City of Highland Park

Historic Preservation Commission Meeting
City Hall - Council Chambers
May 14, 2026
6:30 PM
Agenda

PUBLIC NOTICE

In accordance with the Statutes of the State of Illinois and the Ordinances of the City of Highland Park, the next regular meeting of the Historic Preservation Commission of the City of Highland Park is scheduled to be held at the hour of 6:30 PM on Thursday, May 14, 2026, at City Hall - Council Chambers, 1707 St Johns Avenue, Highland Park, Illinois, during which meeting it is anticipated that there will be a discussion of the following items.

The Historic Preservation Commission has elected to conduct the hearing entirely in-person, and without opportunity for virtual viewing or participation. Please contact the Department of Community Development – Planning Division at (847) 432-0867 for up-to-date information on the conduct of the hearing.

Individuals with questions or feedback about an agenda item may email the Staff Liaison Maddy Markle. Comments and emails received prior to the Thursday before the scheduled meeting will be included in the meeting packet. Public comments received by 4:30 PM the day of the meeting will be read under Business from the Public. Any comments received during the meeting will be held until the end of the meeting. Individuals who wish to have their comments read into the public record are limited to 200 words or less. Public comments should be emailed and contain the following information:

- In the subject line, identify, “HPC (Date of Meeting)”
- Name
- Address (optional)
- City
- Phone (optional)
- Organization, agency representing, if applicable
- Topic or agenda item number of interest

All emails received will be acknowledged. Individuals with no access to email may leave a voice message with Maddy Markle at 847.926.1856.

The City, in compliance with the Americans with Disabilities Act, requests that persons with disabilities who require certain accommodations to allow them to observe and/or participate in this hearing, or who have questions about the accessibility of the meeting facilities, email the City’s ADA coordinator Emily Taub or call at 847.926.1005.

I. Call to Order

II. Roll Call

III. Approval of Minutes

A. 4-15-26 Special Meeting Minutes

B. 5-7-26 Special Meeting Minutes

IV. Scheduled Business

A. Certificate of Appropriateness — 1442 Forest Avenue

B. Certificate of Appropriateness —2012 Grange Avenue

V. Discussion Items

VI. Business from the Public (Individuals wishing to be heard regarding items not listed on this agenda)

VII. Other Business

A. Next Regular Meeting to Occur June 11, 2026

VIII. Staff Report

IX. Adjournment

MINUTES OF A SPECIAL MEETING
HISTORIC PRESERVATION COMMISSION
OF THE CITY OF HIGHLAND PARK, ILLINOIS

MEETING DATE: Wednesday, April 15, 2026

MEETING LOCATION: Council Chambers, City Hall, 1707 St. Johns Avenue, Highland Park, IL

CALL TO ORDER
At 6:35 p.m., Chairperson Weeder called the meeting to order. This Commission meeting takes place on-site. Staff was asked to call the roll.

ROLL CALL
Commissioners Present: Chairperson Weeder; Commissioners Ehrlich, Gonka, Greenbaum, Hartinger, Pines, & Portman

Councilmember Present: Blumberg

Student Council Absent: Cooper Baum

Student Council Present: Gabi Goldstein

Staff declared that a quorum was present.

Staff Present: Coleman & Markle

Guests Present: Cal Bernstein, Attorney/Samuels & Bernstein

Others Present: Gale Cerabona, Recorder

APPROVAL OF MINUTES
Chairperson Weeder stated she received a request to move the Approval of Minutes until later in the meeting and will carry out that request.

SCHEDULED BUSINESS
1. 147 Central Avenue – Review of Written Report to the Plan & Design Commission regarding Planned Development
Planner Markle offered a presentation:

- Commission Consideration Required
- Prior HPC Consideration – January 8, 2026
- Recommendation

Mr. Cal Bernstein, Attorney, thanked the HPC for having a Special Meeting, so this matter can move forward.

Chairperson Weeder asked if anyone in the audience wishes to speak. There was no one.

Planner Markle shared information on nearby properties and illustrated a graph of same.

DRAFT

Some HPC comments are…..

- Commissioner Pines:
  - asked if these are actual or zoning setbacks. Planner Markle said this is existing streetscape information.
  - expressed, regarding the Cornelius House, a 45' setback from the lot line to the house.
  - discussed the massing, scale, and proportionality.
  - said Lot 2 could potentially be 12' from the lot line; this could be very negative if something was built.
  - stated the HPC would like to see this property preserved and not disappear.
- Chairperson Weeder:
  - referenced the house at 175 Central Avenue; a huge difference in side yards (from the proposed property at 147 Central Avenue). Planner Markle verified the table indicates the site plan attachment.
  - said she would mirror the existing to the lot line. Planner Markle said that would be 68'.
- Commissioner Hartinger asked, and Planner Markle noted the restrictions/requirements (for new construction).
- Commissioner Greenbaum identified a wraparound porch on the east side. Her concern is, when it was designed, it was intended to see the east view.

  Councilmember Blumberg said, when one engages on what the owners can see, that speaks to the interior. This exceeds the purview of the HPC. He is referring to the distances between the houses. It's an air and light issue; a Plan & Design issue.

- Commissioner Ehrlich believes the entire property should be preserved. The HPC's role should not be to give guidance to the PDC. He cares about people walking past this house and noticing the oldest and most majestic house in Highland Park. Anyone wishing to change that should present to the HPC. The draft written recommendation doesn't reflect his viewpoint. The property has changed (since the bridge). Perhaps the easement, setbacks have changed.

  Senior Planner Coleman noted the Draft Report recommends denial, etc.

  Commissioner Ehrlich said there could be hypotheticals.

- Commissioner Portman said he felt all along that the HPC's recommendation should stand on its own. He would like to see no provisions after the fact.
- Commissioner Hartinger said the HPC can't control what the PDC does. He discussed if the lots become separated.
- Commissioner Portman said it was determined that it is still a protected property. Increasing the front setback is important.

  Senior Planner Coleman needs to review COAs. He noted there are 14 standards for construction. The COA standards don't regulate setbacks.

- Chairperson Weeder said, if the HPC takes Commissioner Ehrlich's stand, the HPC is taking the perfect over the practical. She recommends the side yard be increased between 147 & 175 Central Avenue from 12' to 45-50', and reminded this is a nonbinding recommendation.

- Commissioner Pines asked if the recommendation should be skimmed.

  Councilmember Blumberg suggested keeping the recommendations within the purview of what the PDC is requesting. He expounded.

- Commissioner Greenbaum reiterated, when it was designed, the view was meant to be there. To make this more practical, and because taxes are outrageous, she feels a setback should be assigned, so this estate could have a lake view. Though the HPC is against separating the lots, she wonders if recommendations should be given. Senior Planner Coleman said this is the HPC's opportunity.
- Commissioner Hartinger asked if there have been situations where if a lot is split, the HPC gave recommendations on what to look for. Senior Planner Coleman stated there haven't been instances.

  Councilmember Blumberg said, if the lot is subdivided, that requires the Petitioner to come back. The new lot is not automatically de-landmarked. He expounded.

- Chairperson Weeder asked about de-landmarking. Planner Markle found the HPC did not recommend landmark removal. If split, Lot B would still be landmarked.
- Commissioner Ehrlich:
  - asked if a COA was granted without a plan. He stated it is not the HPC's place to give guidance. It could be given when a COA is presented to the HPC. Planner Markle reminded the PDC wants the HPC's guidance and direction.
  - said, if a COA is to be given, a plan must be submitted. He doesn't want to mislead anyone by suggesting various numbers of feet.

  Councilmember Blumberg said the HPC is not being asked to say anything about a COA. He reminded the HPC is being asked to give a recommendation with any restrictions, suggestions. Councilmember Blumberg said, if this property is not subdivided, someone could present a plan on the un-subdivided area. Limitations could be placed on the lot.

- Chairperson Weeder mentioned the crux of the issue is noted at the end of the Staff Report. She expounded on parameters.
- Commissioner Pines concurred.

Commissioner Gonka arrived at 7:41 p.m.

- Commissioner Ehrlich would like the HPC to review the 14 criteria and noted, this matter could be continued.
- Commissioner Pines said the restrictions are not as grave as Commissioner Ehrlich is making them out to be.
- Commissioner Hartinger said the Staff Report covers 98% of the HPC's view. Setback issues could be added.
- Commissioner Portman concurred with the exception of the specification from the HPC. It was stated Staff intended to include the second 3-page nonbinding recommendation.
- Chairperson Weeder named the specific areas to address and suggested moving the discussion toward that. It's about the experience of the public viewing this.

Chairperson Weeder asked if anyone in the audience wishes to speak. There was no one.

Senior Planner Coleman summarized the additional 50' is a new point to add.

More HPC comments are…..

- Commissioner Gonka asked:
  - about the process. Planner Markle explained same.
  - what the HPC is actually saying regarding 50' in addition to 12'. Planner Markle explained same.
- Commissioner Pines said Lot 2 is approximately 90,000 sq. ft.; over 2 acres. The amount that's buildable is likely 25,000-30,000 sq. ft.; a robust footprint. The site plan has to be handled artfully.

Councilmember Blumberg suggested the two other agenda items be given attention at this time, as the public may wish to speak on those.

2. 670 De Tamble Avenue – Final Consideration of Landmark Nomination

Planner Markle offered a presentation:

- Summary
- Arthur Vetter House
- Tudor style
- Built in 1928
- Landmark Designation Process
- Previous Consideration
- Findings of Fact
- Landmark Criteria
- Recommendation

Commissioner Greenbaum moved that this meets Criteria 1, 3, 4, & 6; has sufficient integrity of design; and recommends City Council adopt a Landmark Designation Ordinance. Commissioner Gonka seconded the motion.

On a roll call vote
Voting Yea Chairperson Weeder; Commissioners Ehrlich, Gonka, Greenbaum, Hartinger, Pines, & Portman
Voting Nay: None

Staff declared that the motion passed unanimously.

3. 273 Sheridan Road – Final Consideration of Landmark Nomination

Planner Markle offered a presentation:

- Previous Consideration
- Marshall Johnson House
- Significant rating in the 2003 Braeside survey
- French Eclectic style
- Built in 1935
- Findings of Fact
- Landmark Criteria
- Additional Information

- architect is William Betts who designed 18 homes in Highland Park
- elevations of those homes were shown

- Recommendation

Commissioner Greenbaum moved that Criteria 1, 3, 4, 5, 6, & 7 are met. This house has sufficient integrity of design. The HPC wishes to adopt a Landmark Designation recommendation and the drafted Findings of Fact and Planning Report with new information about Marshall Johnson & William Betts added. Commissioner Gonka seconded the motion.

On a roll call vote
Voting Yea Chairperson Weeder; Commissioners Ehrlich, Gonka, Greenbaum, Hartinger, Pines, & Portman
Voting Nay: None

Staff declared that the motion passed unanimously.

Back to…..

1. <u>147 Central Avenue – Review of Written Report to the Plan & Design Commission regarding Planned Development</u>

Chairperson Weeder reminded the HPC was discussing setbacks and reducing bulk.

Commissioner Ehrlich asked, and Planner Markle said the site plan was the only thing submitted. They stated the PDC is waiting for the HPC.

Mr. Bernstein said, as far as he knows, nothing's been designed for this property. He noted the potential buyer for Lot B has retained James Fraerman, Principal at Fraerman Associates Architecture, who is well versed on the HPC's view and the 14 standards. Fraerman has served on HPC in the past.

Final HPC comments…..

- Commissioner Pines summarized that setback and height information be added to the Staff Report.
- Commissioner Gonka maintained that 80' is not enough and said whatever is built shouldn't be taller than the existing house; side setback should be 100' from the proposed lot line.
- Commissioner Greenbaum maintains that a more restrictive front yard setback would maintain the Lot 1's view.
- Commissioner Ehrlich maintains that the HPC should not include conditions of approval in written report.
- Commissioner Pines believes that is excessive; 80' would meet the same objective.

Commissioner Pines moved to approve the written report presented by Staff with the changes:

- to increase the west side-yard setback to 80' for Lot 2
- require that the height of a new structure not exceed that of the Cornelius Field home

Commissioner Portman seconded the motion.

On a roll call vote
Voting Yea Chairperson Weeder; Commissioners Hartinger, Pines, & Portman

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Voting Nay: Commissioners Ehrlich, Gonka, & Greenbaum

Planner Markle declared that the motion passed 4-3. Planner Markle advised they will attend the PDC meeting.

Mr. Bernstein reminded HPC Commissioners cannot discuss this at the PDC meeting due to the Open Meetings Act.

Councilmember Blumberg said speaking separately is contrary to what the HPC, as a whole, has put forth.

Back to…..

APPROVAL OF MINUTES

Regular Meeting of the Historic Preservation Commission – March 12, 2026

Commissioner Gonka expressed that the HPC did an incredible job on the motions at the last meeting. Chairperson Weeder thanked Gale Cerabona, Recorder; Planner Markle, and Senior Planner Coleman for the incredible job they've been doing.

Commissioner Gonka moved to approve the regular meeting minutes of March 12, 2026. Commissioner Greenbaum seconded the motion.

On a voice vote

Voting Yea Chairperson Weeder; Commissioners Ehrlich, Gonka, Greenbaum, Hartinger, Pines, & Portman

Voting Nay: None

Staff declared that the motion passed unanimously.

DISCUSSION ITEMS

1. 2026 Preservation Awards

Planner Markle reminded the event for the Preservation Awards is at the Willits House on May 7, 2026, at 6:30 p.m. They noted sparkling water is being provided. Snacks are welcome. Nominations are posted. Judges made a decision on the winners. Chairperson Weeder offered to bring snacks.

BUSINESS FROM THE PUBLIC

There was no Business from the Public.

OTHER BUSINESS

1. Next Regular Meeting is Scheduled for May 14, 2026

It was noted the next regular HPC Meeting is scheduled for May 14, 2026.

STAFF REPORT

There was no Staff Report.

ADJOURNMENT

Commissioner Greenbaum moved to adjourn at 8:34 p.m. Commissioner Portman seconded the motion.

DRAFT

On a voice vote
Voting Yea Chairperson Weeder; Commissioners Ehrlich, Gonka, Greenbaum, Hartinger, Pines, & Portman
Voting Nay: None

Staff declared that the motion passed unanimously.

Respectfully Submitted,

Gale Cerabona
Recorder

MINUTES OF A REGULAR MEETING ON MARCH 12, 2026, WERE APPROVED WITHOUT CORRECTIONS.

DRAFT

MINUTES OF A SPECIAL MEETING
HISTORIC PRESERVATION COMMISSION
OF THE CITY OF HIGHLAND PARK, ILLINOIS

MEETING DATE: Thursday, May 7, 2026

MEETING LOCATION: Ward Willits House, 1445 Sheridan Road, Highland Park IL

CALL TO ORDER
The meeting began at 6:30 pm. This Commission meeting takes place off-site at 1445 Sheridan Road.

ROLL CALL
Commissioners Present: Chairperson Weeder; Commissioners Ehrlich, Gonka, Hartinger, Pines, & Portman

Councilmember Present: Blumberg, Ross, Mayor Rotering

Student Council Absent: Cooper Baum & Gabi Goldstein

Student Council Present: None

Staff declared that a quorum was present.

Staff Present: Planner Markle, Senior Planner Coleman, and City Manager Neukirch

Guests Present: Thomas Hiller, Peijian Sun, Cedar Roofing Company, Northshore School District 112, and Mary Seyfarth.

APPROVAL OF MINUTES
There was no approval of minutes.

SCHEDULED BUSINESS
Staff presented the winners of the 2026 Historic Preservation Awards.

Winners Thomas Hiller and representatives of North Shore School District 112 spoke about their preservation projects.

Resident Mary Seyfarth spoke about the Rocky the Raccoon Weathervane and the relocation of "The Flight of Time" clock.

DISCUSSION ITEMS
There were no discussion items.

BUSINESS FROM THE PUBLIC
There was no Business from the Public.

OTHER BUSINESS
There was no Other Business

DRAFT

STAFF REPORT

There was no Staff Report.

ADJOURNMENT

Meeting adjourned at 8:30 pm.

Respectfully Submitted,

Maddy Markle
Commission Secretary

DRAFT

Historic Preservation Commission

Certificate of Appropriateness Staff Memorandum

To: Historic Preservation Commission
From: Maddy Markle, Planner I
Date: May 14, 2026
Subject: Certificate of Appropriateness – 1442 Forest Avenue

Location:	1442 Forest Avenue
Historical Name:	Stewart House
Historical Status:	Local Landmark (1993)
Structure:	Style: Colonial Revival Architect: Robert Seyfarth Built: 1913
Petitioner:	Andrew Venamore (contractor) on behalf of Michael Goldner (owner) 602 Academy Dr Northbrook, IL 60062
Project Architect:	Heartland Garage Builders 602 Academy Drive, Northbrook, Illinois 60062

SUMMARY OF THE PETITION

Contractor Andrew Venamore, on behalf of property owner Michael Goldner, has submitted an application for a Certificate of Appropriateness for the demolition of a detached garage and construction of a new detached garage at the property located at 1442 Forest Avenue. The application was submitted April 10, 2026.
The historic "Stewart House" designed by Robert Seyfarth in 1913, is the primary residential structure on the property.



Figure 1. *Current Historic Garage*

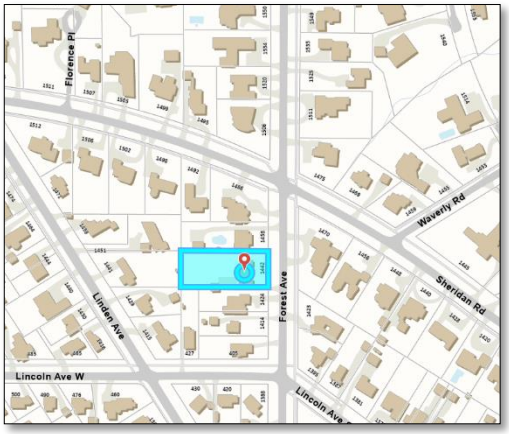


Figure 2. *Location*

Prior Commission Consideration.

This property was designated a Local Landmark in 1993 (see ***Attachment A***). The residential structure on the site was designated a Local Landmark for its associations with architect Robert Seyfarth, its Colonial Revival Style, and its embodiment of significant design details (Landmark Criteria 4, 5, and 6). See the 1993 Landmark Nomination materials in ***Attachment B***.

In 2023 the Historic Preservation Commission ("***HPC***") granted Certificates of Appropriateness ("***COA***") to the current owners to remodel the home and modify window openings (*see* ***Attachment C***). The HPC found these changes appropriate. Furthermore, the Commission granted the remodel a 2025 Historic Preservation Award (*see* ***Attachment D***).

Garage History.
A 1924 Sanborn Map shows that a large dog kennel used to exist on the back of the property.

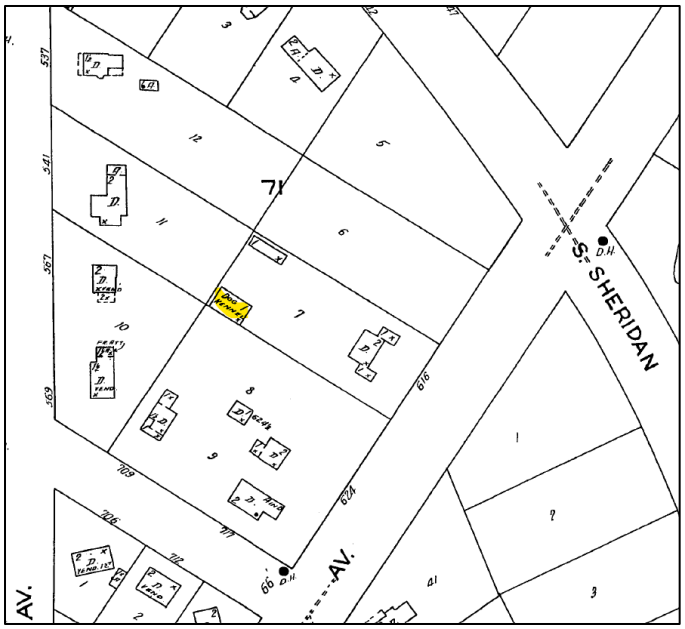


Figure 3. 1924 Sanborn Map

In 1932 the City reviewed a permit application (***Attachment F***) to demolish a portion of the kennel and move the remnants farther east. The building permit application states "*present building 40x20 to be split in half. East half to be made into garage. West half to be torn down.*" Staff concludes that the current garage is the east half of the 1920s dog kennel that was moved and repurposed into a garage in 1932.

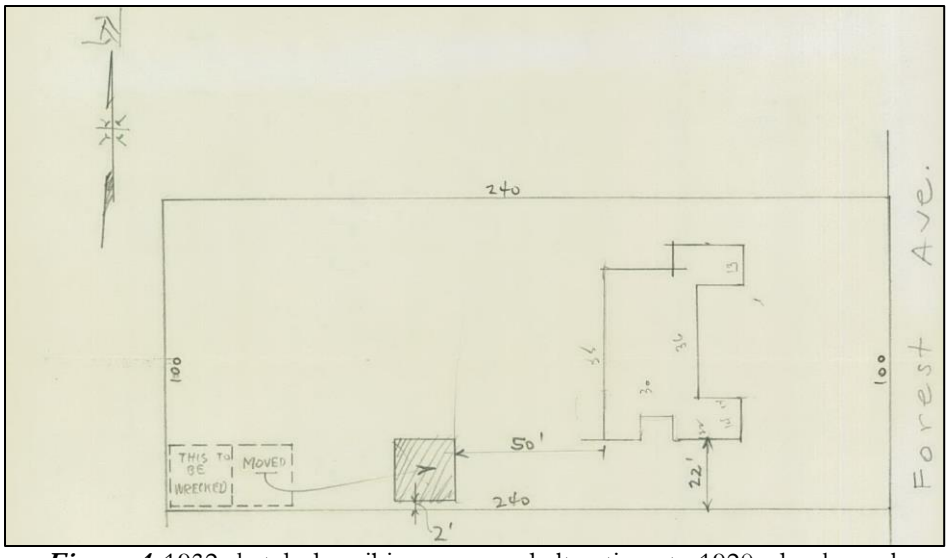


Figure 4. 1932 sketch describing proposed alterations to 1920s dog kennel.

PROPOSED MODIFICATIONS
The applicant proposes to demolish the existing 1932 garage and replace it with a new structure of similar dimensions and with a similar roofline. The new structure will be located west of the current structure. The

applicant proposes that the new garage be vinyl. The applicant's proposed plans can be found in ***Attachment H.***



Figure 5. Proposed New Structure.

STANDARDS FOR CERTIFICATES OF APPROPRIATENESS

The following are the Standards for Certificates of Appropriateness as listed in Section 24.030(C), which are for an application for a Certificate of Appropriateness for ***New Construction***. The applicant has provided comments that address each standard in ***Attachment I***.

Code excerpts are in BLACK. The applicant's commentary is in RED. Additional staff comments are in BLUE.

(1) **Height.** The height of the proposed new Structure shall be visually compatible with properties, structures, sites, public ways, objects, and places to which it is visibly related.

- The proposed detached garage will be less than 16 feet to the ridge (based on a 6/12 pitch) and will be located some 85 feet behind the existing SFR. This accessory structure will therefore be compatible with the home and not detract from it.
- Staff adds that the proposed garage will be the same height as the historic garage.

(2) **Proportion of front façade**. The relationship of the width to the height of the front elevation of the proposed new Structure shall be visually compatible with properties, structures, sites, public ways, objects, and places to which it is visually related.

- At 22 feet in width and 16 feet in height, the proposed garage will be of a standard size for parking 2 vehicles. Since it will be located some distance behind the SFR, there will not be an adverse relationship to the house, and the existing hip style roof will be mirrored on the garage. Additionally, the existing trees that will remain on the lot (within the driveway area) will also form an additional visual barrier down the driveway, as will the location for the replacement structure being +/- 30 further into the rear yard.

(3) **Proportion of openings**. The relationship of the width to height of windows and doors of the proposed new Structure shall be visually compatible with properties, structures, sites, public ways, objects, and places to which the building is visually related

- The new garage has been designed to be very proportional with the 22-foot width dispersed with a 16-foot x 7-foot overhead door that is centrally located on that front elevation.

(4) **Rhythm of solids to voids in front facades**. The relationship of solids to voids in the front façade of the proposed new Structure shall be visually compatible with properties, structures, sites, public ways, objects, and places to which it is visually related.

- As noted above, the front elevation will have continuity of style, with the overhead door having a glass panel to provide additional interest.

(5) **Rhythm of spacing and structures on streets**. The relationship of the proposed new Structure or object to the open space between it and adjoining structures or objects shall be visually compatible with the properties, structures, sites, public ways, objects, and places to which it is visually related.

- This basic-sized garage (22'x22'), has been located in an area of the rear yard that will provide a reasonable amount of open space, within a quite heavily wooded yard. This location is compatible with the subject property and is standard for many neighborhood homes with detached garages.

(6) **Rhythm of entrance porches, storefront recesses and other projections**. The relationship of entrances and other projections of the proposed new Structure to sidewalks shall be visually compatible with the properties, structures, sites, public ways, objects, and places to which it is visually related.

- The entrance is on the side of the garage which is quite standard for a detached structure.
- Staff notes that the garage's entrance is on the east façade and is consistent with the door placement on the historic garage.

(7) **Relationship of materials and texture**. The relationship of the materials and texture of the façade of the proposed new Structure shall be visually compatible with the predominant materials used in the structures to which it is visually related.

- The proposed project will have white vinyl siding and white LP Smartside trim, with the overhead door (with glass in the top panel) colored Evergreen to match the shutter details on the house.
- Staff notes that vinyl is not consistent with the main structure's wood siding and is a modern material. The commission should consider if a modern material like vinyl is compatible with the historic materials of the original garage and the historic Stewart House.

(8) **Roof shapes**. The roof shape of the proposed new Structure shall be visually compatible with the structures to which it is visually related.

- As noted previously the garage will have a hip roof that reflects the SFR
- The new proposed roof shape is the same as the historic garage's roof shape.

(9) **Walls of continuity**. Facades and property and site structures, such as masonry walls, fences, and landscape masses, shall, when it is a characteristic of the area, form cohesive walls of enclosure along a street, to ensure visual compatibility with the properties, structures, sites, public ways, objects, and places to which such elements are visually related.

- Not Applicable

(10) **Scale of a structure**. The size and mass of the proposed new Structure in relation to open spaces, windows, door openings, porches, adjacent structures, and balconies shall be visually compatible with the properties, structures, sites, public ways, objects, and places to which they are visually related.

- Since the replacement garage is of a basic (i.e., 2-car) size, it will maintain spatial compatibility with the home and the surrounding accessory buildings within the neighborhood.

(11) **Directional expression of front elevation**. The proposed new Structure shall be visually compatible with the properties, structures, sites, public ways, objects, and places to which it is visually related in its directional character, whether this be vertical character, horizontal character, or nondirectional character.

- As an accessory building, the new garage will be compatible with the existing character aspects of the lot and neighborhood.

(12) **Destruction or alteration of historic features**. The distinguishing historic qualities or character of a Property, Structure, site or Object and its environment shall not be destroyed. The Alteration of any historic or material or distinctive architectural features should be avoided when possible

- The SFR will not be altered at all as a result of this work; it is the existing, extremely decrepit accessory building (i.e., detached garage) that will be demolished. Its replacement will allow the owner's to actually park in their garage and will remove an eyesore from the property, while furthering the preservation of the existing tree.

(13) **Archaeological and natural resources**. Every reasonable effort shall be

made to protect and preserve archaeological and natural resources affected by, or adjacent to any project.

- The existing garage has no archaeological or natural resources value: it was built within the past few decades and holds no historical significance relative to the house.
- The existing garage was not built within the last few decades. At the very least, the current garage is 94 years old. The material of the garage itself is from the 1920s, possibly earlier. See "Garage History" above. However, this does not necessarily mean the garage has archeological value.

(14) **Architectural compatibility**. In considering new construction, the Commission shall not impose a requirement for the use of a single architectural style or period, though it may impose a requirement for compatibility.

- With a hip roof and (color) finishes that match the SFR, the replacement garage is compatible with the existing historic home.

RECOMMENDATION

Based on the findings presented above, staff recommends that the Historic Preservation Commission consider approval of the Certificate of Appropriateness for the demolition of the 1936 garage and construction of a new structure at 1442 Forest Avenue. Staff asks that the Commission consider if vinyl is an appropriate material substitute for wood siding.

ATTACHMENTS

Attachment A. 1993 Landmark Ordinance
Attachment B. 1993 Landmark Nomination Materials
Attachment C. Previous 2023 HPC Consideration
Attachment D. 2024 Historic Preservation Award Winners
Attachment E. 1924 Sanborn Map
Attachment F. 1932 Building Permit Application
Attachment G. 1932 Building Permit
Attachment H. Current Conditions
Attachment I. Project Narrative
Attachment J. Project Plan Set

AN ORDINANCE DESIGNATING A HIGHLAND PARK LANDMARK

WHEREAS, the Historic Preservation Commission of the City of Highland Park, pursuant to Section 24.025 of "The Highland Park Code of 1968", as amended, did conduct a public hearing on May 20, 1993, pursuant to proper notice; and

WHEREAS, following said hearing, the said Historic Preservation Commission passed Resolution No. 04-93 (a copy of which resolution is attached hereto and made a part hereof as Exhibit I), which resolution contains the report of the Commission as well as a recommendation to the City Council of the City of Highland Park that the Alexander Stewart House, located at the 1442 Forest Avenue (hereinafter referred to as "**Subject Property**") be designated a Highland Park Landmark; and

WHEREAS, the City Council has determined that the designation of the Subject Property will be consistent with the planning policies and objectives of the City, will promote the welfare of its residents, and will not adversely affect the value, use, or enjoyment of any adjacent or nearby property; and

WHEREAS, the City Council of the City of Highland Park believes it to be in the best interests of the residents of the City of Highland Park that the Subject Property be designated a Landmark;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF THE CITY OF HIGHLAND PARK, LAKE COUNTY, ILLINOIS:

SECTION ONE: That, pursuant to Section 24.025 of "The Highland Park Code of 1968", as amended, the following described property be and the same is designated hereby as a Landmark:

Alexander Stewart House	1442 Forest Avenue	16-26-208-015

and as such shall be subject hereafter to the provisions of Chapter 24 of "The Highland Park Code of 1968", as amended.

SECTION TWO: That, as notice of the action of this City Council, the City Clerk shall forward certified copies hereof to those who nominated the aforedescribed property as a Landmark, to the owner of record of the aforementioned Landmark, and to the Building Division of the City of Highland Park.

SECTION THREE: That this ordinance shall be in full force and effect from and after its passage, approval, and publication in the manner provided by law.

AYES: Mayor Pierce and Councilmen Blane, Brenner, Weiss, Geraci, Koukos and Mandel

NAYS: None

ABSENT: None

PASSED: June 28, 1993

APPROVED: June 28, 1993

ORDINANCE NO: 34-93

Mayor

ATTEST:

City Clerk

Owner Consent Form
for
Highland Park Landmark Nomination

Date: March 10, 1993

The undersigned owner of the property located at 1442 Forest Avenue _____ (address), in the city of Highland Park, Illinois, hereby

[X] approves consent for the above property to be nominated by the Highland Park Historic Preservation Commission for designation as a Highland Park Landmark

[ ] disapproves consent for the above property to be nominated by the Highland Park Historic Preservation Commission for designation as a Highland Park Landmark.

(Please place an "X" in the appropriate space.)



Signature(s) Mary G Seyfarth

Print Name(s) MARY G. SEYFARTH

Address 1442 Forest Ave
Highland Park, Ill [redacted]

Highland Park Historic Preservation Commission
1707 St. Johns Avenue
Highland Park, Illinois 60035

Landmark Nomination Form

Date: February 18, 1993

1) Name of Property (original if known): Alexander Stewart House

2) Street Address: 1442 Forest

3) Legal description or P.I.N. (Permanent Index Number from Township Assessor's Office, 600 Laurel Ave., Highland Park):

P.I.N. 16-26-208-015

4) Name and Address of Property Owner(s) (From Assessor's Office):

Mary G. Seyfarth

1442 Forest

5) Present Use: Residence 6) Past Use: Residence

7) Architect: Robert E. Seyfarth 8) Date of Construction: 1913

9) Written statement describing property and setting forth reasons it is eligible for Landmark designation:

This house is a fine example of the Colonial Revival style. It is significant as a prototype of Seyfarth's work. This house illustrates the way in which Seyfarth adapted and personalized the style. The house remains extremely well in tact.

10) This structure is eligible for designation on th of the following crit (see reverse page):

4,5,6



11) Name(s) and Adress(es) Applicant(s):

Name(s): MARY V. SEYFARTH

Signature(s): Mary K. Seyfarth

Address(es): 1442 Forest

12) Affiliation (Commission Member, Owner, City Council, Preservation Organization): OWNER'S FAMILY, RESIDES IN HOUSE

Please complete and return this form to the Highland Park Preservation Commission 1707 St. Johns Avenue, Highland Park, Illinois 60035

Criteria for Determining Highland Park Landmarks

In making decisions about which sites or structures qualify as Highland Park Landmarks, the Preservation Commission will decide within 45 days whether the nominated property meets one or more of the following criteria:

1.) Its Character, interest or value as part of the development, heritage or culture characteristics of the community, county, state or country;

2.) Its location as a site of a significant local, county, state or national event;

3.) Its identification with a person or persons who significantly contributed to the development of the community, county, state or country;

4.) Its embodiment of distinguishing characteristics of an architectural and/or landscape style valuable for the study of a period, type, method of construction or use of indigenous materials;

5.) Its identification as the work of a master builder, designer, architect of landscape architect whose individual work has influenced the development of the community, county, state or country;

6.) Its overall embodiment of elements of design, detailing materials or craftsmanship which renders it architecturally significant;

7.) Its overall embodiment of design elements that make it structurally or architecturally innovative;

8.) Its unique location of singular physical characteristics that makes it an established or familiar visual feature; and/or

9.) Its character as a particularly fine or unique example of a utilitarian structure or group of such structures, including, but not limited to farmhouses, gas stations or other commercial structures, with a high level of integrity of architectural significance.

Any structure, property, or area that meets one or more of the above criteria shall also have sufficient integrity of location, design materials and workmanship to make it worthy of preservation or restoration.

Certificate of Appropriateness

City of Highland Park Historic Preservation Commission

DATE:	May 12, 2023
REGULATED STRUCTURE:	Alexander Stewart House
ADDRESS:	1442 Forest Avenue
OWNERS:	John Eifler
ARCHITECT:	John Eifler (312) 362-0180
PROPOSED ALTERATION:	
1. Window replacement & window modification	
COMMISSION REVIEW DATE:	May 11, 2023
ABSTAIN:	N/A
VOTE:	4-0
ACCEPT PROPOSAL	X
REJECT PROPOSAL	
ATTACHED DOCUMENTS:	Plan Set, 6 pages, submitted by applicant
COMMENTS:	-Overall support for project
SIGNED:	 Zubin Coleman, Planner II

City of Highland Park

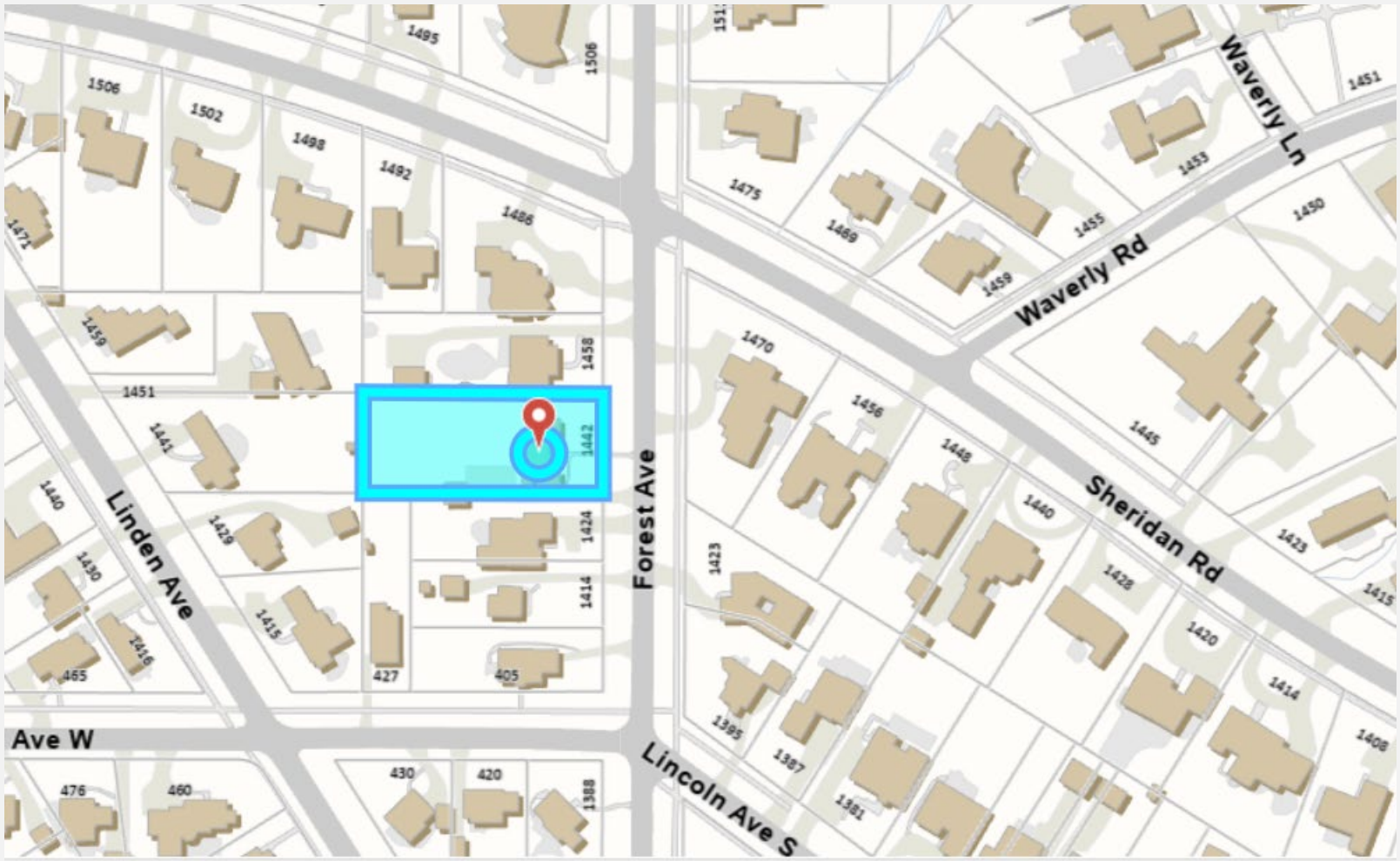
2025 Historic Preservation Award Winners

1442 Forest Avenue Summary

Location	1442 Forest Avenue
Historical Name	Alexander Stewart House
Historical Status	Historic Local Landmark – Designated 1993
Structure	Colonial Revival c. 1913
Architect	Robert Seyfarth
Current Owner	Michael Goldner & Ashley Buxbaum
Petitioners	John Eifler, Eifler & Associates



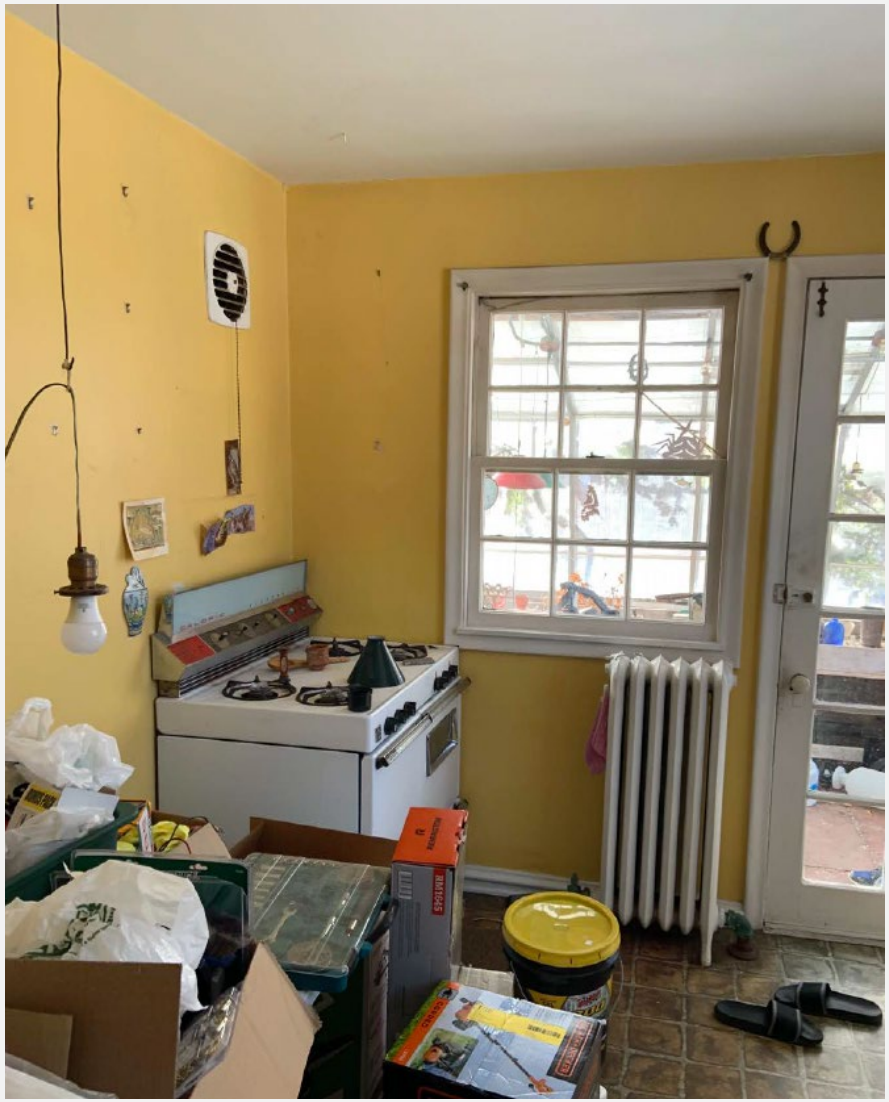
Project Location



Awarded Project Scope

- **Restoration** Award
- Mostly Interior of the home
- Original massing, windows & architectural details maintained
- Restored pine shingle cladding
- Kitchen enlarged and remodeled
- Powder room installed
- Primary bedroom layout reconfigured
- Interior paint
- Bathroom remodel with new fixtures, tiles and marble
- Original windows restored
- Completed in 2024

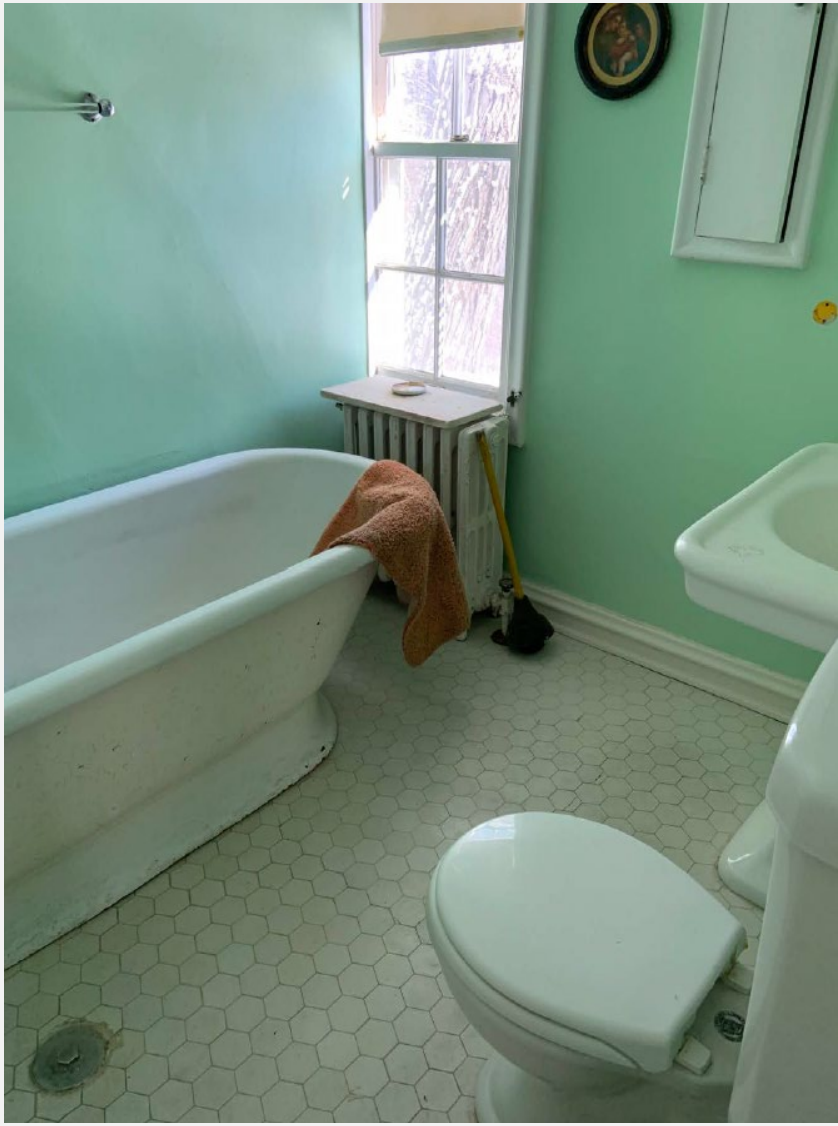
Before




Close









After




Close





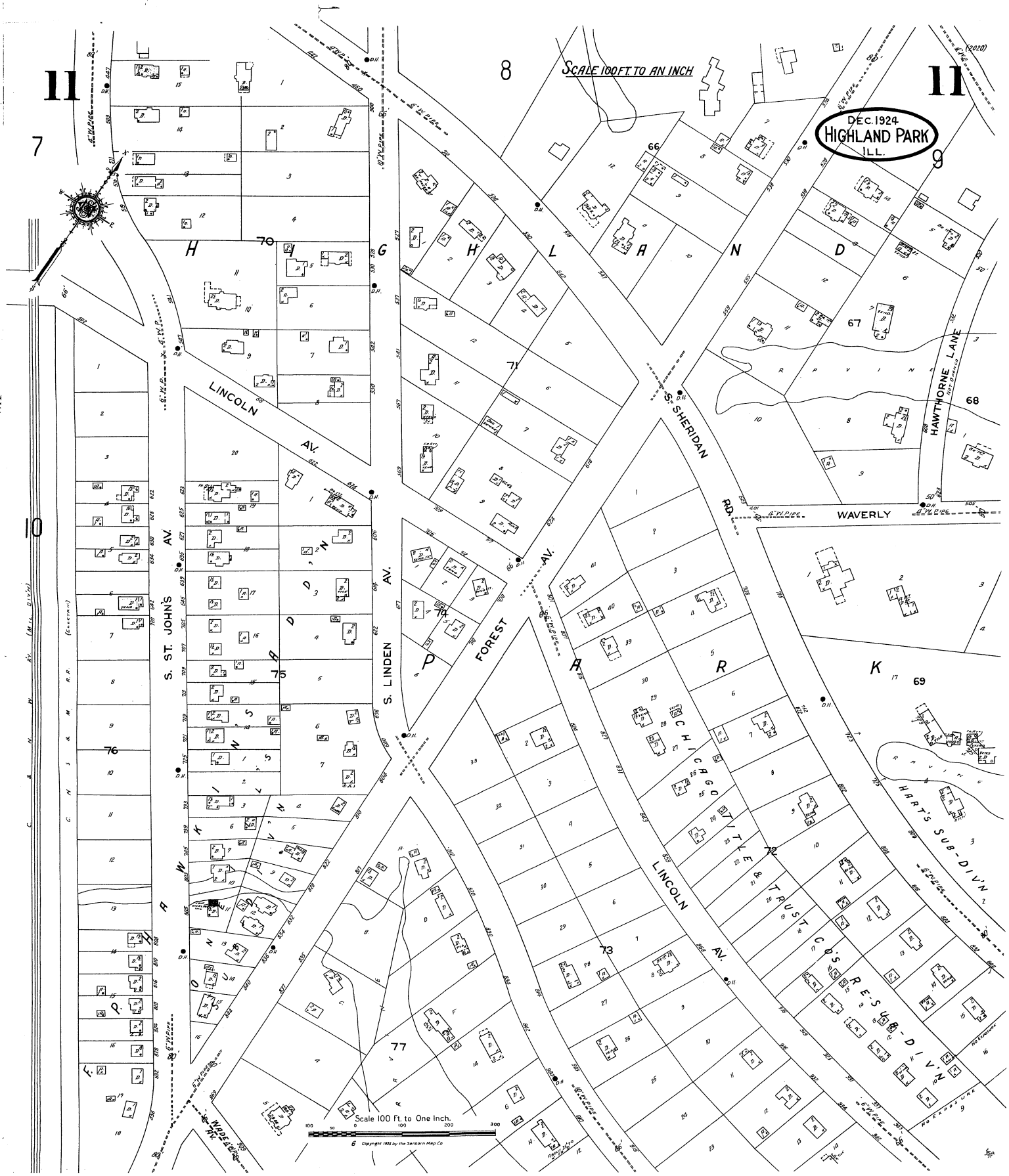



Close








SCALE 100 FT TO AN INCH
DEC. 1924
HIGHLAND PARK
ILL.
LINCOLN AV.
S. SHERIDAN RD.
HAWTHORNE LANE
WAVERLY
FOREST AV.
S. LINDEN AV.
S. ST. JOHN'S AV.
LINCOLN AV.
HART'S SUB-DIV'N
TITLE & TRUST CO'S RE-SUB-DIV'N
CHICAGO
Scale 100 Ft. to One Inch.
100 50 0 100 200 300
Copyright 1925 by the Sanborn Map Co.

File under

OWNER'S NAME A. H. Stewart

C1
I

BUILDING DEPARTMENT, CITY OF HIGHLAND PARK

APPLICATION FOR BUILDING PERMIT

To be filled out in ink

Permit No. 2760

Highland Park, Ill., 13 April 1932

The undersigned AH Stewart hereby applies to the building department of the City of Highland Park, Ill., for a permit to erect, alter, construct, or enlarge the structure or part thereof herein described, and if granted the permit applied for he will comply with all requirements of the city ordinances relating thereto and pay the fee required by such ordinances. This building is to be used for the purpose of private garage and located on Lot 7 Block 71 Subdivision HP No. 616 St. Forest Ave. and constructed of frame of 1 stories, 20 feet wide 20 feet long, and 10 feet high, consisting of 1 rooms, 0 attic, 0 Basement. There will be 0 Bath, 0 Lavatories, 0 Toilets, 0 Sinks, 0 Laundry Tubs, other plumbing 0 Fl. Dr. The building will be heated by —, Lighted by elect., Ventilated ..., fire escapes will be ... The items are more fully set forth in the plans submitted with this application, the estimate of the cost of the work contemplated includes plumbing, heating, wiring, and all construction work necessary to complete the structure $300.00

200

This estimate is made by C	Address		Phone
The owner is AH Stewart	Address	County Ln Rd Barrington	Phone Barr. 192-R
General Contractor Eisenberger & Schmidt	Address	Glenroe 1cc	Phone Glen. 35
Subcontractor	Address		Phone Northbrook 205-J-1
Electrician	Address		Phone
Plumber	Address		Phone
Architect	Address		Phone

No error or omission in either the plans or application, whether said plans or application has been approved by the building inspector or not shall permit or relieve the applicant from constructing the work in any other manner than that provided for in the ordinances of this city relating thereto.

The applicant having read this application and fully understanding the intent thereof declares that the statements made are true to the best of his knowledge and belief.

Signature of Owner AH Stewart by

Address Eisenberger & Schmidt Co. Phone

BUILDING LINE RECORD

NOTE: This application shall be accompanied by Building Line record when required by the Commissioner of Buildings. The Building Line Record shall be: An accurate plat of the block in which the premise of the applicant for a certificate of occupancy is located (one side of the street only) drawn to scale on tracing cloth cut to the size of this application and in ink with a left margin of 1½ inches. On it show: (1) Front line of premises and depth of block to rear line. (2) Street wall line of all buildings. (3) Distance of each street wall from front line, indicating if wall is of porch, bay, or main wall. (4). Use of each building. (5) Location of the premises of applicant, and (6) Points of the compass. This plat must be signed by the owner.

(Use sheet this size if additional space is needed)

(Street Wall: The main wall of a building nearest to and facing on a street, including sun parlors, but not including bay windows nor ground story porches nor piazzas that are not closed in.)

C2
I

BUILDING DEPARTMENT, CITY OF HIGHLAND PARK

St. & No. 616 Forest Ave. Use Dist. 1 A Res. Exam. C

APPLICATION FOR CERTIFICATE OF OCCUPANCY AND CONFORMITY OF PREMISES

(This application must be submitted with the "application for Building Permit" or before a change or extension of a non-conforming use is made.)

City of Highland Park, Commissioner of Buildings:

Application is hereby made for a certificate of occupancy of premises situated on the west side of Forest Ave. street, distant 200 feet of the corner formed by the intersection of " and S. Sheridan Rd.

and known as number 616 Street Forest Ave.

Underline below whether (New Building) (Remodeling or addition to existing buildings) (Change in use)—(Single Family Dwelling) (Apartment over Stores) (Commercial use) (Manufacturing use).

If use is commercial or manufacturing, state if retail store or other commercial or manufacturing use. State fully nature of the business, storage or manufacturing, with manufacturing processes, raw materials used, kind of machinery, and power used, methods of handling materials and products; operations such as processes or materials to be carried on outside of buildings, and if processes or handling of materials are of a nature which would create dust, fire, gas, smoke, noise, fumes, odors, vibrations, sudden fire or explosions. If the premises are to be used in part for residential purposes and in part for commercial or business purposes, state how each floor or part thereof is to be used. If the premises are in commercial district, state area to be devoted to yard storage and its location on the premises. If all information is not available state why:

Area of Lot 24000 ±

List below all buildings (name those to be demolished) stating which exist, which are proposed or which are to be altered. State use of each.

Buildings	Area	Cubic Contents	Height
Res. Bldg 40x20 to be split in ½. E ½ to be made into garage. W ½ to be torn down			

This application shall be accompanied by a plat in duplicate of the premises showing the location of all proposed buildings and of existing buildings (Drawn to Scale). The plat shall be complete with dimensions of premises and buildings, including the height to top of walls along the side lines, and on sheet cut to the size of this application form.

I certify to the correctness of the plat and of the above.

(This application must be signed by the owner of the premises or his duly authorized agents.)

Signature Eisenberg Schmidt Owner

by Agent

Address

(over)

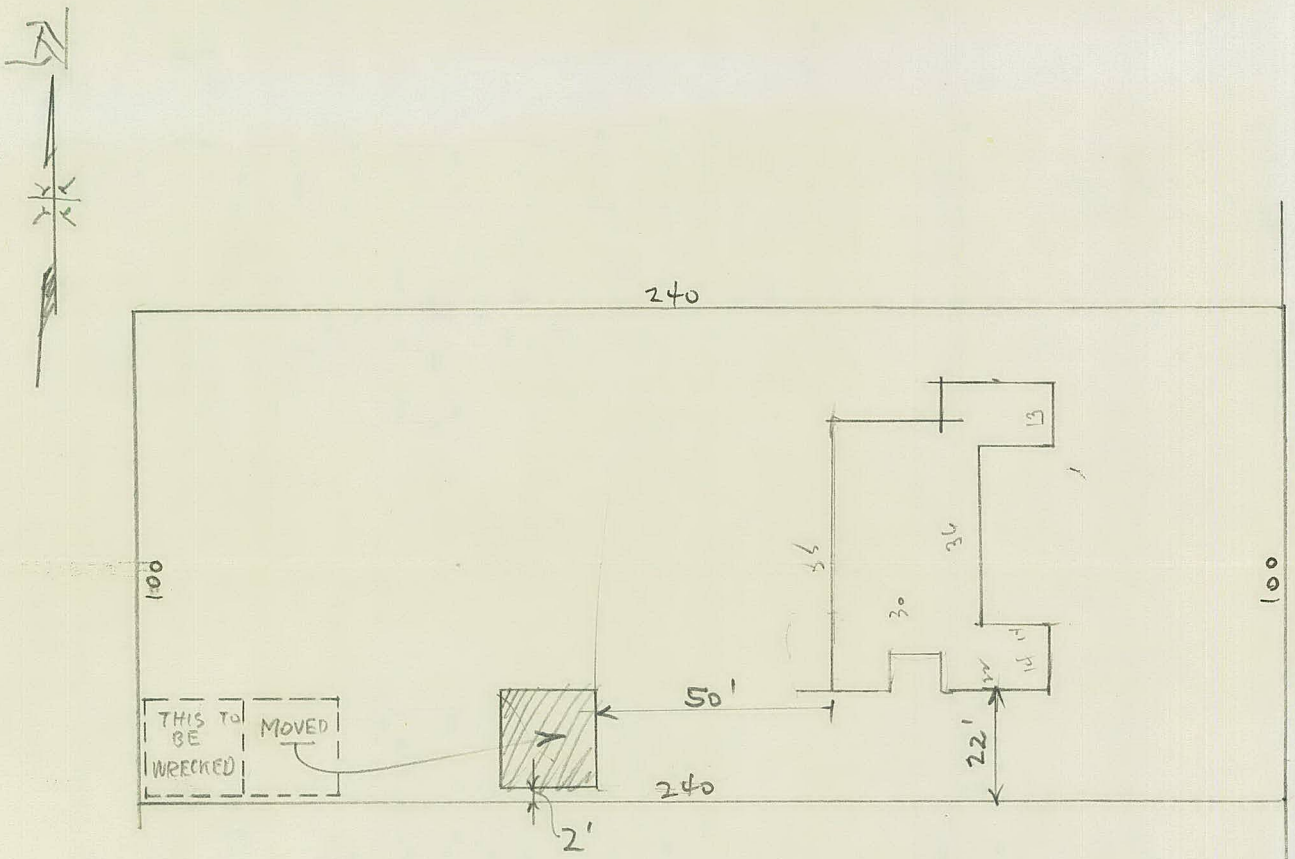
Permit No. 2760

Building Department, City of Highland Park

C3
I

No. 616 St. Forest Ave Lot 7 Block 71 Sub. HP

Draw below, to scale, plat of lot, locating all buildings and show distances from buildings to lot lines. Show average building line of existing houses in block.



Signature Eisenbergas Schmidt

2760

Date 13 April 1932 Building Permit No.

Location of Building—No. 616 1442 Street Forest Ave.

Name of Owner A. H. Stewart

Present Address County Line Road. Barrington, Ill. Phone 142-R

Type of Construction frame Remodeling ✓

General Contractor Eisenberg & Schmidt Address Glenco Phone 35

Permit issued to Owner to construct a privape parape

building on Lot 7 Blk. 71 Sub'n. No

Builder's estimate $300.00 Permit fee 2.00

Location on Lot verified 192 by

Other inspections

Deposits Sidewalks planked

Remarks

Job completed Receipt for returned plans Owner

H.P.C. GARAGE SITE PHOTOS
CITY OF HIGHLAND PARK
1442 Forest Avenue – Michael Goldberg & Ashley Buxbaum



VIEW FROM EAST/DRIVEWAY





INSIDE OF GARAGE

NORTH SIDE



H.P.C. GARAGE SITE PHOTOS
CITY OF HIGHLAND PARK
1442 Forest Avenue – Michael Goldberg & Ashley Buxbaum



VIEW FROM WEST/REAR



OAK TREE ON NORTH SIDE





NORTH-WEST CORNER

H.P.C. PROJECT NARRATIVE
CITY OF HIGHLAND PARK
1442 Forest Avenue – Michael Goldberg & Ashley Buxbaum

Criteria for Certificate of Appropriateness for New Construction. **An application for a Certificate of Appropriateness for Construction of new Structure within a Historic District shall conform to the standards set forth below:**

(1) Height. **The height of the proposed new Structure shall be visually compatible with properties, structures, sites, public ways, objects, and places to which it is visibly related.**

The proposed detached garage will be less than 16 feet to the ridge (based on a 6/12 pitch) and will be located some 85 feet behind the existing SFR. This accessory structure will therefore be compatible with the home and not detract from it.

(2) ***Proportion of front façade.*** **The relationship of the width to the height of the front elevation of the proposed new Structure shall be visually compatible with properties, structures, sites, public ways, objects, and places to which it is visually related.**

At 22 feet in width and 16 feet in height, the proposed garage will be of a standard size for parking 2 vehicles. Since it will be located some distance behind the SFR, there will not be an adverse relationship to the house, and the existing hip style roof will be mirrored on the garage. Additionally, the existing trees that will remain on the lot (within the driveway area) will also form an additional visual barrier down the driveway, as will the location for the replacement structure being +/- 30 further into the rear yard.

(3) ***Proportion of openings.*** **The relationship of the width to height of windows and doors of the proposed new Structure shall be visually compatible with properties, structures, sites, public ways, objects, and places to which the building is visually related.**

The new garage has been designed to be very proportional with the 22-foot width dispersed with a 16-foot x 7-foot overhead door that is centrally located on that front elevation.

(4) ***Rhythm of solids to voids in front façades.*** **The relationship of solids to voids in the front façade of the proposed new Structure shall be visually compatible with properties, structures, sites, public ways, objects, and places to which it is visually related.**

As noted above, the front elevation will have continuity of style, with the overhead door having a glass panel to provide additional interest.

(5) ***Rhythm of spacing and structures on streets.*** **The relationship of the proposed new Structure or object to the open space between it and adjoining structures or objects shall be visually compatible with the properties, structures, sites, public ways, objects, and places to which it is visually related.**

This basic-sized garage (22'x22'), has been located in an area of the rear yard that will provide a reasonable amount of open space, within a quite heavily wooded yard. This location is compatible with the subject property and is standard for many neighborhood homes with detached garages.

(6) ***Rhythm of entrance porches, storefront recesses and other projections.*** **The relationship of entrances and other projections of the proposed new Structure to sidewalks shall be visually compatible with the properties, structures, sites, public ways, objects, and places to which it is visually related**

The entrance is on the side of the garage which is quite standard for a detached structure.

(7) ***Relationship of materials and texture.*** **The relationship of the materials and texture of the façade of the proposed new Structure shall be visually compatible with the predominant materials used in the structures to which it is visually related**

The proposed project will have white vinyl siding and white LP Smartside trim, with the overhead door (with glass in the top panel) colored Evergreen to match the shutter details on the house.

(8) ***Roof shapes.*** **The roof shape of the proposed new Structure shall be visually compatible with the structures to which it is visually related**

As noted previously the garage will have a hip roof that reflects the SFR.

(9) ***Walls of continuity.*** **Façades and property and site structures, such as masonry walls, fences, and landscape masses, shall, when it is a characteristic of the area, form cohesive walls of enclosure along a street, to ensure visual compatibility with the properties, structures, sites, public ways, objects, and places to which such elements are visually related.**

Not Applicable.

(10) ***Scale of a structure.*** **The size and mass of the proposed new Structure in relation to open spaces, windows, door openings, porches, adjacent structures,**

and balconies shall be visually compatible with the properties, structures, sites, public ways, objects, and places to which they are visually related.

Since the replacement garage is of a basic (i.e., 2-car) size, it will maintain spatial compatibility with the home and the surrounding accessory buildings within the neighborhood.

(11) ***Directional expression of front elevation.*** **The proposed new Structure shall be visually compatible with the properties, structures, sites, public ways, objects, and places to which it is visually related in its directional character, whether this be vertical character, horizontal character, or nondirectional character.**

As an accessory building, the new garage will be compatible with the existing character aspects of the lot and neighborhood.

(12) ***Destruction or alteration of historic features.*** **The distinguishing historic qualities or character of a Property, Structure, site or Object and its environment shall not be destroyed. The Alteration of any historic or material or distinctive architectural features should be avoided when possible.**

The SFR will not be altered at all as a result of this work; it is the existing, extremely decrepit accessory building (i.e., detached garage) that will be demolished. Its replacement will allow the owner's to actually park in their garage and will remove an eyesore from the property, while furthering the preservation of the existing tree.

(13) ***Archaeological and natural resources.*** **Every reasonable effort shall be made to protect and preserve archaeological and natural resources affected by, or adjacent to any project.**

The existing garage has no archaeological or natural resources value: it was built within the past few decades and holds no historical significance relative to the house.

(14) ***Archaeological compatibility.*** **In considering new construction, the Commission shall not impose a requirement for the use of a single architectural style or period, though it may impose a requirement for compatibility.**

With a hip roof and (color) finishes that match the SFR, the replacement garage is compatible with the existing historic home.

A. P. SURVEYING COMPANY, PC.
LICENSE NO. 184-003309
PROFESSIONAL DESIGN FIRM-LAND SURVEYING CORPORATION

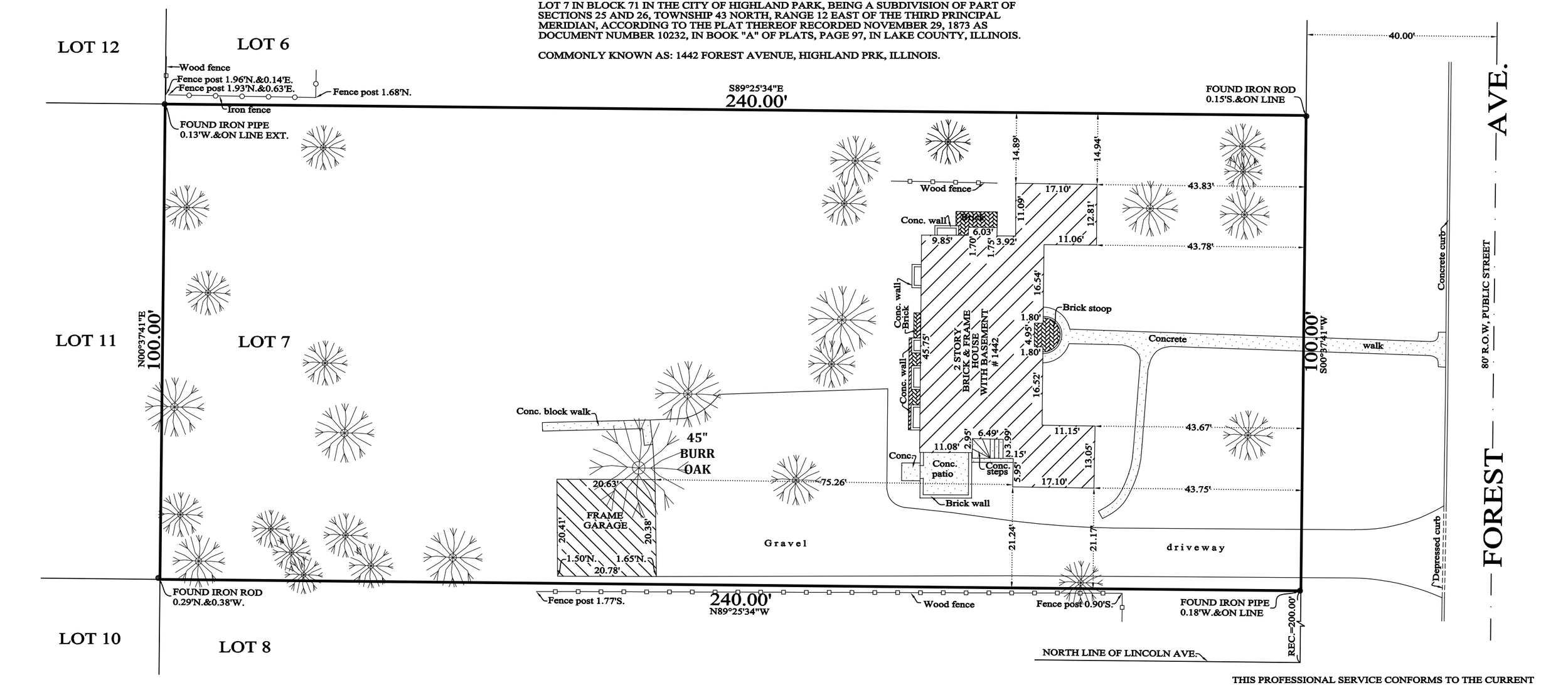
PLAT OF SURVEY

OF

LOT 7 IN BLOCK 71 IN THE CITY OF HIGHLAND PARK, BEING A SUBDIVISION OF PART OF SECTIONS 25 AND 26, TOWNSHIP 43 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED NOVEMBER 29, 1873 AS DOCUMENT NUMBER 10232, IN BOOK "A" OF PLATS, PAGE 97, IN LAKE COUNTY, ILLINOIS.

COMMONLY KNOWN AS: 1442 FOREST AVENUE, HIGHLAND PRK, ILLINOIS.

2121 Parkview Court
Wilmette, Illinois 60091
Tel: (847) 853-9364
Fax: (847) 853-9391
e-mail:
apsurveyingcompany@gmail.com



THE BEARING BASIS IS SPC NAD83 (2011 ADJUSTMENT),ILL.EAST ZONE.
THE TITLE COMMITMENT NO. 24001270WH WAS FURNISHED FOR THIS SURVEY.
DIMENSIONS ARE NOT TO BE ASSUMED FROM SCALING.

Order No.: 24-0973
Scale: 1 inch = 20
Date: March 2, 2024.
Ordered by: MPS LAW
ATTORNEYS AT LAW

HGB

EXISTING SITE PLAN

JACK A. ZLOTEK
3186
PROFESSIONAL LAND SURVEYOR
STATE OF ILLINOIS
WILMETTE, ILLINOIS

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.
DISTANCES ARE MARKED IN FEET AND DECIMAL PART THEREOF.
BUILDING LINES AND EASEMENTS ARE SHOWN ONLY WHERE THEY ARE SO RECORDED IN THE MAPS, OTHERWISE REFER TO YOUR DEED OR ABSTRACT.
COMPARE ALL POINTS BEFORE BUILDING BY SAME AND AT ONCE REPORT ANY DIFFERENCE.

State of Illinois }
} s.s.
County of Cook }

We, A. P. SURVEYING COMPANY, PC. do hereby certify that we have surveyed the above described property and that, to the best of our knowledge, the plat hereon drawn is an accurate representation of said survey.

PROF'L. LAND SURVEYOR No. 3186
License Expiration: November 30, 2026.

A. P. SURVEYING COMPANY, PC.
LICENSE NO. 184-003309
PROFESSIONAL DESIGN FIRM-LAND SURVEYING CORPORATION

PLAT OF SURVEY

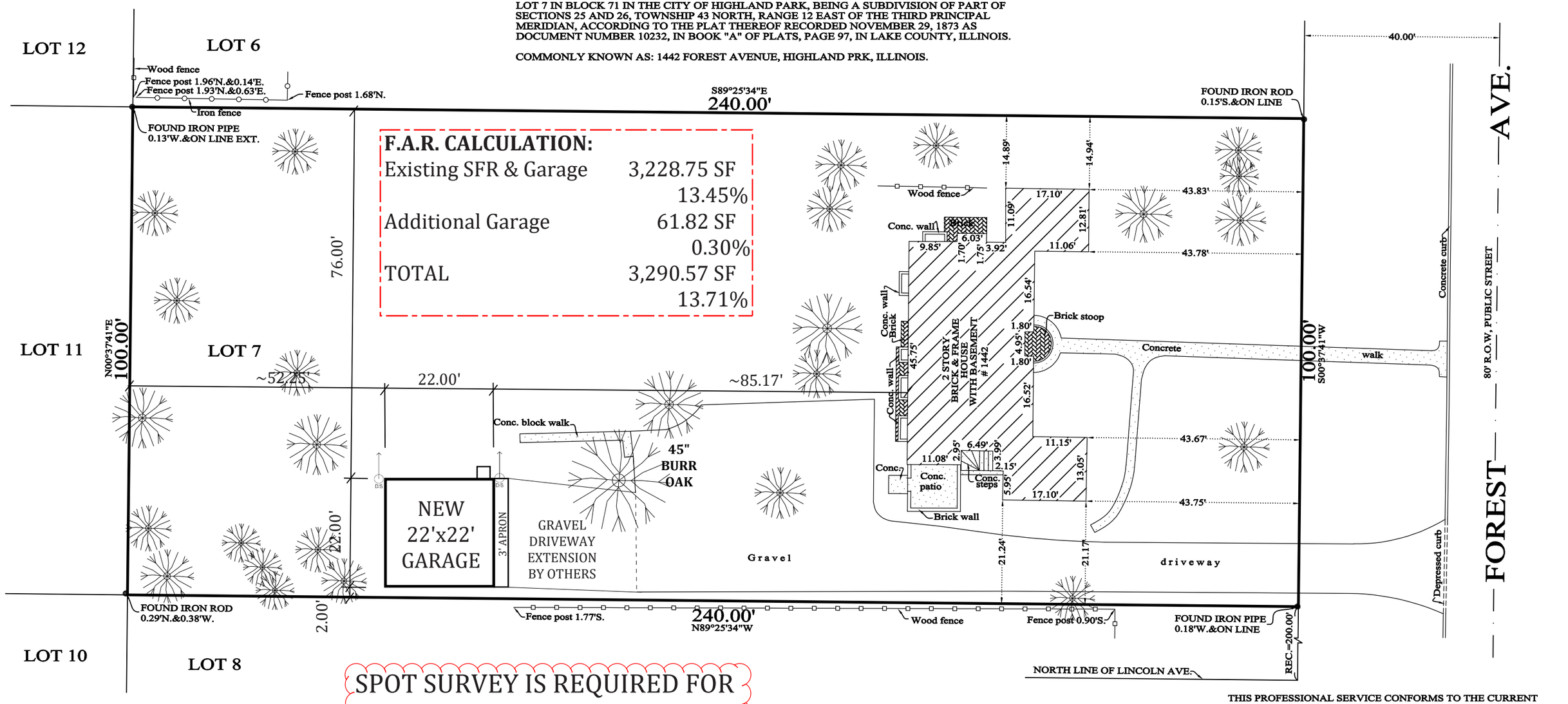
OF

LOT 7 IN BLOCK 71 IN THE CITY OF HIGHLAND PARK, BEING A SUBDIVISION OF PART OF SECTIONS 25 AND 26, TOWNSHIP 43 NORTH, RANGE 12 EAST OF THE THIRD PRINCIPAL MERIDIAN, ACCORDING TO THE PLAT THEREOF RECORDED NOVEMBER 29, 1873 AS DOCUMENT NUMBER 10232, IN BOOK "A" OF PLATS, PAGE 97, IN LAKE COUNTY, ILLINOIS.

COMMONLY KNOWN AS: 1442 FOREST AVENUE, HIGHLAND PRK, ILLINOIS.

2121 Parkview Court
Wilmette, Illinois 60091
Tel: (847) 853-9364
Fax: (847) 853-9391
e-mail:
apsurveyingcompany@gmail.com

NORTH



F.A.R. CALCULATION:

Existing SFR & Garage	3,228.75 SF
	13.45%
Additional Garage	61.82 SF
	0.30%
TOTAL	3,290.57 SF
	13.71%

SPOT SURVEY IS REQUIRED FOR THE FOUNDATION PRIOR TO FRAMING THE GARAGE

HGB PROPOSED SITE PLAN

THE BEARING BASIS IS SPC NAD83 (2011 ADJUSTMENT),ILL.EAST ZONE.
THE TITLE COMMITMENT NO. 24001270WH WAS FURNISHED FOR THIS SURVEY.
DIMENSIONS ARE NOT TO BE ASSUMED FROM SCALING.

Order No.: 2419973
Scale: 1 inch = 20
Date: March 2, 2024.
Ordered by: MPS LAW
ATTORNEYS AT LAW

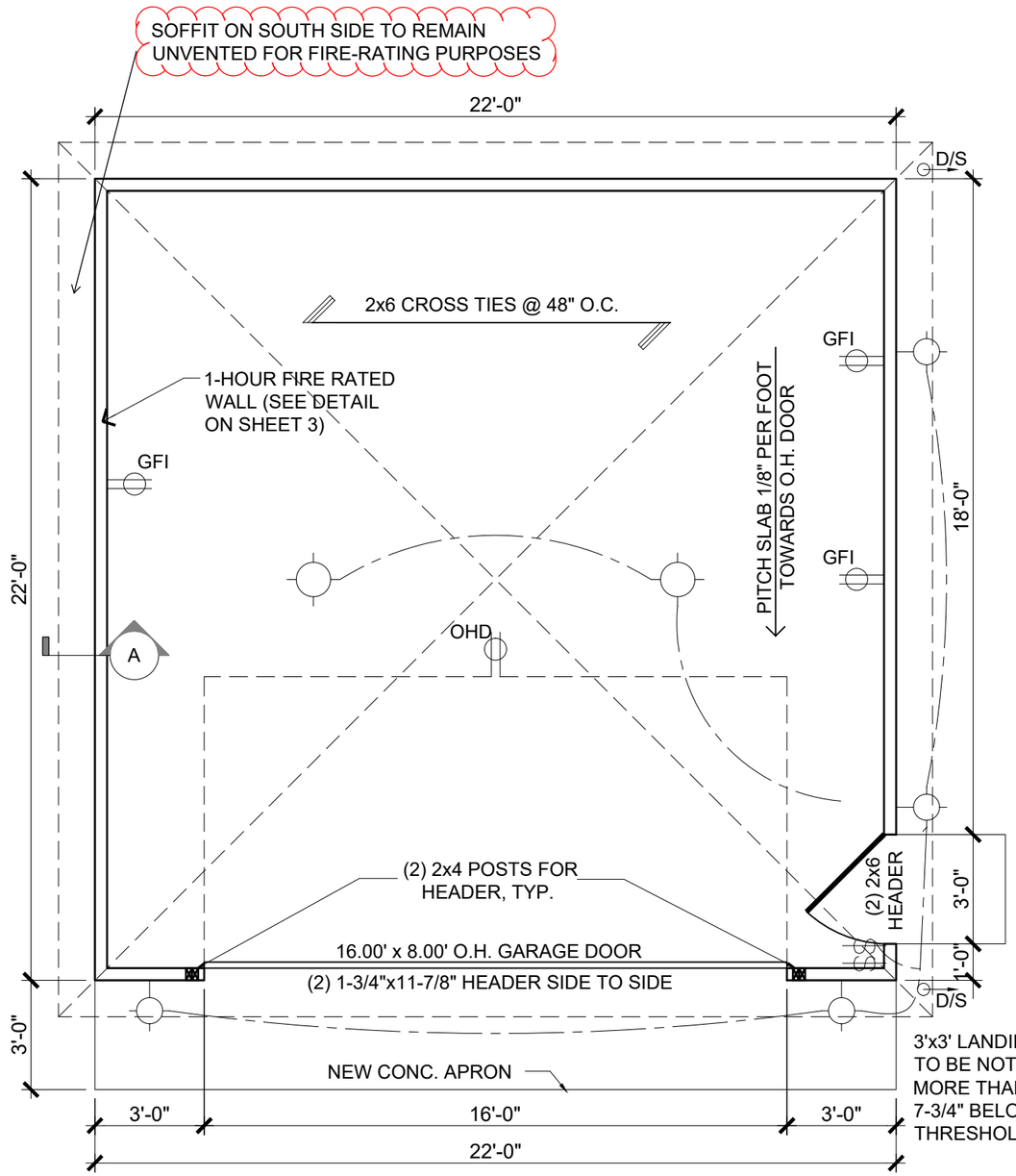
JACK A. ZLOTEK
3186
PROFESSIONAL LAND SURVEYOR
STATE OF ILLINOIS
WILMETTE, ILLINOIS

THIS PROFESSIONAL SERVICE CONFORMS TO THE CURRENT ILLINOIS MINIMUM STANDARDS FOR A BOUNDARY SURVEY.
DISTANCES ARE MARKED IN FEET AND DECIMAL PART THEREOF.
BUILDING LINES AND EASEMENTS ARE SHOWN ONLY WHERE THEY ARE SO RECORDED IN THE MAPS, OTHERWISE REFER TO YOUR DEED OR ABSTRACT.
COMPARE ALL POINTS BEFORE BUILDING BY SAME AND AT ONCE REPORT ANY DIFFERENCE.

State of Illinois }
} s.s.
County of Cook }

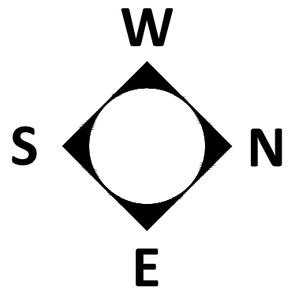
We, A. P. SURVEYING COMPANY, PC. do hereby certify that we have surveyed the above described property and that, to the best of our knowledge, the plat hereon drawn is an accurate representation of said survey.

PROF'L. LAND SURVEYOR No. 3186
License Expiration: November 30, 2026.



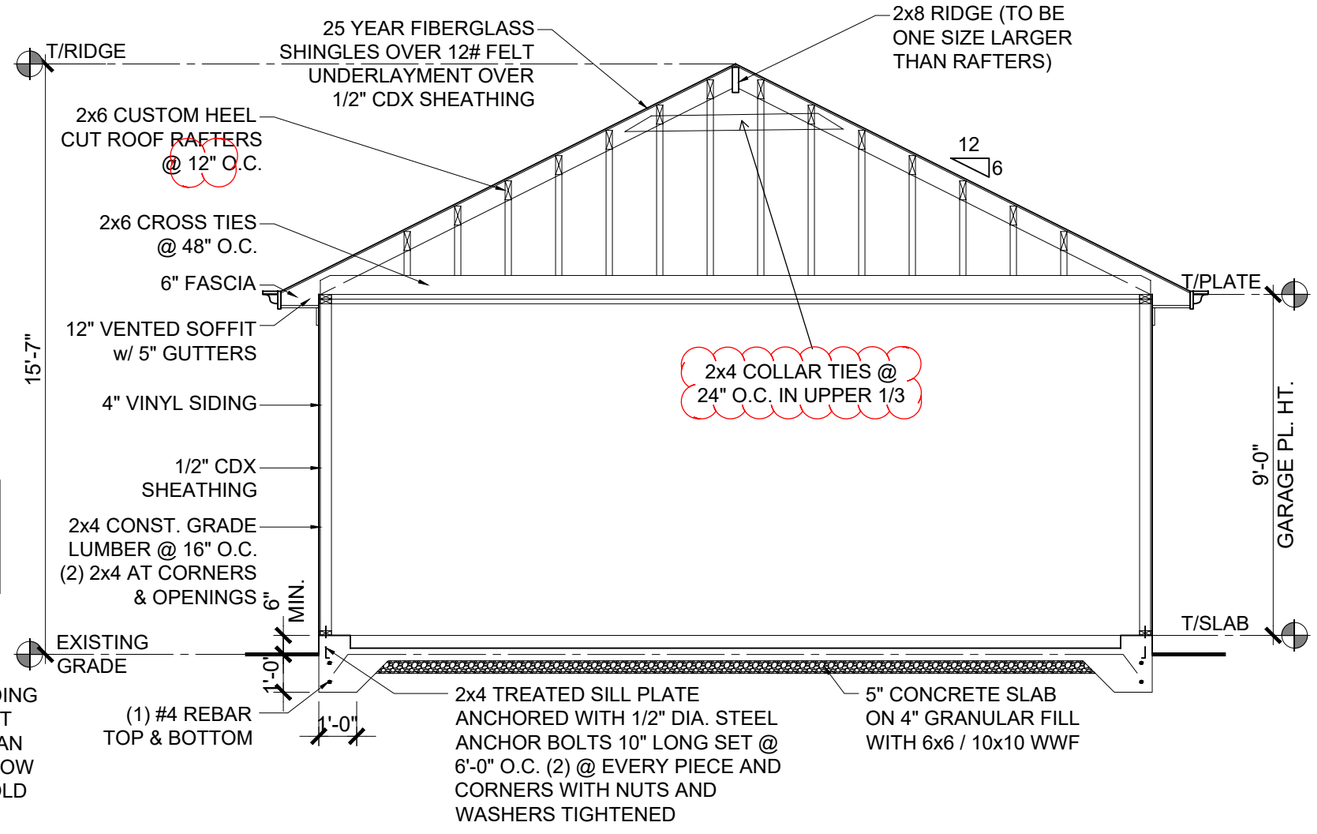
FLOOR PLAN

SCALE: 1/4" = 1'-0"



ELECTRIC DETAIL

- CIRCUITS: (1) 20 AMP. #12 GA. (1) 15 AMP. #14 GA.
- CONTAINED IN 3/4" RIGID STEEL CONDUIT
- BURIAL DEPTH: 8 INCHES
- WIRING: SEPARATE CIRCUITS TO ELECTRICAL PANEL



BUILDING SECTION

SCALE: 1/4" = 1'-0"

HGB

DETACHED GARAGE - HIP ROOF

1442 FOREST AVENUE, HIGHLAND PARK

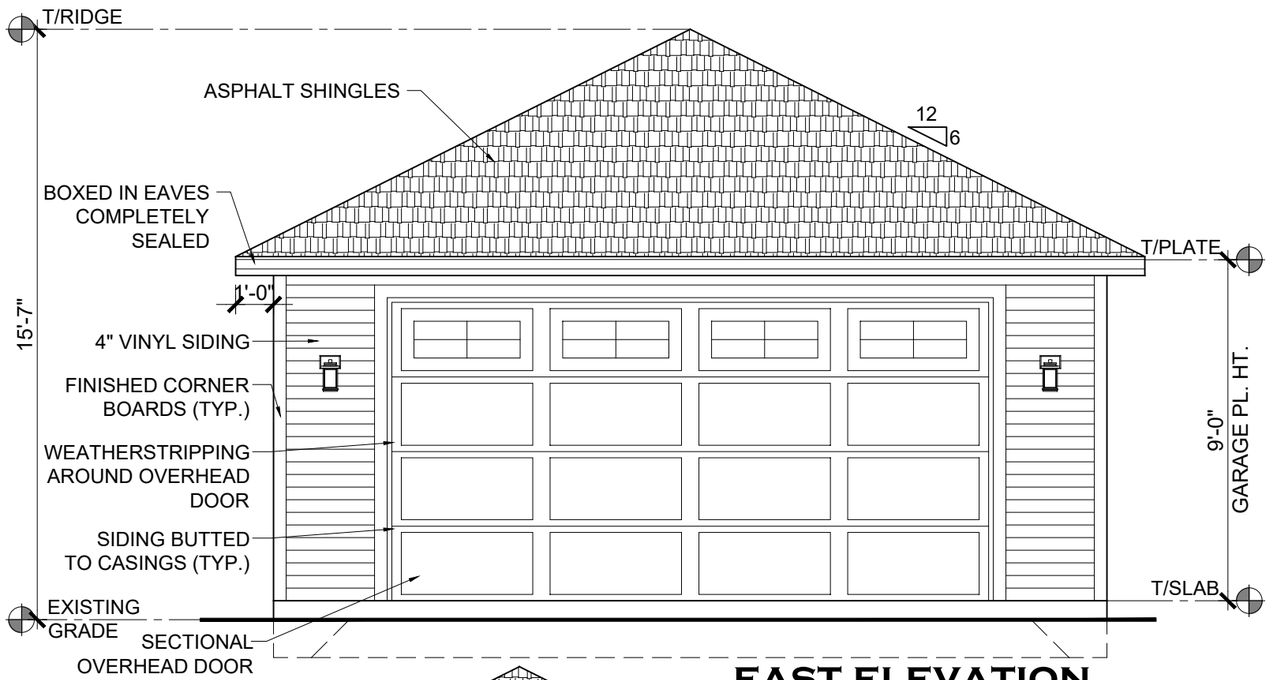
GOLDNER RESIDENCE

THESE PLANS REMAIN THE PROPERTY OF MACH 1, INC. AND THEIR REPRODUCTION IS EXPRESSLY FORBIDDEN.

CONTRACTOR:
HEARTLAND GARAGE BUILDERS
602 ACADEMY DRIVE
NORTHBROOK, IL 60062
PHONE: (224) 619-4539
EMAIL: INFO@HLGBS.COM

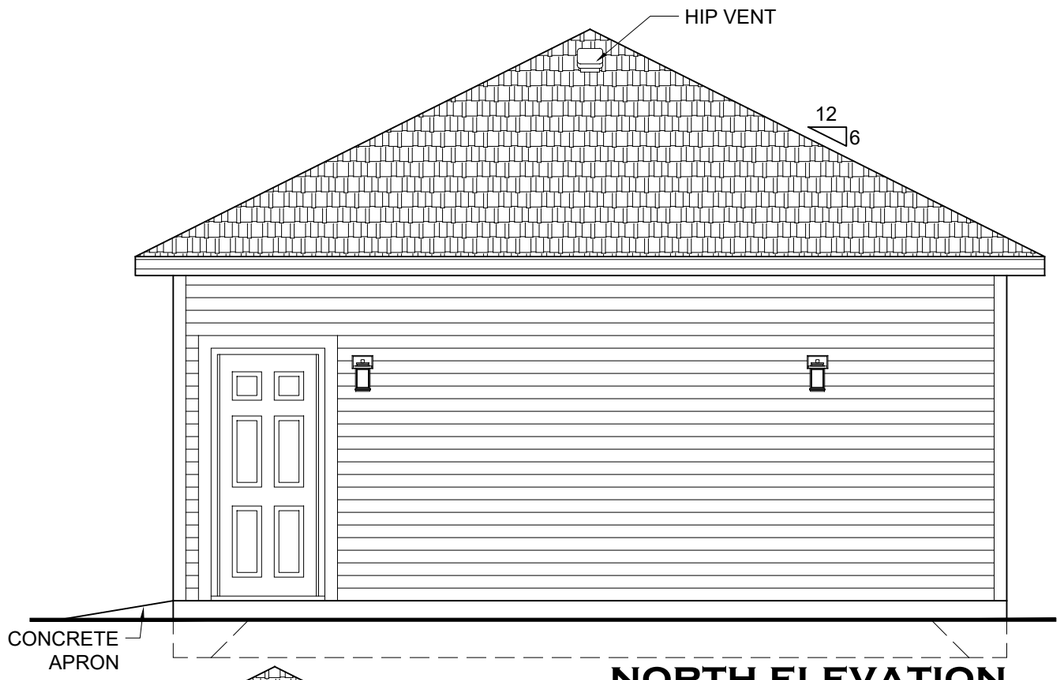
SHEET NAME: FLOOR PLAN & BUILDING SECTION

SHEET NUMBER: 1 OF 4



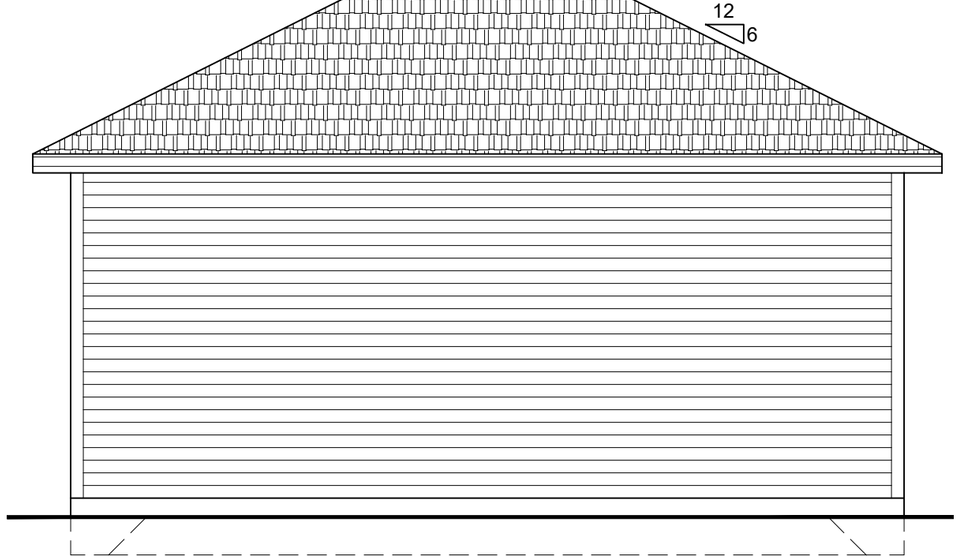
EAST ELEVATION

SCALE: 1/4" = 1'-0"



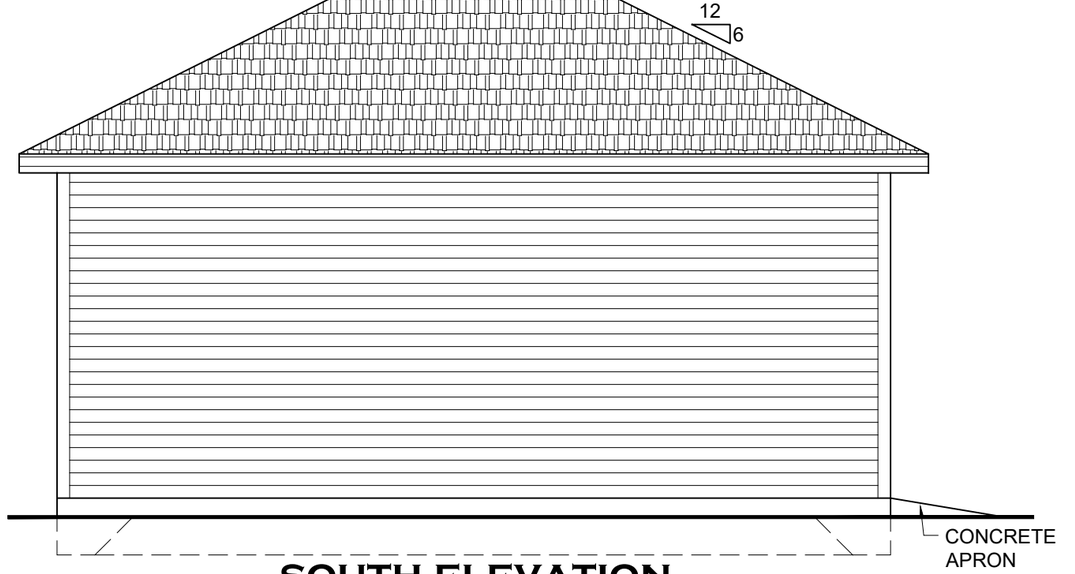
NORTH ELEVATION

SCALE: 1/4" = 1'-0"



WEST ELEVATION

SCALE: 1/4" = 1'-0"



SOUTH ELEVATION

SCALE: 1/4" = 1'-0"

HGB

DETACHED GARAGE - HIP ROOF

1442 FOREST AVENUE, HIGHLAND PARK

GOLDNER RESIDENCE

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NORTHBROOK, IL 60062
PHONE: (224) 619-4539
EMAIL: INFO@HLGBS.COM

SHEET NAME: ELEVATIONS

SHEET NUMBER: 2 OF 4





3-D PERSPECTIVES

*These drawings are for illustration purposes only. Vaulted ceiling or attic heights are approximate and will be confirmed with the permit submission plans.
*Exact materials, colors and styles will be selected on proposal.

HGB HEARTLAND GARAGE BUILDERS®

Michael & Ashley Goldner
1442 Forest Avenue
Highland Park, IL 60035

Date: March 7th, 2026

H.G.B. OFFICE: 602 Academy Drive, Northbrook, Illinois 60062

Historic Preservation Commission

Certificate of Appropriateness Staff Memorandum

To: Historic Preservation Commission

From: Maddy Markle, Planner I

Date: May 14, 2026

Subject: Certificate of Appropriateness – 2012 Grange Avenue

Location:	2012 Grange Avenue
Historical Name:	Sparkling Springs Well House
Historical Status:	Local Landmark (2013)
Structure:	Style: Utilitarian Architect: Unknown Built: c. 1896
Petitioner:	Barry Hammer (Developer) on behalf of Lisa Herzberg (Owner) 1033 Crofton Ct Highland Park, IL 60035
Project Architect:	Scott Renken 555 Oakwood Avenue Lake Forest, IL 60045

SUMMARY OF THE PETITION

Developer Barry Hammer, on behalf of property owner Lisa Herzberg, has submitted an application to amend a previously approved Certificate of Appropriateness for the rehabilitation of the historic well house and construction of an attached single-family home at the property located at 2012 Grange Avenue. The proposed amendment pertains specifically to the well-house structure, not the prior-approved design of the new single-family dwelling. The application was submitted April 27, 2026.

The historic Sparkling Spring Well House is a square utilitarian structure with a pyramidal roof and venting tower (also referred to as copula). The structure was historically built and owned by the Sparking Springs Mineral Water Company, the oldest family-owned business in Highland Park (founded c. 1896).



Figure 1. *Historic Structure.*



Figure 2. *Location*

Prior Commission Consideration.

This property was designated a Local Landmark in 2013 (see ***Attachment A***). The property was designated a Local Landmark for its associations with the Sparkling Springs Mineral Water Company (Landmark Criteria 1, 7, and 8). See the 2013 Landmark Nomination materials in ***Attachment B***.

In October of 2024 the Historic Preservation Commission ("***HPC***") granted a Certificate of Appropriateness ("***COA***") to the current applicant to rehabilitate the historic structure and incorporate it into a new single-family dwelling (*see* ***Attachment C***) using the plans originally approved in 2013[1]. In April of 2025, the HPC granted a COA to the same applicant that included an updated plan set. The applicant applied for a COA that incorporated an updated design of the proposed home that isn't identical to the same design approved in 2013 and 2024 (*see* ***Attachment D***). As part of this past approval the applicant committed to repairing the venting cupola on the roof.

PROPOSED AMENDMENT

The applicant proposes to amend the 2025 COA to reconstruct the venting cupola, as opposed to repairing it.

The project architect, Scott Renken, states, *"Upon closer examination of the Historical Building portion of this project, particularly the cupola front dormer and portions of the roof structure, it has become apparent that the current poor quality and deterioration of materials require replacement vs. saving of existing materials…. All proportions, details and dimensions of the original design will be maintained. The replacement materials will be an asphalt shingle roof (as originally proposed), Hardie Bd. cementitious trim or real cedar would be used for all trim and conventional 2x new wood framing as needed for structure. The vents will either be wood or a Hardie Bd. product and would match as closely as possible the original design."* The applicant's project narrative and proposed amended plans are available in ***Attachment E***.

The reconstructed cupola will resemble the current, in terms of massing, proportion, height, and roof shape. The proposed materials will be the same as the current structure with the exception of possible Hardie Board trim and vents. As part of their evaluation of "*Standard 7 – Relationship of Materials and Textures,*" found in Sec. 24.030 of Code, the Commission should consider if Hardie Board (fiber cement) is an appropriate material replacement for wood. National Parks Service Preservation Brief 16, "*Use of Substitute Materials on Historic Building Exteriors*"[2] is available in ***Attachment F*** as a resource.

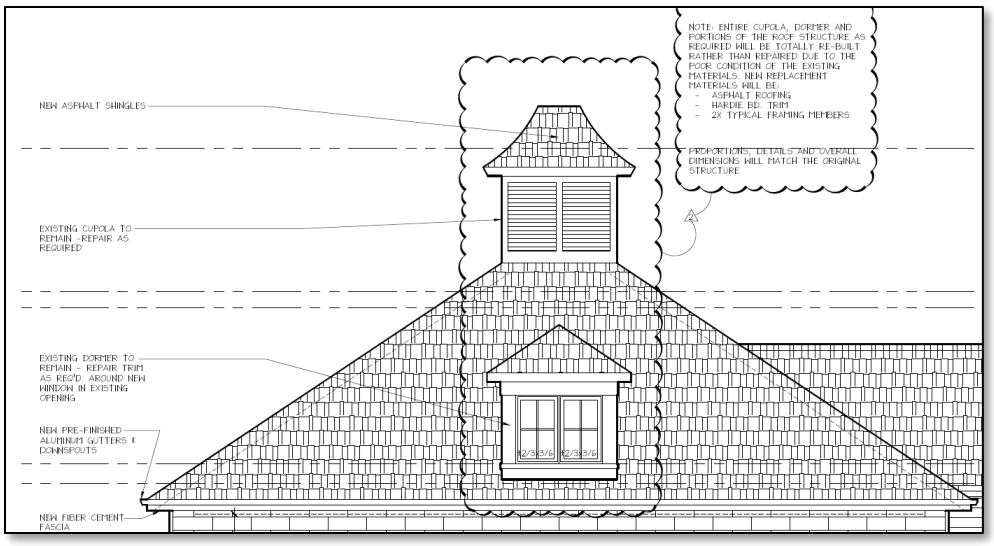


Figure 3. Proposed amendment. Cupola will be totally re-built rather than repaired. Materials will be asphalt roofing, Hardie Board (fiber cement) trim and 2x framing members. Proportions, details, and dimensions will match original structure.

[1] The Oct. 10, 2024 COA was approved by HPC with a condition that the Applicant would return to a subsequent HPC meeting to present an updated plan set of the proposed single-family dwelling.

[2] The HPC does not evaluate applications using National Parks Service standards. Applications are evaluated using the Certificate of Appropriateness standards in Ch. 24.030 of Code. The attached is information about modern replacement materials that the Commission may take into account as they evaluate "*Standard 7 – Relationship of Material and Texture.*"

CITY INSPECTION
The Department of Community Development's Senior Plan Examiner / Inspector Horatiu Wolff, and Senior Inspector Jim Ferber inspected the site on April 23, 2026 to verify the Applicant's claims of the cupola's poor structural condition. Both City inspectors concluded that the cupola requires reconstruction and cannot reasonably be repaired (see *Attachment G*).

Inspector Wolff notes the following:

1. Internal Observations

    a. Existing wood rafters supporting the roof structure, show signs of deterioration from water infiltration and age (especially at the bearing ends over the wood top plates along the perimeter exterior masonry block walls), a condition that has progressed over the life span of the existing construction and would render the wood frame construction unable to support building code required structural loads.

    b. Existing wood framing members framing the rough opening/support for the existing cupola, likewise show signs of deterioration from water infiltration and age.

2. Exterior Observations

    a. Existing asphalt shingled roof has long exceeded the life expectancy attributed to such a roofing type: with portions of the roof missing roof shingles and the roof shingles themselves curled, cracked and extremely weathered.

    b. The cupola itself appears to be warped: appears to have rotated slightly around the vertical axis. Horizontal slats on the exterior vent panels of the cupola, are missing and the cupola wood construction itself shows sign of extreme weathering.

Inspector Wolff concludes that, *"In consideration of such observations, it would be prudent to replace the entire roof structure, with a new roof structure that matches the existing overall design of the existing natural spring/well house: i.e. a hip roof, with a dormer on the South elevation and a rectangular plan shaped, venting cupola (having [2] vent panels on North/South elevations and [1] vent panel on East/West elevations), and with sweeping rafters framing the cupola roof."*

These observations are consistent with the project architect and developer's assessment.

STANDARDS FOR CERTIFICATES OF APPROPRIATENESS
The following are the Standards for Certificates of Appropriateness as listed in Section 24.030(C), which are for an application for a Certificate of Appropriateness for *New Construction*.

(1) **Height.** The height of the proposed new Structure shall be visually compatible with properties, structures, sites, public ways, objects, and places to which it is visibly related.
(2) **Proportion of front façade**. The relationship of the width to the height of the front elevation of the proposed new Structure shall be visually compatible with properties, structures, sites, public ways, objects, and places to which it is visually related.
(3) **Proportion of openings**. The relationship of the width to height of windows and doors of the proposed new Structure shall be visually compatible with properties, structures, sites, public ways, objects, and places to which the building is visually related
(4) **Rhythm of solids to voids in front facades**. The relationship of solids to voids in the front façade of the proposed new Structure shall be visually compatible with properties, structures, sites, public ways, objects, and places to which it is visually related.

(5) **Rhythm of spacing and structures on streets**. The relationship of the proposed new Structure or object to the open space between it and adjoining structures or objects shall be visually compatible with the properties, structures, sites, public ways, objects, and places to which it is visually related.
(6) **Rhythm of entrance porches, storefront recesses and other projections**. The relationship of entrances and other projections of the proposed new Structure to sidewalks shall be visually compatible with the properties, structures, sites, public ways, objects, and places to which it is visually related.
(7) **Relationship of materials and texture**. The relationship of the materials and texture of the façade of the proposed new Structure shall be visually compatible with the predominant materials used in the structures to which it is visually related.
(8) **Roof shapes**. The roof shape of the proposed new Structure shall be visually compatible with the structures to which it is visually related..
(9) **Walls of continuity**. Facades and property and site structures, such as masonry walls, fences, and landscape masses, shall, when it is a characteristic of the area, form cohesive walls of enclosure along a street, to ensure visual compatibility with the properties, structures, sites, public ways, objects, and places to which such elements are visually related.
(10) **Scale of a structure**. The size and mass of the proposed new Structure in relation to open spaces, windows, door openings, porches, adjacent structures, and balconies shall be visually compatible with the properties, structures, sites, public ways, objects, and places to which they are visually related.
(11) **Directional expression of front elevation**. The proposed new Structure shall be visually compatible with the properties, structures, sites, public ways, objects, and places to which it is visually related in its directional character, whether this be vertical character, horizontal character, or nondirectional character.
(12) **Destruction or alteration of historic features**. The distinguishing historic qualities or character of a Property, Structure, site or Object and its environment shall not be destroyed. The Alteration of any historic or material or distinctive architectural features should be avoided when possible
(13) **Archaeological and natural resources**. Every reasonable effort shall be made to protect and preserve archaeological and natural resources affected by, or adjacent to any project.
(14) **Architectural compatibility**. In considering new construction, the Commission shall not impose a requirement for the use of a single architectural style or period, though it may impose a requirement for compatibility.

RECOMMENDATION

Based on the findings presented above, staff recommends that the Historic Preservation Commission consider approval of an amendment to the 2025 Certificate of Appropriateness for the rehabilitation at 2012 Grange Avenue. Staff asks that the Commission consider if Hardie Board trim is an appropriate material replacement for wood trim and vents as part of the proposed reconstruction.

ATTACHMENTS

Attachment A. 2013 Ordinance
Attachment B. 2013 Landmark Nomination
Attachment C. 2024 COA
Attachment D. 2025 COA
Attachment E. Applicant Submission
Attachment F. NPS Preservation Brief 16
Attachment G. City Inspector Opinion

ORDINANCE NO. 112-13

AN ORDINANCE DESIGNATING 1629 PARK AVENUE AS A LANDMARK

WHEREAS, HP Zelp, LLC (***"Owner"***) is the record owner of that certain real property commonly known as 1629 Park Avenue, Highland Park, Illinois and legally described in **Exhibit A** attached to, and by this reference made a part of, this Ordinance (***"Property"***); and

WHEREAS, the Property is improved with a utilitarian industrial structure (***"Structure"***); and

WHEREAS, on July 26, 2013 , pursuant to Section 24.025(A) of "The Highland Park Code of 1968," as amended (***"City Code"***), the Owners submitted a written nomination to the Chairman of the Historic Preservation Commission of the City (***"Commission"***) to designate the Structure as a landmark; and

WHEREAS, pursuant to Section 24.025(B)(1) of the City Code, a public meeting of the Commission to consider preliminary landmark designation of the Structure was held on September 12, 2013; and

WHEREAS, on October 10, 2013, the Commission adopted Resolution No. 13-02, recommending preliminary landmark designation of the Structure pursuant to Section 24.025(B)(2) of the City Code; and

WHEREAS, pursuant to Section 24.025(D)(3) of the City Code, the Owners have consented to the proposed landmark designation of the Structure; and

WHEREAS, on October 10, 2013, the Commission accepted the planning report prepared by the City Director of Community Development, pursuant to Section 24.025(C) of the City Code, and voted to recommend approval of the proposed landmark designation of the Structure, in accordance with Sections 24.025(D)(3) and 24.025(G)(2) of the City Code; and

WHEREAS, the City Council has determined that it will serve and be in the best interest of the City and its residents to designate the Structure as a landmark;

NOW, THEREFORE, BE IT ORDAINED BY THE CITY COUNCIL OF HIGHLAND PARK, LAKE COUNTY, ILLINOIS, as follows:

SECTION ONE: RECITALS. The foregoing recitals are incorporated into, and made a part of, this Ordinance as findings of the City Council.

SECTION TWO: FINDINGS. The City Council, having reviewed the findings, recommendations, and official record of the Commission, hereby finds as follows:

A. The Structure has sufficient integrity of location, design, materials, and workmanship to make it worthy of preservation;

B. The Structure demonstrates character, interest, and value as part of the development and heritage of the City, thereby satisfying the criterion for landmark designation set forth in Section 24.015(1) of the City Code;

C. The Structure has a unique location and exhibits singular physical characteristics that make it an established visual feature, thereby satisfying the criterion for landmark designation set forth in Section 24.015(7) of the City Code;

D. The Structure is a unique example of a utilitarian structure with a high level of integrity and cultural, historical, and community significance, thereby satisfying the criterion for landmark designation set forth in Section 24.015(8) of the City Code;

SECTION THREE: LANDMARK DESIGNATION. In accordance with, and pursuant to, Section 24.025(I)(2) of the City Code, the City Council shall, and does hereby, designate the Structure as a landmark.

SECTION FOUR: RECORDATION; BINDING EFFECT. A copy of this Ordinance shall be recorded with the Lake County Recorder of Deeds. This Ordinance and the privileges, obligations, and provisions contained

herein shall inure solely to the benefit of, and be binding upon, the Owner and each of its heirs, representatives, successors, and assigns.

SECTION FIVE: PUBLICATION. The City Clerk shall be, and is hereby, directed to publish this Ordinance in pamphlet form pursuant to the Statutes of the State of Illinois.

SECTION SIX: EFFECTIVE DATE. This Ordinance shall be in full force and effect from and after its passage and approval in the manner provided by law.

AYES: Mayor Rotering, Councilmen Stone, Kaufman, Frank, Blumberg, Naftzger, Knobel

NAYS: None

ABSENT: None

PASSED: November 12, 2013

APPROVED: November 12, 2013

PUBLISHED IN PAMPHLET FORM: November 13, 2013

ORDINANCE NO.: 112-13

Nancy R. Rotering, Mayor

ATTEST:

Ghida S. Neukirch, City Clerk

EXHIBIT A

LEGAL DESCRIPTION OF THE PROPERTY

Lot 6, Grange Woods Subdivision, being a resubdivision of Lots 12-17 inclusive, in William Tillman's Sparkling Spring Subdivision in that part of the west half of the east half of the northeast quarter of Section 21, Township 43 North, Range 12 east of the third principal meridian, Lake County, Illinois.

Commonly known as 1629 Park Avenue, Highland Park, Illinois

Highland Park Historic Preservation Commission
1707 St. Johns Avenue
Highland Park, Illinois 60035

Landmark Nomination Form

Date: July 26, 2013

1)	Name of Property (original if known)	Sparkling Spring Mineral Water Co. Well House		
2)	Street Address:	1629 Park Ave. West		
3)	Legal description or P.I.N. (Permanent Index Number):	16-21-203-028-0000		
4)	Name and Address of Property Owner(s):	HP Zelp, LLC 2001 N. Halsted St.#302, Chicago, IL 60614		
5)	Present Use:	vacant	6) Past Use:	well house/industrial
7)	Architect:	unknown	8) Date of Construction:	1890s

9) Written statement describing property and setting forth reasons it is eligible for landmark designation:

See attached Statement of Eligibility, Exhibit A.

See attached site photo, Exhibit B.

See attached site survey, Exhibit C.

(please include photos)

10)	This structure is eligible for designation on the basis of the following criteria (see reverse page):	1,7 and 8
11)	Name(s) of Applicant(s):	HP Zelp, LLC
	Address:	2001 N. Halsted St.#302, Chicago, IL 60614
	Signature(s):	Jami J. Mecca, attorney for Applicant
	Address(es):	Becker Gurian, 513 Central Ave.#400, Highland Park
12)	Affiliation (Commission Member, Owner, City Council, Preservation Organization):	Owner

Please return this form to:

Department of Community Development
Historic Preservation Commission
1150 Half Day Road
Highland Park, IL 60035

FAX (847) 432-0964
Attn: Andy Cross, Planner

Exhibit A – Statement of Eligibility

The Well House was built in the 1890s as a shelter for pumping equipment for the Sparkling Springs Water Company. It is the oldest surviving structure on the site. The City's 1999 architectural survey gave the Well House an S-Significant historical status and noted it was probably eligible for inclusion on the National Registry of Historic Places. The Well House is a unique example of a utilitarian structure that illustrates the early development of the west Highland Park area. The Applicant desires to preserve the overall form of the Well House (minus two non-historic brick additions) and incorporate it into a residential adaptive reuse within the Grange Woods Subdivision pursuant to the terms and conditions of a pending proposed planned development special use and development agreement which will be subject to final approval by the City Council.

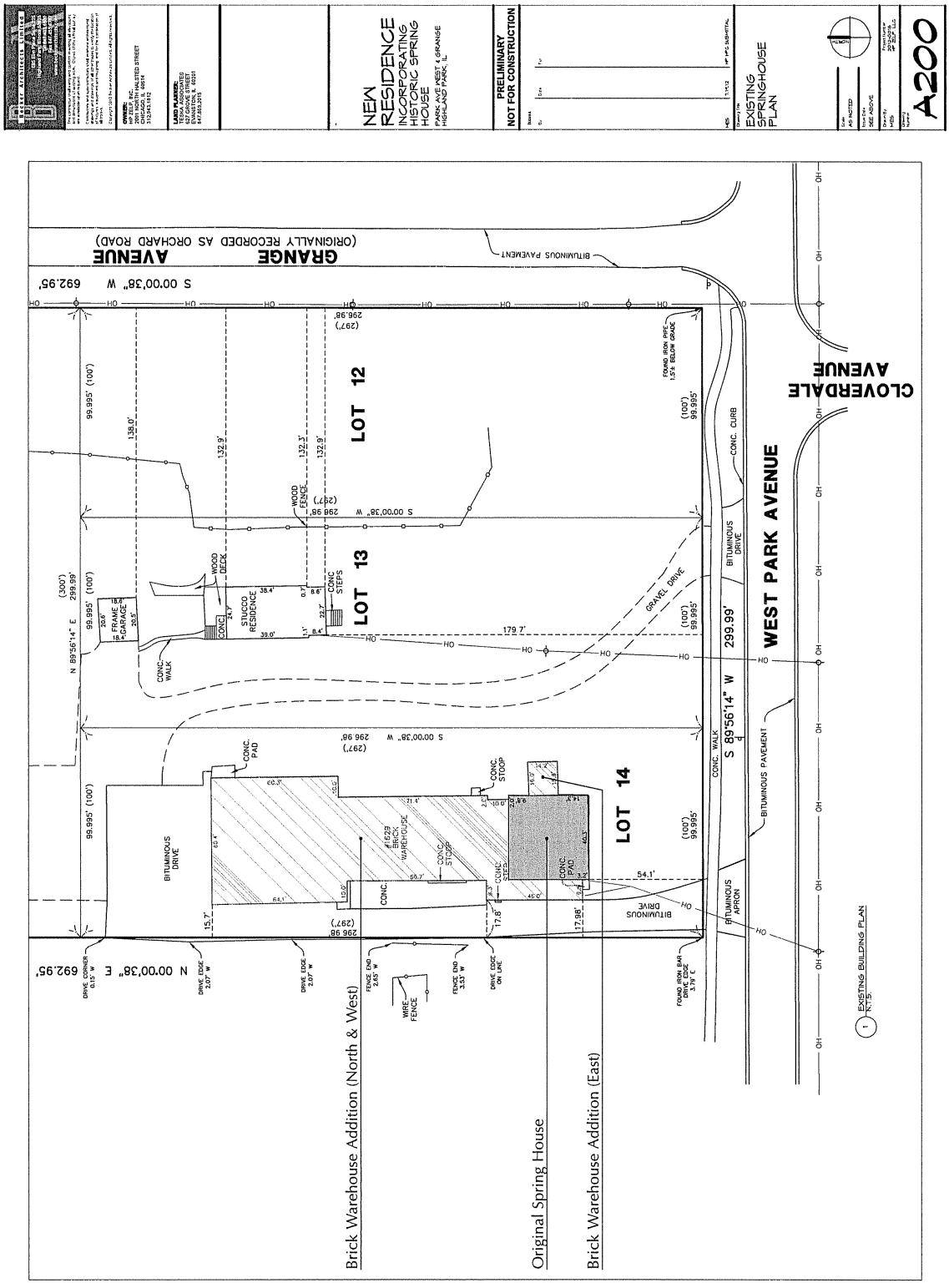
The Well House is eligible for landmark designation on the basis of the following landmarks criteria: (1), (7), and (8).

The Historic Preservation Commission has previously issued (i) a Certificate of Appropriateness for a proposed design for adaptive reuse, and (ii) demolition permits for the two non-historic brick additions.

Exhibit B – Photograph of Well House



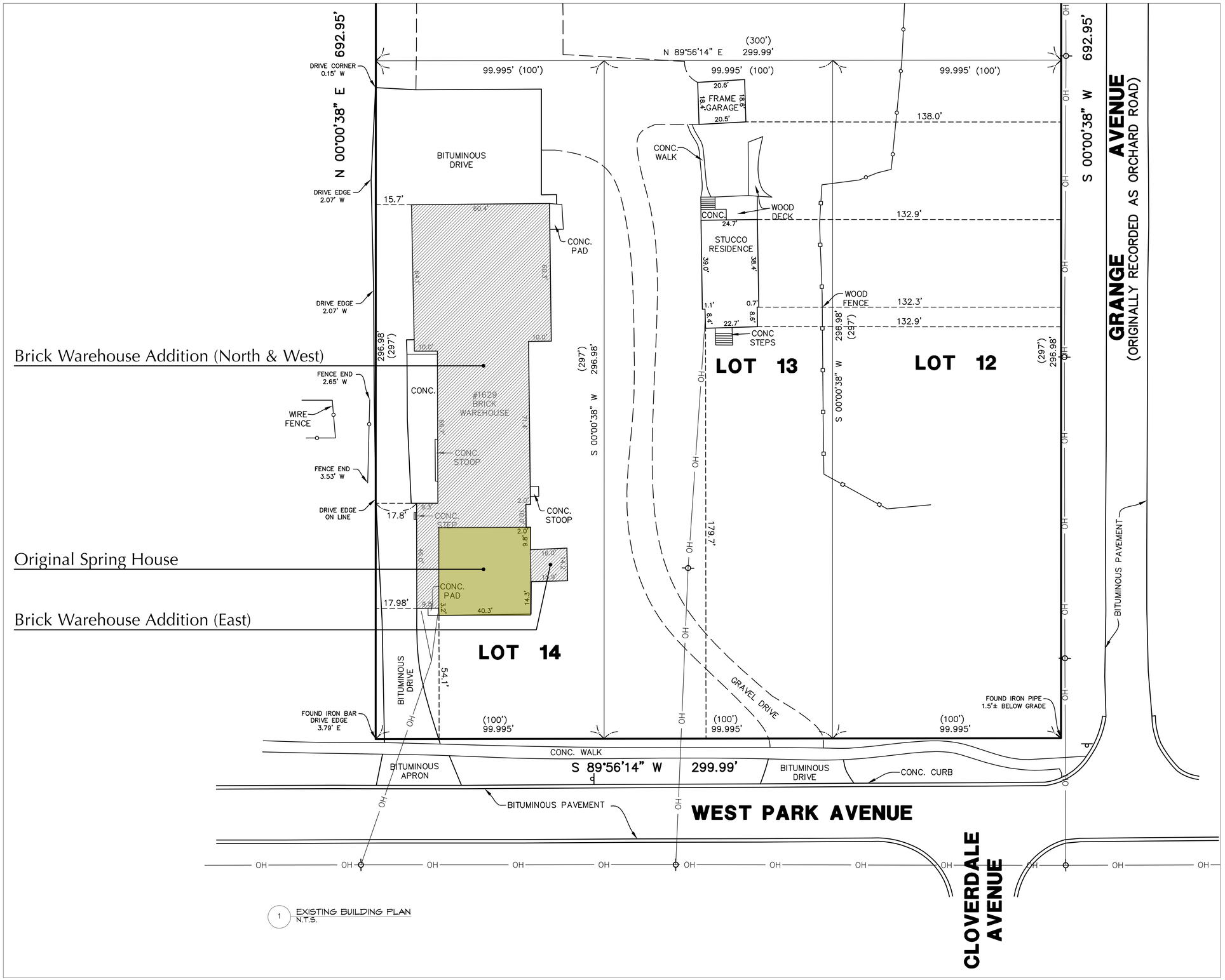
Exhibit C – Survey of Original Spring House (Well House)



Certificate of Appropriateness

City of Highland Park Historic Preservation Commission

DATE:	October 11, 2024
REGULATED STRUCTURE:	Well house structure
ADDRESS:	2012 Grange Road / 1629 Park Ave W
OWNERS:	Lisa Ruby
ARCHITECT:	N/A
PROPOSED ALTERATION:	
1. Incorporating the landmarked well house structure into a new single-family dwelling	
COMMISSION REVIEW DATE:	October 10, 2024
ABSTAIN:	N/A
VOTE:	5-0
ACCEPT PROPOSAL	X
REJECT PROPOSAL	
ATTACHED DOCUMENTS:	-Plan Set, 7 pages, submitted by applicant
COMMENTS:	-This site is part of a PUD approval (2013). -The attached plans were approved by HPC in 2012 and homeowner wanted to resubmit them for a COA approval. -The expectation is for the homeowner to come back to HPC with modifications to the approved design at a subsequent meeting.
SIGNED:	 Zubin Coleman, Planner II



1 EXISTING BUILDING PLAN
N.T.S.

Becker Architects Limited
595 Elm Place Suite 225
Highland Park, Illinois 60035
Tel 847.433.6600
Fax 847.433.6787
www.beckerarchitects.com

The contractor shall verify and confirm in writing all elevations and dimensions of existing work. Copies of the official survey are available upon request.

Contractors and subcontractors shall examine architectural drawings and drawings of all other trades to verify the location of fixtures, equipment and roughing, and for the coodination of all trades.

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OWNER:
HP ZELP, INC.
2001 NORTH HALSTED STREET
CHICAGO, IL 60614
312.943.1812

LAND PLANNER:
TESKA ASSOCIATES
627 GROVE STREET
EVANSTON, IL 60201
847.869.2015

NEW RESIDENCE
INCORPORATING HISTORIC SPRING HOUSE

PARK AVE WEST & GRANGE
HIGHLAND PARK, IL

PRELIMINARY NOT FOR CONSTRUCTION

Issues

By	Date	For
MES	7.19.12	HP HPC SUBMITTAL

Drawing Title
EXISTING SPRINGHOUSE PLAN

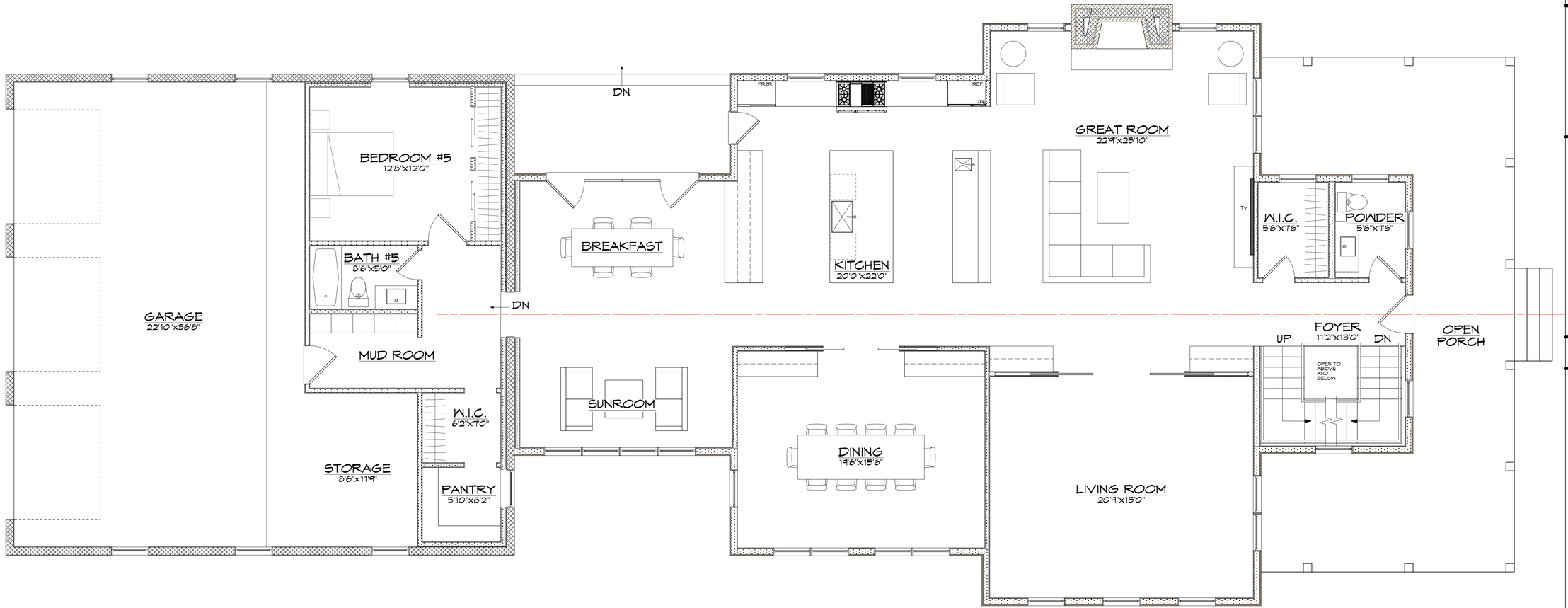
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Issue Date
SEE ABOVE

Drawn By
MES

Project Number
2012-2016
HP ZELP, LLC

Drawing Number
A200



1 PROPOSED 1ST FLOOR PLAN
Scale: 1/4" = 1'-0"

Becker Architects Limited
595 Elm Place Suite 225
Highland Park, Illinois 60035
Tel 847.433.6600
Fax 847.433.6787
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847.869.2015

-

NEW RESIDENCE INCORPORATING HISTORIC SPRING HOUSE

PARK AVE WEST & GRANGE
HIGHLAND PARK, IL

PRELIMINARY NOT FOR CONSTRUCTION

Issues

By	Date	For
MES	7.19.12	HP HPC SUBMITTAL

Drawing Title
PROPOSED 1ST FLOOR PLAN

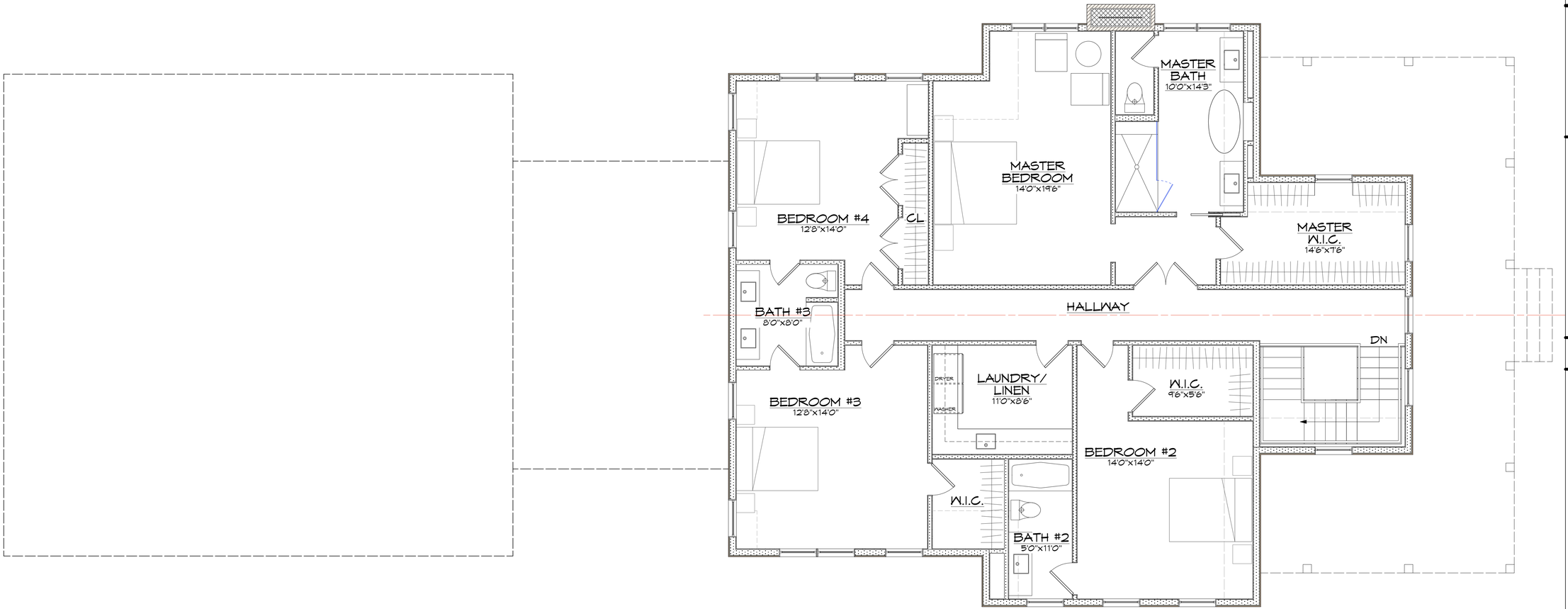
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Issue Date
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Drawn By
MES

Project Number
2012-0016
HP ZELP, LLC

Drawing Number
A201



1 PROPOSED 2ND FLOOR PLAN
Scale: 1/4" = 1'-0"

Becker Architects Limited
595 Elm Place Suite 225
Highland Park, Illinois 60035
Tel 847.433.6600
Fax 847.433.6787
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EVANSTON, IL 60201
847.869.2015

-

NEW RESIDENCE INCORPORATING HISTORIC SPRING HOUSE

PARK AVE WEST & GRANGE
HIGHLAND PARK, IL

PRELIMINARY NOT FOR CONSTRUCTION

Issues

By	Date	For
MES	7.19.12	HP HPC SUBMITTAL

Drawing Title
PROPOSED 2ND FLOOR PLAN

Scale
AS NOTED

Issue Date
SEE ABOVE

Drawn By
MES

Project Number
2012-0016
HP ZELP, LLC

Drawing Number
A202



1 PROPOSED SOUTH ELEVATION
Scale: 1/8" = 1'-0"



2 PROPOSED EAST ELEVATION
Scale: 1/8" = 1'-0"

Becker Architects Limited
595 Elm Place Suite 225
Highland Park, Illinois 60035
Tel 847.433.5600
Fax 847.433.5787
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NEW RESIDENCE
INCORPORATING HISTORIC SPRING HOUSE

PARK AVE WEST & GRANGE
HIGHLAND PARK, IL

PRELIMINARY
NOT FOR CONSTRUCTION

Issues

By	Date	For
MES	7.19.12	HP HPC SUBMITTAL

Drawing Title
PROPOSED ELEVATIONS

Scale
AS NOTED

Issue Date
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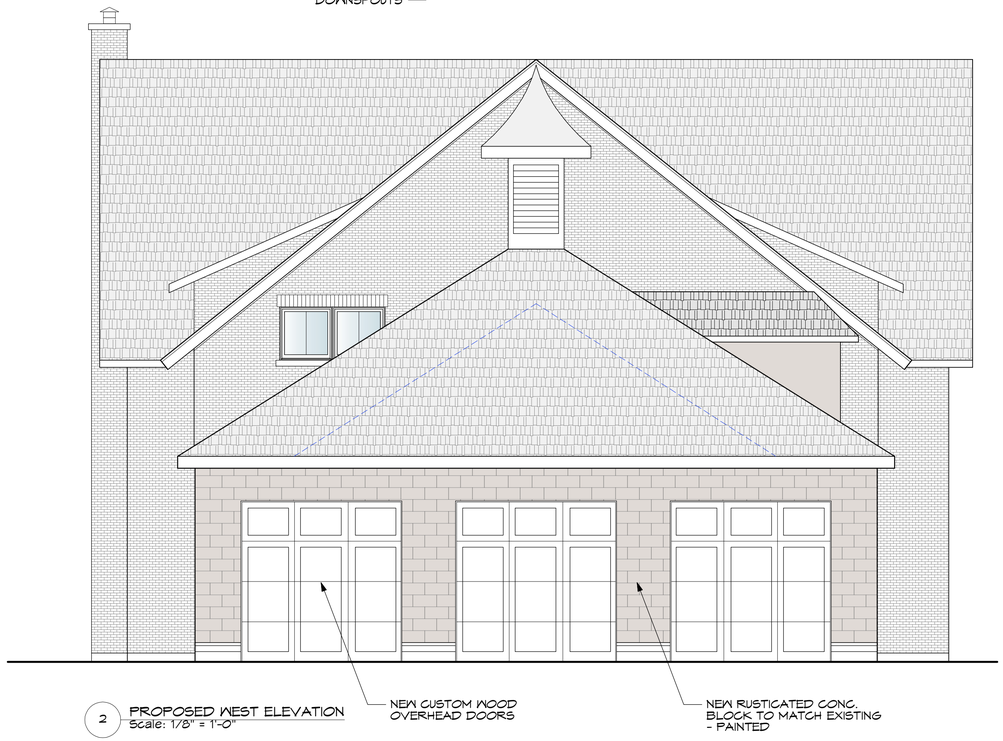
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MES

Project Number
2012-2016
HP ZELP, LLC

Drawing Number
A301



1 PROPOSED NORTH ELEVATION
Scale: 1/8" = 1'-0"



2 PROPOSED WEST ELEVATION
Scale: 1/8" = 1'-0"

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-

NEW RESIDENCE
INCORPORATING HISTORIC SPRING HOUSE

PARK AVE WEST & GRANGE
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Issues

By	Date	For
MES	7.19.12	HP HPC SUBMITTAL

Drawing Title

PROPOSED ELEVATIONS

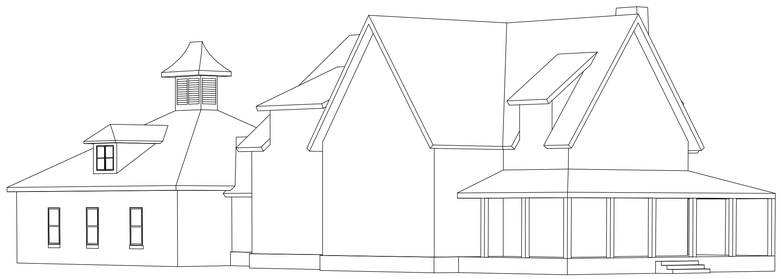
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Issue Date
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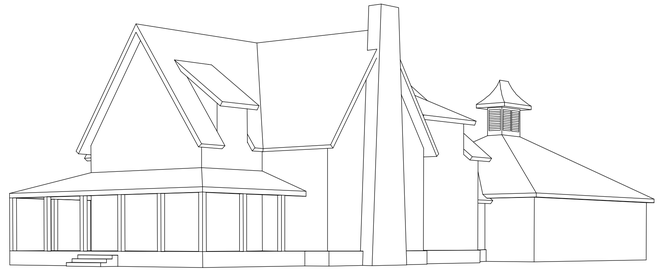
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MES

Project Number
2012-2016
HP ZELP, LLC

Drawing Number
A302



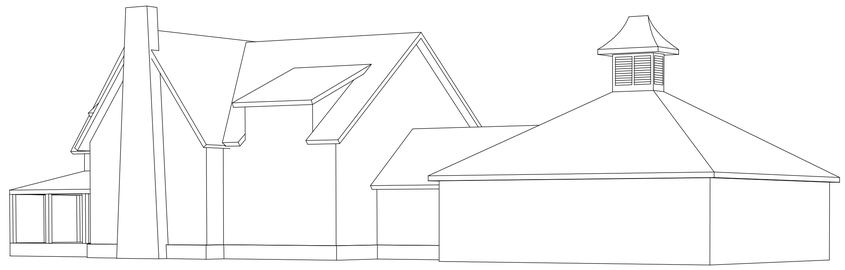
1 PROPOSED SOUTHEAST VIEW
N.T.S.



2 PROPOSED NORTHEAST VIEW
N.T.S.



3 PROPOSED SOUTHWEST VIEW
N.T.S.



4 PROPOSED NORTHWEST VIEW
N.T.S.

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Tel 847.433.6600
Fax 847.433.6787
www.beckerarchitects.com

The contractor shall verify and confirm in writing all elevations and dimensions of existing work. Copies of the official survey are available upon request.

Contractors and subcontractors shall examine architectural drawings and drawings of all other trades to verify the location of fixtures, equipment and roughing, and for the coodination of all trades.

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OWNER:
HP ZELP, INC.
2001 NORTH HALSTED STREET
CHICAGO, IL 60614
312.943.1812

LAND PLANNER:
TESKA ASSOCIATES
627 GROVE STREET
EVANSTON, IL 60201
847.869.2015

-

NEW RESIDENCE
INCORPORATING HISTORIC SPRING HOUSE

PARK AVE WEST & GRANGE
HIGHLAND PARK, IL

PRELIMINARY
NOT FOR CONSTRUCTION

Issues

By	Date	For
MES	7.19.12	HP HPC SUBMITTAL

Drawing Title

3d VIEWS @ GROUND LEVEL (MASSING STUDY)

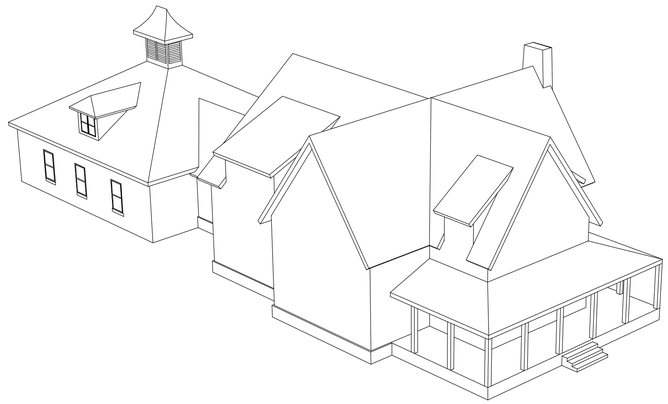
Scale
AS NOTED

Issue Date
SEE ABOVE

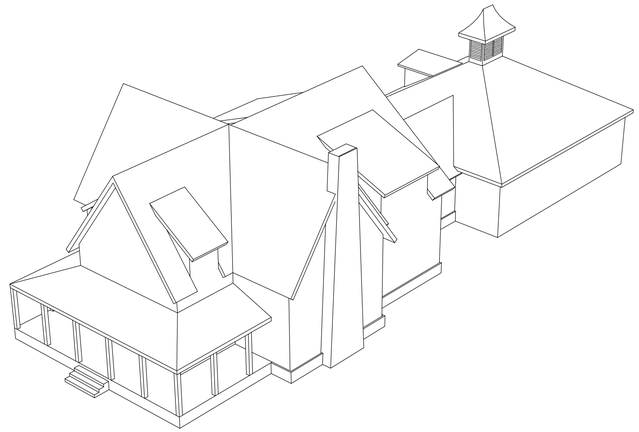
Drawn By
MES

Project Number
2012-2016
HP ZELP, LLC

Drawing Number
A303



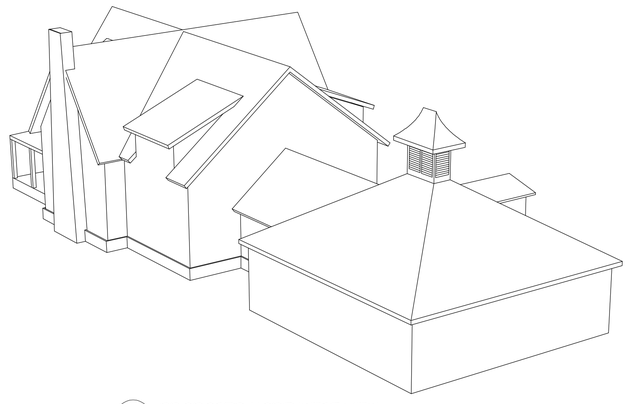
1 PROPOSED SOUTHEAST VIEW
N.T.S.



2 PROPOSED NORTHEAST VIEW
N.T.S.



3 PROPOSED SOUTHWEST VIEW
N.T.S.



4 PROPOSED NORTHWEST VIEW
N.T.S.

Becker Architects Limited
595 Elm Place Suite 225
Highland Park, Illinois 60035
Tel 847.433.6600
Fax 847.433.6787
www.beckerarchitects.com

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-

NEW RESIDENCE
INCORPORATING HISTORIC SPRING HOUSE

PARK AVE WEST & GRANGE
HIGHLAND PARK, IL

PRELIMINARY
NOT FOR CONSTRUCTION

Issues

By	Date	For
MES	7.19.12	HP HPC SUBMITTAL

Drawing Title

3d VIEWS @ AERIAL LEVEL (MASSING STUDY)

Scale
AS NOTED

Issue Date
SEE ABOVE

Drawn By
MES

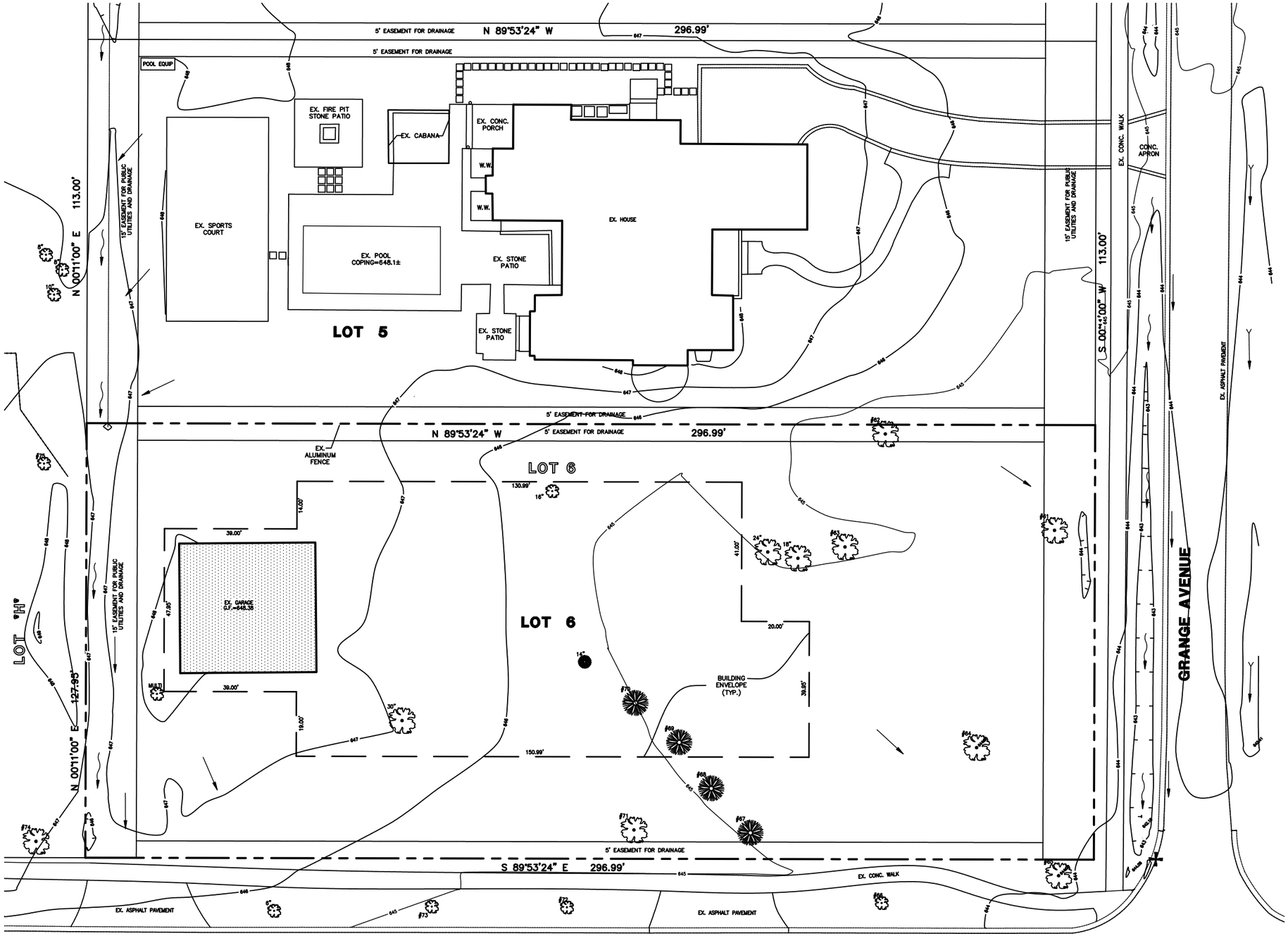
Project Number
2012-0016
HP ZELP, LLC

Drawing Number
A304

Certificate of Appropriateness

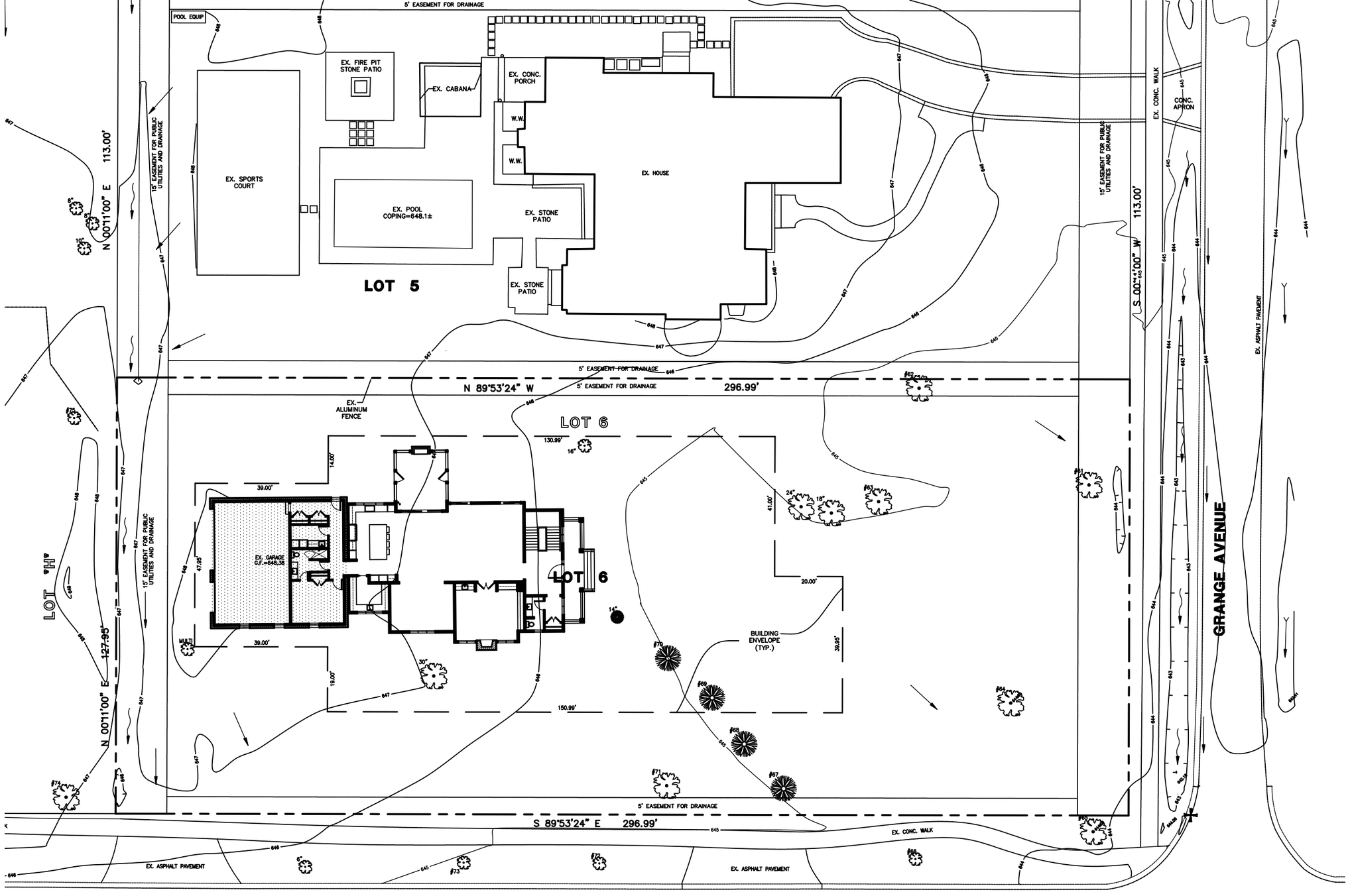
City of Highland Park Historic Preservation Commission

DATE:	April 11, 2025
REGULATED STRUCTURE:	Well house structure
ADDRESS:	2012 Grange Road / 1629 Park Ave W
OWNERS:	Lisa Ruby
ARCHITECT:	Scott Renken
PROPOSED ALTERATION:	
1. Incorporating the landmarked well house structure into a new single-family dwelling	
COMMISSION REVIEW DATE:	April 10, 2025
ABSTAIN:	N/A
VOTE:	4-2
ACCEPT PROPOSAL	X
REJECT PROPOSAL	
ATTACHED DOCUMENTS:	-Plan Set, 8 pages, submitted by applicant -Project Narrative, 3 pages, submitted by applicant
COMMENTS:	-This site is part of a PUD approval (2013). -The attached plans were approved by HPC in 2012 and -The commission generally favored this design and felt it was an improvement from the previously-approved design.
SIGNED:	 Zubin Coleman, Planner II



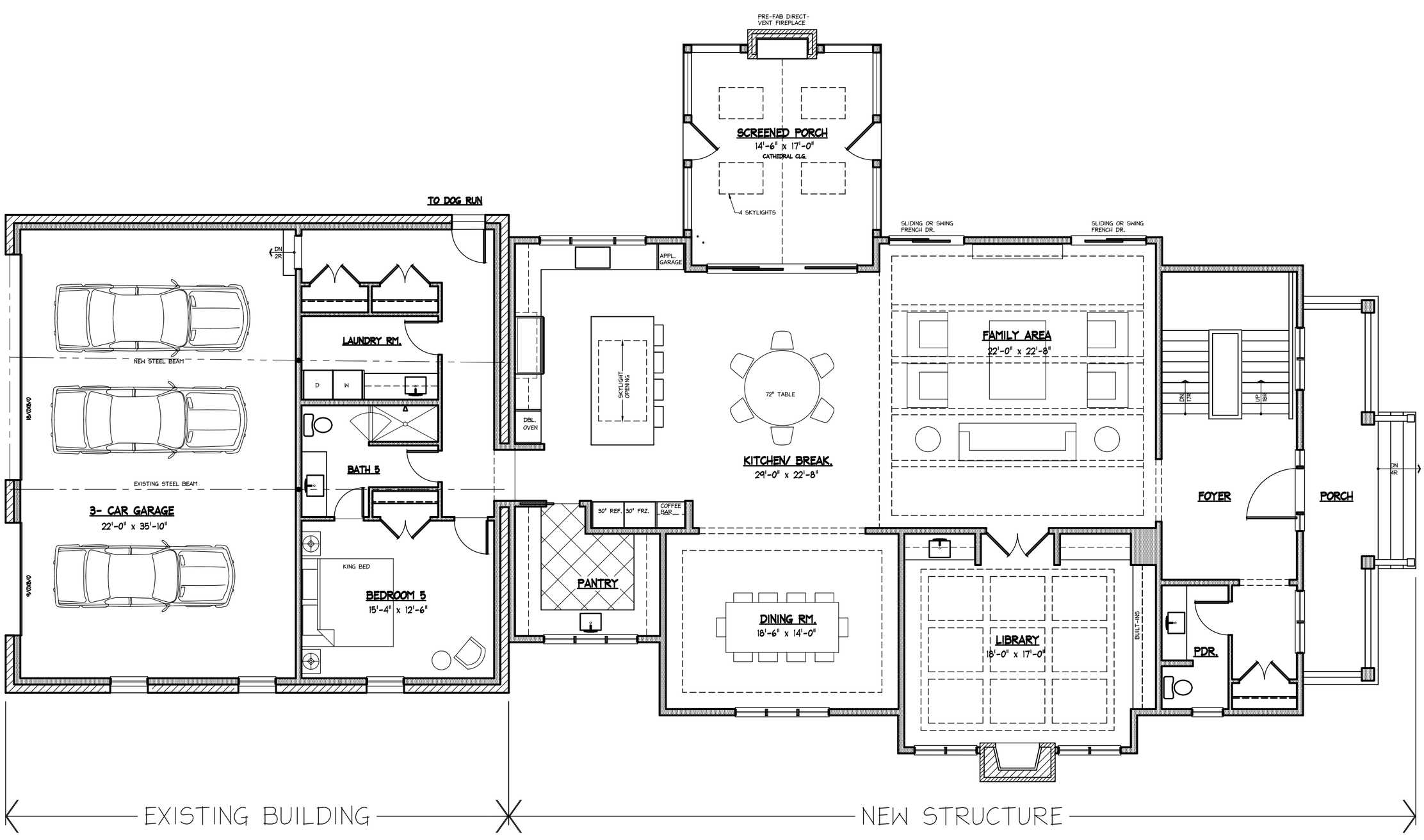
PROPOSED RES. PARK AVE. & GRANGE, HIGHLAND PARK, ILLINOIS
EXISTING SITE PLAN 3/5/25

RENKEN ARCHITECTS



PROPOSED RES. PARK AVE. & GRANGE, HIGHLAND PARK, ILLINOIS
SITE PLAN 3/5/25

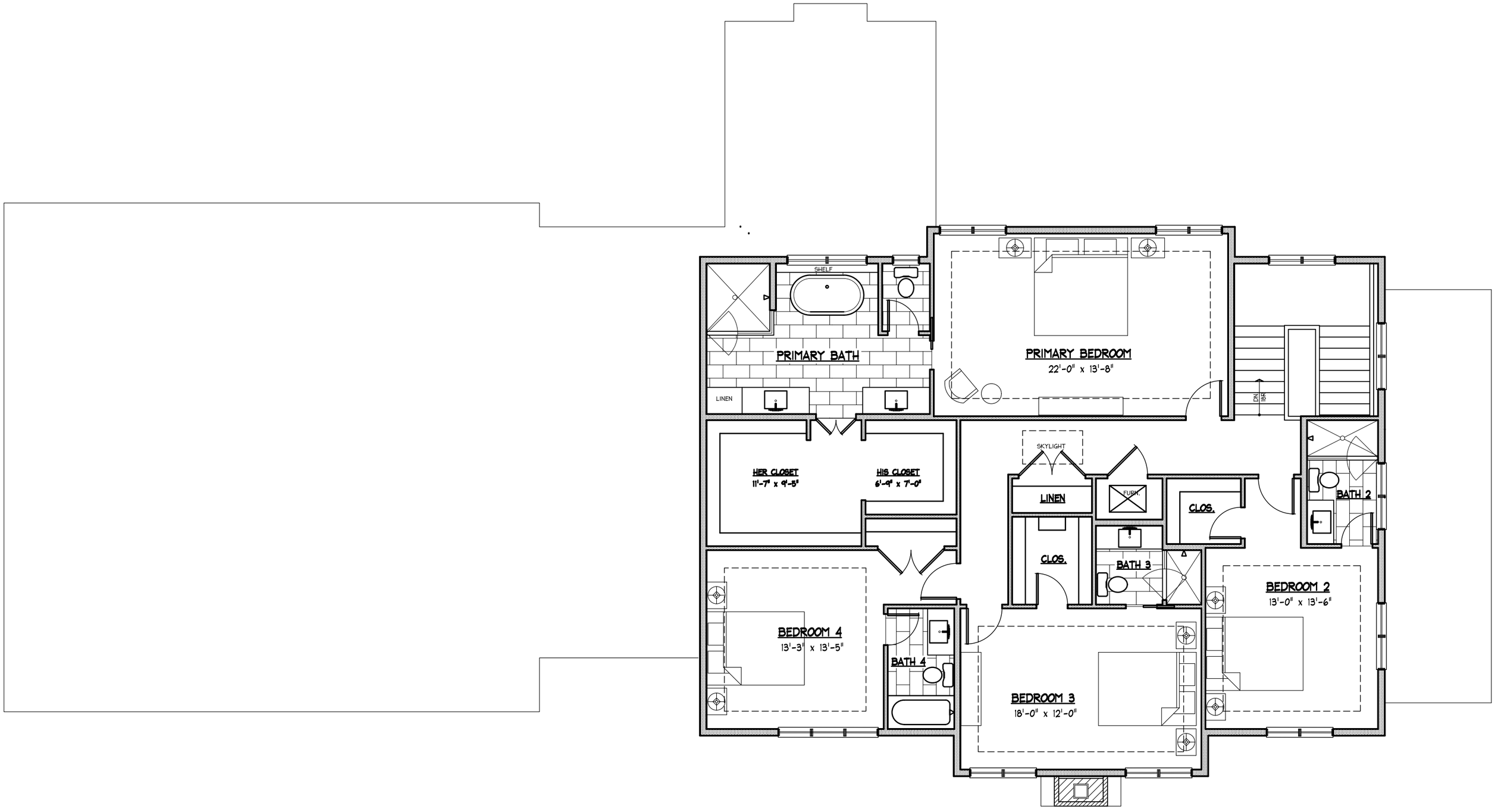
RENKEN ARCHITECTS



PROPOSED RES. PARK AVE. & GRANGE, HIGHLAND PARK, ILLINOIS
FIRST FLOOR PLAN 3/5/25

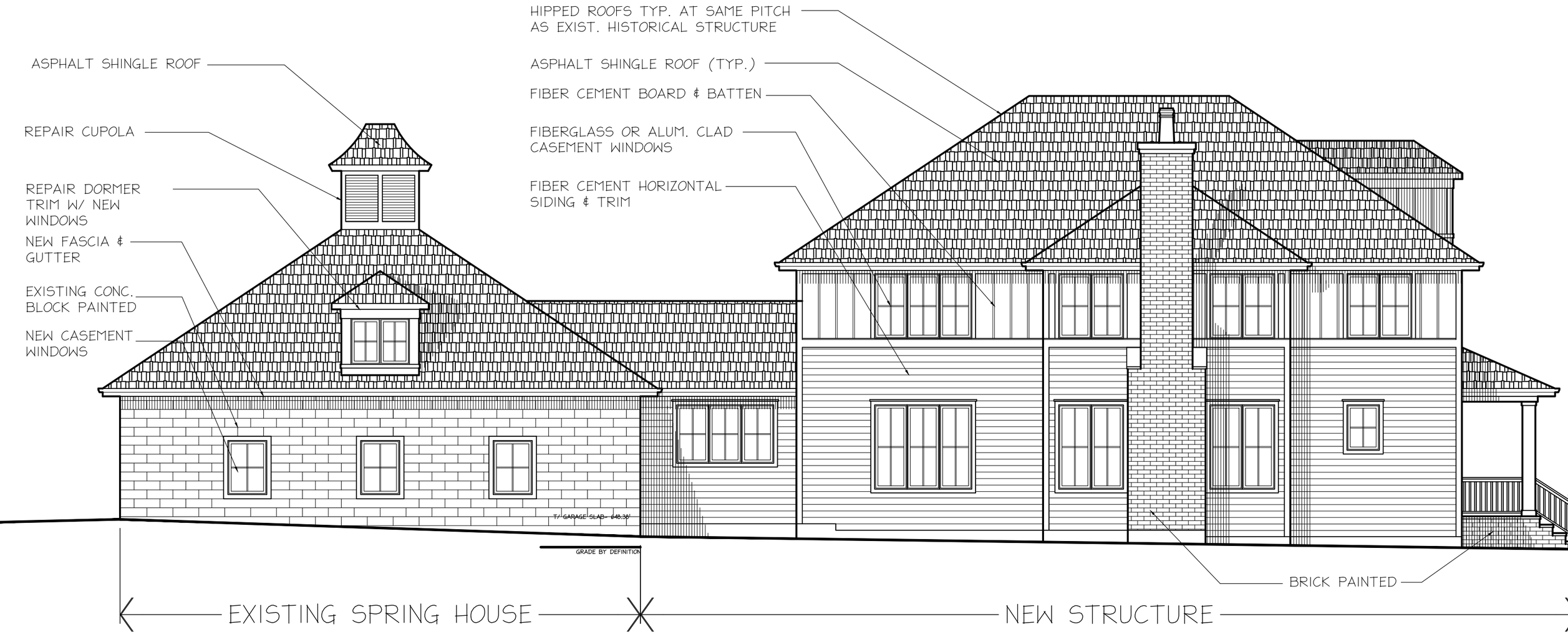
© RENKEN ARCHITECTS

4,921 S.F. FINISHED
284 S.F. SCREENED PORCH



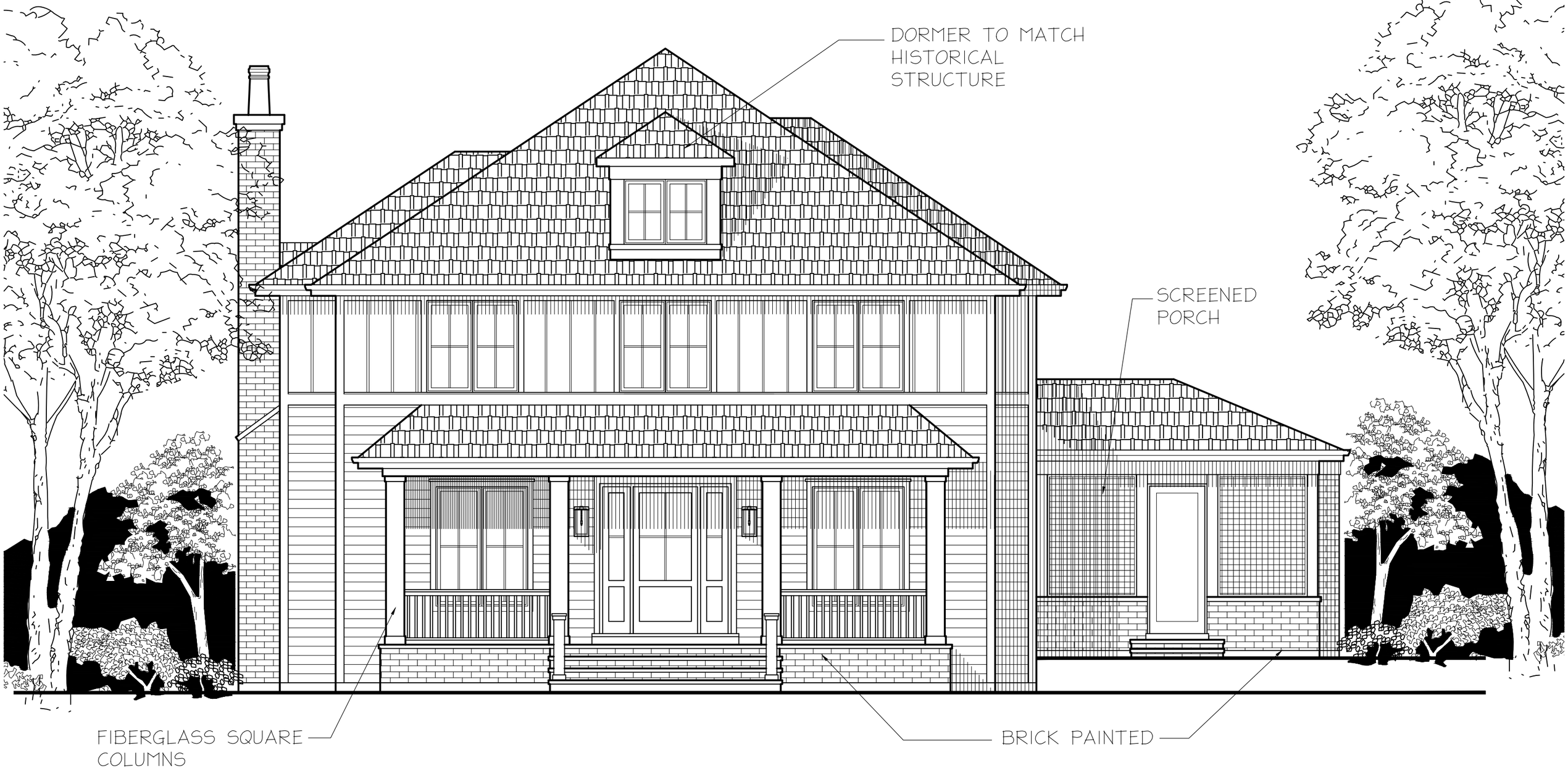
PROPOSED RES. PARK AVE. & GRANGE, HIGHLAND PARK, ILLINOIS
SECOND FLOOR PLAN 3/5/25

© RENKEN ARCHITECTS



PROPOSED RES. - GRANGE & PARK AVE., HIGHLAND PARK IL
SOUTH ELEVATION - 3/5/2025

© RENKEN ARCHITECTS



PROPOSED RES. - GRANGE & PARK AVE., HIGHLAND PARK IL
EAST ELEVATION - 3/5/2025

© RENKEN ARCHITECTS



PROPOSED RES. - GRANGE & PARK AVE., HIGHLAND PARK IL
WEST ELEVATION - 3/5/2025

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PROPOSED RES. - GRANGE & PARK AVE., HIGHLAND PARK IL
NORTH ELEVATION - 3/5/2025

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Renken Architects & Builders LLC

STATEMENT OF INTENT

Re: Park Ave & Grange Ave. property

March 5, 2025

Mr. Zubin Coleman
City of Highland Park
Planning Division
1150 Half Day Rd.
Highland Park, Il. 60035

Dear Mr. Coleman & HPC Members;

We respectfully submit the attached COA application and supporting documents for a new single family home that incorporates the existing historical building formerly known as the "Spring House". This project is part of an earlier subdivision of properties along Grange Ave. for single family homes. The building envelope was pre-determined, and this new home needs to incorporate the existing historical structure into the design. A previous scheme by another Owner was presented approx. 2012 but did not proceed. We think this submittal is superior and relates better to the existing historical structure and to the neighboring properties.

SITE PLAN:

The parameters of the site were pre-determined based on the building envelope. The new home will extend to the east of the existing structure and be connected. We decided to use the existing structure as a 3-car garage and mudroom. The front entry will be facing Grange Ave. to relate to all of the other homes on the street, with the south elevation facing Park Ave. of particular importance due to the historic character of the existing structure and exposure to the public.

ELEVATIONS:

It is required that the south elevation of the historical structure remain as-is with new repairs as needed:

- The 3 windows locations and stone surrounds remain (with new windows)
- The painted rough conc. blocks remain
- The dormer remains with new windows & trim
- The repaired cupola remains
- The existing asphalt shingle roof will be replaced & match the home
- The fascia, soffit & gutter will be replaced but remain in size & position.

The new portion of the house is 2-story with a 1-story link. Here are the characteristics of the new portion:

- 8/12 +/- pitch on all visible roof forms to match the existing building.
- All soffit depths match at 16" +/- on old and new buildings
- New casement windows with a cross pattern in old & new
- The existing dormer on historical building is duplicated on the east side of the new building for continuity.
- The painted masonry on the existing building will be similar to the painted brick elements of the new building.
- The fascia sizes will be the same and the link fascia will match the existing in height
- The horizontal siding on the new will match the side & rear of the existing building.

COLOR & TEXTURE OF MATERIALS:

- The trim & siding will be cement-fiber such as a Hardie product.
- The gutters and downspouts will be pre-finished aluminum
- The windows will be aluminum clad wood or fiberglass. The muntins will be simulated divided lites.
- The roof will be architectural asphalt shingle.
- All masonry will be painted

ARCHITECTURAL STYLE:

The existing building has certain characteristics of a "gentleman farmhouse" with the shape, cupola, dormer, window spacing & hipped roof. These date from the early to mid twentieth century. The front has a rugged painted concrete block, while the sides & rear are in a state of disrepair. We chose to complement this architecture with a more modern farmhouse with traditional features such as front porch, dormer, etc. The roof pitches and soffit overhangs match. The painted masonry is duplicated on old & new. Also, in order to break up the the visual height of the new portion and add interest, a horizontal band is added under the second-floor windows and above is board & batten for the top 1/3. **We feel that the existing structure is seamlessly incorporated into the overall home design and the result is a new residence that satisfies the needs of today while respecting the historical portion.**

COMPARISON OF 2012 SUBMITTAL TO THIS SUBMITTAL

- New submittal has roof forms & pitches that match the existing instead of 1-1/2 steep gable roofs with shed dormers w/ metal roofs of the previous.
- New submittal incorporates existing forms such as the hipped dormer while the previous submittal did not.
- New submittal has better compatibility of material, specifically, no standing seam roofs.
- The new design fits in better with the neighbors in scale & style, specifically the adjacent home to the north.

- Superior floor plan

Renken Architects & Builders LLC

4/26/26

To: Highland Park Historical Preservation Commission
From: Scott Renken, Architect and Oxford Development
Re: 2012 Grange Ave., Highland park, Il

REQUEST FOR FIELD REVISION TO HISTORICAL STRUCTURE

Upon closer examination of the Historical Building portion of this project, particularly the cupola front dormer and portions of the roof structure, it has become apparent that the current poor quality and deterioration of materials require replacement vs. saving of existing materials. Oxford Development has met a Building Inspector on site, who agreed that rebuilding certain areas was the best way to proceed. This revision is indicated by REVISION #2 dated 4/26/26 on sheet A7 of the drawings. All proportions, details and dimensions of the original design will be maintained. The replacement materials will be an asphalt shingle roof (as originally proposed), Hardie Bd. cementitious trim or real cedar would be used for all trim and conventional 2x new wood framing as needed for structure. The vents will either be wood or a Hardie Bd. product and would match as closely as possible the original design.

555 Oakwood Ave Lake Forest, Il. 60045 [redacted]

GENERAL NOTES

ALL WORK SHALL BE PERFORMED IN STRICT ACCORDANCE TO ALL APPLICABLE LOCAL AND NATIONAL CODES

2018 INTERNATIONAL RESIDENTIAL CODE
2014 ILLINOIS STATE PLUMBING CODE
2018 INTERNATIONAL MECHANICAL CODE
2018 INTERNATIONAL FUEL GAS CODE
2021 INTERNATIONAL ENERGY CONSERVATION CODE
2018 INTERNATIONAL EXISTING BUILDING CODE
2017 NATIONAL ELECTRICAL CODE
2018 INTERNATIONAL FIRE CODE
2018 INTERNATIONAL PROPERTY MAINTENANCE CODE

ALL CITY OF HIGHLAND PARK AMENDMENTS AND ORDINANCES

ALL CONTRACTORS SHALL COORDINATE WITH ALL OTHER CONTRACTORS PRIOR TO AND DURING CONSTRUCTION

DO NOT SCALE DRAWINGS. USE DIMENSIONS SHOWN ON DRAWINGS OR ASK THE ARCHITECT FOR CLARIFICATION

ALL MATERIALS, EQUIPMENT, STRUCTURAL ELEMENTS, FINISHES, WINDOWS, DOORS, ETC., WHETHER PRE-MANUFACTURED OR SITE BUILT SHALL BE INSTALLED PER THE MANUFACTURER'S INSTRUCTIONS AND SPECIFICATIONS

THE ARCHITECT

SHOULD ANY DISCREPANCIES, ERRORS, OMISSIONS OR CONFLICT OF ITEMS NEEDING CLARIFICATION BE DISCOVERED IN THE PLANS AND/OR SPECIFICATIONS, THE ARCHITECT SHALL BE PROMPTLY NOTIFIED IN WRITING BEFORE SUBMITTING BID AND/OR PROCEEDING WITH WORK SO THAT HE MAY HAVE THE OPPORTUNITY TO RESOLVE THEM. FAILURE TO PROMPTLY NOTIFY THE ARCHITECT OF SUCH CONDITIONS SHALL ABSOLVE THE ARCHITECT FROM ANY RESPONSIBILITY OF SUCH FAILURE

SITE WORK

THE FOOTINGS AND FOUNDATIONS HAVE BEEN DESIGNED TO BEAR ON UNDISTURBED SOIL OR APPROVED COMPACTED FILL WITH A MINIMUM BEARING CAPACITY OF 2500 p.s.f.

ALL FOOTINGS SHALL BE PLACED A MINIMUM OF 3'-6" BELOW THE FINISHED FINAL GRADE

VERIFY FOOTING STEPS WITH FINAL FINISH GRADE

PORCH AND STOOP FOOTINGS SHALL BE PLACED ON UNDISTURBED SOIL

FOOTINGS ADJACENT TO THE BASEMENT FOUNDATION ON OVER-EXCAVATED AREA SHALL BE INSTALLED ON EITHER COMPACTED ENGINEERED FILL OR STEPPED FOOTING SHALL BE PROVIDED

MATERIALS & INSTALLATION

ALL WORK TO CONFORM TO LOCAL MUNICIPALITY CODES AND ALL OTHER PERTINENT SAFETY CODES AND RULES OF OTHER APPLICABLE GOVERNING BODIES. IF AN INSPECTION AUTHORITY FINDS FAULT WITH ANY SUB-CONTRACTOR WORK, THAT SUB-CONTRACTOR SHALL CORRECT SUCH WORK TO THE SATISFACTION OF THE INSPECTING AUTHORITY AT NO EXPENSE TO THE OWNER OR ARCHITECT. THE SUB-CONTRACTORS, IN USING THESE DOCUMENTS, SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND ARCHITECT FROM ANY AND ALL LIABILITY CLAIMS AND COSTS AS A RESULT OF WORK PERFORMED UNDER THIS PROJECT

ALL SUB-CONTRACTORS TO EXAMINE SITE & EXISTING CONDITIONS AS A BASIS FOR BIDDING. FAILURE TO DETERMINE EXISTING CONDITIONS OR NATURE OF DEMOLITION AND/OR CONSTRUCTION WILL NOT BE CONSIDERED AS A BASIS FOR ADDITIONAL COMPENSATION

SUB-CONTRACTORS SHALL FURNISH ALL MATERIAL & EQUIPMENT NECESSARY FOR A COMPLETE AND READY TO OPERATE SYSTEM. ANY MATERIALS OR EQUIPMENT NOT SHOWN ON DRAWINGS BUT REQUIRED FOR A SATISFACTORY OPERATION SYSTEM SHALL BE FURNISHED & INSTALLED AS THOUGH COMPLETELY SPECIFIED. INSTALLATION TO BE DONE IN ACCORDANCE WITH THE MANUFACTURERS WRITTEN INSTRUCTIONS

CONCRETE WORK

ALL CONCRETE WORK SHALL CONFORM TO ACI 318 OF THE AMERICAN CONCRETE INSTITUTE FOR UNREINFORCED CONCRETE

ALL CONCRETE WORK SHALL DEVELOP A COMPRESSIVE STRENGTH OF 3000 psi IN 28 DAYS

ALL CONCRETE WORK SHALL COMPLY TO THE ACI STANDARDS FOR HOT AND COLD WEATHER CONCRETING

ALL CONCRETE PIERS SHALL EXTEND A MINIMUM OF 2' ABOVE AND 3'-6" BELOW GRADE

METALS

ALL DETAILING, FABRICATION AND ERECTION OF STRUCTURAL STEEL SHALL CONFORM WITH THE APPROPRIATE ASTM SPECIFICATIONS AND STANDARDS AS FOLLOWS: ASTM A992, ASTM A53, ASTM A501, ASTM A307

ALL STEEL BEAMS AND COLUMNS SHALL BE SHOP PRIMED

LINTELS SHALL BE PROVIDED FOR ALL OPENINGS AS INDICATED ON THE DRAWINGS. IN ADDITION, LINTELS ARE REQUIRED FOR MECHANICAL, ELECTRICAL OR PLUMBING OPENINGS IN A MASONRY WALL WITH A WIDTH GREATER THAN 12'

LINTELS SHALL HAVE A MINIMUM BEARING OF 8 INCHES FOR SPANS UP TO 8'-0" AND 16" FOR SPANS GREATER THAN 8'-0" UNLESS NOTED. LINTELS IN NON-LOAD BEARING WALLS SHALL BE OF THE SIZED LISTED BELOW

STEEL LINTELS SHALL BE USED FOR ALL MASONRY OPENINGS. CMU OPENINGS IN NON-LOAD BEARING WALLS MAY BE SPANNED WITH EITHER A STEEL LINTEL OR MASONRY LINTEL BLOCK AT THE CONTRACTOR'S OPTION. MASONRY LINTEL INFORMATION LEFT BLANK INDICATES THAT A STEEL LINTEL IS REQUIRED. FOR OPENINGS 2'-0" OR LESS, PROVIDE 3/8" PLATE x WALL THICKNESS LESS 1", BEAR 8" EACH END

WALL SPAN	STEEL LINTEL
2'-0" - 4'-0"	L 3 1/2" x 3 1/2" x 5/16"
4'-0" - 6'-0"	L 5" x 3 1/2" x 3/8" (LLV)
6'-0" - 8'-0"	L 6" x 3 1/2" x 3/8" (LLV)

CARPENTRY NOTES

ALL INTERIOR PARTITIONS ARE BASED ON 2x4 WOOD STUDS @ 16" O.C. UNLESS OTHERWISE NOTED

ALL UNSUPPORTED FRAME WALLS 12'-0" OR TALLER SHALL BE FRAMED WITH 2 X 6 STUDS AT 16" ON CENTER UNLESS NOTED OTHERWISE

PROVIDE 2x6 STUDS IN LIEU OF 2x4 FOR FOR FRAME WALLS DRILLED FOR PLUMBING PIPES

ALL CANTILEVERS TO BE A MINIMUM 2:1 RATIO PER THE CURRENT CODE

PROVIDE CROSS BRIDGING FOR ALL FLOOR JOISTS SPANNING 15' OR GREATER. MINIMUM 8'-0" ON CENTER

ALL LOAD BEARING HEADERS SHALL BE (2) 2 X 12 WITH 1/2" PLYWOOD SPACER UNLESS OTHER WISE NOTED. INSTALL DOUBLE CRIPPLES EACH SIDE FOR ALL SPANS OVER 6'-0"

PROVIDE APPROVED FIRE STOPPING AT ALL FURRING, PARTITIONS, EXTERIOR WALLS AT EACH FLOOR AND CEILING LEVEL, AND AT THE JUNCTURE OF THE ROOF RAFTERS AND WALL. INSTALLATION OF FIRE-BLOCKING MATERIAL VERTICALLY AT THE FLOOR AND CEILING LEVELS, AND HORIZONTALLY AT INTERVALS NOT EXCEEDING 10'-0" (2018 IRC, SECTION R302.11)

1 PROVIDE CONCEALED GALVANIZED OR ALUMINUM SHEET METAL FLASHING AT ALL WALL/ROOF JUNCTIONS AND AS REQUIRED FOR WATERPROOF CONSTRUCTION

STAIR RAILING AND BALLUSTERS TO CONFORM TO CODE. GRASPABLE PORTION OF RAILING NOT TO EXCEED 2 5/8" IN CROSS SECTIONAL DIMENSION

ALL INTERIOR WOOD TRIM SHALL BE POPLAR OR FINGER-JOINTED PINE. ALL CROWN SHALL BE MDF

DOORS AND WINDOWS

ALL SAFETY GLAZING SHALL BE IN ACCORDANCE WITH THE CODE

ALL WINDOWS SHALL COMPLY WITH THE AIR INFILTRATION REQUIREMENTS PER CODE

A MINIMUM OF ONE WINDOW PER SLEEPING AREA SHALL COMPLY WITH THE FOLLOWING MINIMUM EGRESS REQUIREMENTS:

MINIMUM OPENING AREA	5.7 SQ. FT. (5.0 SQ. FT.. FOR WINDOWS AT GRADE LEVEL)
MINIMUM OPENING WIDTH	20" CLEAR
MINIMUM OPENING HEIGHT	24" CLEAR

ALL EXTERIOR GLASS DOORS AND WINDOWS SHALL BE IN COMPLIANCE WITH SECTION R 613 FOR TESTING, LABELING AND PERFORMANCE

1 MAXIMUM GLAZING U FACTOR FOR ALL EXTERIOR DOORS AND WINDOWS SHALL NOT BE GREATER THAN 0.30 IN COMPLIANCE WITH TABLE R402.1.2 (2021 IECC)

AT FINAL INSPECTION LABELS ON ALL WINDOWS AND DOORS SHALL DEMONSTRATE COMPLIANCE WITH SECTION 601.3.2.2

MECHANICAL

THE MECHANICAL CONTRACTOR IS TO VERIFY ALL EQUIPMENT LOCATIONS AND DUCTWORK LAYOUT WITH THE GENERAL CONTRACTOR PRIOR TO START OF INSTALLATION

VERIFY EQUIPMENT CAPACITY TO CONDITION THE HOME REWORK AS REQUIRED

VENT ALL BATHROOM EXHAUST FANS, KITCHEN RANGE HOOD EXHAUST FAN, AND DRYER VENTS TO THE EXTERIOR WITH A DAMPER. OUTLETS PLACED IN ROOF SOFFITS SHALL BE PLACED A MINIMUM 6'-0" FROM ATTIC SOFFIT VENTS

ALL CRAWL SPACES SHALL BE PROVIDED WITH HEATED SUPPLY AND RETURN AIR

SUB-CONTRACTOR SHALL DESIGN SYSTEM AND CERTIFY THAT IT WILL MAINTAIN +72 DEGREES F INDOORS & -10 DEGREES F OUTDOOR TEMPERATURE AND COOL TO +75 DEGREES INDOORS @ +95 DEGREES OUTDOOR TEMPERATURE @ 50% RELATIVE HUMIDITY. SUBMIT SHOP DRAWINGS FOR APPROVAL BY ARCHITECT PRIOR TO STARTING WORK

DUCT TIGHTNESS SHALL BE VERIFIED BY A 3RD PARTY (2021 IECC, SECTION R403.3.5.)

HVAC SYSTEM SHALL BE CONTROLLED BY A PROGRAMMABLE THERMOSTAT (2021 IECC, SECTION R403.1)

MEANS OF PROVIDING COMBUSTION AIR TO ALL FUEL/GAS APPLIANCES, MECHANICAL EQUIPMENT SHALL COMPLY WITH 2018 IRC, SECTION G2407.

GENERAL NOTES

PLUMBING

ALL UNDERGROUND WATER PIPING SHALL BE TYPE 'K' COPPER; ALL INTERIOR ABOVE GROUND WATER PIPING SHALL BE TYPE 'L' COPPER

PROVIDE 12" AIR CHAMBERS AT ALL FIXTURES; PROVIDE 24" AIR CHAMBERS AT ALL RISERS

ALL INTERIOR WASTE SHALL BE PVC. PITCH MINIMUM 1/4" PER FOOT

ALL SHOWER VALVES SHALL BE NON SCALD TYPE

ALL HOSE BIBS SHALL BE FROST PROOF WITH VACUUM BREAKERS

PROVIDE A SEWER CLEAN OUT WITHIN 5'-0" OF THE EXTERIOR OF THE FOUNDATION WALL

ALL UNDERGROUND WASTE AND VENT PIPING SHALL BE PVC

PROVIDE BACKUP SUMP PUMP SYSTEM WITH DEDICATED ELECTRICAL OUTLET AND BATTERY BACKUP PER PLANS

ELECTRICAL

ALL POWER WIRING SHALL BE IN METAL CONDUIT UNLESS OTHERWISE NOTED

THE ELECTRICAL CIRCUITS AND PANEL LAYOUT ARE TO BE DESIGNED BY THE ELECTRICAL CONTRACTOR IN ACCORDANCE WITH ALL APPLICABLE CODES

PROVIDE A SMOKE DETECTOR ON EACH FLOOR LEVEL AND IN EACH SLEEPING ROOM AS WELL AS WITHIN 15' OUTSIDE OF A SLEEPING ROOM. SMOKE DETECTORS SHALL BE 110V WITH BATTERY BACK-UP AND WIRED IN SERIES SO THAT ALL DETECTORS CHIME WHEN ONE OR MORE ARE ACTIVATED BY SMOKE

ALL CONVENIENCE ELECTRICAL OUTLETS IN HABITABLE AREAS SHALL BE PLACED 12' ABOVE THE FINISHED FLOOR (UNLESS NOTED OTHERWISE) AND BE SPACED PER THE 6/12 RULE

ALL BATHROOM, GARAGE, UNFINISHED BASEMENTS AND EXTERIOR ELECTRICAL OUTLETS SHALL BE GFCI PROTECTED

ALL OUTLETS, LIGHT FIXTURES, AND SWITCHES WITHIN 5'-0" OF A SHOWER OR BATHTUB SHALL BE GFCI PROTECTED

ALL LIGHT FIXTURES WITHIN A 24" OR SMALLER CLOSET SHALL BE RECESSED FLUORESCENT WITH SOLID LENS

DISHWASHER, RANGE HOOD, AND GARBAGE DISPOSAL SHALL BE HARDWIRED

ALL CABLE TV, PHONE & DATA LOCATIONS SHALL BE CONFIRMED WITH OWNER. TV OUTLETS REQUIRE COAXIAL SIGNAL CABLE, 1 DATA NETWORK AND 1 PHONE CABLE. DISTRIBUTED TV OUTLETS SHALL ALLOW FOR HD VIDEO MATRIX DISTRIBUTION VIA HDMI 1.3b PROTOCOL FROM CENTRALLY LOCATED SOURCE COMPONENTS. WIRING REQUIREMENTS MAY VARY BASED ON DISTANCE FROM SOURCE COMPONENTS

PHONE & DATA OUTLETS SHALL SUPPORT UP TO 4 ANALOG OR DIGITAL PHONE LINES AND A NETWORK CONNECTION OUTLET. VERIFY LOCATIONS WITH OWNER. DATA LINE SUPPORTS HARD WIRED NETWORK CONNECTION AND WIRELESS NETWORK EXPANSION

PROVIDE A HOME SECURITY SYSTEM PER OWNER SELECTION. MINIMUM COMPONENTS SHALL BE: WINDOW CONTACTS ON ALL BASEMENT & 1ST FLOOR WINDOWS & EXTERIOR DOORS, 2 MOTION DETECTORS ON 1ST FLOOR, 3 GLASS BREAK SENSORS IN BASEMENT, 2 KEY PADS (1 @ MUDROOM, 1 @ MASTER BEDROOM), 2 SIRENS, 2 HEAT DETECTORS (1 @ GARAGE, 1 @ KITCHEN) AND SMOKE DETECTORS PER CODE AND AS SHOWN

GYPSUM DRYWALL

PROVIDE FOR GYPSUM DRYWALL AT AREAS OF NEW CONSTRUCTION. PROVIDE FOR SCREWED AND GLUED TAPERED EDGE GYPSUM DRYWALL SYSTEM COMPLETE WITH REQUIRED CORNER BEADS AND TAPE - (3) COAT FINISHING SYSTEM AS RECOMMENDED BY U.S. GYPSUM. PROVIDE DUROCK® OR APPROVED EQUAL AT ALL HIGH MOISTURE AREAS UP TO AND INCLUDING CEILING @ SHOWERS

FIRE PROTECTION

1 AN AUTOMATIC RESIDENTIAL FIRE SPRINKLER SYSTEM SHALL BE INSTALLED IN ONE- AND TWO-FAMILY DWELLINGS (2018 IRC, SECTION R313.2) AND SHALL BE DESIGNED AND INSTALLED IN ACCORDANCE WITH NFPA 13D (SECTION R313.2.1)

STRUCTURAL DESIGN CRITERIA

DESIGN LOADS

FLOOR	40 psf.LL	10 psf. DL LIVING SPACE
ATTIC	20 psf.LL	10 psf. DL ATTIC STORAGE
ROOF	30 psf.LL	10 psf. DL
CATHEDRAL CEILING	30 psf.LL	15 psf. DL
SNOW	30 psf.LL	
DECKS	40 psf.LL	10 psf. DL EXTERIOR
GUARD & HANDRAILS	200 psf.LL	
WIND	115 psf	

ALL FLOOR AND CEILING JOIST, ROOF RAFTERS, BEAMS AND HEADERS SHALL BE DOMESTIC HEM FIR #2 UNLESS OTHERWISE NOTED. MINIMUM E = 1,300,000 PSI AND MINIMUM BASE Fb = 850 OR BETTER

ALL STRUCTURAL WOOD POSTS SHALL BE S-P-F STRUCTURAL GRADE OR BETTER

TYP. HEADER CONFIGURATION UNLESS NOTED OTHERWISE: (2) 2x12 W/ (3) 2x4 OR (3) 2x6 POSTS EACH SIDE

PROVIDE DOUBLE JOISTS BELOW ALL PARALLEL PARTITIONS, BATHTUBS, WASHER, DRYER, AND OTHER STATIONARY APPLIANCES

MINIMUM IN-GRADE BASE VALUES FOR STUDS:

FIRST FLOOR EXT. LOAD BEARING WALLS	E = 1,400,000	Fc = 825
FIRST FLOOR INT. LOAD BEARING WALLS	E = 1,200,000	Fc = 800
SECOND FLOOR EXT. LOAD BEARING WALLS	E = 1,200,000	Fc = 800
SECOND FLOOR INT. LOAD BEARING WALLS	E = 1,000,000	Fc = 600
ALL NON-LOAD BEARING WALLS	E = 1,000,000	Fc = 600

EXTERIOR DECK STRUCTURAL FRAMING LUMBER:

ALL DECK STRUCTURAL FRAMING HAS BEEN DESIGNED BASED UPON #2 SOUTHERN YELLOW PINE OF U.S. ORIGIN AS CLASSIFIED BY THE SOUTHERN PINE MARKETING COUNCIL.
Fb: 2x8 = 1,380 PSI / 2x10 = 1,210 PSI / 2x12 = 1,120 PSI - E = 1,600,000

ENGINEERED WOOD PRODUCTS:

MANUFACTURED STRUCTURAL WOOD PRODUCTS SUCH AS HEADERS AND BEAMS HAVE BEEN DESIGNED BASED UPON MICROLLAMS AND PARALLAMS AS MANUFACTURED BY TRUS-JOIST.

1.9 MICROLLAMS	Fb = 2,600 PSI	E = 1,900,000 PSI
2.0 PARALLAMS	Fb = 2,900 PSI	E = 2,000,000 PSI
1.5 TIMBERSTRAND	Fb = 2,250 PSI	E = 1,500,000 PSI

PRESCRIPTIVE BUILDING ENVELOPE COMPLIANCE;2021 IECC W/ILL. AMENDMENTS

A PERMANENT CERTIFICATE SHALL BE COMPLETED BY THE BUILDER OR OTHER APPROVED PARTY AND POSTED ON A WALL IN THE SPACE WHERE THE FURNACE IS LOCATED, A UTILITY ROOM OR AN APPROVED LOCATION INSIDE THE BUILDING. THER CERTIFICATE SHALL INDICATE THE PREDOMINANT R-VALUES, U-FACTORS, TYPES AND EFFICIENCIES OF HEATING, COOLING AND SERVICE WATER HEATING EQUIPMENT, AS WELL AS THE RESULTS FROM ANY REQUIRED DUCT SYSTEM AND BUILDING ENVELOPE AIR LEAKAGE TESTING PERFORMED ON THE BUILDING (2021 IECC, SECTION R401.3)

CLIMATE ZONE: 5A

FENESTRATION U-FACTOR
REQUIRED: 0.026 MAXIMUM
PROVIDED: 0.026 MAXIMUM OR BETTER PER WINDOW MANUFACTURER TO BE DETERMINED

SKYLIGHT U-FACTOR
REQUIRED: 0.55
PROVIDED: N/A

GLAZED FENESTRATION SOLAR HEAT GAIN COEFFICIENT: NOT REQUIRED

CEILING R-VALUE
REQUIRED: R-49
PROVIDED: R-49

WOOD FRAME WALL R-VALUE
REQUIRED: R-30 CAVITY INSULATION
PROVIDED: R-30 CAVITY INSULATION

FLOOR R-VALUE
REQUIRED: R-30
PROVIDED: R-49

BASEMENT WALL R-VALUE
REQUIRED: R-15 CONTINUOUS INSULATION (AT UNFINISHED BASEMENT AREAS)
R-19 CAVITY INSULATION (AT FINISHED BASEMENT AREAS)
PROVIDED: R-15 or R-19 PER CONDITION

GARAGE SLAB R-VALUE (SLAB NOT TO BE HEATED)
REQUIRED: R-10 DOWN TO MIN. 24" BELOW GRADE
PROVIDED: R-15 FROM TOP OF CONCRETE TO MIN. 24" BELOW GRADE

CRAWL SPACES
REQUIRED: R-15 CONTINUOUS INSULATION OR R-19 CAVITY INSULATION
PROVIDED: R-15 CONTINUOUS INSULATION

PROJECT DATA

R-3 ZONING DISTRICT
LOT AREA: 37,999.25 S.F.
MAXIMUM BUILDING HEIGHT: 35' ACTUAL BUILDING HEIGHT: 34.83'
AVERAGE GRADE: 646.23'
COMPUTED BY AVERAGE OF 644.66, 644.20, 648.29, 648.80, 645.21'
MAXIMUM FAR= 25.21 PER HP CALCULATOR
MAXIMUM FLOOR AREA= 9,580 S.F. PER HP CALCULATOR
ACTUAL FLOOR AREA:
FIRST FLOOR= 4,237.36 S.F.
SECOND FLOOR= 1,963.40 S.F.
ATTIC AREA OVER 7'-0"= 155.3 S.F.
TOTAL FLOOR AREA= 6662.86 S.F.

FINISHED AREAS:
FIRST FLOOR = 3,011.81 S.F.
SECOND FLOOR = 1,955.15 S.F.
TOTAL FINISHED AREA IN FIRST AND SECOND FLOOR = 4,966.96 S.F.
FINISHED BASEMENT AREA = 1,468.15 S.F.
GARAGE = 884.19 S.F.
SCREEN PORCH = 284.06 S.F.

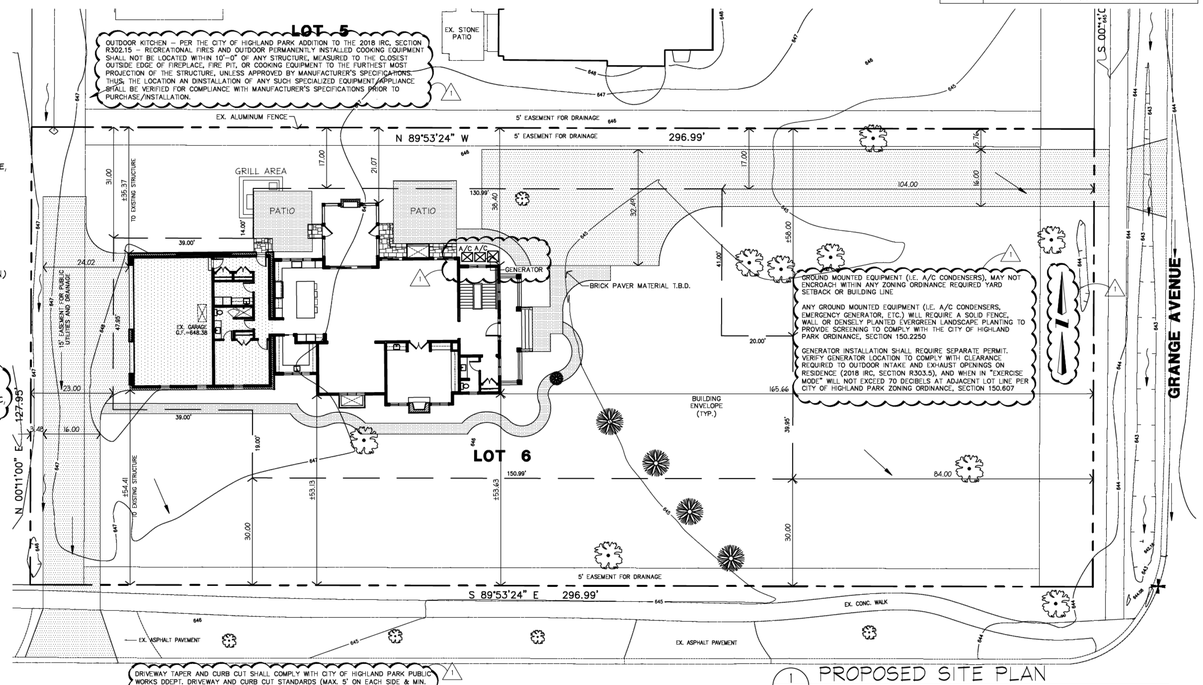
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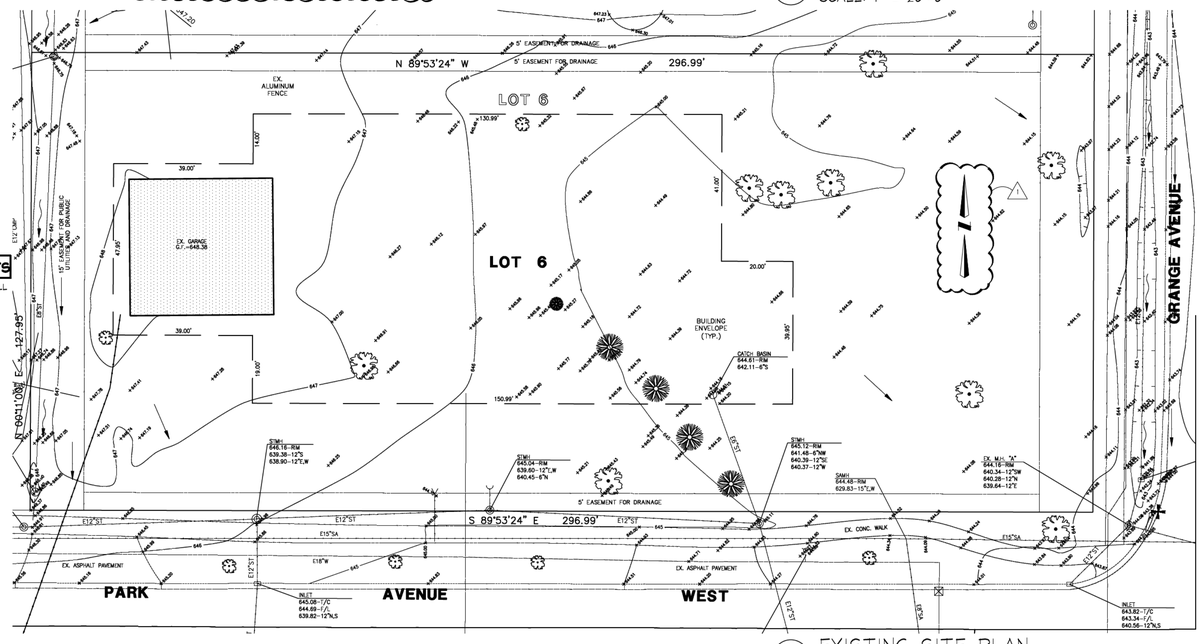
LICENSE EXPIRES 11/30/2025

INDEX

SHEET NAME	DESCRIPTION
A-1	GENERAL NOTES, PROPOSED AND EXISTING SITE PLAN
A-2	PROPOSED FOUNDATION PLAN
A-3	PROPOSED FINISHED BASEMENT PLAN, PLUMBING RISERS
A-4	PROPOSED FIRST FLOOR PLAN
A-5	PROPOSED SECOND FLOOR PLAN
A-6	PROPOSED ROOF PLAN
A-7	PROPOSED ELEVATIONS
A-8	PROPOSED ELEVATIONS
A-9	BUILDING SECTIONS
A-10	SECTIONS, DETAILS, EXISTING STRUCTURE FLOOR PLAN
E-1	FINISHED BASEMENT LIGHT AND POWER PLAN
E-2	FIRST FLOOR LIGHTING AND POWER PLAN
E-3	SECOND FLOOR LIGHTING AND POWER PLAN



1 A1 PROPOSED SITE PLAN
SCALE: 1" = 20'-0"



2 A1 EXISTING SITE PLAN
SCALE: 1" = 20'-0"

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HIGHLAND PARK, IL

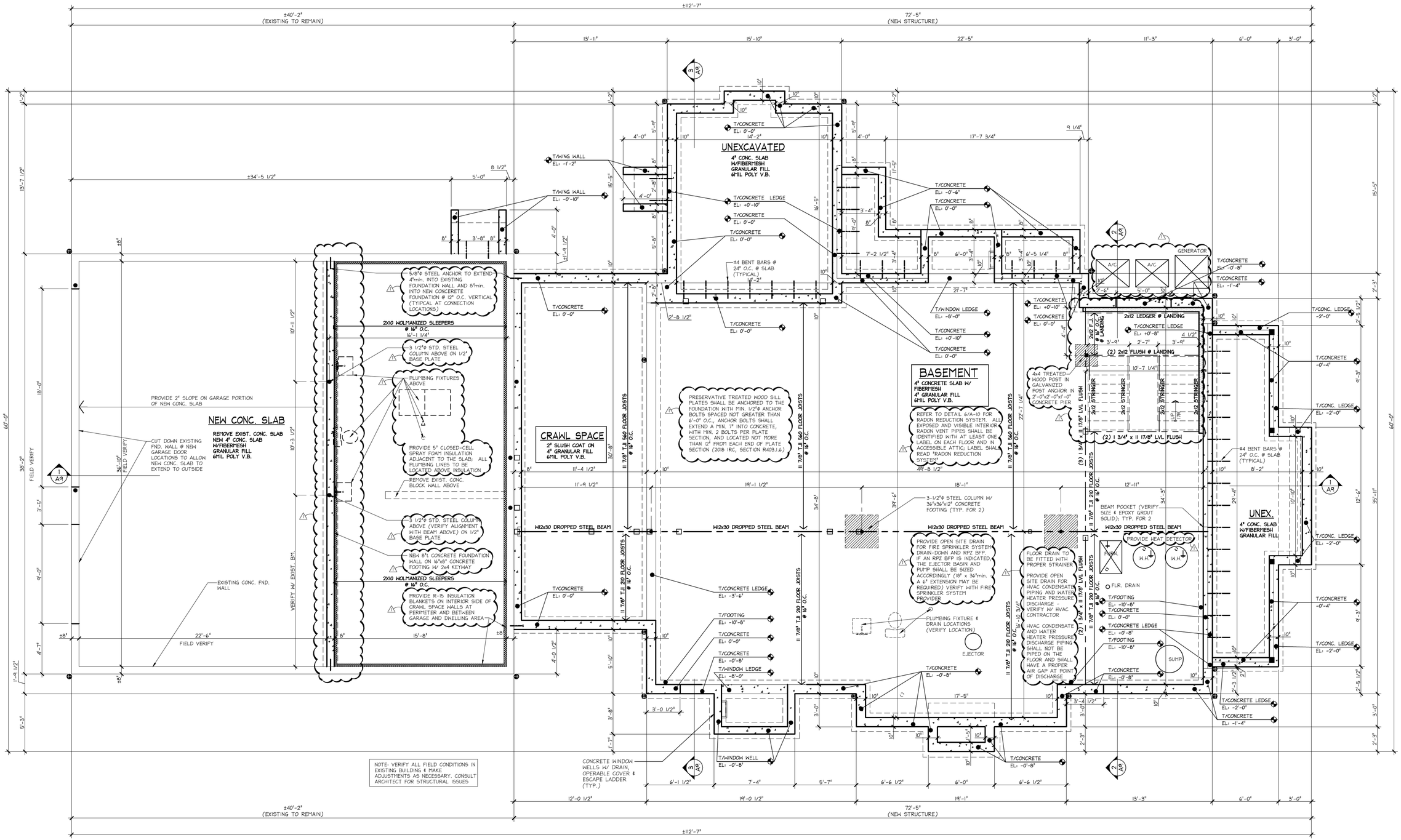
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FAR ADDED SHEET A1	09/10/2025
PERMIT SET REV. 1	12/5/2025
HISTORIC STRUCTURE REV. 2	4/26/2026

SCOTT K. RENKEN, ARCHITECT
555 OAKWOOD AVE
LAKE FOREST, ILLINOIS 60045
PH: 847-343-8162

PROJECT #	172-15
DRAWN BY:	
GENERAL NOTES	A-1

1 OF 13 TOTAL SHEETS



1/A2 PROPOSED FOUNDATION PLAN
SCALE: 1/4" = 1'-0"

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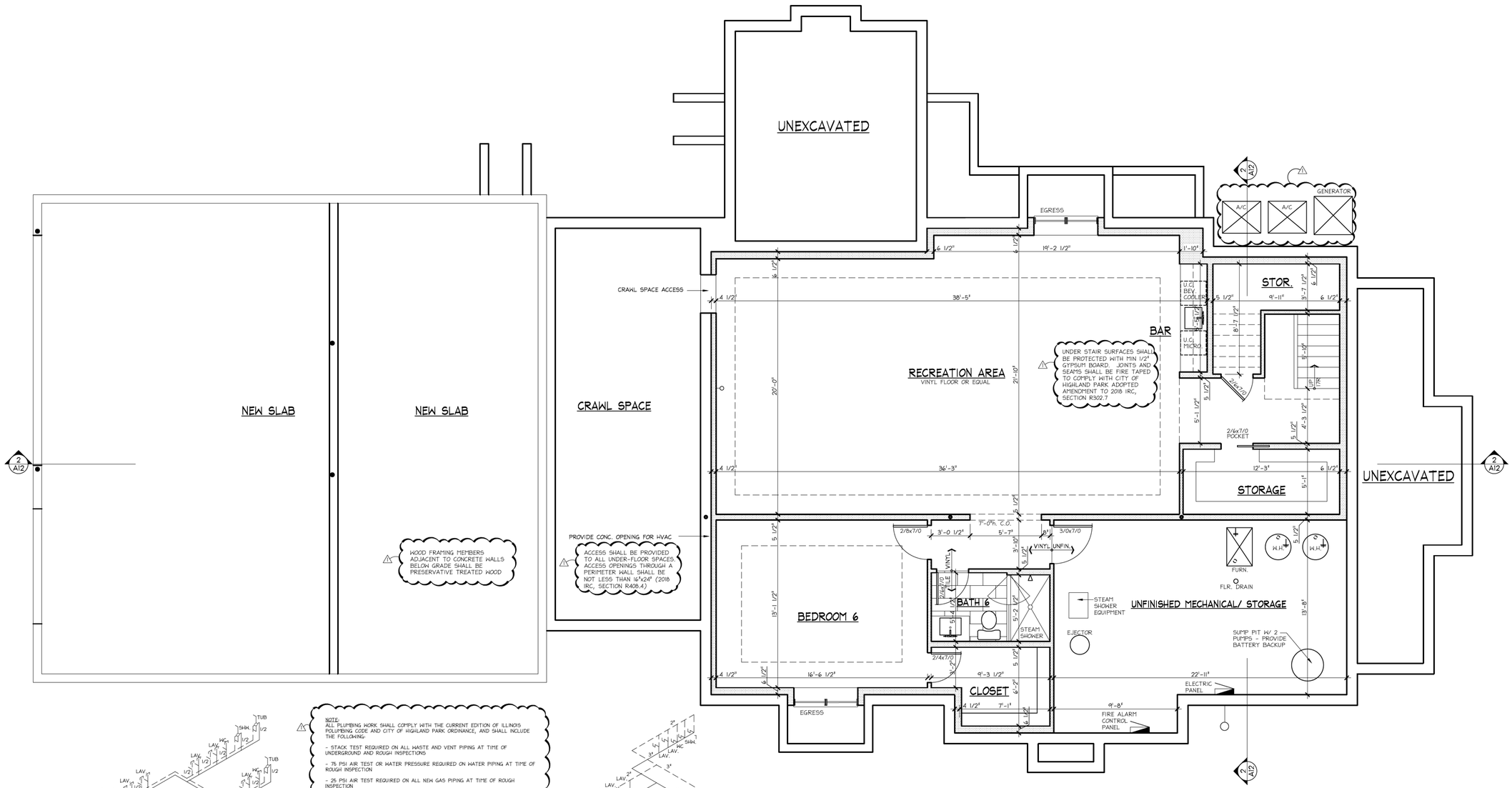
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HISTORIC STRUCTURE REV. 2 4/24/2026

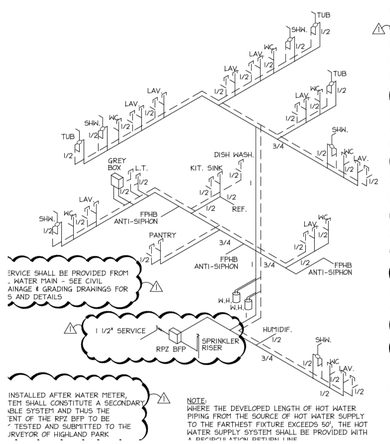
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PROJECT # 172-15
DRAWN BY:
AREA BREAKDOWNS

A-2

2 OF 13 TOTAL SHEETS





ERVICE SHALL BE PROVIDED FROM
. WATER MAIN - SEE CIVIL
AINAGE & GRADING DRAWINGS FOR
S AND DETAILS

1 1/2" SERVICE

INSTALLED AFTER WATER METER, TEM SHALL CONSTITUTE A SECONDARY BLE SYSTEM AND THUS THE ENT OF THE RPZ BFP TO BE ' TESTED AND SUBMITTED TO THE RVEYOR OF HIGHLAND PARK

NOTE:
WHERE THE DEVELOPED LENGTH OF HOT WATER PIPING FROM THE SOURCE OF HOT WATER SUPPLY TO THE FARTHEST FIXTURE EXCEEDS 50', THE HOT WATER SUPPLY SYSTEM SHALL BE PROVIDED WITH A RECIRCULATION RETURN LINE

NOTE:
ALL PLUMBING WORK SHALL COMPLY WITH THE CURRENT EDITION OF ILLINOIS PLUMBING CODE AND CITY OF HIGHLAND PARK ORDINANCE, AND SHALL INCLUDE THE FOLLOWING:

- STACK TEST REQUIRED ON ALL WASTE AND VENT PIPING AT TIME OF UNDERGROUND AND ROUGH INSPECTIONS
- 75 PSI AIR TEST OR WATER PRESSURE REQUIRED ON WATER PIPING AT TIME OF ROUGH INSPECTION
- 25 PSI AIR TEST REQUIRED ON ALL NEW GAS PIPING AT TIME OF ROUGH INSPECTION

PLUMBING CONTRACTOR SHALL HAVE ALL REQUIRED PLUMBING DOCUMENTS ON THE JOB SITE FOR ALL INSPECTIONS

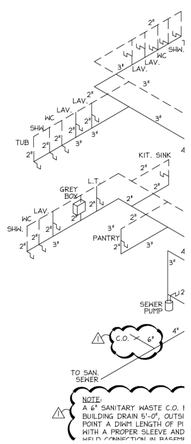
PLUMBING CONTRACTOR THAT PERFORMED THE PLUMBING INSTALLATION SHALL BE AT THE JOB SITE AT EACH INSPECTION

FOR FINAL PLUMBING INSPECTIONS, THE PLUMBING SCOPE OF WORK SHALL COMPLY WITH THE FOLLOWING:

- THE HOT WATER TEMPERATURE SHALL BE A MIN. OF 120ºF AT KITCHEN SINK AND LAVATORY FIXTURES
- THE HOT WATER TEMPERATURE SHALL BE A MAX. OF 115ºF AT BATH TUB AND SHOWER FIXTURES

THE KITCHEN SINK WASTE SHALL HAVE A 2" CLEAN-OUT FITTING THAT IS ACCESSIBLE

- THE WATER CLOSET SHALL HAVE A PROPER WAX RING SEAL
- ALL TUB AND SHOWER PLUMBING VALVES TO COMPLY WITH CURRENT EDITION OF ILLINOIS PLUMBING CODE, SECTION 890.640
- GAS SHUT-OFF VALVE IN THE SAME ROOM AS THE FIREPLACE(S)
- SITE BUILT SHOWER BASE CONSTRUCTION SHALL COMPLY WITH 2018 IRC, SECTION P2709.1, THE TILE COUNCIL OF NORTH AMERICA SPECIFICATIONS AND APPLICABLE NATIONAL INDUSTRY STANDARDS
- ALL HAND HELD SHOWERS SHALL BE PROTECTED BY AN APPROVED ATMOSPHERIC VACUUM BREAKER OR DUAL CHECK BACKFLOW PREVENTERS THAT WILL BE ACCESSIBLE
- COMPLIANCE THROUGH PRESCRIPTIVE METHOD REQUIRED ALL HOT WATER PIPING TO BE INSULATED TO MINIMUM R-3 PER 2021 IECC, SECTION R403.5.2



NOTE:
A 6" SANITARY WASTE C.O. I
BUILDING DRAIN 5'-0", OUTSI
POINT A DWT LENGTH OF PI
WITH A PROPER SLEEVE AND
WELD CONNECTIONS IN BASEM

1 A3 PROPOSED FINISHED BASEMENT
SCALE: 1/4" = 1'-0"

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HIGHLAND PARK, IL

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4/26/2026 HISTORIC STRUCTURE REV. 2

SCOTT K. RENKEN, ARCHITECT
[redacted]

PROJECT # 172-15
DRAWN BY:
FINISHED BSMT. PLUMBING RISERS
A-3
3 OF 13 TOTAL SHEETS

AT EXISTING MASONRY WALLS AS SHOWN ON ELEVATIONS:

- NEW WOLMANIZED FURRING STRIPS @ 16" O.C. VERTICAL GLUED & SCREWED INTO EXISTING MASONRY
- 3/4" CDX PLYWOOD SHEATING
- 6" EXPOSURE HARDIE-BOARD SIDING OVER TYVEK HOUSEWRAP

CUTS, NOTCHES AND HOLES BORED IN TRUSSES, STRUCTURAL COMPOSITE LUMBER, STRUCTURAL-GLUE LAMINATED MEMBERS OR I-JOISTS ARE PROHIBITED EXCEPT WHERE PERMITTED BY THE MANUFACTURER'S RECOMMENDATIONS OR WHERE THE EFFECTS OF SUCH ALTERATIONS ARE SPECIFICALLY CONSIDERED (2018 IRC, SECTION R502.8.2)

EXTERIOR WALLS OR INTERIOR LOAD-BEARING WALLS WHERE STUDS DRILLED WITH A HOLE DRILLED WITHIN 5/8" TO THE EDGE OF THE STUD, SHALL BE REINFORCED WITH AN APPROVED STUD SHOE (2018 IRC, SECTION R602.6)

EXTERIOR WALLS OR INTERIOR LOAD-BEARING WALLS WHERE CUTTING, DRILLING OR NOTCHING OF THE TOP PLATE BY MORE THAN 50% OF ITS WIDTH OCCURS, SHALL HAVE A GALVANIZED METAL TIE NOT LESS THAN 16 GAGE AND 1 1/2" WIDE FASTENED ACROSS AND TO THE PLATE AT EACH SIDE OF THE OPENING (2018 IRC, SECTION R602.6.1)

STAIR CONSTRUCTION SHALL COMPLY W/ 2018 IRC, SECTION R311.7.5 (MAX. 7 3/4" RISER HT., MIN. 10" TREAD DEPTH AND THE MAX. HT. DIFFERENCE BETWEEN THE GREATEST & SMALLEST RISER WITHIN ANY FLIGHT OF STAIRS NOT TO EXCEED 3/8"

HANDRAIL CONSTRUCTION SHALL COMPLY WITH 2018 IRC SECTION R311.7.8. HANDRAILS SHALL BE PROVIDED ON NOT LESS THAN ONE SIDE OF EACH FLIGHT OF STAIRS WITH 4 OR MORE RISERS, HANDRAIL HEIGHT SHALL COMPLY WITH SECTION R311.7.8.1 (MIN. 34" TO MAX. 38" ABOVE TREAD NOSING), HANDRAIL ENDS SHALL COMPLY WITH SECTION R311.7.8.4

GAURDRAIL CONSTRUCTION SHALL COMPLY WITH 2018 IRC, SECTION R312.1 (MIN. 36"h. GAURDRAIL W/ BALUSTER SPACING SO AS NOT TO ALLOW PASSAGE OF A 4"ø SPHERE

MASONRY FIREPLACE CONSTRUCTION SHALL COMPLY WITH 2018 IRC, SECTION/TABLE R1001.1, FIREPLACE CHIMNEY CONSTRUCTION SHALL COMPLY WITH SECTION R1003.1 AND OUTSIDE COMBUSTION AIR SHALL BE PROVIDED PER SECTION R1006

EXPOSED COMBUSTIBLE MATERIAL OR TRIM IS PERMITTED TO BE PLACED DIRECTLY ON THE MASONRY FIREPLACE FRONT SURROUNDING THE FIREPLACE OPENING PROVIDING SUCH COMBUSTIBLE MATERIALS ARE NOT PLACED WITHIN 6" OF A FIREPLACE OPENING. COMBUSTIBLE MATERIAL WITHIN 12" OF THE FIREPLACE OPENING SHALL NOT PROJECT MORE THAN 1/8" FOR EACH 1" DISTANCE FROM SUCH AN OPENING (2018 IRC, SECTION R1001.1

FACTORY-BUILT FIREPLACE AND CHIMNEY INSTALLATION SHALL COMPLY WITH 2018 IRC, SECTIONS R1004 AND R1005, AND TO PROVIDE OUTSIDE COMBUSTION AIR PER SECTION R1006

HEARTH EXTENSION AT FACTORY-BUILT FIREPLACE SHALL COMPLY WITH 2018 IRC, SECTION R1004.2 OR PROVIDE NOTE THAT HEARTH EXTENSION WILL BE PROVIDED PER MANUFACTURER'S SPECIFICATION

GAS SHUT-OFF VALVE TO BE IN THE SAME ROOM AS FIREPLACE

INSTALLATION OF FIRE-BLOCKING MATERIAL VERTICALLY AT THE FLOOR AND CEILING LEVELS, AND HORIZONTALLY AT INTERVALS NOT EXCEEDING 10'-0" (2018 IRC, SECTION R302.11)

±112'-7"
±40'-2" (EXISTING TO REMAIN)
72'-5" (NEW STRUCTURE)

TO DOG RUN
FRAME IN EXISTING MASONRY OPENING AS REQ'D.
NEW OPENING IN EXISTING MASONRY - PATCH & REPAIR OPENING AS REQ'D.
DRYER EXHAUST SHALL COMPLY WITH 2018 IRC, SECTION M1502 AND INSTALLATION SHALL COMPLY WITH SECTION G2439. DRYER INSTALLATION EXHAUSTING MORE THAN 200 CFM SHALL BE PROVIDED WITH MAKE-UP AIR
TREATED WOOD STEP OR CONC.
2/8x8/0 B-LABEL W/ SELF-CLOSER
NEW OPENING IN EXISTING MASONRY - PATCH & REPAIR OPENING AS REQ'D.
2/8x8/0 ENTRY
LAUNDRY
3-1/2"ø STEEL COLUMN TO BASE PL ON NEW CONC PIER
W12x30 DROPPED STEEL BEAM
3-1/2"ø STEEL COL. TO BASE PL. ON NEW CONC FND. WALL
W/D
DWELLING-GARAGE SEPARATION WALL AND GARAGE CEILING FINISHES SHALL BE 5/8" SYPSUM BOARD PER CITY OF HIGHLAD PARK ADOPTED AMENDMENT TO 2018 IRC, TABLE R302.6
EXISTING KNEE WALLS ABOVE - PROVIDE STRUCTURAL LVL'S IF REQUIRED FOR POINT LOADS
PULL DN. STAIR (VERIFY ROUGH OPENING DIMENSIONS) W/ SWITCH AND LIGHT
EXISTING STEEL BEAM
3- CAR GARAGE
PROVIDE R-21 KRAFT-FACED BATT INSULATION IN WALL BETWEEN GARAGE AND DWELLING AREA
NOTE: CURBLESS SHOWER IN THIS LOCATION
BATH 5
4/0x8/0 PAIR
3-1/2"ø STEEL COL. TO BASE PL. ON EXIST. CONC FND. WALL (TYP. OF 2)
BEDROOM 5
NEW OPENING IN EXISTING MASONRY - PATCH & REPAIR OPENING AS REQ'D.
NEW LINTLE AS REQ'D FOR EXISTING MASONRY OVER NEW DOOR
FRAME IN EXISTING MASONRY OPENING AS REQ'D.
NEW WINDOWS IN EXISTING OPENING - PATCH & REPAIR AS REQ'D.
EXISTING MASONRY TO REMAIN - REMOVE EXISTING PAINT, PREP, AND PAINT WHITE. ALL NEW MASONRY PAINTED TO MATCH.
W12x30 DROPPED STEEL BEAM
9'0x8'0 OVERHEAD DOOR
2x6 CL. JSTS. @ 16" O.C.
(2) 2x8
(2) 2x6
2x6 CEILING JOISTS @ 16" O.C.
2/6x8/0
2/4x8/0
TILE
WOOD
2/8x8/0 POCKET
FRAME IN EXISTING MASONRY OPENING AS REQ'D.
FROST PROOF HOSE BIB
(3) 1 3/4"x11 1/4 LVL HDR.
12/0x8/0 EXTERIOR SLIDER
(3) 1 3/4" x 11 1/4" LVL HDR.
APPL. GARAGE
KITCHEN/ BREAK.
CANTILEVER HEADER
SKYLIGHTS AND SLOPED GLAZING SHALL COMPLY W/ 2018 IRC, SECTION R308.6 AND 2021 IECC, SECTION/ TABLE R402.1.2
RANGE HOOD EXHAUST SHALL COMPLY W/ 2018 IRC, SECTION M1503 & INSTALLATION SHALL COMPLY W/ SECTION G2447. EXHAUST HOOD SYSTEM CAPABLE OF EXHAUSTING IN EXCESS OF 400 CFM SHALL BE PROVIDED WITH "MAKE-UP AIR"
RANGE W/HOOD
DBL. OVEN
(2) 1 3/4"x9 1/4" LVL (FLUSH)
(2) 1 3/4"x 9 1/4" LVL (FLUSH)
(2) 1 3/4"x11 7/8" LVL (FLUSH)
11 7/8" TJI 360 FLOOR JOISTS @ 16" O.C.
VELUX M08 SKYLIGHT
SKYLIGHT OPENING
SCREENED PORCH
VELUX M04 SKYLIGHT
3/0x8/0 SCREEN
HIGH POINT OF VAULTED CEILING
(3) 1 3/4"x11 1/4 LVL HDR.
FAMILY AREA
6/0x8/0 EXTERIOR SLIDING FRENCH
GENERATOR
A/C
2x12 LEDGER
2x12 @ 16" O.C. LANDING
2x12 FLUSH
2x12 STRINGER
(2) 1 3/4" x 11 7/8" LVL FLUSH
KNOX BOX LOCATION
(3) 2x10 HDR.
2x6 CL. JSTS. @ 16" O.C.
FOYER
PORCH
3/6x8/0 ENTRY W/ 16" SIDELITES
5/0x8/0 PAIR
2/8x8/0
PDR.
LIBRARY
DINING RM.
PANTRY
30" REF
30" FRZ
COFFEE BAR
BUILT-INS
11 7/8" TJI 210 FLOOR JOISTS @ 16" O.C.
11 7/8" TJI 360 FLOOR JOISTS @ 16" O.C.
FRAME IN EXISTING MASONRY OPENING AS REQ'D.
2/8x8/0 POCKET
2/6x8/0
2/4x8/0
3/0x8/0 PAIR
3 3/4"

±9'-10 1/4" | 10'-2 3/4" | 10'-2 3/4" | 9'-10 1/4" | 6'-6 1/2" | 5'-6" | 9'-9 1/2" | 9'-3" | 3'-9 1/2" | 2'-9" | 6'-0" | 2'-9" | 3'-9 1/2" | 5'-7 1/2" | 7'-7 1/2" | 4'-8 1/4" | 3 3/4"
12'-0 1/2" | 19'-0 1/2" | 19'-1" | 13'-3" | 6'-0" | 1'-0"
±40'-2" (EXISTING TO REMAIN) | 72'-5" (NEW STRUCTURE)
±112'-7"

1/A4 PROPOSED FIRST FLOOR PLAN
SCALE: 1/4" = 1'-0"

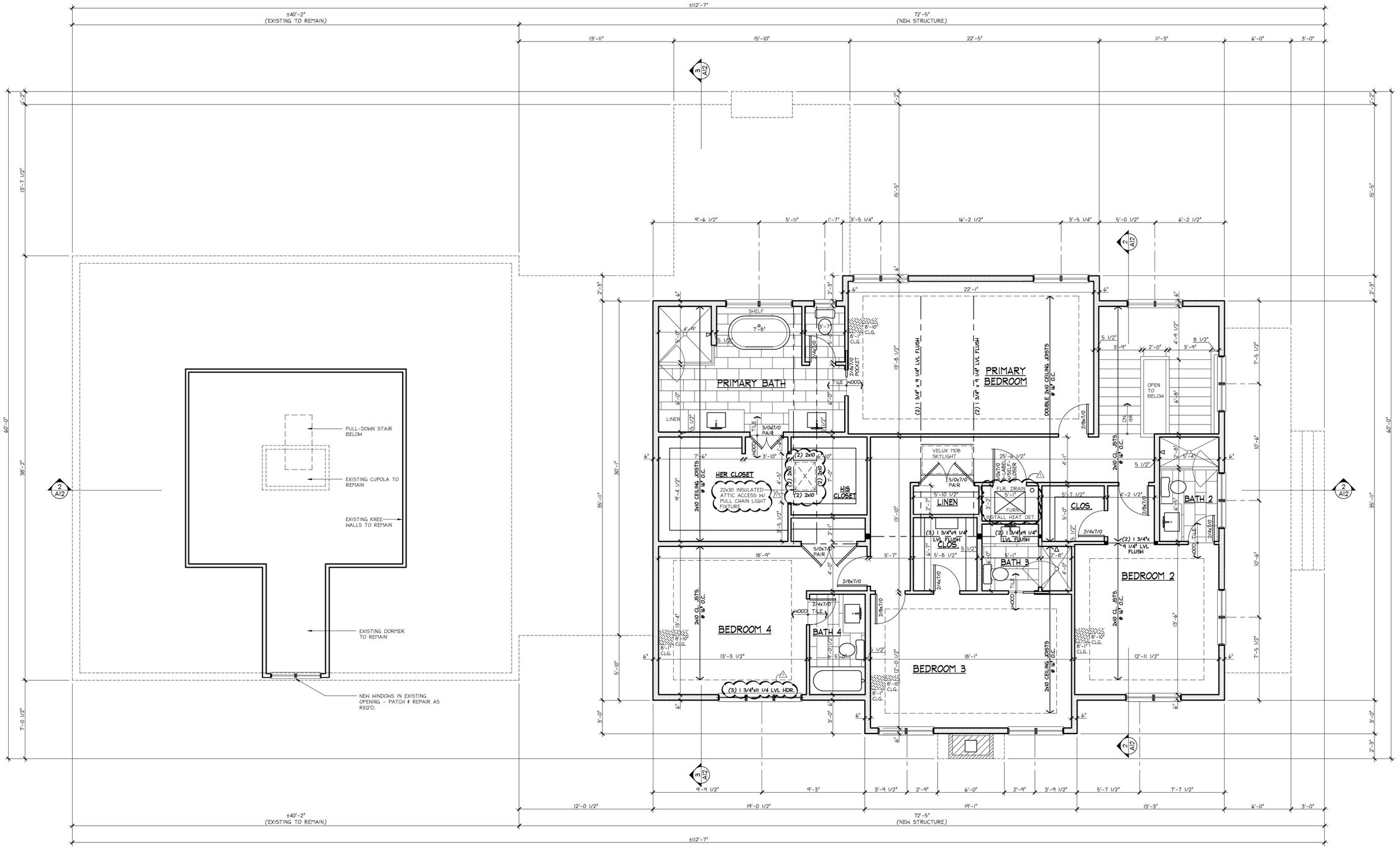
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HISTORIC STRUCTURE REV. 4/26/2026

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[redacted]

PROJECT # 172-15
DRAWN BY:
FIRST FLOOR PLAN
A-4
4 OF 13 TOTAL SHEETS



1 A5 PROPOSED SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

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[redacted]

PROJECT # 172-15
DRAWN BY:
SECOND FLOOR PLAN
A-5
5 OF 13 TOTAL SHEETS

1 A6 PROPOSED ROOF PLAN
SCALE: 1/4" = 1'-0"

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[redacted]

PROJECT # 172-15
DRAWN BY:
ROOF PLAN
A-6
6 OF 13 TOTAL SHEETS



1 A7 PROPOSED LEFT ELEVATION
SCALE: 1/4" = 1'-0"

1 A7 PROPOSED FRONT ELEVATION
SCALE: 1/4" = 1'-0"

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SCOTT K. RENKEN, ARCHITECT
[redacted]

PROJECT # 172-15
DRAWN BY:
ELEVATIONS
A-7
7 OF 13 TOTAL SHEETS

ICE AND WATER SHIELD 3'-0" UP FROM EAVE EDGE & AT ALL INTERSECTIONS OR BENDS (TYPICAL)

MATCH ROOF SLOPE ±

SKYLITE

TEMP. 2/6x5/0

EGRESS 2/6x5/0

2/0x3/6

3/0x3/6

SKYLITE

SKYLITE

TEMP. 2/6x4/6

6'0x8/0 FRENCH

2/6x4/6

3/6x4/6

2/8x8/0

T/ FDN. 648.10

T/ FDN. 647.37

T/ FDN. 648.03

T/ GARAGE SLAB= 648.38'

BRICK VENEER - PAINTED TO MATCH SPRING HOUSE

INSECT SCREENING SHALL NOT BE CONSIDERED A GUARD (2018 IRC, SECTION R312.1.1)

BRICK VENEER - PAINTED TO MATCH SPRING HOUSE

FIBER CEMENT HORIZONTAL SIDING & TRIM OVER EXIST. OPENING & RAW CONC. BLOCKS ON SIDES & REAR

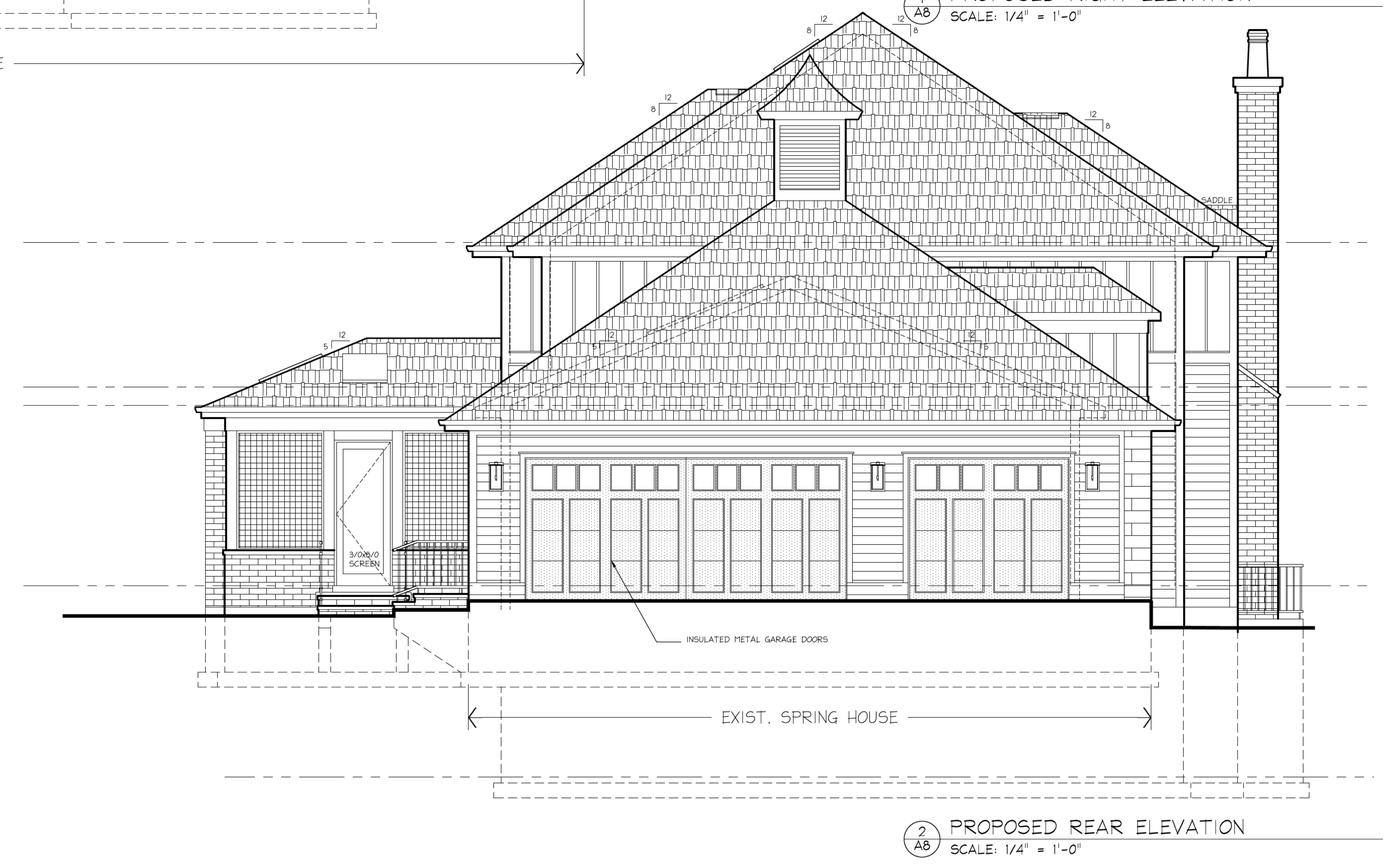
WROUGHT IRON RAILING W/ BALUSTERS SPACED SO NO OPENING ALLOWS A 4"Ø SPHERE TO PASS THROUGH (TYP.)

EXISTING SPRING HOUSE

NEW STRUCTURE

1/A8 PROPOSED RIGHT ELEVATION

SCALE: 1/4" = 1'-0"



2/A8 PROPOSED REAR ELEVATION

SCALE: 1/4" = 1'-0"

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12/5/2025 PERMIT SET REV. 1
4/24/2026 HISTORIC STRUCTURE REV. 2

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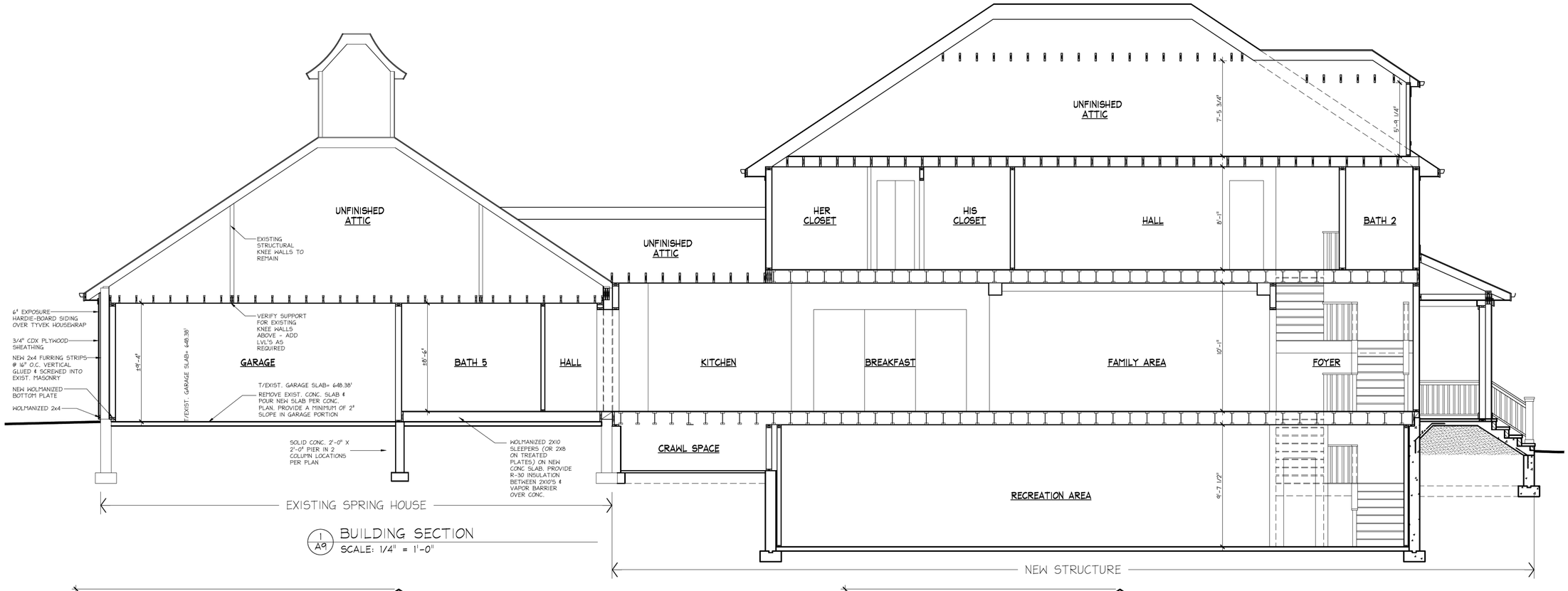
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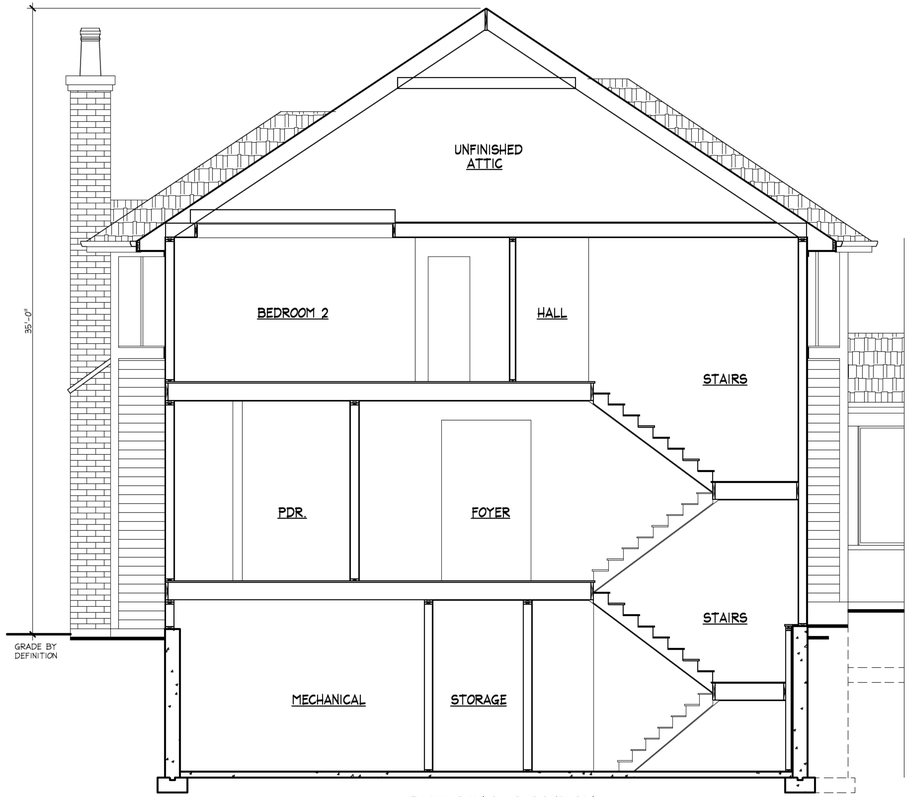
ELEVATIONS

A-8

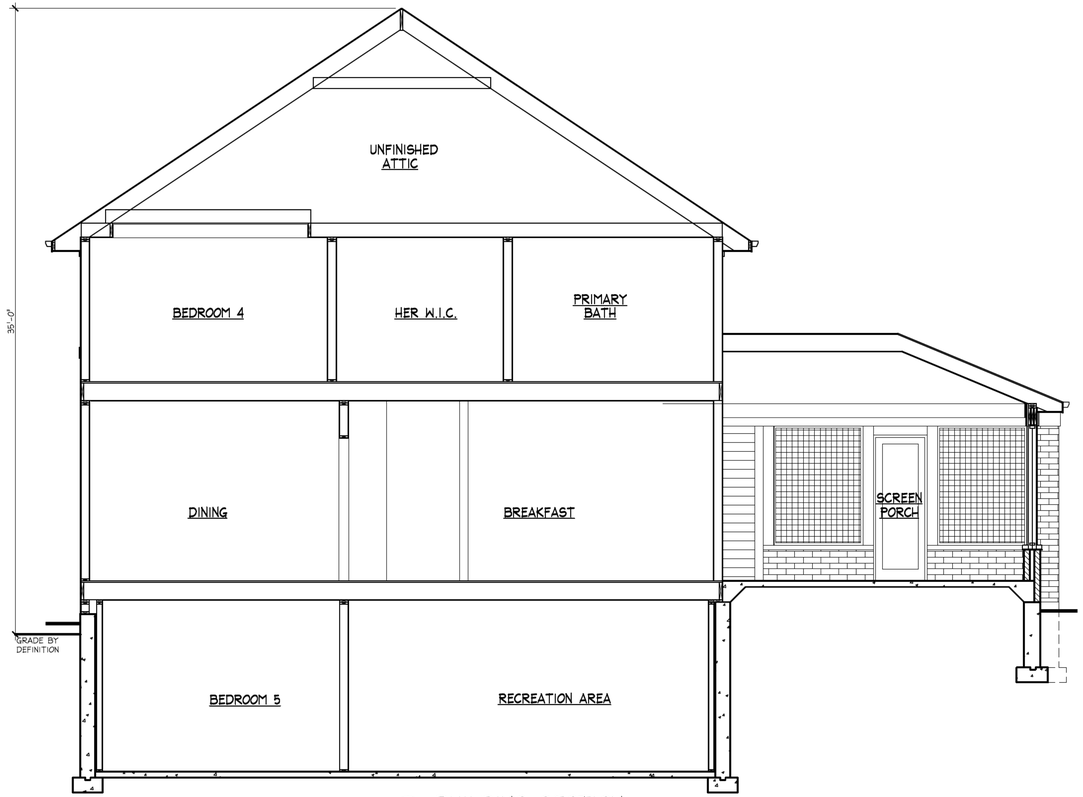
8 OF 13 TOTAL SHEETS



1/A9 BUILDING SECTION
SCALE: 1/4" = 1'-0"



2/A9 BUILDING SECTION
SCALE: 1/4" = 1'-0"



3/A9 BUILDING SECTION
SCALE: 1/4" = 1'-0"

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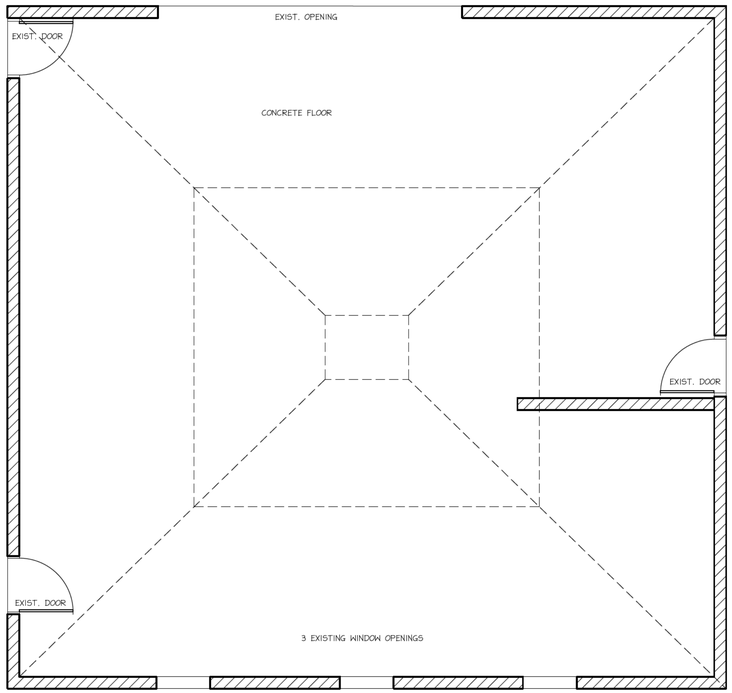
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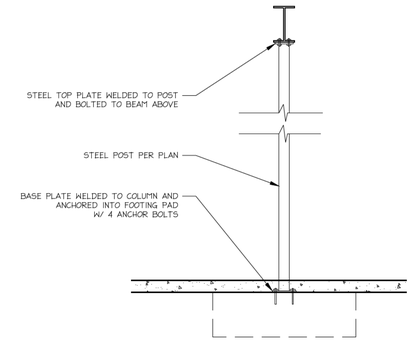
BUILDING SECTION

A-9

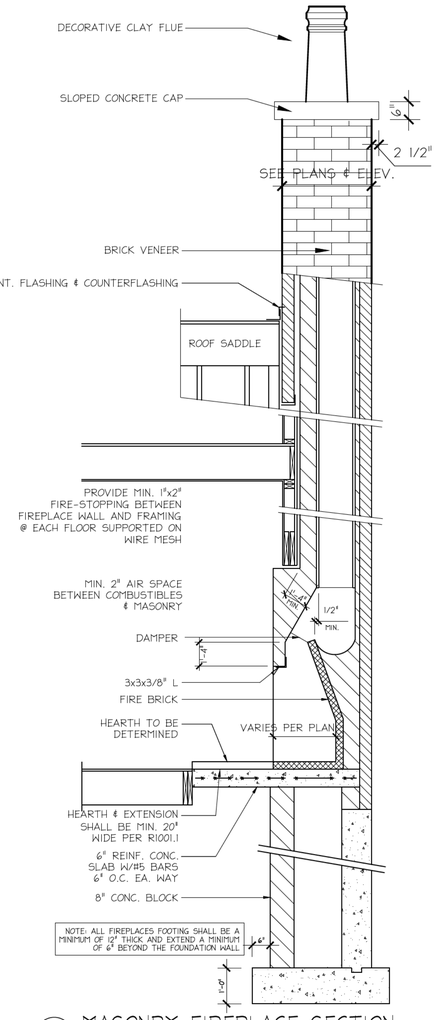
9 OF 13 TOTAL SHEETS



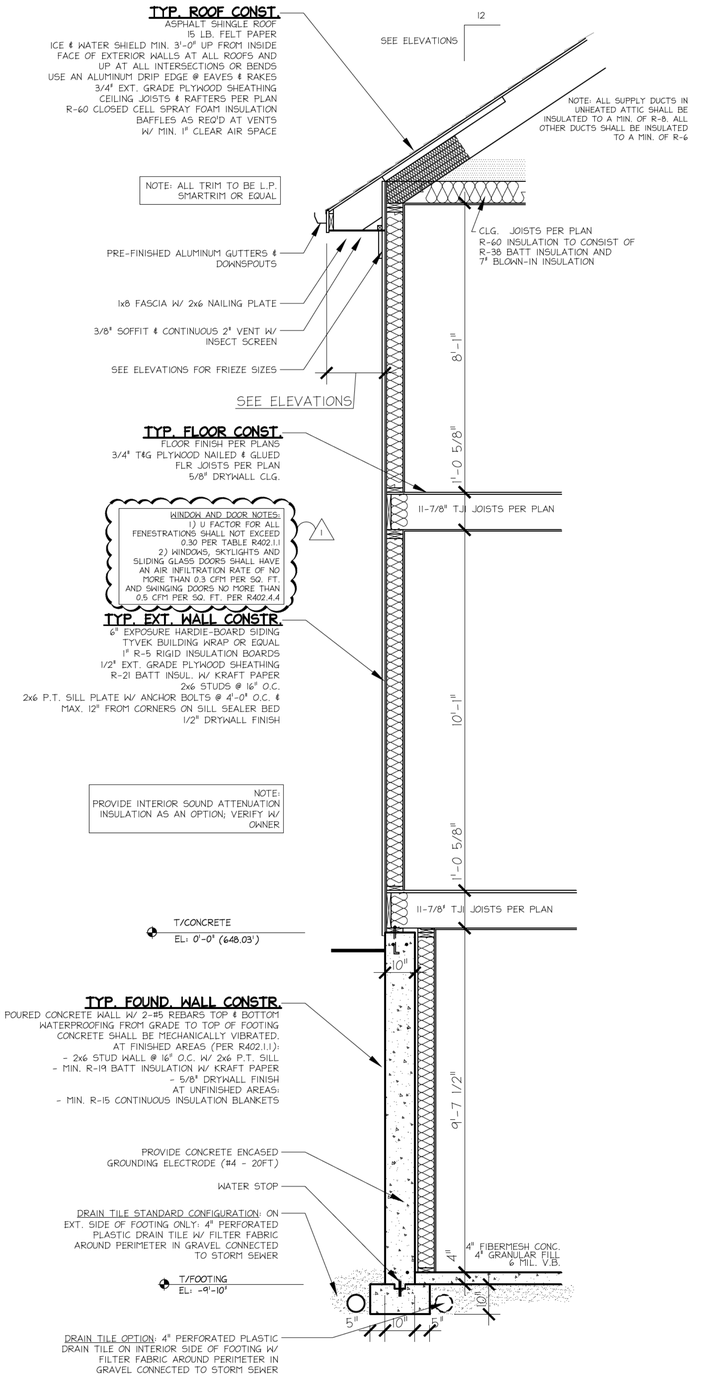
5 A10 EXISTING STRUCTURE FLOOR PLAN
SCALE: 1/4" = 1'-0"



3 A10 STEEL COLUMN DETAIL
SCALE: 1/2" = 1'-0"



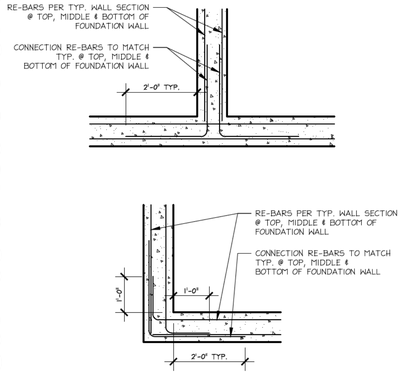
2 A10 MASONRY FIREPLACE SECTION
SCALE: 1/2" = 1'-0"



1 A10 TYPICAL WALL SECTION
SCALE: 1/2" = 1'-0"

..\OneDrive\SassHaus Studio\Renken\Lochnicki SMALLER\passive radon control system details.jpg

6 A10 PASSIVE RADON CONTROL SYSTEM DETAIL
NOT TO SCALE



4 A10 FOUNDATION INTERSECTION DETAILS
SCALE: 1/2" = 1'-0"

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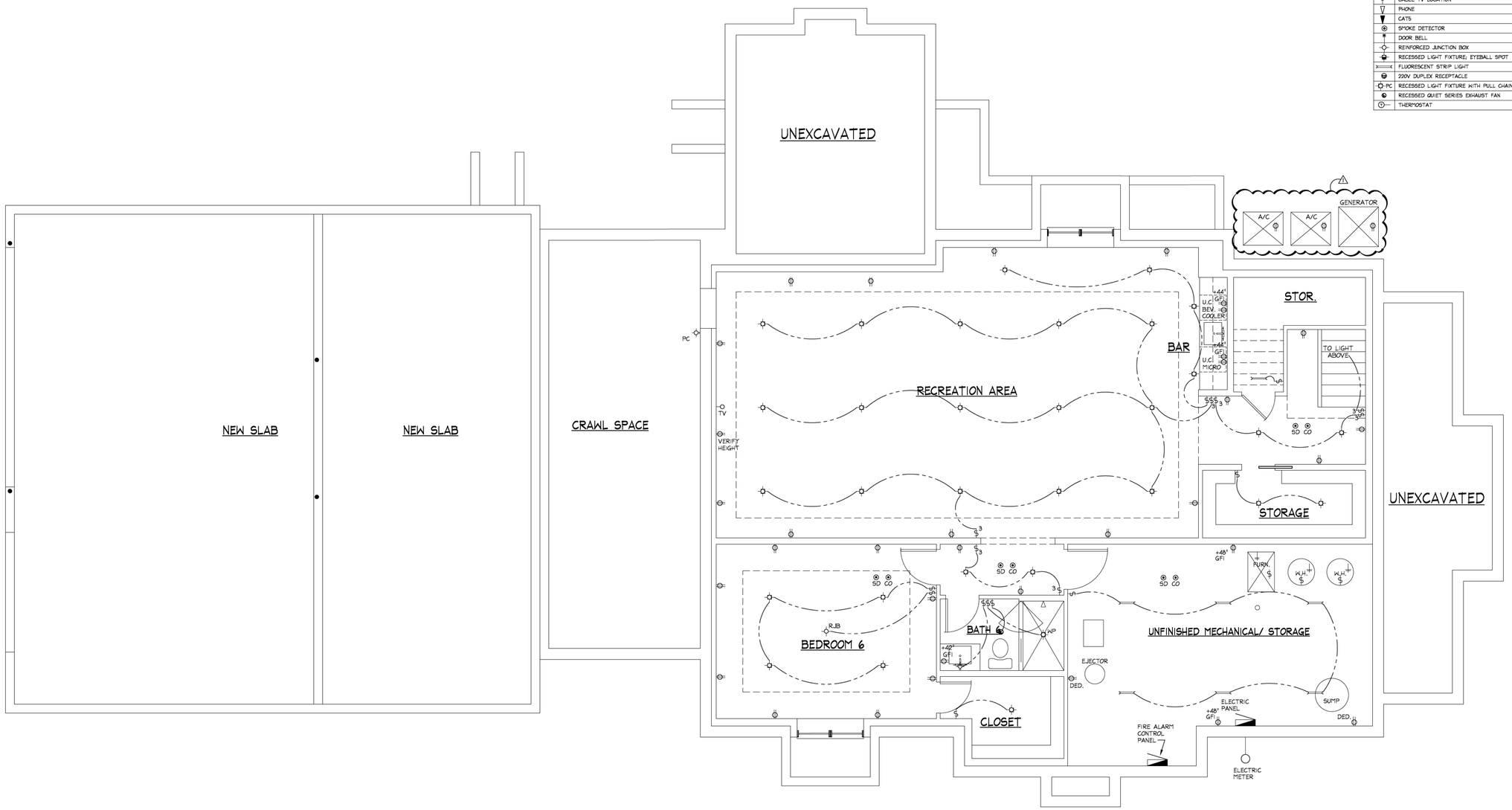
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SECTIONS & DETAILS
A-10
13 OF 13 TOTAL SHEETS

ELECTRICAL SYMBOL KEY

S	SWITCH
S3W	SWITCH, 3-WAY
S4W	SWITCH, 4-WAY
	110V DUPLEX RECEPTACLE
S	110V DUPLEX RECEPTACLE, SWITCHED
GFI	110V DUPLEX RECEPTACLE, GROUND FAULT INTERRUPTER
WP	110V DUPLEX RECEPTACLE, WEATHER PROOFED
	CEILING MOUNTED LIGHT FIXTURE
PC	CEILING MOUNTED LIGHT FIXTURE, PULL CHAIN
	RECESSED LIGHT FIXTURE (5")
	RECESSED LIGHT FIXTURE WITH EXHAUST FAN
	WALL MOUNTED LIGHT FIXTURE
TV	CABLE TV LOCATION
T	PHONE
	CAT5
SD	SMOKE DETECTOR
	DOOR BELL
	REINFORCED JUNCTION BOX
	RECESSED LIGHT FIXTURE, EYEBALL SPOT
	FLUORESCENT STRIP LIGHT
	220V DUPLEX RECEPTACLE
PC	RECESSED LIGHT FIXTURE WITH PULL CHAIN
	RECESSED QUIET SERIES EXHAUST FAN
T	THERMOSTAT



1 E1 BASEMENT ELECTRICAL

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[redacted]

PROJECT # 172-15

DRAWN BY:

OPTIONAL BASEMENT ELECTRICAL

E-1

14 OF 13 TOTAL SHEETS

ELECTRICAL SYMBOL KEY

S	SWITCH
S3W	SWITCH, 3-WAY
S4W	SWITCH, 4-WAY
	110V DUPLEX RECEPTACLE
S	110V DUPLEX RECEPTACLE, SWITCHED
GFI	110V DUPLEX RECEPTACLE, GROUND FAULT INTERRUPTER
WP	110V DUPLEX RECEPTACLE, WEATHER PROOFED
	CEILING MOUNTED LIGHT FIXTURE
PC	CEILING MOUNTED LIGHT FIXTURE, PULL CHAIN
	RECESSED LIGHT FIXTURE (5")
	RECESSED LIGHT FIXTURE WITH EXHAUST FAN
	WALL MOUNTED LIGHT FIXTURE
	CABLE TV LOCATION
	PHONE
	CAT5
SD	SMOKE DETECTOR
CO	CARBON MONOXIDE DETECTOR
	RECESSED LIGHT FIXTURE, EYEBALL SPOT
	FLUORESCENT STRIP LIGHT
	220V DUPLEX RECEPTACLE
	RECESSED LIGHT FIXTURE WITH PULL CHAIN
	RECESSED QUIET SERIES EXHAUST FAN

WALL RECEPTACLES SHALL BE SPACED SO THAT ANY WALL SPACE IS NO MORE THAN 6' FROM A RECEPTACLE (2017 NEC, ARTICLE 210.52 (A)(1))

KITCHEN COUNTER RECEPTACLES SHALL BE SPACED SO THAT ANY WALL COUNTER SPACE IS NO MORE THAN 2' FROM A RECEPTACLE (2017 NEC, ARTICLE 210.52 (C)(1))

KITCHEN ISLAND RECEPTACLES SHALL NOT BE LOCATED MORE THAN 12" FROM THE COUNTER TOP AND NOT BE LOCATED UNDER MORE THAN A 6" COUNTERTOP OVERHAND (2017 NEC, ARTICLE 210.42 (C)(5) EXCEPTION)

ALL LIGHT FIXTURES INSLALLED WITHIN TUB/SHOWER COMPARTMENTS SHALL HAVE A VAPOR PROOF COVER AND SHALL BE GFCI PROTECTED (2017 NEC, ARTICLE 210.8 (A)(9) AS AMENDED)

SEPARATE CIRCUITS SHALL BE PROVIDED FOR ALL RANGES, OVENS, LAUNDRY, GARBAGE DISPOSAL, MICROWAVE, COMPACTOR, DISHWASHER, REFRIGERATOR, FREEZER, WHOLE HOUSE VACUUM, WHIRLPOOL TUB, STEAM GENERATORS, SUMP/EJECTOR PUMPS, WATER HEATER, FURNACES AND AIR CONDITIONERS (2017 NEC, ARTICLE 210.11 (C))

ALL CEILING ELECTRICAL BOXES SHALL BE CAPABLE OF SUPPORTING CEILING FANS (2017 NEC, ARTICLES 314.27 (C) AND 422.18)

OUTDOOR GFI RECEPTACLES TO COMPLY WITH 2017 NEC, ARTICLES 406.9 (B)(1) AND 406.9 (B)(2) FOR WEATHER PROOF COVER

ALL EQUIPMENT & APPLIANCES SHALL BE INSTALLED IN ACCORDANCE WITH THEIR LISTINGS AND MANUFACTURER'S INSTALLATION SPECIFICATIONS. A COPY OF THE MANUFACTURER'S INSTALLATION SPECIFICATIONS SHALL BE PROVIDED AT TIME OF INSPECTION

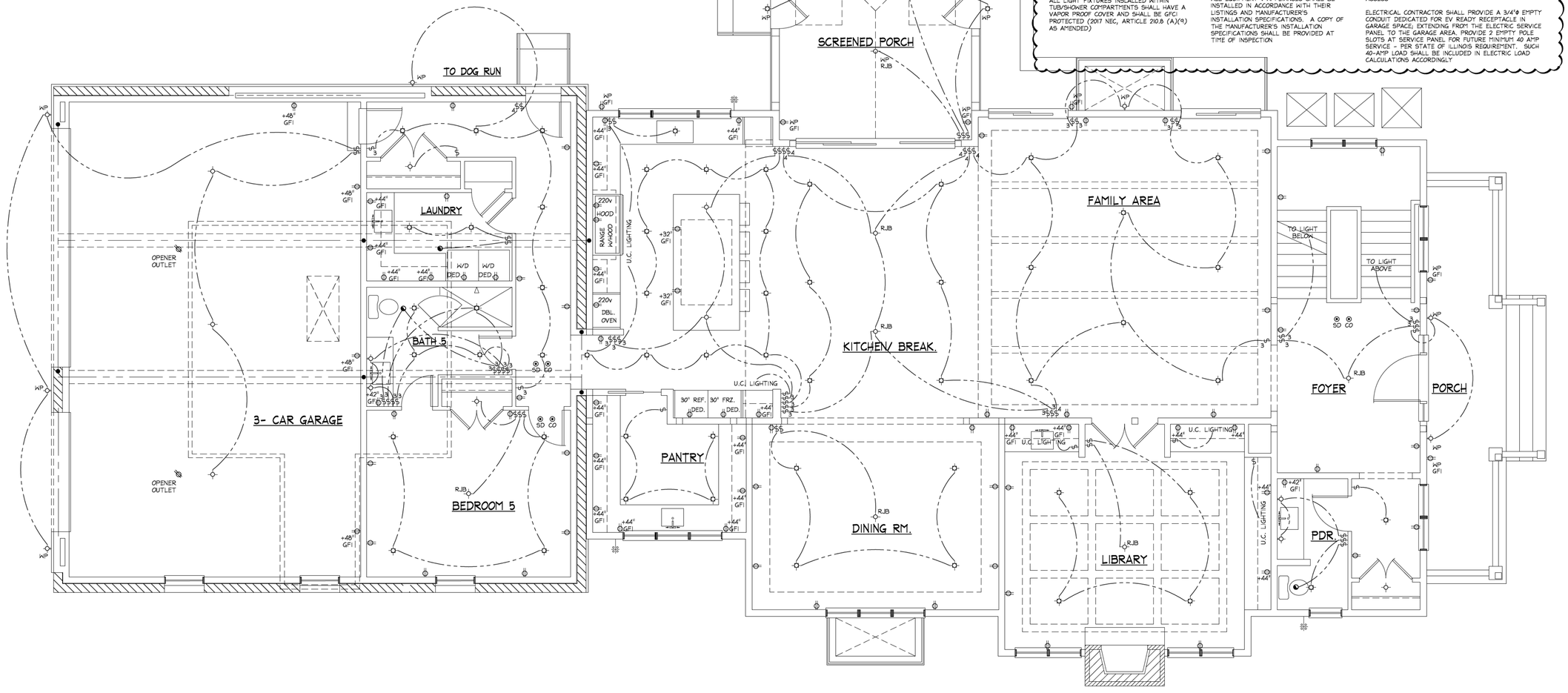
RESIDENTIAL SMOKE/CARBON MONOXIDE DETECTORS SHALL BE INSTALLED THROUGHT THE RESIDENCE AS REQUIRED BY CITY OF HIGHLAND PARK ADOPTED AMENDMENTS TO 2018 IRC, SECTION 314 AND 2018 IFC, SECTION 907.

ALL PERMANENTLY INSTALLED LIGHT FIXTURES (EXCLUDING KITCHEN APPLIANCE LIGHTING FIXTURES) SHALL CONTAIN ONLY HIGH-EFFICACY LIGHT SOURCES (2017 IECC SECTION R404.1)

EXTERIOR LIGHTING SHALL COMPLY WITH CITY OF HIGHLAND PARK ORDINANCE, SECTION 150.605

ELECTRICAL CONTRACTOR SHALL PROVIDE A 1"Ø EMPTY CONDUIT DEDICATED FOR A FUTURE SOLAR PV ROF TOP INSTALLATION, EXTENDING FROM THE ELECTRIC SERVICE PANEL TO THE ATTIC AREA, TO BE WITHIN 10'-0" OF ATTIC ACCESS

ELECTRICAL CONTRACTOR SHALL PROVIDE A 3/4"Ø EMPTY CONDUIT DEDICATED FOR EV READY RECEPTACLE IN GARAGE SPACE; EXTENDING FROM THE ELECTRIC SERVICE PANEL TO THE GARAGE AREA. PROVIDE 2 EMPTY POLE SLOTS AT SERVICE PANEL FOR FUTURE MINIMUM 40 AMP SERVICE - PER STATE OF ILLINOIS REQUIREMENT. SUCH 40-AMP LOAD SHALL BE INCLUDED IN ELECTRIC LOAD CALCULATIONS ACCORDINGLY.



1 E2 FIRST FLOOR ELECTRICAL

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HISTORIC STRUCTURE REV. 2 4/26/2026

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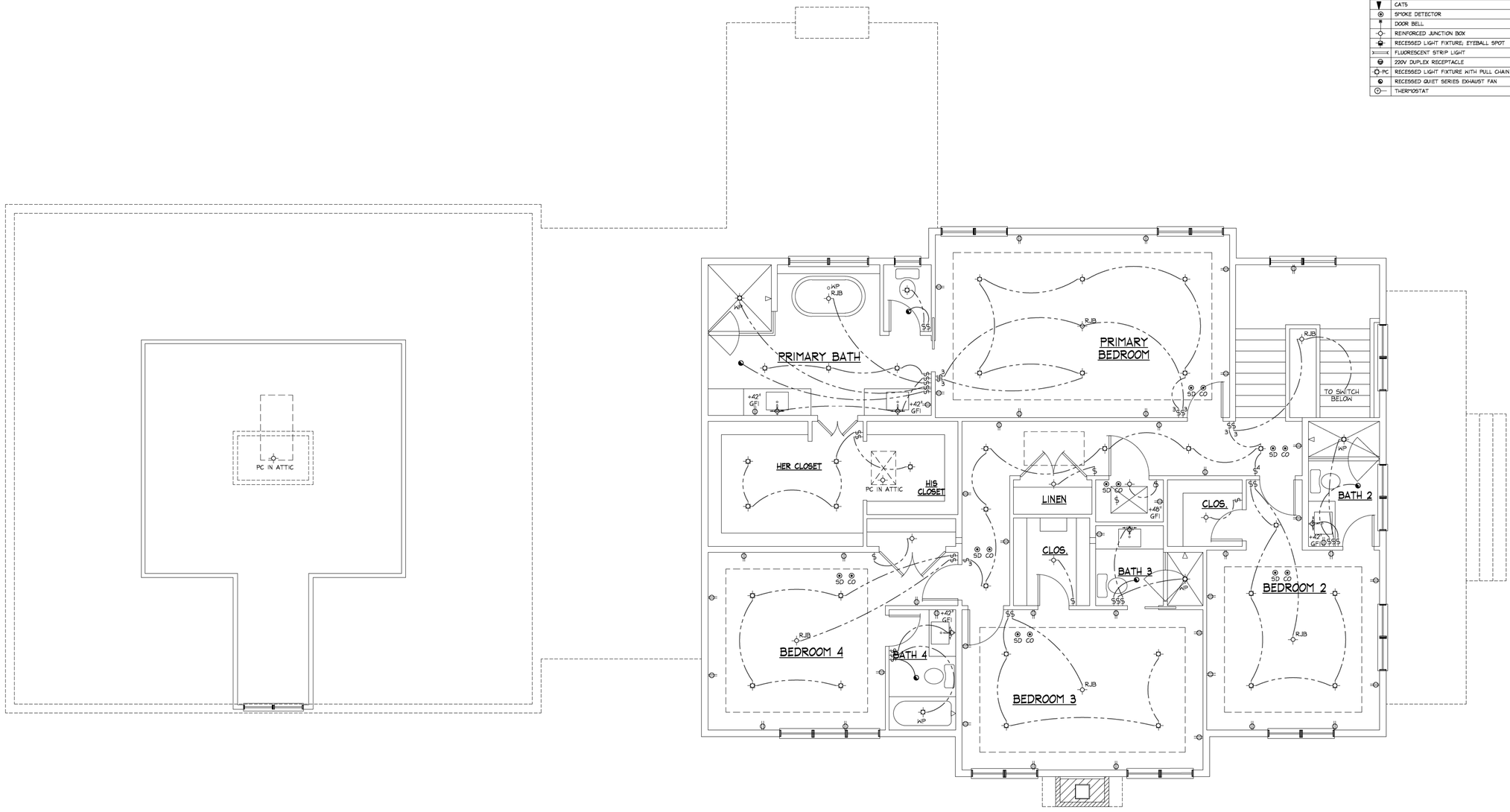
PROJECT # 172-15
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FIRST FLOOR ELECTRICAL

E-2

15 OF 19 TOTAL SHEETS

ELECTRICAL SYMBOL KEY	
S	SWITCH
S3W	SWITCH, 3-WAY
S4W	SWITCH, 4-WAY
	110V DUPLEX RECEPTACLE
	110V DUPLEX RECEPTACLE, SWITCHED
GFI	110V DUPLEX RECEPTACLE, GROUND FAULT INTERRUPTER
WP	110V DUPLEX RECEPTACLE, WEATHER PROOFED
	CEILING MOUNTED LIGHT FIXTURE
PC	CEILING MOUNTED LIGHT FIXTURE, PULL CHAIN
	RECESSED LIGHT FIXTURE (5")
	RECESSED LIGHT FIXTURE WITH EXHAUST FAN
	WALL MOUNTED LIGHT FIXTURE
	CABLE TV LOCATION
	PHONE
	CAT5
	SMOKE DETECTOR
	DOOR BELL
	REINFORCED JUNCTION BOX
	RECESSED LIGHT FIXTURE, EYEBALL SPOT
	FLUORESCENT STRIP LIGHT
	220V DUPLEX RECEPTACLE
PC	RECESSED LIGHT FIXTURE WITH PULL CHAIN
	RECESSED QUIET SERIES EXHAUST FAN
T	THERMOSTAT



1 E3 SECOND FLOOR ELECTRICAL PLAN

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SECOND FLOOR ELECTRICAL

E-3

16 OF 13 TOTAL SHEETS

16 PRESERVATION BRIEFS

The Use of Substitute Materials on Historic Building Exteriors

John Sandor, David Trayte, and Amy Elizabeth Uebel



National Park Service
U.S. Department of the Interior
Technical Preservation Services

The *Secretary of the Interior's Standards for Rehabilitation* generally require that deteriorated distinctive architectural features of a historic property be repaired rather than replaced. Standard 6 of the *Standards for Rehabilitation* further states that when replacement of a distinctive feature is necessary, the new feature must "match the old in composition, design, color, texture, and other visual properties, and, *where possible*, materials" (emphasis added). While the use of matching materials to replace historic ones is always preferred under the *Standards for Rehabilitation*, the Standards also purposely recognize that flexibility may sometimes be needed when it comes to new and replacement materials as part of a historic rehabilitation project. Substitute materials that closely match the visual and physical properties of historic materials can be successfully used on many rehabilitation projects in ways that are consistent with the Standards.

The flexibility inherent in the *Standards for Rehabilitation* must always be balanced with the preservation of the historic character and the historic integrity of a building, of which historic materials are an important aspect. Any replacement work reduces the historic integrity of a building to some degree, which can undermine the historic character of the property over time. With limited exceptions, replacement should only be considered when damage or deterioration is too severe to make repair feasible. When needed replacement is made with a material that matches the historic material, the impact on integrity can be minimal, especially when only a small amount of new material is needed. When a substitute material is used for the replacement, the loss in integrity can sometimes, although not always, be greater than that of a matching material. Also, whether historic or substitute material, there is a point where the amount of replacement can become excessive and the building's historic integrity is diminished to an unacceptable degree, regardless of the material used—that is, a loss of authenticity and the physical features and characteristics closely associated with the property's historic significance.

The term *substitute materials* is used to describe building materials that have the potential to match the appearance, physical properties, and related attributes of historic materials well enough to make them alternatives for use in current preservation practice when historic materials require replacement.

Compelling reasons to use a substitute material instead of the historic material include the unavailability or poor performance of the historic material, or environmental pressures or code-driven requirements that necessitate a change in material. When using a substitute material for replacement it is critical that it match the historic material in all of its visual and physical properties to preserve the historic character of the building and minimize the impact on its integrity.

Substitute materials can be cost-effective, permit the accurate visual duplication of historic materials, and provide improved durability. While the behavior of traditional, historic materials is generally well understood, the behavior of newer materials can be less established and sometimes less predictable. Substitute materials are most successful when the properties of both the original material and the substitute are thoroughly understood by all those involved in the design and construction process. The architect must be adept at the selection of substitute materials and their incorporation into architectural plans and specifications. The contractor or tradesperson in the field must also be experienced with their use.

This Preservation Brief provides general guidance on the use of substitute materials as replacement materials for distinctive features on the exterior of historic buildings. Due to the ever-evolving product market for construction materials, this Brief does not provide specifications for substitute materials. This guidance should be used in conjunction with qualified professionals who are knowledgeable in current construction and historic preservation practices.

This Brief includes a discussion of the appropriate use of substitute materials and provides a path for decision-making in their use. In considering the use of substitute materials, such issues as the deterioration or failure of the historic building component and material must be understood. The existing component's physical and visual properties, profile, surface texture, dimensions, and performance should be identified to establish the basis for evaluating a possible replacement material. The physical and visual properties of the various substitute materials available should also be assessed and compared to the original material for their physical and visual compatibility. Lastly, the suitability of a given substitute replacement material should be determined based on how well the material matches both the physical and visual properties of the existing material as well as any specific performance or application needs. The Brief's descriptions of common substitute materials are not meant to be comprehensive, and, as the performance history of newer materials continues to grow and new materials are developed, available options will change, and our understanding of current material performance will continue to evolve.

Historical Use of Substitute Materials

The tradition of using affordable and common materials in imitation of more expensive and less available materials is a long one. At Mount Vernon, for example, George Washington used wood painted with sand-impregnated paint to imitate rusticated stone. This technique, along with scoring stucco into block patterns, was common in Colonial America to imitate stone.

Nineteenth-century technology made a variety of materials readily available and widely used that were not only able to imitate traditional materials but were also cheaper to fabricate and easier to use. Traditionally, carved stone units were individually worked. Molded or cast materials greatly increased efficiency in creating repetitive elements. Cement-based products such as cast stone could provide convincing imitations of natural stone with carefully chosen aggregates and cements and was typically a commercially manufactured product. It could be tooled like natural stone, though that could reduce much of the cost advantage. These carefully-crafted cementitious products were widely used as trim elements for masonry structures or as the face material for an entire building. At the other end of the spectrum, mail-order catalogs provided a wide variety of forms for molding concrete that were merely evocative of natural stone and did little to match its appearance. Concrete masonry units could be fabricated locally and on site, avoiding expensive quarrying and shipping costs.

Offering similar efficiencies as cast stone for reproducing repetitive and even complex decorative shapes, terra cotta could mimic the surface characteristics of stone with various textures and glazes. It was popular in the late nineteenth and early twentieth centuries for details on stone or brick buildings as well as for the entire skin of large and elaborately detailed buildings.

Cast iron was also used to imitate stone, often with very decorative profiles, for a variety of architectural features ranging from window hoods to columns, piers, balustrades, and even whole façades. Cast iron offered its own set of efficiencies including cost, fabrication time, and weight, but required a painted finish.

While cast stone, terra cotta, and cast iron offered efficiencies over quarried and, particularly, carved stone, they were not cheap or impermanent materials. Less costly, but also less durable, stamped or brake-formed sheet metal, typically galvanized, could also be used instead of masonry for cornices, window hoods, roofing tiles, and even entire building façades.

Substitute Materials and Applying the Standards for Rehabilitation

The *Standards for Rehabilitation* are focused on preserving the important and distinctive character-defining features of a historic property (Standards 2 and 6), and they are to be applied in a reasonable manner, taking into account economic and technical feasibility (36 CFR 67.7 and 36 CFR 68). The Standards have an inherent flexibility that facilitates their application to diverse projects, historic properties, and conditions. They are to be applied on a "cumulative-effect" basis, when the overall effect of all work in the context of the specific conditions of the property and the project is consistent with the property's historic character.

The *Standards for Rehabilitation* require that the replacement of a distinctive feature match the old in physical and visual properties. While the use of matching materials is always preferred, the Standards purposely allow for the use of substitute materials when the use of original materials is not reasonably possible, such as in consideration of economic and technical feasibility or in new construction. They also provide additional flexibility in the treatment of secondary, less distinctive features that are less important in defining the historic character of the property. The *Standards for Rehabilitation* recognize that flexibility is appropriate to facilitate "a compatible use for a property … while preserving those portions or features which convey its historical, cultural, or architectural values" (definition of "Rehabilitation," 36 CFR 67.2(b)).

Examples of Historical Use of Substitute Materials



Figure 2a. Casting concrete blocks to mimic quarried stone was a popular late 19th- to mid 20th-century technique. Concrete masonry units could be completed by local craftsman, saving time and shipping costs. Photo: John Sandor, NPS.



Figure 2b: The 19th century also produced a variety of metal products used to imitate other materials. Across the country, cast iron was used in storefronts to imitate stone. Photo: John Sandor, NPS.

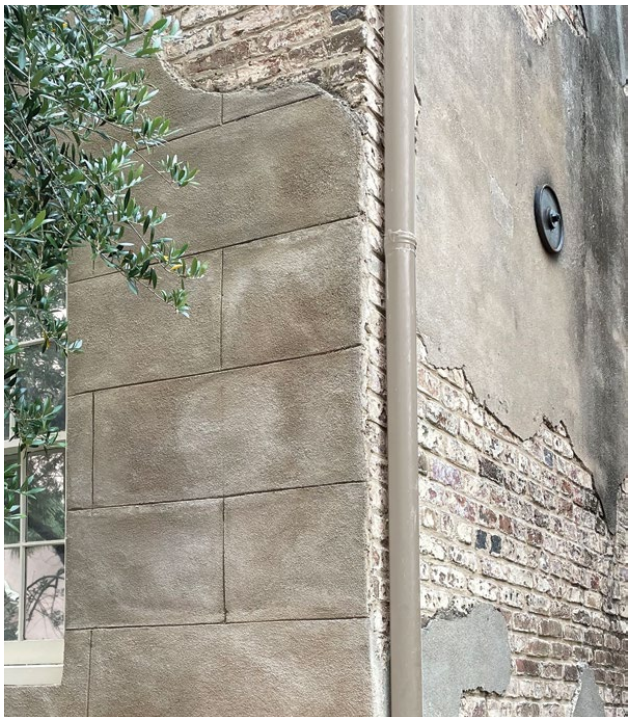


Figure 2c: Stucco has been used to imitate a number of building materials for many centuries. Seen here, stucco was applied to a brick structure and scored to represent a stone façade. Photo: John Sandor, NPS.

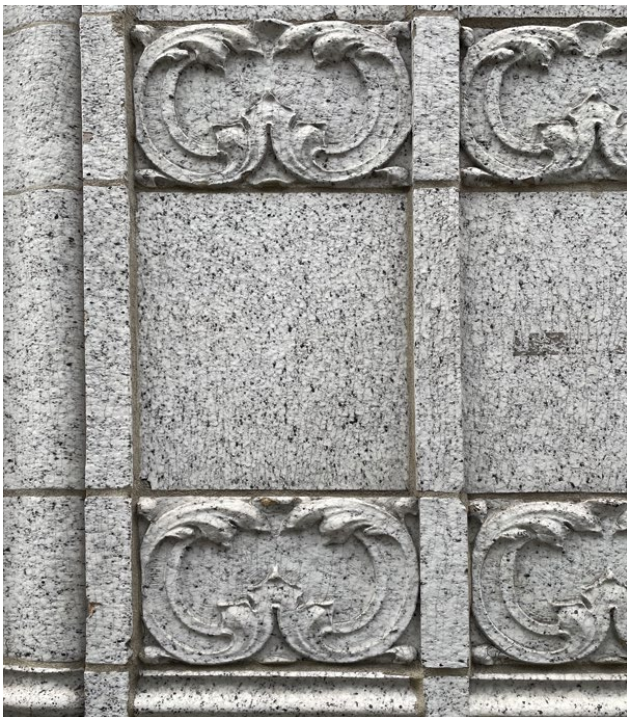


Figure 2d: Terra cotta gained popularity in the late 19th century as a cheap and lightweight alternative to stone. Glazing techniques allowed the blocks to imitate a variety of natural stone materials. Photo: John Sandor, NPS.

These examples of one material used to imitate another, more often in initial construction than for later repair and replacement purposes, are referred to as *imitative materials* in the *Guidelines for Preserving, Rehabilitating, Restoring & Reconstructing Historic Buildings*, updated in 2017, that accompany the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. These imitative materials, while evoking other materials, usually had distinctive qualities of their own and were not always a very close match in appearance to the historic material they were meant to imitate.

Many of the traditional materials discussed above are still available and used to replace damaged or missing original features, both to replace matching historic materials and sometimes as substitute materials. Because of their extensive use over time and their known physical and chemical properties, cast stone, cast iron, and terra cotta are well understood substitute materials. This continued usage and familiarity means their installation requirements and service life are well established, which in turn makes it easier to determine when and how to use these traditional materials as substitutes for a deteriorated material. However, innovation in replacement materials continues, and new products (many of them consisting of synthetic materials) are continually introduced. These non-traditional products are an increasing part of both the new construction and rehabilitation industries. Some materials, like glass fiber reinforced polymers, glass fiber reinforced concrete, or fiber cement, have been in use long enough for an accurate prediction of their service life and performance. Other newer, non-traditional materials may be too new to have established performance records, thus, understanding their material properties is critical, and their use should be approached with more caution.

When to Consider Using Substitute Materials in Preservation Projects

According to the *Standards for Rehabilitation*, deterioration should generally be addressed through repair if in repairable condition. Repair can entail a variety of treatments that retain the unit of building material and remove and patch or replace only the damaged portion. This approach can be done with traditional methods and materials such as a dutchman, where like-kind material is precisely inserted into wood or stone, or it may employ other materials such as epoxies for wood repair or cementitious compounds for masonry. As long as the repair methods are sound and do not damage or accelerate the deterioration of the historic material, repairs are generally preferable to replacement of an entire element. More complex manufactured products, typical of more recent historic materials (as well as a lot of modern building materials generally), may be more difficult to repair, if they can be repaired at all.

There are situations, however, when the level of deterioration makes localized repairs infeasible and entire features or units of historic material must be replaced. While achieving an effective match of all of the visual qualities of a material can be challenging, even when replacement is in kind, it can be even more challenging when the replacement is a substitute material. A good visual match is not the only consideration when a substitute material is to be used for incremental replacement within a larger assembly of historic material. When an individual siding board or a single block of ashlar is being replaced, it is usually best achieved with the original material. Introduction of a different material into an intact assembly requires that its inherent properties, such as expansion and contraction, moisture resistance, or permeability, be thoroughly considered relative to those of the surrounding historic materials to avoid causing damage.



Figure 3: Incremental repair is best done using in-kind material to minimize differences in the performance characteristics that could negatively affect the overall assembly. Photo: NPS.



Figure 4. While occasionally used to imitate other materials such as wood or slate shingle, many asbestos shingles and siding materials had their own distinct shape and profile. No longer manufactured today, alternative materials must be found to replace these materials when they are distinctive features on a historic structure. Drawing: Association for Preservation Technology, Building Technology Heritage Library.





Figure 5. (Left) Asbestos shingles were often used as a substitute for traditional slate roof shingles. The historic asbestos roof on this rehabilitation project had reached the end of its lifespan and required complete replacement. (Right) Given the limited replacement materials available to match the historic asbestos shingles, utilizing natural slate was determined to be the best visual match for the original shingles and design intent in this instance. Photos: Crosskey Architects.

Circumstances in which the use of substitute materials may generally be considered appropriate, taking into consideration technical and economic feasibility reasons, include: the unavailability of historic materials; the unavailability of skilled artisans or historic craft techniques; inadequate durability of the original materials; the replacement of a secondary feature; construction of a new addition; the reconstruction of a missing feature; code-required performance; and for enhanced resilience and sustainability:

- **Unavailability of historic material.** A common reason for using substitute materials is the difficulty in finding a good match using the historic material (particularly a problem for masonry materials where the color and texture are derived from the material itself). This may be due to the actual unavailability of the material or to protracted delivery dates, particularly if the material cannot be sourced domestically. It is not uncommon for a local quarry that is no longer in operation to have been the source of an original stone. If another quarry cannot supply a satisfactory match, a substitute material such as dry-tamp cast stone or textured precast concrete may be an appropriate alternative, if care is taken to ensure that the detail, color, and texture of the original stone are matched. Even when the color is successfully matched, the appearance of a cementitious product may diverge from that of the historic stone as the substitute material ages.

  Many manufactured materials that were used historically on buildings are no longer made. Terne-plated steel, which was the material most typically used for painted standing-seam or flat-seam roofing, is no longer made. However, because it was always painted, other metals including galvanized steel or copper can generally be substituted if painted. When the historic material needing to be replaced is a manufactured product developed as an imitation of a natural material, which was the case with asbestos shingles meant to imitate slate, the natural material may now be an appropriate substitute material to consider for the manufactured one that is no longer produced.

- **Unavailability of skilled artisans or historic craft techniques**. These two issues can complicate any preservation or rehabilitation project. This is particularly true for intricate ornamental work, such as carved wood, carved stone, wrought iron, or cast iron. While skilled craftsmen may not be as difficult to find as they once were, there can still be limitations geographically, even in finding less specialized skills, and particularly if a project is small. Technical advances have allowed some stone or wood carvers to take advantage of computerized equipment, but complex designs will likely still require hand work. It may also be possible to mimic a carved element using a material that can be cast in a mold, adding significant efficiency where an historic element survives from which a mold can be made. Options for casting include aluminum, cast stone, fiberglass, glass fiber reinforced concretes, and terra cotta, but not all carved elements can be duplicated by a casting, and mold-making and casting still require skilled craftsmen.

- **Inadequate durability of the original material.** Some historic building materials were of inherently poor quality or were not durable. In other cases, one material was naturally incompatible with other materials on the building, causing staining or galvanic corrosion. Examples of poor-quality materials are very soft sandstones, which eroded quickly, and brownstone, which is vulnerable to delamination. In some cases, more durable natural stones may be visually similar enough to stand in for these soft stones but cast stone or another material may be needed to achieve an appropriate match.

The ready availability of manufactured ornamental wood features fed a nineteenth-century taste for decorative architectural details that were often used on the exterior of buildings with little concern for how they would be affected by moisture or maintained. Even old-growth wood from decay-resistant species often could not prevent features with severe exposure from eventually needing to be replaced. Today's available commercial supplies of lumber no longer provide the denser, more decay-resistant wood of old-growth forests, so even careful matching to species, which is not always possible, will not yield a replacement equal in performance to the historic material. Old-growth wood is likely to be very expensive, if it can be found, and may not be available from a sustainable, environmentally responsible source. When features with severe exposure need to be replaced or reproduced, substitute materials that are less susceptible to decay can have a longer life, and when the feature is painted, as exterior wood features generally are, the visual effect of a substitute material can be minimal.

- **Replacement of a secondary feature.** When it is necessary to replace a less distinctive, secondary feature that is less important in defining the historic character of the property, there is more flexibility in how it can be replaced. While it may be less important to find an exact match in materials when replacing such a feature, the retention of the overall historic character should still guide selection of an appropriate replacement material. For example, replacing secondary features such as those with limited visibility (e.g., siding materials on a rear elevation) may permit replacement materials that are similar in appearance or character without having to be a perfect match.



Figure 6. The dramatic difference in the number of growth rings between old-growth wood and wood that was recently harvested from second- or third-growth forests is indicative of the diminished dimensional stability and durability of most lumber currently available. Photo: Zachary Dettmore.

- **Construction of a new addition.** The *Standards* require that new additions to historic buildings and related new construction be differentiated from the old as well as be compatible with the historic character of the property and its site and environment. Using materials that evoke, without matching, the historic material can be an effective means of achieving the needed balance between compatibility and



Figure 7. A new addition replaced non-historic construction on the rear elevation of this building. Fiber cement gives the addition a compatible appearance without replicating the exposure for thickness of the historic siding. Photo: Ward Architecture + Preservation.

differentiation for new additions and new construction. Even if differentiation is achieved through design rather than materials, there generally is no basis for requiring the use of matching historic materials for new additions and new construction as part of a rehabilitation project.

- **Reconstruction of a missing feature.** Many buildings lose significant features over the course of their lives for reasons such as those previously discussed. When a missing feature is to be reconstructed, the importance of matching the original material may be less important to the effect replacing the missing feature may have on the overall historic character and appearance of the building. Though replacement of missing features must be substantiated by documentary, physical, or pictorial evidence, in many cases the authenticity of the material may be secondary to the overall visual qualities. The use of a more cost-effective substitute material for the construction of a missing feature can often be an important factor in the feasibility of undertaking such work.

- **Code-required performance.** Modern building codes are regularly amended to require higher performance levels for new and existing buildings in such areas as life safety, seismic retrofits, and accessibility. Rehabilitation projects often trigger compliance with code requirements that were not in place when a building was constructed. Although building codes may often allow for the retention of historic materials and assemblies, substitute materials can offer an alternative in situations when the historic materials are non-compliant and cannot otherwise be reasonably retained. In these instances, a change in material may be appropriate to meet code requirements, while in other instances selecting the optimal code compliance method for the project may achieve code-compliant solutions that also allow for the preservation of a building's historic materials and finishes.

  For example, fire codes may require increased resistance to flame spread for buildings within dense urban environments where building proximity and separation between buildings is a concern. Some substitute materials are non-combustible, have good ratings for flame spread, and can provide an alternative to help meet

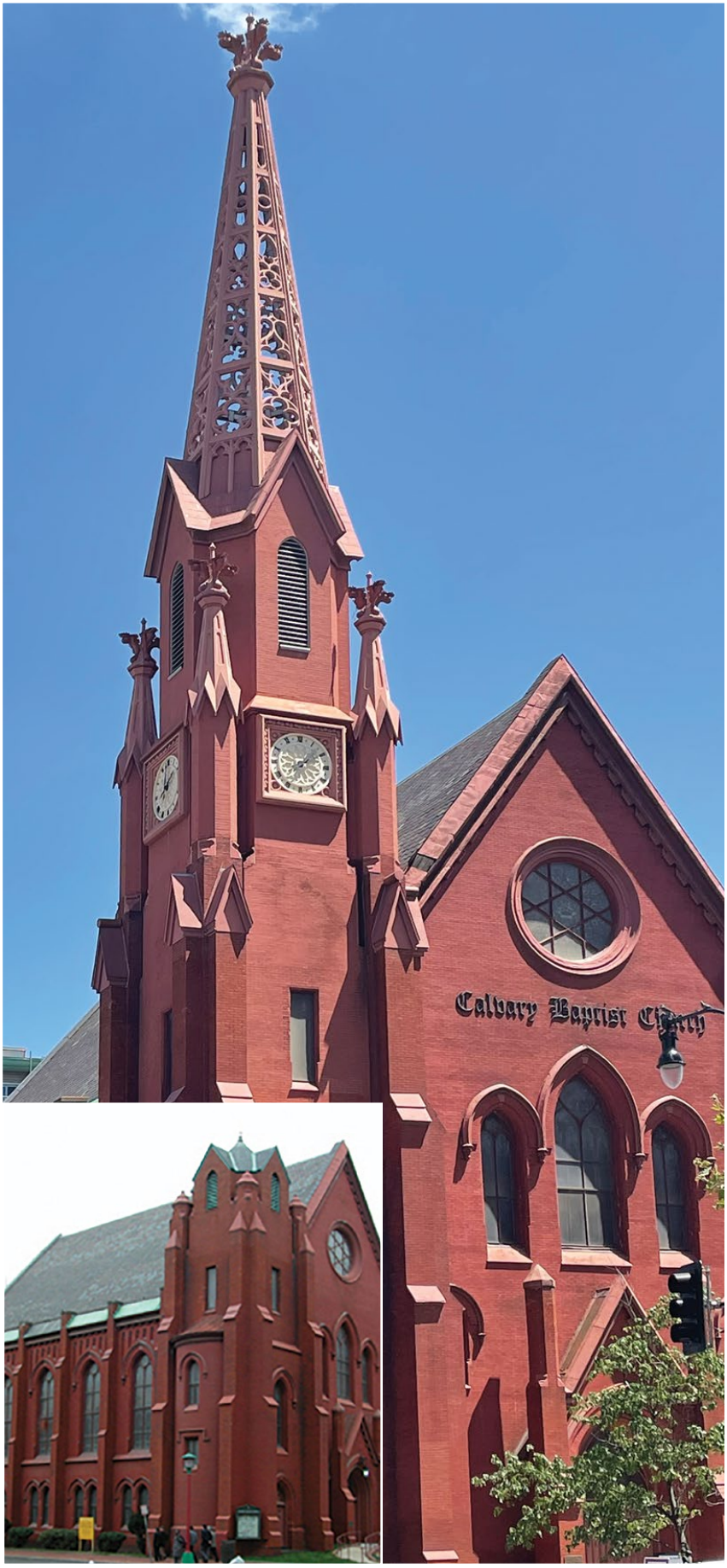


Figure 8. A long-missing cast-iron steeple was reconstructed in aluminum and fiber-reinforced polymer (FRP). Photo: John Sandor, NPS, Inset: Quinn Evans.

fire code requirements. Depending on the building component and the material, however, a substitute material may not resist fire any better than the historic material. In addressing code issues, all feasible alternatives should be considered to minimize the impact on the historic character of the building while still meeting code requirements.

With specific provisions in building code related to issues such as seismic hazards, the choice of materials for features inherently unstable in a seismic event can be a key part of a code-compliant retrofit solution. Elements at risk of falling such as parapets, finials, and overhanging cornices may be made safe by anchoring them to new structural frames. However, for some heavy masonry features, especially where there is deterioration or the feature is difficult to effectively brace, adequately anchoring the existing feature may not prove feasible. In such cases removing and replacing these features with lighter-weight replicas that incorporate a resilient structural framework can help preserve the historic character of the building while improving life safety performance.

- **Enhanced resilience and sustainability.** Wildfires, earthquakes, floods, hurricanes, and other extreme weather events put historic buildings and their occupants at risk and may require adaptive treatments that are more invasive than might be accepted in other circumstances, including related to the use of substitute materials. In these contexts, it is still necessary to try to minimize impacts on a building's historic character as much as possible while still adapting it to be more resilient. Widespread wildfires, for example, have increased demand for fire resistant materials for the exterior building envelope. Flood events may necessitate the replacement of historic materials that have been damaged or inundated with hazardous substances in contaminated floodwaters. When undertaking repairs in such circumstances, substitute materials may offer greater resilience to anticipated future exposure to natural hazard risks.

  Similarly, efforts to improve energy efficiency and performance may include the use of substitute materials as replacement components when modifications to building assemblies are required and the historic materials cannot be preserved. When evaluating substitute materials in the context of sustainability objectives, factors such as the environmental impact of production, the full life cycle of products, and the embodied carbon of the materials already in place should be carefully analyzed. There may be more sustainable choices for a replacement material, including the use of more traditional materials in place of manufactured products that may consist of non-renewable resources or hazardous materials. While some synthetic substitute materials are made from recycled materials or are otherwise sustainably produced, many are not repairable, salvageable, or recyclable themselves, and they may have shorter lifespans to their historic material counterparts. When either greater resilience or sustainability is a factor, all feasible alternatives should be considered in finding a balanced approach that maintains historic character while meeting resilience and sustainability goals.

Substitute Materials and Economic Feasibility

Economic feasibility is inevitably a concern when choosing a material for any part of a project, whether a historic or substitute material, but it should not be the sole determinant factor at the expense of maintaining the historic character and historic integrity of a building. Other factors may prompt the consideration of a substitute material, such as the cost of maintaining the historic material, because it is comparatively difficult or costly to reach or access, or the frequency of required maintenance the historic material needs. Additionally, where in-kind replacement material is found to be prohibitively expensive, it may be reasonable to consider a substitute that offers an alternative and is a good physical and visual match. Not all substitute materials are, however, cost-effective replacements. Long-term durability and maintainability are other factors that should be considered in conjunction with initial cost.



Figure 9. Previously bricked-in openings below the flood line were reopened and new aluminum windows installed with cellular PVC trim detailed to hold back moderate flood waters and survive exposure to water. Photo: John Sandor, NPS.

Maintenance of a material, particularly where accessibility is difficult or expensive, can be an important part of a

cost evaluation. Maintenance costs should not be considered without also considering life-cycle expenses. While some substitute materials may offer reduced initial costs, they may be as or more costly than traditional materials to maintain over time. For example, many substitute materials are not readily repairable, necessitating full replacement when damaged. The cost to replace a material or assembly at the end of its lifespan may also be greater than the accumulated incremental expense to maintain the historic material, particularly if it is a more traditional, repairable material. Maintenance cost should never be the sole reason for replacing a historic material that is not deteriorated.

Criteria for the Appropriate Use of Substitute Materials

Substitute materials must meet three basic criteria to be considered: they must be compatible with the historic materials in appearance; their physical properties must be similar to those of the historic materials, or the materials must be installed in a manner that tolerates differences; and they must meet certain basic performance expectations over an extended period of time.

- **Matching the Appearance of the Historic Material**
  Any material's appearance varies depending on the nature of the material and how it is used. Some historic materials, such as wood and ferrous metals, were typically painted, making the color of the substitute unimportant, though the texture of the surface, which telegraphs through a paint layer, is still an important consideration. Texture can be a large part of distinguishing a material formed by hand from one that is machine-made. Many historic materials, such as most building stones, are used without any coating, making the color, pattern, and reflectivity, as well as surface texture, dependent on the material itself. Matching the color and surface characteristics of a historic natural material with a man-made substitute can often be quite difficult.

  When the color and surface characteristics of an existing material are important, cleaning the material should be the starting point for evaluating a potential matching material. In situations where there are subtle variations in color and texture within the original material, the substitute material should be similarly varied so that it is not conspicuous by its uniformity. If a material is custom fabricated, a sufficient number of samples should be supplied to permit on-site comparison of color, texture, detailing, and other critical visual qualities. For a manufactured product with preset choices of color or texture, it may be necessary to look at samples from more than one manufacturer to find the best match. Similarly, prefabricated products, such as roofing slate, may offer limited, if any, choice of unit size, which can be a critical factor for achieving a good match. A substitute material should not be used to replace distinctive, character-defining materials and features if an adequate match in design and appearance is not possible.

  As all exposed materials are subject to ultraviolet degradation, samples of a new material, particularly when custom formulated, should be prepared during the early planning phases to allow for evaluation of the effects of weathering on color stability. When that is not possible, or if a prefabricated product is used, the fabricator or manufacturer may be able to identify regional locations where equivalent products have been installed long enough ago to get a better sense of how the material weathers and performs.

  While a perfect match is the desired goal for replacing distinctive features, it is not always possible, even when the same matching material is chosen for the replacement. When any compromise





Figure 10. Polymer slates offer a choice of shapes but not sizes, limiting their ability to achieve a good visual match for some historic slate. With the size of the polymer slates (right) being nearly twice that of the historic slates (left), the scale of the entire feature is incompatibly altered. The molded edges of this material, which contribute to its ability to replicate slate, would be lost if each shingle was resized by cutting. Photo: John Sandor, NPS.



Figure 11. The thickness of the wood siding on the front (left) creates a deeper shadow line than is achieved with the fiber cement siding used on the side (right) elevation. While the exposure can be adjusted, fiber cement siding is not available in a matching thickness. Photo: John Sandor, NPS.

must be made in the precision of the match, it is wise to consider the vantage point from which the material will be seen. Sometimes what seems important at close range, such as variations in the texture of a surface, may be secondary to other aspects of the material when viewed from some distance. The closer a feature is to the viewer, the more closely the material and craftsmanship should match the original. An on-site mock-up using a sample of the proposed material can help evaluate whether it is an adequate visual match.

- **Matching the Physical Properties of the Historic Material**
  Carefully chosen substitute materials can often closely match the appearance of historic materials, but their physical properties may differ greatly. These differences are most critical when incrementally replacing components of a larger assembly that retains significant historic material. The chemical composition of the material (e.g., the presence of acids, alkalis, salts, or metals) should be evaluated to ensure that the replacement materials will be compatible with the adjacent historic materials. Materials that will cause galvanic corrosion or other chemical reactions must be isolated from one another.

  The thermal- and moisture-driven expansion and contraction coefficients of each adjacent material must be within narrow limits or be accommodated



Figure 12. Cellulose composite materials, like wood, expand and contract with moisture. Here it was used to reconstruct a missing storefront. Unlike solid wood that is dimensionally stable parallel to the grain, this composite moves equally in all dimensions, resulting in gaps that were not adequately anticipated in the design. Photo: John Sandor, NPS.

by carefully designed joints and fasteners. Joints can play a role both in accommodating movement of materials as well as in managing moisture, either to keep it from entering the enclosure assembly or to let it escape from the building envelope, or both. Because some synthetic materials are less permeable to moisture than more traditional materials, installations must take into account the potential to trap moisture and cause deterioration of historic and new materials. An assembly incorporating new and historic materials should be designed so that if material failures occur, the failures occur within the new material rather than the historic one.

During installation, surface preparation is critical to ensure proper attachment. Deteriorated underlying material must be removed or stabilized. Non-corrosive anchoring devices or fasteners that are designed to carry the new material and to withstand wind, rain, snow, and other destructive elements should be used. Since physical failures often result from poor anchorage or improper installation techniques, a structural engineer should be included in planning any major project. For readily available, off-the-shelf materials, manufacturers' recommendations for attachment and spacing should be followed.

Nearly all substitute materials have some properties that are different from the historic materials they may replace. Even when substitute materials are isolated from historic materials and features, it is important to understand the substitute materials' properties in order to use them successfully.

- **Performance of the Material Over Time**
  When more traditional materials are used to replace damaged historic materials and features, their performance is predictable in most cases. An exception may be modern wood that has durability and other prop-

erties different than those of historic wood from old-growth forests. Many of the materials used as substitutes have been in use long enough to provide some idea of how they perform over time. Other material may only have test results from accelerated weathering. The length of manufacturer warranties may be an indicator of expected durability and lifespan. Warranties only predict a manufacturer's expectation of a product's performance and are no guarantee that the manufacturers will still be in business at the time needed to stand behind them. Just as new manufacturers emerge with new materials, others disappear. Where possible, projects involving substitute materials in similar installations and exposures should be examined before selecting a new, less-tested material. It is unrealistic to expect a substitute material, which can be quite different in composition than the historic material, not to age differently.

Even traditional materials will not perform well if not used or detailed appropriately, and experienced architects, engineers, fabricators, and installers rely on their professional knowledge and experience to ensure proper installation and techniques when working with familiar materials. This is just one of many reasons that using the original materials for needed replacement is usually the best choice. Some of the materials now available as substitutes have properties that differ greatly from the traditional materials they may be used to replace. It is critical to the successful performance of substitute materials that everyone involved in the selection, design, and installation fully understands the material's properties, especially how it is different than the material it is replacing, and how that will affect the surrounding materials and building systems.

Many traditional building materials can be repaired either with traditional methods and materials or with more modern conservation techniques using substances like epoxies. However, many modern substitute materials (particularly synthetic ones) are not as easily repaired, if repairable at all, as their more traditional counterparts. Confirming that a material is repairable may be important for those used, e.g., where impact or significant wear or abrasion is likely.

Finally, it is critical that the substitute materials be documented as part of the historical record of the building so that proper care and maintenance of all of the building materials continue, ensuring the continued life of the historic building.

Choosing an Appropriate Substitute Material

Once all reasonable options for repair and replacement in kind have been considered and sufficient justification for substitute materials has been established, the choice among the variety of substitute materials currently available must be made. Rapidly developing technologies allow a wide variety of materials to choose from that are intended to mimic historic materials. Many of the materials that were historically used as substitutes for more traditional historic materials have themselves become historic, and some of these early substitutes continue to be reasonable options as substitute materials today. No substitute material will exactly match the historic material in all aspects, but many are able to adequately match the appearance and relevant physical attributes to make for a potential substitute. If a substitute material is not

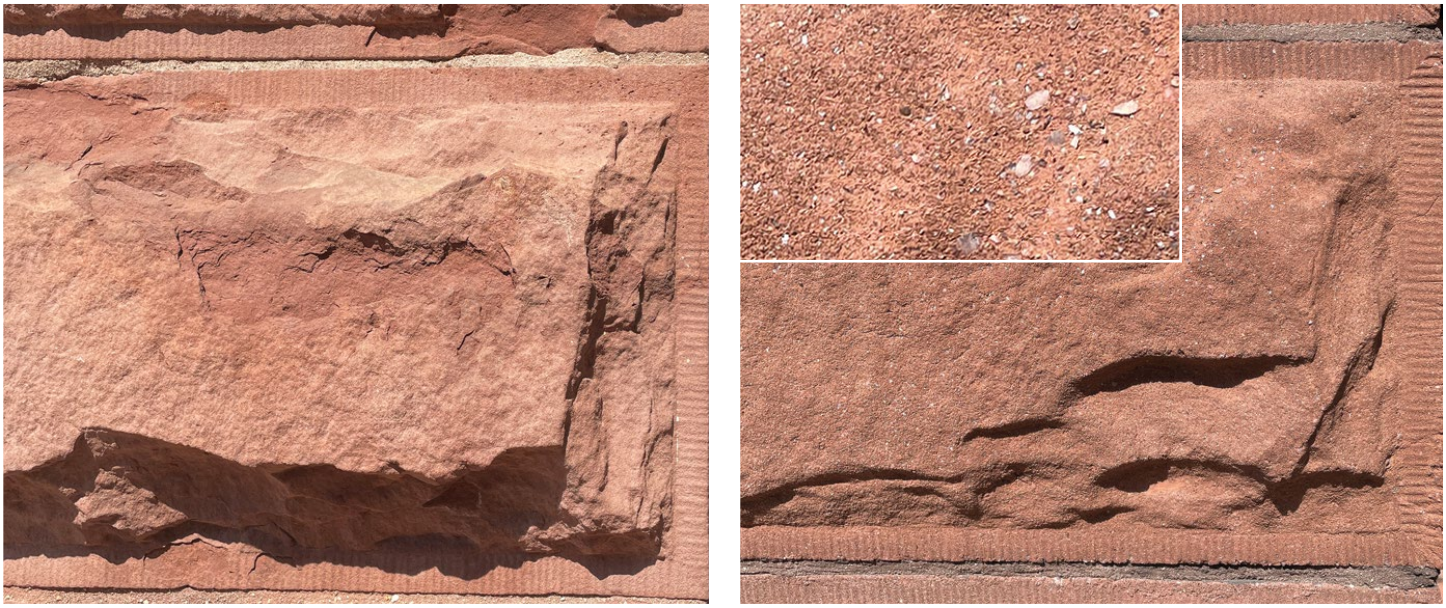


Figure 13. Cast stone was used to effectively replace individual blocks of sandstone. Both the original (left) and the substitute material (right) retain similar physical and visible properties. Having weathered for over 30 years, some erosion of the binder has revealed quartz grains of the aggregate (inset), but it is only noticeable upon close inspection. Photo: John Sandor, NPS.

an adequate physical and visual match given the specific conditions of the building and the project, then it should not be used to replace distinctive, character-defining materials and features.

Listed below are various building components or features and the substitute materials which may, in some circumstances, be considered for use as possible replacement materials in a historic rehabilitation project consistent with the *Standards for Rehabilitation*. This list includes different substitute material options available today for these building features and poses questions that should be asked and considered when choosing between the original material and various types of substitute materials. This is followed by a list of some of the more commonly used, currently available materials that may have some applications as substitute materials and the properties of each that affect their suitability for use as substitutes. This list should not be read as an endorsement of any of these materials, generally, or their appropriateness for use as a substitute material, but it serves as a reminder that the successful use of any building material requires a careful consideration of its properties relative to where and how it will be used.

Considering Substitute Materials

Considering the use of a substitute material should begin with the following questions about the conditions and location where it will be used:

- Will the significance or visibility of the historic feature require a very precise match?
- Is the entire feature being replaced or just a component of it?
- Are pre-existing conditions contributing to the failure of the existing material, and, if so, how will they be addressed/corrected?
- Is the need for replacement due to inherent deficiencies of the original material?
- Will the material need to resist any environmental hazards such as flooding or fire?

Historic Features and Substitute Materials

Historic Building Features

Potential Substitute Materials

	Masonry Stone, terra cotta	**Architectural Metals** Cast & wrought iron, steel, pressed metal	**Siding** Wood, asbestos	**Roofing** Wood shingle, slate, tile	**Decking** Tongue-and-groove & square-edge wood	**Molding / Trim** Wood
Aluminum	●	●	●			●
Cast Stone & Precast Concrete	●			●		
Fiber Reinforced Concretes	●					
Glass Fiber Reinforced Polymers	●	●				
Fiber Cement			●	●		●
Mineral / Polymer Composite			●	●	●	●
Cellulose Fiber / Polymer Composite			●	●	●	●
Non-composite Polymers		●			●	●
Cellular PVC			●		●	●

The above chart lists materials that are sometimes used as substitutes for replacement of historic building features. Even within a given category, all materials may not be equally suitable as a substitute replacement material for the actual historic material or feature. Any substitute material should be selected based on its specific physical and visual characteristics, conditions, and intended application consistent with the Secretary of the Interior's Standards for Rehabilitation.

Historic Building Features: Criteria for selecting an appropriate replacement material

Masonry

FEATURES: corbels, brackets, balusters, cornices, window and door surrounds, friezes, wall surfaces, horizontal surfaces, incidental ornament, columns

HISTORIC MATERIALS: terra cotta, cast stone, stone, concrete

POTENTIAL SUBSTITUTES: cast stone, pre-cast concrete, GFRC, GFRP, non-composite polymers (polyurethane), cast or stamped metal

Questions to ask about the replacement material:

- Can it serve a structural function?
- How is the material affected by moisture?
- Can the material survive flooding and be reused?
- Can it reproduce the surface texture of the original?
- Is its shrinkage in curing low enough to allow it to be molded from existing stones?
- Can matching color be achieved without a coating and with UV stability?
- Can an adequate match of the surface (color and texture) be achieved with a coating?
- Is a coating required?
- If it is not self-supporting, is it lightweight enough to be supported by an underlying framework?
- Can multiple original units be replicated with a single replacement piece?
- Where thermal movement is different from the original material, how will joints accommodate?
- Is the material combustible?

Architectural Metals

FEATURES: pilasters, door and window surrounds, cornices, incidental ornament, columns, spandrels, ceilings, sheathing, roofing

HISTORIC MATERIALS: cast and wrought iron, steel, bronze, lead, aluminum, and stamped steel (usually galvanized or terne-coated)

POTENTIAL SUBSTITUTES: GFRP, aluminum, non-composite polymer (polyurethane), GFRC, metallic/polymer composite

Questions to ask about the replacement material:

- Will the replacement material serve a structural or cosmetic role?
- Will it expand and contract with temperature change enough to require special accommodation in its installation?
- If part of an assembly of mixed materials, how will any expansion and contraction of the dissimilar materials be accommodated?
- Will the replacement material increase deterioration of the historic or surrounding elements, for instance due to galvanic corrosion, moisture entrapment, jacking of original material, off-gassing creating a corrosive environment, or poor original design of the historic material?
- How will the replacement material mimic the surface color/patination of the original material?
- If a coating is needed, what preparation is needed, and what is its durability or service life of the finish?
- What attachment and support systems are necessary?
- If the original element is structural, but the new material is not, how can supplemental structure be introduced to support the new?





Figure 14. Surface texture is an important aspect in matching the appearance of a historic material, especially when a material is viewed at close range. As seen in these two images, many of the substitute materials produced for siding and trim have an embossed wood grain, making them incompatible for replacing historic wood that was typically planed to a smooth surface. Some substitute products are available with a smooth surface as well. Photos: John Sandor, NPS.

Siding

FEATURES: clapboard, tongue-and-groove or shiplap siding, board and batten, shingles

HISTORIC MATERIALS: wood and asbestos

POTENTIAL SUBSTITUTES: cellular PVC, wood fiber/polymer composite, fiber cement, mineral/polymer composite

Questions to ask about the replacement material:

- What are the widths, lengths, profiles, thicknesses, and textures available?
- What, if any, are the finishing requirements, and/or is it available factory-finished?
- How well does it hold paint, and can prefinished surfaces be renewed?
- What tools are needed to cut it, and can it be machined?
- Does it absorb moisture and, if so, to what effect?
- Can the material survive flooding and be reused?
- Will it expand and contract with temperature change enough to require special accommodation in its installation?
- What characteristics can affect its handling (e.g., weight, flexibility, brittleness)?
- Does it have specific fastening requirements?
- Is it susceptible to insect damage?
- What is its impact resistance?
- Does it have a flame spread rating?
- What is the expected lifespan and/or warranty?

Roofing

HISTORIC MATERIALS: wood shingle, slate shingle, asbestos shingle, clay tile, concrete tile, metal

POTENTIAL SUBSTITUTES: fiber cement, mineral/polymer composite, wood fiber/polymer composite, pre-cast concrete, metal

Questions to ask about the replacement material:

- What sizes and shapes are available?
- What are color choices?
- What is the color stability of the new material, and how will it age/weather?
- What is the impact resistance?
- What is its flame spread rating?
- What are the installation requirements of the new material?
- Can the feature being replaced be custom-produced if ready-made ones of the new material are not an accurate match?
- What is the expected lifespan and/or warranty?

Decking

FEATURES: tongue-and-groove, square-edge flooring

HISTORIC MATERIALS: wood

POTENTIAL SUBSTITUTES: cellular PVC, wood fiber/polymer composite, mineral/polymer composite, non-composite polymers (solid PVC)

Questions to ask about the replacement material:

- What are the widths, lengths, and textures available?
- Is it site painted or prefinished?
- How well does it hold paint, and can prefinished surfaces we renewed?
- What tools are needed to cut it, and can it be machined?
- What dimensional span does its strength allow?
- Does it absorb water, and if so, to what effect?
- Can the material survive flooding and be reused?
- Does it require a drainage plane, or can it be installed atop a membrane?
- Will it expand and contract with temperature change enough to require special accommodation in its installation?
- Is it susceptible to insect damage?
- Is it impact resistant?
- Does it have a flame spread rating?
- What is the expected lifespan and/or warranty?

Molding / Trim

FEATURES: run moldings, flat boards, casings, cornice, frieze, railings, balustrade, columns

HISTORIC MATERIALS: wood, metal

POTENTIAL SUBSTITUTES: cellular PVC, wood fiber/polymer composite, mineral/polymer composite, non-composite polymer (polyurethane), GFRP, sheet metal

Questions to ask about the replacement material:

- What are the widths, lengths, and textures available?
- What, if any, are the finishing requirements and/or is it available factory-finished?
- How well does it hold paint, and can prefinished surfaces be renewed?
- What tools are needed to cut it, and can it be machined?
- Does it absorb moisture, and if so, to what effect?
- Can the material survive flooding and be reused?
- Will it expand and contract with temperature change enough to require special accommodation in its installation?
- What characteristics can affect its handling (e.g., weight, flexibility, brittleness)?
- Does it have specific fastening requirements?
- Is it susceptible to insect damage?
- What is its impact resistance?
- Does it have a flame spread rating?
- What is the expected lifespan and/or warranty?



Figure 15. Tongue-and-groove porch flooring is manufactured in several different substitute materials. Each type has different properties, though most are more moisture-resistant than wood. The prefinished product shown can be painted when worn, but repainting is not recommended for some product choices. Photo: Oak Alley Foundation.

Potential Substitute Materials: Matching properties and performance needs

Physical Composition and Properties

After assessing different material options based on the intended application, the appropriateness of a substitute material should also be considered in context of the material's physical composition, associated properties, and necessary visual match.

Aluminum

MATERIAL: Aluminum is a highly corrosion-resistant alloy that can be cast, wrought, or extruded. Molten aluminum is cast into permanent (metal) molds or one-time sand molds forming cast aluminum. Extruded aluminum is formed by passing heated aluminum through a die which produces the desired form. Wrought aluminum is worked using the heated metal and then bending, stamping, and otherwise shaping the metal. If not self-supporting, aluminum elements are generally screwed or bolted to a structural frame. Aluminum can be welded, but more often sections, particularly extruded ones, are mechanically connected.

PROPERTIES:

- Isotropic
- Lightweight
- Thermal movement greater than cast iron or wood
- Corrosion-resistant, but direct contact with other metals may trigger galvanic corrosion
- Lower structural strength that iron or steel
- Ductile - less brittle than cast iron
- Non-combustible
- Retains high definition through molding process and produces crisp profiles through extrusion
- Can be given a durable metallic finish through anodization. Surface etching required for paint adhesion
- Can be machined into a large variety of shapes/ dimensions



Figure 16. Aluminum is a highly corrosion-resistant metal that is commonly used as a substitute material for cast iron. Aluminum can be a more affordable and lightweight alternative to cast iron that retains a similar texture, shape, and maintenance cycle. Photo: NPS.



Figure 17. The balustrade consists of multiple prior campaigns of using cast stone to replace the natural stone. The effective match for the surface texture and color of the original stone allowed individual elements to be incrementally replaced only when they had failed, thus retaining the maximum amount of original material as long as possible. Photo: EverGreene Architectural Arts.

Cast Stone & Precast Concrete

MATERIAL: A cement lime and aggregate mixture that is dry-tamped into a mold is generally referred to as cast stone. Cast stone is one of the original substitute materials. Its longevity has proved that the material ages compatibly with stone. A wet mix of cement and aggregate poured into molds also has a long history of being used to produce concrete masonry units mimicking stone and roofing tiles mimicking clay tile. Both methods have minimal shrinkage during curing, though they employ different curing and finishing techniques. Both can include reinforcing bars and anchorage devices installed during fabrication. The dry-tamp fabrication method is especially effective at producing an outer surface with the appearance of stone.

PROPERTIES:

- Isotropic
- Weight equivalent to stone
- Expansion/contraction similar to stone
- Water absorption may differ from that of any particular stone
- Can be structural
- Non-combustible
- Vapor-permeable
- May achieve a wide range of color and surface textures by varying mix, but use of pigments may reduce UV stability
- Can be coated
- May be tooled to match the appearance of tooled stone
- Repairs similarly to stone



Figure 18. Missing historic terra cotta spandrel panels on all floor levels were recreated utilizing glass fiber reinforced concrete (GFRC) replacements. New spandrels were fabricated as individual components and attached with metal clips between historic terra cotta piers. Photo: Kris Frail, Dewberry.

Fiber Reinforced Concretes (GFRC, CFRC)

MATERIAL: Fiber reinforced concretes are lightweight concrete compounds modified with additives and reinforced with alkaline resistant glass fibers (GFRC), or less frequently carbon fibers (CFRC). They are generally fabricated as thin-shelled panels and applied to a separate structural frame or anchorage system. GFRC is typically sprayed into forms, although it can be poured, and anchoring devices are included in the fabrication. The color is derived from the natural aggregates and, if necessary, a small percentage of added pigments. Because of its low shrinkage in curing, it can be produced using molds taken directly from the building.

PROPERTIES:

- Isotropic
- Lighter weight than solid masonry
- Expansion/contraction similar to stone
- No load bearing capacity, so underlying framework must be used to accommodate any loads
- Material can be fire-rated
- Vapor-permeable
- Can be produced in larger sections efficiently reproducing repetitive elements or features that were originally made up of small individual units
- Large range of colors achievable by varying aggregates, but when pigments are needed UV stability may be reduced
- May be left uncoated or may be painted



Figure 19. A new, lightweight fiber reinforced polymer is attached to a new metal armature to replicate damaged and missing elements of a terra cotta cornice. Photo: Quinn Evans.

Glass Fiber Reinforced Polymers (FRP, Fiberglass)

MATERIAL: Fiberglass is the most well-known of the FRP products generally produced as a thin, rigid, laminate shell formed by pouring a polyester or epoxy resin gelcoat into a mold. When tack-free, layers of chopped glass or glass fabric are added along with additional resins. The surface gel coat can be pigmented or painted. Reinforcing rods and attachment devices can be added when necessary. Because of is low shrinkage in curing, it can be produced using molds taken directly from the building. Rather than being produced as standard components, FRP is custom fabricated for individual applications.

PROPERTIES

- Isotropic
- Lighter weight than masonry, similar to sheet metal
- More thermally driven expansion than masonry or metals
- No load bearing capacity, so underlying framework must be used to accommodate any loads
- High strength to weight ratio
- Flammable
- Not vapor-permeable
- Can be produced in larger sections efficiently reproducing repetitive elements or features that were originally made up of small individual units
- May be difficult to match false joints in multi-unit assemblies to actual joints that need to accommodate movement
- Color can be incorporated into the surface gel-coat, or the surface may be coated



Figure 20. Cement board was used to replace a non-historic infill and mimics the configuration of a typical vehicular door of the period. Photos: Historic Augusta.

Fiber Cement

MATERIAL: Fiber cement products are made from fiber, sand that is ground to a powder, cement, and proprietary additives to reduce moisture absorption. The fiber used in roof products is glass fiber alone, whereas siding and trim board products are primarily wood fiber. The material is formed with a smooth or textured surface, cut to standard sizes of panels, boards, or shingles, and cured in an autoclave. Roofing material has integral color, but board and siding products are produced with a primer, if not fully factory finished. Most siding and trim boards are embossed with a wood grain on one surface and are smooth on the other, the smooth side being the appropriate surface to imitate planed wood.

PROPERTIES:

- Products are minimally orthotropic
- Heavier and more brittle than wood, limiting available lengths
- Very little thermal- and no moisture-driven movement
- Low water absorption, but not recommended for ground or roof contact
- Class A flame spread
- Resists insect damage
- Available in limited thicknesses and widths
- Not machinable, but may be cut with special carbide blades; cutting requires dust collection and personal protective equipment
- Cut edges require sealing
- Available unfinished, primed, or prefinished, and must be painted (with latex paint)
- 15-year limited warranty typical



Figure 21. A mineral polymer composite siding was available in the profile very similar to the historic siding. The replacement siding was used where the original material was almost completely missing beneath a more modern covering. Areas where the original wood was largely intact were replaced with matching wood to sustain more of the material integrity of the building. Photo: Belk Architecture.

Mineral / Polymer Composite

MATERIAL: Calcium carbonate or fly ash are mineral ingredients held in a matrix of various polymers to produce materials formed or molded into a number of building products. Additives found in some of the roofing products include pigments and UV stabilizers. Some use a substantial portion of recycled material. Different combinations yield products with different properties, each formulated for a specific building component. When the material is fly ash with some glass fibers bound in a matrix of polyurethane, it is identified as polyash. Siding, trim, bead board, and deck products are primed or prefinished, whereas roof products have integral color.

PROPERTIES:

Fly ash (siding and trim)

- Isotropic
- Heavier and more brittle than wood, and lacking structural capacity
- Little thermal or moisture-driven movement
- Sufficiently low water absorption to permit ground contact
- Class C flame spread
- Resists insect damage
- Available in limited thicknesses and widths
- Machinable with carbide tools blades; requires dust collection
- Cut edges do not require sealing
- Must be painted
- 30-year limited warranty typical

Calcium carbonate or recycled rubber (roofing)

- Isotropic
- More thermally-driven movement than slate or wood
- Little to no moisture absorption
- As shingles: lighter and more flexible than slate
- As tongue-and-groove decking: heavier and harder than wood
- Not vulnerable to insect damage
- Available in limited dimensions
- As shingles: Class 4 impact resistance, and flame spread ratings ranging from Class A to Class C depending on the specific product
- As shingles: integral color, that may be subject to fading
- As tongue-and-groove decking: prefinished with non-renewable finish, and can be cut with woodworking tools
- 50-year limited warranties on roofing products typical

Cellulose Fiber / Polymer Composite

MATERIAL: Wood strands or fibers are coated with resin for moisture resistance and zinc-borate for insect and fungal-decay resistance, then consolidated under heated pressure. Solid composite core boards are cut from sheets of material, then factory-primed or finished. Resulting siding and trim board products can be referred to as engineered wood, fiber board, or hardboard. Products may be embossed with a wood grain or have a smooth finish, the smooth side being the appropriate surface to imitate planed wood. Siding, trim, and tongue-and-grove decking with a slightly different properties are produced by extruding polyvinyl chloride (PVC) combined with non-wood cellulose. Roofing shingles are molded from fine wood fibers, color additives, and UV stabilizers bound with polypropylene or polyethylene (thermoplastics).



Figure 22. A porch was reconstructed using posts fabricated on site from a smooth-surface cellulose/polymer composite material. Though the face of the posts are painted, the lack of paint on the bottom at the cut ends is not consistent with manufacturers' recommendations. This treatment will allow moisture to be absorbed, shortening the life of the new replacement feature. Photo: John Sandor, NPS.

PROPERTIES:

Predominantly Cellulose (siding, trim and decking)

- Minimal thermal movement
- Resistant to moisture-driven movement
- Lighter and more flexible than solid wood, but lacks structural capacity
- Rice hull cellulose: can span typical floor-framing spacing as decking
- Low water absorption (for wood, no ground or roof contact)
- Class A or Class C flame spread
- Resists insect damage
- Available in limited dimensions
- Machinable with woodworking tools
- Wood cellulose: Cut edges must be sealed and may need additional surface prep for finish; must be painted if unfinished or primed, also available prefinished
- Rice hull cellulose: Accepts stain/paint, but no finish required
- 30–50 year limited warranty, depending on manufacturer

Predominantly Polymer (roofing)

- Minimal thermal movement
- Little to no moisture absorption
- Lighter and more flexible than slate
- Class 4 impact-resistance
- Class A flame spread
- Available in limited shingle size
- 50-year limited warranty typical



Figure 23. 3-D printing using various polymers is occasionally used to replicate missing metal or wood features. This new application is continually being refined, but the application can be successful when a painted, lightweight feature needs to be replicated. Photo: NPS.

Non-composite Polymers

MATERIALS: The main two polymer materials used without significant other components are polyurethane and polyvinyl chloride (PVC). Polyurethane millwork is constructed of urethane foam created by mixing isocyanate and resin. The polyurethane mixture is kept under pressure in a mold as it expands to any desired shape. These molded products have a closed-cell, foamed core with a denser surface skin. Polyurethane products can have exterior applications but are more often used for interior features. Polyvinyl chloride (PVC) in a solid extruded form is another polymer that can have architectural application as tongue-and-groove decking. Various polymers formed using 3-D printing are also being explored as replacements for painted metal or wood ornamental features.

PROPERTIES: Each of the two groupings has distinct physical properties

Urethane Foam (moldings and decorative elements)

- Lightweight and flexible, but lacking structural capacity
- More thermally-driven movement than wood or stone, but less than cellular PVC
- Does not absorb water
- Flammable
- Resists insect damage
- Can be cut with standard woodworking tools
- Adhesive and mechanical fasteners both recommended for installation
- Supplied primed and must be painted (latex paint)
- Lifetime limited warranty typical

Solid PVC (flooring)

- Isotropic
- Heavier and less flexible that wood
- Minimal thermal movement
- Does not absorb water
- Strength to span typical floor-framing spacing
- Impact-resistance greater than wood
- Class A flame spread
- No insect susceptibility
- Good paint adhesion, but also available prefinished
- 20-year warranty typical

Cellular Polyvinyl Chloride (PVC)

MATERIAL: Varying amounts of calcium carbonate and a foaming agent are added to melted PVC before passing through an injection die and then a calibrator to produce the shape and size of the finished product. Cellular PVC is produced as sheets, boards, and moldings. Differences in the specifics of the equipment and the rate of cooling create two varieties of product, with distinct properties. One is known as free-foam, having a fairly consistent structure throughout its section, and the other is identified as Celuka, having a skin that is denser than its core. This primarily affects the ease with which the product can be milled and shaped. The material is white and needs no applied finish. When produced for decking the material has a colored and textured wear layer over the PVC core.

PROPERTIES

- Isotropic
- Lighter and more flexible than wood
- Less strong than wood (in tension and shear), but can span typical floor- framing spacing as decking
- More impact-resistance than wood
- Negligible water absorption; no moisture-driven movement, unlike wood
- Subject to thermal expansion and contraction significantly greater than wood, though the thermal movement is less for the same dimension than the cross-grain moisture-driven movement of wood
- For longer pieces, thermal movement requires manufacturer's specifications to be followed for attachment, and inclusion of expansion joints when installed at low temperature (joints should be glued)
- Class A flame spread
- Resists insect damage
- Machinable with woodworking tools, though cut edges may need additional surface prep for finish
- Good paint adhesion; if painted, high light reflectance (HLV) is recommended to minimize heat driven expansion
- 25–30-year limited warranty, depending on manufacturer



Figure 24. Cellular PVC when painted can be used to replace deteriorated wood features. This beadboard set in a wood frame was not historically designed to shed water effectively and had deteriorated. Cellular PVC was able to match the appearance of the wood details, while its properties were well matched to the shady location, painted finish, and limited size and configuration within the overall assembly; thus, it should provide a long-lasting solution for this application. Photo: Jennifer Balson Alvarez, NPS.

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October 2023

Good afternoon Maddy,

As a follow-up to the Site Visit to 2012 Grange Avenue, made by Jim Ferber and I on Thursday 4/23/2026, the following was observed in regards to the condition of the existing natural spring/well house construction.

1. **Internal Observations**-
    a. Existing wood rafters supporting the roof structure, show signs of deterioration from water infiltration and age (especially at the bearing ends over the wood top plates along the perimeter exterior masonry block walls), a condition that has progressed over the life span of the existing construction and would render the wood frame construction unable to support building code required structural loads.
    b. Existing wood framing members framing the rough opening/support for the existing cupola, likewise show signs of deterioration from water infiltration and age.
2. **Exterior Observations**-
    a. Existing asphalt shingled roof has long exceeded the life expectancy attributed to such a roofing type: with portions of the roof missing roof shingles and the roof shingles themselves curled, cracked and extremely weathered.
    b. The cupola itself appears to be warped: appears to have rotated slightly around the vertical axis. Horizontal slats on the exterior vent panels of the cupola, are missing and the cupola wood construction itself shows sign of extreme weathering.

In consideration of such observations, it would be prudent to replace the entire roof structure, with a new roof structure that matches the existing overall design of the existing natural spring/well house: i.e. a hip roof, with a dormer on the South elevation and a rectangular plan shaped, venting cupola (having [2] vent panels on North/South elevations and [1] vent panel on East/West elevations), and with sweeping rafters framing the cupola roof.

Thank you for your review and commentary.

Horatiu Wolff
Senior Plan Examiner / Inspector