

TABLE R301.2(1)  
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD	WIND DESIGN			SEISMIC DESIGN CATEGORY	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP	ICE BARRIER UNDERLAYMENT REQUIRED	FLOOD HAZARDS	AIR FREEZING INDEX	MEAN ANNUAL TEMP
	Speed (mph)	Topographic effects	Special wind region		Weathering	Frost line depth	Termites					
50	124			B								

- For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447 m/s.
- Weathering may require a higher strength concrete or grade of masonry than necessary to satisfy the structural requirements of this code. The weathering column shall be filled in with the weathering index, "negligible," "moderate," or "severe" for concrete as determined from Figure R405.1(1). The grade of masonry units shall be determined from ASTM C34, C55, C62, C73, C90, C129, C145, C176 or C452.
  - The frost line depth may require deeper footings than indicated in Figure R405.1(1). The *jurisdiction* shall fill in the frost line depth column with the minimum depth of footing below finish grade.
  - The *jurisdiction* shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.
  - The *jurisdiction* shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2(4)(A)]. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.
  - The outdoor design dry-bulb temperature shall be selected from the columns of 97.5-percent values for winter from Appendix D of the *International Plumbing Code*. Deviations from the Appendix D temperatures shall be permitted to reflect local climates or local weather experience as determined by the *building official*.
  - The *jurisdiction* shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.
  - The *jurisdiction* shall fill in this part of the table with (a) the date of the *jurisdiction's* entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the status of the Flood Insurance Study, and (c) the panel numbers and dates of the currently effective FIRMs and IFIRMs or other flood hazard map adopted by the authority having *jurisdiction*, as amended.
  - In accordance with Sections R905.1.2, R905.4.5.1, R905.5.3.1, R905.6.3.1, R905.7.5.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the *jurisdiction* shall fill in this part of the table with "YES." Otherwise, the *jurisdiction* shall fill in this part of the table with "NO."
  - The *jurisdiction* shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R405.3(2) or from the 100-year (99 percent) value on the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32°F)".
  - The *jurisdiction* shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32°F)".
  - In accordance with Section R301.2.1.5, where there is local historical data documenting structural damage to buildings due to topographic wind speed-up effects, the *jurisdiction* shall fill in this part of the table with "YES." Otherwise, the *jurisdiction* shall indicate "NO" in this part of the table.
  - In accordance with Figure R301.2(4)(A), where there is local historical data documenting unusual wind conditions, the *jurisdiction* shall fill in this part of the table with "YES" and identify any specific requirements. Otherwise, the *jurisdiction* shall indicate "NO" in this part of the table.
  - In accordance with Section R301.2.1.2.1, the *jurisdiction* shall indicate the wind-borne debris wind zones. Otherwise, the *jurisdiction* shall indicate "NO" in this part of the table.

TABLE N1102.1.2 (R402.1.2)  
INSULATION AND FENESTRATION REQUIREMENTS BY COMPONENT\*

CLIMATE ZONE	FENESTRATION U-FACTOR	SKYLIGHT SHGC**	GLAZED FENESTRATION SHGC**	CEILING R-VALUE	WOOD FRAME WALL R-VALUE	MASS WALL R-VALUE	FLOOR R-VALUE	BASEMENT WALL R-VALUE	SLAB R-VALUE & DEPTH	CRACK SPACE WALL R-VALUE
1	NR	0.75	0.25	30	13	3-4	13	0	0	0
2	0.40	0.65	0.25	38	13	4-6	13	0	0	0
3	0.35	0.55	0.25	58	20 or 13 + 5"	8-13	19	5-13"	0	5-13
4 except Marine 4	0.35	0.55	0.40	40	20 or 13 + 5"	8-13	19	10-13	10, 2"	10-13
5 and Marine 4	0.30	0.55	NR	40	20 or 13 + 5"	13-17	30"	15-19	10, 2"	15-19
6	0.32	0.55	NR	40	20 + 5 or 13 + 10"	15-20	30"	15-19	10, 4"	15-20
7 and 8	0.32	0.55	NR	40	20 + 5 or 13 + 10"	19-21	38"	15-19	10, 4"	15-19

- For SI: 1 foot = 304.8 mm.
- R-values are minimum. U-factors and SHGC are maximum. When insulation is installed in a cavity, which is less than the label or design thickness of the insulation, the required R-value of insulation shall not be less than the R-value specified in the table.
  - The fenestration U-factor column excludes skylights. The SHGC column applies to all glazed fenestration.
    - Exception: Skylights may be excluded from glazed fenestration SHGC requirements in Climate Zones 1 through 3 where the SHGC for such skylights does not exceed 0.75.
  - 15/18" means R-15 continuous insulation on the interior or exterior of the house or R-18 cavity insulation at the interior of the basement wall. 15/18" shall be permitted to be met with R-13 cavity insulation on the interior of the basement wall plus R-5 continuous insulation on the exterior or exterior of the house. 10/13" means R-10 continuous insulation on the interior or exterior of the house or R-13 cavity insulation at the interior of the basement wall. R-5 shall be added to the required slab edge R-values for heated slabs. Insulation depth shall be the depth of the footing or 2 feet, whichever is less in Zones 1 through 3 for heated slabs.
  - There are SHGC requirements in the Marine Zone.
  - Basement wall insulation is not required at warm-humid locations as defined by Figure N1101.10 and Table N1101.10.
  - Or insulation sufficient to fill the framing cavity, R-19 minimum.
  - The first value in cavity insulation, the second value is continuous insulation, so "13-5" means R-13 cavity insulation plus R-5 continuous insulation.
  - The second R-value applies when more than half the insulation is on the exterior of the mass wall.

Stow MA is a stretch energy code community.  
A HER5 rater is required to specify and verify adequate insulation.  
These documents are prepared based on the Prescriptive 2015 IECC.

APPENDIX U: SOLAR-READY PROVISIONS - DETACHED ONE- AND TWO-FAMILY DWELLINGS, MULTIPLE SINGLE-FAMILY DWELLINGS (TOWNHOUSES) (Adopted as amended)

Delete APPENDIX U and replace as follows:

SECTION AU101 (RB101) SCOPE

AU101.1 (RB101.1) General These provisions shall be applicable for new construction, except additions.

SECTION AU102 (RB102) GENERAL DEFINITIONS

SOLAR-READY ZONE. A section or sections of the roof or building overhanging designed and reserved for the future installation of a solar photovoltaic or solar thermal system.

SECTION AU103 (RB103) SOLAR-READY ZONE

AU103.1 (RB103.1) General New detached one- and two-family dwellings, and multiple single-family dwellings (townhouses) with not less than 600 sq ft (55.74 m<sup>2</sup>) of roof area oriented between 110° and 270° of true north shall comply with sections AU103.2 through AU103.8 (RB103.2 through RB103.8).

EXCEPTIONS

- New residential buildings with a permanently installed on-site renewable energy system.
- A building with a solar-ready zone that is shaded for more than 70% of daylight hours annually.
- Buildings and structures as designed and shown in construction documents that do not meet the conditions for a solar-ready zone area.

AU103.2 (RB103.2) Construction Document Requirements for Solar Ready Zone Construction documents shall indicate the solar-ready zone where applicable.

AU103.3 (RB103.3) Solar-Ready Zone Area. The total solar-ready zone area shall consist of an area not less than 300 sq ft (27.87 m<sup>2</sup>) exclusive of mandatory access or set back areas as required by 527 CMR. New multiple single-family dwellings (townhouses) three stories or less in height above grade plane and with a total floor area less than or equal to 2,000 sq ft (185.8 m<sup>2</sup>) per dwelling shall have a solar-ready zone area of not less than 150 sq ft (13.94 m<sup>2</sup>). The solar-ready zone shall be composed of areas not less than five feet (1,524 mm) in width and not less than 80 sq ft (7.44 m<sup>2</sup>) exclusive of access or set back areas as required by 527 CMR.

This project does NOT have any areas to orient. Therefore no need to comply with sections AU103.2 - AU103.8

APPENDIX F: PASSIVE RADON GAS CONTROLS (Adopted as revised)

AF101.1 Revise the section as follows:

AF101.1 General This appendix contains minimum requirements for radon construction in the high radon potential counties as listed in Table AF101(1) regardless of the radon levels at the site. These requirements are intended to provide a passive means of reducing radon gas entry and prepare the dwelling for post-construction radon mitigation, if necessary. See Figure AF102. Active construction techniques, rather than passive techniques, shall be permitted to be used where approved.

Alternatively, the passive system requirements of ANSI/AARST Standard Designation = C-UMI, *Reducing Radon in New Construction of One, 4 Two Family Dwellings and Townhouses*, 2015 may be used for new construction in Zone 1, or approved equal system.

Regardless of which approach is used, no testing is required as follows:

- In the radon levels at the site prior to construction.
- For the radon control system when completed.
- In the building after completion of the project.

Therefore, such testing shall not be a condition of issuing a certificate of occupancy.

AF102.1 Revise the definition of "GAS-PERMEABLE LAYER" as follows:

GAS-PERMEABLE LAYER. A gas-permeable layer shall consist of one of the following:

- A uniform layer of clean aggregate that is not less than four inches (102 mm) thick. The aggregate shall consist of material that will pass through a two-inch (51 mm) sieve and be retained by a 1/2-inch (6.4 mm) sieve.
- A uniform layer of sand (fine or fill) that is not less than four inches (102 mm) thick and that is created by a soil gas collection mat or soil gas membrane installed in accordance with the manufacturer's instructions. The soil gas mat or membrane shall be designed for this purpose and condition, and have the capacity to freely transport soil gases to the collection point from the mass moisture area.

AF103.2.2 Revise the subsection as follows:

AF103.2.2 Sumps. Sumps open to soil or serving as the termination point for subsurface drain tile loops shall be covered with a gasketed or sealed lid. Sumps used as the suction point in a sub-slab depressurization system shall have a lid designed to accommodate the vent pipe. Sumps used as a floor drain shall have a lid equipped with a trapped inlet. Drainage systems that lead outside the foundation walls shall be isolated or trapped so as not to short-circuit the depressurization system.

AF103.3.1 Revise the subsection as follows:

AF103.3.1 Soil-gas-retarder. The soil in basements and enclosed crawl spaces shall be covered with a soil-gas-retarder. The soil-gas-retarder shall be topped not less than 12 inches (305 mm) at joints and shall extend to foundation walls enclosing the basement or crawl space. The soil-gas-retarder shall fit closely around any pipe, wire, or other penetrations of the material. Penetrations or tears in the material shall be sealed or covered with additional sheathing. The membrane shall extend upward six inches be sealed to the perimeter footing or wall with an ASTM C290 class 25 or larger sealant or equal.

AF103.3.2 Revise the subsection as follows:

AF103.3.2 "T" Fitting and Vent Pipe. A "T" fitting shall be inserted beneath the soil-gas-retarder and be connected to a three-inch minimum vertical vent pipe. The vent pipe shall extend through the conditioned space of the dwelling and terminate not less than 12 inches (305 mm) above the roof in a location not less than ten feet (3.048 m) away from any window or other opening into the conditioned spaces of the building that is less than two feet (610 mm) below the exhaust point. The horizontal legs of the "T" fitting shall connect to two five-foot long pieces of four-inch diameter perforated pipe laid horizontally in a 50 sq ft bed of gravel, filled with the same gravel as used in the gas-permeable layer.

AF103.4.2 Revise the subsection as follows:

AF103.4.2 Soil-gas-retarder. A soil-gas-retarder shall be placed on top of the gas-permeable layer prior to casting the slab or placing the floor assembly. The soil-gas-retarder shall cover the entire floor area with separate sections lapped not less than 12 inches (305 mm) and shall extend upward six inches and be sealed to the wall with an ASTM C290 class 25 or higher sealant or equal. The soil-gas-retarder shall fit closely around any pipe, wire, or other penetrations of the material. Penetrations or tears in the material shall be sealed or covered. Under-slab insulation, if used, shall be placed on top of the sheathing.

AF103.4.3 Revise the subsection as follows:

AF103.4.3 "T" Fitting and Vent Pipe. Before a slab is cast or other floor system is installed a "T" fitting shall be inserted below the slab or other floor system and the soil-gas-retarder. The "T" fitting shall be connected to a three-inch minimum vertical vent pipe. The vent pipe shall extend through the conditioned space of the dwelling and terminate not less than 12 inches (305 mm) above the roof in a location not less than ten feet (3.048 m) away from any window or other opening into the conditioned spaces of the building that is less than two feet (610 mm) below the exhaust point. The horizontal legs of the "T" fitting shall connect to two five-foot long pieces of four-inch diameter perforated pipe laid horizontally in a 50 sq ft bed of gravel, filled with the same gravel as used in the gas-permeable layer.

ASHRAE Standard 62.2 Table 4.1a  
Continuous Whole-Building Ventilation Rate in cfm

Floor Area (SQ FT)	Number of Bedrooms				
	0-1	2-3	4-5	6-7	> 7
<1500	30	45	60	75	90
1501-3000	45	60	75	90	105
3001-4500	60	75	90	105	120
4501-6000	75	90	105	120	135
6001-7500	90	105	120	135	150
>7500	105	120	135	150	165

R303.4 Mechanical ventilation. Where the air infiltration rate of a dwelling unit is 5 air changes per hour or less where tested with a blower door at a pressure of 0.2 inch w.c. (50 Pa) in accordance with Section N1102.4.1.2, the dwelling unit shall be provided with whole-house mechanical ventilation in accordance with Section M1507.3.

Siding Color and style TBD by owner and builder.  
Front porch roof supported by 2 structural fiberglass columns or similar.  
2 additional columns are decorative.

New Roof slopes to match existing.

1x6 rake board and 1x3 shadow board for all Gables. Material TBD.  
Optional Water Table trim board Not shown.

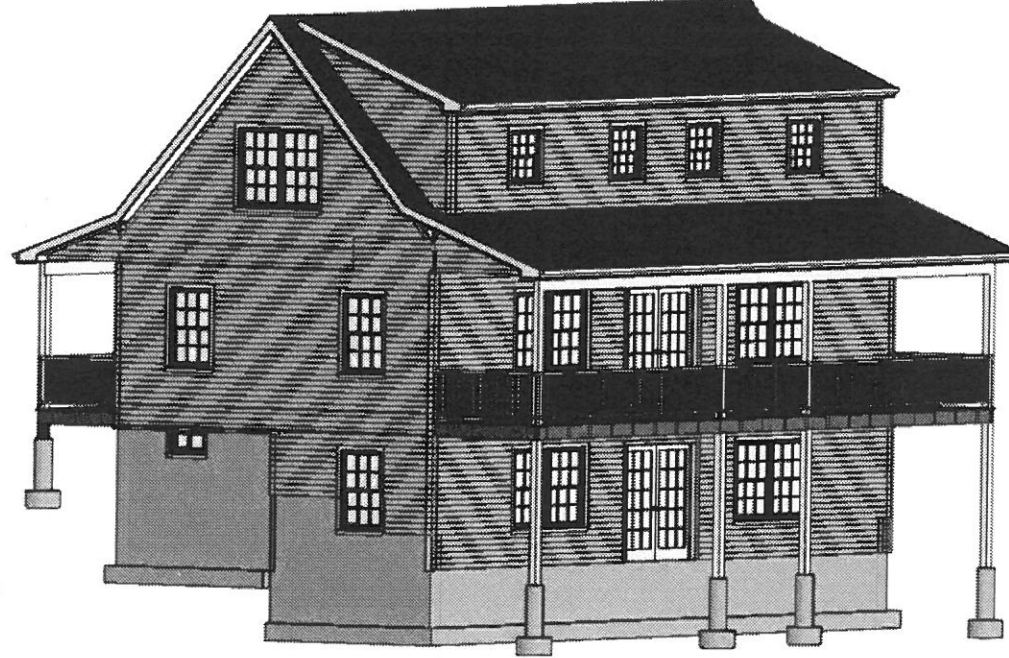
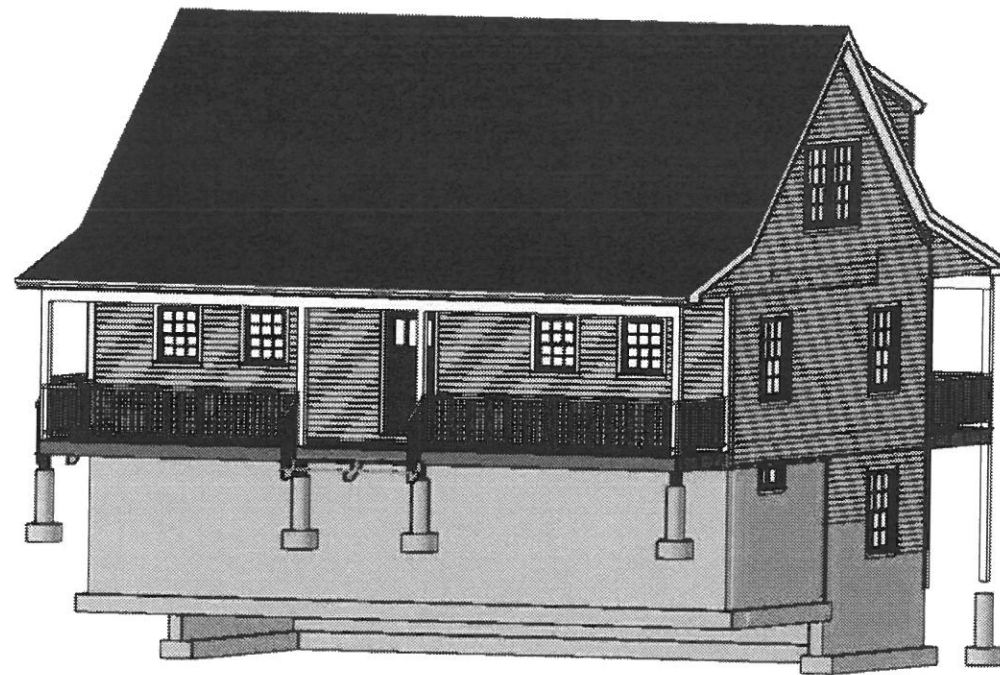
PT deck and stairs if added per the APA "Residential Deck Frame Construction Guide" based on the 2012 IRC.

Guardrails not shown for clarity but are required for walking surfaces greater than 30" above the surrounding terrain.

Stairways to be a minimum of 36" clear width and include a required handrail mounted inside the guardrails.

Handrails are required for stairways with 4 or more risers.

Provided gutters and downspouts to collect rainwater from the roof and direct it away from the foundation. (Not Shown)



PROPOSED ISOMETRIC

Isometric views are NTS and are illustrative only to help visualization. Some details may be inaccurate. Refer to the orthographic plans and the applicable Codes for all construction instructions.

Narrative:

New Construction 2-Story 2-BR home with finished walkout basement.

Ground Floor	GLA = 111 SF (Measured Inside Ext walls)
1st Floor	GLA = 955 SF (Measured Inside Ext walls)
2nd Floor	GLA = 682 SF (Measured Inside Ext walls)
TOTAL	GLA = 2,548 SF

All NEW framing and construction to be in accordance with MA Code 780 CMR 9th Edition and IRC 2015 for 1 & 2 Family Residential Construction. While good faith effort has been made to incorporate as much of that information as practical in these documents, human error or omission is possible. It is the licensed builder's responsibility to review these documents prior to construction and to proceed in accordance with applicable codes.

REVISION TABLE

NUMBER	DATE	DESCRIPTION

COVER

PROJECT DESIGNED FOR:  
**Greendale LLC**  
44 Pine Point Road  
Stow, MA

DATE:

3/29/2020

SCALE:

SHEET:

A-0





LEFT ELEVATION 1/4 in = 1 ft

Foundation / footing steps are for illustration only. Actual foundation and footing steps to be determined by site conditions and planned retaining walls if any.



FRONT ELEVATION 1/4 in = 1 ft

1/2" Rake built off sheathing with 2x6 ladder frame.  
1x4 Trim with 1x3 shadow board.  
3" nom. Fascia with gutter.  
Gutter drops required but not shown.

Porch railings shown.  
Optional if deck is less than 30" or less above grade.

For stairways with 4 or more risers or a total rise greater than 30" guards and handrails are required.



RIGHT ELEVATION 1/4 in = 1 ft

Foundation / footing steps are for illustration only. Actual foundation and footing steps to be determined by site conditions and planned retaining walls if any.



REAR ELEVATION 1/4 in = 1 ft

Rake built off sheathing with 2x6 ladder frame with 1x3 shadow board.  
3" nom. Fascia with gutter.  
Gutter drops required but not shown.

1/2" Rake built off sheathing with 2x6 ladder frame.  
1x4 Trim with 1x3 shadow board.  
3" nom. Fascia with gutter.  
Gutter drops required but not shown.

- Rear porch stair location TBD by builder and owner. Build in accordance with MA Code or DCA6 as allowed by MA code.
- Vinyl siding and trim with white aluminum coil over fascia to be considered as a basis for estimating purposes unless directed otherwise by the owner or builder.
- PVC wrapped PT posts and beams for the front porch roof support.
- Vented vinyl soffit for porch ceilings.
- PVC decking for the front and rear porches connected to a PT frame with hidden fasteners.
- Vinyl Rail system where required. (Mandatory guard rails for walk surfaces greater than 30" above grade.)
- Provide gutters and downspouts to collect roof rainfall runoff and direct it away from the foundation.

- Provide well drained window wells around Cellar sashes which will be below grade.

- If required by site conditions, include a foundation perimeter drain system to terminate to daylight downhill away from the house.

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REVISION TABLE	NUMBER	DATE	REVISION BY	DESCRIPTION

ELEVATIONS

PROJECT DESIGNED FOR:  
**Greendale LLC**  
44 Pine Point Road  
Stowe, MA

DATE:

3/29/2020

SCALE:

SHEET:

A-1

**GENERAL NOTES:**

Dimensions are to face of framing or Foundation

Interior walls are 2x4 studs @ 16" o.c.

Exterior walls and other insulated walls adjacent to unconditioned space are 2x6 stud framed @ 16" o.c. U.N.O.

Provide separate switched light fixture connections over vanities and in each bathroom ceiling. Additionally provide a 50 CFM quiet exhaust fan (Can be combined with ceiling light) with a timer switch.

Provide GFCI double outlet on the wall adjacent to each vanity.

SD indicates smoke detector.

CO indicates CO2 detector.

HD indicates heat detector.

Interconnect all SD, CO, HD, and SD/CO devices in the new structure and the existing home to sound an alarm when any or all are activated. Provide and install in accordance with current code requirements. The existing home systems must also be brought up to current standards.

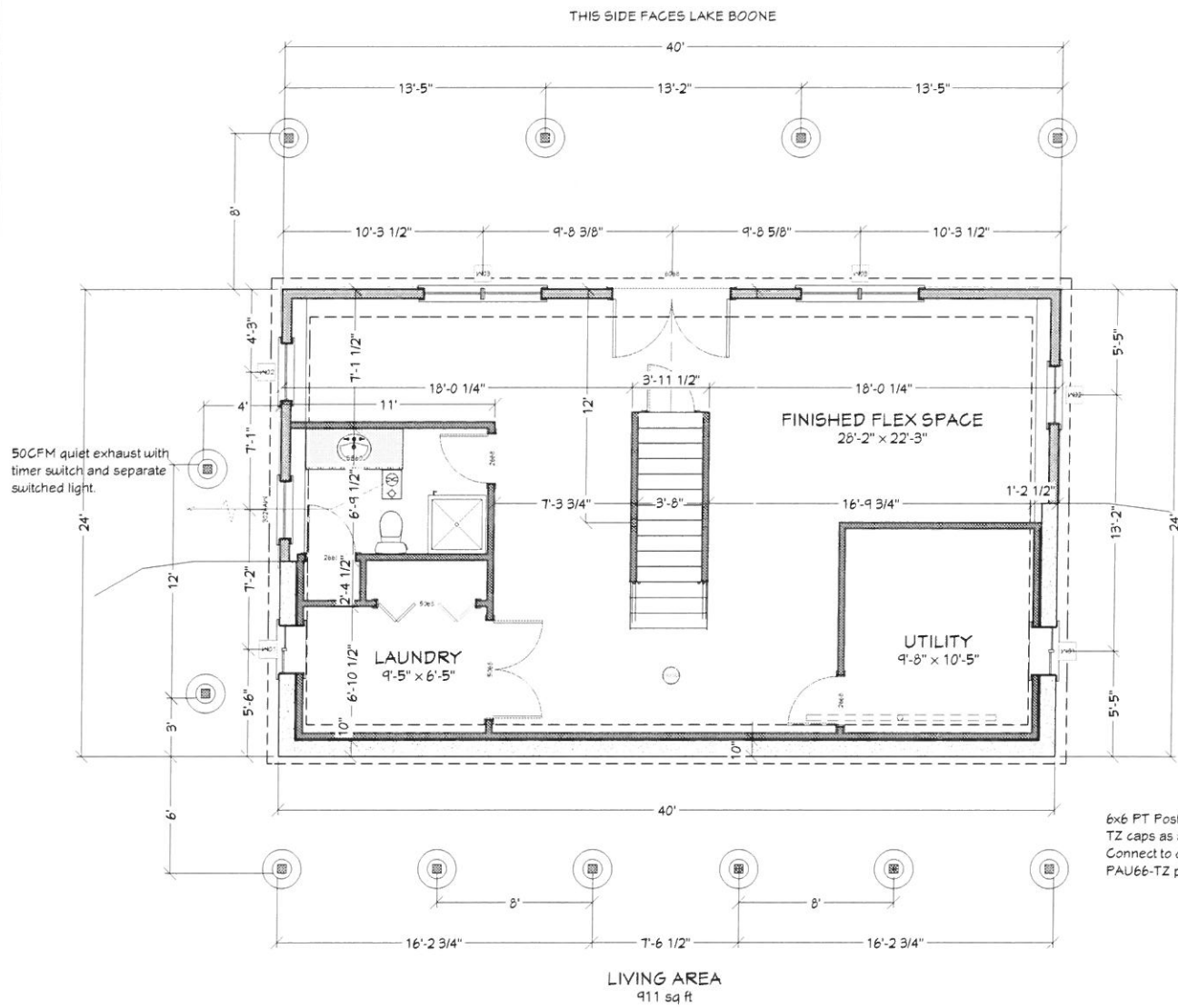
SD/CO detectors within 20 ft. of a kitchen or bathroom must be "Photo-electric" type.

All detection devices must be hard wired AC power with battery backup unless existing ceiling finishes must be removed to install the hard wiring.

Electric lighting and outlets are to be provided as required by code. Additional outlets, fixtures, or other equipment are optional and are to be coordinated between the owner and the builder prior to rough in.

Exterior security and decorative lighting is not shown but should be provided at the owner's discretion.

**ENERGY CONSERVATION per MA STRETCH ENERGY CODE.**

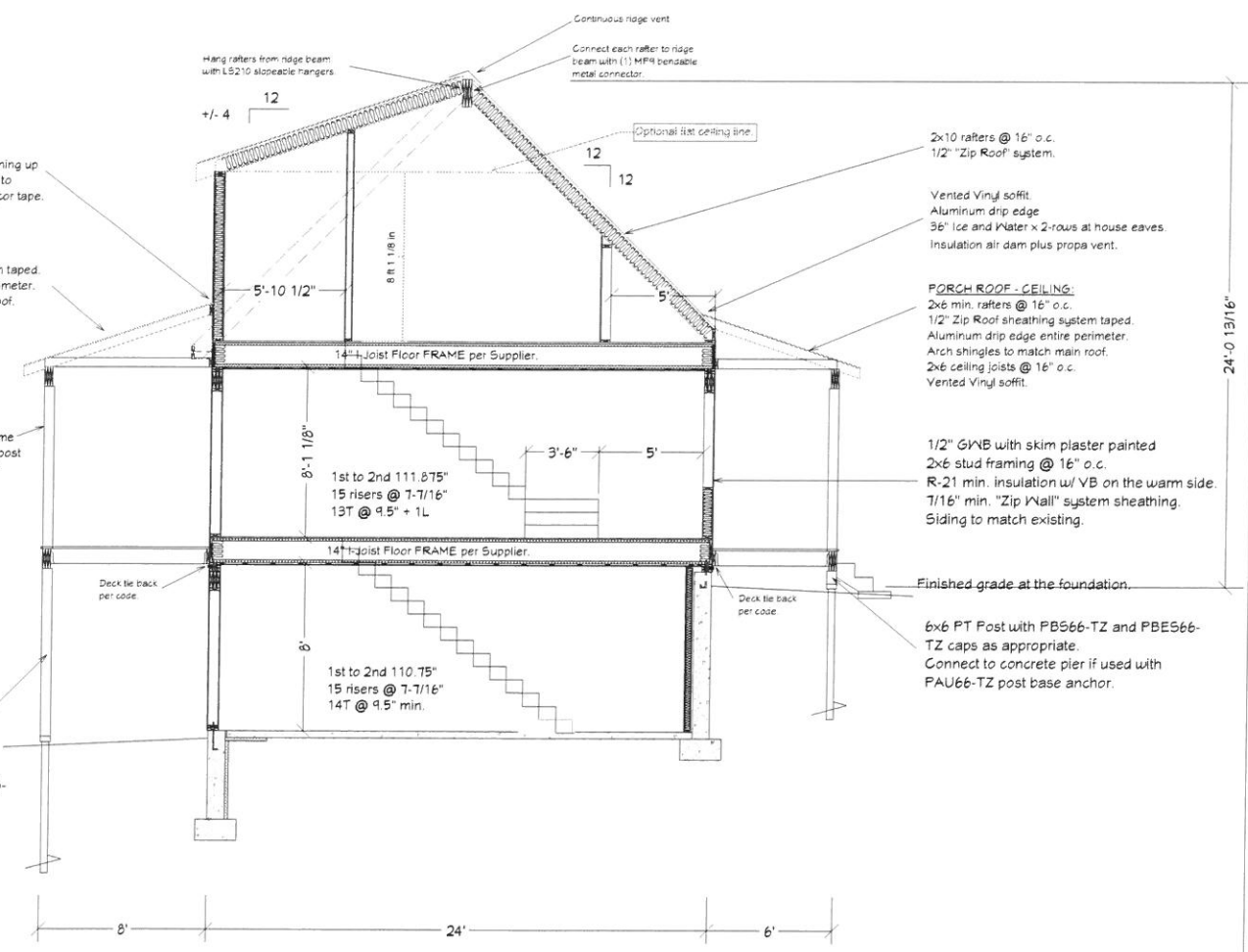


Ice and water + aluminum flashing up behind siding and tape sealed to sheathing with Zip Tape or Vycor tape.

**PORCH ROOF - CEILING:**  
2x6 min. rafters @ 16" o.c.  
1/2" Zip Roof sheathing system taped.  
Aluminum drip edge entire perimeter.  
Arch shingles to match main roof.  
2x6 ceiling joists @ 16" o.c.  
Vented Vinyl soffit.

6x6 PT post with PVC trim.  
Connect to beam and deck frame with FB566-TZ and FBES-TZ post cap connectors as appropriate.

6x6 PT Post with PB566-TZ and PBES66-TZ caps as appropriate.  
Connect to concrete pier if used with PAU66-TZ post base anchor.



Ground Floor PLAN 1/4 in = 1 ft

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NUMBER	DATE	REVISION TABLE	REVISOR	DESCRIPTION

**Basement PLAN**

PROJECT DESIGNED FOR:  
**Greendale LLC**  
44 Pine Point Road  
Stowe, MA

DATE:

3/29/2020

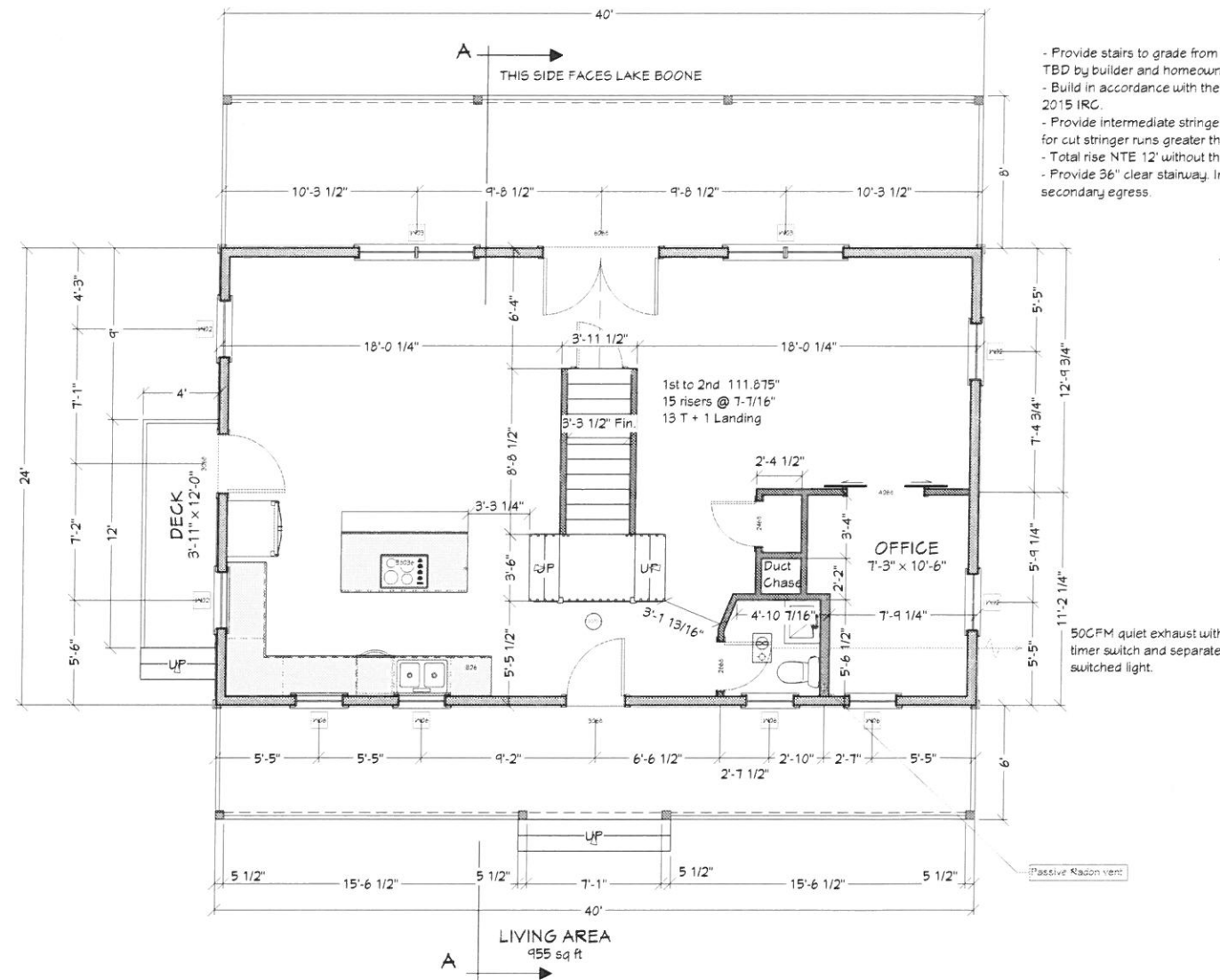
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**A-2**



WINDOW SCHEDULE									
NUMBER	LABEL	QTY	MANUFACTURER	SIZE	R/O	DESCRIPTION	EGRESS	TEMPERED	COMMENTS
W01	2613RS	2		2613RS	31"X16"	RIGHT SLIDING			
W02	3046DH	6		3046DH	37"X55"	DOUBLE HUNG			
W03	6146MU	4		6146	74"X55"	MULLED UNIT			
W04	6146MU	2		6146	74"X55"	MULLED UNIT	YES		
W05	2630DH	2		2630DH	31"X37"	DOUBLE HUNG		YES	
W06	2630DH	6		2630DH	31"X37"	DOUBLE HUNG			



- Provide stairs to grade from rear porch. Location and style TBD by builder and homeowner.
- Build in accordance with the ANS DGA-6 based on the 2015 IRC.
- Provide intermediate stringer supports with posts and piers for cut stringer runs greater than 6'.
- Total rise NTE 12' without the addition of a landing.
- Provide 36" clear stairway. Include handrails if used as a secondary egress.

1st Floor Plan 1/4 in = 1 ft

Dimensions are to face of framing.

Interior walls are 2x4 studs @ 16" o.c. U.N.O.

Exterior walls and other insulated walls adjacent to unconditioned space are 2x6 stud framed @ 16" o.c. with R-20 insulation and air barrier U.N.O.

Provide separate switched light fixture connections over vanities and in each bathroom ceiling. Additionally provide a 50 CFM quiet exhaust fan and light with a timer switch.

Provide GFCI double outlet on the wall adjacent to each vanity.

SD indicates smoke detector.  
CO indicates CO2 detector.  
HD indicated heat detector.

Interconnect all SD, CO, HD, and SD/CO devices in the building to sound an alarm when any or all are activated. Provide and install in accordance with current code requirements.

SD/CO detectors within 20 ft. of a kitchen or bathroom must be "Photo-electric" type.

All detection devices must be hard wired AC power with battery backup.

Electric lighting and outlets are to be provided as required by code. Additional outlets, fixtures, or other equipment are optional and are to be coordinated between the owner and the builder prior to rough in.

Stow, MA is a Stretch Code Community  
ENERGY CONSERVATION Per HERS Rater

STRUCTURAL LOADS:  
Roof - Snow Load: 40 psf  
Roof - Dead Load: 15 psf  
Floors - Live Load: 40 psf (Bedrooms @ 30psf)  
Floors - DL: 10 psf + 2psf for hardwood or tile floor areas.  
Attic - Live Load: 10 psf (No Storage attic.)  
Attic - Dead Load: 10 psf  
Additional DL for PV Solar Array on roof: 5 psf.

REVISION TABLE	
NUMBER	DATE

1st PLAN

PROJECT DESIGNED FOR:  
**Greendale LLC**  
44 Pine Point Road  
Stowe, MA

DATE:

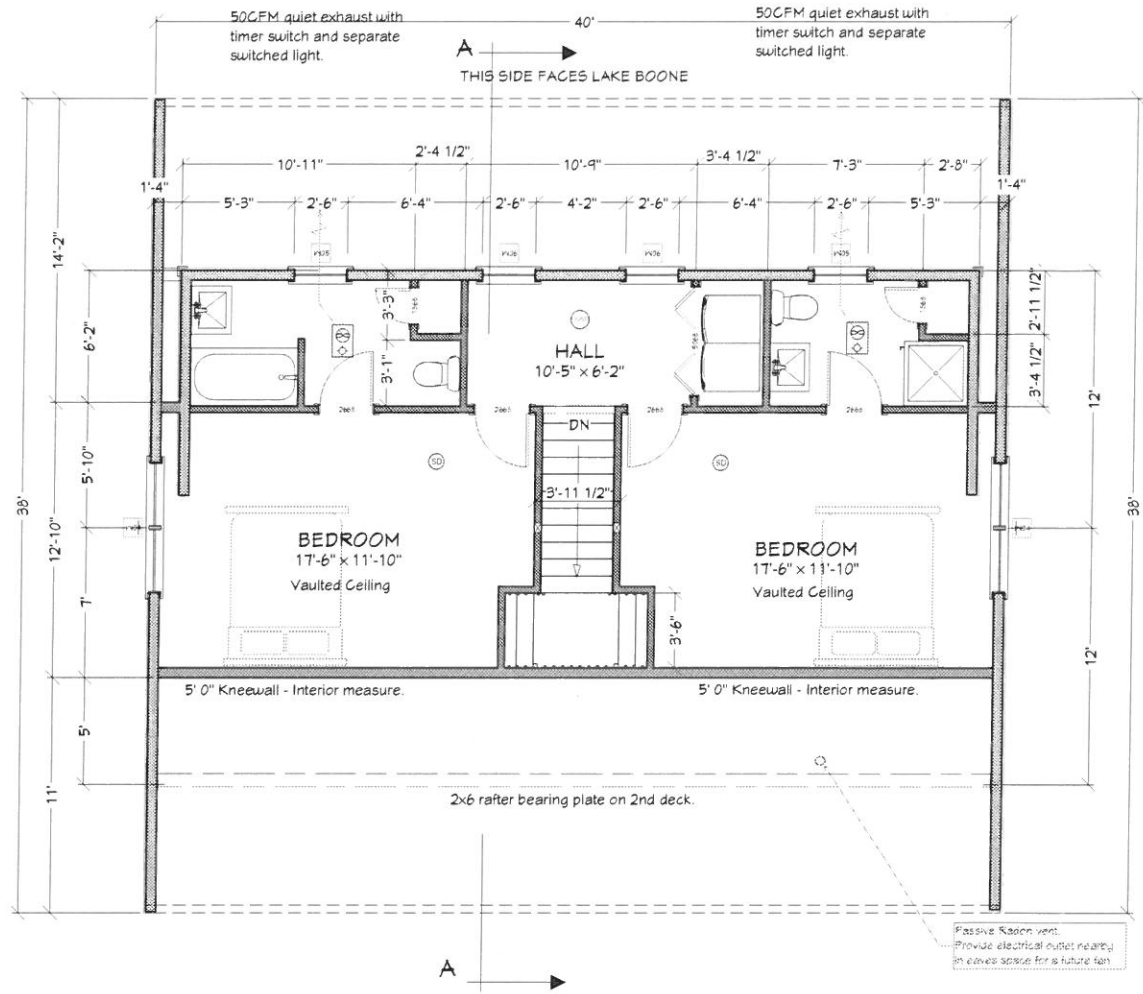
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SCALE:

SHEET:

A-3

All NEW framing and construction to be in accordance with MA Code 780 CMR 9th Edition and IRC 2015 for 1 & 2 Family Residential Construction. While good faith effort has been made to incorporate as much of that information as practical in these documents, human error or omission is possible. It is the licensed builder's responsibility to review these documents prior to construction and to proceed in accordance with applicable codes.



LIVING AREA  
662 sq ft

2nd Floor PLAN 1/4 in = 1 ft

Dimensions are to face of framing.

Interior walls are 2x4 studs @ 16" o.c. U.N.O.

Exterior walls and other insulated walls adjacent to unconditioned space are 2x6 stud framed @ 16" o.c. with R-20 insulation and air barrier U.N.O.

Provide separate switched light fixture connections over vanities and in each bathroom ceiling. Additionally provide a 50 CFM quiet exhaust fan and light with a timer switch.

Provide GFCI double outlet on the wall adjacent to each vanity.

SD indicates smoke detector.  
CO indicates CO2 detector.  
HD indicated heat detector.

Interconnect all SD, CO, HD, and SD/CO devices in the building to sound an alarm when any or all are activated. Provide and install in accordance with current code requirements.

SD/CO detectors within 20 ft. of a kitchen or bathroom must be "Photo-electric" type.

All detection devices must be hard wired AC power with battery backup.

Electric lighting and outlets are to be provided as required by code. Additional outlets, fixtures, or other equipment are optional and are to be coordinated between the owner and the builder prior to rough in.

Stow, MA is a Stretch Code Community  
ENERGY CONSERVATION Per HERS Rater

STRUCTURAL LOADS:  
Roof - Snow Load: 40 psf  
Roof - Dead Load: 15 psf  
Floors - Live Load: 40 psf (Bedrooms @ 30psf)  
Floors - DL: 10 psf + 2psf for hardwood or tile floor areas.  
Attic - Live Load: 10 psf (No Storage attic.)  
Attic - Dead Load: 10 psf  
Additional DL for PV Solar Array on roof: 5 psf.

NUMBER	DATE	REVISION TABLE	REVISOR	DESCRIPTION

2nd PLAN

PROJECT DESIGNED FOR:  
**Greendale LLC**  
44 Pine Point Road  
Stowe, MA

DATE:

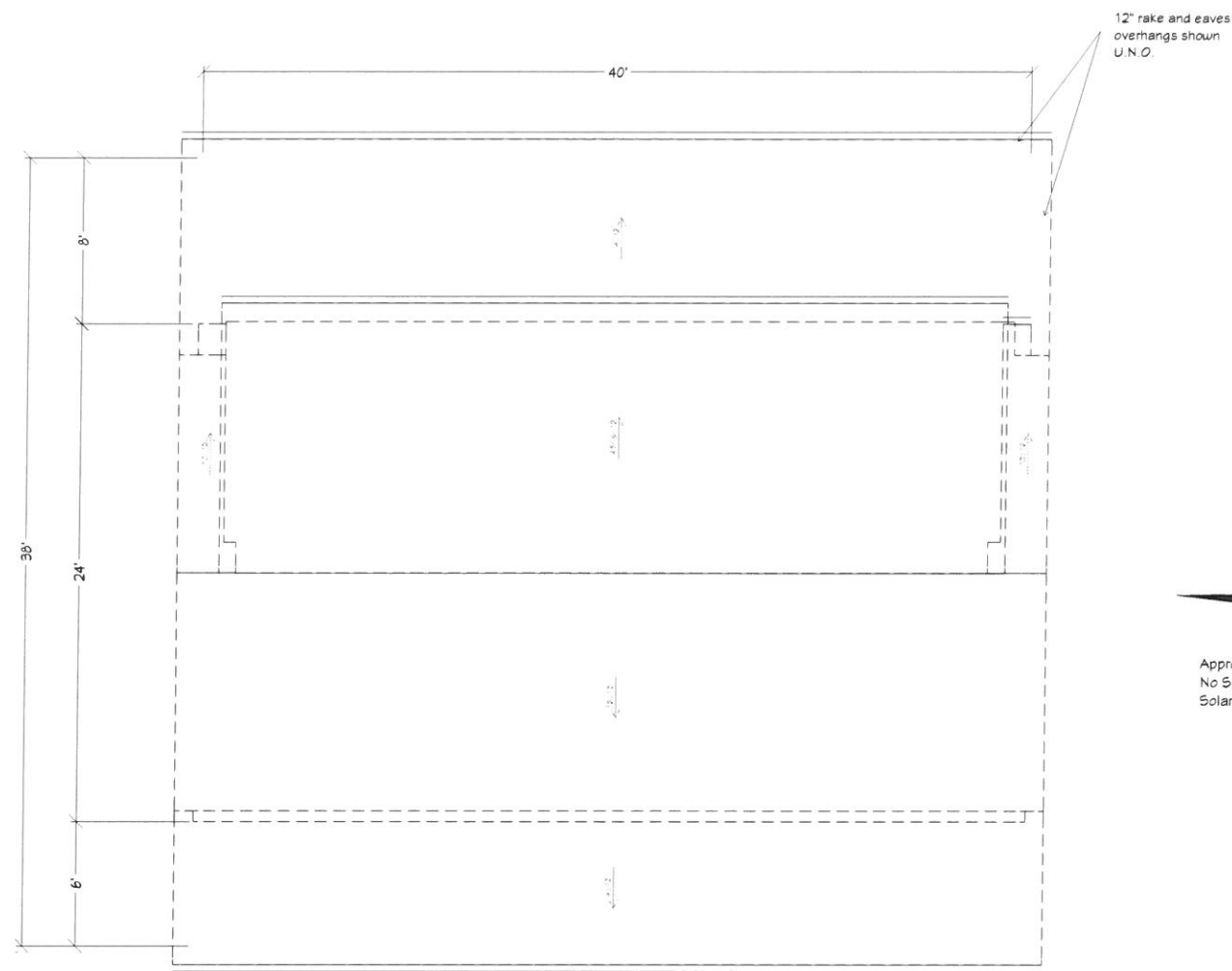
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SCALE:

SHEET:

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All NEW framing and construction to be in accordance with MA Code 780 CMR 9th Edition and IRC 2015 for 1 & 2 Family Residential Construction. While good faith effort has been made to incorporate as much of that information as practical in these documents, human error or omission is possible. It is the licensed builder's responsibility to review these documents prior to construction and to proceed in accordance with applicable codes.



Approximate NORTH  
 No Southerly facing roof areas.  
 Solar Ready Area requirement does NOT apply.

Roof PLAN 1/4 in = 1 ft

**GENERAL NOTES:**

Dimensions are to face of framing or Foundation

Interior walls are 2x4 studs @ 16" o.c.

Exterior walls and other insulated walls adjacent to unconditioned space are 2x6 stud framed @ 16" o.c. U.N.O.

Provide separate switched light fixture connections over vanities and in each bathroom ceiling. Additionally provide a 50 CFM quiet exhaust fan (Can be combined with ceiling light) with a timer switch.

Provide GFCI double outlet on the wall adjacent to each vanity.

SD indicates smoke detector.

CO indicates CO2 detector.

HD indicates heat detector.

Interconnect all SD, CO, HD, and SD/CO devices in the new structure and the existing home to sound an alarm when any or all are activated. Provide and install in accordance with current code requirements. The existing home systems must also be brought up to current standards.

SD/CO detectors within 20 ft. of a kitchen or bathroom must be "Photo-electric" type.

All detection devices must be hard wired AC power with battery backup unless existing ceiling finishes must be removed to install the hard wiring.

Electric lighting and outlets are to be provided as required by code. Additional outlets, fixtures, or other equipment are optional and are to be coordinated between the owner and the builder prior to rough in.

Exterior security and decorative lighting is not shown but should be provided at the owner's discretion.

**ENERGY CONSERVATION per MA STRETCH ENERGY CODE.**

**ROOF CONSTRUCTION NOTES:**

- All rafters are 2x10 KD #25PF @ 16" o.c. U.N.O.
- Ridge boards are 2x12KD + 2x4KD to cover the rafter slash cuts. U.N.O.
- Ceiling joists are 2x8 KD #25PF (No Storage Attic max. span = 22'-4")
- Overlay roof rafters to bear on 2x KD valley cleats.
- Cleats are to be properly fastened through the lower roof sheathing into the lower roof rafters.
- Provide 1/2" CDX sheathing and 15# roof felt -OR- 1/2" "Zip-Roof" sheathing system with taped seams.
- Provide ice and water shield as follows: 2-rows x 36" wide at eaves, 1-row 36" wide at rakes, centered at roof/wall intersections, and 2-rows x 36" wide centered in valleys.
- Provide aluminum drip edge around the perimeter of all roof areas. Provide step flashing wherever a sloped roof meets a wall.
- Provide roof shingles to match existing on slopes 3:12 or greater. Provide rubber membrane roofing to match existing on roof slopes less than 3:12. At a minimum, cover all new roof areas plus existing areas disturbed by this construction.
- Rafters connect to structural ledgers with toe nails per code PLUS (1) JA3G or MP34 or similar framing angle connector.
- Dormer walls to be built on top of structural rafters where needed. No ceiling or roof loads transfer to the 2nd floor framing.
- Rafters connect to flush beams with USP# L5210 hangers for slopes NTE 30 degrees. Use MP-9 bendable metal connectors elsewhere and at sloped / skewed structural roof beams.

**CEILING FRAMING NOTES:**

- Ceiling joists to be 2x8 KD #25PF @ 16" o.c.
- Joists supported by flush framing members to be hung from same with metal joist hangers. Connect opposing joists across the bottom of the supporting girder with L5TA21 metal straps or similar to provide a continuous rafter tie.
- Headers for exterior wall openings to be per R602.7(1)
- Headers for interior bearing wall openings to be per R602.7(2)

All NEW framing and construction to be in accordance with MA Code 780 CMR 9th Edition and IRC 2015 for 1 & 2 Family Residential Construction. While good faith effort has been made to incorporate as much of that information as practical in these documents, human error or omission is possible. It is the licensed builder's responsibility to review these documents prior to construction and to proceed in accordance with applicable codes.

REVISION TABLE	
NUMBER	DATE

Roof PLAN

PROJECT DESIGNED FOR:  
**Greendale LLC**  
 44 Pine Point Road  
 Stone, MA

DATE:

3/29/2020

SCALE:

SHEET:

A-5

**TABLE R404.1.2(1)**  
**MINIMUM VERTICAL REINFORCEMENT FOR 10-INCH-NOMINAL FLAT CONCRETE BASEMENT WALLS\***

MAXIMUM UNIFORMED LOAD PER FOOT (psf)	MAXIMUM INITIAL AND FINAL HEIGHT (ft)	MINIMUM VERTICAL REINFORCEMENT BAR SIZE AND SPACING (inches)			
		BAR SIZE (inches)	BAR SPACING (inches)	BAR SIZE (inches)	BAR SPACING (inches)
8	4	NR	NR	NR	NR
	5	NR	NR	NR	NR
	6	NR	NR	NR	NR
	7	NR	NR	NR	NR
	8	6 @ 48	6 @ 48	6 @ 24	6 @ 24
9	4	NR	NR	NR	NR
	5	NR	NR	NR	NR
	6	NR	NR	NR	NR
	7	NR	NR	6 @ 31	6 @ 24
	8	6 @ 33	6 @ 24	6 @ 24	6 @ 24
10	4	NR	NR	NR	NR
	5	NR	NR	NR	NR
	6	NR	NR	NR	NR
	7	NR	NR	6 @ 28	6 @ 24
	8	6 @ 28	6 @ 24	6 @ 24	6 @ 24

For SI: 1 inch = 25.4 mm; 1 foot = 304.8 mm; 1 pound per square foot = 0.0479 kPa; 1 psi = 6.895 kPa.  
NR = Not Required.  
\* Soil classes are as indicated in the Unified Soil Classification System. Refer to Table R404.1.1.  
† Allow tables are based on unadorned 1/2" x 1/2" x 1/2" (12.5 mm) diameter vertical reinforcement with a maximum yield strength of 60,000 psi and a maximum tensile strength of 75,000 psi and vertical reinforcement length located in the center of the wall. See Section R404.1.3.1.2.  
‡ Vertical reinforcement with a yield strength of less than 60,000 psi and rebar of a different size than specified in the table are permitted as an alternative to the reinforcement specified in this table. See Section R404.1.3.1.2.1.  
§ NR indicates that vertical reinforcement is not required.  
¶ Distribution reinforcement is required where the length of the foundation wall exceeds:  
a. 10 feet for walls less than 8 feet high.  
b. 15 feet for walls 8 feet to 12 feet high.  
c. 20 feet for walls 12 feet to 16 feet high.  
d. 25 feet for walls 16 feet to 20 feet high.  
e. 30 feet for walls 20 feet to 24 feet high.  
f. Interpolation is not permitted.  
g. Where walls shall extend 4 feet or more of finished backfill, they shall be laterally supported at the top and bottom by backfilling.  
h. See Section R404.1.3.2 for maximum reinforcement required for basement walls supporting above-grade concrete walls.  
i. See Table R404.1.3.2.1 for alternate flexural reinforcement permitted for flat walls.  
j. The use of this table shall be prohibited for vertical classification soil class.

**TABLE R404.1.2(1)**  
**MINIMUM HORIZONTAL REINFORCEMENT FOR CONCRETE BASEMENT WALLS\***

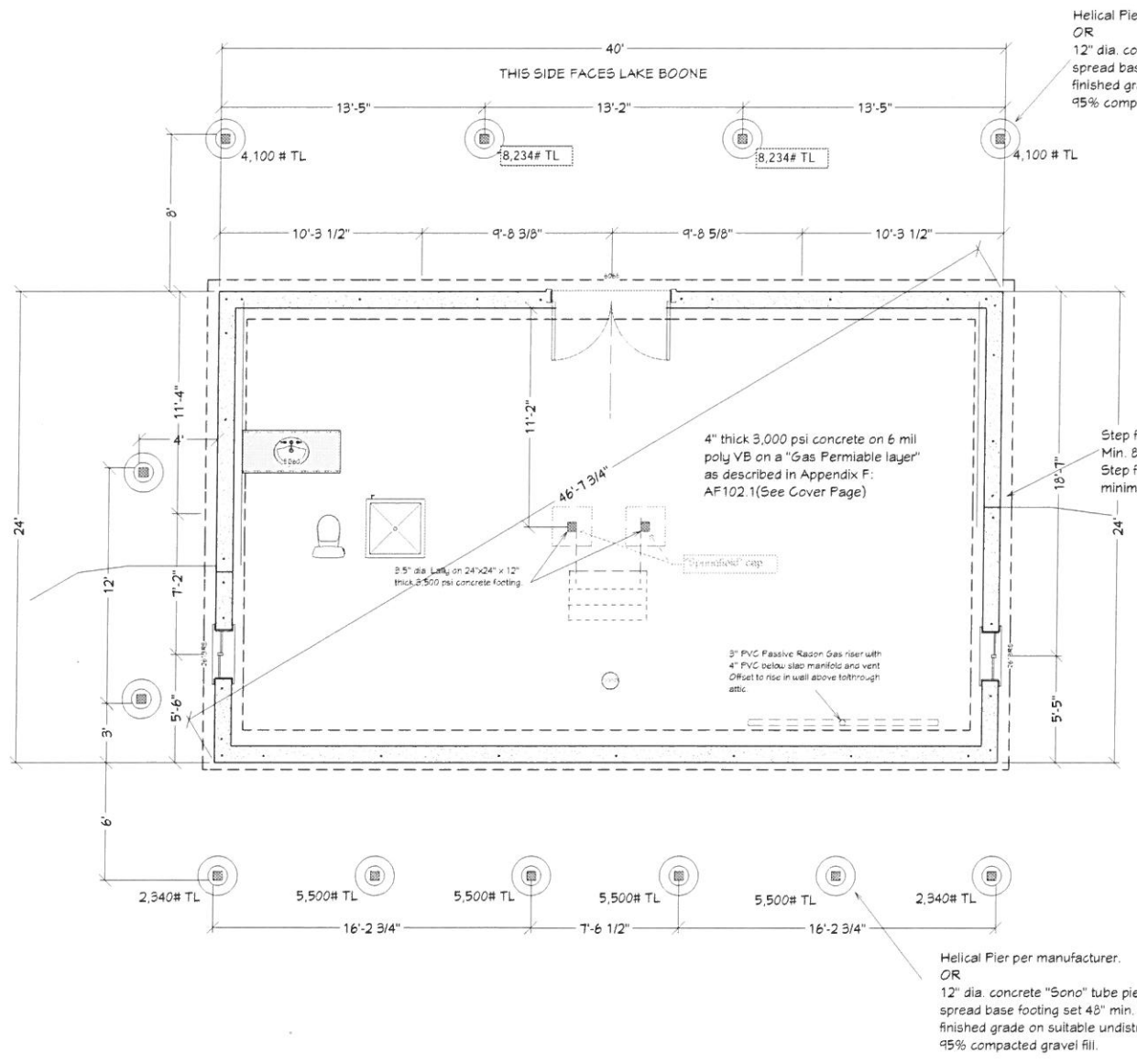
MAXIMUM UNSUPPORTED HEIGHT OF BASEMENT WALL (feet)	LOCATION OF HORIZONTAL REINFORCEMENT
≤ 8	One No. 4 bar within 12 inches of the top of the wall story and one No. 4 bar near mid-length of the wall story.
> 8	One No. 4 bar within 12 inches of the top of the wall story and one No. 4 bar near third points in the wall story.

For SI: 1 inch = 25.4 mm; 1 foot = 304.8 mm; 1 pound per square foot = 0.0479 kPa; 1 psi = 6.895 kPa.  
a. Maximum reinforcement requirements are for reinforcing steel with a maximum tensile strength of 60,000 psi and concrete with a minimum concrete compressive strength of 3,500 psi.  
b. See Section R404.1.3.2 for maximum reinforcement required for foundation walls supporting above-grade concrete walls.

**TABLE R404.1**  
**PROPERTIES OF SOILS CLASSIFIED ACCORDING TO THE UNIFIED SOIL CLASSIFICATION SYSTEM**

SOIL GROUP	UNIFIED SOIL CLASSIFICATION SYMBOL	SOIL DESCRIPTION	DRAINAGE CHARACTERISTICS	FROST HEAVE POTENTIAL	VOLUME CHANGE POTENTIAL EXPANSION
Group I	GW	Well graded gravel, gravel sand mixtures, little or no fines	Good	Low	Low
	GP	Poorly graded gravel or gravel sand mixtures, little or no fines	Good	Low	Low
	SW	Well graded sands, gravelly sands, little or no fines	Good	Low	Low
	SP	Poorly graded sands or gravelly sands, little or no fines	Good	Low	Low
	GM	Silty gravels, gravel-sand mixtures	Good	Medium	Low
Group II	SM	Silty sand, sand-silt mixtures	Good	Medium	Low
	GC	Clayey gravel, gravel-sand clay mixtures	Medium	Medium	Low
	SC	Clayey sands, sand-clay mixtures	Medium	Medium	Low
	ML	Inorganic silty sand or very fine sand, rock flour, silty or clayey fine sand or clayey silty sand with slight plasticity	Medium	High	Low
	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	Medium	Medium	Low to Medium
Group III	CH	Inorganic clays of high plasticity, fat clays	Poor	Medium	High
	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, clayey silts	Poor	High	High
Group IV	OL	Organic silts and organic silty clays of low plasticity	Poor	Medium	Medium
	OH	Organic clays of medium to high plasticity, organic silts	Unsatisfactory	Medium	High
	Pe	Peat and other highly organic soils	Unsatisfactory	Medium	High

For SI: 1 inch = 25.4 mm.  
a. The permeability for good drainage is over 10 inches per foot, medium drainage is 1 inch to 10 inches per foot, and poor is less than 1 inch per foot.  
b. Soils with a low potential expansion typically have a plasticity index (PI) of 0 to 15, soils with a medium potential expansion have a PI of 15 to 35, and soils with a high potential expansion have a PI greater than 35.

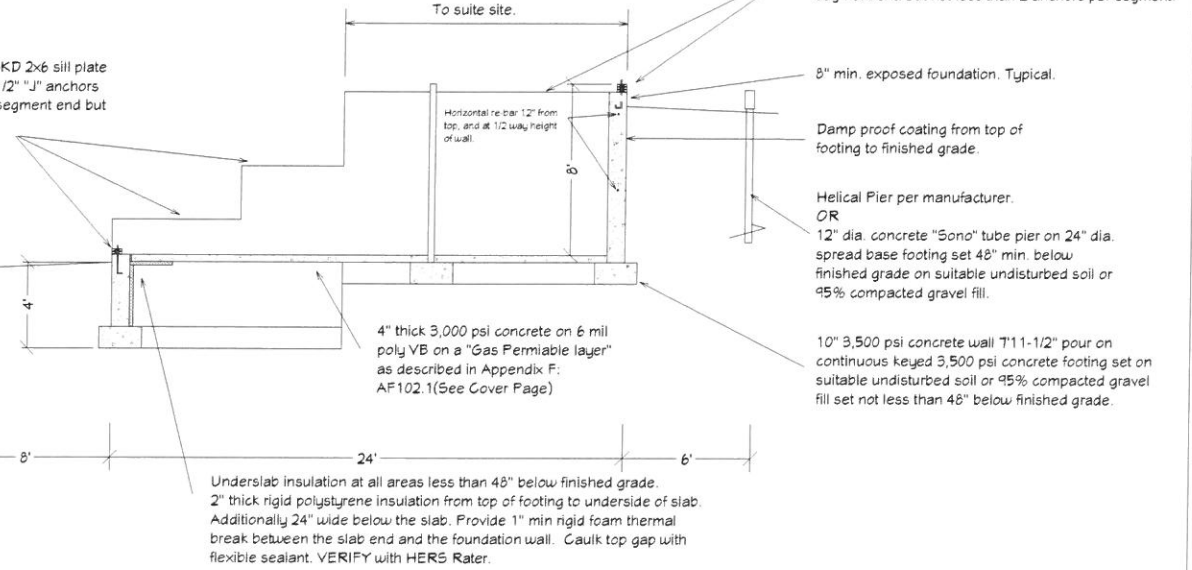


Helical Pier per manufacturer.  
OR  
12" dia. concrete "Sono" tube pier on 24" dia. spread base footing set 48" min. below finished grade on suitable undisturbed soil or 95% compacted gravel fill.

Step foundation to suit site.  
Min. 8" exposed.  
Step footings as necessary to maintain minimum 48" depth below grade.

1-PT 2x6 sill on sill seal gasket PLUS 1-KD 2x6 sill plate anchored to short foundation walls with 1/2" "J" anchors @ 6' o.c. PLUS within 12" of each plate segment end but not less than 2 anchors per segment.

Helical Pier per manufacturer.  
OR  
12" dia. concrete "Sono" tube pier on 24" dia. spread base footing set 48" min. below finished grade on suitable undisturbed soil or 95% compacted gravel fill.



Foundation PLAN 1/4 in = 1 ft

All NEW framing and construction to be in accordance with MA Code 780 CMR 9th Edition and IRC 2015 for 1 & 2 Family Residential Construction. While good faith effort has been made to incorporate as much of that information as practical in these documents, human error or omission is possible. It is the licensed builder's responsibility to review these documents prior to construction and to proceed in accordance with applicable codes.

REVISION TABLE

NUMBER	DATE	REVISION BY	DESCRIPTION

FOUNDATION

PROJECT DESIGNED FOR:  
**Greendale LLC**  
44 Pine Point Road  
Stowe, MA

DATE:  
3/29/2020

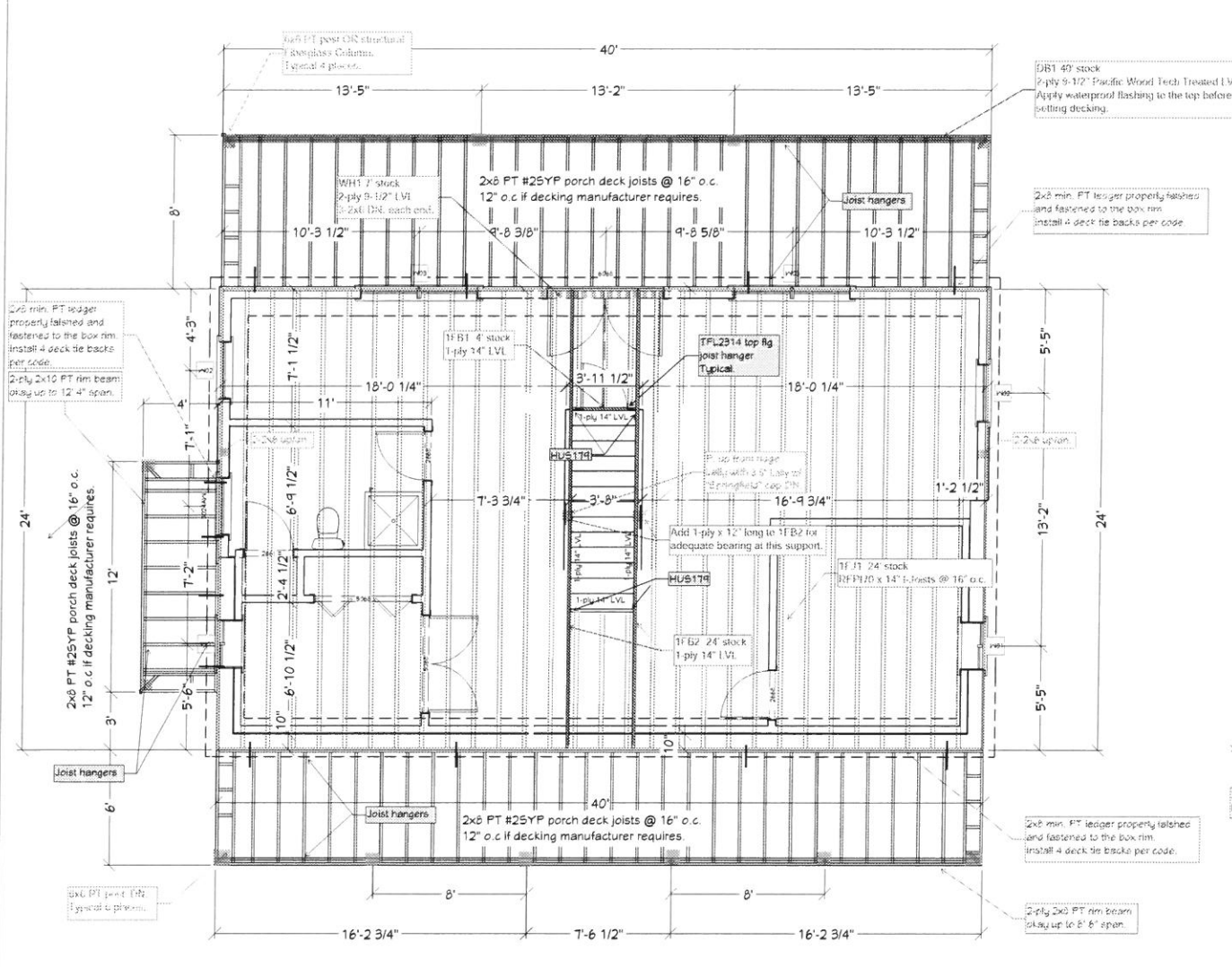
SCALE:

SHEET:  
S-0



**STRUCTURAL LOADS:**  
 Roof - Snow Load: 40 psf  
 Roof - Dead Load: 15 psf  
 Floors - Live Load: 40 psf (Bedrooms @ 30psf)  
 Floors - DL: 10 psf + 2psf for hardwood or tile floor areas.  
 Attic - Live Load: 10 psf (No Storage attic.)  
 Attic - Dead Load: 10 psf  
 Additional DL for PV Solar Array on roof: 5 psf.

NUMBER	DATE	REVISION TABLE	REVISOR	DESCRIPTION

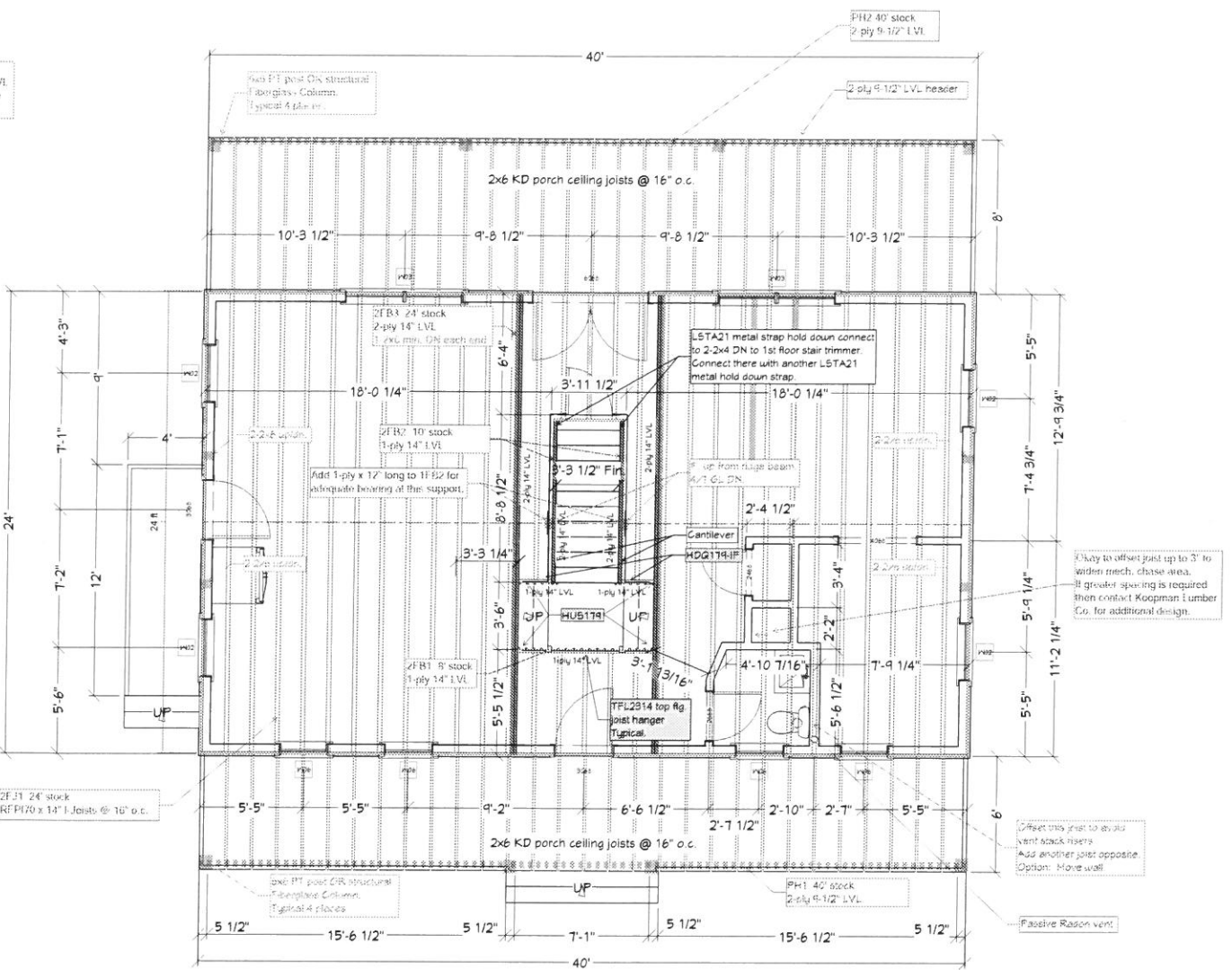


**1st Floor FRAME 1/4 in = 1 ft** Shown over the Ground floor plan.

14" RFP170 series I-Joist Floor Frame shown. (EiNP)  
 LL Deflection @ L/480 min.  
 Actual design to be verified by EiNP supplier.

U.N.O. - Exterior wall opening headers  
 Supporting 1-30' CS floor  
 3-ply 2x10 KD #2SPF okay up to 7' 4.5"  
 Supporting 32' Roof and 1-CS floor  
 3-ply 2x10 KD #2SPF okay up to 6' 1"

Other exterior wall opening headers to be  
 2-ply 2x10 with 2-1/2" rigid foam insulation.  
 U.N.O.



**2nd Floor FRAME 1/4 in = 1 ft** Shown over the 1st floor plan.

14" RFP170 series I-Joist Floor Frame shown. (EiNP)  
 LL Deflection @ L/480 min.  
 Actual design to be verified by EiNP supplier.

Exterior wall opening headers Supporting 32' Roof and 1-CS floor 3-ply 2x10 KD #2SPF okay up to 6' 1"

Other exterior wall opening headers to be 2-ply 2x10 with 2-1/2" rigid foam insulation. U.N.O.

All NEW framing and construction to be in accordance with MA Code 780 CMR 9th Edition and IRC 2015 for 1 & 2 Family Residential Construction. While good faith effort has been made to incorporate as much of that information as practical in these documents, human error or omission is possible. It is the licensed builder's responsibility to review these documents prior to construction and to proceed in accordance with applicable codes.

Floor FRAME

PROJECT DESIGNED FOR:  
**Greendale LLC**  
 44 Pine Point Road  
 Stowe, MA

DATE:  
 3/29/2020

SCALE:

SHEET:

**S-1**



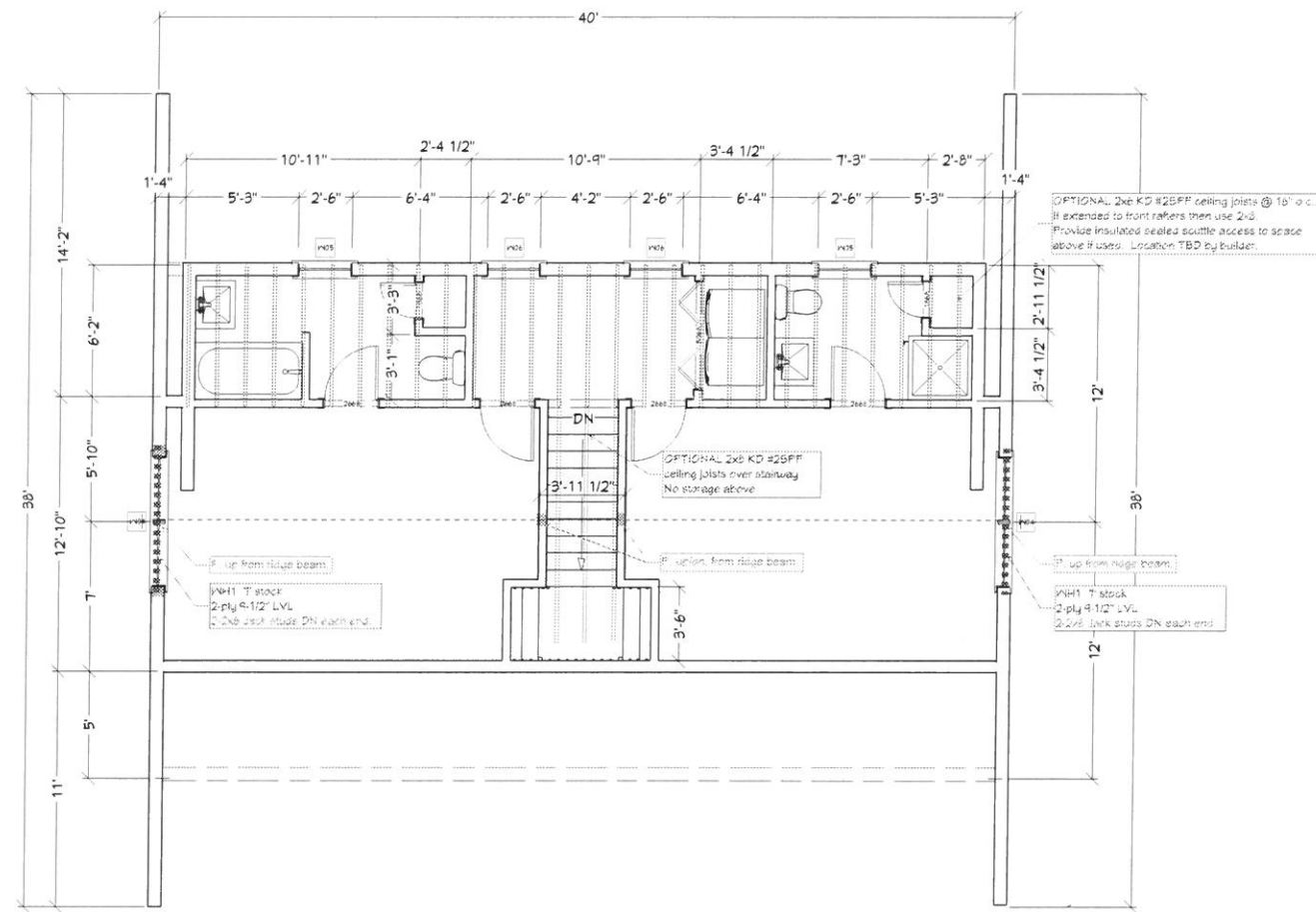
**CEILING FRAMING NOTES:**

- Ceiling joists to be 2x6 KD #25PF @ 16" o.c.
- Joists supported by flush framing members to be hung from same with metal joist hangers. Connect opposing joists across the bottom of the supporting girder with LSTA21 metal straps or similar to provide a continuous rafter tie.
- Headers for exterior wall openings to be per R602.7(1)
- Headers for interior bearing wall openings to be per R602.7(2)

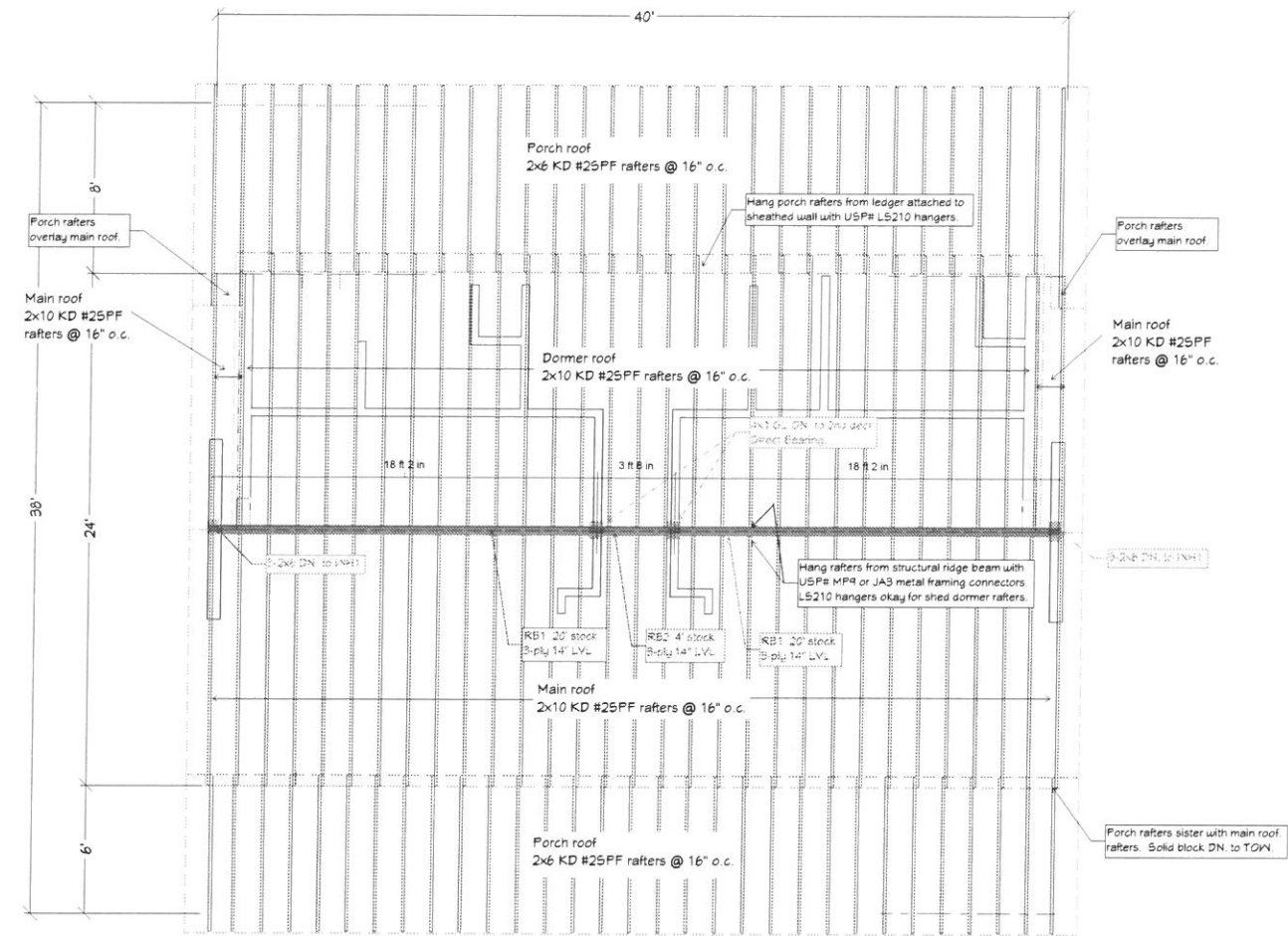
**ROOF CONSTRUCTION NOTES:**

- All rafters are 2x10 KD #25PF @ 16" o.c. U.N.O.
- Ridge boards are 2x12KD + 2x4KD to cover the rafter slash cuts. U.N.O.
- Ceiling joists are 2x6 KD #25PF (No Storage Attic max. span = 22'-4")
- Overlay roof rafters to bear on 2x KD valley cleats.
- Cleats are to be properly fastened through the lower roof sheathing into the lower roof rafters.
- Provide 1/2" CDX sheathing and 15# roof felt -OR- 1/2" Zip-Roof sheathing system with taped seams.
- Provide ice and water shield as follows: 2-rows x 36" wide at eaves, 1-row 36" wide at rakes, centered at roof/wall intersections, and 2-rows x 36" wide centered in valleys.
- Provide aluminum drip edge around the perimeter of all roof areas. Provide step flashing wherever a sloped roof meets a wall.
- Provide roof shingles to match existing on slopes 3:12 or greater. Provide rubber membrane roofing to match existing on roof slopes less than 3:12. At a minimum, cover all new roof areas plus existing areas disturbed by this construction.
- Rafters connect to structural ledgers with toe nails per code PLUS (1) JA36 or MP34 or similar framing angle connector.
- Dormer walls to be built on top of structural rafters where needed. No ceiling or roof loads transfer to the 2nd floor framing.
- Rafters connect to flush beams with USP# L5210 hangers for slopes NTE 30 degrees. Use MP-9 bendable metal connectors elsewhere and at sloped / skewed structural roof beams.

REVISION TABLE	
NUMBER	DATE



2nd Floor



Roof FRAME 1/4 in = 1 ft

All NEW framing and construction to be in accordance with MA Code 780 CMR 9th Edition and IRC 2015 for 1 & 2 Family Residential Construction. While good faith effort has been made to incorporate as much of that information as practical in these documents, human error or omission is possible. It is the licensed builder's responsibility to review these documents prior to construction and to proceed in accordance with applicable codes.

**Ceiling and Roof FRAME**

PROJECT DESIGNED FOR:  
**Greendale LLC**  
 44 Pine Point Road  
 Stowe, MA

DATE:

3/29/2020

SCALE:

SHEET:

S-2



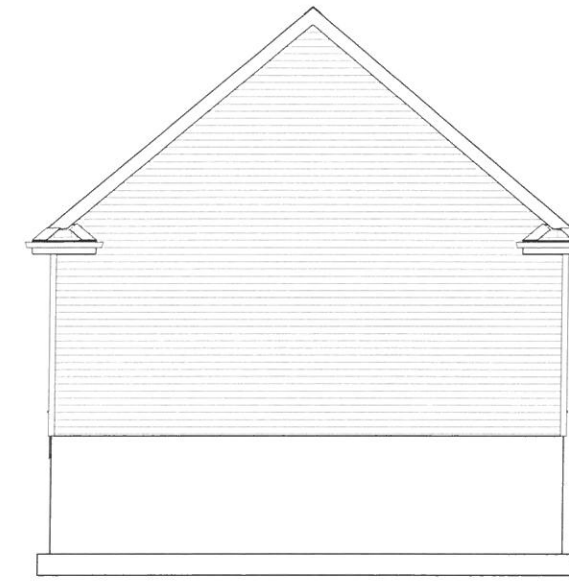
Front ELEVATION - NTS

New Vinyl siding and trim.  
Gutters are shown but not required.  
If desired they would be provided at additional cost.  
If used, then downspouts to terminate and direct water away from the foundation will also be included.



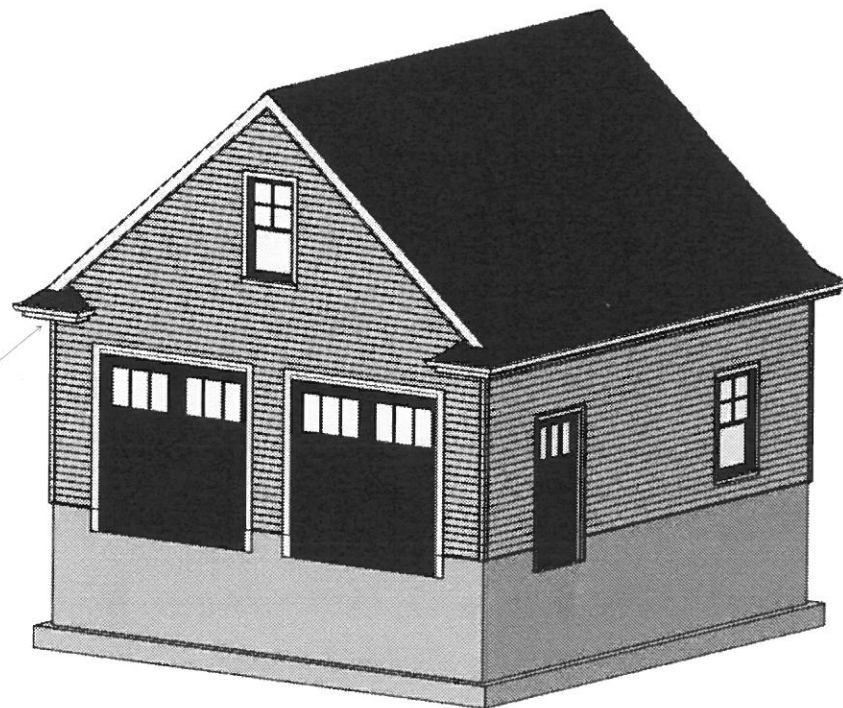
Right Side ELEVATION - NTS

New Vinyl siding and trim.  
Gutters are shown but not required.  
If desired they would be provided at additional cost.  
If used, then downspouts to terminate and direct water away from the foundation will also be included.



Rear ELEVATION - NTS

New Vinyl siding and trim.  
Gutters are shown but not required.  
If desired they would be provided at additional cost.  
If used, then downspouts to terminate and direct water away from the foundation will also be included.



Isometric view - NTS

New Vinyl siding and trim.  
Gutters are shown but not required.  
If desired they would be provided at additional cost.  
If used, then downspouts to terminate and direct water away from the foundation will also be included.

Shown with optional roof returns.

TABLE R301.2(1)  
CLIMATIC AND GEOGRAPHIC DESIGN CRITERIA

GROUND SNOW LOAD	WIND DESIGN				SEISMIC DESIGN CATEGORY <sup>a</sup>	SUBJECT TO DAMAGE FROM			WINTER DESIGN TEMP <sup>e</sup>	ICE BARRIER UNDERLAYMENT REQUIRED <sup>f</sup>	FLOOD HAZARDS <sup>g</sup>	AIR FREEZING INDEX	MEAN ANNUAL TEMP
	Speed <sup>b</sup> (mph)	Topographic effects <sup>c</sup>	Special wind region <sup>d</sup>	Wind-borne debris zone <sup>h</sup>		Weathering <sup>i</sup>	Frost line depth <sup>j</sup>	Termite <sup>k</sup>					
50	124	NO	NO	NO	B	Severe	46"						

jurisdiction to fill in table

- For SI: 1 pound per square foot = 0.0479 kPa, 1 mile per hour = 0.447 m/s.
- Weathering may require a higher strength concrete or grade of masonry than necessary, to satisfy the structural requirements of this code. The weathering column shall be filled with the weathering index, "negligible," "moderate" or "severe" for concrete as determined from Figure R301.2(3). The grade of masonry units shall be determined from ASTM C34, C55, C62, C75, C90, C129, C145, C216 or C652.
  - The frost line depth may require deeper footings than indicated in Figure R403.1(1). The jurisdiction shall fill in the frost line depth column with the minimum depth of footing below finish grade.
  - The jurisdiction shall fill in this part of the table to indicate the need for protection depending on whether there has been a history of local subterranean termite damage.
  - The jurisdiction shall fill in this part of the table with the wind speed from the basic wind speed map [Figure R301.2(4)A]. Wind exposure category shall be determined on a site-specific basis in accordance with Section R301.2.1.4.
  - The outdoor design dry-bulb temperature shall be selected from the columns of 97.5-percent values for winter from Appendix D of the *International Plumbing Code*. Deviations from the Appendix D temperatures shall be permitted to reflect local climates or local weather experience as determined by the building official.
  - The jurisdiction shall fill in this part of the table with the seismic design category determined from Section R301.2.2.1.
  - The jurisdiction shall fill in this part of the table with (a) the date of the jurisdiction's entry into the National Flood Insurance Program (date of adoption of the first code or ordinance for management of flood hazard areas), (b) the date(s) of the Flood Insurance Study and (c) the panel numbers and dates of the currently effective FIRMs and FRFMs or other flood hazard map adopted by the authority having jurisdiction, as amended.
  - In accordance with Sections R905.1.2, R905.4.2.1, R905.5.2.1, R905.6.2.1, R905.7.2.1 and R905.8.3.1, where there has been a history of local damage from the effects of ice damming, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall fill in this part of the table with "NO."
  - The jurisdiction shall fill in this part of the table with the 100-year return period air freezing index (BF-days) from Figure R403.3(2) or from the 100-year (99 percent) value on the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32°F)."
  - The jurisdiction shall fill in this part of the table with the mean annual temperature from the National Climatic Data Center data table "Air Freezing Index-USA Method (Base 32°F)."
  - In accordance with Section R301.2.1.5, where there is local historical data documenting structural damage to buildings due to topographic wind speed-up effects, the jurisdiction shall fill in this part of the table with "YES." Otherwise, the jurisdiction shall indicate "NO" in this part of the table.
  - In accordance with Figure R301.2(4)A, where there is local historical data documenting unusual wind conditions, the jurisdiction shall fill in this part of the table with "YES" and identify any specific requirements. Otherwise, the jurisdiction shall indicate "NO" in this part of the table.
  - In accordance with Section R301.2.1.2.1, the jurisdiction shall indicate the wind-borne debris wind zones. Otherwise, the jurisdiction shall indicate "NO" in this part of the table.

Project Address:  
**Greendale LLC**  
44 Pine Point Road  
Stow MA

DATE:

4/19/20

SCALE:

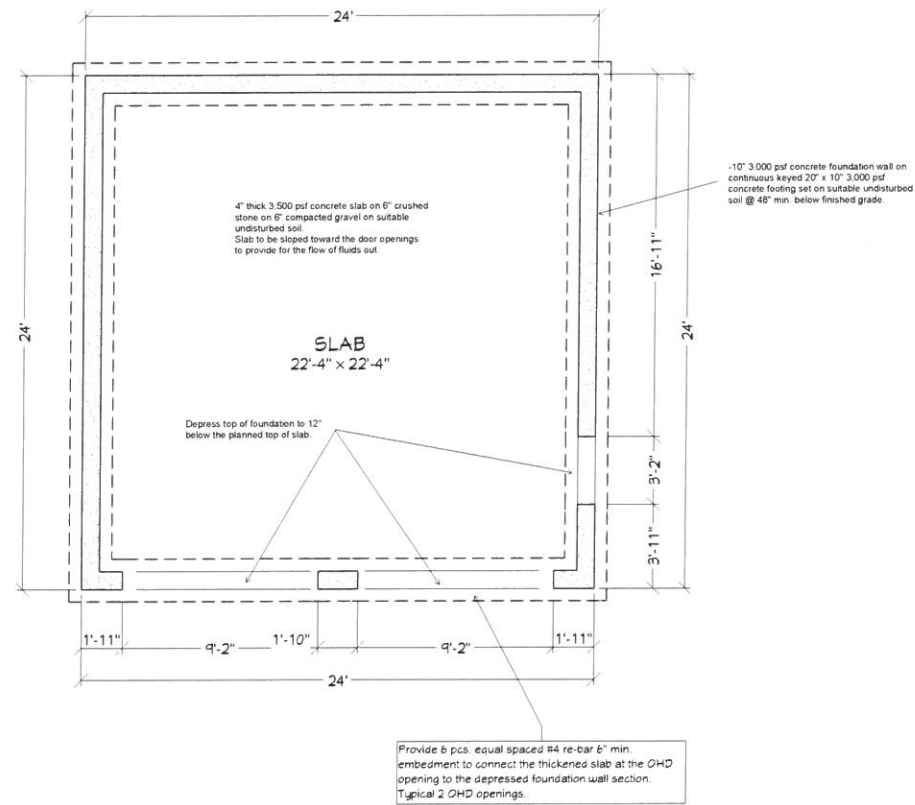
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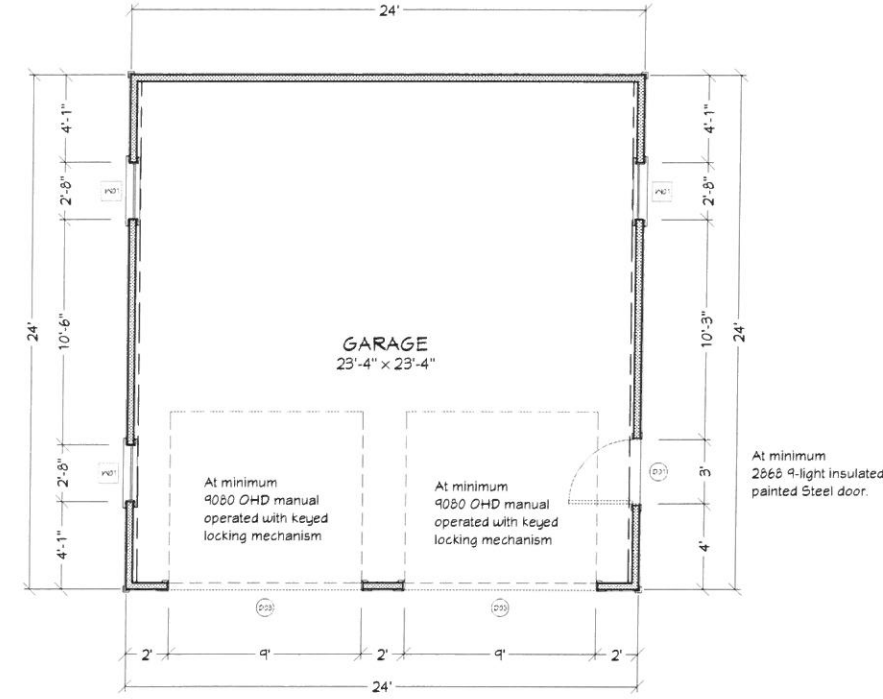
All NEW framing and construction to be in accordance with MA Code 800 CMR 9th Edition and IRC 2015 for 1 & 2 Family Residential Construction. While good faith effort has been made to incorporate as much of that information as practical in these documents, human error or omission is possible. It is the licensed builder's responsibility to review these documents prior to construction and to proceed in accordance with applicable codes.

WINDOW SCHEDULE												
NUMBER	LABEL	QTY	FLOOR	SIZE	WIDTH	HEIGHT	R/O	EGRESS	DESCRIPTION	CODE	MANUFACTURER	COMMENTS
W01	2646DH	3	1	2646DH	32"	54"	33"X55"		DOUBLE HUNG			
W02	2646DH	1	2	2646DH	30"	54"	31"X55"		DOUBLE HUNG			

DOOR SCHEDULE											
NUMBER	LABEL	QTY	FLOOR	SIZE	WIDTH	HEIGHT	R/O	DESCRIPTION	THICKNESS	CODE	COMMENTS
D01	3068	1	1	3068 LEX	36"	80"	38"X83"	EXT HINGED DOOR	E21	1 3/4"	
D03	9080	2	1	9080	108"	96"	110"X99"	GARAGE-GARAGE DOOR	CHD06	1 3/4"	



Foundation Plan



Floor Plan

All NEW framing and construction to be in accordance with MA Code T80 CMR 9th Edition and IRC 2015 for 1 & 2 Family Residential Construction. While good faith effort has been made to incorporate as much of that information as practical in these documents, human error or omission is possible. It is the licensed builder's responsibility to review these documents prior to construction and to proceed in accordance with applicable codes.

Project Address:  
**Greendale LLC**  
 44 Pine Point Road  
 Stow MA

DATE:

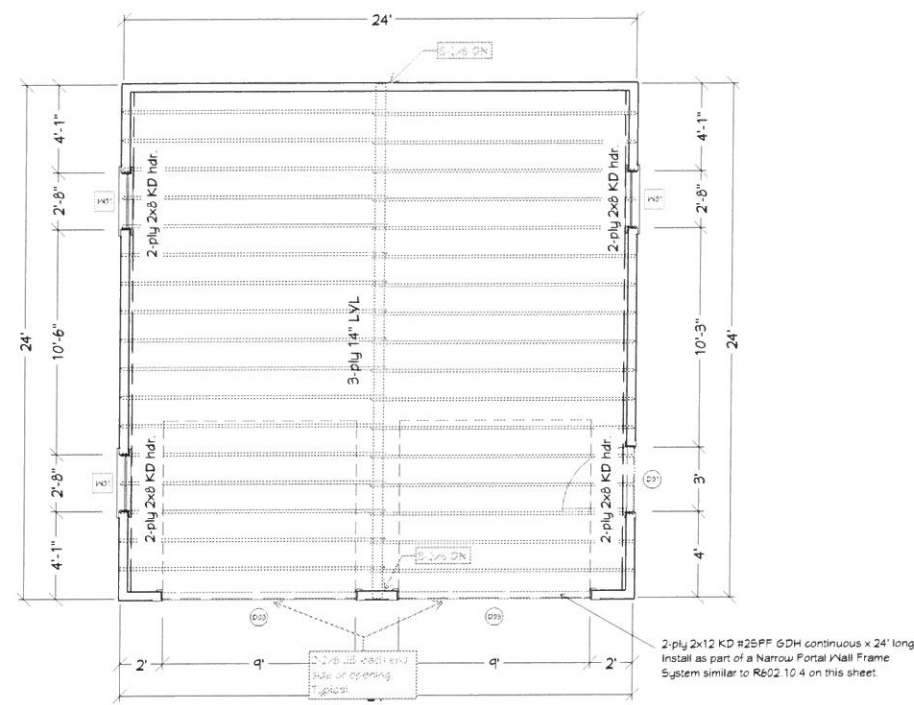
4/19/20

SCALE:

SHEET:

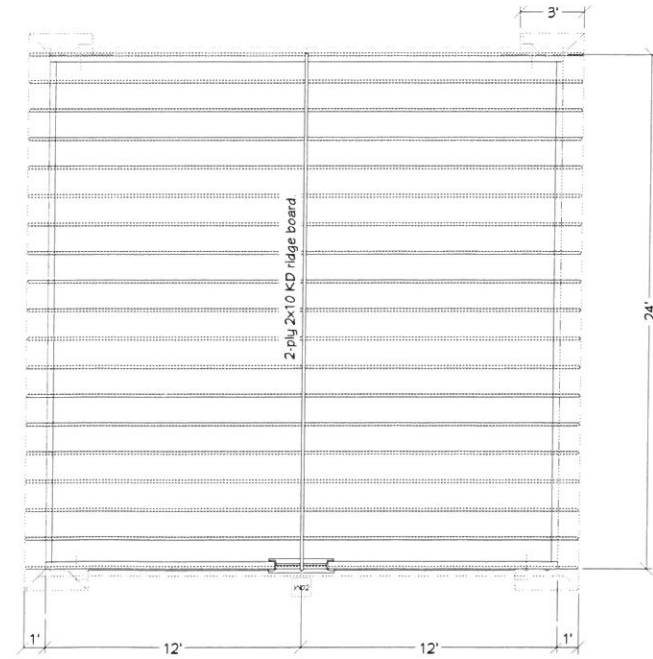
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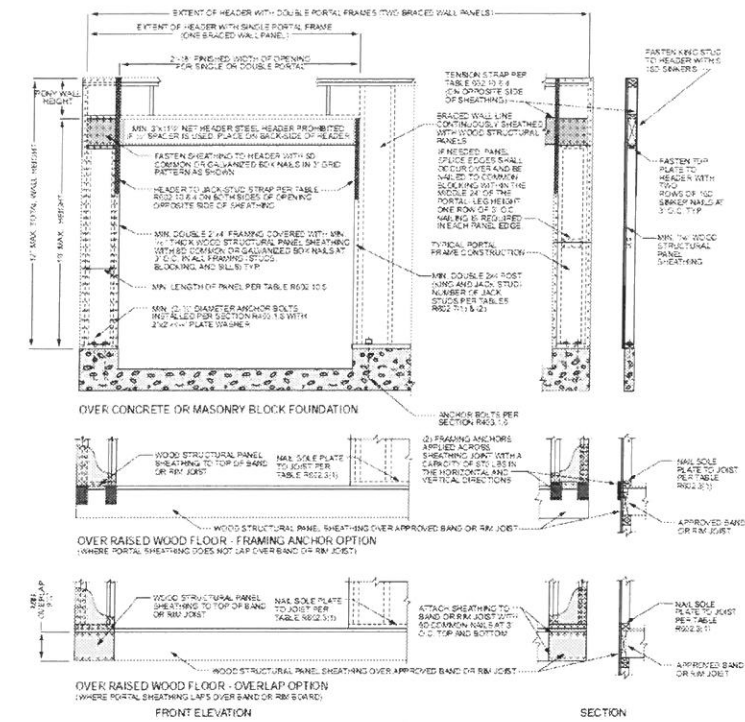


**Ceiling FRAME**

- Limited Access storage Attic - 20psf LL max.
- 2x8 KD #25PF ceiling joists @ 16" o.c.
- Provide Scuttle or pull down ladder access (Not Shown.)
- Access way to be framed with double ceiling joist stock.
- Final access type and location TBD by builder and owner.



**Roof FRAME**



or SI 1 inch = 25.4 mm 1 foot = 304.8 mm

**FIGURE R602.10.6.4**  
**METHOD CS-PF—CONTINUOUSLY SHEATHED PORTAL FRAME PANEL CONSTRUCTION**

2015 INTERNATIONAL RESIDENTIAL CODE COMMENTARY

**ROOF CONSTRUCTION NOTES:**

- All rafters are 2x8 KD #25PF @ 16" o.c. Min. seat cut = 1-3/4"
- Ridge board is 2x10 KD to cover the rafter slash cuts. U.N.O.
- Provide 1/2" CDX sheathing and 15# roof felt -OR- 1/2" Zip-Roof sheathing system with taped seams.
- Provide ice and water shield as follows: 2-rows x 36" wide at eaves, 1-row 18" wide Along rake edges.
- Provide aluminum drip edge around the perimeter of all roof areas.
- Provide roof shingles to match existing.
- Min. seat cut = 1-3/4"

**STRUCTURAL LOADS:**

- Roof - Snow Load: 40 psf
- Roof - Dead Load: 15 psf
- Attic - Live Load: 20 psf (Light storage attic.)
- Attic - Dead Load: 10 psf

All NEW framing and construction to be in accordance with MA Code T80 CMR 9th Edition and IRC 2015 for 1 & 2 Family Residential Construction. While good faith effort has been made to incorporate as much of that information as practical in these documents, human error or omission is possible. It is the licensed builder's responsibility to review these documents prior to construction and to proceed in accordance with applicable codes.

Project Address:  
**Greendale LLC**  
44 Pine Point Road  
Stow MA

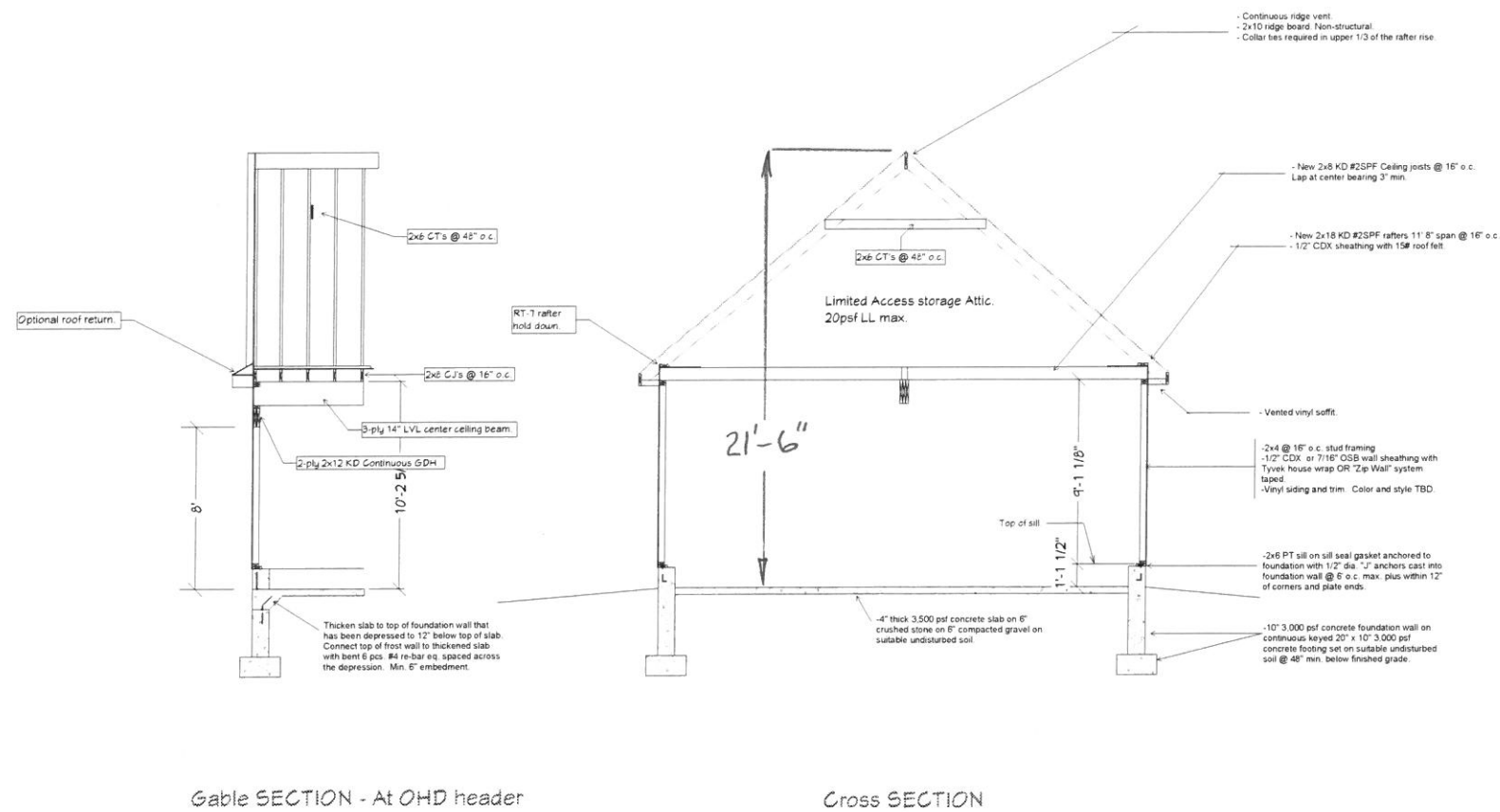
DATE:

4/19/20

SCALE:

SHEET:

S-0



Gable SECTION - At OHD header

Cross SECTION

Project Address:  
**Greendale LLC**  
 44 Pine Point Road  
 Stow MA

DATE:

4/19/20

SCALE:

SHEET:

S-1

All NEVN framing and construction to be in accordance with MA Code 780 CMR 9th Edition and IRC 2015 for 1 & 2 Family Residential Construction. While good faith effort has been made to incorporate as much of that information as practical in these documents, human error or omission is possible. It is the licensed builder's responsibility to review these documents prior to construction and to proceed in accordance with applicable codes.