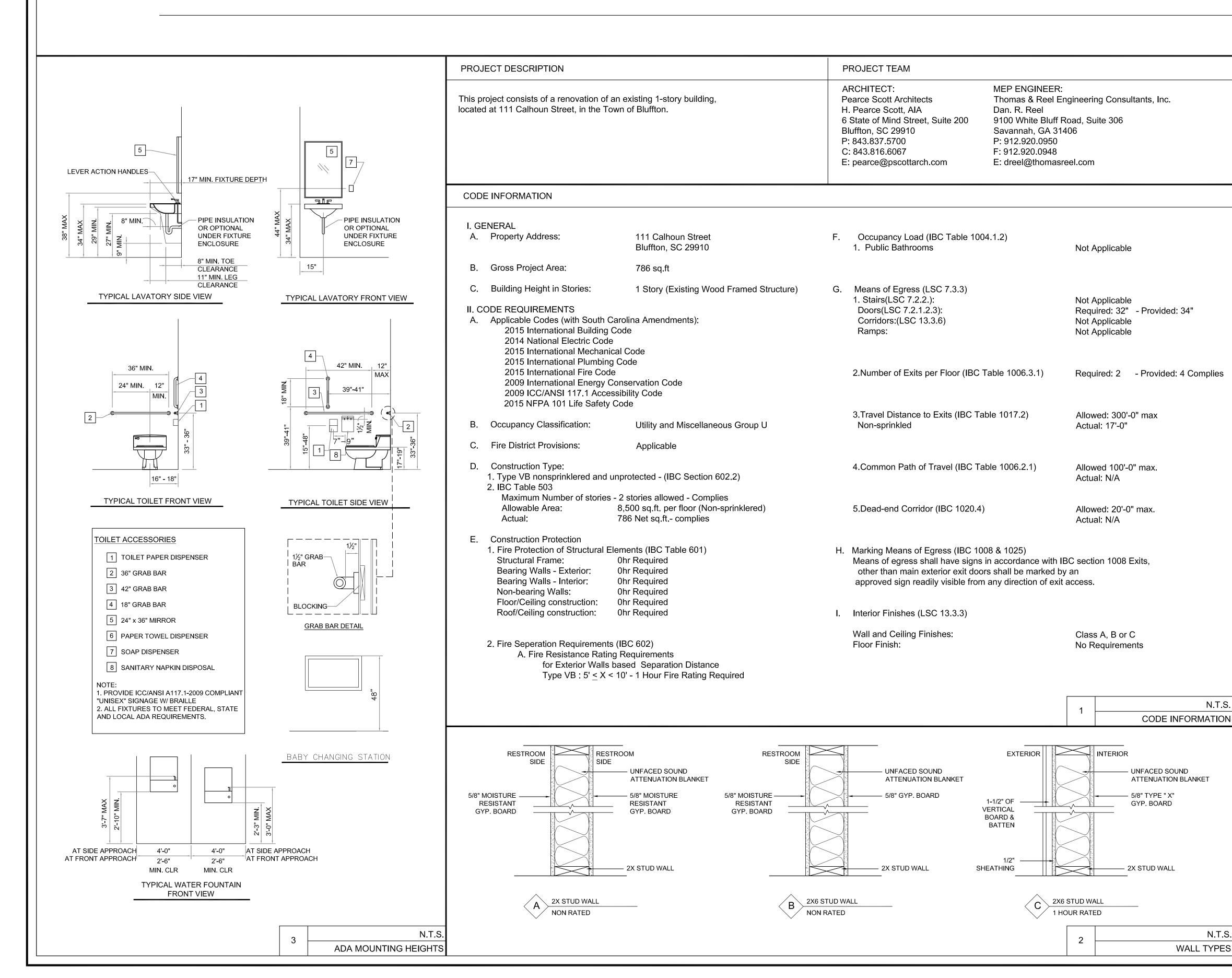
# Public Bathrooms - Remodel

111 Calhoun Street, Bluffton, SC 29910



CVR COVER SHEET & GENERAL DETAILS SITE SURVEY STRUCTURAL NOTES

STRUCTURAL NOTES STRUCTURAL NOTES SECTION DETAILS S2.1

DRAWING INDEX

MECHANICAL PLAN

ELECTRICAL NOTES ELECTRICAL RISER DIAGRAM & SIGN PLAN ELECTRICAL FLOOR PLAN

**ELECTRICAL SCHEDULES** PLUMBING NOTES PLUMBING WASTE PLAN

PLUMBING WATER PLAN P3.0 RISERS

SITE PLAN **EXISTING PLAN & EXTERIOR ELEVATIONS** PROPOSED PLAN & EXTERIOR ELEVATIONS

**FOUNDATION & ROOF PLANS** 

SECTION & DETAILS

#### **LOCATION MAP**



#### **GENERAL NOTES**

N.T.S.

N.T.S.

WALL TYPES

- 1. Approved numbers or addresses shall be provided in a position that is visible and legible from the street or roadway. Letters and numbers shall be a minimum of 4 inches in height with a minimum 0.5 inch stroke. (501.2)
- 2. Toilet rooms are required to have a smooth, hard, nonabsorbent surface that extends at least 4 inches onto walls. (1210.2.1)
- 3. Walls within 2 feet of urinals and water closets are required to be covered with a smooth, hard, nonabsorbent surface to a height of 4 feet. (1210.2.2)
- 4. Accessible routes shall coincide with or be located in the same area as a general circulation path. Where the circulation path is interior, the accessible route shall also be interior. (1104.5)
- 5. The minimum ramp width is 44 inches. If a ramp serves an occupant load of 50 or less. it may be 36 inches wide. If the ramp is serving a high occupant load, check exit requirements above for required width. (1012.5.1 & Table 1020.2) If the ramp is part of the means of egress, the maximum slope is 1:12. All other ramps may have a slope of 1:8 or less. (1012.2)
- 6. Landings shall be provided at the top, bottom, points of turning and at doors. (1012.6) Landings shall have a length of at least 60 inches in the direction of travel. (1012.6.3) The surface shall be of slip-resistant materials that are securely attached. (1012.7.1) Handrails shall be per stair requirements. (1012.8) A curb, rail, wall or barrier shall be provided that prevents the passage of a 4 inch diameter sphere, where any portion of the sphere is within 4 inches of the floor or ground surface. (1012.10.1)

DO NOT SCALE FROM DRAWINGS © 2019 PEARCE SCOTT ARCHITECTS

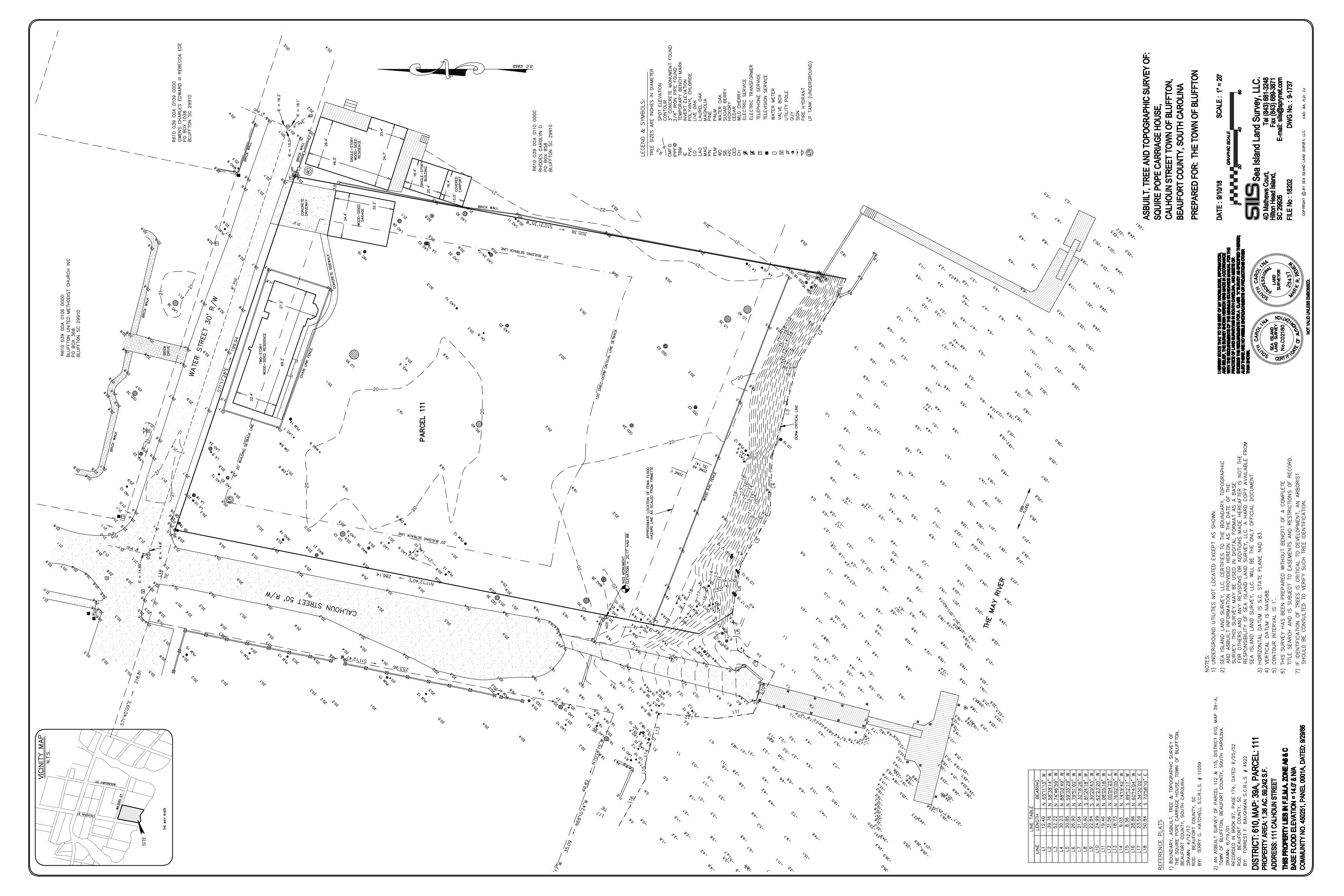


6 STATE OF MIND ST SUITE 200 BLUFFTON, SC 29910 843.837.5700



PROJECT NO.	1866
DATE	05.22.19
DRAWN BY	SDB
CHECKED BY	AWB

**COVER SHEET** & GEN. DETAILS SHEET NO.



# GENERAL STRUCTURAL NOTES **BUILDING DESIGN**

#### **DESIGN CRITERIA:**

1. GENERAL BUILDING CODE:

THE CONTRACT DOCUMENTS ARE BASED ON THE REQUIREMENTS OF THE 2015 INTERNATIONAL BUILDING CODE.

#### 2. DEAD LOADS:

A. ACTUAL WEIGHT OF PARTITIONS HAS BEEN APPLIED AS A UNIFORMLY-DISTRIBUTED SUPERIMPOSED DEAD LOAD. (15 PSF)

B. AN ALLOWANCE OF 5 PSF HAS BEEN APPLIED AS A UNIFORMLY-DISTRIBUTED SUPERIMPOSED DEAD LOAD FOR HANGING CEILING AND MECHANICAL LOADS. SUCH AS DUCTWORK, SPRINKLER PIPES, AND MECHANICAL EQUIPMENT LOADS.

C. THE ACTUAL WEIGHT OF THE EXTERIOR CLADDING OR CURTAIN WALL HAS BEEN APPLIED TO THE STRUCTURE.

D. DEAD LOADS HAVE BEEN ASSUMED IN THE DESIGN AS FOLLOWS:

UNIFORM DEAD LOAD (PSF)	
ROOF	20
UNIT FLOOR	30
AMENITY/CORRIDOR/BREEZEWAY	30
MECHANICAL/ELECTRICAL/TELECOM	30
PRIVATE BALCONY	45
CONCRETE DECK	PER MANU

#### 3. LIVE LOADS:

MINIMUM UNIFORMLY DISTRIBUTED LOADS									
<u>USE</u>	LIVE LOAD IN PSF	DEAD LOAD IN PSF							
UNINHABITABLE ATTICS WITHOUT STORAGE	10	20							
UNINHABITABLE ATTICS WITH LIMITED STORAGE	20	20							
HABITABLE ATTICS AND ATTICS SERVED WITH FIXED STAIRS	30	30							
BALCONIES (EXTERIOR) AND DECKS	40	45							
FIRE ESCAPES	40	30							
GUARDS AND HANDRAILS	200 lbs	-							
PASSENGER VEHICLE GARAGES	50	8000 lbs							
ROOMS OTHER THAN SLEEPING ROOMS	40	30							
SLEEPING ROOMS	40	30							
STAIRS	40	30							
ROOF DEAD LOAD: 20 PSF ROOF LIVE LOAD: 50 PSF									

THE STRUCTURAL DESIGN IS BASED ON THE GREATER OF THE UNIFORM LOADS NOTED ABOVE OR THE CONCENTRATED LOADS NOTED ABOVE (ASSUMED TO BE DISTRIBUTED OVER AN AREA 2.5 FEET SQUARE UNLESS SPECIFICALLY NOTED BELOW).

B. THE CONCENTRATED LOAD DUE TO TRUCK WHEELS ON SIDEWALKS, VEHICULAR DRIVEWAYS AND YARDS. SUBJECT TO TRUCKING, SHALL BE DISTRIBUTED OVER AN AREA OF 20 SQUARE INCHES.

C. THE MINIMUM CONCENTRATED LOAD ON STAIR TREADS SHALL BE 300 POUNDS ON AN AREA OF 4 SQUARE INCHES.

D. BALCONY RAILINGS AND GUARDRAILS SHALL BE DESIGNED TO RESIST A LOAD OF 50 POUNDS PER LINEAL FOOT (PLF) APPLIED HORIZONTALLY AT RIGHT ANGLES TO THE TOP RAIL. INTERMEDIATE RAILS, PANEL FILLERS AND THEIR CONNECTIONS SHALL BE DESIGNED TO WITHSTAND A LOAD OF 25 POUNDS PER SQUARE FOOT APPLIED HORIZONTALLY OVER THE ENTIRE TRIBUTARY AREA, INCLUDING OPENINGS AND SPACES BETWEEN RAILS.

E. HANDRAILS AND GUARDRAILS SHALL BE DESIGNED TO WITHSTAND A LOAD OF 200 POUNDS APPLIED IN ANY DIRECTION AT ANY POINT ON THE RAIL.

F. VEHICLE BARRIERS SHALL BE DESIGNED TO WITHSTAND A HORIZONTAL FORCE OF 10.000 (ULTIMATE) POUNDS APPLIED AT RIGHT ANGLES TO THE VEHICLE BARRIER AT A HEIGHT OF 27 INCHES ABOVE THE PARKING SURFACE. THE FORCE MAY BE DISTRIBUTED OVER A 1 FOOT SQUARE AREA.

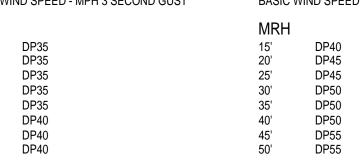
G. DESIGN LIVE LOADS HAVE BEEN REDUCED IN ACCORDANCE WITH THE GENERAL BUILDING CODE NOTED ABOVE SECTION 1607.91 AND 1607.11

# 4. WIND LOADS:

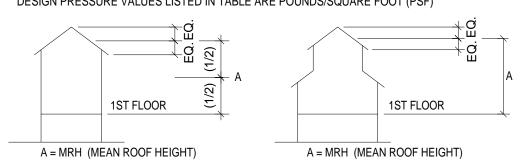
**EXPOSURE "C"** 

3 SECOND GUST WIND SPEED	V3s = 140 MF
(FIG R301.2(4)A)	
EQUIVALENT BASIC WIND SPEED	Vfm = 108 MF
(TAB R301.2(1))	

WIND ZONE - INLAND WIND ZONE - OPEN 140 MPH (B EXPOSURE) 140 MPH (C EXPOSURE) BASIC WIND SPEED - MPH 3 SECOND GUST BASIC WIND SPEED - MPH 3 SECOND GUST



DESIGN PRESSURE VALUES LISTED IN TABLE ARE POUNDS/SQUARE FOOT (PSF)



#### **DESIGN CRITERIA CONT'D:**

30'

5. SEISMIC CRITERIA: (2015 IBC - SECTION 1613, ASCE 7-10)

SITE CLASSIFICATION: SITE CLASS "D" RISK CATEGORY: II IMPORTANCE FACTOR: Ic = 1 SDS = 0.404SD1 = 0.217SEISMIC DESIGN CATEGORY (SDC): "D"

OWNER HOLDS HARMLESS THE ENGINEER FOR ANY & ALL FOUNDATION SETTLEMENT. FOR A SUMMARY OF SEISMIC DESIGN PARAMETERS AND LIQUEFACTION MITIGATION/ GROUND IMPROVEMENT OPTIONS SEE ATTACHMENT D OF GEOTECHNICAL REPORT FOR SEISMIC INFORMATION.

#### **GENERAL CONSTRUCTION NOTES:**

1. ALL WORK UNDER THIS CONTRACT SHALL CONFORM TO ALL CODES, ORDINANCES, AND REGULATIONS OF ALL AUTHORITIES HAVING JURISDICTION OVER THIS WORK WHETHER SHOWN IN THESE DOCUMENTS OR NOT.

2. THE INTENT OF THESE DRAWINGS IS TO SHOW ITEMS NECESSARY TO COMPLETE THE STRUCTURE. FOR ITEMS, METHODS, AND/OR MATERIALS NOT SHOWN; THE MINIMUM REQUIREMENTS OF THE 2015 INTERNATIONAL BUILDING CODE SHALL GOVERN, AS AMENDED BY THE STATE AND LOCAL GOVERNING AGENCIES OF THE PROJECT LOCATION.

3. IF ANY OF THE GOVERNING CODES ARE UPDATED, CHANGED, AND/OR MODIFIED AFTER THE SUBMITTAL OF THE DRAWINGS TO THE OWNER AND/OR ARCHITECT AND PRIOR TO THE ISSUANCE OF A BUILDING PERMIT, THEN THE DRAWINGS MUST BE RESUBMITTED TO THE ENGINEER FOR REVIEW, REEXAMINATION AND/OR REEVALUATION.

4. CONTRACTOR SHALL SECURE AND PAY FOR ALL NECESSARY PERMITS AND INSPECTIONS.

5. CONTRACTOR SHALL SECURE AND PAY FOR ALL INSURANCE CALLED FOR BY LAW AND AS DIRECTED BY FUNDING INSTITUTION. COPIES OF INSURANCE CERTIFICATES SHALL BE FILED WITH THE ARCHITECT.

6. GENERAL CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL WORK WITH ALL TRADES INVOLVED.

7. GENERAL CONTRACTOR SHALL VERIFY ALL ELEVATIONS, DIMENSIONS AND LOCATIONS OF EXISTING FEATURES BEFORE STARTING WORK; NOTIFY ARCHITECT/ENGINEER OF ANY DISCREPANCIES.

8. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH IBC 2015 CODE, OSHA, ACI AISC AND AITC CODES AND REQUIREMENTS AND ALL APPLICABLE STANDARDS.

9. GENERAL CONTRACTOR SHALL REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING AND VENDOR DRAWINGS FOR COORDINATION OF **EQUIPMENT IN AND/OR BENEATH SLABS.** 

10. CONTRACTOR TO PROVIDE ADEQUATE TEMPORARY BRACING FOR STRUCTURE AND ITS INDIVIDUAL MEMBERS SO THAT IT WILL BE STABLE DURING ALL STAGES OF CONSTRUCTION. THE STRUCTURE IS DESIGNED FOR A COMPLETED CONDITION ONLY AND THEREFORE REQUIRES ADDITIONAL TEMPORARY SUPPORTS TO MAINTAIN STABILITY BEFORE COMPLETION. ROOF DECKING AND WALL SHEATHING WILL BE INSTALLED AND ALL JOISTS AND GIRDERS SECURED PRIOR TO TEMPORARY BRACING REMOVAL.

11. TEMPORARY BRACING DESIGN, INSTALLATION AND MAINTENANCE WILL BE AT ALL TIMES THE RESPONSIBILITY OF THE CONTRACTOR AND/OR ERECTOR. TEMPORARY BRACING IS NOT A DESIGN FUNCTION OF THE STRUCTURAL ENGINEER.

12. ANY WORK PERFORMED IN CONFLICT WITH THE CONTRACT DOCUMENTS OR ANY CODE REQUIREMENTS SHALL BE CORRECTED BY THE CONTRACTOR AT THEIR OWN EXPENSE AND AT NO EXPENSE TO THE OWNER, ARCHITECT OR ENGINEER.

13. DRAWINGS ARE NOT TO BE SCALED. WRITTEN DIMENSIONS SHALL GOVERN CONSTRUCTION. THE CONTRACTOR SHALL VERIFY DIMENSIONS WITH THE ARCHITECTURAL DRAWINGS AND THE SITE CONDITIONS PRIOR TO CONSTRUCTION. ANY DISCREPANCIES SHALL BE BROUGHT TO THE ATTENTION OF THE ARCHITECT AND THE ENGINEER SO THAT CLARIFICATION CAN BE PROVIDED.

14. THE STRUCTURAL DRAWINGS REPRESENT THE FINISHED STRUCTURE. THE STRUCTURAL DRAWINGS DO NOT INDICATE THE METHOD OR SEQUENCE OF CONSTRUCTION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR AND PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, SHORING FOR LOADS DUE TO CONSTRUCTION EQUIPMENT, ETC. THE STRUCTURAL ENGINEER SHALL NOT BE RESPONSIBLE FOR THE CONTRACTOR'S MEANS, METHODS, TECHNIQUES AND SEQUENCES FOR PROCEDURE OF CONSTRUCTION, OR THE SAFETY PRECAUTIONS AND THE PROGRAMS INCIDENT THERETO (NOR SHALL OBSERVATION VISITS TO THE SITE INCLUDE INSPECTION OF THESE ITEMS). THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND IMPLEMENTATION OF ALL SCAFFOLDING, BRACING AND SHORING.

15. NOTES AND DETAILS ON DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN. CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT

#### **GENERAL CONSTRUCTION NOTES CON'T:**

16. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL STRUCTURAL NOTES AND SPECIFICATIONS, THE GREATER REQUIREMENTS SHALL GOVERN.

17. ANY DELEGATED ENGINEERING DESIGN TO BE PROVIDED BY OTHERS AND SUBMITTED FOR REVIEW SHALL MEET THE CRITERIA HEREIN, AND SHALL BEAR THE SEAL OF AN ENGINEER REGISTERED IN THE STATE OF THE PROJECT

18. ALTERNATE PRODUCTS OF SIMILAR STRENGTH, NATURE AND FORM FOR SPECIFIED ITEMS MAY BE SUBMITTED WITH ADEQUATE TECHNICAL DOCUMENTATION TO THE ARCHITECT/ENGINEER FOR REVIEW. ALTERNATE MATERIALS THAT ARE SUBMITTED WITHOUT ADEQUATE TECHNICAL DOCUMENTATION OR THAT SIGNIFICANTLY DEVIATE FROM THE DESIGN INTENT OF MATERIALS SPECIFIED MAY BE RETURNED WITHOUT REVIEW.

19. NO STRUCTURAL MEMBER SHALL BE CUT OR NOTCHED OR OTHERWISE REDUCED IN STRENGTH UNLESS APPROVED BY THE STRUCTURAL ENGINEER.

20. DISSIMILAR METALS MUST BE SEPARATED BY A COATING SUCH AS ECK CORROSION COATING OR APPROVED EQUIVALENT OR NEOPRENE GASKET MATERIAL TO PREVENT GALVANIC ACTION.

#### CAST IN PLACE CONCRETE, FOUNDATIONS AND FLOOR SLAB NOTES

1. ALL CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI IN 28 DAYS, UNLESS NOTED OTHERWISE. ALL CONCRETE SHALL BE PLACED IN ACCORDANCE WITH ACI 318.

2. MIXING AND PLACING OF CONCRETE SHALL BE PROVIDED WITH CONSIDERATION TO WEATHER CONDITIONS AT THE TIME OF CONSTRUCTION. FOR COLD WEATHER IN ACCORDANCE WITH ACI 306: FOR HOT WEATHER IN ACCORDANCE WITH ACI 305.

3. CURING METHODS SHALL BE SELECTED BY CONTRACTOR AND ARCHITECT/ENGINEER APPROVED TO SUIT WEATHER CONDITIONS AT THE TIME OF CONSTRUCTION

4. WEATHER CONDITIONS SHALL NOT BE ACCEPTED AS A VALID REASON FOR INCORRECT OR OTHERWISE POOR QUALITY OF CONCRETE OR CONCRETE SURFACES.

5. CONCRETE FINISHES SHALL BE SELECTED TO ACCOMMODATE FLOOR COVERINGS. SCRATCHED FINISH FOR SURFACES INTENDED TO RECEIVE BOND APPLIED CEMENTIOUS APPLICATIONS. TROWELED FINISH FOR EXPOSED INTERIOR SURFACES. NONSLIP, LIGHT BROOM FINISH FOR EXTERIOR EXPOSED SURFACES.

6. ALL FINISHES SHALL BE MINIMUM CLASS B TOLERANCES, EXCEPT FOR EXPOSED CONCRETE SURFACES WHICH SHALL MEET CLASS A REQUIREMENTS IN ACCORDANCE WITH ACI 301.

7. GENERAL CONTRACTOR SHALL INVESTIGATE ACTUAL LOCATIONS OF UNDERGROUND LINES AND UTILITIES BEFORE EXCAVATING. ALL EXCAVATIONS NEAR THESE LINES SHALL BE CARRIED OUT WITH EXTREME CAUTION.

8. UNLESS OTHERWISE NOTED, ALL DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL CONFORM TO THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES ACI SP-66. LATEST EDITION.

9. ALL BAR SPLICES SHALL BE CLASS C TENSION LAP SPLICES, UNLESS OTHERWISE SHOWN. PROVIDE STD. CORNER BARS AT ALL CORNERS.

10. PROVIDE MINIMUM OF 3" OF CONCRETE COVER FOR REINFORCING STEEL WHEN THE CONCRETE IS PLACED DIRECTLY AGAINST GROUND.

11. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185.

12. WELDED WIRE FABRIC REINFORCEMENT MUST LAP ONE FULL MESH AT SIDE AND END LAPS AND BE WIRED TOGETHER OR CONCRETE IS TO BE FIBER REINFORCED.

13. ALL SLAB AND FOUNDATION REINFORCEMENT SHALL BE TIED IN PLACE PRIOR TO PLACING CONCRETE.

14. HOLD UP REINFORCING WITH TYPICAL STANDARD CHAIRS.

15. REINFORCEMENT SHOWN SHALL BE USED AS DETAILING GUIDE. PROVIDE RE-BARS AS REQUIRED TO SUIT SPECIAL CONDITIONS.

16. CONTRACTOR SHALL COORDINATE EXACT ANCHOR BOLT LOCATIONS AND LAYOUT WITH BUILDING CODE REQUIREMENTS AND THESE DRAWINGS

17. FLOOR JOINTS SHALL BE LOCATED AS RECOMMENDED BY ACI 318. CONSTRUCTION JOINTS SHALL BE LOCATED AS REQUIRED FOR WORK SEQUENCE.

18. FOR CONCRETE SLAB, CONTROL JOINTS SHOULD BE SPACED 8-12 FEET APART AND CUT 1" DEEP.

19. THE DESIGN OF ALL REINFORCED CONCRETE SHALL CONFORM TO ACI 318-11, IN ACCORDANCE WITH THE GENERAL BUILDING CODE NOTED ABOVE. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318, ACI 318.1, AND ACI 301. CONCRETE TEST REPORTS SHALL BE AVAILABLE AT THE JOB SITE.

20. CONCRETE MIX DESIGNS SHALL BE ESTABLISHED BY THE SUPPLIER IN ACCORDANCE WITH ACI 318-11. MIX DESIGNS SHALL BE SUBMITTED WITH BACK-UP DATA PER ACI 318-11 TO THE ARCHITECT FOR REVIEW PRIOR TO CONCRETE PLACEMENT. THE PROPOSED MATERIALS AND MIX SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE OWNER'S TESTING LABORATORY. IT IS THE CONTRACTOR'S RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH.

21. ANCHOR RODS

UNLESS INDICATED OTHERWISE IN THE COLUMN SCHEDULE OR ON THE DRAWINGS, ANCHOR RODS SHALL CONFORM TO ASTM F1554 GRADE 36. SEE ANCHOR BOLT SCHEDULE FOR ANCHOR BOLT DIAMETERS, QUANTITY AND TYPE OF NUTS, AND REQUIRED EMBEDMENT LENGTH. DAMAGE THREADS AT TWO PLACES BELOW THE NUT TO PREVENT LOOSENING.

22. GROUT:

GROUT BELOW STRUCTURAL STEEL BASE PLATES SHALL BE NON-METALLIC, NON-SHRINK GROUT WITH A MINIMUM STRENGTH OF:

**BEARING MATERIAL** GROUT STRENGTH 3,000 PSI CONCRETE 6,000 PSI 4.000 PSI CONCRETE 8,000 PSI

#### **FOUNDATION:**

1. SOIL BEARING CAPACITY DETERMINE TO BE 2000 PSF. OWNER HOLDS HARMLESS THE ENGINEER FOR ANY & ALL FOUNDATION SETTLEMENT.

2. CONTRACTOR SHALL OBTAIN A COPY OF THE ABOVE REFERENCED GEOTECHNICAL ENGINEERING REPORT AND COMPLY WITH ITS RECOMMENDATIONS.

THE SOILS ENGINEER OF RECORD SHALL CERTIFY IN WRITING THAT ALL FOUNDATIONS WERE PLACED AND COMPLETED AS SPECIFIED.

4. GEOTECHNICAL ENGINEER SHALL VERIFY THE ASSUMED BEARING PRESSURE CONDITION AND / OR ADEQUACY OF ALL SUBGRADES, FILLS AND BACKFILLS BEFORE PLACEMENT OF FOUNDATIONS, FOOTINGS, SLABS, WALLS, FILLS, BACKFILLS, ETC.

5. UNDER SLAB DRAINAGE SYSTEMS, IF REQUIRED, ARE NOT SHOWN ON THE STRUCTURAL DRAWINGS. DRAINAGE SYSTEMS SHALL BE PROVIDED AS DETERMINED AND RECOMMENDED BY THE GEOTECHNICAL ENGINEER OF RECORD. CONTRACTOR TO PROVIDE FOR DE-WATERING IN EXCAVATIONS FROM EITHER SURFACE WATER. GROUND WATER OR SEEPAGE.

6. CONTRACTOR / OWNER TO COORDINATE THE LOCATION(S), SIZE(S) AND INSTALLATION OF THE AGGREGATE COLUMNS / AGGREGATE PIERS WITH THE GEOTECHNICAL CONTRACTOR.

7. SOIL BELOW INTERIOR CONCRETE SLABS ON GRADE AND ANY FILL WITHIN 10'-0" OF BUILDING LIMIT SHALL BE COMPACTED TO 98% OF STANDARD PROCTOR (ASTM D698) IN FINAL TWO (2) FEET OF FILL AND 95% OF STANDARD PROCTOR BELOW. ALL FOOTINGS SHOULD BEAR ON ORIGINAL UNDISTURBED SOIL OR CONTROLLED FILL.

8. SUBGRADE PREPARATION FOR SLAB ON GRADE SHALL BE PERFORMED IN ACCORDANCE WITH GEOTECHNICAL ENGINEERING REPORT.

9. SIDES OF FOUNDATIONS SHALL BE FORMED UNLESS CONDITIONS PERMIT EARTH FORMING. FOUNDATIONS POURED AGAINST THE EARTH REQUIRE THE FOLLOWING PRECAUTIONS: SLOPE SIDES OF EXCAVATIONS AS APPROVED BY GEOTECHNICAL ENGINEER AND CLEAN UP SLOUGHING BEFORE AND DURING CONCRETE PLACEMENT.

10. WHEN FOOTING STEPS ARE NECESSARY, THEY SHALL BE NO STEEPER THAN ONE **VERTICAL TO TWO HORIZONTAL** 

11. GRADE BEAMS:

A. BOTH VERTICAL FACES OF ALL GRADE BEAMS SHALL BE FORMED FOR FULL BEAM DEPTH.

B. GRADE BEAM REINFORCING SHALL BE SUPPORTED WITH A MINIMUM OF 3 INCHES CLEAR COVER USING BEAM BOLSTERS DESIGNED AND MANUFACTURED FOR SUPPORT ON SOIL.

12. CONTRACTOR SHALL PROVIDE AND INSTALL ALL CRIBBING, SHEATHING AND SHORING REQUIRED TO SAFELY RETAIN THE EARTH BANKS.

13. CONTRACTOR SHALL PROTECT ALL UTILITY LINES, ETC. ENCOUNTERED DURING **EXCAVATION AND BACKFILLING.** 

14. ALL EXCAVATIONS SHALL BE PROPERLY BACKFILLED, BUT NOT BEFORE CONCRETE HAS ATTAINED FULL DESIGN STRENGTH. NO BACKFILL SHALL BE PLACED AGAINST CONCRETE WALLS UNTIL CONCRETE HAS ATTAINED FULL 28-DAY STRENGTH.

15. BASEMENT WALLS (NON-CANTILEVER CAST-IN-PLACE WALLS) SHALL BE BRACED AGAINST LATERAL THRUST – SUCH BRACING SHALL REMAIN IN PLACE UNTIL SLAB ON EARTH (AND SUPPORTED SLAB, IF ANY) HAS BEEN PLACED AND GAINED 75% COMPRESSIVE STRENGTH.

16. CANTILEVER WALLS SHALL BE BRACED AGAINST LATERAL THRUST DURING BACKFILLING UNLESS COMPACTION IS PERFORMED ONLY BY HAND OPERATED EQUIPMENT IN ZONE WITHIN 5 FEET OF BACK WALL. FOUNDATION WALLS, RETAINING WALLS, AND BASEMENT WALLS HAVE NOT BEEN DESIGNED TO RESIST LATERAL LOADS DUE TO CONSTRUCTION EQUIPMENT SURCHARGE.

#### 17. CONSTRUCTION COORDINATION:

A. THE SLAB-ON-GRADE WAS NOT DESIGNED FOR CRANE LOADS, WHICH WOULD REQUIRE AN INCREASE IN SLAB STRENGTH, THICKNESS, AND REINFORCING. THE CONTRACTOR IS CAUTIONED AGAINST LOADING THE SLAB-ON-GRADE (AS SHOWN ON THESE DRAWINGS) WITH CRANE LOADS. SHOULD CONSTRUCTION SEQUENCING REQUIRE THE SLAB-ON-GRADE TO RESIST CRANE LOADS. THE CONTRACTOR IS REQUIRED TO PRODUCE AND SUBMIT A COMPLETE DESIGN FOR THE NECESSARY SLAB-ON-GRADE, INCLUDING CALCULATIONS SIGNED AND SEALED BY A PROFESSIONAL ENGINEER.

B. THE CONCRETE RETAINING WALLS HAVE <u>NOT</u> BEEN DESIGNED TO RESIST LATERAL LOADS RESULTING FROM CRANE LOADS APPLIED IN CLOSE PROXIMITY TO WALLS. THE CONTRACTOR SHALL KEEP ALL CRANE TRACKS AWAY FROM CONCRETE RETAINING WALLS A MINIMUM OF THE WALL HEIGHT OR 15'-0", WHICHEVER IS GREATER.

C. THE CONTRACTOR SHALL DETERMINE THE EXTENT OF CONSTRUCTION DEWATERING NECESSARY FOR ANY REQUIRED EXCAVATION. THE CONTRACTOR SHALL SUBMIT THE PROPOSED PLAN FOR CONSTRUCTION DEWATERING TO THE GEOTECHNICAL ENGINEER FOR REVIEW, PRIOR TO COMMENCEMENT OF THE EXCAVATION.

#### **REINFORCED CONCRETE:**

1. THE DESIGN OF ALL REINFORCED CONCRETE SHALL CONFORM TO ACI 318-11. IN ACCORDANCE WITH THE GENERAL BUILDING CODE NOTED ABOVE. ALL CONCRETE CONSTRUCTION SHALL CONFORM TO ACI 318, ACI 318.1, AND ACI 301. CONCRETE TEST REPORTS SHALL BE AVAILABLE AT THE JOB SITE.

2. CONCRETE MIX DESIGNS SHALL BE ESTABLISHED BY THE SUPPLIER IN ACCORDANCE WITH ACI 318-11. MIX DESIGNS SHALL BE SUBMITTED WITH BACK-UP DATA PER ACI 318-11 TO THE ARCHITECT FOR REVIEW PRIOR TO CONCRETE PLACEMENT. THE PROPOSED MATERIALS AND MIX SHALL BE FULLY DOCUMENTED AND REVIEWED BY THE OWNER'S TESTING LABORATORY. IT IS THE CONTRACTOR'S RESPONSIBILITY FOR OBTAINING THE REQUIRED DESIGN STRENGTH.

3. ALL CONCRETE SHALL CONFORM TO THE REQUIREMENTS SPECIFIED IN THESE DRAWINGS.

A. ALL CONCRETE MIX DESIGNS SHALL BE PROPORTIONED FOR A MAXIMUM ALLOWABLE UNIT SHRINKAGE OF .03% AS DETERMINED BY ASTM C157 (MEASURED AT 28 DAYS AFTER CURING IN LIME WATER WITH AIR STORAGE).

B. ALL CONCRETE EXPOSED TO THE WEATHER SHALL CONTAIN 6% TO 8% ENTRAINED AIR.

C. THE USE OF CALCIUM CHLORIDE, CHLORIDE IONS, OR OTHER SALTS IN CONCRETE IS NOT PERMITTED.

STRUCTURAL No. 3624

0

CREORING SC  $\overline{\mathbf{O}}$ AR 

JOUN NEIGH JUFFT SC CALFOWN

**REVISIONS** MARK DATE DESCRIPTION

**WRIGHT** 

2

**SNO** 

~

0

Ш

S

<u>S</u>

1809-1714-03 TREC No. 5/16/2019 2:38:42 PM Date Printed Date Issued 11/30/2018

Designed By

Checked by

Approved by

As indicated

GENERAL NOTES I

#### **REINFORCED CONCRETE CONT'D:**

- D. PORTLAND CEMENT SHALL CONFORM TO ASTM C150, TYPE 1.
- 4. REFER TO ARCHITECTURAL DRAWINGS FOR CLIPS, GROOVES GROUNDS, ETC., TO BE CAST IN CONCRETE AND CONCRETE FINISHES. CHAMFER OR ROUND ALL EXPOSED CORNERS MINIMUM 3/4".

5. SLEEVE PLUMBING OPENINGS IN SLABS BEFORE PLACING CONCRETE AND BEND REINFORCING AROUND SLEEVES. CORING NOT PERMITTED IN FLOOR SLABS, UNLESS APPROVED BY STRUCTURAL ENGINEER. DO NOT PLACE PIPES OR DUCTS EXCEEDING ONE-THIRD THE SLAB OR WALL THICKNESS WITH THE SLAB OR WALL UNLESS SPECIFICALLY SHOWN AND DETAILED ON STRUCTURAL DRAWINGS. SEE MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR LOCATION OF SLEEVES, ACCESSORIES,

#### REINFORCING STEEL

- A. ALL REINFORCING STEEL SHALL CONFORM TO ASTM A615 GRADE 60 UNLESS NOTED OTHERWISE ON THESE DRAWINGS OR IN THE NOTES BELOW.
- B. PROVIDE REINFORCING STEEL CONFORMING TO ASTM A706 FOR ALL REINFORCING STEEL REQUIRED TO BE WELDED AND WHERE NOTED ON THESE DRAWINGS.
- C. PROVIDE GALVANIZED REINFORCING STEEL IN ACCORDANCE WITH ASTM A767 CLASS II (2.0 OZ ZINC PER SQUARE FOOT), WHERE NOTED ON THESE DRAWINGS.
- D. PROVIDE EPOXY-COATED REINFORCING STEEL CONFORMING TO ASTM
- WHERE NOTED ON THESE DRAWINGS.
- E. PROVIDE DEFORMED BAR ANCHORS CONFORMING TO ASTM A496 (75,000 PSI YIELD STRENGTH) WHERE NOTED ON THESE DRAWINGS. REINFORCING BARS SHALL NOT BE SUBSTITUTED FOR DEFORMED BAR ANCHORS.
- F. ALL REINFORCING BAR ENDS TO BE MADE COLD.
- G. PROVIDE WELDED SMOOTH WIRE REINFORCEMENT CONFORMING TO ASTM A185 (65,000 PSI YIELD STRENGTH) AND SHALL BE PROVIDED IN FLAT SHEETS WHERE NOTED ON THESE DRAWINGS.
- H. PROVIDE WELDED DEFORMED WIRE REINFORCEMENT CONFORMING TO ASTM A497 (70,000 PSI YIELD STRENGTH) WHERE NOTED ON THESE DRAWINGS.
- 7. WHERE WELDED WIRE REINFORCEMENT IS SPECIFIED, IT SHALL BE CONTINUOUS ACROSS THE ENTIRE CONCRETE SURFACE WITHOUT INTERRUPTION BY BEAMS, GIRDERS, OR COLUMNS. SPLICES SHALL BE LAPPED ONE CROSS WIRE SPACING PLUS 2 INCHES
- 8. PROVIDE WELDED SMOOTH WIRE REINFORCEMENT (6X6 W2.9XW2.9 MINIMUM) IN ALL TOPPING SLABS AND HOUSEKEEPING SLABS (SUPPORTING MECHANICAL UNITS) UNLESS SPECIFIED OTHERWISE IN THESE DRAWINGS.
- 9. UNSCHEDULED BEAMS AND SLABS, INCLUDING GRADE BEAMS, SHALL HAVE CONTINUOUS TOP BARS LAPPED AT MIDSPAN BETWEEN SUPPORTS WITH A CLASS A TENSION SPLICE. BOTTOM BARS SHALL BE LAPPED AT THE SUPPORTS WITH A CLASS A TENSION SPLICE.
- 10. BARS SHALL BE IN CONTACT WHEN FORMING A LAP SPLICE, UNLESS NOTED OTHERWISE.
- 11. PROVIDE CORNER BARS AT ALL TURN-DOWN SLAB CORNERS AND C.I.P. CONCRETE WALL CORNERS. PROVIDE 30" LAP BETWEEN CORNER BARS AND MAIN REINFORCING.
- 12. VERTICAL BARS PLACED ON THE DIRT-FACING SIDE OF BASEMENT WALLS SHALL BE SPLICED AT MIDSPAN BETWEEN SUPPORTS WITH A CLASS A TENSION SPLICE. VERTICAL BARS PLACED OPPOSITE THE DIRT-FACING SIDE SHALL BE LAPPED AT THE SUPPORTS WITH A CLASS A TENSION SPLICE. HORIZONTAL BARS SHALL HAVE A LAP SPLICE OF 30 BAR DIAMETERS.
- 13. REINFORCING STEEL MARKED "CONTINUOUS" SHALL BE LAPPED WITH CLASS "B" LAP SPLICE UNLESS SPECIFICALLY DETAILED OTHERWISE. PROVIDE CONTINUOUS REINFORCEMENT WHERE EVER POSSIBLE; SPLICE ONLY AS SHOWN OR APPROVED; STAGGER SPLICES WHERE POSSIBLE; USE TENSION SPLICE (CLASS "B") UNLESS NOTED OTHERWISE. DOWELS SHALL MATCH THE SIZE AND SPACING OF THE WALL OR COLUMN SPECIFIED REINFORCEMENT AND SHALL BE LAPPED WITH TENSION SPLICES (CLASS "B"), UNLESS NOTED OTHERWISE.
- 14. HORIZONTAL REINFORCEMENT IN FOOTINGS, TURNDOWN SLABS AND WALLS SHALL BE CONTINUOUS AROUND CORNERS. HORIZONTAL REINFORCEMENT SHALL CONTINUE AT BENDS AND CORNERS WITH BEND TO FAR FACE OF INTERSECTING ELEMENT IN EACH DIRECTION. ADDITIONAL HORIZONTAL CORNER BARS OF SAME SIZE AND SPACING MAY BE PROVIDED. PROVIDE CORNER BARS AT ALL TURN-DOWN SLAB CORNERS AND C.I.P. CONCRETE WALL CORNERS. PROVIDE CLASS B LAP BETWEEN CORNER BARS AND MAIN REINFORCING.
- 15. DETAILING, FABRICATION AND PLACING REINFORCING STEEL AND ACCESSORIES SHALL BE IN ACCORDANCE WITH ACI 315. "DETAILS AND DETAILING OF CONCRETE REINFORCEMENT" DETAILING MANUAL. SUBMIT SHOP DRAWINGS FOR APPROVAL, SHOWING ALL FABRICATION DIMENSIONS AND LOCATIONS FOR PLACING REINFORCING STEEL AND ACCESSORIES. DO NOT BEGIN FABRICATION UNTIL SHOP DRAWINGS ARE COMPETED AND REVIEWED.
- 16. CONTRACTORS SHALL NOT PLACE ANY REINFORCING UNTIL APPROVED SHOP DRAWINGS ARE RECEIVED ON THE JOB. SUBMIT SHOP DRAWINGS WITH ADEQUATELY DEPICT THE REINFORCING BAR SIZES AND PLACEMENT. WRITTEN DESCRIPTION OF REINFORCEMENT WITHOUT ADEQUATE SECTIONS, ELEVATIONS, AND DETAILS IS NOT ACCEPTABLE.
- 17. ALL REINFORCING BARS, ANCHOR BOLTS AND OTHER CONCRETE INSERTS SHALL BE SECURED IN POSITION PRIOR TO PLACING CONCRETE, TIE ALL REINFORCING STEEL AND EMBEDMENTS SECURELY IN PLACE PRIOR TO PLACING CONCRETE. PROVIDE SUFFICIENT SUPPORTS TO MAINTAIN THE POSITION OF REINFORCEMENT WITHIN SPECIFIED TOLERANCES DURING ALL CONSTRUCTION ACTIVITIES.

#### REINFORCED CONCRETE CONT'D

- 18. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 4000 PSI
- 19. ALL CONCRETE WORK SHOULD BE IN ACCORDANCE WITH ACI 318 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
- 20. ALL REINFORCING STEEL TO BE NEW DOMESTIC DEFORMED BILLET STEEL CONFORMING TO ASTM A-615 GRADE 60 EXCEPT THAT TIES MAY BE DOMESTIC STEEL CONFORMING TO ASTM A-615 GRADE 60.
- 21. WELDED WIRE FABRIC SHALL CONFORM TO A-185. POLYPROPYLENE FIBERMESH OR FIBER STRANDS MAY BE SUBSTITUTED FOR WELDED WIRE FOR NON STRUCTURAL SLAB REINFORCEMENT.
- 22. CONTRACTOR SHALL VERIFY LOCATIONS OF ALL OPENINGS, SLEEVES, ANCHOR BOLTS, INSERTS, ETC. AS REQUIRED BY OTHER TRADES BEFORE CONCRETE IS PLACED. NO SLEEVES. OPENINGS OR INSERTS MAY BE PLACED IN BEAMS OR SLABS UNLESS APPROVED BY THE ENGINEER AND SHOWN ON SHOP DRAWINGS.
- 23. ALL REINFORCING DETAILS TO CONFORM TO "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES, ACI 315," UNLESS DETAILED OTHERWISE ON STRUCTURAL DRAWINGS.
- 24. PROVIDE SPACERS, CHAIRS, BOLTERS, ETC. AS REQUIRED TO ASSEMBLE PLACE AND SUPPORT ALL REINFORCING IN PLAN.
- 25. PROVIDE CORNER BARS FOR ALL FOOTINGS, ALL FOOTING DOWEL BARS SHALL HAVE A STANDARD 90 DEGREE HOOK AND SHALL BE EMBEDDED 5" INTO INTERIOR FOOTINGS AND A MINIMUM OF 7" INTO ALL OTHERS. DOWEL BARS LAP VERTICAL WALL REINFORCEMENT A MINIMUM OF 25".
- 26. ALL LUMBER IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED.
- 27. SOIL UNDER SLAB TO BE PRETREATED FOR TERMITES AS PER THE 2015 INTERNATIONAL BUILDING CODE.
- 28. ALL FOOTINGS TO BE DESIGNED FOR AN ASSUMED SOIL PRESSURE OF 2500 P.S.F. OWNER & CONTRACTOR TO HAVE SOIL PRESSURE VERIFIED AND IF CONTACT PRESSURE IS LESS THAN 2500 P.S.F. FOUNDATION SHALL BE REDESIGNED. COMPACT FILL SOIL TO 95% STANDARD PROCTOR DENSITY DOWN TO 2'-0" BELOW ALL SLABS & FOOTINGS.
- 29. PLUMBING WASTE PIPE PENETRATING FOOTING SHALL BE CAST IRON OR SCH 40 PVC. GROUT WORK AS PER ASTM C47613. MASONRY WORK AS PER ACI 530.1-02

#### **CONCRETE MASONRY:**

- 1. GROUT FOR CONCRETE MASONRY WALL(S) SHALL CONFORM TO ASTM C476. GROUT SHALL BE CONSOLIDATED BY THOROUGHLY RODDING ALL CELLS.
- 2. GROUT PLACEMENT SHALL BE LOW-LIFT. THE CONSTRUCTION JOINTS ARE CREATED BY THE LEVEL OF GROUT STOPPING AT 1-1/2" FROM TOP OF MASONRY AND THE STEEL REINFORCING PROJECTING ABOVE THE TOP COURSE FOR A SUFFICIENT HEIGHT TO PROVIDE A LAP AT THE SPLICE OF 48 BAR DIAMETERS. THE CONSTRUCTION JOINT SHALL BE LOCATED 3'-0" MINIMUM FROM TOP AND BOTTOM OF STRUCTURAL ELEMENTS SUCH AS SLABS, ROOFS, ETC.
- 3. CONCRETE MASONRY WALLS SHALL BE TEMPORARILY BRACED DURING ERECTION. REMOVE TEMPORARY BRACING ONLY AFTER WALLS ARE CONNECTED TO SUPPORTING ELEMENTS.
- 4. WHERE APPLICABLE, ALL CONCRETE BLOCK BELOW THE DESIGN FLOOD ELEVATION SHALL HAVE ALL CELLS FILLED WITH GROUT. SEE ARCH. AND CIVIL DRAWINGS FOR ADDITIONAL INFORMATION.
- 5. ALL CELLS SHALL BE GROUTED SOLID.
- 6. MAXIMUM CONTROL JOINT SPACING IN MASONRY WALL 30'-0" UNLESS NOTED. SEE ARCHITECTURAL DRAWINGS FOR LOCATION.
- 7. UNLESS SPECIFICALLY NOTED OTHERWISE, ALL CMU WALLS SHALL BE REINFORCED.
- 8. DOWEL ALL CMU MASONRY WALLS INTO GRADE BEAMS, SPREAD FOOTINGS. CONTINUOUS FOOTINGS. THICKENED SLAB ELEMENTS, AND/OR CONCRETE FOUNDATION WALLS. DOWELS WITH STANDARD HOOKS SHALL HAVE A MINIMUM EMBEDMENT OF 9". STRAIGHT DOWELS SHALL HAVE A MINIMUM EMBEDMENT EQUAL TO A CLASS "B" TENSION LAP SPLICE WITH VERTICAL REINFORCING. DOWELS SHALL BE OF SAME SIZE AND SPACING AS VERTICAL WALL REINFORCING.
- 9. SEE ARCHITECTURAL DRAWINGS FOR ALL CMU WALL OPENING SIZES AND LOCATIONS.
- 10. ALL CMU SHALL BE INSTALLED IN RUNNING BOND.
- 11. ALL MASONRY CONSTRUCTION AND INSPECTION SHALL COMPLY WITH ACI 530-11 AND ACI 530.1-11.
- 12. ALL CONCRETE MASONRY CONSTRUCTION SHALL BE INSPECTED AND TESTED PER THE REQUIREMENTS OF ACI 530.1-11. COSTS OF THE SERVICES OF AN INDEPENDENT TESTING LABORATORY TO PERFORM TESTING AND INSPECTION SERVICES SHALL BE BORNE BY THE CONTRACTOR.
- 13. CMU GROUT FILL SHALL ARRIVE AT THE JOB SITE WITH A SLUMP BETWEEN 3" TO 5" PRIOR TO DEPOSITING GROUT. SUPERPASTICIZER SHALL BE ADDED TO THE GROUT AT THE JOB SITE INCREASING THE SLUMP TO 8" TO 10".
- 14. CMU WALL REINFORCING SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER OF RECORD PRIOR TO FABRICATION. DRAWINGS SHALL SHOW ALL WALL AND PILASTER REINFORCING IN PLAN AND IN ELEVATION.
- 15. PROVIDE CORNER BARS AT ALL BOND BEAMS TO ENSURE CONTINUITY AT CORNERS. LAP CORNER BARS WITH BOND BEAM BARS, TYP.
- 16. PROVIDE BAR SUPPORTS AND POSITIONERS AS REQUIRED TO ENSURE THAT FINAL IN-PLACE LOCATION OF REINFORCING IS AS INDICATED ON THE DRAWINGS.
- 17. MASONRY SHALL BE PROTECTED FROM FREEZING DURING PLACEMENT AND CURING. COLD WEATHER MASONRY PROCEDURES SHALL COMPLY WITH ACI 530-11 AND ACI 530.1-11.
- 18. THE GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL BRACING AND SHORING FOR ALL MASONRY WALLS AS REQUIRED TO ENSURE STABILITY DURING CONSTRUCTION.

#### **CONCRETE MASONRY CONT'D:**

- 19. PROVIDE DOUBLE BRICK TIES AT BRICK CONTROL JOINTS (ONE STUD EACH SIDE OF CONTROL JOINT).
- 20. SIDE AND TOP OF MASONRY WALL PANELS SHALL BE ANCHORED TO STRUCTURE BY DOVETAIL ANCHORS, METAL STRAPS OR EQUIVALENT AT 24" ON CENTER MAXIMUM SPACING.
- 21. BRICK TIES SHALL BE 3/16" DIAMETER WIRE TRIANGULAR TIES WITH A MINIMUM EMBEDMENT INTO BRICK OF ½ BRICK DEPTH OR 1 ½", WHICHEVER IS GREATER. TIES SHOULD NOT EXTEND NO CLOSER THAN 5/8" TO THE EXTERIOR FACE OF THE BRICK VENEER. DO NOT BEND THE TIE TO MEET THIS CRITERION. BRICK TIES SHALL BE LOCATED VERTICALLY AND HORIZONTALLY AS INDICATED IN ARCHITECTURAL DRAWINGS. INSTALL TIES AT STUDS OR COLUMNS AT WALL ENDS. EACH SIDE OF WALL CORNERS, AROUND ALL WALL OPENINGS, AND AT EACH SIDE OF WALL CONTROL JOINTS.
- 22. BRICK WALLS ARE TO HAVE VERTICAL CONTROL JOINTS AT 20'-0" MAXIMUM. PROVIDE DOUBLE STUDS AT BRICK CONTROL JOINTS (ONE STUD EACH SIDE OF CONTROL JOINT.) EACH STUD SHALL HAVE BRICK TIES.

#### **SOLID SAWN & LAMINATED LUMBER:**

- 1. BRACE WALLS UNTIL ALL PLYWOOD DECKING AND ROOF TRUSSES HAVE BEEN
- 2. USE PRESSURE TREATED WOOD WITH ALKALINE COPPER QUAT (ACQ) OR COPPER AZOLE (CBA) FOR ALL EXPOSED LUMBER AND WITH ACQ, CBA OR SODIUM BORATES (SBX) FOR SILL PLATES IN CONTACT WITH CONCRETE. ALL FASTENERS IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE HOT-DIP GALVANIZED PER ASTM A153. ALL CONNECTORS IN CONTACT WITH PRESSURE TREATED WOOD SHALL BE HOT-DIP GALVANIZED PER ASTM A653 AND MADE FROM CLASS G185 SHEET WITH 1.85 OUNCES MINIMUM OF ZINC COATING PER SQUARE FOOT.
- 3. SEE DRAWINGS FOR SHEAR WALL AND SILL PLATE ANCHORAGE DETAILS AND SPECIFICATIONS.
- 4. HANDRAILS, GUARDRAILS AND STAIRWAYS INCLUDING ALL COMPONENTS AND THEIR CONNECTIONS SHALL BE DESIGNED BY THE SUPPLIER IN ACCORDANCE WITH THE 2015 INTERNATIONAL BUILDING CODE.
- 5. INSTALL BEAMS WITH CROWN UP.
- ALL TIMBER FRAMING CONNECTIONS SHALL BE MADE WITH JOIST HANGERS TIE DOWNS, FRAMING ANCHORS, POST CAPS, ETC., UNLESS NOTED OTHERWISE
- 7. DOUBLE PLY 2X MEMBERS AND DOUBLE PLY 2X WITH PLYWOOD PLATE BEAMS SHALL BE SPIKED TOGETHER W/ 12d @ 12" TOP AND BOTTOM OF BEAM. DOUBLE PLY MICROLAM AND TRIPLE PLY-2x BEAMS AND WIDER SHALL BE BOLTED TOGETHER W/ 1/2" LAG BOLTS IN 5/16" PILOT HOLES OR 1/2" THOUGH BOLTS IN 9/16" HOLES INSTALLED 24" O.C. MAX @ TOP AND BOTTOM STAGGERED
- 8. WHEN NAILING IS NOT SHOWN IN PLANS, NAIL PER TABLE 2304.9.1, 2015 INTERNATIONAL BUILDING CODE.
- 9. ALL KING STUDS SHALL BE CONTINUOUS TO SLAB ON GRADE, TYP.
- 10. ALL FREE-STANDING WOOD COLUMNS AND/OR WOOD STUD PACKS SHALL HAVE A SIMPSON STRONG-TIE PB, PBS, CB, CBS OR LCB TYPE POST BASE. GENERAL CONTRACTOR TO COORDINATE TYPE AND SIZE WITH SCHEDULED WOOD COLUMN, AND/OR STUD PACK.
- 11. DRAFT STOP AND/OR FIRE STOP AT PARTY WALLS, CHASE WALLS, ETC., IN FLOOR SPACE AS INDICATED ON ARCHITECTURAL DRAWINGS SHALL BE ATTACHED TO FRAMING USING THE NAILING INDICATED IN THE DRAWINGS FOR THE APPROPRIATE SHEATHING MATERIAL.
- 12. WHERE SHEAR WALLS HAVE NOT BEEN SHOWN AT THE EXTERIOR OF BUILDING, ALL EXTERIOR SHALL BE SHEAR WALLS, UNLESS NOTED OTHERWISE

#### **FRAMING:**

- 1. ALL FRAMING SYSTEMS ARE TO BE DESIGNED BY OTHERS AND SUBMITTED FOR REVIEW BY ENGINEER UTILIZING L/480 DEFLECTION CRITERIA
- 2. FULL HEIGHT STUDS SHALL MEET THE SAME REQUIREMENTS AS EXTERIOR WALL STUDS PER SEC. 4: TABLE 5 OF THE WOOD FRAME CONSTRUCTION MANUAL (135 MPH - EXPOSURE "B"). THE MINIMUM NUMBER OF FULL HEIGHT STUDS AT EACH END OF THE HEADER SHALL NOT BE LESS THAN HALF THE NUMBER OF STUDS REPLACED BY THE OPENING. IN ACCORDANCE WITH THE WOOD FRAME CONSTRUCTION MANUAL, SECTION 4.2; TABLE 9. FULL HEIGHT STUDS SHALL BE PERMITTED TO REPLACE AN EQUIVALENT NUMBER OF JACK STUDS, WHEN ADEQUATE GRAVITY CONNECTIONS ARE PROVIDED.
- 3. WINDOW SILL PLATE- MAXIMUM SPANS FOR WINDOW SILL PLATES USED IN EXTERIOR WALLS SHALL NOT EXCEED THE SPANS GIVEN IN WFCM - SEC. 4.2; TABLE
- 4. HEADER AND/OR GIRDER TO STUD CONNECTIONS SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS GIVEN IN WFCM - SEC. 4.2; TABLE 9.
- 5. TOP AND BOTTOM PLATE TO FULL HEIGHT STUD- EACH FULL HEIGHT STUD SHALL BE CONNECTED IN ACCORDANCE WITH THE REQUIREMENTS GIVEN WFCM - SEC. 4.2: TABLE 9.

#### FLOORS AND ROOF FRAMING GENERAL NOTES:

- 1. COORDINATE LAYOUT OF FRAMING MEMBERS WITH ALL TRADES TO INSURE THAT JOISTS, RAFTERS AND PLATES ARE NOT EXTENSIVELY NOTCHED, CUT OR BORED. REFER TO IBC 2015 CODE, ICC-600 AND AITC MANUAL FOR ALLOWABLE CUTTING NOTCHING AND BORING OF FRAMING MEMBERS. TRUSSES SHALL NOT BE CUT, NOTCHED OR BORED WITHOUT ARCHITECT'S APPROVAL.
- 2. THE ENGINEERING OF FRAMING MEMBERS IS BASED ON # 2 SPRUCE OR #2 S.Y.P. FB = 1200 PSI, E = 1,200,000 PSI. SUBSTITUTION MUST BE APPROVED BY THE ARCHITECT BEFORE USING.
- 3. ALL CONNECTION STEEL ANGLES, PLATES AND BOLTS AT MASONRY WALLS SHALL BE HOT DIP GALVANIZED IN ACCORDANCE WITH ASTM A-153.
- 4. ALL LUMBER IN CONTACT WITH CONCRETE, MASONRY, GROUND OR OTHERWISE NOTED ON THE DRAWINGS WILL BE PRESSURE TREATED IN ACCORDANCE WITH AWPI STANDARD LP-2.

5. ALL PLYWOOD SHEATHING WILL BEAR THE TRADEMARK OF THE AMERICAN PLYWOOD ASSOCIATION AND WILL MEET THE REQUIREMENTS OF PS1-83 OR APA PRP-108. ALL PANELS PERMANENTLY EXPOSED TO THE WEATHER WILL BE CLASSIFIED "EXTERIOR". APPLICATION WILL BE IN ACCORDANCE WITH RECOMMENDATIONS PLYWOOD ASSOCIATION, ALL OSB BOARD SHEATHING WILL BE "EXTERIOR GRADE" EXCEPT ON INTERIOR WALLS.

#### **FLOORS AND ROOF FRAMING GENERAL NOTES CONT'D:**

6.ROOF SHEATHING WILL BE NAILED WITH 8D NAILS

#### **MISCELLANEOUS**

- 1. CONTRACT DOCUMENTS: IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO OBTAIN ALL CONTRACT DOCUMENTS AND LATEST ADDENDA AND TO SUBMIT SUCH DOCUMENTS TO ALL SUBCONTRACTORS AND MATERIAL SUPPLIERS PRIOR TO THE SUBMITTAL OF SHOP DRAWINGS, FABRICATION OF ANY STRUCTURAL MEMBERS, AND ERECTION IN THE FIELD.
- 2. DRAWING CONFLICTS: THE GENERAL CONTRACTOR SHALL COMPARE THE ARCHITECTURAL AND STRUCTURAL DRAWINGS AND REPORT ANY DISCREPANCY BETWEEN EACH SET OF DRAWINGS AND WITHIN EACH SET OF DRAWINGS TO THE ARCHITECT AND ENGINEER PRIOR TO THE FABRICATION AND INSTALLATION OF ANY STRUCTURAL MEMBERS.
- 3. EXISTING CONDITIONS: THE GENERAL CONTRACTOR SHALL VERIFY ALL DIMENSIONS AND CONDITIONS OF THE EXISTING BUILDING AT THE JOB SITE AND REPORT AND DISCREPANCIES FROM ASSUMED CONDITIONS SHOWN ON THE DRAWINGS TO THE ARCHITECT AND ENGINEER PRIOR TO THE FABRICATION AND ERECTION OF ANY MEMBERS.
- 4. RESPONSIBILITY OF THE CONTRACTOR FOR STABILITY OF THE STRUCTURE DURING CONSTRUCTION: ALL STRUCTURAL ELEMENTS OF THE PROJECT HAVE BEEN DESIGNED BY THE STRUCTURAL ENGINEER TO RESIST THE REQUIRED CODE VERTICAL AND LATERAL FORCES THAT COULD OCCUR IN THE FINAL COMPLETED STRUCTURE ONLY. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL REQUIRED BRACING DURING CONSTRUCTION TO MAINTAIN THE STABILITY AND SAFETY OF ALL STRUCTURAL ELEMENTS DURING THE CONSTRUCTION PROCESS UNTIL THE LATERAL-LOAD RESISTING OR STABILITY-PROVIDING SYSTEM IS COMPLETELY INSTALLED AND THE STRUCTURE IS COMPLETELY TIED TOGETHER.
- 5. CONFLICTS IN STRUCTURAL REQUIREMENTS: WHERE CONFLICT EXISTS AMONG THE VARIOUS PARTS OF THE STRUCTURAL, CONTRACT DOCUMENTS, STRUCTURAL DRAWINGS, GENERAL NOTES, AND SPECIFICATIONS, THE STRICTEST REQUIREMENTS, AS INDICATED BY THE ENGINEER, SHALL GOVERN.
- 6. STABILITY AND BRACING OF MASONRY WALLS DURING CONSTRUCTION: ALL MASONRY WALLS SHOWN ON THE ARCHITECTURAL AND STRUCTURAL DRAWINGS HAVE BEEN DESIGNED TO RESIST THE REQUIRED CODE VERTICAL AND LATERAL FORCES APPLIED TO THEM IN THE FINAL CONSTRUCTED CONFIGURATION ONLY ASSUMING FULL BRACING TOP, BOTTOM, AND/OR SIDE OF WALL AS SHOWN. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROPERLY AND ADEQUATELY BRACE ALL MASONRY WALLS AT ALL STAGES DURING CONSTRUCTION TO RESIST ERECTION LOADS AND LATERAL LOADS THAT COULD POSSIBLY BE APPLIED PRIOR TO COMPLETION OF CONSTRUCTION.
- 7. A PLANNED PROGRAM OF MAINTENANCE SHALL BE ESTABLISHED BY THE BUILDING OWNER. THIS PROGRAM SHALL INCLUDE SUCH ITEMS SUCH AS BUT NOT LIMITED TO PAINTING OF STRUCTURAL STEEL, PROTECTIVE COATING FOR CONCRETE, SEALANTS CAULKED JOINTS, EXPANSION JOINTS, CONTROL JOINTS, SPALLS AND CRACKS IN CONCRETE. AND PRESSURE WASHING OF EXPOSED STRUCTURAL ELEMENTS EXPOSED TO A SALT ENVIRONMENT OR OTHER HARSH CHEMICALS.
- 8. ALL EXTERIOR WALL TO BE SHEAR WALLS WITH NAILING PATTERN: 15/32" OSB OR EQUIVALENT
- 9. CONTRACTOR TO PROVIDE ADEQUATE TEMPORARY BRACING FOR STRUCTURE AND ITS INDIVIDUAL MEMBERS THAT WILL BE STABLE DURING ALL STAGES OF CONSTRUCTION. THIS STRUCTURE IS DESIGN FOR A COMPLETE CONDITION ONLY AND THEREFORE REQUIRES ADDITIONAL TEMPORARY SUPPORTS TO MAINTAIN STABILITY DURING CONSTRUCTION.

No. 24188 80

**STRUCTURAL** 

THOMAS & RESL

EXCINE AING CONSULTANTS, INC.

No. 3624

WRIGHT

0

 $\Delta$ 

**SNO** 

~

0

S

<u>S</u>

IRE ORF V, S(  $\overline{\mathbf{O}}$ AR 

HOUN NEIGH Ü S CALF OWN BL

REVISIONS MARK DATE DESCRIPTION

1809-1714-03 TREC No. 5/16/2019 2:38:43 PM Date Printed 11/30/2018

Date Issued Designed By Checked by

Approved by

GENERAL NOTES II

1/4" = 1'-0"

DR/CR

#### **VAPOR BARRIER NOTE**

INSTALL 6 MIL VAPOR BARRIER IN CRAWL SPACE. ALL SEAMS MUST BE TAPED AND SEALED PROPERLY. VAPOR BARRIER MUST EXTEND AT LEAST 12" UP EACH PIER AND STEM WALL.

#### **CONCRETE NOTES**

- ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH OF 3000 PSI AT 28 DAYS.
- 2 ALL CONCRETE WORK SHOULD BE IN ACCORDANCE WITH ACI 3 | 8 BUILIDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
- ALL REINFORCING STEEL TO BE NEW DOMESTIC DEFORMED BILLET STEEL CONFORMING TO ASTM A-6 | 5 GRADE 60 EXCEPT THAT TIES MAY BE DOMESTIC STEEL CONFORMING TO ASTM A-6 | 5 GRADE 60.
- WELDED WIRE FABRIC SHALL CONFORM TO A-185. POLYPROPYLENE FIBERMESH OR FIBER STRANDS MAY BE SUBSTITUTED FOR WELDED WIRE FOR NON STRUCTURAL SLAB
- CONTRACTOR SHALL VERIFY LOCATIONS OF ALL OPENINGS, SLEEVES, ANCHOR BOLTS, INSERTS, ETC. AS REQUIRED BY OTHER TRADES BEFORE CONCRETE IS PLACED. NO SLEEVES, OPENINGS OR INSERTS MAY BE PLACED IN BEAMS OR SLABS UNLESS APPROVED BY THE ENGINEER AND SHOWN ON SHOP DRAWINGS.
- 6 ALL REINFORCING DETAILS TO CONFORM TO "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES. ACI 3 | 5." UNLESS DETAILED OTHERWISE ON STRUCTURAL DRAWINGS.
- 7 PROVIDE SPACERS, CHAIRS, BOLTERS, ETC. AS REQUIRED TO ASSEMBLE, PLACE AND SUPPORT ALL REINFORCING IN PLAN.
- 8 PROVIDE CORNER BARS FOR ALL FOOTINGS, ALL FOOTING DOWEL BARS SHALL HAVE A STANDARD 90 DEGREE HOOK AND SHALL BE EMBEDDED 5" INTO INTERIOR FOOTINGS AND A MINIMUM OF 7" INTO ALL OTHERS. DOWEL BARS LAP VERTICAL WALL REINFORCEMENT A MINIMUM
- 9 ALL LUMBER IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED.
- 10 SOIL UNDER SLAB TO BE PRETREATED FOR TERMITEES AS PER THE 2015 INTERNATIONAL BUILDING CODE.
- I I ALL FOOTINGS TO BE DESIGNED FOR AN ASSUMED SOIL PRESSURE OF 2000 P.S.F. OWNER \$/OR CONTRACTOR TO HAVE SOIL PRESSURE VERIFIED AND IF CONTACT PRESSURE IS LESS THAN 2000 P.S.F. FOUNDATION SHALL BE REDESIGNED. COMPACT FILL SOIL TO 95% STANDARD DENSITY IN ACCORDANCE WITH ASTM D-1557 DOWN TO 2'-0" BELOW ALL SLABS & FOOTINGS.
- 12 PLUMBING WASTE PIPE PENETRATING FOOTING SHALL BE CAST IRON OR SCH 40 PVC. GROUT WORK AS PER ASTM C47613. MASONRY WORK AS PER ACI 530.1-02

#### STRUCTURAL STEEL COMPONENTS FASTENERS & TIE DOWNS

- SHAPES, ANGLES, CHANNELS: ASTM A 36 Fy = 36KSI ROUND AND SQUARE METAL PIPE: ASTM A 53 GRADE B Fy = 36 KSI; SQUARE METAL TUBING: ASTM A 500, GRADE B Fy = 36 KSI
- 2 FASTENERS AND TIE DOWNS SHALL CONSIST OF BUT ARE NOT LIMITED TO: HIGH STRENGTH BOLTS: ASTM A325
- MACHINE BOLTS: GALVANIZED ASTM A 307 SHEET METAL ACCESSORIES SHALL CONFORM TO: ASTM A446 OR ASTM A 526 Fy = 33 KSI WITH G90 GALVANIZED COATING IN ACCORDANCE WITH ASTM A 525.
- NAILS SHALL CONSIST OF RING SHANK NAILS WITH MINIMUM DIAMETER AS FOLLOWS: 8D = .131", IOD = .148", IGD = .162"
- ALL FASTENERS AND TIE DOWNS EMBEDDED IN CONCRETE OR USED IN AN EXTERIOR
- APPLICATION ARE TO RECEIVE AN ANTI-CORROSIVE COATING PRIOR TO INSTALLATION. 6 ALL FASTENERS AND TIE DOWNS ARE TO PROVIDE THE UPLIFT CAPACITY CALLED FOR IN THE
- ALL FASTENER TIE DOWNS, BEAM HANGERS, JOIST HANGERS, AND FLOOR TRUSS STRAPPING ARE TO BE INSTALLED IN ACCORDANCE WITH THE PLANS AND MANUFACTURER'S
- SPECIFICATIONS. CONCRETE EMBEDDED "J" BOLTS USED FOR UPLIFT ARE TO BE WET SET PRIOR TO INITIAL SET OF THE CONCRETE SPACING AND ALIGNMENT ARE TO BE IN ACCORDANCE WITH THE DESIGN
- CONCRETE EMBEDDED TIE DOWNS USED FOR TRUSS AND WALL UPLIFT ARE TO BE PLACED AROUND EMBEDDED REINFORCING PRIOR TO PLACING GROUT/CONCRETE.
- 10 FASTENERS ARE TO BE GALVANIZED ROOFING NAILS WITH A MINIMUM OF 12 GUAGE SHANK AND A MINIMUM 3/8" DIA. HEAD.
- I I FASTENERS ARE TO BE LONG ENOUGH TO PENETRATE THE SHINGLES AND STILL PROTRUDE AT LEAST 3/4" INTO OR THROUGH THE ROOF SHEATHING, USE I" NAILS MIN.

### **FOUNDATION DESIGN ASSUMPTIONS**

PLANS AS A MINIMUM.

THE FOUNDATION SHALL BE PLACED ON UNDISTURBED SOIL OR ROCK WITH A BEARING CAPACITY WITH A SAFE WORKING ZONE DESIGNATED BY GEOTECHNICAL ENGINEER. IF PORTIONS OF THE SLAB OR FOUNDATION IS ON PREPARED FILL, A REGISTERED GEO-TECHNICAL ENGINEER SHALL VERIFY SUITABILITY OF THE FILL FOR USE AND ITS FOUNDATION BEARING CAPACITY, THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE CONDITIONS OF THE SOIL AND/OR SITE LOCATION PRIOR TO COMMENCING WORK AND NOTIFYING THE ENGINEER OF ANY DISCREPANCIES IN THIS DESIGN IMMEDIATELY.

### SOIL BEARING CAPACITY

SOIL BEARING PRESSURE ASSUMED AT 2000 P.S.F. OWNER DID NOT FURNISH TESTS TO ESTABLISH S.B.P.OWNER ASSUMES ANY AND ALL RESPONSIBILITY FOR ANY \$ ALL FOUNDATION SETTLEMENT AND HOLDS HARMLESS ENGINEER.

#### **ENTRY STEP NOTE**

GENERAL CONTRACTOR SHALL DETERMINE IN-FEILD THE LOCATIONS AND PLACEMENT OF ENTRY STAIR AND LANDINGS AS PER SITE CONDITIONS. THESE STAIRS AND LANDINGS SHALL COMPLY WITH THE IRC 2015.

#### **DIMENSION NOTE**

SEE ARCHITECTURAL PACKAGE FOR DIMENSIONS AND FINISH FLOOR ELEVATIONS NOT SHOWN HEREIN.

#### FRAMING SYSTEM NOTE

ALL FRAMING SYSTEMS ARE TO BE DESIGNED BY OTHER AND SUBMITTED FOR REVIEW BY ENGINEER UTILIZING L/480 DEFLECTION CRITERIA.

#### **CONTROL JOINT NOTE**

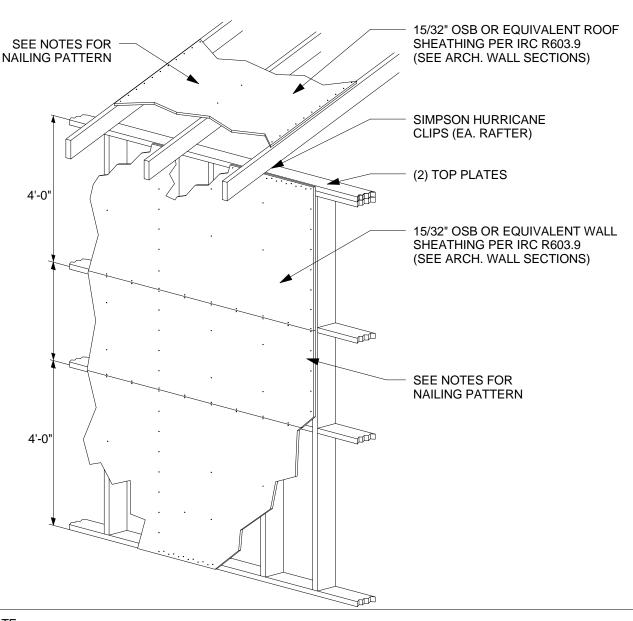
FOR A 4" THICK SLAB, JOINTS SHOULD BE SPACED 8-12 FEET APART AND CUT I" DEEP.

#### MISCELLANEOUS NOTES

- I. ALL EXTERIOR WALLS TO BE SHEAR WALLS WITH NAILING PATTERN: 15/32" OSB OR EQUIVALENT 3" EDGE
- 2. CONTRACTOR TO PROVIDE ADEQUATE TEMPORARY BRACING FOR STURCTURE AND ITS INDIVIDUAL MEMBERS THAT WILL BE STABLE DURING ALL STAGES OF CONSTRUCTION. THIS STRUCTURE IS DESIGN FOR A COMPLETE CONDITION ONLY AND THEREFORE REQUIRES ADDITIONAL TEMPORARY SUPPORTS TO MAINTAIN STABILITY DURING CONSTRUCTION.

#### FOR ANY SIDDING REPLACEMENT

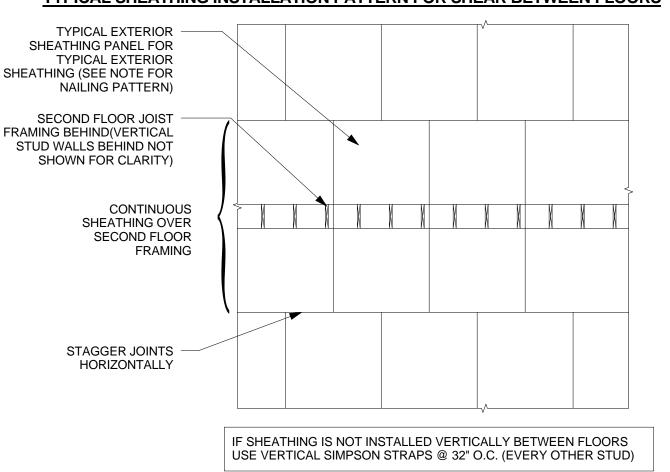
#### SHEATHING NAILING PATTERN



WALL AND ROOF SHEATHING WILL BE NAILED WITH 8d NAILS 3" O.C. AROUND EDGES AND 6" O.C. IN FIELD OR WALL AND ROOF SHEATHING WILL BE NAILED WITH 10d NAILS 4" O.C. AROUND EDGES AND 12" O.C. IN FIELD PROVIDE SHEATHING SPLICES OVER BLOCKING OR FRAMING THE SHEATHING MAY BE PLACED EITHER HORIZONTALLY OR VERTICALLY

NAILS IN ANY SINGLE ROW SHALL NOT BE SPACED CLOSER THAN 3" O.C

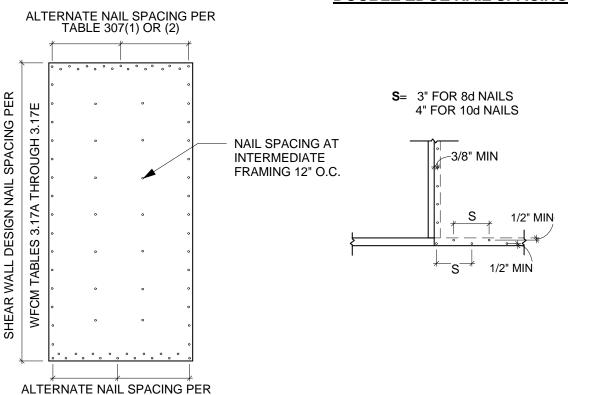
### TYPICAL SHEATHING INSTALLATION PATTERN FOR SHEAR BETWEEN FLOORS



SOIL BEARING PRESSURE ASSUMED AT 2000 P.S.F. OWNER DID NOT FURNISH TESTS TO ESTABLISH S.B.P.OWNER ASSUMES ANY AND ALL RESPONSIBILITY FOR ANY & ALL FOUNDATION SETTLEMENT AND HOLDS HARMLESS ENGINEER.

#### NAIL SPACING PER ICC 600 **DOUBLE EDGE NAIL SPACING**

TABLE 307(1) OR (2)



#### **NAILING SCHEDULE** (PER ICC-600) (APPLIES UNLESS NOTED OTHERWISE ON DRAWINGS) CONNECTION **FASTENER** NUMBERS OR SPACING 16D COMMON JOIST TO BAND JOIST, FACE NAIL JOIST TO SILL OR GIRDER, TOE-NAIL **8D COMMON** BRIDGING TO JOIST, TOENAIL EACH END 8D COMMON LEDGER STRIP 3 @ EACH JOIST 16D COMMON 1x6 OR LESS SUB FLOOR TO EACH JOIST, FACE NAIL 8D COMMON OVER 1x6 SUB FLOOR TO EACH JOIST, FACE NAIL 8D COMMON 2" SUB FLOOR TO JOIST OR GIRDER, BLIND AND FACE NAIL 16D COMMON SOLE PLATE TO JOIST OR BLOCKING, FACE NAIL 16" O.C 16D COMMON TOP OR SOLE PLATE TO STUD, END NAIL 16D COMMON STUD TO SOLE PLATE, TOE NAIL 8D COMMON DOUBLE STUDS, FACE NAIL 10D COMMON 24" O.C. DOUBLE TOP PLATES, FACE NAIL 10D COMMON 16" O.C TOP PLATES, LAP AND INTERSECTIONS FACE NAIL 2-16D OR 3-10D COMMON CONTINIOUS HEADER, TWO PIECES 16D COMMON 16" O.C. ALONG EACH EDGE CEILING JOIST TO PLATE, TOENAIL 8D COMMON CONTINIOUS HEADER TO STUD, TOE NAIL 8D COMMON CEILING JOIST, LAPS OVER PARTITIONS, FACE NAIL 3-16D OR 4-10D COMMON 3-16D OR 4-10D COMMON CEILING JOIST TO PARALLEL RAFTERS, FACE NAIL RAFTER TO PLATE, TOENAIL **8D COMMON** 1" BRACE TO EACH STUD AND PLATE, FACE NAIL 8D COMMON 1x8 OR LESS SHEATHING TO EACH BEARING, FACE NAIL 8D COMMON 16D COMMON

20D COMMON

16D COMMON

24" O.C.

16D COMMON

#### NOTE:

I)SEE ARCHITECTURAL DRAWINGS FOR DIMENSION(S) AND CONDITION(S) NOT SHOWN HEREIN.

2) FRAMING BY OTHERS. TO BE DESIGNED UTLIZING L/480 DESIGN CRITERA AND TO BE SUBMITTED TO ENGINEER FOR APPROVAL. SEE ARCHITECTURAL FOR DIMESIONS AND CONDITIONS NOT SHOWN HERIN.

3) SOIL BEARING PRESSURE ASSUMED AT 2000 P.S.F. OWNER DID NOT FURNISH TESTS TO ESTABLISH S.B.P.OWNER ASSUMES ANY AND ALL RESPONSIBILITY FOR ANY \$ ALL FOUNDATION SETTLEMENT AND HOLDS HARMLESS ENGINEER.

4) CONTRACTOR TO VERIFY LOCATION OF THICKENED SLAB LOAD BEARING WALLS

5) CONTRACTOR TO VERIFY FOOTINGS

BUILT-UP GIRDERS AND BEAMS, OF THREE MEMBERS

STUDS TO SOLE PLATE, END NAIL

6) BUILDING CONSIDERED CATEGORIZED AS A "MINOR" STRUCTURE, THEREFORE SPECIAL INSPECTIONS IS NOT REQUIRED

**STRUCTURAL** 

C AR 0 Ü

S

REVISIONS MARK DATE DESCRIPTION

1809-1714-03 TREC No. 5/16/2019 2:38:45 PM Date Printed

Date Issued 11/30/2018 Designed By

Checked by

WRIGHT

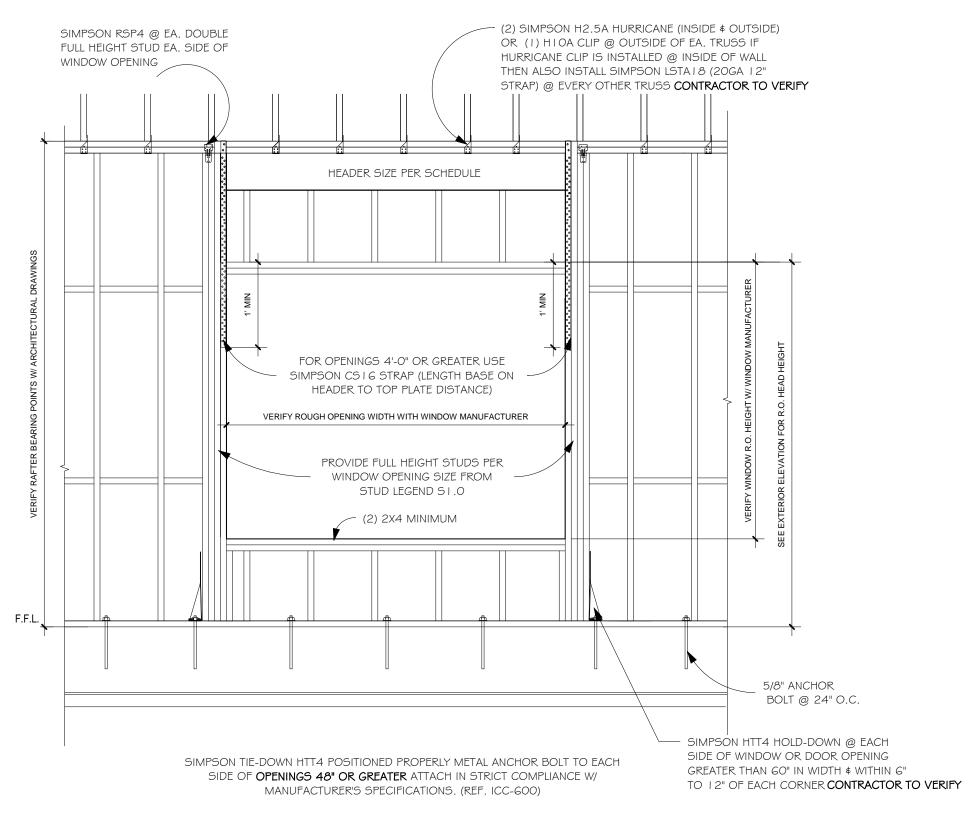
Approved by

FOUNDATION PLAN

1/4" = 1'-0"

 $\mathbf{M}$  $\vdash$ **SNO** OR <u>Q</u>

0



1 WALL OPENING STRAP DETAIL N.T.S.

HEADERS IN LOAD BEARING WALLS											
		REQUIREMENT AT EACH END OF HEADER									
<b>HEADER SPAN</b>	MINIMUM HEADER	<b>NUMBER OF FULL</b>									
<u>(FT)</u>	SIZE	<b>HEIGHT STUDS</b>	UPLIFT (LB)	LATERAL (LB)							
2	(2) 2X4	I	364 lb	157 lb							
3	(2) 2X4	2	546 lb	236 lb							
4	(2) 2X6	2	728 lb	314 lb							
5	(2) 2X8	3	910 lb	393 lb							
6	(2) 2X8	3	1092 lb	471 lb							
7	(2) 2X10	3	1274 lb	550 lb							
8	(2) 2X10	3	1456 lb	626 lb							
9	(2) 2X I 2	3	1638 lb	707 lb							
10	(3) 2X12	4	1820 lb	785 lb							

<b>HEADERS IN NON-LOAD BEARING WALLS &amp; WINDOW SILL PLATES</b>												
FOR NON-LOAD BEARING WALLS AND WINDOW SILL PLATES, (2) 2X4 (FLAT) CAN BE SUBSTITUTED FOR (1) 2X6												
	REQUIREMENT AT EACH END OF HEADER											
HEADER SPAN (FT)	MINIMUM HEADER SIZE	NUMBER OF FULL HEIGHT STUDS	UPLIFT ( LB)	LATERAL(LB)								
2	(2) 2 X 4 (FLAT)	I	60 lb	157 lb								
3	(2) 2 X 4 (FLAT)	2	90 lb	236 lb								
4	(2) 2 X 6	2	120 lb	31416								
5	(2) 2 X 6	3	150 lb	393 lb								
6	(2) 2 X 6	3	18016	471 lb								
7	(2) 2 X 6	3	210 lb	550 lb								
8	(2) 2 X 6	3	240 lb	628 lb								
9	(2) 2 X 6	3	270 lb	707 lb								
10	(2) 2 X 6	3	300 lb	785 lb								
1.1	(2) 2 X 6	4	330 lb	864 lb								

STRUCTURAL STUD SCHEDULE										
OTTOOTOTAL OTOD OOTTLOOLL										
LUMBER SPECIES: #2 S.Y.P.K.D. MEDIUM GRAIN										
WALL LOCATION CEILING HEIGHT STUD SIZE O.C. SPACING OPT. STUD GRADE-										
EXTERIOR	8'-0"	2 x 4	16"	16"						
EXTERIOR	9'-0"	2 x 4	16"	12"						
EXTERIOR	10'-0"	2 x 6	16"							
EXTERIOR	12'-0"	2 x 6	12"							
EXTERIOR	14'-0"	2 x 6	12" & DBL. @ 36"							
EXTERIOR	16'-0"	2 x 8	16"							
INTERIOR	8'-0"	2 x 4	16"							
INTERIOR	9'-0"	2 x 4	16"							
INTERIOR	10'-0"	2 x 4	16"							
INTERIOR	12'-0"	2 x 6	16"							
INTERIOR	14'-0"	2 x 6	12"							

 $^{\star}$  STUDS MAY BE USED AT HEIGHTS AND DISTANCES OTHER THAN WHAT IS LISTED ON THIS CHART IF SHOWN ON THESE PLANS.

#### **ROOF RAFTER SCHEDULE**

PER IRC 2015 TABLE R802.5.1(6) #2 SOUTHERN PINE DEAD LOAD= 10 PSF

2 X 6's O.C. UP TO 9'-2" (UNSHORED) SPAN

2 X 8's O.C. UP TO 11'-7" (UNSHORED) SPAN 2 X 10's O.C. UP TO 13'-9" (UNSHORED) SPAN

2 X I 2's O.C. UP TO I 6'-O" (UNSHORED) SPAN

#### **CEILING JOIST SCHEDULE** (WITHOUT STORAGE)

PER IRC TABLE R 802.4 2 X 6's O.C. UP TO 16'-11" (UNSHORED) SPAN 2 X 8's O.C. UP TO 21'-7" (UNSHORED) SPAN

2 X 10's O.C. UP TO 25'-7" (UNSHORED) SPAN

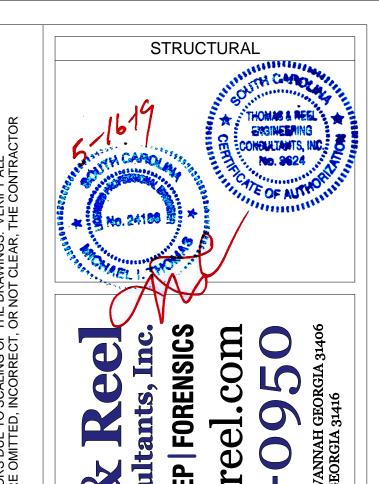
#### **CEILING JOIST SCHEDULE** (WITH LIMITED STORAGE)

PER IRC TABLE R 802.4

2 X 6's O.C. UP TO 12'-0" (UNSHORED) SPAN 2 X 8's O.C. UP TO 15'-3" (UNSHORED) SPAN

2 X 10's O.C. UP TO 18'-1" (UNSHORED) SPAN

FLOOR JOIST SCHEDULE FOR SOUTHERN PINE #2 WITH A DEAD LOAD OF 20 PSF								
PER IRC 2015 R502.3.1(2)								
JOIST SPACING	2X	MAXIMUM SPAN						
12" O.C.	2X6	9 ' 10"						
12" O.C.	2X8	12'6"						
12" O.C.	2X10	14'9"						
12" O.C.	2X12	17' 5"						
16" O.C.	2X6	8' 6"						
16" O.C.	2X8	10'10"						
16" O.C.	2X10	12'0"						
16" O.C.	2X12	15'1"						



111 CALHOUN STREET OLD TOWN NEIGHBORHOOD BLUFFTON, SC WRIGHT F

**REVISIONS** MARK DATE DESCRIPTION

1809-1714-03 5/16/2019 2:38:45 PM Date Printed 11/30/2018

Designed By

Checked by

ISSUE FOR CONSTRUCTION
COPYRIGHT C 2009
THOMAS-REEI ENGINEERING CONCULTANTS INC.

\_As indicated\_

SECTION DETAILS

# MECHANICAL SPECIFICATION NOTES

I. ALL WORK SHALL CONFORM TO IBC 2015, IPC, IMC 2015, NFPA70 2014 AND LOCAL CODES AND ORDINANCES.

2. EXHAUST DUCTS: GALVANIZED STEEL.

# **GENERAL NOTE:**

DRAWING(S) ARE <u>SCHEMATIC</u>, CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL DEVICE LOCATIONS AND INTERCONNECT ROUTING WITH ARCHITECTURAL AND STRUCTURAL CONFIGURATION AND REQUIREMENTS.

# MECHANICAL LEGEND

AIR RETURN DUCT/GRILLE

AIR SUPPLY DUCT/DIFFUSER EXHAUST FAN

ROOF MOUNTED EXHAUST FAN

SMOKE DETECTOR

DUCT MTD. SMOKE DETECTOR

AIR HANDLER CONDENSING UNIT OR COMPRESSOR UNIT

**THERMOSTAT** 

EXHAUST FAN

FIRE EXTINGUISHER

CFM CUBIC FEET PER MINUTE OUTSIDE AIR

FIRE DAMPER RETURN AIR SUPPLY AIR

#### **GENERAL NOTES**

DRAWING(S) ARE SCHEMATIC, CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL DEVICE LOCATIONS AND INTERCONNECT ROUTING WITH ARCHITECTURAL AND STRUCTURAL CONFIGURATION AND REQUIREMENTS.

OWNER AND/OR CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCY AND/OR ITEMS IN NEED OF CLARIFICATION AND/OR DETAIL ELABORATION.

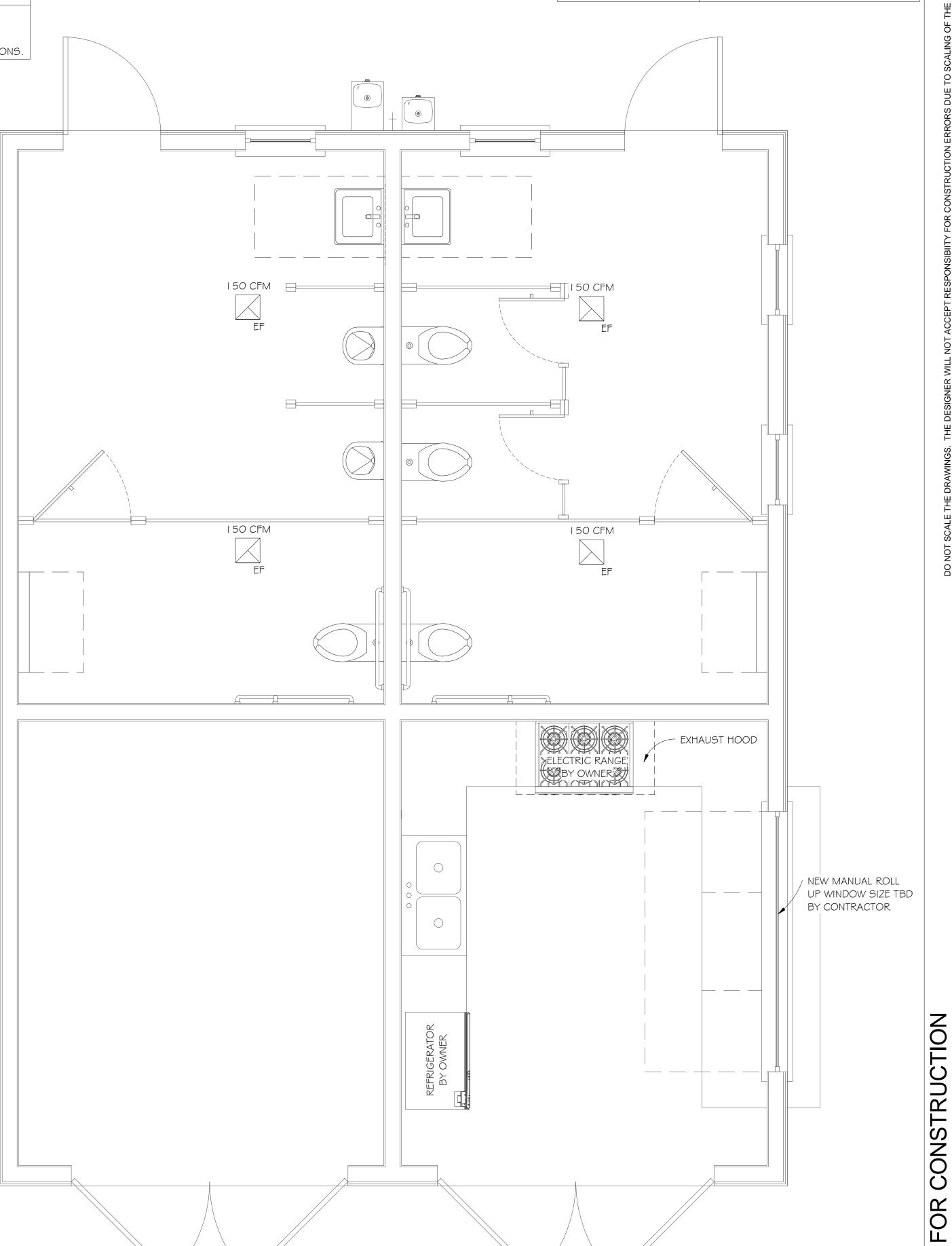
OWNER AND/OR CONTRACTOR TO NOTIFY ENGINEER OF ANY KNOWN ERRORS AND/OR OMISSIONS IN NEED OF ELABORATION IN WRITING FOR ENGINEERING REVIEW

OWNER AND/OR CONTRACTOR TO NOTIFY ENGINEER OF ANY DIFFERENT SITE CONDITIONS, STRUCTURAL CONDITIONS, SPACE UTILIZATION OF ANY OTHER DIFFEREING CONDITION IN WRITING. ENGINEER TO REVIEW AND RESPOND TO ALL WRITTEN NOTIFICATIONS.

SHEET NUMBER	SHEET NAME
E2.1	ELECTRICAL LIGHTING PLAN
P2.1	PLUMBING WATER PLAN
M1.0	MECHANICAL PLAN
E1.0	ELECTRICAL GENERAL NOTES
E2.0	ELECTRICAL POWER PLAN
P1.0	PLUMBING GENERAL NOTES
P2.0	PLUMBING WASTE PLAN

RISERS

P3.0



# **EQUIPMENT LIST:**

	•										
	SYM DESCRIPTION		ELECTRICAL			GAS		PLUMBING			DESIGN BASIS
QTY		DESCRIPTION	V	Α	HP	BTU/H	SIZE	Н	С	WASTE	MANUFACTURER MODEL #
1	1	EXHAUST RANGE HOOD	120	3.3	-	-	-	-	-	-	BROAN B56 OR EQUIVALENT
1	2	WATER HEATER	230	40	-	-	-	3/4"	3/4"	3/4"	40 GAL OWNER SELECT
1	3	ELECTRIC RANGE	208	57.6	-	-	-	-	-	-	BY OWNER

#### VENTILATION EQUIPMENT SCHEDULE

QTY	UNIT NO.	COOLINO	MIN. SEER	FAI CFM		OA CFM	EL VOLTS	ECTR		МОСР	NOM WT LBS	DESIGN BASIS MANUFACTURER & MODEL #	NOTES
4	EF	-	-	150	-	-	120	1	1.14	20	-	GREENHECK SPB-150 OR EQUIV.	2, 3, 4, 5

#### NOTES

I. BY OWNER

2.OPERABLE FROM LIGHT SWITCH IN EACH BATHROOM 3. CONNECTED TO OPERATE WITH LIGHT.

4. DIRECT EXHAUST.

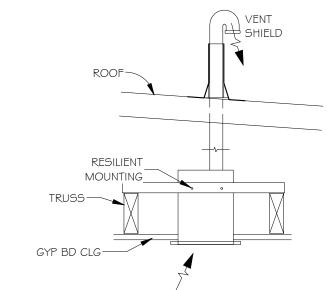
5. ELECTRIC FAN TO CONFORM TO UL/cUL 507

### **MECHANICAL / ELECTRICAL COORDINATION**

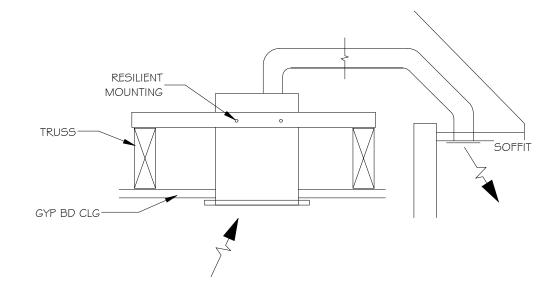
- CONTRACTOR SHALL COORDIANTE ELECTRICAL CHARACTERISTICS AND REQUIREMENTS OF ALL MECHANICAL EQUIPMENT WITH ELECTRICAL DRAWINGS PRIOR TO ORDERING EQUIPMENT OR SUBMITTING SHOP DRAWINGS, AND SHALL FURNISH EQUIPMENT WIRED FOR THE VOTAGES SHOWN THEREIN. SHOP DRAWING SUBMITTALS SHALL CLEARLY STATE THAT THE ELECTRICAL CHARACTERISTICS OF ALL EQUPMENT HAS BEEN COORDINATED WITH THE ELECTRICAL CONTRACT DOCUMENTS AND THE ELECTRICAL CONTRACTOR.
- ALL MECHANICAL EQUIPMENT REQUIRING ELECTRICAL POWER SHALL BE INSTALLED WITH DISCONNECT SWITCHES AT EACH PIECE OF EQUIPMENT. COORDINATE SWITCH TYPE (FUSED OR NON-FUSED) WITH EQUIPMENT CHARACTERISTICS, MANUFACTURER'S RECOMMENDATIONS, AND THE ELECTRICAL DRAWINGS.
- LL REQUIRED CONTROL WIRING (INCLUDING POWER WIRING REQUIRED FOR CONTROL PANELS, DEVICES, ETC.) NOT SHOWN ON THE ELECTRICAL DRAWINGS SHALL BE INCLUDED AS PART OF THE MECHANICAL WORK. WIRING IN HVAC PLENUM SPACES SHALL BE INSTALLED ACCORDING TO CODE REQUIREMENTS.
- UNLESS NOTED OTHERWISE, TRANSFORMERS, CONTROLS AND CONTROL WIRING REQUIRED FOR ALL MECHANICAL SYSTEMS SHALL BE FURNISHED WITH THE EQUIPMENT IT SERVES AND INSTALLED BY THE MECHANICAL CONTRACTOR MOTOR STARTERS FOR HVAC EQUIPMENT SHALL BE FURNISHED WITH THE MOTOR OR APPARATUS WHICH IT OPERATES. MOTOR STARTER INSTALLATION SHALL BE BY THE DIVISION 16 CONTRACTOR

# **MECHANICAL SPECIFICATION NOTES**

- ALL MECHANICAL EQUIPMENT AND INSTALLATIONS SHALL CONFORM WITH THE REQUIREMENTS OF THE 2015 INTERNATIONAL MECHANICAL CODE, THE 2015 INTERNATIONAL BUILDING CODE, THE 2009 INTERNATIONAL ENERGY CONSERVATION CODE, NFPA 90A, 96, 101, UNDERWRITERS LABORATORIES (OR ETL) AND ALL APPLICABLE LOCAL CODES AND ORDINANCES.
- IF ANY OF THE GOVERNING CODES ARE UPDATED, CHANGED, AND/OR MODIFIED AFTER THE SUBMITAL OF THE DRAWINGS TO THE OWNER AND/OR ARCHITECT AND PRIOR TO THE ISSUANCE OF A BUILDING PERMIT, THEN THE DRAWINGS MUST BE RESUBMITTED TO THE ENGINEER FOR REVIEW, REEXAMINATION AND/OR REEVALUATION.
- CEILING RETURN AND EXHAUST AIR GRILLES PER OWNER SELECTION
- ALL MECHANICAL EQUIPMENT SHALL BE INSTALLED ACCORDING TO MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS.
- ALL WORK SHALL BE COORDINATED AND PERFORMED WITH PRIOR APPROVAL FROM THE OWNER TO SUITE HIS OPERATING CONDITIONS. WORK IN ALL AREAS SHALL BE PERFORMED IN ACCORDANCE WITH THE OWNER'S REQUIREMENTS.
- ANY EXISTING WALL, FLOOR, OR CEILING SURFACE THAT IS DISTURBED DURING THE COURSE OF THE MECHANICAL WORK SHALL BE REPAIRED TO MATCH NEW AND/OR EXISTING CONDITIONS.



2 EXHAUST FAN (EF) DETAIL THROUGH ROOF N.T.S.



3 EXHAUST FAN (EF) DETAIL THROUGH EAVE
3/4" = 1'-0"

MECHANICAL PLAN
1/2" = 1'-0"

ARCH

REVISIONS

MARK DATE DESCRIPTION

RG

1403-1405-11 5/16/2019 2:39:27 PM Date Printed 12/11/2018

Date Issued Designed By

Checked by Approved by

As indicated

MECHANICAL PLAN

#### **ELECTRICAL NOTES:**

# SEE LANDSCAPE DRAWINGS FOR ALL SITE FEATURES. COORDINATE WITH LANDSCAPE CONTRACTOR FOR POWER REQUIREMENTS AND CONNECTION POINT.

#### PART I - GENERAL

- A. Codes and Ordinances The entire installation shall be strictly in accordance with the latest version of the 2017 National Electrical Code, and amendments of the local governing body.
- B. Tests Provide test of all systems to demonstrate proper operation.
- C. Provide maintenance and operational instructions for all equipment. All panel boards, disconnect switches, control cabinets, etc., shall be clearly marked with identification externally and internally for each circuit.
- D. The contractor shall schedule all required inspections.
- E. Provide materials and equipment that are products of manufacturers regularly engaged in the production of such products which are of equal material, design and workmanship. Products shall have been in satisfactory commercial or industrial use for 2 years prior to bid opening. Products manufactured more than 3 years prior to date of delivery to site shall not be used, unless specified otherwise.
- F. Lighting shall comply with asrhae 90.1 2007 where applicable.

#### PART II - PRODUCTS

A. As a minimum, meet requirements of UL, where UL standards are established for those items, and requirements of NFPA 70 for all materials, equipment, and devices.

- B. Light fixtures shall be as per plan.
- C. Switches (NEMA WD1,UL20) and receptacles (NEMA WD 1)shall be screw type side wire commercial grade and as per plan. Color selection by owner and may vary.
- E. Circuit Breaker and fused protected circuits shall be as per above referenced code.
- F. Outlet boxes and conduit boxes shall be metal, cadmium or zinc coated UL514a).
- G. Provide grounding conductors in all conduit. Hash marks on drawing do not include grounding conductor.
- K. Disconnects switches: NEMA KS1. enclosures Indoor NEMA 1, Outdoor Heavy Duty NEMA 3R.
- Provide label indicating source and load.

  L. Panelboard is existing. Install a typewritten circuit directory on panel board cover interior, reflecting an "As Wired" condition after completion of wiring. Provide nameplate indicated name and feeder source. Circuit breakers shall match existing type with short rating as indicated. Multipole shall be provided with common trip single operating handle.
- M. Contractor to verify all circuit requirements with actual equipment provided.

#### PART III - EXECUTION

- A. Remove all manufacturers labels and clean all exposed fixtures and equipment.
- B. Replace all damaged fixtures and equipment.
- C. Adjust or calibrate all items of equipment to assure proper operation.
- D. Make all wiring connections in outlet or junction boxes.
- E. Nameplates: ATM D709, Provide laminated plastic nameplates for each equipment enclosure, relay, switch, and device; as specified or as indicated on the drawings. Identify the function and, when applicable, the position. Minimum size of nameplates: one by 2.5 inches. Lettering size and style: a minimum of 0.25 inch high normal block style. For panels indicate the panel fed from.
- F. Label all devices with permanent label indicating circuit and panel.

#### ABBREVIATIONS

- A AMPERE
- AFF ABOVE FINISHED FLOOR
- AL ALUMINUM
- 1/C ONE CONDUCTOR
- 3/C THREE CONDUCTOR
- C CONDUIT
- CATV CABLE TELEVISION
- CB CIRCUIT BREAKER
- CKT CIRCUIT
- CU COPPER
- DIA DIAMETER
- EB ENCASED BURIAL

**EXHAUST FAN** 

- EWC ELECTRIC WATER COOLER
- FACP FIRE ALARM CONTROL PANEL

**EXPLOSION PROOF** 

- GF GROUND FAULT CIRCUIT
  INTERRUPTER
- GFP GROUND FAULT PROTECTION
- HPS HIGH PRESSURE SODIUM
- HT HEIGHT
- H7 HERT
- JB JUNCTION BOX
- LED LIGHT EMITTING DIODE
- M METER

mm/MM MILLIMETERS

- MCB MAIN CASE BREAKER
- MCP MECHANICAL CONTROL PANEL
- M.H. MOUNTING HEIGHT
- MLO MAIN LUGS ONLY
- N.E.C. NATIONAL ELECTRICAL CODE
- NF NON FUSED
- NIC NOT IN CONTRACT
- NO. NUMBER
- PH PHASE
- SPS STANDBY POWER SYSTEM
- SWD SWITCHING DUTY
- TC/SW TIME CLOCK AND H-O-A SWITCH
- U.N.O. UNLESS NOTED OTHERWISE
- V VOLT
- VA VOLTAMPERE
- AV VARIABLE AIR VOLUMN
- VSD VARIABLE SPEED DRIVE
- W WATTS
- WH WATER HEATER
- VP WEATHER PROOF

ELECTRICAL NOTES, LEGEND & ABBREVIATIONS

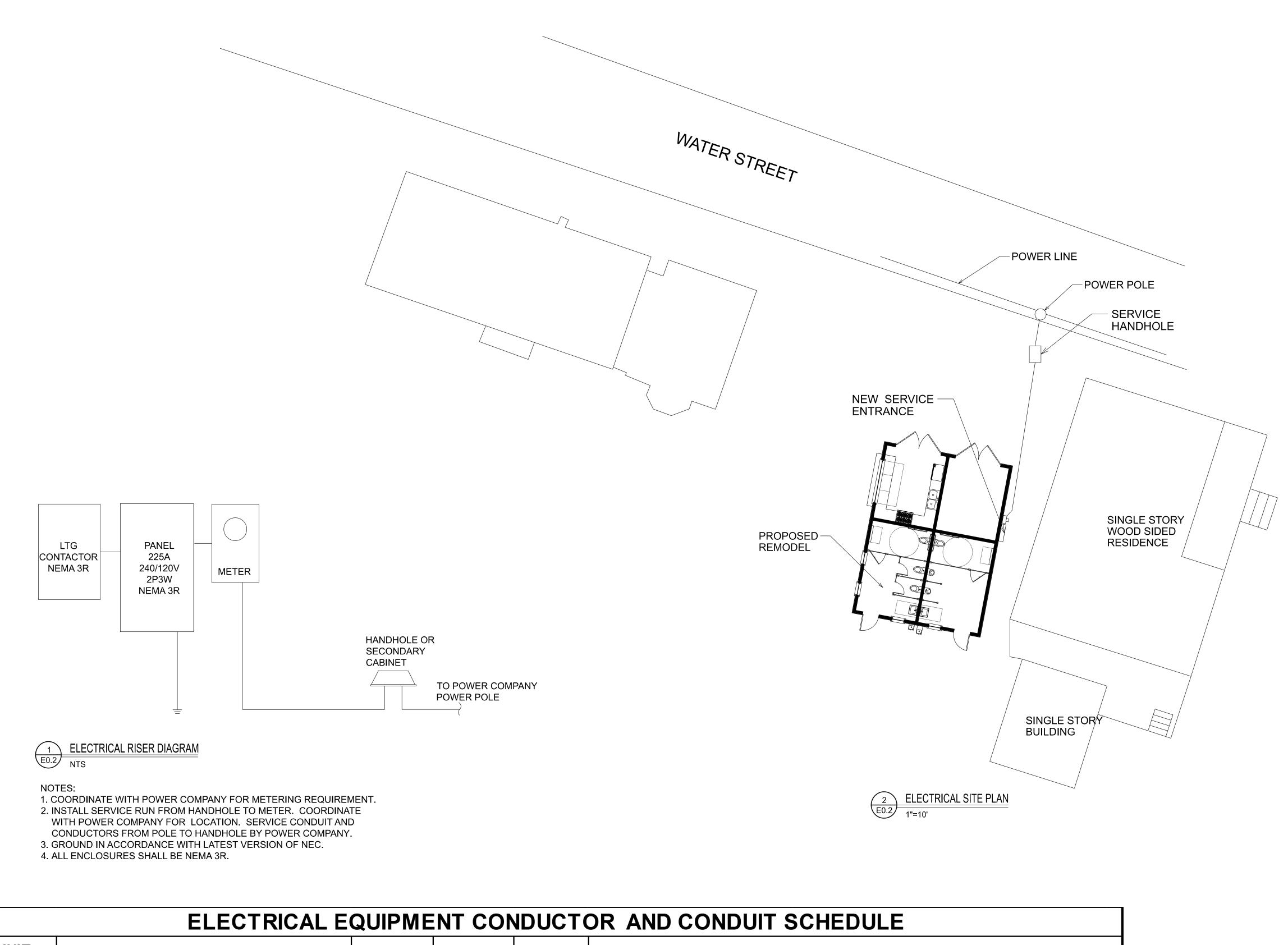
Blackburn Electrical

Engineering, LLC ®

E-0.1

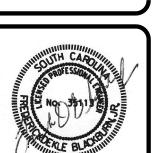
E-01.dgn

FINAL DESIGN



	ELECTRICAL EQUIPMENT CONDUCTOR AND CONDUIT SCHEDULE									
UNIT NUMBER	UNIT DESCRIPTION		R UNIT DESCRIPTION		V	PH	CONDUCTOR AND CONDUIT SIZE			
1	FROM HANDHOLE TO PANEL	225	240/120	1	3-4/0AWG CU THHN IN 2-1/2" CONDUIT					
2	RANGE	60	240/120	1	2-6AWG AND 1-#10AWG GND CU THHN IN 3/4" CONDUIT					
3	WATER HEATER	40	240/120	1	2 #8 AWG & 1 # 10 AWG GND THWN CU IN 3/4" CONDUIT					
4	SUBMERSIBLE PUMP	20	240/120	1	2 #12 AWG & 1 # 12 AWG GND THWN CU IN 3/4" CONDUIT					
5	IRRIGATION CONTROL	20	120	1	2 #12 AWG & 1 # 12AWG GND THWN CU IN 3/4" CONDUIT					





REBLECKING THE BLOCK IN THE BLO	
S	EAL

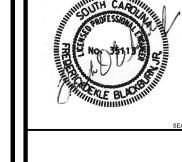
				SEAL
				APPR.
				DATE
REVISIONS				DESCRIPTION
				MARK

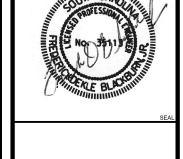
7 7 8	 7 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		PLOT DATE:	5/16/2019	FILE NAME:	
				1 0000 / in	SIZE	
	Ī		29910			

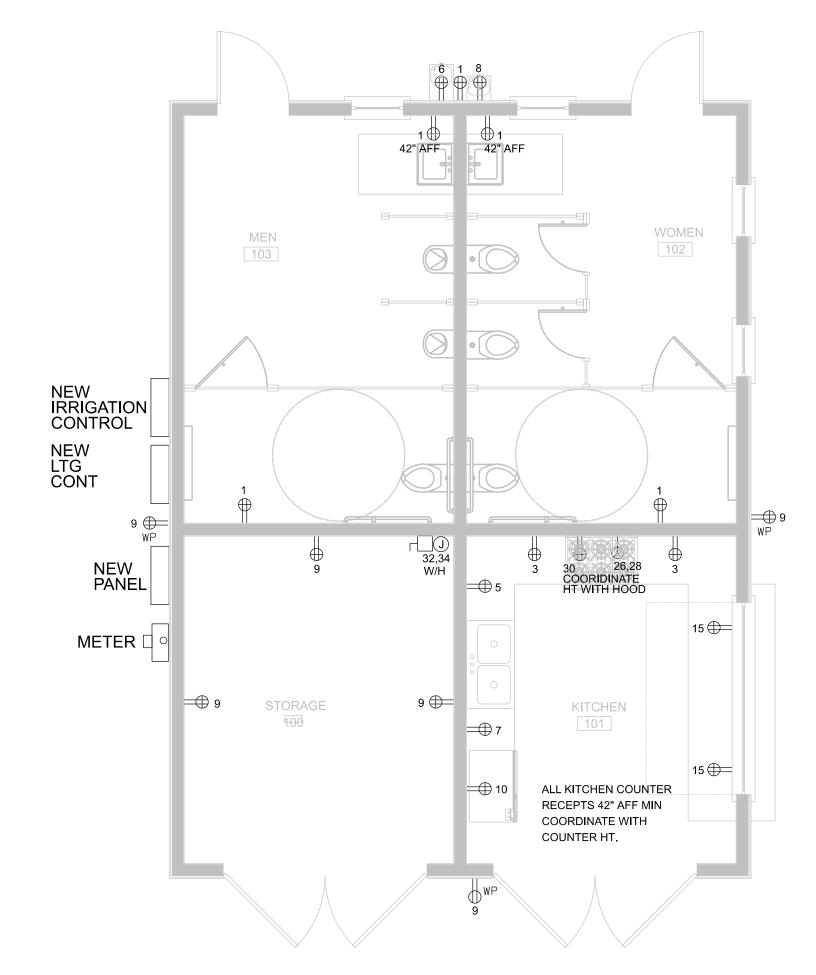
ELECTRICAL RISER DIAGRAM & SITE PLAN

Blackburn Electrical Engineering, LLC <sup>®</sup>









29,31
SUBMERSIBLE PUMP
SEE SITE PLAN
FOR LOCATION

EB3.0 ELECTRICAL POWER PLAN

1/4" = 1'-0"

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

KITCHEN 101

NEW IRRIGATION CONT

METER 🗆 🔾

STORAGE 100

NEV LTG CON

E-1.0.dgn

ELECTRIAL FLOOR PLANS

E-1.0

5/16/2019 11:44:44 AM

FINAL DESIGN

				SC	HEL	<b>JULI</b>	E OF	NE	M M	AIN	PAN	IEL					
VOLTA G	E: 240 / 120						PHASE:	1								WIRE: 3	
BUS AMF	PS: 225 A						<b>DEVICE A</b>	MPS: 2	25 A	MCB						NEMA: 3R	
A.I.C RA	TING: 10,000 A						MOUNTIN	G: SURI	FA CE								
	LOCATION DESCR	RIPTION		LOAD (KVA)	LOAD TYPE	TRIP POLE	#	PH	#	TRIP POLE	LOAD TYPE	LOAD (KVA)	LOCATION DESCRIPTION			RIPTION	
,	RECEPTS	<b>3</b>		1.0	В	20/1	1	Α	2	20/1	А	0.5		LIGHTI	NG (INT	ERIOR)	
	KITCHEN RECE	EPTS		0.4	В	20/1	3	В	4	20/1	Α	0.1		LIGHTI	NG (EXT	ERIOR)	
	KITCHEN RECE	EPTS		1.1	В	20/1	5	Α	6	20/1	Н	1.2		W	ATER F	TN	
	KITCHEN RECE	EPTS		0.0	Н	20/1	7	В	8	20/0	Н	1.2		W	ATER F	TN	
	RECEPTS	<b>3</b>		1.1	В	20/1	9	Α	10	20/1	С	1.5			FREEZEF	₹	
	KITCHEN REC	EPT		0.4	В	20/1	11	В	12	20/1	А	0.1	FU	UTURE TE	REE LIGI	HTING (LT2)	
FUTUI	RE POWER PEDE	STALS (	PP-1)	0.4	В	20/1	13	Α	14	20/1	Α	0.1	FU	UTURE TE	REE LIGI	HTING (LT2)	
FUTUI	RE POWER PEDE	STALS (	PP-1)	0.4	В	20/1	15	В	16	20/1	В	0.4	FU	JTURE GF	ROUND E	BOX (PP-2A)	
FUTUI	RE POWER PEDE	STALS (	PP-1)	0.4	В	20/1	17	Α	18	30/1	В	1.0	FU	JTURE GF	ROUND E	BOX (PP-2B)	
FUTUI	RE POWER PEDE	STALS (	PP-1)	0.4	В	20/1	19	В	20	20/1	В	0.4	FL	UTURE GROUND BOX (PP-2)			
FU	TURE POLE LIGH	TING (LT	<b>-</b> -3)	0.4	А	20/1	21	Α	22	20/1	Н	1.0	LIGHTING CONTACTOR BY OTHER			R BY OTHER	
FU	TURE POLE LIGH	TING (LT	<b>-</b> -3)	0.4	А	20/1	23	В	24	20/1	В	1.0	IRRIGATION SYSTEM BY OTHERS				
FU	TURE POLE LIGH	TING (LT	<del>-3)</del>	0.4	Α	20/1	25	Α	26	00/2	С	6.9	- ELECTRIC RANGE				
	SPACE			0.0			27	В	28	80/2	С	6.9		ELEC	I RIC R	ANGE	
	U2 LID CLIDMEDCI		4D	1.2	F	20/2	29	Α	30	20/1	С	0.4	KITCHEN HOOD			OOD	
1-1	I/2 HP SUBMERSI	BLE PUN	VIP	1.2	F	20/2	31	Α	32	F0/2	С	4.8		\A/A -		TED	
	SPACE						33	В	34	50/2	С	4.8		VVA	TER HEA	NIER	
	SPACE						35	Α	36						SPACE		
	SPACE						37	Α	38						SPACE		
	SPACE						39	В	40						SPACE		
	SPACE						41	Α	42						SPACE		
					•		PA NEL L	OAD A	WALYSIS		•						
Load	DESCR:	IDTION		Conn.	Demand		2011 NEC		Load	Di	SCRIPTI	ON	Conn.	Demand		2011 NEC	
Туре	DESCK.	IPTION		KVA	KVA		Reference		Туре	Di	_SCRIPTI	ON	KVA	_			
Α	Ligh	ting		1.8	2.2	NE	C Table 220	).42	E		Heating		0.0				
В	Recep			8.3	8.3		C Table 220		F		rgest Mo		2.4 3.0				
С	Kitchen Equip. (N		ng Unit)	25.3	20.3		C Table 220		G		ther Moto		0.0				
D	HVAC			0.0	0.0		C Article 440	0.32	<u> </u>		Other Load		3.4	3.4			
	ase A Connected Lo			KVA	Notes:							CONNECT				171.8 AN	
Pha	ase B Connected Lo	ad	17.9	KVA							TOT	AL DEMA	ND LOAD	37.2	KVA	155.1 AN	

	LIGHTING FIXTURE SCHEDULE										
TYPE	DESCRIPTION	MANUFACTURERER	WATTAGE	LAMP	VOLTAGE						
Α	4 FT WRAPAROUND SURFACE LED	METALUX 4 WNLED LD4 32SL F UNV L835 (EL7)CD1	28	LED	120V						
В	2 FT WALLBRACKET LED	METALUX 2 BCLED LD4 20SL F UNV L835 CD1	23	LED	120V						
С	WALL MOUNTED LED WITH PE CELL	HALO WP1135LPC 3500K BRONZE	13.8	LED	120V						
EF	EXAHUST FAN	SEE MECHANICAL DRAWINGS	MAX 100W	N/A	120V						
W	WALL MOUNTED REMOTE EXTERIOR EMERG. LIGHT	ATLITE ATLED W A300 WH SD	N/A	LED							

# LIGHTING NOTES:

USE FIXTURE SELECTION INCLUDED IN

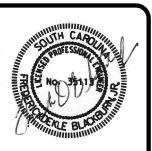
FOLLOWING

SECTION 111

CALHOUN ST.

BATH RENOVATION LIGHTING

- 1. SEE LANDSCAPE DRAWINGS FOR FUTURE LANDSCAPE LIGHTING AND POWER RQMT.
- 2. LANDSCAPE LIGHTING AND CONTACTOR WILL BE BY OTHERS. FIXTURES ARE NOT INCLUDED IN FIXTURE SCHEDULE.
- 3. APPROVED EQUAL FIXTURES ARE ACCEPTABLE TO MEET THE INTENT, LIGHTING LEVELS, AND APPEARANCE OF THIS DESIGN.



ELECTRICAL SCHEDULES

E-2.0

	ALL PLUMBING WORK SHALL BE INSTALLED IN ACCORDANCE WITH THE 2015
	INTERNATIONAL PLUMBING CODE, 2015 INTERNATIONAL BUILDING CODE, STATE SOUTH CAROLINA AMENDMENTS, AND ALL APPLICABLE LOCAL CODES AND ORDINANCES.
2.	IF ANY OF THE GOVERNING CODES ARE UPDATED, CHANGED, AND/OR MODIFIED
	AFTER THE SUBMITTAL OF THE DRAWINGS TO THE OWNER AND/OR ARCHITECT AN PRIOR TO THE ISSUANCE OF A BUILDING PERMIT, THEN THE DRAWINGS MUST BE RESUBMITTED TO THE ENGINEER FOR REVIEW, REEXAMINATION AND/OR
3.	REEVALUATION.  REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND ELEVATIONS (
4.	ALL PLUMBING FIXTURES. PLUMBING CONTRACTOR TO VERIFY ALL PLUMBING FIXTURES WITH ARCHITECT
5.	AND/OR OWNER BEFORE PROCUREMENT AND/OR INSTALLATION.  WATER PIPING ROUTED ABOVE CEILING AND IN EXTERIOR WALLS SHALL BE ROUTE ON HEATED SIDE (UNDERSIDE) OF CEILING INSULATION AND HEATED SIDE (INSIDE
6	OF WALL INSULATION.  SANITARY AND DRAINAGE PIPING 2" AND SMALLER SHALL BE SLOPED AT 1/4" PER FOOT MINIMUM, PIPING 3" AND LARGER SHALL BE SLOPED AT 1/8" PER FOOT
7.	MINIMUM.  TOPS OF ALL FLOOR DRAINS AND CLEANOUTS SHALL BE SET FLUSH WITH FINISH
8.	FLOOR.  TRAP PRIMERS ARE TO BE PROVIDED ON ALL FLOOR DRAINS AND HUB DRAINS.  "A" AUTOMATIC TRAP PRIMERS ARE TO BE
9.	"A" AUTOMATIC TRAP PRIMERS ARE TO BE PROVIDED IN ALL REQUIRED LOCATION PLUMBING AND FIRE PROTECTION PIPING IS NOT TO BE INSTALLED IN ELECTRICAL ROOMS, CLOSETS, TELEPHONE ROOMS, OR ELEVATOR EQUIPMENT ROOMS EXCERNING THAT SPECIFIC ROOM.
10.	PIPING SERVING THAT SPECIFIC ROOM.  LOCATE ALL SECTIONAL OR MAIN CONTROL VALVES WITHIN 1'-0" FROM ACCESS PANELS, CEILING TILES, OR OTHER POINT OF ACCESS.
11.	ALL COLDWATER, HOT WATER AND DRAIN PIPING AT HANDICAPPED FIXTURES SHABE INSULATED WITH HANDI-LAV GUARD MODELS 102 AND 105 INSULATION KITS
12.	PROVIDE SHOCK ABSORBERS SIZED PER PDI SPECIFICATIONS ON ALL DOMESTIC WATER LINES SERVING FLUSH VALVE FIXTURES, WASHING MACHINES SUPPLIES, F STATIONS AND OTHER INSTALLATIONS WITH QUICK CLOSING VALVES.
13.	PROVIDE A BASE CLEANOUT AT THE LOWEST LEVEL OF ALL SANITARY AND WASTE STACKS.
<ul><li>14.</li><li>15.</li></ul>	ALL SHOWER HEAD ARMS AND VALVES SHALL BE PROVIDED WITH ADDITIONAL BLOCKING AS REQUIRED AND RIGIDLY SECURED TO ADJACENT STRUCTURE.  ALL SHOWER HEADS SHALL BE INSTALLED WITH THE CENTER POINT OF THE SHOW
16.	HEAD FACE LOCATED 6'-3" MINIMUM ABOVE THE TUB/SHOWER FINISHED SURFA PROVIDE REDUCED PRESSURE BACKFLOW PREVENTORS AT ALL DOMESTIC WATER
	CONNECTIONS TO MECHANICAL EQUIPMENT, AS REQUIRED BY LOCAL CODE AND AUTHORITIES. BACKFLOW PREVENTORS ARE TO BE LOCATED WITH A MINIMUM OF 1'-0" CLEARANCE AT THE LOWEST POINT AND AT NO MORE THAN 5'-0" ABOVE
17.	FLOOR AT THE HIGHEST POINT OF THE DEVICE.  PROVIDE MANUFACTURED EXPANSIONS DEVICE OR FABRICATED EXPANSION LOC
18.	ON ALL PIPING SYSTEMS CROSSING BUILDING EXPANSION JOINTS.  CONTRACTOR SHALL COORDINATE ELECTRICAL CHARACTERISTICS AND
10.	REQUIREMENTS OF ALL PLUMBING EQUIPMENT WITH THE ELECTRICAL DRAWINGS THE ELECTRICAL CONTRACTOR AND SHALL FURNISH EQUIPMENT WIRED FOR THE VOLTAGES SHOWN THEREIN.
19.	ALL PLUMBING EQUIPMENT, PIPING, INSULATION, ETC. INSTALLED IN HVAC PLENU SPACES SHALL MEET CODE REQUIREMENTS FOR SMOKE AND COMBUSTIBILITY.
20.	ALL PLUMBING EQUIPMENT AND SYSTEMS SHALL BE GUARANTEED FOR A MINIMU PERIOD OF ONE-YEAR AFTER FINAL ACCEPTANCE.
21.	ALL PIPE PENETRATIONS OF FIRE AND/OR SMOKE RATED ASSEMBLIES SHALL BE F STOPPED AS REQUIRED TO RESTORE ASSEMBLY TO ORIGINAL INTEGRITY. FIRE BARRIER PRODUCTS SHALL BE AS MANUFACTURED BY 3M COMPANY, CP25 CALCS 195 COMPOSITE PANEL, FS 195 WRAP/SHRINK, TREMCO, HILTI, METACAULK, NELSON, OR PSS 7900 SERIES SYSTEMS AS RECOMMENDED BY MANUFACTURE FOR PARTICULAR APPLICATIONS, OR EQUIVALENT SYSTEM AS APPROVED BY LOCCODE OFFICIALS. ALSO, REFER TO DIVISION 7 – THERMAL AND MOISTURE
22.	PROTECTION.  ALL VENT TRHU ROOF PENETRATIONS SHALL BE ROUTED TO TERMINATE AT THE LIVISIBLE LOCATION FROM THE ENTRY VIEW.
23.	WATER LINES INSIDE BUILDING:  A. COPPER TYPE "L" WITH LEAD FREE SOLDER.
	B. SCHEDULE 40 CPVC WITH SOLVENT JOINTS.  C.PEX WITH MANUFACTURER'S APPROVED CONNECTIONS.
24.	WATER LINES OUTSIDE BUILDING:
	A. WATER METER TO 20' OUTSIDE BUILDING: SCHEDULE 40 PVC WITH SOLVENT JOINTS.
	B. 20' OUTSIDE BUILDING ENTRY: SCHEDULE 40 CPVC OR COPPER TYPE "L" WITH LEAD FREE SOLDER.
25.	WASTE AND VENT: SCHEDULE 40 PVC WITH DRAINAGE PATTERN FITTINGS AND SOLVENT WELDED JOINTS.
26. 27.	PROVIDE SHUT-OFF VALVES AT FIXTURES.  EXPOSED FIXTURE TRIM SHALL BE CHROME PLATED.
28. 29.	CAULK/SEAL ALL FIXTURE MOUNTING AT COUNTER, WALL AND FLOOR AS APPLICALL FIXTURES AND EQUIPMENT SHALL BE PROVIDED WITH A UNION TYPE CONNECT
30.	TO FACILITATE REMOVAL/SERVICE.  INSULATE HOT WATER LINES FROM WATER HEATER THROUGHOUT SYSTEM WITH 3 FIBERGLASS PREFORM OF "FR" TYPE RUBBER OR POLYOLEFIN FLEXIBLE FOAM.
31.	COORDINATE WITH UTILITY COMPANIES AS REQUIRED FOR SERVICE AND METER LOCATIONS.
32.	NOTIFY THE UTILITIES PROTECTION CENTER AT LEAST THREE BUSINESS DAYS PRICE TO BEGINNING:  A. EARTH EXCAVATION OR DIGGING WORK.
	B. WORK WHICH POTENTIALLY COMES WITHIN 10' OF ANY OVERHEAD HIGH VOLTA
33.	GAS LINES (NATURAL):
34.	NOTIFY ALL RESPECTIVE UTILITY COMPANY(IES) WHOSE LINES ARE ROUTED THROUGH, CONNECTED TO, AND/OR ARE IN 10' PROXIMITY OF CONSTRUCTION S LESS THAN 2 PSI. 2.5" AMD LARGER: SCHEDULE 40 BLACK STEEL WITH WELDED
	JOINTS. 2" AND SMALLER: SCHEDULE 40 BLACK STEEL WITH SCREWED JOINTS.  COPPER TYPE "L" WITH SILVER SOLDER JOINTS (1000°F). TYPE 'SST" STAINLESS  STEEL WITH JACKET AND COMPATIBLE FITTINGS.
35.	GREATER THAN 2 PSI: SCHEDULE 40 BLACK STEEL WITH WELDED JOINTS.  REFER TO ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS AND ELEVATIONS (
36.	ALL PLUMBING FIXTURES.  SANITARY AND DRAINAGE PIPING 2" AND SMALLER SHALL BE SET FLUSH WITH
J J.	FINISHED FLOOR.

37. PROVIDE A BASE CLEANOUT AT THE LOWEST LEVEL OF ALL SANITARY AND WASTE

STACKS.

	GENERAL NOTES	PLUM	BING	FIXTURE SCHEDULE					
1.	DRAWING(S) ARE SCHEMATIC, CONTRACTOR IS RESPONSIBLE FOR THE COORDINATION OF ALL DEVICE LOCATIONS AND INTERCONNECT	SYM.	QTY.	DESCRIPTION	MANUFACTURER MODEL	COLD	НОТ	WASTE	NOTES
	ROUTING WITH ARCHITECTURAL AND STRUCTURAL CONFIGURATION AND REQUIREMENTS.	WC	4	WATER CLOSET, ADA RATED, FLOOR MTD., FLUSH VALVE, I.6 GPF, VITREOUS CHINA, NOMINAL 18" SEAT HEIGHT		1"	-	3"	1,2,3,4
2.	OWNER AND/OR CONTRACTOR TO NOTIFY ENGINEER OF ANY DISCREPANCY AND/OR ITEMS IN NEED OF CLARIFICATION AND/OR DETAIL ELABORATION.	L	3	LAVATORY, ADA RATED, WALL MTD., GRID DRAIN, VITREOUS CHINA, SINGLE LAYER FAUCET, 4" CENTERS, COMPARMENT SINK		1/2"	1/2"	1-1/2"	3,4,5
3.	OWNER AND/OR CONTRACTOR TO NOTIFY ENGINEER OF ANY KNOWN ERRORS AND/OR OMISSIONS IN NEED OF ELABORATION IN WRITING	U	2	URINAL		3/4"	-	2"	3,4
4.	FOR ENGINEERING REVIEW  OWNER AND/OR CONTRACTOR TO NOTIFY ENGINEER OF ANY	WF	1	WATER FOUNTAIN		1/2"	-	3/4"	
	DIFFERENT SITE CONDITIONS, STRUCTURAL CONDITIONS, SPACE UTILIZATION OF ANY OTHER DIFFEREING CONDITION IN WRITING.	REF	1	REFRIGERATOR (BY OWNER)		1/4"	-	-	
	ENGINEER TO REVIEW AND RESPOND TO ALL WRITTEN NOTIFICATIONS.		ò						

I. SEAT: HEAVY DUTY SOLID PLASTIC, OPEN FRONT WITH STAINLESS STEEL SELF-SUSTAINING CHECK HINGE.	
2. LOCATE FLUSH OPERATOR ON MOST OPEN SIDE OF FIXTURE.	

<sup>3.</sup> SOLID BLOCKING IN WALL FOR FIXTURE SUPPORT.

**PLUMBING WASTE NOTES** 

LAVATORY.

— - -G- - —

 $-\!\!\!+$  HB

VTR

VTS

FD

ABV

I. LOCATE EXISTING SANITARY SEWER LINES INFIELD. 2. INSTALL NEW FLOOR DRAIN AND ROUTE 4" WASTE LINE TO EXISTING SEWER LINE. VERIFY LOCATION AND FLOW PRIOR TO INSTALLATION. INSTALL NEW

1/2" TRAP PRIMER LINE FROM FLOOR DRAIN TO

3. I.W. = INDIRECT WASTE LINE RUN TO NEAREST

4. MIN 1/8" HORIZONTAL SLOPE PER EVERY FOOT

SAN SEWER

COLD WATER

HOT WATER

PIPE DOWN

PIPE CAP

HOSE BIB

WATER HAMMER

VENT THRU ROOF

VENT THRU STACK

CLEAN OUT

FLOOR DRAIN

ABOVE CEILING

RELIEF VALVE

PRESSURE/TEMPERATURE

NATURAL GAS METER

NATURAL GAS CUT OFF

ARRESTOR PISTON TYPE

(F=FLOOR,G=GRADE,W=WALL)

FLEXIBLE CONNECTION

P-TRAP

COMBINATION WASTE \$ VENT

DOUBLE CHECK VALVE

BACKFLOW PREVENTER

GAS LINE

SAN VENT

FLOOR SINK/HUB DRAIN/FLOOR DRAIN.

**PLUMBING LEGEND** 

<sup>4.</sup> CAULK/GROUT/SEAL FIXTURE CONTACT WITH WALL/FLOOR/COUNTER, AS APPLICABLE.

5. PROVIDE MIXING VAL	VE TO TEMPER WATER (110 F).
-----------------------	-----------------------------

SHEET LIST							
SHEET NUMBER	SHEET NAME						
E2.1	ELECTRICAL LIGHTING PLAN						
P2.1	PLUMBING WATER PLAN						
M1.0	MECHANICAL PLAN						
E1.0	ELECTRICAL GENERAL NOTES						
E2.0	ELECTRICAL POWER PLAN						
P1.0	PLUMBING GENERAL NOTES						
P2.0	PLUMBING WASTE PLAN						
P3.0	RISERS						

ARCH

SCOTT

**REVISIONS** MARK DATE DESCRIPTION

1403-1405-11 5/16/2019 2:39:28 PM Date Printed Date Issued 12/11/2018

Designer

Designed By

SSUE FOR CONSTRUCTION
THOMAS-REEL ENGINEERING CONSULTANTS, INC.

WRIGHT

Checked by

Approver

Checker

PLUMBING GENERAL NOTES

# PLUMBING SPECIFICATION NOTES

I. ALL WORK SHALL CONFORM TO LOCAL CODES.

2. WATER LINES INSIDE BUILDING:
A. COPPER TYPE "L" WITH LEAD

A. COPPER TYPE "L" WITH LEAD FREE SOLDER.
B. SCHEDULE 40 CPVC WITH SOLVENT JOINTS.
C. PEX WITH MANUFACTURER'S APPROVED CONNECTIONS.

3. WATER LINES OUTSIDE BUILDING:
A. WATER METER TO 20' OUTSIDE BUILDING: SCHEDULE
40 PVC WITH SOLVENT JOINTS.

B. 20' OUTSIDE BUILDING ENTRY: SCHEDULE 40 CPVC OR COPPER TYPE "L" WITH LEAD FREE SOLDER.

4. WASTE AND VENT: SCHEDULE 40 PVC WITH DRAINAGE PATTERN FITTINGS AND SOLVENT WELDED JOINTS.

5. PROVIDE SHUT-OFF VALVES AT FIXTURES.

6. EXPOSED FIXTURE TRIM SHALL BE CHROME PLATED.

7. CAULK/SEAL ALL FIXTURE MOUNTING AT COUNTER, WALL AND FLOOR AS APPLICABLE.

8. ALL FIXTURES AND EQUIPMENT SHALL BE PROVIDED WITH A UNION TYPE CONNECTION TO FACILITATE REMOVAL/SERVICE.

# PLUMBING WASTE NOTES

I. LOCATE EXISTING SANITARY SEWER LINES IN FIELD.

2. RUN NEW 4" WASTE LINE. ADJUST CONNECTION TO EXISTING SANITARY SEWER AS NECESSARY IN FIELD.

3. INSTALL NEW FLOOR DRAIN AND ROUTE 4" WASTE LINE TO EXISTING SEWER LINE. VERIFY LOCATION AND FLOW PRIOR TO INSTALLATION. INSTALL NEW 1/2" TRAP PRIMER LINE FROM FLOOR DRAIN TO LAVATORY.

4. I.W. = INDIRECT WASTE LINE RUN TO NEAREST FLOOR SINK/HUB DRAIN/FLOOR DRAIN.

# **GENERAL NOTE:**

POLYOLEFIN FLEXIBLE FOAM.

BUSINESS DAYS PRIOR TO BEGINNING:

OVERHEAD HIGH VOLTAGE LINE.

AND METER LOCATIONS.

CONSTRUCTION SITE.

DRAWING(S) ARE <u>SCHEMATIC</u>, CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL DEVICE LOCATIONS AND INTERCONNECT ROUTING WITH ARCHITECTURAL AND STRUCTURAL CONFIGURATION AND REQUIREMENTS.

9. INSULATE HOT WATER LINES FROM WATER HEATER THROUGHOUT

SYSTEM WITH 3/4" FIBERGLASS PERFORM OR "FR" TYPE RUBBER OR

I I. NOTIFY THE UTILITIES PROTECTION CENTER AT LEAST THREE

A. EARTH EXCAVATION OR DIGGING WORK.

IO. COORDINATE WITH UTILITY COMPANIES AS REQUIRED FOR SERVICE

B. WORK WHICH POTENTIALLY COMES WITHIN 10' OF ANY

I 2. NOTIFY ALL RESPECTIVE UTILITY COMPANY(IES) WHOSE LINES ARE

ROUTED THROUGH, CONNECTED TO, AND/OR ARE IN 10' PROXIMITY OF

# PLUMBING LEGEND

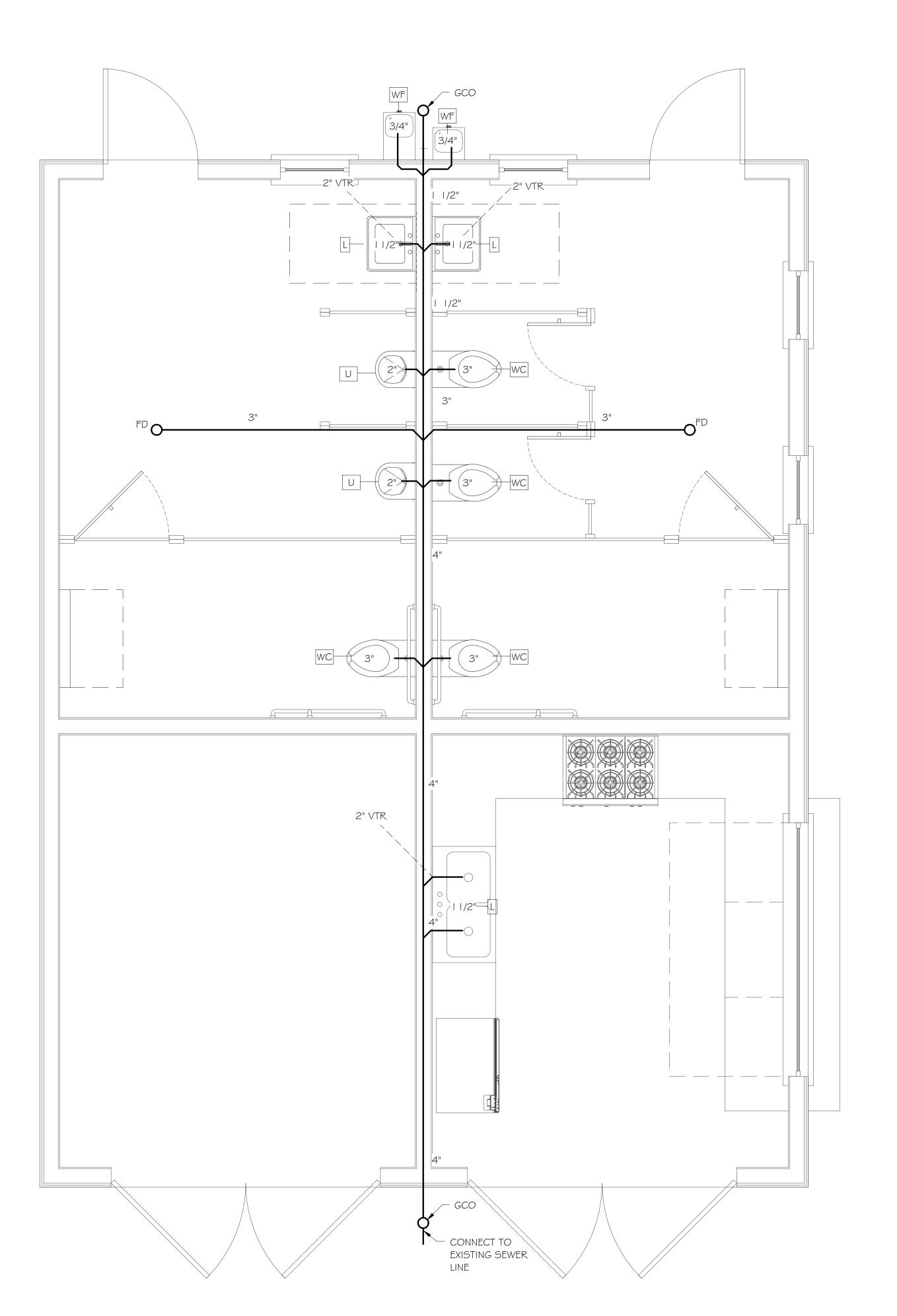
	SAN SEWER
	SAN VENT
	COLD WATER
	HOT WATER
—G— - —	GAS LINE
	DOUBLE CHECK VALVE BACKFLOW PREVENTER
	PIPE DOWN
— 0	PIPE UP
	PIPE CAP
<u></u> НВ	HOSE BIBB
	AIR GAP
U	P-TRAP
	WATER HAMMER ARRESTOR PISTON TYPE
	FLEXIBLE CONNECTION
VTR	VENT THRU ROOF
СО	CLEAN OUT (F=FLOOR,G=GRADE,W=WALL)
FD	FLOOR DRAIN
AC	ABOVE CEILING
—₽ PŧT	PRESSURE/TEMPERATURE RELIEF VALVE

NATURAL GAS METER

NATURAL GAS CUT OFF

PLUMBING FIXTURE SCHEDULE												
SYM.	QTY.	DESCRIPTION	MANUFACTURER MODEL	COLD	НОТ	WASTE	NOTES					
WC	4	WATER CLOSET, ADA RATED, FLOOR MTD., FLUSH VALVE, I.6 GPF, VITREOUS CHINA, NOMINAL 18" SEAT HEIGHT		1"	-	3"	1,2,3,4					
L	3	LAVATORY, ADA RATED, WALL MTD., GRID DRAIN, VITREOUS CHINA, SINGLE LAYER FAUCET, 4" CENTERS, COMPARMENT SINK		1/2"	1/2"	1-1/2"	3,4,5					
U	2	URINAL		3/4"	-	2"	3,4					
WF	1	WATER FOUNTAIN		1/2"	_	3/4"						
REF	I	REFRIGERATOR (BY OWNER)		1/4"	-	-						
			•		1							

- I. SEAT: HEAVY DUTY SOLID PLASTIC, OPEN FRONT WITH STAINLESS STEEL SELF-SUSTAINING CHECK HINGE.
- 2. LOCATE FLUSH OPERATOR ON MOST OPEN SIDE OF FIXTURE.
- 3. SOLID BLOCKING IN WALL FOR FIXTURE SUPPORT.
- 4. CAULK/GROUT/SEAL FIXTURE CONTACT WITH WALL/FLOOR/COUNTER, AS APPLICABLE. 5. PROVIDE MIXING VALVE TO TEMPER WATER (110 F).



2 PLUMBING- WASTE PLAN
1/2" = 1'-0"

DESIGN

THOMAS AND THE CONTRACTOR

OF ANY

OF

Engineering Consultants, In trec | STRUCTURAL | MEP | FORENS|

WWW.thomasreel.com



SC CHITECTS

EARCE SCOTT A

REVISIONS
MARK DATE DESCRIPTION

TREC No. 1403-1405-11

Date Printed 5/16/2019 2:39:30 PM

Date Issued 12/11/2018

Designed By PU

CONSTRUCTION

FOR

Checked by

P2.0

PLUMBING WASTE PLAN

# PLUMBING SPECIFICATION NOTES

- I. ALL WORK SHALL CONFORM TO LOCAL CODES.
- 2. WATER LINES INSIDE BUILDING: A. COPPER TYPE "L" WITH LEAD FREE SOLDER. B. SCHEDULE 40 CPVC WITH SOLVENT JOINTS. C. PEX WITH MANUFACTURER'S APPROVED
- 3. WATER LINES OUTSIDE BUILDING: A. WATER METER TO 20' OUTSIDE BUILDING: SCHEDULE 40 PVC WITH SOLVENT JOINTS.
  - B. 20' OUTSIDE BUILDING ENTRY: SCHEDULE 40 CPVC OR COPPER TYPE "L" WITH LEAD FREE SOLDER.
- 4. WASTE AND VENT: SCHEDULE 40 PVC WITH DRAINAGE PATTERN FITTINGS AND SOLVENT WELDED JOINTS.
- 5. PROVIDE SHUT-OFF VALVES AT FIXTURES.

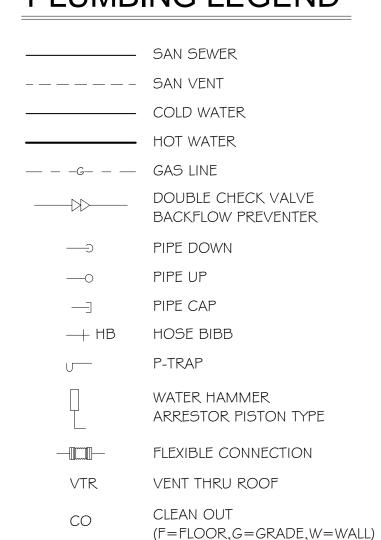
CONNECTIONS.

6. EXPOSED FIXTURE TRIM SHALL BE CHROME PLATED.

7. CAULK/SEAL ALL FIXTURE MOUNTING AT COUNTER, WALL AND FLOOR AS APPLICABLE.

8. ALL FIXTURES AND EQUIPMENT SHALL BE PROVIDED WITH A UNION TYPE CONNECTION TO FACILITATE REMOVAL/SERVICE.

# PLUMBING LEGEND



FLOOR DRAIN

RELIEF VALVE

ABOVE CEILING

PRESSURE/TEMPERATURE

NATURAL GAS METER

NATURAL GAS CUT OFF

- 9. INSULATE HOT WATER LINES FROM WATER HEATER THROUGHOUT SYSTEM WITH 3/4" FIBERGLASS PERFORM OR "FR" TYPE RUBBER OR POLYOLEFIN FLEXIBLE FOAM.
- IO. COORDINATE WITH UTILITY COMPANIES AS REQUIRED FOR SERVICE AND METER LOCATIONS.
- I I. NOTIFY THE UTILITIES PROTECTION CENTER AT LEAST THREE BUSINESS DAYS PRIOR TO BEGINNING:
  - A. EARTH EXCAVATION OR DIGGING WORK. B. WORK WHICH POTENTIALLY COMES WITHIN 10' OF ANY OVERHEAD HIGH VOLTAGE LINE.
- I 2. NOTIFY ALL RESPECTIVE UTILITY COMPANY(IES) WHOSE LINES ARE ROUTED THROUGH, CONNECTED TO, AND/OR ARE IN 10' PROXIMITY OF CONSTRUCTION SITE.
- 13. GAS LINES (NATURAL):
  - A. LESS THAN 2 PSI. 2.5" AND LARGER: SCHEDULE 40 BLACK STEEL WITH WELDED JOINTS. 2" AND SMALLER: SCHEDULE 40 BLACK STEEL WITH SCREWED JOINTS. COPPER TYPE "L" WITH SILVER SOLDER JOINTS (1000°F). TYPE "SST" STAINLESS STEEL WITH JACKET AND COMPATIBLE FITTINGS.
  - B. GREATER THAN 2 PSI: SCHEDULE 40 BLACK STEEL WITH WELDED JOINTS.

# GENERAL NOTE:

DRAWING(S) ARE <u>SCHEMATIC</u>, CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL DEVICE LOCATIONS AND INTERCONNECT ROUTING WITH ARCHITECTURAL AND STRUCTURAL CONFIGURATION AND REQUIREMENTS.

# PLUMBING WASTE NOTES

- I. LOCATE EXISTING SANITARY SEWER LINES IN FIELD.
- 2. RUN NEW 6" WASTE LINE. ADJUST CONNECTION TO EXISTING SANITARY SEWER AS NECESSARY IN FIELD.
- 3. INSTALL NEW FLOOR DRAIN AND ROUTE 4" WASTE LINE TO EXISTING SEWER LINE. VERIFY LOCATION AND FLOW PRIOR TO INSTALLATION. INSTALL NEW 1/2" TRAP PRIMER LINE FROM FLOOR DRAIN TO LAVATORY.
- 4. I.W. = INDIRECT WASTE LINE RUN TO NEAREST FLOOR SINK/HUB DRAIN/FLOOR DRAIN.

PLUMBING FIXTURE SCHEDULE							
SYM.	QTY.	DESCRIPTION	MANUFACTURER MODEL	COLD	НОТ	WASTE	NOTES
WC	4	WATER CLOSET, ADA RATED, FLOOR MTD., FLUSH VALVE, I.6 GPF, VITREOUS CHINA, NOMINAL 18" SEAT HEIGHT		1"	-	3"	1,2,3,4
L	3	LAVATORY, ADA RATED, WALL MTD., GRID DRAIN, VITREOUS CHINA, SINGLE LAYER FAUCET, 4" CENTERS, COMPARMENT SINK		1/2"	1/2"	1-1/2"	3,4,5
U	2	URINAL		3/4"	-	2"	3,4
WF	1	WATER FOUNTAIN		1/2"	-	3/4"	
REF	1	REFRIGERATOR (BY OWNER)		1/4"	-	-	
NOTES							

L CEAT LIEALA (DUT) COUR DIACTIC OPEN EDONT WITH CTAINLECC CTEEL CE	THE CLICEAUNING CLIECK LUNIOE
I. SEAT: HEAVY DUTY SOLID PLASTIC, OPEN FRONT WITH STAINLESS STEEL SE	1 F-51 5   AININ(3 ( .HF( .K HIN(3F

2. LOCATE FLUSH OPERATOR ON MOST OPEN SIDE OF FIXTURE. 3. SOLID BLOCKING IN WALL FOR FIXTURE SUPPORT.

4. CAULK/GROUT/SEAL FIXTURE CONTACT WITH WALL/FLOOR/COUNTER, AS APPLICABLE.

5. PROVIDE MIXING VALVE TO TEMPER WATER (110 F).

WF C 1/2" HB
U C 3/4"
WH
HB I"

**PLUMBING- WATER PLAN** 

1/2" = 1'-0"





1 CALHOUN STREE TOWN NEIGHBORH BLUFFTON, SC

ARCH

SCOTT

REVISIONS MARK DATE DESCRIPTION

RIGI

**NOIL** 

CONSTRUC

FOR

1403-1405-11 TREC No. 5/16/2019 2:39:31 PM Date Printed

Date Issued 12/11/2018 Designed By Designer

Checker

Checked by Approver Approved by

As indicated

PLUMBING WATER PLAN

# PLUMBING SPECIFICATION NOTES

I. ALL WORK SHALL CONFORM TO LOCAL CODES.

2. WATER LINES INSIDE BUILDING:

A. COPPER TYPE "L" WITH LEAD FREE SOLDER.
B. SCHEDULE 40 CPVC WITH SOLVENT JOINTS.
C. PEX WITH MANUFACTURER'S APPROVED CONNECTIONS.

3. WATER LINES OUTSIDE BUILDING:
A. WATER METER TO 20' OUTSIDE BUILDING: SCHEDULE

40 PVC WITH SOLVENT JOINTS.

B. 20' OUTSIDE BUILDING ENTRY: SCHEDULE 40 CPVC OR COPPER TYPE "L" WITH LEAD FREE SOLDER.

4. WASTE AND VENT: SCHEDULE 40 PVC WITH DRAINAGE PATTERN FITTINGS AND SOLVENT WELDED JOINTS.

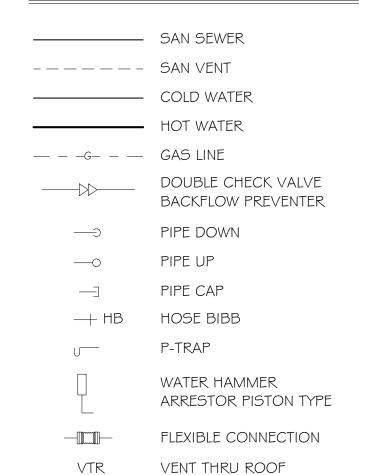
5. PROVIDE SHUT-OFF VALVES AT FIXTURES.

6. EXPOSED FIXTURE TRIM SHALL BE CHROME PLATED.

7. CAULK/SEAL ALL FIXTURE MOUNTING AT COUNTER, WALL AND FLOOR AS APPLICABLE.

8. ALL FIXTURES AND EQUIPMENT SHALL BE PROVIDED WITH A UNION TYPE CONNECTION TO FACILITATE REMOVAL/SERVICE.

# PLUMBING LEGEND



AC ABOVE CEILING

PRESSURE/TEMPERATURE
RELIFE VALVE

CLEAN OUT

FLOOR DRAIN

(F=FLOOR,G=GRADE,W=WALL)

P\$T PRESSURE/TEMPERA
RELIEF VALVE

M NATURAL GAS METER

NATURAL GAS CUT OFF

# 9. INSULATE HOT WATER LINES FROM WATER HEATER THROUGHOUT SYSTEM WITH 3/4" FIBERGLASS PERFORM OR "FR" TYPE RUBBER OR POLYOLEFIN FLEXIBLE FOAM.

I O. COORDINATE WITH UTILITY COMPANIES AS REQUIRED FOR SERVICE AND METER LOCATIONS.

I I . NOTIFY THE UTILITIES PROTECTION CENTER AT LEAST THREE

BUSINESS DAYS PRIOR TO BEGINNING:

A. EARTH EXCAVATION OR DIGGING WORK.

B. WORK WHICH POTENTIALLY COMES WITHIN 10' OF ANY

OVERHEAD HIGH VOLTAGE LINE.

I 2. NOTIFY ALL RESPECTIVE UTILITY COMPANY(IES) WHOSE LINES ARE ROUTED THROUGH, CONNECTED TO, AND/OR ARE IN 10' PROXIMITY OF CONSTRUCTION SITE.

# **GENERAL NOTE:**

DRAWING(S) ARE <u>SCHEMATIC</u>, CONTRACTOR IS RESPONSIBLE FOR COORDINATION OF ALL DEVICE LOCATIONS AND INTERCONNECT ROUTING WITH ARCHITECTURAL AND STRUCTURAL CONFIGURATION AND REQUIREMENTS.

# PLUMBING WASTE NOTES

I. LOCATE EXISTING SANITARY SEWER LINES IN FIELD.

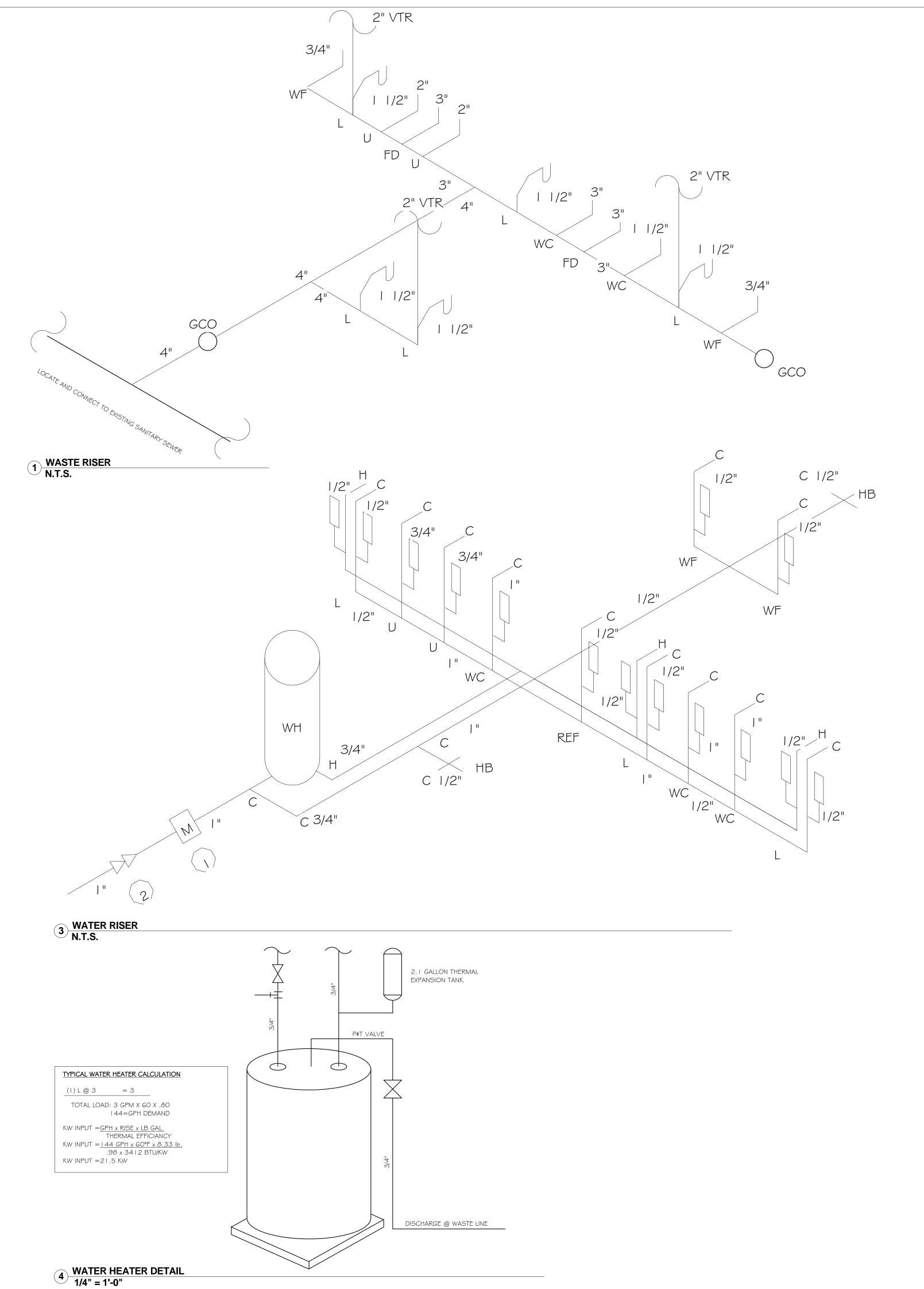
2. RUN NEW 4" WASTE LINE. ADJUST CONNECTION TO EXISTING SANITARY SEWER AS NECESSARY IN FIELD.

3. INSTALL NEW FLOOR DRAIN AND ROUTE 4" WASTE LINE TO EXISTING SEWER LINE. VERIFY LOCATION AND FLOW PRIOR TO INSTALLATION. INSTALL NEW 1/2" TRAP PRIMER LINE FROM FLOOR DRAIN TO LAVATORY.

4. I.W. = INDIRECT WASTE LINE RUN TO NEAREST FLOOR SINK/HUB DRAIN/FLOOR DRAIN.

PLUMBING FIXTURE SCHEDULE							
SYM.	QTY.	DESCRIPTION	MANUFACTURER MODEL	COLD	НОТ	WASTE	NOTES
WC	4	WATER CLOSET, ADA RATED, FLOOR MTD., FLUSH VALVE, I.6 GPF, VITREOUS CHINA, NOMINAL 18" SEAT HEIGHT		1"	-	3"	1,2,3,4
L	3	LAVATORY, ADA RATED, WALL MTD., GRID DRAIN, VITREOUS CHINA, SINGLE LAYER FAUCET, 4" CENTERS, COMPARMENT SINK		1/2"	1/2"	1-1/2"	3,4,5
U	2	URINAL		3/4"	-	2"	3,4
WF	1	WATER FOUNTAIN		1/2"	-	3/4"	
REF	1	REFRIGERATOR (BY OWNER)		1/4"	-	-	
NOTES							

- I. SEAT: HEAVY DUTY SOLID PLASTIC, OPEN FRONT WITH STAINLESS STEEL SELF-SUSTAINING CHECK HINGE.
- 2. LOCATE FLUSH OPERATOR ON MOST OPEN SIDE OF FIXTURE.
- 3. SOLID BLOCKING IN WALL FOR FIXTURE SUPPORT.
- 4. CAULK/GROUT/SEAL FIXTURE CONTACT WITH WALL/FLOOR/COUNTER, AS APPLICABLE.
- 5. PROVIDE MIXING VALVE TO TEMPER WATER (110 F).



ALING OF THE DRAWINGS. VERIFY ALL
ORRECT, OR NOT CLEAR, THE CONTRACTOR

LINC.
NSICS

OIN
SICS

OIN
GIA 31406

Engineering Consultants, Inc trec | STRUCTURAL | MEP | FORENSIC WWW.thomasreel.com 912-920-0950

CHITECTS

CE SCOTT ARCH

REVISIONS

MARK DATE DESCRIPTION

TREC No. 1403-1405-11

Date Printed 5/16/2019 2:39:32 PM

Date Issued 12/11/2018

RIGI

CONSTRUCTION

FOR

Date Issued 12/11/2018

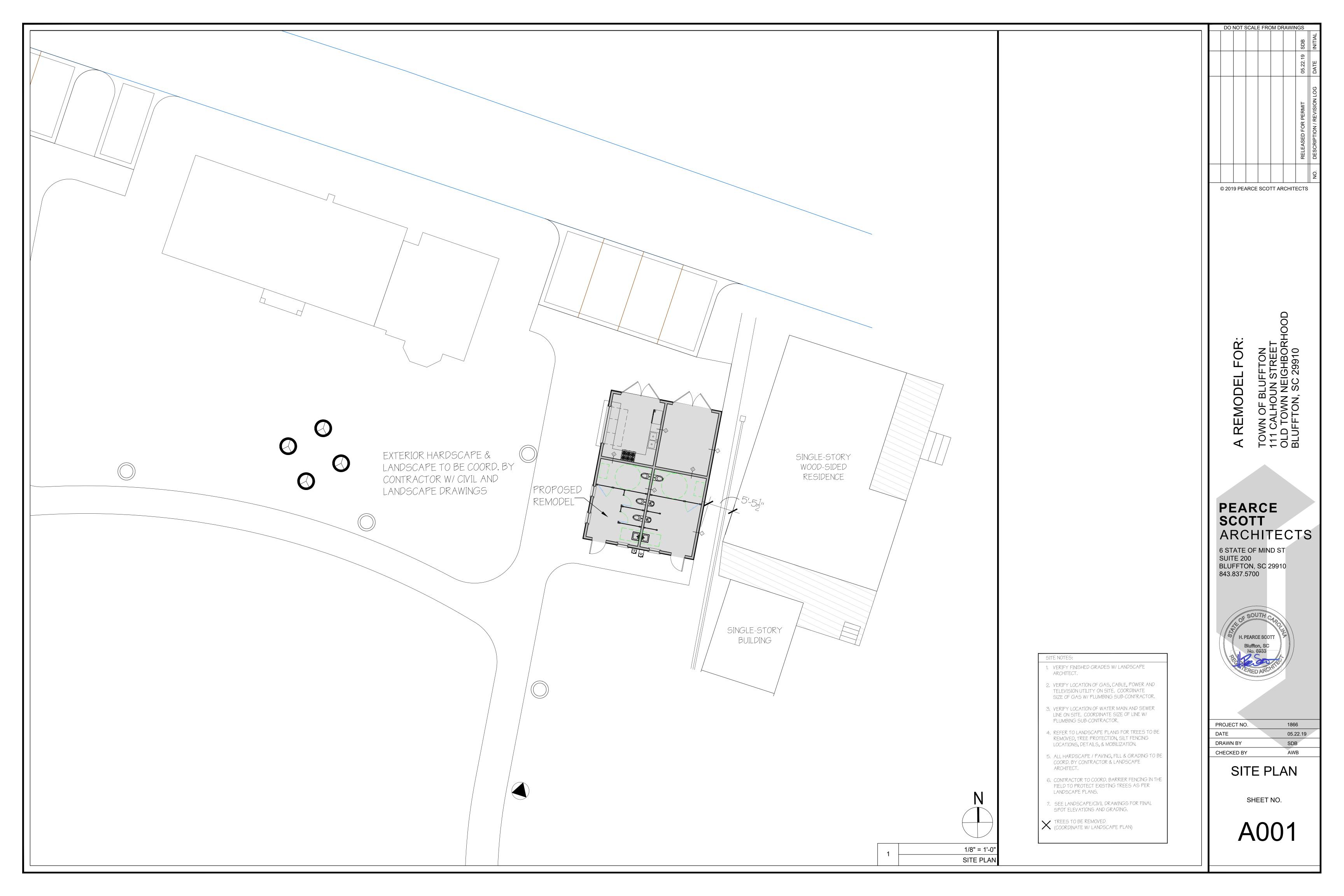
Designed By PU

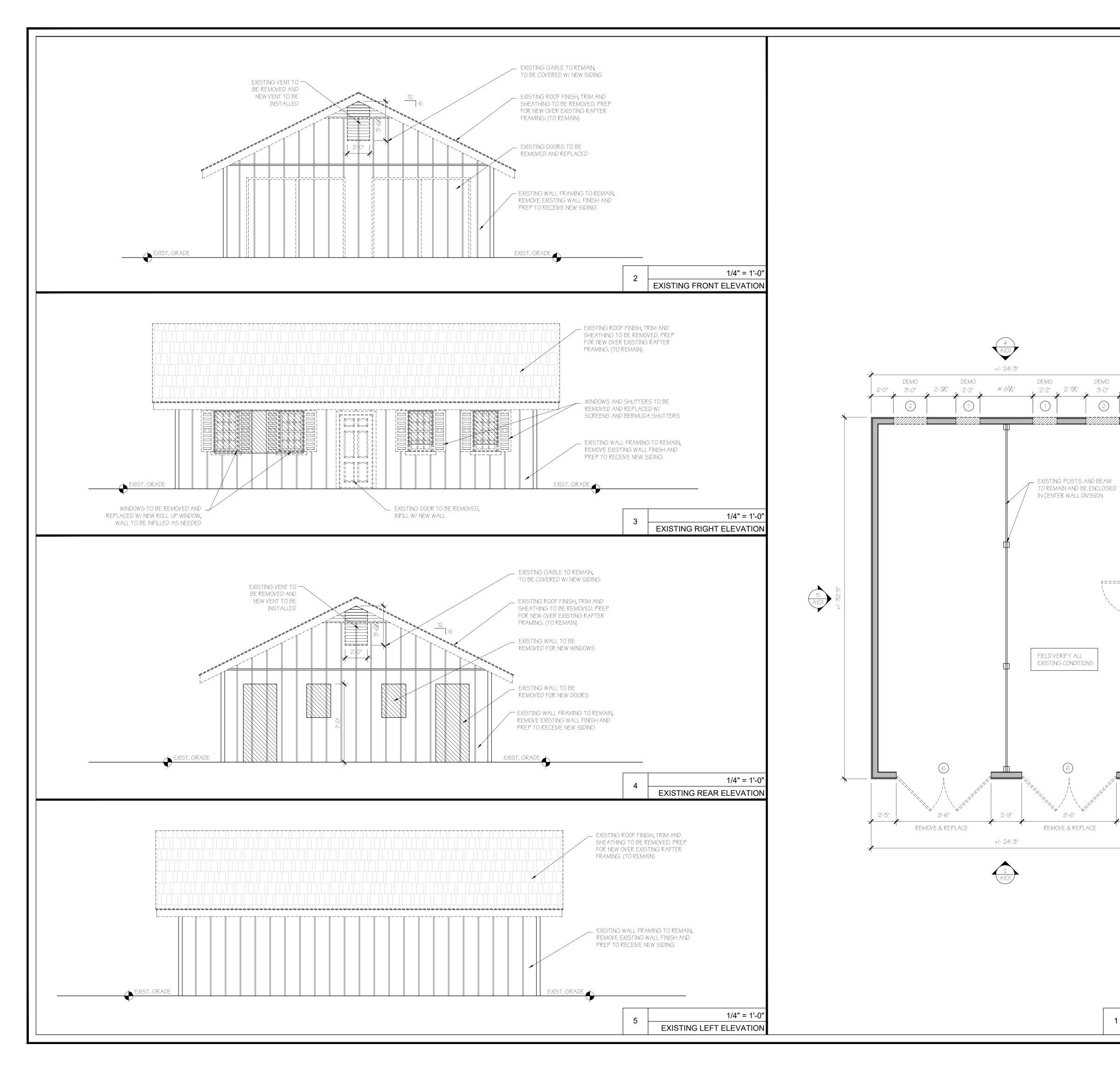
Checked by DR

Approved by MT

P3.0
As indicated

s indicated\_\_\_







INFILL AS REQUIRED

EXISTING WALL TO BE REMOVED FOR NEW FIXED
 SCREEN AND BERMUDA SHUTTER

2. EXISTING WALL TO BE REMOVED FOR NEW DOOR

3. EXISTING WINDOW TO BE REMOVED AND REPLACED WITH NEW FIXED SCREEN AND BERMUDA SHUTTER,

4. EXISTING DOOR TO BE REMOVED, INFILL WITH NEW WALL FRAMING

5. EXISTING WINDOW TO BE REMOVED AND REPLACED WITH NEW ROLL UP WINDOW, INFILL BELOW AS REQUIRED

6. EXISTING DOORS TO BE REMOVED AND REPLACED

#### GENERAL NOTES

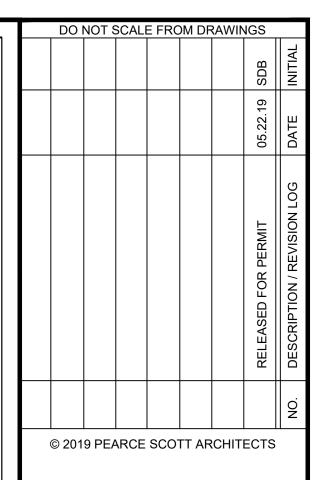
F=====**}** 

- BEFORE COMMENCING WORK, THE CONTRACTOR SHALL FILE ALL REQUIRED CERTIFICATES OF INSURANCE WITH THE DEPARTMENT OF BUILDINGS, OBTAIN ALL REQUIRED PERMITS AND PAY ALL FEES REQUIRED BY THE LOCAL JURISDICTION.
- THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS IN THE FIELD PRIOR TO COMMENCING WORK AND SHALL REPORT ANY DISCREPANCIES BETWEEN DRAWINGS AND FIELD CONDITIONS TO THE ARCHITECT.
- THE CONTRACTOR IS NOT TO SCALE DRAWINGS
  OR DETAILS. ONLY WRITTEN DIMENSIONS ARE TO
  BE USED.
- MINOR DETAILS NOT USUALLY SHOWN OR SPECIFIED, BUT NECESSARY FOR PROPER CONSTRUCTION OF ANY PART OF THE WORK SHALL BE INCLUDED AS IF THEY WERE INDICATED IN THE DRAWINGS.
- THE CONTRACTOR SHALL COORDINATE ALL WORK PROCEDURES WITH REQUIREMENTS OF LOCAL AUTHORITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL CONDITIONS AND MATERIALS WITHIN THE PROPOSED CONSTRUCTION AREA. THE CONTRACTOR SHALL DESIGN AND INSTALL ADEQUATE SHORING AND BRACING FOR ALL STRUCTURAL OR REMOVAL TASKS. THE CONTRACTOR SHALL HAVE SOLE RESPONSIBILITY FOR ANY DAMAGE OR INJURIES CAUSED BY OR DURING THE EXECUTION OF THE
- EACH CONTRACTOR SHALL LAY OUT HIS OWN WORK AND SHALL PROVIDE ALL DIMENSIONS REQUIRED FOR OTHER CONTRACTORS.

  (PLUMBING, ELECTRICAL, MECH.)
- PLUMBING, MECHANICAL AND ELECTRICAL WORK SHALL BE PERFORMED BY PERSONS LICENSED IN THEIR TRADES, WHO SHALL ARRANGE FOR AND OBTAIN INSPECTIONS AND REQUIRED SIGN-OFFS.
- EACH CONTRACTOR SHALL DO CUTTING,
   PATCHING, REPAIRING AS REQUIRED TO
   PERFORM ALL OF THE WORK INDICATED ON THE
   DRAWINGS AND ALL OTHER WORK THAT MAY BE
   REQUIRED TO COMPLETE THE JOB IN EACH PRIME
   CONTRACT.
- ALL MATERIALS, ASSEMBLIES, FORMS AND METHODS OF CONSTRUCTION AND SERVICE EQUIPMENT SHALL COMPLY WITH THE REQUIREMENTS OF THE LOCAL JURISDICTION.
- EACH CONTRACTOR SHALL COORDINATE HIS WORK WITH THAT OF THE OTHER CONTRACTORS AND SUPPLIERS.

1/4" = 1'-0

EXISTING FIRST FLOOR PLAN



TOWN OF BLUFFTON 111 CALHOUN STREET OLD TOWN NEIGHBORHC

# PEARCE SCOTT ARCHITECTS

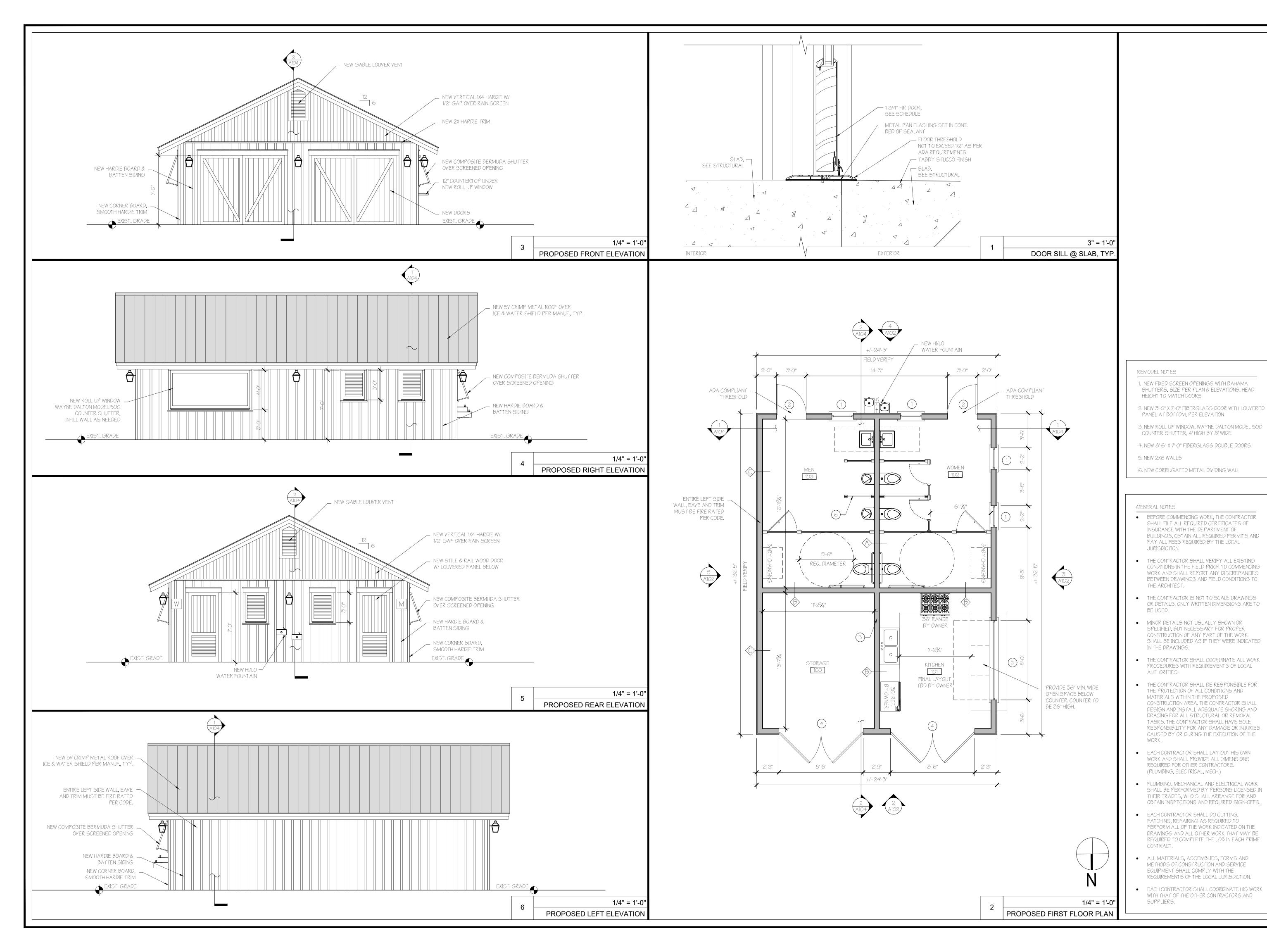
6 STATE OF MIND ST SUITE 200 BLUFFTON, SC 29910 843.837.5700

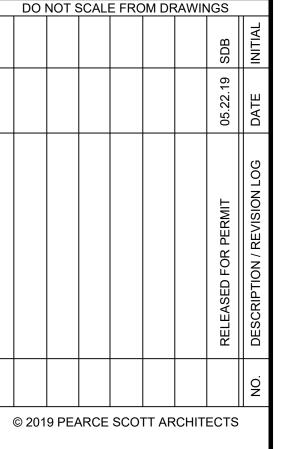


PROJECT NO.	1866
DATE	05.22.19
DRAWN BY	SDB
CHECKED BY	AWB

EXST. PLAN & ELEVATIONS
SHEET NO.

A101





# PEARCE SCOTT ARCHITECTS

6 STATE OF MIND ST SUITE 200 BLUFFTON, SC 29910 843.837.5700



ROJECT NO.	1866
ATE	05.22.19
RAWN BY	SDB
HECKED BY	AWB

PROP. PLAN & **ELEVATIONS** SHEET NO.

