

2024 - 25

REVISED
11/07/24

**44th
Annual**

**"Single Family Residence
with Home Office /
Business Studio"**

The Robert L. Polk & John D. Kohler Student Design Competition

SPONSORED BY:



**ATTENTION:
MONROE COUNTY
STUDENT GRADES 7-12**

CASH PRIZES

- 1ST PLACE - \$400 CASH & CERTIFICATE**
- 2ND PLACE - \$300 CASH & CERTIFICATE**
- 3RD PLACE - \$150 CASH & CERTIFICATE**
- 4TH PLACE - \$100 CASH & CERTIFICATE**
- 5TH PLACE - \$ 50 CASH & CERTIFICATE**

**(2) TRAVELING SCHOOL TROPHIES - TO ENCOURAGE
COMPETITION AMONG SCHOOLS FOR 1ST & 2ND PLACES**

DUE DATE: WEDNESDAY, APRIL 9, 2025 AT 12:00 NOON

FOR MORE INFORMATION CONTACT: KEITH KOHLER (734.242.6880) OR GREG KREPS (734.777.1962)

The Robert L Polk & John D. Kohler Student Design Competition

***Sponsored by Home Builders Association of Monroe County &
Kohler Architecture***

1. Sponsor - The Home Builders Association of Monroe County and Kohler Architecture.
2. Eligibility - All junior high and senior high school students in the Monroe County School System, (grade 7 thru 12). Students do not have to be in a formal art, drafting or drawing course.
3. Deadline - All entries must be submitted by Wednesday, April 9, 2025 at 12:00 Noon, at the Office of Kohler Architecture - 1110 W. Front St., Monroe, MI 48161. Contact Keith Kohler at 734-242-6880 or Greg Kreps at 734-777-1962.
4. Project – “A Single Family Residence with a Home Office / Business Studio”
5. Judging - Will be done Friday, April 11, 2025 at 10:00 a.m. by members of the HBA and Kohler Architecture.
6. Judging Guidelines - Will be based on the following point system (100 points total) for both categories:
 - a) Program Compliance - 1/3
 - b) Functional Design - 1/3
 - c) Presentation & Composition - 1/3

The highest overall score will receive 1st place; 2nd highest will receive 2nd place, etc.

7. Awards:
 - a) Individual Awards
 - 1st Place Certificate & \$400 Cash
 - 2nd Place Certificate & \$300 Cash
 - 3rd Place Certificate & \$150 Cash
 - 4th Place Certificate & \$100 Cash
 - 5th Place Certificate & \$50 Cash

The judges have the option to disqualify any submittal if it does not meet the minimum program requirements or expected standards of quality. It will also be their discretion to shift some or all of the awards into the other places, should there be a lack of qualifying submittals. Each student is limited to only one submittal. The same individual submittal will also be judged in the traveling trophy category.

- b) School Traveling Trophy

There are (2) traveling school trophies, which will be awarded to (2) different schools. The 1st winning school trophy will be awarded to the school of the 1st place student winner. The 2nd winning school trophy will go to a different school having the student winner closest to 1st place. No single school will receive both trophies. In the event only one school enters, the 2nd trophy will remain dormant. The trophies will be given to the instructor at the awards banquet and remain in the school's possession until the following year. At that time, it will be returned to the Home Builders Association for re-issuing to that year's winning school(s).

8. Assistance:

For purposes of explaining this year's program, answer any questions and give assistance, Members of the committee will be available. Contact Keith Kohler (734-242-6880) or Greg Kreps (734-777-1962).

9. Award Ceremony:

The winners will be invited to the Home Builder's Association for presentation of awards and public recognition. Tentatively set for Thursday, May 1, 2025 at 6:30 pm- verification of location and time for award ceremony will be announced later.

10. Entry Requirements - Each student must submit the following drawings:

- a) Drawing Media - Drawings shall be done on white tracing/vellum or opaque/bond paper and secured to cardboard or foamcore board for rigidity (maximum cardboard size is 24" x 36"). Each drawing shall be secured to one board on one side only. One drawing/tracing allowed per board. Maximum number of boards shall be three (3).
- b) Drawing Content - Drawings shall be preliminary in nature, sufficient to explain the design and concept. Each submittal must contain:
 - 1. Site Plan at 1" = 20'-0" scale.
 - 2. First Floor, Second Floor and Basement Plan at 1/4" = 1'-0" scale
 - 3. Four (4) Exterior elevations at 1/4" = 1'-0" scale.
 - 4. One (1) Exterior perspective view
 - 5. Typical exterior wall section at 3/4" = 1'-0" scale.
 - 6. Full width building/cross section (*thru stairs indicating first floor / second floor of house*) at 1/4" = 1'-0" scale.
 - 7. A narrative to describe your design concept (*see program requirements for clarification*)
 - 8. Multiple interior and exterior perspective drawings are encouraged, though not required.
- c) Dimensions/Square Footage – **Fully dimensioned Site Plan, Floor Plan, Exterior Elevations** (i.e. floor to floor elevations and ridge ht.), **Wall Section Detail, and Building Cross Section are required. Please note that room sizes are to be noted on floor plan.**
- d) Identification - Each entry shall include the following information in a plain sealed opaque envelope, taped to the back of each board:

Name, Address, Telephone Number, School, Principal and/or Instructor.

PROGRAM REQUIREMENTS
“SINGLE FAMILY RESIDENCE WITH A HOME OFFICE / BUSINESS STUDIO”

A. REQUIREMENTS

1. Design The design of the residence should be your interpretation of the requirements, consisting of a conservative design for a middle-income family. It must be a single-family residence with a home office / business studio. Style can be Contemporary, Victorian, Colonial, English Tudor, Dormer, Arts & Crafts, etc., or combination of styles.
2. Site See Site Plan on Page 5 showing property lines, building setbacks, etc. Show driveway, sidewalk, porches, decks, landscaping, or other exterior related amenities. All public utilities are available at the street. Assume site is flat and the best view is towards rear of property. Lot is 50' wide x 120' deep with 9' and 6' side yard building setback each side – total of 15' together. Other yard setbacks are 35' front and 35' rear. **Location of home and garage must be shown with “main” front entry facing street - see attached Site Plan for clarification.**
3. Size The house is to be a single-family residence. Gross floor space is **2,500 S.F. max. gross area** (*out to out exterior walls w/ garage excluded*). Basement is not included in total square footage. You as a designer, have the freedom and must use your best judgment to arrive at appropriate room sizes and space arrangements for all rooms unless noted otherwise in this program.
4. Stories The design must be a 1-1/2 to 2 story home. The home office / business studio must be on the first floor (See office/studio requirements to clarify). Handicapped accessibility is not a consideration with this project. Basement is required, but it is not necessary to show a floor plan – just show a stair down on first floor plan. At stairs, clearly show and provide sufficient head clearance. Curved, spiral, winding, or glass package type stairs not recommended.
5. Construction The design is **required** to be a 1-1/2 to 2 story home residence, on full depth basement. Typical wall construction is to be 2x6 wood studs @ 16" o.c. and 7/16" OSB sheathing, Tyvek house wrap, and vinyl siding on the exterior. Insulate walls with R-21 batt insulation and ½" gypsum board on interior. The roof slope is to be determined by you, with trusses having an energy heel at bearing. Roof can be a combination of gable and hip design. Bay windows and skylights are acceptable.
6. Bedrooms There must be (2) separate Bedrooms on the second floor and (1) Primary Bedroom with it's own bath located on first floor.
7. Bathrooms Total of (3). There must be (1) full bath (water closet, lav, tub) to serve the (2) bedrooms, a common full bath serving the Home Office and first floor, and a Primary Bath (water closet, walk-in shower, lav.) for the Primary Bedroom.
8. Basement Include a space, centrally located, in the basement for a forced air furnace and a water heater. Indicate location on the basement plan. Provide a secondary means of egress with 3 FT x 3 FT clear window well (minimum 24" clear height x 20" clear width), located 44" above finished floor. Also provide 2 additional basement windows. Indicate on basement plan. May be developed with finish rooms if desired, but not included as part of total square footage.
9. Other Rooms In the main house provide kitchen with island eating area, great / living / family / dining room (all one room). Include a laundry room (indicate washer, dryer, utility tub) on first floor that is convenient to use from the kitchen area. Exterior decks/patios as desired.

10. Garage A simple two car (22'wx24'd) attached garage must be included in your final design. Garage square footage not to be included in total square footage. Garage doors facing street are permitted by zoning ordinance.
11. Home Office The office / studio shall be located on the first floor with a common bath room (water closet, lav, tub/shower) serving both the first floor and office / studio.

The office / studio should have its own exterior entrance, so that a visitor could have direct access from the drive / parking area to enter without disrupting the daily living functions of the main house. Be considerate of where the office / studio is located to allow good traffic flow without disturbing the other interior spaces. Handicap accessibility is not required.

The office / studio should allow future use as a guest bedroom with minimum remodeling. For privacy, the entire house should appear as a unified whole of the same architectural style. The Owner does not want to have the appearance of multiple additions.
12. Furniture All floor plans must show furniture and appliance arrangements in each room at the same scale as the floor plan (ie. counters, wall/base cabinets, plumbing fixtures, couches, beds, tables, chairs, etc).
13. Narrative Include a descriptive statement of how you arrived at the solution you are submitting. This may be based on how the interior spaces are arranged, views to the exterior, architectural style that was chosen, materials, orientation, etc.
14. Exterior Provide an exterior design of your choice. A covered porch, to protect against inclement weather, is optional. An exterior 3-D Perspective View is required. Your design must show the exterior materials - siding, double hung windows, stacked stone, brick, asphalt shingles, etc. Consideration of making the street side elevation marketable shall be given high priority when judging final designs.
13. Stairs Stairways shall meet the following minimum code requirements: Stairways shall not be less than 36 inches in clear width. The headroom in stairways shall not be less than 6 feet 8 inches measured vertically from the sloped line adjoining the tread nosing or from the floor surface of the landing or platform on that portion of the stairway. There shall be a floor landing at the top and bottom of each stairway. Where the stairway has a straight run, the depth in the direction of travel shall not be than 36 inches. The maximum riser height shall be 8 inches height with a minimum tread depth of 9 inches (please note that the preferred stair design is a 7 inch riser height x 11 inch tread depth).

14. Code The following items must be complied with in the design as based upon the 2015 Michigan Residential Code (MRC).

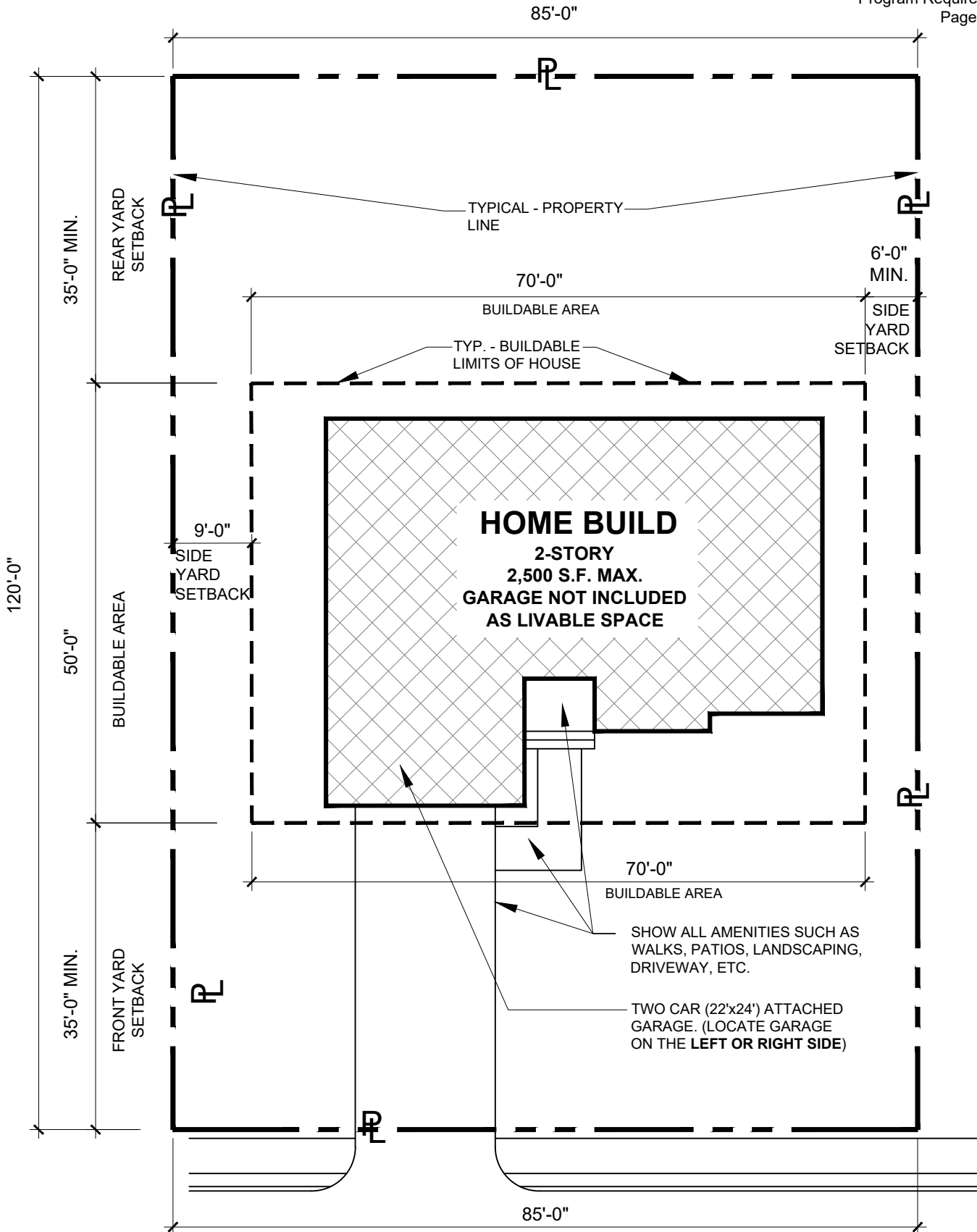
Sleeping Room Egress - Each bedroom shall have a minimum of one operable window or door for emergency escape, which opens to the exterior having a minimum net clear opening of 5.7 sq. ft. (minimum height of 24" and minimum width of 20".) Sill height to be a maximum of 44".

Natural Light/Ventilation – All habitable rooms shall be provided with aggregate glazing area of not less than 8 percent of the floor area of such rooms. Natural ventilation shall be through windows, doors, louvers or other approved openings to the outdoor air. Such openings shall be provided with ready access or shall otherwise be readily controllable by the building occupants. The minimum openable area to the outdoors shall be 4 percent of the floor area being ventilated. Habitable rooms are those used for sleeping, living, or eating. Kitchens are exempt. Bathrooms, closets, halls, storage, utility or similar spaces are not considered habitable space. A room may be considered a part of an adjoining room when one-half of the area of the common wall is open and unobstructed and provides an opening of not less than 1/10 of the floor area of the interior room or 25 sq. ft., whichever is greater.

Stairs & Hall - A suggested riser height of 7" to 7 1/2" and a tread width of 10" to 11" should be used. 7" riser and 11" tread recommended. The code limits are a maximum riser height of 8 1/4" and a minimum tread of 9" as measured between the furthestmost projection of adjacent planes (nosing to nosing; riser to riser; or tread to tread) MRC - Section R 311. Minimum width of stairs and hallways shall be 42" (although Code allows 36"), including handrails. Head height clearance shall be 6'-8" minimum measured vertically and in line with riser/nosing. Exterior decks shall be concrete flush with finish grade line or treated wood if elevated deck.

B. SUGGESTIONS

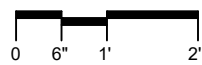
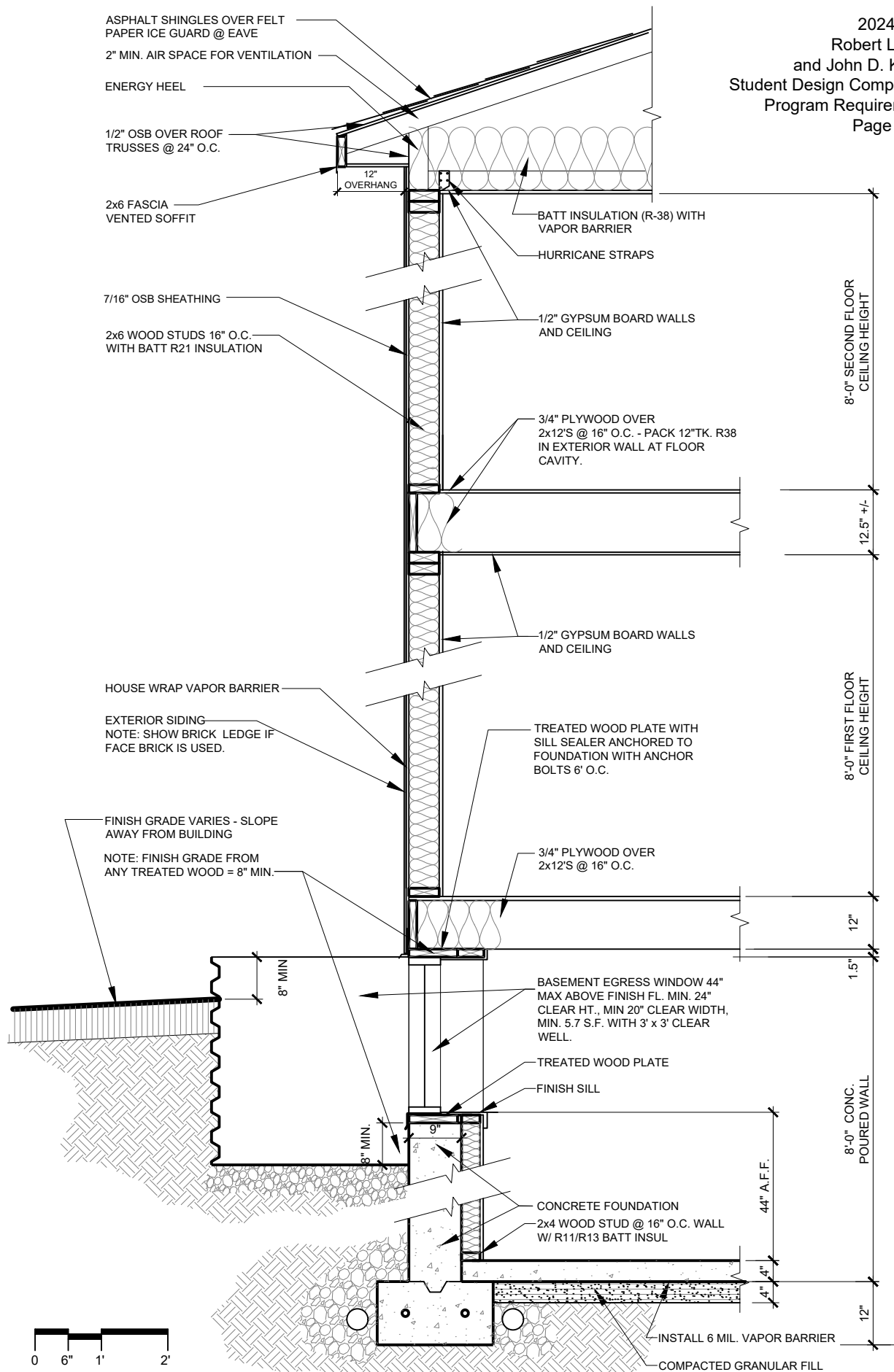
1. Floor plans should be efficient with minimum length of hallways and proper relationships between the living, sleeping, dining, and entertaining functions of the home. Make sure your stairs work (number of treads, risers, head room, etc.).
2. Room sizes should allow for their proper use, such as; bath fixtures must fit with sufficient user space (for the water closet, provide a minimum clear floor space of 36" wide [18" to the center line of fixture] and 54" deep [24" in front of fixture]); kitchen appliances must have an efficient layout; etc.
3. Sensitivity and simplicity should be used in selecting and combining materials properly for your design. Materials can be other than those normally used in home construction today, but must be currently available and installed with today's technology.
4. Remember to place your home within the designated area as shown / noted on the Site Plan. Please use the site plan as provided. You can adjust the shape of your residence as required to accommodate your design. Provide dimensions and locate the house where you want within the buildable area contained in the zoning setbacks.
5. Open floor plans of kitchen/living areas are encouraged. Be imaginative and stay within the area requirements.



SITE PLAN



0 5' 10' 20'



TYPICAL WALL SECTION