INC. AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT, INC.



WALL MOUNTED WATER CLOSET CARRIER DETAIL

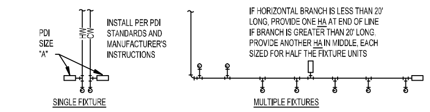
NOT TO SCALE

NOTE: ALL PIPING SHOWN IS DIAGRAMMATIC ONLY. ALL PIPING SHALL BE ROUTED IN FIELD TO MEET ACTUAL CONDITIONS.



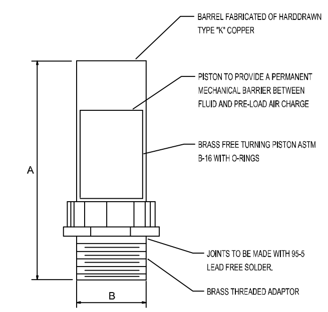
ELECTRIC WATER HEATER DETAIL - SUSPENDED FROM CEILING/ROOF STRUCTURE ON UNISTRUT SUPPORTS

NOT TO SCALE



	PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD
HA-	A	1/2"	1-11
HA-	B	3/4"	12-32
HA-	C	1"	33-60
HA-	D	1-1/4"	61-113
HA-	E	1-1/2"	114-154
HA-	F	2"	154-330

FIXTURE UNIT TABULATION		
FIXTURE	COLD	HOT
VALVE WATER CLOSET	10	–
TANK WATER CLOSET	5	–
URINAL	5	–
LAVATORY/SINK	1.5	1.5
JANITOR'S SINK	3	3
SHOWER/BATHTUB	2	2

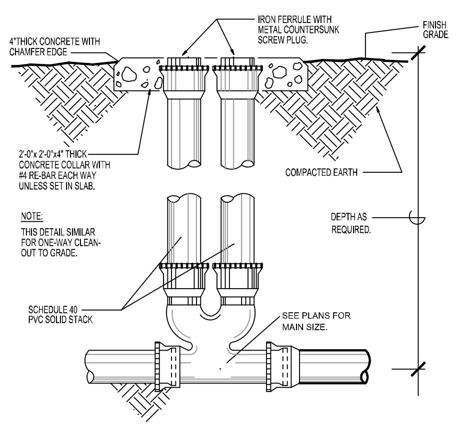


PROVIDE WATER HAMMER ARRESTERS BY SIOUX CHIEF, PRECISION PLUMBING PRODUCTS, WATTS OR APPROVED EQUIVALENT WITH PISTON AND 0-RING CONSTRUCTION, HAVING PDI #WH- 201, ASSE #1010 AND ANSI #A112.26.1M CERTIFICATION. INSTALL IN HORIZONTAL OR VERTICAL POSITION, BUT NEVER UPSIDE DOWN. INSTALL IN LINE WITH WATER FLOW DIRECTION IF POSSIBLE. SIZE THE UNITS AS SHOWN ON THE DRAWINGS AND/OR PER THE TABLES SHOWN ABOVE. PROVIDE ACCESS PANEL FOR SERVICING OR REPLACEMENT, WHERE REQUIRED.

NOTE: INSTALL AT WATER CLOSETS, LAVATORIES, WASHING MACHINE BOX, SINKS, DISHWASHERS, & WATER HEATERS AS NOTED IN SPEC'S IN COMPLIANCE WITH 2015 INTERNATIONAL PLUMBING CODE & ASPE DESIGN MANUAL

WATER HAMMER ARRESTOR DETAIL

NOT TO SCALE

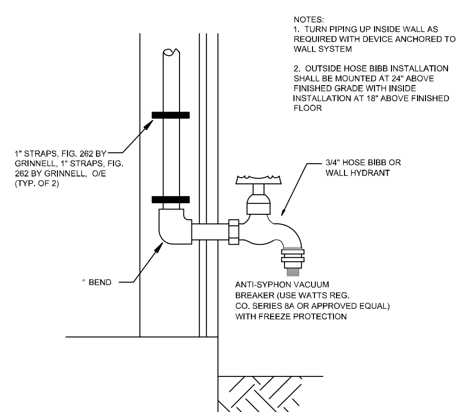


OUTSIDE CLEANOUT DETAIL

NOT TO SCALE

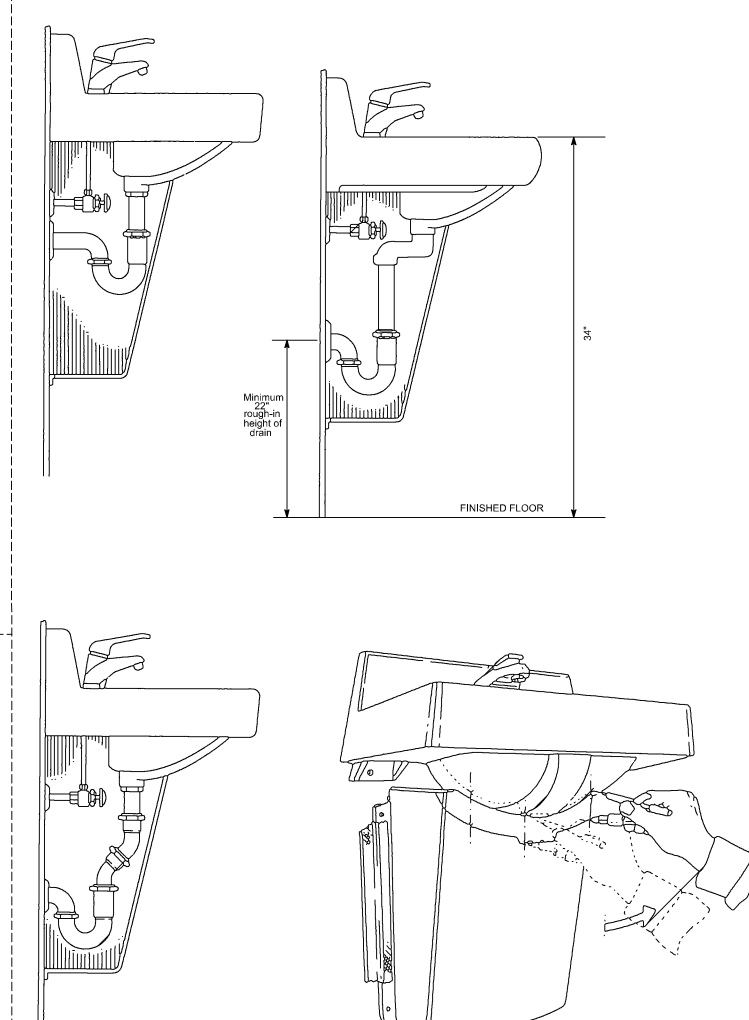
NOTES:
1. TURN PIPING UP INSIDE WALL AS REQUIRED WITH DEVICE ANCHORED TO WALL SYSTEM

2. OUTSIDE HOSE BIBB INSTALLATION SHALL BE MOUNTED AT 24" ABOVE FINISHED GRADE WITH INSIDE INSTALLATION AT 18" ABOVE FINISHED FLOOR



TYPICAL WALL HYDRANT DETAIL

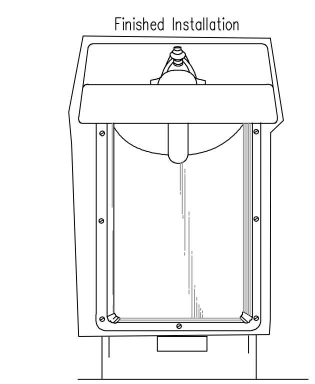
NTS



Standard Installation:
The Lav Shield is designed to be used in combination with ADA conforming 20" x 18" wall-hung china lavatories with waste outlets a maximum of 8.5" from wall (Illustration #1).
IMPORTANT: recommended height of 22 inches from floor is best for waste drain rough-in to allow for P-trap clearance.

Installation Variations:
If drain rough-in is less than 22" from floor or P-trap interfers with slanted front surface of Lav Shield, complete installation by flexing Lav Shield into place (for minor interference) or modify drain piping with offset tailpiece piping

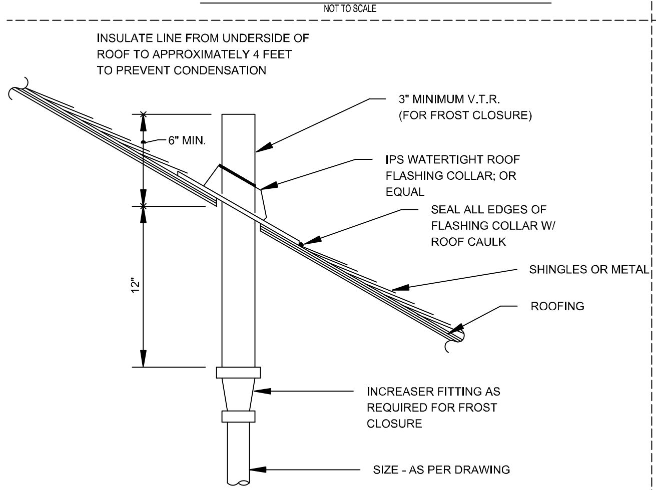
Installation Note:
Depending on the make and model of the lavatory, some scribing and coping may be required for satisfactory fit to underside of lavatory.



LAV SHIELD
LAVATORY PROTECTIVE ENCLOSURES

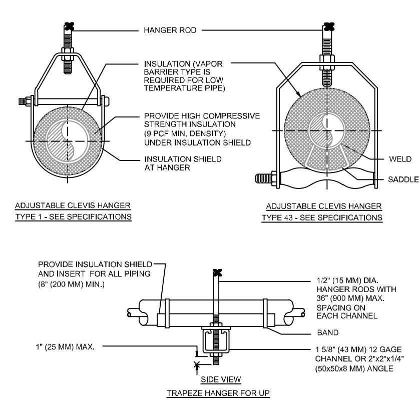
TYPICAL "LAV-SHIELD" LAVATORY-SINK ANSI-ADA DETAIL

NOT TO SCALE



PLUMBING VENT THROUGH PITCHED ROOF DETAIL

NOT TO SCALE



MAXIMUM PIPE/TUBING SUPPORT SPACING																				
NOM. SIZE	IN. (MM)	THRU 3/4 THRU (20)	1 (25)	1 1/4 (32)	1 1/2 (40)	2 (50)	2 1/2 (65)	3 (75)	4 (100)	5 (125)	6 (150)	8 (200)	10 (250)	12 (300)	14 (350)	16 (400)	18 (450)	20 (500)	24 (600)
PIPE	FT. (M)	7 (2.1)	7 (2.1)	7 (2.1)	9 (2.7)	10 (3.0)	11 (3.4)	12 (3.7)	14 (4.1)	16 (4.9)	17 (5.2)	19 (5.8)	22 (6.7)	23 (7.0)	25 (7.6)	27 (8.2)	28 (8.5)	30 (9.1)	32 (9.6)
TUBING	FT. (M)	5 FT 5 FT	6 (1.8)	7 (2.1)	8 (2.4)	8 (2.4)	9 (2.7)	10 (3.0)	12 (3.7)	13 (4.0)	14 (4.1)	16 (4.9)	-	-	-	-	-	-	-
NOTE: FOR TRAPEZE HANGER TAKE SPACING OF SMALLEST SIZE ON TRAPEZE.																				

TYPICAL PIPE HANGER DETAILS

NTS

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, INC. AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT, INC.

JOEL SAMPSON ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014780
850-875-4348

ANDY GAY PARK IMPROVEMENTS
FOR
CITY OF QUINCY, FLORIDA
116 NORTH ADAMS STREET QUINCY, FLORIDA

DATE: 7-15-25
REV:

JOB NO: 24-014

P2.1
SHEET NO.

284 POPLAR DR
RAINSVILLE, ALABAMA 35986
(334) 695-0284
thedesigngroupinc@gmail.com
Mechanical-Electrical
Consulting Engineers
FL License No. 31813

confidential–this document & the information contained herein is confidential & may not be disclosed, copied altered or reproduced to any persons except as permitted in writing by "The Design Group, Inc."

the Design Group of Florida inc.
division of The Design Group, Inc.

J. KYLE COX LICENSE NO.62881 STATE OF ... PROF... ENGINEER
Digitally signed by J. Kyle Cox Date: 2025.09.30 10:58:18-05'00'

ABBREVIATIONS

1PH	SINGLE-PHASE
1P	SINGLE POLE
2/C	TWO-CONDUCTOR
3/C	THREE-CONDUCTOR
3PH	THREE-PHASE
4/C	FOUR-CONDUCTOR
4W	FOUR-WIRE
ABV	ABOVE
A/C UNIT	AIR CONDITIONING UNIT
A/E	ARCHITECT/ENGINEER
AC	ALTERNATING CURRENT
ACC	ACCESSIBLE
ADJ	ADJACENT, ADJOINING
AFC	ABOVE FINISHED COUNTER
AFCI	AVAILABLE FAULT CURRENT
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AHJ	AUTHORITY HAVING JURISDICTION
AIC	AMPERE INTERRUPTING CAPACITY
ALT	ALTERNATE
AMP	AMPERE
ARCH	ARCHITECT
ATS	AUTOMATIC TRANSFER SWITCH
AUTO	AUTOMATIC
AV	AUDIO VISUAL
BC	BARE COPPER
BFC	BELOW FINISH CEILING
BFF	BELOW FINISH FLOOR
BFG	BELOW FINISH GRADE
BLDG	BUILDING
BRKR	BREAKER
BYP	BY PASS
C	CONDUIT
CAB	MOUNTED IN CABINET OR CASEWORK
CALC	CALCULATE
CAP	CAPACITY
CATV	COMMUNITY ANTENNA TELEVISION
CCR	CONTROL CONTACTOR
CCTV	CLOSED CIRCUIT TELEVISION
CD	CONSTRUCTION DOCUMENTS
CHW	CHILLED WATER
CHWP	CHILLED WATER PUMP
CKT	CIRCUIT
CKT BRKR	CIRCUIT BREAKER
CLG	CEILING
CMU	CONCRETE MASONRY UNIT
COAX	COAX CABLE
COMM	COMMUNICATION
CONC	CONCRETE
CONTR	CONTRACTOR
COORD	COORDINATE
CTV	CABLE TELEVISION
CU FT	CUBIC FEET
CUR	CURRENT
DB	DECIBEL
DC	DIRECT CURRENT
DCP	DIMMER CONTROL PANEL
DEG C	DEGREES CELSIUS
DEG F	DEGREES FAHRENHEIT
DEMO	DEMOLITION
DIAG	DIAGRAM
DISC	DISCONNECT
DISTR	DISTRIBUTION
DISTR PNL	DISTRIBUTION PANEL
DMR SW	DIMMER SWITCH
DN	DOWN
DPDT	DOUBLE POLE,DOUBLE THROW
DPST	DOUBLE POLE,SINGLE THROW
DS	DISCONNECT SWITCH
DWG	DRAWING
EC	EMPTY CONDUIT
EG	EQUIPMENT GROUND
EL	ELEVATION
ELEC	ELECTRIC
ELEV	ELEVATOR
EMT	ELECTRICAL METALLIC TUBING
ENCL	ENCLOSURE
EPO	EMERGENCY POWER OFF
EP	EXPLOSION PROOF
ESMT	EASEMENT
EWC	ELECTRIC WATER COOLER
EWH	ELECTRIC WATER HEATER
EX	EXISTING
FA	FIRE ALARM
FACP	FIRE ALARM CONTROL PANEL
FDS	FUSED DISCONNECT SWITCH
FIXT	FIXTURE
FLA	FULL LOAD AMPS
FLEX	FLEXIBLE METALLIC CONDUIT
FLUOR	FLUORESCENT
FP	FIRE PROTECTION
FT	FEET OR FOOT
FVNR	FULL VOLTAGE NON-REVERSING
G	GROUND
GEN	GENERATOR
GFCI	GROUND FAULT CIRCUIT INTERRUPTER
HID	HIGH INTENSITY DISCHARGE
HOA	HAND-OFF-AUTOMATIC
HP	HORSEPOWER
HT	HEIGHT
HZ	HERTZ
IMC	INTERMEDIATE METAL CONDUIT
IR	INFRARED
IWH	INSTANTANEOUS WATER HEATER
J-BOX	JUNCTION BOX
kV	KILOVOLT
kVA	KILOVOLT AMPERE
kVAH	KILOVOLT AMPERE PER HOUR
kVAR	KILOVOLT AMPERE REACTIVE
kW	KILOWATT
kWH	KILOWATT HOUR
kWHM	KILOWATT HOUR METER
LED	LIGHT EMITTING DIODE
LF	LINEAR FEET (FOOT)
LM	LUMEN
LP	LIGHT POLE
LPS	LOW PRESSURE SODIUM
LRA	LOCKED ROTOR AMPS
LT	LIGHT
LTG	LIGHTING
LV	LOW VOLTAGE
MATV	MASTER ANTENNA TELEVISION SYSTEM
MAX	MAXIMUM
MC	METAL-CLAD
MCA	MINIMUM CIRCUIT AMPS
MCB	MAIN CIRCUIT BREAKER
MCC	MOTOR CONTROL CENTER
MD	MAIN DISCONNECT
MDP	MAIN DISTRIBUTION PANEL
MECH	MECHANICAL
MH	MANHOLE
MIN	MINIMUM
MOCP	MAXIMUM OVERCURRENT PROTECTION
MLO	MAIN LUGS ONLY
MT	MOUNT
MTD	MOUNTED
MTG	MOUNTING
MTS	MANUAL TRANSFER SWITCH
MV	MEDIUM VOLTAGE
NA	NOT APPLICABLE
NEC	NATIONAL ELECTRICAL CODE
NEMA	NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION
N	NEUTRAL
NFPA	NATIONAL FIRE PROTECTION ASSOCIATION
NIC	NOT IN CONTRACT
NL	NIGHT LIGHT
NO	NORMALLY OPEN
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OL	OVERLOAD
P	POLE
PA	PUBLIC ADDRESS
PE	PHOTOELECTRIC CELL
PED	PEDESTAL
PEND	PENDANT
PF	POWER FACTOR
PH	PHASE
PNL	PANEL
POD	POWER OPERATED DAMPER
PVC	POLYVINYL CHLORIDE (PLASTIC)
PWR	POWER
RCP	REFLECTED CEILING PLAN
REC	RECESSED
RECPT	RECEPTACLE
RGS	RIGID GALVANIZED STEEL
RM	ROOM
REQD	REQUIRED
SCC	SHORT CIRCUIT CAPACITY
SE	SERVICE ENTRANCE
SES	SERVICE ENTRANCE SECTION
SD	SMOKE DETECTOR
SF	SQUARE FOOT (FEET)
SHT	SHEET
SPEC	SPECIFICATION
SPST	SINGLE POLE, SINGLE THROW
SURF	SURFACE
SW	SWITCH
SWBD	SWITCHBOARD
SWGR	SWITCHGEAR
TBB	TELECOMMUNICATIONS BACKBOARD
TC	TIME CLOCK
TEL	TELEPHONE
TP	TWISTED PAIR
TPS	TWISTED PAIR SHIELDED
TV	TELEVISION
TYP	TYPICAL
UGND	UNDERGROUND
UL	UNDERWRITERS LABORATORY
UON	UNLESS OTHERWISE NOTED
UPS	UNINTERRUPTIBLE POWER SUPPLY
UTIL	UTILITY
V	VOLT
VA	VOLT AMPERE
VFD	VARIABLE FREQUENCY DRIVE
VOLT	VOLTAGE
W	WATT
WH	WATER HEATER
WP	WEATHERPROOF
XFMR	TRANSFORMER
XR	EXISTING TO BE REMOVED
XRL	EXISTING RELOCATED
XRR	EXISTING TO BE RELOCATED

GENERAL ELECTRICAL NOTES

1. ALL ELECTRICAL WORK PROVIDED FOR THIS PROJECT SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRIC CODE (NFPA-70), LOCAL CODES, AND THE FOLLOWING CRITERIA:
   A. TRADE SIZE CONDUIT SMALLER THEN 1/2" SHALL NOT BE USED.
   B. CONDUIT ABOVE GRADE AND NOT EXPOSED TO THE WEATHER SHALL BE ELECTRICAL METALLIC TUBING (EMT). FITTINGS SHALL BE SET SCREW TYPE.
   C. CONDUIT BELOW GRADE SHALL BE SCHEDULE 40 PVC EXCEPT TURNS AND PENETRATIONS AT GRADE SHALL BE GALVANIZED RIGID STEEL.
   D. CONDUIT ABOVE GRADE AND EXPOSED TO WEATHER SHALL BE GALVANIZED RIGID OR INTERMEDIATE METAL CONDUIT.
   E. WIRE SIZE SMALLER THAN #12 AWG SHALL NOT BE USED FOR POWER AND LIGHTING CIRCUITS.
   F. ALL WIRING PROVIDED BY THE ELECTRICAL CONTRACTOR SHALL BE COPPER.
   G. ALL CONDUCTORS SHALL HAVE A MINIMUM TEMPERATURE RATING OF 75 DEGREES C. (TYPE THW OR TYPE THWN).
   H. WHERE POSSIBLE EXCEPT WHEN SHOWN OTHERWISE ON THE DRAWINGS, ALL CONDUIT SHALL BE RUN CONCEALED BELOW GRADE, WITHIN WALLS OR ABOVE CEILING.
   I. CONDUCTORS #12 AWG MAY BE SOLID OR STRANDED, EXCEPT FOR ONLY #12 AWG SOLID OR ONLY #12 AWG STRANDED SHALL BE USED. #10 AWG OR LARGER SHALL BE STRANDED.
   J. THERE SHALL BE NO MORE THAN 270 DEGREES TOTAL TURN OR 150 FEET BETWEEN PULL POINTS IN CONDUIT RUNS.
2. EXISTING SERVICE TO THE BUILDING IS 120/240 VOLTS, 1 PHASE, 3 WIRE.
3. THE ELECTRICAL CONTRACTOR SHALL BE RESPONSIBLE FOR ALL CONSTRUCTION PERMITS FOR ELECTRICAL WORK AND FOR SCHEDULING ELECTRICAL INSPECTIONS.
4. THE ELECTRICAL CONTRACTOR SHALL ARRANGE FOR AND MAKE NECESSARY CONNECTION FOR TEMPORARY POWER AS REQUIRED FOR CONSTRUCTION.
5. THE ELECTRICAL CONTRACTOR SHALL MAKE ARRANGEMENTS WITH THE ELECTRICAL UTILITY COMPANY FOR SERVICE CONNECTIONS.
6. SOME SAFETY DISCONNECT SWITCHES MAY BE PROVIDED BY THE MECHANICAL CONTRACTOR BUT INSTALLED AND CONNECTED BY THE ELECTRICAL CONTRACTOR. THIS WORK SHALL BE COORDINATED WITH THE MECHANICAL CONTRACTOR.
7. CONDUIT WHICH PENETRATES THE ROOF OR EXTERIOR WALL SHALL BE FLASHED AND SEALED WATERTIGHT.
8. BURIED CONDUIT NOT UNDER SLAB SHALL HAVE A MINIMUM COVER OF 24 INCHES.
9. VERIFY ALL DOOR SWINGS WITH ARCHITECTURAL DRAWINGS BEFORE ROUGHING IN SWITCHES.
10. VERIFY EXACT LOCATION OF ALL MOTORS AND EQUIPMENT BEFORE ROUGHING IN.
11. VERIFY THE EXACT LOCATION OF COUNTERTOPS AND BACKSPLASHES ON ARCHITECTURAL DETAILS AND/OR CASEWORK SHOP DRAWINGS AND ADJUST SPECIFIED MOUNTING HEIGHT OF WALL OUTLETS AS REQUIRED TO AVOID CONFLICTS.
12. CHECK ALL LIGHTING FIXTURES FOR EXACT TYPE MOUNTING AND SPACE REQUIRED BEFORE ROUGHING IN. SUPPORT OF ALL LIGHT FIXTURES SHALL BE THE RESPONSIBILITY OF THE ELECTRICAL CONTRACTOR. FIXTURES SHALL BE SUPPORTED INDEPENDENT OF CEILING FROM STRUCTURAL MEMBERS OF THE BUILDING.
13. FURNISH AND INSTALL PLASTER FRAMES FOR ALL RECESSED FIXTURES AS REQUIRED.
14. CHECK THE CORRESPONDING MECHANICAL SHEETS AND INSTALL PROPER SERVICE AND CONNECTIONS TO ALL MECHANICAL SYSTEMS SHOWN THEREON, REGARDLESS OF ITS BEING OR NOT BEING SHOWN ON ELECTRICAL SHEETS.
15. FURNISH AND INSTALL FUSES IN FUSIBLE DISCONNECTS PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.
16. A GREEN EQUIPMENT GROUNDING CONDUCTOR (SIZED PER THE NEC) SHALL BE INSTALLED IN EACH CONDUIT.
17. ALL WIRING DEVICES SHALL BE MOUNTED AS INDICATED IN THE SPECIFICATIONS UNLESS NOTED OTHERWISE IN THESE PLANS. ALL LIGHTING FIXTURES SHALL BE MOUNTED AS NOTED IN THE FIXTURE SCHEDULE UNLESS OTHERWISE INDICATED.
18. ALL PANELBOARDS, BACKBOARDS, TERMINAL CABINETS, ETC SHALL HAVE CUSTOM ENGRAVED MICARTA NAMEPLATE MECHANICALLY AFFIXED IDENTIFYING SYSTEM.
19. THE ELECTRICAL CONTRACTOR SHALL PROVIDE FAULT CURRENT CALCULATIONS FOR THE SERVICE EQUIPMENT AND SHALL MARK EQUIPMENT WITH THE AVAILABLE FAULT CURRENT AND DATE OF THE CALCULATION PER NEC 110.24. REFER TO TYPICAL SERVICE EQUIPMENT FAULT CURRENT LABEL DETAIL.
20. TYPICAL MOUNTING HEIGHTS:

A. WALL SWITCHES	48" A.F.F.	J. CLOCK OUTLET	96" A.F.F. OR 6" BELOW CEILING
B. GENERAL RECEPTACLE OUTLETS	18" A.F.F.	K. BELLS, BUZZERS, CHIMES	96" A.F.F. OR 6" BELOW CEILING
C. RECEPTACLE OUTLETS, MOUNTED ABOVE COUNTER	6" ABOVE COUNTERTOP	L. FIRE ALARM STATIONS	48" A.F.F.
D. TELEPHONE OUTLETS	18" A.F.F.	M. FIRE ALARM GONGS, BELLS, HORNS, LIGHTS	80" A.F.F. OR 6" BELOW CEILING
E. WALL PHONE OUTLETS	48" A.F.F.	N. PANEL BOARDS-HIGHEST OVERCURRENT PROTECTION DEVICE	6'-7" A.F.F. MAXIMUM
F. WALL INTERCOM STATIONS	48" A.F.F.	O. EXIT SIGNS	CENTERLINE ABOVE DOOR
G. NIGHT LIGHTS	18" A.F.F.	P. DISCONNECT SWITCHES, CONTROLLERS	6'-7" A.F.F. MAXIMUM
H. WALL LIGHTING OUTLETS	84" A.F.F.		
I. PUSH BUTTONS	48" A.F.F.		

23. ALL SUB-CONTRACTORS ARE RESPONSIBLE FOR SEALING/CAULKING ALL PENETRATIONS TO MEET THE HOURLY REQUIREMENT OF THE WALL/CEILING ASSEMBLY.
24. ALL 15 AND 20 AMP 120 VOLT RECEPTACLES SHALL BE TAMPER RESISTANT TYPE. PER NEC 406.13

ELECTRICAL POWER SYSTEM SYMBOLS

- WP, 1, C — DUPLEX WALL OUTLET. "C" INDICATES GFCI TYPE. "WP" INDICATES WEATHERPROOF OUTLET. CIRCUIT "1" INDICATED. "OS" INDICATES SWITCHED WITH OCCUPANCY SENSOR.
- SIMPLEX WALL OUTLET.
- DUPLEX WALL OUTLET. SPLIT-WIRED SO THAT EACH OUTLET IS SERVED FROM A SEPARATE CIRCUIT.
- DUPLEX/USB WALL OUTLET. LEVINTON T5632-W OR APPROVED EQUAL.
- TV — DUPLEX WALL FOR TELEVISION. MTD AT 9' AFF.
- CAB — DUPLEX WALL OUTLET MOUNTED IN CASEWORK. ALL WIRING BY ELECTRICAL CONTRACTOR. INSTALLATION OF OUTLET SHALL BE COORDINATED WITH CASEWORK SUPPLIER.
- DUPLEX WALL OUTLET MOUNTED ABOVE COUNTERTOP
- DOUBLE DUPLEX WALL OUTLET
- CEILING MOUNTED DUPLEX OUTLET
- 14-30 — SPECIAL PURPOSE WALL OUTLET. NEMA CONFIGURATION 14-30 INDICATED.
- DUPLEX WALL ISOLATE GROUND OUTLET. ORANGE BODY. (NEMA 5-20R) SEE TYPICAL I.G. RECEPTACLE WIRING DETAIL.
- DOUBLE DUPLEX ISOLATED GROUND WALL OUTLET. ORANGE BODY. (NEMA 5-20R) SEE TYPICAL I.G. RECEPTACLE WIRING DETAIL.
- CR — CORD REEL WITH SINGLE OUTLET (NEMA 5-20). SEE DETAIL SHEET ____.
- CR — CORD REEL WITH FOUR (4) OUTLETS (NEMA 5-20). SEE DETAIL SHEET ____.
- CR — CORD REEL WITH TWO (2) OUTLETS (NEMA 5-20). SEE DETAIL SHEET ____.
- DUPLEX OUTLET IN CAST PEDESTAL
- LP-A — PANELBOARD, 240 VAC MAX, SURFACE MOUNTED. PANEL "LP-A" INDICATED. SEE PANELBOARD SCHEDULES.
- PANELBOARD, 240 VAC MAX, FLUSH MOUNTED.
- PANELBOARD, 600 VAC MAX, SURFACE MOUNTED.
- T — TRANSFORMER. SEE TRANSFORMER SCHEDULE. LOCATE MINIMUM 6" FROM WALL.
- 60/3, J, F40, NEMA 3R — FUSED DISCONNECT SWITCH. "NEMA 3R" ENCLOSURE INDICATED. "60" AMPERE, "3" POLE SWITCH INDICATED." F40 INDICATES 40 AMPERE FUSING.
- 60/3, NEMA 1 — NON-FUSED DISCONNECT SWITCH. "NEMA 1" ENCLOSURE INDICATED. "60" AMPERE, "3" POLE SWITCH INDICATED.
- 60/3, J, F40, NEMA 4X, 0, FVNR — COMBINATION MOTOR STARTER AND SHORT CIRCUIT PROTECTION. "NEMA 4X" ENCLOSURE INDICATED. STARTER SIZE INDICATED AS FOLLOWS: # INDICATES NEMA SIZE, #A INDICATES STARTER OUTPUT CURRENT IN AMPERES (FOR SOLID STATE STARTERS). SEE ABBREVIATIONS FOR EXPLANATION OF LETTER DESIGNATIONS.
- MOTOR STARTER ONLY (WITHOUT SHORT CIRCUIT PROTECTION).
- MANUAL MOTOR STARTER.
- $_M — SWITCH, MANUAL MOTOR STARTER, WITH OVERLOADS.
- ATS — AUTOMATIC TRANSFER SWITCH.
- MTS — MANUAL TRANSFER SWITCH.
- TVSS — TRANSIENT VOLTAGE SURGE SUPPRESSOR.
- UPS — UNINTERRUPTIBLE POWER SUPPLY.
- # — SINGLE PHASE MOTOR. # INDICATES MOTOR HORSEPOWER.
- # — THREE PHASE MOTOR. # INDICATES MOTOR HORSEPOWER.

RACEWAY SYMBOLS

- MP: 4 — CONDUIT CONCEALED IN WALL OR ABOVE CEILING UNLESS NOTED OTHERWISE. ARROW INDICATES HOME RUN (PANEL "LP-R" CIRCUIT "4" INDICATED). NUMBER AND SIZE OF CONDUCTORS INDICATED, EITHER BY CALLOUTS OR HASHMARKS. HASHMARKS MEANS 2 #12, 1 #12G, 3/4"C. WIRING CALLOUTS SHALL USE THE FOLLOWING PATTERN: "3 #3, 1 #8G, 1-1/2" C." MEANS THREE SIZE 3 AWG CONDUCTORS AND ONE SIZE 8 AWG GROUNDING CONDUCTOR, INSTALLED IN A 1-1/2" SIZE CONDUIT. THE TYPE OF CONDUIT IS INDICATED BY THE SPECIFICATIONS UNLESS NOTED.
- FLAGGED HASHMARK ON CONDUIT RUN INDICATES SWITCHED CONDUCTOR.
- CONDUIT CONCEALED IN FLOOR OR BELOW GRADE
- SURFACE METAL RACEWAY SYSTEM, WITH DEVICES INSTALLED AS SHOWN
- 8' PLUG MOLD STRIP, WITH 2:20 A OUTLETS AT 4' ON CENTER
- FLEXIBLE CONDUIT CONNECTION. LENGTH AS REQUIRED AND ALLOWED BY SPECIFICATIONS AND NEC. CONDUIT SHALL BE LIQUID-TIGHT IN ALL OUTDOOR LOCATIONS, MECHANICAL ROOMS AND OTHER LOCATIONS WHERE FALLING OR SPRAYING WATER IS POSSIBLE.
- UNDERGROUND CONDUIT STUB-OUT FOR FUTURE TIE-IN BY OTHERS. CAP AND MARK LOCATION AFTER FINISH GRADING IS COMPLETE.
- VERTICAL CONDUIT TURNED UPWARD. [STUB UP AND CAP] [RISER TO FLOOR ABOVE]
- VERTICAL CONDUIT TURNED DOWNWARD. [STUB DOWN AND CAP] [RISER TO FLOOR BELOW]

ELECTRICAL LIGHTING SYMBOLS

- A, NL, EM, [2] — RECESSED CEILING MOUNTED LUMINAIRE – MARK "A". SWTCH "a" INDICATED." LIGHTING CONTROL ZONE "2" INDICATED. "EM" INDICATES LUMINAIRE ON EMERGENCY POWER. "NL" INDICATES UNSWITCHED LUMINAIRE FOR NIGHT LIGHTING.
- SURFACE CEILING MOUNTED LUMINAIRE.
- WALL MOUNTED LUMINAIRE.
- SURFACE MOUNTED STRIP LUMINAIRE, 2' LONG.
- SURFACE MOUNTED STRIP LUMINAIRE, 3' LONG.
- SURFACE MOUNTED STRIP LUMINAIRE, 4' LONG.
- 1'x4' LUMINAIRE.
- 1'x8' LUMINAIRE.
- 2'x2' LUMINAIRE.
- 2'x4' LUMINAIRE.
- $_a — SWITCH, SINGLE POLE, 20A, 120/277V. "a" INDICATES KEY OPERATED SWITCH. IF PRESENT, LOWERCASE LETTER COORDINATES WITH LETTERS ON FIXTURES.
- $_2 — SWITCH, 30A, (EQ TO MITSUBISHI ELECTRIC TAZ-MS303). MOUNTED 6" BELOW CEILING.
- $_3 — SWITCH, THREE-WAY, 20A, 120/277V.
- $_4 — SWITCH, FOUR-WAY, 20A, 120/277V.
- $_D — DIMMER SWITCH, [ROTARY][SLIDE] TYPE, RATED FOR LOAD TO BE SWITCHED.
- $_P — PILOT-LIGHTED SWITCH
- $_os — OCCUPANCY SENSOR FOR LIGHTING CONTROL. DUAL TECHNOLOGY, RELAY CONTACTS RATED FOR LOAD TO BE SWITCHED. (EQ TO SENSOR SWITCH WSX PDT "COLOR"). COLOR SELECTED BY OWNER/ARCHITECT.
- $_LV — LOW VOLTAGE FOR LIGHTING CONTROL. (EQ TO SENSOR SWITCH BR2 BWH PWH). COLOR SELECTED BY OWNER/ARCHITECT.
- $_t — SWITCH, SINGLE POLE, 20A, 120/277V. 60 MINUTE TIMER WALL SWITCH
- OS, 1 — OCCUPANCY SENSOR FOR LIGHTING CONTROL. CEILING MTD, STANDARD RANGE (EQ TO SENSOR SWITCH CMR-PDT-9). "1" INDICATES EXTENDED RANGE SENSOR (EQ TO SENSOR SWITCH CMR-PDT-10). "2" INDICATES EXTENDED RANGE SENSOR (EQ TO SENSOR SWITCH CMR-PDT-10R). PROVIDE POWER PACK AS REQUIRED BY MANUFACTURER.
- OS, 2 — OCCUPANCY SENSOR FOR LIGHTING CONTROL WALL MTD. STANDARD RANGE (EQ TO SENSOR SWITCH CMR-PDT-9). "1" INDICATES EXTENDED RANGE SENSOR (EQ TO SENSOR SWITCH CMR-PDT-10). PROVIDE POWER PACK AS REQUIRED BY MANUFACTURER.
- $_LC — LIGHTING CONTROL PANEL (EQ TO LC&D "LIGHTING CONTROL & DESIGN" BRIGHTON DIGITALSWITCH. SEE DIGITAL SWITCH SCHEDULE.
- EXIT SIGN, CEILING MOUNTED, SINGLE FACE.
- EXIT SIGN, CEILING MOUNTED, SINGLE FACE. ARROW INDICATES DIRECTION(S) OF EGRESS.
- EXIT SIGN, CEILING MOUNTED, DOUBLE FACE. ARROWS INDICATE DIRECTION(S) OF EGRESS.
- EXIT SIGN, WALL MOUNTED. SINGLE FACE.
- EXIT SIGN, WALL MOUNTED. DOUBLE FACE.
- EMERGENCY LIGHTING UNIT
- P1 — POLE MOUNTED LUMINAIRE, SINGLE HEAD. POLE TYPE "P1" INDICATED.
- POLE MOUNTED LUMINAIRE, DOUBLE HEAD.
- POLE MOUNTED LUMINAIRE, TRIPLE HEAD.
- POLE MOUNTED LUMINAIRE, QUAD HEAD.
- BOLLARD LUMINAIRE.
- B — REMOTE EMERGENCY BALLAST.
- LCP — LIGHTING CONTROL PANEL (EQ TO TORK #ELC712)
- PE — PHOTO ELECTRICAL CELL (EQ TO TORK #2101)
- LC — EMPTY BOX W/PULL STRING AND BLANK FACEPLATE. FOR FUTURE LIGHTING CONTROL SYSTEM.
- DD — DAYLIGHT HARVESTING PHOTOCELL CONTROL

SPECIAL NOTE:

PLEASE NOTE, SOME SYMBOLS & ABBREVIATIONS MAY NOT BE USED ON THESE DRAWINGS OR CONSTRUCTION DOCUMENTS. SEE PROJECT DRAWING INFORMATION NOTES FOR ADDITIONAL DIRECTION & CLARIFICATION.

MISCELLANEOUS AUXILIARY

- W — COMMUNICATIONS OUTLET WITH 3/4"C STUBBED ABOVE ACCESSIBLE CEILING. "W" INDICATES WALL PHONE. MOUNTED 54" AFF UNLESS NOTED OTHERWISE. CABLING BY OTHERS.
- IWS/LAN OUTLET WITH 3/4"C STUBBED ABOVE ACCESSIBLE CEILING. "W" INDICATES WALL PHONE. CABLING BY OTHERS.
- TELECOMMUNICATIONS BACKBOARD (4FT LONG)
- TELECOMMUNICATIONS BACKBOARD (8FT LONG)
- DATA, MDF — DATA COMMUNICATIONS RACK. "MDF" INDICATES MAIN DISTRIBUTION FRAME, "IDF" INDICATES INTERMEDIATE DISTRIBUTION FRAME.
- MATV, HE — MATV/CATV RACK. "HE" INDICATES HEAD-END CABINET, "IR" INDICATES INTERMEDIATE CABINET.
- WP, CAM, 1-1 — CCTV CAMERA. CAMERA 1-1 INDICATED. SEE SCHEDULE. "WP" INDICATES WEATHERPROOF HOUSING.
- CCTV, HE — CCTV RACK. "HE" INDICATES HEAD-END CABINET, "IR" INDICATES INTERMEDIATE CABINET.

MISCELLANEOUS ELECTRICAL

- E — EMERGENCY STOP CONTROL STATION WITH RESET KEY SWITCH. SEE CONTROL DIAGRAM FOR MORE INFORMATION. MTD 4'-0" AFF.
- PUSHBUTTON STATION, WITH [ON-OFF] [START-STOP] BUTTONS. MTD 4'-0" AFF. NEMA 12 ENCL.
- JUNCTION BOX. SIZE AS REQUIRED.
- # — FLOOR BOX, WITH POWER OR DATA OUTLETS AS INDICATED. # INDICATES NUMBER OF GANGS. [SEE DETAIL ON SHEET ____]
- # — DIVIDED FLOOR BOX, WITH POWER AND DATA OUTLETS AS INDICATED. # INDICATES NUMBER OF GANGS. [SEE DETAIL ON SHEET ____]
- # — MULTI-SERVICE WALL BOX, WITH POWER AND DATA OUTLETS AS INDICATED. # INDICATES NUMBER OF GANGS. [SEE DETAIL ON SHEET ____]
- # — POKE THRU SERVICE FITTING, WITH POWER AND/OR DATA OUTLETS AS INDICATED. # INDICATES NUMBER OF GANGS. "S" INDICATES SURFACE OR MONUMENT TYPE FITTING. FLUSH FITTING UNLESS NOTED.
- S, P — CEILING-MOUNTED SPEAKER. "P" INDICATES PUBLIC ADDRESS OR PAGING TYPE (NO TALKBACK FUNCTION).
- C, LC-A — LIGHTING CONTACTOR, CONTACTOR "LC-A" INDICATED. SEE CONTACTOR SCHEDULE.
- ???, ## — EQUIPMENT MARK. SEE SCHEDULES FOR ELECTRICAL SERVICE INFORMATION
- TV — OUTLET WITH 3/4"C STUBBED ABOVE ACCESSIBLE CEILING. "TV" INDICATES TELEVISION OUTLET. "AV" INDICATES AUDIO/VIDEO 2-GANG OUTLET BOX. SEE USOS AUDIOVISUAL STANDARDS FOR DETAILS.

JOEL SAMPSON ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLALIC.NO AR0014780
850-875-4348

ANDY GAY PARK IMPROVEMENTS

FOR

CITY OF QUINCY, FLORIDA

116 NORTH ADAMS STREET QUINCY, FLORIDA

DATE: 7-15-25

REV:

JOB NO: 24-014

E0.1

SHEET NO.

284 POPLAR DR
RAINSVILLE, ALABAMA 35986
(334) 695-0284
thedesigngroupinc@gmail.com
Mechanical-Electrical
Consulting Engineers
FL License No. 31813

confidential-this document & the information contained herein is confidential & may not be disclosed, copied altered or reproduced to any persons except as permitted in writing by "The Design Group, Inc."

the Design Group of Florida inc.

division of The Design Group, Inc.

K. DAVID PALMER LICENSE NO.62855 STATE OF FLORIDA — Digitally signed by K. David Palmer 62855 State of Florida. Date: 2025.09.30 15:20:21-05'00'

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, INC. AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT, INC.

PANELBOARD SCHEDULE — PANEL MP

120/240 VOLTS, 1 PHASE, 3 WIRE,
225 AMP MAIN LUGS ONLY
ISOLATED NEUTRAL BUS, GROUND BUS
SURFACE MOUNT, HINGED FRONT TRIM, NEMA 3R ENCLOSURE

NQO STYLE PANEL
42 CKT PANEL
24,000 AIC RATING

CKT NO.	CIRCUIT DESCRIPTION	BRKR A/POLE	CKT VA LGT	CKT VA REC	CKT VA MISC	VA/PHASE PH A	VA/PHASE PH B	CKT VA LGT	CKT VA REC	CKT VA MISC	BRKR A/POLE	CIRCUIT DESCRIPTION	CKT NO.
1	BATHROOM HANDS FREE DEVICES	20/1	0	400	0	561		161	0	0	20/1	LTS – RESTROOM ROOMS	2
3	CRP–1	20/1	0	0	750		828	78	0	0	20/1	LTS – EXTERIOR PAVILION LIGHTS	4
5	CRP–2	20/1	0	0	750	840		90	0	0	20/1	LTS – CANOPY LIGHTS	6
7	WUH–1	20/1	0	0	1500		1980	480	0	0	20/1	LTS – SITE POST TOP	8
9	WH–1	20/1	0	0	1500	2048		548	0	0	20/1	LTS – TALL AREA SITE	10
11	REC – PAVILION	20/1	0	720	0		878	156	1	1	20/1	LTS – SIGN LIGHTS	12
13	REC – PAVILION WALL	20/1	0	180	0	381		0	0	201	20/1	CONTACTOR/TIME CLOCK	14
15	REC – PAVILION WALL	20/1	0	180	0		180	0	0	0	20/1	SPARE	16
17	REC – PAVILION WALL	20/1	0	180	0	180		0	0	0	20/1	SPARE	18
19	REC – PAVILION WALL	20/1	0	180	0		180	0	0	0	20/1	SPARE	20
21	REC – PAVILION WALL	20/1	0	180	0	180		0	0	0	20/1	SPARE	22
23	REC – POST TOP POLES	20/1	0	1080	0		1080	0	0	0	20/1	SPARE	24
25	REC – POST TOP POLES	20/1	0	1080	0	1080		0	0	0	20/1	SPARE	26
27	REC – AREA POLES	20/1	0	720	0		720	0	0	0	20/1	SPARE	28
29	REC – CANOPY	20/1	0	540	0	540		0	0	0	20/1	SPARE	30
31	REC – CANOPY	20/1	0	540	0		540	0	0	0	___/_	SPACE	32
33	SPARE	20/1	0	0	0	0		0	0	0	___/_	SPACE	34
35	SPACE	___/_	0	0	0		0	0	0	0	___/_	SPACE	36
37	SPACE	___/_	0	0	0	0		0	0	0	___/_	SPACE	38
39	SPACE	___/_	0	0	0		5760	0	0	5760	60/2	DISC FOR BAND	40
41	SPACE	___/_	0	0	0	5760		0	0	5760			42
		TOTALS:	0	5980	4500	11570	12146	1513	1	11722	VA		

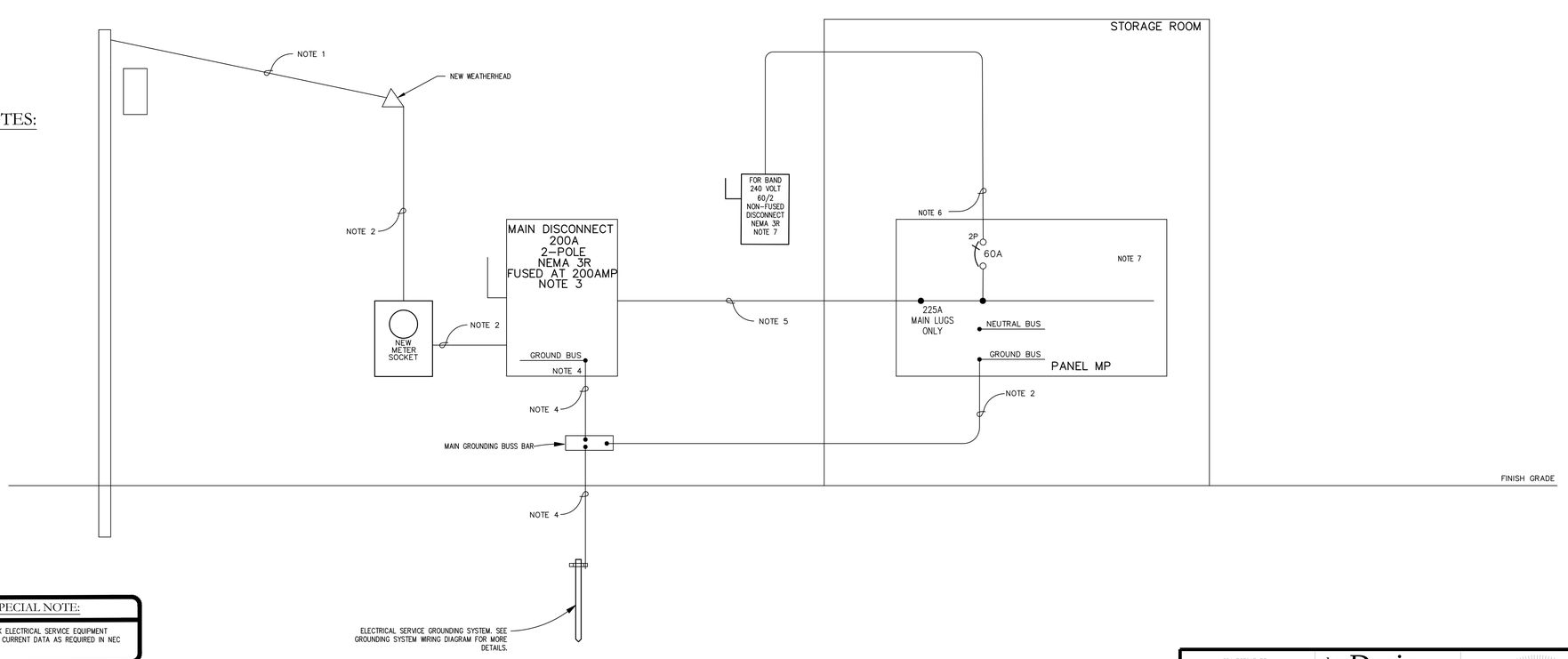
LOAD SUMMARY:	CONNECTED:				DEMAND:		VOLTAGE			TOTAL
LIGHTING:	1513	X 125%	=	1891	24094	/	240	=	100.4	X 125%= 125.49
RECEPTACLES:	5981	(FIRST 10K + 50% OF REMAINING)	=	5981	FEEDER SIZE:					3 #250 KCMIL AL, 2 1/2"C.
MISCELLANEOUS:	16222	X 100%	=	16222	FEEDER BREAKER:					200/2 MAIN BREAKER

LUMINAIRE SCHEDULE

MARK	DESCRIPTION	BASIS OF DESIGN PRODUCT(S) MANUFACTURER	BASIS OF DESIGN PRODUCT(S) CATALOG NUMBER	VOLTAGE	LAMP DATA QTY PER LUMINAIRE	LAMP DATA WATTAGE	LAMP DATA TYPE	MOUNTING LOCATION	MOUNTING TYPE	MOUNTING HEIGHT	REMARKS
DL	RECESSED DOWNLIGHT 4" APERTURE. LED.	LITHONIA	LDN4 35/10 L04/AR LD MVOLT GZ10	120	1	11	LED	CEILING	RECESSED		
ED	LED, EXTERIOR RECESSED CAN	LITHONIA	LDN4 40/10 L04/AR LD MVOLT GZ10 TRW	120	1	11	LED	CEILING	RECESSED		
FI	LED, FLOOD LIGHT	VISTA	1051KM DZ MF 30 B MV GS-VR	120	1	18	LED	CEILING	SURFACE		
LS	LED, 2' STRIP LIGHT	LITHONIA	CSS L24 2000LM MVOLT MIN10 ZT 40K 80CRI DNA	120	1	15	LED	CEILING	SURFACE		
	EXTERIOR RATED CEILING FAN, WITHOUT LIGHT KIT	OXYGEN	3–100–15	120	1	23	N/A	CEILING	SURFACE		
WP	LED, DIE CAST ALUMINUM, EXTERIOR WALL PACK, POLY CARBONATE LENS,	LITHONIA	WST LED P1 40K VW MVOLT DDBXD	120	1	12	LED	WALL	SURFACE	9' AFF	

ELECTRICAL RISER DIAGRAM NEW WORK NOTES:

1. NEW OVERHEAD SERVICE DROP FROM EXISTING SECONDARY POLE BY POWER COMPANY. COORDINATE ALL WORK WITH POWER COMPANY AND INSTALL SERVICE IN ACCORDANCE WITH THEIR REQUIREMENTS. NEW SERVICE SHALL BE 120/240 VOLT 1 PHASE.
2. 3 #250 KCMIL AL, 2 1/2"RMC.
3. PERMANENTLY LABEL MAIN DISCONNECT AS "MAIN SERVICE DISCONNECT".
4. 1 #2 BARE CU SERVICE GROUNDING ELECTRODE CONDUCTOR IN 3/4" PVC TO ELECTRICAL SERVICE GROUNDING SYSTEM. SEE ELECTRICAL SERVICE GROUNDING SYSTEM DETAIL FOR MORE DETAILS. GROUND PER NEC ARTICLE 250.
5. 3 #250 KCMIL AL, 1 # 4 AL G, 2 1/2"C..
6. 3 #6, 1 #10G – 1"C.
7. FIELD MARK ELECTRICAL SWITCHBOARDS AND PANELBOARDS TO INDICATE THE DEVICE OR EQUIPMENT WHERE THE POWER SUPPLY ORIGINATES FROM.



ELECTRICAL RISER DIAGRAM NEW WORK

NO SCALE

GENERAL PANELBOARD SCHEDULE SPECIAL NOTE:

PERMANENTLY LABEL PANEL "MAIN SERVICE DISCONNECT". FIELD MARK ELECTRICAL SERVICE EQUIPMENT INCLUDING SWITCHBOARDS AND PANELBOARDS WITH AVAILABLE FAULT CURRENT DATA AS REQUIRED IN NEC 110.24 AND ARC–FLASH WARNING LABELS PER NEC 110.16.

THIS DOCUMENT PROTEKTY OF JOEL SAMPSON ARCHITECT INC AND MAY NOT BE COPIED ALTERED OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT INC

JOEL SAMPSON ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014780
850-875-4348

ANDY GAY PARK IMPROVEMENTS
FOR
CITY OF QUINCY, FLORIDA
116 NORTH ADAMS STREET QUINCY, FLORIDA

DATE: 7-15-25
REV: 2-6-26

JOB NO: 24-014

E0.2

SHEET NO.

284 POPLAR DR
RAINSVILLE, ALABAMA 35986
(334) 695-0284
thedesigngroupinc@gmail.com
Mechanical–Electrical
Consulting Engineers
FL License No. 31813

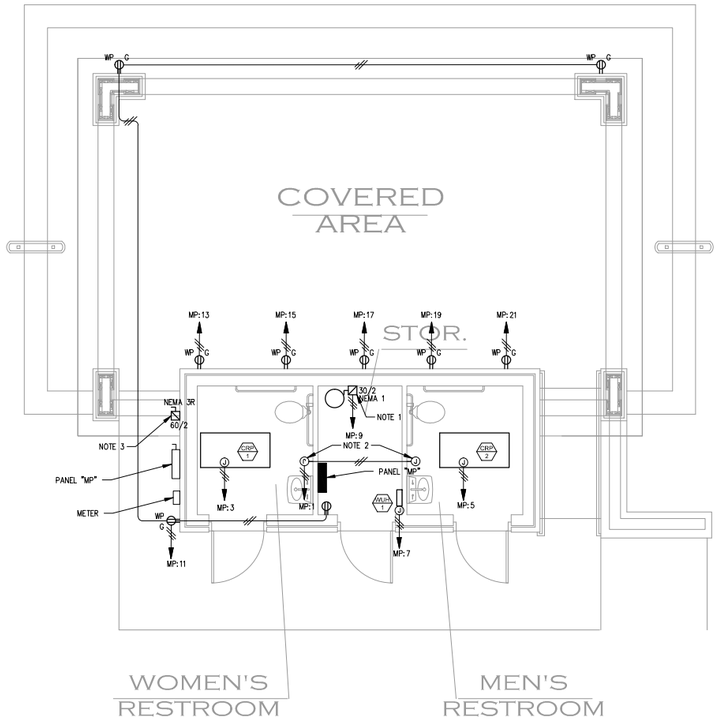
confidential–this document & the information contained herein is confidential & may not be disclosed, copied altered or reproduced to any persons except as permitted in writing by "The Design Group, Inc."

the Design Group of Florida inc.
division of The Design Group, Inc.

K. DAVID PALMER LICENSE NO.62655 STATE OF FLORIDA
Digitally signed by K. David Palmer 62655 State of Florida
Date: 2026.02.06 13:14:37-06'00'

GENERAL POWER FLOOR PLAN NOTES:

1. FOR WATER HEATER MOUNTED AT CEILING.
2. FOR HANDS FREE PLUMBING FIXTURES.
3. DISCONNECT FOR CONNECTION REQUIRED FOR BAND. VERIFY REQUIREMENTS WITH OWNER.

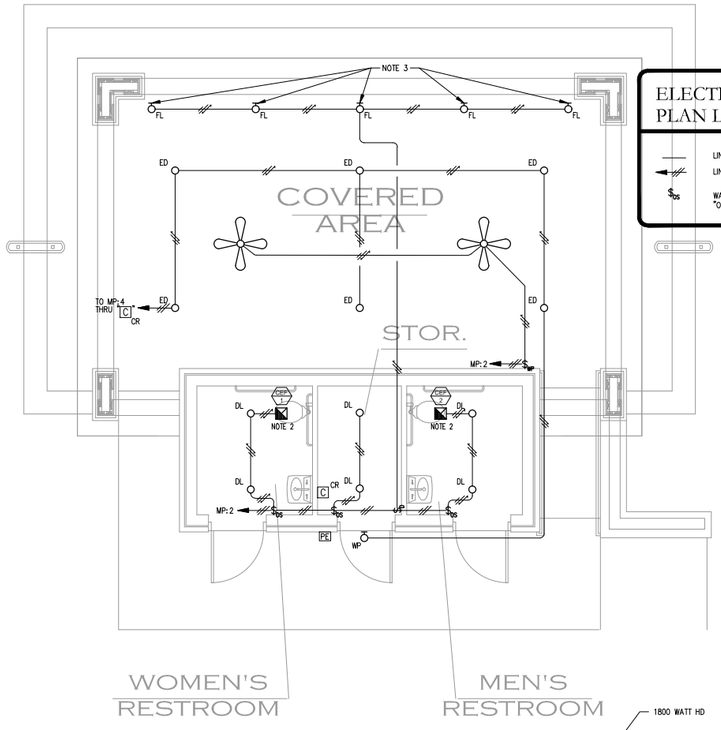


ELECTRICAL-POWER AND AUXILIARY FLOOR PLAN

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

GENERAL LIGHTING FLOOR PLAN NOTES:

1. PROVIDE AN UNSWITCHED CONDUCTOR FOR EMERGENCY FIXTURES AND EXIT SIGNS SERVING THE SAME AREA.
2. SEE FAN SCHEDULE ON MECHANICAL SHEETS FOR CONTROL REQUIREMENTS.
3. VERIFY MOUNTING LOCATION WITH ARCHITECT PRIOR TO ROUGH-IN.

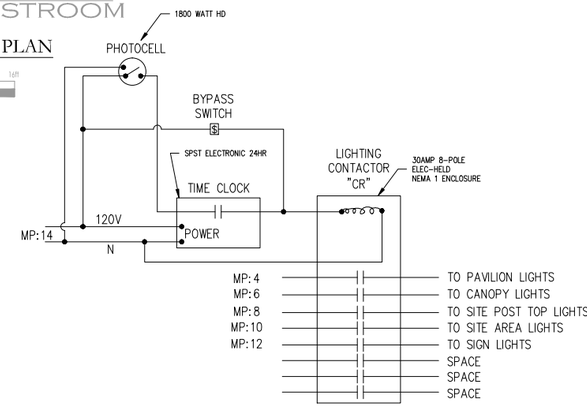


ELECTRICAL-LIGHTING FLOOR PLAN

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

ELECTRICAL - LIGHTING FLOOR PLAN LEGEND

- LINE VOLTAGE WIRING, SEE PLAN VIEWS FOR EXACT WIRING.
- LINE VOLTAGE HOMERUN."MP:2" INDICATES HOMERUN TO PANEL "MP" CIRCUIT "2".
- $_{OS}$ WALL MOUNTED SWITCH. "OS" DENOTES NLIGHT # WSX PDT WHITE



JOEL SAMPSON ARCHITECT

212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014780
850-875-4348

ANDY GAY PARK IMPROVEMENTS

FOR

CITY OF QUINCY, FLORIDA

116 NORTH ADAMS STREET QUINCY, FLORIDA

DATE: 7-15-25

REV:

JOB NO: 24-014

E1.1

SHEET NO.

284 POPLAR DR
RAINSVILLE, ALABAMA 35986
(334) 695-5284
thedesigngroupinc@gmail.com
Mechanical-Electrical
Consulting Engineers
FL License No. 31813

confidential-this document & the information contained herein is confidential & may not be disclosed, copied altered or reproduced to any persons except as permitted in writing by "The Design Group, Inc."

the Design Group of Florida inc.

division of The Design Group, Inc.

K DAVID PALMER LICENSE NO.62655 STATE OF FLORIDA PROFESSIONAL ENGINEER

Digitally signed by K. David Palmer 62655 State of Florida Date: 2025.09.10 15:20:21-05'00'

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT INC AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS TRANSMITTED BY JOEL SAMPSON ARCHITECT INC.

SITE LUMINAIRE SCHEDULE

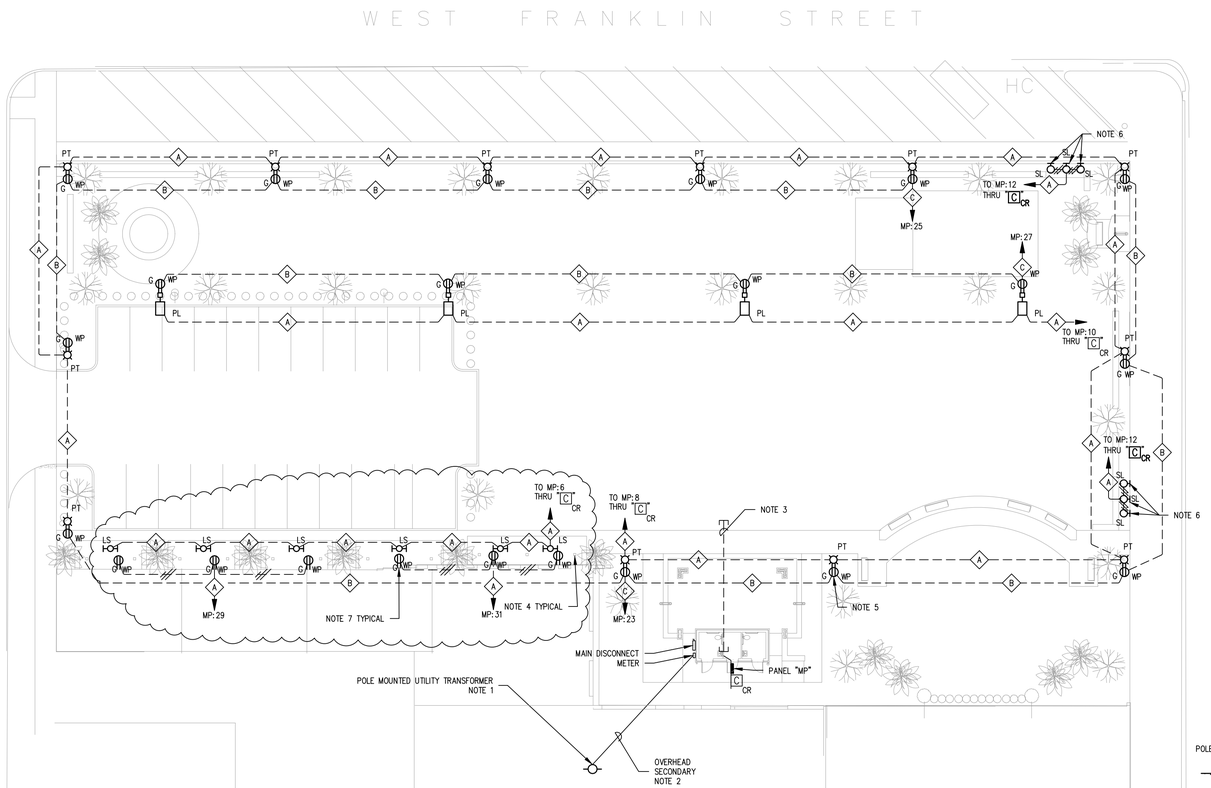
MARK	DESCRIPTION	BASIS OF DESIGN PRODUCT(S)		VOLTAGE	LAMP DATA			MOUNTING LOCATION	MOUNTING TYPE	MOUNTING HEIGHT	REMARKS
		MANUFACTURER	CATALOG NUMBER		QTY PER LUMINAIRE	WATTAGE	TYPE				
SL	LED, STRIP LINEAR FLOOD.	VISTA	1052KM B WW 40 A MV ND VR	120	1	26	LED	GROUND	SURFACE	18" FROM WALL	CONTRACTOR SHALL PROVIDE CONCRETE PADS FOR FIXTURE MOUNTING. CONTRACTOR SHALL FIELD AIM AFTER DARK.
PL	LED, TYPE FORWARD THROW DISTRIBUTION, POLE MOUNTED SITE LIGHT, DIE CAST ALUMINUM. SINGLE HEAD	LITHONIA KW POLES	DSXO LED P6 40K 70CRI TSW MVOLT RPA DBLXD POLE – RTAP20-6.0-7-BLK-DM10-BC-SBHH-E	120	1	137	LED	SITE	POLE		POLE SHALL HAVE RECEPTACLE MOUNTED AT BOTTOM OF POLE. RECEPTACLE SHALL BE GFCI TYPE WITH WEATHERPROOF IN-USE COVER.
PT	LED, POST TOP ACORN LIGHT, DECORATIVE CONCRETE POLE	STERNBERG SCGRP	PT-A67LED-VCOB-4L-40-T4-MDL05-A-BKT POLE – KCC12-E-30-DB-140-30/30-GFI-AG	120	1	40	LED	SITE	POLE		POLE SHALL HAVE RECEPTACLE MOUNTED AT BOTTOM OF POLE. RECEPTACLE SHALL BE GFCI TYPE WITH WEATHERPROOF IN-USE COVER.

ELECTRICAL SITE PLAN CONDUIT AND CONDUCTOR LEGEND

- A — 2 #10, 1 #10G, 3/4"C
- B — 2 #10, 1 #10G, 3/4"C FOR RECEPTACLE
  1"C FOR FUTURE SPEAKERS BY OWNER
- C — 2 #10, 1 #10G, 3/4"C FOR RECEPTACLE TO PANEL AS SHOWN
  1"C FOR FUTURE SPEAKERS BY OWNER STUBBED OUT NEXT TO PANEL "MP"

ELECTRICAL SITE PLAN NOTES:

1. EXISTING OVERHEAD TRANSFORMER POLE.
2. VERIFY EXACT LOCATIONS WITH UTILITY COMPANIES AND MEET ALL UTILITY REQUIREMENTS FOR ESTABLISHMENT OF SERVICES.
3. CONTRACTOR SHALL PROVIDE 3 – 1"C WITH PULL STRING FROM BELOW PANEL AND STUB OUT IN FRONT OF PAVILION FOR FUTURE. CONTRACTOR SHALL VERIFY STUB-OUT LOCATION WITH OWNER PRIOR TO ROUGH-IN.
4. CONTRACTOR SHALL VERIFY LOCATION AND ALL REQUIREMENTS OF CANOPY PRIOR TO ROUGH-IN. CONDUIT SHALL BE ROUTED INSIDE POLES UP TO CEILING OF CANOPY.
5. RECEPTACLE MOUNTED IN LIGHT POLE. TYPICAL OF ALL SITE LIGHTING POLES.
6. VERIFY EXACT LOCATION OF SIGN LIGHTERS WITH ARCHITECT PRIOR TO ROUGH-IN.
7. RECEPTACLES SHALL SURFACE MOUNT ON FACE OF BLOCK WALL. TYPICAL OF 6



POLE BASE DETAIL - GRASSED AREAS

SCALE: NOT TO SCALE

GENERAL NOTES:

1. BACKFILL, CONCRETE, REINFORCING STEEL, AND ANCHOR BOLTS ARE SHOWN FOR REFERENCE ONLY. REFER TO MANUFACTURERS REQUIREMENTS.

ELECTRICAL-SITE PLAN

SCALE: 1" = 20'-0"

0 10ft 20ft 80ft
5ft 15ft 40ft

GENERAL NOTES:

1. BACKFILL, CONCRETE, REINFORCING STEEL, AND ANCHOR BOLTS ARE SHOWN FOR REFERENCE ONLY. STRUCTURAL DESIGN IS SHOWN ON STRUCTURAL DRAWINGS.

POLE BASE DETAIL - DIRECT BURIED

SCALE: NOT TO SCALE

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, INC. AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS TRANSMITTED BY JOEL SAMPSON ARCHITECT, INC.

JOEL SAMPSON ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014780
850-875-4348

ANDY GAY PARK IMPROVEMENTS

FOR

CITY OF QUINCY, FLORIDA

116 NORTH ADAMS STREET QUINCY, FLORIDA

DATE: 7-15-25
REV: 2-6-26

JOB NO: 24-014

E2.1

SHEET NO.

284 POPLAR DR
RAINSVILLE, ALABAMA 35986
(334) 695-0284
thedesigngroupinc@gmail.com
Mechanical-Electrical
Consulting Engineers
FL License No. 31813

confidential-this document & the information contained herein is confidential & may not be disclosed, copied altered or reproduced to any persons except as permitted in writing by "The Design Group, Inc."

the Design Group of Florida inc.

division of The Design Group, Inc.

K. DAVID PALMER LICENSE NO.62655 STATE OF FLORIDA

Digitally signed by K. David Palmer 62655 State of Florida Date: 2026.02.06 13:14:38-06'00'

USE CONDUCTOR SIZING CHARTS TO DETERMINE WIRE GUAGE FOR ALL BRANCH CIRCUITING

CONDUCTOR SIZING CHART PER VOLTAGE DROP

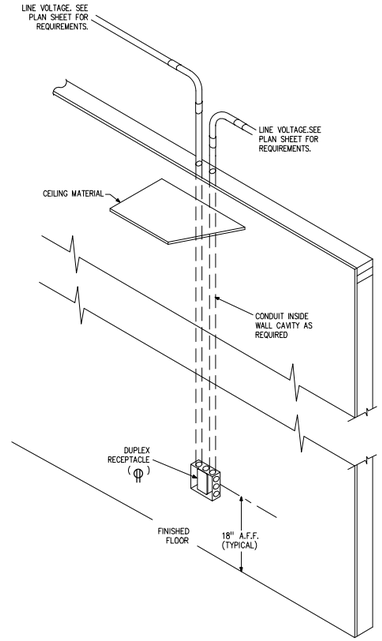
120 VOLT, 2 WIRE AMPS PER RUN

LENGTH OF RUN IN FEET	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	24	24
10	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
20	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
30	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
40	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	10
50	12	12	12	12	12	12	**12**	**12**	**12**	**12**	12	12	12	12	12	12	12	12	10	10	10	10	10	10
60	12	12	12	12	12	12	**12**	**12**	**12**	**12**	12	12	12	12	12	10	10	10	10	10	10	10	10	10
70	12	12	12	12	12	12	12	12	12	12	12	12	12	10	10	10	10	10	10	10	8	8	8	8
80	12	12	12	12	12	12	12	12	12	12	10	10	10	10	10	10	10	8	8	8	8	8	8	8
90	12	12	12	12	12	12	12	12	12	12	10	10	10	10	10	10	8	8	8	8	8	8	8	8
100	12	12	12	12	12	12	12	12	12	10	10	10	10	10	8	8	8	8	8	8	8	8	8	6
110	12	12	12	12	12	12	12	12	12	10	10	10	10	10	8	8	8	8	8	8	8	8	6	6
120	12	12	12	12	12	12	12	12	10	10	10	10	10	8	8	8	8	8	8	8	6	6	6	6
130	12	12	12	12	12	12	12	12	10	10	10	10	8	8	8	8	8	8	6	6	6	6	6	6
140	12	12	12	12	12	12	12	10	10	10	10	8	8	8	8	8	8	6	6	6	6	6	6	6
150	12	12	12	12	12	12	10	10	10	10	8	8	8	8	8	8	6	6	6	6	6	6	6	6
160	12	12	12	12	12	10	10	10	10	8	8	8	8	8	8	6	6	6	6	6	6	6	4	4
170	12	12	12	12	12	10	10	10	8	8	8	8	8	8	6	6	6	6	6	6	6	4	4	4
180	12	12	12	12	12	10	10	10	8	8	8	8	8	6	6	6	6	6	6	6	4	4	4	4
190	12	12	12	12	10	10	10	8	8	8	8	8	6	6	6	6	6	6	6	4	4	4	4	4
200	12	12	12	12	10	10	10	8	8	8	8	6	6	6	6	6	6	6	4	4	4	4	4	4
210	12	12	12	12	10	10	8	8	8	8	6	6	6	6	6	6	6	4	4	4	4	4	4	4
220	12	12	12	12	10	10	8	8	8	8	6	6	6	6	6	6	4	4	4	4	4	4	4	4
230	12	12	12	10	10	10	8	8	8	8	6	6	6	6	6	6	4	4	4	4	4	4	4	4
240	12	12	12	10	10	10	8	8	8	6	6	6	6	6	6	4	4	4	4	4	4	4	4	4
250	12	12	12	10	10	8	8	8	8	6	6	6	6	6	4	4	4	4	4	4	4	4	4	3
260	12	12	12	10	10	8	8	8	6	6	6	6	6	6	4	4	4	4	4	4	4	4	3	3
270	12	12	12	10	10	8	8	8	6	6	6	6	6	4	4	4	4	4	4	4	4	3	3	3
280	12	12	12	10	10	8	8	8	6	6	6	6	6	4	4	4	4	4	4	4	3	3	3	3
290	12	12	12	10	8	8	8	6	6	6	6	6	4	4	4	4	4	4	4	4	3	3	3	3

CONDUCTOR SIZING CHART PER VOLTAGE DROP

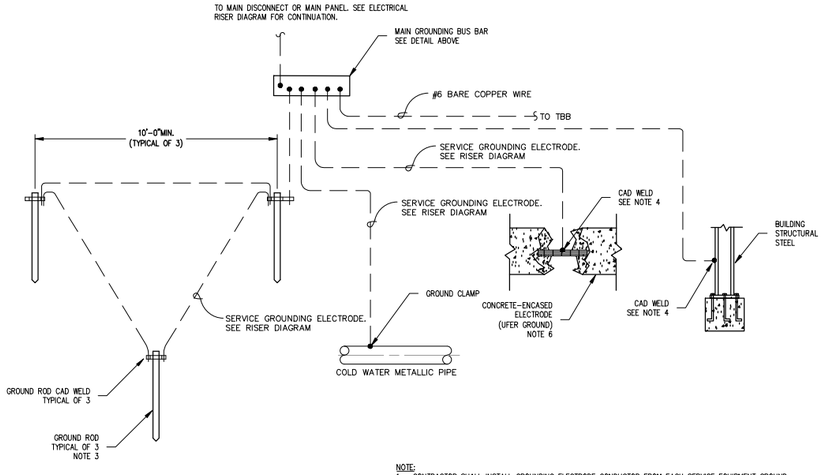
240 VOLT, 2 WIRE AMPS PER RUN

LENGTH OF RUN IN FEET	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	24	24
10	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
20	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
30	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
40	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
50	12	12	12	12	12	**12**	**12**	**12**	**12**	**12**	12	12	12	12	12	12	12	12	12	12	12	12	12	12
60	12	12	12	12	12	12	**12**	**12**	**12**	**12**	12	12	12	12	12	12	12	12	12	12	12	12	12	12
70	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	10
80	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	10	10	10	10	10
90	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	10	10	10	10	10	10	10
100	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	10	10	10	10	10	10	10	10
110	12	12	12	12	12	12	12	12	12	12	12	12	12	12	10	10	10	10	10	10	10	10	8	8
120	12	12	12	12	12	12	12	12	12	12	12	12	10	10	10	10	10	10	10	10	8	8	8	8
130	12	12	12	12	12	12	12	12	12	12	12	12	10	10	10	10	10	8	8	8	8	8	8	8
140	12	12	12	12	12	12	12	12	12	12	12	10	10	10	10	10	10	8	8	8	8	8	8	8
150	12	12	12	12	12	12	12	12	12	12	10	10	10	10	10	10	8	8	8	8	8	8	8	8
160	12	12	12	12	12	12	12	12	12	10	10	10	10	10	10	8	8	8	8	8	8	8	8	8
170	12	12	12	12	12	12	12	12	12	12	10	10	10	10	8	8	8	8	8	8	8	8	8	6
180	12	12	12	12	12	12	12	12	10	10	10	10	10	8	8	8	8	8	8	8	8	8	6	6
190	12	12	12	12	12	12	12	12	10	10	10	10	10	8	8	8	8	8	8	8	8	6	6	6
200	12	12	12	12	12	12	12	12	10	10	10	10	8	8	8	8	8	8	8	8	6	6	6	6
210	12	12	12	12	12	12	12	10	10	10	10	8	8	8	8	8	8	8	8	6	6	6	6	6
220	12	12	12	12	12	12	12	10	10	10	10	8	8	8	8	8	8	8	6	6	6	6	6	6
230	12	12	12	12	12	12	10	10	10	10	8	8	8	8	8	8	8	6	6	6	6	6	6	6
240	12	12	12	12	12	12	10	10	10	10	8	8	8	8	8	8	6	6	6	6	6	6	6	6
250	12	12	12	12	12	12	10	10	10	10	8	8	8	8	8	6	6	6	6	6	6	6	6	6
260	12	12	12	12	12	10	10	10	10	8	8	8	8	8	8	6	6	6	6	6	6	6	6	6
270	12	12	12	12	12	12	10	10	10	10	8	8	8	8	8	6	6	6	6	6	6	6	6	4
280	12	12	12	12	12	10	10	10	8	8	8	8	8	8	8	6	6	6	6	6	6	6	4	4
290	12	12	12	12	12	10	10	10	8	8	8	8	8	8	6	6	6	6	6	6	6	6	4	4



RECEPTACLE INSTALLATION DETAIL

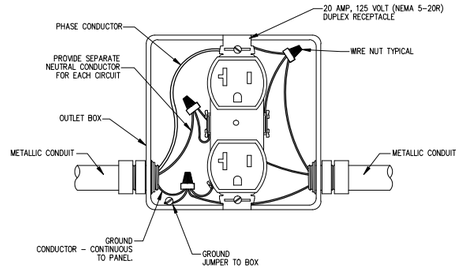
SCALE: NOT TO SCALE



NOTE:
1. CONTRACTOR SHALL INSTALL GROUNDING ELECTRODE CONDUCTOR FROM EACH SERVICE EQUIPMENT GROUND BUS TO EACH ELECTRICAL SERVICE GROUNDING SYSTEM OR OTHER PARTS OF GROUNDING ELECTRODE AS SHOWN.
2. IF ALL GROUNDING ELECTRODES OF ELECTRICAL SERVICE GROUNDING SYSTEM ARE BONDED TOGETHER WITH GROUNDING ELECTRODE CONDUCTORS THEN A SINGLE GROUNDING ELECTRODE CONDUCTOR SHALL BE PERMITTED TO BE CONNECTED FROM EACH SERVICE EQUIPMENT GROUND BUS TO THE NEAREST GROUNDING ELECTRODE SYSTEM.
3. GROUND RODS SHALL BE 5/8"DIA. X 10'L COPPER CLAD STEEL. DRIVE GROUND ROD 6" BELOW GRADE. CAD WELD CONNECTION.
4. BOND CONDUCTORS TO METALLIC SURFACE WITH CAD WELD AS PERMITTED IN NEC 250.8. ANY NON CONDUCTIVE MATERIALS ON EQUIPMENT, SUCH AS PAINT, ETC. SHALL BE REMOVED FROM SURFACE AT CONNECTION POINT IN ORDER TO ENSURE PROPER CONNECTION.
5. WATER PIPE ELECTRODE SHALL BE IN DIRECT CONTACT WITH THE EARTH FOR A MINIMUM OF 10'-0".
6. CONCRET-ENCASED ELECTRODE SHALL MEET THE REQUIREMENTS OF NEC 250.52(A)(3).

ELECTRICAL SERVICE GROUNDING SYSTEM

SCALE: NOT TO SCALE



TYPICAL RECEPTACLE WIRING DETAIL

SCALE: NOT TO SCALE

GENERAL NOTE:

1. CONTRACTOR SHALL NOT WIRE CIRCUIT THROUGH DEVICE. PROVIDE PIGTAIL TO DEVICE FOR HOT, NEUTRAL, AND GROUND.

JOEL SAMPSON ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLA LIC NO AR0014780
850-875-4348

ANDY GAY PARK IMPROVEMENTS

FOR

CITY OF QUINCY, FLORIDA

116 NORTH ADAMS STREET QUINCY, FLORIDA

DATE: 7-15-25

REV:

JOB NO: 24-014

E3.1

SHEET NO.

284 POPLAR DR
RAINSVILLE, ALABAMA 35986
(334) 695-0284
thedesigngroupinc@gmail.com
Mechanical-Electrical
Consulting Engineers
FL license No. 31813

confidential-this document & the information contained herein is confidential & may not be disclosed, copied altered or reproduced to any persons except as permitted in writing by "The Design Group, Inc."

the Design Group of Florida inc.

division of The Design Group, Inc.

K. DAVID PALMER LICENSE NO.62655 STATE OF FLORIDA

Digitally signed by K. David Palmer
State of Florida
Date: 2025.09.10 15:20:21-05'00'

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, INC. AND MAY NOT BE COPIED, ALTERED, OR REPRODUCED UNLESS PERMITTED BY JOEL SAMPSON ARCHITECT, INC.

ELECTRICAL SPECIFICATION

PART ONE – GENERAL

1.01 DESCRIPTION

A. Work included: Provide complete electrical installation where shown on the Drawings, as specified herein, and as needed for complete and proper installation including, but not necessarily limited to:

1. Service entrance, in conduit, from the point of connection with the power company;
2. Feeder system, in conduit, to branch circuit panels;
3. Branch circuit wiring system, in conduit, for lighting, motors, receptacles, junction boxes, and similar uses;
4. Panelboards and load centers, complete with circuit breakers as shown on the drawings;
5. Lighting fixtures and lamps;
6. Wall switches, receptacles, and similar items;
7. Hangers, anchors, sleeves, chases, supports, for fixtures, and other electrical materials and equipment in association therewith;
8. Wiring system, in conduit, up to and including safety switches, for equipment and controls provided under other sections of these Specifications;
9. Other items and services required to complete the systems.

B. Related work described elsewhere:

1. Provide all required electrical connections and service to items described in all other Sections of these Specifications.

1.02 QUALITY ASSURANCE

A. Codes and Standards: – All work, equipment and apparatus will conform to the following requirements:

1. National Electrical Code of the National Fire Protection Association.
2. National Electrical Manufacturers Association.
3. Underwriters Laboratories, Inc.
4. Governmental agencies having jurisdiction.

B. Qualifications of Installers: For the actual fabrication, installation, and testing of the work of this Section, use only thoroughly trained and experienced workmen completely familiar with the items required and with the manufacturers' recommended methods of installation. In acceptance or rejection of the installed work, no allowance will be made for lack of skill on the part of workmen.

C. Without additional cost to the OWNER, provide such other labor and materials as are required to complete the work of this Section in accordance with the requirements of the governmental agencies having jurisdiction, regardless of whether such materials and associated labor are called for elsewhere in these Contract Documents.

1.03 SUBMITTALS

A. Submit:

1. A complete list of all materials proposed to be furnished and installed under this Section.
2. Manufacturers' specifications and catalog cuts as required to demonstrate compliance with the specified requirements.
3. Manufacturers' recommended installation procedures which, when approved by the ARCHITECT, will become the basis for accepting or rejecting actual installation procedures used on the Work.

B. Record Drawing: During progress of the Work, maintain an accurate record of the installation of all items.

C. Manual: Upon completion of this portion of the Work, and as a condition of its acceptance, deliver to the ARCHITECT four copies of an operation and maintenance manual. Include in the manual:

1. Copy of the approved record documents for this portion of the Work;
2. Copies of circuit directories;
3. Copies of warranties and guaranties.

1.04 PRODUCT HANDLING

A. Protection: Use all means necessary to protect the materials of this Section before, during, and after installation and to protect the work and materials of all other trades.

B. Replacements: In the event of damage, immediately make all repairs and replacements necessary to the approval of the ARCHITECT and at no additional cost to the OWNER.

PART TWO – PRODUCTS

2.01 GENERAL

A. Provide only materials that are new, of the type and quality specified. Where Underwriters' Laboratories, Inc. have established standards for such materials, provide only materials bearing the UL label.

B. Temporary Power: provide temporary power as required for construction.

C. Grounding: Provide grounding as indicated and specified herein. The following are included as required grounding:

1. Conduits and other conductor enclosures;
2. Neutral or identified conductor of interior wiring system;
3. Panelboards and load centers;
4. Non–current carrying parts of fixed equipment, such as motors and starters.

D. Identification

1. Identify all panelboards, load centers, cabinets, safety switches, and other apparatus used for operation and control of circuits, appliances, and equipment.
2. Provide plastic laminate nameplates black face with white core letters, showing proper and complete identification.

2.02 PANELBOARDS:

A. Standard dead front circuit breaker panels with Main Circuit Breaker or Main Lugs Only as shown.

B. Bus shall be of the ampere rating called for, arranged for voltage, phase and number of wires indicated on the Drawings.

C. Front shall be complete with door and flush or surface mounted as indicated. The cabinet shall be not less than 14" wide. Proper trim shall be furnished for each panel.

D. Branch circuit breakers shall be toggle type, quick make, quick break, thermal–magnetic bolt on breakers. All multi–pole breakers shall be single–handle, common trip type.

E. Minimum circuit breaker installed in load centers shall be type QO with 10,000 amp interrupting capacity at 120 volts AC.

2.03 CONDUIT AND FITTINGS

A. Use and locations of Types of Conduits:

1. Thick wall rigid steel galvanized shall be used for all conduit runs buried in the earth, embedded in concrete or run exposed to the outside weather conditions.
2. Schedule 40 rigid PVC, where permitted, may be used underground for feeders and branch circuits, except penetrations at grade or concrete and all turns shall be rigid steel.
3. Aluminum rigid or EMT may be used in all indoor dry locations.
4. IMC is acceptable where permitted by the National Electric Code under Art. 345.
5. Galvanized steel EMT shall be used in all locations except where other types are listed as mandatory or permissive above.
6. Electrical non–metallic tubing may not be used.
7. Flexible metal conduit shall be aluminum or galvanized steel spiral interlocked type for connection to vibrating equipment or machinery. Bends shall be with radius large enough to prevent strain on the interlocking joints and permit complete flexibility.
   a. Machinery connections shall not exceed 20 times nominal trade diameter.
   b. Provide bond wire inside flexible conduit and non–metallic conduits.
8. Where PVC raceways are indicated they shall be Schedule 40. PVC shall be joined with solvent glue and the fittings used shall be standard products as supplied by the manufacturer.
9. Pull boxes shall be provided as require by the NEC.
10. Individual runs shall be anchored in place by means of straps or clamps specifically designed for the purpose. Wire, pipe straps, or nails shall not be used. Do not strap piping. Multiple runs shall be supported by assemblies, individual or trapeze type hanger to provide a rigid installation. Support runs on masonry walls by means of toggle bolts or expansion anchors; on structural steel by means of pipe clamps. Plastic insert anchors shall not be used.

2.04 CONDUCTORS

A. Conductors shall be copper (aluminum may be used only where indicated by note) installed in continuous system and, unless otherwise indicated, shall be as follows:

1. All general building wire shall have THHN insulation.
2. Sizes No. 14 and smaller shall be solid.
3. Size No. 12 may be solid or stranded, except that only stranded or only solid may be used.
4. Sizes No. 10 and larger shall be stranded.
5. Terminal lugs shall be used for connecting conductors larger than No. 10 and for all multiple connections to terminals.
6. Minimum size conductor for branch circuits shall be No. 12 AWG.
7. Color coding:
   Ground Bare copper or green
   Neutral White
   Phase A Black
   Phase B Red
   Phase C Blue

2.05 BOXES

A. Outlet Boxes used in the conduit system shall be galvanized sheet steel, 2 1/8" x 4" or 4" square or 4" octagon depending upon the use. Device boxes in the wall shall be "Tile" boxes with square covers. Boxes containing wiring devices shall be fitted with a raised plaster ring to set flush with the wall service.

1. Where lighting switches are shown inside doorways, they shall be minimum of 4" and a maximum of 8" from edge of opening. Outlet boxes shall be set with 4" dimension vertical.

B. Exposed Boxes shall be cast aluminum.

C. Boxes shall meet NEC requirements for size to contain conductors.

D. Pull boxes shall be used in conduit system as indicated in the NEC and shall be sized according to the NEC.

2.06 WIRING DEVICES

A. Switches: Wall switches shall be quiet type with integral metal plaster ears and shall be totally enclosed in molded plastic base. All switches shall be white "decora" series with matching plastic wall plates. All ratings shall be 15 amp.

approved manufacturers:

a. Single pole: Hubbell cat. no. 1221I or equal.
b. Three–way: Hubbell cat. no. 1223I or equal.
c. Four–way Hubbell cat. no. 1224I or equal.

2.07 RECEPTACLES

A. Receptacles shall be molded plastic. Slot configuration shall be standard NEMA type as specified or shown. All receptacles shall be white white standard with matching wall plate.

1. Unless noted otherwise, all duplex receptacles shall be 3–pole grounding type, 125 volt, 15 amp duplex – NEMA 5–15R.

B. Ground fault interrupter receptacles shall be duplex type and have self contained circuit to open circuit when any fault current exceeding 5 milliamps flows to ground. Device shall have trip indicator, test button and reset button. This type shall be used for all outdoor receptacles. An upline ground fault receptacle may protect standard units farther down the line.

C. Weatherproof receptacles shall have gasketed die–cast aluminum cover with spring loaded, hinged door over each receptacle.

2.08 DEVICE PLATES

A. Except as noted otherwise, all wiring device plates on finished walls shall be smooth white plastic, standard size. Plates for devices in surface mounted boxes shall be designed to fit box and device without protruding sharp edges.

B. Device plates for receptacles and switches marked "WP" shall be die–cast aluminum with spring hinged, gasketed covers.

2.09 SAFETY AND DISCONNECT SWITCHES

All switches shall be quick–make, quick–break, with interlocked cover. Switches shall be of the ampere rating with number of poles and fuses shown. Enclosures for outdoor locations shall be NEMA 3R.

2.10 FUSES

All fuses shall be dual element time delay type. All motor circuits shall be fused at not less than 125% of motor nameplate amperes or as manufacturer recommends. Ratings shall be 250 volt.

2.11 BRANCH CIRCUITS

A. Circuits shall be provided as indicated. The circuit numbers indicated are the panel breaker numbers as shown in the panel schedule.

B. Circuits shall be 3 wire for single phase and 3 or 4 wire, as indicated, for 3 phase.

C. All circuits shall be run in continuous conduit as per the NEC. All conduits shall be as specified herein. Minimum size conduit shall be 1/2" nominal trade size.

D. All circuits shall be run concealed except as indicated. Minimum bury of branch circuit outside building shall be 24".

2.12 LOAD BALANCE

The connected single phase loads shall be connected at the panelboards to balance as near as possible the current flow in each phase conductor.

2.13 LIGHTING

A. General: Provide complete fixtures and lamps of types and sizes as indicated in Lighting Fixture Schedule shown on the Drawings, complete with supports and mounting accessories.

B. Fluorescent Ballasts: Rapid start, high power factor, ETL and CBM certified, high frequency electronic type.

C. Emergency lighting:

1. General: Emergency light shall be capable of remaining in service during a power failure for 90 minutes or longer. Batteries shall automatically recharge when normal power is restored.
2. Batteries shall be sealed, maintenance free, long life, with 3 year unconditional warranty and additional 3 year pro rata warranty. the battery shall be 6 or 12 volts.
3. Transfer switch shall be solid state type which instantly energizes the lamps upon power failure. It shall have a battery protection circuit which automatically shuts down the lamp load when the battery is discharged to 87.5% of its normal capacity.
4. The battery charger shall be solid state type capable of recharging the fully discharged battery in 12 to 24 hours and maintain the battery at full charge until needed. It shall be current limiting and short circuit proof. Units shall meet UL specifications.
5. Controls shall be test switch, high charge light, and AC check and ready light. Lights shall be visible from the floor below the unit.

D. Exit Lights:

1. Batteries shall meet the requirements described above.
2. Exit signs shall be as indicated in the Lighting Fixture Schedule on the Drawings and specified herein. Comply with UL 1571 and NFPA–101.
   a. Minimum height of letters shall be 6".
   b. Minimum stroke width shall be 3/4".
   c. Minimum width of each letter shall be 2".
   d. Minimum spacing shall be 3/8".
   e. Luminance of face in normal operation and after one minute operation in emergency mode shall be equivalent to the visibility of a reference sign illuminated to five footcandles.

E. Fluorescent Light Emergency Packs:

1. Batteries shall meet the requirements described above.
2. The inverter shall be all solid state, 87% minimum efficiency. Power output shall be capable of illuminating a fluorescent lamp to 500 to 600 lumens.
3. The unit shall be located in the fixture ballast channel. It shall be connected to an unswitched circuit conductor feeding the normal lighting.
4. Indicator lights on the pack shall be visible from the floor below the light.

2.14 OTHER MATERIALS

All other materials, not specifically described but required for a complete and proper installation of the work of this Section, shall be selected by the Contractor subject to the approval of the ARCHITECT.

PART THREE – EXECUTION

3.01 INSPECTION

Examine the areas and conditions under which the work of this Section will be installed. Correct condition detrimental to the proper and timely completion of the Work. Do not proceed until unsatisfactory conditions have been corrected.

3.02 PREPARATION

A. Coordination:

1. Coordinate installation of electrical items with the schedules for other work, to prevent unnecessary delays in the total Work.
2. Where lighting fixtures and other electrical items are shown in conflict with locations of structural members and mechanical or other equipment, provide all required supports and wiring to clear the encroachment.

B. Accuracy of data: The data indicated on the Drawings and in these Specifications are as exact as could be secured, but their absolute accuracy is not guaranteed. Exact locations, distances, levels, and other conditions will be governed by the building. Use the Drawings and these Specifications for guidance, and secure the ARCHITECT's approval of all changes in location.

C. Measurements: Verify all measurements at the site. No extra compensation will be made because of differences between locations shown on the Drawings and measurements at the building.

D. Circuiting: The branch circuits and arrangement of home runs are to be designed for maximum economy consistent with sizes for voltage drop and other considerations.

3.03 INSTALLATION OF RACEWAYS AND FITTINGS

A. Concealment: Conceal all conduit in walls or ceiling space unless otherwise specifically approved by the ARCHITECT or indicated on the Drawings. Where conduit is allowed to be exposed, install the conduit parallel with or at right angles to structural members, walls, and lines of the building.

B. Installation:

1. Keep all conduit at least 6" away from the covering on hot water pipes.
2. Keep ends of conduit closed with approved conduit seals during construction of the building. Use conduit unions where union joints are required. Do not use running threads.
3. Where conduit is installed in concrete slabs, on the ground, underground, or exposed to the weather, make all joints liquidtight and gastight. Bury all underground conduit to a depth of 2'–0" below finished grade unless otherwise shown on the Drawings.

3.05 INSTALLATION OF LIGHTING FIXTURES

A. Install all lighting fixtures complete and ready for service, in accordance with the Fixture Schedule on the Drawings.

B. Provide all lamps as shown on the Fixture Schedule.

3.06 INSTALLATION OF POWER EQUIPMENT

Provide all power and control wiring required for the work of other trades as described on the Drawings and in the various Sections of these Specifications, except where the furnishing and installing of such wiring is specified elsewhere.

3.07 INSTALLATION OF CONDUCTORS

Install conductors in accordance with the National Electrical Code.

3.08 INSTALLATION OF PANELS

A. Installation: Unless otherwise indicated on the Drawings, install all panels with the top of the trim 6'–0" above the finished floor. Panels located where they are not visible to the public may be surface mounted, if space permits.

B. Directories: Mount a typewritten directory behind glass or plastic on the inside of each panel door. On the directory, show the circuit number and complete description of all outlets on each circuit.

3.09 GROUND FAULT BREAKERS

Install ground fault interruption system or breakers for all circuits required by the National Electrical Code or shown on the Drawings.

3.09 TESTING

Upon completion of this portion of the Work, test all parts of the electrical system in the presence of the ARCHITECT. Demonstrate that all equipment furnished, installed, and/or connected under this Section of these Specifications functions electrically in the required manner.

END OF ELECTRICAL SPECIFICATION

THIS DOCUMENT PROPERTY OF JOEL SAMPSON ARCHITECT, P.A. INC. AND MAY NOT BE COPIED, ALTERED OR REPRODUCED UNLESS TRANSMITTED BY JOEL SAMPSON ARCHITECT, P.A. INC.

JOEL SAMPSON ARCHITECT
212 NORTH ADAMS ST
QUINCY, FLORIDA 32351
FLALIC.NO AR0014780
850-875-4348

ANDY GAY PARK IMPROVEMENTS
FOR
CITY OF QUINCY, FLORIDA
116 NORTH ADAMS STREET QUINCY, FLORIDA

DATE: 7-15-25
REV:

JOB NO: 24-014

E4.1
SHEET NO.

284 POPLAR DR
RAINSVILLE, ALABAMA 35986
(334) 695-5284
thedesigngroupinc@gmail.com
Mechanical–Electrical
Consulting Engineers
FL License No. 31813

confidential–this document & the information contained herein is confidential & may not be disclosed, copied altered or reproduced to any persons except as permitted in writing by "The Design Group, Inc."

the Design Group of Florida inc.
division of The Design Group, Inc.

K. DAVID PALMER LICENSE NO.62655 STATE OF FLORIDA
Digitally signed by K. David Palmer 62655 State of Florida
Date: 2025.09.15 15:20:21-05'00'