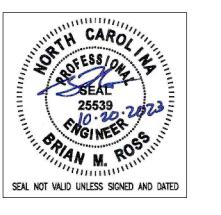


W.S. ARCHITECTS, PA 3305-109 Durham Drive Raleigh, North Carolina 27603 919.779.9797 www.wsarchitectspa.com

# ROSS LINDEN ENGINEERS PC 709 W. JONES STREET RALEIGH, NC 27603 TEL 919.832.5680 WWW.ROSSLINDEN.COM NC LICENSE NO. C-2364



PROJECT TITLE

REVELS TURF &
TRACTOR

RAWLS CHURCH RD.
FUQUAY-VARINA, NC

PROJECT NO.

C230405

DRAWING TITLE

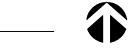
FOUNDATION PLAN

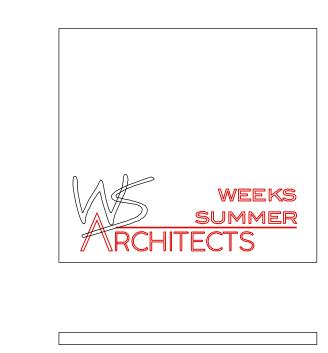
SHEET 0 OF 0

**S1.1** 

PLOT DATE REVISION 10/20/2023







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ROSS LINDEN

E N G I N E E R S P C

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DRAWING TITLE
FOUNDATION PLAN

SHEET 0 OF

**S1.2** 

10/20/2023 11/15/2023

PLOT DATE REVISION



REINFORCEMENT

#5 AT 12"

#5 AT 12"

8'-0"

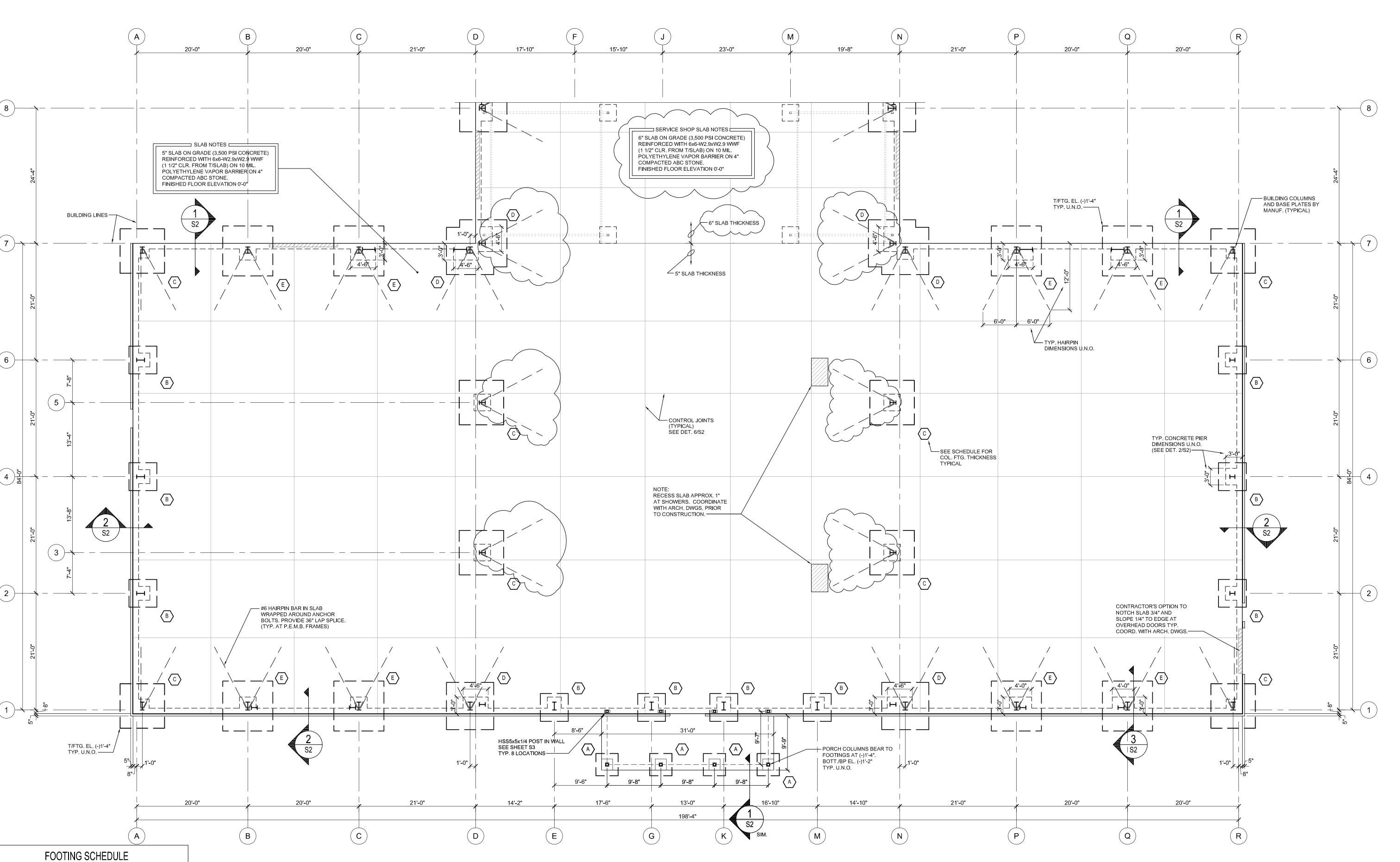
2**'-**0"

E-W

#5 AT 12"

#5 AT 12"

#6 AT 12" #6 AT 12"



### STRUCTURAL NOTES

I. GENERAL

DESIGN CODES

NORTH CAROLINA BUILDING CODE, 2018 EDITION

(AMENDED 2015 INTERNATIONAL BUILDING CODE) ACI BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

(ACI 318-14) AISC MANUAL OF STEEL CONSTRUCTION - ALLOWABLE STRESS DESIGN

NINTH EDITION

ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES

DESIGN LOADS

LIVE LOADS: FLOOR: 100 PSF ROOF: 20 PSF

ULTIMATE DESIGN WIND SPEED: 116 MPH (RISK CATEGORY II)

GROUND SNOW LOAD: 15 PSF

SITE CLASS D Ss = 0.172

S1 = 0.083

SEE PRE-ENGINEERING METAL BUILDING DRAWINGS BY OTHERS FOR FULL STRUCTURAL DESIGN LOAD SUMMARY USED FOR BUILDING DESIGN.

3. ALL ELEVATIONS ARE REFERENCED FROM FINISHED FLOOR ELEVATION OF 0'-0".

4. BUILDING DESIGN AND MAXIMUM FOUNDATION REACTIONS PROVIDED BY VP BUILDINGS, PRELIMINARY REACTION REPORT, DATED 4 OCTOBER 2023. FOUNDATION DESIGN IS BASED ON MAXIMUM AND MINIMUM LOADING CONDITIONS PROVIDED BY THE BUILDING DESIGNER. FINAL SEALED FOUNDATION REACTIONS SHALL BE PROVIDED OR REVIEW PRIOR TO CONSTRUCTION.

5. SEE BUILDING DRAWINGS FOR COLUMN AND BASE PLATE SIZES AND

6. ANCHOR BOLT DESIGN PROVIDED BY BUILDING DESIGNER. ANCHOR BOLT EMBEDMENT ONLY IS PROVIDED ON DRAWING \$1.3.

7. ENGINEER'S SEAL APPLIES TO STRUCTURAL COMPONENTS ONLY AND DOES NOT CERTIFY ARCHITECTURAL LAYOUT OR DIMENSIONAL ACCURACY.

8. ROSS LINDEN ENGINEERS PC ASSUMES NO LIABILITY FOR CHANGES OR MODIFICATIONS MADE TO THESE DRAWINGS BY OTHERS, OR FOR CONSTRUCTION METHODS, OR FOR ANY DEVIATION FROM THESE DRAWINGS.

#### II. CONCRETE

1. UNLESS OTHERWISE NOTED, ALL CONCRETE SHALL HAVE THE FOLLOWING STRENGTH AND SLUMP REQUIREMENTS: 3,500 PSI 28-DAY COMPRESSIVE STRENGTH, MAX. 5" SLUMP.

2. ALL CONCRETE SHALL BE MOIST CURED PER ACI 301 OR CURED WITH AN APPROVED CURING COMPOUND. CONTRACTOR SHALL VERIFY THAT THE CURING COMPOUND IS COMPATIBLE WITH FLOOR COVERING ADHESIVES, COATINGS, OR TOPPINGS TO BE USED. CONCRETE SHALL BE CURED FOR A MINIMUM OF 7 DAYS.

3. UNLESS OTHERWISE NOTED, ALL REINFORCING STEEL SHALL BE NEW BILLET STEEL, CONFORMING TO ASTM A-615, GRADE 60, DEFORMED.

4. 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 315)

5. ALL BAR SPLICES SHALL BE CLASS "B" TENSION SPLICES PER ACI 318-14, UNLESS OTHERWISE SHOWN.

# 6. ANCHOR BOLTS TO BE ASTM A36 OR A307.

7. CONTRACTOR SHALL REFER TO DRAWINGS OF OTHER TRADES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON THE STRUCTURAL DRAWINGS.

8. ALL SPREAD FOOTINGS BEARING ON NATIVE SOIL OR STRUCTURAL FILL ARE DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 2,500 PSF. A GEOTECHNICAL REPRESENTATIVE SHALL INSPECT ALL FOOTING EXCAVATIONS TO CONFIRM ALLOWABLE BEARING PRESSURES

9. PROVIDE TWO (2) #5 x 4'-0" LONG DIAGONAL BARS IN TOP FACE OF ALL SLABS (1" CLEAR) AT ALL RE-ENTRANT CORNERS. SEE PLAN FOR LOCATIONS.

10. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, PROTECTING, AND RELOCATING AS REQUIRED ALL SERVICE AND UTILITY LINES IN VICINITY OF THE

11. ALL DOWELS WHICH ARE TO BE DRILLED AND GROUTED INTO EXISTING CONCRETE SHALL BE DONE WITH AN EPOXY GROUT. DRILL HOLE WITH DIAMETER 1/8" LARGER THAN DOWEL OR AS RECOMMENDED BY GROUT SUPPLIER. USE HIT-RE 500 V3 BY HILTI OR APPROVED EQUAL.

# III. LIGHT GAUGE STEEL FRAMING

1. INSTALLATION OF LIGHT GAUGE STEEL FRAMING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

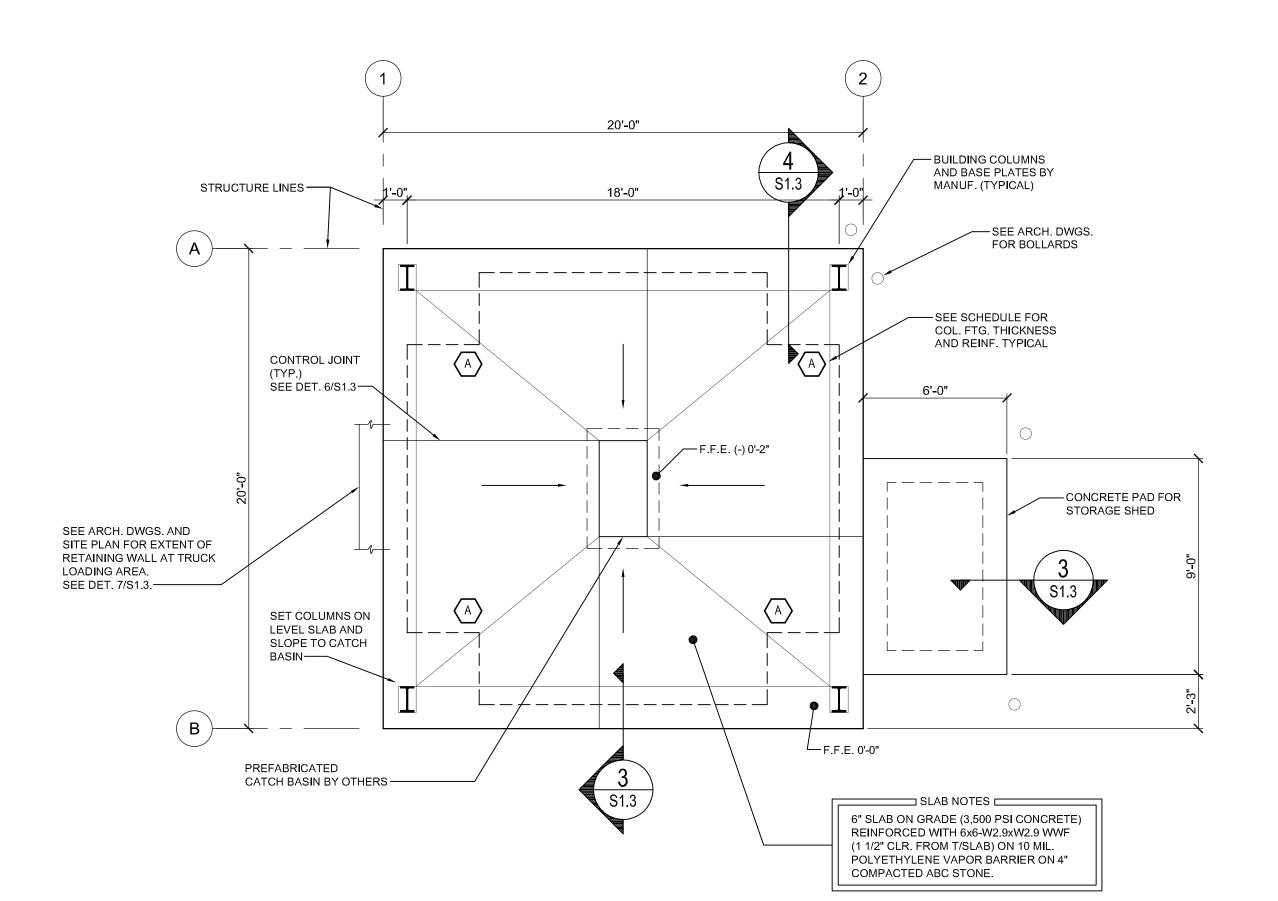
2. WALL STUDS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES: 16" MAX. SPACING

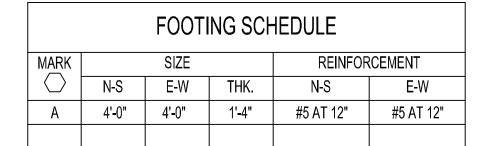
STUD DEPTH = 3 5/8" (SEE ARCH. DWGS.) FLANGE WIDTH = 1 5/8" MIN.

18 GAUGE STEEL SEE ARCH. DWGS. FOR WALL HEIGHT

3. PROVIDE MIN. 18 GA. BOTTOM TRACK AND ANCHOR TO SLAB WITH POWDER ACTUATED FASTENERS AT 16" O.C. USE HILTI DS FASTENERS WITH 0.177" SHANK DIAMETER AND 1 7/16" EMBEDMENT. WELD STUDS TO TRACK EACH SIDE -or-PROVIDE (2) NO. 10 SCREWS (ONE EACH SIDE OF TRACK).

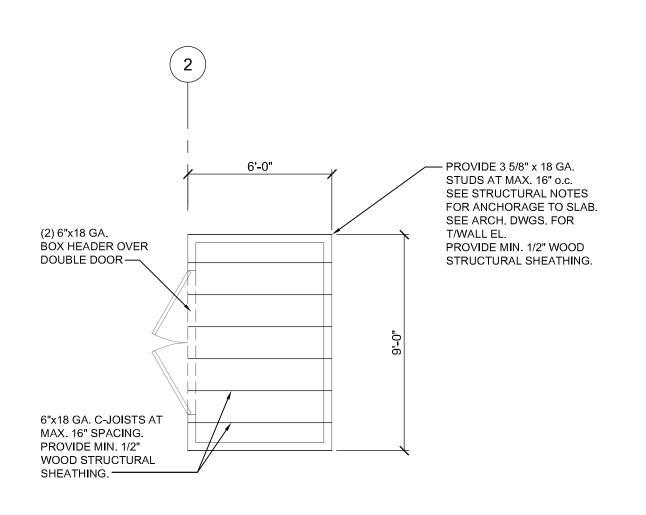
4. DETAILED SHOP DRAWINGS SHALL BE PROVIDED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.





SLAB AND FOUNDATION PLAN

S1.3





BASE PL

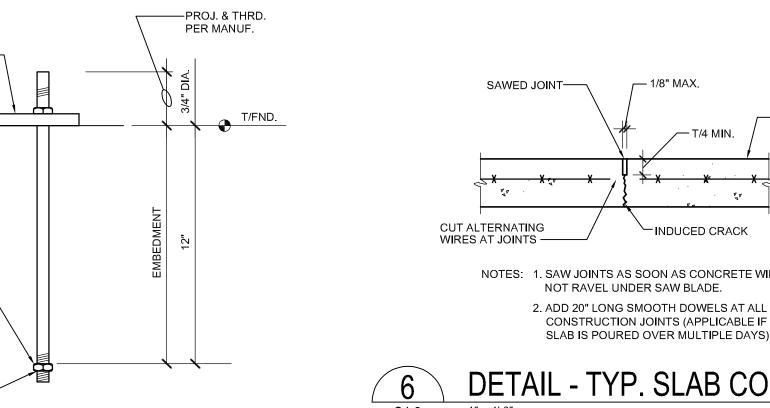
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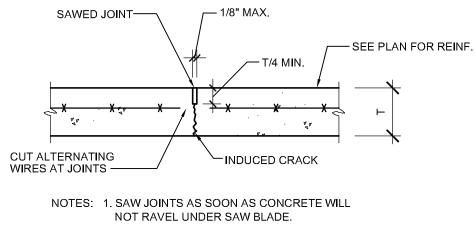
ANCHORAGE —

BY OTHERS -

STORAGE SHED FRAMING PLAN

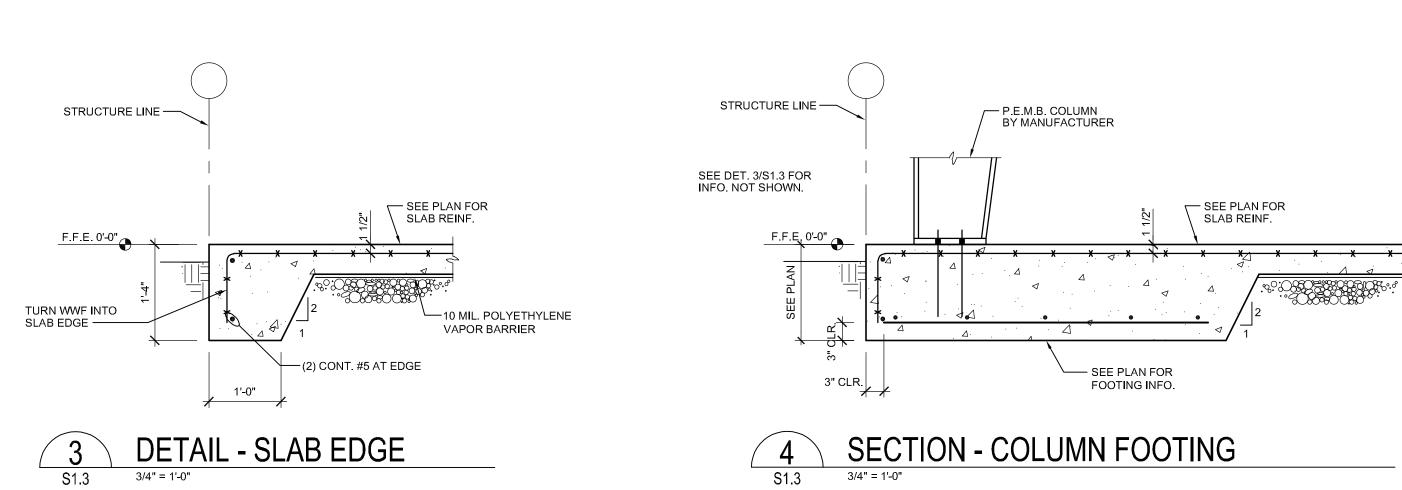


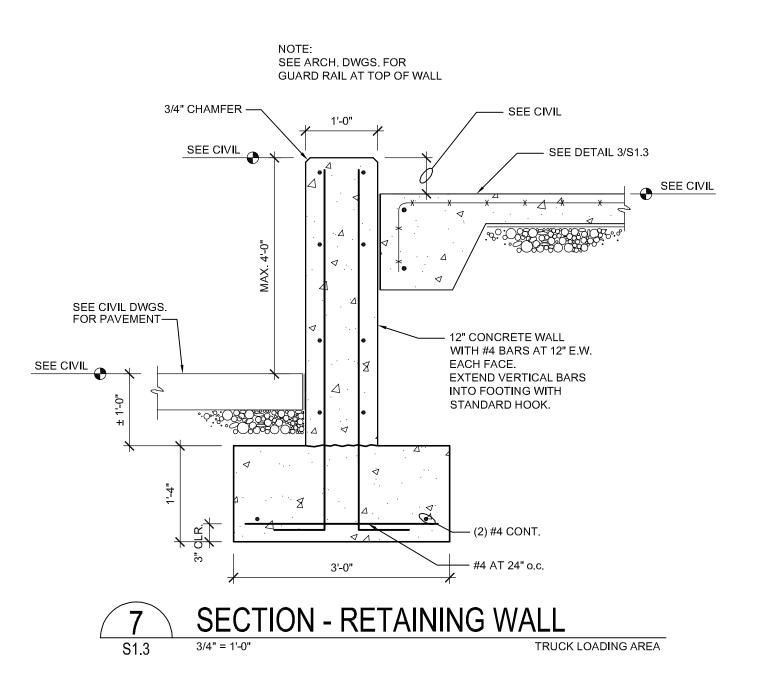


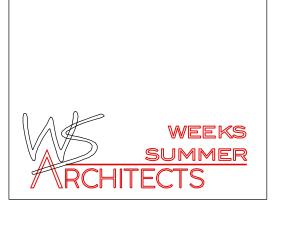


CONSTRUCTION JOINTS (APPLICABLE IF SLAB IS POURED OVER MULTIPLE DAYS). DETAIL - TYP. SLAB CONTROL JOINT









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PROJECT TITLE **REVELS TURF &** TRACTOR RAWLS CHURCH RD. FUQUAY-VARINA, NC

PROJECT NO. C230405 DRAWING TITLE **WASH BAY PLAN AND DETAILS** 

OF

PLOT DATE REVISION

11/17/2023

## STRUCTURAL NOTES

I. GENERAL

1. DESIGN CODES

NORTH CAROLINA BUILDING CODE, 2018 EDITION (AMENDED 2015 INTERNATIONAL BUILDING CODE)

ACI BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

(ACI 318-14)

AISC MANUAL OF STEEL CONSTRUCTION - ALLOWABLE STRESS DESIGN NINTH EDITION

ASCE 7-10 MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES

2. DESIGN LOADS

LIVE LOADS: FLOOR: 100 PSF ROOF: 20 PSF

ULTIMATE DESIGN WIND SPEED: 116 MPH (RISK CATEGORY II)

GROUND SNOW LOAD: 15 PSF

SITE CLASS

Ss = 0.172 S1 = 0.083

SEE PRE-ENGINEERING METAL BUILDING DRAWINGS BY OTHERS FOR FULL STRUCTURAL DESIGN LOAD SUMMARY USED FOR BUILDING DESIGN.

3. ALL ELEVATIONS ARE REFERENCED FROM FINISHED FLOOR ELEVATION OF 0'-0".

4. BUILDING DESIGN AND MAXIMUM FOUNDATION REACTIONS PROVIDED BY VP BUILDINGS, JOB NUMBER 23-018589-01, DATED 26 SEPTEMBER 2023. FOUNDATION DESIGN IS BASED ON MAXIMUM AND MINIMUM LOADING CONDITIONS PROVIDED BY THE BUILDING DESIGNER.

5. SEE BUILDING DRAWINGS FOR COLUMN AND BASE PLATE SIZES AND

6. ANCHOR BOLT DESIGN PROVIDED BY BUILDING DESIGNER. ANCHOR BOLT EMBEDMENT ONLY IS PROVIDED ON DRAWING S2.

7. ENGINEER'S SEAL APPLIES TO STRUCTURAL COMPONENTS ONLY AND DOES NOT CERTIFY ARCHITECTURAL LAYOUT OR DIMENSIONAL ACCURACY.

8. ROSS LINDEN ENGINEERS PC ASSUMES NO LIABILITY FOR CHANGES OR MODIFICATIONS MADE TO THESE DRAWINGS BY OTHERS, OR FOR CONSTRUCTION METHODS, OR FOR ANY DEVIATION FROM THESE DRAWINGS.

#### II. CONCRETE

1. UNLESS OTHERWISE NOTED, ALL CONCRETE SHALL HAVE THE FOLLOWING STRENGTH AND SLUMP REQUIREMENTS: 3,500 PSI 28-DAY COMPRESSIVE STRENGTH, MAX. 5" SLUMP.

2. ALL CONCRETE SHALL BE MOIST CURED PER ACI 301 OR CURED WITH AN APPROVED CURING COMPOUND. CONTRACTOR SHALL VERIFY THAT THE CURING COMPOUND IS COMPATIBLE WITH FLOOR COVERING ADHESIVES, COATINGS, OR TOPPINGS TO BE USED. CONCRETE SHALL BE CURED FOR A MINIMUM OF 7 DAYS.

3. UNLESS OTHERWISE NOTED, ALL REINFORCING STEEL SHALL BE NEW BILLET STEEL, CONFORMING TO ASTM A-615, GRADE 60, DEFORMED.

4. 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 315)

5. ALL BAR SPLICES SHALL BE CLASS "B" TENSION SPLICES PER ACI 318-14, UNLESS OTHERWISE SHOWN.

6. ANCHOR BOLTS TO BE ASTM A36 OR A307.

7. CONTRACTOR SHALL REFER TO DRAWINGS OF OTHER TRADES AND VENDOR DRAWINGS FOR EMBEDDED ITEMS AND RECESSES NOT SHOWN ON THE STRUCTURAL DRAWINGS.

8. ALL SPREAD FOOTINGS BEARING ON NATIVE SOIL OR STRUCTURAL FILL ARE DESIGNED FOR AN ALLOWABLE BEARING PRESSURE OF 2,500 PSF. A GEOTECHNICAL REPRESENTATIVE SHALL INSPECT ALL FOOTING EXCAVATIONS TO CONFIRM ALLOWABLE BEARING PRESSURES

9. PROVIDE TWO (2) #5 x 4'-0" LONG DIAGONAL BARS IN TOP FACE OF ALL SLABS (1" CLEAR) AT ALL RE-ENTRANT CORNERS. SEE PLAN FOR LOCATIONS.

10. CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING, PROTECTING, AND RELOCATING AS REQUIRED ALL SERVICE AND UTILITY LINES IN VICINITY OF THE

11. CONTRACTOR SHALL VERIFY ALL SIZES AND LOCATIONS OF ALL MECHANICAL AND ELECTRICAL OPENINGS AND EQUIPMENT PADS WITH THE MECHANICAL AND ELECTRICAL DETAILS AND SHOP DRAWINGS BY OTHERS. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL OPENINGS AND SLEEVES FOR PROPER DISTRIBUTION FOR ALL UTILITIES THROUGHOUT THE BUILDING.

12. ALL DOWELS WHICH ARE TO BE DRILLED AND GROUTED INTO EXISTING CONCRETE SHALL BE DONE WITH AN EPOXY GROUT. DRILL HOLE WITH DIAMETER 1/8" LARGER THAN DOWEL OR AS RECOMMENDED BY GROUT SUPPLIER. USE HIT-RE 500 V3 BY HILTI OR APPROVED EQUAL.

## III. STRUCTURAL STEEL

1. ALL STRUCTURAL STEEL WIDE FLANGE BEAMS AND COLUMNS, UNLESS NOTED, SHALL CONFORM TO THE REQUIREMENTS OF ASTM A992 OR ASTM A572, GRADE 50. ANGLES AND CHANNELS SHALL CONFORM TO ASTM A36. TUBES SHALL CONFORM TO ASTM A500, GRADE B.

2. ALL DETAILING, FABRICATION, AND ERECTION OF STRUCTURAL STEEL, UNLESS OTHERWISE NOTED, SHALL CONFORM TO THE REQUIREMENTS OF THE AISC SPECIFICATIONS FOR BUILDINGS, LATEST EDITION.

3. UNLESS OTHERWISE NOTED, ALL SHOP CONNECTIONS SHALL BE MADE BY WELDING OR HIGH STRENGTH BOLTING. (3/4" DIAMETER BOLTS, MINIMUM)

4. WELDS SHALL BE MADE WITH E-70XX ELECTRODES BY CERTIFIED WELDERS.

5. ALL COLUMN ANCHOR BOLT HOLES TO BE OVERSIZED IN ACCORDANCE WITH RECOMMENDATIONS OF "AISC" MANUAL FOR "DETAILING FOR STEEL CONSTRUCTION."

6. UNLESS OTHERWISE NOTED, ALL FIELD CONNECTIONS SHALL BE MADE WITH 3/4" DIAMETER HIGH STRENGTH BOLTS (ASTM A-325). CONNECTIONS SHALL BE DESIGNED AS BEARING TYPE WITH THREADS IN SHEAR PLANE. BOLTS SHALL BE TIGHTENED TO THE SNUG TIGHT CONDITION PER "AISC" UNLESS NOTED OTHERWISE ON THE DRAWINGS.

7. UNLESS OTHERWISE SHOWN, ALL BEAM CONNECTIONS SHALL BE STANDARD FRAMED OR SEATED CONNECTIONS AS SHOWN IN PART 4 OF THE AISC MANUAL OF STEEL CONSTRUCTION.

#### 8. GUSSET PLATES SHALL BE 3/8" THICK MINIMUM.

9. CONTRACTOR TO PROVIDE ADEQUATE BRACING FOR STRUCTURE SO THAT IT WILL BE STABLE DURING ALL STAGES OF CONSTRUCTION. THE STRUCTURE IS DESIGNED FOR A COMPLETED CONDITION ONLY AND THEREFORE MAY REQUIRE ADDITIONAL SUPPORT TO MAINTAIN STABILITY BEFORE COMPLETION.

#### IV. LIGHT GAUGE STEEL FRAMING

1. INSTALLATION OF LIGHT GAUGE STEEL FRAMING SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

2. WALL STUDS SHALL HAVE THE FOLLOWING MINIMUM PROPERTIES:
16" MAX. SPACING
STUD DEPTH = 6" (SEE ARCH. DWGS.)

FLANGE WIDTH = 1 5/8" MIN. 16 GAUGE STEEL

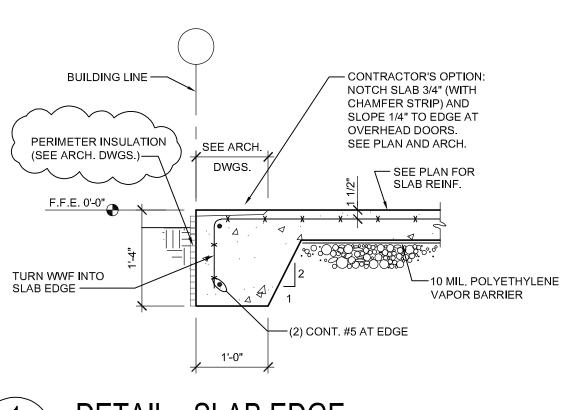
L/600 MAX. DEFLECTION AT BRICK VENEER SEE ARCH. DWGS. FOR GIRT HEIGHT

3. PROVIDE MIN. 18 GA. BOTTOM TRACK AND ANCHOR TO SLAB WITH POWDER ACTUATED FASTENERS AT 16" O.C. USE HILTI DS FASTENERS WITH 0.177" SHANK DIAMETER AND 1 7/16" EMBEDMENT. WELD STUDS TO TRACK EACH SIDE -or-PROVIDE (2) NO. 10 SCREWS (ONE EACH SIDE OF TRACK).

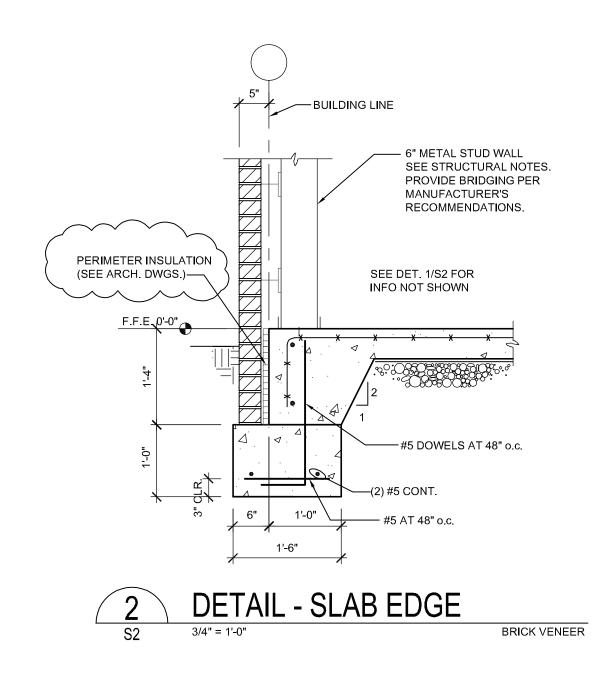
4. ATTACH STUDS TO BUILDING STRUCTURE WITH CLIP ANGLE AND SCREW CONNECTION DETAILS PROVIDED BY SUPPLIER. CONNECTION OF EACH WALL STUD TO TO BUILDING STRUCTURE SHALL CONSIST OF A MINIMUM OF (3) No. 12 SCREWS

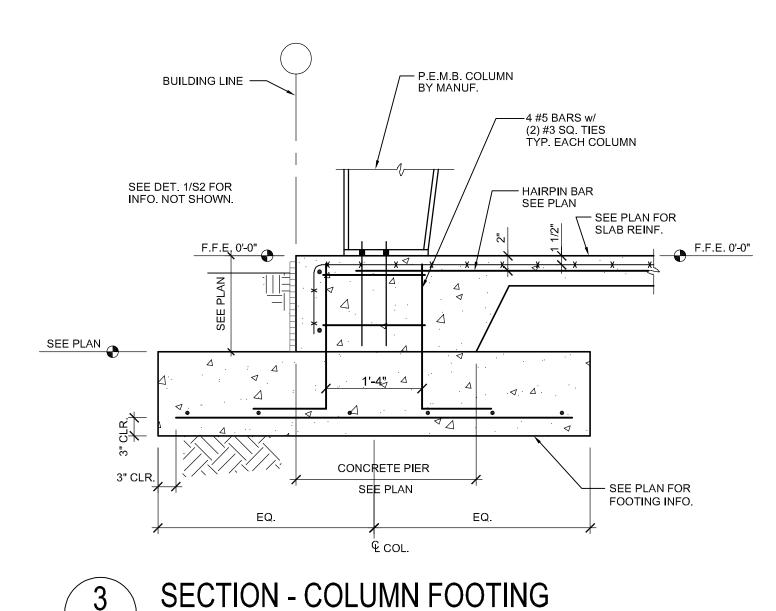
5. PROVIDE MINIMUM (2) 8" x 18 GA. BOX HEADER AT ALL FRAMED WINDOW AND DOOR OPENINGS UP TO A CLEAR SPAN OF 6'-4". PROVIDE A MINIMUM OF (2) KING STUDS AT EACH END OF EACH HEADER. PROVIDE INSULATION PER ARCHITECTURAL DRAWINGS.

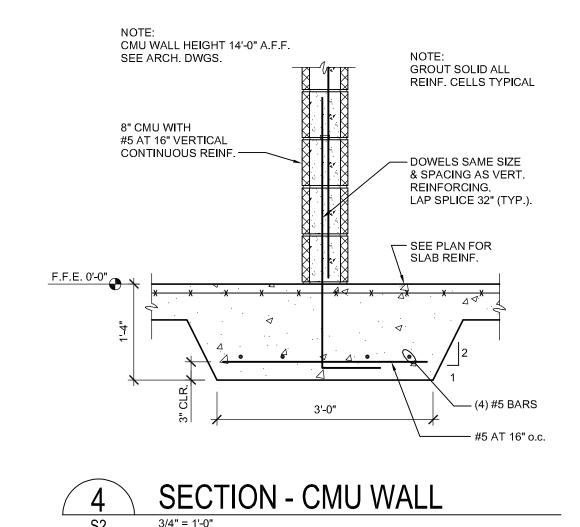
6. DETAILED SHOP DRAWINGS SHALL BE PROVIDED FOR REVIEW AND APPROVAL PRIOR TO CONSTRUCTION.

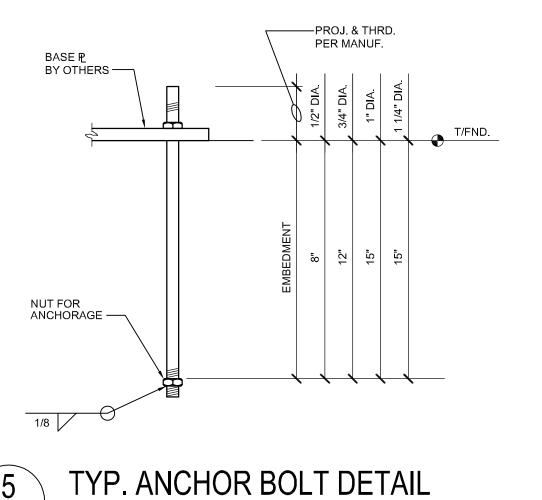


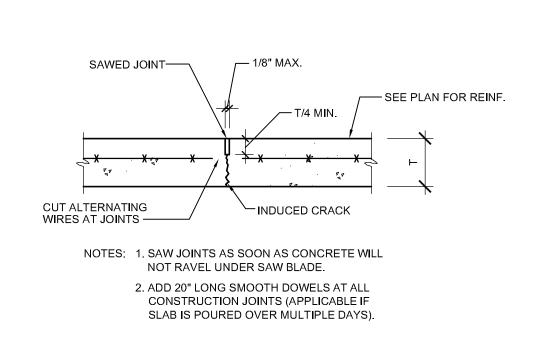


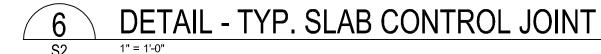














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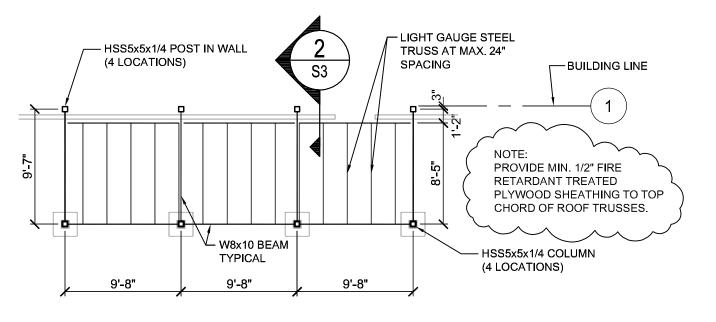
STRUCTURAL NOTES
AND DETAILS

SHEET 0 OF

**S2** 

PLOT DATE 10/20/2023

REVISION 11/22/2023
(REVIEW COMMENTS)



PORCH FRAMING PLAN 1/8" = 1'-0"

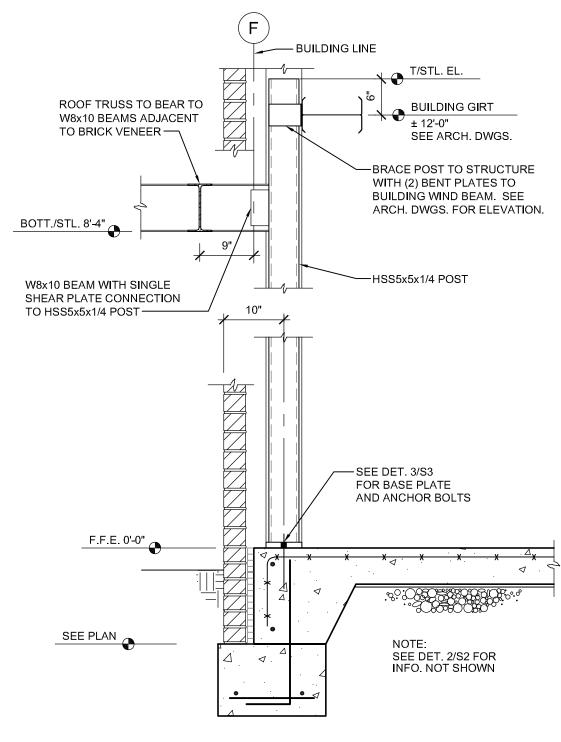
LIGHT GA. STEEL TRUSS NOTES:

1. TRUSS DESIGN LOADS: 20 PSF TOP CHORD LL 10 PSF TOP CHORD DL 10 PSF BOTTOM CHORD DL 115 MPH WIND

2. TRUSSES SHALL BE PLACED AT MAX. 24" o.c. SPACING WITH 3:12 PITCH. SEE ARCH. DRAWINGS.

3. PROVIDE DETAILED SHOP DRAWINGS FOR REVIEW AND APPROVAL PRIOR TO FABRICATION. TRUSS PROFILES SHALL BE ENGINEERED AND SEALED BY THE TRUSS MANUFACTURER.

4. SUPPORT TRUSSES AT BEARING LOCATIONS INDICATED ON PLAN. INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.





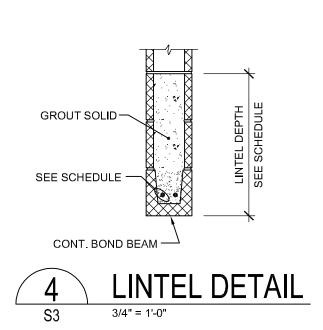
LINTEL SCHEDULE			
WALL TYPE	CLEAR OPENING WIDTH	DESCRIPTION	LINTEL DEPTH
8" CMU	LESS THAN 4'-0"	8" BOND BEAM WITH (1) #5 BAR	8" (1 COURSE)
8" CMU	4'-0" TO 10'-4"	8" BOND BEAM WITH (2) #5 BAR	16" (2 COURSES)
4" BRICK	4'-0" MAX.	L 3 1/2 x 3 1/2 x 1/4	
4" BRICK	6'-4" MAX.	L 5 x 3 1/2 x 1/4 (LLV)	
4" BRICK	8'-4" MAX.	L 6 x 3 1/2 x 5/16 (LLV)	

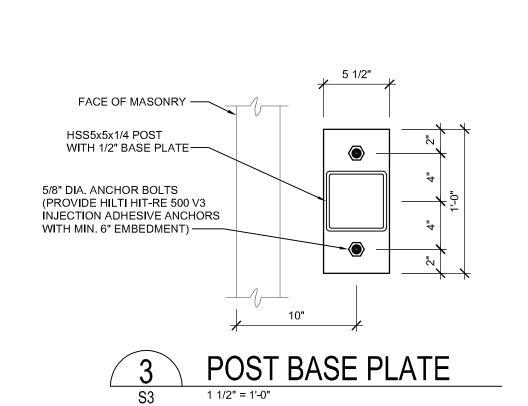
LINTEL NOTES:
1. LINTEL SCHEDULE SHALL APPLY UNLESS NOTED OTHERWISE 2. PROVIDE MIN. 8" BEARING FOR ALL LINTEL ANGLES U.N.O. 3. PROVIDE MIN. 8" BEARING FOR CMU LINTELS U.N.O.

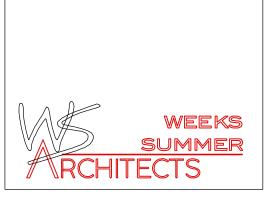
4. PLACE BARS IN BOTTOM OF BOND BEAM. 5. FOR LINTELS CONSISTING OF MULTIPLE COURSES OF CMU, PLACE BARS IN BOTTOM OF BOND BEAM AND GROUT THE ENTIRE LINTEL

SOLID IN ONE LIFT.

6. SEE DETAIL 4/S3 FOR DEFINITION OF LINTEL DEPTH.

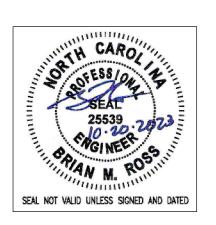






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PROJECT TITLE **REVELS TURF & TRACTOR** RAWLS CHURCH RD. FUQUAY-VARINA, NC

PROJECT NO. C230405 DRAWING TITLE **PORCH PLAN AND DETAILS** 

PLOT DATE 10/20/2023 REVISION 11/22/2023 (REVIEW COMMENTS)