

PROPOSED AGENDA

Meeting of the Design Review Board
To be held Thursday, January 17, 2019 at 5:30 p.m.

- I. Chairman Johnson will call the meeting to order.
- II. Approval of Minutes from October 18, 2018, November 20, 2018, and December 20, 2018.
- III. Design Review Board Presentations
 - 1. Mr. Robert Rychly, 18 White Oak Road, presents plans for a roof addition to an existing patio and a master bath remodel.
 - 2. Mr. Dave and Mrs. Judy Morris, 40 Forest Road, present plans for an addition to the rear of the home.
 - 3. Carolina Day School, 1345 Hendersonville Road, presents plans for a solar array system to be located on the Upper School.
- IV. Adjourn

MINUTES OF THE TOWN OF BILTMORE FOREST
DESIGN REVIEW BOARD MEETING OF OCTOBER 18, 2018

Those in attendance:

Mrs. Andrea Eglinton

Mrs. Trudy Cappiello

Mr. Fred Groce

Mr. Jonathan Kanipe, Town Manager

Ms. Adrienne Isenhower, Town Planner

The meeting was called to order at 5:30 p.m. by Ms. Eglinton.

The minutes from the previous two meetings were approved.

Mr. Peter Rantzios, representing Kostas and Emily Rantzios at 126 Stuyvesant Road, was called forward to present plans for a covered porch on the rear of the home. The plan was for a cover on the existing porch, and the porch will not extend any further than it currently exists. The porch cover design includes two skylights. Proposed materials, including trim and shingles, as well as colors, are consistent with the existing home and porch. The project was approved.

Mr. Pierce Harmon, representing Jill Hulsing at 12 Forest Road, was called forward. Mr. Harmon is with River Birch Builders, the general contractor, presenting plans for a master bedroom/bathroom addition and a new patio. Mr. Harmon reviewed the proposal for the project, and noted that there was a previous approval for a garage that has been removed from the overall plan. There is now a porte-cochere that will replace the garage, which will provide a drive-through covered area at the entrance to the home. The bedroom/bathroom addition with a small porch off the bedroom is all new added area to the house. Mr. Harmon indicated there would be a standing seam metal roof on the new addition that would be charcoal gray to match the slate as closely as

possible. River Birch will provide a sample of the materials upon the decision being finalized. The project was approved.

Mr. Sandy Pfeiffer, 16 Forest Road, was called forward for the review of the project. He noted that he had drafted these plans but now had a builder, John Truett from Grove Park Fine Homes, finalizing the plans. Mr. Pfeiffer noted they would like to break out some space for the closet and the study. Mr. Groce noted that the work done on the house originally was very well done. Project "A" of the home included the master closet and study addition. There will be a window addition on the master closet. The flooring in the new addition will be hardwood. Project "B" is a garage extension. The intent of this is to use the facility as a garage extension and workshop. There will be a window and a door on the front facing portion of the garage. Mrs. Cappiello asked a question about the areas facing Forest Road. Mr. Pfeiffer noted the addition of a greenhouse on the rear of the building.

Jon Moore, architect for Robert Griffin Architects representing the Hollmans at 4 Southwood Road, was called forward to present plans for their renovation. Mr. Moore noted that there was no bedroom on the main floor. The Hollmans also wanted to add a garage to the existing home.

All the windows in the home will be replaced with new double pane windows replacing the single pane windows. The slate roof underlayment is not in good shape, and the entire slate roof will be replaced to match existing. The additions should not appear as though it is an addition, as all materials will match. Mrs. Cappiello asked about the existing conservatory. Mr. Moore said it is a beautiful room that adds quite a bit of light, but is not practical as it is either very hot in the summer or very cold in the winter. The garage addition will be located where the existing conservatory is located.

The pricing for the project is scheduled to come in at the end of the month. Construction will likely begin before the end of the year. The project will take around a year and a half, and is estimated to be finished by September 2020. The project was approved.

The next Design Review Board meeting is scheduled for November 20, 2018 at 5:30 p.m.

Bruce Johnson, Chairman

Jonathan Kanipe, Town Manager

MINUTES OF THE TOWN OF BILTMORE FOREST
DESIGN REVIEW BOARD MEETING OF NOVEMBER 20, 2018

Those in attendance:

Mr. Bruce Johnson

Mr. Jonathan Kanipe, Town Manager

Ms. Adrienne Isenhower, Town Planner (?)

The meeting was called to order at 5:30 p.m. by Mr. Johnson.

The minutes from the October 18, 2018 meeting will be reviewed for approval at the next meeting.

Anne and David Primo, 10 Amherst Road, were called forward.

Mr. Primo reviewed the history of their purchase of the property. The property was in a much more involved state than anticipated. By the time the interior portion was removed to open the garage, it was determined the roof was structurally unsound over the garage. There was no ability to shore up the garage or provide a replacement. When the interior portion of the garage was removed, the rot in the walls was noticeable.

The plan at this point is for the garage to be replaced with a trussed roof to the same blueprint. Charcoal shingles will be replaced throughout the entire roof, the window boxes damage, trim, and garage door will all be replaced. The garage door will be moved slightly to the right closer to the street. Mr. Primo provided a grey color to change the clapboard siding and the front door would be a darker grey. The applicants hope to have this completed by the beginning of January. Mr. Johnson endorsed the project.

Mr. Steven Lee Johnson, representing the owners at 29 Hemlock Road, was called forward to present plans for the half basketball court.

Mr. Steven Johnson reviewed the plans and noted that a professional basketball court installer would install the half-court. The applicants are heavily buffering the property on each side and have agreed to provide additional buffering if necessary. Mr. Johnson asked if the project required a conditional use permit, and Mr. Kanipe indicated this was approved yesterday. Mr. Kanipe asked Mr. Steven Lee Johnson to explain the changes to the garden area that was previously approved. The project was endorsed.

Mr. Johnson called Dr. Brian Washburn forward to present the plans for the new home at 30 Niagara Drive.

Mr. Michael McDonough, architect for the Washburns, presented plans for the new home. Mr. Washburn reviewed the location of the site as well as the specific design and layout of the home.

Mr. McDonough reviewed the plans in detail by showing specific elements on the plans. Mr. Johnson asked whether these were cedar or cypress shingles. Mr. McDonough said these were cedar shingles. Mr. Johnson asked for the timeline to begin construction and Mr. Julian Kern, contractor, indicated they would begin Monday, November 26. The project was approved.

Mr. Matt Crawford, Rob Moody and Sean Perry were called forward to represent the Arnolds at 106 Stuyvesant Road.

Each person was a contractor for the Hands of Sean Perry. Mr. Crawford reviewed the plans for the deck replacement and changes for the home. The project is to be constructed in the rear yard. The new roof will have shingles to match the existing roof. New footings will be used for the project. Mr. Johnson endorsed the project.

Mr. Moody, Mr. Crawford, and Mr. Perry stayed in place to review the project for 54 Forest Road.

Mr. Kanipe reviewed several aspects of the project that had already been approved, including some interior renovations that affected the exterior of the home, removal of the garage, and changes to the pool. The Board of Adjustments approved several items at yesterday's meeting, including the replacement of the fence, a garden shed, a retaining wall and parking area in front of the house, and realignment of the driveway, which Mr. Kanipe reviewed. Mr. Johnson asked whether the trees would be 15-20' tall, or at least more than 10' tall. Ms. Zimmerman asked about the landscaping and the plants that would be utilized.

Mr. Johnson asked about the materials utilized for the fence. There was a discussion about the code requirements for pool fencing and the style and construction of the fence. Mr. Moody indicated that they had spoken with the neighbor on the north side regarding the fence and material.

Ms. Zimmerman expressed concerns about safety of the fence, the dog coming over, and would prefer the wooden fence. There was a discussion about the style of the fence and visibility from Ms. Zimmerman's home and lot. Ms. Zimmerman wants privacy and feels adamantly that the proposed plan will not provide that.

Mr. Kanipe provided a review of the existing ordinance governing the proposed project. Ms. Zimmerman expressed her concerns about noise from the pool, and that she sits outside on her porch often.

Mr. Johnson reviewed the proposed landscaping plan. Ms. Zimmerman is still concerned about why there should be a fence all the way around. Mr. Johnson talked about the Biltmore Forest fence ordinance regarding placement of a fence along the property line or inside of the setback line. The Ashworth-Deters are planning with the highest caliber of materials and construction for this project. Ms. Zimmerman reiterated her opinion that the proposed fence is like chicken fencing and that the ordinance is worded such that chicken wire would be acceptable. Mr. Johnson reviewed the guidelines and stated that anytime a resident plans to install a fence it would have to

be brought before the Board for approval. Ms. Zimmerman's three-board wooden fence with farm fencing along the inside was approved several years ago.

Mr. Johnson asked Ms. Zimmerman to rationally state her objections. Ms. Zimmerman stated that she is concerned about the safety of the fence, she is concerned about the dog coming over the fence, and she wants the fence to be a wooden fence for her privacy.

Mr. Johnson stated that this plan is a representation of what is proposed. There was a discussion about the types of trees in that area. Mr. Johnson stated that the Town and Ms. Zimmerman could say that they want the trees to all be evergreens. Mr. Johnson stated that the only way this was going to be resolved it to get with the landscape architect to have a detailed planting plan to specify types and height of plants. The fence could be constructed since it is approved, but due to the strenuous objections of the neighbor the landscaping would need to be addressed in more detail. Screening and buffering in general are taken very seriously in the Town. A general discussion about the style of the fencing ensued. Adrienne Isenhower stated that a detailed landscaping plan with specific materials to be planted might help. Mr. Kanipe stated that he would present those details and serve as a liaison between the property owners.

Mr. Johnson reviewed the plans again with the construction team. Ms. Zimmerman was saying that her dining room is below the family room at 54 Forest. Mr. Johnson asked if the architect could prepare an elevation and full color graphics and have the landscape architect provide specifics as to plantings and buffering of the fence.

Mr. Kanipe stated that the zoning permit could be issued provided that a detailed landscaping plan would be provided. Mr. Johnson stated that it should definitely be checked as to whether that proposed fencing meets code requirements for pool fencing. Mr. Kanipe felt that a wooden fence might be more acceptable, and there was further discussion about fence styles.

The next Design Review Board meeting is scheduled for December 20, 2018 at 5:30 p.m.

Bruce Johnson, Chairman

Jonathan Kanipe, Town Manager

MINUTES OF THE TOWN OF BILTMORE FOREST
DESIGN REVIEW BOARD MEETING OF DECEMBER 20, 2018

The Design Review Board did not have a meeting on December 20, 2018. A new roof project was for 5 Cedar Chine and a new addition for 15 Cedar Chine were reviewed and approved by the Board electronically.

The next Design Review Board meeting is scheduled for January 17, 2018 at 5:30 p.m.

Bruce Johnson, Chairman

Jonathan Kanipe, Town Manager

Zoning Compliance Application

Town of Biltmore Forest

Name

Robert
First

Rychly
Last

Address

18 White Oak Road
Address Line 1

Phone

(706) 831-3959

Email

kelli@homesourcebuilders.com

Parcel ID/PIN Number

964790206700000

ZONING INFORMATION

Current Zoning

☐ R-1 ☒ R-2 ☐ R-3 ☐ R-4 ☐ R-5 ☐ P-S

Lot Size

.39

Maximum Roof Coverage

2,874 square feet (Up to .5 acres)
Identifies allowance based on lot size

Proposed Roof Coverage Total

22x15
Must not exceed maximum coverage allowed

Maximum Impervious Surface Coverage

☒ 27.5 percent of lot area (Up to 1 acre) ☐ 25 percent of lot area (1-3 acres) ☐ 20 percent of lot area (3-6 acres)
Identifies allowance based on lot size

Proposed Impervious Surface Coverage

N/A
Must not exceed maximum coverage allowed

Front Yard Setback

50 feet (R-2, R-3, R-4, and R-5 Districts)
Choose the appropriate zoning district.

Side Yard Setback

15 feet (R-2, R-3, R-4, and R-5 Districts)
Choose the appropriate zoning district.

Rear Yard Setback

20 feet (R-2, R-3, R-4, and R-5 Districts)
Select the appropriate zoning district.

No buildings or structures may be located within these setback areas. A variance application is required if your project requires encroachment upon the setback.

Description of the Proposed Project

roof added to existing patio, (no footprint changes), Master bath remodel
A Conditional Use Permit application is also required for all accessory buildings and structures.

Estimated Cost of Project

\$60,000.00

Estimated Completion Date

3/31/2019

Applicant Signature

Kelli
Cramer
Tom
Alexander

Supporting Documentation (Site Plan, Drawings, Other Information)

Rychly Elevations.pdf

Rychly Existing.pdf

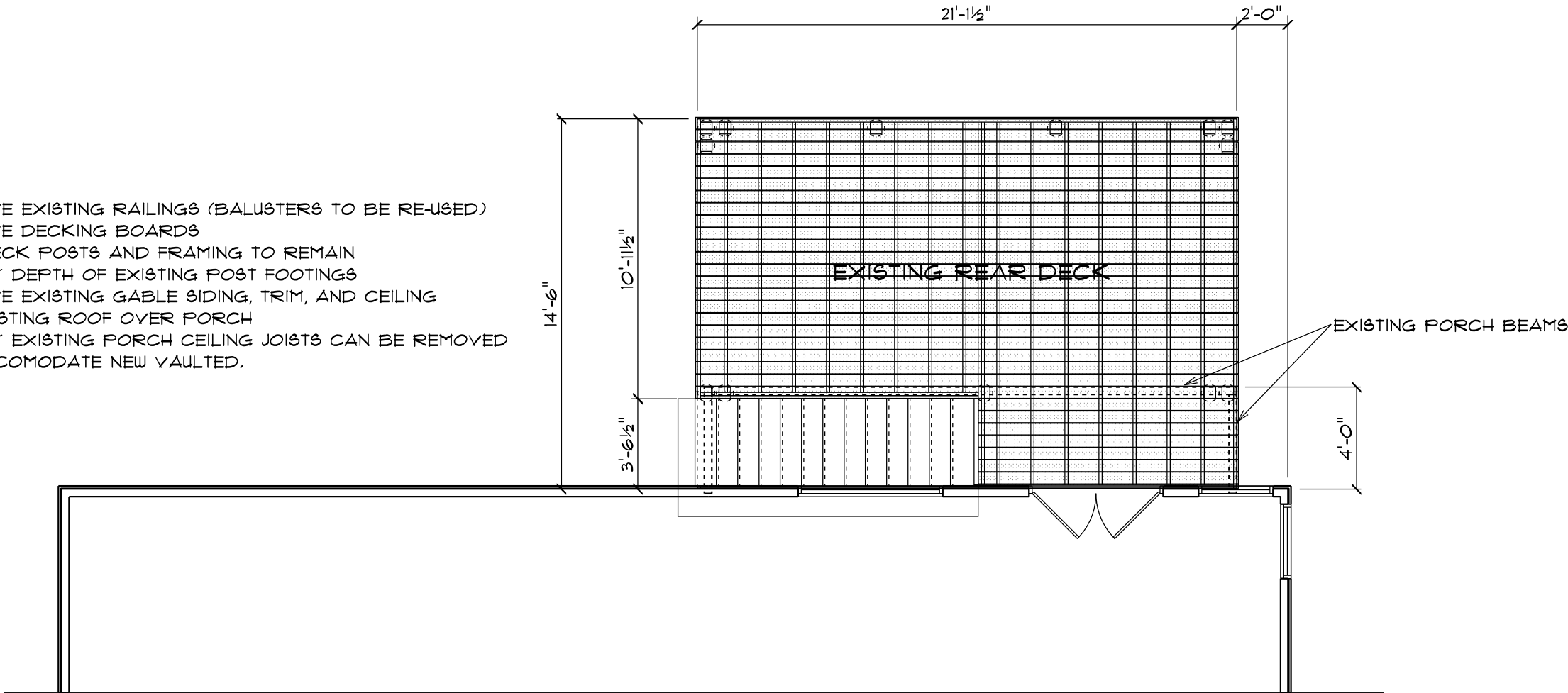
Rychly Porch.pdf

Rychly Renderings.pdf

Rychly Roof.pdf

NOTES:

- REMOVE EXISTING RAILINGS (BALUSTERS TO BE RE-USED)
- REMOVE DECKING BOARDS
- ALL DECK POSTS AND FRAMING TO REMAIN
- VERIFY DEPTH OF EXISTING POST FOOTINGS
- REMOVE EXISTING GABLE SIDING, TRIM, AND CEILING OF EXISTING ROOF OVER PORCH
- VERIFY EXISTING PORCH CEILING JOISTS CAN BE REMOVED TO ACCOMODATE NEW VAULTED.



AS BUILT - DEMO PLAN

ALL CONSTRUCTION TO MEET OR EXCEED ALL APPLICABLE STATE/LOCAL BUILDING CODES.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND CONDITIONS BEFORE CONSTRUCTION

ALL REQD. ENGINEERING BY OTHERS

Date :
12/21/18

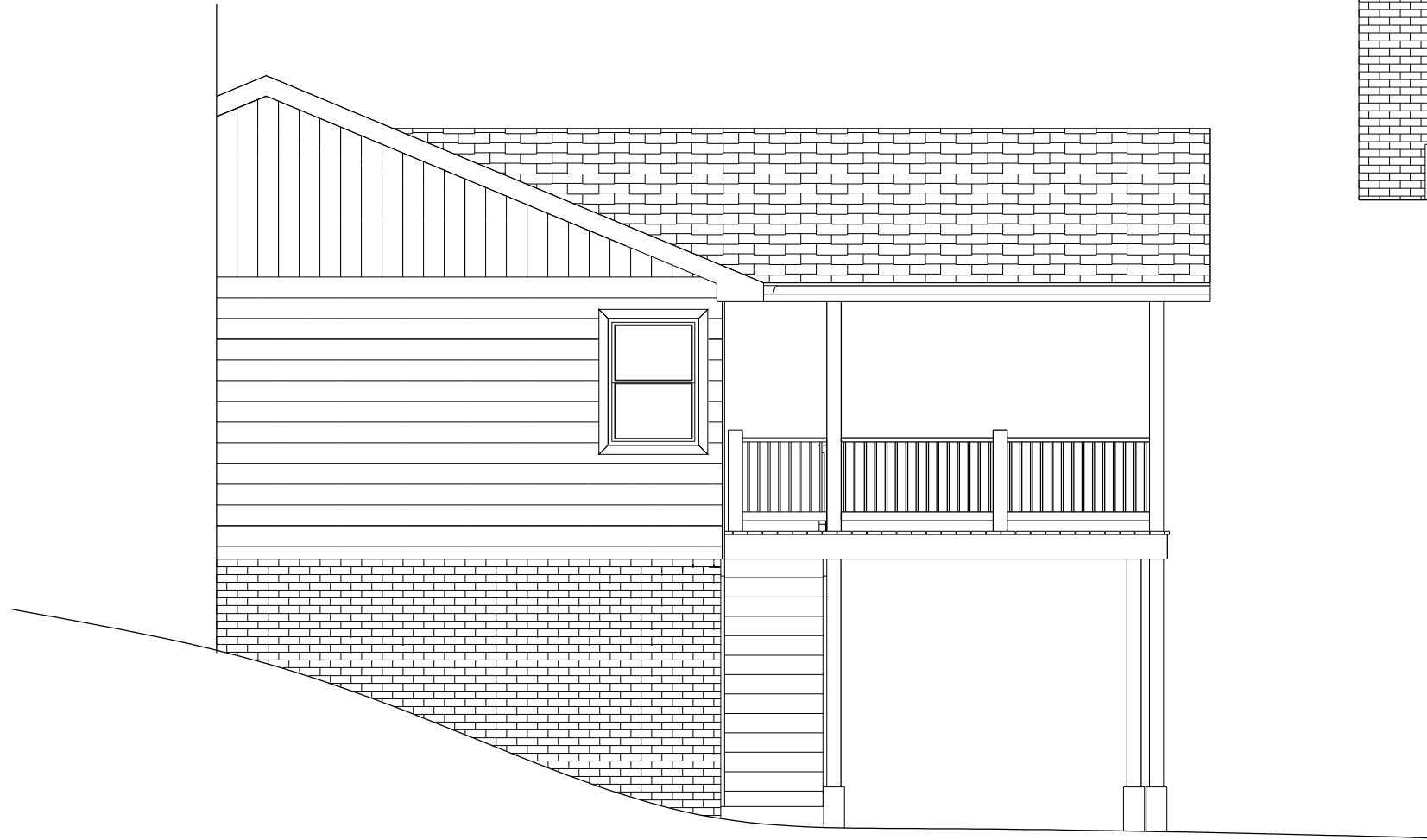
NEW COVERED PORCH FOR THE HOME
OF BOB AND CAROL RYCHLY
18 WHITE OAK DRIVE ASHEVILLE, NC 28803

172 CHARLOTTE ST.
ASHEVILLE, NC 28801
(828) 252-1022



Sheet :
1 OF 4

Scale :
3/16" = 1'-0"



SIDE ELEVATION

ALL CONSTRUCTION TO MEET OR EXCEED
ALL APPLICABLE STATE/LOCAL BUILDING
CODES.

CONTRACTOR TO VERIFY ALL DIMENSIONS
AND CONDITIONS BEFORE CONSTRUCTION

ALL REQD. ENGINEERING BY OTHERS



REAR ELEVATION

Date :
12/21/18

NEW COVERED PORCH FOR THE HOME
OF BOB AND CAROL RYCHLY
18 WHITE OAK DRIVE ASHEVILLE, NC 28803

172 CHARLOTTE ST.,
ASHEVILLE, NC 28801
(828) 252-1022

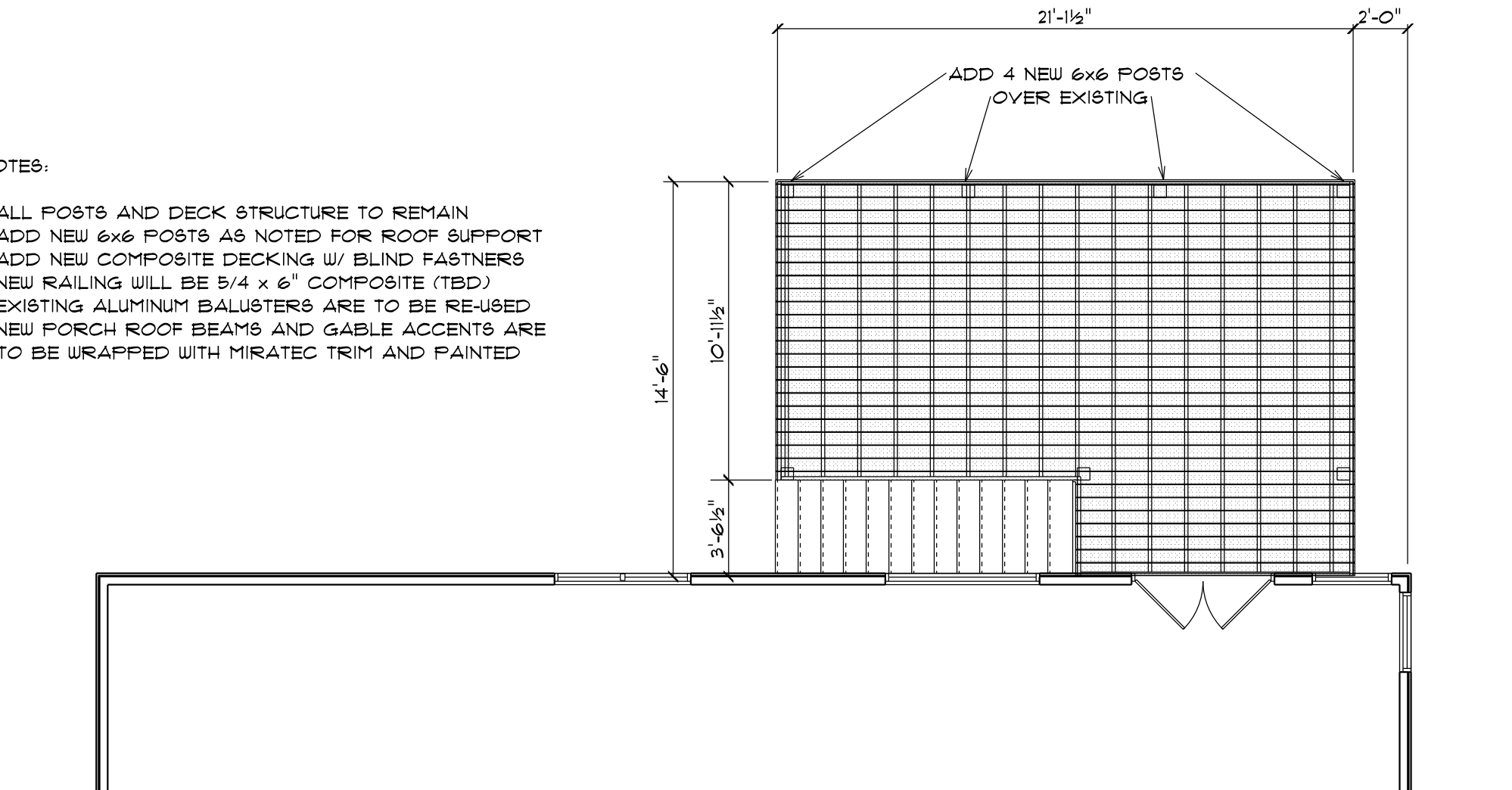


Sheet :
4 OF 4

Scale :
3/16" = 1'-0"

NOTES:

- ALL POSTS AND DECK STRUCTURE TO REMAIN
- ADD NEW 6x6 POSTS AS NOTED FOR ROOF SUPPORT
- ADD NEW COMPOSITE DECKING W/ BLIND FASTNERS
- NEW RAILING WILL BE 5/4 x 6" COMPOSITE (TBD)
- EXISTING ALUMINUM BALUSTERS ARE TO BE RE-USED
- NEW PORCH ROOF BEAMS AND GABLE ACCENTS ARE TO BE WRAPPED WITH MIRATEC TRIM AND PAINTED



ALL CONSTRUCTION TO MEET OR EXCEED
ALL APPLICABLE STATE/LOCAL BUILDING
CODES.

CONTRACTOR TO VERIFY ALL DIMENSIONS
AND CONDITIONS BEFORE CONSTRUCTION

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172 CHARLOTTE ST.
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HS HomeSource
DREAM BUILT. REMODEL.

Sheet :

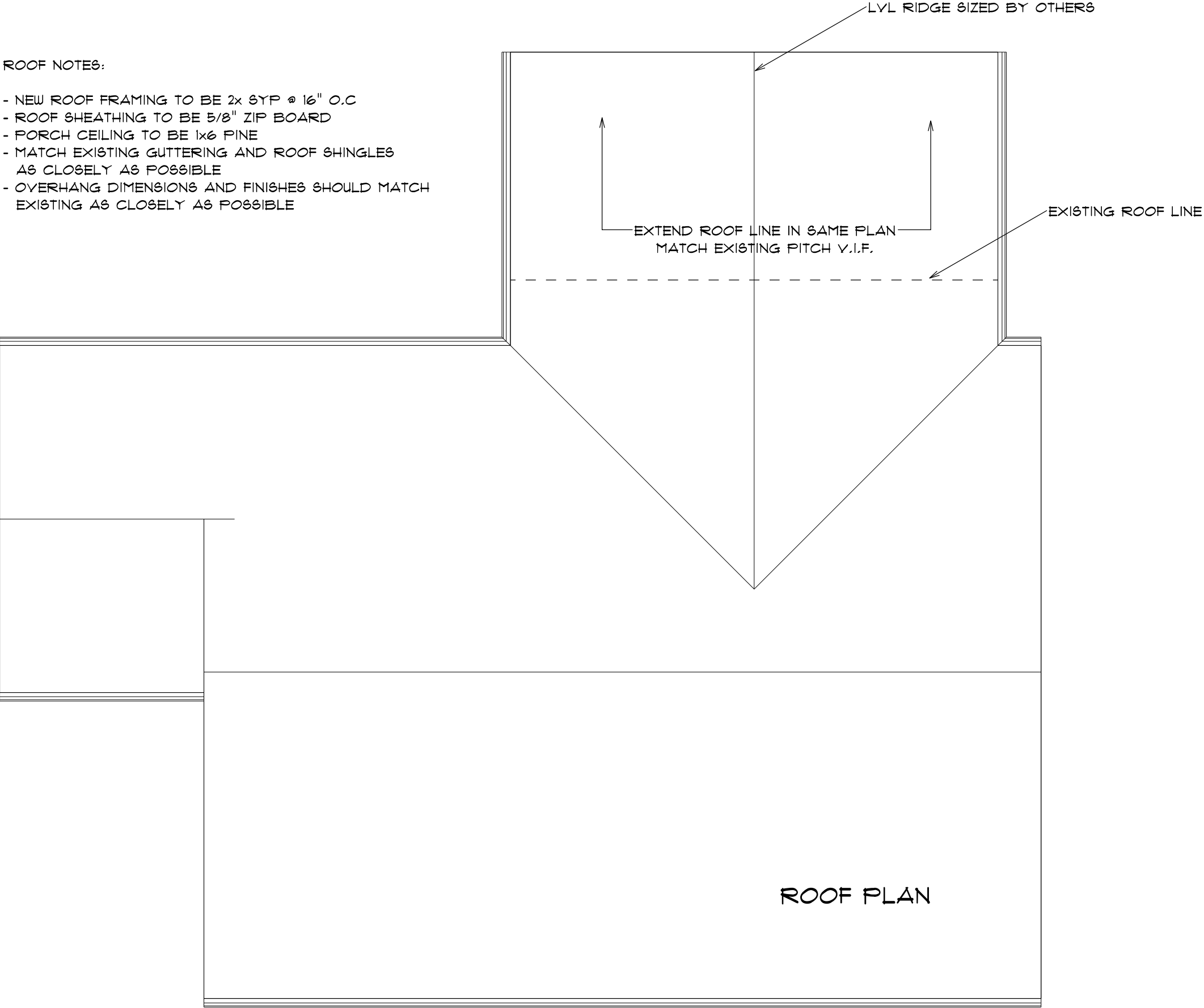
2 OF 4

Scale :

3/16" = 1'-0"

ROOF NOTES:

- NEW ROOF FRAMING TO BE 2x SYP @ 16" O.C
- ROOF SHEATHING TO BE 5/8" ZIP BOARD
- PORCH CEILING TO BE 1x6 PINE
- MATCH EXISTING GUTTERING AND ROOF SHINGLES AS CLOSELY AS POSSIBLE
- OVERHANG DIMENSIONS AND FINISHES SHOULD MATCH EXISTING AS CLOSELY AS POSSIBLE



ALL CONSTRUCTION TO MEET OR EXCEED
ALL APPLICABLE STATE/LOCAL BUILDING
CODES.

CONTRACTOR TO VERIFY ALL DIMENSIONS
AND CONDITIONS BEFORE CONSTRUCTION

ALL REQD. ENGINEERING BY OTHERS

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Sheet :
3 OF 4

Scale :
3/16" = 1'-0"







355 Vanderbilt Rd | Biltmore Forest, NC
Po Box 5352 | Biltmore Forest, NC 28803
P (828) 274-0824 | F (828) 274-8131

www.biltmoreforest.org



George F. Goosmann, III, Mayor
Fran G. Cogburn, Mayor-Pro Tem
E. Glenn Kelly, Commissioner
Doris P. Loomis, Commissioner

Jonathan B. Kanipe,
Town Manager

MEMORANDUM

To: Board of Adjustments Members
From: Jonathan Kanipe, Town Manager
Re: Board of Adjustments Case Number 3 (40 Forest Road)
Date: December 7, 2018

Request for Conditional Use Permit for an Accessory Structure Variance Request for Construction of Driveway/Retaining Wall in Side Yard Setback

The applicants present plans for an addition to their home to include a solarium, additional decks, and a stacked garage. An extension of the driveway is requested for access to the new garage. The proposed driveway addition will extend into the side yard setback. A retaining wall is also included as part of the driveway extension which is considered an accessory structure. All accessory structures require a conditional use permit based on the Permitted Uses Table in the zoning ordinance.

A variance is requested for the extension of the driveway because it will encroach upon the side yard setback. The applicants note the narrowness of the lot creates the need for the request. Section 153.004 *Interpretations and Definitions* expressly prohibits driveways in the side yard setback unless a variance is granted by the Board.

*YARD, SIDE. An open, unoccupied space on the same lot with a principal building extending the full width of the lot and being situated between the building and the side lot line and extending from the rear line of the front yard to the front line of the rear yard. Notwithstanding the above definition, for the purposes of determining compliance with minimum yard setback of § [153.007](#), the SIDE YARD shall be the entire length of each side lot line extending from the front lot line to the rear lot line and shall equally apply to lots with a principal building, lots without a principal building and vacant lots. **Driveways shall not be located in the side yard setback.***

Entry #: 3**Date Submitted:** 11/9/2018 12:43 PM**Name**

Steve Farrell

Address**Phone**

(828) 231-4915

Email

ssf@AshevilleArchitect.com

Parcel ID/PIN Number

9646 79 4827

ZONING INFORMATION**Current Zoning**

R-1

Lot Size

0.623 acres

Maximum Roof Coverage

2,874 square feet (Up to .5 acres)

Proposed Roof Coverage Total**Maximum Impervious Surface Coverage**

27.5 percent of lot area (Up to 1 acre)

Proposed Impervious Surface Coverage**Front Yard Setback**

60 feet (R-1 District)

Side Yard Setback

20 feet (R-1 District)

Rear Yard Setback

25 feet (R-1 District)

No buildings or structures may be located within these setback areas. A variance application is required if your project requires encroachment upon the setback.

Description of the Proposed Project

Additions and Improvements to the Morris House at 40 Forest Drive in Biltmore Forest, NC proposes to build a Solarium and a deck on the back of an existing home. The Solarium and deck will be equal in floor elevation to the existing house Main Level. Below these proposed spaces would be a two car garage in a "stacked" configuration with this floor more or less level with the existing basement slab.

The proposed exterior materials would be matching to the existing exterior materials with the possible exception of the roof over the proposed solarium which is intended to be raised seam metal with a LRV of less than 25.

None of the proposed addition is visible from the public way. These proposed constructions will take the place of aged decks in dire need of replacement.

These proposed constructions would require the removal of two trees, one near the proposed gravel drive extension and one very near the foundations of the proposed solarium.

No changes are proposed for the primary or front elevation as seen from Forest Road.

Estimated Cost of Project**Estimated Completion Date**

Applicant Signature



Date

Supporting Documentation (Site Plan, Drawings, Other Information)



Scans(2).zip
3.13 MB



Conditional Use Permit Application

Town of Biltmore Forest

Transaction Details

Number: F16E5T1

Date: 11/19/2018 9:31 PM

Application Fee	\$100.00
Subtotal:	\$100.00
Order Total: \$100.00	

Application Fee

\$100.00

Name

Steve Farrell

Address

40 Forest Road

Phone

(828) 231-4915

Email

ssf@AshevilleArchitect.com

Please select the type of conditional use you are applying for:

Accessory Structures

The applicant must show that the proposed use will not materially endanger public health or safety or injure value of adjoining or abutting property. In addition, the proposed use must be in general conformity with the plan of development of the town and be in harmony with scale, bulk, height, coverage, density, and character of the neighborhood.

Please provide a description of the proposed project:

David and Judy Morris, Owners of 40 Forest Drive, intend to build an addition to their home in the form of a Solarium and open decks on the back of their house. These spaces (in line with the main level) would be above a 2 car "stacked" garage (as compared to a traditional "side by side" garage). To gain vehicular access to the proposed garage an extension of the existing gravel driveway is required. This proposed driveway must be located within the side-yard setback. As such this proposal requires a variance from the Town of Biltmore Forest for the driveway extension within the side-yard setback. The relative narrowness of the lot (100 feet) makes alternatives to this request physically impossible and/or architecturally impractical. Attached garages are common in Biltmore Forest and will enhance the street-scape by allowing vehicles to be removed from view from the public way. The topography is such that the driveway extension will be visible from the public way. The proposed addition will be completely hidden from view from the public way.

Explain why the project would not adversely affect the public interest of those living in the neighborhood:

The proposed extension of the existing driveway is separated from the neighbors property by

approximately 8 feet and a line of existing evergreen vegetation. The garage would only be used on occasion to store the Owner's vehicles when they are out of town or in the instance of inclement weather, etc. While the public interests of those living in the neighborhood would not be adversely affected they will be positively affected by increase property values based on real estate appraisal "comps" given the increased square footage, the increase utility (presently there is no garage), and the related improvements to be made to the home.

I hereby certify that all of the information set forth above is true and accurate to the best of my knowledge.

Signature

Date

11/19/2018

A handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke extending to the right. The signature is positioned above a thin horizontal line.

VARIANCE APPLICATION

Town of Biltmore Forest

Name

Steve Farrell

Address

40 Forest Road

Phone

(828) 231-4915

Email

ssf@AshevilleArchitect.com

Current Zoning/Use

House

Requested Use

Single Family Residential

APPLICATION REQUIREMENTS: An application to the Board of Adjustment for a variance must be submitted to the Town of Biltmore Forest Town Manager at least 21 days prior to the meeting at which the application will be considered. A pre-application meeting with Town staff is required prior to application submittal to the Board of Adjustment.

What would you like to do with your property?

The Owners, David and Judy Morris, intend to build a Solarium and deck on the rear of their house in Biltmore Forest. These proposed additions will be above a two car "stacked" garage (as compared to a traditional "side by side" garage). In order to gain vehicular access to the proposed garage an extension of the existing gravel driveway is required.

By virtue of the relative narrowness of the lot (it is 100 feet wide) the proposed driveway extension must be located within the side-yard setback.

The proposed addition is totally hidden from view from the public way as is the proposed extension of the existing driveway.

By allowing this variance the community's best interest will be served by allowing the Owner's vehicles to be removed from view from the public way and by increasing property values by making much needed improvements to the home including an expanded (within the existing building footprint) and remodeled Kitchen

What does the ordinance require?

The ordinance requires a variance for the proposed driveway extension to be located within the side-yard setback. The balance of the proposal (Solarium and decks, etc.) are within the setbacks and are "By Right" requiring no variance or deviation from ordinance.

BOARD OF ADJUSTMENT: N.C.G.S. 160A-388(D) requires that the Board of Adjustment shall vary the provisions of the Zoning Ordinance only upon a showing of ALL the items below. The Board of Adjustment must follow strict procedure and all determinations must be decided by a concurring vote of four-fifths of the members of the Board. It is important to provide detailed supporting documentation for the Board of Adjustment to review. If necessary, additional sheets may be attached to this application.

REQUIRED FINDINGS: Please provide a thorough response to each.

Unnecessary hardship would result from the strict application of the ordinance.

The lot is relatively narrow at 100 feet wide. As such it is physically impossible and/or architecturally

impractical to create a garage space in any other design or configuration.

The hardship results from conditions that are peculiar to the property, such as location, size, or topography.

The relative narrowness of the property makes it impossible to build a garage in any other configuration. The topography of the property are such that the proposed driveway extension will not be visible from the public way.

The hardship did not result from actions taken by the applicant or the property owner.

The narrowness of the lot obviously predates the Morri's ownership.

The requested variance is consisent with the spirit, purpose, and intent of the ordinance, such that public safety is secured, and subtaintial justice is achieved.

The requested variance is consistent with the spirit, purpose and intent of the ordinance and does not constitute a threat to public safety. Substantial justice is achieved by allowing the Morris's to enjoy and improve their property in ways that are in the best interests of the community in general and the abutters in particular. The proposed addition will increase the property value; the proposed garage will enable the owner's vehicles to be removed from view from the public way.

I hereby cetify that all of the information set forth above is true and accurate to the best of my knowledge.

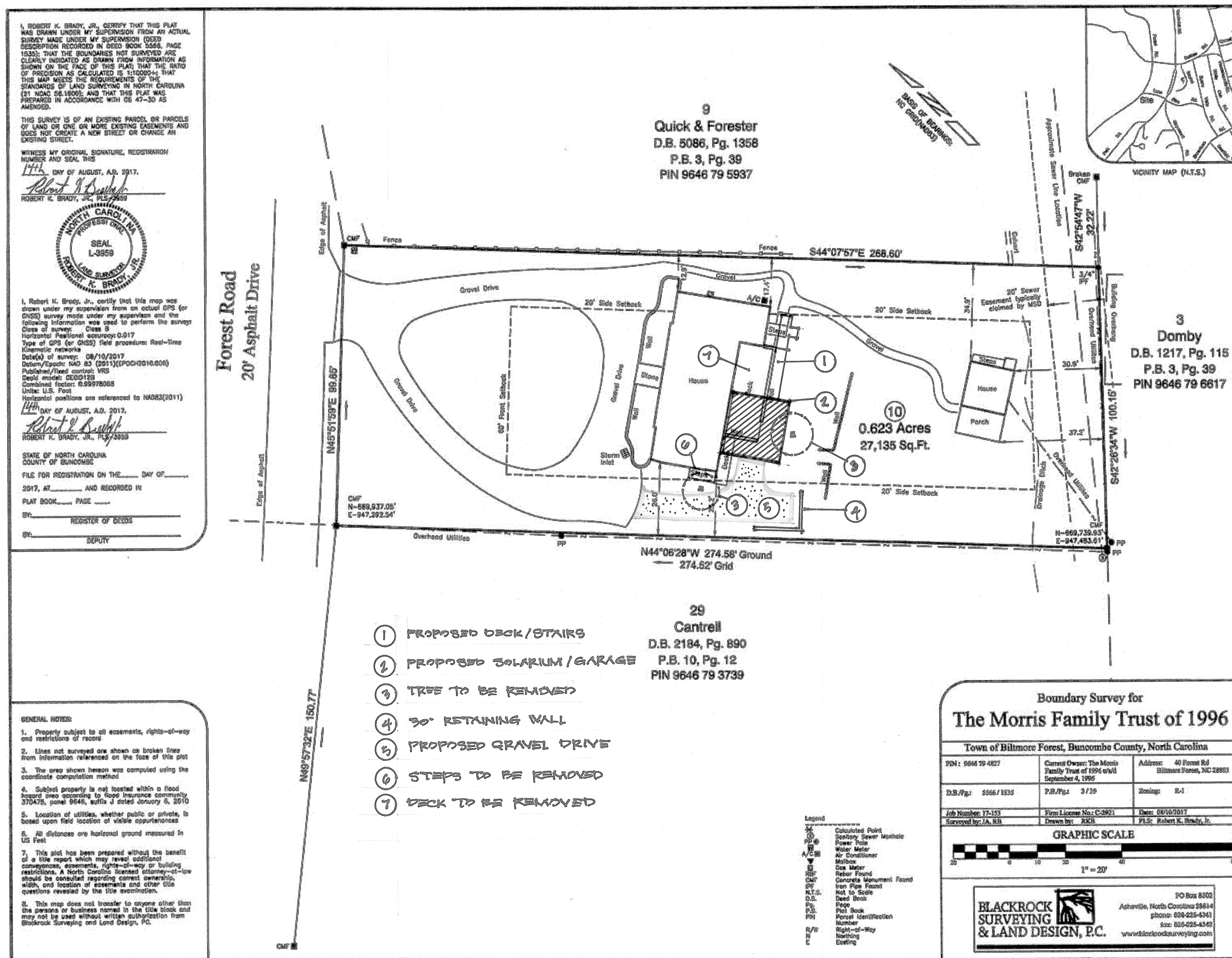
Signature

Date

11/19/2018

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CII



10.10.18
11.8.18 EF

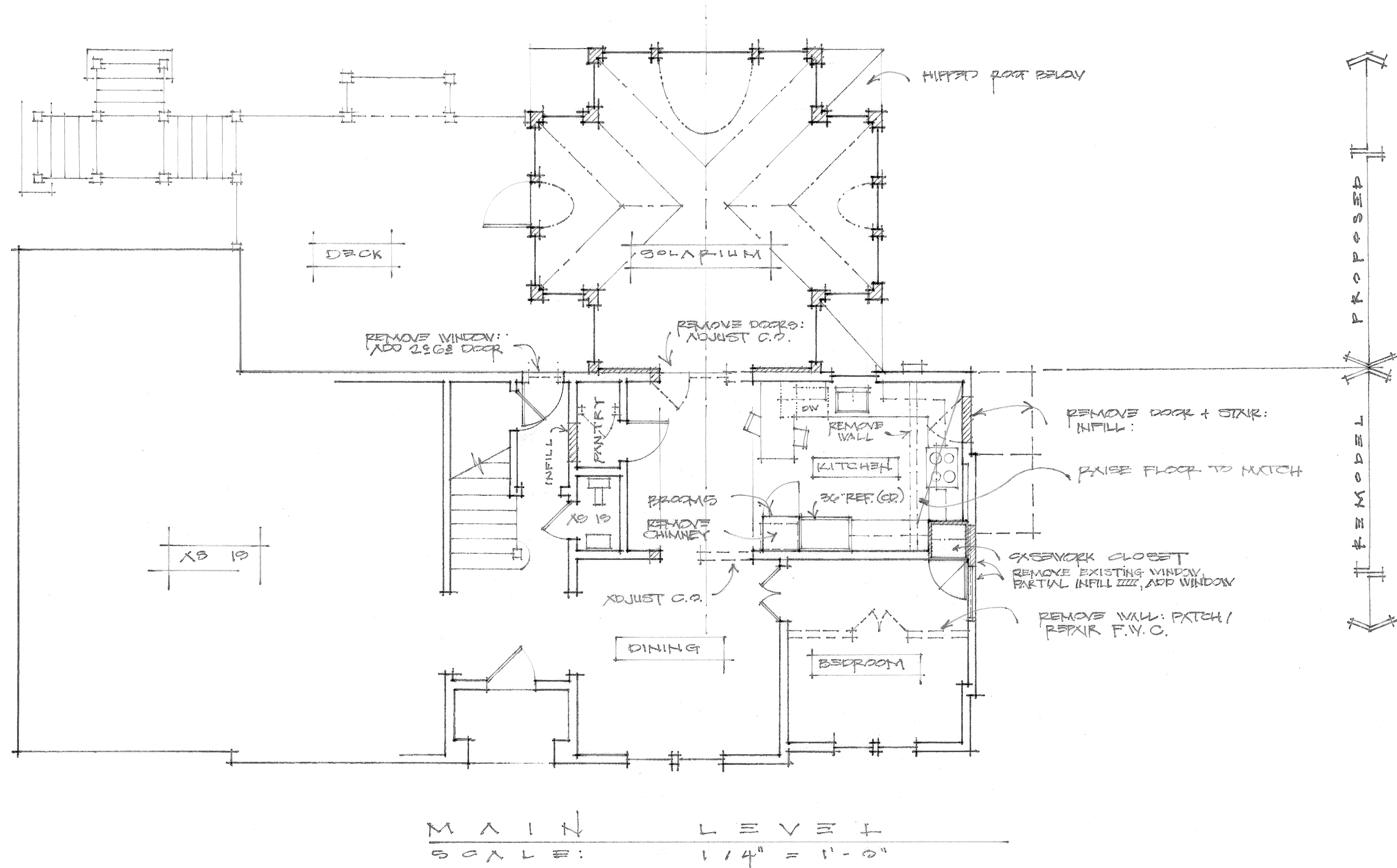
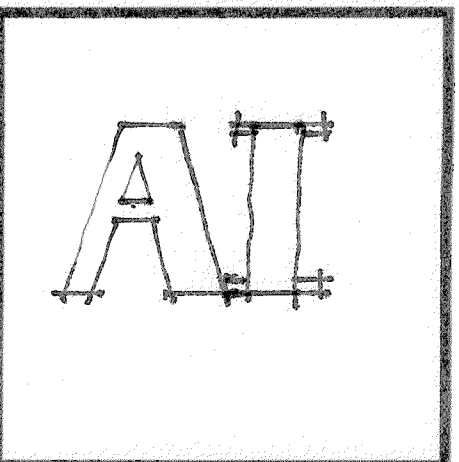
STEPHENS
SMITH
FARRELL
ARCHITECTURE

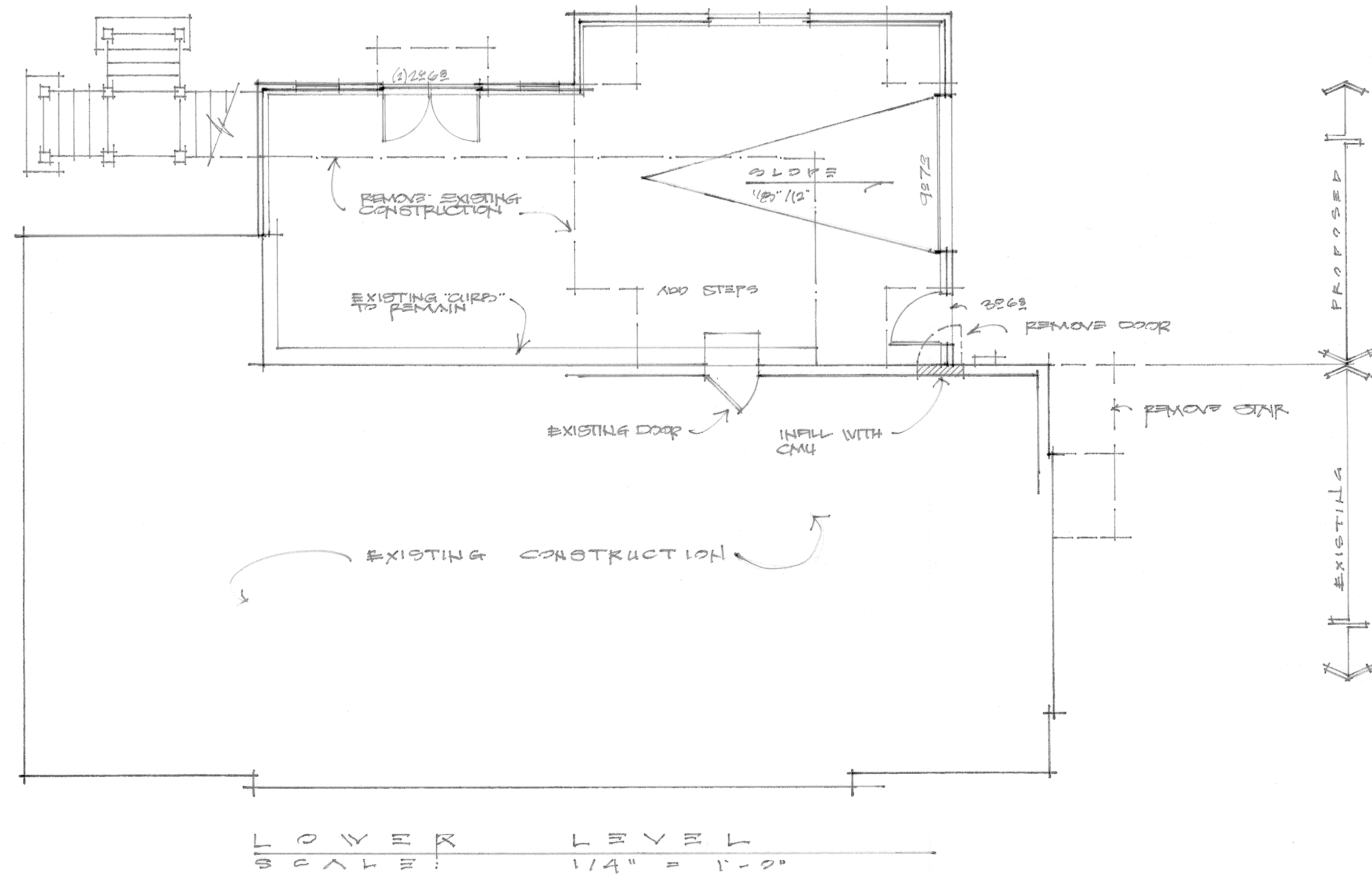
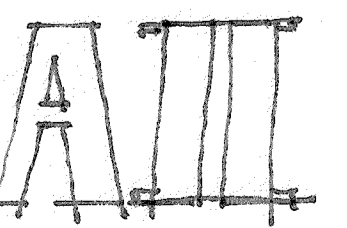
179 SOUTH
DELANO ROAD
ASHEVILLE
NC 28805

828 231 4915

SSF@ASHEVILLE
ARCHITECT.COM

ADDITIONS AND IMPROVEMENTS
DAVE AND JUDY MORRIS
FOREST RD.
BILTMORE FOREST, N.C.





12.10.18
11.8.15 BF

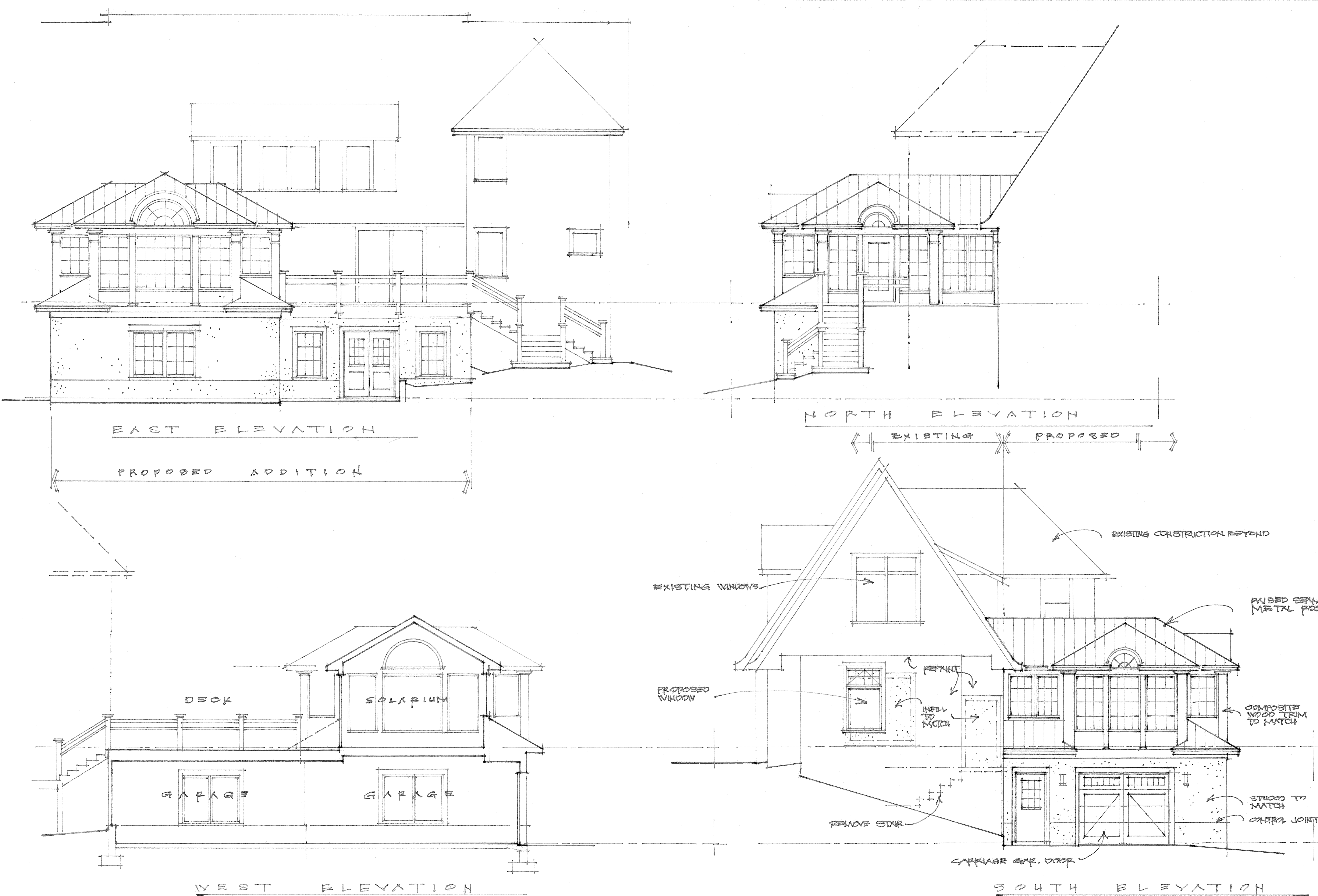
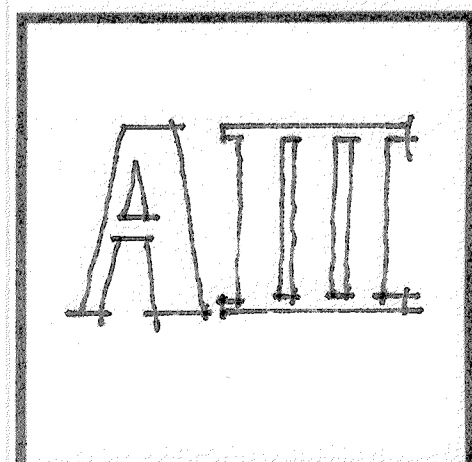
STEPHENS
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ADDITIONS AND IMPROVEMENTS
DAVE AND JUDY MORRIS
FOREST RD.
BILTMORE FOREST, N.C.





EXISTING
FRONT ELEVATION

1/4"=1'-0"



EXISTING
RIGHT SIDE ELEVATION

1/4"=1'-0"



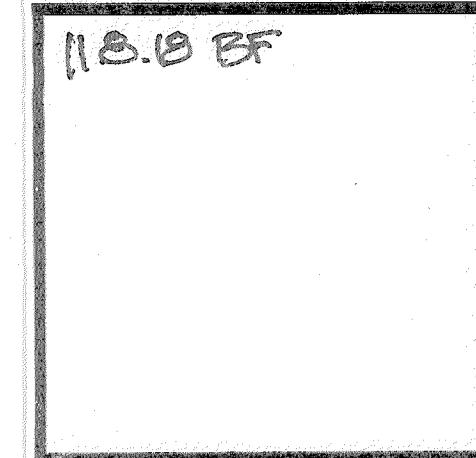
EXISTING
REAR ELEVATION

1/4"=1'-0"



EXISTING
LEFT SIDE ELEVATION

1/4"=1'-0"



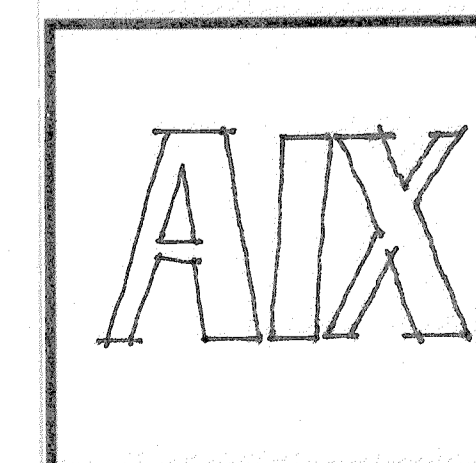
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George F. Goosmann, III, Mayor
Fran G. Cogburn, Mayor-Pro Tem
E. Glenn Kelly, Commissioner
Doris P. Loomis, Commissioner

Jonathan B. Kanipe,
Town Manager

MEMORANDUM

To: Board of Adjustments Members
From: Jonathan Kanipe, Town Manager
Re: Board of Adjustments Case Number 1 (Carolina Day School)
Date: January 4, 2019

Request for Conditional Use Permit for Installation of a Solar Array System

After the December meeting, Eagle Solar and Light submitted a written report detailing their review of the issues raised by neighboring properties concerning reflectivity. The report is attached to this memo for your review. A letter from a neighboring resident in support of the project is also attached for your review. Town staff also received feedback from a few other neighboring residents reporting no other objections to the project. The original request is summarized below.

The applicant is requesting a Conditional Use Permit for a solar array system to be located on the roof of Carolina Day School's Upper School. The solar panels are considered an accessory structure, which allows for the application for a Conditional Use Permit. The North Carolina General Statutes place limitations on local government's regulation of solar panels, with a few exceptions. One exception exists when the solar panels are located on a roof surface that slopes down towards common or public access areas. Based on this language, the solar panels may be approved via Conditional Use Permit as they are considered accessory structures by the zoning ordinance.

The 100 kW solar array system will be placed on approximately 6,000 square feet of roof space on the Carolina Day School Campus.

Zoning Application

Property Identification

Name

Brett Fuhrman

Address

1345 Hendersonville Road, Asheville, North Carolina 28803-1923

Phone

[REDACTED]

Email

[REDACTED]

Zoning

R-1

Lot Size (Acres)

25.88

Email -Submission Verification

[REDACTED]

Scope of Project-Roof Coverage

Does the project include increasing roof coverage?

No

Is the proposed roof coverage greater than the permitted maximum roof coverage?

No

Scope of Project-Impervious Surface

Does the project include increasing the impervious surface coverage?

No

Scope of Project-Setbacks

Does any part of the project fall within the front yard?

No

Does any part of the project fall within the side/rear yard setback(s)s?

No

Scope of Project-Accessory Structures

Does the project include a detached structure or building?

No

Will there be more than the approved number of

accessory structures/buildings?

No

Project Description

Brief Description of Project

Installation of a 100 kW solar array system on approximately 6,000 square feet of roof space of the Upper School on the Carolina Day School campus.

Estimated Cost of Project

75,000

Estimated Completion Date

12/31/2018

Please attach any drawings, renderings, photographs or other supporting documentation.

Conditional Use Permit Application

I hereby petition the Board of Adjustment to issue a Conditional Use Permit for:

Name

Brett Fuhrman

Property Address

1345 Hendersonville Road

Phone

[REDACTED]

Email

[REDACTED]

Type of Conditional Use

802.07 Accessory Buildings

Email-Submission Verification

[REDACTED]

Description of Project

Installation of a 100 kW solar array system on approximately 6,000 square feet of roof space of the Upper School on the Carolina Day School campus.

Explain why the project would not adversely affect the public interest of those living in the neighborhood:

This is an opportunity to generate some of our power from a clean, renewable energy source. It will also provide us with an incredible educational opportunity for our students. There will be no affect to the public or those living in the neighborhood. Lastly, there is very little visibility of the solar array from a location off of the Carolina Day School campus.

I certify that the information presented by the undersigned in this application is accurate to the best of my knowledge, information and belief.

SignatureA handwritten signature in black ink, appearing to read 'Brett Fuhrman', written over a horizontal line.**Date**

10/29/2018

Design 1 Revised Carolina Day School, 1345 Hendersonville Rd, Asheville, NC 28803

Report

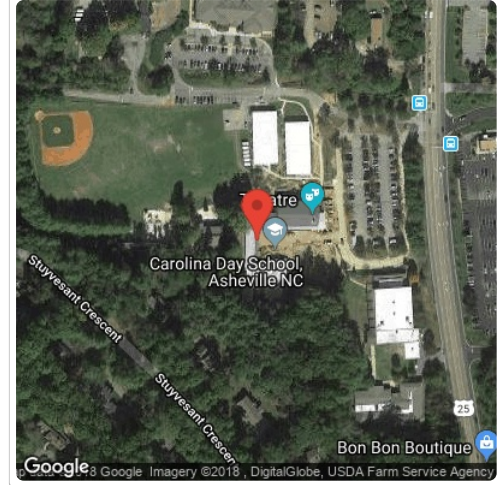
Project Name	Carolina Day School
Project Address	1345 Hendersonville Rd, Asheville, NC 28803
Prepared By	Joe Bennett jbennett@eaglesolarandlight.com



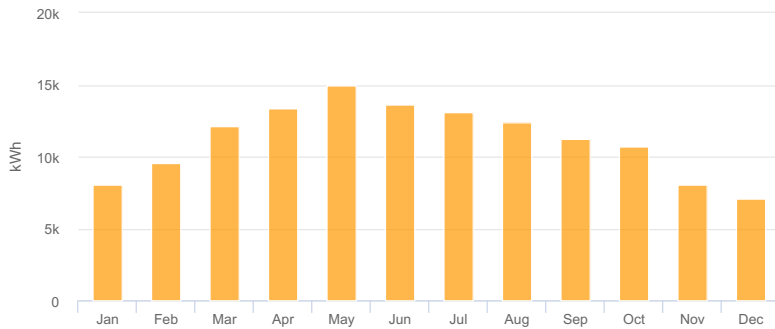
System Metrics

Design	Design 1 Revised
Module DC Nameplate	107.4 kW
Inverter AC Nameplate	100.0 kW Load Ratio: 1.07
Annual Production	134.3 MWh
Performance Ratio	75.1%
kWh/kWp	1,250.8
Weather Dataset	TMY, 10km Grid (35.55,-82.55), NREL (prospector)
Simulator Version	1468d8055c-52441aee5c-623e099696-b542d03352

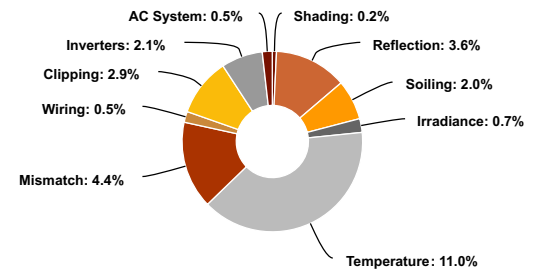
Project Location



Monthly Production



Sources of System Loss



Annual Production

	Description	Output	% Delta
Irradiance (kWh/m ²)	Annual Global Horizontal Irradiance	1,620.9	
	POA Irradiance	1,664.8	2.7%
	Shaded Irradiance	1,661.3	-0.2%
	Irradiance after Reflection	1,601.0	-3.6%
	Irradiance after Soiling	1,568.9	-2.0%
	Total Collector Irradiance	1,568.8	0.0%
Energy (kWh)	Nameplate	168,860.4	
	Output at Irradiance Levels	167,696.6	-0.7%
	Output at Cell Temperature Derate	149,267.3	-11.0%
	Output After Mismatch	142,734.0	-4.4%
	Optimal DC Output	141,959.6	-0.5%
	Constrained DC Output	137,837.7	-2.9%
	Inverter Output	134,984.0	-2.1%
	Energy to Grid	134,309.0	-0.5%
Temperature Metrics			
	Avg. Operating Ambient Temp		12.2 °C
	Avg. Operating Cell Temp		28.5 °C
Simulation Metrics			
	Operating Hours	4715	
	Solved Hours	4715	

Condition Set

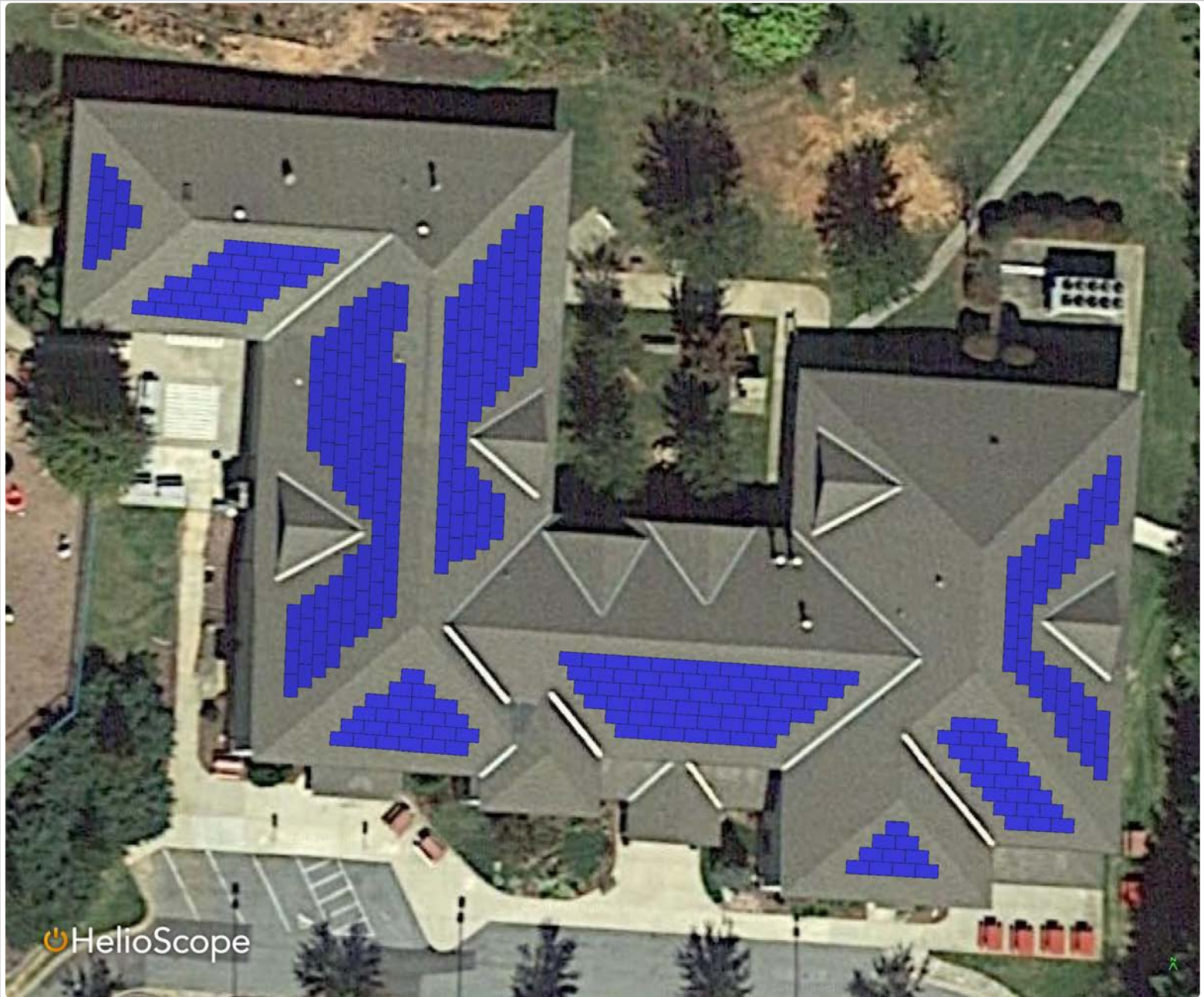
Description	Condition Set 1											
Weather Dataset	TMY, 10km Grid (35.55,-82.55), NREL (prospector)											
Solar Angle Location	Meteo Lat/Lng											
Transposition Model	Perez Model											
Temperature Model	Sandia Model											
Temperature Model Parameters	Rack Type	a	b	Temperature Delta								
	Fixed Tilt	-3.56	-0.075	3°C								
	Flush Mount	-2.81	-0.0455	0°C								
Soiling (%)	J	F	M	A	M	J	J	A	S	O	N	D
	2	2	2	2	2	2	2	2	2	2	2	2
Irradiation Variance	5%											
Cell Temperature Spread	4° C											
Module Binning Range	-2.5% to 2.5%											
AC System Derate	0.50%											
Module Characterizations	Module						Characterization					
	SST-295W (SunSpark)						Spec Sheet Characterization, PAN					
Component Characterizations	Device						Characterization					
	PVI 50TL 2-22-2017 (Solecristia (Yaskawa Solecristia Solar))						Default Characterization					

🏠 Components		
Component	Name	Count
Inverters	PVI 50TL 2-22-2017 (Solectria (Yaskawa Solectria Solar))	2 (100.0 kW)
Strings	10 AWG (Copper)	18 (3,971.0 ft)
Module	SunSpark, SST-295W (295W)	364 (107.4 kW)

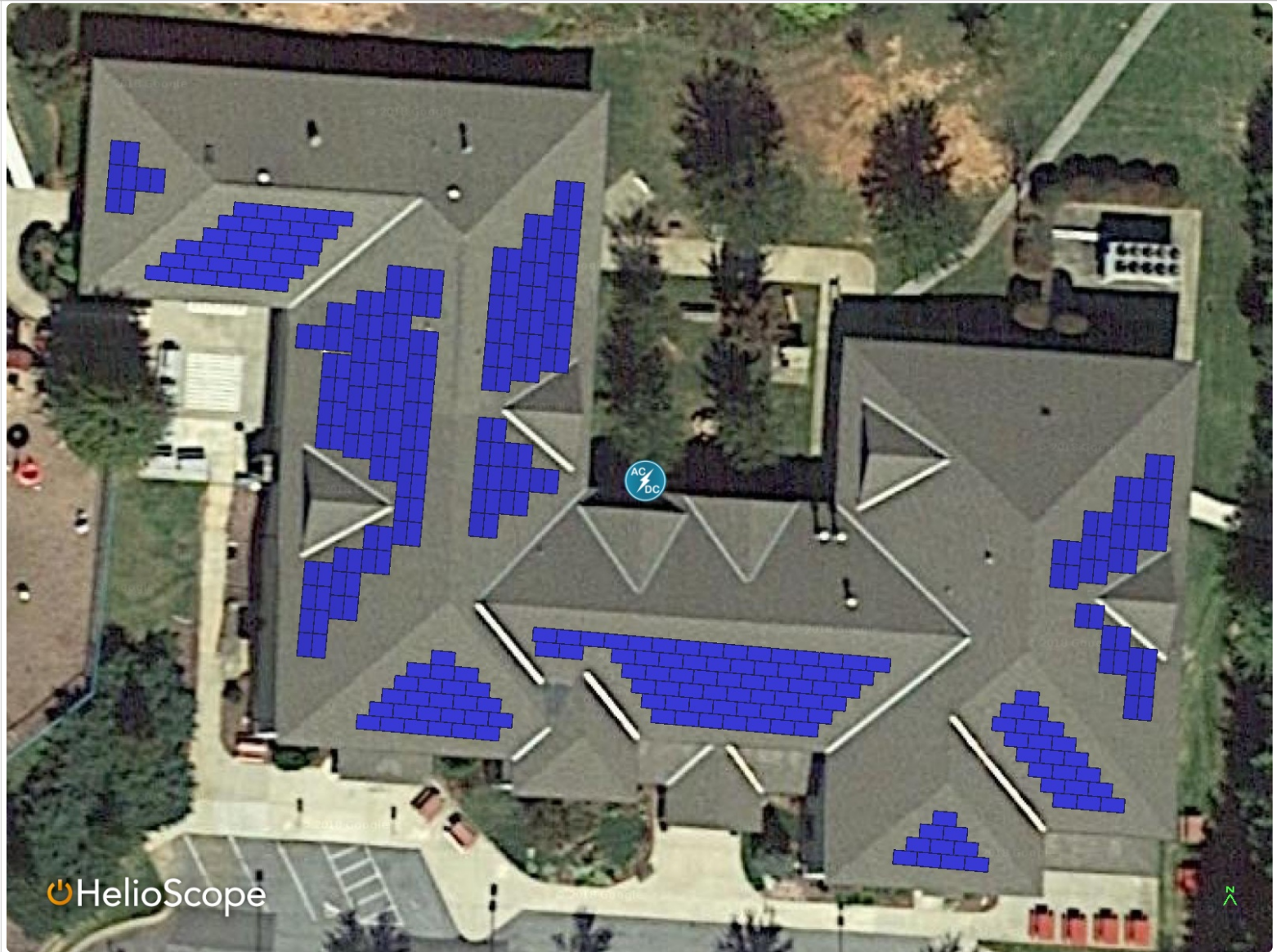
🔌 Wiring Zones			
Description	Combiner Poles	String Size	Stringing Strategy
Wiring Zone 2	12	20-21	Along Racking

Field Segments									
Description	Racking	Orientation	Tilt	Azimuth	Intrarow Spacing	Frame Size	Frames	Modules	Power
Field Segment 1	Flush Mount	Landscape (Horizontal)	10°	185.029°	0.0 ft	1x1	33	30	8.85 kW
Field Segment 2	Flush Mount	Landscape (Horizontal)	10°	184.389°	0.0 ft	1x1	24	24	7.08 kW
Field Segment 3	Flush Mount	Landscape (Horizontal)	10°	183.876°	0.0 ft	1x1	68	61	18.0 kW
Field Segment 4	Flush Mount	Landscape (Horizontal)	10°	183.13°	0.0 ft	1x1	10	10	2.95 kW
Field Segment 5	Flush Mount	Landscape (Horizontal)	10°	183.056°	0.0 ft	1x1	23	23	6.79 kW
Field Segment 6	Flush Mount	Landscape (Horizontal)	10°	272.213°	0.0 ft	1x1	103	90	26.6 kW
Field Segment 7	Flush Mount	Landscape (Horizontal)	10°	274.9°	0.0 ft	1x1	13	13	3.84 kW
Field Segment 8	Flush Mount	Landscape (Horizontal)	10°	92.5091°	0.0 ft	1x1	52	45	13.3 kW
Field Segment 9	Flush Mount	Landscape (Horizontal)	14°	92.3°	0.0 ft	1x1	72	68	20.1 kW

Detailed Layout



Detailed Layout





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North Carolina #79280

December 21st, 2018

Jonathan Kanipe
Town Manager
Town of Biltmore Forest

Mr. Kanipe,

Thank you for allowing us to attend the meeting on December 17, 2018 to answer questions regarding the potential solar PV system for Carolina Day School. We found it helpful to hear questions about the proposed project directly from the neighbors of Carolina Day School and the Board. We hope the following information will help answer these good questions, and give the Board the information it needs to make an informed decision on CDS's permit.

We have calculated the angular range of reflectivity, using the following input values:

- Roof hip – 4/12 (Equivalent to 18-1/2 degrees)
- Elevation of CDS Upper School roof hip = 666m (above sea level)
- Angle of sun incidence at 12:00 noon – Summer solstice (Asheville, NC) – 77 degrees
- Angle of incidence – Winter solstice (Asheville, NC) – 32 degrees

Calculated Results:

Carolina Day School Solar system angle of reflectivity at winter solstice – 21 degrees, right of vertical in northerly direction.

Carolina Day School Solar system angle of reflectivity at summer solstice – 24 degrees, left of vertical in southerly direction.

These calculations show that unless any neighbors are located at or above an angle of 66 degrees from the horizontal plane of the Carolina Day School building, at an azimuth direction of 180 degrees true south, then solar reflectivity will not be a factor. For any azimuth directions left or right of true south, the reflectivity angles for summer and winter solstice increase as the sun angle of incidence decreases, meaning that one would have to be higher than the calculated 66 degrees.



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For the neighbors who requested the calculations:

#4 Stuyvesant Crescent

- Home elevation = 673 meters
- Distance from CDS high school building = 281 meters
- Angle of home above CDS high school building = 1.427 degrees (Calculated using trigonometry, with a horizontal distance of 281 meters, and a vertical height of 7 meters. The tangent of the angle (theta) is equal to the opposite leg (vertical height) divided by the adjacent leg (horizontal distance).
- Azimuth direction = 185 degrees

#6 Stuyvesant Crescent

- Home elevation = 676 meters
- Distance from CDS high school building = 321 meters
- Angle of home above CDS high school building = 1.785 degrees
- Azimuth direction = 175 degrees

#8 Stuyvesant Crescent

- Home elevation = 682 meters
- Distance from CDS high school building = 362 meters
- Angle of home above CDS high school building = 2.5332 degrees
- Azimuth direction = 170 degrees

Other areas

Using our software, it appears the highest elevations within site of a southerly direction of CDS high school building occur in 2 locations, one near the hilltop where the Blue Ridge Parkway crosses Hendersonville Rd, near the entrance ramp on the west side of Hwy 25:

- Elevation = 695 meters
- Distance from CDS high school building = 516 meters
- Azimuth direction = 155 degrees
- Angle above CDS high school building = 3.222 degrees



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North Carolina #79280

And, the other just off the Parkway to the east of Hwy 25, close to where the entrance ramp intersects the Parkway:

- Elevation = 702 meters
- Distance from CDS high school building = 551 meters
- Azimuth direction = 145 degrees
- Angle above CDS high school building = 3.744 degrees

In summary, the solar module reflectivity will not be an issue for any visible location south of the Carolina Day School high school. As mentioned by one of the board members, panels are designed and manufactured to absorb as much of the visible light spectrum as possible. Photovoltaic panels cause less glare than standard home window glass. And research has shown that they reflect less light than snow, white concrete, and energy-efficient white rooftops.

We are happy to answer any additional questions that arise and thank you again for the opportunity.

Samuel E Yates
CEO