



APPLICATION FOR A CERTIFICATE OF APPROPRIATENESS – STAFF REPORT

165-17-CA      3227 BIRNAMWOOD ROAD  
Applicant:      ANN BROWN AND KENNETH KOHAGEN  
Received:      10/10/2017      Meeting Date(s):  
Submission date + 90 days: 1/8/2018      1) 11/27/2017    2)    3)

INTRODUCTION TO THE APPLICATION

Raleigh Historic Landmark: PAUL AND ELLEN WELLES HOUSE

Nature of Project: Reconstruct retaining wall; construct driveway retaining walls; reconstruct walkway and stair; install fence; alter existing garage; install new windows and skylight; expand screened porch; alter rear deck; construct two-story addition with screened porch

APPLICABLE SECTIONS OF GUIDELINES and DESCRIPTION OF PROJECT

<u>Sections</u>	<u>Topic</u>	<u>Description of Work</u>
1.3	Site Features and Plantings	Reconstruct retaining wall; construct driveway retaining walls; reconstruct walkway and stair
1.4	Fences and Walls	Reconstruct retaining wall; construct driveway retaining walls; install fence
1.5	Walkways, Driveways and Offstreet Parking	Construct driveway retaining walls
1.6	Garages and Accessory Structures	Alter existing garage
2.5	Roofs	Install skylight
2.7	Windows and Doors	Install new windows
2.8	Entrances, Porches and Balconies	Expand screened porch
3.1	Decks	Alter rear deck
3.2	Additions to Historic Buildings	Construct two-story addition with screened porch

STAFF REPORT

Based on the information contained in the amended application and staff’s evaluation:

- A. Reconstructing retaining walls, constructing driveway retaining walls, and reconstructing walkways and stairs are not incongruous in concept according to *Guidelines* 1.3.1, 1.3.2, 1.3.3, 1.3.4, 1.3.8, 1.3.9, 1.3.12, 1.3.13, 1.4.1, 1.4.2, 1.4.3, 1.4.4, 1.4.5, 1.4.6, 1.4.11, 1.5.1, 1.5.2, 1.5.3, and 1.5.9; however, the extensive retaining wall surrounding the gravel driveway and brick paving area **may be** incongruous in according to *Guidelines* 1.4.8, and the following suggested facts:

- 1\* According to the Raleigh Historic Landmark designation application and the National Register nomination, the house was built in 1956 and designed by architect Kenneth Scott who “actually considered the rear elevation as the front because it overlooks a large meadow that covers most of the site.”
- 2\* Also from the Raleigh Historic Landmark designation application and the National Register nomination: “Original contemporary hardscaping relates the house to its site. A four-foot wide brick walkway extends around three sides of the house. In the front, this walkway is elevated, with brick terraces extending down the slope to the driveway. In the rear, the walkway widens into a brick patio beside the living room.”
- 3\* The applicant is requesting to rebuild the existing raised brick walk and retaining wall, the adjoining steps and the lower brick path that is on grade. All of these elements are immediately abutting the north side of the house and are constructed of brick. The applicant proposes reusing the existing bricks, with the addition of a concrete slab underneath in order to provide stability and to prevent uneven settling from occurring in the future.
- 4\* The existing gravel driveway leads from the street to the garage on the north side of the house and flows into a brick-paved parking area on the west side of the house. The applicant proposes to install retaining walls that surround this entire surface area and range from 8” to 24” in height depending on the topography.
- 5\* Photographs were provided of three other Raleigh Historic Landmarks to illustrate the use of hardscaping in modernist houses; the George Matsumoto House at 821 Runnymede Road, the Henry L Kamphoefner House at 3060 Granville Drive, and the Ritcher House at 3039 Churchill Road. While these illustrate the usage of retaining walls alongside such features as stairs and planting areas, they do not provide evidence of retaining walls lining driving and parking areas to the extent proposed by the applicant.
- 6\* The 1.85 acre property includes extensive landscaped areas with a variety of tree species, ground covers and other plantings that provide a loose, organic aesthetic. The proposed bluestone retaining walls have a more formal character than what is present on the site now.
- 7\* The applicant provided a tree protection plan by an arborist certified by the International Society of Arboriculture (ISA). There was no separate arborist report provided.

- 8\* There is a discrepancy between the stone site walls section drawing and the tree protection plan drawing. The wall section shows a portion of the wall being constructed below grade, while the tree protection plan states “stone site walls to be hand built on grade with no excavation within the critical root zone of large trees.”
- 9\* A 42” wrought iron fence is proposed for the east side of the lot connecting the eastern corner of the house with the far corner of the garage. Two gates are proposed. The design of the fence was provided but not of the gates.
- 10\* An existing wrought iron railing aligns with the wide stairway from the driveway to the front door.

B. Altering the existing garage is not incongruous in concept according to *Guidelines* 1.6.1 and 1.6.2, and the following suggested facts:

- 1\* From the Raleigh Historic Landmark Designation Application and the National Register nomination: “Original plans called for a two-car flat-roofed free-standing carport to be centered in front of the house, at the end of the driveway that curves off Birnamwood Road. Because this was not built, the second owners, the Dahles, constructed a combination one-car garage and open carport in the same location about 1990. In order to relate it visually to the house, the outbuilding has similar rough-cut board-and-batten siding, a low shed roof, and solid wooden carport posts. Due to its age, this outbuilding is noncontributing, but its design harmonizes with the house architecture.”
- 2\* While the above description states the garage is for a single vehicle, it actually has a single vehicular door while having a footprint that can accommodate two cars.
- 3\* The only change proposed to the garage is widening the vehicular door from 8’ to 16’. The elevation drawings show a similar design for the new door, but no door specifications were provided for the vehicular door.

C. Installing new windows and a skylight, expanding the screened porch, and constructing a two-story addition with a screened porch is not incongruous in concept according to *Guidelines* 2.5.10, 2.7.1, 2.7.2, 2.8.1, 3.2.1, 3.2.2, 3.2.3, 3.2.4, 3.2.5, 3.2.6, 3.2.7, 3.2.8, 3.2.9, 3.2.10, 3.2.11, 3.2.12; however, installing a new window on the upper level of the primary façade is incongruous according to *Guideline* 2.7.9, and installation of new windows on the basement

level of the primary façade **may be** incongruous according to *Guideline 2.7.9*, and the following suggested facts:

- 1\* The significance of the Welles House according to the Raleigh Historic Landmark Designation Application and the National Register nomination is for its 1950s Modern design, one of a group of houses designed by faculty and students of North Carolina State University's architecture program. A key element of the design is the large open south elevation which opens to the expansive fields behind the house. The openness of the south façade contrasts with the more solid north façade, which features six grouped openings of doors and windows. The applicant proposes to add three new sets of openings to the east end of the north façade, thereby altering the relationship of solids to voids.
- 2\* The windows on the north façade align at the top with other windows on the same floor, but the newly added window for the master bath does not align with the windows to the right of it, the only other windows on the upper level of the north elevation.
- 3\* One skylight is proposed to be added over the master bathroom. One skylight exists over the kitchen at the opposite end of the house from the proposed location of the new skylight. Both skylights are on the streetside elevation. According to the applicant, "this skylight will not be visible from the street due to the low slope of the roofline and the two-story height of the house."
- 4\* The addition to the screened porch on the main level of the house is an extrusion of the existing screened porch and roof by 5'.
- 5\* The addition to the upper level for the master bedroom is on the west façade of the house, the one that could be deemed the least character defining. It is a modest 287 SF addition which maintains the same architectural style, materials and colors as the existing house. It is also inset from the existing house walls by a foot to distinguish it from the original structure.
- 6\* The screened porch of the addition is proposed for the west end of the south façade, adding more openness so that the bedroom/screened porch addition only increases the voids on the more transparent north elevation.

D. Altering the rear deck is not incongruous in concept according to *Guidelines* 2.8.1, 2.8.4, 3.1.1, and the following suggested facts:

- 1\* The existing rear deck flooring and steps will be replaced with stained rather than painted wood. The application states they will use either ipe or pressure treated lumber.
- 2\* The existing deck has a low rail that is proposed to be replaced with one of similar design at a slightly taller height.
- 3\* No stain color was specified for the deck.

Staff offers no suggested decision on the installation of new windows on the primary façade of the historic house or the construction of the new retaining walls.

Staff suggests that the committee approve the remainder of the application, with the following conditions:

1. That details and specifications for the following be provided to and approved by staff prior to issuance of the blue placard:
  - a. Eave construction details;
  - b. Screened porch section drawing.
  - c.
2. That details and specifications for the following be provided to and approved by staff prior to installation or construction:
  - a. Garage vehicular door;
  - b. Brick sample for bedroom addition;
  - c. Window section drawings;
  - d. Gate design;
  - e. Deck stain.

# Raleigh Historic Development Commission – Certificate of Appropriateness (COA) Application



**DEVELOPMENT  
SERVICES  
DEPARTMENT**

**Development Services  
Customer Service Center**  
One Exchange Plaza  
1 Exchange Plaza, Suite 400  
Raleigh, North Carolina 27601  
Phone 919-996-2495  
eFax 919-996-1831



<input type="checkbox"/> Minor Work (staff review) – <b>1 copy</b>  <input checked="" type="checkbox"/> Major Work (COA Committee review) – <b>10 copies</b> <input type="checkbox"/> Additions Greater than 25% of Building Square Footage <input type="checkbox"/> New Buildings <input type="checkbox"/> Demo of Contributing Historic Resource <input type="checkbox"/> All Other  <input type="checkbox"/> Post Approval Re-review of Conditions of Approval	<p style="text-align: center;"><b>For Office Use Only</b></p> Transaction # <u>532119</u> File # <u>165-17-CA</u> Fee <u>\$147.00</u> Amount Paid <u>\$147.00</u> Received Date <u>10/10/17</u> Received By <u>10/10/17</u>
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Property Street Address **3227 Birnamwood Rd**

Historic District

Historic Property/Landmark name (if applicable) **Paul + Ellen Welles House**

Owner's Name **Ann Brown + Kenneth Kohagen**

Lot size app. 1.85 acres	(width in feet) 250'-0"	(depth in feet) 291'-0" (west) + 288'-0"/137'-0"
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For applications that require review by the COA Committee (Major Work), provide addressed, stamped envelopes to owners of all properties within 100 feet (i.e. both sides, in front (across the street), and behind the property) not including the width of public streets or alleys ([Label Creator](#)).

Property Address	Property Address
3231 BIRNAMWOOD RD	3221 BIRNAMWOOD RD
3236 LEWIS FARM RD	3232 LEWIS FARM RD
3230 BIRNAMWOOD RD	
3410 LEWIS FARM RD	
3256 LEWIS FARM RD	
3220 BIRNAMWOOD RD	
3220 BIRNAMWOOD RD	
3246 LEWIS FARM RD # R	

I understand that all applications that require review by the commission's Certificate of Appropriateness Committee must be submitted by 4:00 p.m. on the application deadline; otherwise, consideration will be delayed until the following committee meeting. An incomplete application will not be accepted.

Type or print the following:

Applicant **Ann Brown + Kenneth Kohagen**

Mailing Address **3227 Birnamwood Rd**

City <b>Raleigh</b>	State <b>NC</b>	Zip Code <b>27604</b>
Date <b>9/27/2017</b>	Daytime Phone	
Email Address <b>Brown066@gmail.com / Kenneth.Kohagen@unchealth.unc.edu</b>		
Applicant Signature <i>Ann Brown</i> <i>Kenneth Kohagen</i>		

<p>Will you be applying for rehabilitation tax credits for this project? <input type="checkbox"/> Yes <input type="checkbox"/> No</p> <p>Did you consult with staff prior to filing the application? <input type="checkbox"/> Yes <input type="checkbox"/> No</p>	<p style="text-align: center;">Office Use Only</p> <p>Type of Work _____</p> <p style="text-align: center;"><u>2, 85, 65, 82, 66,</u></p> <p style="text-align: center;"><u>35, 58, 25</u></p>
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Design Guidelines - Please cite the applicable sections of the design guidelines ( <a href="http://www.rhdc.org">www.rhdc.org</a> ).		
Section/Page	Topic	Brief Description of Work (attach additional sheets as needed)
3.2/66-67	New Additions	<p>See written description for more information on each section.</p> <p>In brief, the project includes a small addition to a lesser character defining elevation. New windows are proposed to be added to the north east elevation. New windows + door will be added in the addition. Proposed work to front existing brick walk (elevated) and to expand existing screened porch. Rails to be updated on existing second floor deck as well as deck floor + stair treads.</p>
2.8/54	Entrances, Porches	
2.7/50	Windows + Doors	

### Minor Work Approval (office use only)

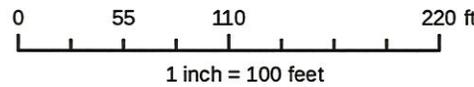
Upon being signed and dated below by the Planning Director or designee, this application becomes the Minor Work Certificate of Appropriateness. It is valid until \_\_\_\_\_. Please post the enclosed placard form of the certificate as indicated at the bottom of the card. Issuance of a Minor Work Certificate shall not relieve the applicant, contractor, tenant, or property owner from obtaining any other permit required by City Code or any law. Minor Works are subject to an appeals period of 30 days from the date of approval.

Signature (City of Raleigh) \_\_\_\_\_ Date \_\_\_\_\_

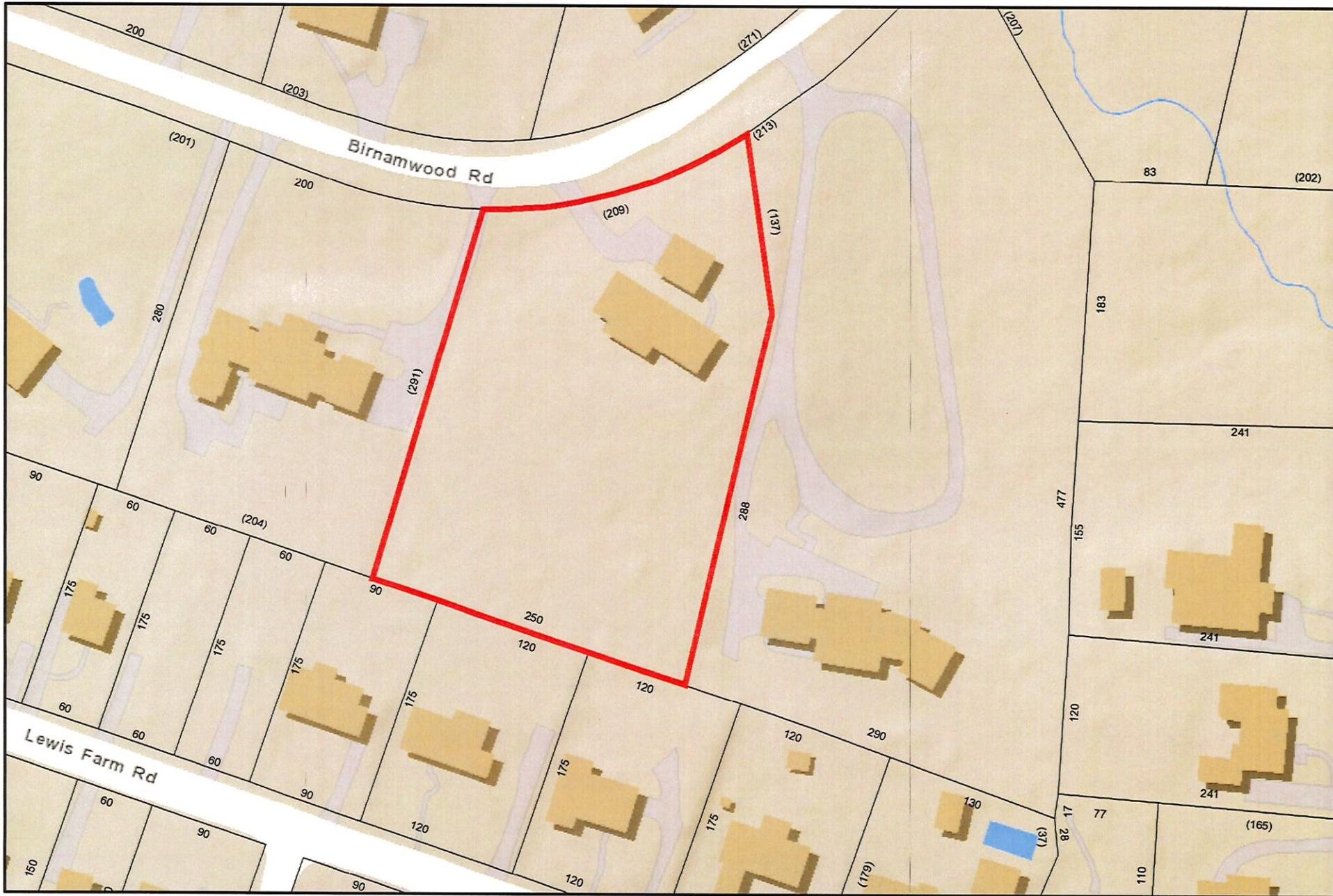
	TO BE COMPLETED BY APPLICANT		TO BE COMPLETED BY CITY STAFF		
	YES	N/A	YES	NO	N/A
<p>Attach 8-1/2" x 11" or 11" x 17" sheets with written descriptions and drawings, photographs, and other graphic information necessary to completely describe the project. Use the checklist below to be sure your application is complete.</p> <p><b>Minor Work (staff review) – 1 copy</b></p> <p><b>Major Work (COA Committee review) – 10 copies</b></p>			✓		
1. <b>Written description.</b> Describe clearly and in detail the nature of your project. Include exact dimensions for materials to be used (e.g. width of siding, window trim, etc.)	<input checked="" type="checkbox"/>		✓		
2. <b>Description of materials</b> (Provide samples, if appropriate)	<input checked="" type="checkbox"/>		✓		
3. <b>Photographs</b> of existing conditions are required. Minimum image size 4" x 6" as printed. Maximum 2 images per page.	<input checked="" type="checkbox"/>		✓		
4. <b>Paint Schedule</b> (if applicable)	<input type="checkbox"/>	<input type="checkbox"/>			
5. <b>Plot plan</b> (if applicable). A plot plan showing relationship of buildings, additions, sidewalks, drives, trees, property lines, etc., must be provided if your project includes any addition, demolition, fences/walls, or other landscape work. Show accurate measurements. You may also use a copy of the survey you received when you bought your property. Revise the copy as needed to show existing conditions and your proposed work.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	✓		
6. <b>Drawings</b> showing existing and proposed work <ul style="list-style-type: none"> <li><input type="checkbox"/> Plan drawings</li> <li><input type="checkbox"/> Elevation drawings showing the façade(s)</li> <li><input type="checkbox"/> Dimensions shown on drawings and/or graphic scale (required)</li> <li><input type="checkbox"/> 11" x 17" or 8-1/2" x 11" reductions of full-size drawings. If reduced size is so small as to be illegible, make 11" x 17" or 8-1/2" x 11" snap shots of individual drawings from the big sheet.</li> </ul>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	✓		
7. Stamped envelopes addressed to all property owners within 100 feet of property not counting the width of public streets and alleys (required for Major Work). Use the <a href="#">Label Creator</a> to determine the addresses.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	✓		
8. <b>Fee</b> ( <a href="#">See Development Fee Schedule</a> )	<input checked="" type="checkbox"/>		✓		



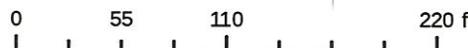
Aerial 3227 Birnamwood Rd



**Disclaimer**  
iMaps makes every effort to produce and publish the most current and accurate information possible. However, the maps are produced for information purposes, and are NOT surveys. No warranties, expressed or implied, are provided for the data therein, its use, or its interpretation.



**Imaps 3227 Birnamwood Rd**



1 inch = 100 feet

**Disclaimer**  
 iMaps makes every effort to produce and publish the most current and accurate information possible. However, the maps are produced for information purposes, and are NOT surveys. No warranties, expressed or implied, are provided for the data therein, its use, or its interpretation.





**northeast elevation with raised brick walk, stone landscaping and garage**



**inside foyer looking out  
at raised brick walk and garage**



**Raised walk separating  
from steps**



**Existing brick walkway + steps**

**First step down is sloped and 12-14 inches tall**

**Window detail shot, shows different style windows and trim on this elevation**



**Existing magnolia by corner of house  
near addition, arborist to provide care  
report before and during construction**

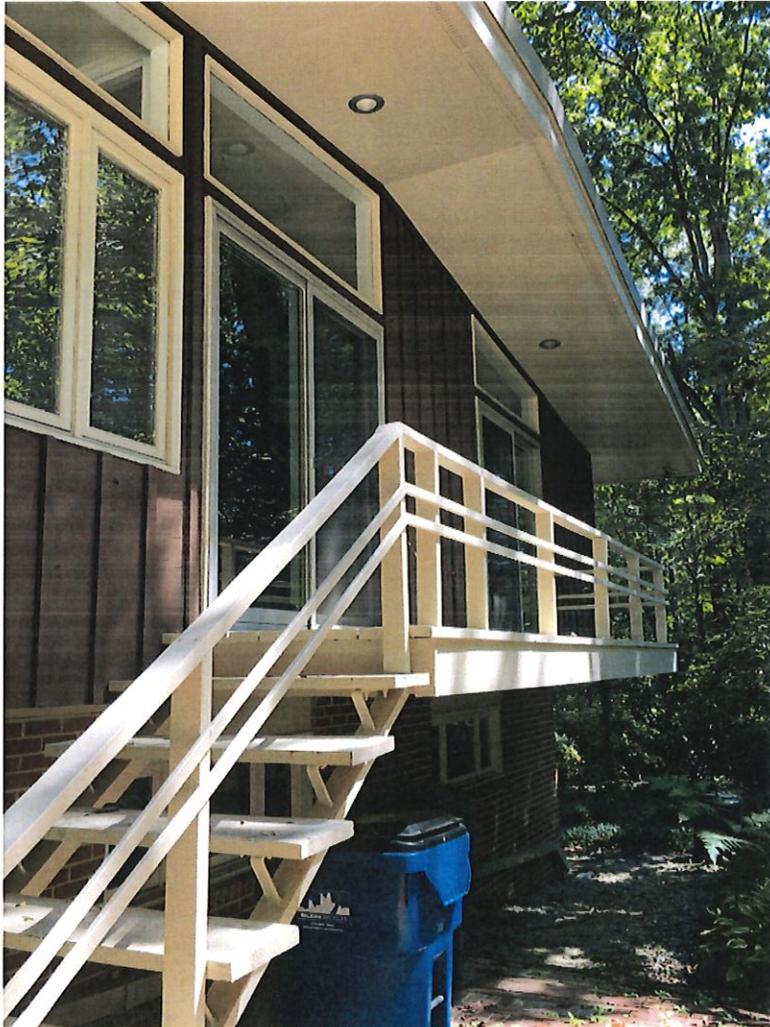


**Southwest Elevation**





**Southwest Elevation**



Section 10A: Photographs



Façade View (NW corner)



Façade – Main House (NW corner)

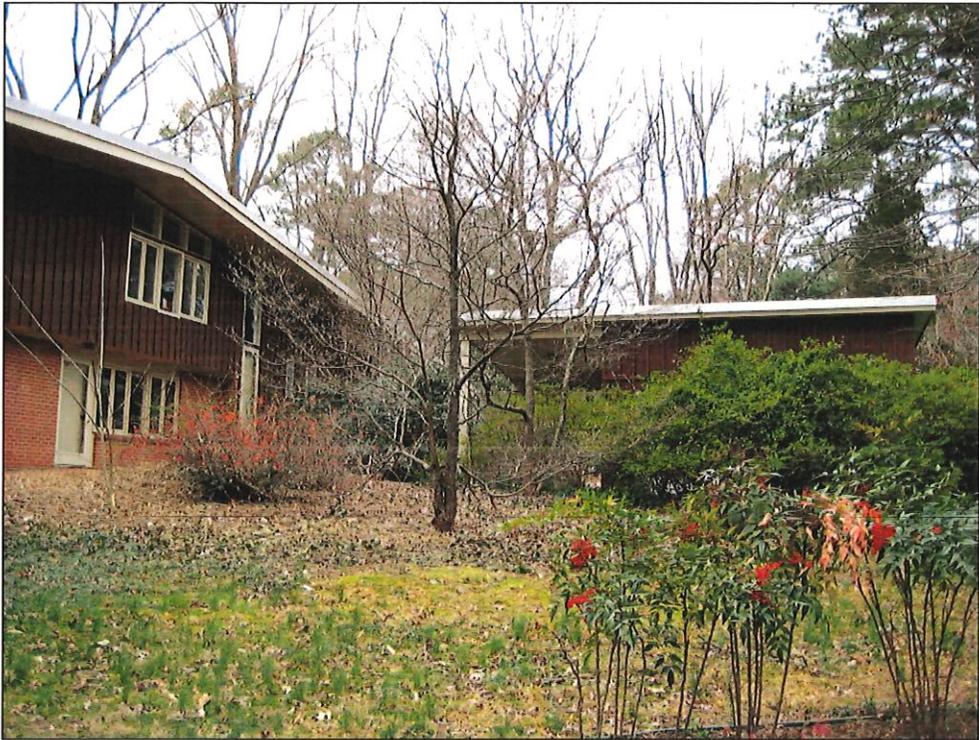


Garage (NW elevation)



Façade (NE corner)

Welles, Paul and Ellen House  
Landmark Application  
March 2009



Garage (Rear/SE elevation)



NE corner (view of façade and east/side elevation)

Welles, Paul and Ellen House  
Landmark Application  
March 2009



SE corner (view of rear and east/side elevation)



Rear/SW elevation



Front entrance



Eave detail on rear/SW elevation



Detail of Rear/SW elevation (rear deck and stair)



Eave and rear deck/stair detail (SE corner)

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National Park Service

**NATIONAL REGISTER OF HISTORIC PLACES  
CONTINUATION SHEET**

**Section 7 Page 1**  
**Welles, Paul and Ellen, House**  
**Wake County, N.C.**

**Section 7: Description**

The dwelling built for Paul and Ellen Welles in 1956 at 3227 Birnamwood Road in the Highland Gardens subdivision on the western outskirts of Raleigh, Wake County, North Carolina is a dramatic, contemporary Split-Level with five bedrooms, four baths, and an open floor plan with soaring ceilings and large areas of glass. The house nestles into a hillside on a spacious wooded 1.88-acre lot in the subdivision, bounded by Ridge Road, Darien Drive, Dixie Trail, and Lewis Farm Road. It sits close to Birnamwood Road, with the north front façade partially concealed by the free-standing garage-carport built ca. 1990. Architect Kenneth Scott actually considered the rear elevation as the front because it overlooks a large meadow that covers most of the site. While the Welles House is virtually unaltered, surrounding mid-twentieth century houses are gradually being replaced with large new residences.

The approximately 3,000 square foot house is generally rectangular in form, with an asymmetrical side-gable roof with wide overhanging eaves. At the east end the house stands two stories tall, with a brick-veneered lower level that is partially sunken into the ground at the rear and a slightly cantilevered upper level sheathed with board-and-batten siding. The ridge of the side-gable roof is situated in the middle of the east section and slopes over five bays to the west wall. The west one-story section, sheathed with board-and-batten siding, contains the living room, dining room, kitchen, and screened porch. The wide board-and-batten siding of rough-milled lumber is stained a dark brown. Windows are a combination of fixed glass and aluminum casements. All single doors are glazed, with wooden frames. All double doors are either wood or sliding metal types. An interior brick chimney divides the entrance foyer from the living room. The roof, originally of tar and gravel, is now covered with a rubber membrane.

The north elevation facing Birnamwood Road is six bays wide. The main entrance, in the next-to-last bay on the west end, is recessed to create a shallow porch. The bay contains a wide single door flanked by fixed panes of glass and a glazed transom separated by wide flat finish boards. Double and triple-paned aluminum sliding windows flank the entrance bay. In the center of the elevation is a single door into the kitchen, with a tall transom window above it. The eastern bay contains a door and adjacent set of five-paned windows in the lower level and a set of five-paned windows with transoms in the upper level.

The south elevation opens to the scenic meadow behind the house through the fully glazed walls of the one-story section. A shallow gabled wing projects from this elevation, containing an extension of the living room in the west half and a screen porch in the east half. A den (originally intended as a mother-in-law bedroom) occupies the east end of the house. The south walls of the den, living room, and dining room are fully glazed with two sliding wooden doors flanked by fixed full-height panes of glass, with glazed transoms above. Some of the transom panes are trapezoidal in shape to follow the shape of the roofline, and bring additional light to the interior. On this elevation the lower level at the east end has small sliding glass windows and is partially sunken into the ground. A cantilevered wooden stair rises from the side door of the screen porch to a cantilevered wooden balcony running along the upper bedroom level. Two sliding doors provide access to the children's bedrooms and the master bedroom. A three-paned window with a fixed center pane and flanking

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**NATIONAL REGISTER OF HISTORIC PLACES  
CONTINUATION SHEET**

**Section 7 Page 2**  
**Welles, Paul and Ellen, House**  
**Wake County, N.C.**

casements in the children's rooms and glazed transoms provide additional light.

The narrow east elevation consists of the unfenestrated brick veneer wall of the lower level and the board-and-batten wall of the upper elevation with a centered double-pane casement window. The narrow west elevation has board-and-batten siding and a centered double-pane sliding window.

Original contemporary hardscaping relates the house to its site. A four-foot wide brick walkway extends around three sides of the house. In the front, this walkway is elevated, with brick terraces extending down the slope to the driveway. In the rear, the walkway widens into a brick patio beside the living room.

Original plans called for a two-car flat-roofed free-standing carport to be centered in front of the house, at the end of the driveway that curves off Birnamwood Road. Because this was not built, the second owners, the Dahles, constructed a combination one-car garage and open carport in the same location about 1990. In order to relate it visually to the house, the outbuilding has similar rough-cut board-and-batten siding, a low shed roof, and solid wooden carport posts. Due to its age, this outbuilding is noncontributing, but its design harmonizes with the house architecture.

The interior plan and finish is almost completely unaltered. The floor plan from the original blueprints shows the main and upper levels (see Figure 1). The main level contains an entrance foyer, living room, dining room/kitchen, and a suite consisting of a den and bathroom. The upper level contains a master bedroom and bath, two children's bedrooms divided by a wooden accordion wall, a fourth bedroom, and a hall bathroom. The lower level is labeled recreation room on the blueprints. Short flights of stairs ascend to the upper level and descend to the lower level. Floors are carpeted except for hardwood in the master bedroom and den and linoleum in the foyer, kitchen, and baths. Walls are of sheetrock with the exception of the partition wall of the foyer and living room, made of unpainted antique pine salvaged from the flooring of Mrs. Welles's childhood home in downtown Raleigh and laid horizontally. Ceilings are of sheetrock with the exception of the antique pine ceiling in the dining room. All ceilings in the main level and upper level consist of the underside of the roofline, thus ceilings in the center section containing the kitchen, dining, and living rooms are high and dramatic.

Entering into the foyer, one faces the wide expanse of brick chimney that soars through the ceiling. A double closet built of antique pine sits to the left of the chimney. The living room contains a wood-burning fireplace with exposed brick chimney stack, as well as side and rear walls of full glass, overlooking the back yard. To the right of the living room is a large den, with an entertainment center (in place of the original utility kitchen) concealed behind closed doors along one wall. Adjacent to the den, in the front right corner of the house, is a full bath and laundry room. To the left of the living room, the adjacent kitchen and dining room form one large space with a soaring antique pine ceiling. The galley kitchen, overlooking the front yard, contains its original birch plywood cabinetry, constructed on site. One section of cabinetry runs along the front wall. A parallel section of cabinetry forms a divider, with open shelves above the lower cabinets for the storage of tableware that allow views through to the dining room, and three pass-through openings with drop-leaf shelves. In the

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**NATIONAL REGISTER OF HISTORIC PLACES  
CONTINUATION SHEET**

**Section 7 Page 3  
Welles, Paul and Ellen, House  
Wake County, N.C.**

dining room, the east wall contains built-in closets and drawer storage. One section originally contained a fold-down table, but this has been converted into open shelving. To the rear of the dining room, a screened porch provides access to the outdoor terrace.

The upper bedroom level has double-loaded bedrooms flanking a narrow hall. On the front side of the hall is a single bedroom, then a hall bathroom, and, at the end of the hall, a master bedroom with adjoining master bath with dressing area. Along the rear side of the hall are two small bedrooms with a wooden folding divider between them. Above the divider is a glazed transom. One wall of these bedrooms contains built-in storage consisting of closets and drawers.

Down another half-flight of stairs below the main level is the lower level, originally left with stud walls dividing the space into two bedrooms, a bath, and a recreation room. In 1977 when the current owners purchased the house, they sheetrocked and finished these rooms for their originally-intended functions.

The integrity level of the 1956 Welles House is quite high, for only a few alterations have been made. The current owners replaced the original tar and gravel roof with a membrane roof, made some minor reconfigurations of some of the storage walls, and constructed a garage and carport in front about 1990.

### Proposed Changes to 3227 Birnamwood Rd

The new home owners would like to add a relatively small addition (177SF footprint on grade + 177SF finished space on second floor with 110SF Screened Porch) to the two story narrow east elevation which houses the private portions of the house so that a larger master suite can be created. The addition will be inset 11" from both the second floor front wall and the basement front wall of the northeast elevation and 12" from the southeast elevation second floor wall, it will maintain the same cantilevered second floor to match the existing house, the same rough sawn board and batten siding, and brick veneered foundation to match the existing house. New windows shown in the addition will be aluminum casements to be similar to the existing windows throughout the house. A low sloped gable roof is planned to differentiate the addition from the rest of the house, but also relates to the main house in slope of roof, material (rubber membrane) and in shape (low gable).

#### Section 3.2

1. Construct additions, if feasible, to be structurally self-supporting to reduce any damage to the historic building. Sensitively attach them to the historic building so that the loss of historic materials and details is minimized. - **The addition is located on the narrow end wall of the east portion of the house which appears to be the least character defining of the four elevations, see Section 7 – Description of House in the Landmark Application.**
2. Design additions so that the overall character of the site, site topography, character-defining site features, trees, and significant district vistas and views are retained. – **The addition is small in footprint and requires little disturbance of the site, the gravel path will be continued around the addition.**
6. Locate a new addition on an inconspicuous face of the historic building, usually the rear one. – **In this case we feel that the narrow ends of the house are the less character defining elevations, the rear elevation of this house is a significant elevation see Section 7 – Description of House in the Landmark Application.**
7. Limit the size and the scale of an addition in relationship to the historic building so that it does not diminish or visually overpower the building – **The new addition consists of 177SF footprint on grade (basement) + 177SF finished space on second floor with 110SF Screened Porch.**
8. Design an addition to be compatible with the historic building in mass, architectural style, materials, color, and relationship of solids to voids in the exterior walls, yet make the addition discernible from the original. – **The addition is inset and has a low sloped gable roof to differentiate itself from the existing house. The addition is compatible in all other respects.**
9. Design additions so that the placement, configuration, materials, and overall proportion of windows and doors are compatible with those of the historic building. Select exterior surface materials and architectural details that are compatible with the existing building in terms of composition, module, texture, pattern, and detail. – **The addition uses the same sized windows as are on the existing house and uses the same number of multiples when ganged together as the existing house. Rough sawn board and batten siding will be used and brick veneered foundation walls to match existing. A rubber membrane roof will be used for the addition as well as eave + soffit details to match existing. The addition will have a 3'-0"**

**overhang to differentiate itself from the existing house which has approximately 4'-0" overhangs.**

- 11. It is not appropriate to construct an addition that significantly changes the proportion of original built mass to open space on the individual site. – The addition's footprint is 177 SF, which increases the SF for each level by 177 SF. It adds a 110SF screened porch to the second floor. The overall existing SF of the house is app. 3,000 SF.**
- 12. It is not appropriate to construct an addition if the overall proportion of built mass to open space on its site will significantly vary from the surrounding buildings and sites that contribute to the special character of the historic district. – This house is not located in a historic district and is on the smaller side as far as SF goes for the neighborhood.**

There is one skylight proposed to be added to the existing roof over the master bathroom, this skylight will not be visible from the street due to the low slope of the roof line and the two story height of the house. There is an existing skylight located on the west end over the guest bathroom on the entry level of the house.

The home owners would like to add a small window to the master bathroom in order to allow natural light in and a view out. The window is similar in size to existing windows around the house. Windows are also shown added to the basement on this same elevation (North East), they are similar in size to the existing windows already located in the basement. In the master bedroom beyond where the addition is to be placed, we have shown a new french-casement window and a new exterior door on the narrow east elevation. In the Landmark application Section 7- Description of the house, it references the design intention of the architect as the North East elevation of the house as being the "rear" elevation of the house (facing the expansive rear yard), with this in mind the new windows would be added to rear elevation and not the character defining elevation of the house (the South West).

## **Section 2.7**

- 9. If additional windows or doors are necessary for a new use, install them on a rear or non-character-defining facade of the building, but only if they do not compromise the architectural integrity of the building. Design such units to be compatible with the overall design of the building, but not to duplicate the original. – New windows are located on the "rear" of the house and allow for natural light in areas where it is currently missing. One small window will be added to the master bathroom. A skylight to be added for the master bathroom to provide more natural light without needing more windows on the elevation and the skylight will not be visible from grade due to roof height and slope. New windows added to the basement to add more natural light to this area, these will be blocked from view by the existing garage and carport from the street and as you approach from the driveway. It is very dark in this existing rear corner which will be a second living area for the home owners. A new french-casement window and exterior door will be added in the master bedroom to add natural light in that room beyond the addition and provide access to the new screened porch.**

The existing raised brick walkway that lines the street view elevation needs to be rebuilt due to the uneven settling of the bricks and the bulging of the brick site/retaining walls. The owners would like to reuse the existing brick and rebuild the site walls/walkway to be more structurally sound. A concrete slab would be poured under the surface of the brick walk to keep the bricks from settling unevenly and bricks to be mortared to prevent movement. The bricks will be re-installed in a straight laid pattern as it is currently.

### Section 2.8

3. Repair historic entrances, porches, and balconies and their distinctive features and materials using recognized preservation methods for patching, consolidating, splicing, and reinforcing. – **Rebuild the raised brick walk way, site/retaining brick wall, and brick steps to correct the uneven settling of the bricks and the bulging of the brick walls of the walkway. Reuse all bricks and rebuild it back to the way it was with the exception that there will be a concrete slab below the brick walk and brick will be mortared to prevent the problems from reoccurring in the future.**

The home owners would like to expand the screen porch deeper into the yard by 5'-0". We intend to extend the screen porch half of the gable roof out to cover the addition. This will allow the screen porch and overall aesthetic of this elevation of the house to remain intact.

### Section 2.8

9. It is not appropriate to remove an original entrance or porch or to add a new entrance or porch on character-defining facades – **The owners would like expand the screen porch in depth only, and all existing wood framing for screen to be moved forward and new members for expansion will be made to match existing. The screen porch half of the gable would extrude out to cover the new portion of porch. All detailing, trim work, and beam extensions to match existing.**

The cantilevered deck and stairs on the "front" of the house (southwest elevation facing the rear yard) have wood boards that have been painted. The boards are cupping and uneven, the stair treads are standard 2x12's and the decking is made up of 2x6's. The owners would like to replace these boards if possible with a stained wood material such as ipe or pressure treated decking and treads that are stained.

### Section 2.8

4. If replacement of a deteriorated historic detail or element of an entrance, porch, or balcony feature is necessary, replace only the deteriorated detail or element in kind rather than the entire feature. Match the original in design, dimension, and material. Consider compatible substitute materials only if using the original material is not technically feasible. – **Replace the boards in kind with similar material and dimension, but owners would prefer the wood to be stained versus painted.**

The cantilevered deck has a very low guard rail and the way that they have been constructed lends them to being a little less structurally stable than modern rail systems. The owners would at the very least like to raise the height of them to 36" and if possible beef up the supports to make the rail more structurally sound. The new screened porch (part of the addition), is a second floor porch which will have to have rails/pickets per code. We have proposed metal cable rails for this porch since it is a new structure and they will continue the horizontal aesthetic.

The garage was built in ca. 1990 (see Landmark Application Section 7-Description), the plans called for a two car garage but what was built was a one car garage and a carport. The home owners would like to widen the garage door from an 8'-0" door to a 16'-0" single door.

Owners would also like to add low site walls lining the gravel driveway. There are several areas of large stones used as landscaping around the front of the house, the site walls would relate to these by being a stacked stone with a blue stone cap and also differentiate themselves from the site walls of the raised walkway by being another material other than brick. See images attached.

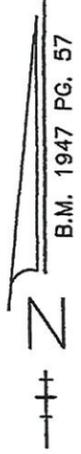
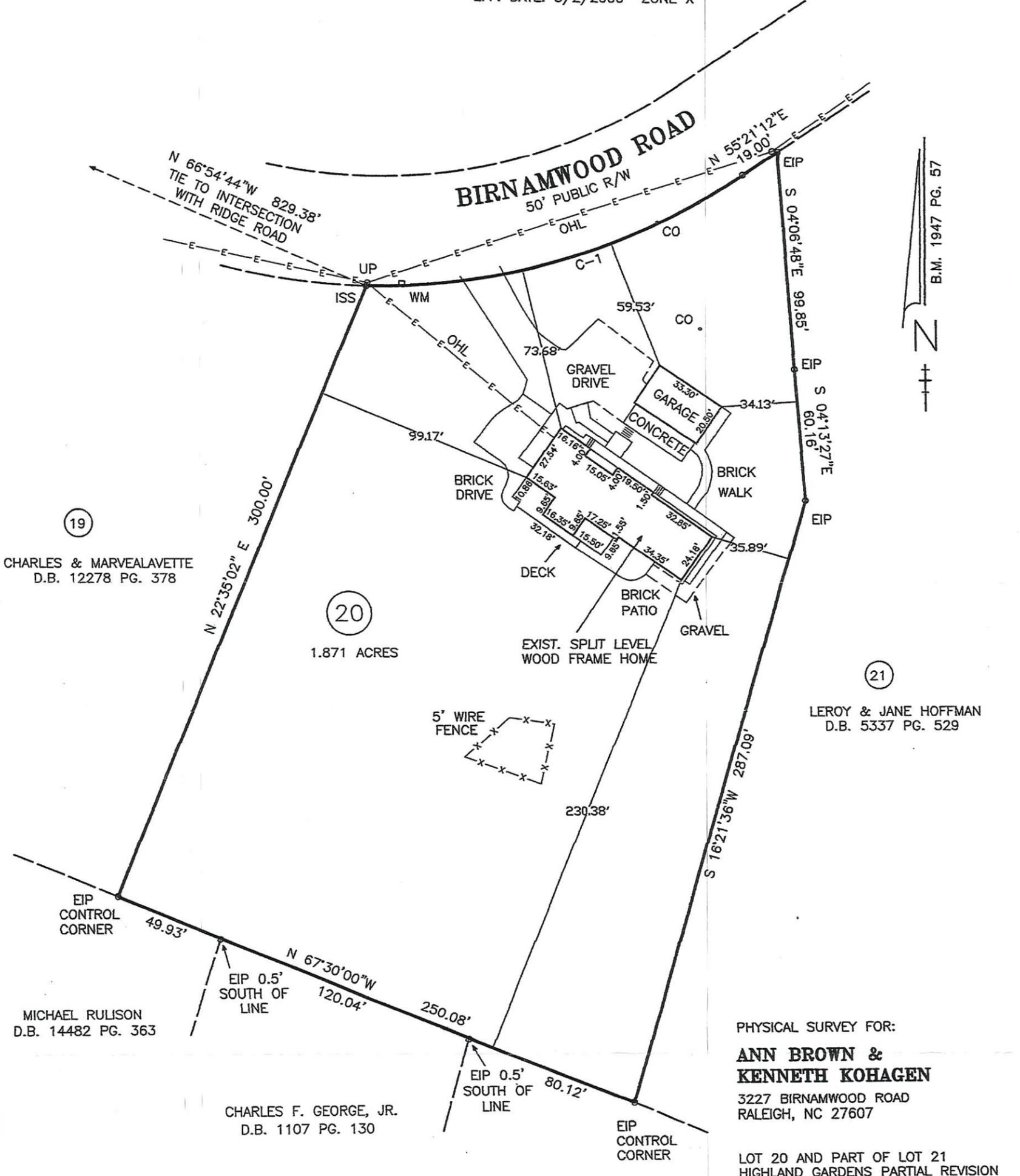


VICINITY MAP NTS

LEGEND	CURVE	RADIUS	LENGTH	DELTA	CHORD	CH.BEARING
EIP - EXISTING IRON PIPE	C-1	287.90'	180.07'	35°50'07"	177.15'	N 73°04'47"E
ISS - IRON STAKE SET						
WM - WATER METER						
CO - SEWER CLEAN OUT						
UP - UTILITY POLE						
OHL - OVERHEAD LINES						
GM - GAS METER						
HVAC - HEAT/AIR UNIT						

NOTES  
 AREA BY COORDINATES  
 NO NCGS CONTROL FOUND WITHIN 2000'  
 PROPERTY SUBJECT TO BOTH ABOVE AND/OR  
 BELOW GROUND UTILITIES AND/OR EASEMENTS.

THIS LOT IS NOT LOCATED IN A  
 FLOOD HAZARD AREA PER  
 F.E.M.A. MAP #3720079400J  
 EFF. DATE: 5/2/2006 ZONE X



19  
 CHARLES & MARVEALAVETTE  
 D.B. 12278 PG. 378

20  
 1.871 ACRES

21  
 LEROY & JANE HOFFMAN  
 D.B. 5337 PG. 529

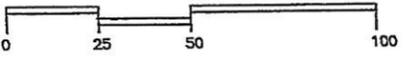
MICHAEL RULISON  
 D.B. 14482 PG. 363

CHARLES F. GEORGE, JR.  
 D.B. 1107 PG. 130

GEORGE F. WOOD  
 D.B. 3283 PG. 750

PHYSICAL SURVEY FOR:  
**ANN BROWN &  
 KENNETH KOHAGEN**  
 3227 BIRNAMWOOD ROAD  
 RALEIGH, NC 27607

LOT 20 AND PART OF LOT 21  
 HIGHLAND GARDENS PARTIAL REVISION  
 BOOK OF MAPS 1947 PAGE 57  
 DEED BOOK 2566 PAGE 319  
 PIN #0794493798  
 RALEIGH TOWNSHIP  
 WAKE COUNTY - NORTH CAROLINA  
 SCALE: 1" = 50' DECEMBER 27, 2016



BENTON DEWAR & ASSOCIATES  
 PROFESSIONAL LAND SURVEYOR  
 5920 HONEYCUTT ROAD  
 HOLLY SPRINGS, NC 27540  
 (919)-552-9813

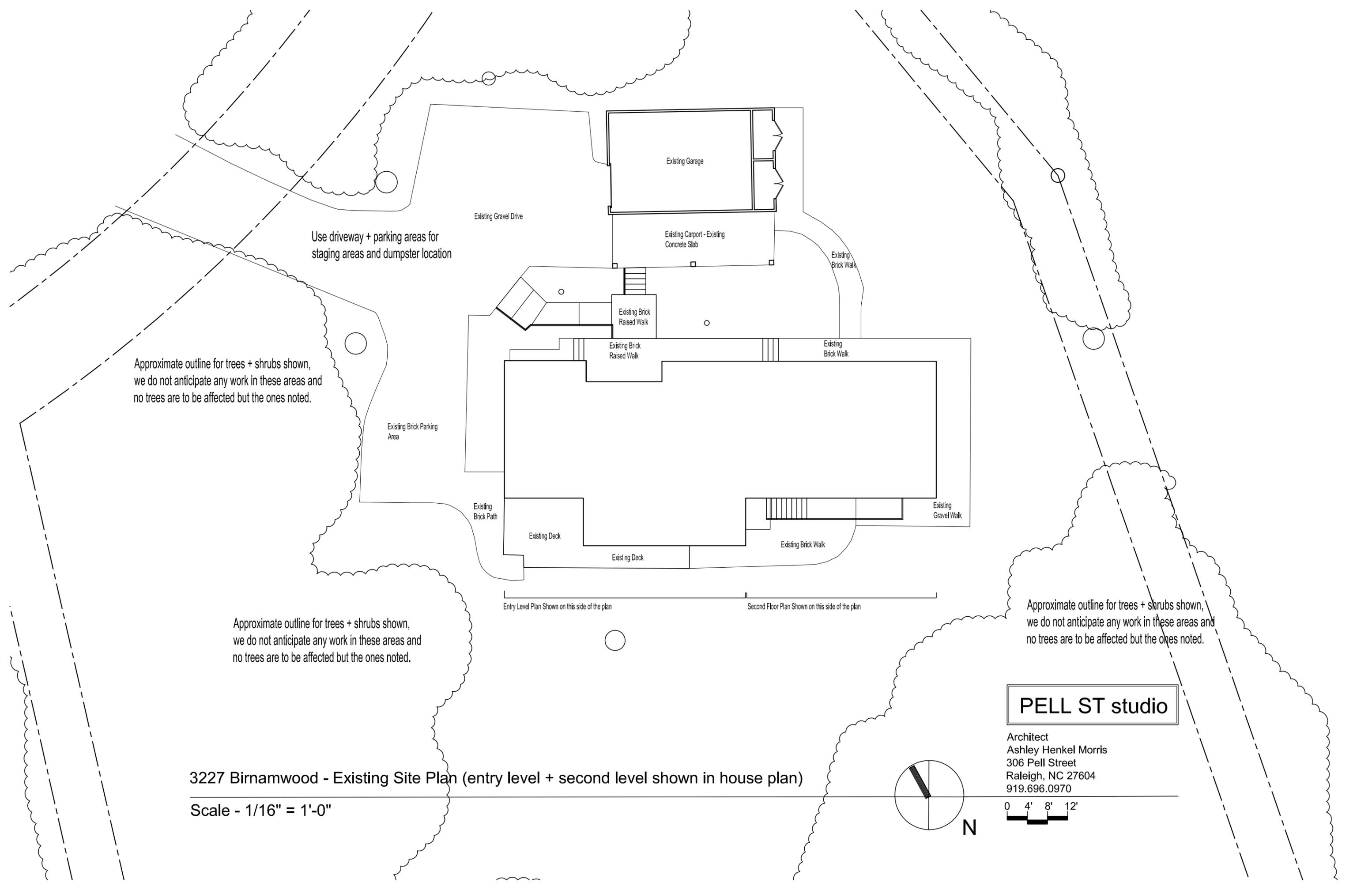
I, BENTON W. DEWAR CERTIFY THAT THIS PLAT WAS DRAWN UNDER  
 MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY  
 SUPERVISION; THAT THE RATIO OF PRECISION IS 1:10,000±  
 THAT THE BOUNDARIES NOT SURVEYED ARE SHOWN AS BROKEN LINES  
 PLOTTED FROM INFORMATION FOUND IN BOOK MAP 1947  
 PAGE 57; THAT THIS PLAT DOES NOT MEET SIZE REQUIREMENTS  
 FOR RECORDING IN THE REGISTER OF DEEDS, PER G.S. 47-30 AS AMMENDED.  
 LICENCE NUMBER AND SEAL THIS 29th DAY OF DEC. 2016



THIS PLAT IS OF A BOUNDARY SURVEY OF AN EXISTING  
 PARCEL OF LAND THAT IS REGULATED BY A COUNTY OR  
 MUNICIPALITY ORDINANCE THAT REGULATES PARCELS OF LAND.





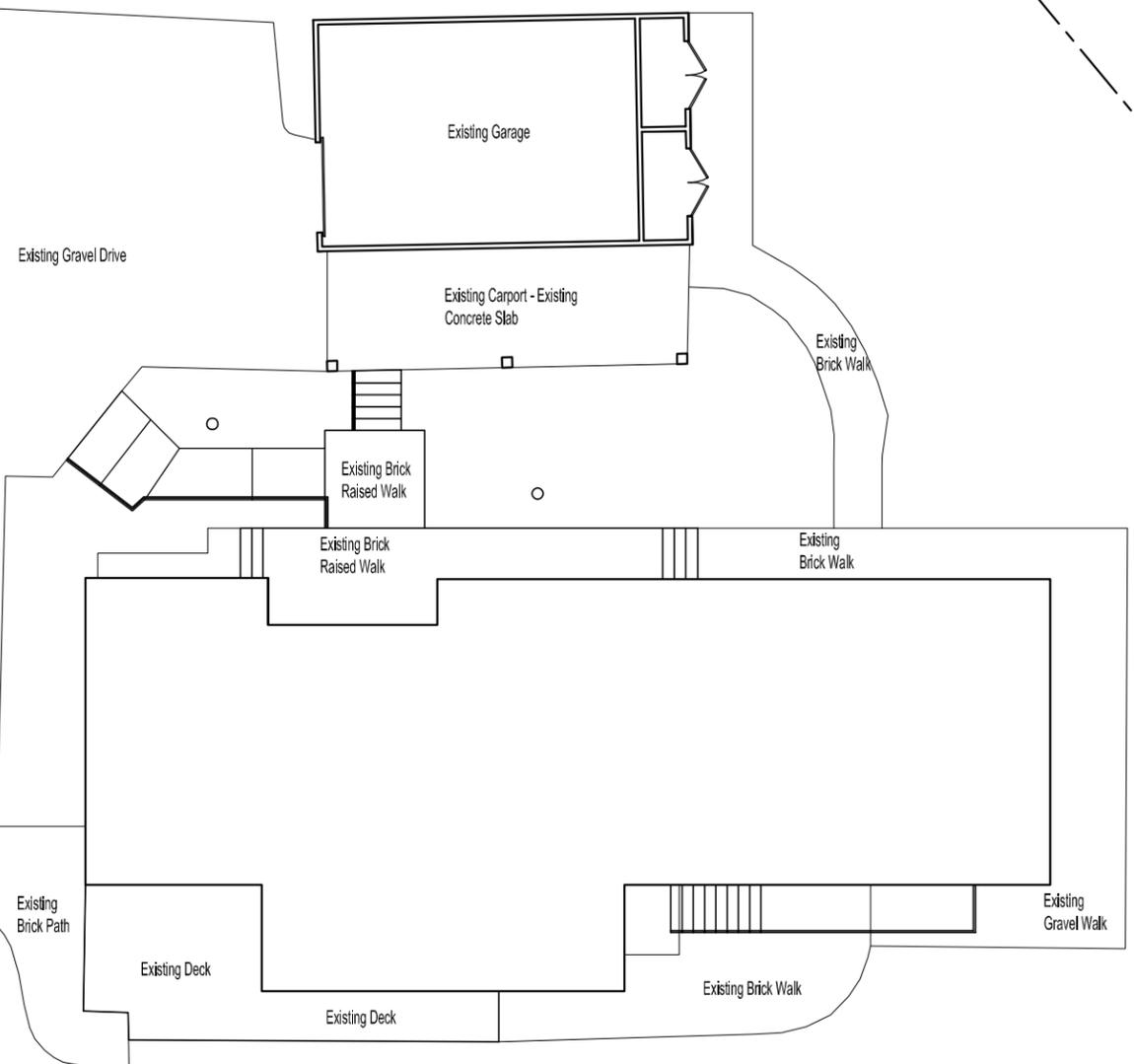


Use driveway + parking areas for staging areas and dumpster location

Approximate outline for trees + shrubs shown, we do not anticipate any work in these areas and no trees are to be affected but the ones noted.

Approximate outline for trees + shrubs shown, we do not anticipate any work in these areas and no trees are to be affected but the ones noted.

Approximate outline for trees + shrubs shown, we do not anticipate any work in these areas and no trees are to be affected but the ones noted.



Entry Level Plan Shown on this side of the plan

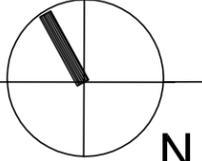
Second Floor Plan Shown on this side of the plan

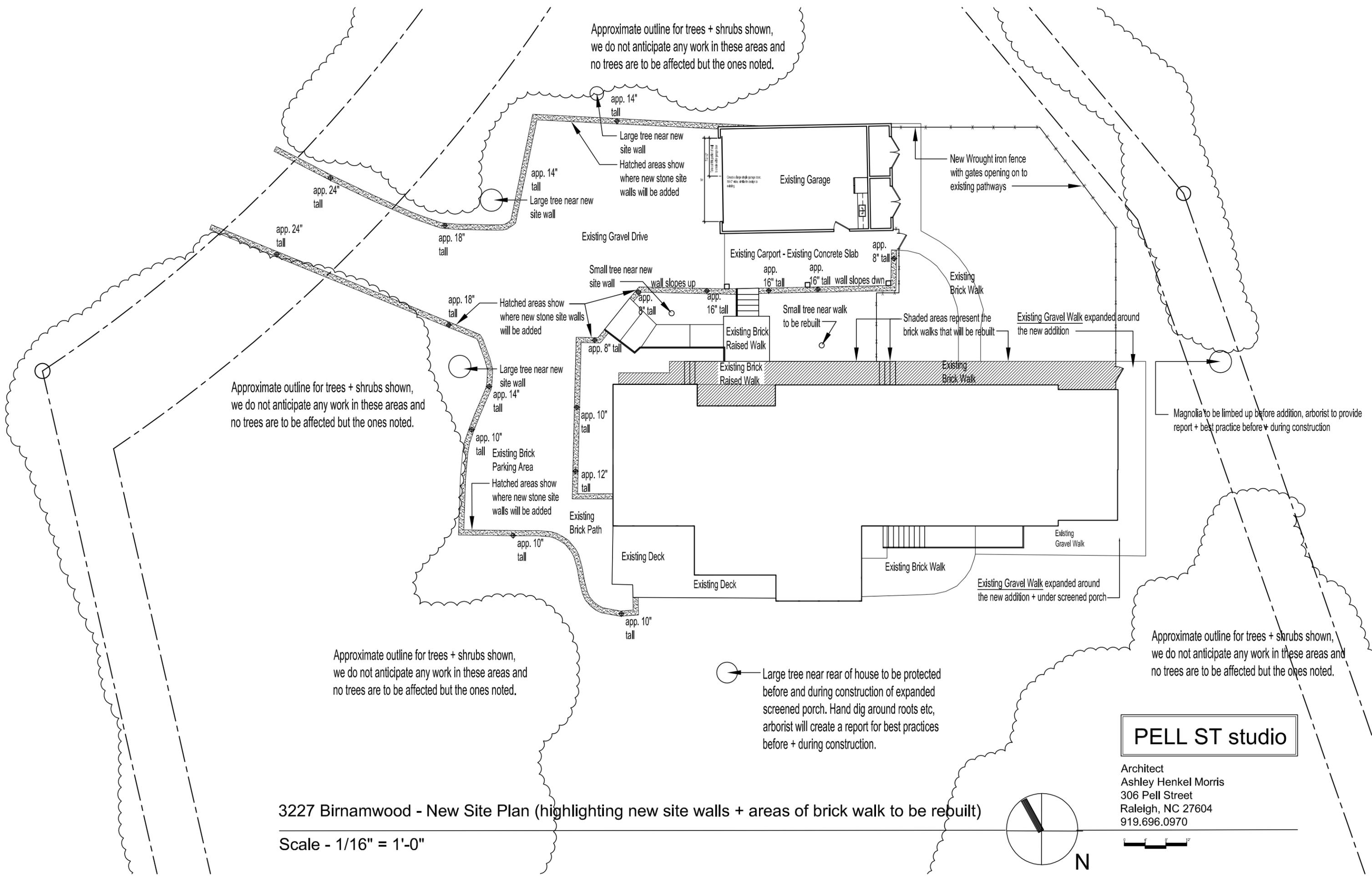
3227 Birnamwood - Existing Site Plan (entry level + second level shown in house plan)

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

**PELL ST studio**

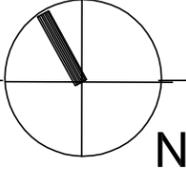
Architect  
 Ashley Henkel Morris  
 306 Pell Street  
 Raleigh, NC 27604  
 919.696.0970





3227 Birnamwood - New Site Plan (highlighting new site walls + areas of brick walk to be rebuilt)

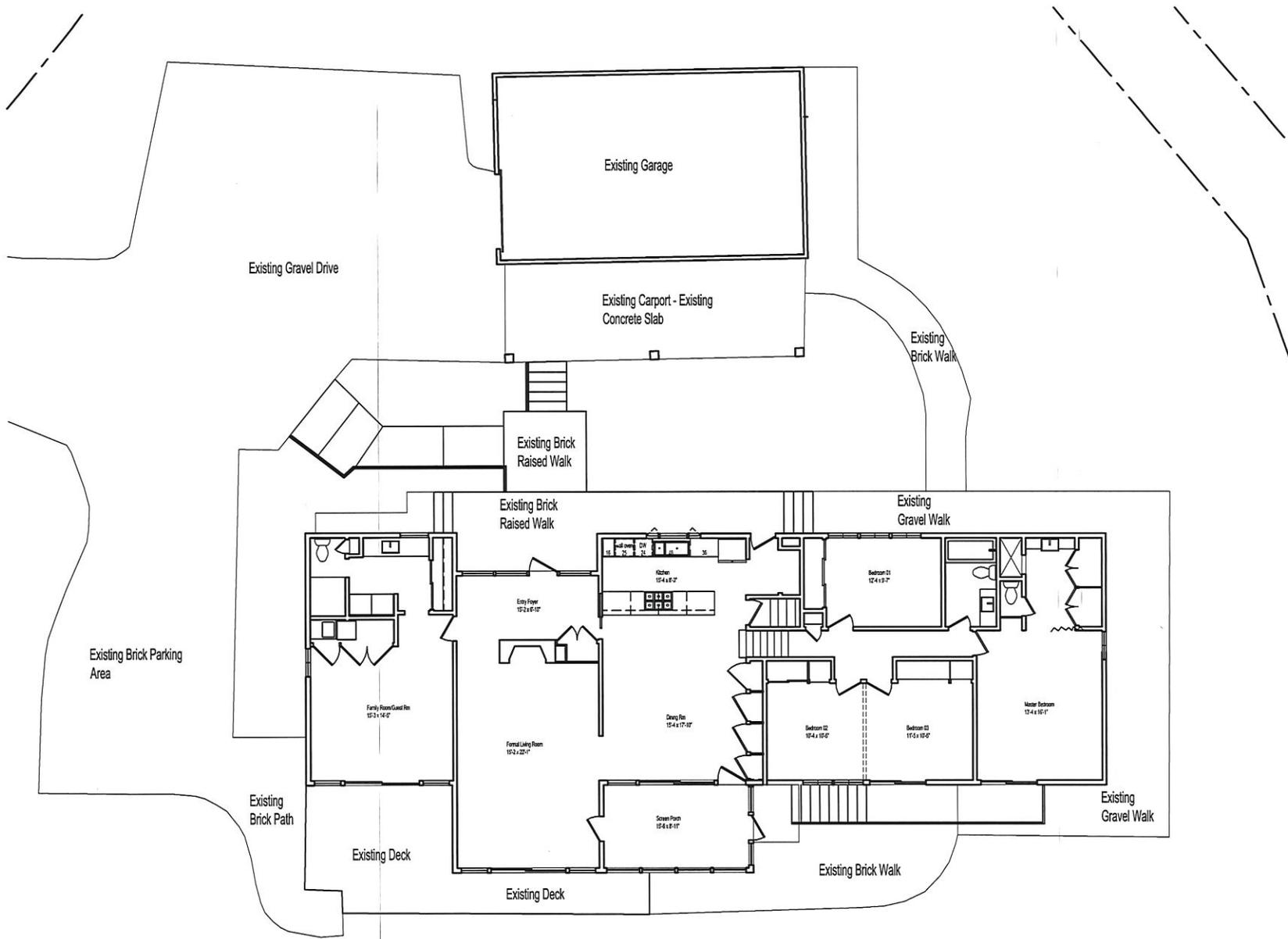
Scale - 1/16" = 1'-0"



**PELL ST studio**

Architect  
Ashley Henkel Morris  
306 Pell Street  
Raleigh, NC 27604  
919.696.0970





Entry Level Plan Shown on this side of the plan

Second Floor Plan Shown on this side of the plan

3227 Birnamwood - Existing Split Level Plan (Entry Level + Second Floor is shown on this plan)

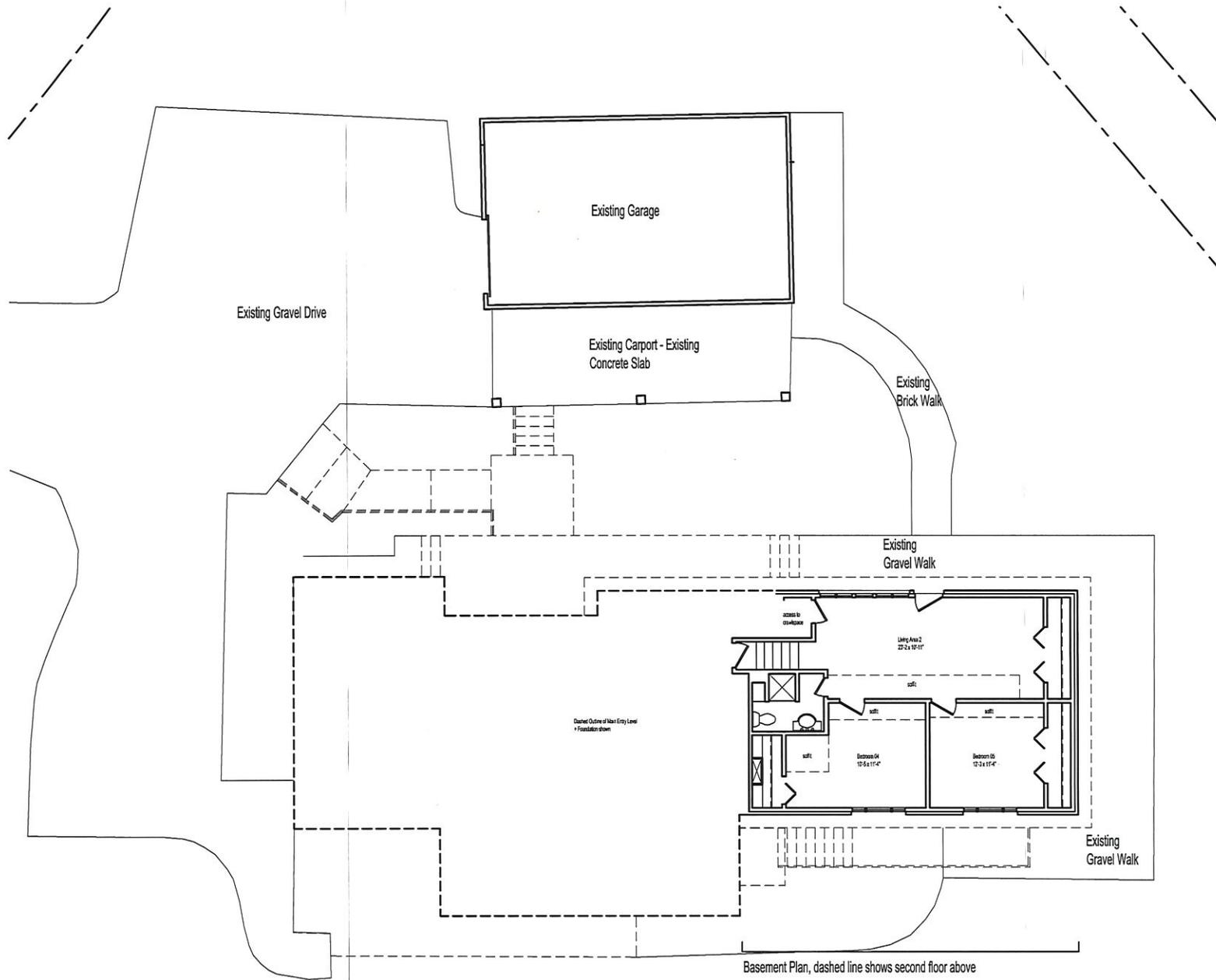
Scale - 1/16" = 1'-0"

PELL ST studio

Architect  
Ashley Henkel Morris  
308 Pell Street  
Raleigh, NC 27604  
919.896.0970







Basement Plan, dashed line shows second floor above

3227 Birnamwood - Existing Basement - already finished

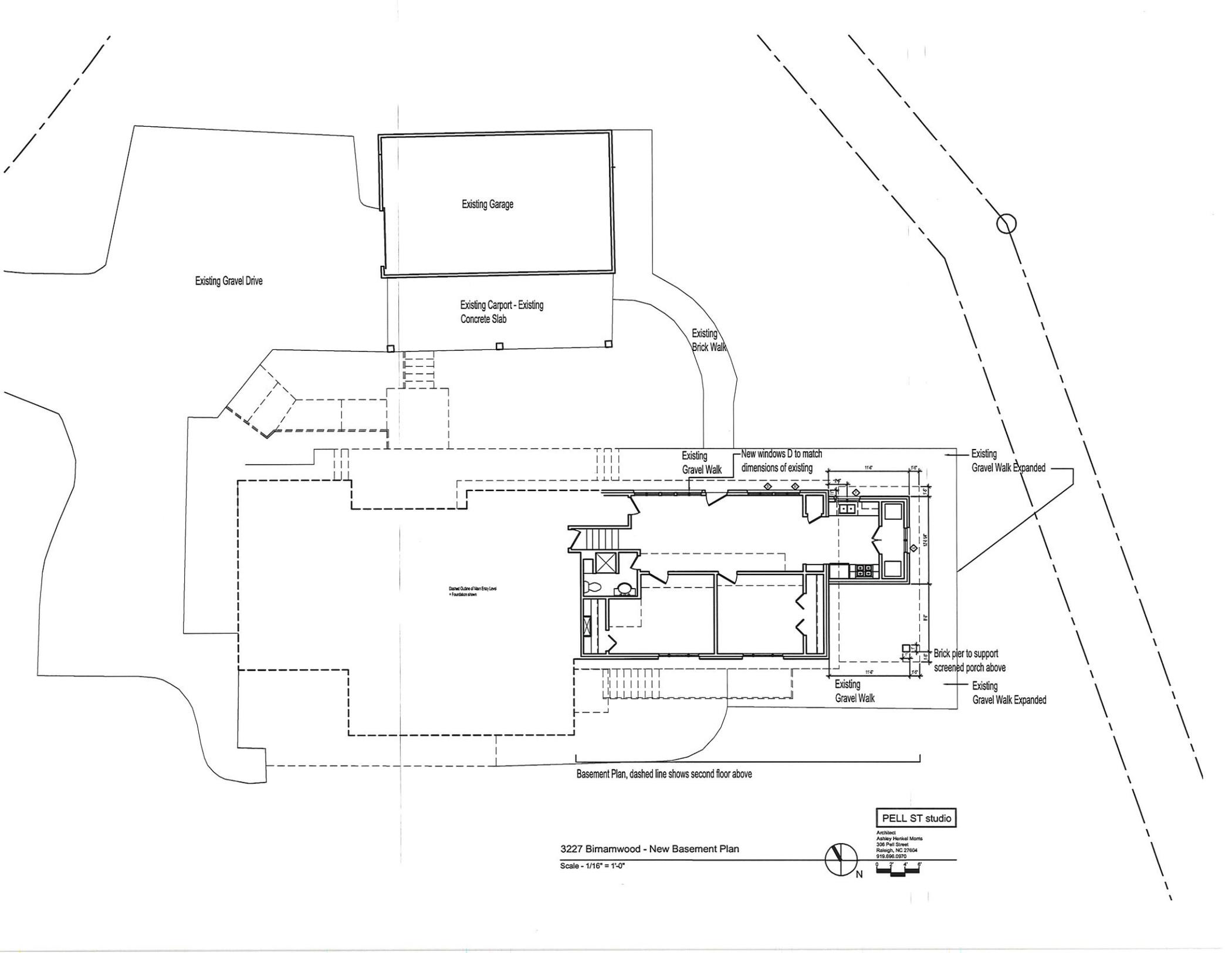
Scale - 1/16" = 1'-0"



**PELL ST studio**

Architect  
Ashley Henkel Morris  
306 Pell Street  
Raleigh, NC 27604  
919.696.0970





Existing Gravel Drive

Existing Garage

Existing Carport - Existing Concrete Slab

Existing Brick Walk

Existing Gravel Walk

New windows D to match dimensions of existing

Existing Gravel Walk Expanded

Original Outline of Main Entry Level  
+ Foundation shown

Brick pier to support screened porch above

Existing Gravel Walk

Existing Gravel Walk Expanded

Basement Plan, dashed line shows second floor above

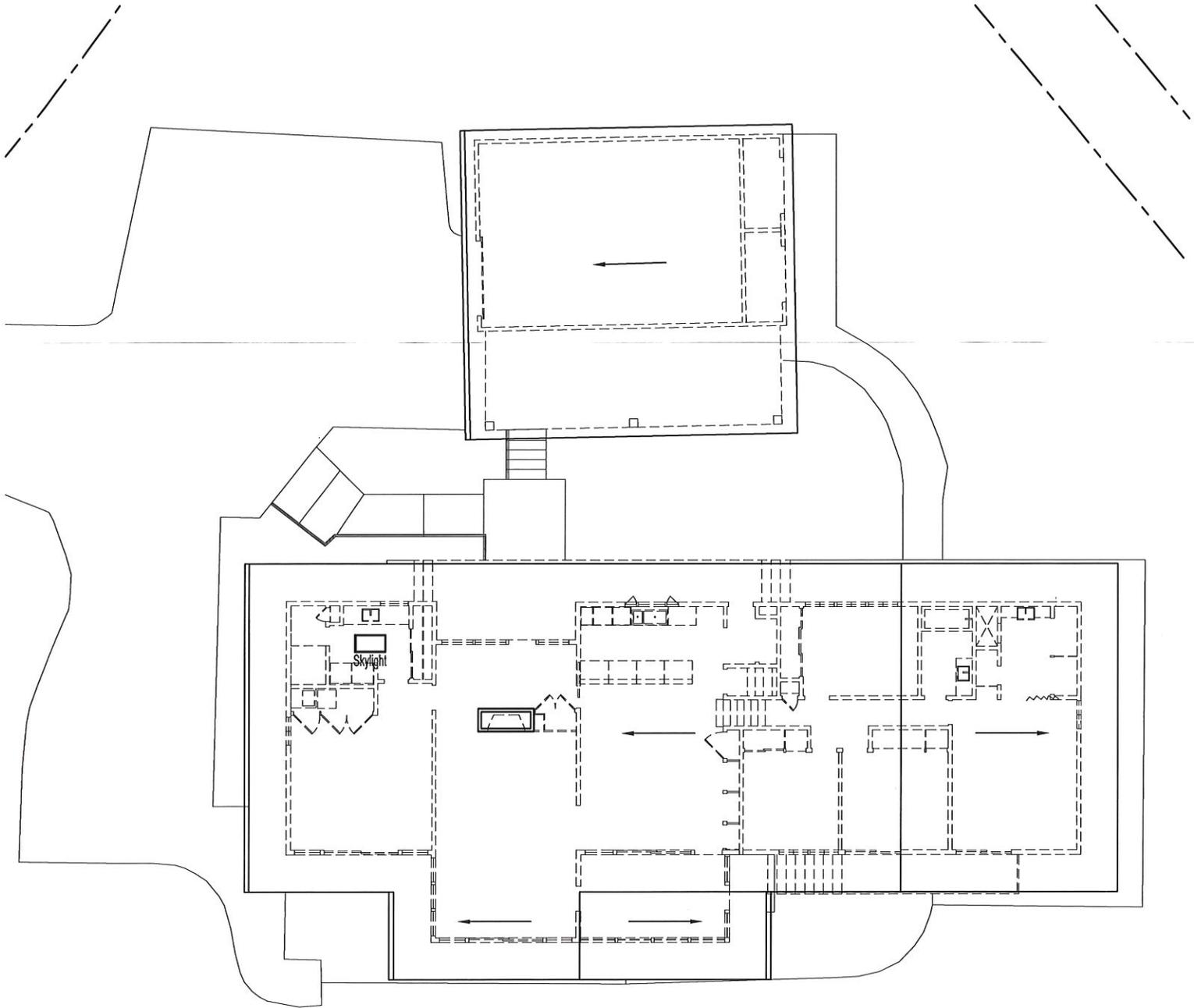
**PELL ST studio**

Architect  
Ashley Henkel Mays  
308 Pell Street  
Raleigh, NC 27604  
919.896.0970

3227 Bimamwood - New Basement Plan

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





Entry Level Plan Shown on this side of the plan

Second Floor Plan Shown on this side of the plan

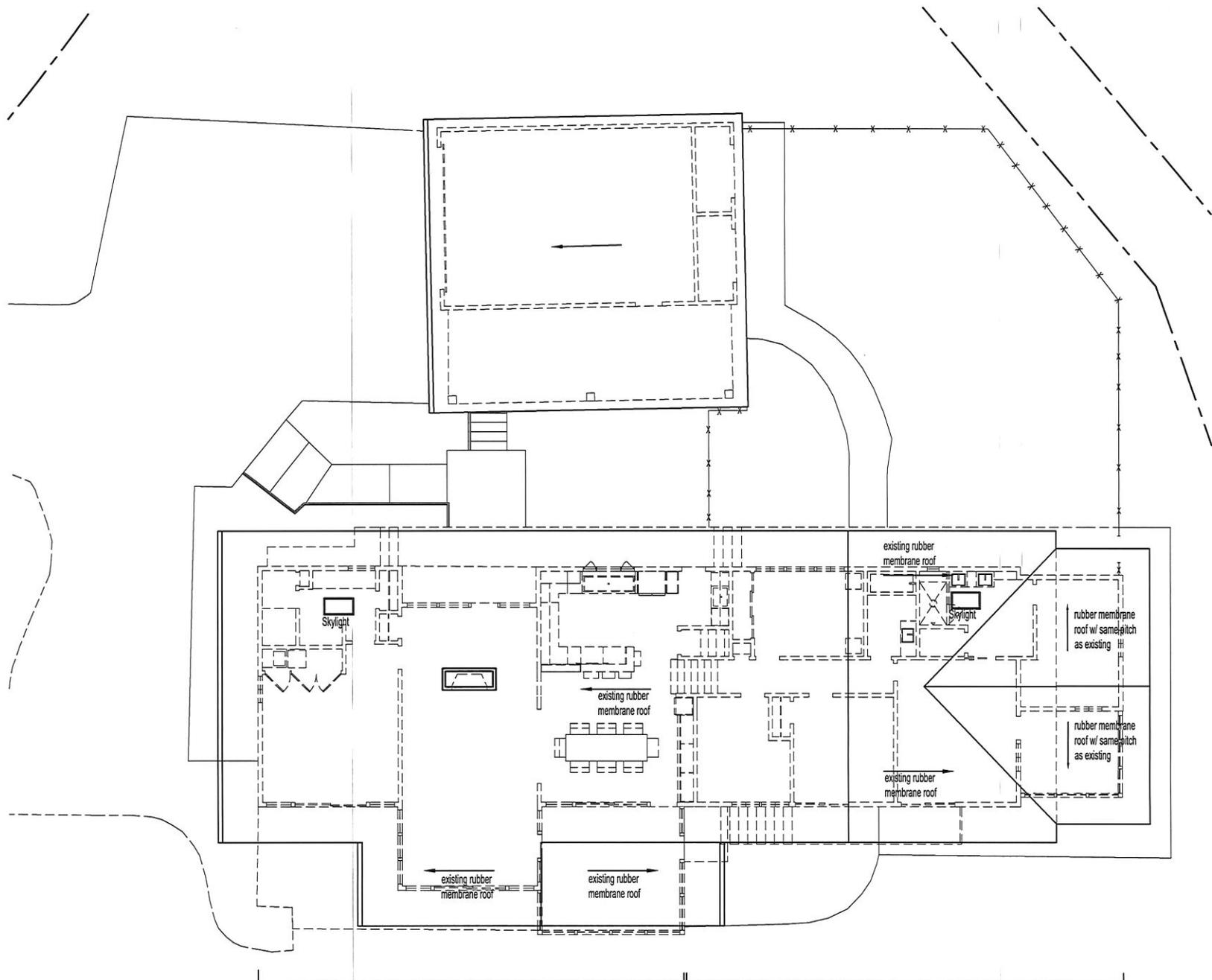
3227 Birnamwood - Existing Split Level Roof Plan

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

**PELL ST studio**

Architect  
Ashley Hankel Morris  
306 Pell Street  
Raleigh, NC 27604  
919.656.0270





Entry Level Plan Shown on this side of the plan

Second Floor Plan Shown on this side of the plan

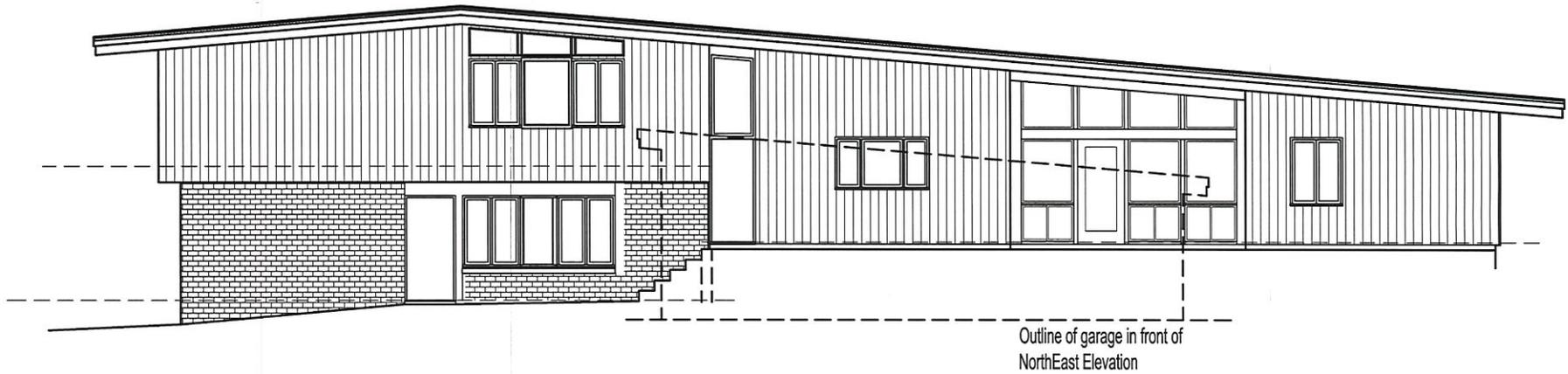
3227 Birnamwood - New Split Level Roof Plan

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

**PELL ST studio**

Architect  
Ashley Marshall Morris  
306 Pell Street  
Raleigh, NC 27604  
919.595.0070



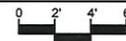


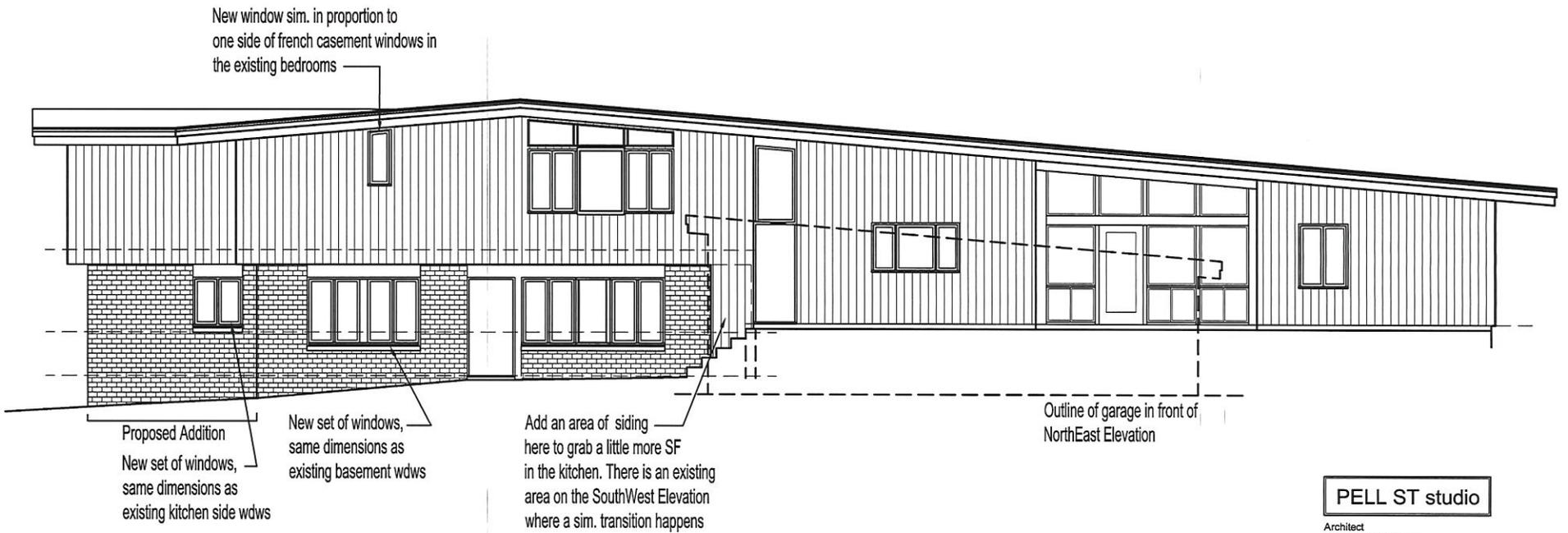
3227 Birnamwood - Existing NorthEast Elevation

Scale - 3/32" = 1'-0"

PELL ST studio

Architect  
Ashley Henkel Morris  
306 Pell Street  
Raleigh, NC 27604  
919.696.0970



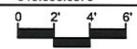


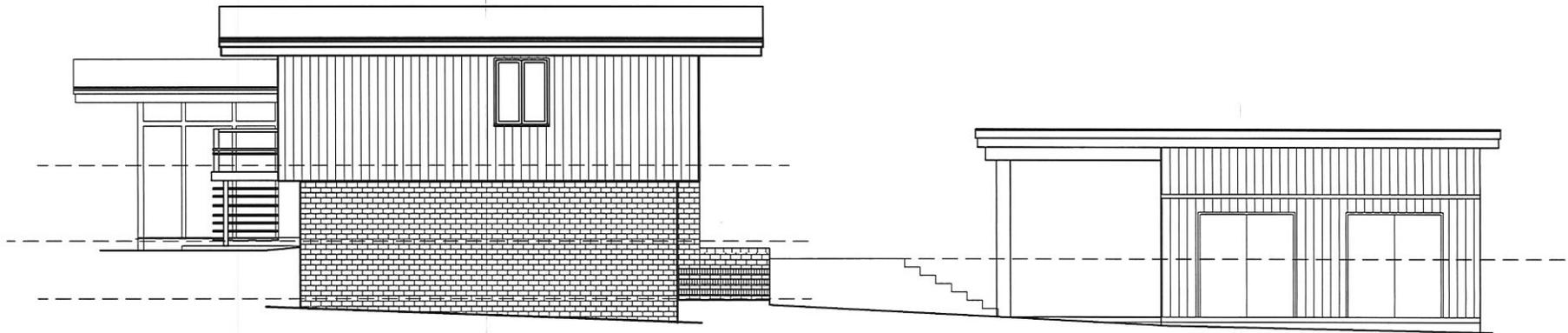
3227 Birnamwood - New NorthEast Elevation

Scale - 3/32" = 1'-0"

PELL ST studio

Architect  
Ashley Henkel Morris  
306 Pell Street  
Raleigh, NC 27604  
919.696.0970





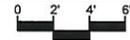
Garage

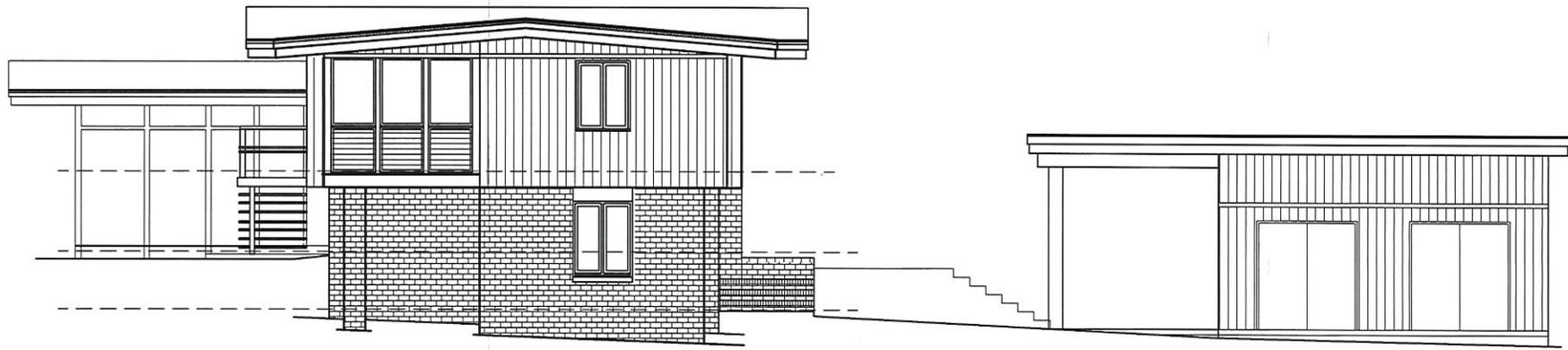
3227 Birnamwood - Existing East Elevation

Scale - 3/32" = 1'-0"

PELL ST studio

Architect  
Ashley Henkel Morris  
306 Pell Street  
Raleigh, NC 27604  
919.696.0970





Screened Porch  
Expansion

Thin horizontal cable rails to be  
used on lower screen panel for  
code (second floor screen porch)

Proposed Addition

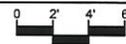
Garage

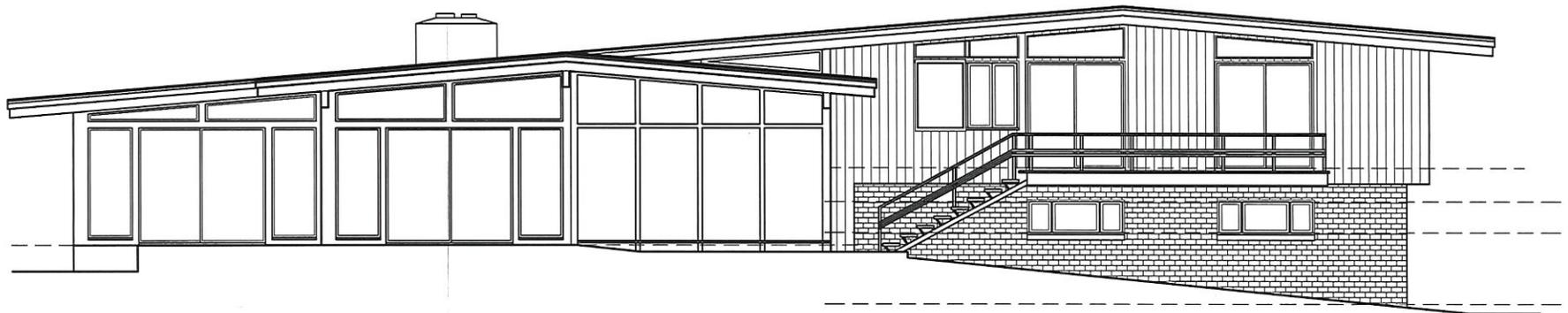
3227 Birnamwood - New East Elevation

Scale - 3/32" = 1'-0"

PELL ST studio

Architect  
Ashley Henkel Morris  
306 Pell Street  
Raleigh, NC 27604  
919.696.0970



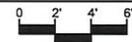


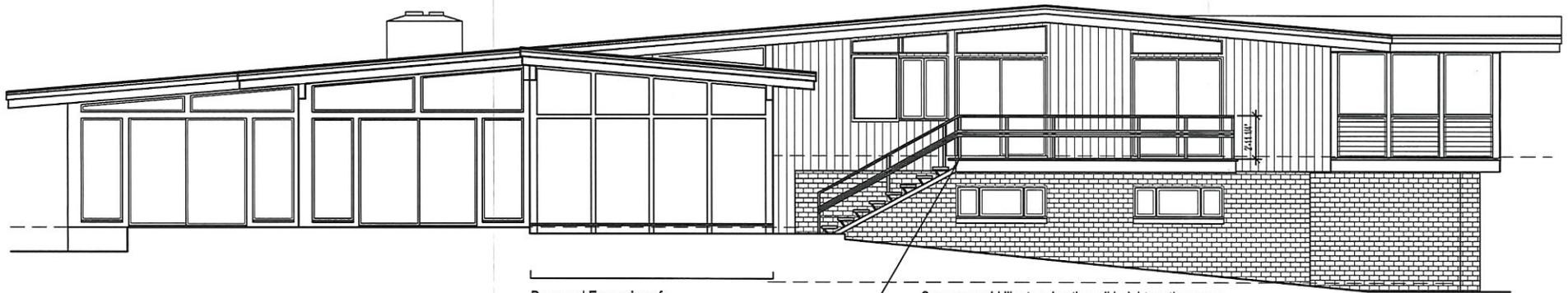
3227 Birnamwood - Existing SouthWest Elevation

Scale - 3/32" = 1'-0"

PELL ST studio

Architect  
Ashley Hankel Morris  
306 Pell Street  
Raleigh, NC 27604  
919.696.0970





Proposed Expansion of  
Screened Porch, existing roof  
extends out over screen porch  
expansion

Owners would like to raise the rail height on the upper  
deck. Propose having the stair rail extend to first post on  
deck and horizontal pickets up as well to create a taller  
guard and maintain existing aesthetic. Owners will  
strengthen supports as well.

Proposed Addition  
Thin horizontal cable rails to be  
used on lower screen panel for  
code (second floor screen porch)

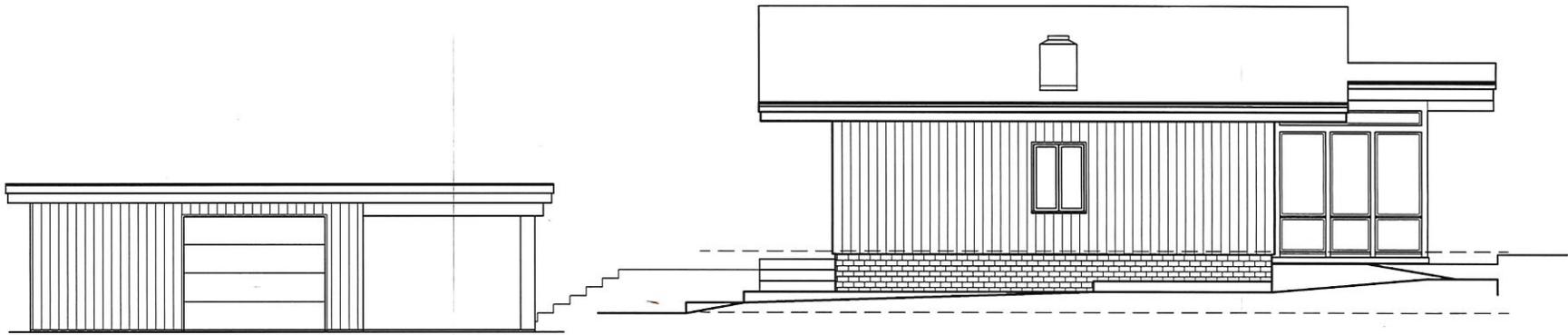
3227 Birnamwood - New SouthWest Elevation

Scale - 3/32" = 1'-0"

**PELL ST studio**

Architect  
Ashley Henkel Morris  
306 Pell Street  
Raleigh, NC 27604  
919.696.0970





Garage

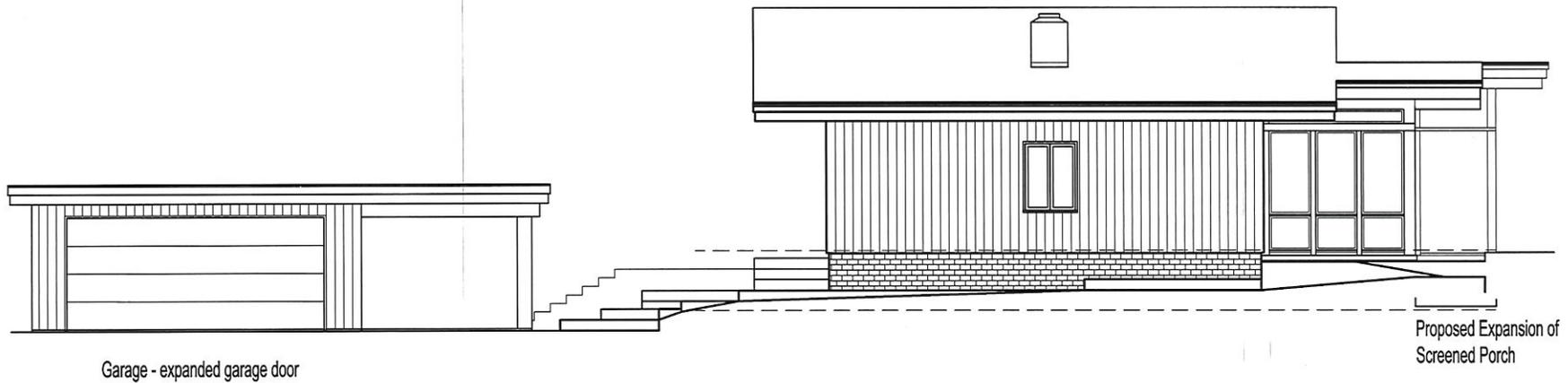
3227 Birnamwood - Existing West Elevation

Scale - 3/32" = 1'-0"

PELL ST studio

Architect  
Ashley Henkel Morris  
306 Pell Street  
Raleigh, NC 27604  
919.696.0970





Garage - expanded garage door

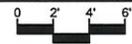
Proposed Expansion of Screened Porch

3227 Birnamwood - New West Elevation

Scale - 3/32" = 1'-0"

PELL ST studio

Architect  
Ashley Henkel Morris  
306 Pell Street  
Raleigh, NC 27604  
919.696.0970



**Tree Protection Plan**  
Katie Rose Levin (ISA Certified Arborist SO-6744A)  
Additional Notes:  
- Stone site walls to be hand built on grade with no excavation within the critical root zone of large trees  
- No concrete nor concrete washout shall be deposited on site. All wash down stations shall be located off site

**Tree protection fencing**

**Post oak (31DBH)**  
- Preventative borer treatments for one season  
- Optional root collar excavation on driveway side

Approximate outline for trees + shrubs shown, we do not anticipate any work in these areas and no trees are to be affected but the ones noted.

**Sweetgum tree (24DBH).**

**Willow Oak (32DBH)**  
-Optional phytophthora treatment

**3227 Birnamwood - New Site Plan (highlighting new site walls + areas of brick walk to be rebuilt)**

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

Approximate outline for trees + shrubs shown, we do not anticipate any work in these areas and no trees are to be affected but the ones noted.

**Kousa Dogwood (12DBH).**  
-Hand demolish brick walkway starting in the middle and moving out.  
-Preventative borer treatments for one season

Large tree near new site wall  
Hatched areas show where new stone site walls will be added

Existing Gravel Drive

Small tree near new site wall  
wall slopes up  
wall slopes down

Hatched areas show where new stone site walls will be added

Large tree near new site wall

Hatched areas show where new stone site walls will be added

Existing Brick Parking Area  
Hatched areas show where new stone site walls will be added

Existing Brick Path

Approximate outline for trees + shrubs shown, we do not anticipate any work in these areas and no trees are to be affected but the ones noted.

Large tree near rear of house to be protected before and during construction of expanded screened porch. Hand dig around roots etc, arborist will create a report for best practices before + during construction.

**Tulip Poplar (36DBH)**  
-Preventative borer treatments for one season  
--Deep root fertilization utilizing a low salt index, low nitrogen, probiotic mixture  
-Hand dig within critical root zone. Do not cut roots over 1" diameter.

**Japanese Maple (4")**  
-Root collar excavation

**American Elm (36DBH)**  
-Preventative borer treatments beginning this fall and occurring for two full growing seasons after  
-Deep root fertilization utilizing a low salt index, low nitrogen, probiotic mixture  
-Hand dig within critical root zone. Do not cut roots over 1" diameter.

Shaded areas represent the brick walks that will be rebuilt

Existing Gravel Walk expanded around the new addition + under screened porch

New Wrought iron fence with gates opening on to existing pathways

**Tree protection fencing**

**Southern Magnolia (22DBH)**  
- Only remove root sprouts post construction  
- Concrete slab to be poured on grade. If cut is necessary, hand dig along edge of cut and cleanly sever all roots between .75"-1" in diameter.

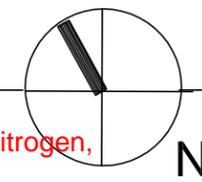
Magnolia to be limbed up before addition, arborist to provide report + best practice before + during construction

Hand dig pier for screened in porch. Do not cut roots over 1" diameter. Adjust location of pier if necessary.

Approximate outline for trees + shrubs shown, we do not anticipate any work in these areas and no trees are to be affected but the ones noted.

**PELL ST studio**

Architect  
Ashley Henkel Morris  
306 Pell Street  
Raleigh, NC 27604  
919.696.0970







## Tully, Tania

---

**From:** Ashley Morris <pellststudio@gmail.com>  
**Sent:** Monday, November 06, 2017 11:50 AM  
**To:** Robb, Melissa; Tully, Tania  
**Cc:** Ann Brown; Kohagen, Kenneth R.; Katie Rose Levin  
**Subject:** Reply to Monday, November 27, 2017 - 165-17-CA (3227 Birnamwood Rd) - Initial Staff Comments  
**Attachments:** MidCentury-deisgn-and-prpoosed-sitewalls.docx; 821 Runnymede-ex-of-site-walls.JPG; 3227Birnamwood-existing-built-site-plan.pdf; 3227Birnamwood-Low-Wall-Section.pdf; 3227Birnamwood-new-built-site-plan.pdf; 3227Birnamwood-Tree Protection Plan.pdf; brick-images-areas-to-be-rebuilt.JPG; brick-images-areas-to-be-rebuilt-photo2.JPG; brick-images-areas-to-be-rebuilt-photo3.JPG; Kamphoefnehouse-site-walls.JPG; Richter-house-example-site-walls-Curchill.JPG; stone-wall-stonecap-image1.jpg; stone-wall-stonecap-image2.jpg

Hi Melissa + Tania -

Response to initial staff comments are attached.

1. As of right now we are only requesting to rebuild the existing raised brick walk + retaining wall, adjoining steps, and the lower brick path on grade. The areas of rebuild are hatched in the new built site plan. We are also requesting to build new low site walls to help start informing the entry and driveway. See attached plans, site wall section, info on why the site walls proposed are in keeping with the design principles of Mid-Century Modern and photographs of other noted Mid-Century modern houses in Raleigh with site walls. A more indepth landscaping plan will be created for a future phase and submitted under its own COA application. Revised site plans + tree protection plan are 11x17s

2. Tree protection plan from Leaf and Limb attached.

3. See attached. The walls are really garden walls in most areas where they will not be retaining earth, see section attached. Trying to avoid footings by keeping walls low and using a gravel trench to stabilize the walls so that tree roots can be conserved.

4. This area for now will remain as is. No change in path, rail, or stairs.

5. As of right now the paint schedule for the addition is to be consistent with the existing house. The home owners would like to change the paint colors, but will work with staff in a future/separate minor work application.

6. This has not been selected yet, but will be happy to work with staff on the stain color options.

Please let us know if you need anymore information of have other questions at all.

Thank you for the initial staff comments!

Ashley

## Distinguishing Features of Mid-Century Modern Style

The distinguishing features of this style consist of a classic, understated look, and clean lines with minimal fuss.

- Functionality is important, as form follows function
- Uncluttered and sleek lines with both organic and geometric forms
- Minimal ornamentation
- An exploration of different traditional as well as non-traditional materials
- Juxtaposition of different, and sometimes contrasting materials

Site walls are created as a way to inform the landscape as an extension of the built environment and the architecture that was created. See photos that have been added to the application that show several mid-century modern houses that have site walls as part of informing their landscape.

The highlighted sections above are design features that are common in the mid-century aesthetic and we believe the new site walls proposed fit in to these design principles. Natural stone is found in several areas already onsite and gives a break in texture, color, and feel from the existing brick walkways, walls and paths.



1952 - The George Matsumoto House, [821 Runnymede Road](#), Raleigh. Neighboring land owner F. Wayne Koontz sold him the lot and [Frank Walser](#) did the construction.

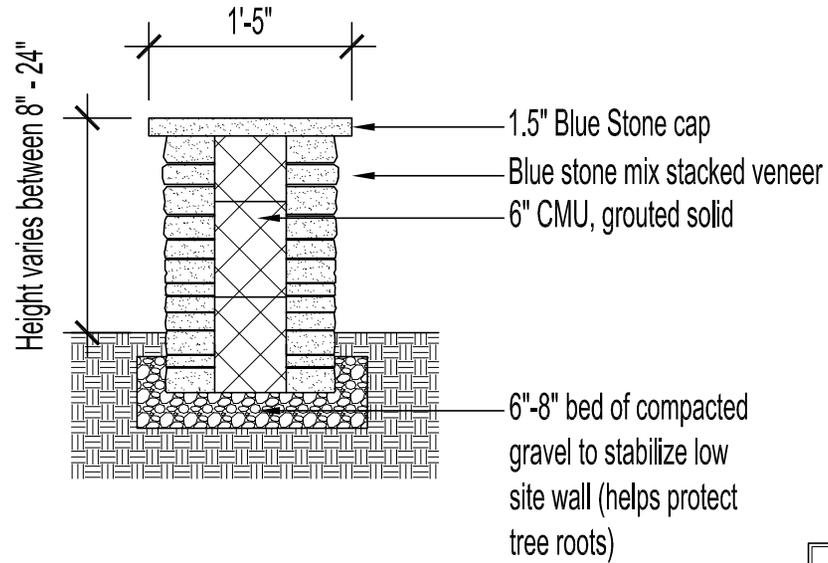
## Henry L Kamphoefner House



Photo by D. Strevel, Capital City Camera Club







PELL ST studio

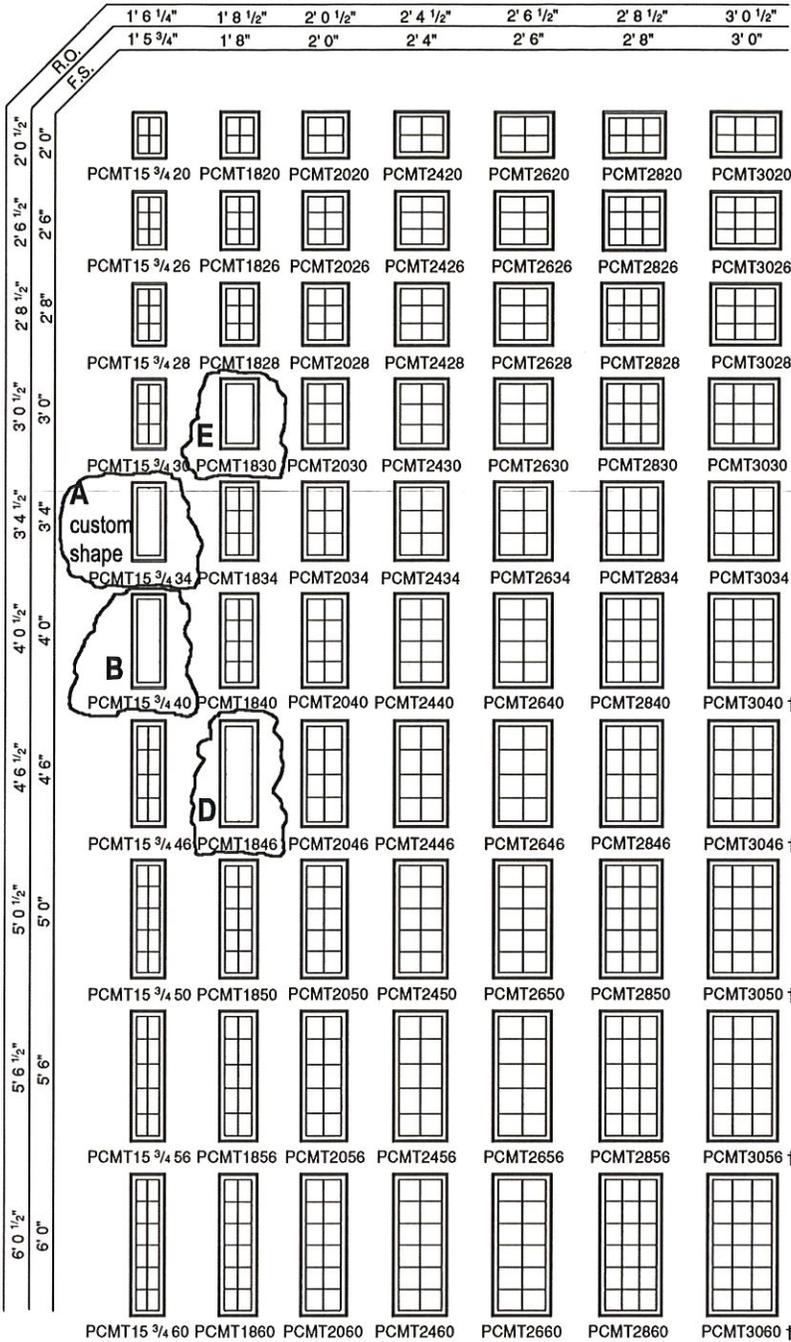
Architect  
 Ashley Henkel Morris  
 306 Pell Street  
 Raleigh, NC 27604  
 919.696.0970

3227 Birnamwood - New Low Stone Site Walls

Scale - 3/4" = 1'-0"



**Push Out Casement Window Sizes**



**NOTES**

† These units meet or exceed the following dimensions: Clear Opening Area 5.7 sq. ft., Clear Opening Width 20", Clear Opening Height 24" and 44" maximum floor to sill height (with standard 6'10-1/2" structural header height). Local codes may differ. Verify egress requirements with your local building code official.

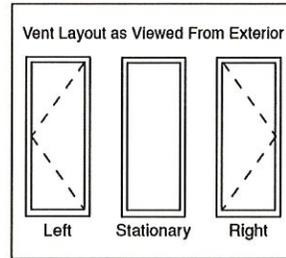
Units ≤ 24" Actual Frame Width (AFW) will receive hinges only (no clip or friction arm).  
 Units > 24" AFW and ≤ 30" AFW receive clip only.  
 Units > 30" AFW receive (2) 14" friction arms.

If glass is positioned within 18" of the finished floor, safety/tempered glass may be required. Local codes may differ. Verify tempered glass requirements with your local building code official.

Use structural joining material when necessary or required by code.

The light patterns illustrated apply to rectangular removable interior wood grilles, Full Divided Light, Simulated Divided Light, Decorelle 100, 150 and 400 and Finelight™ Grilles-Between-the-Glass. All removable interior wood grilles will be installed in the units unless otherwise specified.

For a metric conversion in millimeters, multiply dimensions in inches by 25.4.



**FORMULA FOR COMBINATION WINDOWS**

The overall frame dimension (both width and height) is equal to the sum of the individual unit frame dimensions plus joining material dimension(s).

The overall rough opening (both width and height) is equal to the overall frame dimensions plus 1/4" on all sides.

Any unit within each combination can be operating or stationary.

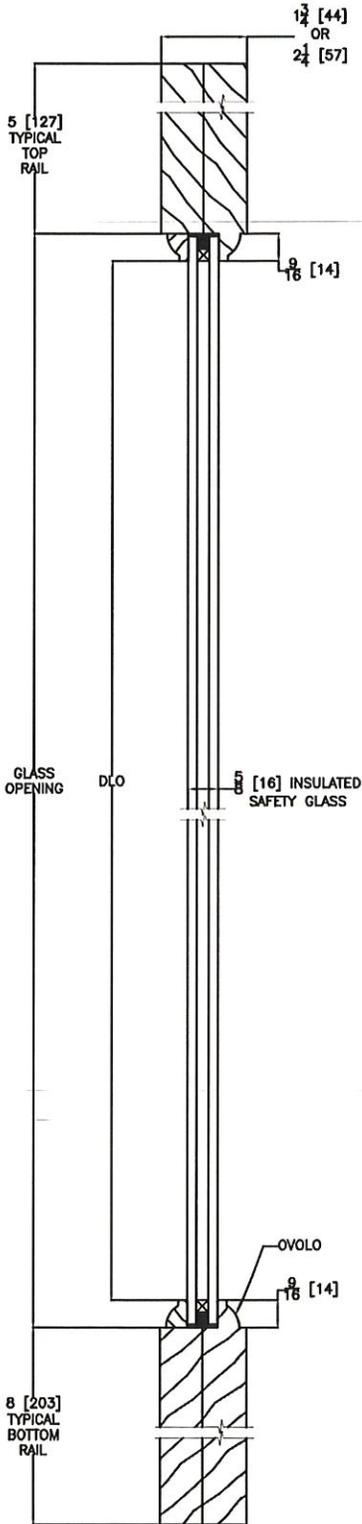
Joined Casement Combinations	2-Wide		3-Wide		4-Wide		5-Wide		
	Single Unit Frame Width	Rough Opening Width	Frame Width						
	1'-5 3/4"	3'-0"	2'-11 1/2"	4'-5 3/4"	4'-5 1/4"	5'-11 1/2"	5'-11"	7'-5 1/4"	7'-4 3/4"
	1'-8"	3'-4 1/2"	3'-4"	5'-0 1/2"	5'-0"	6'-8 1/2"	6'-8"	8'-4 1/2"	8'-4"
	2'-0"	4'-0 1/2"	4'-0"	6'-0 1/2"	6'-0"	8'-0 1/2"	8'-0"	10'-0 1/2"	10'-0"
	2'-4"	4'-8 1/2"	4'-8"	7'-0 1/2"	7'-0"	9'-4 1/2"	9'-4"	11'-8 1/2"	11'-8"
	2'-6"	5'-0 1/2"	5'-0"	7'-6 1/2"	7'-6"	10'-0 1/2"	10'-0"	12'-6 1/2"	12'-6"
	2'-8"	5'-4 1/2"	5'-4"	8'-0 1/2"	8'-0"	10'-8 1/2"	10'-8"	13'-4 1/2"	13'-4"
	3'-0"	6'-0 1/2"	6'-0"	9'-0 1/2"	9'-0"	12'-0 1/2"	12'-0"	15'-0 1/2"	15'-0"

### ELEVATION NOTES

Door Size = Book Size Before Prefit  
 Daylight Opening (DLO) = Visible Glass  
 Values in brackets [ ] are millimeter conversions.

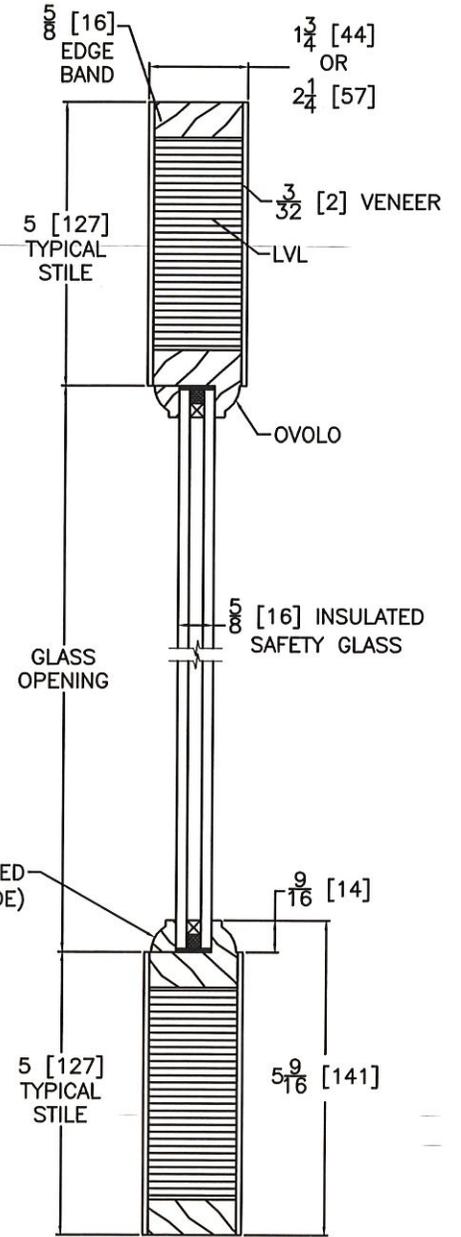
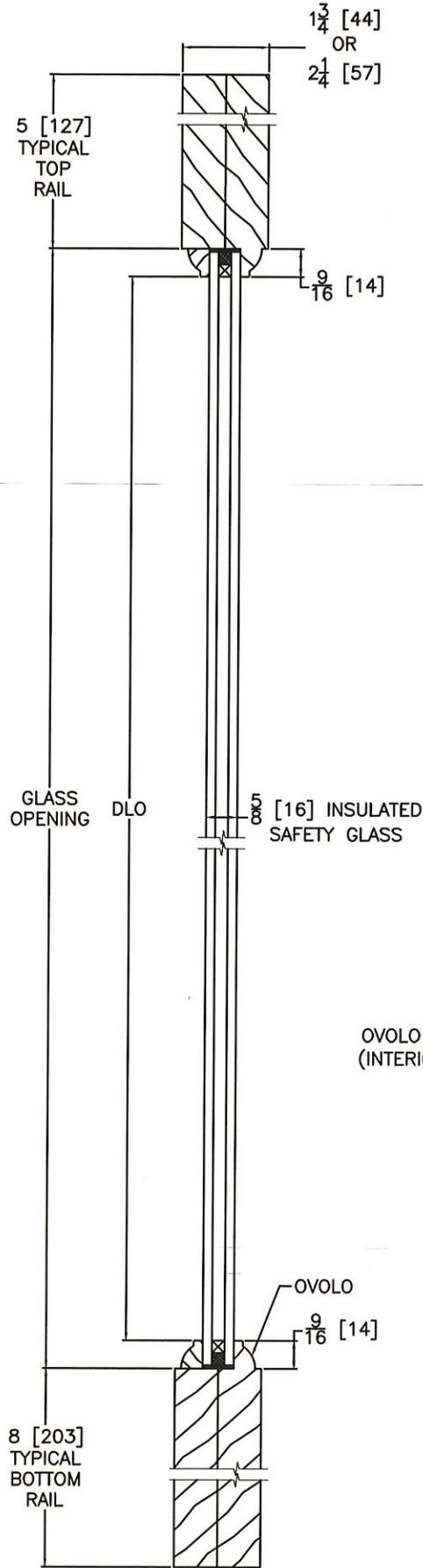
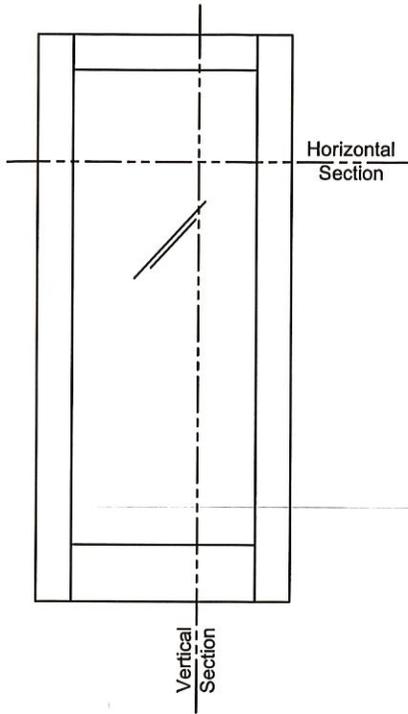
### DOOR CROSS-SECTION

Moulding Profile = Ovolo  
 Panel Profile = n/a  
 See 500 Cross Section sheet for more detail.



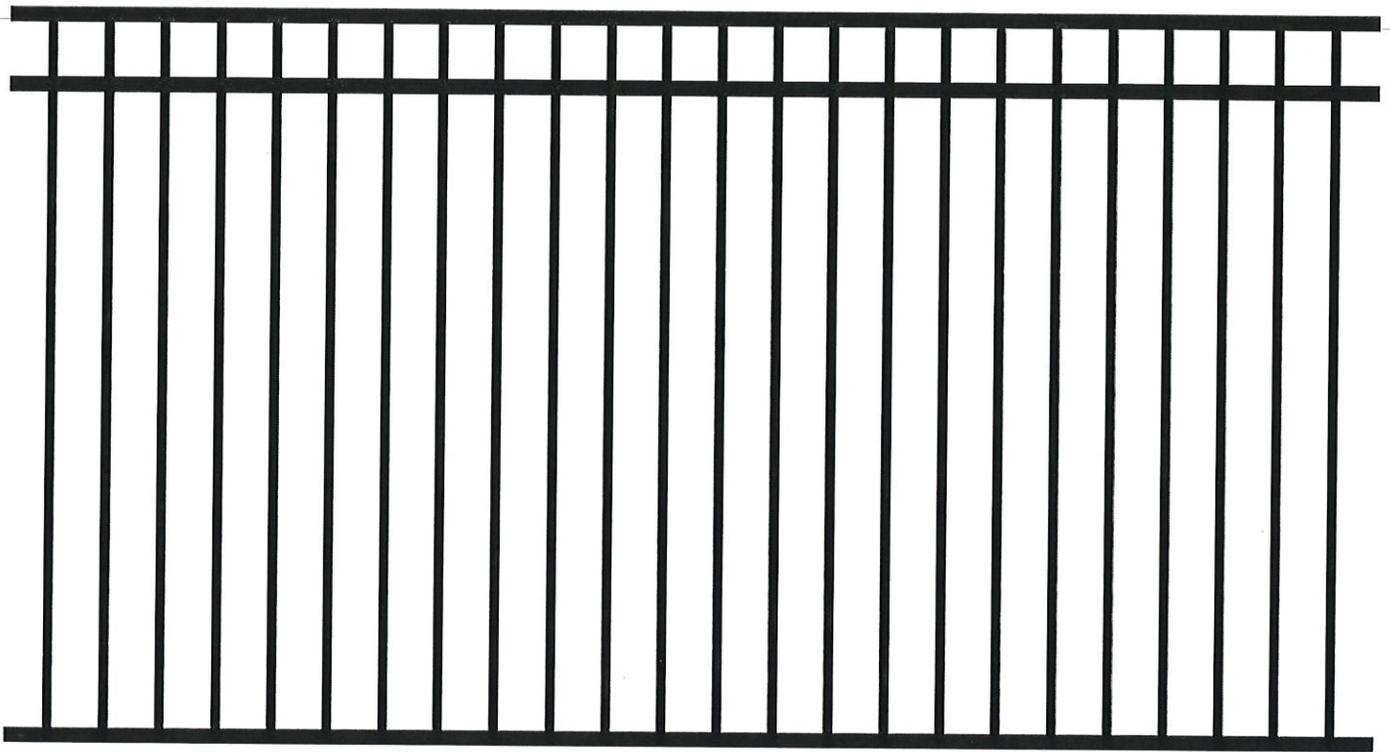
Door Size Daylight Opening	30" [762] 18 7/8" [479]	32" [813] 20 7/8" [530]	36" [914] 24 7/8" [632]	42" [1067] 30 7/8" [784]			
80" [2032] 65 7/8" [1673]							
84" [2134] 69 7/8" [1775]							
96" [2438] 81 7/8" [2080]							
Sidelight Size Daylight Opening	12" [305] 7 7/8" [200]	13" [330] 7 7/8" [200]	14" [356] 7 7/8" [200]	15" [381] 10 7/8" [276]	16" [406] 10 7/8" [276]	17" [432] 10 7/8" [276]	18" [457] 10 7/8" [276]
80" [2032] 65 7/8" [1673]							
84" [2134] 69 7/8" [1775]							
96" [2438] 81 7/8" [2080]							

VERTICAL DOOR/SIDELIGHT CROSS SECTION  
 Insulated Glass



**HORIZONTAL DOOR CROSS SECTION**  
Engineered Stile Option  
(Upon Request or Doors > 3'-6" X 8'-0")

**Notes:**  
Stile, Rail, Panel & Glass  
vary by Size & Model of Door.  
Typical Sizes are Shown.



**Metal Fence design, horizontals  
to be 1.5"x1.5" metal square tube  
and vertical pickets to be .5"x.5" metal  
square tubes. Fence to be 42" tall above  
grade**

0794493798  
BROWN, ANN KOHAGEN, KENNETH  
1409 TYLER CT  
DURHAM NC 27701-1200

0794490670  
DALTON, TARIK H DALTON, ROCHELLE M  
3410 LEWIS FARM RD  
RALEIGH NC 27607-6725

0794491538  
GAY, ASHLEY DOZIER GAY, JEFFREY  
BRANT  
3406 LEWIS FARM RD  
RALEIGH NC 27607-6725

0794491861  
FRANCIS, CHARLES T FRANCIS,  
MARVEALAVETTE J  
3231 BIRNAMWOOD RD  
RALEIGH NC 27607-6703

0794492506  
RULISON, MICHAEL V E /TR  
3256 LEWIS FARM RD  
RALEIGH NC 27607-6723

0794493503  
GEORGE, CHARLES F JR  
3246 LEWIS FARM RD # R  
RALEIGH NC 27607-6723

0794494418  
WOOD, GEORGE P  
3236 LEWIS FARM RD  
RALEIGH NC 27607-6723

0794495434  
JAMEEL, HASAN ASANUMA, MARI  
PO BOX 37307  
RALEIGH NC 27627-7307

0794496736  
HOFFMAN, LEROY G HOFFMAN, JANE D  
3221 BIRNAMWOOD RD  
RALEIGH NC 27607-6703

0795402162  
MORGAN, MARK S MORGAN, SANDRA S  
3230 BIRNAMWOOD RD  
RALEIGH NC 27607-6704

0795404140  
KUSHNER, DAVID S KUSHNER, CHRISTINE  
C  
3220 BIRNAMWOOD RD  
RALEIGH NC 27607-6704