STRUCTURAL SCOPE OF WORK:

THE STRUCTURAL SCOPE OF WORK IS INTENDED TO ADDRESS THE STRUCTURAL ROOF FRAMING REPAIRS & ASSOCIATED WORK AT THE EXISTING BRYANT RESIDENCE LOCATED AT 163 SE Beadie Dr., Lake City, Columbia Co., FL 32025.

THE ENGINEERED DRAWINGS (PLANS) HERE-IN PROVIDE FOR THE REPAIR AND ASSOCIATED WORK, AT THE SUBJECT SITE ONLY, AND THE REPAIR DETAILS WITHIN ARE NOT TO BE USED FOR ANY OTHER PURPOSE.

GENERAL NOTES:

1. STRUCTURAL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST FLORIDA BUILDING CODE (FBC 2023-8TH EDITION).
2. THE MOST STRINGENT REQUIREMENTS APPLY IN CASE OF CONFLICT BETWEEN STANDARDS, LOCAL CODES, AND THESE DRAWINGS.
3. OBTAIN ALL REQUIRED PERMITS FOR THE PROPER LEGAL EXECUTION OF THE WORK DESCRIBED IN THESE DRAWINGS.
4. CONTRACTOR TO PROVIDE A CONTINUOUS LOAD PATH FROM RAFTERS TO FOUNDATION FOR ALL NEW CONSTRUCTION AND PROPER SHORING/RESHORING OF LOAD-BEARING ELEMENTS DURING CONSTRUCTION.
5. ALL DIMENSIONS INDICATED ON THESE DRAWINGS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION.
6. CONTACT THE ENGINEER OF RECORD (EOR) IF ANY UNFORESEEN CONDITIONS ARE ENCOUNTERED. FAILURE BY THE CLIENT OR CONTRACTOR TO NOTIFY THE EOR, RELIEVES THE EOR OF COSTS OF REMEDYING THE DEFECT.
7. THE EOR SHALL NOT BE RESPONSIBLE FOR AND WILL NOT HAVE CONTROL OR CHARGE OVER THE CONTRACTOR'S MEANS AND METHODS OF CONSTRUCTION, NOR WILL THE EOR BE RESPONSIBLE FOR CONTRACTOR'S SAFETY PRECAUTIONS OR FAILURE TO PERFORM THE WORK IN ACCORDANCE WITH THESE DRAWINGS. FURTHERMORE, THE EOR SHALL NOT BE RESPONSIBLE FOR THE OMISSIONS AND ERRORS OF THE CONTRACTOR, SUB-CONTRACTORS, OR ANY OF THEIR RELATED AGENTS.

CODES AND DESIGN CRITERIA:

ALL CONSTRUCTION IS TO BE PERFORMED IN CONFORMANCE WITH THE BUILDING AND DESIGN CODES REFERENCED WITHIN THESE DOCUMENTS. THE PROJECT DOCUMENTS REFER TO THE FOLLOWING CODES AND STANDARDS, UNLESS NOTED OTHERWISE (UNO.):

- AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE), ASCE 7-22: "MINIMUM DESIGN LOADS AND ASSOCIATED CRITERIA FOR BUILDINGS AND OTHER STRUCTURES"
- AMERICAN CONCRETE INSTITUTE (ACI), ACI 318-19: "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), "STEEL CONSTRUCTION MANUAL, 2017" - 15TH EDITION
- NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION - 2018
- THE MASONRY SOCIETY (TMS), TMS402/602-16: "BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES" - 2016
- WOOD FRAME CONSTRUCTION MANUAL (WFCM) FOR ONE- AND TWO-FAMILY DWELLINGS - 2018

DESIGN LOADS:

DEAD LOAD - ROOF (D)	10 PSF
LIVE LOAD - UNINHABITABLE ATTIC - NOT FOR STORAGE (L)	10 PSF
LIVE LOAD - ROOF (L_r)	20 PSF
FLOOR LIVE LOAD (L)	40 PSF

FOUNDATION NOTES:

1. FOUNDATION DESIGN IS BASED ON 2,000 PSF MINIMUM SOIL BEARING PRESSURE. CONTRACTOR TO CONFIRM FOUNDATION BEARING CAPACITY.
2. PROVIDE TESTING ON SOIL COMPACTION PRIOR TO CONCRETE PLACEMENT OPERATIONS. SOIL COMPACTION SHOULD ACHIEVE 95% MODIFIED PROCTOR DENSITY.
3. BEARING SOILS SHALL BE FREE OF ORGANIC MATERIAL AND FREE OF WATER PRIOR TO CONCRETE PLACEMENT.
4. FOUNDATIONS SHALL BE ALLOWED TO SETTLE PRIOR TO VERTICAL CONSTRUCTION.
5. SLAB FOUNDATION SUBGRADE SOILS SHALL BE TERMITE TREATED.

CAST-IN-PLACE CONCRETE:

1. CAST-IN-PLACE CONCRETE WORK SHALL BE DONE IN ACCORDANCE TO ACI 318-19 - BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
2. CAST-IN-PLACE CONCRETE SHALL BE NORMAL WEIGHT STRUCTURAL CONCRETE WITH A 28-DAY COMPRESSIVE STRENGTH (f'_c) OF 3,000 PSI.
3. CONCRETE SHALL HAVE A MAXIMUM W/C RATIO OF 0.50 FOR FOOTINGS AND 0.45 FOR ALL OTHER CONCRETE.
4. DEFORMED REINFORCING BARS SHALL CONFORM TO ASTM A615, GRADE 40 WITH A YIELD STRENGTH (f_y) OF 40 KSI.

CONCRETE MASONRY:

1. CONCRETE MASONRY WORK SHALL BE DONE IN ACCORDANCE WITH TMS 402/602-16 - BUILDING CODE REQUIREMENTS AND SPECIFICATION FOR MASONRY STRUCTURES.
2. THE MINIMUM COMPRESSIVE STRENGTH OF CONCRETE MASONRY (f'_m) SHALL BE 1,500 PSI.
3. CONCRETE BLOCK SHALL BE NORMAL WEIGHT (MINIMUM 125 PCF) CONFORMING TO ASTM C90.
4. MORTAR SHALL BE TYPE S, M, OR N IN CONFORMANCE WITH ASTM C476.
5. USE HORIZONTAL LADDER TYPE JOINT REINFORCEMENT SPACED AT 16" O.C. VERTICALLY CMU WALL CONSTRUCTION
6. PROVIDE FULL MORTAR COVERAGE ON FACESHELL AND WEBS.

WOOD FRAMING:

1. WOOD FRAMING SHALL BE IN CONFORMANCE WITH THE NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION - 2018.
2. UTILIZE DRESSED SEASONED LUMBER, S4S, 19% MAX. MOISTURE CONTENT AT TIME OF DRESSING.
3. ALL WOOD FRAMING SHALL CONSIST OF SOUTHERN YELLOW PINE (SYP) #2 OR BETTER UNLESS NOTED OTHERWISE (UNO).
4. ROOF SHEATHING SHALL CONSIST OF 7/16" APA RATED STRUCTURAL SHEATHING ATTACHED WITH 8d x 2 $\frac{1}{2}$" L RINGSHANK NAILS @ 6" O.C. ALONG EDGES & 6" O.C. IN FIELD (ALL ZONES).
5. WALL SHEATHING SHALL CONSIST OF 7/16" APA RATED STRUCTURAL SHEATHING ATTACHED WITH 8d x 2 $\frac{1}{2}$" L RINGSHANK NAILS @ 6" O.C. ALONG EDGES & 6" O.C. IN FIELD (ALL ZONES).
6. WOOD IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE TREATED (P.T.) LUMBER. USE GALVANIZED NAILS IN P.T. LUMBER.
7. ALL FRAMING ANCHORS, CLIPS, STRAPS, ETC., SHALL BE MANUFACTURED BY THE SIMPSON STRONG TIE COMPANY OR APPROVED EQUAL. ALL SPECIFIED FASTENERS MUST BE INSTALLED PER WRITTEN MANUFACTURER'S INSTRUCTIONS.

WIND LOAD NOTES:

1. ULTIMATE WIND PRESSURES TO BE USED IN THE DESIGN OF ALL COMPONENTS AND CLADDING ELEMENTS.
2. REFER TO WIND PRESSURE DIAGRAM FOR ZONE LOCATIONS AND EXTENTS.
3. POSITIVE PRESSURES ACT TOWARD COMPONENT SURFACES AND NEGATIVE PRESSURES ACT AWAY FROM COMPONENT SURFACES.
4. VALUES FOR OVERHANGS INCLUDE PRESSURE CONTRIBUTIONS FROM BOTH UPPER AND LOWER SURFACES.
5. LINEAR INTERPOLATION BETWEEN EFFECTIVE WIND AREA VALUES IS PERMITTED.

WIND LOAD DESIGN CRITERIA:

PRESSURES DETERMINED FROM ASCE 7-22 CHAPTER 30 PART 1

ULTIMATE WIND VELOCITY (V_{ult})	130 MPH
RISK CATEGORY	II
WIND EXPOSURE CATEGORY	B
ENCLOSURE CLASSIFICATION	ENCLOSED
MEAN ROOF HEIGHT	< 15 FT
ROOF SLOPE	3 : 12
INTERNAL PRESSURE COEFFICIENT (G_{cpi})	+/- 0.18
DIMENSION 'A' (EDGE ZONES)	3.00 FT

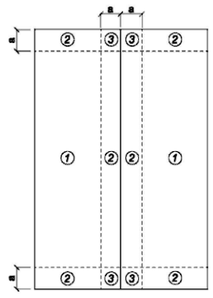
COMPONENTS & CLADDING (C&C) PRESSURES DETERMINED FROM ASCE 7-22 CHAPTER 30 PART 1 FIGURES 30.3-1 & 30.3-2B

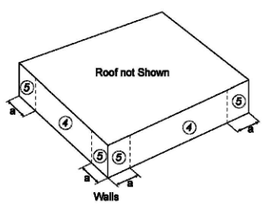
C&C Wind Roof & Wall Summary per Ch 30 Pt 1 (Table 1)

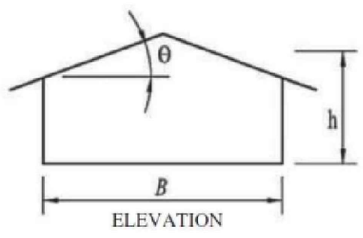
All wind pressures include a Load Factor (LF) of 1.0

Zone	Reference	P_{max} A ≤ 10 ft² psf	P_{min} A ≤ 10 ft² psf	P_{max} A = 20 ft² psf	P_{min} A = 20 ft² psf	P_{max} A = 50 ft² psf	P_{min} A = 50 ft² psf
1	F:30.3-2B	16.43	-45.93	16.00	-39.49	16.00	-30.97
2	F:30.3-2B	16.43	-60.68	16.00	-52.39	16.00	-41.43
3	F:30.3-2B	16.43	-79.64	16.00	-68.22	16.00	-53.13
4	F:30.3-1	24.86	-26.97	23.74	-25.85	22.26	-24.37
5	F:30.3-1	24.86	-33.29	23.74	-31.05	22.26	-28.09
Zone	**Reference**	**P_{max} A = 100 ft² psf**	**P_{min} A = 100 ft² psf**	**P_{max} A = 200 ft² psf**	**P_{min} A = 200 ft² psf**	**P_{max} A > 500 ft² psf**	**P_{min} A > 500 ft² psf**
1	F:30.3-2B	16.00	-24.53	16.00	-18.09	16.00	-16.00
2	F:30.3-2B	16.00	-33.15	16.00	-24.86	16.00	-24.86
3	F:30.3-2B	16.00	-41.71	16.00	-41.71	16.00	-41.71
4	F:30.3-1	21.14	-23.25	20.02	-22.13	18.54	-20.65
5	F:30.3-1	21.14	-25.85	20.02	-23.61	18.54	-20.65

WIND ZONE DIAGRAM:

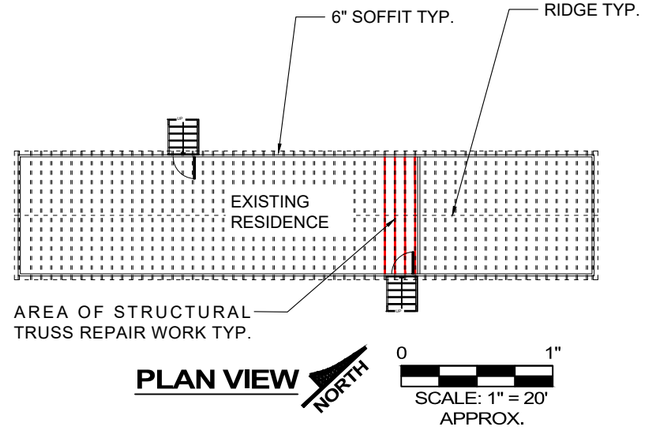






PROJECT:

EXISTING BRYANT RESIDENCE
ROOF TRUSS REPAIR
163 SE Beadie Dr.,
Lake City, Columbia Co., FL 32025
JOB NO: FE25-120



SHEET INDEX:

Digitally signed by Joseph S Fielden
Date: 2025.07.07 '11:38:35 -04'00

JOSEPH S. FIELDEN, P.E.
FLORIDA PE# 77726

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E: jsfielden@gmail.com

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ROOF TRUSS REPAIR
163 SE Beadie Dr.,
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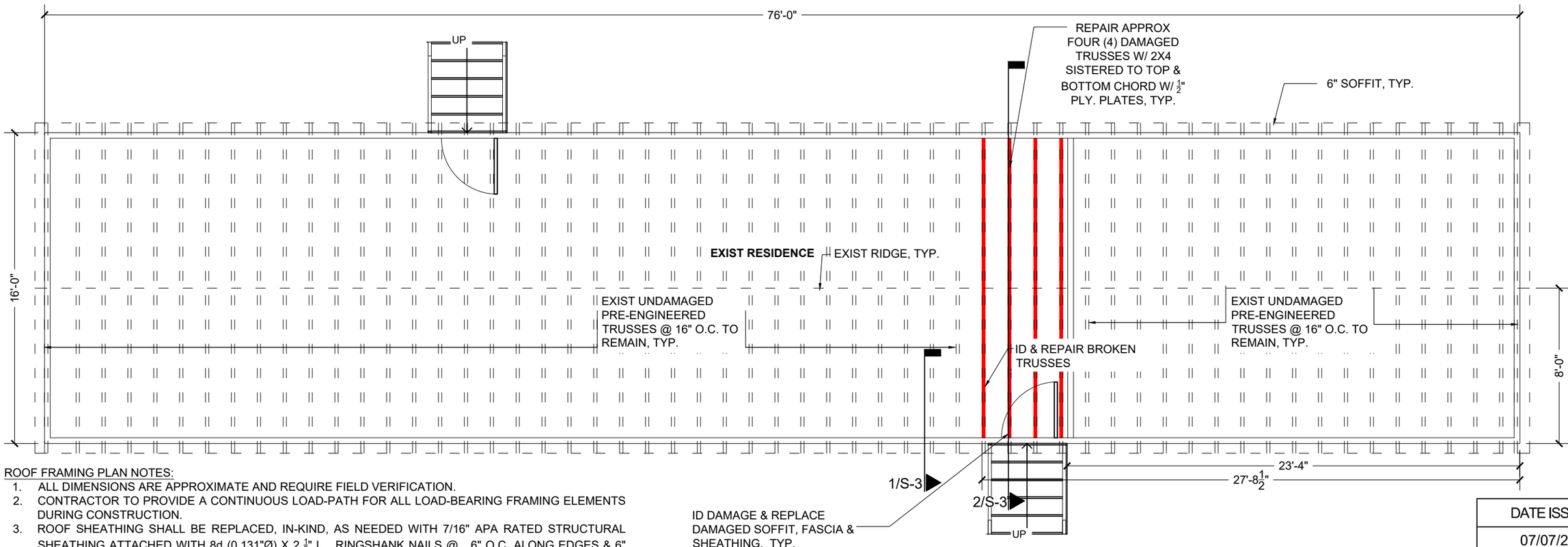
JOB NO: FE25-120

DATE ISSUED:
07/07/2025

REVISION:

GENERAL NOTES & WIND LOAD INFORMATION

SHEET
S-1



ROOF FRAMING PLAN NOTES:

1. ALL DIMENSIONS ARE APPROXIMATE AND REQUIRE FIELD VERIFICATION.
2. CONTRACTOR TO PROVIDE A CONTINUOUS LOAD-PATH FOR ALL LOAD-BEARING FRAMING ELEMENTS DURING CONSTRUCTION.
3. ROOF SHEATHING SHALL BE REPLACED, IN-KIND, AS NEEDED WITH 7/16" APA RATED STRUCTURAL SHEATHING ATTACHED WITH 8d (0.131"Ø) X 2 ½" L RINGSHANK NAILS @ 6" O.C. ALONG EDGES & 6" O.C. IN FIELD (ALL ZONES).
4. PROVIDE MINIMUM UNDERLAYMENT PER 1507.1.1.1 2023 FBC - 8TH EDITION
5. INSTALL NEW ROOFING OVER ENTIRE ROOF PER MANUF. WRITTEN INSTRUCTIONS TYP.

ROOF FRAMING PLAN

0 1"
SCALE: 3/16" = 1' APPROX.
NORTH

DATE ISSUED:
07/07/2025
REVISION:
ROOF FRAMING PLAN

SHEET S-2

FIELDEN ENGINEERING LLC.

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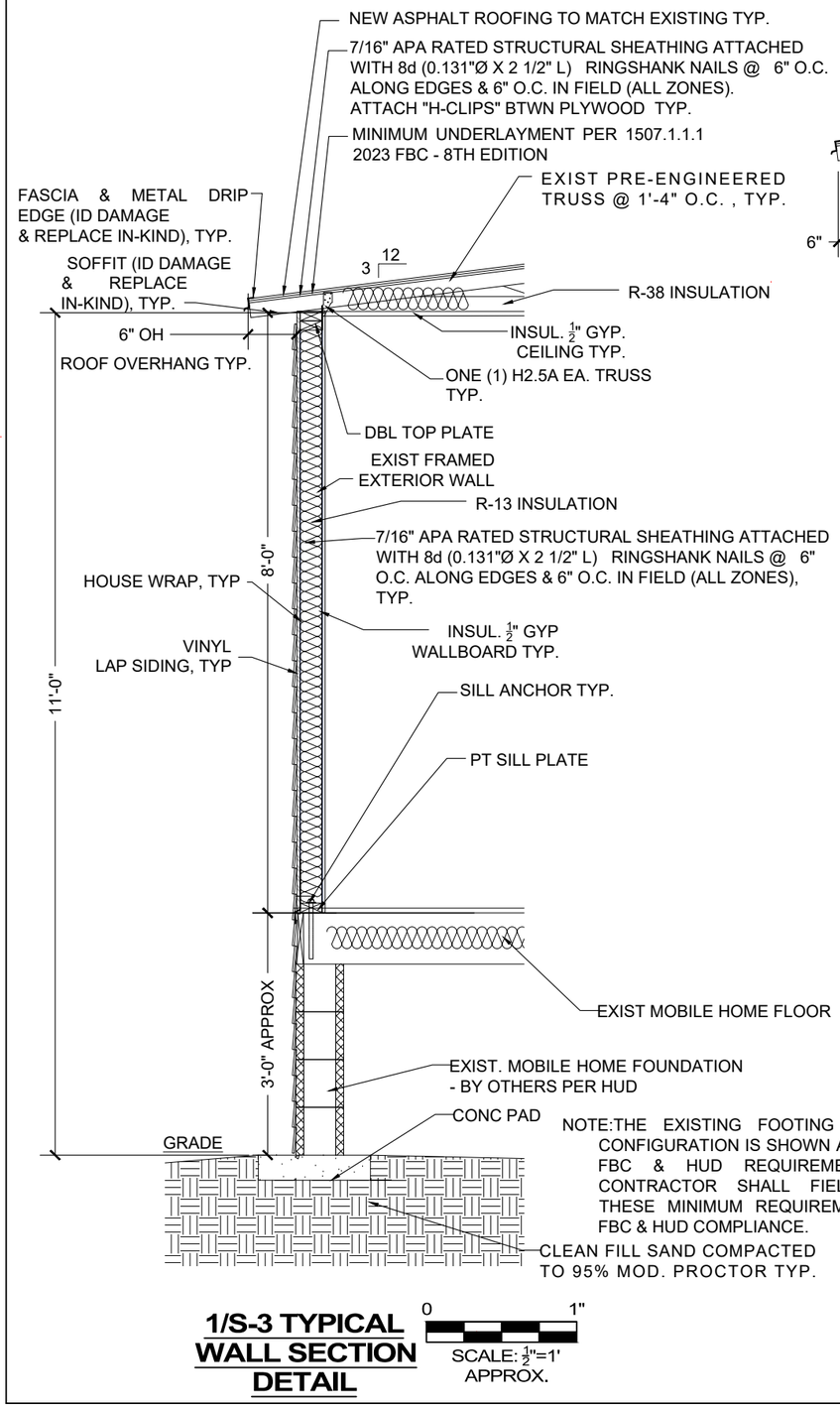
JOSEPH STEPHEN FIELDEN LICENSE No.77726 STATE OF FLORIDA PROFESSIONAL ENGINEER

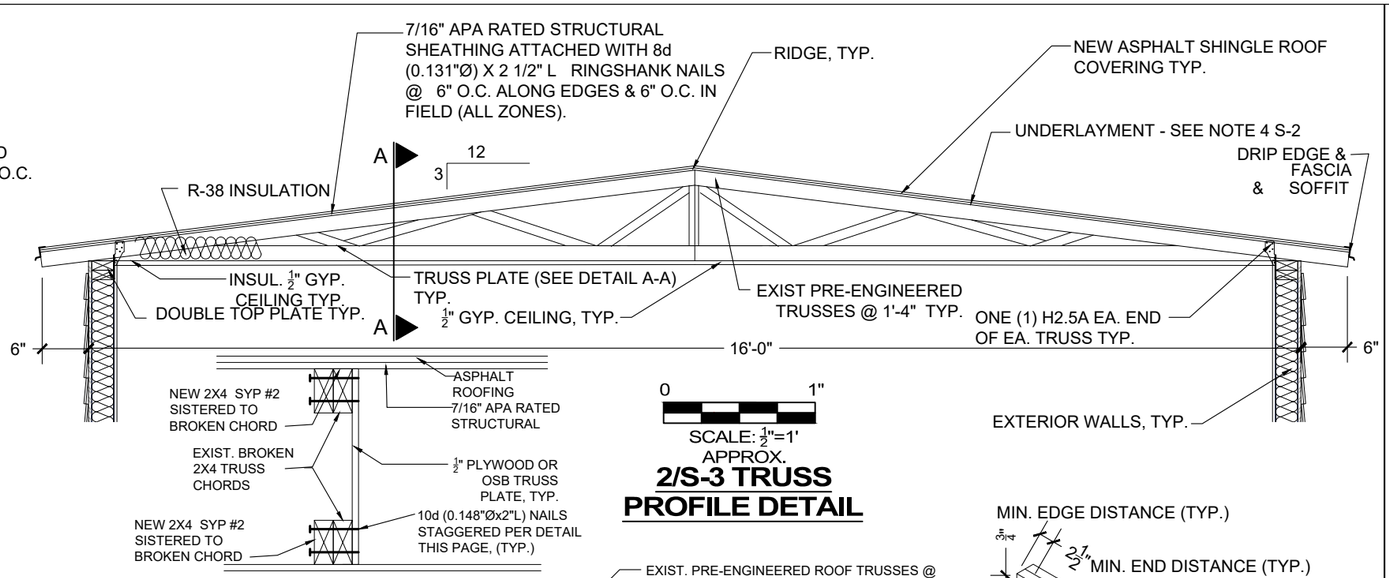
JOSEPH S. FIELDEN, P.E.
FLORIDA PE# 77726



1/S-3 TYPICAL WALL SECTION DETAIL

0 1"

SCALE: ½"=1' APPROX.

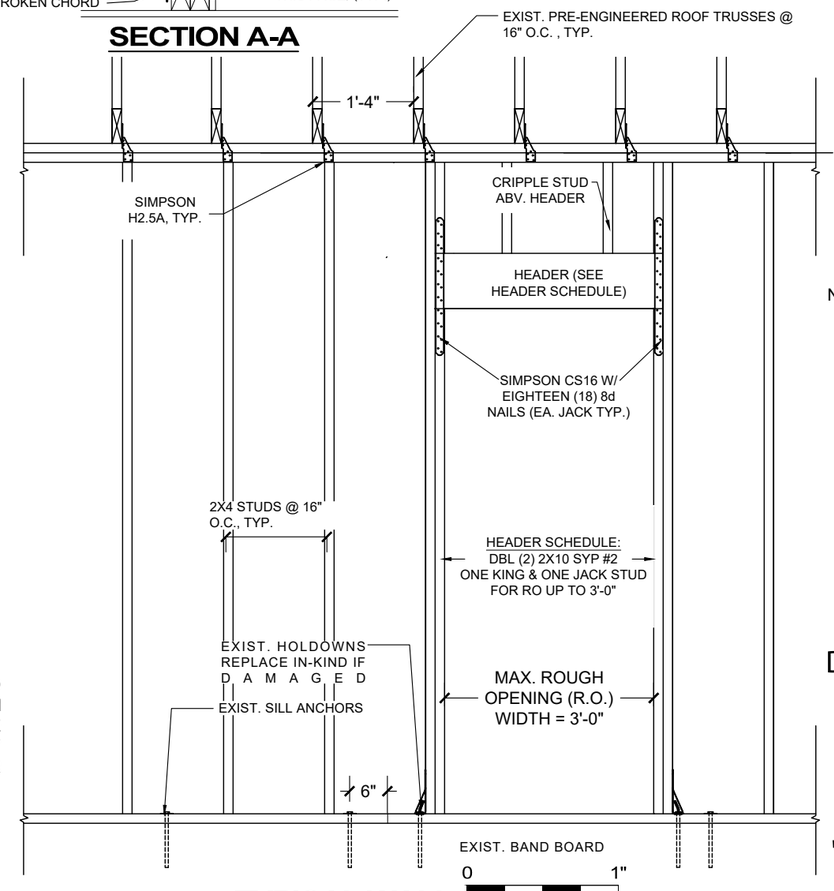


SECTION A-A

0 1"

SCALE: ½"=1' APPROX.

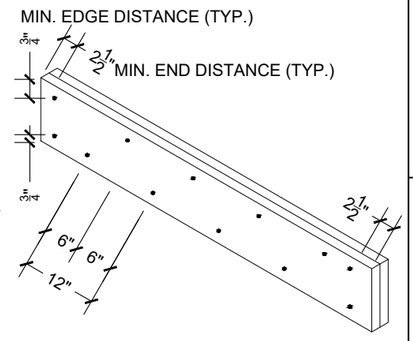
2/S-3 TRUSS PROFILE DETAIL



TYPICAL WALL OPENING DETAIL

0 1"

SCALE: 1/2" = 1' APPROX.



NOTE: USE 10d (0.148"Øx2"L) NAILS (TYP.)

MULTI-PLY BEAM DETAIL

SCALE: NTS

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REVISION:

STRUCTURAL DETAILS

SHEET S-3