



**CITY OF NORMAN, OK**  
**FLOODPLAIN PERMIT COMMITTEE MEETING**  
Development Center, Room B, 225 N. Webster Ave., Norman, OK 73069  
Monday, November 04, 2024 at 3:30 PM

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## AGENDA

The Floodplain Permit Committee of the City of Norman, Cleveland County, State of Oklahoma, will meet in Regular Session in Conference Room B at the Development Center, on Monday, November 04, 2024 at 3:30 PM and notice of the agenda of the meeting was posted at the Norman Municipal Building at 201 West Gray, Development center at 225 N. Webster, and on the City website at least 24 hours prior to the beginning of the meeting.

*It is the policy of the City of Norman that no person or groups of persons shall on the grounds of race, color, religion, ancestry, national origin, age, place of birth, sex, sexual orientation, gender identity or expression, familial status, marital status, including marriage to a person of the same sex, disability, relation, or genetic information, be excluded from participation in, be denied the benefits of, or otherwise subjected to discrimination in employment activities or in all programs, services, or activities administered by the City, its recipients, sub-recipients, and contractors. In the event of any comments, complaints, modifications, accommodations, alternative formats, and auxiliary aids and services regarding accessibility or inclusion, please contact the ADA Technician at 405-366-5424, Relay Service: 711. To better serve you, five (5) business days' advance notice is preferred.*

### ROLL CALL

### MINUTES

1. Approval of minutes from the October 21, 2024 meeting.

### ACTION ITEMS

2. **Floodplain Permit Application No. 702** - This permit application is for the proposed elevation of a residential structure at 624 Sinclair Dr. in the floodway of a tributary of Bishop Creek. This permit application was postponed from the October 21, 2024 meeting.

### MISCELLANEOUS COMMENTS

### ADJOURNMENT



## CITY OF NORMAN, OK

### FLOODPLAIN PERMIT COMMITTEE MEETING

Development Center, Conference Room B, 225 N. Webster Avenue,  
Norman, OK 73069

Monday, October 21, 2024 at 3:30 PM

## MINUTES

The Floodplain Permit Committee of the City of Norman, Cleveland County, State of Oklahoma, met in Regular Session in Conference Room B at the Development Center, on the 21st day of October, 2024, at 3:30 p.m., and notice of the agenda of the meeting was posted at the Norman Municipal Building at 201 West Gray, Development Center at 225 N. Webster and on the City website at least 24 hours prior to the beginning of the meeting.

## ROLL CALL

The meeting was called to order by Mr. Sturtz at 3:30 p.m. Roll was called and 1 member was absent, Jane Hudson. Others in attendance included, Todd McLellan, Capital Projects Manager; Jason Murphy, Stormwater Program Manager; Kim Freeman, Staff; Gary Keen, Keen Engineering; Mary Eva Cook, Resident; Diana Broms, Resident; Donnie Broms, Resident; Cindee Pichot, Resident; Holly Hawk, Resident; Charles Keeling, Resident; Hunter Thompson, SH Renovations; C. Glass, Resident; Uwem Ekpenyong, Urban James Engineering.

## MINUTES

1. Approval of minutes from the September 3, 2024 meeting

Mr. Sturtz asked for any comments on the minutes from the meeting of September 3, 2024. Mr. Sturtz asked for a spelling correction on page 5. The motion was made by Mr. Scanlon and seconded by Ms. Stansel. The minutes were approved 6-0.

## ACTION ITEMS

2. Floodplain Permit No. 702

Mr. Sturtz said the Application for Permit 702 is for the proposed elevation of a residential structure in the floodway of a tributary to Bishop Creek. Mr. Sturtz said the Applicant is Jobin Cherian and the Engineer is Urban James Engineering, Uwem Ekpenyong P.E.

Mr. Murphy presented the staff report and reviewed plans and aerial maps of the project location provided to members in their packets.

Mr. Murphy confirmed all ordinance requirements have been met and said staff recommends Floodplain Permit Application No. 702 be approved with the following condition:

- Elevation Certificate provided for the residential structure prior to final acceptance. Elevation of electrical and mechanical components should also be provided and verified by staff. Staff will also confirm that flood venting meets requirements of the ordinance.

Mr. Sturtz called for any questions or comments from the committee. The committee discussed the missing design plans for stairs and a deck to the elevated structure. The committee discussed postponing the application until design plans can be submitted for review.

Mr. Scanlon motioned to postpone Permit 702 until the November 4<sup>th</sup> meeting. Ms. Stansel seconded the motion. The committee voted to postpone the application 6-0.

### 3. Floodplain Permit No. 703

Mr. Sturtz said the Application for Permit 703 is for the construction of a patio and replacement of a fence at 3124 Meadow Ave. in the Canadian River floodplain. Mr. Sturtz said the Applicant is Holly Hawk and the Engineer is Gary Keen, P.E.

Mr. Murphy presented the staff report and reviewed plans and aerial maps of the project location provided to members in their packets.

Mr. Murphy confirmed all ordinance requirements have been met and said staff recommends Floodplain Permit Application No. 703 be approved with the following recommendation:

- Photos should be taken before work is started, and during soil removal process, as well as post construction. These photos should be submitted to City staff to help verify that the work was done in accordance with the application.

Mr. Sturtz called for any comments from the Applicant. Holly Hawk, Applicant, discussed wanting to come into compliance anyway the committee says she should.

Mr. Sturtz called for any comments or questions from the committee. Ms. Hoggatt reminded the applicant they still need a permit for the paving.

Mr. Sturtz called for any comments from the Public. Donnie Broms, Resident, shared his concerns about the patio with the committee and discussed elevations of the patio with Mr. Keen.

The committee discussed the items included in the application and determined the plants can remain. The committee discussed amending the conditions to include post construction elevation.

The committee reviewed the modified conditions:

- Photos should be taken before work is started, and during soil removal process, as well as post construction. These photos should be submitted to City staff to help verify that the work was done in accordance with the application.
- Elevations be provided post removal to indicate that 2 inches have been removed.
- The fence will be modified and the edging removed.

Mr. Scanlon made a motion to approve Permit 703 with modified conditions. Ms. Hoggatt seconded the motion. The committee voted to approve the application 6-0.

### 4. Floodplain Permit No. 704

Mr. Sturtz said the Application for Permit 704 is for the construction of a patio and installation a fence at 3126 Meadow Ave. in the Canadian River floodplain. Mr. Sturtz said the Applicant is Cynthia Pichot and the Engineer is Gary Keen, P.E.

Mr. Murphy presented the staff report and reviewed plans and aerial maps of the project location provided to members in their packets.

Mr. Murphy confirmed all ordinance requirements have been met and said staff recommends Floodplain Permit Application No. 704 be approved with the following recommendation:

- Images should be taken before any work is started and after work has completed to help City staff verify that the work was done in accordance with the proposal.

Mr. Sturtz asked Mr. Keen for any additional comments. Mr. Keen discussed lowering the edging.

Mr. Sturtz called for any questions from the committee. Hearing none, Mr. Sturtz asked for any comments from the Public. Mr. Broms discussed with the committee and Mr. Keen, a drain that routes water from the roofs of 3124 and 3122 that is no longer working and inquired if a permit is required to move the drain.

Mr. Scanlon made a motion to approve Permit 704 with staff recommendations. Mr. Danner seconded the motion. The committee voted to approve the application 6-0.

#### 5. Floodplain Permit No. 705

Mr. Sturtz said the Application for Permit 705 is for proposed elevation of a residential structure and the installation of a fence in the floodway of Imhoff Creek. Mr. Sturtz said the Applicant is Swift Acquisition Partners, the Builder is SH Renovations and the Engineer is Urban James Engineering, Uwem Ekpenyong P.E.

Mr. Murphy presented the staff report and reviewed plans and aerial maps of the project location provided to members in their packets.

Mr. Murphy confirmed all ordinance requirements have been met and said staff recommends Floodplain Permit Application No. 705 be approved with the following recommendations:

- Elevation Certificate provided for the residential structure prior to final acceptance. Elevation of electrical and mechanical components should also be provided and verified by staff.
- As built drawings need to be provided to verify compensatory storage area requirements have been met for either alternative. Staff will also confirm that flood venting meets requirements of the ordinance.

Mr. Sturtz called for any comments from the Builder. Hunter Thompson, SH Renovations, said he is happy to answer any questions from the committee.

Mr. Sturtz called for any questions from the committee. The committee discussed the floodway section of the ordinance and increasing the useable area in the floodway.

Mr. Scanlon made a motion to postpone Permit 705. Ms. Stansel seconded the motion.

Mr. Thompson asked for the alternative plan to be considered. The committee and Mr. Thompson discussed the material used for the stairs and the landing being slightly larger to meet ADA compliance. Mr. Thompson offered to change the material of the stairs to open flow using the alternative plan.

Mr. Scanlon withdrew his motion to postpone Permit 705. Ms. Stansel withdrew her second to postpone.

Mr. Scanlon made a motion to approve Permit 705 with the modifications discussed.

The committee discussed the pond in the backyard.

The committee reviewed the modified conditions:

- Stair deck size using the alternative plan constructed out of wood or steel to allow open flow through access.
- Recalculate the size of the swell.
- Provide as built drawings to verify compensatory storage area requirements.

Ms. Stansel seconded the motion. The committee voted to approve the application 6-0.

#### 6. Floodplain Permit No. 706

Mr. Sturtz said the Application for Permit 706 is for the installation of a generator for a cellular tower located at 3199 S. Berry Road in the Imhoff Creek floodplain. Mr. Sturtz said the Applicant is Sherry Duff, the Builder is CA Bass Ventures, LLC and the Engineer is Benchmark Services, Inc.

Mr. Murphy presented the staff report and reviewed plans and aerial maps of the project location provided to members in their packets.

Mr. Murphy confirmed all ordinance requirements have been met and said staff recommends Floodplain Permit Application No. 706 be approved with the following recommendation:

- Elevation certificate be required for the top of the steel platform prior to final acceptance.

Mr. Sturtz called for any questions or comments from the committee.

C. Glass, Resident, asked for more clarification on the plans for the generator. Ms. Glass and the committee discussed her property and Imhoff Creek.

Mr. Scanlon made a motion to approve Permit 706 with staff recommendations. Mr. Danner seconded the motion. The committee voted to approve the application 6-0

### **MISCELLANEOUS COMMENTS**

Mr. Sturtz asked for any miscellaneous comments.

### **ADJOURNMENT**

Mr. Scanlon motioned to adjourn. Mr. Sturtz adjourned the meeting at 4:56 p.m.

Passed and approved this \_\_\_\_\_ day of \_\_\_\_\_, 2024

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City of Norman Floodplain Administrator, Scott Sturtz

**ITEM:** Floodplain Permit application for proposed elevation of a residential structure in the floodway of a tributary to Bishop Creek. This permit was postponed during the October 21, 2024 meeting.

**BACKGROUND:**

APPLICANT: Jobin Cherian

ENGINEER: Urban James Engineering, Uwem Ekpenyong P.E.

624 Sinclair Ave. is located in the floodway in the upper reaches of a tributary to Bishop Creek. It is a two story duplex constructed in 1977. The property was purchased in March of 2023 by Resilient Visionary Investments at which time they were informed that floodplain permits would be required to proceed with renovations of the structure. The previous owner had began renovations without obtaining permits. The interior of the structure had been stripped down to studs and windows, siding and possibly roofing had already been replaced. It was determined at that time that this would constitute a substantial improvement and the structure would have to come into full compliance with the Flood Hazard Ordinance before a permit could be issued. Cost of renovations were estimated to be \$80 thousand dollars and the County Assessor value of the structure was estimated at approximately \$70 thousand dollars.

Detailed engineering plans are included in the packet submitted with the application. The BFE for this location is 1164.0'. According the applicant's engineer, the existing slab elevation is 1163.52'. The proposed plan would leave the slab at existing elevation and elevate the structure so that the lowest finished floor elevation would be 1167.19' and be mounted on concrete piers. This would amount to elevating the residence approximately 3.7' and place the first finished floor elevation at 3.19' above the BFE. In the engineer's statement, it is indicated that this would allow for the structure to meet the ordinance requirements and leave room for structural, electrical and mechanical underfloor elements to be installed more than 2 feet about the BFE as well. The applicant has also indicated that if it is decided to enclose the foundation space, that 1227 square inches of flood venting will be installed no higher than 1 foot above grade with a minimum of two openings on each side of the structure.

**Updated:** The applicant's engineer submitted plans for the addition of 4 sets of landings and stairs for the both front and back doors of the duplex. In addition, calculations were created for determining compensatory storage and a site plan to indicate the location of the compensatory storage.

**STAFF ANALYSIS:**

Site located in Little River Basin or Tributaries?                    yes\_\_    no✓

According to the latest DFIRM, this project is located in the floodway of a tributary of Bishop Creek (Zone AE).

Applicable Ordinance Sections:

- 36-533 (e)(2)(a) .....
- (e)(2)(e) .....
- (e)(2)(j) .....
- (e)3(a) .....
- (f)(3)(8) .....

Subject Area:

- Fill restrictions in the floodplain
- Compensatory storage
- Utilities constructed to minimize flood damage
- Elevation of Structures
- No rise considerations

(e)(2)(a) and (e)(2)(e) Fill Restrictions in the Floodplain and Compensatory Storage – The use of fill is restricted in the floodplain unless compensatory storage is provided.

The plans indicate the existing structure will be elevated off of the existing slab by approximately 3.7'. In addition, there will be 4 sets of stairs installed for both front and rear entrance into the duplex. The engineering plans indicate a total of 55.25 cubic feet of compensatory storage is required and will be provided by creating a 20' x 6' x 0.5' (100 cubic feet) swale in the rear of the property, as indicated on the site plans.

(e)2(j) - All new construction or substantial improvements shall be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

The applicant has indicated all electrical and mechanical underfloor elements will be installed at least 2.0' above the BFE.

(e)3(a) Elevation of Structures – Residential structures shall be constructed on fill including any attendant utility and sanitary facilities, shall be designed so that the lowest floor (including basement) is elevated at least two feet above base flood elevation and the fill shall be at a level no lower than 1 foot above the base flood elevation for the particular area and shall extend at such elevation at least (15) fifteen feet beyond the limits of any structure or building erected thereon.

The project engineer has indicated that the existing structure will be elevated and placed on piers so that the lowest finished floor elevation is 3.19' above the BFE. It was indicated that all structural, electrical, and mechanical underfloor elements to be installed at least 2.0' above the BFE.

(f)(3)(8) No Rise Considerations – For proposed development within any flood hazard area (except for those designated as regulatory floodways), certification that a rise of no more than 0.05 ft. will occur in the BFE on any adjacent property as a result of the proposed work is required.

The project engineer has indicated in their No-Rise statement that this activity will cause no rise on any adjacent property.

**RECOMMENDATION:** Staff recommends Floodplain Permit Application #702 be approved with the following condition:

1. Elevation Certificate provided for the residential structure prior to final acceptance. Elevation of electrical and mechanical components should also be provided and verified by staff. Staff will also confirm that flood venting meets requirements of the ordinance.
2. Survey elevations taken of compensatory storage before construction and as-built drawings with elevations taken after to confirm volume should be provided to Staff.

**ACTION TAKEN:** \_\_\_\_\_





# City of Norman

## Floodplain Permit Application

Floodplain Permit No. 702

Building Permit No. \_\_\_\_\_

~~09-26-2024~~

Date 10/21/2024


### FLOODPLAIN PERMIT APPLICATION (\$100.00 Application Fee Required)

#### **SECTION 1: GENERAL PROVISIONS (APPLICANT to read and sign):**

1. No work may start until a permit is issued.
2. The permit may be revoked if any false statements are made herein.
3. If revoked, all work must cease until permit is re-issued.
4. Development shall not be used or occupied until a Certificate of Occupancy is issued.
5. The permit will expire if no work is commenced within 2 years of issuance.
6. Applicant is hereby informed that other permits may be required to fulfill local, state and federal regulatory requirements and must be included with this floodplain permit application.
7. Applicant hereby gives consent to the City of Norman or his/her representative to access the property to make reasonable inspections required to verify compliance.
8. The following floodplain modifications require approval by the City Council:
  - (a) A modification of the floodplain that results in a change of ten percent (10%) or more in the width of the floodplain.
  - (b) The construction of a pond with a water surface area of 5 acres or more.
  - (c) Any modifications of the stream banks or flow line within the area that would be regulatory floodway whether or not that channel has a regulatory floodplain, unless the work is being done by the City of Norman staff as part of a routine maintenance activity.
9. All supporting documentation required by this application is required along with the permit fee by the submittal deadline. Late or incomplete applications will not be accepted.
10. I, THE APPLICANT, CERTIFY THAT ALL STATEMENTS HEREIN AND IN ATTACHMENTS TO THIS APPLICATION ARE, TO THE BEST OF MY KNOWLEDGE, TRUE AND ACCURATE.

#### **SECTION 2: PROPOSED DEVELOPMENT (To be completed by APPLICANT.)**

APPLICANT: Jobin Cherian ADDRESS: 7809 Sunset Blvd Rowelett, Texas 75088

TELEPHONE: 214-673-8160 SIGNATURE: 

BUILDER: Edward Harill ADDRESS: \_\_\_\_\_

TELEPHONE: 405-600-4335 SIGNATURE: \_\_\_\_\_

ENGINEER: Uwem Ekpenyong ADDRESS: \_\_\_\_\_

TELEPHONE: 405-243-0672 SIGNATURE: \_\_\_\_\_

PROJECT LOCATION

To avoid delay in processing the application, please provide enough information to easily identify the project location. Provide the street address, subdivision addition, lot number or legal description (attach) and, outside urban areas, the distance to the nearest intersecting road or well known landmark. A sketch attached to this application showing the project location would be helpful.

624 Sinclair Dr. Norman, OK 73072

DESCRIPTION OF WORK (Check all applicable boxes):

A. STRUCTURAL DEVELOPMENT

<u>ACTIVITY</u>	<u>STRUCTURE TYPE</u>
<input type="checkbox"/> New Structure	<input checked="" type="checkbox"/> Residential (1-4 Family)
<input type="checkbox"/> Addition	<input type="checkbox"/> Residential (More than 4 Family)
<input checked="" type="checkbox"/> Alteration	<input type="checkbox"/> Non-Residential (Flood proofing? <input type="checkbox"/> Yes)
<input type="checkbox"/> Relocation	<input type="checkbox"/> Combined Use (Residential & Commercial)
<input type="checkbox"/> Demolition	<input type="checkbox"/> Manufactured (Mobile) Home
<input type="checkbox"/> Replacement	<input type="checkbox"/> In Manufactured Home Park? <input type="checkbox"/> Yes

ESTIMATED COST OF PROJECT \$ 80,000 Work that involves substantial damage/substantial improvement requires detailed cost estimates and an appraisal of the structure that is being improved.

B. OTHER DEVELOPMENT ACTIVITIES:

- Fill     Mining     Drilling     Grading
- Excavation (Beyond the minimum for Structural Development)
- Watercourse Alteration (Including Dredging and Channel Modifications)
- Drainage Improvements (Including Culvert Work)     Road, Street or Bridge Construction
- Subdivision (New or Expansion)                       Individual Water or Sewer System

In addition to items A. and B. provide a complete and detailed description of proposed work (failure to provide this item will be cause for the application to be rejected by staff). Attach additional sheets if necessary.

Please see attached Proposal

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**C. ATTACHMENTS WHICH ARE REQUIRED WITH EVERY APPLICATION:**

The applicant must submit the documents listed below before the application can be processed. If the requested document is not relevant to the project scope, please check the Not Applicable box and provide explanation.

A. Plans drawn to scale showing the nature, location, dimensions, and elevation of the lot, existing or proposed structures, fill, storage of materials, flood proofing measures, and the relationship of the above to the location of the channel, floodway, and the regulatory flood-protection elevation.

B. A typical valley cross-section showing the channel of the stream, elevation of land areas adjoining each side of the channel, cross-sectional areas to be occupied by the proposed development, and high-water information.

Not Applicable:

\_\_\_\_\_  
\_\_\_\_\_

C. Subdivision or other development plans (If the subdivision or other developments exceeds 50 lots or 5 acres, whichever is the lesser, the applicant **must** provide 100-year flood elevations if they are not otherwise available).

Not Applicable:

\_\_\_\_\_  
\_\_\_\_\_

D. Plans (surface view) showing elevations or contours of the ground; pertinent structure, fill, or storage elevations; size, location, and spatial arrangement of all proposed and existing structures on the site; location and elevations of streets, water supply, sanitary facilities; photographs showing existing land uses and vegetation upstream and downstream, soil types and other pertinent information.

Not Applicable:

\_\_\_\_\_  
\_\_\_\_\_

E. A profile showing the slope of the bottom of the channel or flow line of the stream.

Not Applicable:

\_\_\_\_\_  
\_\_\_\_\_

F. Elevation (in relation to mean sea level) of the lowest floor (including basement) of all new and substantially improved structures.

Not Applicable:

\_\_\_\_\_  
\_\_\_\_\_

G. Description of the extent to which any watercourse or natural drainage will be altered or relocated as a result of proposed development.

Not Applicable:

\_\_\_\_\_

- H. For proposed development within any flood hazard area (except for those areas designated as regulatory floodways), certification that a rise of no more than five hundredths of a foot (0.05') will occur on any adjacent property in the base flood elevation as a result of the proposed work. For proposed development within a designated regulatory floodway, certification of no increase in flood levels within the community during the occurrence of the base flood discharge as a result of the proposed work. All certifications shall be signed and sealed by a Registered Professional Engineer licensed to practice in the State of Oklahoma.
- I. A certified list of names and addresses of all record property owners within a three hundred fifty (350) foot radius of the exterior boundary of the subject property not to exceed 100 feet laterally from the Special Flood Hazard Area. The radius to be extended by increments of one hundred (100) linear feet until the list of property owners includes not less than fifteen (15) individual property owners of separate parcels or until a maximum radius of one thousand (1,000) feet has been reached.
- J. A copy of all other applicable local, state, and federal permits (i.e. U.S. Army Corps of Engineers 404 permit, etc).

**After completing SECTION 2, APPLICANT should submit form to Permit Staff for review.**

**SECTION 3: FLOODPLAIN DETERMINATION (To be completed by Permit Staff.)**

The proposed development is located on FIRM Panel No.: 0285H, Dated: 9/26/2008

The Proposed Development:

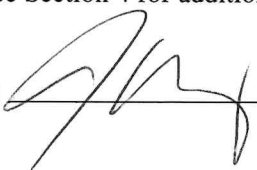
Is NOT located in a Special Flood Hazard Area  
(Notify the applicant that the application review is complete and NO FLOODPLAIN PERMIT IS REQUIRED).

Is located in a Special Flood Hazard Area.

The proposed development is located in a floodway.

100-Year flood elevation at the site is 1164.0' Ft. NGVD (MSL)       Unavailable

See Section 4 for additional instructions.

SIGNED:  \_\_\_\_\_ DATE: 10/9/2024

**SECTION 4: ADDITIONAL INFORMATION REQUIRED (To be completed by Permit Staff.)**

The applicant must also submit the documents checked below before the application can be processed.

- Flood proofing protection level (non-residential only) \_\_\_\_\_ Ft. NGVD (MSL). For flood proofed structures applicant must attach certification from registered engineer.
- Certification from a registered engineer that the proposed activity in a regulatory floodway will not result in any increase in the height of the 100-year flood (Base Flood Elevation). A copy of all data and calculations supporting this finding must also be submitted.
- Certification from a registered engineer that the proposed activity in a regulatory flood plain will result in an increase of no more than 0.05 feet in the height of the 100-year flood (Base Flood Elevation). A copy of all data and calculations supporting this finding must also be submitted.
- All other applicable federal, state, and local permits have been obtained.

Other: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**SECTION 5: PERMIT DETERMINATION (To be completed by Floodplain Chairman.)**

The proposed activity: (A)  **Is**; (B)  **Is Not** in conformance with provisions of Norman’s City Code Chapter 22, Section 429.1. The permit is issued subject to the conditions attached to and made part of this permit.

SIGNED: \_\_\_\_\_ DATE: \_\_\_\_\_

If **BOX A** is checked, the Floodplain committee chairman may issue a Floodplain Permit.

If **BOX B** is checked, the Floodplain committee chairman will provide a written summary of deficiencies. Applicant may revise and resubmit an application to the Floodplain committee or may request a hearing from the Board of Adjustment.

APPEALS: Appealed to Board of Adjustment:  Yes  No  
Hearing date: \_\_\_\_\_

Board of Adjustment Decision - Approved:  Yes  No

Conditions:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**SECTION 6: AS-BUILT ELEVATIONS (To be submitted by APPLICANT before Certificate of Occupancy is issued.)**

1. FEMA Elevation Certificate  
and/or
2. FEMA Floodproofing Certificate

NOTE: The completed certificate will be reviewed by staff for completeness and accuracy. If any deficiencies are found it will be returned to the applicant for revision. A Certificate of Occupancy for the structure will not be issued until an Elevation and /or Floodproofing Certificate has been accepted by the City.

# DESIGN CRITERIA

1. GOVERNING BUILDING CODES (INCLUDES STATE AND LOCAL AMENDMENTS)
  - A. 2018 INTERNATIONAL BUILDING CODE
  - B. 2018 INTERNATIONAL EXISTING BUILDING CODE
  - C. 2018 INTERNATIONAL RESIDENTIAL CODE
  
2. WIND DESIGN CRITERIA
 

A. ULTIMATE WIND SPEED ( $V_{ult}$ )	115 MPH
B. NOMINAL DESIGN WIND SPEED ( $V_{asd}$ )	89 MPH
C. EXPOSURE CATEGORY	B
D. INTERNAL PRESSURE COEFFICIENT	+/- 0.18
  
3. SEISMIC DESIGN CATEGORY
 

A. RISK CATEGORY	II
B. SEISMIC IMPORTANCE FACTOR ( $I_e$ )	1.0
C. SITE CLASS	D
D. SEISMIC DESIGN CATEGORY	C
  
4. DEAD LOADS
 

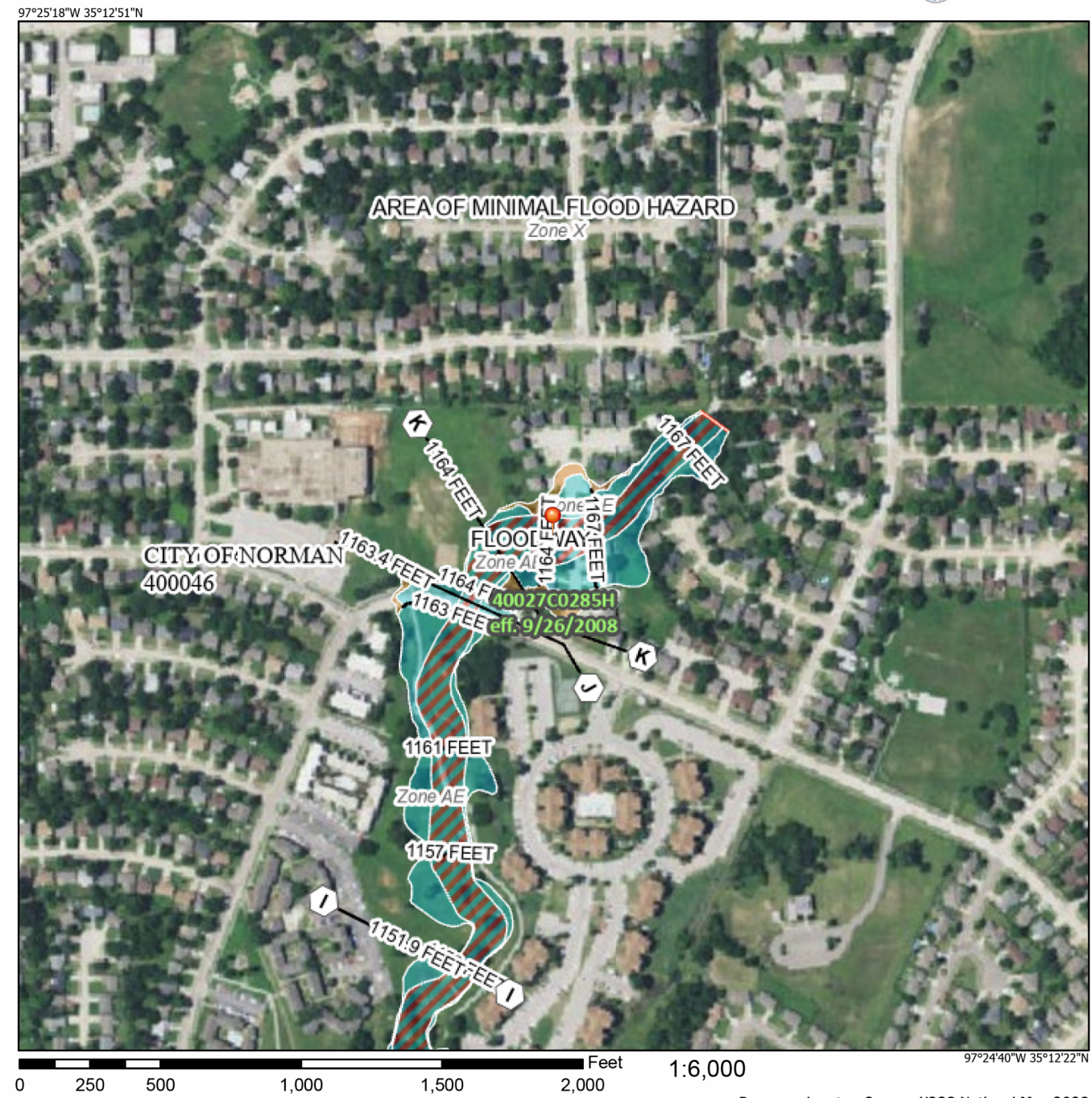
A. ROOF	6 PSF
B. CEILINGS	6 PSF
C. FLOOR	6 PSF
  
5. LIVE LOADS
 

A. ROOF	20 PSF
B. CORRIDORS	100 PSF
C. STAIRS	100 PSF
D. LIVING AREAS	40 PSF
E. BEDROOMS	30 PSF
  
6. SNOW LOADS
 

A. GROUND SNOW LOAD ( $P_g$ )	10 PSF
B. FLAT ROOF SNOW LOAD ( $P_f$ )	10 PSF
C. SLOPED ROOF SNOW LOAD ( $P_s$ )	8 PSF
D. SNOW IMPORTANCE FACTOR ( $I_s$ )	1.0
E. SNOW EXPOSURE FACTOR ( $C_e$ )	1.0
F. SNOW THERMAL FACTOR ( $C_t$ )	1.0
  
7. ASSUMED FOUNDATION DESIGN CRITERIA
 

A. NET ALLOWABLE SOIL BEARING FOR SPREAD FOOTINGS	1500 PSF
B. NET ALLOWABLE SOIL BEARING FOR CONT FOOTINGS	1500 PSF
C. CODE MINIMUM BEARING DEPTH	30 INCHES

## National Flood Hazard Layer FIRMette



**Legend**

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

<b>SPECIAL FLOOD HAZARD AREAS</b>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #e0f0ff; border: 1px solid black; margin-right: 5px;"></span> Without Base Flood Elevation (BFE) <i>Zone A, V, A99</i></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #fff0e0; border: 1px solid black; margin-right: 5px;"></span> With BFE or Depth <i>Zone AE, AO, AH, VE, AR</i></li> <li><span style="display: inline-block; width: 15px; height: 10px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, red 2px, red 4px); border: 1px solid black; margin-right: 5px;"></span> Regulatory Floodway</li> </ul>
<b>OTHER AREAS OF FLOOD HAZARD</b>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #ffcc99; border: 1px solid black; margin-right: 5px;"></span> 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile <i>Zone X</i></li> <li><span style="display: inline-block; width: 15px; height: 10px; background: repeating-linear-gradient(-45deg, transparent, transparent 2px, red 2px, red 4px); border: 1px solid black; margin-right: 5px;"></span> Future Conditions 1% Annual Chance Flood Hazard <i>Zone X</i></li> <li><span style="display: inline-block; width: 15px; height: 10px; background: repeating-linear-gradient(45deg, transparent, transparent 2px, red 2px, red 4px); border: 1px solid black; margin-right: 5px;"></span> Area with Reduced Flood Risk due to Levee. See Notes. <i>Zone X</i></li> <li><span style="display: inline-block; width: 15px; height: 10px; background: repeating-linear-gradient(-45deg, transparent, transparent 2px, red 2px, red 4px); border: 1px solid black; margin-right: 5px;"></span> Area with Flood Risk due to Levee <i>Zone D</i></li> </ul>
<b>OTHER AREAS</b>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #fff0e0; border: 1px solid black; margin-right: 5px;"></span> NO SCREEN Area of Minimal Flood Hazard <i>Zone X</i></li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #fff0e0; border: 2px solid blue; margin-right: 5px;"></span> Effective LOMRs</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #fff0e0; border: 1px solid black; margin-right: 5px;"></span> Area of Undetermined Flood Hazard <i>Zone D</i></li> </ul>
<b>GENERAL STRUCTURES</b>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; border-bottom: 2px dashed black; margin-right: 5px;"></span> Channel, Culvert, or Storm Sewer</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px solid black; margin-right: 5px;"></span> Levee, Dike, or Floodwall</li> </ul>
<b>OTHER FEATURES</b>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; border-bottom: 2px solid black; margin-right: 5px;"></span> Cross Sections with 1% Annual Chance Water Surface Elevation</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px dashed black; margin-right: 5px;"></span> Coastal Transect</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px solid black; margin-right: 5px;"></span> Base Flood Elevation Line (BFE)</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px solid red; margin-right: 5px;"></span> Limit of Study</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px solid yellow; margin-right: 5px;"></span> Jurisdiction Boundary</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px dashed black; margin-right: 5px;"></span> Coastal Transect Baseline</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px solid blue; margin-right: 5px;"></span> Profile Baseline</li> <li><span style="display: inline-block; width: 15px; border-bottom: 2px solid blue; margin-right: 5px;"></span> Hydrographic Feature</li> </ul>
<b>MAP PANELS</b>	<ul style="list-style-type: none"> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px solid green; margin-right: 5px;"></span> Digital Data Available</li> <li><span style="display: inline-block; width: 15px; height: 10px; border: 1px solid gray; margin-right: 5px;"></span> No Digital Data Available</li> <li><span style="display: inline-block; width: 15px; height: 10px; background-color: #fff0e0; border: 1px solid gray; margin-right: 5px;"></span> Unmapped</li> </ul>

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards.

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on **10/1/2024 at 1:26 PM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



PROJECT: 624-626 SINCLAIR DRIVE  
 624-626 SINCLAIR DR  
 NORMAN, OK 73072  
 CLIENT: RESILIENT VISIONARY INVESTMENTS, LLC

0001  
 EVALUATION AND DESIGN CRITERIA



## FLOOD ZONE CRITERIA

1. BASE FLOOD ELEVATION CRITERIA
  - A. BASE FLOOD ELEVATION (BFE): 1164.00 FEET
  - B. LOWEST GRADE LEVEL: 1162.08 FEET
  - C. VERTICAL DISTANCE IMPACTED BELOW BFE: 1.2 FEET  
(FROM LOWEST GRADE TO BFE)
  
2. PREVIOUS CONSTRUCTION
  - A. AREA IN FLOOD ZONE: 1227.00 SQ. FT.
  - B. VOLUME BELOW BFE: 1472.00 CU. FT.
  
3. PROPOSED ELEVATED CONSTRUCTION:
  - A. OPEN CONSTRUCTION REQUIREMENTS:
    - a. NOT ENCLOSED
    - b. (25) 1'-4"X1'-4" PILASTERS 44.42 SQ. FT.
    - c. (8) 4X4 POSTS 0.68 SQ. FT.
    - d. (8) 2X12 STAIR STRINGER 0.94 SQ. FT.
    - e. TOTAL AREA: 46.04 SQ. FT.
    - f. VOLUME BELOW BFE: 55.25 CU. FT.
  
  - B. ENCLOSED CONSTRUCTION REQUIREMENTS:
    - a. AREA OF ENCLOSED CRAWL SPACE: 1472.00 CU. FT.
  
4. FLOOR REMEDIATION REQUIREMENTS:
  - A. FLOOD VENTING REQUIREMENTS: 1472.00 SQ. IN.
  - B. COMPENSATORY STORAGE REQUIREMENTS: 55.25 SQ. FT.
  - C. COMPENSATORY STORAGE PROVIDED: 60.00 SQ. FT.  
(20 FOOT LONG BY 6 FOOT WIDE BY 6" DEEP SWALE DRAINING TOWARDS CREEK ON THE NORTHWEST SIDE OF THE PROPERTY)



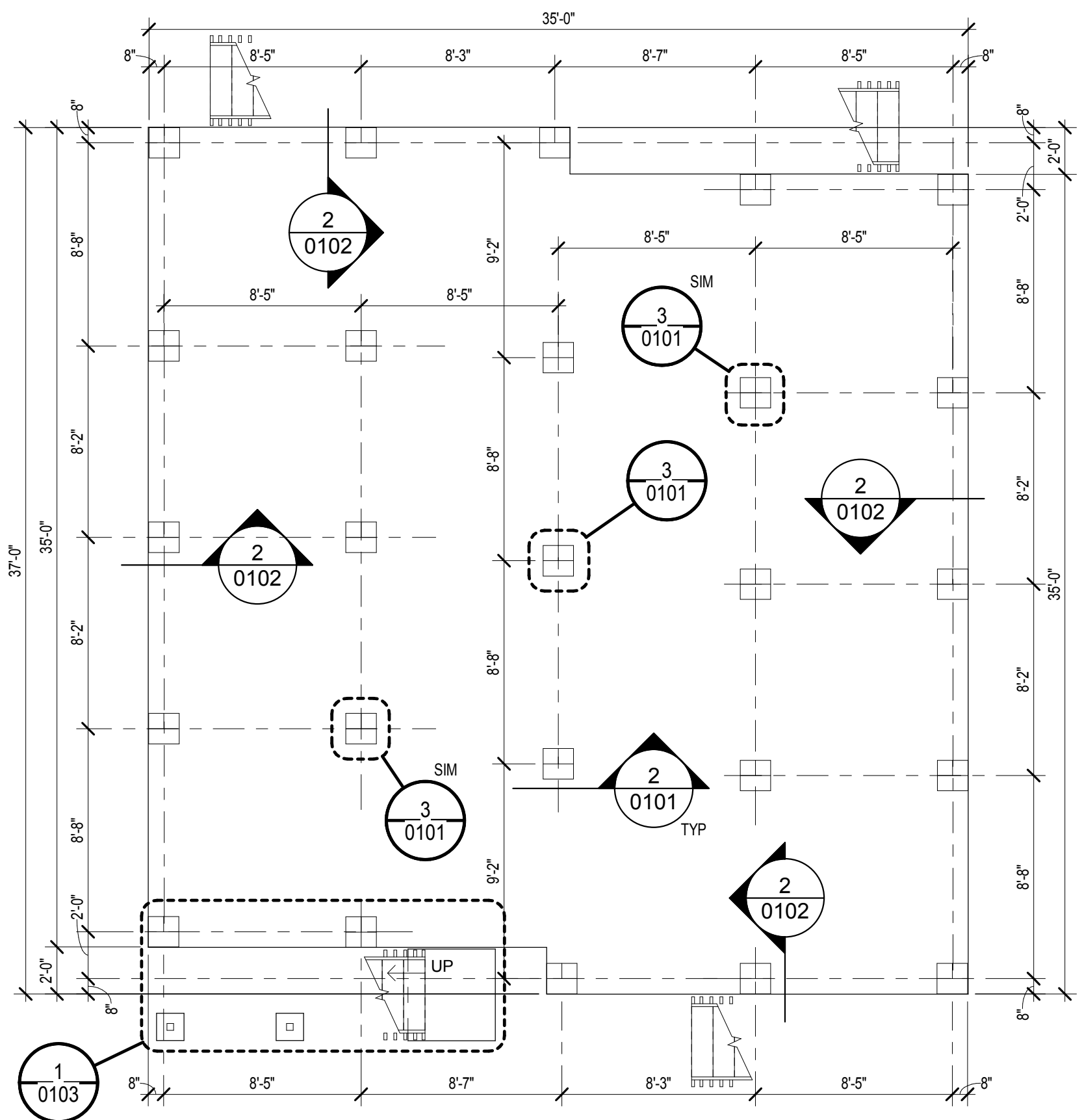
**1** **SITE LAYOUT**  
SCALE: 1" = 20'-0"



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624-626 SINCLAIR DR  
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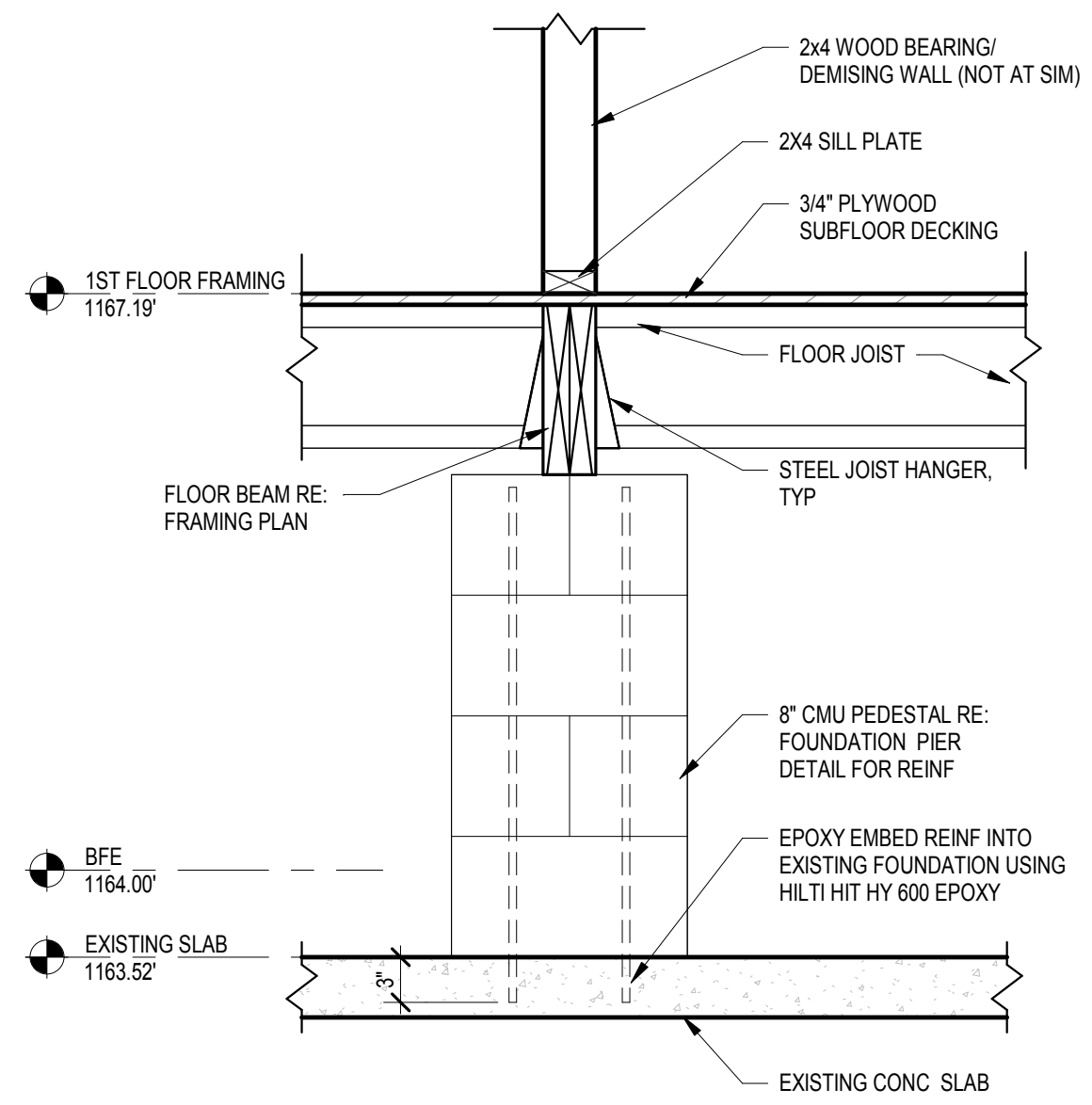
0002  
GENERAL SITE  
LAYOUT



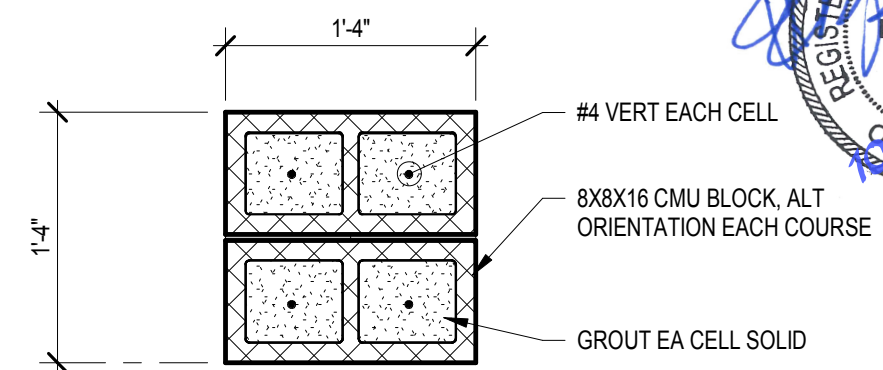


**1 FOUNDATION PLAN**  
SCALE: 3/16" = 1'-0"

- FLOOR RELIEF OPENINGS FOR OPTIONAL FOUNDATION ENCLOSURE:
- PROVIDE A TOTAL OF 1227 SQ. IN. OF FLOOD RELIEF OPENINGS ON FOUR SIDES OF THE HOME.
  - FLOOR RELIEF OPENINGS CANNOT BE PLACE HIGHER THAN 1'-0" ABOVE ADJACENT GRADE
  - PROVIDE A MINIMUM OF 2 OPENINGS PER SIDE OF THE STRUCTURE



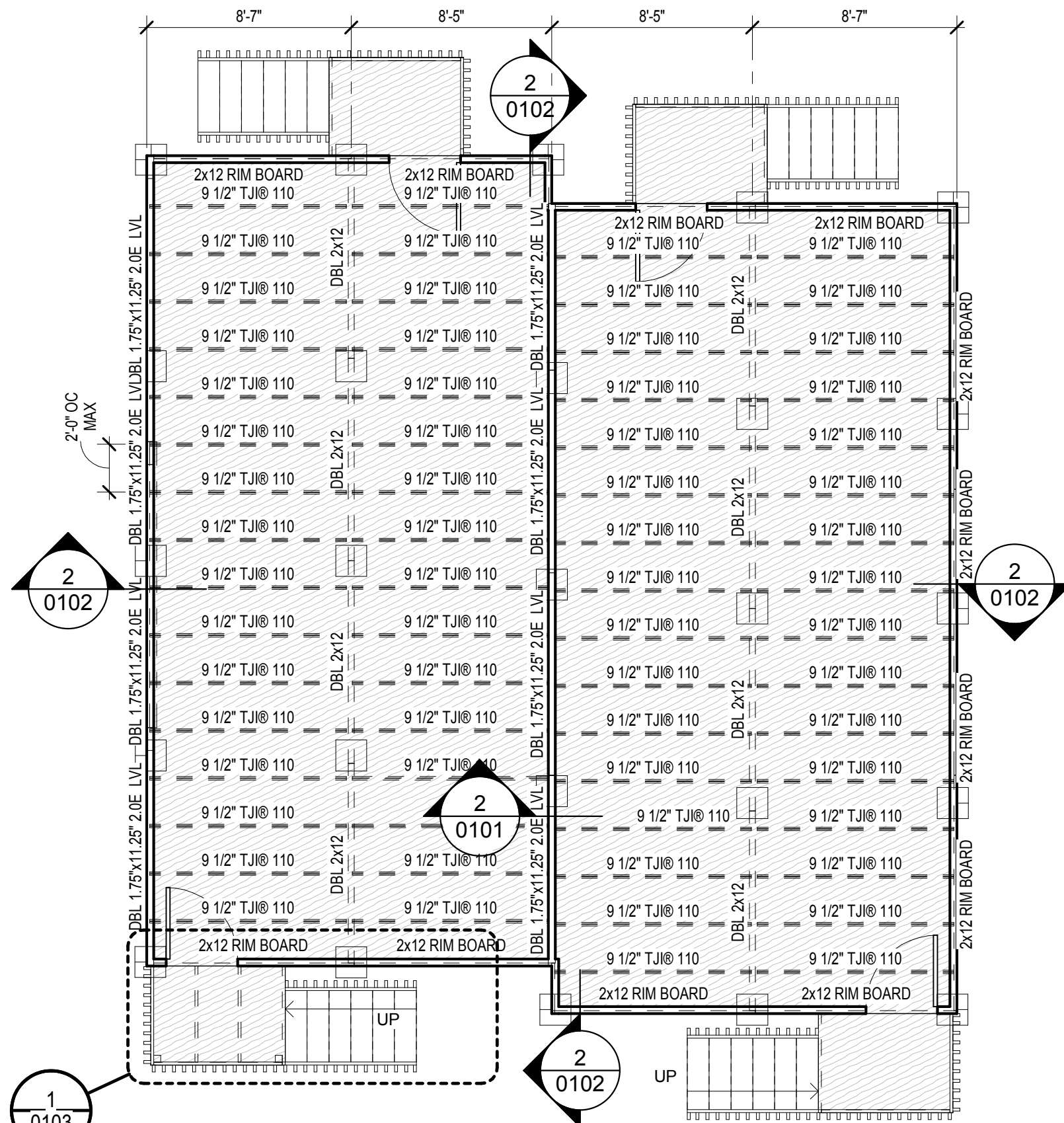
**2 PEDESTAL ELEVATION**  
SCALE: 1" = 1'-0"



**3 CMU FOUNDATION PIER**  
SCALE: 1" = 1'-0"



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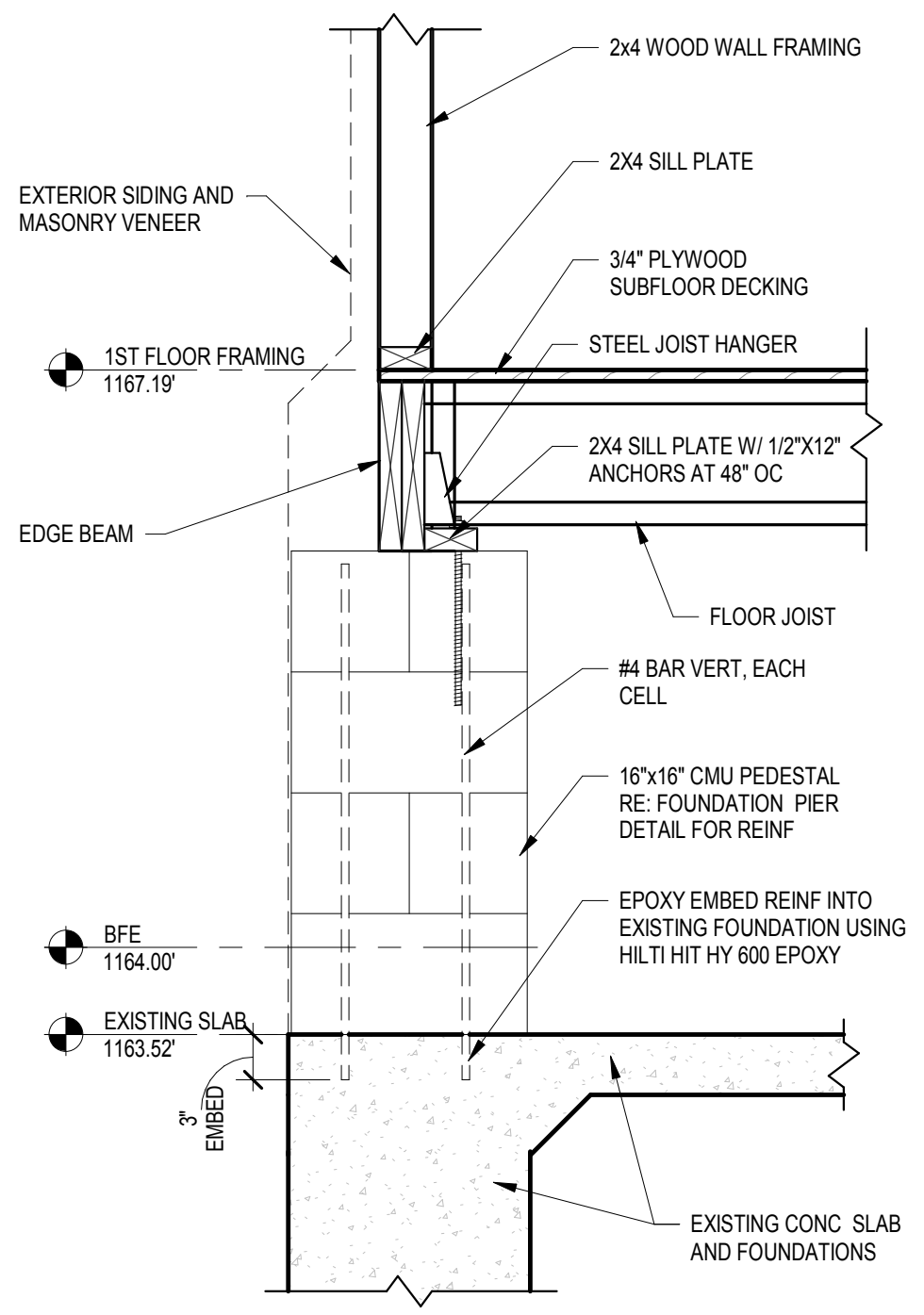


1/0103  
TYP AT STAIRS

# 1 1ST FLOOR FRAMING

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

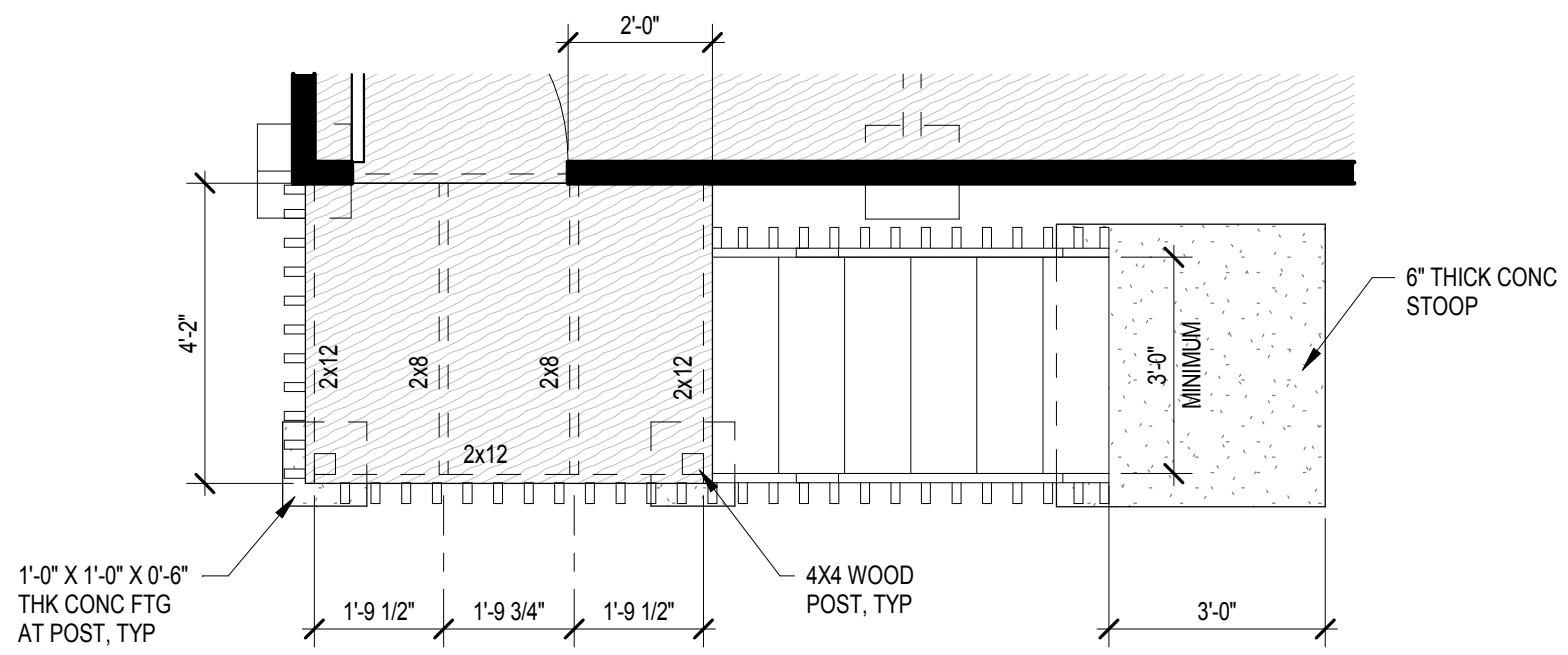
- FLOOR RELIEF OPENINGS FOR OPTIONAL FOUNDATION ENCLOSURE:
- PROVIDE A TOTAL OF 1227 SQ. IN. OF FLOOD RELIEF OPENINGS ON FOUR SIDES OF THE HOME.
  - FLOOR RELIEF OPENINGS CANNOT BE PLACE HIGHER THAN 1'-0" ABOVE ADJACENT GRADE
  - PROVIDE A MINIMUM OF 2 OPENINGS PER SIDE OF THE STRUCTURE



# 2 WALL SECTION

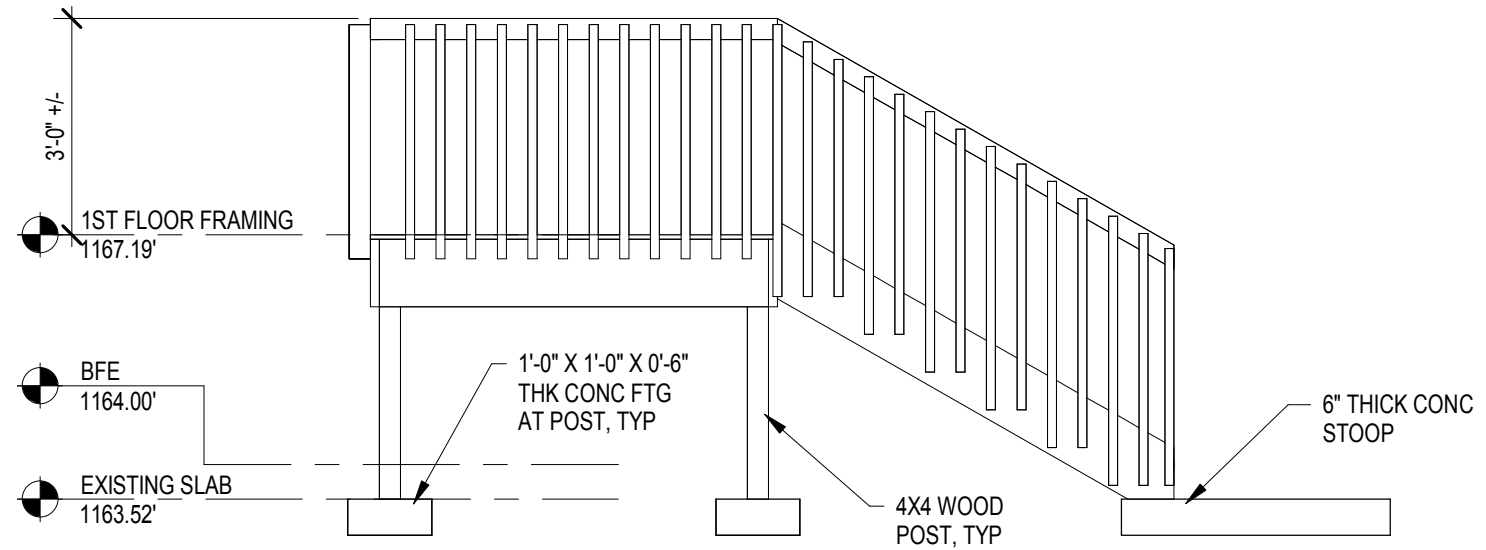
SCALE: 1" = 1'-0"





**ADA COMPLIANT STAIR:**  
 MATERIALS: NO 2 SYP OR BETTER  
 STRINGER: 2X12  
 TREADS: 2X12  
 MIN TREAD DEPTH: 11"  
 MIN RISER HT: 4"  
 MAX RISER HT: 7"  
 (ALL RISER HEIGHTS MUST BE UNIFORM)  
 HANDRAIL HEIGHT: 34" - 38" ABOVE TREAD OR LANDING

**1 EXTERIOR STAIR PLAN**  
 SCALE: 3/8" = 1'-0"



**2 EXTERIOR STAIR ELEVATION**  
 SCALE: 3/8" = 1'-0"



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0103  
 EXTERIOR STAIR  
 PLAN

Tuesday, October 1, 2024

Jobin Cherian  
Resilient Visionary Investments, LLC  
7908 Sunset Blvd  
Rowlett, TX 75088

**Subject: Structural Evaluation and Recommendation  
624-626 Sinclair Drive  
Norman, OK, 73072**

Mr. Jobin Cherian,

This statement is presented as part of a floodplain permit application to the City of Norman for the construction of duplexes located at 624-626 Sinclair Dr. in Norman. According to the elevation certificate provided by Golden Land Surveying, PLLC, the current first floor elevation is 1,163.52 ft. (Datum). According to the Elevation Certificate, the Base Flood Elevation is 1164 ft. After visiting and reviewing the site and the topography of the area, I observed that the grading of the site is sloped to the culvert that is adjacent to the east and north of the site. Water movement to or from the culvert/waterway is not obstructed.

To conform to FEMA requirements. The you are proposing to elevate the structure to raise the 1<sup>st</sup> floor to an elevation above the BFE. Pursuant to that I have designed and details the necessary structure to support the home on pilasters. The designed drawings may be submitted with the application for a Floodplain construction permit. It is this engineer's opinion that this project will result in a floor elevation 3'-0" or more above the flood BFE. This should give ample room for structural, electrical, and mechanical underfloor elements to be installed 2'-0" higher than the BFE. Additionally, the proposed construction will return 1419 cubic feet of flood volume back the flood zone.

**Closing:**

Thank you again for the opportunity to provide a structural evaluation and report. Photos taken during my site observations are available on request. If you have any questions or if I may be of any more assistance, please let me know.

Kind regards,

Uwem J. Ekpenyong P.E.  
Urban James Engineering

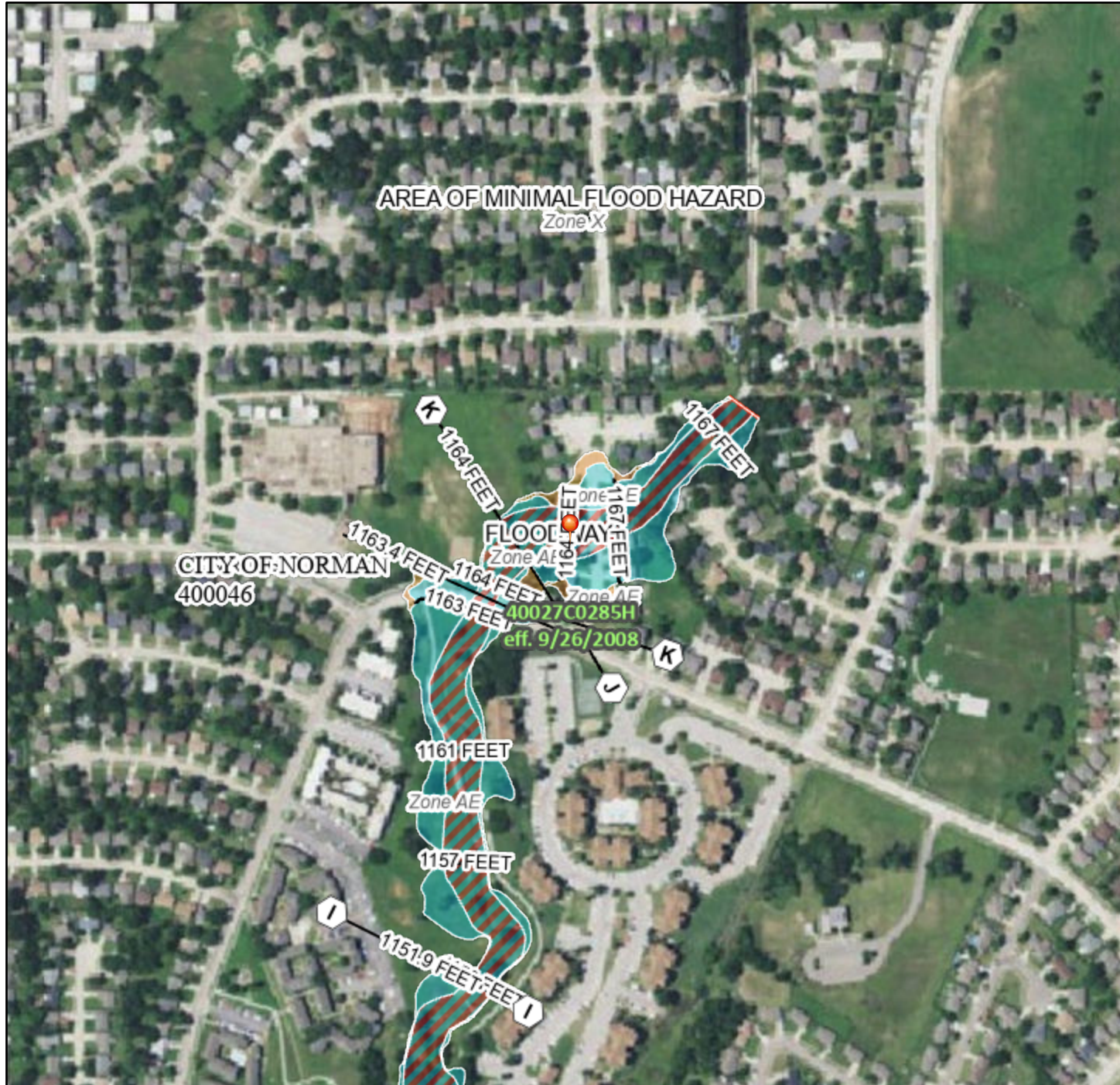


Be advised that my recommendations are based on limited visual observations only. No physical testing was performed, and no calculations have been made to determine the adequacy of the structural system or its compliance with accepted building code requirements. The building structure was not investigated for structural damage or improper construction or inadequate design, except as noted. Not all conditions were observed. Nor was the building evaluated beyond the scope indicated in the project understanding. The acceptance of the report or payment for services indicates an agreement to limit the liability of Urban James Engineering to the extent of the fee paid for service.

# National Flood Hazard Layer FIRMette



97°25'18"W 35°12'51"N



## Legend

Item 2.

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM UT

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee. See Notes. Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
GENERAL STRUCTURES		Area of Undetermined Flood Hazard Zone D
		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance Water Surface Elevation
		17.5
		Coastal Transect
		Base Flood Elevation Line (BFE)
		Limit of Study
MAP PANELS		Jurisdiction Boundary
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Digital Data Available
		No Digital Data Available
		Unmapped

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

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0 250 500 1,000 1,500 2,000 Feet 1:6,000

97°24'40"W 35°12'21"N

Basemap Imagery Source: USGS National Map 2023





