

Development Services Department

BOARD ACTION REPORT - APPEALABLE ITEM

Project Name: 143 S Swinton Avenue (2020-179)

Project Location: 143 S Swinton Avenue, Old School Square Historic District

PCN: 12-43-46-16-B4-070-0090 Request: Certificate of Appropriateness Board: Historic Preservation Board Meeting Date: October 6, 2021 Board Vote: Approved on a 6-0 vote

Board Actions:

Approved Certificate of Appropriateness (2020-179) request for the reconstruction of the roof and repairs to exterior walls of an existing contributing structure on the property.

Project Description:

The subject 0.30-acre property is located on the northeast corner of South Swinton Avenue and SE 2nd Street. The property consists of Lots 9 and 10, Block 70, of the Amended Plat of Sundy and Cromers Subdivision, is located within the Locally and Nationally Registered Old School Square Historic District (OSSHD) and is zoned Old School Square Historic Arts District (OSSHAD). The property contains a 1-story Bungalow style residential structure, built in 1917, and is classified as contributing to the OSSHD. The 1,571 sq. ft. structure was built as single-family residence and was originally owned by John S. and Elizabeth C. Sundy.

On December 4, 2018, the City Commission approved an In-Lieu of Parking Fee Request in the amount of \$10,140 for 1 parking space for the HNM Office, proposed to be located at the subject property. Conditions of approval included that the full payment for the In-Lieu of Parking Fee be paid upon issuance of a building permit and that the applicant construct 3 additional on-street parking spaces adjacent to the subject property within the Swinton Avenue and SE 2nd Street rights-of-way.

Then at its meeting of February 6, 2019 the HPB board denied the request for a Class V Site Plan, Landscape Plan, Certificate of Appropriateness, Waiver, and Variance requests for:

- Conversion of the existing single-family residence to office;
- Construction of a 1-story 2,789 square foot addition;
- Construction of an 8-space parking lot and landscape improvements;
- Waiver request to increase the width of the building that is facing the street; and,
- Variance requests to reduce the interior side setback and to reduce the width of the landscape islands at the end of a parking row.

Subsequently, the applicant appealed HPB's denial of the request to the City Commission. The requests were heard by the City Commission at its April 2, 2019, meeting and ultimately denied.

The applicant revised the proposal submitted a new COA (2019-227) on June 20, 2019. At its meeting of August 7, 2019, the board approved the request for:

- Conversion of the existing 1,571 sq. ft., 1- story single-family residence to office;
- Construction of a 1-story, 2,826 sq. ft. addition;
- Construction of an 8-space parking lot and landscape improvements;
- Variances to reduce the terminal landscape island widths at NE & SE corners of property from the required 9' to 5'5" and 6'5".

The applicant had received an interior demolition permit (19-181201) in November of 2019 in preparation for construction of the approved plan. Upon removal of the interior wall surfaces, the applicant found that the existing roof and interior walls were in poor condition as vertical supports were missing from the roof trusses, there are sections of the roof being supported by pieces of trim wood, and there are no vertical supports surrounding the enclosed porch and some exterior walls creating an extremely unsafe situation, which jeopardizes the structural integrity of the building. On March 2, 2020, the applicant coordinated a site visit with the Development Services Director, Chief Building Inspector, and City Historic Preservation Planners to review the existing condition of the structure. The applicant was advised that reconstruction of the roof and associated structural improvements would require review by the Historic Preservation Board.

Board Comments:

Appealable Item Report

All of the board members were supportive of the proposal.

Public Comments:

There were no public comments.

$\frac{\textbf{Associated Actions:}}{N/A}$

Next Action:
The HPB action is final unless appealed by the City Commission



DEVELOPMENT SERVICES

BUILDING | HISTORIC PRESERVATION | PLANNING & ZONING 100 NW 1ST AVENUE, DELRAY BEACH, FLORIDA 33444 (561) 243-7040

HISTORIC PRESERVATION BOARD STAFF REPORT

143 South Swinton Avenue

Meeting	File No.	Application Type
October 6, 2021	2020-179	Certificate of Appropriateness

REQUEST

The item before the Board is consideration of a Certificate of Appropriateness, (2019-227) request for the reconstruction of the roof and repairs to exterior walls of an existing contributing structure on the property located at **143 South Swinton Avenue**, **Old School Square Historic District**.

GENERAL DATA

Agent: Jaime Mayo – Nigel Development, Inc.

Owner: Nigel Development, Inc.

Location: 143 South Swinton Avenue **PCN:** 12-43-46-16-B4-070-0090

Property Size: 0.30 Acres

Historic District: Old School Square Historic District

LUM: OMU (Other Mixed Use)

Zoning: OSSHAD (Old School Square Historic Arts District)

Adjacent Zoning:

- OSSHAD (North)
- OSSHAD (East)
- RM Multiple-Family Residential (South)
- CF Community Facilities (West)

Existing Land Use: Residential Proposed Land Use: Commercial



BACKGROUND AND PROJECT DESCRIPTION

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Project Planners:
Katherina Paliwoda, Planner
Michelle Hoyland, Principal Planner
PaliwodaK@mydelraybeach.com
HoylandM@mydelraybeach.com

143 South Swinton Avenue - COA Review Dates: HPB: October 6, 2021

Attachments:

- 1. Architectural and Structural Plans
- 2. Structural Engineer Report
- Justification Statement & Photos

Then at its meeting of February 6, 2019 the HPB board denied the request for a Class V Site Plan, Landscape Plan, Certificate of Appropriateness, Waiver, and Variance requests for:

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The applicant had received an interior demolition permit (19-181201) in November of 2019 in preparation for construction of the approved plan. Upon removal of the interior wall surfaces, the applicant found that the existing roof and interior walls were in poor condition as vertical supports were missing from the roof trusses, there are sections of the roof being supported by pieces of trim wood, and there are no vertical supports surrounding the enclosed porch and some exterior walls creating an extremely unsafe situation, which jeopardizes the structural integrity of the building. On March 2, 2020, the applicant coordinated a site visit with the Development Services Director, Chief Building Inspector, and City Historic Preservation Planners to review the existing condition of the structure. The applicant was advised that reconstruction of the roof and associated structural improvements would require review by the Historic Preservation Board. The applicant submitted a COA for reconstruction of the roof and structural wall members and the COA is now before the board for review.

REVIEW AND ANALYSIS

Pursuant to Land Development Regulation (LDR) Section 2.4.6(H)(5), prior to approval, a finding must be made that any Certificate of Appropriateness which is to be approved is consistent with Historic Preservation purposes pursuant to Objective 1.4 of the Historic Preservation Element of the Comprehensive Plan and specifically with provisions of Section 4.5.1, the Delray Beach Historic Preservation Design Guidelines, and the Secretary of the Interior's Standards for Rehabilitation.

LDR SECTION 4.5.1

HISTORIC PRESERVATION: DESIGNATED DISTRICTS, SITES, AND BUILDINGS

Pursuant to LDR Section 4.5.1(E), <u>Development Standards</u>, all new development or exterior improvements on individually designated historic properties and/or properties located within historic districts shall, comply with the goals, objectives, and policies of the Comprehensive Plan, the Delray Beach Historic Preservation Design Guidelines, the Secretary of the Interior's Standards for Rehabilitation, and the Development Standards of this Section.

Standard 1

A property shall be used for its historic purpose or be placed in a new use that requires minimal change to the defining characteristics of the building and its site and environment.

Standard 2

The historic character of a property shall be retained and preserved. The removal of historic materials or alteration of features and spaces that characterize a property shall be avoided.

Standard 3

Each property shall be recognized as a physical record of its time, place, and use. Changes that create a false sense of historical development, such as adding conjectural features or architectural elements from other buildings, shall not be undertaken.

Standard 4

Most properties change over time; those changes that have acquired historic significance in their own right shall be retained and preserved.

Standard 5

Distinctive features, finishes, and construction techniques or examples of craftsmanship that characterize a historic property shall be preserved.

Standard 6

Deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence.

Standard 7

Chemical or physical treatments, such as sandblasting, that cause damage to historic materials shall not be used. The surface cleaning of structures, if appropriate, shall be undertaken using the gentlest means possible.

Standard 8

Significant archeological resources affected by a project shall be protected and preserved. If such resources must be disturbed, mitigation measures shall be undertaken.

Standard 9

New additions, exterior alterations, or related new construction shall not destroy historic materials that characterize the property. The new work shall be differentiated from the old and shall be compatible with the massing, size, scale, and architectural features to protect the historic integrity of the property and its environment.

Standard 10

New additions and adjacent or related new construction shall be undertaken in such a manner that if removed in the future, the essential form and integrity of the historic property and its environment would be unimpaired.

Standards 1, 2, 3, 5, and 6 apply to the subject request. The existing structure was approved to be converted from residential to commercial use and was determined to be an appropriate adaptive reuse for the structure with HPB's approval of COA (2019-227) on June 20, 2019. The subject request is for the reconstruction of the existing roof and to repair the interior walls and structural beams. The alterations will consist of utilizing existing materials that are in good condition, as well as using like-in-kind materials, so the historic character of the structure will be retained.

In regard to Standard #6, which states:

"That deteriorated historic features shall be repaired rather than replaced. Where the severity of deterioration requires replacement of a distinctive feature, the new feature shall match the old in design, color, texture, and other visual qualities and, where possible, materials. Replacement of missing features shall be substantiated by documentary, physical, or pictorial evidence."

The photographic evidence shown in the submittal depicts interior wooden beams located on the roof and interior walls of the structure that are missing and/or beyond repair. In addition, it is very important to note the vertical structural beams throughout the interior are different lengths dispersed randomly throughout the interior making it very difficult to comprehend how the structure has remained stable for the last one hundred years. It is evidenced in the photographs, that vertical truss supports are completely missing and there are 2" x 4" or tongue-in-groove pieces of wood that are propping up the roof. When observing the roof from the exterior, a visible sag is noted across the roofline. The applicant proposes to remove the entire roof, repair/replace sections of walls (one wall at a time) and construct a new roof.

The applicant proposes to reuse existing tongue-in-groove wood roof decking as well as materials from existing floor decking throughout the reconstruction of the roof. The proposed structural plans contain documentation on the existing roof and interior so that the reconstructed roof will be constructed to match the original with respect to size, slope, design, etc. Interior walls will also be repaired with wood beams being removed and replaced as needed. The exterior shingles will be replaced where needed (as was approved with COA 2019-227) including the varying shingle pattern that exists between the wall and gable shingles.

Pursuant to LDR Section 4.5.1(E)(7) – <u>Visual Compatibility Standards:</u> new construction and all improvements to both contributing and noncontributing buildings, structures, and appurtenances thereto within a designated historic district or on an individually designated property shall be visually compatible. In addition to the Zoning District Regulations, the Historic Preservation Board shall apply the visual compatibility standards provided for in this Section with regard to height, width, mass, scale, façade, openings, rhythm, material, color, texture, roof shape, direction, and other criteria set forth elsewhere in Section 4.5.1. Visual compatibility for minor and major development as referenced in Section 4.5.1(E)(2) shall be determined by utilizing criteria in (a)-(m), noted below:

a. Height: The height of proposed buildings or modifications shall be visually compatible in comparison or relation to the height of existing structures and buildings in a historic district for all major and minor development. For major development, visual compatibility with respect to the height of residential

- structures, as defined by 4.5.1(E)(2)(a), shall also be determined through application of the Building Height Plane.
- b. Front Facade Proportion: The front facade of each building or structure shall be visually compatible with and be in direct relationship to the width of the building and to the height of the front elevation of other existing structures and buildings within the subject historic district.
- c. Proportion of Openings (Windows and Doors): The openings of any building within a historic district shall be visually compatible with the openings exemplified by prevailing historic architectural styles of similar buildings within the district. The relationship of the width of windows and doors to the height of windows and doors among buildings shall be visually compatible within the subject historic district.
- d. Rhythm of Solids to Voids: The relationship of solids to voids of a building or structure shall be visually compatible with existing historic buildings or structures within the subject historic district for all development, with particular attention paid to the front facades.
- e. Rhythm of Buildings on Streets: The relationship of buildings to open space between them and adjoining buildings shall be visually compatible with the relationship between existing historic buildings or structures within the subject historic district.
- f. Rhythm of Entrance and/or Porch Projections: The relationship of entrances and porch projections to the sidewalks of a building shall be visually compatible with existing architectural styles of entrances and porch projections on existing historic buildings and structures within the subject historic district for all development.
- g. Relationship of Materials, Texture, and Color: The relationship of materials, texture, and color of the facade of a building and/or hardscaping shall be visually compatible with the predominant materials used in the historic buildings and structures within the subject historic district.
- h. Roof Shapes: The roof shape, including type and slope, of a building or structure shall be visually compatible with the roof shape of existing historic buildings or structures within the subject historic district. The roof shape shall be consistent with the architectural style of the building.
- i. Walls of Continuity: Walls, fences, evergreen landscape masses, or building facades, shall form cohesive walls of enclosure along a street to ensure visual compatibility with historic buildings or structures within the subject historic district and the structure to which it is visually related.
- j. Scale of a Building: The size of a building and the building mass in relation to open spaces, windows, door openings, balconies, porches, and lot size shall be visually compatible with the building size and mass of historic buildings and structures within a historic district for all development. To determine whether the scale of a building is appropriate, the following shall apply for major development only:
 - a. For buildings wider than sixty percent (60%) of the lot width, a portion of the front façade must be setback a minimum of seven (7) additional feet from the front setback line:
 - b. For buildings deeper than fifty percent (50%) of the lot depth, a portion of each side façade, which is greater than one story high, must be setback a minimum of five (5) additional feet from the side setback line:
- k. Directional Expression of Front Elevation: A building shall be visually compatible with the buildings, structures, and sites within a historic district for all development with regard to its directional character, whether vertical or horizontal.

- I. Architectural Style: All major and minor development shall consist of only one (1) architectural style per structure or property and not introduce elements definitive of another style.
- m. Additions to individually designated properties and contributing structures in all historic districts: Visual compatibility shall be accomplished as follows:
 - 1. Additions shall be located to the rear or least public side of a building and be as inconspicuous as possible.
 - 2. Additions or accessory structures shall not be located in front of the established front wall plane of a historic building.
 - 3. Characteristic features of the original building shall not be destroyed or obscured.
 - 4. Additions shall be designed and constructed so that the basic form and character of the historic building will remain intact if the addition is ever removed.
 - 5. Additions shall not introduce a new architectural style, mimic too closely the style of the existing building nor replicate the original design but shall be coherent in design with the existing building.
 - 6. Additions shall be secondary and subordinate to the main mass of the historic building and shall not overwhelm the original building.

It is noted, that with approval of COA 2019-227 the proposal was found to be in compliance with the Visual Compatibility Standards. An analysis of the proposal with respect to the Visual Compatibility Standards has been completed and the following standards are applicable:

Height

The height of the structure will not change and will remain as existing and as approved by HPB via COA 2019-227.

Relationship of Materials, Texture, and Color

The proposal is for replacement/reconstruction of the existing roof structure. The roof will be reconstructed in the same style with similar materials as the original, including a dimensional shingle roof. The exterior walls will be repaired or replaced wall-by-wall and exterior materials will be utilized as approved with COA 2019-227, which includes replication of the two different shingle patterns between the walls and gable sections. Interior wall sections such as studs, will be retained and new support members will be "sistered" onto existing. New corner columns will be installed, and existing foundation piers will be wrapped or encased with new concrete sections and support wall sections to ensure structural stability of the building.

Roof Shapes

The roof profile and pitch will not be modified beyond what exists. The goal of the request is to preserve the historic character of the structure through a careful reconstruction of the roof and sections of some of the exterior walls. The shape of the existing roof will be retained, with matching slopes and height to ensure consistency and visual compatibility with existing conditions and the Bungalow style of the building.

According to the National Park Service Preservation Brief 4 on Roofing for Historic Buildings:

During some periods in the history of architecture, the roof imparts much of the architectural character. It defines the style and contributes to the building's aesthetics. The hipped roofs of Georgian architecture, the turrets of Queen Anne, the Mansard roofs, and the graceful slopes of the Shingle Style and Bungalow designs are examples of the use of roofing as a major design feature.

But no matter how decorative the patterning or how compelling the form, the roof is a highly vulnerable element of a shelter that will inevitably fail. A poor roof will permit the accelerated deterioration of historic building materials—masonry, wood, plaster, paint—and will cause general disintegration of the basic structure. Although such action is desirable as soon as a failure is discovered, temporary patching methods should be carefully chosen to prevent inadvertent damage to sound or historic roofing materials and related features. Before any repair work is performed, the historic value of the materials used on the roof should be understood. Then a complete internal and external inspection of the roof should be planned to determine all the causes of failure and to identify the alternatives for repair or replacement of the roofing.

As briefly mentioned in the background section earlier in the report, the applicant was working to rehabilitate the structure to convert the residential building to a commercial office. It was through the interior demolition phase that it was discovered that there was a lack of structural and vertical support systems for the roof and some of the exterior walls throughout the building. The applicant has indicated and provided photographic documentation that the roof has sustained irreparable damage and would need to be reconstructed.

According to the Secretary of the Interior Standards of Restoration - Replace Extensively Deteriorated Features from the Restoration Period (page 166) - In Restoration, replacing an entire feature from the restoration period, such as a porch, that is too deteriorated to repair may be appropriate. Together with documentary evidence, the form and detailing of the historic feature should be used as a model for the replacement. Using the same kind of material is preferred; however, compatible substitute material may be considered. New work may be unobtrusively dated to guide future research and treatment.

BUILDING EXTERIOR

RECOMMENDED	NOT RECOMMENDED
Reconstructing a non-surviving building to depict the documented historic appearance. Although the use of the original building materials (such as masonry, wood, and architectural	Reconstructing features that cannot be documented historically or for which existing documentation is inadequate.
metals) is preferable, substitute materials may be used as long as they recreate the historic appearance.	Using substitute materials that do not convey the appearance of the historic building.
Recreating the documented design of exterior features, such as the roof form and its coverings, architectural detailing, windows, entrances and porches, steps and doors, and their historic spatial	Omitting a documented exterior feature, or rebuilding a feature but altering its historic design.
relationships and proportions.	Using inappropriate designs or materials that do not convey the historic appearance.
Reproducing the appearance of historic paint colors and finishes based on documentary and physical evidence.	Using paint colors that cannot be documented through research and investigation or using other undocumented finishes.
Installing exterior electrical and telephone cables underground or in the least obtrusive location possible, unless they can be documented as having been aboveground historically.	Attaching exterior electrical and telephone cables to the principal elevations of the reconstructed building, unless they can be documented as having been there historically.
Using signage to identify the building as a contemporary recreation.	Failing to explain that the building is a reconstruction, thereby confusing the public's understanding of the property.

The applicant has submitted a justification statement and photographs of the existing conditions, which are attached. There is photographic evidence attached to document that the roof and portions of the exterior walls have been deteriorated, missing structural components, and are beyond repair. Thus, replacement is eminent to ensure preservation of the historic structure. The proposal includes utilizing existing materials to repair and replace the roof and portions of the exterior walls. Additionally, new like-in-kind materials will also be utilized.

ROOFS						
RECOMMENDED	NOT RECOMMENDED					
Alterations and Additions for a New Use						
Installing mechanical and service equipment on the roof (such as heating and air-conditioning units, elevator housing, or solar panels) when required for a new use so that they are inconspicuous on the site and from the public right-of-way and do not damage or obscure character-defining historic features.	Installing roof-top mechanical or service equipment so that it damages or obscures character-defining roof features or is conspicuous on the site or from the public right-of-way.					
Designing rooftop additions, elevator or stair towers, decks or terraces, dormers, or skylights when required by a new or continuing use so that they are inconspicuous and minimally visible on the site and from the public right-of-way and do not damage or obscure character-defining historic features.	Changing a character-defining roof form, or damaging or destroying character-defining roofing material as a result of an incompatible rooftop addition or improperly-installed or highly-visible mechanical equipment.					
Installing a green roof or other roof landscaping, railings, or furnishings that are not visible on the site or from the public right-of-way and do not damage the roof structure.	Installing a green roof or other roof landscaping, railings, or furnishings that are visible on the site and from the public right-of-way.					

It is noted, that while the applicant has documented that the roof is beyond repair and that there are sections of walls that need to be repaired to ensure structural stability, it is not their intent to remove all portions of the existing structure. The request is not a demolition, nor is this proposal considered a complete historic Reconstruction. The request is for <u>replacement of the entire roof and repairing sections of walls where structural members are missing</u>. Should the scope of the project change beyond this description, the applicant will need to return to the Historic Preservation Board to modify the request accordingly.

COMPREHENSIVE PLAN

Pursuant to the <u>Historic Preservation Element (HPE)</u>, <u>Objective 1.4</u>, <u>Historic Preservation Planning</u>: Implement appropriate and compatible design and planning strategies for historic sites and properties within historic districts.

The objective shall be met through continued adherence to the City's Historic Preservation Ordinance and, where applicable, to architectural design guidelines through the following policies:

HPE Policy 1.4.1

Continue to require that the Historic Preservation Board make findings that any land use or development application for a historic structure, site or within a historic district, is consistent with the provisions of the Secretary of the Interior's Standards for Rehabilitation, the Land Development Regulations, and Delray Beach Historic Preservation Design Guidelines.

The development proposal involves the reconstruction of a roof and structural beams on the interior of existing, contributing, one-story commercial structure within the subject property. With respect to the adjacent land uses, the property is in an area surrounded by mixed-use, commercial, and residential uses. The proposal can be found to be consistent with the

HISTORIC PRESERVATION BOARD | OCTOBER 6, 2021 143 SOUTH SWINTON AVENUE

requirements of the Comprehensive Plan and provided the conditions of approval are addressed, the request will be considered to be consistent with the provisions of LDR Section 4.5.1 relating to historic sites and districts as well as the "Delray Beach Historic Preservation Design Guidelines".

ALTERNATIVE ACTIONS

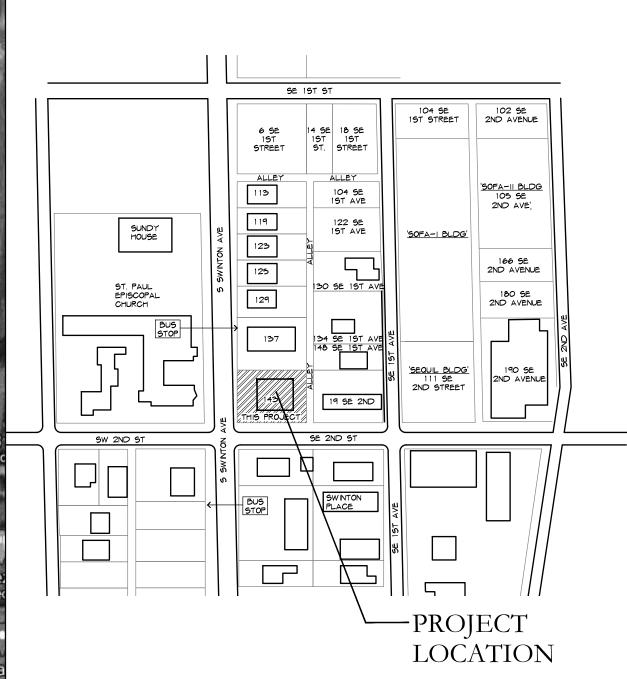
- A. Continue with direction.
- B. Approve Certificate of Appropriateness, (2020-179) request for **143 South Swinton Avenue**, **Old School Square Historic District**, by finding that the request and approval thereof is consistent with the Comprehensive Plan and meets the criteria set forth in the Land Development Regulations.
- C. Approve Certificate of Appropriateness, (2020-179) request for **143 South Swinton Avenue**, **Old School Square Historic District**, by finding that the request and approval thereof is consistent with the Comprehensive Plan and meets the criteria set forth in the Land Development Regulations subject to the following condition(s):
- D. Deny Certificate of Appropriateness (2020-179), request for **143 South Swinton Avenue**, **Old School Square Historic District Historic District**, by finding that the request is inconsistent with the Comprehensive Plan and does not meet the criteria set forth in the Land Development Regulations.

PUBLIC AND COURTESY NOTICES							
X Courtesy Notices are not applicable to this	\underline{X} Public Notices are not required for this request.						
	\underline{X} Agenda was posted on (9/29/21), 5 working days prior to meeting.						

HNM ARCHITECTURE OFFICES

143 South Swinton Avenue City of Delray Beach, Florida 33444





ARCHITECTURAL:

A0.1 SITE PLAN A1.0 FLOOR PLAN A3.0 ROOF PLAN

A4.0 SOUTH & WEST ELEVATION A4.1 NORTH & EAST ELEVATION

A5.0 BUILDING SECTIONS A5.1 BUILDING SECTIONS

5.2 EXTERIOR WALL SECTIONS

STRUCTURAL:

S0.1 STRUCTURAL NOTES
S0.2 STRUCTURAL NOTES
S0.3 STRUCTURAL NOTES
S0.4 STRUCTURAL NOTES
S1.0 FOUNDATION PLAN
S1.1 FOUNDATION PLAN

S1.2 ROOF FRAMING PLANS1.3 BUILDING SECTIONS1.0 FOUNDATION PLAN

S2.0 FOUNDATION DETAILSS3.0 ROOF FRAMING DETAILS

MISCELLANEOUS

SCHEDULES S5.0 WIND PRESSURE ARCHITECT:

HNM ARCHITECTURE, LLC 3705 N. Federal Hwy. Delray Beach, FL 33483 Contact: Jaime O. Mayo T 561-733-2225

STRUCTURAL ENGINEER:

B B M STRUCTURAL ENGINEERS
399 W. Palmetto Park Road, Suite 200
Boca Raton, FL 33432

Contact: Joel R. Middlebrooks

T: 561-750-1916

E: jmiddlebrooks@bbmstructural.com

HNM ARCHITECTURE OF

VICINITY MAP

STREET MAP

DRAWING INDEX

PROJECT TEAM

ZONING DESIGNATION:

OSSHAD-OLD SCHOOL SQUARE HISTORIC ARTS DISTRICT

FUTURE LAND USE DESIGNATION OMU - OTHER MIXED USE

OCCUPANCY:
'B' BUSINESS PER 2017 F.B.C

CONICTRICTIONITYDE

CONSTRUCTION TYPE:
TYPE V-B (NON-SPRINKLERED)

LEVEL OF ALTERATION:

LEVEL 3, AS PER FBC., EXISTING BUILDING 504.1

BUILDING STATS:

EXISTING FLOOR AREA(A/C) 1,571 S.F.

EXISTING FLOOR AREA(A/C) CONVERTED

BACK TO ORIGINAL EXTERIOR PORCH: -254 S.F.

EXISTING FLOOR AREA (A/C) TO REMAIN: 1,317 S.F.

EXISTING FLOOR AREA (A/C) TO REMAIN:
EXISTING ORIGINAL EXTERIOR PORCH:

NEW ADDITIONAL FLOOR AREA (A/C):
NEW GROSS FLOOR AREA:

1,317 S.F.
254 S.F.
4,397 S.F.

GENERAL NOTES:

- 1. BUILDER SHALL COORDINATE ALL THE WORK OF ALL TRADES.
- 2. BUILDER SHALL REVIEW DRAWINGS IN THEIR ENTIRETY BEFORE STARTING WORK. THE BUILDER SHALL ACCEPT FULL RESPONSABILITY FOR ANY ERRORS OR OMISSIONS NOT REPORTED IMMEDIATELY IN WRITING TO THE ARCHITECT. BACKCHARGES WILL NOT BE ACCEPTED. DO NOT SCALE DRAWINGS.
- . SUBMIT MINIMUM THREE (3) COPIES OF SHOP DRAWINGS AS REQUIRED BELOW.
- 4. THESE PLANS, AS DRAWN AND NOTED, COMPLY WITH THE BUILDING ENVELOPE ENERGY REQUIREMENTS OF THE F.B.C. CHAPTER 13 ENERGY EFFICIENCY. CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE GOVERNING CODE IN ITS ENTIRETY AND BUILD IN ACCORDANCE WITH ALL PROVISIONS OF THIS CODE WHICH MAY NOT BE SPECIFICALLY ADDRESSED ON THE PLANS AND NOTES.
- BUILDER IS RESPONSIBLE FOR ADEQUATE BRACING OF STRUCTURAL OR NON-STRUCTURAL MEMBERS DURING CONSTRUCTION.
- 6. CABINET SUPPLIER TO PROVIDE SHOP DRAWINGS TO THE BUILDER.
- . WINDOW AND DOOR SUPPLIER TO PROVIDE SHOP DRAWING TO BUILDER.
- 8. ALL WINDOWS AND DOORS SHALL BE CAULKED AND WEATHER STRIPPED. WINDOW UNITS SHALL DISPLAY LABELS SHOWING COMPLIANCE WITH THE F.B.C. ENERGY CONSERVATION CODE.
- 9. ALL CONSTRUCTION IN BROWARD AND DADE COUNTIES SHALL COMPLY WITH THE HIGH VELOCITY HURRICANE ZONE (HVHZ) SECTIONS OF THE F.B.C.

ALL WORK TO COMPLY W/ THE FOLLOWING CODES:

THIS PROJECT IS TO BE BUILT IN ACCORDANCE WITH ALL CITY OF DELRAY BEACH BUILDING DEPARTMENT REQUIREMENTS AND AMENDMENTS, PALM BEACH COUNTY REQUIREMENTS AND FOLLOWING CODES:

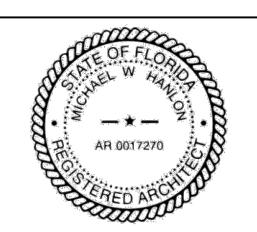
- 2020 FLORIDA BUILDING CODE
- NATIONAL ELECTRICAL CODE 2017
- 2020 THE FLORIDA FIRE PREVENTION CODE
- NFPA-101, 2018 EDITION W/ FLORIDA AMENDMENTS
- NFPA 1 UNIFORM FIRE CODE 2018 W/ FLORIDA AMENDMENTS
- FLORIDA STATUES
- FLORIDA ADMINISTRATIVE CODE

REV

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IS FORBIDDEN WITHOUT THE ARCHITECT'S WRITTEN PERMISSI

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS
AND FIELD CONDITIONS AND NOTIFY ARCHITECT/ENGINE





MICHAEL W. HANLON FLORIDA REGISTERED ARCHITECT . REG. NUMBER: ARC

нъм рвојест ъимві 17-030

1SSUED DATE: 2021-08-20

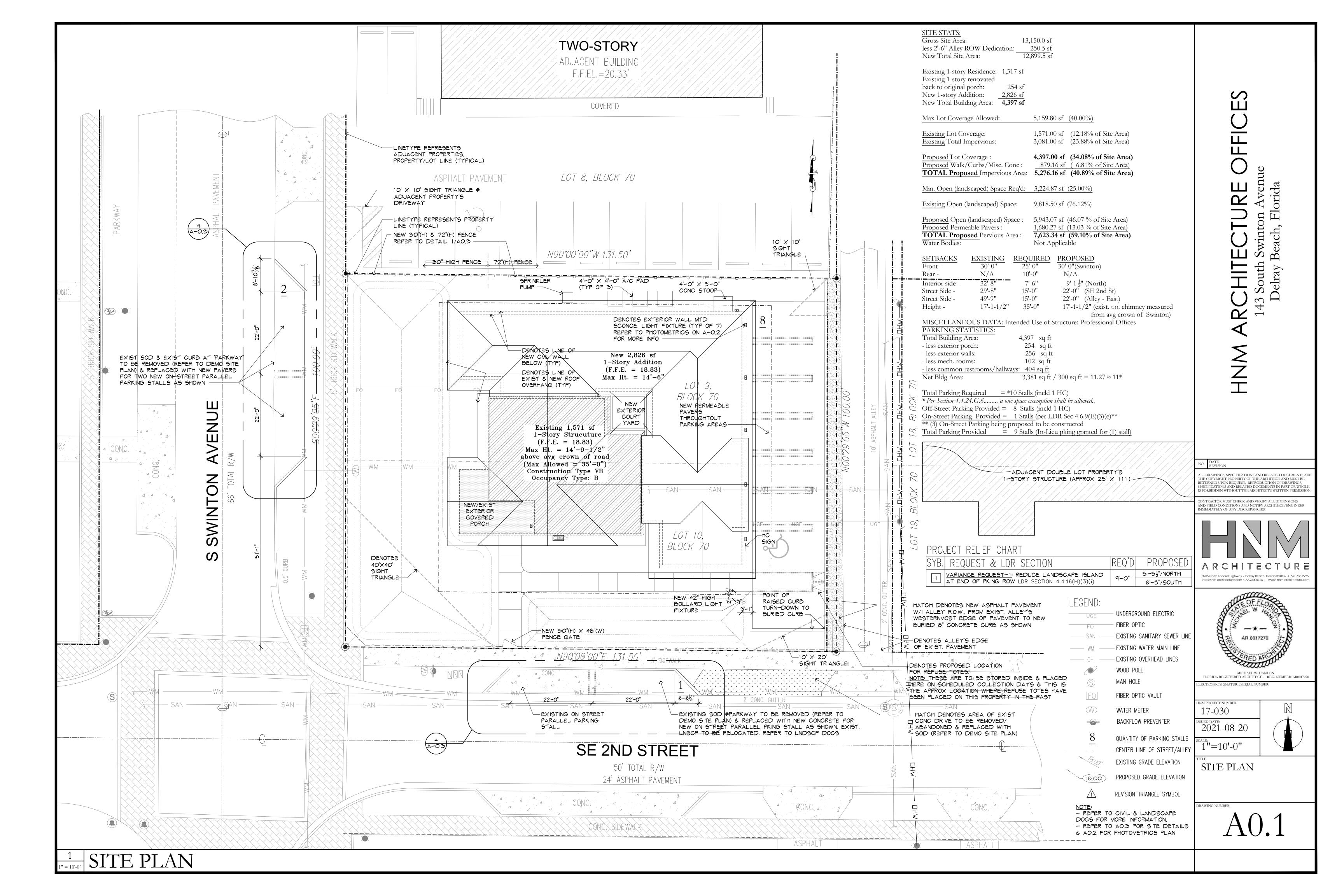
N.T.S

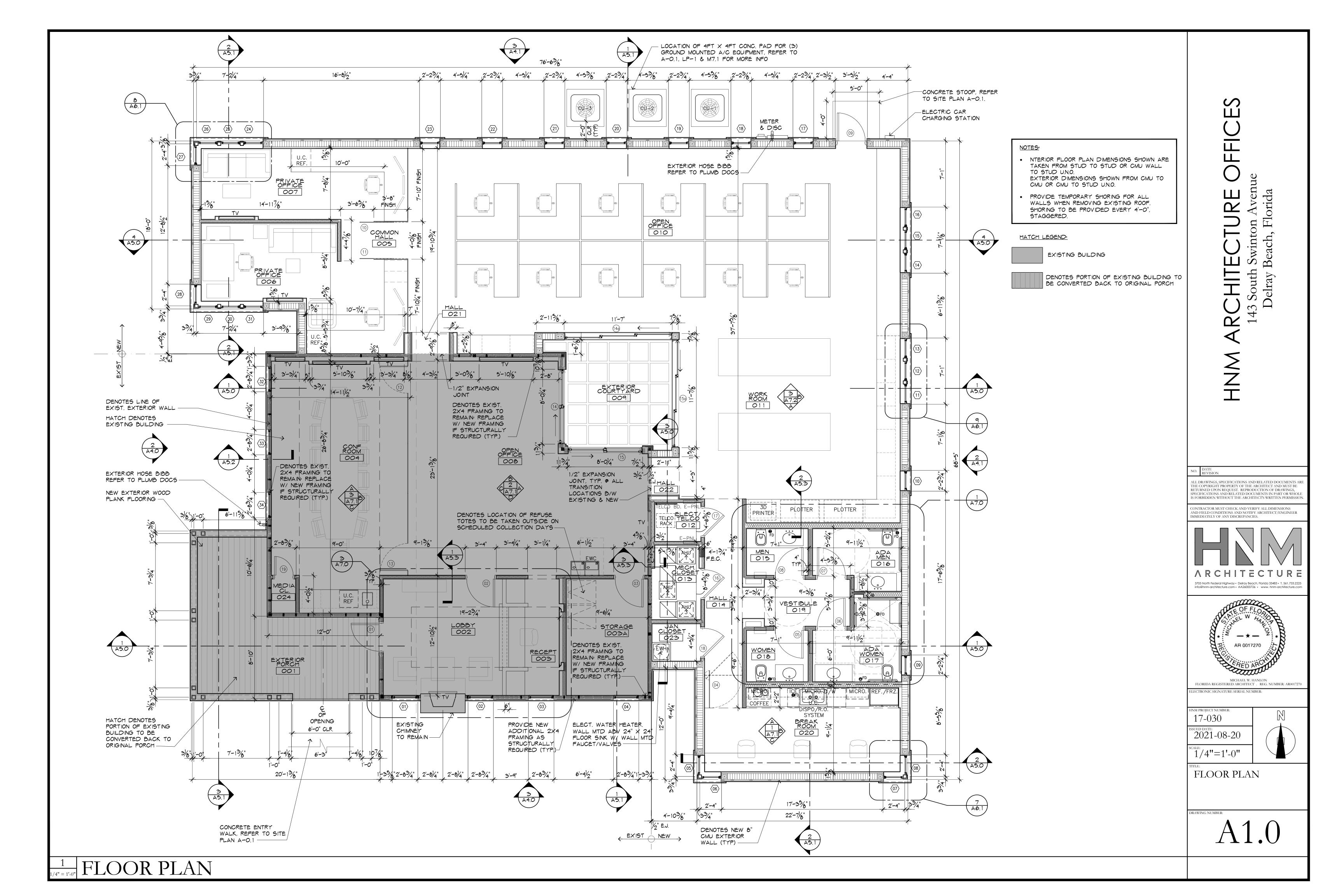
COVER, NOTES, STATS

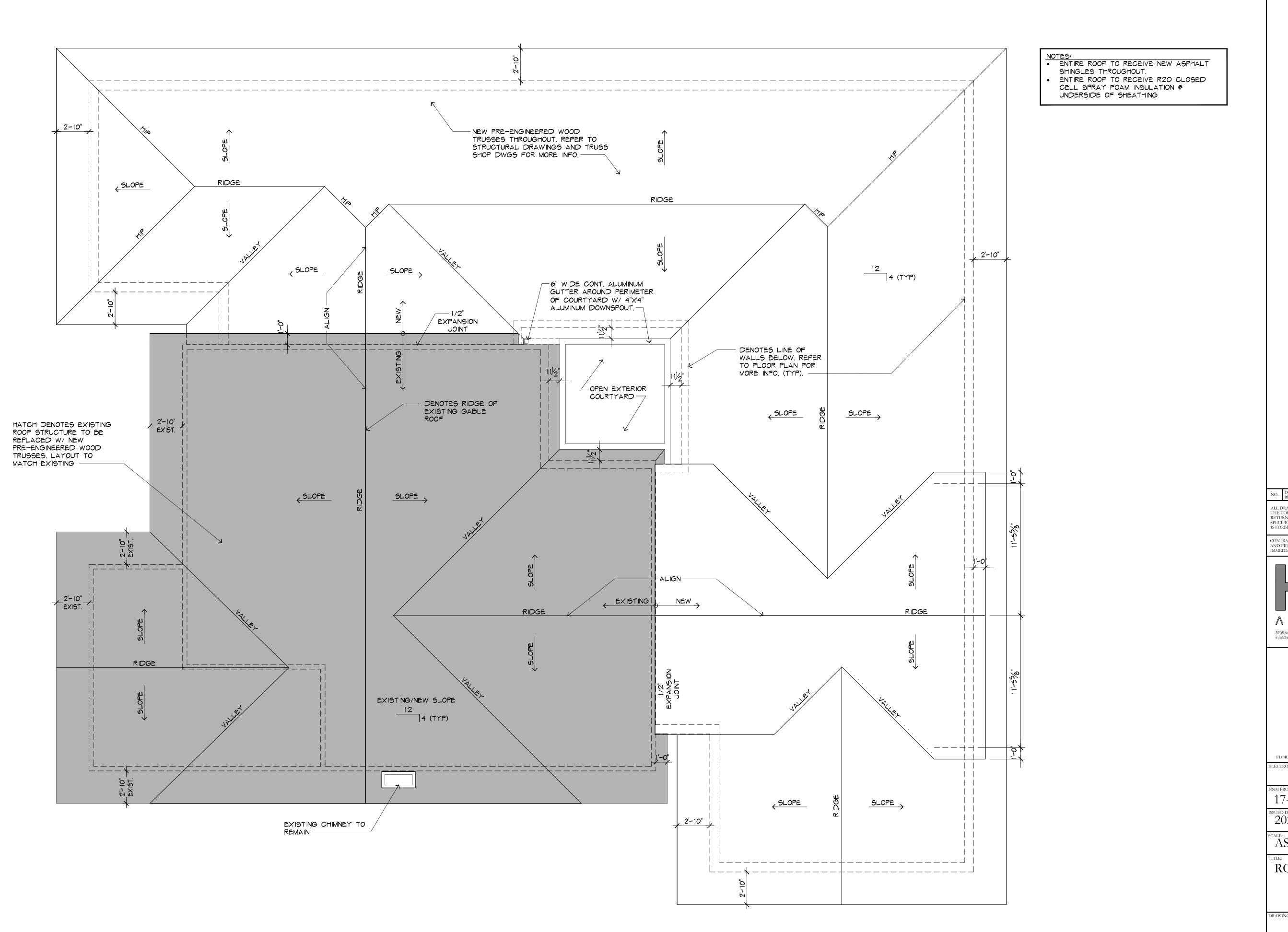
DRAWING NUM

A0.0

STATISTICS NOTES



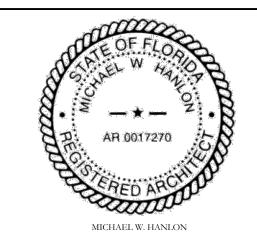




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CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND FIELD CONDITIONS AND NOTIFY ARCHITECT/ENGINEER IMMEDIATELY OF ANY DISCREPANCIES.

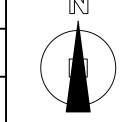




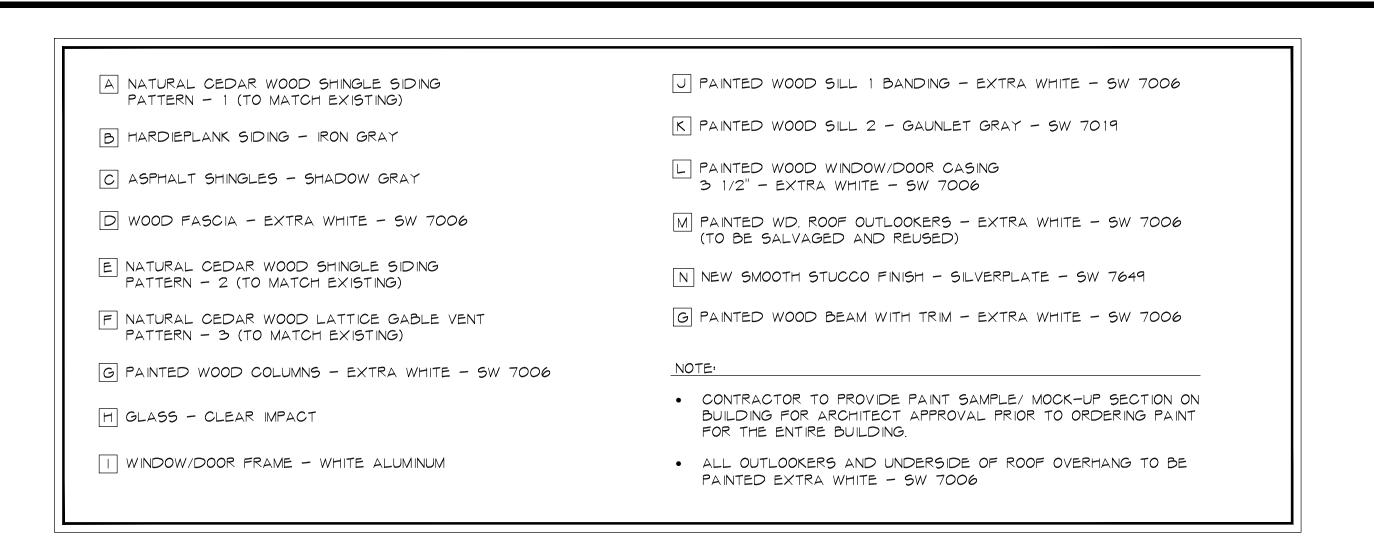
FLORIDA REGISTERED ARCHITECT . REG. NUMBER: AR001727

ELECTRONIC SIGNATURE SERIAL NUMBER:

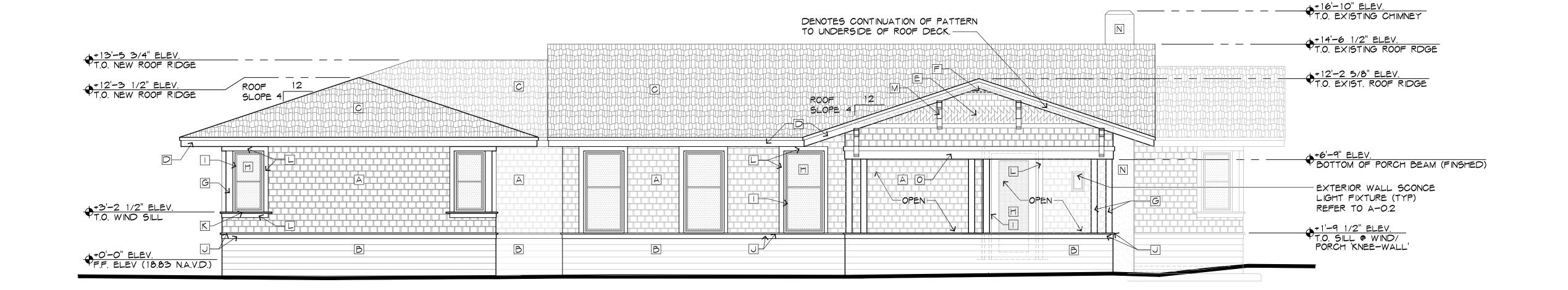
2021-08-20 AS NOTED



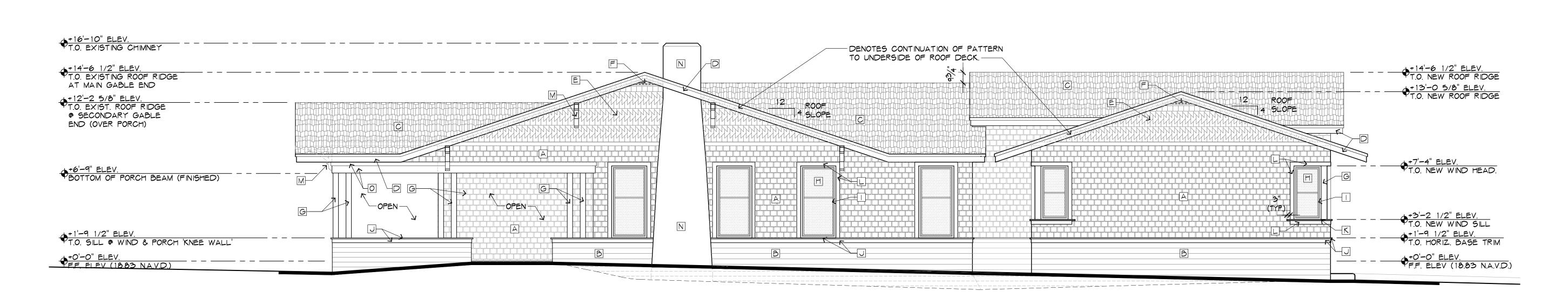
ROOF PLAN



FINISH LEGEND



WEST ELEVATION



HNM ARCHITECTURE OFFICES

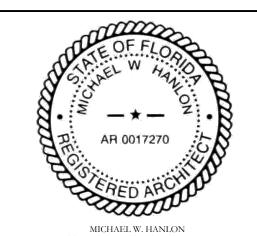
NO. DATE REVISION

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CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND FIELD CONDITIONS AND NOTIFY ARCHITECT/ENGINEE

ARCHITECTURE

3705 North Federal Highway • Delray Beach, Florida 33483 • T. 561.733.2225 info@hnm-architecture.com • AA26000726 • www. hnm-architecture.com



MICHAEL W. HANLON
FLORIDA REGISTERED ARCHITECT . REG. NUMBER: AR00172'

нъм реојест пимве 17-030

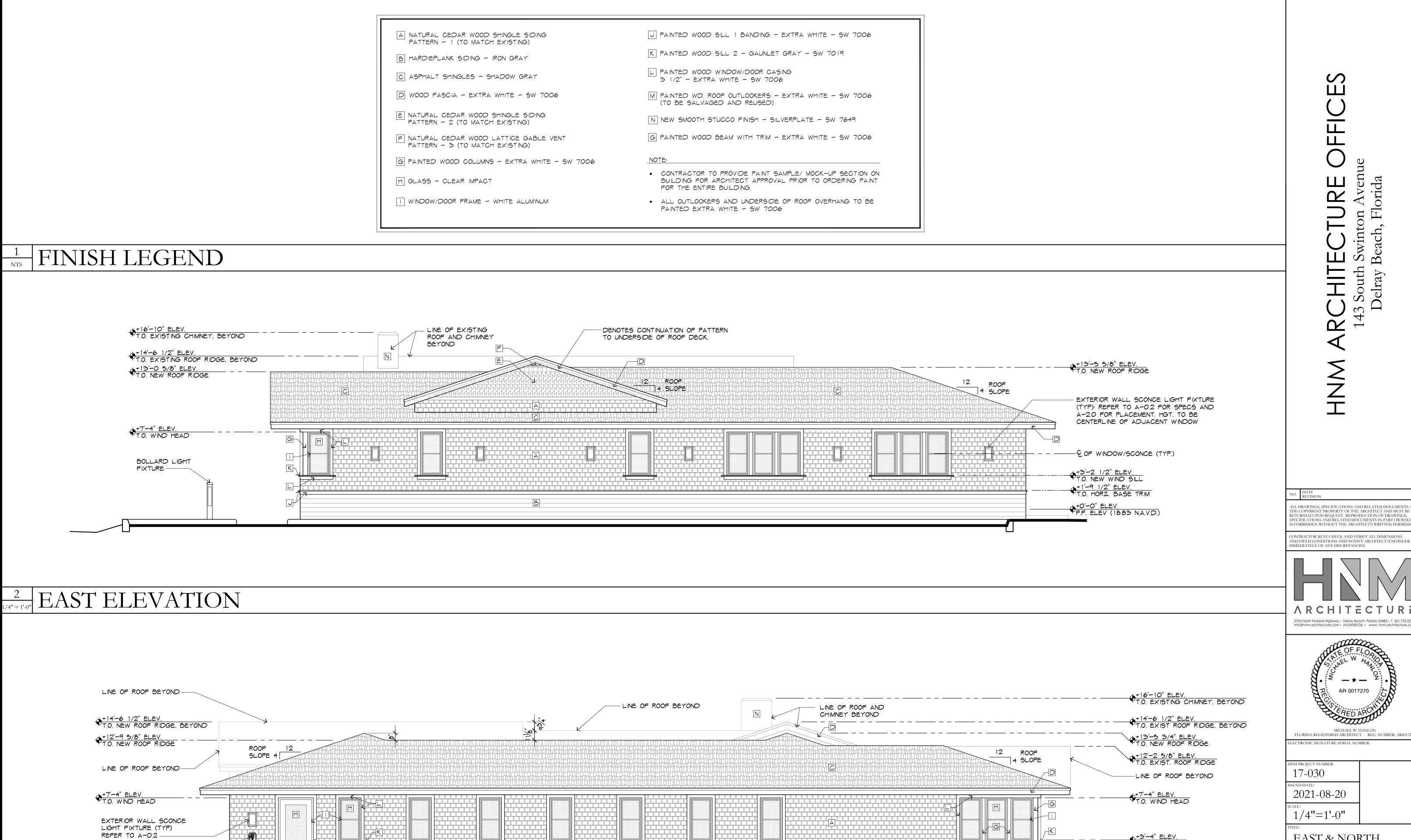
2021-08-20

1/4"=1'-0"

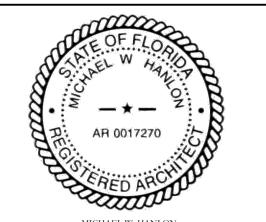
WEST & SOUTH ELEVATION

AWING NUMBER:

A4.0



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EAST & NORTH ELEVATION

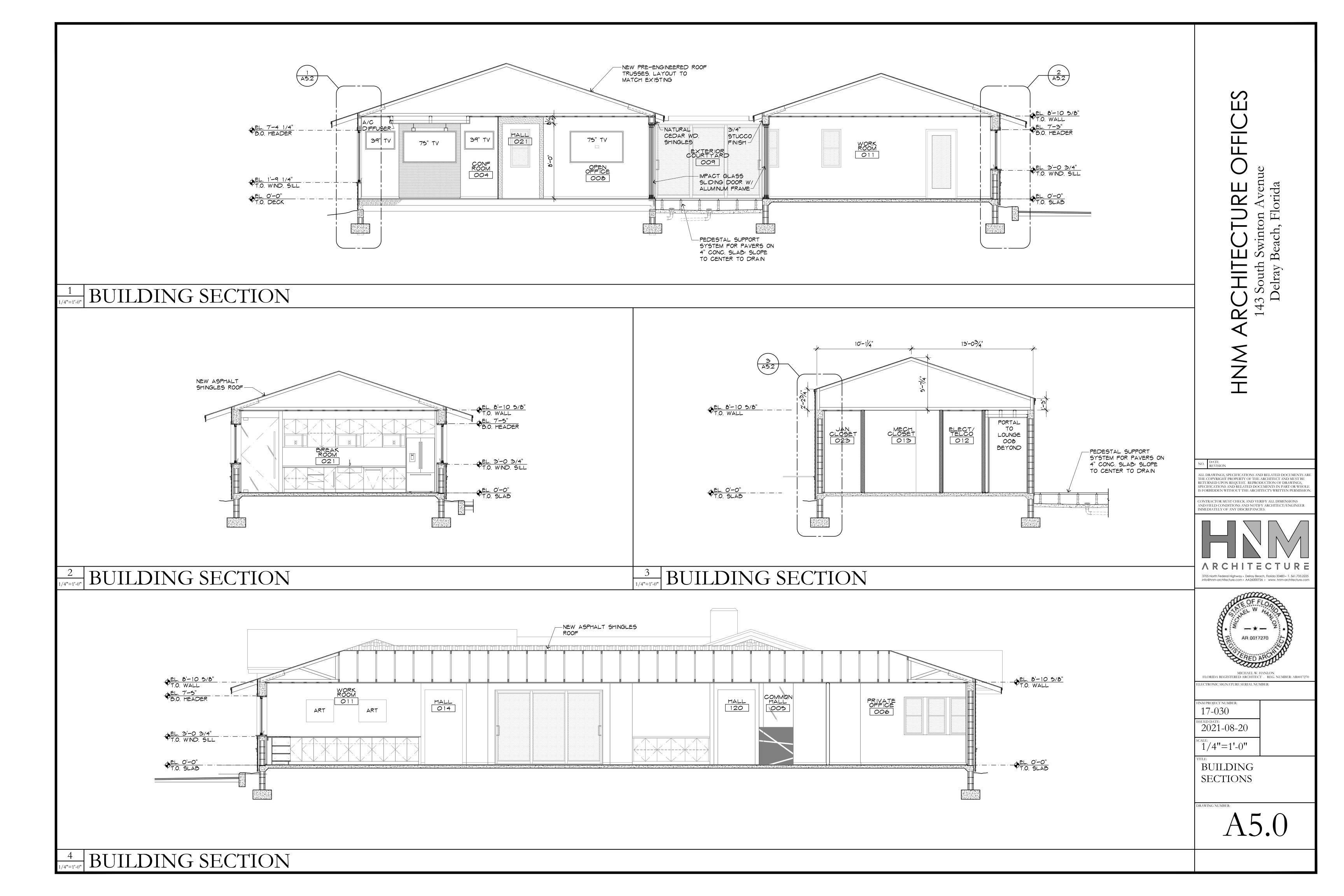
+3'-4" ELEV. T.O. WIND SILL

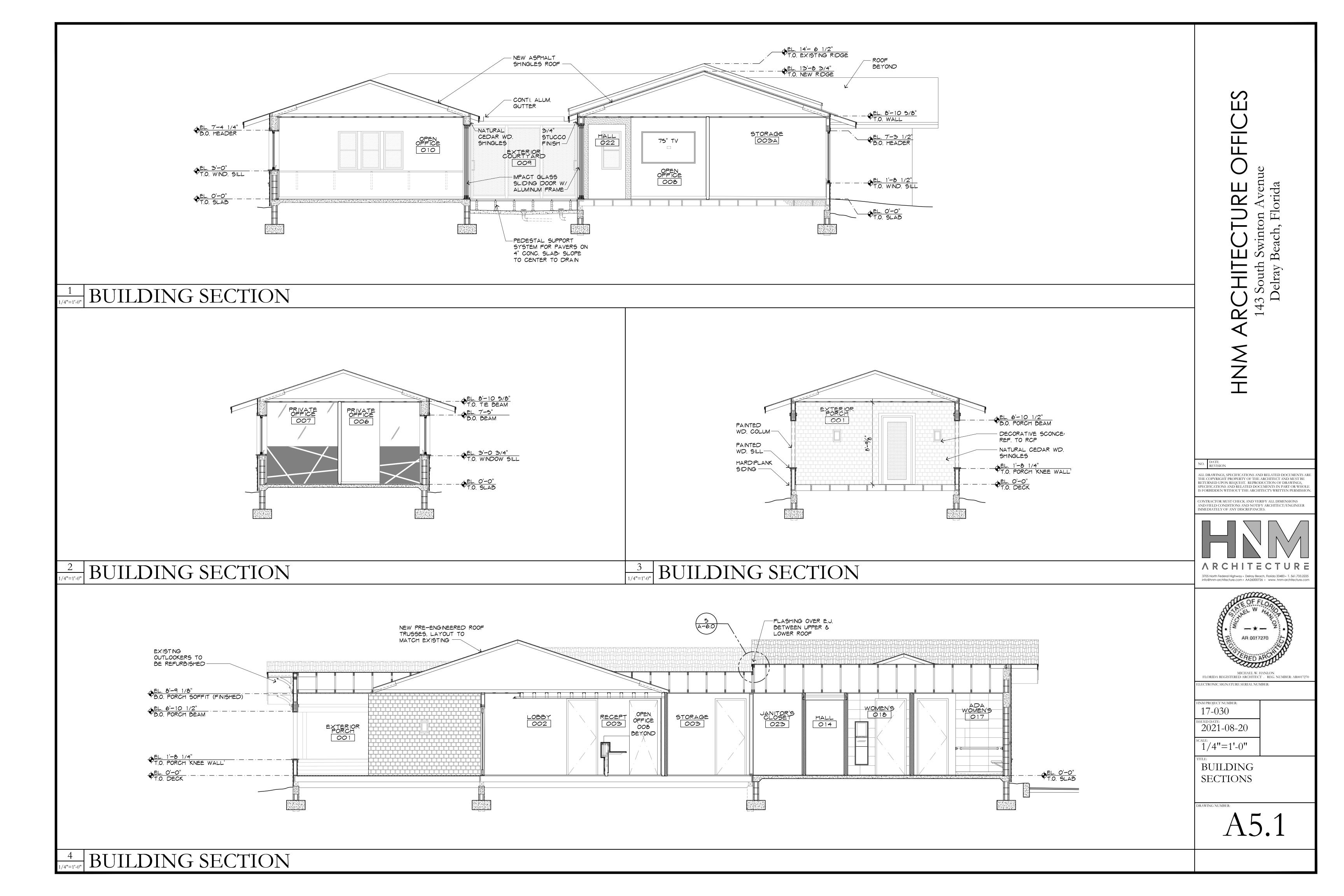
+1'-9 1/2" ELEV. T.O. HORIZ. BASE TRIM

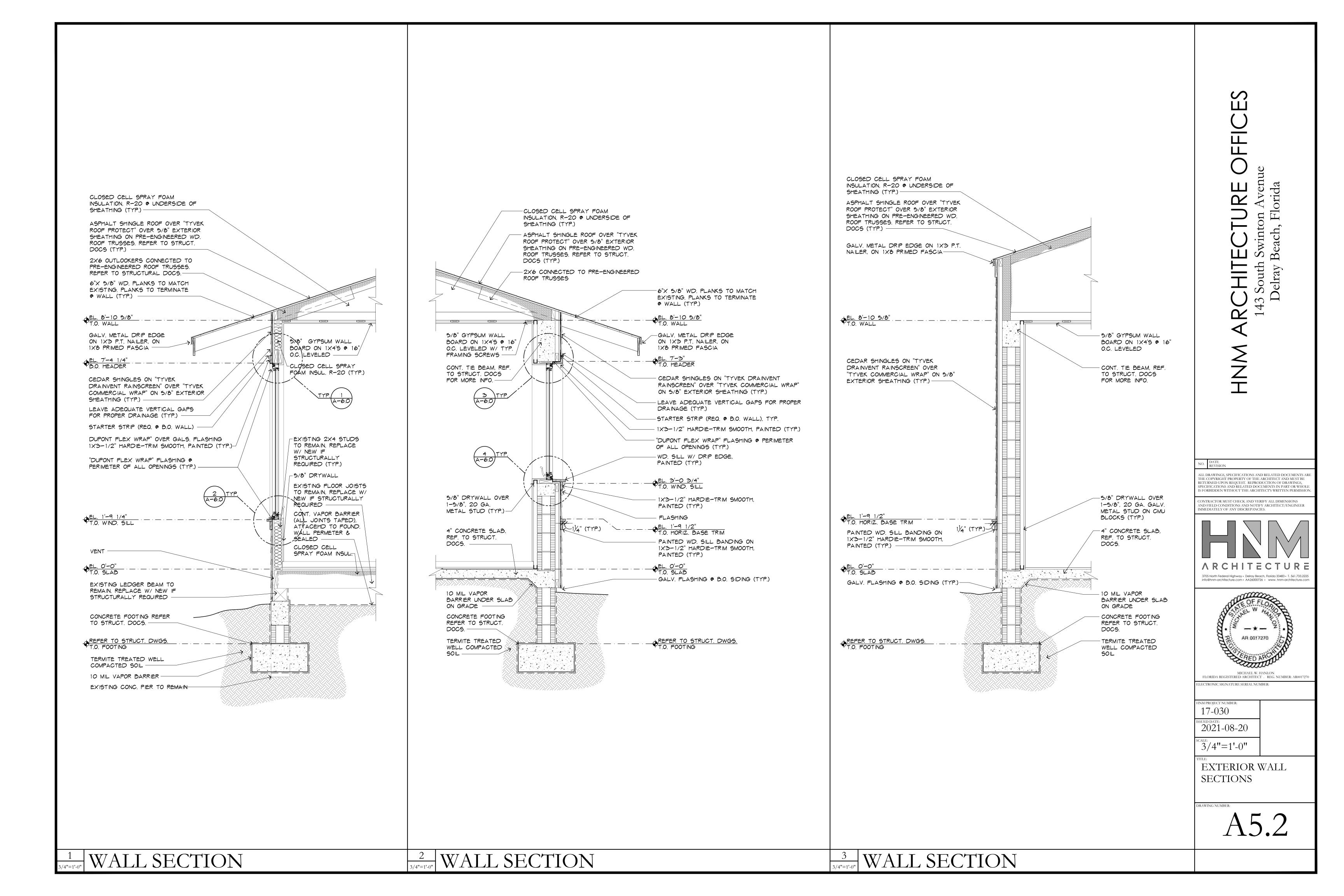
+0'-0" ELEV. F.F. ELEV (18.83 N.A.V.D.)

ELECTRIC CAR CHARGER

+0'-0" ELEV. F.F. ELEV (18.83 N.A.V.D.)







ANCHOR BOLT

ADDITIONAL

AGGREGATE

ALUMINUM

ALTERNATE

BOTTOM OF

BUILDING

BELOW

BOTTOM

BRIDGING

BEARING

BETWEEN

BRICK

BEAM

BOND BEAM

BASE PLATE

BOTH SIDES

CANTILEVER

CENTERLINE

COLUMN

CENTER

CENTERED

DIAMETER

DOWN

DETAIL

DOWEL

EACH

EQUAL

DRAWING

EACH END

EACH FACE

ENGINEER

ELEVATION

EACH SIDE

EACH WAY

EXTERIOR

FACE OF FLOOR DRAIN

FINISH

FLOOR

FLANGE

FOOT

FAR SIDE

FOOTING

GAGE, GAUGE

GRADE BEAM

GLU-LAM BEAM

HOLLOW CORE

HEADED STUD

INSIDE DIAMETER

HORIZONTAL

HIGH POINT

INSIDE FACE

INTERIOR

GALVANIZE

GRADE

HOOK

FOUNDATION

EXPANSION JOINT

EQUAL SPACE(S) (ING)

DEAD LOAD

CONCRETE

CONNECTION

CONTINUOUS

CONTRACTOR

COUNTER SINK

CLEAR(ANCE)

BOLTED TIE JOIST

CENTER TO CENTER

CONSTRUCTION JOINT

CONCRETE MASONRY

CONCRETE MASONRY UNIT

OR CONTROL JOINT

CONCRETE BEAM

CONCRETE COL

CAST IN PLACE

AMERICAN IRON AND

STEEL INSTITUTE

ARCHITECT(URAL)

TESTING MATERIALS

AMERICAN WELDING

ABOYE

AGGR

BLDG

BLW

BM

BOT

BP

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CONTR

OF OUTSIDE FACE OPNG OPENING OPP OPPOSITE PAF POWDER ACTUATED FASTENERS PEMB PRE-ENGINEERED

METAL BUILDING PERP PERPENDICULAR PC PRECAST PLATE PLYWDPLYWOOD PANEL POUNDS PER SQUARE FOO POUNDS PER SQUARE INCH PARTITION

RADIUS REFERENCE REINFORCE(D)(ING) REQ REQUIRE REQ'D REQUIRED RF ROOF RTN RETURN RETAINING WALL

SCHEDULE SLAB EDGE SECTION SHT SHEET SIMILAR SAWCUT JOINT STEEL JOIST INSTITUTE SL SLOPE SP SPACE(S) SPECS SPECIFICATIONS SQUARE STAINLESS STEEL STANDARD STD STL STEEL STRENGTH STRL STRUCTURAL SHEAR WALL

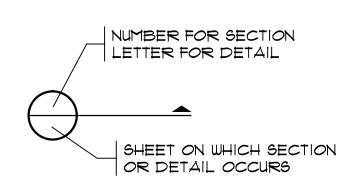
SYMM SYMMETRICAL SYP SOUTHERN YELLOW PINE TIE BEAM T&B TOP & BOTTOM TIE COLUMN GENERAL CONTRACTOR TDS TURN DOWN SLAB TEMP TEMPERATURE THK THICK THNS THICKEN SLAB TOP'S TOPPING TYP TYPICAL **T**/ TOP OF UNO UNLESS NOTED

OTHERWISE

YERT YERTICAL WALL FOOTING WINDOW OPENING (MASONRY) WORKING POINT

WITH

WATERSTOP



WELDED WIRE FABRIC

SECTION CUTS



GRID BUBBLE



NORTH ARROW



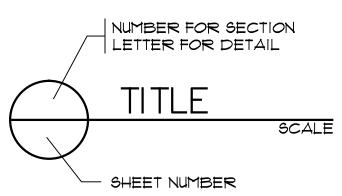
ELEVATION SYMBOL



REVISION MARK



TYP. PLAN CALL OUT



SECTION & DETAIL TITLE

TYPICAL LINETYPES

 GRID LINE
 EXISTING
 MATCH LINE
 HIDDEN
 DASHED
 CONTINUOUS

DESIGN CRITERIA

- ALL WORK SHALL CONFORM TO AT LEAST THE MINIMUM STANDARDS OF THE FLORIDA BUILDING CODE (FBC), SEVENTH EDITION (2020).
- DESIGN LOAD VALUES ARE INDICATED ON THE APPROPRIATE SHEETS AS FOLLOWS: FOUNDATION DESIGN -SØ.1 ROOF FRAMING DESIGN -S1.2 S4.0, S5.0 WIND DESIGN -
- TO THE BEST OF THE ENGINEER'S KNOWLEDGE, THE STRUCTURAL PLANS AND SPECIFICATIONS HAVE BEEN DESIGNED IN ACCORDANCE WITH THE BUILDING CODE.
- EVERY REASONABLE EFFORT HAS BEEN MADE TO ENSURE COORDINATION BETWEEN THESE DRAWINGS AND THE BOUND STRUCTURAL SPECIFICATIONS, SHOULD THERE BE ANY DISCREPANCIES, THE CONTRACTOR SHALL THEN REQUEST A CLARIFICATION IN WRITING.

GENERAL

- THE GENERAL CONTRACTOR SHALL REVIEW AND DETERMINE THAT DIMENSIONS ARE COORDINATED BETWEEN ARCHITECTURAL AND STRUCTURAL DRAWINGS PRIOR TO FABRICATION OR START OF CONSTRUCTION.
- THE GENERAL CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY TO PROTECT THE STRUCTURE, THE WORK PERSONS AND OTHER PEOPLE DURING CONSTRUCTION. HE SHALL SUPERVISE AND DIRECT THE WORK AND BE RESPONSIBLE FOR ALL CONSTRUCTION.
- NO STRUCTURAL MEMBER SHALL BE CUT, NOTCHED OR OTHERWISE REDUCED IN STRENGTH.
- THE GENERAL CONTRACTOR SHALL COORDINATE ARCHITECTURAL MECHANICAL AND ELECTRICAL DRAWINGS FOR ANCHORED, EMBEDDED AND SUPPORTED ITEMS WHICH AFFECT THE STRUCTURAL DRAWINGS AND NOTIFY THE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
- ALL SHOP DRAWING SUBMITTALS SHALL BE SUBMITTED VIA ELECTRONIC MEDIA (I.e. PDF OR DWF FORMAT). HARD COPY SUBMITTALS WILL NOT BE ACCEPTED.
 - 1. SUBMITTALS SHALL NOT BE SECURED IN ANY FORMAT THAT WILL PREVENT COMMENTS FROM BEING ADDED.
 - 2. SUBMITTALS THAT ARE REQUIRED TO BE SIGNED AND SEALED SHALL BE SUBMITTED WITH A VISIBLE INK SEAL OR SHADED RAISED SEAL AT TIME OF FIRST SUBMITTAL
- ANY SUBMITTALS RECEIVED BY ARCH/ENG THAT HAVE NOT BEEN CHECKED BY THE GC AND HIS SUBCONTRACTOR SHALL BE RETURNED WITHOUT REVIEW
- ALL SECTIONS AND DETAILS SHALL BE CONSTRUED TO BE TYPICAL OR SIMILAR UNLESS ANOTHER SECTION OR DETAIL IS NOTED.
- ANY CONFLICTS NOTICED, OR OBSERVED, BETWEEN THE WRITTEN SPECIFICATIONS AND THE CONSTRUCTION DOCUMENTS DURING PROJECT BIDDING OR PROJECT CONSTRUCTION SHALL BE BROUGHT TO THE IMMEDIATE ATTENTION OF THE STRUCTURAL ENGINEER-OF-RECORD. IF SUCH DISCREPANCY IS NOT NOTICED OR BROUGHT TO THE ATTENTION OF THE STRUCTURAL ENGINEER-OF-RECORD FOR WRITTEN CLARIFICATION, THE CONTRACTOR/SUBCONTRACTOR SHALL PROVIDE, AT PROJECT BID OR DURING PROJECT CONSTRUCTION, THE MORE STRINGENT AND/OR MORE COSTLY OF THE TWO ITEMS IN THE BID AND/OR FINAL INSTALLATION.
- "BBM STRUCTURAL ENGINEERS" ASSUMES NO RISK OR LIABILITY FOR THE SITE SAFETY OR WELL-BEING OF ANY CONTRACTOR, SUBCONTRACTOR NOR THEIR EMPLOYEES DURING THE CONSTRUCTION OF THE PROJECT CONTAINED IN THESE DOCUMENTS.
- GENERAL CONTRACTOR/CONSTRUCTION MANAGER SHALL SUPPLY ALL SUB-CONTRACTORS WITH THE STRUCTURAL GENERAL NOTE SHEETS AS WELL AS THE STRUCTURAL DRAWINGS.
- THE STRUCTURAL STEEL AND OPEN WEB STEEL JOISTS SHALL BE FABRICATED AND ERECTED IN FULL CONFORMANCE WITH THE "OSHA STEEL ERECTION STANDARD". IF THE CONSTRUCTION DRAWINGS DEVIATE FROM THE OSHA STANDARD THEN THE FABRICATOR SHALL PROVIDE SUBMITTALS THAT CLEARLY INDICATE THE DEVIATION WITH A REVISION CLOUD AND REQUEST APPROVAL FROM "BBM" TO MAKE THE CHANGE SO THAT CONFORMANCE WITH THE OSHA STANDARD IS ASSURED.
- THE CONTRACTOR'S MEANS AND METHODS SHALL FULLY CONFORM TO THE REQUIREMENTS OF SEI/ASCE 37 (DESIGN LOADS ON STRUCTURES DURING CONSTRUCTION) UNTIL ALL OF THE STRUCTURAL ELEMENTS ARE IN PLACE AND HAVE RECEIVED THE INSPECTOR'S APPROVAL.
- REFER TO ARCHITECTURAL DRAWINGS FOR ROOF COVERINGS. ROOF COYERINGS FOR ENHANCED HURRICANE PROTECTION AREA (EHPA) FACILITIES SHALL BE PROVIDED IN ACCORDANCE WITH THE LATEST ASTM AND FACTORY MUTUAL STANDARDS FOR MATERIALS AND WIND UPLIFT FORCES. ROOFS SHALL BE INSPECTED BY A LICENSED ENGINEER/ ARCHITECT AND A REPRESENTATIVE OF THE ROOFING MANUFACTURER AND REPORTS SHALL BE SUBMITTED TO THE OWNER AND ARCHITECT.

FOUNDATIONS

- A CERTIFIED TESTING AGENCY SHALL BE ENGAGED TO PERFORM INDUSTRY-STANDARD SOIL DENSITY TESTS TO ENSURE CONFORMANCE WITH GEOTECHNICAL SOILS REPORT. SUBMIT REPORTS TO ARCHITECT AND ENGINEER.
- CONTRACTOR, IN CONJUNCTION WITH GEOTECHNICAL FIELD REPRESENTATIVE, SHALL DETERMINE IF ANY UNSUITABLE CONDITIONS ARE DISCOVERED DURING EXCAYATION WHICH WOULD PREVENT ATTAINMENT OF THE DESIGN SOIL PRESSURE RECOMMENDED BY THE SOILS REPORT.
- FOR FOUNDATION DESIGN VALUES, SEE FOUNDATION SCHEDULE. MAXIMUM DESIGN SOIL BEARING PRESSURE DOES NOT EXCEED 2500 PSF, SEE FOOTING SCHEDULE FOR GEOTECHNICAL REPORT INFORMATION AND MAXIMUM ALLOWABLE BEARING PRESSURE.

SLAB ON GRADE

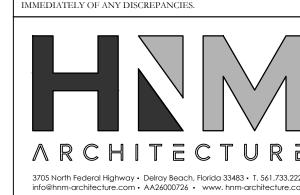
- UNLESS NOTED OTHERWISE IN THE GEOTECHNICAL REPORT, COMPACT INTERIOR FILL TO 95% OF MODIFIED PROCTOR MAXIMUM DRY DENSITY (ASTM D1557). SOIL COMPACTION SHALL BE FIELD-CONTROLLED BY A REPRESENTATIVE TECHNICIAN OF A QUALIFIED LABORATORY. EACH LAYER OF FILL SHALL NOT EXCEED 12" THICK AND SHALL BE COMPACTED PRIOR TO PLACEMENT OF NEXT LAYER.
- MAXIMUM SPACING OF CONTROL JOINTS (i.e. SAWCUT JOINT OR CONSTRUCTION JOINT) SHALL BE AS SET IN THE TABLE BELOW, OR AS NOTED ON PLANS. THE MORE STRINGENT SHALL APPLY. PATTERNS SHALL BE APPROXIMATELY SQUARE WITH A RATIO OF LONG SIDE TO SHORT SIDE NOT EXCEEDING 1.5 TO 1.

SLAB THICKNESS (IN)	*3/4" OR LARGER AGGREGATE SPACING (FT)
4	12
5	13
6	14
1 AND GREATER	15

- * MIX DESIGNS CONTAINING AGGREGATE LESS THAN 3/4" ARE NOT ACCEPTABLE.
- * * SAWCUT SLAB AS SOON AS AGGREGATE DOES NOT DISLODGE (MUST BE WITHIN 12 HOURS OF CONCRETE PLACEMENT).
- GENERAL CONTRACTOR SHALL COORDINATE EXACT LOCATION OF SJ'S AND CJ'S WITH ARCHITECTURAL FLOOR FINISHES TO ENSURE SLAB JOINTS DO NOT READ THROUGH.
- SLAB ON GRADE THICKNESS SHALL BE INCREASED AS REQUIRED TO PROVIDE ADEQUATE SUPPORT FOR CRANE LOADS WITHOUT CRACKING
- SLAB ON GRADE SHALL BE POWER-TROWELLED TO A HARD, SMOOTH BURNISHED FINISH. THE FINAL TROWEL PASS SHALL BE DONE BY BY HAND TO ACHIEVE FINISH AS REQUIRED ON ARCHITECTURAL PLANS. WE' CURE THE SLAB FOR A MINIMUM OF 7 DAYS.
- THE FLOOR AND ROOF SLABS HAVE BEEN DESIGNED FOR THE ALLOWABLE DISTRIBUTED LOADS NOTED ON THE PLAN(S). ANY AND ALL LOADS PLACED UPON THE SLAB DURING THE CONSTRUCTION OR POST- CONSTRUCTION PHASE WHICH EXCEED THE DESIGN LOADS ARE THE SOLE RESPONSIBILITY OF THE CONTRACTOR/SUBCONTRACTOR OR THE TENANT.

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CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND



JOEL MIDDLEBROOKS

ECTRONIC SIGNATURE SERIAL NUMBER ISSUED FOR PERMIT



07-02-2021

STRUCTURAL ENGINEERS

P 561-750-1916 399 W. Palmetto Park Rd. Suite 200 Boca Raton, FL 33432

EB5343 Joel R. Middlebrooks P.E. =35422 ENGINEER HEREBY EXPRESSLY RESERVES HIS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THIS DESIGN AND DRAWINGS ARE NOT TO BE REPRODUCED, CHANGED, OR COPIED OR ELECTRONICALLY DOWNLOADED OR OTHERWISE DIGITALLY OBTAINED IN ANY FORM OR MANNER WHATSOEVER WITHOUT FIRST SECURING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF "BBM STRUCTURAL ENGINEERS". NEITHER MAY THESE DRAWINGS BE ASSIGNED TO ANY PERSON, PERSONS OR COMPANY WITHOUT FIRST OBTAINING SAID WRITTEN PERMISSION AND CONSENT. AS SHOWN

GENERAL NOTES

NM PROJECT NO.

2020-09-01

- A CERTIFIED TESTING AGENCY SHALL BE ENGAGED TO PERFORM INDUSTRY STANDARD TESTING INCLUDING SLUMP TESTS AND CYLINDER BREAKS TO ENSURE CONFORMANCE WITH PLANS AND SPECIFICATIONS (IF PROVIDED). SUBMIT REPORTS TO ARCHITECT AND ENGINEER.
- C2 CONCRETE WORK SHALL CONFORM TO ACI 318-08 BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE.
- C3 ALL CONCRETE SHALL HAVE THE FOLLOWING PROPERTIES:

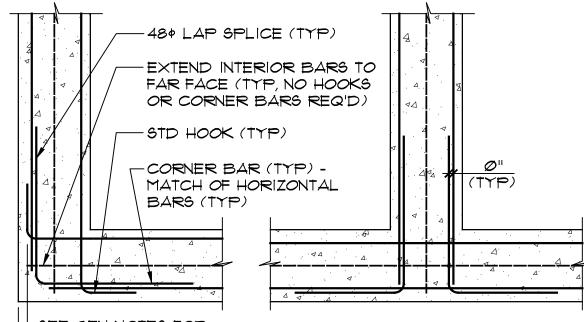
LOCATION	28 DAY STRENGTH	SLUMP	COARSE AGGREGATE(S	COMMENTS	EXPOSURE CATEGORIES & CLASSES			
					Щ	IJ	Ω	C
	4000 PSI							
SLAB-ON-GRADE: FOOT TRAFFIC	3000 PSI	4" +/- 1"						
TIE BEAMS AND TIE COLUMNS (MAX 50' BETWEEN COLD JOINTS)	3000 PSI	6" +/- 1"	3/8"					
BEAMS, COLUMNS & ELEVATED STAIRS	4000 PSI	4" +/- 1"	3/8" ‡ 1"					
FOUNDATIONS	3000 PSI	5" +/- 1"	1 1/2"					
FILLED CELL, PRECAST LINTELS & BOND BEAM GROUT (ASTM C416) - SEE NOTE 6	2500 PSI	8" TO 11"	COARSE GROUT: FINE GROUT: NONE	3/8"				

NOTES:

- 1. SLUMP FOR RAMPS AND SLOPING SURFACES SHALL NOT EXCEED 4".
- 2. ALL SLAB MIXES SHALL HAVE A MAXIMUM SAND TO TOTAL AGGREGATE RATIO OF 0.50.
- 3. A 2" OR 3" PUMP SHALL BE ACCEPTABLE FOR COLUMNS, CELL FILL AND TIE BEAMS BUT WILL NOT BE ALLOWED FOR FOUNDATIONS, SLABS, TILT-UP PANELS AND CONCRETE BEAMS.
- 4. READY MIX SUPPLIER SHALL DESIGN THE MIXES THAT CONTAIN MULTIPLE AGGREGATES TO BE WELL GRADATED.
- 5. SLABS SHALL NOT BE AIR ENTRAINED.
- 6. SEE MASONRY NOTE M21 FOR TESTING REQUIREMENTS OF GROUT TO BE USED TO FILL CORES OF CMU.
- C4 CONCRETE MIX DESIGN SUBMITTALS:
 - 1. EACH MIX DESIGN SHALL BE LABELED TO INDICATE THE AREA IN WHICH THE CONCRETE IS TO BE PLACED (I.E. FOUNDATIONS, SLABON-GRADE, COLUMNS, ETC.). FAILURE TO DO SO WILL CAUSE DELAY AND/OR REJECTION OF SUBMITTALS.
 - 2. PROPOSED MIX DESIGN SHALL BE IN ACCORDANCE WITH METHOD 1 OR METHOD 2 OF ACI 301. PROVIDE SUPPORTING DATA IN TABULAR FORM FOR EACH SEPARATE PROPOSED MIX.
 - 3. SUBMIT CONCRETE MIX DESIGN FOR EACH PROPOSED CLASS OF CONCRETE.
- C5 REBAR SHALL CONFORM TO ASTM-615 GRADE 60. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185 AND SHALL BE LAPPED MINIMUM ONE MESH + 2" WHERE SPLICED. ALL REINFORCING SHALL BE DOMESTICALLY PRODUCED.
- C6 SPLICES AND ANCHORAGE OF REINFORCING SHALL BE AS FOLLOWS (UNLESS OTHERWISE NOTED):

WELDED WIRE FABRIC: 8"
ALL OTHER: 48 DIA (12" MIN)

REINFORCEMENT IN WALLS, FOOTINGS AND BEAMS SHALL BE CONTINUOUS AND LAPPED 48 BAR DIA AT SPLICE UNLESS OTHERWISE NOTED. HOOK AND LAP ALL CORNER AND INTERSECTING BARS. (SEE REINF DEVELOPMENT DETAIL).



SEE GEN NOTES FOR REQ'D COVER (TYP)

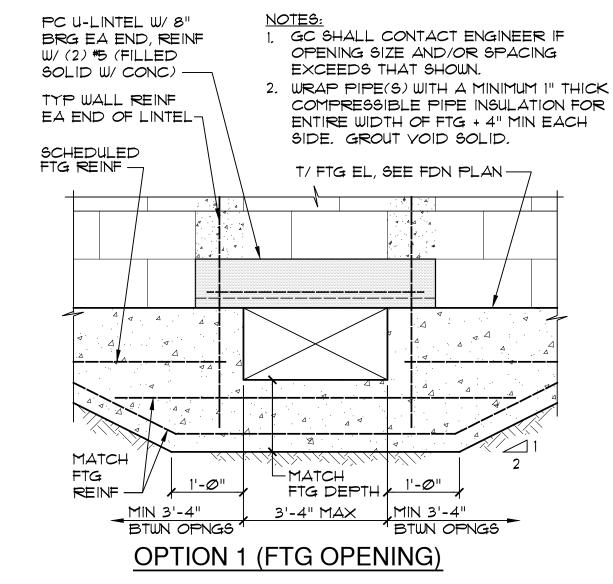
INTERSECTION

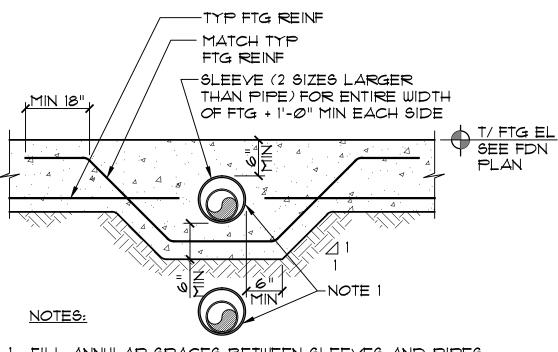
REINF DEVELOPMENT DETAIL

CS COVER FOR REINFORCING SHALL BE AS FOLLOWS:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH:	3"
CONCRETE EXPOSED TO EARTH OR WEATHER: #6 THRU #18 BARS: #5 BAR, W31 OR D31 WIRE AND SMALLER:	2" 1 1/2"
CONCRETE NOT EXPOSED TO EARTH OR WEATHER: SLABS, WALLS, JOISTS: #14 AND #18 BARS:	1 1/2"
#11 BAR AND SMALLER: BEAMS, COLUMNS: PRIMARY REINF, TIES, STIRRUPS, SPIRALS:	3/4"
SHELLS, FOLDED PLATE MEMBERS: *6 BAR AND LARGER: *5 BAR, W31, OR D31 WIRE AND SMALLER:	3/4" 1/2"

C9 FOOTING PENETRATION DETAILS:



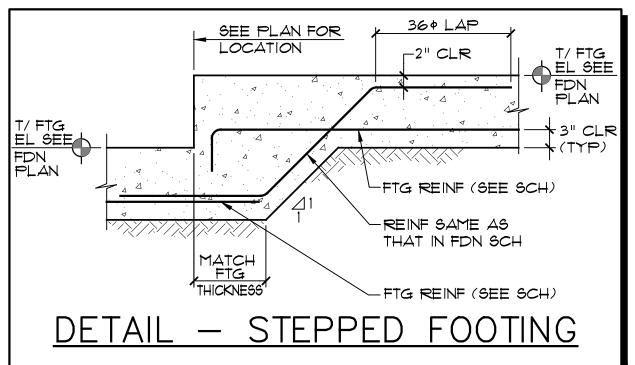


1. FILL ANNULAR SPACES BETWEEN SLEEVES AND PIPES WITH A COMPRESSIBLE MATERIAL AS REQUIRED BY THE PLUMBING CODE.

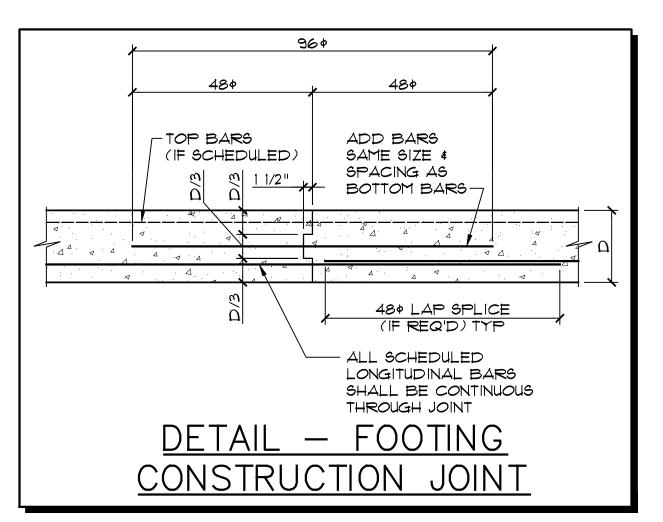
2. PIPE MUST BE 90° (±10°) TO WALL FTG.

OPTION 2 (SLEEVED)

CII STEPPED FOOTING DETAIL (IF REQUIRED):



- C12 BASE CONSTRUCTION PRICE SUBMITTED BY CONTRACTOR/SUBCONTRACTOR SHALL INCLUDE 300# OF BOTH #5 AND #6 REINFORCING STEEL AND 100 MAN HOURS (TOTAL) OF LABOR FOR INSTALLATION OF THIS REINFORCING AS DIRECTED BY THE ARCHITECT/ENGINEER.
- CI3 TERMINATE ALL DISCONTINUED ELEVATED SLAB TOP BARS WITH A 180 DEGREE STANDARD HOOK UNLESS OTHERWISE NOTED.
- C14 CONTINUOUS TOP BARS SHALL BE SPLICED AT MID-SPAN. CONTINUOUS BOTTOM BARS SHALL BE SPLICED AT CENTER-LINE OF SUPPORTS (OR AS SHOWN ON TYPICAL DETAILS).
- C15 FOOTING CONSTRUCTION JOINT (IF REQUIRED):



CIG ONE-WAY SLAB CONSTRUCTION JOINT (IF REQUIRED):

 \subseteq

143 South Swinton Avenue

NO. DATE REVISION

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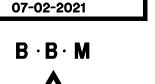
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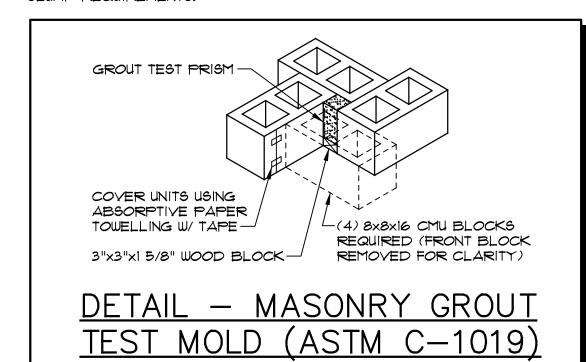
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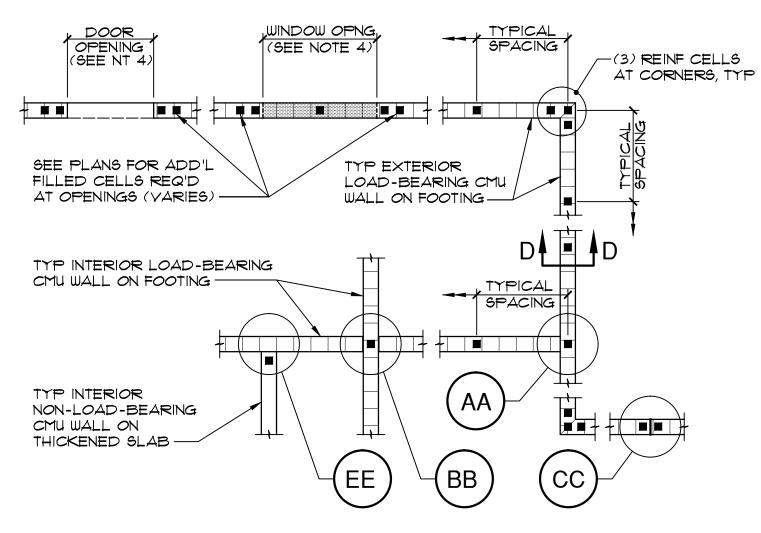
- CONCRETE BLOCKS SHALL CONFORM TO ASTM C-90. (f'm = 1500 PSI) (1900 PSI ON THE NET AREA).
- MORTAR SHALL COMPLY WITH ASTM C270, TYPE 'M' FOR RETAINING WALLS AND WALLS BELOW GRADE, TYPE 'S' FOR TYPICAL WALLS. (COMPRESSIVE STRENGTH = 2500 PSI AND 1800 PSI, RESPECTIVELY. SITE TESTED MORTAR CUBES SHALL ACHIEVE A MINIMUM OF 80% OF THE DESIGN COMPRESSIVE STRENGTH)
- BLOCK SHALL NOT BE MOISTENED BEFORE GROUTING.
- ALL MASONRY CROSS WEBS SHALL BE FULLY BEDDED IN MORTAR AROUND CELLS TO BE GROUTED.
- REINFORCE WALLS WITH LADDER TYPE (ASTM A-153, *9 GAGE WIRE) DEFORMED REINFORCEMENT EQUAL TO DUR-O-WAL IN BED JOINTS AT 16" OC UNO, MEASURED VERTICALLY. PLACE PER THE MFR'S INSTRUCTIONS. LAP ALL HORIZONTAL JOINT REINFORCING 6" MIN.
- VERTICAL REINFORCING MUST HAVE A MINIMUM CLEARANCE OF 1/2" TO INSIDE FACE. VERTICAL REINFORCEMENT IN WALLS SHALL BE SECURED AND LATERALLY SUPPORTED AGAINST DISPLACEMENT AT INTERVALS NOT EXCEEDING 192 x (BAR DIAMETER) OR 10 FT (WHICHEVER IS LESS) WHENEVER A CLEANOUT IS REQUIRED. SEE GROUTING DETAIL NOTE FOR CLEAN-OUT REQUIREMENTS.
- GROUT PLACEMENT STOPPED FOR (1) HOUR OR MORE SHOULD BE STOPPED 1 1/2" BELOW THE TOP OF THE MASONRY UNIT TO PROVIDE A KEY FOR SUBSEQUENT GROUTING.
- TYPICAL VERTICAL REINFORCING SIZE AND SPACING SHALL BE ABOVE AND BELOW ALL WALL OPENINGS.
- TEMPORARY BRACING AND SHORING OF WALLS TO PROVIDE STABILITY DURING CONSTRUCTION SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- PROVIDE FILLED PRECAST U-LINTELS AS MANUFACTURED BY CAST-CRETE OR APPROVED EQUAL WITH (2) *5 CONT AT ALL OPENINGS WHERE BEAMS ARE NOT SHOWN, SCHEDULED OR NOTED GREATER THAN 2'-0" WIDE. LINTELS SHALL HAVE MINIMUM UNFILLED CAPACITY OF 400 Ib/LF AND BEAR NOMINAL 6" (MIN 6") EACH END ON A GROUT FILLED CELL. PROVIDE PRE-CAST LINTEL MFR'S STANDARD TABULATED LOAD TABLES AS EVIDENCE THAT THE MINIMUM CAPACITIES AS LISTED IN THE BEAM SCHEDULE ARE SATISFIED. REFER TO MASONRY WALL BEAM SCHEDULE FOR TYPICAL PRECAST LINTEL SPANS AND DETAILS.
- STOPPING AND RESUMING WORK: RACK BACK 1/2-UNIT LENGTH IN EACH COURSE. DO NOT TOOTH. CLEAN EXPOSED SURFACES OF SET MASONRY. REMOVE LOOSE MASONRY UNITS AND MORTAR PRIOR TO LAYING FRESH MASONRY.
- REINFORCE MASONRY OPENINGS LESS THAN 2'-0" WIDE, WITH HORIZ JOINT REINF PLACED IN (2) HORIZ JOINTS APPROXIMATELY 8" APART, IMMEDIATELY ABOVE THE GROUT FILLED LINTEL AND IMMEDIATELY BELOW THE GROUT FILLED SILL. EXTEND REINFORCING A MINIMUM OF 2'-0" BEYOND JAMBS OF THE OPENING EXCEPT AT CONTROL JOINTS.
- DO NOT APPLY UNIFORM LOADS TO MASONRY WALLS FOR (3) DAYS.
- DO NOT APPLY CONCENTRATED LOADS TO MASONRY WALLS FOR (1)
- EXTEND ALL VERTICAL WALL REINFORCEMENT TO WITHIN 2" OF TOP OF WALL OR BEAM UNLESS NOTED OTHERWISE. TERMINATE REINFORCING WITH STANDARD ACI 90 DEGREE HOOK IF ROOF JOISTS AND/OR TRUSSES BEAR ON TOP OF WALL AND THERE IS NO PARAPET. IF PARAPET EXISTS, HOOK IS NOT REQUIRED.
- MAXIMUM CONTROL JOINT SPACING FOR CONCRETE MASONRY UNITS:

SPACING FOR CONTROL JOINTS 2 x WALL HEIGHT = SPACING IN FT (NOT TO EXCEED 30'-0")

- REFER TO ARCHITECTURAL DRAWINGS FOR WATERPROOFING DETAILS AT MASONRY CONTROL JOINTS.
- JOB SITE MIXING OF GROUT SHALL NOT BE PERMITTED. TESTING SHALL CONFORM TO ASTM C1019. SEE TEST MOLD DETAIL BELOW. SEE THE SCHEDULE UNDER CONCRETE NOTES FOR COMPRESSIVE STRENGTH AND SLUMP REQUIREMENTS.

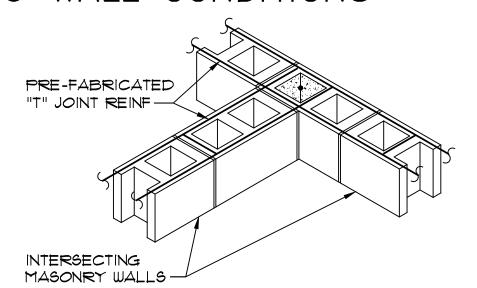


TYPICAL MASONRY DETAILS:



- SEE DETAIL "CC" FOR LOCATING MASONRY CONTROL JOINTS. CONTRACTOR SHALL SUBMIT MCJ PLAN TO ARCHITECT FOR APPROVAL
- 2. SEE ARCHITECTURAL DRAWINGS FOR OPENING SIZES AND LOCATIONS.
- 3. SEE FDN PLAN NOTES FOR REINFORCED FILLED CELL SIZE & SPACING.
- 4. MULTIPLE FILLED CELLS MAY BE REQUIRED AT JAMBS. ADDITIONAL BARS WILL BE SHOWN ON PLAN(S). IF NONE ARE SHOWN, THEN A SINGLE TYPICAL REINFORCED JAMB CELL IS SUFFICIENT
- 5. SEE MASONRY NOTES ON GENERAL NOTE SHEETS FOR HORIZONTAL JOINT REINFORCING AND OTHER ADDITIONAL INFORMATION.

ILLUSTRATIVE PLAN OF VARIOUS CMU WALL CONDITIONS

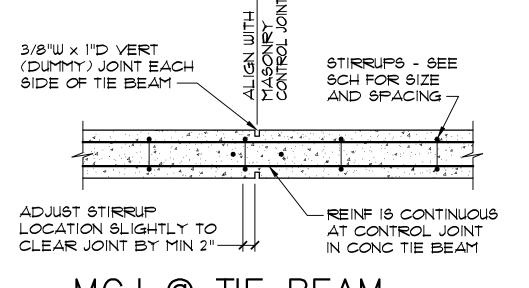


WALL INTERSECTION JOINT REINF SHALL BE CONTINUOUS IN BOTH DIRECTIONS

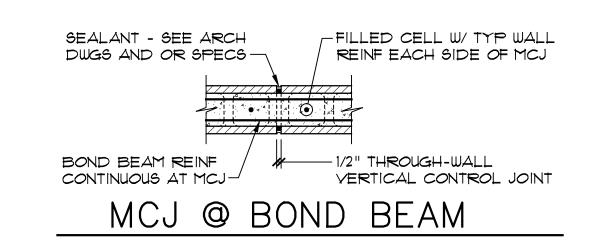


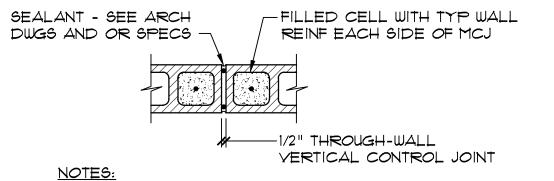
INTERSECTING

MASONRY WALLS -



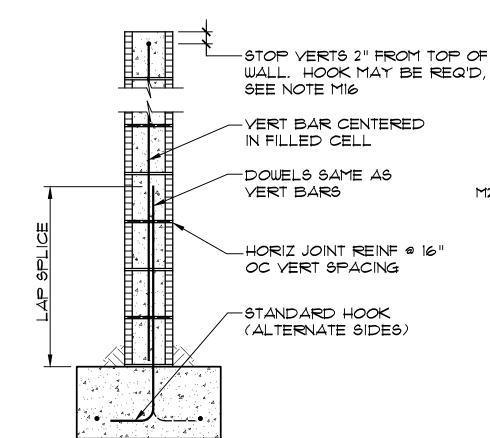
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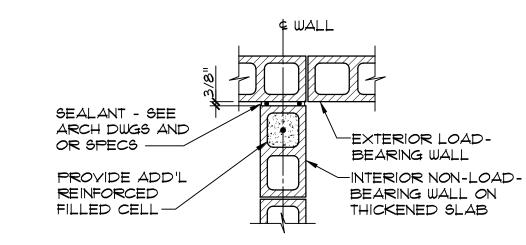


- 1. THROUGH-WALL JOINT SHALL BE CONTINUOUS WITHOUT INTERRUPTION FROM FOUNDATION TO TOP OF WALL
- 2. TERMINATE TYPICAL HORIZONTAL JOINT REINFORCING 2" FROM JOINT.
- 3. MAXIMUM SPACING OF CONTROL JOINTS SHALL BE 2 x (WALL HEIGHT) OR 30'-0", WHICHEVER IS LESS.



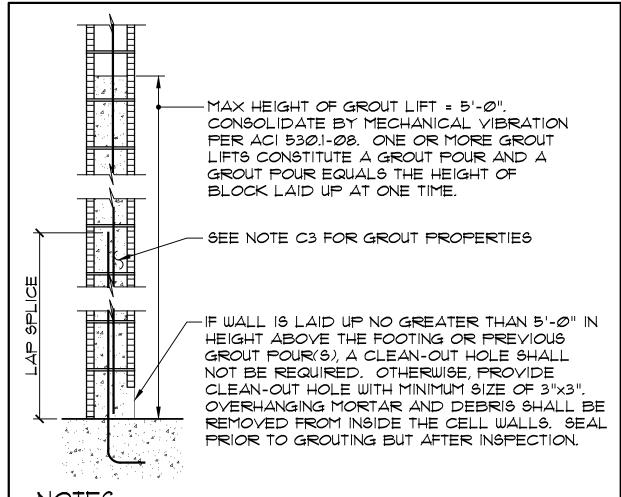


TYPICAL FILLED CELL



INTERSECTION OF LOAD-BRG & NON-LOAD-BRG WALLS

GROUT FOR FILLED CELLS SHALL BE PLACED IN CONFORMANCE WITH ACI 530.1-08 AND AS INDICATED BELOW:



DO NOT GROUT UNTIL MORTAR HAS SET SUFFICIENTLY TO WITHSTAND THE PRESSURE OF THE GROUT. WAIT NOT LESS THAN 24 HOURS.

- PLACE GROUT WITHIN 90 MINUTES FROM INTRODUCING WATER IN THE MIXTURE AND PRIOR TO INITIAL SET.
- MAXIMUM WALL HEIGHT LAID UP AT ONE TIME SHALL BE 12'-0" FOR COARSE GROUT AND 24'-0" FOR FINE GROUT. GROUT IN LIFTS NOT EXCEEDING 5'-0" UNTIL THE GROUT POUR HAS REACHED THE TOP OF THE WALL. A GROUT POUR CONSISTS OF ONE OR MORE LIFTS.
- 4. THE MINIMUM CONTINUOUS UNOBSTRUCTED CLEAR AREA IN CELL TO RECEIVE GROUT MUST BE NOT LESS THAN 3"x3". MORTAR FINS MUST BE REMOVED AS BLOCK PLACEMENT PROCEEDS. MORTAR DROPPINGS MUST BE KEPT OUT OF CELLS WHICH ARE TO BE GROUTED.

GROUTING DETAIL

MINIMUM LAP SPLICES FOR REINFORCED CMU PER 2010 FBC FOR LRFD DESIGNS

CMU	WALLS	WITH C	ENTERE	D VER	TICAL REIN	IFORCING
#4	#5	#6	#	#8	#9 (NOTE 1)	#1Ø (NOTE 2)
21"	26"	36"	48"	72"	82"	

CMU WALLS WITH <u>EACH FACE</u> VERTICAL REINFORCING							
#4	# 5	#6	#	* 8	#9 (NOTE 1)	#1Ø (NOTE 2)	
34"	45"	54"	63"	72"	82"		

*9 BARS ARE NOT ALLOWED IN 8" CMU BUT ACCEPTABLE FOR 10" AND 12" CMU. MAXIMUM BAR DIAMETER SHALL NOT EXCEED ONE-EIGHTH OF THE NOMINAL WALL THICKNESS.

- 2. #10 BARS SHALL BE SPLICED USING MECHANICAL CONNECTORS AND SHALL ONLY BE ALLOWED IN 12" CMU.
- 3. EPOXY COATED BARS SHALL NOT BE USED
- 4. PROJECTS IN DADE OR BROWARD COUNTY SHALL HAVE A MINIMUM LAP SPLICE OF 48 BAR DIAMETERS, SPLICE LENGTHS LISTED ABOVE THAT ARE LESS THAN 48 BAR DIAMETERS SHALL BE INCREASED TO 48 BAR DIAMETERS.

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GENERAL NOTES

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PRE-FABRICATED METAL PLATE CONNECTED WOOD TRUSSES

- WTI A CERTIFIED TESTING AGENCY SHALL BE ENGAGED TO PERFORM INDUSTRY STANDARD INSPECTIONS TO ENSURE CONFORMANCE WITH PLANS AND SPECIFICATIONS (IF PROVIDED). SUBMIT REPORTS TO ARCHITECT AND ENGINEER.
- WT2 "BBM STRUCTURAL ENGINEERS" WILL REQUIRE THAT THE ENGINEERED DRAWINGS FOR THE WOOD COMPONENTS ON THE REFERENCED PROJECT BE REVIEWED FOR COMPATIBILITY WITH THE DESIGN INTENT OF THE STRUCTURE PRIOR TO FABRICATION.
- WT3

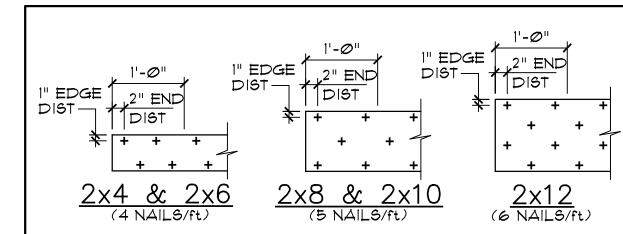
 ALL WOOD TRUSSES SHALL BE DESIGNED AND CERTIFIED BY TRUSS MANUFACTURER'S REGISTERED ENGINEER. ALL TRUSS-TO-TRUSS & TRUSS-TO-STRUCTURE CONNECTIONS SHALL BE DESIGNED AND DETAILED BY THE TRUSS MFR. CONNECTIONS SHALL BE DESIGNED FOR DEAD, LIVE AND WIND (BOTH UPLIFT & LATERAL) LOADS. THE WIND PRESSURE AND SUCTION EXERTED ON THE WALLS MAY BE FOUND IN THE WIND SCHEDULES.
- JT4 DESIGN, HANDLING, ERECTION AND TEMPORARY AND PERMANENT BRACING OF METAL PLATE CONNECTED WOOD TRUSSES SHALL BE IN ACCORDANCE WITH THE FOLLOWING DOCUMENTS:
 - A. APPLICABLE BUILDING CODE IDENTIFIED IN THE GENERAL NOTES.
 - B. NATIONAL FOREST PRODUCTS ASSOCIATION (NFPA): NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION (NDS) LATEST
 - C. TRUSS PLATE INSTITUTE (TPI) & WOOD TRUSS COUNCIL OF AMERICA (WTCA): BUILDING COMPONENT SAFETY INFORMATION BCSI 1-03
 "GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES".
- TRUSS REPAIRS REQUIRED DURING THE PROGRESS OF WORK ARE TO BE DESIGNED BY THE TRUSS ENGINEER WITH REQUIRED MATERIALS AND HARDWARE TO BE PROVIDED BY THE TRUSS MANUFACTURER. FIELD REPAIRS MADE TO TRUSSES ARE TO BE SUPERVISED AND INSPECTED BY THE TRUSS MANUFACTURER'S REPRESENTATIVE. WRITTEN CONFIRMATION OF REPAIR ACCEPTANCE BY THE TRUSS MANUFACTURER IS REQUIRED ON ALL REPAIRS AND MUST BE SUBMITTED TO ARCHITECT FOR ACCEPTANCE. NAIL-ON TYPE TRUSS REPAIR PLATES WILL NOT BE ALLOWED IN A BOTTOM CHORD TENSION SPLICE.
- SIGNED & SEALED SHOP DRAWINGS SHALL BE SUBMITTED WHICH INDICATE DESIGN LOADS, DURATION FACTOR, TRUSS LAYOUT, TRUSS CONFIGURATIONS AND TRUSS-TO-TRUSS CONNECTIONS (USE OF NAIL-ON TYPE TRUSS PLATES FOR FIELD SPLICES IN TENSION MUST BE APPROVED BY ENGINEER OF RECORD). SHOP DRAWINGS SHALL SHOW PIECE MARKS, MEMBER SIZES, GRADES AND CONNECTION DETAILS. PERMANENT BRACING SHALL BE INDICATED IN THE TRUSS LAYOUT DRAWINGS AND SHALL BE SUPPLIED AND INSTALLED BY THE FRAMING CONTRACTOR.
- WT7 REVIEW ARCHITECTURAL REFLECTED CEILING PLANS AND SECTIONS FOR SPECIAL CEILING CONDITIONS INCLUDING CEILING SLOPES, TROFFERS, COFFERS, TRAYS, STEPS AND OTHER SPECIAL FEATURES.
- WTS REVIEW ARCHITECTURAL FLOOR PLANS FOR OPERABLE WALLS THAT ARE SUSPENDED FROM THE TRUSSES. ANALYSIS FOR CLOSED, PARTIALLY OPEN AND OPEN POSITION LOAD CURVES ARE REQUIRED. SEE WALL MFR FOR SPECIAL DEFLECTION CRITERIA.
- REVIEW MECHANICAL PLANS FOR ROOF TOP UNITS, EXHAUST FANS,
 KITCHEN HOODS AND OTHER LOADS SUSPENDED OR SUPPORTED BY
 TRUSSES FOR LOCATION, LOADS AND PHYSICAL SIZE. TRUSS GIRDER
 AND MULTI-PLY TRUSS CONFIGURATIONS TO ACCOMMODATE OPENINGS
 AND SPECIAL LOADING SHALL BE PROVIDED BY THE TRUSS
 MANUFACTURER, UNLESS NOTED OTHERWISE ON PLANS.
- TRUSSES SHALL BE DESIGNED FOR THE LOADS AS INDICATED ON THE FRAMING PLANS. ALLOWABLE STRESS INCREASES SHALL BE AS IDENTIFIED IN NFPA NDS LATEST EDITION UNLESS SUPERSEDED BY REQUIREMENTS OF THE APPLICABLE BUILDING CODE. PRE-FABRICATED WOOD TRUSSES SHALL BE FABRICATED FROM SOUTHERN PINE KILN DRIED *2 GRADE OR BETTER FOR CHORDS AND *3 GRADE OR BETTER FOR WEBS. NO WANE, KNOTS, SKIPS OR OTHER DEFECTS SHALL OCCUR IN THE PLATE CONTACT AREA OR SCARFED AREA OF WEB MEMBERS. PLATES SHALL BE CENTERED WITH ONE REQUIRED EACH SIDE OF TRUSS.
- UTII BEARING LOCATIONS MUST BE MARKED ON TRUSSES BY FABRICATOR TO ENSURE PROPER INSTALLATION. TRUSS ENGINEER TO UTILIZE ONLY LOAD BEARING WALLS INDICATED ON PLAN FOR BEARING AND TIE-DOWN. TRUSS SUPPLIER SHALL PROVIDE GALVANIZED MOISTURE BARRIER WHERE THE TRUSS BEARS ON EITHER MASONRY OR CONCRETE SUPPORTS.
- BOTTOM CHORD BRACING: WHERE BOTTOM CHORDS OF TRUSSES DO NOT HAVE SOLID SHEATHING (REVIEW ARCHITECTURAL REFLECTED CEILING PLAN FOR SUSPENDED CEILING AND/OR OPEN TRUSS WORK), PROVIDE PERMANENT 2×4 × 10' (MIN LENGTH) LATERAL BRACES AT 10'-0" OC (MAX) UNLESS CLOSER SPACING IS REQUIRED BY TRUSS ENGINEER'S ANALYSIS. STAGGER SPLICES MIN 4'-0" AND ATTACH WITH (2) 12d NAILS AT EACH TRUSS. TERMINATE BRACING RUNS AT WALLS, OR WITH DIAGONAL CROSS BRACE EACH END. CONFORM TO TRUSS PLATE INSTITUTE (TPI) HIB-91, "HANDLING, INSTALLING AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES".
- THE SUPPORTS FOR SCISSOR, ARCHED CHORDS OR ANY OTHER SIMILAR TYPE TRUSS, UNLESS NOTED OTHERWISE, SHALL BE DESIGNED WITH A PINNED CONNECTION AT ONE END AND A HORIZONTAL ROLLER AT THE OTHER END. THE SUPPORTING STRUCTURE, UNLESS NOTED OTHERWISE, HAS NOT BEEN DESIGNED FOR ANY GRAVITY LOAD HORIZONTAL FORCE DUE TO DEFLECTION. DO NOT DESIGN THESE TYPE OF TRUSSES WITH PINNED SUPPORTS EACH END.

WOOD

- WDI WOOD CONSTRUCTION SHALL CONFORM TO AITC, NATIONAL DESIGN SPECIFICATIONS AND THE APPLICABLE CODE. SEE NOTE DI FOR APPLICABLE BUILDING CODE.
- JD2 HURRICANE CLIPS, JOIST HANGERS, POST CAPS AND BASES, BEAM HANGERS AND OTHER STANDARD CONNECTIONS SHALL BE ADEQUATE FOR LOADS. METAL CONNECTORS AND FASTENERS SHALL BE G185 HOT-DIPPED GALVANIZED.
- JD3 PROVIDE MEMBERS AS SCHEDULED:

JOISTS, STUDS & HEADERS	Fb (PSI)	Fy (PSI)	E (PSI)	SPECIES AND COMMERCIAL GRADE
2×4	1100	9Ø	1,400,000	NO. 2 SYP
2×6	1000	90	1,400,000	NO. 2 SYP
2×8	925	90	1,400,000	NO. 2 SYP
2×1Ø	800	90	1,400,000	NO. 2 SYP
2×12	75Ø	90	1,400,000	NO. 2 SYP

- WD4 WOOD IN CONTACT WITH MASONRY OR CONCRETE SHALL BE PRESSURE-TREATED.
- UNLESS NOTED OTHERWISE, MULTI-MEMBER WOOD RAFTERS, BEAMS AND LEDGERS SHALL BE FASTENED TOGETHER WITH 100 COMMON NAILS (0.131"x3" PNEUMATIC FRAMING NAILS ARE AN ACCEPTABLE ALTERNATE) IN EVENLY SPACED STAGGERED PATTERNS AS SHOWN BELOW:



FOR THREE (OR MORE) PLY MULTI MEMBERS, THE NAILS SHALL BE INSTALLED SUCCESSIVELY. FOR EXAMPLE, PLACE THE FIRST AND SECOND MEMBERS TOGETHER AND ATTACH PER THE SPECIFIED NAIL SPACING, THEN PLACE THE THIRD MEMBER AGAINST THE SECOND AND REPEAT NAILING, AND SO ON. EXCEPT FOR LEDGERS, EACH MEMBER SHALL BE FULL LENGTH.

NAILING PATTERN DETAILS

- WD6 JOISTS OR RAFTERS SHALL BE LATERALLY SUPPORTED AT ENDS BY SOLID BLOCKING OR OTHER MEANS TO PREVENT ROTATION.
- WD7 STANDARD WASHERS SHALL BE USED BETWEEN WOOD AND BOLT HEADS AND NUTS. BOLTS AND SCREWS SHALL BE ASTM A3Ø7. ALL FASTENERS IN CONTACT WITH TREATED WOOD SHALL BE GI85 HOT-DIPPED GALVANIZED.

MECHANICAL FASTENERS

- MFI EXPANSION ANCHORS SHALL BE "POWER-STUD" BY RAWL, "TRUBOLT" BY ITW RAMSET/REDHEAD OR "KWIK BOLT" BY HILTI OR ENGINEER-APPROVED EQUAL.
- MF2

 ADHESIVE ANCHORS SHALL BE THE HILTI HIT-RE 500 ADHESIVE
 ANCHORING SYSTEM OR STRUCTURAL ENGINEER APPROVED ALTERNATE
 PRODUCT CONSIDERING SUITABILITY, LOAD RESISTANCE, IN-SERVICE
 AND INSTALLATION TEMPERATURE, AVAILABILITY OF COMPREHENSIVE
 INSTALLATION INSTRUCTIONS AND CREEP. AT THE ONSET OF EACH
 APPLICATION, A MANUFACTURER'S REPRESENTATIVE MUST BE PRESENT
 TO WITNESS AT LEAST FIVE COMPLETE INSTALLATIONS. INSTALLERS MUST
 BE TRAINED BY THE MANUFACTURER. EACH CERTIFIED INSTALLER WILL
 BE ISSUED A CERTIFICATION CARD TO VERIFY THEIR TRAINING AND
 SHALL BE REQUIRED TO CARRY THEIR CERTIFICATION CARD ON THEIR
 PERSON. CERTIFIED INSTALLERS SHALL PROVIDE WRITTEN
 DOCUMENTATION THAT ALL ANCHORS HAVE BEEN INSTALLED PER THE
 MANUFACTURER'S INSTRUCTIONS.
- #F3 MASONRY SCREWS SHALL BE "TAPPERS" BY RAWL, "TAPCON" BY ITW RAMSET/REDHEAD OR "KWIK-CON" BY HILTI OR ENGINEER-APPROVED FOUAI
- MF4 POWDER-ACTUATED FASTENERS (PAF) SHALL BE BY ITW RAMSET/ REDHEAD, HILTI OR ENGINEER-APPROVED EQUAL.
- MF5 REFER TO LIGHT-GAGE FRAMING NOTES (IF APPLICABLE) FOR ADDITIONAL INFORMATION.
- MF6 CARBON-STEEL EXPANSION ANCHORS SHALL HAVE A ONE-PIECE ANCHOR BODY WITH A LENGTH IDENTIFICATION CODE. THE ANCHORS SHALL HAVE AN EXPANSION MECHANISM WHICH CONSISTS OF A PAIR OF INTERLOCKING INDEPENDENT WEDGES. CARBON STEEL COMPONENTS SHALL BE PLATED ACCORDING TO ASTM SPECIFICATION B 6.33. EXPANSION ANCHORS MUST MEET THE DESCRIPTION IN FEDERAL SPECIFICATION FF-8-325 FOR CONCRETE EXPANSION ANCHORS.
- MFT ALL FASTENERS SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. REFER TO LIGHT GAGE METAL FRAMING NOTES (IF APPLICABLE) FOR ADDITIONAL INFORMATION.

PLYWOOD ROOF DECKING:

- PDI PLYWOOD USED AS ROOF DECKING OVER WOOD TRUSSES TO BE 19/32" CDX STRUCTURAL, 40/20 SPAN RATED.
- PD2 ATTACH PLYWOOD TO SUPPORTING MEMBERS WITH 8d RINK SHANK NAILS AS FOLLOWS 4"o.c. @ EDGES 6"o.c. IN FIELD

ACTIFICIONE OFFICE South Swinton Avenue

NO. DATE

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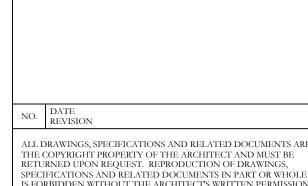
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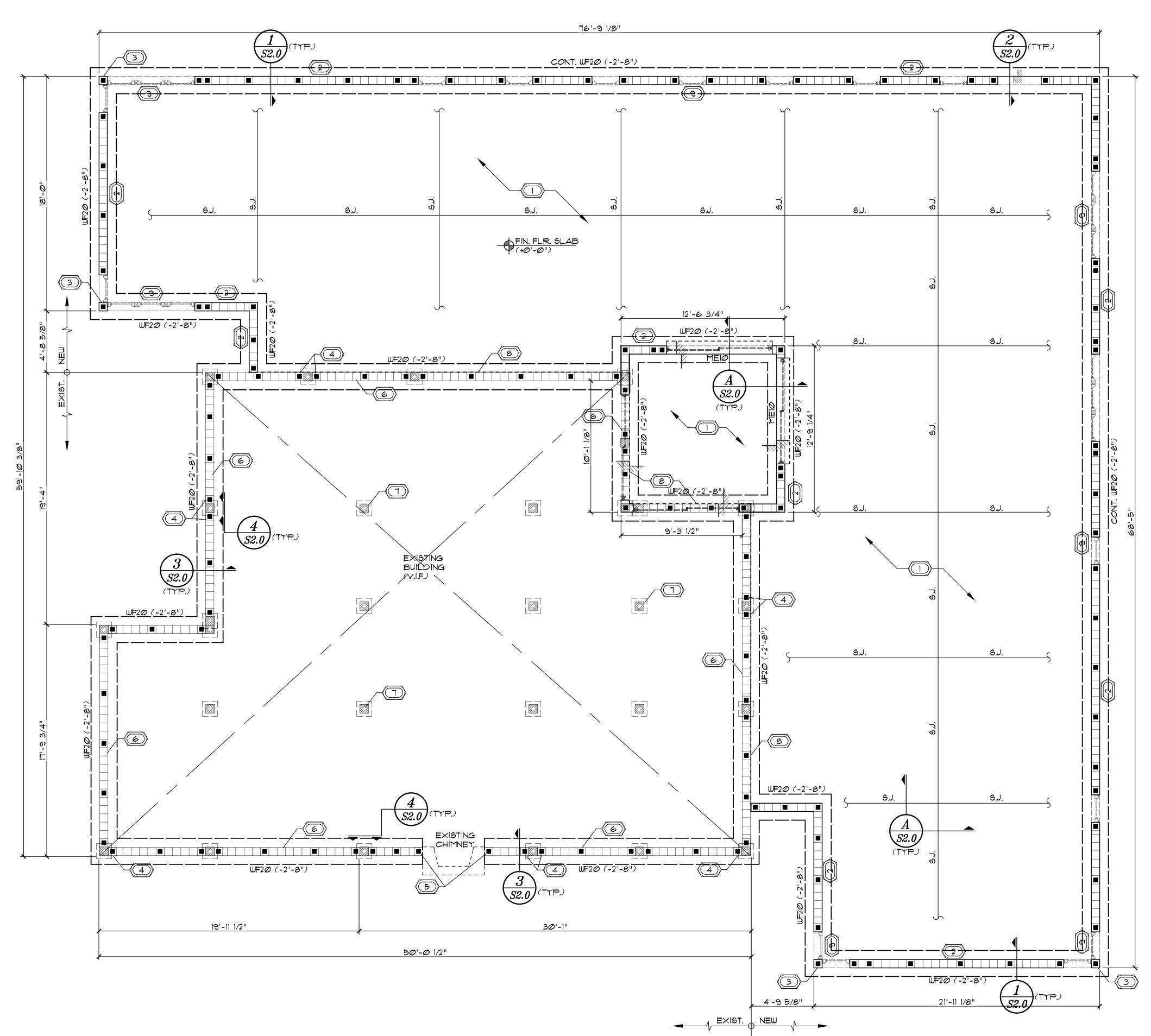
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FOUNDATION PLAN

2020-09-01

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FOUNDATION PLAN:

FOUNDATION PLAN NOTES:

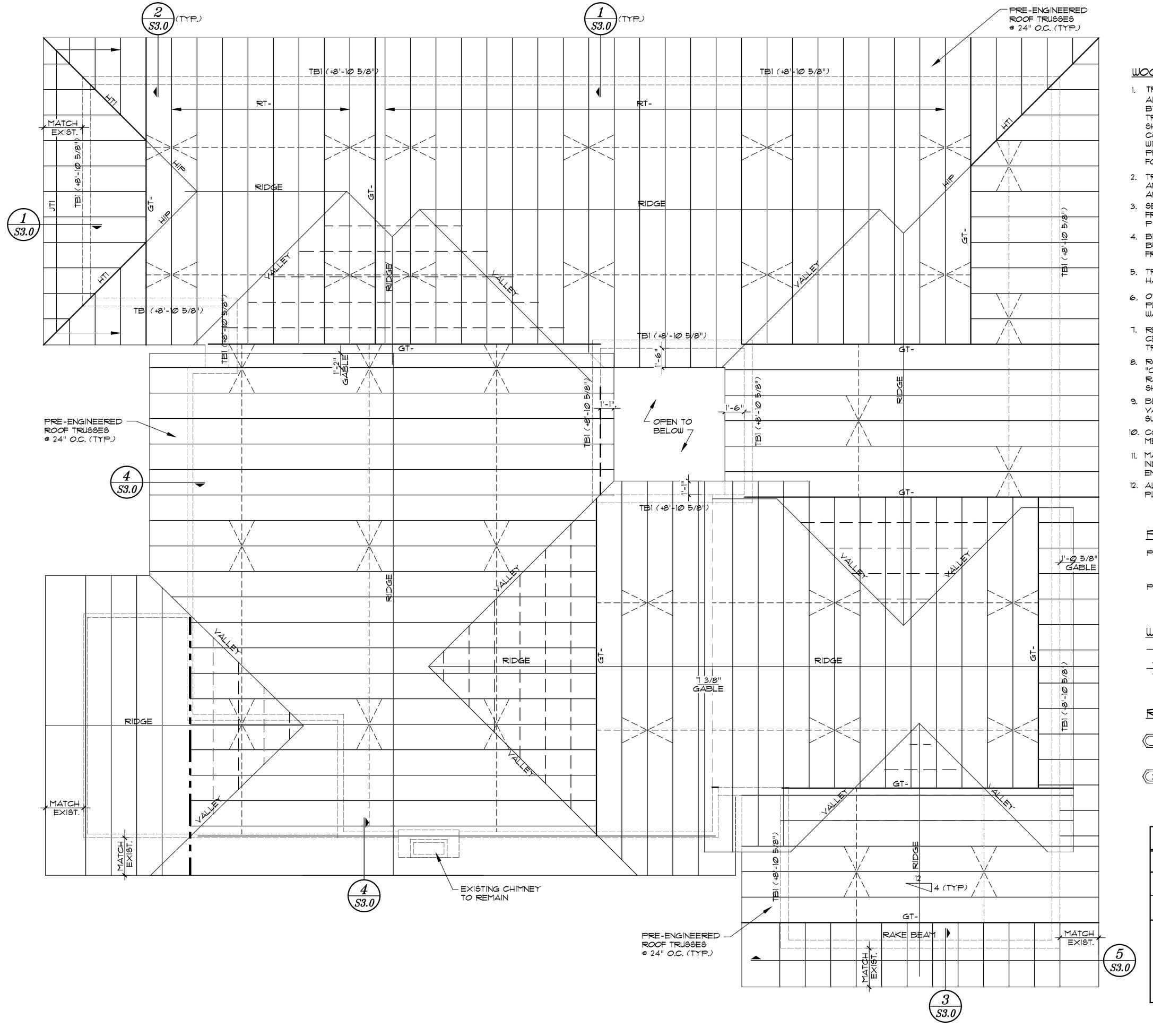
- 1. FLOOR SLAB SHALL BE 4" THICK CONCRETE SLAB REINF W/6x6 WI.4xWI.4 WWF OVER CLASS A (MIN 6 MIL) VAPOR BARRIER (ASTM E 1745) ON COMPACTED AND TERMITE TREATED SUBGRADE. SEE "SLAB-ON-GRADE DETAILS" ON SHEET S2.0..
- 2. T/ SLAB EL = Ø'-Ø" (TYP, UNO). REFERENCE ONLY SEE CIVIL DWGS FOR ACTUAL ELEVATION.
- 3. T/FTGEL = -2'-8" (TYP, UNO).
- 4. ALL CMU BEARING WALLS ARE 8" (TYP, UNO).
- 5. STEP AND/OR LOWER FOUNDATIONS WHERE SHOWN AND AS NECESSARY TO AVOID INTERFERENCE WITH OTHER TRADES. SEE CONCRETE GENERAL NOTES FOR DETAILS AND SECTIONS. PARTICULAR ATTENTION SHALL BE PAID TO DOWNSPOUTS ENSURING THAT PROPER ACTIONS HAVE BEEN TAKEN TO PREVENT PIPES FROM CONFLICTING WITH THE FOUNDATION SYSTEM.
- 6. ALL FTGS ARE CENTERED BENEATH BEARING WALLS AND COLUMNS (TYP, UNO).
- REINF LOAD-BEARING CMU WALLS WITH #5 YERT BAR CENTERED IN GROUT-FILLED CELL AT ENDS, CORNERS AND AT MAX SPACING OF 48" OC., TYP. ADDITIONAL FILLED CELLS REQUIRED AT JAMBS ARE SHOWN THUS " ... ON EACH STRUCTURAL PLAN. SEE "ILLUSTRATIVE PLAN OF VARIOUS CMU WALL CONDITIONS" ON SHEET SØ.3 FOR ADDITIONAL REQUIRED FILLED CELLS AND OTHER INFORMATION.
- 8. TYP SPACING OF FILLED CELLS SHALL APPLY ABOVE AND BELOW OPENINGS ALSO.
- 9. SEE SHEET S5.0 FOR LINTEL SCHEDULED REQUIRED AT ALL MASONRY OPENINGS, UNO.
- 10. SEE SHEETS S0.1-S0.3 FOR STRUCTURAL GENERAL NOTES.
- 11. MAINTAIN STRUCTURAL SLAB THICKNESS AT ALL FLOOR SLOPES AND DEPRESSIONS.
- 12. THE CONTRACTOR SHALL COORDINATE ALL UNDERGROUND UTILITIES, PIPES, ETC... WITH THE FOUNDATION PLAN AND FOUNDATION ELEVATIONS. FOOTING PENETRATION DETAILS MAY BE FOUND IN THE CONCRETE AND REINFORCING SECTION OF THE STRUCTURAL GENERAL NOTES.

PROPOSED PLAN KEY NOTES:

- NEW 4" SLAB TO BE REINFORCED W/ 6x6 W1.4xW1.4 WWF OVER CLASS A (MIN. 10 MIL.) YAPOR BARRIER.
- DENOTES NEW 8" C.M.U. WALL W/ #5@48" MAX. REINF., FILLED CELL & AT SIDES OF OPENINGS.
- NEW 8"x8" CMU FILLED CELL (COLUMN) W/ (1) #5 REINF. NEW 8"x8" CMU FILLED CELL W/ (1) #5 REINF., ATTACHED

TO EXISTING CONCRETE PIER TYPICAL AT OLD

- PERIMETER WALL. VERIFY IN FIELD FOR LOCATIONS. NEW 8"x8" CMU FILLED CELL W/ (1) #5 REINF., ATTACHED TO EXISTING CHIMNEY, VERIFY IN FIELD.
- NEW 8" CMU LOW WALL (BELOW FLOOR DECK) W/ #5@48" MAX, REINF,
- EXISTING CONCRETE PIERS, TYP., VERIFY IN FIELD FOR
- NEW 1/2" EXPANSION JOINT BETWEEN NEW CONCRETE SLAB AND EXISTING STRUCTURE, TYP.
- DENOTES NEW WINDOWS, TYP., REF. ARCH'L.



WOOD ROOF FRAMING PLAN NOTES:

- 1. TRUSS BRG = +8'-10 5/8" U.N.O. (TYP.)
- ALL WOOD TRUSSES SHALL BE DESIGNED AND CERTIFIED BY TRUSS MANUFACTURER'S REGISTERED ENGINEER. ALL TRUSS-TO-TRUSS & TRUSS-TO-STRUCTURE CONNECTIONS SHALL BE DESIGNED AND DETAILED BY THE TRUSS MFR. CONNECTIONS SHALL BE DESIGNED FOR DEAD, LIVE AND WIND (BOTH UPLIFT & LATERAL) LOADS. THE WIND PRESSURE AND SUCTION EXERTED ON THE WALLS MAY BE FOUND IN THE WIND SCHEDULES.
- 2. TRUSS MANUFACTURER SHALL VERIFY ALL DIMENSIONS AND SUBMIT SHOP DRAWINGS TO ARCHITECT FOR APPROVAL.
- 3. SEE ARCHITECTURAL BUILDING SECTIONS, STRUCTURAL FRAMING PLANS AND TRUSS ELEVATIONS FOR ROOF PITCHES (TYP).
- 4. BEARING PLATE HEIGHTS VARY. SEE ARCHITECTURAL BUILDING SECTIONS, WALL SECTIONS AND STRUCTURAL FRAMING PLAN(S) FOR BEARING HEIGHTS.
- 5. TRUSS SPACING SHALL BE @ 24" OC (UNO). HAND FRAMING SHALL BE @ 24" OC (UNO).
- 6. OVERHANGS MAY VARY, SEE STRUCTURAL FRAMING PLAN(S) AND ARCHITECTURAL BUILDING SECTIONS AND WALL SECTIONS.
- REFER TO ARCHITECTURAL DRAWINGS FOR FRAMED DOWN CEILINGS, VOLUME CEILINGS AND OTHER INTERIOR TREATMENTS.
- 8. ROOF DECK SHALL BE 19/32" A.P.A. RATED, EXPOSURE "C/D" TYPE PLYWOOD SHEATHING WITH 48/24 (MIN) SPAN RATING CONNECTED TO WOOD TRUSSES WITH 10/20 RINK SHANK NAILS @ 4", PERIMETER EDGE & 6" O.C. IN FIELD.
- 9. BLOCKING SHALL BE PROVIDED UNDER ALL HIPS & VALLEYS WHERE DISCONTINUOUS DECK ENDS ARE NOT SUPPORTED BY A TRUSS.
- 10. COORDINATE SIZE AND LOCATION OF ROOFTOP UNITS WITH MECHANICAL DWGS (IF REQUIRED).
- 11. MASONRY BOND BEAMS AND TIE BEAMS THAT ARE INDICATED ON THE PLAN SHALL BE CONTINUOUS FOR THE ENTIRE LENGTH OF THE WALL, UNO.
- 12. ALL GT GIRDERS ARE TWO PLY MIN. TRUSSES. NUMBER OF PLYS TO BE VERIFIED BY TRUSS MANUFACTURER/ENG.

PLYWOOD ROOF DECKING:

- PDI PLYWOOD USED AS ROOF DECKING OVER WOOD TRUSSES TO BE 19/32" CDX STRUCTURAL, 40/20 SPAN RATED.
- PD2 ATTACH PLYWOOD TO SUPPORTING MEMBERS WITH 10d COMMON NAILS AS FOLLOWS 4"o.c. @ EDGES 6"o.c. IN FIELD

WOOD BRACING LEGEND:

---- DENOTES CONT. 1X4 BRACING W/ (2) 10d EA. TRUSS

DENOTES 2x4 "X" BRACING W/ (2) 16d EA. TRUSS

ROOF FRAMING PLAN NOTES:

- ROOF FRAMING SHALL BE 19/32" PLYWOOD SHEATHING ON METAL PLATE CONNECTION OVER PRE-ENGINEERED WOOD TRUSSES @ 24" O.C.
- ROOF DECK TO BE 2"x6" T&G WOOD DECKING WITH 19/32" PLYWOOD SHEATHING. ATTACH DECKING TO TRUSSES USING #12 ST PAN HEAD SCREWS (2) PER BOARD, OTHERWISE @ 6" O.C. ALONG PERIMETER.

٦	RUSS	DESIGN BASIS				
DEAD LO						
TOP CHORD	BOTTOM CHORD	TOP CHORD	BOTTOM CHORD			
15	10	3Ø UNREDUCIBLE	100			
NOTES: 1. SEE ROOF FRAMING PLAN FOR CONCENTRATED AND/ OR						

1. SEE ROOF FRAMING PLAN FOR CONCENTRATED AND/ OR SPECIAL LOADS.

TRUSSES SUPPORTING OVERFRAMING SHALL HAVE 5 PSF ADDED TO TOP CHORD DEAD LOAD.

BOTTOM CHORD LIVE LOAD IS NON COLLATERAL WITH T.C. LOAD.

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2020-09-01

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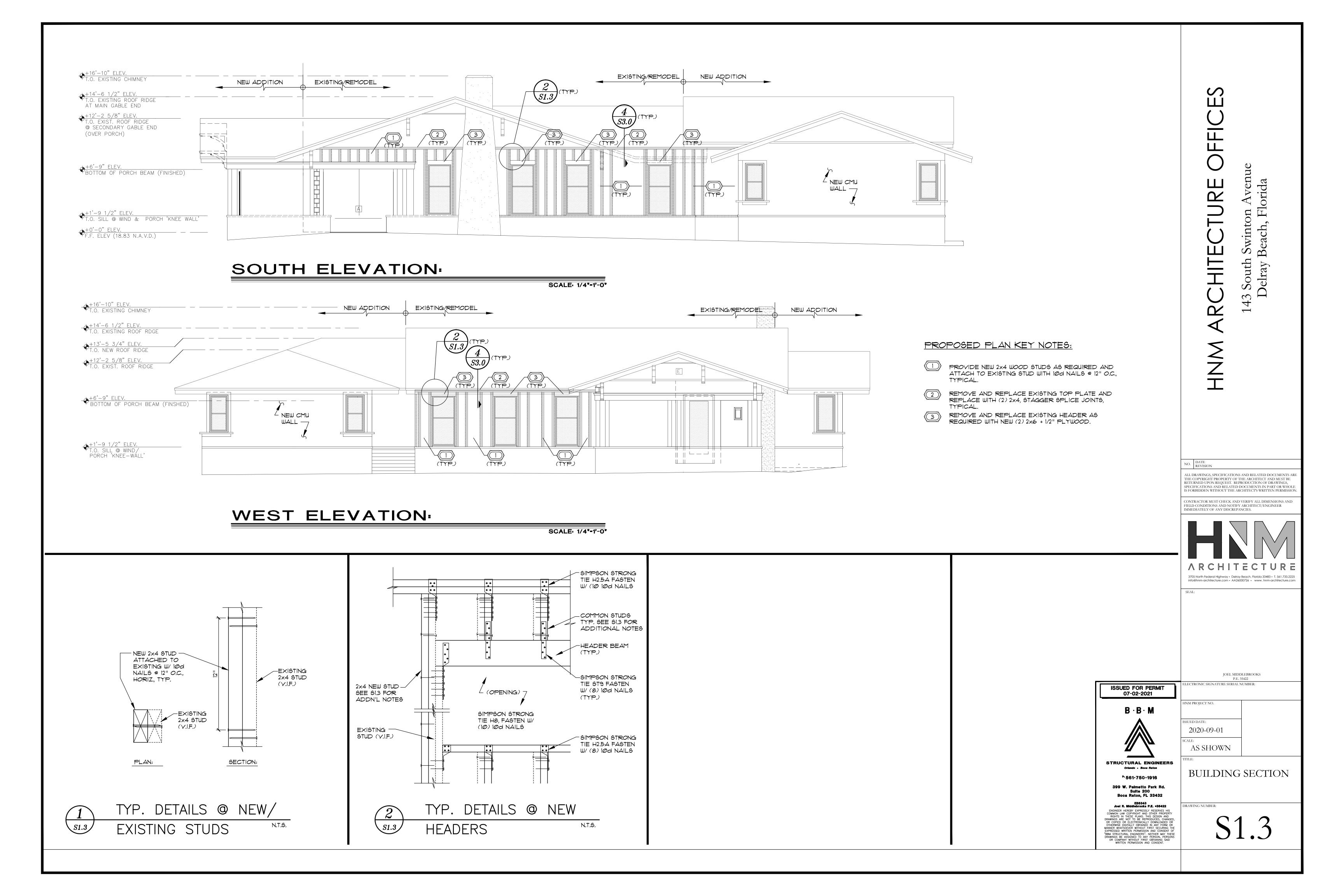
ROOF FRAMING PLAN

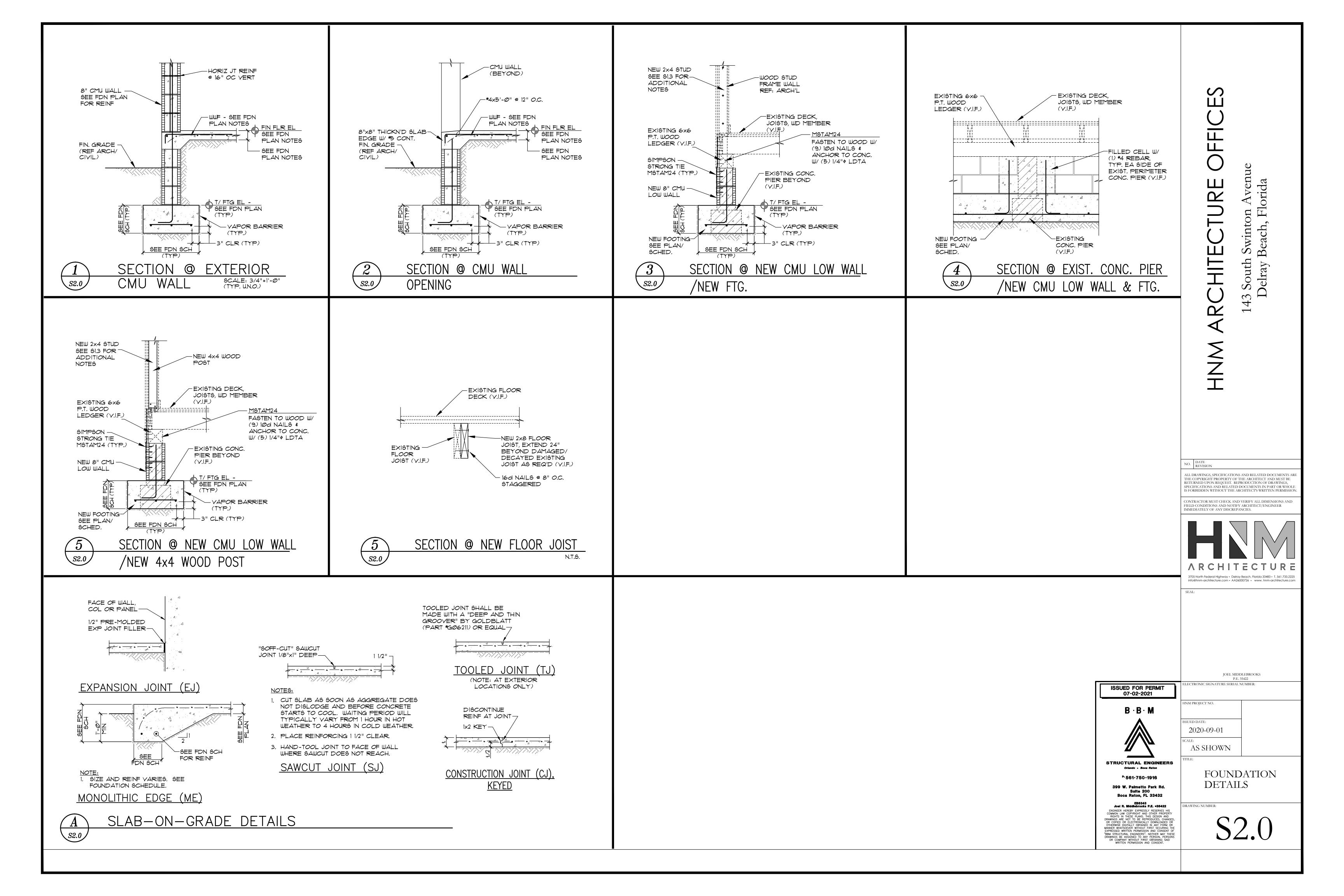
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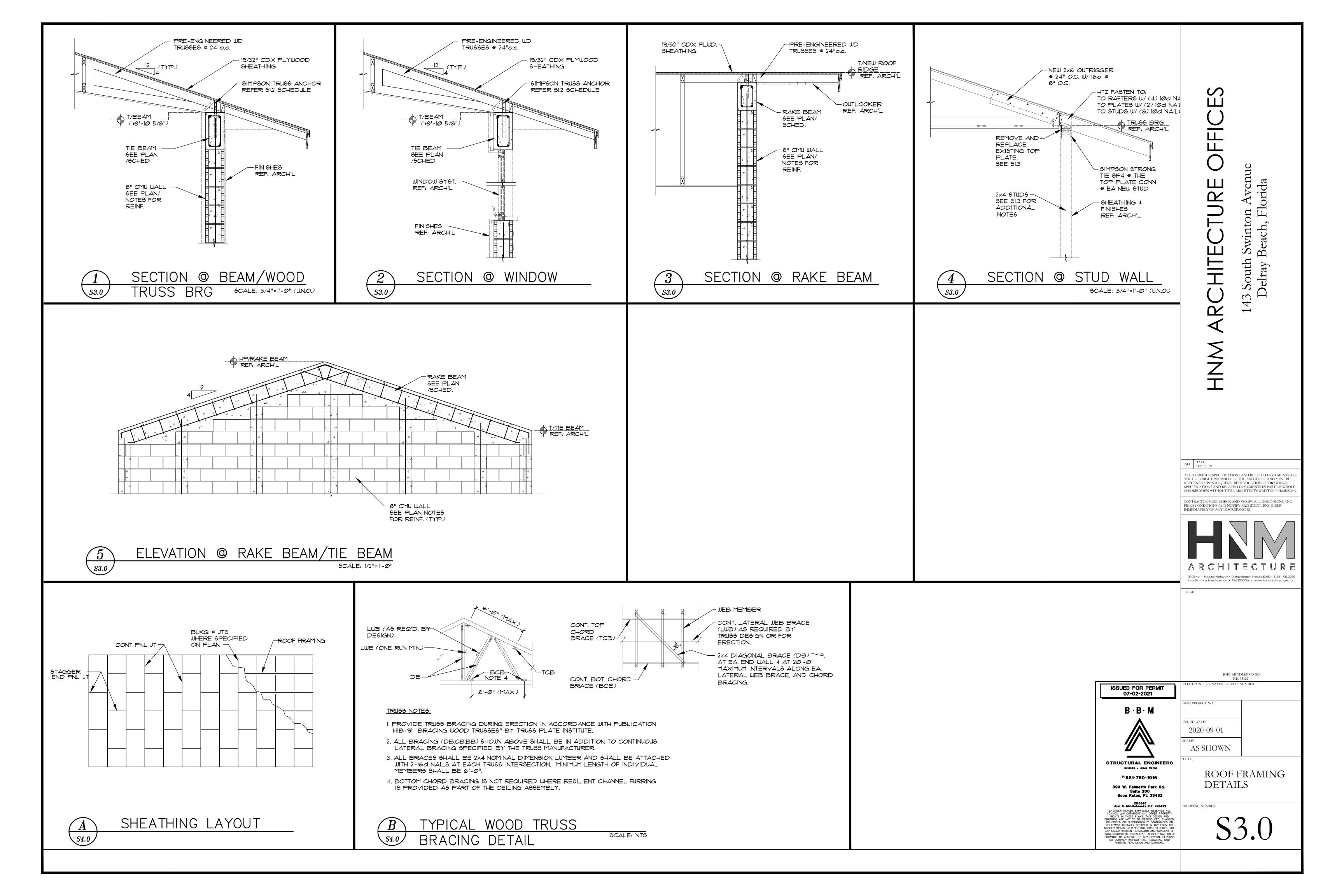
S1.2

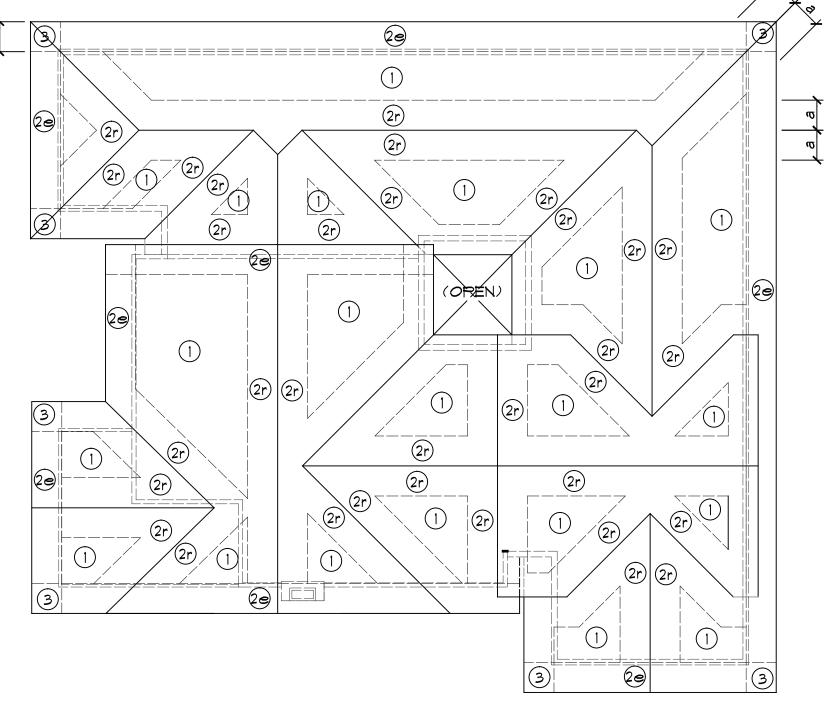
ROOF FRAMING PLAN:











ROOF UPLIFT PLAN

NOTES:

1. A (Kd) OF 0.85 HAS BEEN USED IN THE DEVELOPMENT OF THESE VALUES. THE USE OF THESE VALUES SHALL ONLY BE APPLIED WHEN USED IN CONJUNCTION WITH LOAD COMBINATIONS SPECIFIED IN SECTIONS 2.3 & 2.4 OF ASCE 7-16.

- 2. PRESSURES AND SUCTIONS ON SOFFITS SHALL BE THE SAME AS CORRESPONDING WALL ZONES 4 \$ 5.
- 3. IF THE STRUCTURE IS AN EHPA OR IS INSURED BY FACTORY MUTUAL (FM) THE GROSS UPLIFT DESIGN PRESSURES SHOWN HEREIN SHALL BE DOUBLED FOR ROOF COVERINGS.
- 4. THE "ULTIMATE" WIND LOADS SHOWN IN THE COMPONENTS AND CLADDING SCHEDULE SHALL BE MULTIPLIED BY 0.6 TO REDUCE THEM DOWN TO "SERVICE" LEVEL FOR ALL TESTED ASSEMBLIES, INCLUDING BUT NOT LIMITED TO DOORS, WINDOWS AND ROOF ASSEMBLIES.
- 5. DEAD LOAD OF 8 PSF SHALL BE USED TO CONVERT GROSS UPLIFT TO NET UPLIFT FOR OPEN-WEB JOIST DESIGN.

6. a = 6.0 ft.

LATERAL DESIGN CRITERIA

WIND VELOCITY: 170 MPH
RISK CATEGORY: II
EXPOSURE CATEGORY: C
INTERNAL PRESSURE +/- 0.18
COEFFICIENT:

ASCE 7-16 GROSS UPLIFT DESIGN PRESSURES (ULT) FOR MONOSLOPE ROOFS WITH

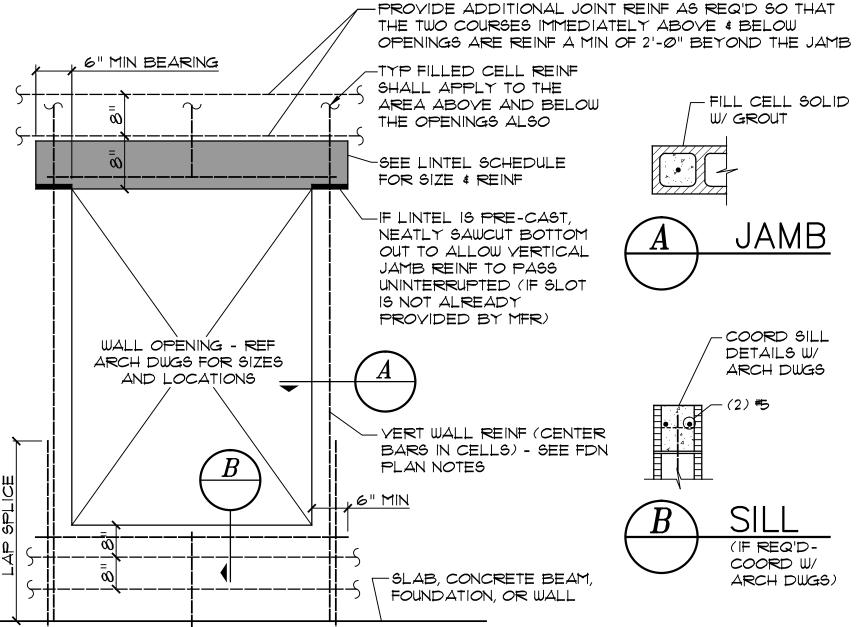
ROOF SLOPE 0 < ∅ ≤ 3 (MRH ≤ 60') (∅ = ROOF SLOPE)

EFFECTIVE	GROSS UPLIFT							
WIND AREA	PRESSURE (PSF)							
(SQ FEET)	\bigcirc	29	(2r)	3				
1Ø	-79.Ø	-105.7	-137.7	-105.7				
	+47.Ø	+47.0	+47.Ø	+47.0				
2Ø	-79.0	-97.1	-124.1	-97.1				
	+40.5	+4 <i>0.</i> 5	+4 <i>0.</i> 5	+4Ø.5				
5Ø	-69.9	-85.6	-106.2	-85.6				
	+32.1	+32.1	+32.1	+32.1				
100	-63.0	-77.Ø	-92.6	-77.Ø				
	+25.6	+25.6	+25.6	+25.6				
200	-63.0	-68.3	-79.0	-68.3				
	+25.6	+25.6	+25.6	+25.6				

ASCE 7-16 GROSS UPLIFT DESIGN PRESSURES (ASD)

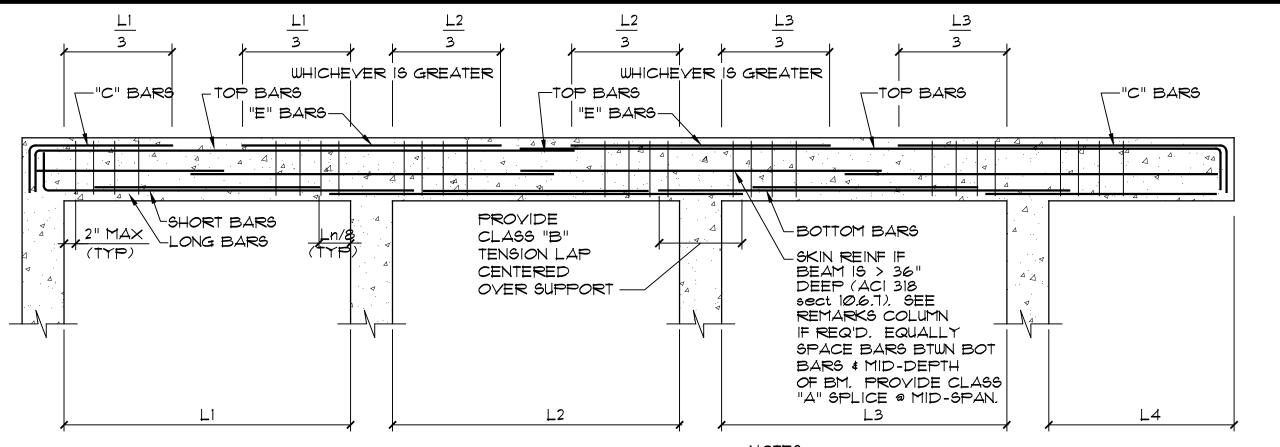
FOR MONOSLOPE ROOFS WITH ROOF SLOPE 0 < 0 ≤ 3 (MRH ≤ 60') (0 = ROOF SLOPE)

(\$ 1100.000.00								
EFFECTIVE	GROSS UPLIFT							
WIND AREA	PRESSURE (PSF)							
(SQ FEET)	1	20	(2r)	3				
1Ø	-47.4	-63.4	-37.8	-63.4				
	+28.2	+28.2	+28.2	+28.2				
2Ø	-47.4	-58.2	-74.5	-58.2				
	+24.3	+24.3	+24.3	+24.3				
5Ø	-41.9	-51.4	-63.7	-51.4				
	+19.2	+19.2	+19.2	+19.2				
100	-37.8	-46.2	-55,6	-46.2				
	+15.4	+15.4	+15,4	+15.4				
200	-37.8	-41.0	-47,4	-41.0				
	+15.4	+15.4	+15,4	+15.4				



TYPE HEIGHT REINFORCING MAX CLEAR SPAN MIN CAPACITY (NOTE 1)								
PBI	8x8	(2) #5 CONT	UP TO 6'-0"	1150 PLF				
PB2	8×16	(2) #5 CONT T&B	UP TO 10'-0"	1450 PLF				
PB3	8×24	(2) #5 CONT T&B	UP TO 14'-0"	1600 PLF				
TYPES 1 2 3								

TYPICAL MASONRY WALL OPENING ELEVATION



"C" - ADDITIONAL TOP BARS AT DISCONTINUOUS ENDS
"E" - ADDITIONAL TOP BARS AT INTERIOR SUPPORTS
"TOP BARS" - EXTEND TO ADJACENT SPAN, AS SHOWN

NOTES:

- 1. "E" BARS AS SCHEDULED <u>ALWAYS</u> REFER
 TO THE RIGHT END OF THE SCHEDULED BEAM.
- 2. PLACEMENT OF REINF TO BE PER ACI 318.

Concrete Beam Schedule												
BEAM ELEV. 0175		REINFORCING					STIRRUPS					
	(W' x D')	SIZE (W' x D')		вот	ТОМ	TOP	MID*	'C'	*E*	SIZE	SPACING EA END	REMARKS
			LONG	SHORT			_	_				
TBI	+8'-8 1/2"	8×16 1/2	(2) #5		(2) #5				#3	a 12"		
RAKE BM.	VARIES	8xVAR.	(2)#5		(2) *5				#3	@ 12"	12" MIN. DEPTH	

FOUNDATION SCHEDULE MARK SIZE (L x W x D) REINFORCING REMARKS WF20 CONT x 2'-0" x 1'-0" (3) *5 CONT & *5 @ 24" TRANS, BOT WALL FOOTING MEIO CONT. 1'-0" x 1'-0" (1) *5 CONT, BOTT. MONOLITHIC EDGE

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2020-09-01



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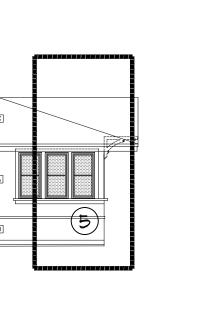
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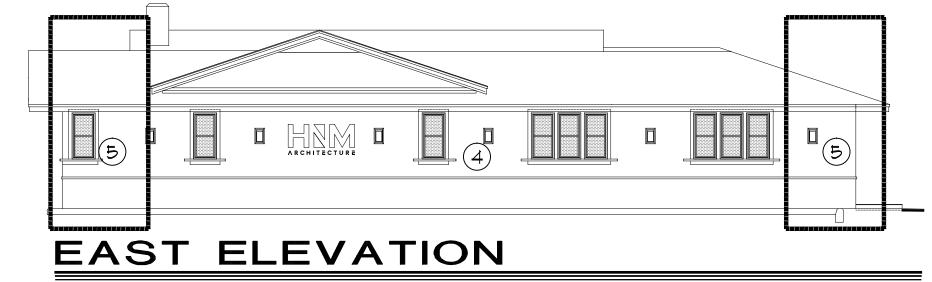
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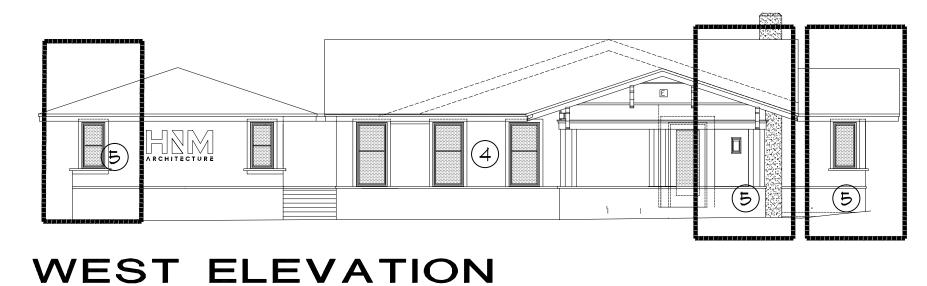


NORTH ELEVATION

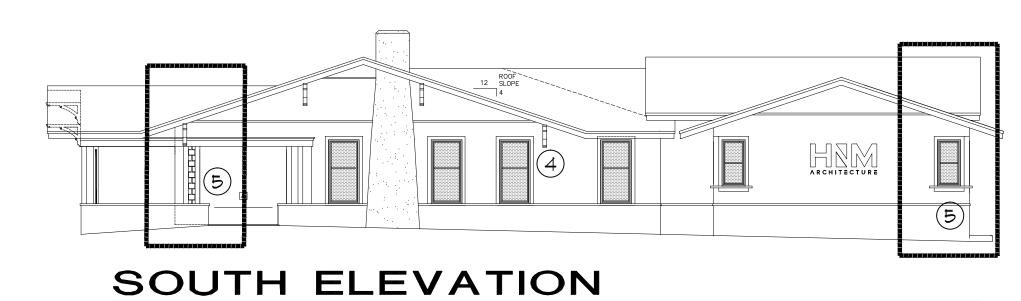
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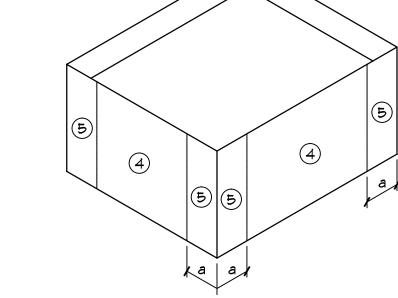
SCALE: N.T.S.

ASCE 7-16 COMPONENTS & CLADDING WALL DESIGN WIND PRESSURES & SUCTIONS (ULT) FOR MEAN ROOF HEIGHT 60 ft								
EFFECTIVE WIND AREA	WIND AREA (-) VALUE DENOTES SUCTION							
(SQ FEET)	4	(5)	CAS	PARAPETS (SOLID)* CASE A CASE B				
			EDGE	CORNERS	EDGE	CORNERS		
100	-68.3	-84.3						
	+63.0	+63.0						
5Ø	-61.7	-71.2						
	+63.0	+63.0						
100	-58.9	-65.5						
	+53.6	+53.6						
200	-56.1	-59.8						
	+50.7	+5 <i>Ø.</i> 7						
500	-52.3	-52.3						
	+47.0	+47.00				_		
1	1		I /			_		

ASCE 7-16 COMPONENTS & CLADDING WALL DESIGN WIND PRESSURES & SUCTIONS (ASD) FOR MEAN ROOF HEIGHT = 60 ft								
EFFECTIVE WIND AREA (SQ FEET)	WIND AREA (-) VALUE DENOTES SUCTION							
	4	5	CAS	EA	(SOLID) ³ CASE B			
			EDGE	CORNERS	EDGE	CORNERS		
1 10	-41.0	-50.6						
10	+3T.8	+37.8						
	-37.Ø	-42.7			•			
5 <i>0</i>	+33.8	+33.8						
	-35.3	-39.3		_	_			
100	+32.1	+32.1						
	-33.6	-35,9						
200	+30.4	+30.4		<i>></i>	<			
	-31.4	-31.4						
500	+28.2	+28.2				_		

WIND PRESSURE ELEVATIONS

SCALE: N.T.S.



LATERAL DESIGN CRITERIA

+/- Ø.18

WIND YELOCITY: RISK CATEGORY:

COEFFICIENT:

EXPOSURE CATEGORY:

INTERNAL PRESSURE

- 1. A (Kd) OF Ø.85 HAS BEEN USED IN THE DEVELOPMENT OF THESE VALUES. THE USE OF THESE VALUES SHALL ONLY BE APPLIED WHEN USED IN CONJUNCTION WITH LOAD COMBINATIONS SPECIFIED IN SECTIONS 2.3 \$ 2.4 OF ASCE 7-16.
- 2. PRESSURES AND SUCTIONS ON SOFFITS SHALL BE THE SAME AS CORRESPONDING WALL ZONES 4 \$ 5.
- 3. IF THE STRUCTURE IS AN EHPA OR IS INSURED BY FACTORY MUTUAL (FM) THE GROSS UPLIFT DESIGN PRESSURES SHOWN HEREIN SHALL BE DOUBLED FOR ROOF COVERINGS.
- 4. THE "ULTIMATE" WIND LOADS SHOWN IN THE COMPONENTS AND CLADDING SCHEDULE SHALL BE MULTIPLIED BY 0.6 TO REDUCE THEM DOWN TO "SERVICE" LEVEL FOR ALL TESTED ASSEMBLIES, INCLUDING BUT NOT LIMITED TO DOORS, WINDOWS AND ROOF ASSEMBLIES.
- 5. PARAPET WIND LOADS ARE BASED ON A "SOLID" PARAPET WITH NO INTERNAL PRESSURE. ACTUAL PARAPET CONSTRUCTION MAY DICTATE THAT INTERNAL PRESSURE BE ADDED TO THE EXTERNAL PRESSURE IN ACCORDANCE WITH ASCE 7-16 SECTION 30.9.
- 6. UPLIFT VALUES FOR ZONE 2 MAY BE USED IN LIEU OF ZONE 3 FOR CORNER ZONES IF PARAPET HEIGHT WITH RESPECT TO FINISHED ROOF IS GREATER THAN 3 ft.
- 7. DEAD LOAD OF 8 PSF (NO FURTHER REDUCTION ALLOWED) SHALL BE USED TO CONVERT GROSS UPLIFT TO NET UPLIFT FOR OPEN WEB JOIST DESIGN.

7. a = 6.0 ft.





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2020-09-01 AS SHOWN

WIND PRESSURE

JUSTIFICATION' STATEMENT AS TO WHY WE NEED TO RECONSTRUCT THE EXISTING ROOF

The Roof Structure of the Existing Building is comprised of (4) roof structures as follows:

(REFER TO 11 X 17 EXISTING ROOF PLAN EXHIBIT INCLUDED HEREIN)

- I. A Main Double-Ended North/South Facing Gabled Roof Structure, further referred to herein as the Main Roof Structure and off-of this main roof structure are three secondary roof structures:
- II. a West Facing Gabled Roof framed off-of the main roof (over the original porch)
- III. an East Facing Hipped Roof also framed off-of the main roof
- IV. and a North facing Gabled Roof, that was added onto as an extension of the Main Roof Structure's North Facing Gabled Roof. This final structure was an addition made in the 1950's or 1960's.

Deficiencies which have completely comprised the structural integrity of the entire structure are described below:

I. The Main Roof Structure's 'Ridge Beam' and secondary roof members framed off-of this "Ridge Beam" are all 2 x 4 members and spanning far beyond the structural capacity for these sized members.

(Pic-1_Main Roof_Ridge/Secondary Member - note vertical support for West Gable)



This has caused the entire Main Roof to bow or sag

More so none of the secondary members are properly nailed/secured to the ridge beam and or to the top plate of the walls they rest upon.

It is clear that these main roof structure members have to be replaced with new appropriately sized members and being that the (3) aforementioned, secondary roof structures are framed off-of/tied into this main roof structure, would then require the secondary roof structures' members to be replaced as well and not only for this reason but also for specific conditions related to each of the (3) secondary roof structures as follows:

II. The smaller west facing gabled, secondary roof structure (over the original porch) is missing a ridge beam altogether

(Pic-2 West Porch_No_Ridge)



More so at the junction where this roof (SE corner) and the main roof structure (SW corner) meet along the exterior wall has no vertical continuity for the forces of these roofs to come down to the foundation and has caused the exterior wall along the south to literally bow out and is also literally tearing apart the roof and wall

(Pic 3 – Junction Main Roof/West Gable at Exterior wall – note vertical support)



(Pic 4 – Junction Main Roof/West Gable at Exterior wall – note vertical support)



(Pic 5 - South Wall Pushed Out)



(Pic 6 – Junction Main/Porch Roof – method of vertical support implemented in order to attempt to support the roof deflection caused by poor design)



(Pic 7 – Junction Main/Porch Roof – Exterior Fascia)



III. East Facing Hipped Roof is also compromised due to the same factors affecting the main roof in that the roof members are undersized, not properly secured to each other or to the top of wall they rest upon and lack of vertical continuity.

In addition some of the existing members of this Hipped roof has rotted out and showing evidence of previous termite damage

(Pic 8 East Hipped Roof– Junction at Main Roof along exterior wall)



(Pic 9 East Hipped Roof – junction at Main Roof – Fascia damaged/misaligned w/Hipped Roof)



This has caused the roof to sag and has caused this roof and the main roof structure to tear apart from each other.

(Pic 10 East Hipped Roof Exterior SE corner and NE corner Deflection)



(Pic 11 East Hipped Roof Deflection)



IV. The North facing Gabled Roof, that was added onto as an extension of the Main Roof Structure's North Facing Gabled Roof was also poorly constructed sometime during the 1950's and 1960's, as with the other roof structures it is also lacking vertical continuity and lacking proper bracing at the exposed gabled end. The manner in which it was secured to the original north facing gabled roof is beyond deficient.

This roof structure is even more compromised than the Main Roof Structure, being that the Ridge Beam for this portion of the roof is comprised of a ¾" thick tongue and groove board, serving as the 'spine' for the secondary roof members framed off-of this 'ridge beam' and to worsen the issue this ridge beam is improperly secured at both ends

Pic 12 North Gable Addition - Ridge Beam







Due to these conditions this entire portion of the Roof (North Gable Addition)has deflected and as evidenced is the following pics is literally dropping down and off of the main roof structure.

<u>Pic 14 – North Gable Exterior Deflection – note deflection at Junction of Original North</u> <u>End Gable and Addition as well as deflection along the fascia</u>



<u>Pic 15 – North Gable Exterior Deflection – note deflection right at Junction of Original North End Gable and Addition</u>



In addition to all these compromising factors and deficiencies, the overall roof construction was originally poorly built as further described below:

Poorly designed and built, Existing Hand Framing & lack of vertical continuity.

Structural system lacks any continuous vertical load paths at the points most crucial to support these randomly framed members, there is no vertical continuity of the loads from the roof structure to the exterior walls and then down to the foundations.

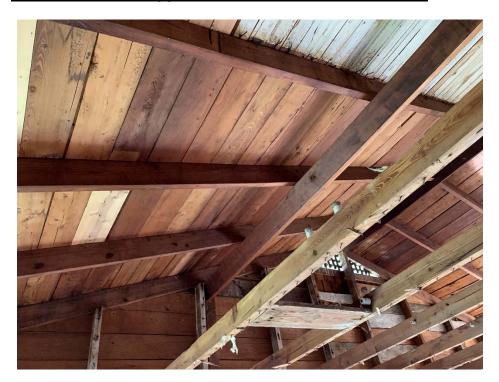
- Manner in which the different members are configured with each other
- Manner they are fastened to each other and to secondary members
- Undersized Structural Members
 - > 2x4 ridge and secondary members at Double Ended Gabled Main Roof
 - Non-existent ridge beam at West Gable
 - ➤ Undersized Ridge Beam at North Gable (3/4 " Board)
- Randomly placed vertical supports improperly secured, some simply forced into place with friction and without fasteners
- Overall design and layout of the roof members done in a random fashion throughout, without any cohesiveness.

Some Examples of these conditions are depicted below

Pic 16 - Unsecured Vertical Support at Junction of two Roofs



Pic 17 - Horizontal support unsecured to North Gabled Wall



Pic 18- Randomly Placed Vertical Supports



All of these existing factors have caused severe damage which has caused the roof to deflect in several locations.

(SE Corner pic)



(NW Corner pic)



(NW Corner West Gable pic)



It is clear that the existing condition of this roof and the manner in which it was poorly constructed does not only compromise the longevity of this structure but has also created an unsafe structure that should not be considered occupiable in its current condition.

In order to save this structure, assure it longevity and in order to make it an occupiable/safe structure for occupants, the entire roof must be reconstructed.

Finally, note that the manner in which we are proposing to reconstruct it shall be an exact match of the existing roof shape/style/slope,etc....in other words from the exterior it will not be discernible that the original roof has been reconstructed.

In order to assure it is reconstructed in a manner to appear exactly as it does now (less of course the sagging/bowing/damage, etc..) we have taken meticulous records of the existing conditions by performing multiple on-site measurements of the structure that provided us with the information to not only re-create the entire original structure in a 3D-virtual model but also to produce a computerized printed 3-D physical model of the structure. With these two models, provides us a complete and true representation of the existing roof structure that will allow us to replicate its original appearance; however making it structurally viable.

STRUCTURAL ENGINEERS
Orlando • Boca Raton

February 12, 2020

Mr. Jaime Mayo, AIA HNM Architecture, LLC 3705 North Federal Highway Delray Beach, Fl 33483

RE: Structural Evaluation of Proposed new H&M Architectural Office 143 S. Swinton Ave., Delray Beach, Fl

Dear Mr. Mayo:

As directed by your firm we have performed a structural evaluation of the existing one-story structure featuring about 1570 sf for the planned renovation and expansion. The existing structure is a wood framed structure dating back to the early 1930's that has been significantly adapted and expanded on at least two occasions. The original cracker style home consisted of a gable framed roof with porch and fire place as notable amenities. A first addition enclosed the front porch facing west followed by the second addition along the north side enclosing new bedroom off the original family room.

Building floor plan is an irregular shaped rectangle having a combined hip/gable framed roof area that accomplished a low sloped roof over the original shape and adjoining prior expansions. Construction consisted of hardwood subflooring on raised wood floor framing supported on low concrete piers. Exterior walls used Dade pine 2x4 studs ballooned framed from perimeter rim joist to top plate. Roof framing also used hand framed Dade pine roof rafters spaced irregularly with random 1x bracing between roof and ceiling joist. Roof sheathing consist of 1x tongue and groove slat framing with a composite shingle exterior wall finish. To achieve positive roof drainage and ceiling height, prior additions added approximately 16" in height over existing porch framing using a hand framed cripple walled attached atop the existing porch perimeter roof framing. The addition of new wall framing without properly splicing wall members to existing members created a pinned condition that lacks any substantial flexural strength at this point. As shown in the photographs, the pinned condition lacks any flexural continuity from base of wall to the upper top plate. Additionally, the subsequent additions did not use the naturally decay and insect resistant Dade pine but instead used common Yellow Pine that is not decay resistant. We observed many areas within the structure where water intrusion or termite infestation has caused localized decay and loss of strength of the members. Hand framed members were typically nail used common steel nails without any hurricane straps of clips on any framing member. Toe nailing was

page 2 143 S. Swinton Ave



observed in several locations as the typical joining method in the framed roof and wall framing areas.

It is our opinion that since the structure is planned for significant renovations including revised wall opening locations and repositioning interior load bearing walls in such a manner that the structure will need to be brought up to the existing standards of the Florida Building Code. This requirement, along with strengthening all of the existing walls, roof and floor framing will essentially require the structure to be rebuilt as existing member framing does not meet existing Florida Building Code provisions for strength or connection detailing. Existing foundations may be reused where applicable or removed to allow for a conventional floor slab on grade to replace the elevated wood framed floor.

If we can be of further assistance please do not hesitate to contact our office.

Sincerely, BBM Structural Engineers, Inc.

Joel Middlebrooks, P.E.

Joel R. Middlebrooks, P.E. Vice President PE 35422



Hand framed roof framing without hurricane clips.

Significant decay observed at sill

Inadequate roof joist supports

Cripple wall framing above header without vertical continuity creates hinge condition

Lack of hurricane clips on wall studs



Hand framed roof framing without hurricane clips.

Significant decay observed at sill

Inadequate continuous jamb reinforcement

Cripple wall framing above header without vertical continuity creates hinge condition

Lack of hurricane clips on wall studs



Hand framed roof framing without hurricane clips.

Significant decay observed at sill

Inadequate continuous jamb reinforcement

Lack of gable end wall bracing

Lack of hurricane clips on wall studs