

PROJECT DATA

BUILDING CODES:

THE CURRENT STATE MINIMUM STANDARD CODES AS ADOPTED BY THE BOARD OF COMMUNITY AFFAIRS -

INTERNATIONAL BUILDING CODE 2012 EDITION W/ GA AMENDMENTS 2014
INTERNATIONAL RESIDENTIAL CODE 2012 EDITION W/ GA AMENDMENTS 2014
INTERNATIONAL FIRE CODE 2012 EDITION W/ GA AMENDMENTS 2014
INTERNATIONAL PLUMBING CODE 2012 EDITION W/ GA AMENDMENTS 2014
INTERNATIONAL MECHANICAL CODE 2012 EDITION W/ GA AMENDMENTS 2014
INTERNATIONAL FUEL GAS CODE 2012 EDITION W/ GA AMENDMENTS 2014
NATIONAL ELECTRICAL CODE 2014 EDITION
INTERNATIONAL ENERGY CONSERVATION CODE 2009 EDITION W/ GA SUPPLMENTS AND AMENDMENTS 2011 & 2012

FOR INFORMATION AND QUESTIONS REGARDING THE LIFE SAFETY CODE (NFPA 101) OR THE GA ACCESSIBILITY CODE, CONTACT THE STATE FIRE MARSHAL'S OFFICE.

THE RULES AND REGULATIONS OF THE SAFETY FIRE COMMISSIONER CHAPTER 120-3-3 RULES AND REGULATIONS FOR THE STATE MINIMUM FIRE SAFETY STANDARD EFFECTIVE JAN 1, 2015.
APPLICABLE REQUIREMENTS 6.1.14.2 IS REFERENCED FROM THE 2000 EDITION OF THE NFPA LIFE SAFETY CODE. THE CURRENT STATE ADOPTED EDITION OF THE LSC IS 2012.
THE AMERICANS WITH DISABILITIES ACT OF 1990 (ADA) WAS SIGNED INTO LAW ON JULY 26, 1990 BY PRESIDENT GEORGE H.W. BUSH AND LATER AMENDED WITH CHANGES EFFECTIVE JAN 1, 2009
THE AMERICANS WITH DISABILITIES ACT GIVES CIVIL RIGHTS PROTECTIONS TO INDIVIDUALS WITH DISABILITIES SIMILAR TO THOSE PROVIDED TO INDIVIDUALS ON THE BASIS OF RACE, COLOR, SEX, NATIONAL ORIGIN, AGE, AND RELIGION. IT GUARANTEES EQUAL OPPORTUNITIES FOR INDIVIDUALS WITH DISABILITIES IN PUBLIC ACCOMMODATIONS, EMPLOYMENT, TRANSPORTATION, STATE AND LOCAL GOVERNMENT SERVICES, TELECOMMUNICATIONS, AND IT ALSO APPLIES TO THE U.S. CONGRESS.

PROJECT DETAILS:

THE PROJECT CONSISTS OF A NEW CMU AND WOOD-FRAMED STRUCTURE TO SERVE AS A PUBLIC RESTROOM FACILITY AT THE EXISTING KENWOOD PARK COMPLEX. THE BUILDING WILL CONSIST OF APPROXIMATELY 420 SQUARE FEET OF CONDITIONED SPACE HOUSING TWO (2) TOILET FACILITIES ON EACH SIDE (2 MEN'S / 2 WOMEN'S). THE OCCUPANT CLASSIFICATION FOR THE STANDALONE RESTROOM FACILITY HAS BEEN DETERMINED AS "U", AS IT IS AN ACCESSORY STRUCTURE NOT CLASSIFIED IN ANY SPECIFIC OCCUPANCY.

ALLOWABLE HEIGHT AND AREA:

OCCUPANCY TYPE	CONSTRUCTION TYPE	ALLOWED	AREA
(U) UTILITY	VB	40 FT MAX, 1 STORY	420 SF TOTAL

OCCUPANCY CALCULATIONS:

MAXIMUM OCCUPANCY OF STANDALONE RESTROOMS IN TERMS OF LIFE SAFETY AND EGRESS IS NOT CLEARLY DEFINED IN THE IBC 2012. THE FOLLOWING METHODOLOGY HAS BEEN USED TO DETERMINE THE MAXIMUM OCCUPANCY OF THE SPACE -

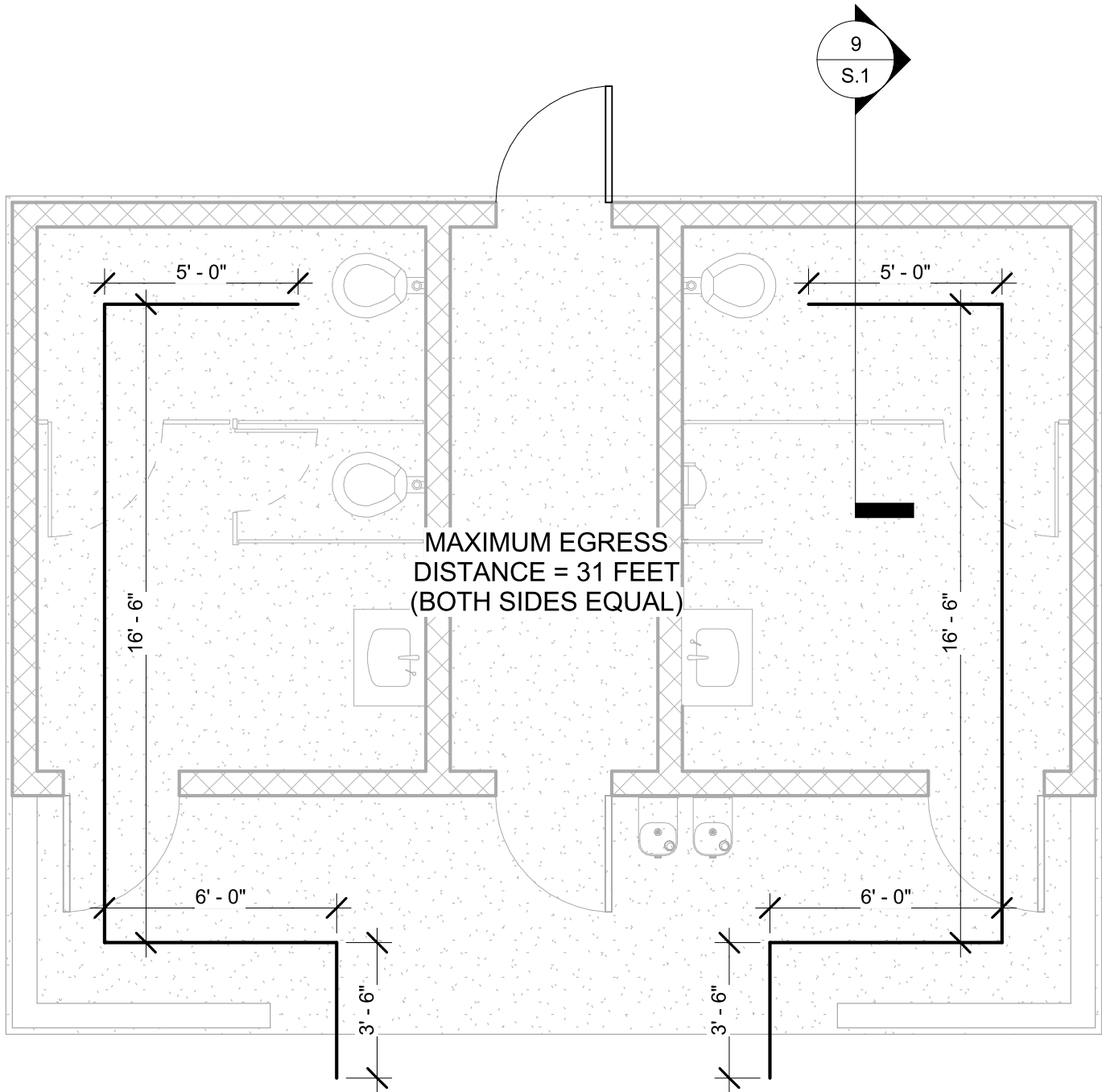
ASSIGN OCCUPANCY TYPE ASSEMBLY AND USE 10SF PER OCCUPANT, AN AVERAGE OF 5 SF PER PERSON FOR "STANDING SPACE" AND 15 SF PER OCCUPANT FOR "UNCONCENTRATED ASSEMBLY" PER TABLE 1004.1.1.
10 SF PER PERSON BASED ON NET FLOOR AREA (NET FLOOR AREA WILL EXCLUDE BATHROOM STALL AREA AS THESE SPACES ARE INTENDED FOR SINGLE OCCUPANCY, AS WELL AS MECHANICAL AND ELECTRICAL SPACES, AS THESE ARE NOT NORMALLY OCCUPIED AT ALL).

NET FLOOR AREA IN BUILDING FOR OCCUPANTS = 155 SF
155 SF / 10 SF PER PERSON = 15.5 = **16 OCCUPANTS MAXIMUM**

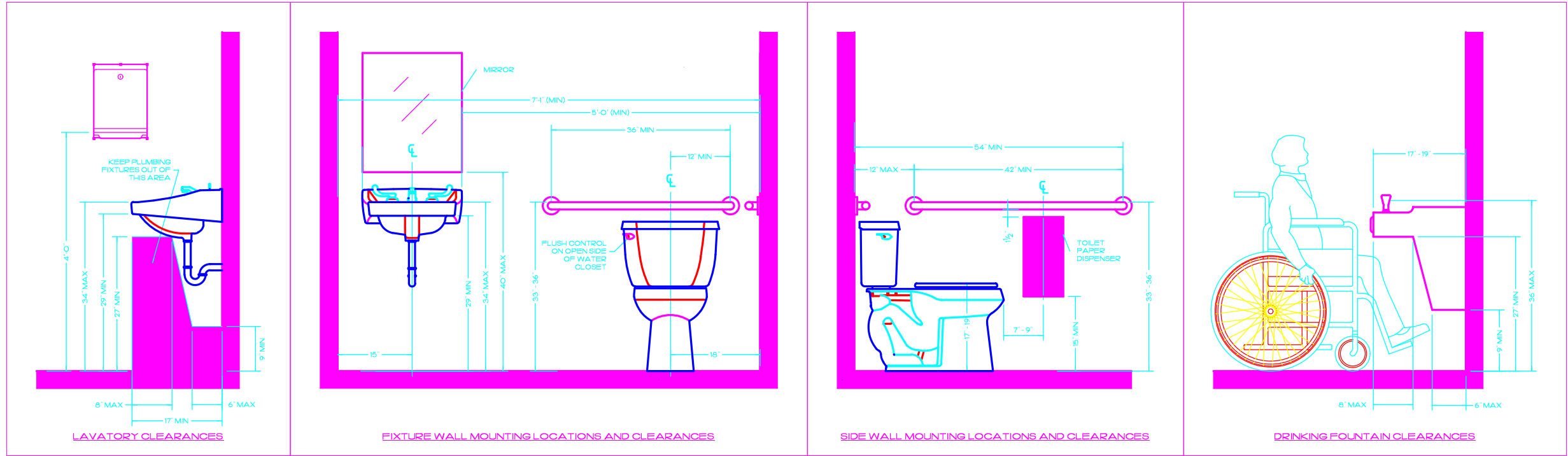
PER TABLE 1019.2, FOR "U" OCCUPANCY IN UNSPRINKLERED BUILDING WITH ONE EXIT (EACH SIDE HAS ONE EXIT), MAXIMUM OCCUPANCY IS **49 PERSONS** AND MAXIMUM TRAVEL DISTANCE IS 75 FEET.

AS SHOWN BELOW, MAXIMUM ACTUAL TRAVEL DISTANCE IS 25'.

KENWOOD PARK RESTROOM BUILDING
FAYETTE COUNTY, GA



1 EGRESS PLAN
1/4" = 1'-0"



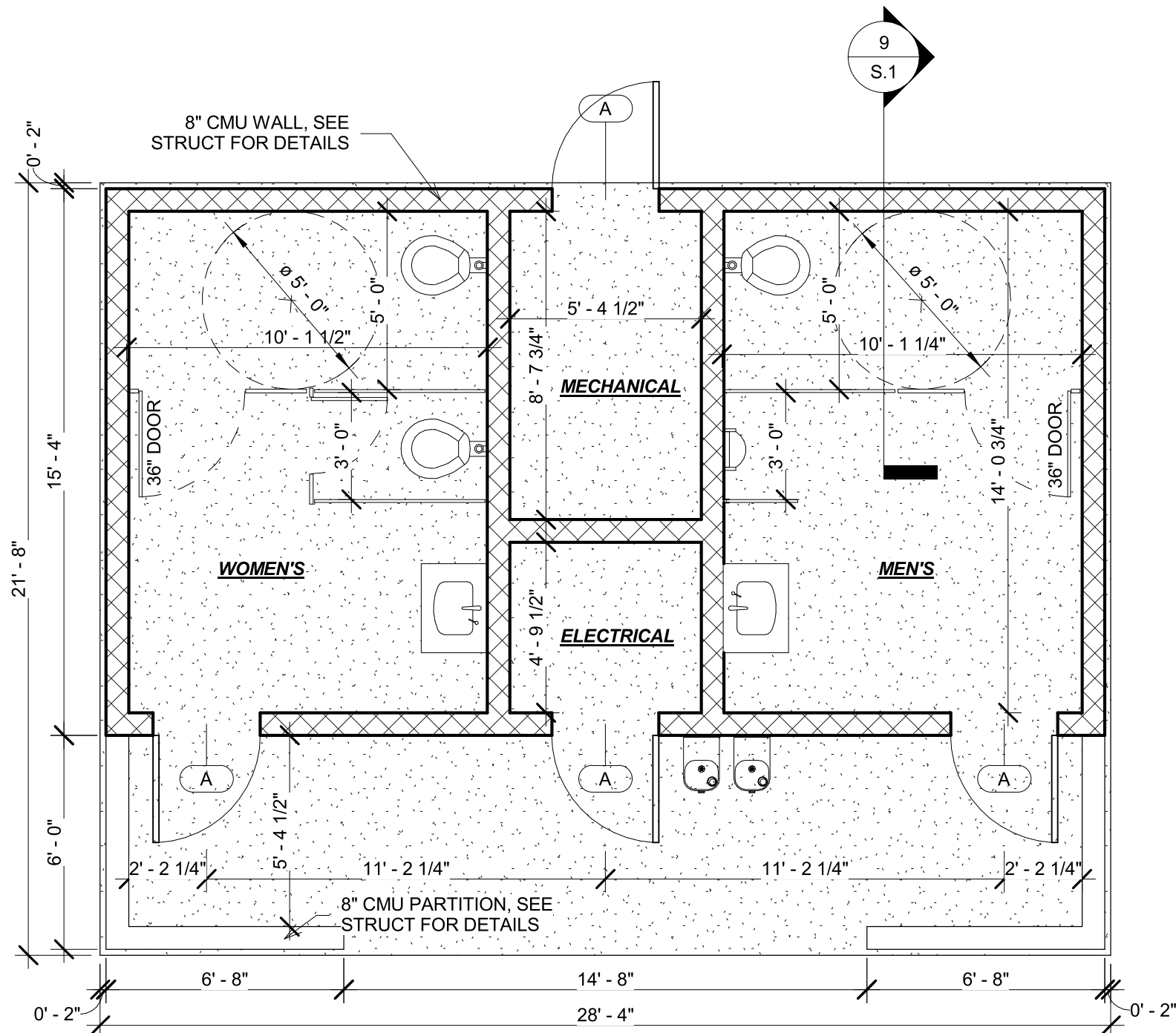
ADA RESTROOM DETAILS

INSULATION AND FINISH NOTES:

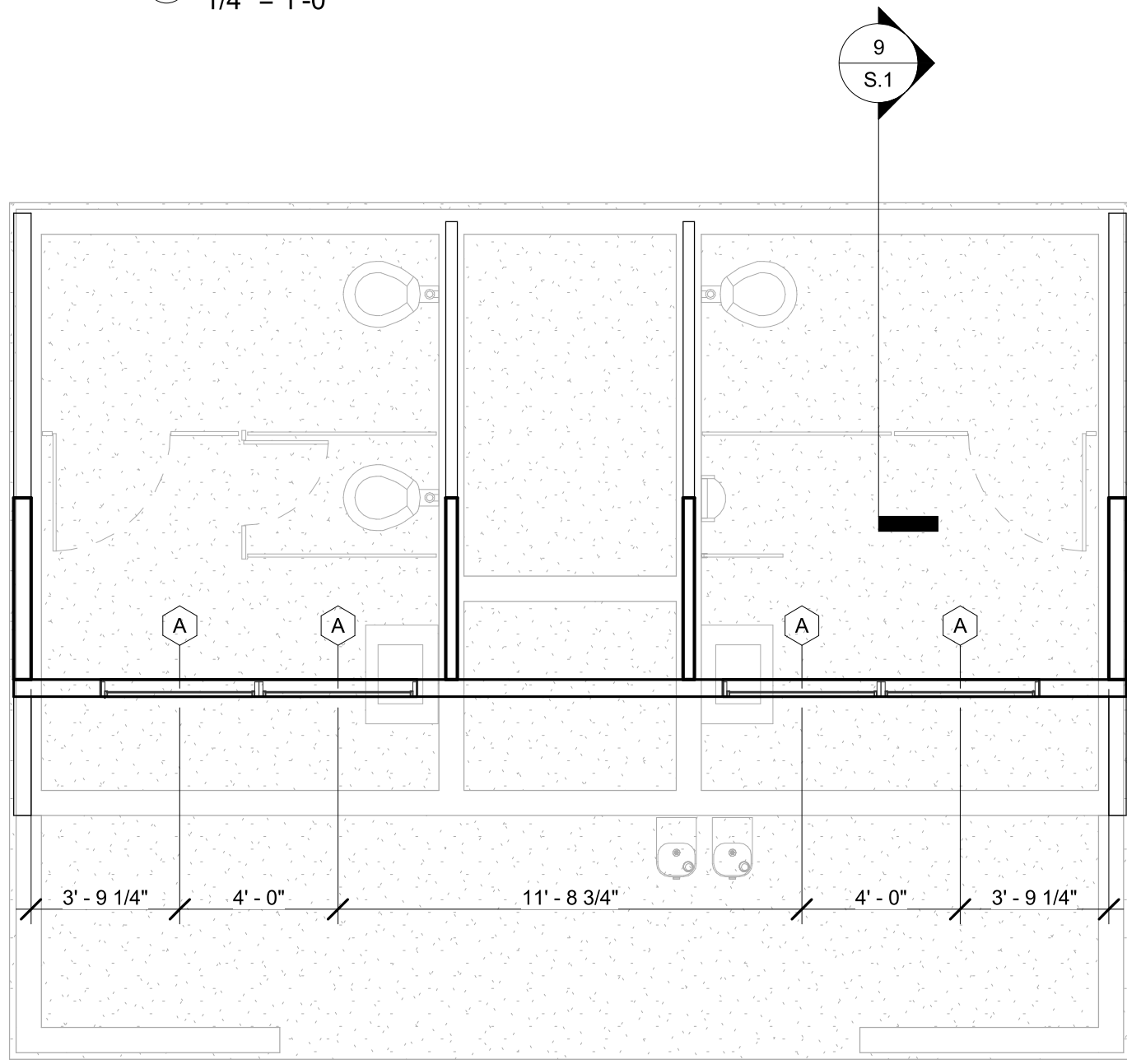
- ALL INTERIOR AND EXTERIOR BATHROOM FINISHES TO MATCH EXISTING BUILDINGS AT KENWOOD PARK. UNLESS INSTRUCTED OTHERWISE BY THE OWNER. IT IS RECOMMENDED THAT CONTRACTOR VISIT THE SITE PRIOR TO BIDDING TO OBSERVE THE FINISHES IN QUESTION.
- WOOD KNEE WALLS AND CEILINGS ARE TO BE INSULATED W/ R-19 FIBERGLASS BATT INSULATION, AND CLAD INSIDE WITH SANDED 1/2" PLYWOOD W/ 1/4"x1 1/2" LATHE, PAINTED TO MATCH EXISTING RESTROOM BUILDINGS.
- INTERIOR CMU WALLS TO BE PAINTED.
- SLAB TO BE FINISHED WITH A POWER TROWEL, AND SEALED USING A ROLLER-APPLIED PRODUCT PER THE OWNER.

DOORS AND WINDOWS

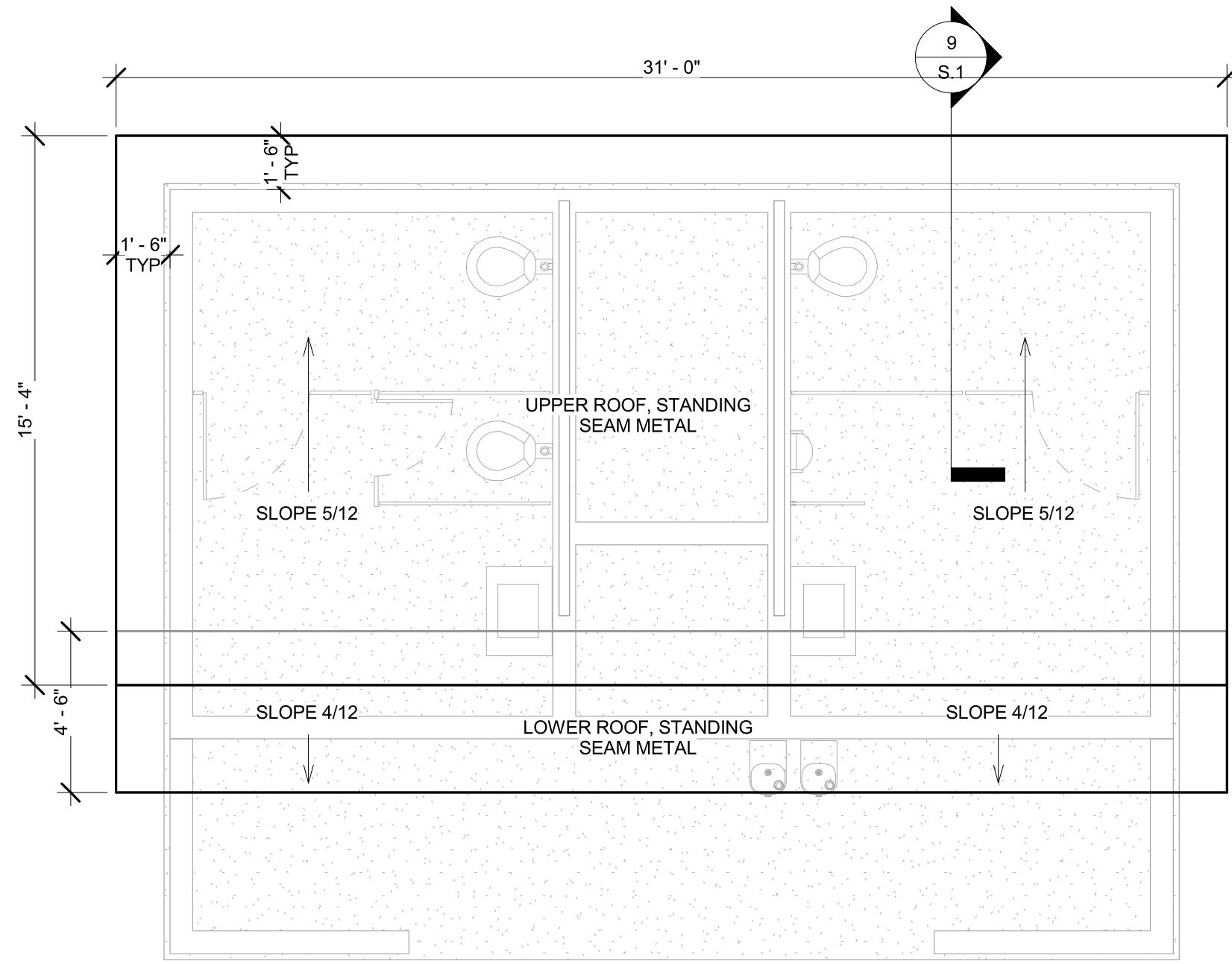
- DOOR "A" = 3'-0" / 6-8 STEEL DOOR, FOAM CORE, EXTERIOR PULL HANDLES WITH DEAD BOLT, CLOSER, STAINLESS STEEL HARDWARE FINISH, PAINTED WITH EPOXY PAINT TO MATCH EXISTING BUILDINGS
- WINDOW "A" = 2'-0" / 4'-0" FIXED RECTANGULAR DOUBLE PANE LOW-E, MATCH MANUFACTURER AND MODEL OF EXISTING WINDOWS IN ADJACENT BUILDINGS.



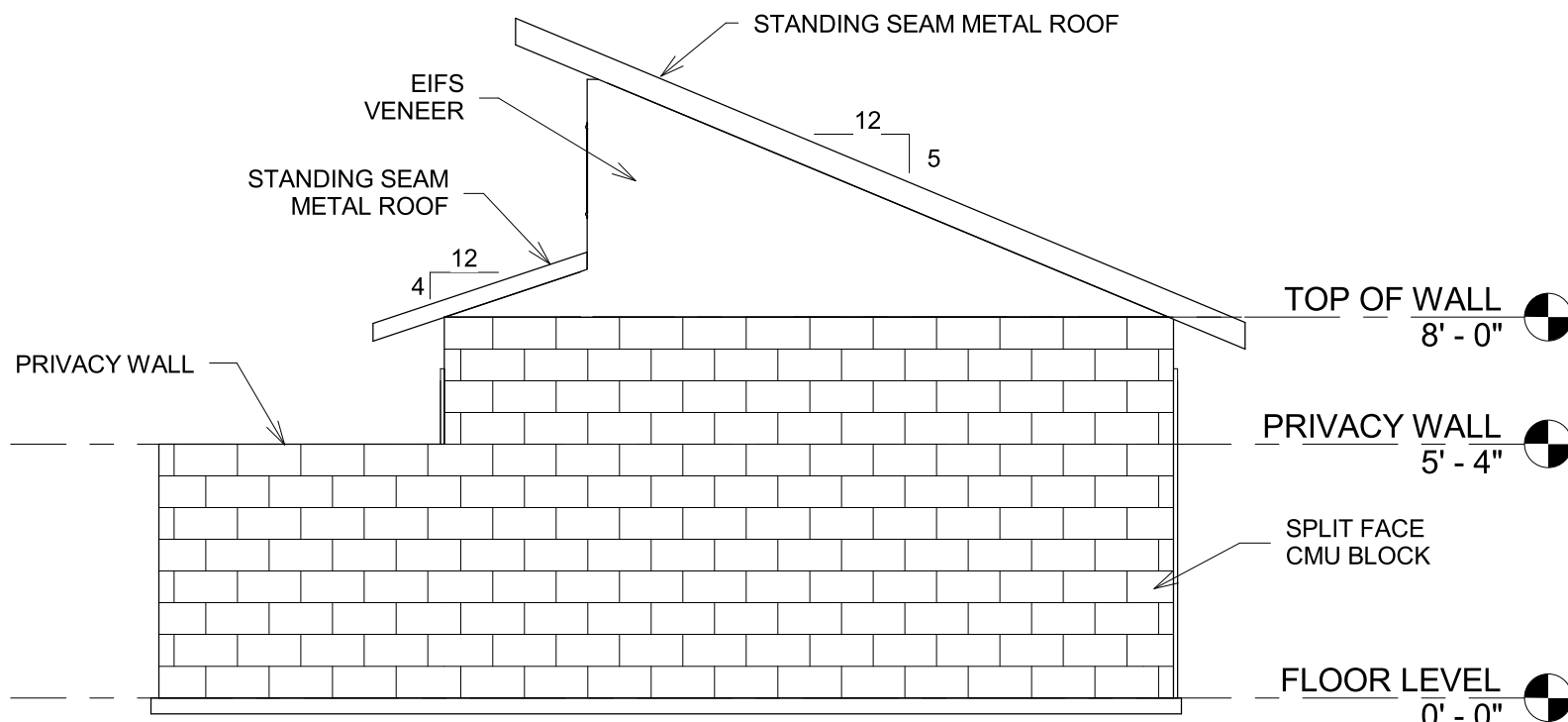
2 FLOOR PLAN
1/4" = 1'-0"



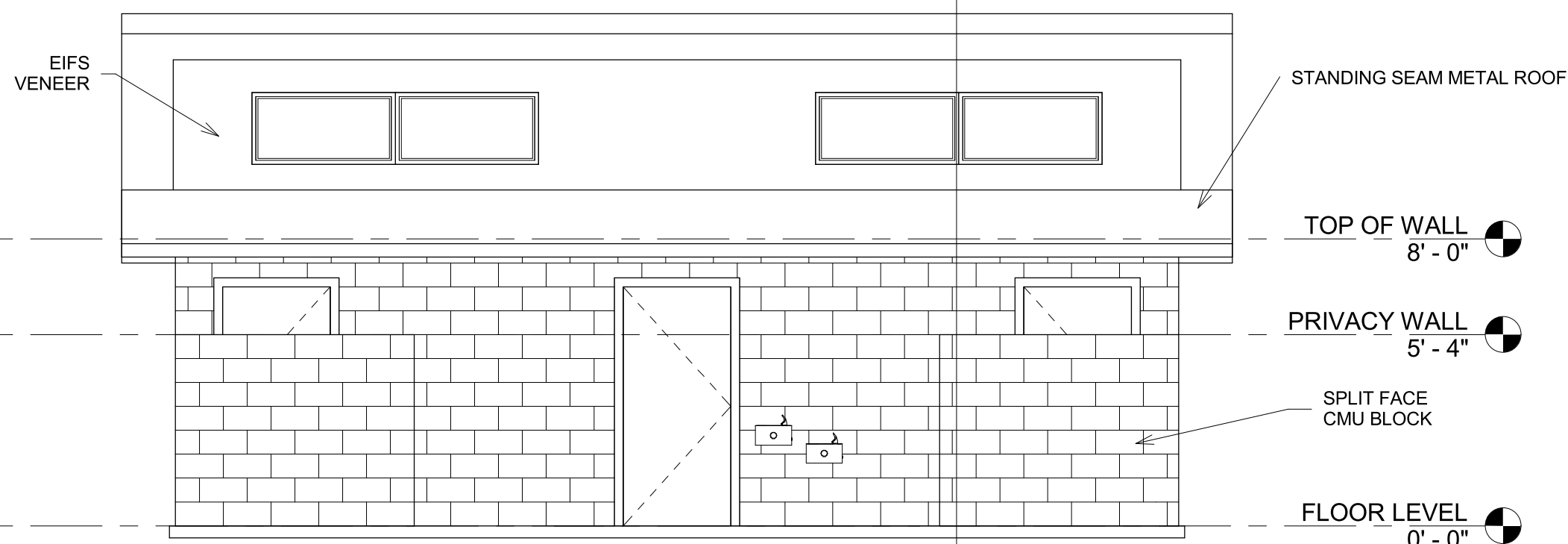
3 UPPPER WALL PLAN
1/4" = 1'-0"



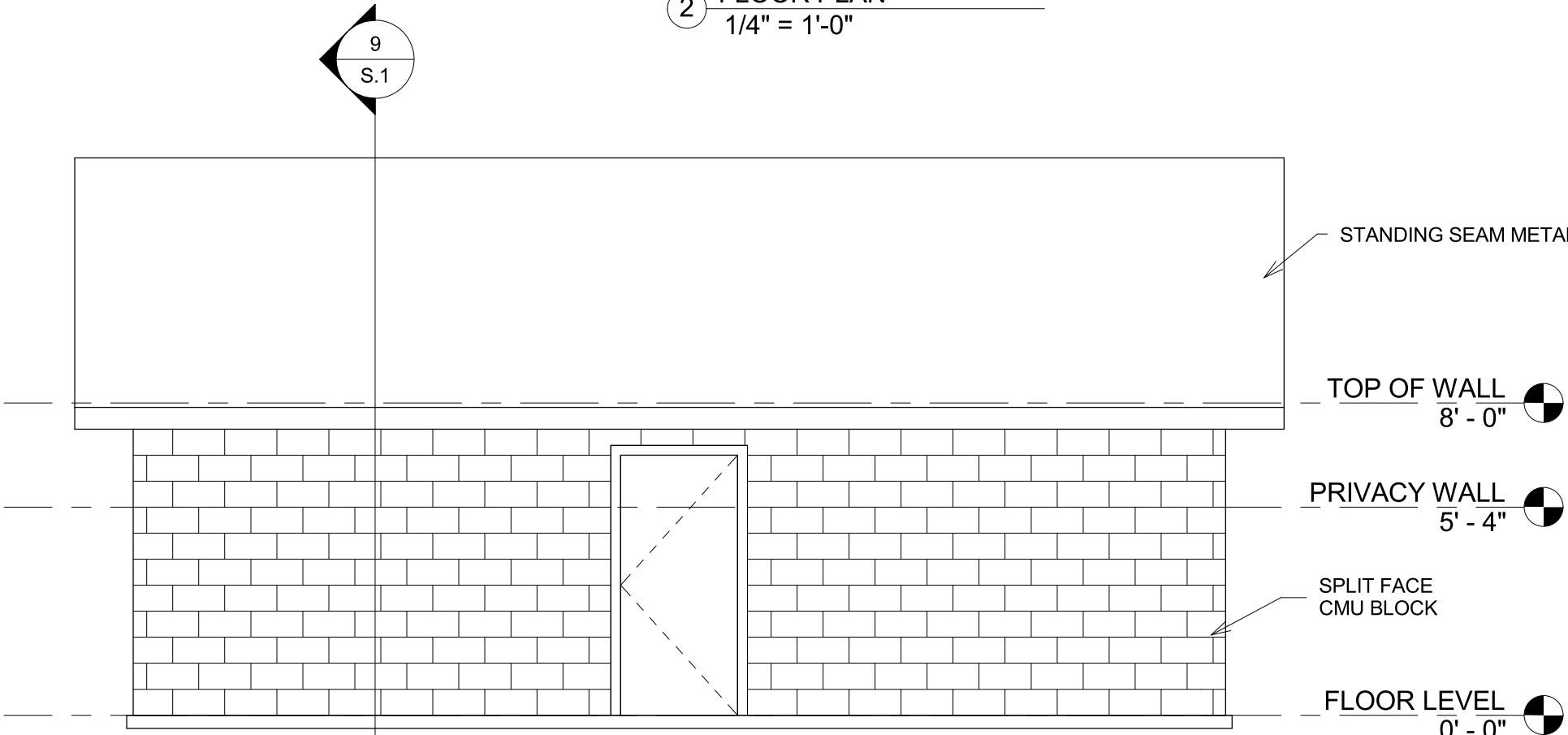
4 ROOF PLAN
1/4" = 1'-0"



5 SIDE ELEVATION
1/4" = 1'-0"



6 FRONT ELEVATION
1/4" = 1'-0"



7 REAR ELEVATION
1/4" = 1'-0"

PROJECT DIRECTORY:

OWNER:
FAYETTE COUNTY
140 STONEWALL AVE WEST
SUITE 240
FAYETTEVILLE, GA 30214

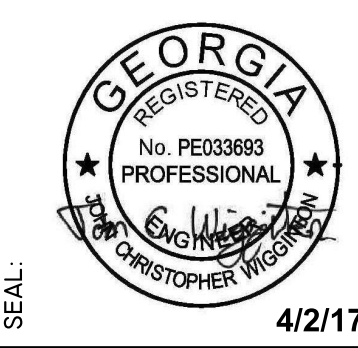
ENGINEER / DESIGNER:
TECHNIKA ENGINEERING & DESIGN, LLC
PO BOX 80097
CHARLESTON, SC 29416

SHEET LIST

A.1 FLOOR PLANS AND ELEVATIONS
S.0 STRUCTURAL NOTES
S.1 STRUCTURAL PLANS AND DETAILS
M.1 MECHANICAL PLAN AND NOTES
E.0 ELECTRICAL NOTES
E.1 ELECTRICAL PLANS AND SCHEDULES
P.1 PLUMBING PLANS AND DETAILS

REVISIONS

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CHARLESTON, SC 29416
843-580-3769



LAYOUT AND ELEVATIONS

PROPOSED ENGINEERING DESIGN FOR THE
KENWOOD PARK RESTROOM FACILITY
GA-279 - FAYETTEVILLE, GA 30214

NOTES:

TECH
JCW
APPROVED:
DATE: 3-23-17
JOB NO.: T17-005
SHEET 1 OF 7
SHEET NUMBER:
A.1

1 ALL CONSTRUCTION SHALL COMPLY WITH THE GEORGIA STATE MINIMUM STANDARD BUILDING CODE, 2012 EDITION (2012
2 INTERNATIONAL BUILDING CODE WITH GA STATE AMENDMENTS), REFERENCE TO OTHER STANDARD SPECIFICATIONS OR
3 CODES SHALL MEAN THE LATEST STANDARD OR CODE ADOPTED AND PUBLISHED.
4 NOTES ON THIS DRAWING SHEET PROVIDE MINIMUM VALUES, DIMENSIONS, QUANTITIES, CHARACTERISTICS AND
5 CONDITIONS. IF INFORMATION ON OTHER PLAN SHEETS EXCEED THE REQUIREMENTS SPECIFIED IN THESE NOTES, THEY
6 SHALL GOVERN.
7 DRAWINGS SHOW TYPICAL AND CERTAIN SPECIFIC CONDITIONS ONLY. FOR DETAILS NOT SPECIFICALLY SHOWN, PROVIDE
8 DETAILS SIMILAR TO THOSE SHOWN.
9 VERIFY ALL EXISTING CONDITIONS, DIMENSIONS AND ELEVATIONS BEFORE STARTING WORK. NOTIFY STRUCTURAL
10 ENGINEER OF ANY DISCREPANCY.
11 THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN, ADEQUACY, AND SAFETY OF ERECTION BRACING, SHORING,
12 TEMPORARY SUPPORTS, ETC. THE STRUCTURAL ELEMENTS ARE NOT STABLE UNTIL THE STRUCTURE IS COMPLETE.
13 ALL ERECTION BRACING AND SHORING OF COMPONENTS SHALL NOT PROCEED UNTIL SHOP DRAWINGS HAVE BEEN
14 SUBMITTED, REVIEWED AND APPROVED BY THE ENGINEER.
15 COORDINATE STRUCTURAL CONTRACT DOCUMENTS WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND
16 CIVIL DOCUMENTS. NOTIFY STRUCTURAL ENGINEER OF ANY CONFLICT AND/OR OMISSION. REFER TO ARCHITECTURAL
17 DOCUMENTS FOR DIMENSIONS NOT SHOWN.
18 COORDINATE FLOOR AND CEILING OPENINGS SIZES AND LOCATIONS WITH ARCHITECTURAL, MECHANICAL,
19 PLUMBING AND ELECTRICAL DRAWINGS. FOR ADDITIONAL OPENINGS, INSERTS, SLEEVES, CURBS, PADS, ETC. NOT SHOWN
20 ON THE STRUCTURAL DRAWINGS SEE ARCHITECTURAL, MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS.
21 CONTRACTOR IS RESPONSIBLE FOR MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES.
22 THE CONTRACTOR IS SOLELY RESPONSIBLE FOR ERRORS AND OMISSIONS ASSOCIATED WITH THE PREPARATIONS OF SHOP
23 DRAWINGS.
24 UNLESS NOTED OTHERWISE, TESTING AND INSPECTION SERVICES SHALL BE PAID PROVIDED BY THE OWNER AND ARE NOT
25 PART OF THE BASIC DESIGN SERVICES.

1. COMPLY WITH THE LATEST EDITION OF THE AFPA NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION, 1997 SPC
AND THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION TIMBER CONSTRUCTION MANUAL, FOURTH EDITION.

2. PROVIDE NEW LUMBER WITH A MINIMUM OF TWO (2) END JOINTS. MILL GRADING, END JOINTS, AND END JOINTS OF LUMBER TO BE CUT WHEN
SURFACED AND GRADE OR STRESS RATED BY STAMPS FROM THE ASSOCIATIONS HAVING JURISDICTION.

3. PROVIDE APA STRUCTURAL 1" RATED PLYWOOD SHEATHING, C-C GRADE WITH EXTERIOR GLUE [EXPOSURE 1], GROUP 1
SPECIES, C GRADE WITH EXPOSURE 1 GLUE ON INNER PLYS ON EXTERIOR WALLS, ROOFS, DESIGNATED INTERIOR WALLS,
AND BRACING DIAPHRAGMS.

4. REBAR THE BRACE/STIFFEN SCHEDULE FOR NAILING OF SHEAR WALLS IF NOT SHOWN ON THE DRAWINGS.

5. FASTEN STUDS AND RAFTERS WITH WIND TIRES/JOISTS AND RAFTERS TO SIDES OF BEAMS WITH HANGERS; AND
SHEAR WALLS WITH HOLD-DOWNS USING PROPRIETARY STEEL CONNECTORS.

6. METAL CONNECTOR DESIGNATIONS PROVIDED ON DRAWINGS ARE SIMPSON STRONG-TIE & HILTI'S NOTATION. OTHER
MANUFACTURER'S PRODUCTS MAY BE SUBSTITUTED PENDING APPROVAL BY THE ENGINEER.

7. CUTTING OR DRIPPING OF END JOINTS IS PROHIBITED. CONTACT ENGINEER FOR GUIDANCE.

8. CUTTING, NOTCHING & DRILLING OF BEAMS AND JOIST TO COMPLY WITH IBC REQUIREMENTS. MODIFICATIONS OF
BEAMS/JOIST WITHIN SPAN 3/3 OF SUPPORTS IS PROHIBITED. CONTACT ENGINEER FOR GUIDANCE.

9. SHEATHED CONSTRUCTION, AT MINIMUM: ROOF SHEATHING TO BE 5/8" APA RATED PLYWOOD ATTACHED TO TRUSSES WITH
104 COMMON NAILS SPACED AT 6" ALONG EDGES AND 12" AT INTERMEDIATE SUPPORTS; FLOOR SHEATHING TO BE 3/4" APA
RATED PLYWOOD ATTACHED TO JOISTS WITH 104 COMMON NAILS SPACED AT 6" ALONG EDGES AND 12" AT
INTERMEDIATE SUPPORTS; EXTERIOR WALL SHEATHING TO BE 1/2" APA EXTERIOR RATED PLYWOOD ATTACHED TO
SUPPORTING STUDS WITH 104 COMMON NAILS SPACED AT 6" ALONG EDGES AND 12" AT INTERMEDIATE SUPPORTS.

10. WALL CONSTRUCTION, AT MINIMUM: PROVIDE SOUTHERN PINE NO. 2 GRADE KILN-DRIED STUDS WITH MAXIMUM MOISTURE
CONTENT OF 19% AT TIME OF DRESSING; PROVIDE SOLID WALL BRIDGING SPACING AT 4'-0" O.C. VERTICALLY. VERTICALLY
ALIGNED STUDS AND BRIDGES, IN SUPPORTING MEMBERS WITH 104 COMMON NAILS SPACED AT 6" ALONG EDGES AND 12" AT
INTERMEDIATE SUPPORTS. ADDITIONAL 3" STUDS TO SUPPORT LIMITS ON EACH SIDE OF OPENINGS BETWEEN 16" TO 48" WIDE. IN 6 INCH STUD
WALLS, PROVIDE 3" 2" X 8" HEADERS FOR SPANS UP TO 4'-0" AND 3-2" X 10" UP TO 6'-0". FORM CORNERS WITH A MINIMUM
OF 3 STUDS SPIKED TOGETHER. PROVIDE SINGLE BOTTOM SUE AND DOUBLE TOP PLATE IN ALL BEARING WALLS.

EXTERIOR - ANCHOR SILLS WITH 5/8" DIAMETER BOLTS EMBEDDED 8" AND SPACED NO MORE THAN 4'-0" APART AND LOCATED
AT 16" ON ENDS AND 8" ON OTHERS. PROVIDE 2" X 8" STUDS TO SUPPORT LIMITS ON EACH SIDE OF OPENINGS BETWEEN 16" TO 48" WIDE.
FASTENERS EMBEDDED 11/4" AND SPACED AT 2'-0" ON CENTER. FABRICATE BUILT-UP POSTS AS FOLLOWS: 2' X 4" FASTENED
WITH ONE ROW OF STAGGERED 10D NAILS @ 6", 3-2" X 4" FASTENED WITH ONE ROW OF STAGGERED 30D NAILS @ 8", AND 3-2"
FASTENED WITH TWO ROWS OF 30D NAILS.

11. FLOOR AND ROOF CONSTRUCTION: PROVIDE SOUTHERN PINE NO. 2 OR BETTER LUMBER FOR JOISTS AND RAFTERS
SURFACED DRY WITH MAXIMUM MOISTURE CONTENT OF 19% AT TIME OF DRESSING. LOCATE JOISTS AND RAFTERS
DIRECTLY OVER WALL STUDS. PROVIDE DOUBLE JOISTS UNDER WALLS PARALLEL TO JOISTS. NOTCHES IN JOISTS SHALL
NOT EXCEED 1/6 THE JOIST DEPTH AND SHALL NOT IN THE MIDDLE THIRD OF THE SPAN. BORED HOLES SHALL NOT BE WITH
2" OF JOIST EDGES AND NOT EXCEED 1/3 THE DEPTH OF THE JOIST. INSTALL ONE LINE 1" X 3" CROSS BRIDGING FOR EACH
OF FLOOR FRAMING. INSTALL 2" SOLID BLOCKING BETWEEN JOISTS OVER ALL BEAMS OR OTHER SUPPORTING MEMBERS.
RECEIVE AND REPAIR ALL DAMAGE TO EXISTING CONSTRUCTION. PROVIDE 3/4" TONGUE-AND-GROOVE, INTERIOR TYPE WITH EXTERIOR GLUE, UNDERLAYMENT
GRADE PLYWOOD.

1. I-JOIST DESIGNATIONS PROVIDED ON DRAWINGS ARE WEYERHAEUSER'S NOTATION. OTHER MANUFACTURER'S PRODUCTS MAY BE SUBSTITUTED PENDING APPROVAL BY THE ENGINEER.
2. ALL JOIST LUMBER SHALL MEET THE REQUIREMENTS OF THE NATIONAL LUMBER LUMBER (PSL) MADE UNDER PROCESSES APPROVED BY THE NATIONAL RESEARCH BOARD. COMPLY WITH THE AMERICAN INSTITUTE OF TIMBER CONSTRUCTION MEMBER CONSTRUCTION MANUAL, FOURTH EDITION, FOR THE DESIGN, FABRICATION, AND CONSTRUCTION OF ENGINEERED TIMBER.
3. PROVIDE LVL LUMBER HAVING THE FOLLOWING GRADE AND DESIGN VALUES: GRADE = 3100 FB; FLEXURAL STRESS (F_b) = 3,100 PSI; MODULUS OF ELASTICITY (E) = 2,000,000 PSI; AND HORIZONTAL SHEAR STRESS (F_v) = 290 PSI.
4. CUTTING, NOTCHING & DRILLING OF TIMBER SHALL BE IN ACCORDANCE WITH THE FOLLOWING: GRADE = 3100 FB; FLEXURAL STRESS (F_b) = 3,100 PSI; MODULUS OF ELASTICITY (E) = 2,000,000 PSI; SHEAR MODULUS OF ELASTICITY (G) = 125,000 PSI; AND HORIZONTAL SHEAR STRESS (F_v) = 290 PSI.
5. NAIL EACH LAYER OF MULTIPLE LVL MEMBERS TOGETHER WITH (3) 16d NAILS PER FOOT.
6. CUTTING, NOTCHING & DRILLING OF BEAMS AND JOIST TO COMPLY WITH IBC REQUIREMENTS. MODIFICATIONS OF BEAMS/JOIST WITHIN SPAN /3 OF SUPPORTS IS PROHIBITED. CONTACT ENGINEER FOR GUIDANCE.

ALL CONCRETE WORK SHALL COMPLY WITH ACI 318, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS", LATEST EDITION. DESIGN BASED ON ACI 318, "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE", LATEST EDITION.

UNLESS NOTED OTHERWISE, ALL CONCRETE SHALL BE NORMAL WEIGHT AND HAVE THE FOLLOWING MINIMUM 28 DAY STRENGTH: FOUNDATIONS: 3000PSI, RETAINING WALLS: 3000PSI, SLAB-ON-GRADE: 3000PSI, COMPOSITE FLOOR SLABS 4000PSI

CONCRETE MIX DESIGNS SHALL BE SUBMITTED TO THE TESTING AGENCY AND THE STRUCTURAL ENGINEER, IN ACCORDANCE WITH ACI 318 SECTION 5.3. APPROVAL OF MIX DESIGN SHALL BE RESPONSIBILITY OF TESTING AGENCY.

MIX MATERIALS AND MIX DESIGN SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE OWNER'S TESTING LABORATORY. CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE REQUIRED DESIGN STRENGTH.

USE OF CALCIUM CHLORIDE, CHLORIDE IONS, OR OTHER SALTS IN THE CONCRETE IS PROHIBITED.

THE AIR CONTENT IN ALL CONCRETE EXPOSED TO WEATHER SHALL BE $4 \pm 1\%$

UNLESS NOTED OTHERWISE, SAMPLES FOR STRENGTH TESTING OF EACH CLASS OF CONCRETE PLACED SHALL BE TAKEN BY THE TESTING AGENCY AT MINIMUM: ONCE A DAY, FOR EACH 100 CUBIC YARDS OF CONCRETE, OR FOR EACH 5000 SQUARE FEET OF SURFACE AREA FOR SLABS AND WALLS. SAMPLING TO COMPLY WITH ASTM C172. TESTING TO COMPLY WITH: ASTM C143, AIR CONTENT: ASTM C173, COMPRESSIVE STRENGTH: ASTM C39, UNIT WEIGHT OF LIGHTWEIGHT CONCRETE: ASTM C172

CHAMFER OR ROUND ALL EXPOSED CORNERS MINIMUM $\frac{3}{4}"$

DETAIL CONCRETE REINFORCEMENT AND ACCESSORIES IN ACCORDANCE WITH ACI 315, "DETAILING MANUAL", LATEST EDITION. SUBMIT SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION. DRAWINGS TO SHOW ALL DIMENSIONS AND LOCATIONS FOR PLACING REINFORCING STEEL AND ACCESSORIES. DO NOT BEGIN FABRICATION UNTIL SHOP DRAWINGS HAVE BEEN COMPLETED AND APPROVED.

UNLESS NOTED OTHERWISE, REINFORCING STEEL SHALL BE GRADE 60 AND CONFORM TO ASTM A615.

WELDED WIRE MESH (FABRIC) SHALL CONFORM TO ASTM A185 AND SHALL BE PROVIDED IN FLAT SHEETS. ROLLS (ROLLED WELDED WIRE MESH/FABRIC) IS PROHIBITED.

PRIOR TO PLACING CONCRETE ALL REINFORCING STEEL AND EMBEDMENTS SHALL BE TIED SECURELY IN PLACE AND SUFFICIENTLY SUPPORTED TO MAINTAIN THE POSITION OF THE REINFORCEMENT DURING ALL CONSTRUCTION ACTIVITIES. "STICKING" DOWELS INTO WET CONCRETE IS NOT PERMITTED

PROVIDE CONTINUOUS REINFORCEMENT WHEREVER POSSIBLE. SPlice ONLY AS SHOWN OR APPROVED. STAGGER JOICES WHEREVER POSSIBLE. USE CLASS "B" TENSION SPlice UNLESS NOTED OTHERWISE. DOWELS SHALL MATCH THE SIZE AND SPACING OF THE SPECIFIED REINFORCEMENT AND SHALL BE LAPPED WITH CLASS "B" TENSION SPlice. UNLESS NOTED OTHERWISE LAP LENGTHS EXPRESSED IN NUMBER OF BAR DIAMETERS SHALL BE AS PRESCRIBED IN ACI 318-05

INCREASE THE LAP LENGTHS BY 1.3 FOR TOP BARS AND BY 1.3 FOR LIGHTWEIGHT CONCRETE.

REINFORCING STEEL SHALL HAVE THE MINIMUM CONCRETE COVER AS REQUIRED BY ACI 318-05.

DO NOT REINFORCE EXTERIOR WALLS WITH REINFORCING STEEL THICKNESS WITHIN THE SLAB OR WALL UNLESS SPECIFICALLY SHOWN AND DETAILED ON THE STRUCTURAL DRAWINGS

DO NOT WELD OR TACK WELD REINFORCING STEEL UNLESS APPROVED BY THE STRUCTURAL ENGINEER.

FLOOR FINISH TOLERANCES FOR INTERIOR SLABS SHALL BE MEASURED IN ACCORDANCE WITH ACI 302.11 AND ASTM E1155. MINIMUM FLATNESS VALUES SHALL BE AS FOLLOWS: SPECIFIED OVERALL VALUE (SOV), F/6 GREATER THAN OR EQUAL TO 25; FL GREATER THAN OR EQUAL TO 20, MINIMUM LOCAL VALUE (MLV), F/6 GREATER THAN OR EQUAL TO 17, F/6 GREATER THAN OR EQUAL TO 10.

EXTERIOR SLABS SHALL DRAIN FREELY WITH A MAXIMUM VARIATION FROM THE INDICATED PLANE OF $1/4"$ IN 10' OR 10"

REINFORCING PLACEMENT SHALL BE INSPECTED IN ACCORDANCE WITH ACI 318 SECTION 1.3.9, OR UNDER THE SUPERVISION OF, A REGISTERED STRUCTURAL ENGINEER. UNLESS NOTED OTHERWISE, THESE INSPECTIONS ARE NOT INCLUDED IN THE BASIC SERVICES OF THE STRUCTURAL ENGINEER OF RECORD.

PROVIDE FOR AN ALLOWANCE OF 1% OF TOTAL REINFORCING STEEL FOR THE PROJECT TO BE FABRICATED, AND PLACED DURING PROGRESS OF WORK AS MAY BE DIRECTED BY THE STRUCTURAL ENGINEER, IN ADDITION TO REINFORCING STEEL INDICATED ON THE DRAWINGS. CREDIT THE OWNER ANY UNUSED QUANTITY AT THE END OF THE PROJECT.

1. LOCATIONS FOR HOLE/HARDWARE ANCHORAGE TO BE LOCATED PER THE DESIGN DRAWINGS, CONSIDERING ANY FIELD VERIFICATIONS/CONDITIONS AS APPLICABLE.
2. ALL HOLES TO BE DRILLED TO THE EMBEDMENT/HOLE DEPTH SPECIFIED IN THE DRAWINGS. HOLES FOR #4 REBAR TO BE 9/16" - 1", FOR 3/4"-1" THREADED ROD TO BE 7/8" - 1".
3. DRILLED HOLES TO BE THOROUGHLY CLEANED PRIOR TO APPLICATION OF EPOXY ADHESIVE.
4. 1/4" DEPTH OF HOLE TO BE CLEANED WITH AIR AT AN APPROPRIATE DIAMETER (SLIGHTLY LARGER THAN THE HOLE) AND EITHER COMPRESSED AIR OR A VACUUM.
5. EPOXY ADHESIVE TO BE PROPORTIONED AND COMBINED PER THE MANUFACTURER'S INSTRUCTIONS.
6. PRE-PACKAGED UNITS THAT AUTOMATICALLY COMBINE THE CONSTITUENTS SHALL BE CHECKED TO ENSURE PROPER MIXING AND PROPER CURE.
7. INSERT EPOXY ADHESIVE INTO THE HOLE PER THE MANUFACTURER'S INSTRUCTIONS. HOLES TO BE FILLED TO A LEVEL IN WHICH ALLOWS THE EPOXY ADHESIVE TO RISE UP TO THE SURFACE OF THE CONCRETE AFTER INSERTION OF HARDWARE (TEST APPLICATIONS FOR EACH HARDWARE TYPE ARE RECOMMENDED).
8. INSERT HARDWARE WITH A TWISTING MOTION, RELEASING AFTER FULL INSERTION. DO NOT MOVE, RE-POSITION OR LOAD THE HARDWARE FOR ONE AND HALF HOURS.
9. THE "WORKING TIME" FOR MIXED EPOXY ADHESIVE SHALL BE FIVE MINUTES. ANY EPOXY THAT HAS BEEN MIXED SHALL BE DISCARDED AND NOT USED FOR ANCHORAGE AFTER FIVE MINUTES HAS ELAPSED.

1. A GEOTECHNICAL INVESTIGATION OF THE SITE IS RECOMMENDED FOR ALL PROJECTS REQUIRING FOUNDATIONS. IF THE OWNER OMITS A GEOTECHNICAL INVESTIGATION AN ALLOWABLE SOIL CAPACITY OF 2,000 PSF WILL BE ASSUMED. THE FOUNDATION SHALL BE DESIGNED TO WITHSTAND THE FULL WEIGHT OF THIS FOUNDATION DESIGN. STRUCTURAL ENGINEER IS NOT RESPONSIBLE FOR SITE SOIL CONDITIONS OR CHARACTERISTICS.
2. A LICENSED GEOTECHNICAL ENGINEER, FAMILIAR WITH THE REGION, SHALL INSPECT THE CONDITION AND ENSURE THE ADEQUACY OF ALL SUBGRADES, FILLS AND BACKFILLS BEFORE PLACEMENT OF FOUNDATIONS, FOOTINGS, SLABS, AND WALLS. THE GEOTECHNICAL ENGINEER SHALL SUBMIT REPORTS OF ALL FINDINGS TO THE STRUCTURAL ENGINEER.
3. SIDE SLOPES OF FOUNDATIONS SHALL BE FORMED UNLESS CONDITIONS PERMIT EARTH FORMING. FOUNDATIONS CAST AGAINST EARTH REQUIRE SLOPES OF IN ACCORDANCE WITH THE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS AND CLEAN UP OF ACCUMULATED WATER AND RUBBISH PRIOR TO CONCRETE PLACEMENT.
4. WHERE FOOTING STEPS ARE NECESSARY THEY SHALL BE NO STEEPER THAN ONE VERTICAL AND TWO HORIZONTAL.
5. BACKFILL SLABS (WALLS SUPPORTED AT THE TOP AND BOTTOM BY SLABS) SHALL NOT BE BACKFILLED PRIOR TO THE WALLS AT THE TOP AND BOTTOM REACHING 75% OF THEIR DESIGN STRENGTHS.
6. UNLESS NOTED OTHERWISE, SLABS-ON-GRADE SHALL BE MINIMUM 4" THICK, PLACED ON COMPACTED SUBGRADE, REINFORCED WITH 6x6-W2 X1W2 1 W.W.M. IN FLAT SHEETS (ROLLS NOT PERMITTED), SUPPORTED BY FORMED CONCRETE OR BRICK PIER FOUNDATIONS. REINFORCEMENT SHALL BE 6" ON CENTER OR 2' X 2' MESH TWO SQUARES AT SPLICES AND STAGGER SPLICES. PROVIDE VAPOR BARRIER BENEATH THE FLOOR SLAB WITH JOINTS LAPPED NO LESS THAN 6". PLACE CONTROL JOINTS AS SHOWN ON PLANS SUCH THAT AREA OF CONSTRUCTION DOES NOT EXCEED 10' X 10'. PROVIDE CONSTRUCTION JOINTS AT CONTROL JOINT LOCATIONS. PLACE ON 4" MINIMUM GRADE AGGREGATE BASE.
7. SLABS-ON-GRADE CONSISTING OF FIBER-REINFORCED CONCRETE ("FIBERCRETE") WITHOUT STEEL REINFORCEMENT ARE NOT RECOMMENDED. PORTIONS OF SLABS-ON-GRADE SUPPORTING WALLS, POSTS OR OTHER LOADS MUST BE REINFORCED WITH 6x6-W2 X1W2 1 W.W.M. OR 4" MESH TWO SQUARES AT 24" ON CENTER. EACH WAY SHOULD BE PROVIDED TO ENSURE PROPER PERFORMANCE.

1 CONCRETE MASONRY DESIGN AND CONSTRUCTION SHALL CONFORM TO THE FOLLOWING:
2 BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES, ACI 530/ASCE 5/ TMS 402, LATEST EDITION
3 ADOPTED.
4 SPECIFICATIONS FOR MASONRY STRUCTURES, ACI 530.1/ASCE 6/ TMS 602, LATEST EDITION ADOPTED.
5 UNLESS NOTED OTHERWISE, PROVIDE 10% HOLLOW LOAD-BEARING CONCRETE MASONRY UNITS (CMU)
6 CONFORMING TO ASTM C90, TYPE 1, WITH A MAXIMUM DENSITY OF 105 PCF.
7
8 PROVIDE CONCRETE MASONRY WITH MINIMUM COMPRESSIVE STRENGTH, $f_m = 1,500$ PSI, CORRESPONDING TO
9 UNIT STRENGTH OF 2,000 PSI ON NET CROSS-SECTIONAL AREA OF CMU DETERMINED IN ACCORDANCE WITH
10 ASTM C140.
11
12 PROVIDE TYPE "S" MORTAR IN ACCORDANCE WITH ASTM C270, UNLESS NOTED OTHERWISE. MORTAR BED JOINTS
13 SHALL NOT EXCEED 5/8" THICKNESS.
14
15 PROVIDE GROUT FOR REINFORCED MASONRY IN ACCORDANCE WITH ASTM C476 WITH MINIMUM COMPRESSIVE
16 STRENGTH OF 3,000 PSI, UNLESS NOTED OTHERWISE.
17
18 CELLS TO BE GROUTED OVER 5' HIGH SHALL HAVE CLEAN-OUT HOLES PROVIDED AT THE BASE.
19
20 LAP REINFORCING BARS 50 BAR DIAMETERS AT SPLICES, UNLESS OTHERWISE NOTED.
21
22 PROVIDE TRUSS OR LADDER TYPE HORIZONTAL JOINT REINFORCEMENT COMPLYING WITH ASTM A82, WITH MIN.
23 TWO 9 GA. LONGITUDINAL LINES, ZINC COATED, PLACED 16 INCHES ON CENTER UNLESS NOTED OTHERWISE.
24
25 CORNERS, PROVIDE HORIZONTAL JOINT REINFORCEMENT SPECIFICALLY DESIGNED FOR SUCH.
26
27 ALL CMU WALLS SHALL BE REINFORCED, AT MINIMUM, AS FOLLOWS:
28
29 VERTICAL ORIENTATION FOR PRIMARY REINFORCEMENT OF EXTERIOR WALLS SHOULD BE #5 AT 32" ON CENTER
30 MINIMUM.
31
32 VERTICAL ORIENTATION FOR PRIMARY REINFORCEMENT OF INTERIOR WALLS SHOULD BE #4 AT 48" ON CENTER
33 MINIMUM.
34
35 VERTICAL ORIENTATION AT ENDS, CORNERS, OR ADJACENT TO CONTROL JOINTS SHOULD BE #5, FULL HEIGHT
36 MINIMUM.
37
38 VERTICAL ORIENTATION FOR SIDES OF OPENINGS SHOULD BE #5 MINIMUM. SEE LINTEL SCHEDULE.
39
40 HORIZONTAL ORIENTATION OF TOP OF OPENINGS SEE LINTEL SCHEDULE.
41
42 HORIZONTAL ORIENTATION OF BOTTOM OF OPENINGS #5 EXTENDING 2'-0" PAST OPENING EDGES.
43
44 HORIZONTAL ORIENTATION OF TOP OF WALLS (2) #4 CONTINUOUS.
45
46 MASONRY UNITS TO BE LAID IN RUNNING BOND, UNLESS NOTED OTHERWISE.
47
48 SIDES AND TOPS OF MASONRY WALL PANELS SHALL BE ANCHORED TO STRUCTURE BY DOVETAIL ANCHORS,
49 METAL STRAPS, OR EQUIVALENT, UNLESS NOTED OTHERWISE.
50
51 SHOP DRAWINGS SHALL BE SUBMITTED FOR APPROVAL SHOWING ALL FABRICATION DIMENSIONS AND
52 LOCATIONS FOR PLACING REINFORCING STEEL AND ACCESSORIES. SHOW WALL STEEL IN ELEVATION. NO
53 FABRICATION SHALL BEGIN UNTIL SHOP DRAWINGS ARE COMPLETED, REVIEWED AND APPROVED.
54
55 UNLESS NOTED OTHERWISE, PROVIDE VERTICAL CONTROL JOINTS ACCORDING TO THE FOLLOWING CRITERIA:
56
57 AT 40'-0" ON CENTER MAXIMUM.
58
59 20'-0" FROM BUILDING CORNERS, MAXIMUM.
60
61 NO CLOSER THAN 1'-4" TO OPENING EDGES.
62
63 NO CLOSER THAN 1'-4" TO MAJOR BEAM OR JOIST BEARINGS.
64
65
66 BOND BEAMS, CMU LINETS, MASONRY BENEATH STEEL BEAM AND JOIST BEARINGS, AND OTHER STRUCTURAL
67 ELEMENTS SHALL EXTEND UNINTERRUPTED ACROSS CONTROL JOINTS. PROVIDE RAKED JOINTS IN THESE
68 ELEMENTS TO MATCH THE CONTROL JOINT.

- NAILING OR BOLT LAYS ARE PERMITTED TO BE USED EXCEPT WHERE OTHERWISE STATED.
- NAILS SPACED AT 4" INCHES ON CENTER AT EDGES, 12" INCHES AT INTERMEDIATE SUPPORTS EXCEPT 6" INCHES AT SUPPORTS AT CORNERS OR SPREADS. 12" INCHES AT CORNERS OR SPREADS IS REQUIRED FOR ALL STARTING AND ENDING RAFTERS AND SHEAR WALLS. REFER TO SECTION 2305. NAILS FOR WALL SHEATHING ARE PERMITTED TO BE COMMON OR CASEING.
- COMMON OR CASEING: $6" \times 2" \times 10S$; $8" \times 2" \times 10S$; $8" \times 2" \times 12S$; OR $10" \times 2" \times 12S$.
- COMMON (6" \times 2" \times 10S): $8" \times 2" \times 10S$; $10" \times 2" \times 10S$; $10" \times 2" \times 12S$.
- DEFORMED SHANK: $6" \times 2" \times 10S$; $8" \times 2" \times 10S$; $8" \times 2" \times 12S$; OR $10" \times 2" \times 12S$.
- CORROSION-RESISTANT SIDING: $6" \times 2" \times 10S$; $8" \times 2" \times 10S$; OR $10" \times 2" \times 10S$ OR CASEING: $6" \times 2" \times 099S$; $8" \times 2" \times 099S$ OR $10" \times 2" \times 099S$.
- FASTENERS SPACED 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6 INCHES ON CENTER AT INTERMEDIATE SUPPORTS, WHEN USED AS STRUCTURAL SHEATHING. SPACING SHALL BE 6 INCHES ON CENTER ON THE EDGES AND 12 INCHES ON CENTER AT INTERMEDIATE SUPPORTS.
- CORROSION-RESISTANT ROOFING WITH NOMINAL $\frac{1}{8}$ " INCH DIMENSION HEAD AND $\frac{1}{8}$ " INCH LENGTH FOR $\frac{1}{8}$ " INCH SHEATHING AND $\frac{1}{8}$ " INCH LENGTH FOR $\frac{1}{8}$ " INCH SHEATHING.
- CORROSION-RESISTANT STAPLES WITH NOMINAL $\frac{1}{8}$ " INCH CROWN AND $\frac{1}{8}$ " INCH LENGTH FOR $\frac{1}{8}$ " INCH SHEATHING AND $\frac{1}{8}$ " INCH LENGTH FOR $\frac{1}{8}$ " INCH SHEATHING. PANEL SUPPORTS AT 16 INCHES (20 INCHES IF STRENGTH AXIS IN THE LONG DIRECTION OF THE PANEL, UNLESS OTHERWISE MARKED).
- CASEING $10" \times 2" \times 099S$ OR FINISH $10" \times 2" \times 072S$ NAILS SPACED 6 INCHES ON CENTER, 12 INCHES AT INTERMEDIATE SUPPORTS.
- PANEL SUPPORTS AT 24 INCHES. CASEING OR FINISH NAILS SPACED 6 INCHES ON PANEL EDGES, 12 INCHES AT INTERMEDIATE SUPPORTS.
- FOR ROOF SHEATHING APPLICATIONS, 8 INALTS $2" \times 10S$ ARE THE MINIMUM REQUIRED FOR WOOD STRUCTURAL PANELS.
- STAPLES SHALL HAVE A MINIMUM CROWN WIDTH OF $\frac{1}{8}$ " INCH.
- FASTENERS SPACED 3 INCHES ON CENTER AT EXTERIOR EDGES AND 6 INCHES ON CENTER AT EDGES, 6 INCHES AT INTERMEDIATE SUPPORTS.
- FASTENERS SPACED 4 INCHES ON CENTER AT EDGES, 6 INCHES AT INTERMEDIATE SUPPORTS FOR GUFLOCS AND WALL SHEATHING. 3 INCHES ON CENTER AT EDGES, 6 INCHES AT INTERMEDIATE SUPPORTS FOR ROOF SHEATHING.

ABBREVIATIONS		ABBREVIATIONS	
A.F.F.	ABOVE FINISH FLOOR	LB(S)	POUND(S)
ARCH	ARCHITECTURAL	LPRS	LATERAL FORCE RESISTING SYSTEM
BOTT	BOTTOM	LL.H./V.	LONG LEG HORIZONTAL / VERTICAL
BLDG	BUILDING	LTWT	LIGHT-WEIGHT
BM	BEAM	MIN	MINIMUM
BRS	BEARING	MTL	METAL
C.I.P.	CAST-IN-PLACE (CONCRETE)	N/A	NOT APPLICABLE
C.J.	CONTROL JOINT	N.I.C.	NOT IN CONTRACT
C	CENTERLINE	N.T.S.	NOT TO SCALE
CLR	CLEAR	O.C.	ON CENTER
COL	COLUMN	O.D.	OUTER DIAMETER
CONC	CONCRETE	O/O	OUTSIDE FACE TO OUTSIDE FACE
CONT	CONTINUOUS	OPNG	OPENING
D.B.A.	DEFORMED BAR ANCHOR	OPP	OPPOSITE
DM	DIMENSION	P.A.F.	POWDER ACTUATED FASTENER
DWG	DRAWING	PSF/1	POUNDS PER SQUARE FOOT / INCH
DWL	DOWEL	REF	REFERENCE
EA	EACH	REV	REVISION
E.F.	EACH FACE	REINF	REINFORCING (REINFORCEMENT)
E.J.	EXPANSION JOINT	SC-ED	SC-EDEULE
ELEV	ELEVATION	SF	SQUARE FOOT (FEET)
E.O.S.	EDGE OF SLAB	SM	SIMILAR
EQ	EQUAL	STD	STANDARD
EXT	EXTERIOR	STRUT	STRUCTURAL
E.W.	EACH WAY	SUSP	SUSPENDED
FDN	FOUNDATION	T&G	TONGUE & GROOVE
F.F.E.	FINISH FLOOR ELEVATION	THRD	THREADED
FN	FINISH	THK	THICKNESS
FLR	FLOOR	T.O.C.	TOP OF CONCRETE
F.O.B.	FACE OF BRICK	T.O.F.	TOP OF FOOTING
F.O.G.	FACE OF GIRT	T.O.S.	TOP OF STEEL
F.O.W.	FACE OF WALL	T.O.W.	TOP OF WALL
F.S.	Far Side	TYP	TYPICAL
FT	FEET (FOOT)	U.N.O.	UNLESS NOTED OTHERWISE
FTG	FOOTING	V.B.	VAPOR BARRIER
GA	GAGE (GAUGE)	VERT	VERTICAL
G.A.B.	GRADED AGGREGATE BASE	W/	WITH
GR.	GRADE	W/O	WITHOUT
HORZ	HORIZONTAL	WT	WEIGHT
I.D.	INSIDE DIAMETER	W.W.M.	WELDED WIRE MESH (FABRIC)
INT	INTERIOR	#	POLANDS
JT	JOINT	ø/DIA	DIAMETER
KSF/KSI	KIPS PER SQUARE FOOT / INCH		

TECHNIKA ENGINEERING & DESIGN, LLC WAS CONTRACTED BY FAYETTE COUNTY TO PROVIDE A SET OF ENGINEERED STRUCTURAL PLANS FOR A NEW RESTROOM BUILDING TO BE CONSTRUCTED AT KENWOOD PARK IN FAYETTE COUNTY, GA. THE BUILDING IS TO BE A CMU STRUCTURE BUILT ON A SLAB ON GRADE WITH MONOLITHIC TURNDOWN FOOTINGS. THE FRONT AND REAR SHED ROOFS ARE TO BE SLOPED OFF OF A FRONT STICK-FRAMED WALL AS SHOWN, WITH AN I/J BEAM BEARING THE ROOF AND WALL LOADS. THE INTERIOR CEILING OF THE BUILDING IS TO BE VAULTED.

ALL DESIGN PARAMTERS IN ACCORDANCE WITH ASCE7-10 AND IBC 2012

AS CALCULATED

20 PSF ROOF

Pg= 5 PS

Ce x Is x Ct = EXPOSURE, IMPORTANCE AND THERMAL FACTORS = 0.9,1.0,1.0
ROS = RAIN ON SNOW SURCHARGE = 5.0 PSF
Ps = DESIGN SNOW LOAD = 5 PSF (DOES NOT GOVERN)

Vult = 115 MPH

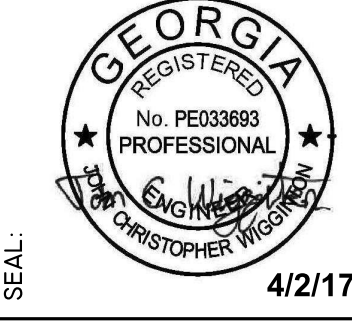
RISK CAT. = III
I = IMPORTANCE FACTOR = 1.0
EXPOSURE CLASSIFICATION =
HURRICANE-PRONE = NO

OCCUPANCY

IMPORTANCE FACTOR = 1.25
Sds / Sd1 = 0.177 / 0.136
SOIL SITE CLASS = D (ASSUMED)
SEISMIC DESIGN CATEGORY = C

1

KA-DE
8009
SC 2
-376

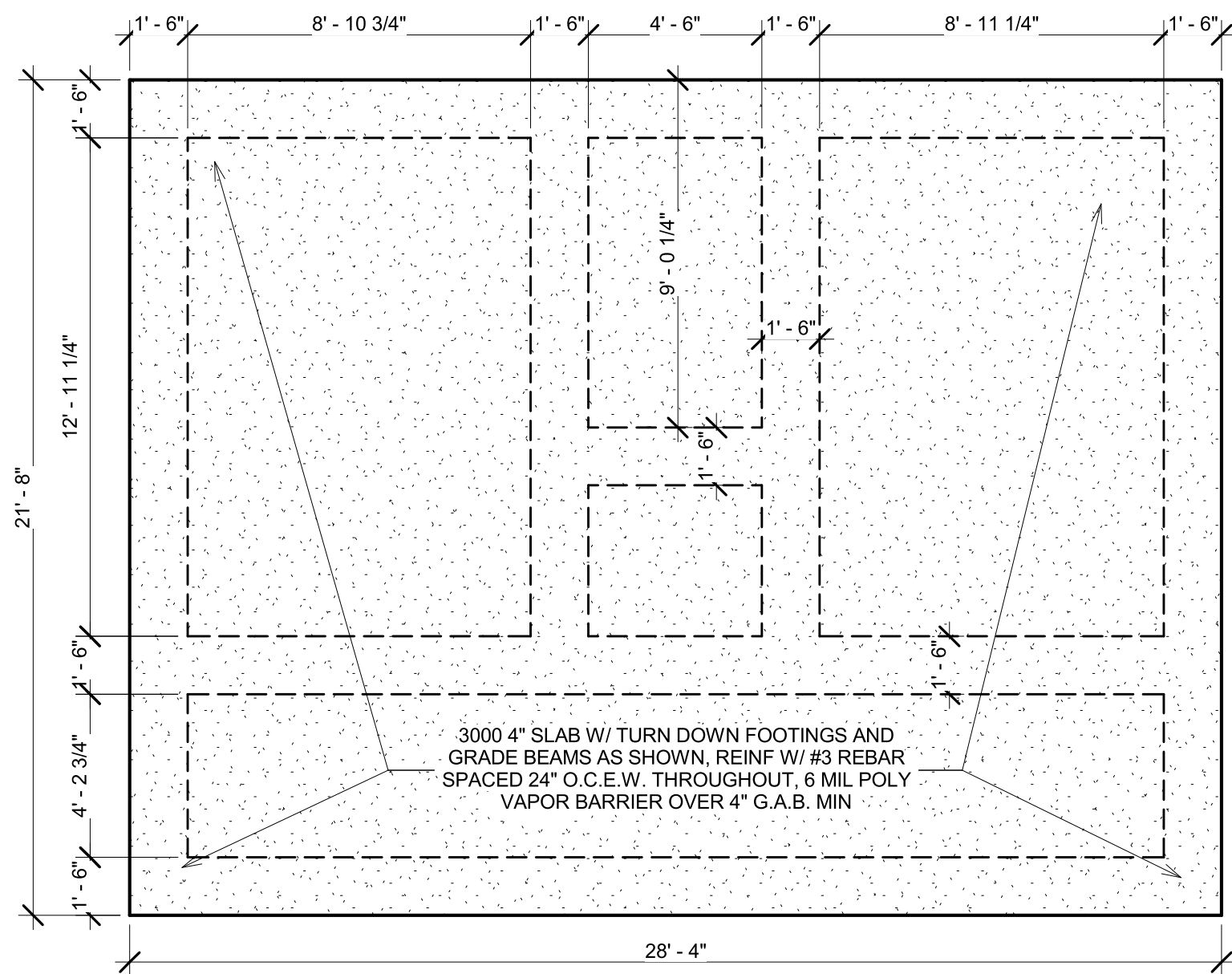


STRUCTURAL NOTES

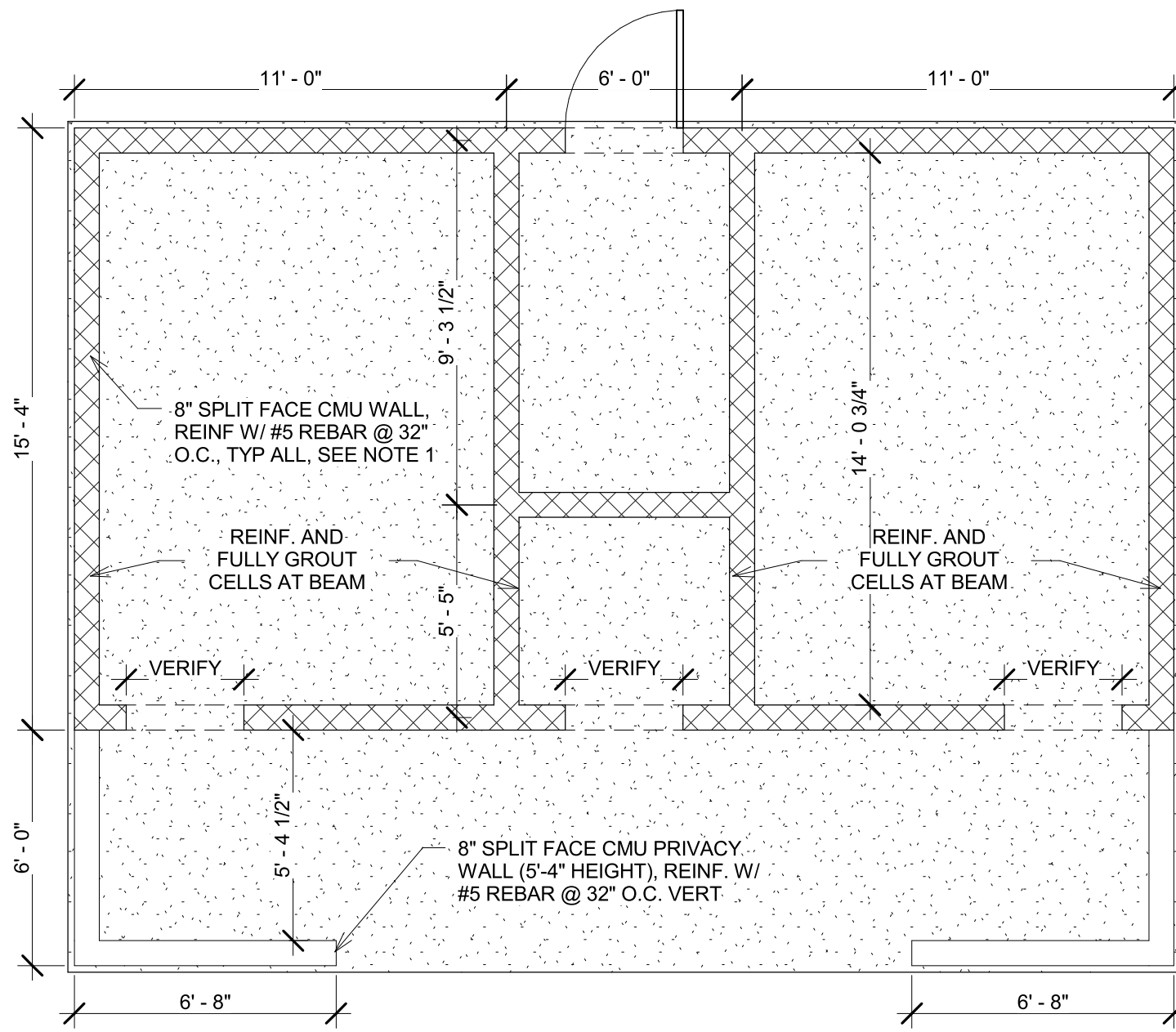
NOTES:

DRAWN:	TECH
APPROVED:	JCW
DATE:	3-23-17
JOB NO.:	T17-005
SHEET	2 OF 7
SHEET NUMBER:	

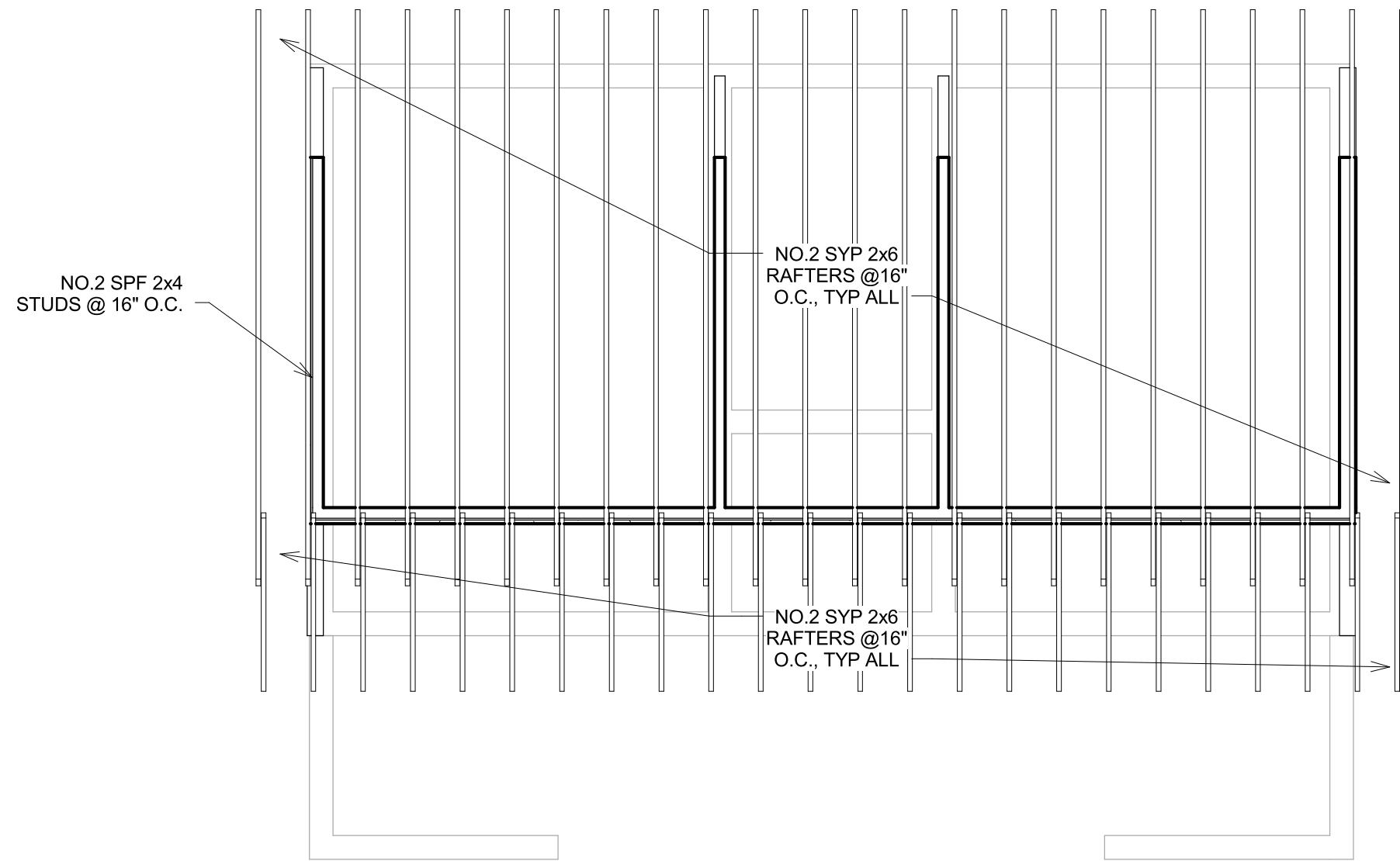
KENWOOD PARK RESTROOM FACILITY
GA-279 - FAYETTEVILLE, GA 30214



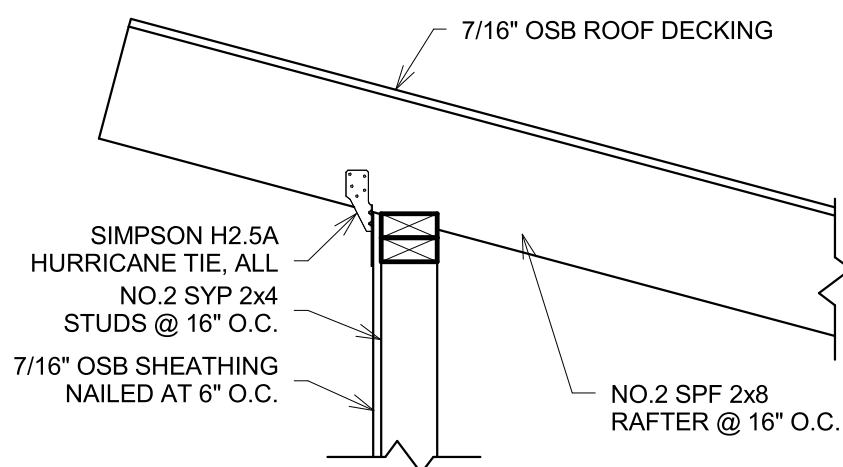
① FOUNDATION PLAN
1/4" = 1'-0"



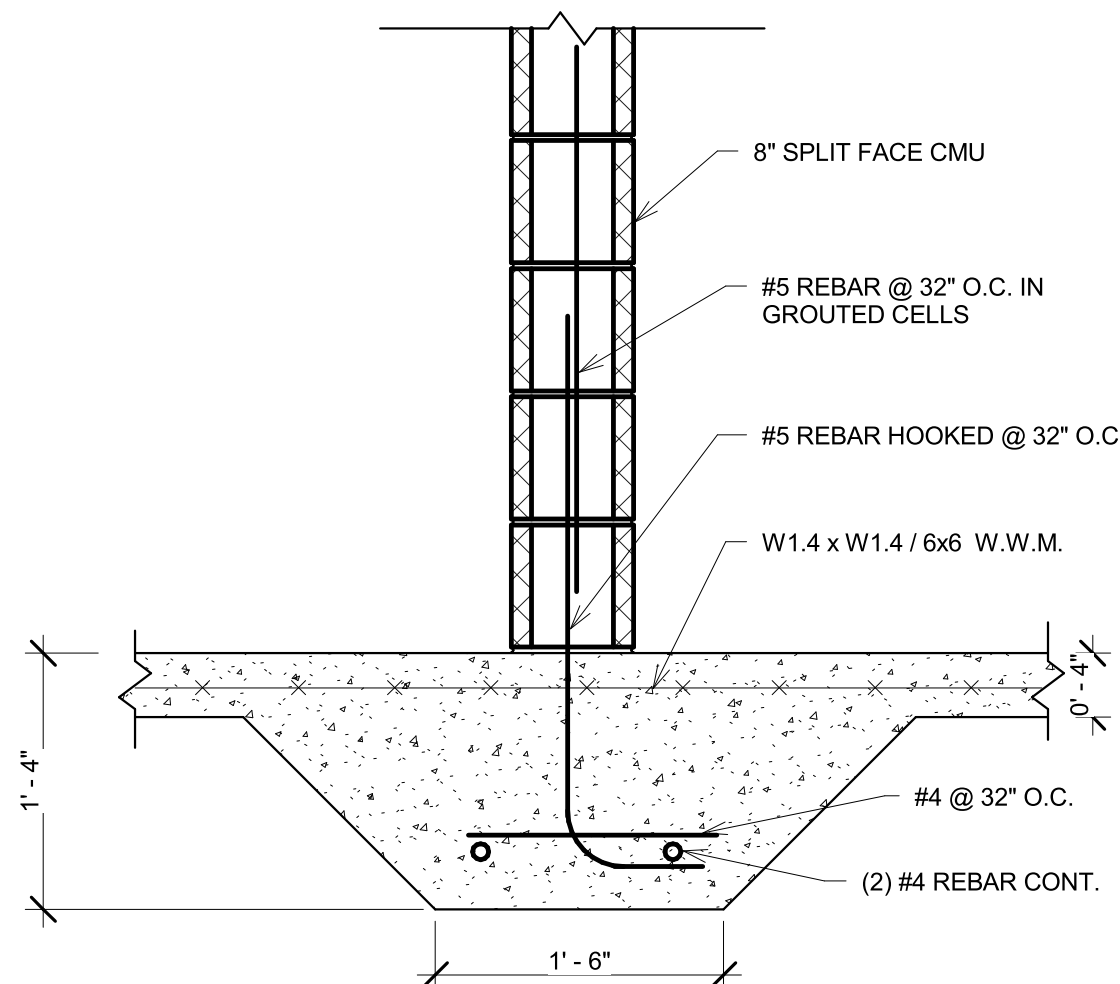
② CMU WALL PLAN
1/4" = 1'-0"



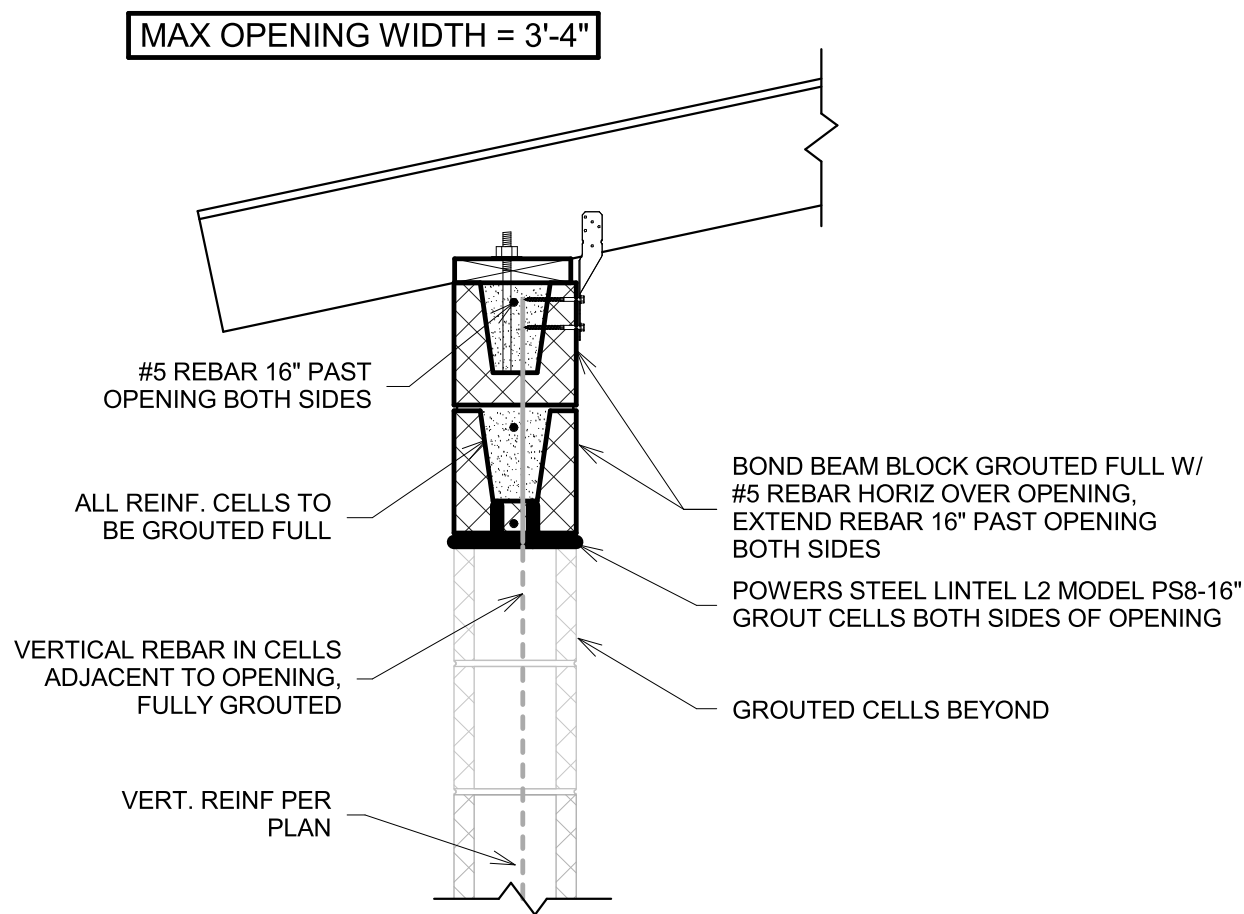
③ ROOF FRAMING
1/4" = 1'-0"



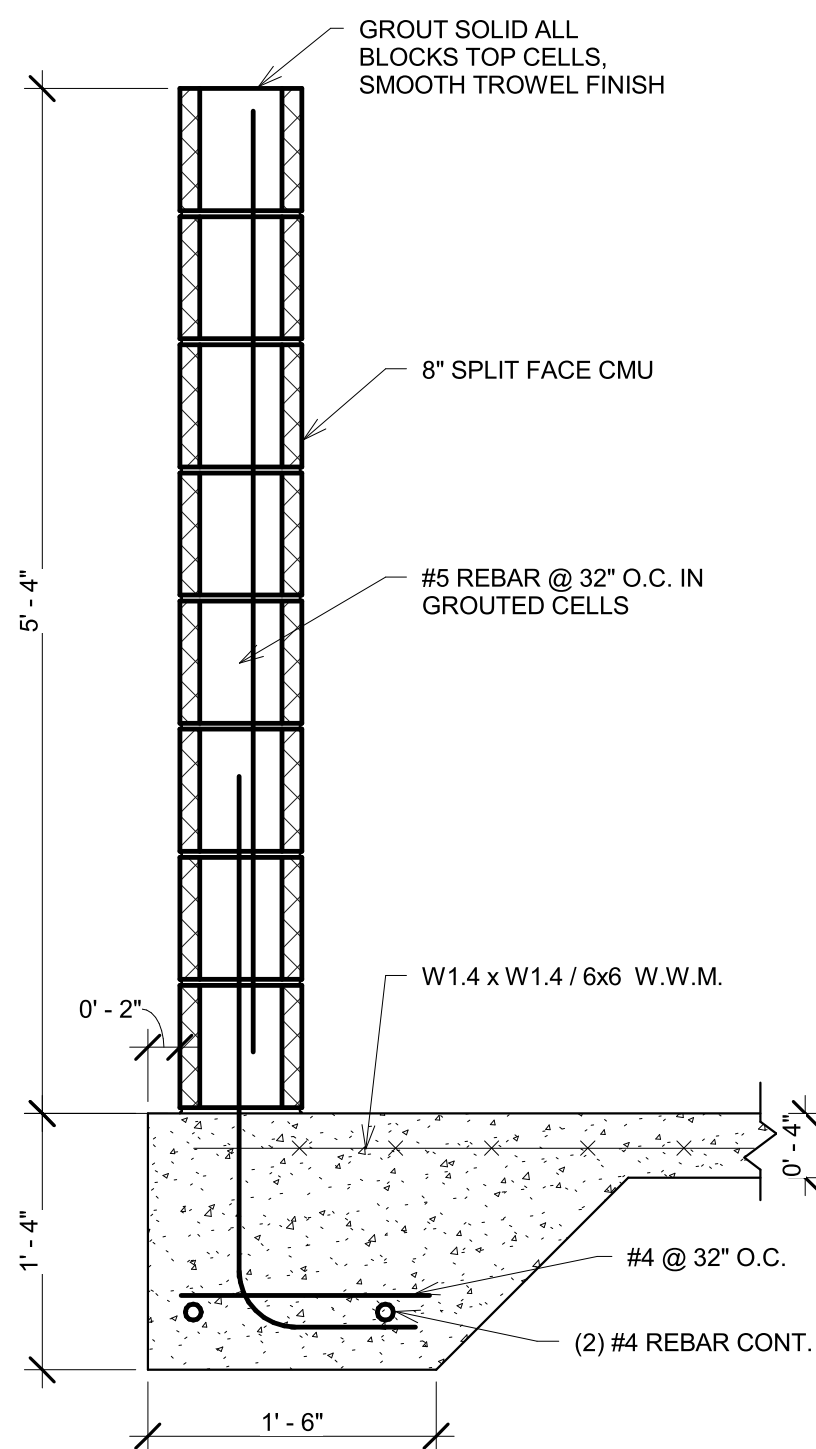
⑦ ROOF ATTACHMENT
1" = 1'-0"



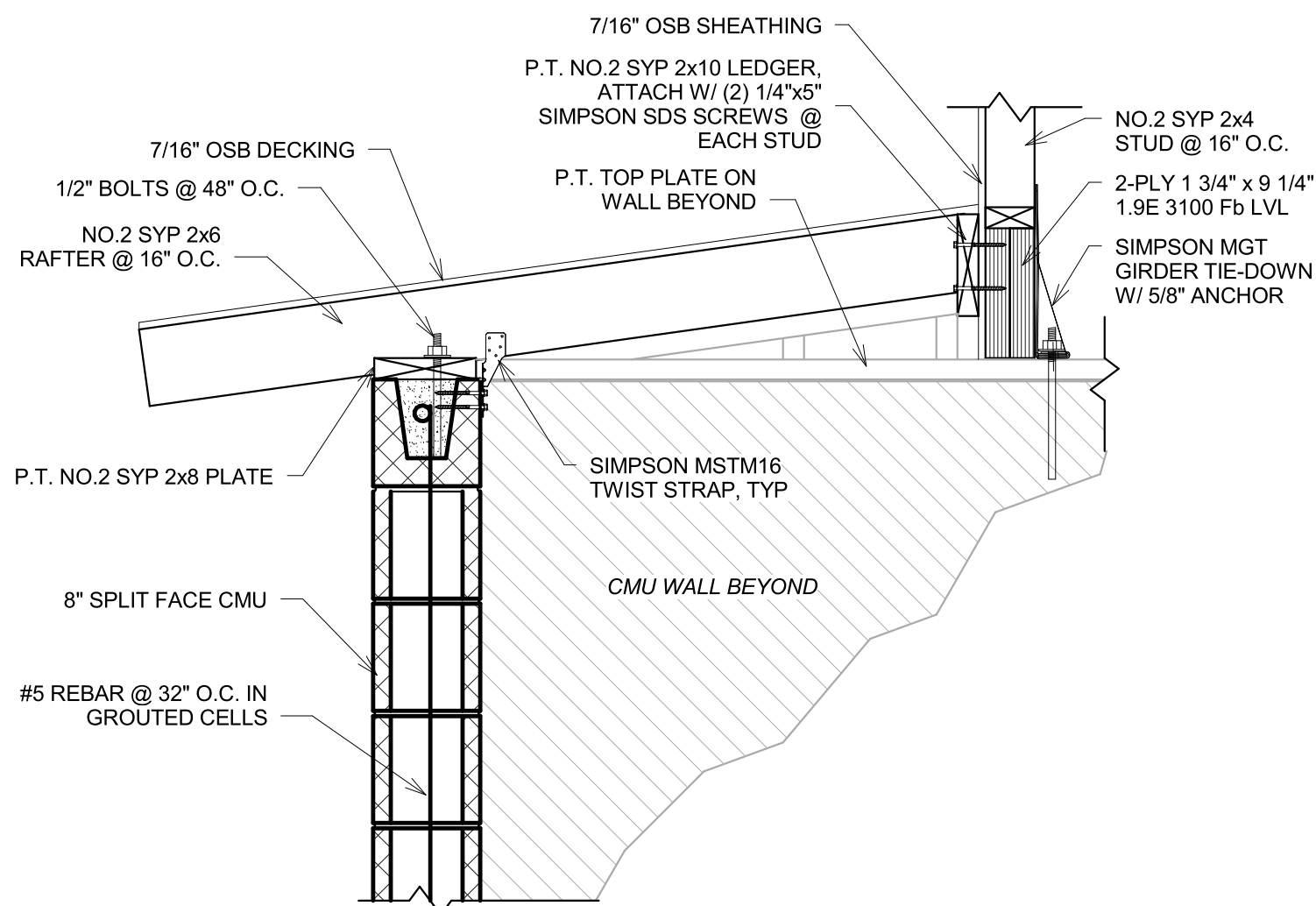
⑤ CMU WALL @ GRADE BEAM
1" = 1'-0"



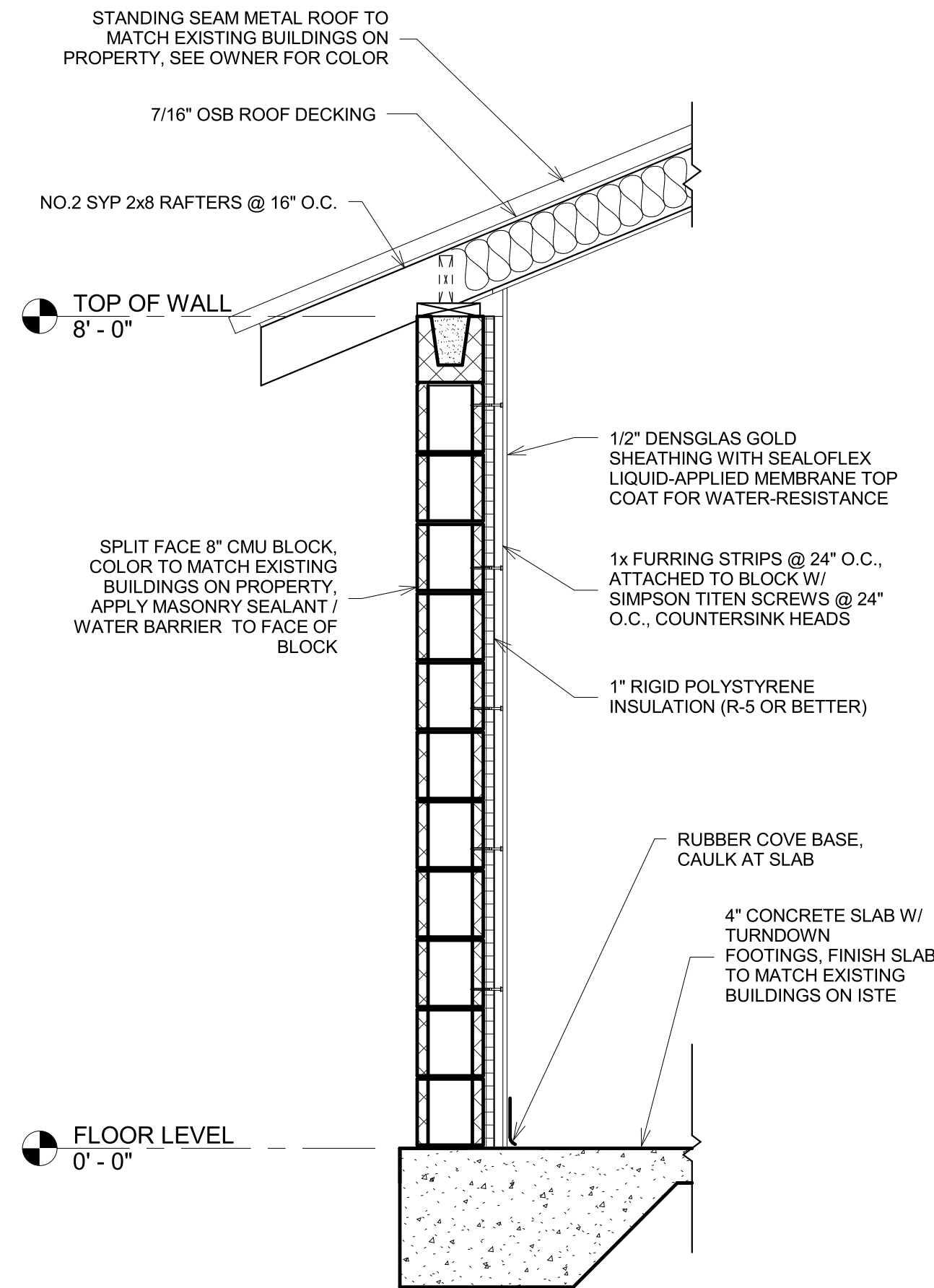
⑧ CMU - WALL OPENING REINF.
1" = 1'-0"



④ PRIVACY WALL SECTION
1" = 1'-0"



⑥ FRONT WALL SUPPORT
1" = 1'-0"



⑨ TYP WALL SECTION
3/4" = 1'-0"



STRUCTURAL PLANS AND DETAILS

PROPOSED ENGINEERING DESIGN FOR THE
KENWOOD PARK RESTROOM FACILITY
GA-279 - FAYETTEVILLE, GA 30214

NOTES:

TECH	JCW
APPROVED:	3-23-17
DATE:	T17-005
JOB NO.:	3 OF 7
SHEET NUMBER:	S.1

REVISIONS

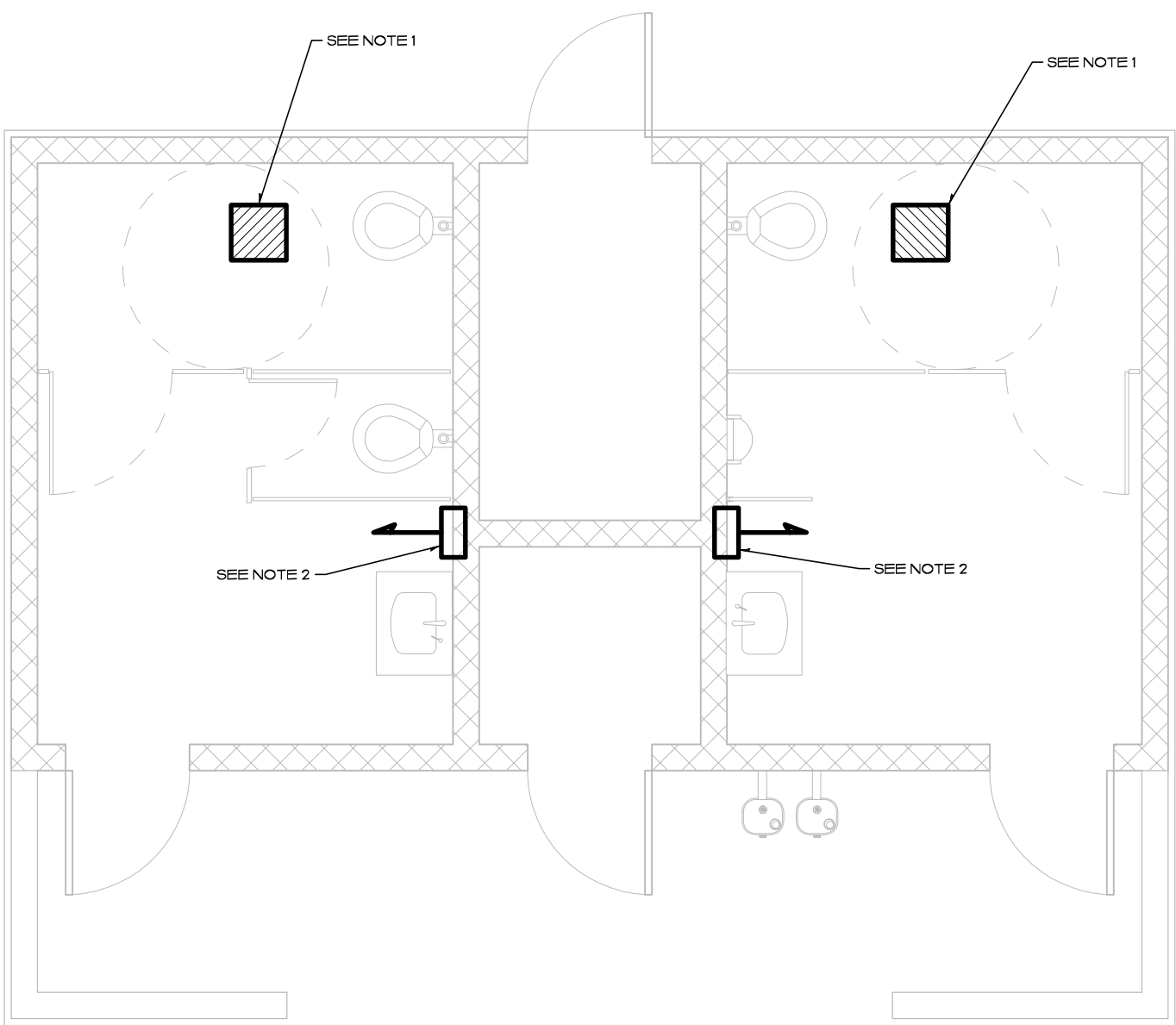
T.E.D.
WWW.TECHNIKA-DESIGN.COM
PO BOX 80097
CHARLESTON, SC 29416
843-580-3769

EX-HAUST FAN SCHEDULE										
MARK	MANUFACTURER	MODEL	TYPE	CFM	ESP IN W.G.	DUCT SIZE	WATT	DRIVE	SONES	CONTROLLED BY
EF-1	GREEN-ECK	G-065-E	ROOFTOP	175	0.10	-	7.5	DIRECT	1.9	INTERLOCKED W/ LIGHTS
EF-2										
SEE ELECTRICAL SHEET FOR LIGHTING INTERLOCK										

EXHAUST SCHEDULE PER ASH-RAE 62.1-2007					
AREA	SQR. FT.	CFM	LINTS	PXLT. LINTS	EX-HAUST AIR (CFM)
RESTROOMS	290	70	PER FIXTURE	4	280
MECH-NICAL	75	1	PER SF	-	70
TOTAL	0	---	---	---	350

HVAC DESIGN CRITERIA					
OUTDOOR DESIGN TEMPERATURES			ASH-RAE CLIMATE CONDITION		GEORGIA / ATLANTA AIR PORT
SUMMER DB = 94°F					
SUMMER WB = 74°F			DESIGN ALTITUDE		1010 FT
WINTER DB = 17°F					
INDOOR AREA DESIGN CONDITIONS		SUMMER		WINTER	
	DB 94°	1 HUMIDITY	DB 74°	1 HUMIDITY	
ALL AREAS	72	50%	72	50%	

- SHEET NOTES:**
- EXHAUST IN BATH-ROOMS TO BE PROVIDED BY GREEN-ECK MODEL G-065-E ROOFTOP MOUNTED FANS (1 PER SIDE OF THE RESTROOM BUILDING, 2 TOTAL). FANS SHALL BE INTERLOCKED WITH LIGHTS. SIZED TO PROVIDE 175 CFM PER SIDE (350 CFM TOTAL BUILDING EXHAUST).
 - BATHROOM HEAT TO BE PROVIDED BY MARKET MODEL 3424-1 UNIT HEATERS MOUNTED AT WALLS 8'-6" ABOVE FLOOR. HEATERS ARE TO BE 4kW EACH AND SHALL HAVE INTEGRAL THERMOSTATS.



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

HVAC LEGEND			
	SUPPLY DIFFUSER		90° ELBOW WITH TEEING VANES
	RETURN OR EXHAUST GRILL		MANUAL OPPOSED BLADE DAMPER WITH LOCKING LEVER (PLAN)
	EX-AUST GRILLE		LIMIT OF DEMOLITION
	EXISTING DUCT		POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
	RECTANGULAR DUCT X" HORIZONTAL Y" VERTICAL		OPPOSED BLADE DAMPER (SECTION)
	DUCT RISE (ARROW IN DIRECTION OF FLOW)		DUCT DROP (ARROW IN DIRECTION OF FLOW)
	DUCT WITH ACOUSTICAL LINER (DIMENSION FOR NET FREE AREA INSIDE LINER)		DUCT TRANSITION (FLAT ON TOP OR FLAT ON BOTTOM IF APPL. CABLE)
	DUCT TURN DOWN		SMOKE DETECTOR
	DUCT TURN UP		THERMOSTAT X" UNIT NUMBER Y" ZONE NUMBER
	TAKE OFF WITH FLEX DUCT		EX-AUST FAN
	FIRE DAMPER WITH ACCESS PANEL		EQUIPMENT DESIGNATION TYPE "X" DEVICE NUMBER
	MOTOR OPERATED DAMPER WITH ACCESS PANEL		AIR DISTRIBUTION DEVICE
	ZONE DAMPER ACTUATOR X" UNIT NUMBER Y" ZONE NUMBER		GAS PIPING
	BAROMETRIC RELIEF DAMPER		CONDENSATE DRAIN
	GAS SHUTOFF		GAS PRESSURE REGULATOR

MECHANICAL SPECIFICATIONS:

- REFER TO ALL OTHER DRAWINGS AND SPECIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL APPLICABLE PROVISIONS THEREIN.
- GENERAL NOTES ON THIS DRAWING ARE APPLICABLE TO EACH MECHANICAL DRAWING OF THIS SET. NOTES SPECIFIC TO INDIVIDUAL MECHANICAL DRAWINGS WILL BE SHOWN ON THE RESPECTIVE MECHANICAL DRAWING.
- FURNISH AND INSTALL ALL NECESSARY LABOR AND MATERIALS FOR A COMPLETE SYSTEM. ANY APPLIANCES OR MATERIALS OR VULNERA PART OF THE SYSTEM AND NECESSARY FOR ITS PROPER OPERATION, ALTHOUGH NOT SPECIFICALLY MENTIONED HEREIN, SHALL BE FURNISHED AND INSTALLED AS IF CALLED FOR IN DETAIL.
- PRIOR TO SUBMITTING PROPOSAL, THE CONTRACTOR IS STRONGLY ENCOURAGED TO VISIT THE SITE AND THOROUGHLY INSPECT ALL EXISTING CONDITIONS TO INSURE THAT THE WORK REPRESENTED IN THE DRAWINGS CAN BE INSTALLED AS INDICATED.
- ENTIRE INSTALLATION, INCLUDING MATERIALS, EQUIPMENT, AND WORKMANSHIP, SHALL CONFORM WITH ALL APPLICABLE LAWS, CODES, AND REGULATIONS OF MUNICIPAL, STATE AND FEDERAL AUTHORITIES.
- THIS PROJECT SHALL CONFORM TO ALL APPLICABLE IBC, ASH-RAE, NFPA, AND SMACNA CODES AND STANDARDS HAVING JURISDICTION OVER THE CLASS OF WORK.
- MATERIALS AND EQUIPMENT SHALL HAVE STAMPS OR SEALS OF A.S.I. ASME, U.L. AND/OR ASTM.
- ALL EQUIPMENT MUST MEET OR EXCEED ALL REQUIREMENTS OF THE IECC 2006.
- THE CONTRACTOR SHALL MAKE TESTS FOR ACCEPTANCE AND APPROVAL AS REQUIRED BY CODE AND THE REQUIREMENTS OF APPLICABLE REGULATORY AGENCIES.
- THE CONTRACTOR SHALL OBTAIN AND PAY FOR ALL PERMITS, LICENSES, DOCUMENTS, AND SERVICES RELATED TO INSTALLATION OF THE WORK.
- MATERIALS AND WORKMANSHIP SHALL BE GUARANTEED AGAINST DEFECTS FOR ONE YEAR. PROVIDE ADDITIONAL FOUR YEAR WARRANTY ON ALL COMPRESSORS.
- PROTECT ALL MATERIALS AND EQUIPMENT FROM DAMAGE.
- EQUIPMENT AND MATERIALS SHALL BE NEW, UNLESS OTHERWISE SPECIFIED.
- THE CONTRACTOR SHALL COORDINATE HIS WORK WITH THE OTHER TRADES IN ORDER TO RESOLVE ANY CONFLICT THAT MIGHT ARISE DUE TO THE LOCATION OF EQUIPMENT OR THE USE OF SPACE.
- SPLIT SYSTEM HEAT PUMPS, ELECTRIC HEAT, AIR CONDITIONERS, AND GAS FURNACES EQUIVALENT BY CARRIER, LENOX, OR TRANE. OUTSIDE AIR FANS AND EXHAUST FANS EQUIVALENT BY GREEN-ECK, LORENZ, OR A.O. SMITH. AIR DISTRIBUTION DEVICES EQUIVALENT BY TITUS, PRICE, OR HARTZCOoley.
- LOCATIONS SHOWN FOR EQUIPMENT ARE APPROXIMATE LOCATIONS. CONTRACTOR SHALL COORDINATE WITH THE ARCHITECT AND/OR STRUCTURAL ENGINEER TO ACCOMMODATE FIELD CONDITIONS.
- DRAWINGS ARE GENERALLY DIAGRAMMATIC AND DO NOT NECESSARILY SHOW EVERY FITTING AND DETAIL. INSTALL DUCTS, PIPING, EQUIPMENT AND CONTROLS IN A NEAT WORKMANLIKE MANNER, AND IN ACCORDANCE WITH GOOD PRACTICE FOR A COMPLETE WORKABLE INSTALLATION. AVOID CONFLICT WITH OTHER WORK. MAKE ADEQUATE PROVISIONS FOR PREVENTING NOISE AND VIBRATION. ARRANGE EQUIPMENT INTO THE AVAILABLE SPACE IN A MANNER TO MAKE ALL WORKING PARTS ACCESSIBLE FOR MAINTENANCE AND SERVICE.
- CONSTRUCT AIR DUCTS IN ACCORDANCE WITH SMACNA DUCT MANUALS LATEST EDITION. DUCTWORK MATERIALS SHALL BE GALVANIZED SHEET METAL AS MADE BY ARMOCO OR EQUAL.
- CONTRACTOR SHALL FIELD VERIFY AVAILABLE SPACE FOR DUCTWORK BEFORE FABRICATING. CONTRACTOR SHALL NOTIFY ENGINEER OF RECORD OF CONFLICTING FIELD CONDITIONS BEFORE PROCEEDING WITH ALTERATIONS.
- PROVIDE INTERNAL INSULATION 1" THICK ACOUSTIC LINER WITH A NEOPRENE COATING ON THE AIR STREAM SIDE OF THE RETURN AIR DUCTWORK FOR A MINIMUM OF 10" FROM THE AIR HANDLER. ADHERE LINER TO DUCT WITH A 100% COVERAGE OF MINNESOTA MINING BBS3 AND WELDED PING 16 O.C. INSULATING APPLIED TO TOP SURFACE SHALL OVERLAP JOINTS. 2" DUCT BOARD MAY BE SUBSTITUTED FOR LINED SHEET METAL DUCT WHEN APPROVED BY OWNER AND INSTALLED IN ACCORDANCE WITH NAAMA FIBROUS GLASS DUCT CONSTRUCTION STANDARD.
- INSULATE SUPPLY AIR DUCTS WITH 2" THICK GLASS FIBER BLANKET NOT LESS THAN 3/4 LB DENSITY. WITH HEAVY ALUMINUM FOIL BARRIER. SECURE WITH ANNEALED STAINLESS STEEL WIRE AT 12" ON CENTER. SEAL ALL JOINTS AND PUNCTURES IN JACKET.
- RUN ALL HORIZONTAL PIPING AND DUCTWORK ABOVE CEILING UNLESS OTHERWISE NOTED.
- DUCTWORK SIZES ARE INSIDE CLEAR DIMENSIONS.
- ALL ELBOWS IN DUCTWORK SHALL BE RADIUS ELBOWS WITH A CENTERLINE RADIUS OF 15 X DUCT WIDTH. UNLESS OTHERWISE NOTED, SQUARE ELBOWS ARE TO HAVE TURNING VANES.
- RUN ALL EXPOSED PIPING AND DUCTWORK AS HIGH AS POSSIBLE UNLESS OTHERWISE NOTED. ALLOW FOR RISES, DROPS AND OFFSETS AS REQUIRED. ALL EXPOSED DUCTWORK TO BE SPIRAL DUCT WITH APPROPRIATE FITTINGS.
- FOR ROUND DUCT TAKE OFF FROM SHEET METAL DUCTS. USE GENFLEX MODEL NO. SM-MDL-SPIN IN FITTING WITH SCOOP AND DAMPER.
- FLEXIBLE DUCTWORK SHALL BE AT GO TYPE #34 OR APPROVED EQUAL.
- FLEXIBLE DUCT RUNOUTS TO CEILING DIFFUSERS SHALL BE INSTALLED FREE OF KINKS AND SAGS. ALL BRANCH DUCTWORK SHALL BE SIZED TO MATCH THE INLET/NECK OF THE DIFFUSERS SERVED.
- PORTIONS OF DUCTWORK VISIBLE THROUGH SUPPLY AND RETURN AIR OPENINGS SHALL BE PAINTED FLAT BLACK.
- MAKE DUCT PENETRATIONS OF ALL WALLS WITH SHEET METAL DUCTS. FLEXIBLE DUCT PENETRATIONS OF WALLS ARE NOT ACCEPTABLE.
- COORDINATE WITH REFLECTED CEILING PLANS AND LIGHTING PLANS FOR EXACT LOCATION OF DIFFUSERS, REGISTERS, GRILLES, AND EXHAUST FANS. FINISHES AND COLORS TO BE SELECTED BY OWNER.
- GRILLES, REGISTERS AND DIFFUSERS - REFER TO SCHEDULES.
- UNDERCUT DOORS IN ROOMS WITHOUT RETURN DOOR GRILL OR TRANSFER DUCTS.
- PROVIDE DYNAMIC ACCESS DAMPERS IN ACCORDANCE WITH THEIR U.L. LISTING AND THE REQUIREMENTS OF IBC 2006 AND NFPA 90A.
- INSTALL MECHANICAL EQUIPMENT TO FACILITATE SERVICING, MAINTENANCE, AND REPAIR OR REPLACEMENT OF EQUIPMENT COMPONENTS. AS MUCH AS PRACTICAL, CONNECT EQUIPMENT FOR EASE OF DISCONNECTING, WITH A MINIMUM OF INTERFERENCE WITH OTHER INSTALLATIONS. PIPING SHALL NOT INTERFERE WITH FILTER FULL OR COIL REMOVAL.
- EXTEND DRAIN LINES TO NEAREST DRAIN OR AS NEAREST DRAIN. ALL CONDENSATE DRAIN PIPING SHALL BE TRAPPED AND PITCHED DOWN IN DIRECTION OF FLOW A MINIMUM OF 1" PER 10 FEET.
- PROVIDE AUXILIARY DRAIN PANS UNDER ALL EQUIPMENT WHICH IS NOT LOCATED WITHIN CURBED CONTAINMENT AREAS CONTAINING FLOOR DRAINS.
- LOCATE AND SIZE 6" THICK CONCRETE HOUSEKEEPING PADS AND CURBS IN ACCORDANCE WITH ACTUAL EQUIPMENT PLACEMENT. EXTEND PAD BEYOND EQUIPMENT 6" IN ALL DIRECTIONS.
- PROVIDE VIBRATION SPRING ISOLATORS FOR ALL MOTORIZED EQUIPMENT.
- DO NOT INSTALL EQUIPMENT, PIPING OR DUCTWORK IN ANY WAY THAT ENROACHES ON ELECTRICAL EQUIPMENT OR ELECTRICAL SERVICE SPACE.
- COORDINATE VOLTAGE AND PHASE OF EACH PIECE OF EQUIPMENT WITH ELECTRICAL CONTRACTOR BEFORE ORDERING.
- FOR PACKAGED EQUIPMENT, THE MANUFACTURER SHALL PROVIDE CONTROLLERS INCLUDING THE REQUIRED MONITORS AND THERMOSTATS. PROVIDE REDUCED VOLTAGE STARTERS FOR ALL MOTORS 25 HP AND LARGER.
- DISCONNECT AND CONVENIENCE OUTLET TO BE PROVIDED WITH ALL ROOF TOP UNITS. MECHANICAL WORK SHALL INCLUDE CONTROL AND INTERLOCK WIRING REQUIRED FOR PROPER OPERATION OF THE SYSTEM AND SHALL INCLUDE FURNISHING OF RELAYS. MAGNETIC STARTERS OR CONTACTORS WHERE REQUIRED.
- ALL DISCONNECT SWITCHES, VFD'S, MOTOR STARTERS - ADD NOTES FOR ELECTRICAL DISCONNECTS AND OUTLETS MECHANICAL WORK SHALL INCLUDE CONTROL AND INTERLOCK WIRING REQUIRED FOR PROPER OPERATION OF THE SYSTEM AND SHALL INCLUDE FURNISHING OF RELAYS. VFD'S, MAGNETIC STARTERS OR CONTACTORS WHERE REQUIRED.
- ANY EQUIPMENT POWERED BY VFD SHALL BE VFD MOTORIZED.
- ALL AIR HANDLERS TO BE PROVIDED WITH AT LEAST ONE MANUALLY OPERABLE MEANS TO STOP THE OPERATION OF THE SUPPLY, RETURN AND EXHAUST FANS IN AN EMERGENCY. COORDINATE EMERGENCY STOP LOCATION WITH ARCHITECTURAL PLANS.
- CONTROL'S CONTRACTOR SHALL PROVIDE AUTOMATIC CONTROL DEVICES, SUCH AS TEMPERATURE SENSORS, RELAYS, PRESSURE SWITCHES WHICH ARE ASSOCIATED WITH MECHANICAL EQUIPMENT AND ASSOCIATED CONTROL WIRING FROM STARTER TO THE CONTROL DEVICE. ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT AND WIRING FROM POWER SOURCE TO DISCONNECT SWITCH, FROM DISCONNECT SWITCH TO STARTER, AND FROM STARTER TO THE EQUIPMENT.
- ALL CONTROL WIRING EXCEPT IN EQUIPMENT ROOMS SHALL BE RUN CONCEALED. WIRING IN WALLS SHALL BE IN CONDUIT. ALL WIRING SHALL BE PLENUM RATED CONTROL WIRING IN EXPOSED AREAS SHALL BE BUNDLED AND SECURED OR RUN IN CONDUIT. NO WIRING SHALL BE SURFACE MOUNTED IN FINISHED SPACES. ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE.
- ALL WIRING IN THE CEILING PLENUM SHALL BE PLENUM RATED CABLE OR IN CONDUIT.
- LOCATE THERMOSTATS/TEMPERATURE SENSORS 54" ABOVE FINISHED FLOOR OR AS NOTED ON THE PLANS.
- MECHANICAL CONTRACTOR SHALL PROVIDE AUTOMATIC CONTROL DEVICES, SUCH AS TEMPERATURE SENSORS, RELAYS, PRESSURE SWITCHES WHICH ARE ASSOCIATED WITH MECHANICAL EQUIPMENT AND ASSOCIATED CONTROL WIRING FROM STARTER TO THE CONTROL DEVICE. ELECTRICAL CONTRACTOR SHALL PROVIDE CONDUIT AND WIRING FROM POWER SOURCE TO DISCONNECT SWITCH, FROM DISCONNECT SWITCH TO STARTER, AND FROM STARTER TO THE EQUIPMENT. UNLESS NOTED OTHERWISE, CONTRACTOR SHALL WIRE CONTROL VALVES AND DAMPERS.
- COMPLETION AND TESTS SHALL INCLUDE CLEANING AND LUBRICATION OF ALL EQUIPMENT, AND ADJUSTMENTS FOR PROPER OPERATION. ADJUST DAMPERS, REGISTERS AND DIFFUSERS FOR PROPER AIR DISTRIBUTION. CHECK SYSTEM UNDER ACTUAL OPERATING CONDITIONS AND MAKE ADJUSTMENTS FOR A UNIFORM TEMPERATURE THROUGH THE CONDITIONED SPACE.
- FURNISH TO THE OWNER ONE COPY OF OPERATING INSTRUCTIONS, MANUFACTURER'S PARTS DATA AND SERVICE INSTRUCTIONS.
- THE CONTRACTOR SHALL HAVE AN INDEPENDENT A.B.C. CERTIFIED TEST AND BALANCE COMPANY PERFORM AND SUBMIT 3 COPIES OF THE TEST AND BALANCE REPORT PRIOR TO ARCHITECT'S FINAL PLAN LIST.

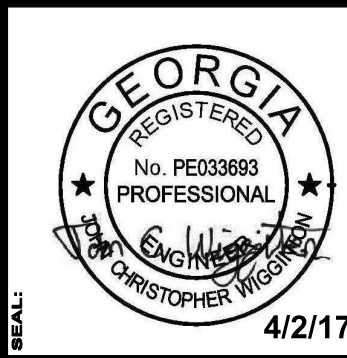
HVAC ABBREVIATION			
AC	ABOVE CEILING	LB	POUNDS
AD	ACCESS DOOR	LWT	LEAVING WATER TEMPERATURE
ADJ	ADJUSTABLE	MAX	MAXIMUM
AFF	ABOVE FINISHED FLOOR	MBH	1000 BTUH
AHU	AIR HANDLING UNIT	MIN	MINIMUM
AP	ACCESS PANEL	MOD	MOTOR OPERATED DAMPER
ARD	AIR PRESSURE DROP	MVD	MANUAL VOLUME DAMPER
BD	BACKDRAFT DAMPER	NC	NORMALLY CLOSED
BDT	BOTTOM OF DUCT	NG	NOT IN CONTRACT
BTUH	BRITISH THERMAL UNIT / HOUR	NOM	NORMAL
C	COMMON	NO	NUMBER OR DESIGNATION
CAP	CAPACITY	NO	NORMALLY OPEN
CFM	CUBIC FEET PER MINUTE	ODA	OUTSIDE AIR
CU	CONDENSING UNIT	ODB	OPPOSED BLADE DAMPER
D	DRAIN	OD	OUTSIDE DIAMETER
DB	DRY BULB	PH	ELECTRICAL PHASE
DN	DOWN	PSI	POUNDS PER SQUARE INCH
EA	EACH	RA	RETURN AIR
EAT	ENTERING AIR TEMPERATURE	RAP	RETURN AIR FAN
EDH	ELECTRIC DUCT HEATER	RPM	REVOLUTIONS PER MINUTE
EP	EXHAUST PAN	SA	SUPPLY AIR
ESP	EXTERNAL STATIC PRESSURE	SD	SMOKE DETECTOR
EW+	ELECTRIC WALL HEATER	SP	STATIC PRESSURE
EW+	ENTERING WATER TEMPERATURE	SG	SGRABER
FCL	FAN COIL UNIT	TOO	TOP OF DUCT
FD	FIRE DAMPER	TYP	TYPICAL
FDB	FLAT ON BOTTOM	U.C.	UNDERCUT DOOR
FOT	FLAT ON TOP	VAV	VARIABLE AIR VOLUME
FPM / S	FEET PER MINUTE / SECOND	VP	VENTILATION FAN
FT	FEET	VSC	VARIABLE SPEED CONTROLLER
IP	HORSE POWER	WB	WET BULB
ID	INSIDE DIAMETER	WG	WATER COLUMN
INCHES		WG	WATER GAUGE
KW	KILOWATT	WPD	WATER PRESSURE DROP
LAT	LEAVING AIR TEMPERATURE		

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MECHANICAL PLANS AND DETAILS

PROPOSED ENGINEERING DESIGN FOR THE

KENWOOD PARK RESTROOMS

GA 279 - FAYETTEVILLE, GA 30214

NOTES:

TECH
DRAWN: JCW

APPROVED: 3/23/2017

DATE: T17-005

JOB NO.: 4 OF 7

SHEET

SHEET NUMBER: 7

M.1

GENERAL ELECTRICAL NOTES:

- ALL ELECTRICAL WORK SHALL BE IN ACCORDANCE WITH THE GEORGIA STATE MINIMUM STANDARD ELECTRIC CODE (NFPA 70: NATIONAL ELECTRICAL CODE WITH GEORGIA STATE AMMENDMENTS) AND ALL LOCAL AMMENDMENTS, CONSTRUCTION CODES, AND ORDINANCES.
- DRAWINGS SHOWING ELECTRICAL WORK ARE DIAGRAMMATIC. THE CONSTRUCTION MANAGER SHALL REFER TO ARCHITECTURAL, STRUCTURAL, AND MECHANICAL DRAWINGS FOR GUIDANCE AS TO DIMENSIONS, CEILING HEIGHTS, DOOR SWINGS, ROOM FINISHES, ARCHITECTURAL DETAILS, AND LOCATIONS OF EQUIPMENT, PIPES, MECHANICAL SYSTEM EQUIPMENT AND OUTLETS, AND THE LIKE. AND SHALL: A. INSTALL THE ELECTRICAL SYSTEMS WITHOUT INTERFERENCE WITH OBSTRUCTIONS. B. LOCATE LIGHTING FIXTURES AS INDICATED ON REFLECTED CEILING PLANS AND INTERIOR DETAILS IN CORRECT RELATION TO FINISHED AREAS (MAKE MINOR ADJUSTMENTS IN FIXTURE LOCATIONS AS NECESSARY TO CLEAR OBSTRUCTIONS). C. PROVIDE ADDITIONAL STEEL SUPPORTS FOR MOTOR CONTROLLERS, FIXTURES, RACEWAYS, CABINETS, BOXES, AND THE LIKE WHERE THE BUILDING, EQUIPMENT, OR STRUCTURE IS NOT SUITABLE FOR MOUNTING SAME DIRECTLY THEREON.
- THE CONTRACTOR SHALL HAVE ONE SIGNED COPY OF THE PLANS (APPROVED BY THE AHJ), ONE COPY OF THE APPROPRIATE STANDARDS AND SPECIFICATIONS, AND A COPY OF ANY PERMITS AND EXTENSION AGREEMENTS NEEDED AT THE JOB SITE AT ALL TIMES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS AND PAYING ALL FEES REQUIRED BY THE CONSTRUCTION PROPOSED IN THESE PLANS.
- THE CONTRACTOR SHALL NOT DEVIATE FROM THE PLANS WITHOUT FIRST OBTAINING WRITTEN APPROVAL FROM THE OWNER AND THE DESIGN ENGINEER. THE CONTRACTOR SHALL CONTACT THE DESIGN ENGINEER IMMEDIATELY UPON DISCOVERY OF ANY ERRORS OR INCONSISTENCIES.
- THE CONTRACTOR IS RESPONSIBLE FOR THE SAFETY OF ALL PERSONNEL, ALL SITE VISITORS, AND THE GENERAL PUBLIC WHO MAY BE AFFECTED BY THE CONSTRUCTION.
- ALL ESTIMATES OF QUANTITIES SHOWN IN THESE PLANS SHALL BE VERIFIED BY THE CONTRACTOR / SUBCONTRACTOR, WHO SHALL BE RESPONSIBLE FOR DETERMINING ALL QUANTITIES AND PROVIDING THE WORK AND MATERIALS AS SHOWN ON THESE PLANS.
- ON WIRING PLANS, A NUMERAL BESIDE A BRANCH CIRCUIT OUTLET INDICATES THE PANELBOARD CIRCUIT CONNECTION. A LOWER CASE LETTER BESIDE A LIGHTING FIXTURE SHALL INDICATE THE SWITCH LEG CONNECTION. UPPER CASE LETTER BESIDE LIGHTING FIXTURE INDICATES FIXTURE TYPE. SEE LIGHTING FIXTURE SCHEDULE.
- WHERE HOME RUNS TO A MULTIPLE POLE BREAKER ARE SHOWN, THE CIRCUIT IS IDENTIFIED ONLY BY THE NUMBER OF THE FIRST POLE.
- THE TERM "PROVIDE" USED IN THE SPECIFICATIONS AND DRAWINGS SHALL MEAN "TO FURNISH, INSTALL, CONNECT, AND PLACE IN SERVICE. COMPLETELY IN THE SPECIFIED OR APPROVED MANNER, THE ITEM DESCRIBED".
- ELECTRICAL EQUIPMENT ENCLOSURES SHALL BE NEMA 1 FOR INDOOR USE, NEMA 3R FOR OUTDOOR USE WHEN EQUIPMENT IS MOUNTED GREATER THAN 18" ABOVE GRADE, AND NEMA 3X FOR OUTDOOR USE WHEN EQUIPMENT IS MOUNTED LESS THAN 18" ABOVE GRADE.
- ELECTRICAL WORK EMBEDDED IN CONCRETE OR OTHERWISE PERMANENTLY CONCEALED SHALL NOT BE COVERED UNTIL INSPECTED BY THE OWNER'S REPRESENTATIVE.
- ALL PENETRATIONS THROUGH FIRE WALLS SHALL BE FIRESTOPPED IN ACCORDANCE WITH FIRESTOPPING SPECIFICATIONS.
- REFER TO PARTITION LEGEND ON ARCHITECTURAL FLOOR PLANS FOR FIRE RATINGS OF WALL PARTITIONS.

BASIC MATERIALS AND METHODS:

GENERAL

- ELECTRICAL EQUIPMENT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER.
- ALL MATERIAL SHALL BE NEW, CLEAN AND RATED FOR THE USE IN THE AREA FOR WHICH IT IS TO BE INSTALLED.
- LISTED OR LABELED EQUIPMENT SHALL BE INSTALLED AND USED IN ACCORDANCE WITH ANY INSTRUCTIONS INCLUDED IN THE LISTING OR LABELING.

IDENTIFICATION

- CONTRACTOR SHALL LEGIBLY LABEL EACH DISCONNECTING MEANS TO INDICATE ITS PURPOSE. THE MARKING SHALL BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED.
- UPON COMPLETION OF WORK, ALL BREAKERS SHALL BE LABELED WITH TYPED SCHEDULES AND AFFIXED TO THE INSIDE COVER.
- SWITCHBOARDS, PANELBOARDS, INDUSTRIAL CONTROL PANELS, METER SOCKET ENCLOSURES, AND MOTOR CONTROL CENTERS THAT ARE IN OTHER THAN DWELLING OCCUPANCIES SHALL BE FIELD MARKED TO WARN QUALIFIED PERSONS OF POTENTIAL ELECTRIC ARC FLASH HAZARDS. THE MARKING SHALL BE LOCATED SO AS TO BE CLEARLY VISIBLE TO QUALIFIED PERSONS BEFORE EXAMINATION, ADJUSTMENT, SERVICING, OR MAINTENANCE OF THE EQUIPMENT.

CONDUCTORS AND CONDUIT

- ALL CONDUCTORS SHALL BE COPPER. ALL CONDUCTORS SHALL BE 12 AWG AND RATED FOR 75°C UNLESS NOTED ON PLANS.
- ALL WIRING SHALL BE INSTALLED IN EMT CONDUIT (IN ACCORDANCE WITH ARTICLE 358) OR MC TYPE CABLE (IN ACCORDANCE WITH ARTICLE 330).
- CONDUIT INSTALLED IN CONCRETE FLOOR SHALL BE RIGID METAL (IN ACCORDANCE WITH ARTICLE 344).
- EQUIPMENT FIXTURE WHIPS LESS THAN 6 FEET IN LENGTH CONNECTING THE EQUIPMENT TO THE DISCONNECTING MEANS SHALL BE INSTALLED IN LIQUID TIGHT NONMETALLIC FLEXIBLE CONDUIT (LFNC) FOR EXTERIOR PPLICATIONS (IN ACCORDANCE WITH ARTICLE 356) AND IN FLEXIBLE METAL CONDUIT (FMC) FOR INTERIOR APPLICATIONS (IN ACCORDANCE WITH ARTICLE 348).
- ALL WIRING SHOWN ON PLANS TO CONSIST OF (2)#12 AWG AND (1)#12 AWG EQUIPMENT GROUND, U.N.O.
- NON-METALLIC SHEATHED (NM) WIRE MAY BE USED FOR 20 AMPERE BRANCH AND LIGHTING CIRCUITS IN TYPE-V CONSTRUCTION WITH WRITTEN PERMISSION OF THE AHJ. CONTRACTOR TO DE-RATE WIRE SIZES SHOWN ON PLANS TO 80°C AND UPSIZE NM WIRES ACCORDINGLY.
- ALL WIRING SHALL BE INSTALLED WITH SUITABLE BENDING SPACE DEFINED BY ARTICLE 314.28.
- BRANCH CIRCUIT CONDUCTORS SHALL BE IDENTIFIED USING THE PROVISIONS OF ARTICLE 210.5.
- FEEDER CIRCUIT CONDUCTORS SHALL BE IDENTIFIED USING THE PROVISIONS OF ARTICLE 215.12.
- PROVIDE IDENTIFICATION FOR GROUNDING CONDUCTORS OF SEPARATE SYSTEMS IN ACCORDANCE WITH ARTICLE 200.6(D).

EQUIPMENT

- ALL DEVICES SHALL BE RATED FOR THE CIRCUIT IN WHICH IT IS ATTACHED.
- ELECTRICAL CONTRACTOR SHALL INSTALL ALL EQUIPMENT WITH WORKING SPACES AS REQUIRED BY ARTICLE 110.26.
- UNUSED CABLE OR RACEWAY OPENINGS IN BOXES, RACEWAYS, AUXILIARY GUTTERS, CABINETS, CUTOUT BOXES, METER SOCKET ENCLOSURES, EQUIPMENT CASES, OR HOUSINGS SHALL BE EFFECTIVELY CLOSED TO AFFORD PROTECTION SUBSTANTIALLY EQUIVALENT TO THE WALL OF THE EQUIPMENT. WHERE METALLIC PLUGS OR PLATES ARE USED WITH NONMETALLIC ENCLOSURES, THEY SHALL BE RECESSED AT LEAST 6 MM (1/4 IN.) FROM THE OUTER SURFACE OF THE ENCLOSURE.
- CONTRACTOR SHALL TORQUE ALL MECHANICAL FASTENERS AND CONNECTIONS IN ACCORDANCE WITH MANUFACTURERS LISTED SPECIFICATIONS/INSTRUCTIONS. IF TORQUE VALUES ARE NOT LISTED, FOLLOW THE TORQUE RECOMMENDATIONS IN THE NEC HANDBOOK, COMMENTARY TABLES 1.2 THRU 1.5.
- PROVIDE PROPERLY SIZED BOLTS FOR THE CONNECTION BEING MADE. UNDERSIZED BOLTS AND FENDER WASHERS ARE NOT ACCEPTABLE.
- OWNER SHALL SELECT THE COLOR OF ALL EXPOSED OUTLETS, RECEPTACLES, AND COVER PLATES.

LIGHTING

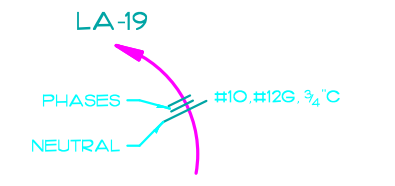
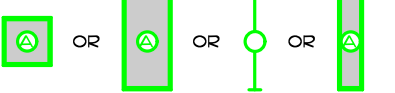









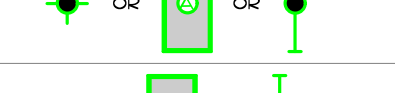

































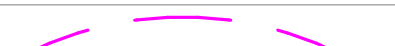







- PROVIDE AND INSTALL LIGHTING FIXTURES AS SPECIFIED AND APPROVED BY OWNER. PRIOR TO ORDERING OR INSTALLING, PROVIDE CUT SHEETS TO OWNER FOR APPROVAL. NO FIXTURE SHALL EXCEED THE POWER RATING SPECIFIED IN THE FIXTURE SCHEDULE. PROVIDE NEW CLEAN BULBS.

GROUNDING

- CONTRACTOR SHALL USE ALL AVAILABLE METHODS OF GROUNDING TO FORM A GROUNDING SYSTEM PER NEC ARTICLE 250.50.
- PROVIDE A MAIN BONDING JUMPER INSIDE SERVICE EQUIPMENT CONNECTING THE EQUIPMENT GROUNDING BUS BAR WITH THE GROUNDING CONDUCTOR (NEUTRAL) BUS BAR.
- MAIN BONDING JUMPERS ARE NOT REQUIRED FOR FEEDER PANELBOARDS PROVIDED THEY ARE FED WITH A SEPARATE EQUIPMENT GROUNDING CONDUCTOR (GREEN WIRE).
- WHERE THE MAIN BONDING JUMPER IS A SCREW ONLY, THE SCREW SHALL BE IDENTIFIED WITH A GREEN FINISH AND BE VISIBLE WITH THE SCREW INSTALLED.
- ELECTRICAL CONTRACTOR TO PROVIDE A (4) LUG MINIMUM EXTERIOR-RATED EQUIPMENT GROUNDING BUS BAR CONNECTED TO THE GROUNDING SYSTEM AT THE SERVICE ENTRANCE TO EFFECTIVELY GROUND ALL LOW VOLTAGE WIRING BEFORE IT ENTERS THE BUILDING.

LOW VOLTAGE

- COORDINATE EXACT PHONE AND DATA OUTLETS WITH OWNER.
- AT ALL PHONE AND DATA OUTLET LOCATIONS, ELECTRICAL CONTRACTOR TO PROVIDE A JUNCTION BOX AND 3/4" EMT CONDUIT STUBBED UP ABOVE CEILING WITH A PULL STRING.

ELECTRICAL LEGEND	
SYMBOL	DESCRIPTION
GENERAL	
	LA - 19 ADJACENT TO ARROW INDICATES HOMERUN OF CIRCUIT 19 TO PANEL 'LA'. MARKS ACROSS RACEWAYS FOR LIGHTING AND RECEPTACLE LOADS INDICATE THE NUMBER OF 120 AWG PHASE AND 100 NEUTRAL CONDUCTORS IN RACEWAY. WHEN #10 IS SHOWN ADJACENT TO HOMERUN IT SHALL INDICATE THAT PHASE AND NEUTRAL CONDUCTORS ARE 100 AWG FOR ENTIRE BRANCH CIRCUIT. UNO. NO MARKS ACROSS RACEWAY INDICATE ONE PHASE AND ONE NEUTRAL CONDUCTORS. WHEN #12 IS SHOWN ADJACENT TO HOMERUN IT SHALL INDICATE THAT THE GROUND WIRE IS #12 AWG FOR THE ENTIRE BRANCH CIRCUIT. WHEN 1/2" C IS SHOWN ADJACENT TO HOMERUN IT SHALL INDICATE THAT THE CONDUIT IS 1/2" EMT. MULTICIRCUIT HOMERUNS TO BE 1 EMT CONDUIT UNO. SINGLE CIRCUIT HOMERUNS TO BE 1 EMT CONDUIT UNO.
LIGHTING	
	FLUORESCENT LIGHT FIXTURE AND OUTLET BOX. LETTER INDICATES FIXTURE IDENTIFICATION. SEE LIGHTING FIXTURE SCHEDULE.
	DOWNLIGHTING FIXTURE. LETTER INDICATES FIXTURE IDENTIFICATION. SEE LIGHTING FIXTURE SCHEDULE.
	WALL MOUNT LIGHT FIXTURE. LETTER INDICATES FIXTURE IDENTIFICATION. SEE LIGHTING FIXTURE SCHEDULE.
	FLOOD LIGHT. LETTER INDICATES FIXTURE IDENTIFICATION. SEE LIGHTING FIXTURE SCHEDULE.
	TRACK LIGHTING. LETTER INDICATES FIXTURE IDENTIFICATION. SEE LIGHTING FIXTURE SCHEDULE.
	UNDERCABINET LIGHTING. LETTER INDICATES FIXTURE IDENTIFICATION. SEE LIGHTING FIXTURE SCHEDULE.
	WALL MOUNTED FLUORESCENT LIGHTING. LETTER INDICATES FIXTURE IDENTIFICATION. SEE LIGHTING FIXTURE SCHEDULE.
	CEILING OR WALL MOUNTED EXIT SIGN. PROVIDE ARROWS AS INDICATED. SINGLE FACE OR DOUBLE FACE AS INDICATED BY SHADING.
	CEILING OR WALL MOUNTED EMERGENCY LIGHTING.
	CEILING OR WALL MOUNTED COMBINATION EXIT AND EMERGENCY LIGHTS. PROVIDE ARROWS AS INDICATED. SINGLE FACE OR DOUBLE FACE AS INDICATED BY SHADING.
	EGRESS/EMERGENCY LIGHT FIXTURE. LETTER INDICATES FIXTURE TYPE.
	NIGHT LIGHT OR SECURITY LIGHT. FIXTURE IS CONTROLLED BY CIRCUIT BREAKER.
RECEPTACLES & COMMUNICATIONS	
	SINGLE RECEPTACLE. NEMA 5 - 20R. UNO.
	SINGLE RECEPTACLE. NEMA 5 - 20R. UNO. MT 44. AFF OR 6" ABOVE COUNTER TOP.
	DUPLEX RECEPTACLE. NEMA 5 - 20R. UNO. SUBSCRIPT: TV-TELEVISION POWER OUTLET. (6 INDICATES ISOLATED GROUND) (6R INDICATES EMERGENCY RECEPTACLE) (6P INDICATES GROUND FAULT INTERRUPT PROTECTED).
	DUPLEX RECEPTACLE. NEMA 5 - 20R. UNO. MT 44. AFF OR 6" ABOVE COUNTER TOP. SUBSCRIPT: (6G INDICATES ISOLATED GROUND) (6P INDICATES GROUND FAULT INTERRUPT PROTECTED).
	QUADPLEX RECEPTACLE. NEMA 5 - 20R. UNO. (6G INDICATES ISOLATED GROUND).
	SUSPENDED FROM CEILING OR WALL MOUNTED SPECIAL PURPOSE RECEPTACLE TO MATCH EQUIPMENT PLUG OR AS NOTED.
	FLOOR BOX RECEPTACLE. 120V. 20A. PROVIDE BRASS COVER AND TRIM.
	CEILING MOUNTED RECEPTACLE. 120V. 20A.
	WALL MOUNTED CABLE TELEVISION OUTLET BY OTHERS. PROVIDE 1/2" EMPTY CONDUIT.
	WALL MOUNTED DATA OUTLET BY OTHERS. PROVIDE 1/2" EMPTY CONDUIT.
	WALL MOUNTED (VOICE) TELEPHONE OUTLET. PROVIDE 2 GANG BOX WITH SINGLE GANG PLASTERING. EXTEND 3/4" FROM BOX TO ABOVE ACCESSIBLE CEILING. TERMINATE CONDUIT WITH AN INSULATED BUSHING. PROVIDE PULL STRING IN CONDUIT.
	COMBINATION WALL MOUNTED COMMUNICATIONS OUTLETS. PROVIDE ONE VOICE & ONE DATA OUTLET. OUTLETS BY OTHERS. ELECTRICAL CONTRACTOR TO PROVIDE 1" EMPTY CONDUIT WITH PULL LINE.
	JUNCTION BOX. TO BE MOUNTED ABOVE CEILING. UNO. SUBSCRIPT: T - TELECOMMUNICATIONS. D - DATA.
	JUNCTION BOX. TO BE WALL MOUNTED. UNO. SUBSCRIPT: T - TELECOMMUNICATIONS. D - DATA.
SWITCHES	
	SINGLE POLE SWITCH. SUBSCRIPT: L - LOCKING COVER. HUBBELL CAT. NO. 96061. K - KEYPATH. P - PILOT LIGHT.
	THREE WAY SWITCH. SUBSCRIPT: K - KEY TYPE.
	FOUR WAY SWITCH.
	SWITCH. PROVIDE MOTION ACTIVATED SWITCH TO TURN OFF LIGHTS 30 MIN AFTER ROOM WAS LAST OCCUPIED. LITHONIA LOW VOLTAGE. UNO. TEST ECOC 701.
	MOTOR RATED SWITCH WITH NO OVERLOADS.
	2000 W. 120V SLIDE DIMMER. HUBBELL CAT. AS203.
	2-HOUR ROTARY TIMER SWITCH WITH HOLD FEATURE.
DEVICES	
	MOTOR. HORSEPOWER AS INDICATED BY NUMBER.
	MOTOR. FRACTIONAL HORSEPOWER. 1/2 - 1/4P.
	FLUSH OR SURFACE MOUNTED. 277/480V. 3 PHASE. 4W PANEL BOARD. REFER TO PANEL SCHEDULES.
	FLUSH OR SURFACE MOUNTED. 120/208V. 3 PHASE. 4W PANEL BOARD. REFER TO PANEL SCHEDULES.
	NON-FUSED SAFETY SWITCH. SWITCH AMPS/POLES/NEMA ENCLOSURE.
	FUSED SAFETY SWITCH. FUSE SIZE/SWITCH AMPS/POLES/NEMA ENCLOSURE.
	COMBINATION STARTER/FUSED DISCONNECT SWITCH. FUSE SIZE/SWITCH AMPS/NEMA SIZE/NEMA ENCLOSURE.
	MAGNETIC MOTOR STARTER. NEMA. SIZE/NEMA ENCLOSURE.
	CIRCUIT BREAKER. NEMA ENCLOSURE. SIZE/NEMA ENCLOSURE.
	DRY TYPE TRANSFORMER. TA - IDENTIFICATION.
	TELEPHONE / TELECOMMUNICATIONS BACKBOARD.
	CEILING MOUNTED ULTRASONIC OCCUPANCY SENSOR. WATT STOPPER CAT. NO. WT-2200 OR EQUAL. DIRECTIONAL ARROWS INDICATE SENSOR ORIENTATION.
	CONTACTOR.
	PHOTOCELL.
CIRCUITRY	
	CONDUIT UP / CONDUIT DOWN.
	RACEWAY INSTALLED CONCEALED IN / OR BELOW SLAB.
	RACEWAY INSTALLED CONCEALED ABOVE OR IN WALLS.
	RACEWAY INSTALLED EXPOSED.
	FIXTURE WHIP.

BRANCH CIRCUIT AND FEED CIRCUIT LENGTHS															(5% VOLTAGE DROP)									
		LINE CURRENT																						
WIRE	VOLTAGE	15A	20A	25A	30A	35A	40A	45A	50A	60A	70A	80A	90A	100A	125A	150A	200A	250A	300A	350A	400A			
#12	120V	90	45	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
#10	120V	143	72	57	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-			
#8	120V	230	114	92	77	66	57	51	47	-	-	-	-	-	-	-	-	-	-	-	-			
#6	120V	353	177	141	117	101	89	78	71	59	-	-	-	-	-	-	-	-	-	-	-			
#4	120V	-	-	225	188	161	140	125	113	93	80	71	-	-	-	-	-	-	-	-	-			
#3	120V	-	-	236	203	177	158	141	119	101	89	78	71	-	-	-	-	-	-	-	-			
#2	120V	-	-	-	257	224	200	179	150	128	113	99	90	-	-	-	-	-	-	-	-			
#1	120V	-	-	-	-	251	225	198	161	141	125	113	90	-	-	-	-	-	-	-	-			
1/0	120V	-	-	-	-	-	236	203	177	158	141	114	93	-	-	-	-	-	-	-	-			
2/0	120V	-	-	-	-	-	-	255	224	198	179	143	119	-	-	-	-	-	-	-	-			
3/0	120V	-	-	-	-	-	-	-	227	180	150	113	-	-	-	-	-	-	-	-	-			
4/0	120V	-	-	-	-	-	-	-	-	250	192	144	128	-	-	-	-	-	-	-	-			
2500CM	120V	-	-	-	-	-	-	-	-	-	225	168	130	135	-	-	-	-	-	-	-			
3000CM	120V	-	-	-	-	-	-	-	-	-	-	203	150	162	-	-	-	-	-	-	-			
3500CM	120V	-	-	-	-	-	-	-	-	-	-	-	236	210	169	158	138	-	-	-	-			
4500CM	120V	-	-	-	-	-	-	-	-	-	-	-	-	-	242	218	182	156	-	-	-			
5000CM	120V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	242	227	194	-	-			
6000CM	120V	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	325	269	231	203		

NOTES:

- THE ABOVE LENGTHS ARE LISTED FOR A 5% VOLTAGE DROP OF 120V CIRCUIT RECOMMENDED BY THE N.E.C. TO CONVERT LENGTHS TO 208V, 240V, 277V, OR 480V MULTIPLY BY THE FACTORS BELOW.

208V MULTIPLY LENGTHS BY 1.73
240V MULTIPLY LENGTHS BY 2.00
277V MULTIPLY LENGTHS BY 2.31
480V MULTIPLY LENGTHS BY 4.00

REVISIONS

T.E.D.
WWW.TECHNIKA-DESIGN.COM
PO BOX 80097
CHARLESTON, SC 29416
843-580-3769

SEAL:  4/2/17

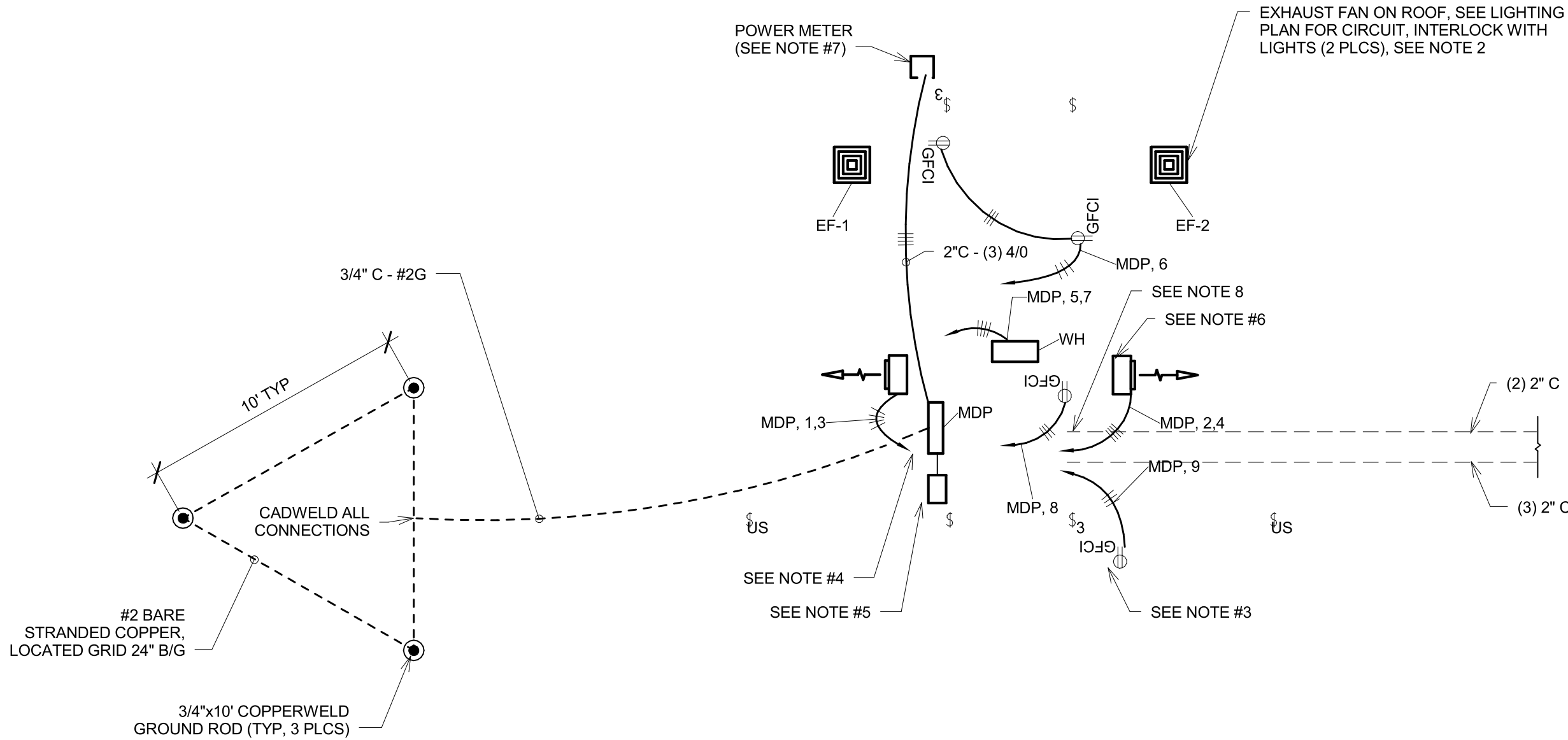
ELECTRICAL NOTES

PROPOSED ENGINEERING DESIGN FOR THE
KENWOOD PARK RESTROOM FACILITY
GA 279 - FAYETTEVILLE, GA 30214

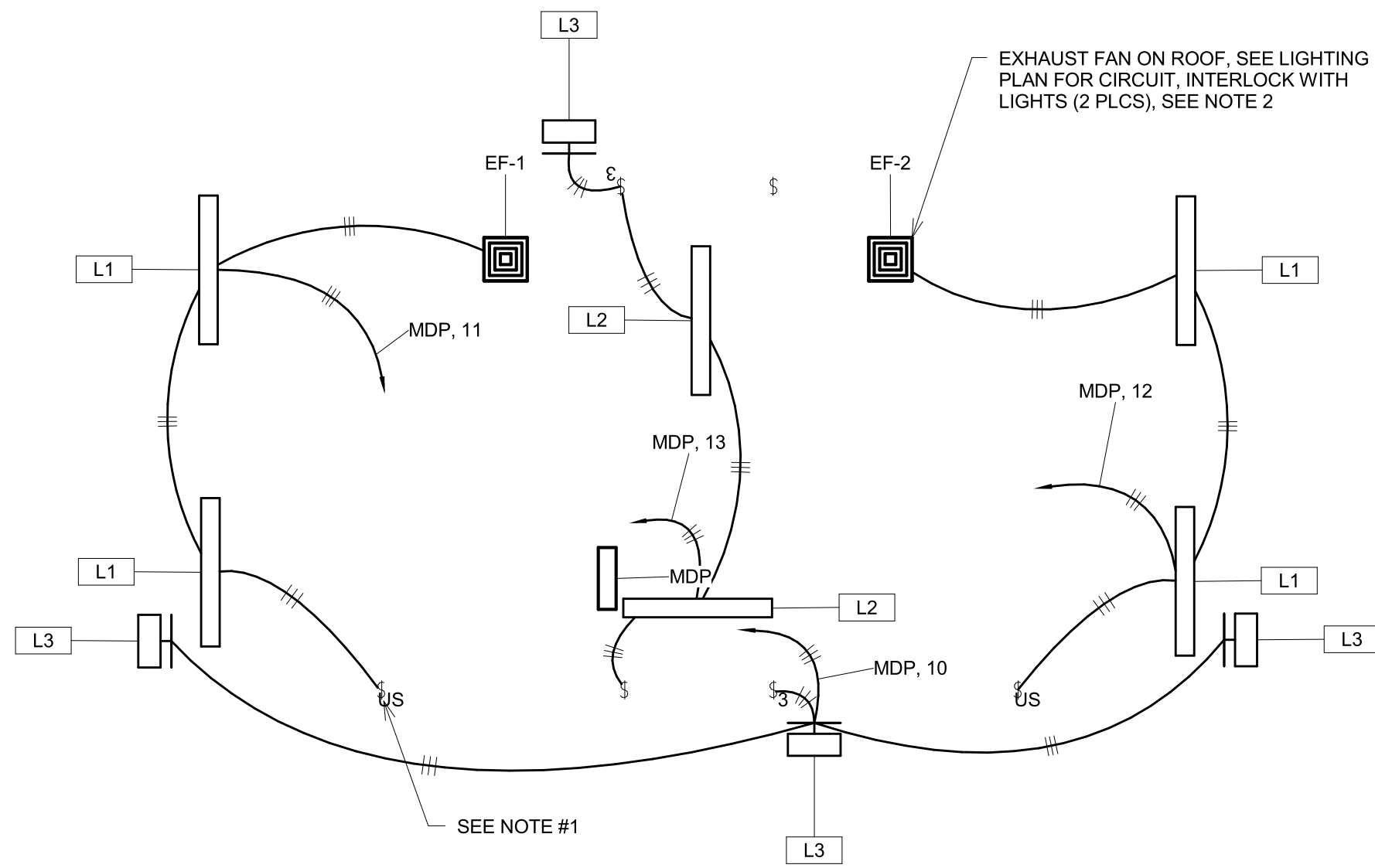
NOTES:

TECH: JCW
APPROVED: 3-21-17
DATE: 117-005
JOB NO.: 5 OF 7
SHEET NUMBER: E.0

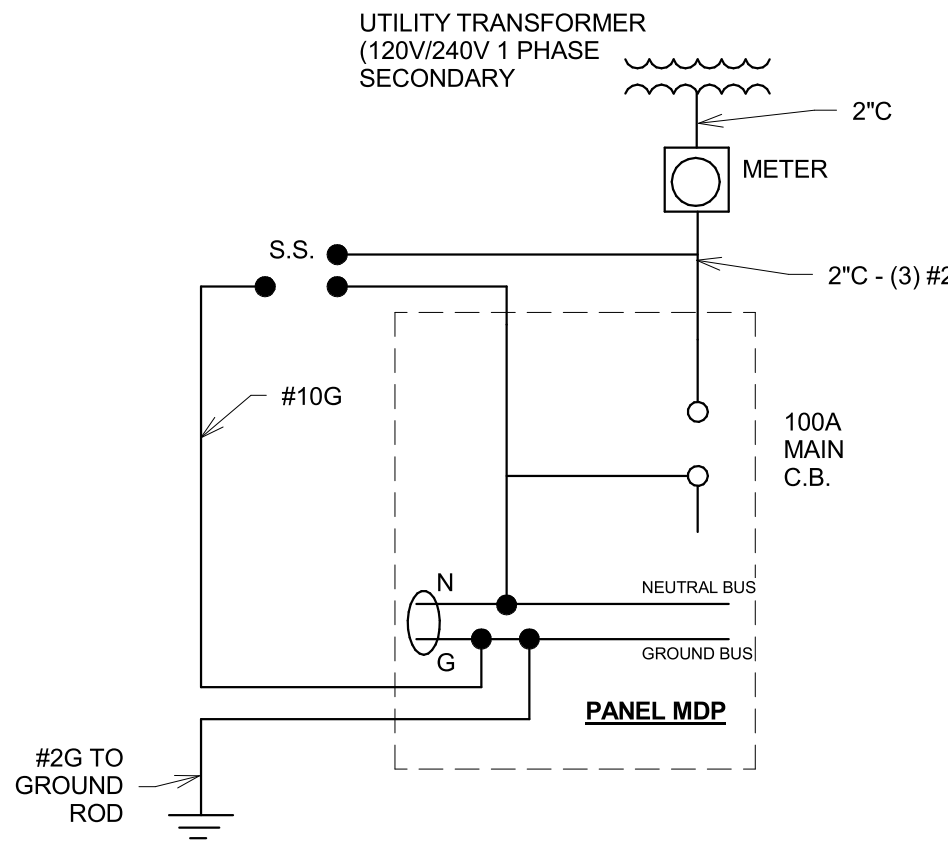
- SHEET NOTES:**
1. PROVIDE AN ULTRASONIC WALL SWITCH SENSOR AT 4' ABOVE FINISHED FLOOR. SENSOR SHALL BE HUBBELL MODEL #LH-US-RR-W. ONE SWITCH PER EACH RESTROOM (1 MEN'S, 1 WOMEN'S).
 2. CONTACTORS FOR EXHAUST FANS SHALL BE NEMA SIZE 1 W/ 120V COILS. ENCLOSURE SHALL BE NEMA-1. INSTALL CONTACTORS 8'-6" A.F.E. PROVIDE ALL CONDUIT AND WIRING IN ACCORDANCE WITH THE DIAGRAM SHOWN.
 3. PROVIDE OUTLET PER THE REQUIREMENTS OF THE DRINKING FOUNTAIN MANUFACTURER. OUTLET TO BE PROTECTED AND VANDAL-RESISTANT.
 4. PANEL TO BE 120V/240V, SINGLE PHASE, 3W, 100A MAIN CB, COPPER PHASE AND GROUND BUSBARS, 22KA R.M.S. SYMMETRICAL SHORT CIRCUIT RATING, U.L. LISTED FOR SERVICE ENTRANCE. REFER TO SINGLE LINE DIAGRAM, THIS SHEET. THE PANEL SHALL BE SQUARE-DCUTLER-HAMMER, SIEMENS, OR G.E.
 5. SURGE SUPPRESSOR SHALL HAVE SURGE RATING OF 160KVA AND SHALL BE LISTED UNDER UL1449, UL1283, AND INTERGAL DISCONNECT, LEDs, AND SURGE COUNTER SHALL BE PROVIDED. THE ENCLOSURE SHALL BE NEMA-4. THE SURGE SUPPRESSOR SHALL BE LIEBERT MODEL S1016-220-220V-S-A-R-C-E OR EQUAL BY APPROVED EQUIVALENT.
 6. WALL HEATERS TO BE MARKEL MODEL H3424T, 4KW, 240V, 1 PHASE, WITH INTEGRAL THERMOSTAT. INSTALL FLUSH IN WALL 8'-6" A.F.E.
 7. ROUTE TO TRANSFORMER FROM LOCAL UTILITY. COORDINATE LOCATION OF METER AND CONDUIT WITH LOCAL UTILITY. INCLUDE 50' OF CONDUIT AND SERVICE FEED IN BASE BID, WITH PRICING PER FOOT AS ADDITIONAL LINE ITEM.
 8. CONDUITS TO BE STUBBED UP INSIDE ELECTRICAL ROOM FOR FUTURE LIGHTING AND IRRIGATION CONTROLLERS (BY OTHERS).



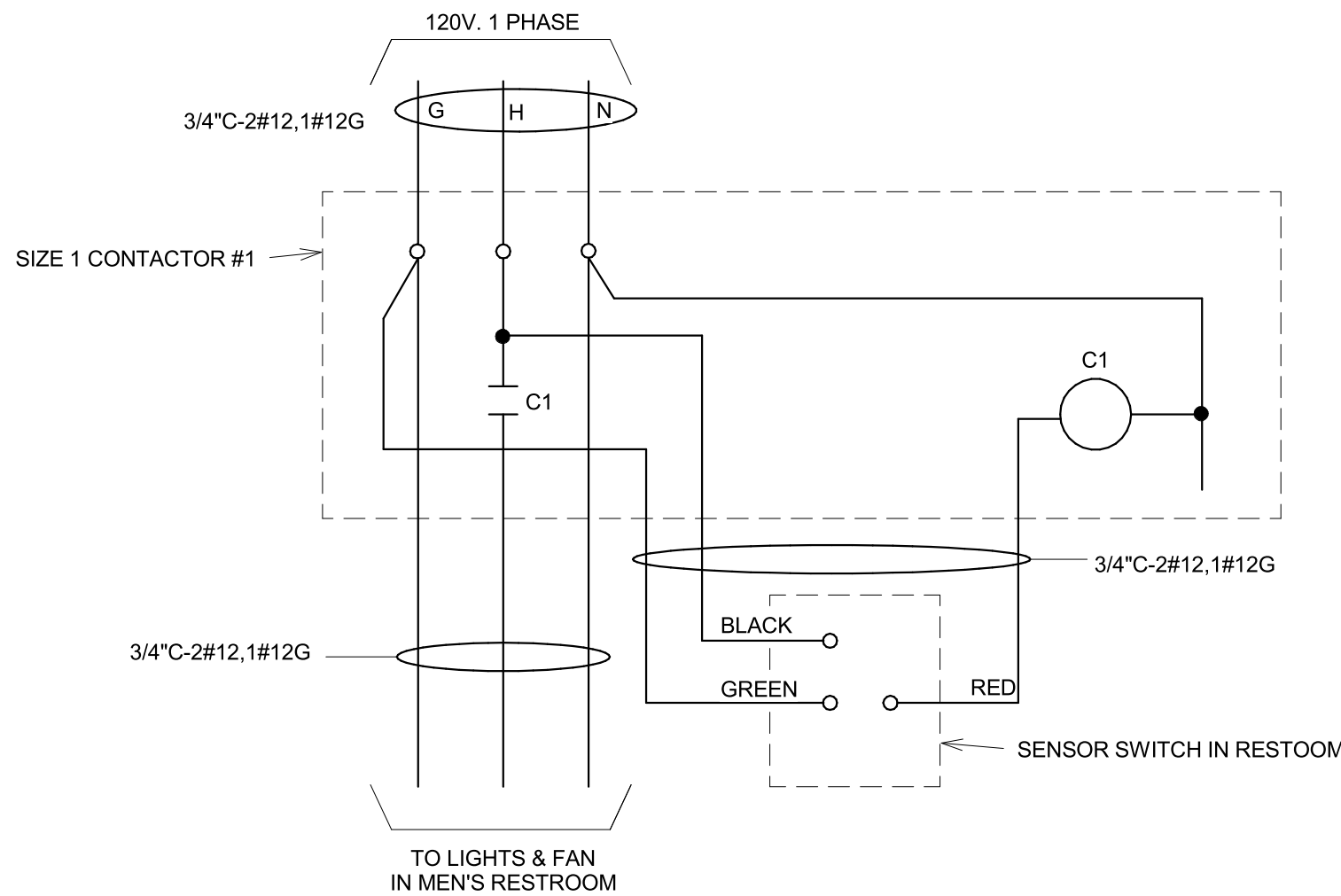
2 POWER AND MECH PLAN
1/4" = 1'-0"



1 LIGHTING PLAN
1/4" = 1'-0"



3 MDP PANEL DIAGRAM
1/2" = 1'-0"



(SHOWN FOR MEN'S RESTROOM- TYP. FOR BOTH RESTROOMS)

4 RESTROOM LIGHTS AND FANS
1/2" = 1'-0"

ARC FAULT CALCULATION

TRANSFORMER IMPEDANCE = UNKNOWN (ASSUME 0 OHMS)

SPECIFY FOR 2/0 AL CONDUCTOR TO TRANSFORMER SECONDARY

50' OF 2/0 AL CONDUCTOR = (.131 OHMS / 1000') x (50'/1000') = .0066 OHMS

240V / .0066 = 36,363 A MAX FAULT CURRENT IN CONDUCTOR

FAULT CURRENT MAXIMUM MAY BE RECALCULATED BASED ON TRANSFORMER SECONDARY IMPEDANCE ONCE THE TRANSFORMER IS SET.

Branch Panel: MDP

Location:
Supply From:
Mounting: Surface
Enclosure:

Volts: 120/240 Single
Phases: 1
Wires: 3

A.I.C. Rating:
Mains Type:
Mains Rating: 100 A
MCB Rating: 100 A

Notes:

CKT	Circuit Description	Trip	Poles	A		B		Poles	Trip	Circuit Description	CKT
1	WOMEN'S HEATER	20 A	2	2000 VA	2000 VA			2	20 A	MEN'S HEATER	2
3	--	--	--			2000 VA	2000 VA	--	--	--	4
5	WATER HEATER	50 A	2	4800 VA	360 VA			1	20 A	MECH RM OUTLETS	6
7	--	--	--			4800 VA	180 VA	1	20 A	ELECT RM OUTLET	8
9	WATER COOLER OUTLET	20 A	1	180 VA	210 VA			1	20 A	FRONT AND SIDE EXT LIGHTS	10
11	WOMENS LIGHTS	20 A	1			135 VA	135 VA	1	20 A	MEN'S LIGHTS	12
13	MECH, ELECT, AND REAR EXT LIGHTS	20 A	1	198 VA							14
15											16
17											18
19											20
21											22
23											24
25											26
27											28
29											30
31											32
33											34
35											36
37											38
39											40
41											42
				Total Load:		9748 VA	9250 VA				
				Total Amps:		81 A	77 A				

Legend:

Load Classification	Connected Load	Demand Factor	Estimated Demand	Panel Totals	
Appliance - Dwelling Unit	9600 VA	100.00%	9600 VA		
Heating	8000 VA	100.00%	8000 VA	Total Conn. Load:	18999 VA
Lighting - Dwelling Unit	384 VA	125.00%	480 VA	Total Est. Demand:	19167 VA
Lighting - Exterior	280 VA	125.00%	350 VA	Total Conn.:	79 A
Motor	15 VA	112.50%	17 VA	Total Est. Demand:	80 A
Other	0 VA	0.00%	0 VA		
Receptacle	720 VA	100.00%	720 VA		

Notes:

LIGHTING POWER DENSITY CALCULATIONS
(PER IECC 2009 SECTION 505.5)

INTERIOR POWER DENSITY
TOTAL CONNECTED INTERIOR LIGHTING POWER
(6) 64W FLOURSECENT FIXTURES = 384W

TOTAL AREA = 420 SF

ALLOWANCE PER TABLE 505.5.2 = 1.1 W/SF (SPORTS ARENA)

TOTAL ALLOWED INTERIOR LIGHTING POWER = 462 W, O.K.

EXTERIOR POWER DENSITY
TOTAL CONNECTED EXTERIOR LIGHTING POWER
(4) 70W H.P.S. LAMPS = 280W

ALLOWANCE PER TABLE 505.6.2(2) = 20 W/LF ENTRANCE OR EXIT (ZONE 2)
= 0.1 W/SF FACADE (ZONE 2)

20 W/LF x 12 LF DOOR OPENING (4 DOORS @ 3 FT EACH) = 240 W
0.1 W/SF x (356 SF SIDE WALLS + 460 SF FRONT AND REAR) = 81.6 W

TOTAL ALLOWED EXTERIOR LIGHTING POWER = 321.6 W, O.K.

Lighting Fixture Schedule

Mark	Manufacturer	Wattage	Comments
L1	COLUMBIA VRN4-232-EBB	64 W	WALL MOUNTED, VANDAL RESISTANT 4' FLOURESCENT LIGHT FIXTURE W/ (20 32W LAMPS, 120V ZERO DEGREE BALLAST
4			
L2	COLUMBIA KL4-232-EBB	64 W	PENDANT MOUNTED, 4' FLOURESCENT LIGHT FIXTURE W/ (20 32W LAMPS, 120V ZERO DEGREE BALLAST
2			
L3	HUBBELL MRK-S70-MT-PE-DBZ	70 W	70W HIGH PRESS. SODIUM WALL MOUNT DARK BRONZE 120V BALLAST, PHOTOCCELL

Mechanical Equipment Schedule

Mark	Manufacturer	Description	Circuit Number	Comments
H1	MARKEL H3424T	ELECTRIC UNIT HEATER, WALL MOUNT	1,3	4KW, 240V, 1 PHASE
H2	MARKEL H3424T	ELECTRIC UNIT HEATER, WALL MOUNT	2,4	4KW, 240V, 1 PHASE
EF-1	GREENHECK G-065-E	DIRECT DRIVE ROOF MOUNT	11	7.5W, 120V, 1 PHASE
EF-2	GREENHECK G-065-E	DIRECT DRIVE ROOF MOUNT	12	7.5W, 120V, 1 PHASE
WH	CHRONOMITE M-40	TANKLESS	5,7	9.6KW, 240V, 1 PHASE

REVISIONS

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4/2/17

ELECTRICAL PLANS AND SCHEDULES

PROPOSED ENGINEERING DESIGN FOR THE
KENWOOD PARK RESTROOM FACILITY
GA 279 - FAYETTEVILLE, GA 30214

NOTES:

TECH
DRAWN: JCW
APPROVED: 3-21-17
DATE: T17-005
JOB NO.: 6 OF 7
SHEET NUMBER:
E.1

SYMBOLS & ABBREVIATIONS					
SYMBOL	ABBREVIATION	DESCRIPTION	SYMBOL	ABBREVIATION	DESCRIPTION
	S/W	SOIL OR WASTE PIPE		GC	GAS COOK
	V	VENT PIPE		CKV	CHECK VALVE
	CW	COLD WATER PIPE		STR	STRAINER
	HW	HOT WATER PIPE		U	UNION
	HWC	HOT WATER CIRC. PIPE			CONNECT TO EXISTING
	ST	STORM SEWER		NF-H	NON FREEZE HOSE BIBB
	FCW	FILTERED COLD WATER		AFF	ABOVE FINISHED FLOOR
	GW	GRAY WATER		A/C	ABOVE CEILING
	G	GAS PIPING		B/F	BELOW FLOOR
	FD	FLOOR DRAIN		B/G	BELOW GRADE
	FS	FLOOR SINK		P	PLUMBING FIXTURE
	HD	HUB DRAIN		VTR	VENT THRU ROOF
	SA	SHOCK ABSORBER W/ P.D.I. SIZE		VTW	VENT THRU WALL
	CO	FLOOR CLEAN OUT		T.P.S	TRAP PRIMER SUPPLY
	COTG	CLEAN OUT TO GRADE		T.P.V	TRAP PRIMER VALVE
	WCO	WALL CLEAN OUT		LAV	LAVATORY
	XX	DRAIN TRAP, XX-FIXTURE, SEE SCHED.		WC	WATER CLOSET
	DS	DOWN SPOUT		MT	MASTER TRAP
	RD	ROOF DRAIN		GI	GREASE INTERCEPTOR
	DN	PLUMBING PIPING DOWN		WH	WATER HEATER
	UP	PLUMBING PIPING UP		EWG	ELECTRIC WATER COOLER
	PRV	PRESSURE REDUCING VALVE			
	GV or BV	GATE VALVE or BALL VALVE			

SHOCK ABSORBER SCHEDULE						
ABSORPTION TYPE NO.	5005	5010	5020	5030	5040	5050
P.D.I. SYMBOLS	A	B	C	D	E	F
FIXTURE UNIT RATINGS	1-11	12-32	33-60	61-95	96-154	155-330

WATER HEATER SCHEDULE							
MARK	HEATER SERVICE	HEATER TYPE	HEAT INPUT	STORAGE CAPACITY	STORAGE TEMP.	SHOCK ABSORBER (P.D.I.)	MANUFACTURER & MODEL NUMBER
WH	RESTROOMS	INSTANT / ELECTRIC	8.92 KW	--	--	--	CHRONITE M-30

EQUIVALENT BY LOOKING AT STATE OR RULD.

PLUMBING FIXTURE SCHEDULE						
MARK	FIXTURE	W	V	CW	HW	MANUFACTURER / MODEL
FD	FLOOR DRAIN	3"	1/2"	--	--	J.R. SMITH, P/N 2005
NF-H-B	NON FREEZE HOSE BIBB	--	--	1/2"	--	WOODFORD B65 SERIES
HWC	ADA FLUSH VALVE WC	4"	2"	1"	--	AMERICAN STANDARD P/N 3045.511
WC	FLUSH VALVE WC	4"	2"	1"	--	AMERICAN STANDARD P/N 2294.511
UR	FLUSH VALVE URINAL	2"	1/2"	1"	--	AMERICAN STANDARD P/N 6581.001EC
LAV	ADA WALL MOUNT LAV	1/2"	1/2"	1/2"	1/2"	AMERICAN STANDARD P/N 0124.024
DF	ADA WATER COOLER	1/2"	1/2"	1/2"	--	MOF MODEL 480 EZ WM
2012 LOW FLOW COMPLIANT						
ACCESSORIES						
PROVIDE TRAP PRIMER						
FOR FINISHED AREAS						
16-1/2" SEAT HEIGHT						
15" SEAT HEIGHT						
17" RM HEIGHT						
MOUNT 34" A.F.F. (ADA) 42" A.F.F. FOR NON ADA						
INSTALL TWO IDENTICAL FOUNTAINS SIDE BY SIDE						

PLUMBING FIXTURE SCHEDULE						
MARK	FIXTURE	W	V	CW	HW	MANUFACTURER / MODEL
FD	FLOOR DRAIN	3"	1/2"	--	--	J.R. SMITH, P/N 2005
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INSTALL TWO IDENTICAL FOUNTAINS SIDE BY SIDE						

SPECIFICATIONS

BASIC MATERIALS & METHODS

11. PROVIDE A COMPLETE PLUMBING SYSTEM LEFT IN PROPER WORKING ORDER. PROVIDE HEREIN MEANS INSTALLED COMPLETELY INCLUDING LABOR AND MATERIALS. CONTRACTOR RESPONSIBLE FOR ALL COST FOR REDESIGNS, REINSPECTIONS, ETC. CAUSED OR CREATED BY THE CONTRACTOR. SECURE AND PAY FOR ALL FEES, LICENSES, PERMITS AND INSPECTIONS. COORDINATE ALL DETAILS OF THE UTILITIES. MEET AND COMPLY WITH ALL FEDERAL, STATE, COUNTY AND CITY CODES AND REGULATIONS.
12. THE INSTALLING CONTRACTOR PROVIDING FOR THIS WORK SHALL BE A FIRM LICENSED FOR THIS TYPE OF WORK AND SHALL PROVIDE COPIES OF LICENSES, BUSINESS LICENSES, BONDING LIMITS AND INSURANCE COVERAGE. THE CONTRACTOR'S FIELD PERSONNEL SHALL BE UNDER THE DIRECT SUPERVISION OF A LICENSED PLUMBER(S).
13. PROVISIONS INCLUDE LABOR, SUPPLIES AND MATERIALS, TOOLS, EQUIPMENT, ETC. PROVIDE COMPLETE SUBMITTALS AND SHOP DRAWINGS ON ALL ITEMS. PRIOR APPROVAL REQUIRED FOR ANY SUBSTITUTIONS. PROVIDE FINAL CONNECTIONS TO ALL ITEMS. COORDINATE WITH OTHER TRADES PRIOR TO ROUGH-IN AND PROVIDE ANY NECESSARY ADJUSTMENTS. CONTRACTOR IS RESPONSIBLE FOR MATERIAL, SHIPPING, DELIVERY, RECEIVING, STORAGE, PROTECTION, EXCAVATION, BACKFILLING, CUTTING, PATCHING AND CLEANING. ALL WORK AND MATERIALS SHALL BE GUARANTEED FOR ONE YEAR PLUS ANY EXTENDED MANUFACTURER'S WARRANTIES. PROVIDE AS BUILT REPRODUCTION OF SECOND DOCUMENTS AND COMPLETE PARTS, MAINTENANCE AND SERVICE MANUALS ALONG WITH THE NECESSARY TRAINING OF OWNER'S PERSONNEL.
14. ALL MATERIALS SHALL BE NEW AND CURRENTLY MANUFACTURED. ALL MATERIALS SHALL BE FULLY LABELED AND MEET ALL INDUSTRY STANDARDS. PROVIDE PIPE LABELING FOR ALL POTABLE WATER AND OTHER LINES. PROVIDE 3000 PSI CLASS CONCRETE FOR EQUIPMENT BASES, BACKFILL, COMPACTION, PAINT ALL AND COMPACT FILL TO A MINIMUM OF 90% MATERIALS EXPOSED TO VIEW AS DIRECTED BY ARCHITECT. FIRE/SMOKE SEAL EACH PENETRATION OF ANY RATED BARRIER (FLOOR, WALL, ETC).
15. EXISTING CONDITIONS INFORMATION IS BASED ON HISTORICAL INFORMATION. CONTRACTOR SHALL FIELD VERIFY ACTUAL CONDITIONS PRIOR TO DEMOLITION/REPAIRS AND IMMEDIATELY ADVISE OF ANY DISCREPANCIES. MAINTAIN CONTINUITY OF ALL EXISTING SYSTEMS. PROVIDE FOR REMOVAL, RECONNECTION, ETC. TO EXISTING SYSTEMS. PROVIDE 72-HOUR ADVANCE NOTICE (MIN) OF ANY INTERRUPTIONS. INTERRUPTIONS OF TWO OR MORE HOURS SHALL BE AT NIGHTS OR WEEKENDS. REMOVED MATERIALS SHALL BECOME PROPERTY OF CONTRACTOR UNLESS NOTED OTHERWISE.

GENERAL PIPING REQUIREMENTS

21. DRAWINGS ARE DIAGRAMMATIC TO INDICATE THE REQUIRED PLUMBING SYSTEM. EVERY FITTING AND DETAIL NOT NECESSARILY INDICATED. THE CONTRACTOR SHALL PROVIDE FOR AND INSTALL FOR A COMPLETE AND PROPERLY FUNCTIONING SYSTEM(S) IN A PROFESSIONAL MANNER. ALL WORK SHALL BE INSTALLED SO THAT VALVES AND OTHER WORKING COMPONENTS ARE ACCESSIBLE FOR SERVICE. PROVIDE FLUSH MOUNTED, HINGED COVER ACCESS PANELS FOR ACCESS TO ANY CONCEALED VALVES, ETC.
22. CONTRACTOR SHALL CHECK AND VERIFY THE UTILITY SOURCE WATER PRESSURE. IF THE PRESSURE EXCEEDS 80 PSI THE CONTRACTOR SHALL PROVIDE A LINE SIZE PRESSURE REDUCING VALVE. WAITS MODEL 22885 TYPE.
23. ALL VENT, WATER AND WASTE PIPING SHALL BE CONCEALED IN WALLS OR ABOVE CEILINGS UNLESS NOTED OTHERWISE. ANY PIPING ROUTED THROUGH COUNTER WORK SHALL BE LOCATED OUT OF THE WAY TO THE REAR OF THE COUNTER AND WELL SECURED. COORDINATE CAREFULLY WITH THE COUNTER MANUFACTURER AND ARCHITECT FOR ROUTING OF ANY PIPING.
24. ANY EXPOSED PIPING SHALL BE PROTECTED FROM PHYSICAL DAMAGE. ALL PIPING EXPOSED BELOW SINKS, SINKS, SINKS, ETC. SHALL BE INSULATED AND PROTECTED IN ACCORDANCE WITH THE CODES AND/OR ANSIS/ADA REQUIREMENTS. UTILIZING PROWRAP BY MOORE MANUFACTURING OR EQUAL.
25. THE CONTRACTOR SHALL PROVIDE FINAL FIELD COORDINATION AND VERIFICATION OF THE EXACT LOCATION OF SINK/UP AND SINK/OUT LOCATION PRIOR TO ROUGH-IN. EACH FLOOR SLAB PENETRATION SHALL BE FIRST BE CHECKED AND VERIFIED WITH STRUCTURAL TO AVOID STRUCTURAL DAMAGE. FLOOR SLAB PENETRATIONS SHALL BE SLEEVED AND SEALED. ALL FLOOR DRAINS, FLOOR SINKS, AND FLOOR DRAINS SHALL BE FLASHED TO THE WATERPROOFING MEMBRANE AND SEALED. SLOPE DOWN TO DRAIN PER ARCHITECTURAL REQUIREMENTS. ANY ROOF PENETRATIONS SHALL BE MADE AS DIRECTED BY OWNER'S ROOFING INSTALLER TO MAINTAIN SLOPE WARRANT. PROVIDE ALL NECESSARY SLOPE FLANGES ETC.
26. PIPING SUPPORT - PROVIDE PIPE HANGERS & SUPPORTS WITH WIDE SADDLES THAT SUPPORT BOTH THE PIPE AND THE HANGERS. PROVIDE SADDLES THAT SUPPORT BOTH THE PIPE