Commonwealth of Massachusetts

Manufactured Buildings Program

Transmittal Form for all correspondences relating to Manufactured Buildings and Building Components

To: Linda Shea, Manufactured Buildings Program	Phone Number:	Date Transmitted
linda.shea@mass.gov	617-826-5225	12-6-23
Commonwealth of Massachusetts	Office of Public Safety and Inspections Attn: Manu. Bldgs.	
Board of Building Regulations and Standards	1000 Washington Street, Suite 710	
Boston	Massachusetts	02118

The person forwarding this material shall complete the following portion of this transmittal

Name of Person Transmitting Material	MC Number	TPIA Number
Chris O'Brien	221	02

The following information is being transmitted to the Board of Building Regulations and Standards and / or the Department of Public Safety for reasons detailed below (Please check the appropriate box or give a further description of the transmitted items under the section labeled *other*. Be sure to identify the appropriate Use Group.)		Please indicate the Distinct Model and / or Serial Number pertaining to transmitted items	Use Group
Building Plans for Review and Approval	☐		
Building Plans forwarded as a record copy for your files (Review not required)	☒	108503	one-family
Revised building plans for review. (Please clearly identify revisions on the plans.)	☐		
Revised Building Plans forwarded as a record copy for your files (Review not required - Please clearly identify revisions on the plans.)	☐		

Compliance Assurance Programs	Original Submission	☐	Modification to:	☐
Calculations Manual	Original Submission	☐	Modification to:	☐
Installation Manual	Original Submission	☐	Modification to:	☐
Systems Drawings	Original Submission	☐	Modification to:	☐

Other - Provide a detailed description of any other materials which are being transmitted. **Identify any revisions clearly along with BBRS number.**
Also, identify the requested action.

Site Location: 26 CRICKET LANE LITTLETON, MA 01460

The office transmitting this information has reviewed the above mentioned and attached materials and has found them, to the best of our knowledge and abilities, to be in compliance with the codes and \ or rules and regulations for the Commonwealth of Massachusetts' Manufactured Building Program, as applicable

Signed By for TPIA:	Harold Raup Digitally signed by Harold Raup DN: cn=Harold Raup, o=Harold Raup, ou=PFS-TECO, email=harold.raup@pfsteco.om, c=US Date: 2023.12.06 11:37:26 -05'00'	BBRS No: assigned by Mass.	Signed By for MASS:

Print Form

STATE OF : MASSACHUSETTS

CODES:

MA SINGLE & TWO FAMILY DWELLING CODE (780 CMR)–9TH EDITION
248 CMR, THE MASSACHUSETTS STATE PLUMBING AND GAS CODE
2015 INTERNATIONAL MECHANICAL CODE W/AMENDMENTS
2021 INTERNATIONAL ENERGY CONSERVATION CODE
W/ 2023 MA STRETCH ENERGY CODE AMENDMENTS
2023 NATIONAL ELECTRICAL CODE W/ MA AMENDMENTS
SOLAR READY ZONE PER AU103
STRETCH ENERGY COMMUNITY

SPECIAL USE PROVISIONS, BUILDING SETBACKS AND ZONING REQUIREMENTS ARE THE RESPONSIBILITY OF THE LOCAL CONTRACTOR.

CONDITIONS, LIMITATIONS: MASSACHUSETTS: 5'–0" MINIMUM SETBACK FOR ZERO HOUR WALL.

HEATING SYSTEMS: PREFABRICATED FIREPLACES AND FLUES, U.L. LISTED AND MASSACHUSETTS APPROVED, INSTALLED ACCORDING TO MANUFACTURERS INSTRUCTIONS (OPTIONAL). FURNACES OR HEAT PUMPS TO BE INSTALLED ON–SITE ACCORDING TO MASSACHUSETTS, AND/OR LOCAL CODES.

VENTING SYSTEMS: RANGE HOOD AND BATH FAN TO BE EXHAUSTED TO EXTERIOR.

EXTERIOR ENVELOPE: SEE ATTACHED ENERGY DESIGN

THERMAL PERFORMANCE: SEE ENERGY DESIGN FOR INSULATION AMOUNTS. R–35 IS REQUIRED TO BE INSTALLED ON–SITE BY THE BUILDER TO COMPLY WITH THE ENERGY DESIGN R–35 IS TO BE INSTALLED IN THE FLOOR.

SITE CONNECTIONS TO BE VERIFIED BY CONSTRUCTION SUPERVISOR

CAPE MODEL ON-108503

MANUFACTURER INFORMATION

MODULAR BUILDING SYSTEMS OF PA
72 E. MARKET ST. MIDDLEBURG, PA 17842
MA MANUFACTURER MC #: MC221
EXPIRATION DATE: APRIL 30, 2024

MBSP MODULAR BUILDING SYSTEMS OF PA
PROFESSIONAL BUILDING SYSTEMS, INC. | CUSTOM BUILDING SYSTEMS LLC | Virginia Homes Building Systems
MULTI-UNIT MODULAR SOLUTIONS

DRAWING INDEX (TOTAL SHEETS IN SET=62)

PAGE	DESCRIPTION
1	COVER SHEET
PP	PLOT PLAN
2.1–2.4	ELEVATIONS
3.1	FIRST STORY FLOOR PLAN
3.2	PROPOSED SECOND STORY FLOOR PLAN
3.3	FIRST STORY BRACED WALL PLAN
3.4	SECOND STORY BRACED WALL PLAN
4	FIRST STORY ELECTRICAL
5	FOUNDATION
6.1–6.2	CROSS SECTION(s)
7.1–7.2	RAFTER(s)
8.1–8.2	CONNECTION
9.1–9.2	TYPICAL PLUMBING
10	DOOR AND WINDOW SCHEDULES
	RAFTER / BEAM CALCS
	HERS REPORT
	SHEAR WALL DESIGN CALCS

SITE ADDRESS

26 CRICKET LANE
LITTLETON, MA 01460

BUILDING INFORMATION

CONSTRUCTION TYPE: VB
USE GROUP: ONE–FAMILY

DESIGN CRITERIA

WIND SPEED (MPH): 123 VULT
WIND EXPOSURE: C
WIND–BORNE DEBRIS: N
GROUND SNOW LOAD: 50 PSF
SEISMIC CATEGORY: B

FLOORS:
SLEEPING AREAS: 30 PSF
KITCHEN, LIVING, ECT.: 40 PSF
CORRIDOR: 30 PSF
STAIRS: 40 PSF
BALCONIES: 40 PSF
OTHER: NA

LABEL LOCATIONS:
DATA PLATE PER DWELLING AS INDICATED ON PLANS.
THIRD PARTY EACH MODULE AS INDICATED ON PLANS.
STATE LABELS EACH UNIT AS INDICATED ON PLANS.

ROOF DESIGNED FOR SOLAR READY ZONES PER AU103. TRUSSES DESIGNED WITH 10 PSF DEAD LOAD FOR ADDITIONAL OVERFRAMING.

FIRE ALARM SYSTEM: SMOKE/CO DETECTORS (P.E.) TO BE INSTALLED EVERY 1000 SQ. F.T. PER LEVEL AND SHALL BE AC/DC TYPE PER SECTION R314.3. HEAT DETECTORS TO BE INSTALLED IN GARAGE PER SECTION R314.8 2015 IRC / 780 CMR

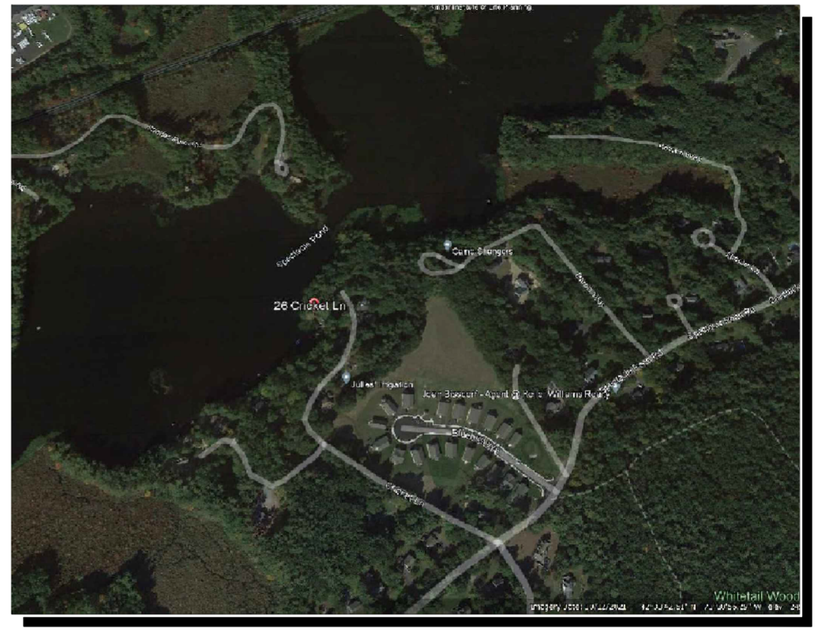
THE DRAWINGS IN THIS SUBSET SHOULD NOT BE SCALED FOR DIMENSIONAL REFERENCE. ALL DIMENSION LINES AND NOTES SUPERCEDE ANY SUCH REFERENCE. DISCRETE MODELS (PLANS HAVING THE SAME SPECIFIC ROOM ARRANGEMENT OR ARCHITECTURAL STYLE) SHALL BE PREPARED FROM THESE DRAWINGS WITHOUT MODIFICATION, ADDITION OR DELETION IN ANY MANNER.

PBS WILL BE CONSIDERED AS A SUB–CONTRACTOR IN ALL BUILDING PROJECTS, SUPPLYING A BUILDING COMPONENT TO A GENERAL CONTRACTOR OR BUILDER. ALL NOTES WITH REFERENCE TO "IN–FIELD", "ON–SITE" OR "BY BUILDER" ARE PERTAINING TO THE RESPONSIBILITIES OF THE GENERAL CONTRACTOR.

ALL MECHANICAL HEATING SYSTEMS TO BE DONE ON–SITE BY BUILDER

FLOOR PLAN MAY BE FLIPPED AND OR MIRRORED

THESE DRAWINGS ARE PROPERTY OF MODULAR BUILDING SYSTEMS OF PA, INC. AND SHALL NOT BE REPRODUCED AND OR COPIED WITHOUT AUTHORIZATION.



1. IT IS MANDATORY FOR THE BUILDER TO COMPLETE THIS HOME IN COMPLIANCE WITH THE INTERNATIONAL BUILDING CODE REQUIREMENTS ADDITIONAL SITE WORK MAY BE:
   a. FLOOR INSULATION – CRAWL SPACE
   b. FOUNDATION WALL INSULATION – BASEMENT
   c. PERIMETER INSULATION – SLABS
   d. INSULATION – PIPING EXPOSED TO UNCONDITIONAL SPACES THE ABOVE MUST BE ACCOMPLISHED WITHIN STATE CODE REQUIREMENTS
2. BUILDER RESPONSIBLE TO FILE THE REQUIRED CERTIFICATION FORMS WITH THE LOCAL ELECTRIC UTILITY PRIOR TO OBTAINING PERMANENT ELECTRIC SERVICE
3. PBS TO USE INTERNATIONAL ENERGY COMPLIANCE CODE. SEE SUBMISSION SET FOR EXAMPLE. EACH INDIVIDUAL MODEL TO REQUIRE A RESCHECK TO MEET THE I.R.C. REQUIREMENTS

STATE STAMP

P.E. SEAL

COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-5-23 D.Feeney

THIRD PARTY INFORMATION

PFS CORPORATION
MA THIRD PARTY APPROVAL AGENCY: TPIA–02
EXPIRATION DATE: APRIL 30, 2024

PFS STAMP

PFS CORPORATION
Approval Limited to Factory Built Portion Only

State: Massachusetts
Signature: Harold Raup
Title: Staff Plan Reviewer
Date: 12/6/23

48 HOUR NOTIFICATION IS REQUIRED PRIOR TO THE SET. THE CSL ON RECORD WILL RELAY THIS TO THE LOCAL BUILDING AUTHORITY. IF ANY CONNECTIONS HAVE BEEN CONCEALED PRIOR TO INSPECTION, THE BUILDING OFFICIAL MAY REQUEST HAVING THE REMOVAL OF ELEMENTS THAT CONCEAL THE CONNECTIONS TO PROVDE ACCESS. THIS WOULD NOT CONSTITUTE DESTRUCTIVE DISASSEMBLY. ALL CONNECTONS ON SITE MUST BE INSPECTED BY THE LOCAL AUTHORITY.

CHRISO 12/5/2023 2:16:36 PM

BUILDER: PROS EDGE QUALITY HOMES L
CUSTOMER: CLARK AND MC
CITY: LITTLETON
COUNTY: MIDDLESEX
STATE: MA
WIND SPEED: 123 MPH VULT
SNOW LOAD: 50
SQ. FT.: 1008
ORDER NO.: 108503
SERIAL NO.:
FILE NO.: P108503(620)

2442–PRESTIGE RANCH
INDEX

Professional Building Systems
72 East Market Street
Middleburg, PA 17842
(888) 553–1414
WWW.PROMODULAR.COM

DATE:	DRAWN BY:	STATUS:
6/30/23	NPL	CONFO
08/09/2023	MDC	FINAL
09/07/2023	MDC	REV FINAL
10/26/2023	SMW	REV. FINAL
11/9/2023	COB	APPROVAL

PAGE:

LEGEND

- - 300 - - EXISTING CONTOUR
PROPOSED CONTOUR
I1J PERGOLATION TEST HOLE
[# I OBSERVATION TEST HOLE
-- S -- SEWER LINE
--W--WATER LINE
EDGE or WETLANDS
EXISTING TREE TO REMAIN
(PROPOSED SITE PLAN)

ZONING REQUIREMENTS					
"R" RESIDENTIAL DISTRICT					
DESCRIPTION	REQUIRED	EXISTING (#26)	EXISTING (#28)	EXISTING (#30)	PROVIDED
LOT AREA	40,000 S.F.	2,633 SF.±*	3,732 S.F.±*	2,815 S.F.±'	9,180 S.F.±*
MIN. LOT FRONTAGE	tso·	O·•	O•	O•	O·•
MIN. FRONT SETBACK	25'	N/A	N/A	N/A	N/A
MIN. SIDE SETBACK	15'	0.9'*	11.8'*	1.7•	4.1''
MIN. REAR SETBACK	15'	14.4'*	1.6'/-	3.7'*	12.0'*

'PRE-EXIST/NC. NON-CONFORMING

ASSESS0R's
MAP U46
PARCEL 11
2,815 S.F.±

N,/r
MCKENNA

CRAfil
AREA

EDG'E OF
PAVEMENT

0(100'_-t____ _____

\. ,1MIJJ zoN£
ER

FND
RRSPIKE

N/r
YONG L I

N/r
FLANNERY

N,/r
WARNER

FND
p

13.49'

OAK 24" ·.
20-4

MAPLE
to"

ASSESSOR'S
MAP U46

PARCEL 10

3.732 S.F.:i:

"5" 20- 0-13

"-C/°'. PIN. _/ JMAPLE 24"

---to 20_1 'wi 10·
PINE 20" 20- 20.:."1'2 K 16"

ASSESS0R's
MAP U46

PARCEL 9
2,6.J.J S.F.:i:

EXISTING SITE PLAN

1"-20·

LOCUS MAP
NOT TO SCALE

20 0 10 210 -410 6 0
GRAPHIC SCALE IN FEEr

SVRV.: MSB/JDS	CALC: JPC	DRAFT' BJD
NB. 815-8	DEED: 73353-213 73861-459 75619-105	CHECK: DBW

REVISIONS

8/6/21: REV. PER CON COM COMMENTS

10/7/21: REV. WELL LDC. AND ADD HOLDING rANK ON ABUTTING PROPERTY (#28)

COMMONWEALTH OF MASSACHUSETTS
DANIEL B. WOLFE
CIVIL
No. 35523
REGISTERED PROFESSIONAL ENGINEER
10-7-21

SHEET I'/LE
SEWAGE DISPOSAL SYSTEM
HOLDING TANK

DESJGNED FOR:
PETER McANESPIE

ADDRESS:
#26, #28 & 30 CRICKET LAN£
LITTL£TON, MA

LOT NO.: ASSESSOR MAP: U46 ASSESSOR PARCEL: 9, JO & 11

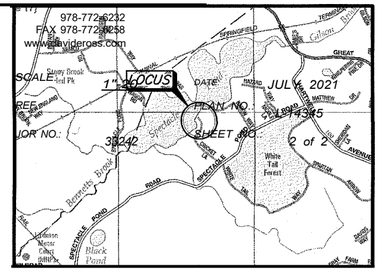
DAVIDE. ROSS
ASSOCIATES, INC.
CIVIL ENGINEERS - LAND SURVEYORS
ENVIRONMENTAL CONSULTANTS

PROPOSED

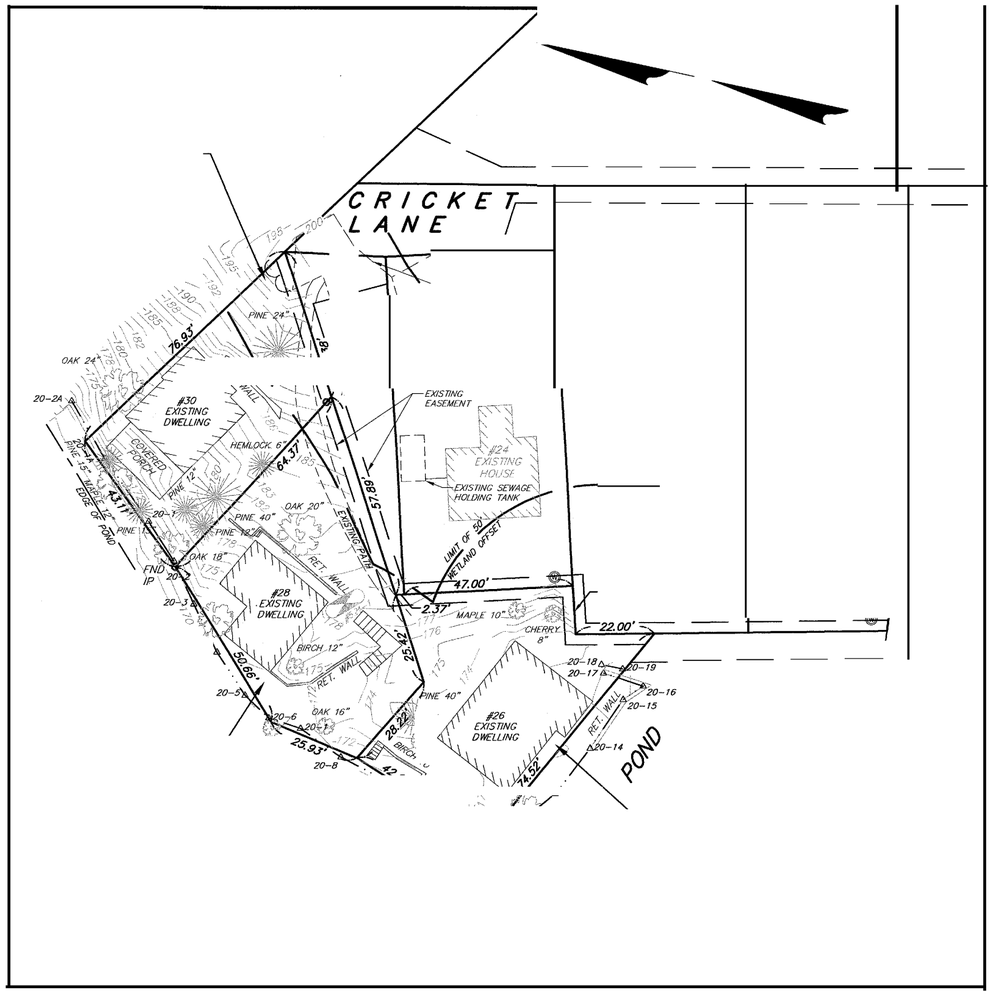
T£ PLAN
1"-20'

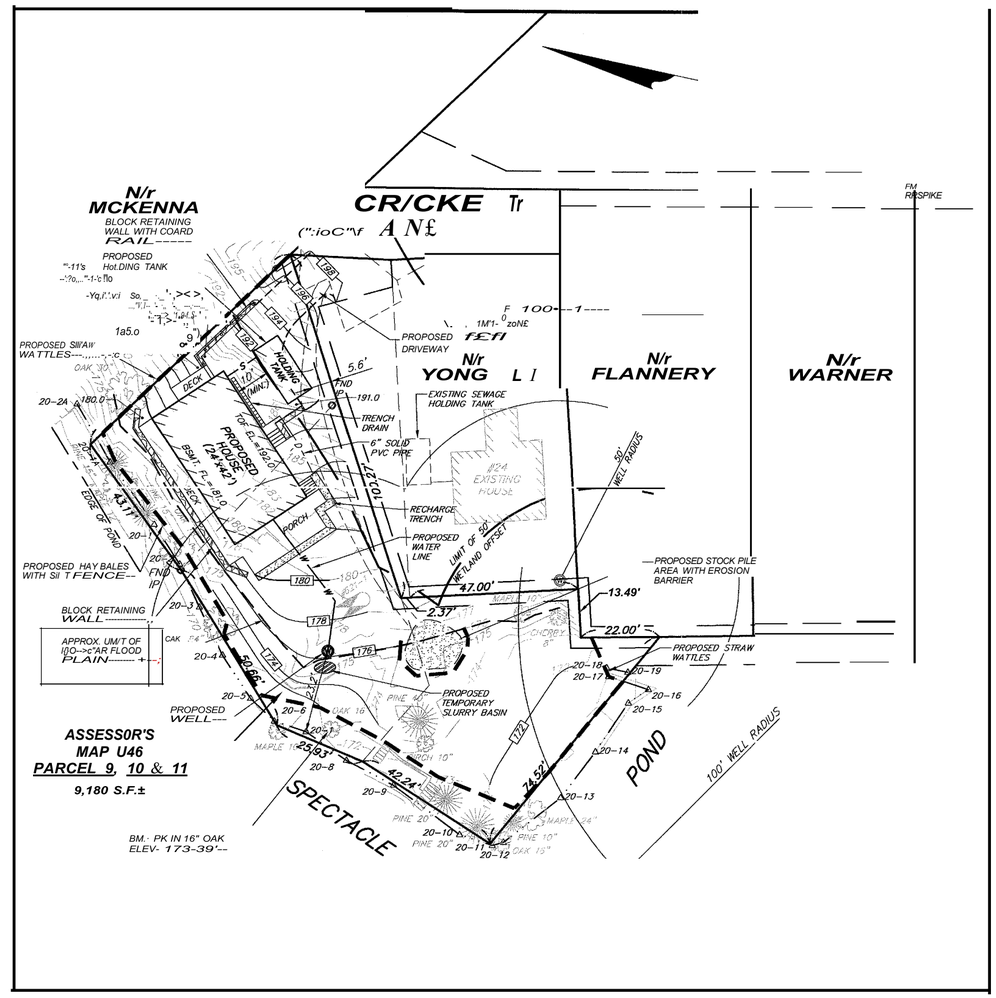
6 Lancaster County Road
P.O. Box795
Harvard, MA 01451-0795

978-772-6232
FAX 978-772-0258
www.davidcross.com



SCALE: 1"=60'
DATE: JULY 2021
REF.
PLAN NO.: CS14345
JOB NO.: 38242
SHEET NO.: 2 of 2





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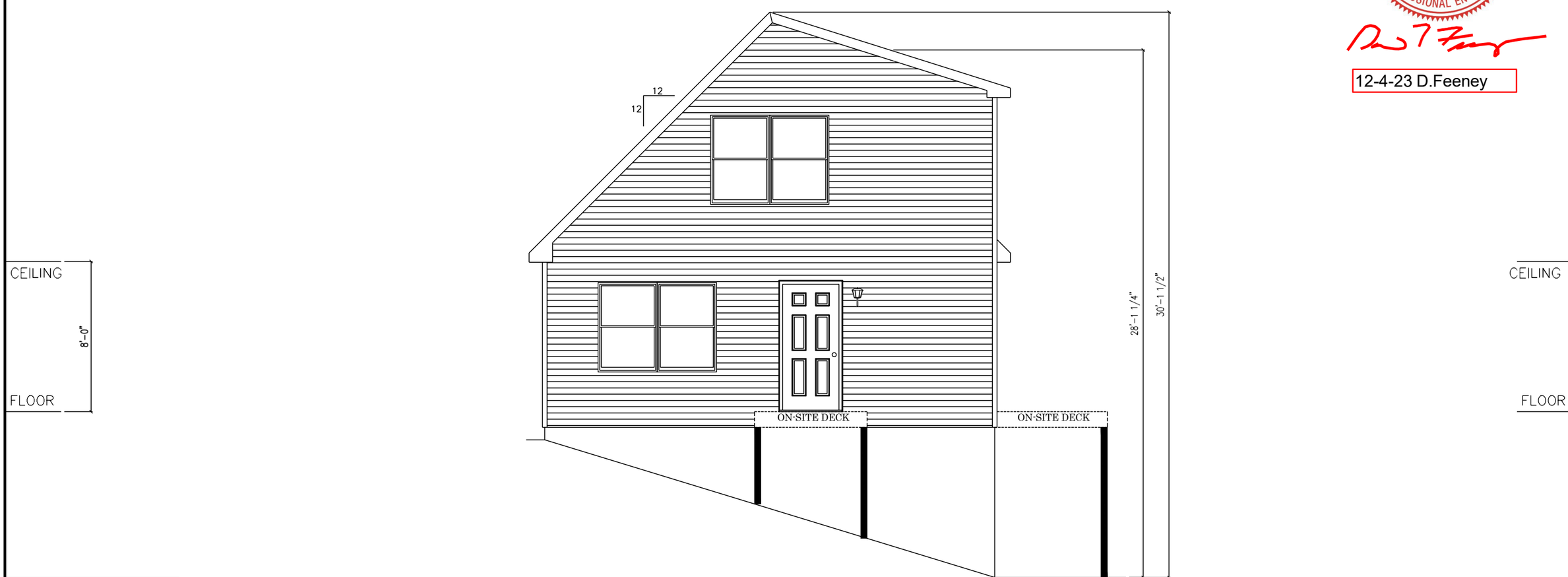
Northeast Region
APPROVED
H Raup – 3
12/6/23
Approval limited to Factory Built Portion

COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

SHIPLOOSE SIDING



ATTIC VENTILATION
LOWER 50% @ EAVES
REQ'D 1.68 SUPPLIED 2.6
UPPER 50% 3'-0" MIN ABOVE EAVES
REQ'D 1.68 SUPPLIED 2.16 (3 PCS)

CHRISO 12/4/2023 7:39:29 AM

ACTUAL HOUSE MAY VARY FROM ELEVATION–ACCESS TO GRADE ON–SITE BY BUILDER

BUILDER	CUSTOMER
PROS EDGE QUALITY HOMES L	CLARK AND MC

CITY	COUNTY	STATE
LITTLETON	MIDDLESEX	MA

WIND SPEED	SNOW LOAD	SQ. FT.
123 MPH VULT	50	1008

ORDER NO.	SERIAL NO.	FILE NO.
108503		P108503(620)

2442–PRESTIGE RANCH
FRONT ELEVATION

Professional Building Systems
72 East Market Street
Middleburg, PA 17842
(888) 553–1414
WWW.PBSMODULAR.COM

DATE:	DRAWN BY:	STATUS:
6/30/23	NPL	CONFO
08/09/2023	MDC	FINAL
09/07/2023	MDC	REV FINAL
10/26/2023	SMW	REV. FINAL
11/9/2023	COB	APPROVAL

PAGE: 2.1

PFS Corporation
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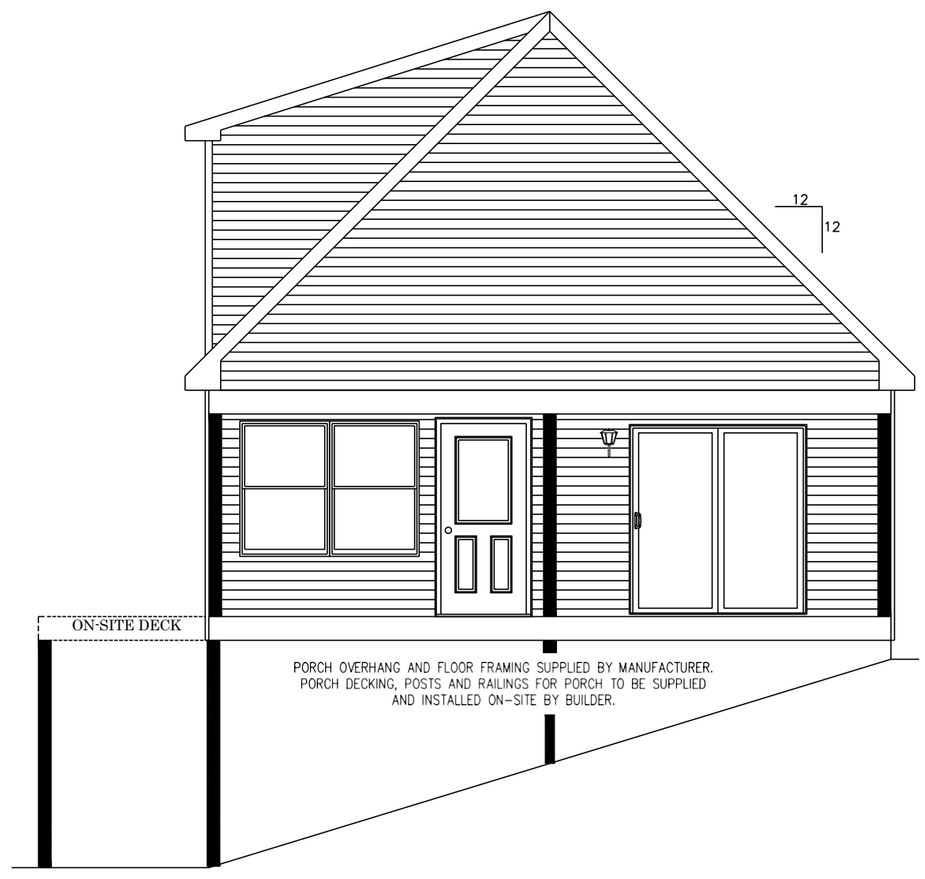
COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

CEILING

FLOOR



CEILING

FLOOR

CHRISO 12/4/2023 7:39:29 AM

ACTUAL HOUSE MAY VARY FROM ELEVATION–ACCESS TO GRADE ON–SITE BY BUILDER

BUILDER	PROS EDGE QUALITY HOMES L
CUSTOMER	CLARK AND MC
CITY	LITTLETON
COUNTY	MIDDLESEX
STATE	MA
WIND SPEED	123 MPH VULT
SNOW LOAD	50
SQ. FT.	1008
ORDER NO.	108503
SERIAL NO.	
FILE NO.	P108503(620)

2442–PRESTIGE RANCH
REAR ELEVATION

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10/26/2023	SMW	REV. FINAL
11/9/2023	COB	APPROVAL

PAGE: 2.2

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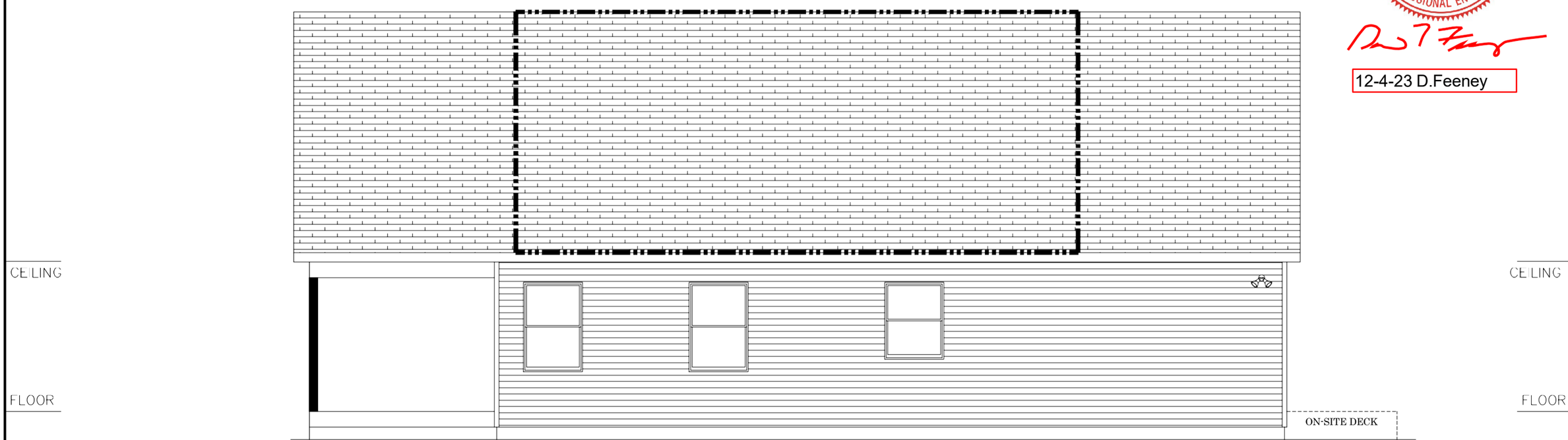
ROOF AREA MEETS THE 600 SQ FT REQUIREMENT
PER SECTION AU103 SOLAR-READY ZONE.
TRUSSES ARE DESIGNED WITH 10 PSF DEAD LOAD
FOR ADDITIONAL OVERFRAMING



PORCH OVERHANG AND FLOOR FRAMING SUPPLIED BY MANUFACTURER.
PORCH DECKING, POSTS AND RAILINGS FOR PORCH TO BE SUPPLIED
AND INSTALLED ON-SITE BY BUILDER.

COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

CHRISC 12/4/2023 7:39:29 AM

ACTUAL HOUSE MAY VARY FROM ELEVATION–ACCESS TO GRADE ON–SITE BY BUILDER

BUILDER	PROS EDGE QUALITY HOMES L
CUSTOMER	CLARK AND MC
CITY	LITTLETON
COUNTY	MIDDLESEX
STATE	MA
WIND SPEED	123 MPH VULT
SNOW LOAD	50
SQ. FT.	1008
ORDER NO.	108503
SERIAL NO.	
FILE NO.	P108503(620)

2442–PRESTIGE RANCH
LEFT ELEVATION

PROFESSIONAL BUILDING SYSTEMS, INC.
Professional Building Systems
72 East Market Street
Mechanicsburg, PA 17842
(888) 553-1414
WWW.PBSMODULAR.COM
MBSP MODULAR BUILDING SYSTEMS OF PA

DATE:	DRAWN BY:	STATUS:
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09/07/2023	MDC	REV FINAL
10/26/2023	SMW	REV. FINAL
11/9/2023	COR	APPROVAL

PAGE: 2.3

PFS Corporation
Northeast Region
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12/6/23
Approval limited to Factory Built Portion

COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

ROOF AREA MEETS THE 600 SQ FT REQUIREMENT
PER SECTION AU103 SOLAR-READY ZONE.
TRUSSES ARE DESIGNED WITH 10 PSF DEAD LOAD
FOR ADDITIONAL OVERFRAMING

PORCH OVERHANG AND FLOOR FRAMING SUPPLIED BY MANUFACTURER.
PORCH DECKING, POSTS AND RAILINGS FOR PORCH TO BE SUPPLIED
AND INSTALLED ON-SITE BY BUILDER.

CHRISC 12/4/2023 7:39:29 AM

ACTUAL HOUSE MAY VARY FROM ELEVATION–ACCESS TO GRADE ON-SITE BY BUILDER

BUILDER: PROS EDGE QUALITY HOMES L
CUSTOMER: CLARK AND MC
CITY: LITTLETON
COUNTY: MIDDLESEX
STATE: MA
WIND SPEED: 123 MPH VULT
SNOW LOAD: 50
SQ. FT.: 1008
ORDER NO.: 108503
SERIAL NO.:
FILE NO.: P108503(620)

2442–PRESTIGE RANCH
RIGHT ELEVATION

Professional Building Systems
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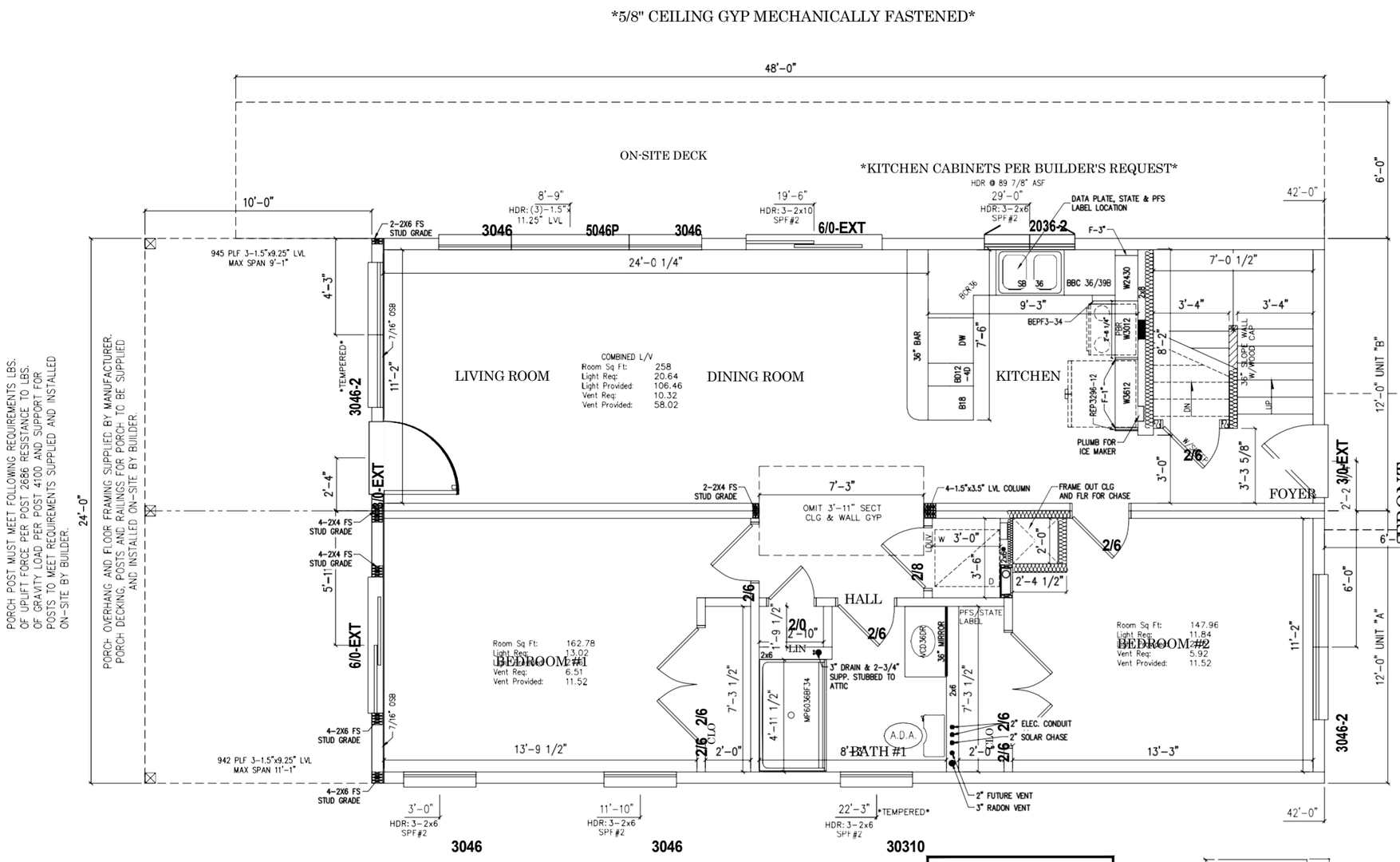
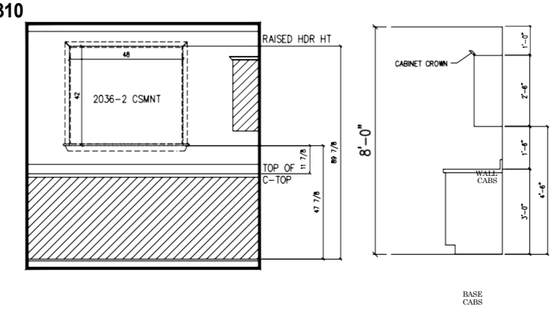
11/9/2023	COB	APPROVAL

PAGE: 2.4

GENERAL NOTES:

1. *5/8" CEILING GYP MECHANICALLY FASTENED*
2. ALL LVL (LAMINATED VENEER LUMBER) SPECIFIED IN PLAN SET SHALL BE TYPE "2.0E/Fb 3100 PSI"
3. MECHANICAL VENTILATION ON-SITE BY BUILDER PER TABLE N1103.6.
4. THE ON-SITE WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM SHALL COMPLY WITH 2015 IRC 1507.3 W/SONE RATING OF 1.0 OR LESS.
5. BUILDER RESPONSIBLE FOR COMPLIANCE WITH SECTION R312.2 (WINDOW SILLS) OF THE 2015 IRC (TO BE DONE ON-SITE IF APPLICABLE).
6. DUCT TIGHTNESS AND BLOWER DOOR TESTING ON-SITE BY BUILDER AND CERTIFIED BY STATE.
7. TENT INSULATION AROUND H20 SUPPLY LINES ON EXTERIOR WALLS TO PREVENT FREEZING.
8. SHOWER COMPARTMENTS TO CONFORM TO [248 CMR 10.10(7)(C)].
9. LOT LINE SET BACK FIRE-RATING/SEPARATION NOT REQUIRED UNLESS SPECIFIED OTHERWISE.
10. HEAT REQUIREMENT AND SYSTEM IS TO BE DESIGNED AND INSTALLED ON-SITE BY BUILDER. HEAT SYSTEM TO BE INSPECTED AND APPROVED BY LOCAL BUILDING INSPECTOR.
11. STRUCTURE DEPICTED AT THIS SITE ADDRESS TO BE DEMOLISHED BY BUILDER AND REPLACED WITH THIS HOUSE.





CODES:

MA SINGLE & TWO FAMILY DWELLING CODE (780 CMR)-9TH EDITION
248 CMR, THE MASSACHUSETTS STATE PLUMBING AND GAS CODE
2015 INTERNATIONAL MECHANICAL CODE W/AMENDMENTS
2021 INTERNATIONAL ENERGY CONSERVATION CODE
W/ 2023 MA STRETCH ENERGY CODE AMENDMENTS
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SOLAR READY ZONE PER AU103
STRETCH ENERGY COMMUNITY

COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

PFS Corporation
Northeast Region
APPROVED
H Raup – 3
12/6/23
Approval limited to Factory Built Portion

CHRISC 12/4/2023 7:39:29 AM

NOTES: 1. ✻ DENOTES ADDITIONAL COLUMN IN BASEMENT
2. 2X6 EXTERIOR WALLS 16" O.C.
3. 2X4 MARRIAGE WALLS 16" O.C.
4. ROOF RAFTERS 16" O.C.
5. 8'-0" CLG.

BUILDER	CUSTOMER
PROS EDGE QUALITY HOMES L	CLARK AND MC

CITY	COUNTY	STATE
LITTLETON	MIDDLESEX	MA

WIND SPEED	SNOW LOAD	SQ. FT.
123 MPH VULT	50	1008

ORDER NO.	SERIAL NO.	FILE NO.
108503		P108503(620)

2442-PRESTIGE RANCH
1st STORY FLOOR PLAN

PROFESSIONAL BUILDING SYSTEMS, INC.

MBSP MODULAR BUILDING SYSTEMS OF PA

Professional Building Systems
72 East Market Street
Middleburg, PA 17842
(888) 553-1414
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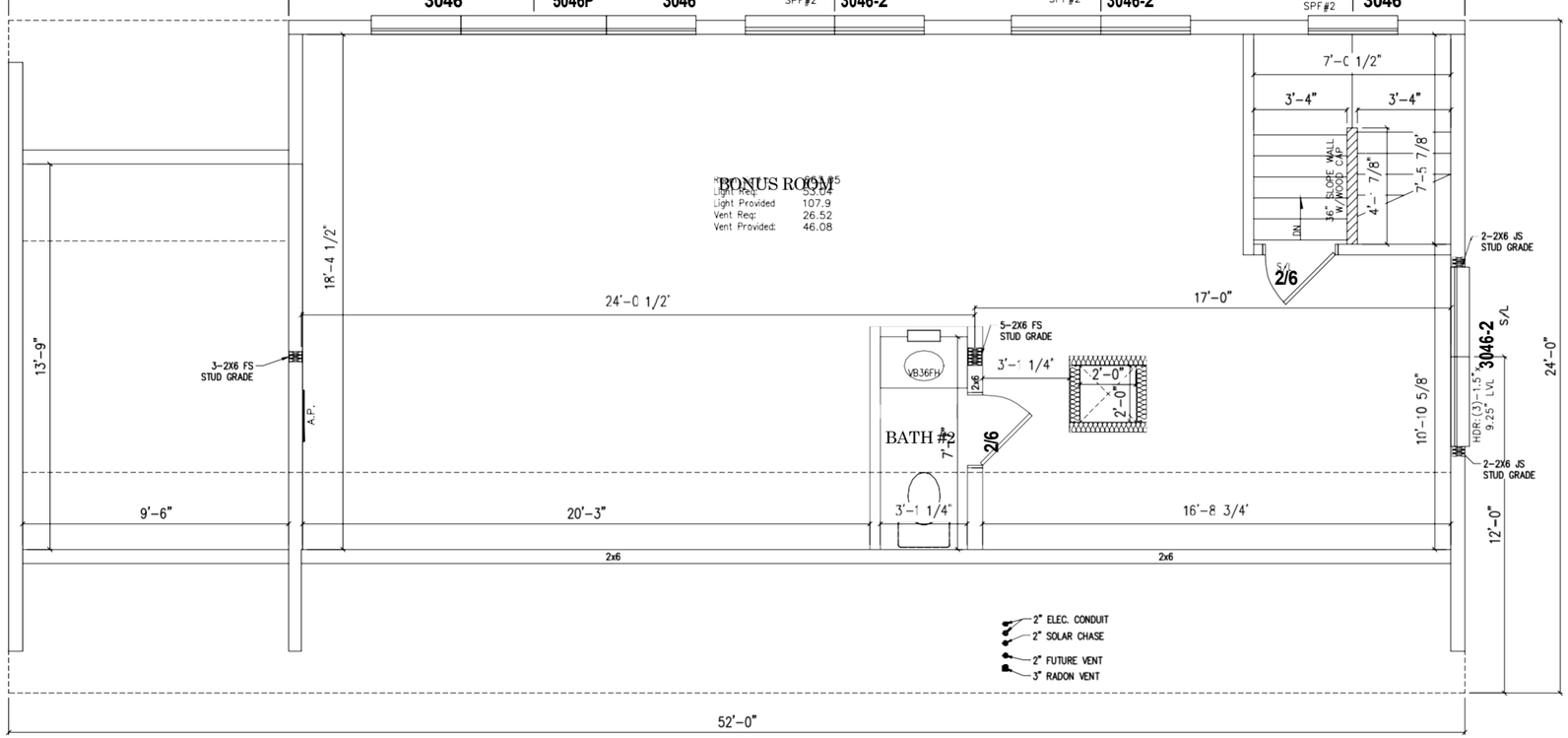
PAGE:	DATE:	DRAWN BY:	STATUS:
	6/30/23	NPL	CONFO
	08/09/2023	MDC	FINAL
	09/07/2023	MDC	REV FINAL
	10/26/2023	SMW	REV. FINAL
	11/9/2023	COB	APPROVAL

6. STAIRS TO BE 8 1/4" RISERS AND 9" TREADS.
7. MW CLG BEAM OVER DIN/HALL: 21.5" X 9.25" LVL (PER SIDE)
8. MW CLG BEAM OVER PORCH: 1-1.5" X 9.25" LVL (PER SIDE)
9. MW FLR BM: 3-2X10 SYP#2 (PER SIDE)
10.
11.

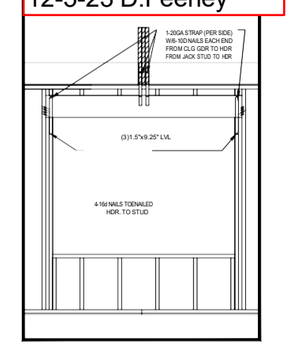
3.1

PROPOSED SECOND FLOOR DRAWINGS ARE TO BE USED AS A GUIDE ONLY. BEAM SIZE IS BASED ON SUGGESTED PLAN SHOWN. MANUFACTURER WILL NOT ASSUME ANY LIABILITY OR RESPONSIBLE FOR ALTERED CONSTRUCTION OF SECOND FLOOR LAYOUT. ON-SITE INSTALLATION INCLUDES THE ELECTRICAL DESIGN, HEATING REQUIREMENTS AND ENERGY COMPLIANCE. PROPOSED SECOND FLOOR SHALL BE INSPECTED AND APPROVED BY THE LOCAL BUILDING INSPECTOR.



FRONT

12-5-23 D.Feeney



S/L HDR AT ENDWALL

PFS Corporation
Northeast Region
APPROVED
H Raup – 3
12/6/23
Approval limited to Factory Built Portion

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NOTES: 1. ✲ DENOTES ADDITIONAL COLUMN IN BASEMENT
2. 2X6 EXTERIOR WALLS 16" O.C.
3. ROOF RAFTERS 16" O.C.
4.
5. S H E

BUILDER	PROS EDGE QUALITY HOMES L
CUSTOMER	CLARK AND MC
CITY	LITTLETON
COUNTY	MIDDLESEX
STATE	MA
WIND SPEED	123 MPH VULT
SNOW LOAD	50
SQ. FT.	1008
ORDER NO.	108503
SERIAL NO.	
FILE NO.	P108503(620)

2442-PRESTIGE RANCH
2nd STORY FLOOR PLAN

Professional Building Systems
72 East Market Street
Middleburg, PA 17842
(888) 553-1414
WWW.PROMODULAR.COM

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09/07/2023	MDC	REV FINAL
10/26/2023	SMW	REV. FINAL
11/9/2023	COB	APPROVAL

PAGE:

D BEAM: 3-1.5" X 24" LVL (TOTAL)

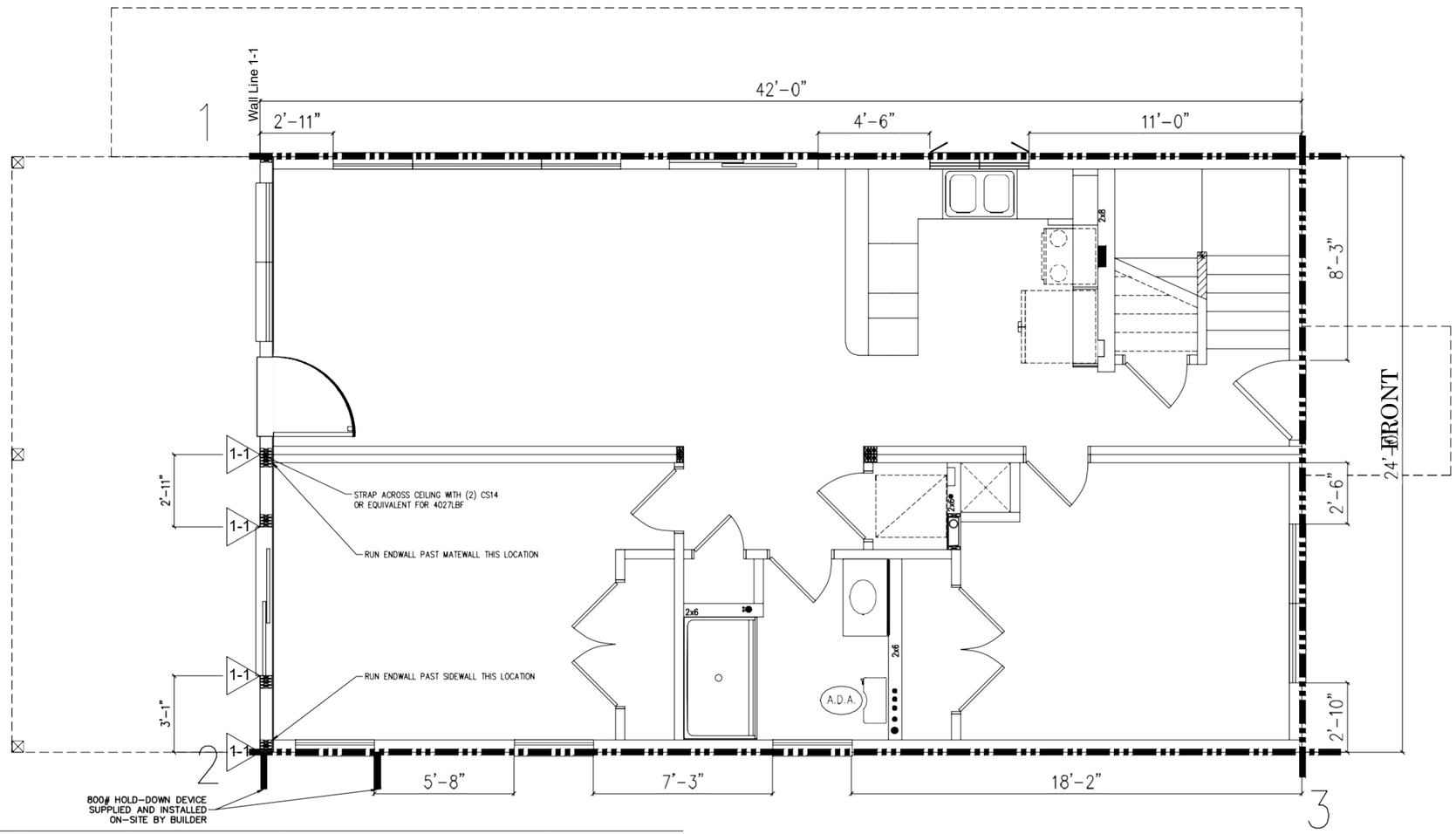
6.
7.
8.

9.
10.
11.
12.

3.2

NAILING FOR ALL BRACED WALL "CS-WSP" PANEL LOCATIONS: 6" O.C. AT PANEL EDGES AND ALL HORIZONTAL JOINTS ARE BLOCKED, INCLUDING TOP AND (INCLUDING TOP AND BOTTOM PLATES) 12" O.C. FIELD. USE 8D COMMON (2.5"X0.131") NAILS (1-3/4" PENETRATION)6D COMMON (2"X0.113") NAILS AT 6" O.C. SPACING (PANEL EDGES) AND AT 12" O.C. SPACING (INTERMEDIATE SUPPORTS) OR 16GA. X 1-3/4" STAPLES AT 3" O.C. SPACING (PANEL EDGES) AND 6" O.C.SPACING (INTERMEDIATE SUPPORTS).

ALL SHEATHING SHALL RUN VERTICALLY WITHOUT HORIZONTAL JOINTS



COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-5-23 D.Feeney

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12/6/23
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BRACED WALLS DESIGN PER 2015 INTERNATIONAL RESIDENTIAL BUILDING CODE

	Wall 1	Wall 2	Wall 3
WIND SPEED / WALL CONSTRUCTION TYPE	130 MPH CS-WSP	130 MPH CS-WSP	130 MPH CS-WSP
WALL LINE SPACING	24	24	42
MINIMUM PANEL NEXT TO DOOR	35	35	35
MINIMUM PANEL NEXT TO WINDOW	26	26	26
TOTAL LENGTH OF BRACING REQUIRED	9.40	4.80	7.90
ADJUSTMENTS (per TABLE R602.10.3(2))			
Exposure/ Number of Stories	1.2	1.2	1
Wall Height	0.9	0.9	0.9
Support Condition/Eave to Ridge Height	1	1.3	1.3
Number of Braced Wall Lines	1	1	1
Bracing Lengths for Method GB	1	1	1
TOTAL LENGTH OF BRACING REQUIRED AFTER ADJUSTMENTS	10.15	6.74	9.24
TOTAL LENGTH OF BRACING PROVIDED	18.42	31.087	13.58
Compliant with Section R602.10	YES	YES	YES

WALL LINE SCHEDULE

Mark	Sheathing	Fastening	Framing	1st Story Rim to Sill Connection
WALL LINE 1-1	7/16" Structural Sheathing, Two Sides, Blocked See Note 1 and Note 2	0.148"x2" Nail 3/12 (edge/field)	2x6 SPF @ 16" oc	Lapped Sheathing with 0.131" x 2" Nails at 3" oc
Fasten unblocked floor diaphragm w/ 0.131" x 2.25" Nails 6"oc Boundary, 6" oc Edge, 12" oc Field				
Top Plates to be Interconnected with (10) 0.131"x2.375" Face Nails Each Side of Splice				
Note 1: Panel joints shall be offset to fall on different framing members or double studs and stagger fasteners at adjoining panel edges.				
Note 2: Double sided requires endwalls to run past sidewall/matewall to acheive full length sheathing on both sides of the wall.				

TIE-DOWN SCHEDULE

Mark	Tie-down/Force
1-1	11,536lbf

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BUILDER: PROS EDGE QUALITY HOMES L
CUSTOMER: CLARK AND MC
CITY: LITTLETON
COUNTY: MIDDLESEX
STATE: MA
WIND SPEED: 123 MPH VULT
SNOW LOAD: 50
SQ. FT.: 1008
ORDER NO.: 108503
SERIAL NO.:
FILE NO.: P108503(620)

2442-PRESTIGE RANCH
1st STORY BRACED WALL PLAN

PROFESSIONAL BUILDING SYSTEMS, INC.
Professional Building Systems
72 East Market Street
Middleburg, PA 17842
(888) 553-1414
WWW.PBSMODULAR.COM

MBSP MODULAR BUILDING SYSTEMS OF PA

STATUS:	DRAWN BY:	DATE:
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FINAL	MDC	08/09/2023
REV FINAL	MDC	09/07/2023
REV. FINAL	SMW	10/26/2023
APPROVAL	COB	11/9/2023

PAGE: 3.3

NAILING FOR ALL BRACED WALL "CS-WSP" PANEL LOCATIONS: 6" O.C. AT PANEL EDGES AND ALL HORIZONTAL JOINTS ARE BLOCKED, INCLUDING TOP AND (INCLUDING TOP AND BOTTOM PLATES) 12" O.C. FIELD. USE 8D COMMON (2.5"X0.131") NAILS (1-3/4" PENETRATION)6D COMMON (2"X0.113") NAILS AT 6" O.C. SPACING (PANEL EDGES) AND AT 12" O.C. SPACING (INTERMEDIATE SUPPORTS) OR 16GA. X 1-3/4" STAPLES AT 3" O.C. SPACING (PANEL EDGES) AND 6" O.C.SPACING (INTERMEDIATE SUPPORTS).

ALL SHEATHING SHALL RUN VERTICALLY WITHOUT HORIZONTAL JOINTS

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Northeast Region
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12/6/23
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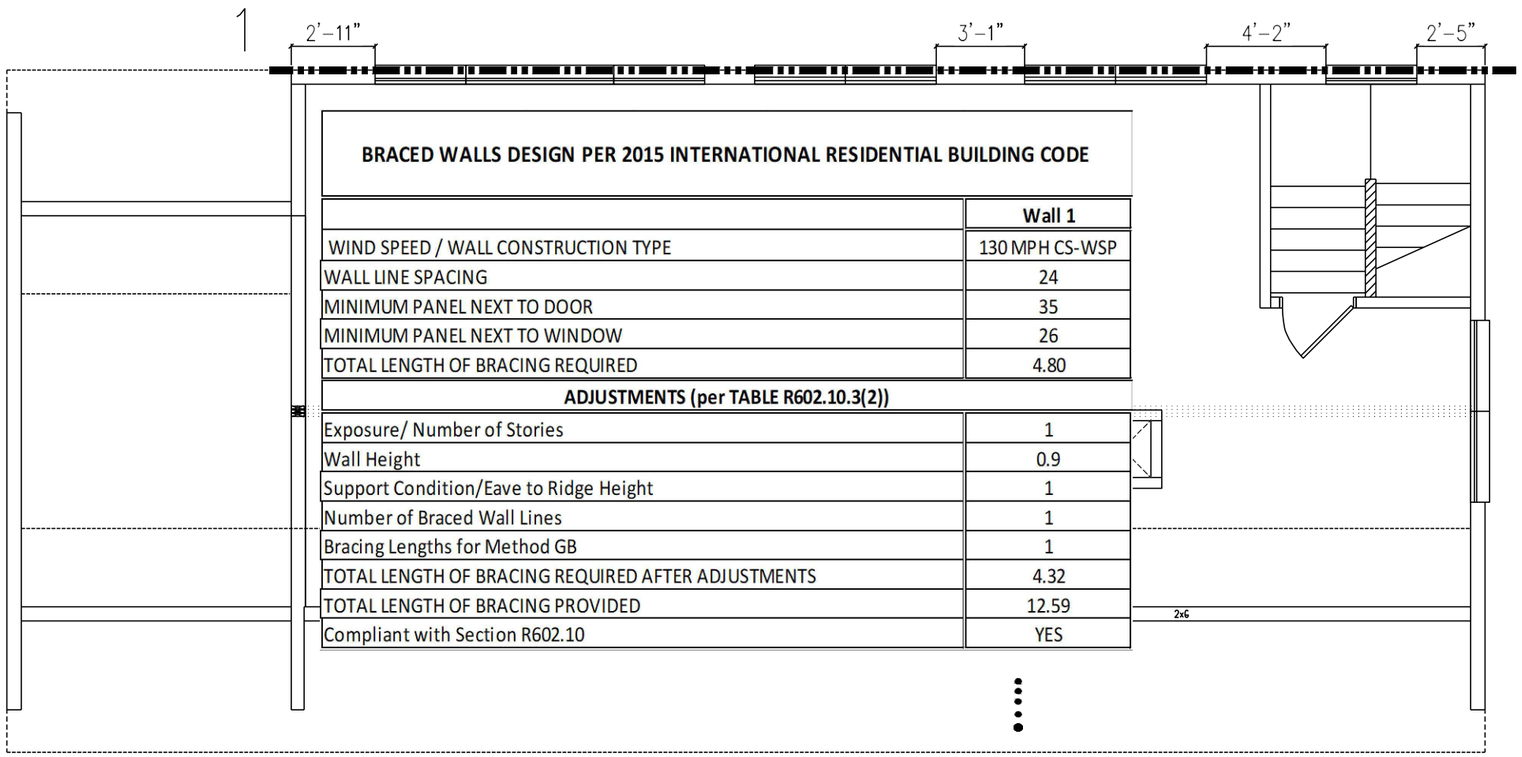

BRACED WALLS DESIGN PER 2015 INTERNATIONAL RESIDENTIAL BUILDING CODE

	Wall 1
WIND SPEED / WALL CONSTRUCTION TYPE	130 MPH CS-WSP
WALL LINE SPACING	24
MINIMUM PANEL NEXT TO DOOR	35
MINIMUM PANEL NEXT TO WINDOW	26
TOTAL LENGTH OF BRACING REQUIRED	4.80
ADJUSTMENTS (per TABLE R602.10.3(2))	
Exposure/ Number of Stories	1
Wall Height	0.9
Support Condition/Eave to Ridge Height	1
Number of Braced Wall Lines	1
Bracing Lengths for Method GB	1
TOTAL LENGTH OF BRACING REQUIRED AFTER ADJUSTMENTS	4.32
TOTAL LENGTH OF BRACING PROVIDED	12.59
Compliant with Section R602.10	YES

FRONT

COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

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BUILDER: PROS EDGE QUALITY HOMES L
CUSTOMER: CLARK AND MC
CITY: LITTLETON
COUNTY: MIDDLESEX
STATE: MA
WIND SPEED: 123 MPH VULT
SNOW LOAD: 50
SQ. FT.: 1008
ORDER NO.: 108503
SERIAL NO.:
FILE NO.: P108503(620)

2442-PRESTIGE RANCH
2nd STORY BRACED WALL PLAN

Professional Building Systems
72 East Market Street
Middleburg, PA 17842
(888) 553-1414
WWW.PBSMODULAR.COM

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10/26/2023	SMW	REV. FINAL
11/9/2023	COB	APPROVAL

PAGE: 3.4

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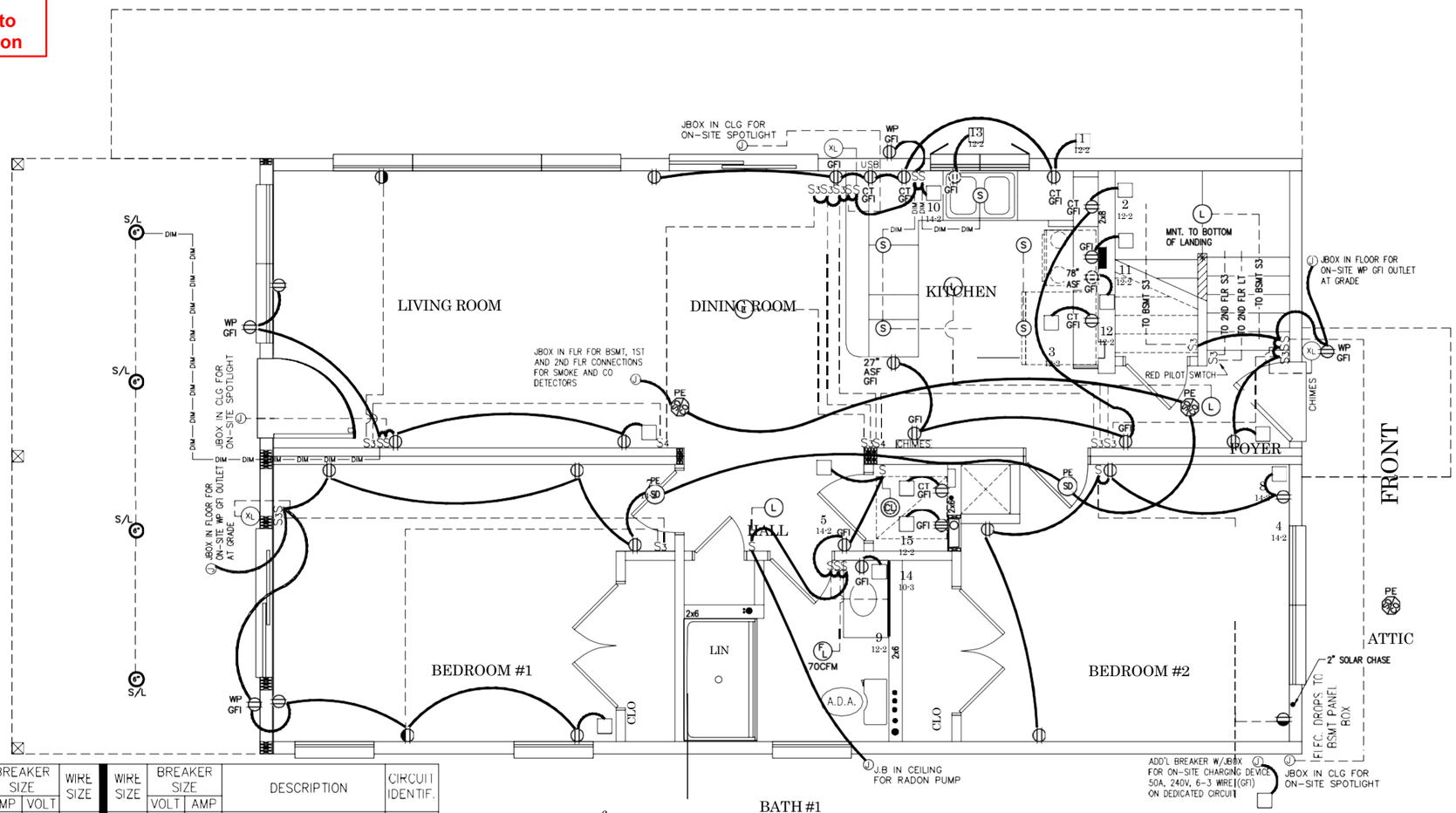
Northeast Region
APPROVED
H Raup – 3
12/6/23
Approval limited to Factory Built Portion



CIRCUIT IDENTIF.	DESCRIPTION	BREAKER SIZE AMP	BREAKER SIZE VOLT	WIRE SIZE	WIRE SIZE	BREAKER SIZE VOLT	BREAKER SIZE AMP	DESCRIPTION	CIRCUIT IDENTIF.
1	SMALL APPLIANCE AFI(GFI)	20A	110	12–2	12–2	110	20A	SMALL APPLIANCE AFI(GFI)	2
3	SMALL APPLIANCE AFI	20A	110	12–2	14–2	110	15A	GENERAL LIGHTING AFI	4
5	GENERAL LIGHTING AFI	15A	110	14–2	14–2	110	15A	SMOKE DETECTORS/ GENERAL LIGHTING AFI	6
7	GENERAL LIGHTING AFI	15A	110	14–2	14–2	110	15A	GENERAL LIGHTING AFI	8
9	BATH #1 (GFI)	20A	110	12–2	14–2	110	15A	GENERAL LIGHTING AFI	10
11	RANGE AFI (GFI)	20A	110	12–2	14–2	110	15A	MICROWAVE AFI(GFI)	12
13	DISHWASHER AFI(GFI)	20A	110	12–2	10–3	220	30A	DRYER	14
15	WASHER AFI(GFI)	20A	110	12–2					
	SPARE							SPARE	
	SPARE							SPARE	
	SPARE							SPARE	
	SPARE							SPARE	
	SPARE							SPARE	
	SPARE							SPARE	
	SPARE							SPARE	
	ERV/HRV –SPACE							SPARE	
33	"EV READY" [225 CMR 22 (R404.4)]							SPARE	
								SPARE	
37	SOLAR READY ZONE							SPARE	
39	SOLAR READY ZONE							SPARE	

GENERAL NOTES:

1. ALL CAN LIGHTS ARE 6" LED UNLESS NOTED OTHERWISE.
2. 50# LIGHT BOXES; CLG. BOXES USED FOR SUSPENDED PADDLE FANS REQUIRED TO SUPPORT 70# (2023 NEC 314.27).
3. ALL BRANCH CIRCUITS SUPPLYING 15 AND 20 AMPERE OUTLETS, AND SMOKE DETECTORS IN KITCHENS, LAUNDRY RMS, BEDROOMS, FAMILY ROOMS, DINING ROOMS, LIVING ROOMS, PARLORS, LIBRARIES, DENS, SUNROOMS, RECREATION ROOMS, CLOSETS, HALLWAYS, OR SIMILAR ROOM OR AREAS SHALL BE PROTECTED BY AN ARC–FAULT CIRCUIT INTERRUPTER IN ACCORDANCE WITH SECTION 210.12, 2023 NEC..
4. ALL 125–VOLT, 15–20 AMPERE RECEPS. INSTALLED IN AREAS SPECIFIED BY 210.52 SHALL BE LISTED TAMPER–RESISTANT TYPE.
5. UTILITY, RANGE, DISHWASHER, AND LAUNDRY GFI RECEPTACLES TO BE ON AFCI BREAKERS.
6. GAS APPLIANCES ARE REQUIRED TO MEET 248 CMR AND BE AN APPROVED APPLIANCE FOR A BATH LOCATION.
7. FIRE ALARM SYSTEM: SMOKE DETECTORS (P.E.) TO BE INSTALLED EVERY 1000 SQ. FT. PER LEVEL AND SHALL BE AC/DC TYPE PER SECTION R314.3. HEAT DETECTORS TO BE INSTALLED IN GARAGE PER SECTION R314.8 2015 IRC / 780 CMR.
8. ALL PERMANENTLY INSTALLED LIGHTING FIXTURES (EXCLUDING KITCHEN APPLIANCES) SHALL CONTAIN ONLY HIGH–EFFICACY LIGHTING SOURCES. HIGH–EFFICACY LIGHTING SOURCE: ANY LAMPS (LIGHT BULBS) WITH THE EFFICACY OF NOT LESS THAN 65 LUMENS PER WATT, OR LUMINARIES (SELF–CONTAINED LIGHT FIXTURES) WITH A EFFICACY OF NOT LESS THAN 45 LUMENS PER WATT. [21 IECC (R404.3)].
9. INTERIOR LIGHTING CONTROLS: DIMMERS, OCCUPANT SENSORS OR OTHER CONTROLS INSTALLED OR BUILT INTO THE FIXTURE MUST BE INSTALLED EVERYWHERE EXCEPT BATHROOMS, HALLWAYS, EXTERIOR LIGHTS AND SECURITY LIGHTS. [21 IECC (R404.2)].
10. EXTERIOR LIGHTING CONTROLS: WHEN THE TOTAL PERMANENTLY INSTALLED EXTERIOR LIGHTING POWER EXCEED 30 WATTS. (TOTAL OF ALL LIGHTS) a. LIGHTING CONTROL BY MANUAL ON/OFF SWITCH THAT PERMITS AUTO–SHUTOFF ACTIONS. b. LIGHTING SHALL AUTO–OFF IN DAYLIGHT c. OVERRIDE CONTROLS SHALL NOT BE PRESET EXCEPT TO CHANGE THE SETTINGS FOR 24 HOURS MAXIMUM (THEN THE SETTINGS RETURN TO NORMAL) [21 IECC (R404.3)].
11. ERV/HRV PROVIDED AND INSTALLED ON–SITE BY BUILDER PER ALL APPLICABLE CODE REQUIREMENTS.
12. "EV" CHARGER SUPPLIED/INSTALLED ON–SITE BY BUILDER. SPACE/BREAKER IS PROVIDED FOR "EV" CHARGER IN ELECTRICAL PANEL AND LABELED "EV READY" [225 CMR 22 (R404.4)].
13. DWELLING UNITS MUST HAVE AN ELECTRICAL DISCONNECT INSTALLED IN A READILY ACCESSIBLE EXTERIOR LOCATION IN ACCORDANCE WITH 2023 NEC 230.85 PROVIDED ONSITE BY BUILDER PER STATE AND LOCAL CODES AND INSPECTED BY LOCAL AUTHORITY HAVING JURISDICTION.
14. ALL SERVICES SUPPLYING DWELLING UNITS MUST BE PROVIDED WITH A SURGE–PROTECTION DEVICE IN ACCORDANCE WITH [2023 NEC 230.67] PROVIDED ON–SITE BY BUILDER PER STATE AND LOCAL CODES AND INSPECTED BY LOCAL AUTHORITY HAVING JURISDICTION.
15. SD/CO SHALL BE INSTALLED ON–SITE BY BUILDER PER NFPA 72 FOR SLOPED CEILINGS.

COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

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BUILDER	PROS EDGE QUALITY HOMES L
CUSTOMER	CLARK AND MC
CITY	LITTLETON
COUNTY	MIDDLESEX
STATE	MA
WIND SPEED	123 MPH VULT
SNOW LOAD	50
SQ. FT.	1008
ORDER NO.	108503
SERIAL NO.	
FILE NO.	P108503(620)

2442–PRESTIGE RANCH
1st STORY ELECT. PLAN

PROFESSIONAL BUILDING SYSTEMS, INC.
MBSP MODULAR BUILDING SYSTEMS OF PA
Professional Building Systems
72 East Market Street
Mechanicsburg, PA 17842
(888) 553–1414
WWW.PBSMODULAR.COM

STATUS:	DRAWN BY:	DATE:
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REV FINAL	MDC	09/07/2023
REV. FINAL	SMW	10/26/2023
APPROVAL	COB	11/9/2023

PAGE: 4

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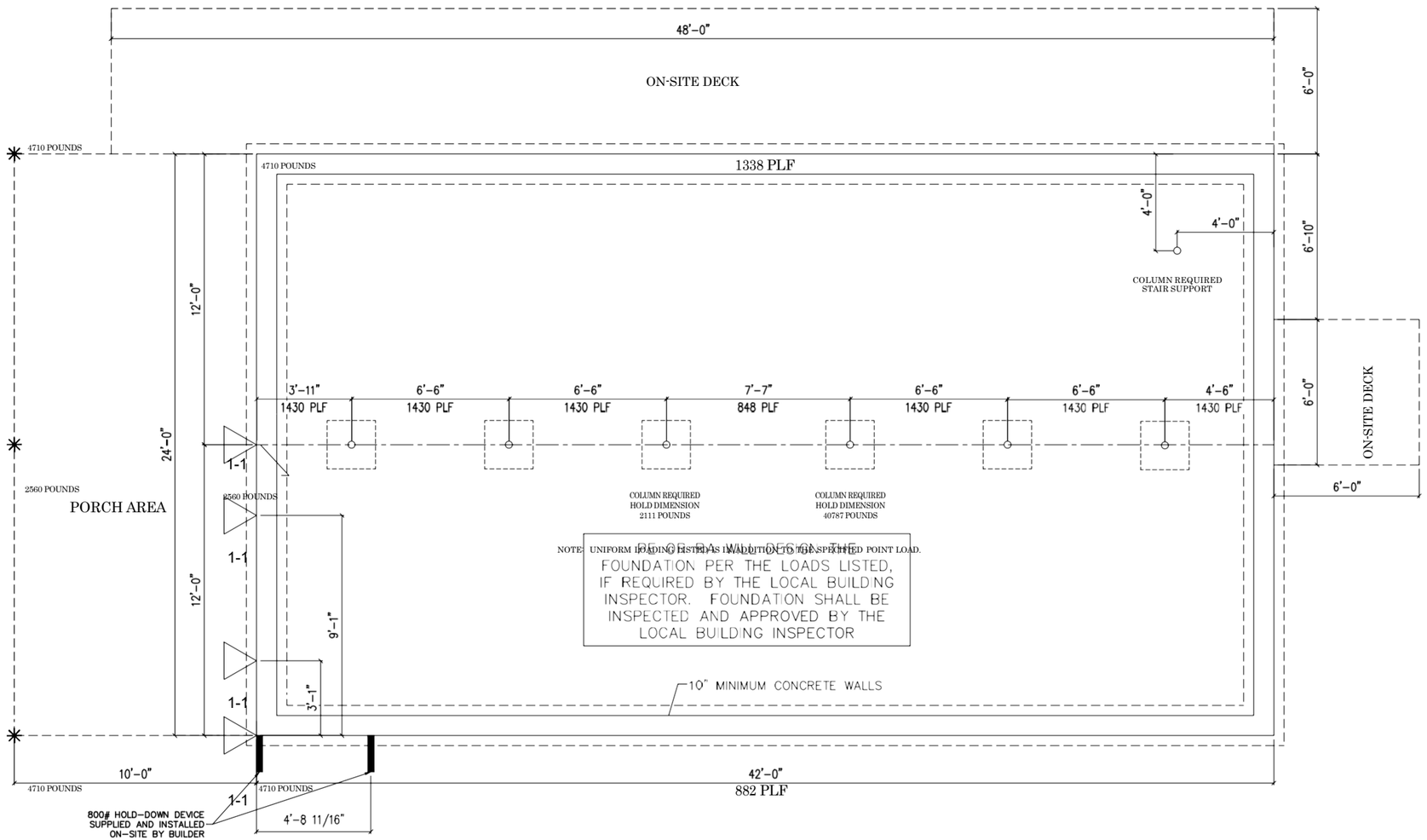

TIE-DOWN SCHEDULE	
Mark	Tie-down/Force
1-1	11,536lbf

PFS Corporation
Northeast Region
APPROVED
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12/6/23
Approval limited to
Factory Built Portion

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NOTES:
1. PERIMETER RAIL ATTACHED TO SILL WITH 16d. NAILS AT 6" O.C.
2. PIER FOOTINGS BASED UPON 2000 PSF. ALLOWABLE SOIL BEARING PRESSURE
3. CONCRETE COMPRESSIVE STRENGTH: 3000 PS
4. M OR S TYPE MORTAR TO BE USED
5. MAX. ANCHOR BOLT SPACING: 6'-0" O.C. (4'-0" O.C. MAX. IN AREAS WHERE WIND VELOCITY IS @ OR EXCEEDS 100 MPH)
6. WINDOWS OR VENTS (INSTALLED BY BLDR) ARE REQ'D. TO PROVIDE 1/150 OF FLOOR AREA AS FREE VENTILATION AND SHALL BE LOCATED AS CLOSE TO CORNERS AS POSSIBLE.

BUILDER: PROS EDGE QUALITY HOMES L
CUSTOMER: CLARK AND MC
CITY: LITTLETON
COUNTY: MIDDLESEX
STATE: MA
WIND SPEED: 123 MPH VULT
SNOW LOAD: 50
SQ. FT.: 1008
ORDER NO.: 108503
SERIAL NO.:
FILE NO.: P108503(620)

2442-PRESTIGE RANCH
FOUNDATION PLAN

Professional Building Systems
72 East Market Street
Mechanicsburg, PA 17842
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STATUS:

DATE	DRAWN BY:	STATUS:
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09/07/2023	MDC	REV FINAL
10/26/2023	SMW	REV. FINAL
11/9/2023	COB	APPROVAL

PAGE: 6

FOUNDATION DRAWINGS ARE TO BE USED AS A GUIDE ONLY.
PROFESSIONAL BUILDING SYSTEMS WILL NOT ACCEPT ANY
LIABILITY OR RESPONSIBILITY FOR INCORRECT FOUNDATIONS.

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Northeast Region
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12/6/23
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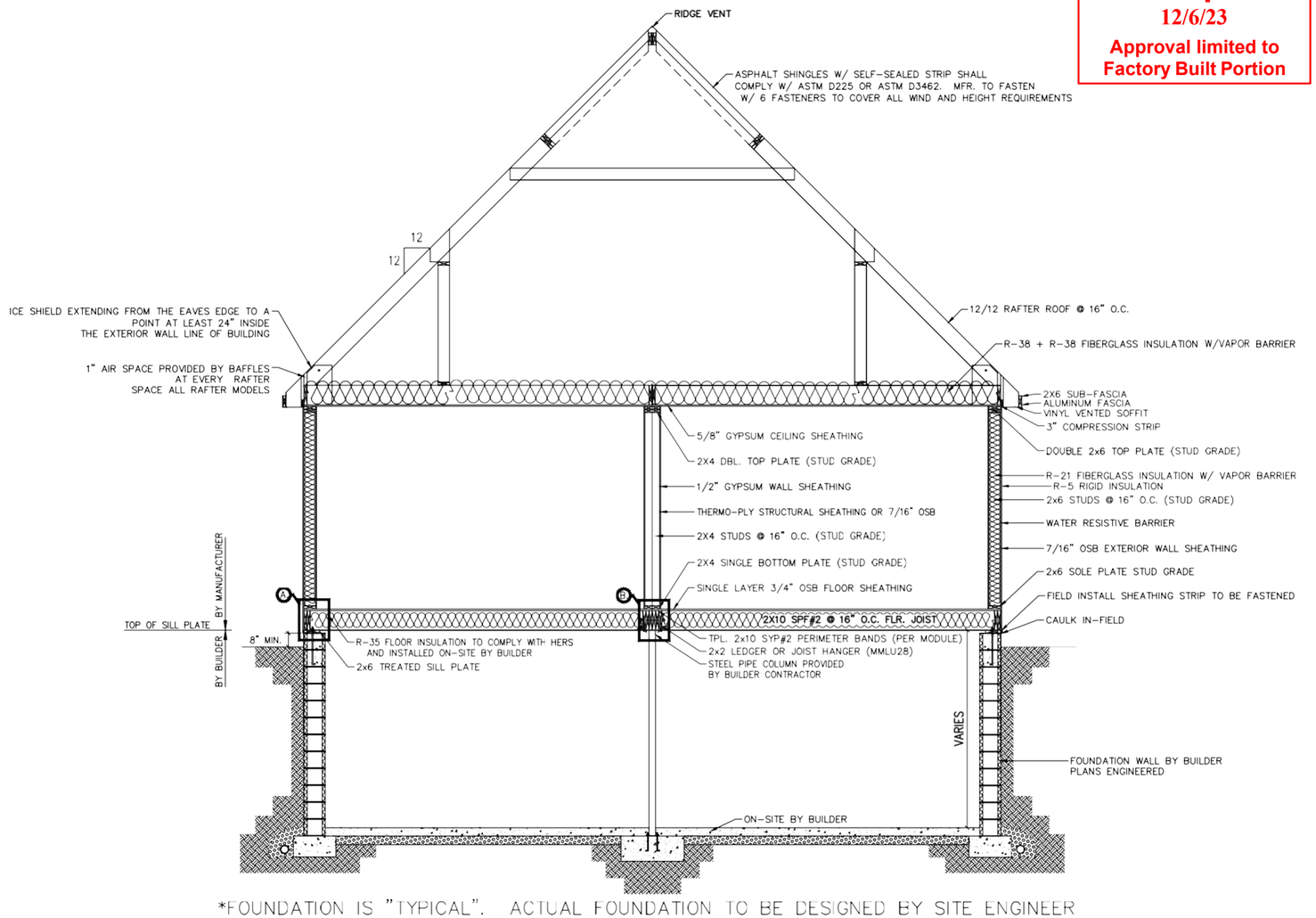
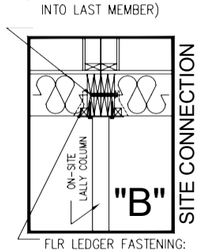


*FOUNDATION IS "TYPICAL". ACTUAL FOUNDATION TO BE DESIGNED BY SITE ENGINEER

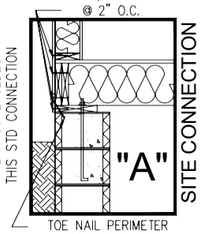
5/8" BOLT @ 48" O.C. OR
3/8" LAG @ 32" O.C.
ALTERNATING SIDES
(LAG MUST PENETRATE 1" INTO LAST MEMBER)



FLR LEDGER FASTENING:
2-16D NAILS ONE SIDE AND 1-16D NAIL THE OTHER SIDE EACH BAY

S/L SHEATHING:
NAIL w/8d NAILS @ 2" O.C.

CONNECTIONS ON 1ST STORY BRACED WALL PLAN SUPERSEDES THIS STD CONNECTION



TOE NAIL PERIMETER TO SILL PLATE w/16d NAILS @ 6" O.C.

ON-SITE CONNECTIONS (SEE PGS. 3.3, 5, 6.2, 8.1-8.2 FOR ADDITIONAL SITE CONNECTIONS)
THE CONSTRUCTION SUPERVISOR TO VERIFY ALL ON-SITE CONNECTIONS

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COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

BUILDER: PROS EDGE QUALITY HOMES L		CUSTOMER: CLARK AND MC	
CITY: LITTLETON	COUNTY: MIDDLESEX		STATE: MA
WIND SPEED: 123 MPH VULT		SNOW LOAD: 50	SQ. FT.: 1008
ORDER NO.: 108503	SERIAL NO.	FILE NO.: P108503(620)	

2442-PRESTIGE RANCH
CROSS SECTION

Professional Building Systems
72 East Market Street
Middleburg, PA 17842
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DATE:	DRAWN BY:	STATUS:
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11/9/2023	COR	APPROVAL

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PFS Corporation
Northeast Region
APPROVED
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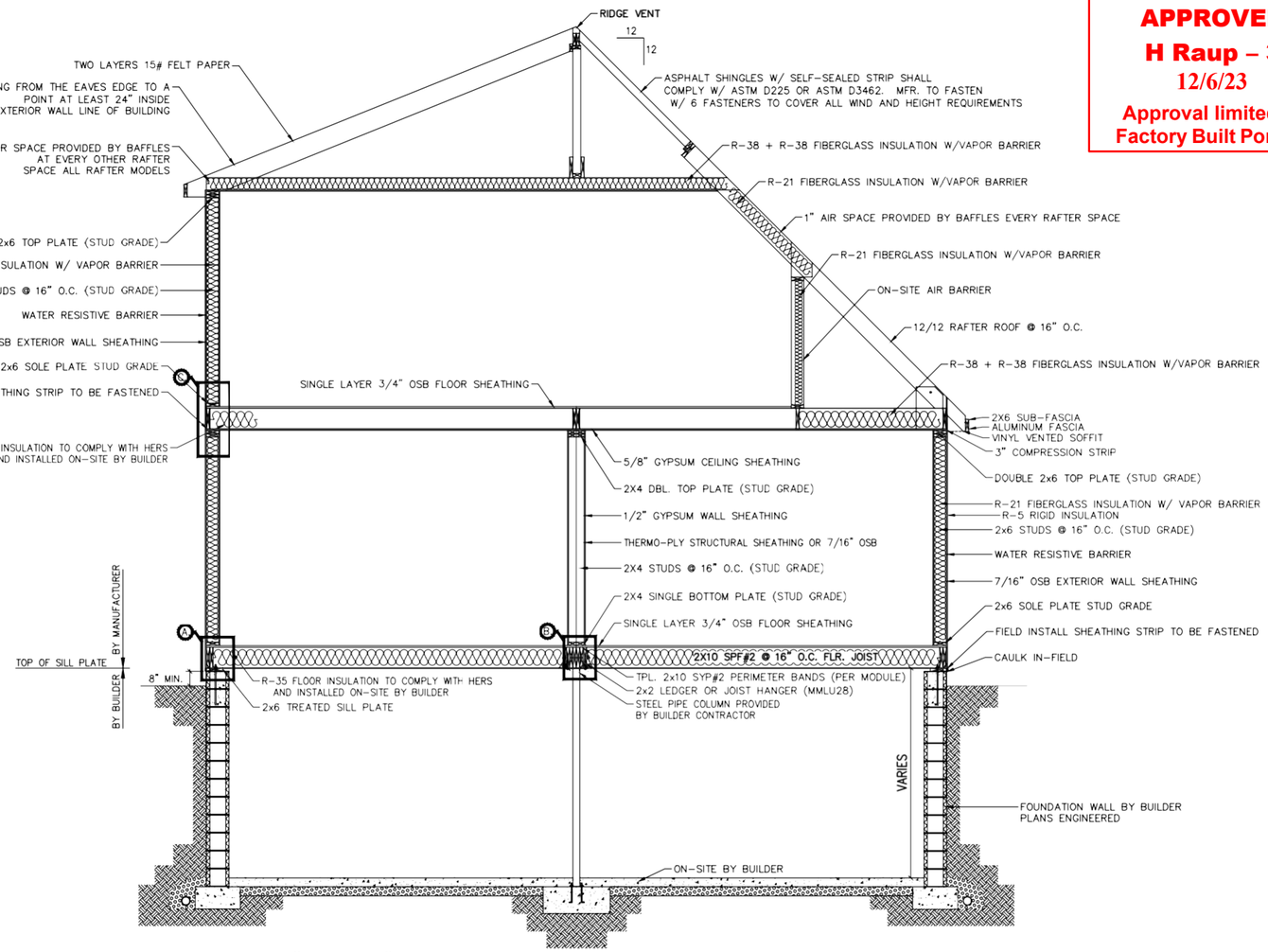
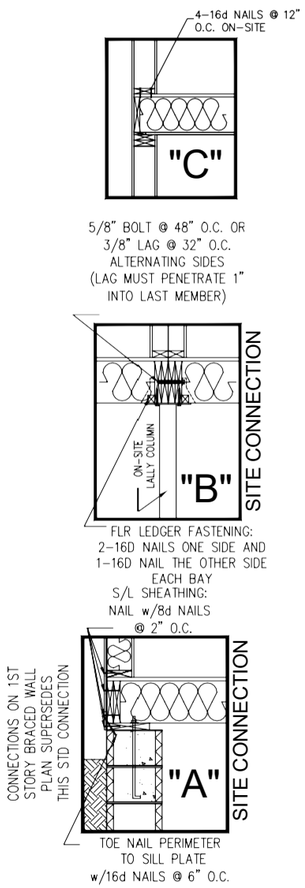
12/6/23
Approval limited to Factory Built Portion



*FOUNDATION IS "TYPICAL". ACTUAL FOUNDATION TO BE DESIGNED BY SITE ENGINEER



COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

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CUSTOMER	CLARK AND MC
CITY	LITTLETON
COUNTY	MIDDLESEX
STATE	MA
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SNOW LOAD	50
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10/26/2023	SMW	REV. FINAL
11/9/2023	COB	APPROVAL

PAGE: 6.2

PFS Corporation
Northeast Region
APPROVED
H Raup – 3
12/6/23
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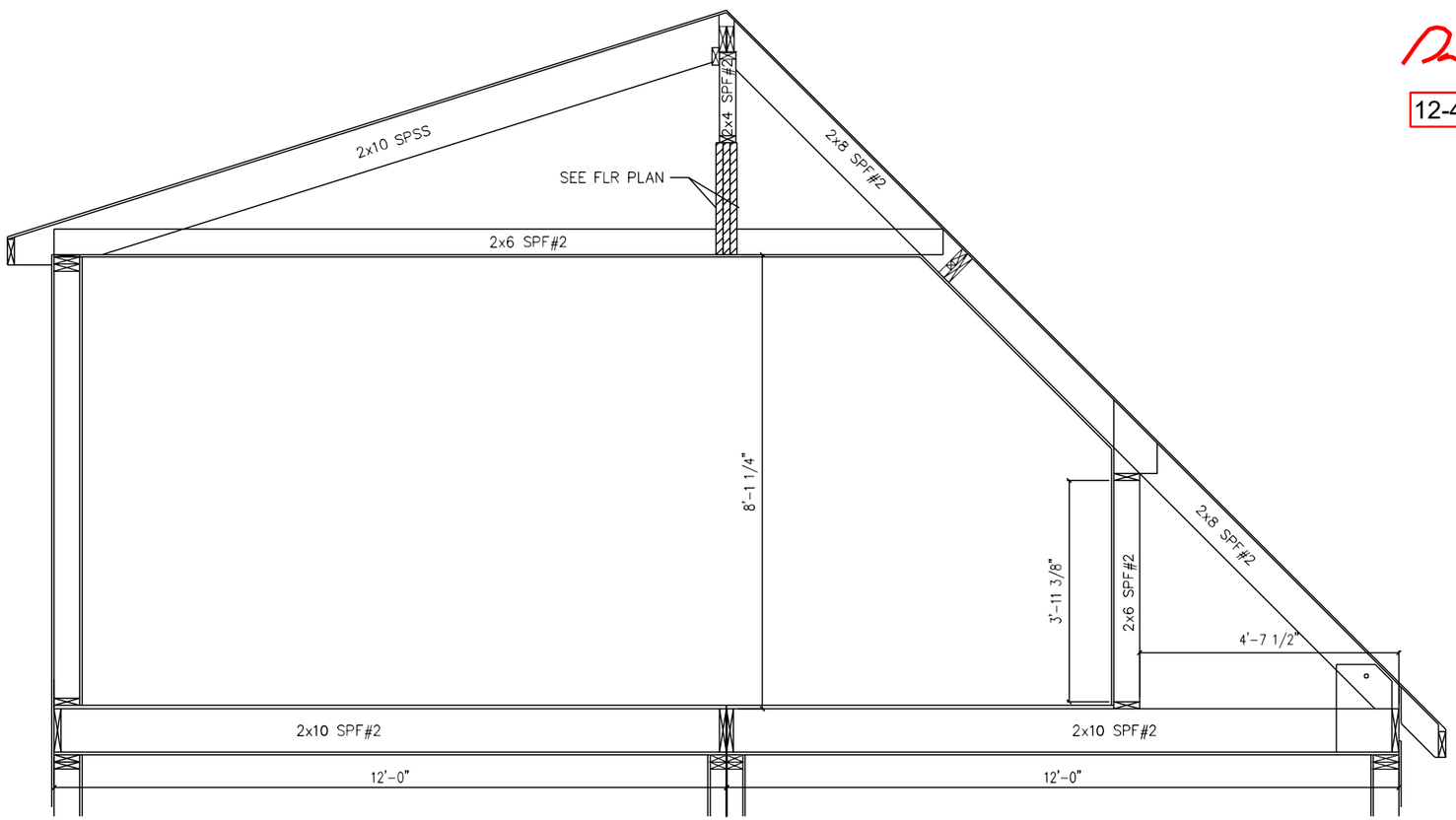
COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney



BUILDER	PROS EDGE QUALITY HOMES L
CUSTOMER	CLARK AND MC
CITY	LITTLETON
COUNTY	MIDDLESEX
STATE	MA
WIND SPEED	123 MPH VULT
SNOW LOAD	50
SQ. FT.	1008
ORDER NO.	108503
SERIAL NO.	
FILE NO.	P108503(620)

2442–PRESTIGE RANCH
RAFTER DETAIL #1

Professional Building Systems
72 East Market Street
Middleburg, PA 17842
(888) 553-1414
WWW.PBSMODULAR.COM

DATE:	00/00/00
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STATUS:	STAT

PAGE: 7.1

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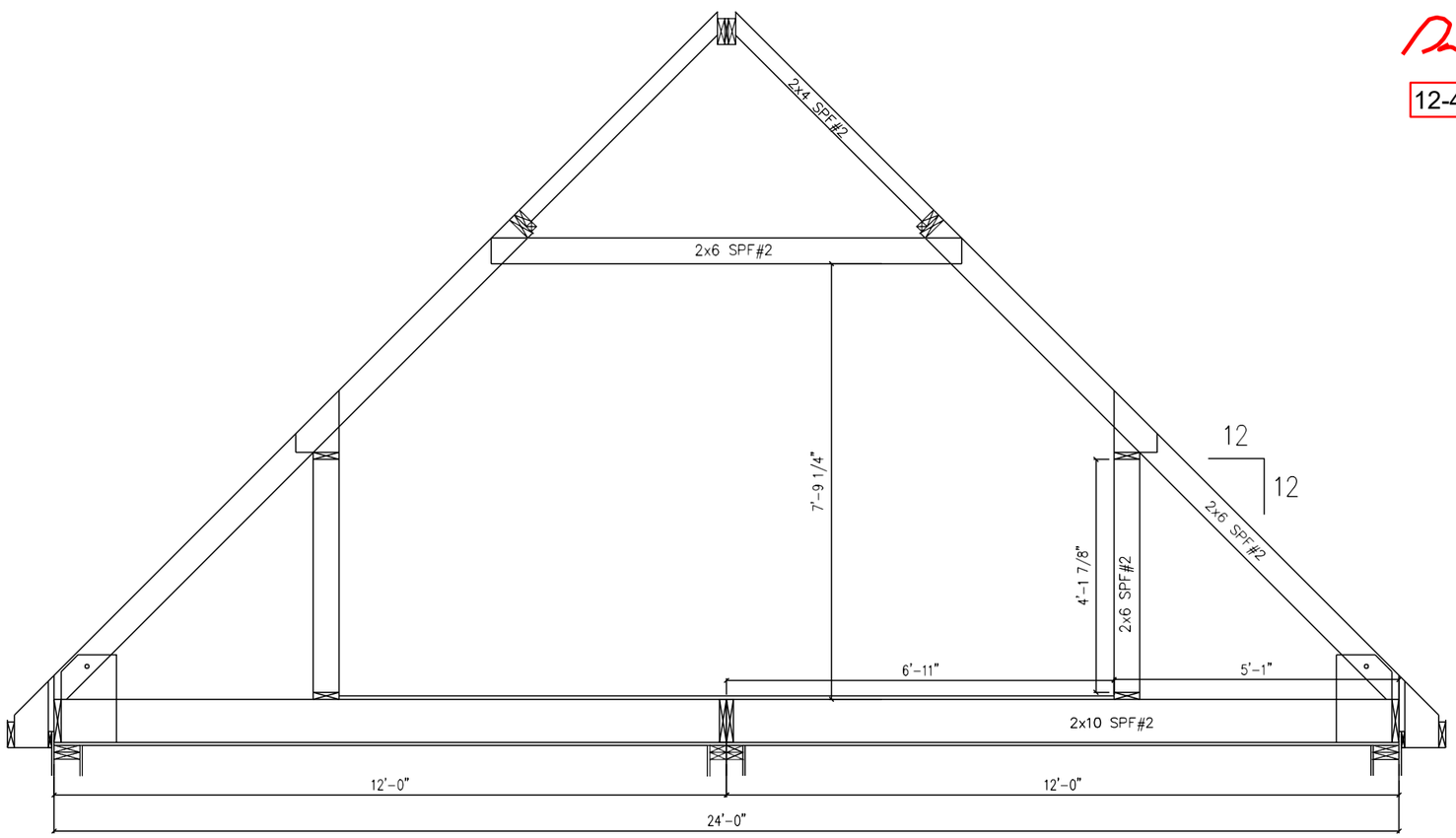

COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

BUILDER	CUSTOMER	
PROS EDGE QUALITY HOMES L	CLARK AND MC	
CITY: LITTLETON	COUNTY: MIDDLESEX	STATE: MA
WIND SPEED: 123 MPH VULT	SNOW LOAD: 50	SQ. FT.: 1008
ORDER NO.: 108503	SERIAL NO.:	FILE NO.: P108503(620)

2442–PRESTIGE RANCH
RAFTER DETAIL #2

Professional Building Systems
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Middleburg, PA 17842
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DATE:	DRAWN BY:	STATUS:
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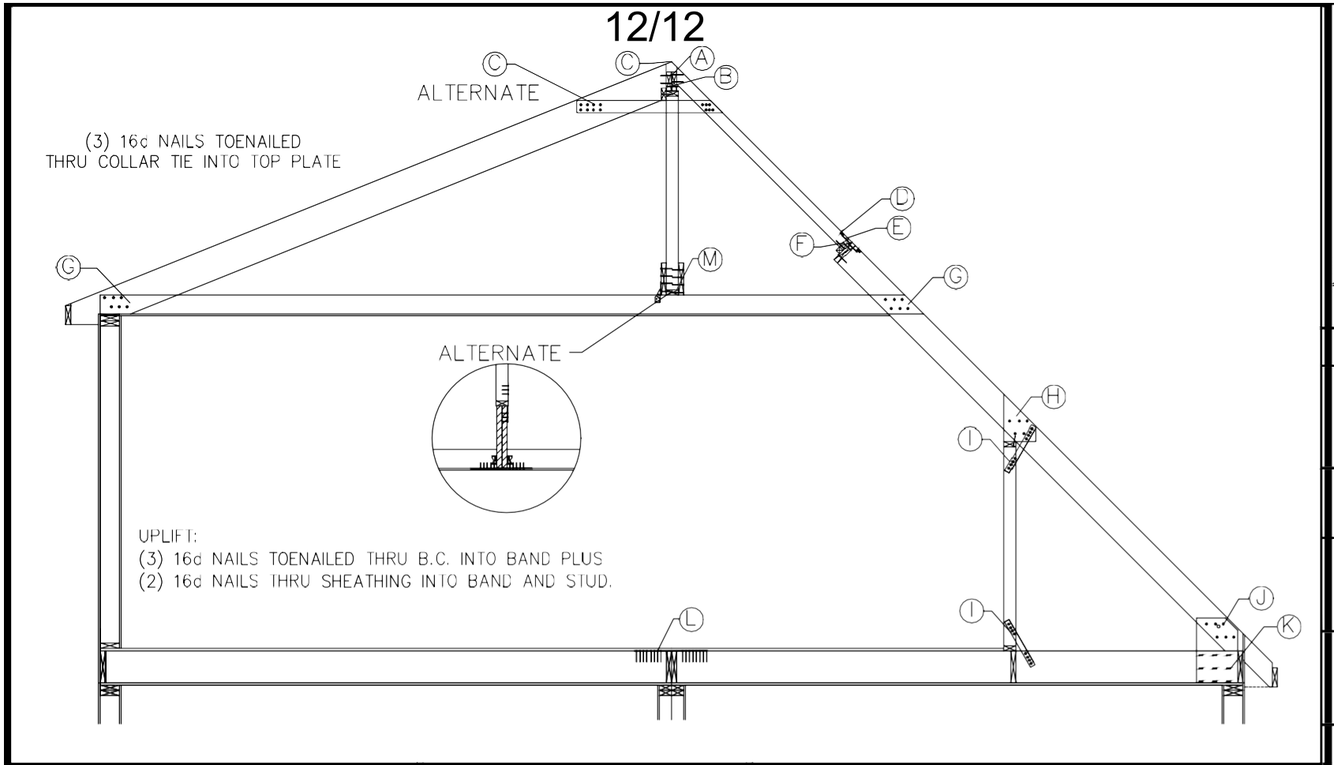
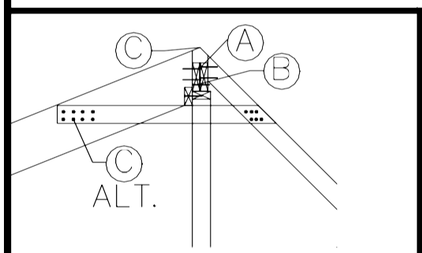
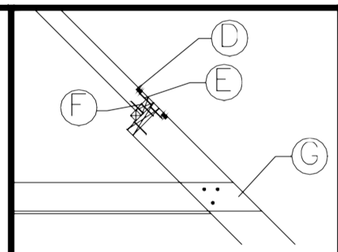
PAGE: 7.2

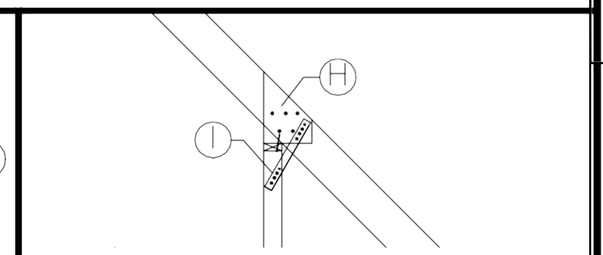




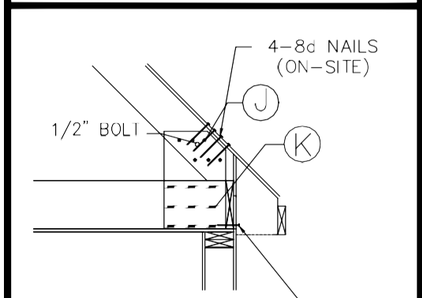
A=9-16d NAILS
B=10d NAILS @ 2"O.C.
C=1 1/2" x 16 ga STRAP 14 10 d NAILS
ALT 2=4-8d NAILS



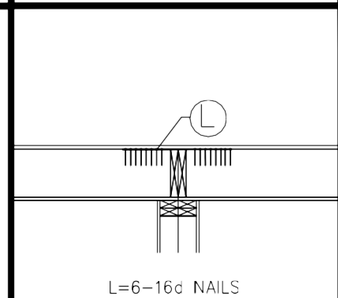
D=26-16 GA. STAPLES
E=2-16d NAILS
F=10d NAILS @ 10"O.C.
G=8-16d NAILS



H=2-16d NAILS
I=6-10d NAILS (26 Ga. STRAP)



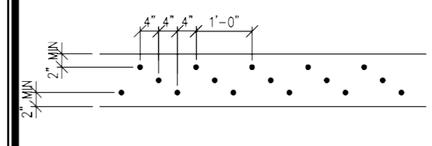
J=2-6d NAILS
K=8-16 GA. STAPLE
16d NAILS @ 48" O.C.
(ON-SITE AT EAVE)

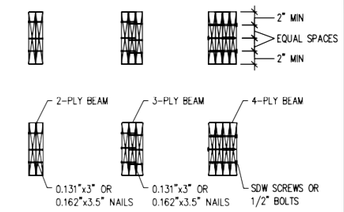


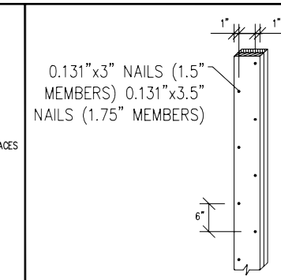
L=6-16d NAILS
THRU DECKING EA. SIDE
OR 5-16d NAILS THRU
DECKING EACH SIDE

M ALT=SEE LVL FASTENING
1 1/2" x 20 ga 9-10d NAILS EACH END (STUD TO BEAM)
1 1/2"x 16 Ga. STRAP
W/8-10c NAILS (COLLAR TIE TO COLLAR TIE)
1-A34 EACH SIDE OF BEAM
M= (8) 10 d NAILS THROUGH BEAM INTO KNEEWALL
H2.5A BEAM TO COLLAR TIE

LVL FASTENING
TOP/SIDE LOADED BEAMS







BUILT UP COLUMN FASTENING

FASTENING REQUIREMENTS FOR MULTIPLE PLY LVL MEMBERS:

FASTENER TYPE	ROWS	SPACING	2 PLY			3 PLY			4 PLY		
			UP TO 11.25"	12" TO 18"	18" TO 24"	UP TO 11.25"	12" TO 18"	18" TO 24"	UP TO 11.25"	12" TO 18"	18" TO 24"
0.131"X3" PNEUMATIC "GUN" NAILS	2	12"									
	3	12"	X			X					
	4	12"		X	X		X	X			
SIMPSON STRONG DRIVE® SDW SCREWS ONE FACE	2	24"									
	2	16"	X			X			X		
	3	24"									
	3	16"		X	X		X	X		X	X
SIMPSON STRONG DRIVE® SDW SCREWS BOTH FACES	2	24"									
	2	16"							X		
	3	24"									
	3	16"								X	X
1/2" DIAMETER A307 BOLTS W/FENDER WASHERS EACH FACE	2	24"									
	2	16"	X	X		X			X		
	3	24"									
	3	16"			X		X	X		X	X

NOTES: FASTENING REQUIREMENTS FOR MULTIPLE PLY MEMBERS:
-7" WIDE BEAMS MAY NOT BE LOADED FROM ONE SIDE ONLY. THEY MUST BE LOADED FROM BOTH SIDES AND/OR TOP LOADED.
-LOAD DURATION FACTORS MAY BE APPLIED TO THE LOADS LISTED ABOVE.
-IF THE FASTENER POINT PENETRATES A MINIMUM OF 75% OF THE 4TH PLY OF THE BEAM, THEY MAY BE APPLIED FROM ONE SIDE OF THE BEAM; OTHERWISE, THE FASTENERS MUST BE APPLIED FROM BOTH SIDES AND STAGGERED.
-FASTENING SPACING IS FOR EACH ROW. STAGGER SPACING BETWEEN ROWS OF FASTENERS.

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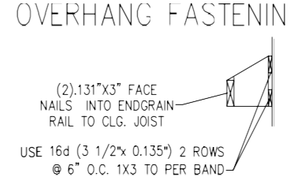
EYE BROW ROOF OVERHANG FASTENING



COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

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BUILDER: PROS EDGE QUALITY HOMES L
CUSTOMER: CLARK AND MC
CITY: LITTLETON
COUNTY: MIDDLESEX
STATE: MA
WIND SPEED: 123 MPH VULT
SNOW LOAD: 50
SQ. FT.: 1008
ORDER NO.: 108503
SERIAL NO.:
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2442-PRESTIGE RANCH
CONNECTION

Professional Building Systems
72 East Market Street
Middleburg, PA 17842
(888) 553-1414
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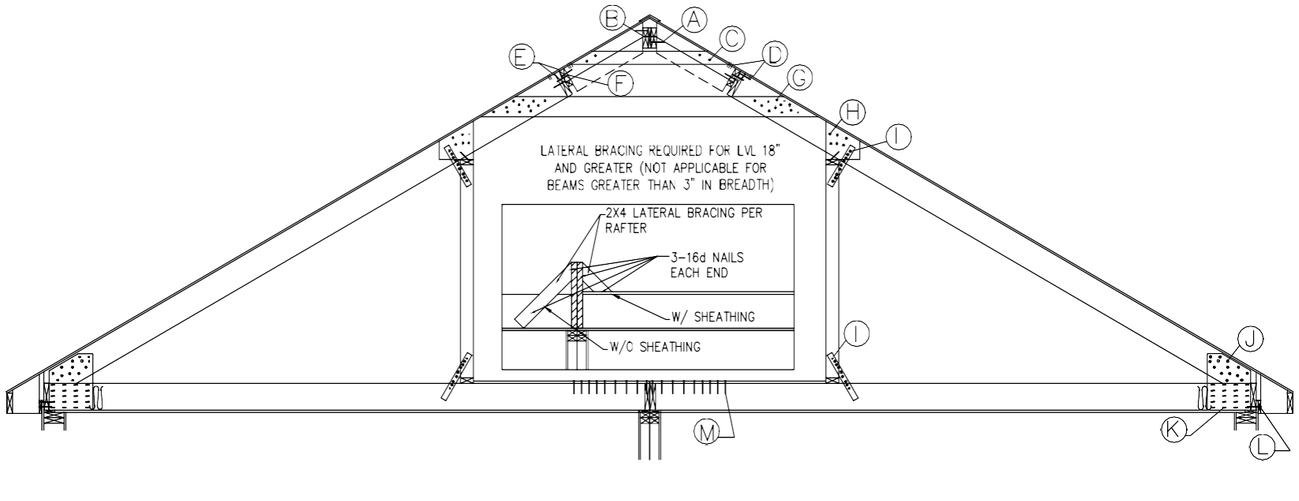
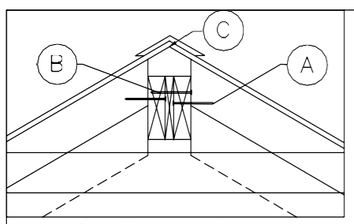
MBSP MODULAR BUILDING SYSTEMS OF PA

DATE:	DRAWN BY:	STATUS:
6/30/23	NPL	CONFO
08/09/2023	MDC	FINAL
09/07/2023	MDC	REV FINAL
10/26/2023	SMW	REV. FINAL
11/9/2023	COB	APPROVAL

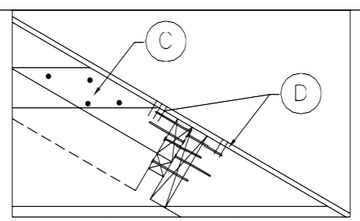
PAGE: 8.1

12/12

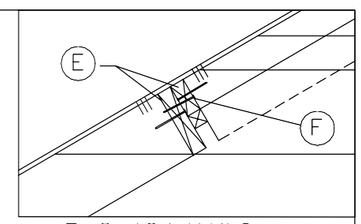




A=2-16d NAILS
B=10d NAILS @ 17"O.C.

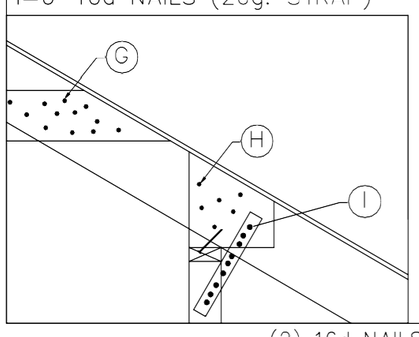


C=2-8d NAILS
ALT: C=1 1/2"X26 GA RIDGE STRAP W/2-10d NAILS EACH END
D=3-16 GA. STAPLES

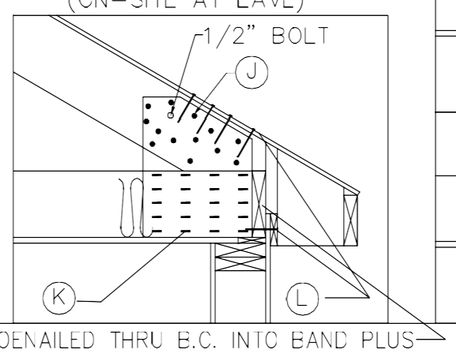


E=2-16d NAILS
F=10d NAILS @ 17"O.C.

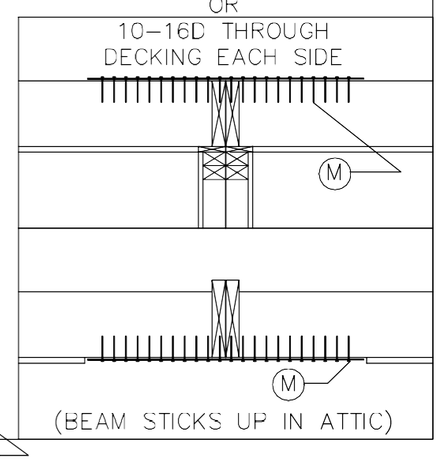
G=6-16d NAILS
H=2-16d NAILS
I=6-10d NAILS (26g. STRAP)



J=4-6d NAILS
K=11-16 GA. STAPLE
L=4-8d NAILS(ON-SITE)
L=16d NAILS @ 48" O.C.
(ON-SITE AT EAVE)



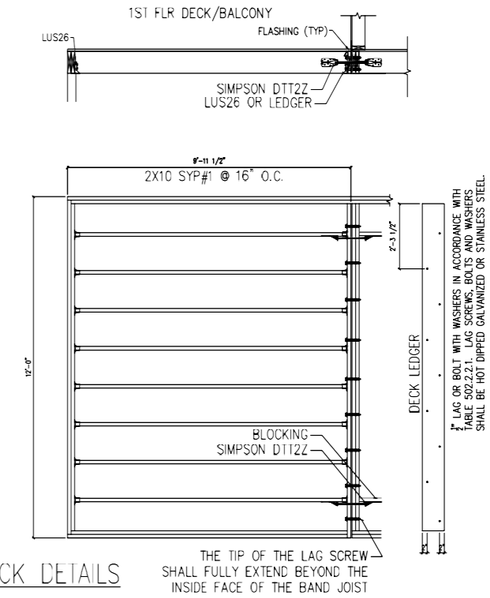
M=1-20 GA. STRAP W/ 9-10d NAILS EACH END
OR
10-16D THROUGH DECKING EACH SIDE



(2) 16d NAILS TOENAILED THRU B.C. INTO BAND PLUS
(2) 16d NAILS THRU SHEATHING INTO BAND AND STUD.

P.T. DECK DETAILS

JOIST SPAN	6' and less	6' 1" to 8'	8' 1" to 10'	10' 1" to 12'	12' 1 "to 14'	14' 1" to 16'	16' 1" to 18'
Connection details	**On-center spacing of fasteners *d, e***						
½ inch diameter lag screw with 15/32 inch maximum sheathing *a*	30	23	18/	15	13	11	10
½ inch diameter bolt with 15/32 inch maximum sheathing	36	36	34	29	24	21	19
½ inch diameter bolt with 15/32 inch maximum sheathing and ½ inch stacked washers *b, h*	36	36	29	24	21	18	16



P.T. DECK DETAILS

PFS Corporation
Northeast Region
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12/6/23
Approval limited to Factory Built Portion

COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

CHRISC 12/4/2023 7:39:29 AM

CUSTOMER: CLARK AND MC
BUILDER: PROS EDGE QUALITY HOMES L
STATE: MA
SQ. FT.: 1008
CITY: LITTLETON
COUNTY: MIDDLESEX
SNOW LOAD: 50
WIND SPEED: 123 MPH VULT
FILE NO.: P108503(620)
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CONNECTION

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DATE:	DRAWN BY:	STATUS:
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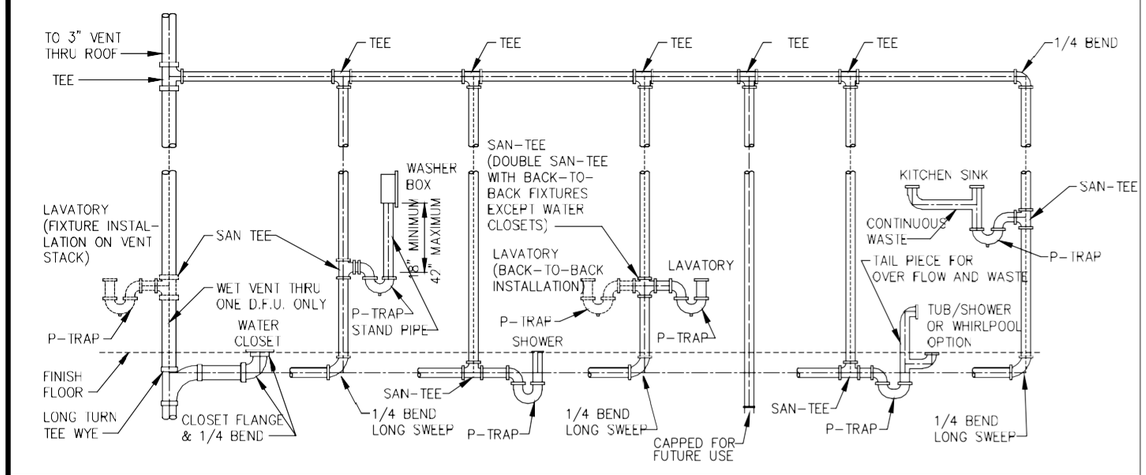
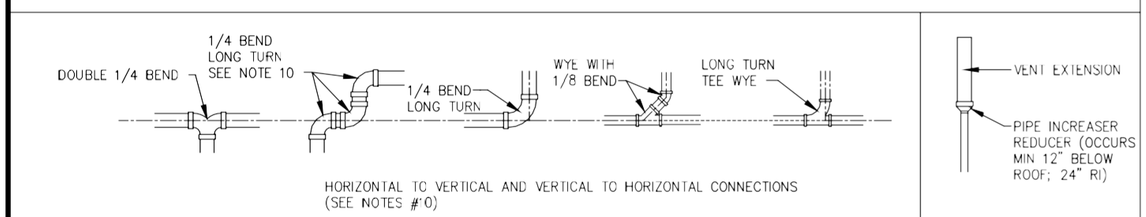
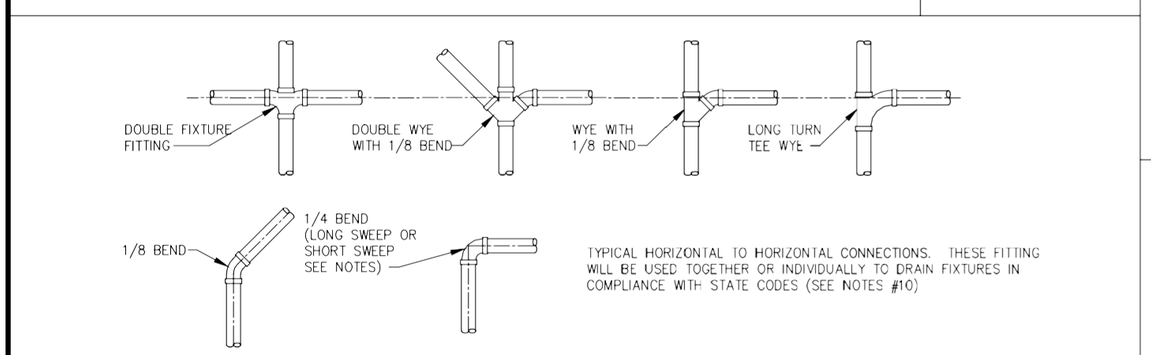
PAGE: 8.2





HORIZONTAL TO VERTICAL AND VERTICAL TO HORIZONTAL CONNECTIONS (SEE NOTES #10)



TYPICAL HORIZONTAL TO HORIZONTAL CONNECTIONS. THESE FITTING WILL BE USED TOGETHER OR INDIVIDUALLY TO DRAIN FIXTURES IN COMPLIANCE WITH STATE CODES (SEE NOTES #10)

DWV NOTES:

1. ALL WASTE AND VENT LINES IN MODULE ARE PVC PIPE.
2. PITCH ON HORIZONTAL WASTE LINES IS 1/8" PER FOOT FOR LARGER THEN 3" DIA. PIPE, AND 1/4" PER FOOT FOR PIPES 3" DIA. AND SMALLER
3. WASTE LINES: INSTALL WYE W/ CLEANOUT PRIOR TO EXITING WALL FOR CONNECTION TO DISPOSAL SYSTEM.
4. PVC-DWV PIPE SUPPORTS: AT BRANCHES, CHANGES IN DIRECTION AND AT THE BASE, EACH FLOOR AND MID STORY (VERTICAL) MAXIMUM EVERY 3'-0" AT THE END OF BRANCHES, AND CHANGE OF DIRECTION OR ELEVATION. 4" MINIMUM MAIN WASTE TO SEPTIC (BY BUILDER).
5. PLASTIC PIPE SHALL PENETRATE FIRE RATED ASSEMBLIES INCLUDING FLOOR/CEILING. PIPING SHALL BE FIRESTOPPED ACCORDING TO THE UL THROUGH PENETRATION FIRESTOP SYSTEMS F-C-2135 FOR 3" OR LARGER OR F-C-2137 FOR 2" OR SMALLER
6. EACH DWELLING UNIT SHALL HAVE ONE MAIN 3 INCH MIN. STACK FROM BUILDING DRAIN TO ABOVE ROOF.
7. ALL TRAP ARMS MUST BE SUPPORTED WITH 3/4" MINIMUM BEARING.
8. ALL PLASTIC PIPE MUST BE SUPPORTED AT INTERVALS OF NOT MORE THAN 4'-0" HORIZONTALLY INSTALLED PLASTIC PIPE UNDER 2" SHALL BE SUPPORTED AT 3'-0" INTERVALS. VERTICAL PIPE SHALL BE SUPPORTED AT 4'-0".
9. BASEMENT MODELS SHALL BE PROVIDED IN FACTORY WITH A 2 INCH VENT TO BASEMENT STUBBED BELOW FIRST FLOOR, THEN CAPPED & LABELED.
10. HORIZONTAL TO HORIZONTAL & VERTICAL TO HORIZONTAL DRAIN CHANGES IN DIRECTION SHALL BE 45 DEGREE WYES, LONG SWEEP ELBOWS, LONG SWEEP TY'S, 6TH., 8TH. OR 16TH BENDS, APPROVED COMBINATIONS OF THESE OR EQUIVALENT LONG SWEEP FITTINGS. SHORT SWEEPS PERMITTED IN SINGLE BRANCH HORIZONTAL TO VERTICAL CHANGES IN DIRECTION & ON 3 INCH OR LARGER.
11. DISHWASHERS CANNOT DISCHARGE INTO GARBAGE DISPOSALS.
12. TRAPS SHALL BE PLACED AS CLOSE AS POSSIBLE TO FIXTURE OUTLET. MAXIMUM LENGTH FROM FIXTURE OUTLET TO TRAP WEIR IS 24"
13. INACCESSIBLE TRAPS SHALL NOT HAVE UNIONS, CLEANOUTS OR SLIPJOINTS. ACCESSIBLE TRAPS SHALL BE REMOVABLE WITH UNION IN TRAP SEAL OR HAVE CLEANOUT OPENING SAME SIZE AS TRAP.
14. ALL HORIZONTAL VENT BRANCH PIPING SHALL BE LOCATED A MINIMUM OF 6" ABOVE THE FLOOD LEVEL OF THE HIGHEST FIXTURE IN THAT BRANCH.
15. MAXIMUM DISTANCE OF FIXTURE TRAP WEIR TO VENT SHALL BE: 1 1/2" PIPE = 5'-0"; 2" PIPE = 6'-0"; 3" PIPE = 8'-0"; 4" PIPE = 12'-0"
16. PLASTIC PIPING SHALL BE PROTECTED WITH 16 GAUGE STEEL PLATE WHEN PIPE PASSES THRU WOOD MEMBERS LESS THAN 1 1/4 INCHES FROM EDGE OF MEMBER.
17. DWV PIPE IS SIZED ACCORDING TO FIXTURE LOAD.
18. NOTE BACK TO BACK HORIZONTAL TO VERTICAL FITTING TO BE LONG TURN (DIRECTIONAL) FITTING.
19. FIRST FLOOR FIXTURES SHALL CONNECT INTO HORIZONTAL BUILDING DRAIN MORE THAN 10 PIPE DIAMETERS DOWNSTREAM OF STACK BASE & NOT CONNECT INTO SECOND FLOOR DRAIN STACK.
20. POTABLE WATER SYSTEM SHALL BE DISINFECTED BY ON-SITE BUILDER FOR PER SECTION 10.14
21. 3" RADON VENT PROVIDED CAPPED AND LABELED AS RADON ONLY. IF REQUIRED TO BE USED MUST BE VENT INDEPENDENTLY OF DWV VENTING SYSTEM.

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COMMONWEALTH OF MASSACHUSETTS
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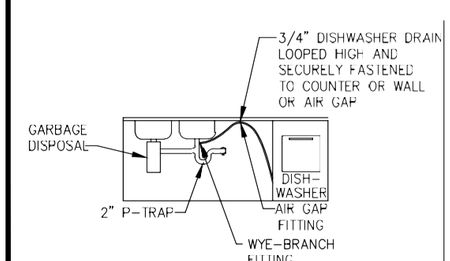
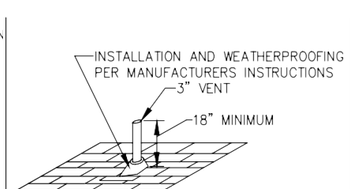
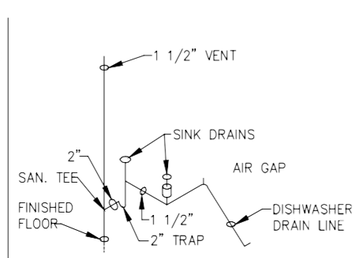


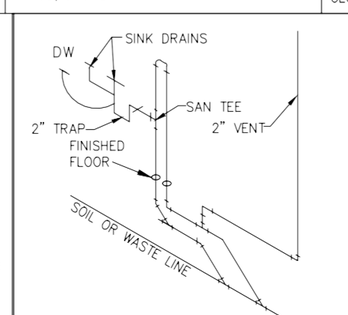
KITCHEN SINK/DISHWASHER/DISPOSAL



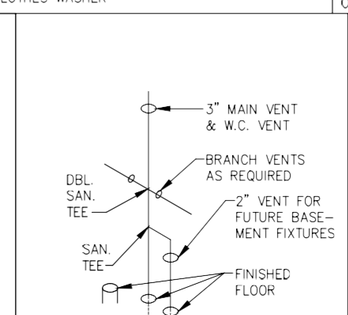
VENT THRU ROOF DETAIL



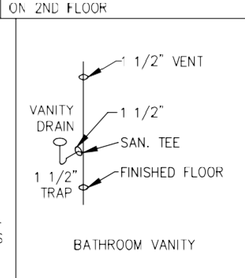
KITCHEN SINK/DISHWASHER/DISPOSAL



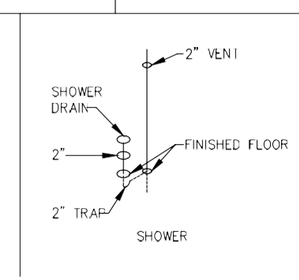
KITCHEN SINK/DISHWASHER/DISPOSAL ISLAND VENTING W/BOW VENT



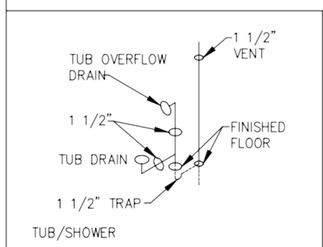
WATER CLOSETS & MAIN VENT



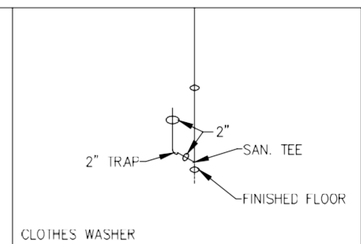
BATHROOM VANITY



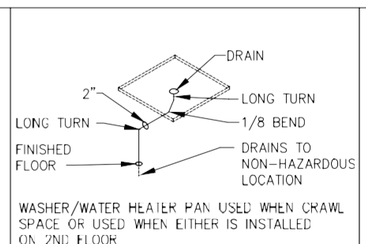
SHOWER



TUB/SHOWER



CLOTHES WASHER



WASHER/WATER HEATER PAN USED WHEN CRAWL SPACE OR USED WHEN EITHER IS INSTALLED ON 2ND FLOOR

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BUILDER: PROS EDGE QUALITY HOMES L
CUSTOMER: CLARK AND MC
CITY: LITTLETON
COUNTY: MIDDLESEX
STATE: MA
WIND SPEED: 123 MPH VULT
SNOW LOAD: 50
SQ. FT.: 1008
ORDER NO.: 108503
SERIAL NO.:
FILE NO.: P108503(620)

2442-PRESTIGE RANCH
TYPICAL PLUMBING DETAILS

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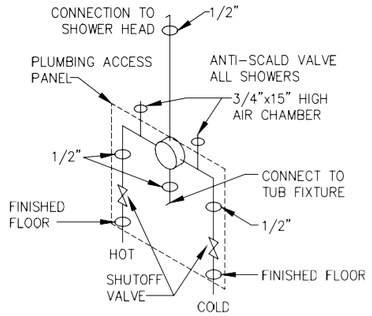
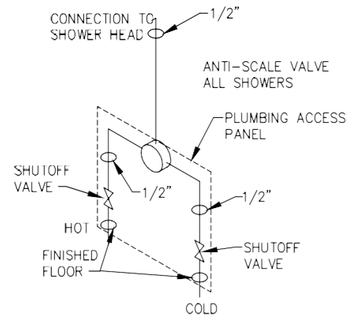
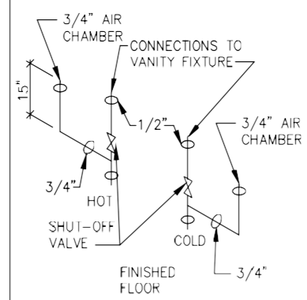


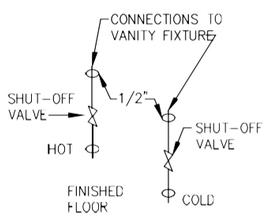
TUB/SHOWER



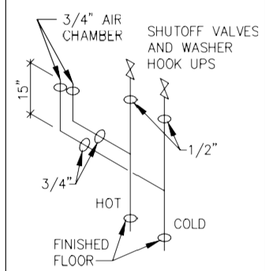
SHOWER



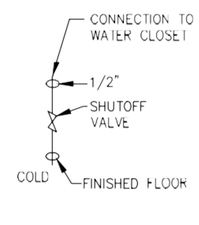
HOT TUB/WHIRLPOOL/GARDEN TUB



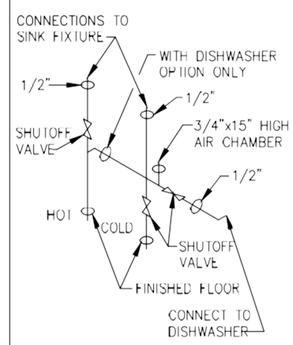
BATHROOM VANITY



CLOTHES WASHER



WATER CLOSET

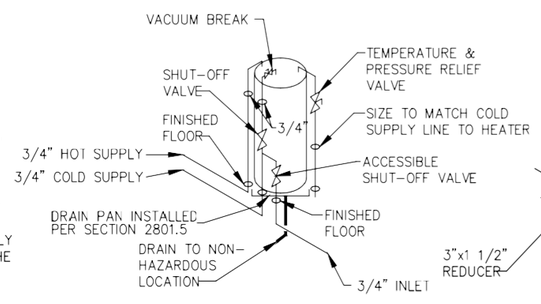


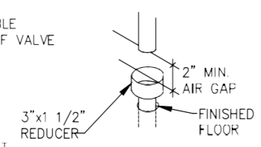
KITCHEN SINK/DISHWASHER/DISPOSAL

NOTES:

1. WATER HEATER INSTALLATION SHALL MEET ALL APPLICABLE STATE CODES.
2. PRESSURE TEMPERATURE RELIEF VALVE SHALL PIPE TO A VISIBLE AIR GAP AT FLOOR IN THE SAME SPACE AS WATER HEATER. WHEN WATER HEATER IS ON FIRST OR SECOND FLOOR A PAN SHALL BE PROVIDED & ITS DRAIN SHALL PIPE BELOW FIRST FLOOR (DRAIN RPOVIDED IN PLANT FOR SECOND FLOOR UNITS). DRAIN SHALL PIPE & DISCHARGE INDIRECTLY TO A HAZARD FREE POINT.
3. NO FUEL BURNING WATER HEATERS IN OR OFF SLEEPING, BATH OR TOILET ROOMS. PROVIDE DOOR ON PANEL LARGE ENOUGH TO REPLACE HEATER. DO NOT PLACE ACCESS THRU CLOSET. SPACE FOR WATER HEATER SHALL BE PROVIDED IN PLANT. INSTALLATION SHALL BE PROTECTED FROM FREEZING.
4. VACUUM RELIEF TO BE PROVIDED ON COLD WATER SUPPLY WHEN FIXTURE OUTLETS ARE LOCATED BELOW TOP OF THE HEATING UNIT
5. WATER HEATER TO BE INSTALLED PER 248 CMR
6. HEAT TRAPS TO COMPLY WITH SECTION 504.4 OF THE I.E.C.C.

TYPICAL WATER HEATER INSTALLATION WHEN WATER HEATER IS NOT INSTALLED IN BASEMENT





PRESSURE RELIEF LINE AT FINISHED FLOOR

WATER SUPPLY NOTES:

1. ALL WATER AND DRAIN LINES ARE STUBBED THRU FLOOR ONLY, FOR FIELD COMPLETION.
2. ALL POTABLE WATER LINES ARE TO COMPLY WITH MA 248 CMR
3. RODENT PROTECTION SHOULD BE APPLIED IN FIELD AT WATER INLET WALL PENETRATIONS.
4. ALL VALVES ARE GATE OR ANGLE TYPE.
5. ALL HOSE BIBBS ARE TO COMPLY WITH MA 248 CMR
6. WATER HEATER IS SHIPPED LOOSE AND INSTALLED BY BUILDER FOR FULL BASEMENT. INSTALLED BY FACTORY FOR CRAWL OPTION OR BUILDER MAY CHOOSE TO INSTALL ON SITE.
7. NO PLUMBING IS DONE IN FACTORY BELOW 1ST FLOOR, CONNECTIONS BELOW FIRST FLOOR BY BUILDER.
8. FIELD PLUMBING TO BE APPROVED LOCALLY & FIELD TESTED PER CODE BEFORE CONSEALING.
9. PLUMBING WALLS ARE NOTCHED OR DRILLED TO SUPPORT HORIZONTAL PIPING WHEN REQUIRED. NOTCHING AND DRILLING OF STUDS MUST CONFORM WITH SECTION R602.6
10. EQUIVALENT FIXTURES & MECHANICAL EQUIPMENT MAY BE SUBSTITUTED IF NORMALLY FURNISHED OR SPECIFIED EQUIPMENT IS UNAVAILABLE.
11. ANY VERTICAL COPPER TUBING TO BE SUPPORTED 4'-0" O.C. BY STRAPPING OR EQUAL.
12. COPPER DISTRIBUTION SUPPORTS: AT THE BASE & AT EACH FLOOR NOT EXCEEDING 10'-0" ON CENTER (VERTICAL). MAXIMUM EVERY 6'-0" (HORIZONTAL)
13. WHERE CODE PERMITS, SHUTOFF VALVES MAY BE INSTALLED BELOW FLOOR WITH ACCESS.
14. 3/4" MINIMUM HOT & COLD MAIN SUPPLY LINE TO BE USED (1" FOR 20 GPM @ 8 FT. PER SECOND) WITH 1/2" SUPPLY FROM MAIN SERVICE TO INDIVIDUAL FIXTURES.
15. FLOOR PENETRATIONS FOR SUPPLY LINES ARE TO BE FIRESTOPPED AND BLOCKED IN FIELD WITH MATERIALS EQUIVALENT TO CONSTRUCTION MEMBERS IT PENETRATES AND BE SUITABLE TO PIPE MATERIAL.
16. PRESSURE BALANCE/THERMOSTATIC MIXING VALVE SHALL BE INSTALLED IN ALL SHOWER AND SHOWER/BATHING FIXTURES TUBS AND WHIRLPOOLS PER 10.10 iv
17. HORIZONTAL COPPER PIPING SHALL NOT BE SOFT COPPER.
18. SUPPLY PIPING IN UNHEATED AREAS (OUTSIDE WALLS & CRAWL SPACES) SHALL BE INSULATED BY BUILDER. THE MANUFACTURER SHALL KEEP PIPING OUT OF UNHEATED AREAS WHERE POSSIBLE PER 10.05.8.
19. FLOOR JOIST NOTCHES MAY NOT EXCEED 1/6 OF JOIST NOTCH DEPTH AND MAY NOT OCCUR IN MIDDLE 1/3 OF SPAN. HOLES MAY NOT EXCEED 1/3 DEPTH OF JOIST AND MUST OCCUR 2" IN FROM EITHER EDGE.
20. SILL COCKS & HOSE BIBBS SHALL BE EQUIPPED WITH PERMANENT VACUUM BREAKERS IN ACCORDANCE WITH 241 CMR TABLE 1 ASSE STD.
21. FUTURE VENT FOR BASEMENT MODELS TO BE CAPPED AND LABELED.
22. THIS SPACE LEFT BLANK FOR FUTURE USE
23. ALL MATERIALS AND FIXTURES ARE IN COMPLIANCE WITH ACCEPTABLE STANDARDS. IN PLANT PLUMBING TO BE PLUGGED OR CAPPED FOR PROTECTION DURING TRANSIT.
24. ALL PLUMBING FIXTURES TO BE WATER CONSERVING.
25. LEAD CONTENT IN SOLDER & FLUX FOR COPPER TUBE JOINTS SHALL BE LIMITED TO 0.2%.
26. HOSE SPRAY (IF SUPPLIED) FOR SHOWER OR BATH SHALL HAVE A DIVERTER THAT WHEN WATER IS SHUT OFF REVERTS TO TUB POSITION & PROVIDES A VACUUM BREAKER WHEN UNDER VACUUM (E.G. BATH SPOUT DIVERTER) OR SHALL BE PROVIDED WITH A VACUUM BREAKER.
27. BATH TUBS & SHOWERS ARE TO BE LISTED/LABELED BY AN APPROVED AGENCY.
28. ANY VERTICAL CROSSLINKED POLYETHYLENE (PEX) TUBING TO BE SUPPORTED 4'-0" TO 5'-0" O.C. BY PLASTIC U-NAILS.
29. CROSSLINKED POLYETHYLENE (PEX) TUBING DISTRIBUTION SUPPORTS: AT THE BASE & AT EACH FLOOR NOT EXCEEDING 4'-0" ON CENTER (VERTICAL). MAXIMUM EVERY 4'-0" (HORIZONTAL)

PLUMBING MATERIAL SPECIFICATIONS–PER MA 248 CMR TABLE 1

1. Air gap fittings for use with plumbing fixtures, appliances and appurtenances
2. Bathtub/whirlpool pressure-sealed doors
3. Diverters for faucets with hose spray anti-syphon type, residential application
4. Enameled cast-iron plumbing fixtures
5. Floor drains
6. Floor-affixed supports for off-the-floor plumbing fixtures for public use
7. Framing-affixed supports for off-the-floor water closets with concealed tanks
8. Home laundry equipment
9. Hose connection vacuum breaker
10. Hot water dispensers, household storage type, electrica
11. Household dishwashing machines
12. Household disposers
13. Hydraulic performance for water closets and urinals
14. Individual pressure balancing valves for individual fixture fittings
15. Individual shower control valves anti-scald
16. Macerating toilet systems and related components
17. Nonvitreous ceramic plumbing fixtures
18. Plastic bathtub units
19. Plastic lavatories
20. Plastic shower receptors and shower stall
21. Plastic sinks
22. Plastic water closet bowls and tanks
23. Plumbing fixture fittings
24. Plumbing fixture waste fittings
25. Porcelain-enameled formed steel plumbing fixtures
26. Pressurized flushing devices for plumbing fixtures
27. Specification for copper sheet and strip for building construction
28. Stainless steel plumbing fixtures (residential)
29. Suction fittings for use in swimming pools, wading pools, spas, hot tubs and whirlpool bathtub appliances
30. Temperature-actuated, flow reduction valves to individual fixture fittings
31. Thermoplastic accessible and replaceable plastic tube and tubular fittings
32. Trench drains
33. Trim for water closet bowls, tanks and urinals
34. Vacuum breaker wall hydrant-frost-resistant, automatic-draining type
35. Vitreous china plumbing fixtures
36. Wall-mounted and pedestal-mounted, adjustable and pivoting lavatory and sink carrier systems
37. Water closet flush tank fill valves

COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

PFS Corporation
Northeast Region
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Approval limited to Factory Built Portion

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BUILDER: PROS EDGE QUALITY HOMES L
CUSTOMER: CLARK AND MC
CITY: LITTLETON
COUNTY: MIDDLESEX
STATE: MA
WIND SPEED: 123 MPH VULT
SNOW LOAD: 50
SQ. FT.: 1008
ORDER NO.: 108503
SERIAL NO.:
FILE NO.: P108503(620)

2442–PRESTIGE RANCH
TYPICAL PLUMBING DETAILS

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PAGE: 9.2

Door And Window Schedule

TYPE	QTY	DESCRIPTION	RO	DIAG	SQFT	LIGHT	VENT	U	DP	SHGC	EGRESS
Exterior Door	2	6'-0" Sliding Patio Door	72"x80"	107 5/8"	40	30.8	15.28	0.26		0.26	X
Exterior Door	1	A Therma Tru 3068 Glass (Under 50% Glazing)	38 1/2"x82 1/2"	91"	22.06	5.15	19.7	0.25		0.17	X
Exterior Door	1	A Thermu Tru 3068 Solid (Under 50% Glazing)	38 1/2"x82 1/2"	91"	22.06	0	19.7	0.14	70		X
Interior Door	10	(2668) Interior Swing Door	32 1/4"x82 3/4"	88 3/4"	18.53	0	0	0.52			
Interior Door	1	(2868) Interior Louvered Swing Door	34 1/4"x82 3/4"	89 1/2"	0	0	0	0			
Interior Door	1	(2068) Interior Swing Door	26 1/4"x82 3/4"	86 7/8"	0	0	0	0			
Window	1	SP MW Brick Mould Double Hung 30310	38 3/8"x49 5/8"	62 3/4"	13.22	9.1	4.6	0.26	50	0.27	
Window	7	3 MW Brick Mould Double Hung 3046	38 3/8"x57 5/8"	69 1/4"	15.36	10.8	5.76	0.26	50	0.27	X
Window	5	3 MW Brick Mould Double Hung Twin 3046	76 3/4"x57 5/8"	96"	30.71	21.6	11.52	0.26	50	0.27	X
Window	2	SP MW Brick Mould Double Hung 5046P	62 3/8"x57 5/8"	84 7/8"	24.96	21.5	0	0.26	50	0.27	
Window	1	SP MW Classic Casement 2036-2	48"x42"	63 3/4"	14	5.8	4.64	0.26	50	0.37	

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RAFTER AND BEAM PAGE INDEX

PAGE A	CALCS MANUAL COVER PAGE
PAGE B	GENERAL NOTES
PAGE C	CALCS MANUAL SECTION 11
PAGES D-E	TR12 RAFTER DESIGN
PAGES L-P	CALCS MANUAL SECTION 14
PAGES G-H	TR12 SHED ROOF DESIGN
PAGES I	CALCS MANUAL SECTION 16
PAGES J-R	EXTERIOR HEADERS AND CEILING BEAMS
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PAGE T	PORCH HEADER

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CALCULATIONS
FOR

COMMONWEALTH OF MASSACHUSETTS
JAMES J. BARLOW
CIVIL
NO. 49508
REGISTERED PROFESSIONAL ENGINEER
06/10/2020

PROFESSIONAL BUILDING SYSTEMS

72 E. Market St.
Middleburg, PA 17842

PER 2012 & 2015 IRC / ASCE 7-10
117 / 155 mph WIND (Vult)
90 / 120 mph WIND (Vasd)
20 / 30 / 40 &
50 / 60 / 70 psf GROUND SNOW LOAD

STATE OF CONNECTICUT
JAMES J. BARLOW
No. 29184
LICENSED PROFESSIONAL ENGINEER
10/17/16

STATE OF NEW YORK
JAMES JOSEPH BARLOW
078757
LICENSED PROFESSIONAL ENGINEER
06/09/16

STATE OF NEW JERSEY
JAMES J. BARLOW
No. 24GE04906100
LICENSED PROFESSIONAL ENGINEER
10/07/15

STATE OF MARYLAND
No. 33421
PROFESSIONAL ENGINEER
03/09/17

PREPARED BY
BARLOW ENGINEERING, P.C.
6512 SIX FORKS ROAD
SUITE 203-B
RALEIGH, NC 27615

150137

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PROFESSIONAL SEAL
11879
ENGINEER
JAMES J. BARLOW

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 19584
JAMES J. BARLOW
06/10/15

COMMONWEALTH OF VIRGINIA
James Joseph Barlow
Lic. No. 035206
PROFESSIONAL ENGINEER

A

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Bloomsburg, PA

The following calculation manual is developed to meet the requirements for the following codes for 1 & 2 Family dwellings:

2012 International Building Code / 2012 International Residential Code
2015 International Building Code / 2015 International Residential Code

Roof and component designs are based on Ground Snow Loads (GSL) of 20 - 70 psf with a Ct = 1.1 and Ce = 1.0. The provisions of ASCE 7-10 are used to calculate applied roof loads.

Wind speeds used for design are 117 & 155 mph (Vult) which converts to 90 & 120 mph (Vasd) with a maximum eave height of 30 ft, Exposure "C", Risk Category "II" at 3-sec gusts in accordance with the provisions of ASCE 7-10. Wind designs beyond Exposure "C" are not considered in this manual.

Seismic designs beyond Seismic "C" are not considered in this manual.

Stresses, including the effects of combined stresses, are calculated in accordance with the NDS 2012 edition for wood members.

Where truss designs specify SPF#2 members for 2x4 to 2x8, SYP#2 may be substituted. Where SYP#2 is specified for 2x4 to 2x8, SPF#2 may not be used. Where SYP#2 is specified for 2x10 & 2x12, SPF#2 may be used. Where SPF#2 is specified for 2x10 & 2x12, SYP#2 may not be used. Truss bottom chord deflection criteria for habitable areas is the same as for floor joists.

Trusses may be cut down for shorter spans provided they are reduced proportionally and no member is longer than the original design.

Specified connections may be replaced with any suitable connector(s) for the given load.

Beam bracing criteria is provided at the end of the Instructions section.

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JAMES J. BARLOW
CIVIL
NO. 49508
REGISTERED PROFESSIONAL ENGINEER
12/05/17

STATE OF CONNECTICUT
JAMES J. BARLOW
No. 29184
LICENSED PROFESSIONAL ENGINEER
10/17/16

SECTION 11

50, 60 & 70 psf GROUND SNOW FOLDING TRUSSES
w/ CONNECTIONS & LOAD SUMMARIES

TR5-27-6	**P1 - P9**
TR5-31-6	**P10 - P18**
TR7-27-6	**P19 - P27**
TR7-31-6	**P28 - P36**
TR9-27-6	**P37 - P45**
TR9-31-6	**P46 - P54**
TR12-27-6	**P55 - P63**
TR12-31-6	**P64 - P72**

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SOUTH CAROLINA REGISTERED PROFESSIONAL ENGINEER No. 19584 JAMES J. BARLOW

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PROFESSIONAL ENGINEER

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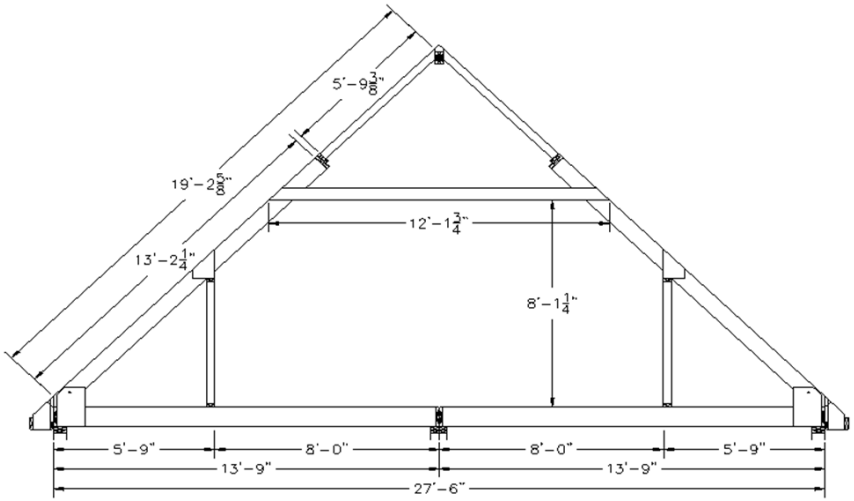
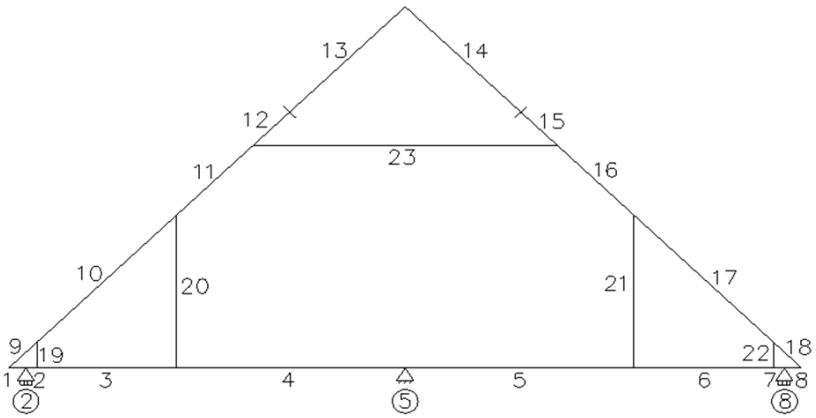
C





	GROUND SNOW LOAD:	**50 psf**	**60 psf**	**70 psf**	**TC DL:**	10 psf
	*** BALANCED SNOW LOAD:**	29.61	35.53	41.45 psf	**BC DL:**	10 psf
TRUSS NO.: TR12-27-6	**UNBALANCED SNOW LOAD:**	N/A	N/A	N/A psf	**BC LL:**	10 psf WHERE h < 42"
JOB NO.: 150137	**OPPOSITE SIDE UNB. SNOW LOAD:**	N/A	N/A	N/A psf	**BC LL:**	20 psf WHERE h ≥ 42"
PITCH: 12/12	**UNBALANCED SNOW LOAD LENGTH:**	N/A	N/A	N/A ft	**BC LL:**	40 psf BETWEEN KNEEWALLS
SPAN: 27'-6"					**APPLIED MWFRS UPLIFT:**	22.82 psf WINDWARD AT 90 / 117 mph
TRUSS CENTERS:	FOR 50 psf GROUND SNOW:	16 in O.C.				12.96 psf LEEWARD AT 90 / 117 mph
	FOR 60 psf GROUND SNOW:	16 in O.C.				27.87 psf WINDWARD AT 120 / 155 mph
	FOR 70 psf GROUND SNOW:	16 in O.C.				19.54 psf LEEWARD AT 120 / 155 mph
	FOR 90 / 117 mph WIND:	16 in O.C.			**APPLIED C & C UPLIFT:**	24.58 psf AT 90 / 117 mph
	FOR 120 / 155 mph WIND:	16 in O.C.				43.14 psf AT 120 / 155 mph

* 5 psf RAIN ON SNOW SURCHARGE APPLIED.

MEMBER INFORMATION:

MEMBER	SIZE & SPECIES
1 - 8	2 x 8 SPF #2
9 - 12 & 15 - 18	2 x 6 SPF #2
13 & 14	2 x 4 SPF #2
19 - 22	2 x 4 SPF #2
23	2 x 6 SPF #2

MAXIMUM SUPPORT REACTIONS (lbs):

	DEAD LOAD	DL + LL + 50 psf GSL	DL + LL + 60 psf GSL	DL + LL + 70 psf GSL	MWFRS UPLIFT 0.6 DL + 90 / 117 mph UPLIFT	MWFRS UPLIFT 0.6 DL + 120 / 155 mph UPLIFT	C & C UPLIFT 0.6 DL + 90 / 117 mph UPLIFT	C & C UPLIFT 0.6 DL + 120 / 155 mph UPLIFT
EXTERIOR WALL	448	1255	1372	1525	-50	-154	-169	-500
MATING WALL	151	605	605	605	0	0	0	0

MAXIMUM INTERACTION & DEFLECTION:

	MAXIMUM CSI	MAXIMUM DEFLECTION (in)	*l* /
BOTTOM CHORD	0.551	0.149	1138
TOP CHORD	0.731	0.355	676
WEB	0.108	0.00	*****

NOTES: 1. MATING WALL REACTIONS ARE TOTAL FOR BOTH SIDES.
2. WIND PER ASCE 7-10, 117 & 155 mph (Vult) = 90 & 120 mph (Vasd), EXP. C.
3. SNOW PER ASCE 7-10, 50, 60 & 70 psf GSL, Ct = 1.1, Ce = 1.0
DRIFTING LENGTH IS LATERAL DISTANCE FROM RIDGE.
4. COMPONENT DESIGN IS BASED ON C & C PRESSURES
TRUSS UPLIFT CONNECTIONS ARE BASED ON MWFRS PRESSURES.

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P:\2015\150137\2015 TRUSSES\50-60-70\FOLDING\TR12-27-6

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6512 SIX FORKS RD., SUITE 203-B
RALEIGH, NC 27615

D

COMPONENT LOAD SUMMARY

* CROSS SECTION IS FOR REFERENCE ONLY

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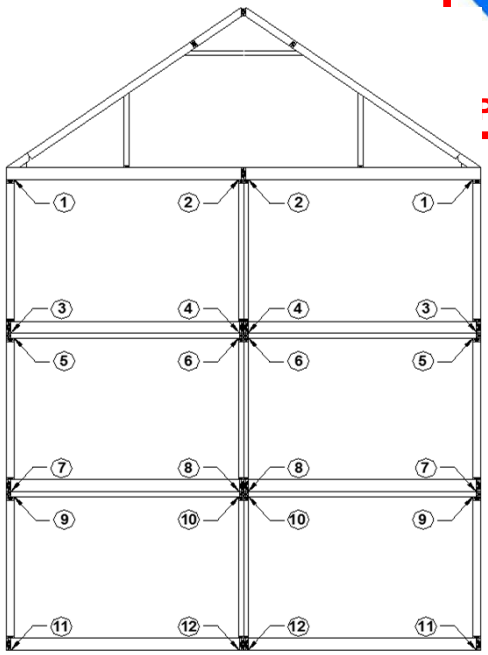
EXTERIOR WALL DEAD LOAD =	12	psf	x	10	ft	=	120 plf
MATING WALL DEAD LOAD =	8	psf	x	10	ft	=	80 plf
FLOOR DEAD LOAD =	10	psf	x	13.75	ft / 2 =		69 plf
FLOOR LIVE LOAD =	40	psf	x	13.75	ft / 2 =		275 plf
CEILING DEAD LOAD =	5	psf	x	13.75	ft / 2 =		34 plf

LOCATION 1 = EXT. WALL HEADER & EXT. WALL STUD
LOCATION 2 = M. WALL HEADER & M. WALL STUD
LOCATION 3 = PERIMETER BAND
LOCATION 4 = CENTER GIRDER
LOCATION 5 = EXT. WALL HEADER & EXT. WALL STUD
LOCATION 6 = M. WALL HEADER & M. WALL STUD
LOCATION 7 = PERIMETER BAND
LOCATION 8 = CENTER GIRDER
LOCATION 9 = EXT. WALL HEADER & EXT. WALL STUD
LOCATION 10 = M. WALL HEADER & M. WALL STUD
LOCATION 11 = PERIMETER BAND
LOCATION 12 = CENTER GIRDER
LOCATIONS 3, 4, 7, 8, 11 & 12 MAY BE USED TO GENERATE FOUNDATION LOADS



TRUSS TR12-27-6, 12/12 PITCH, 27'-6" WIDTH

COMPONENT LOADS (lbs/ft)

(MATING WALL LOADS ARE PER SIDE OF LINE)

50 psf GROUND SNOW

LOCATION	1	2	3	4	5	6	7	8	9	10	11	12
DEAD LOAD	336	57	525	206	559	240	748	389	782	423	971	572
LIVE LOAD	606	199	881	474	881	474	1156	749	1156	749	1431	1024
TOTAL LOAD	942	256	1406	680	1440	714	1904	1138	1938	1172	2402	1596

60 psf GROUND SNOW

LOCATION	1	2	3	4	5	6	7	8	9	10	11	12
DEAD LOAD	336	57	525	206	559	240	748	389	782	423	971	572
LIVE LOAD	693	199	968	474	968	474	1243	749	1243	749	1518	1024
TOTAL LOAD	1029	256	1493	680	1527	714	1991	1138	2025	1172	2489	1596

70 psf GROUND SNOW

LOCATION	1	2	3	4	5	6	7	8	9	10	11	12
DEAD LOAD	336	57	525	206	559	240	748	389	782	423	971	572
LIVE LOAD	808	199	1083	474	1083	474	1358	749	1358	749	1633	1024
TOTAL LOAD	1144	256	1608	680	1642	714	2106	1138	2140	1172	2604	1596

LOCATION	1	2	3	4	5	6	7	8	9	10	11	12
UPLIFT (0.6) DEAD LOAD	202	34	315	124	335	144	449	233	469	254	583	343
90 / 117 mph UPLIFT	-127	0	-	-	-	-	-	-	-	-	-	-
120 / 155 mph UPLIFT	-375	0	-60	-	-40	-	-	-	-	-	-	-

BARLOW ENGINEERING, P.C.
6512 SIX FORKS RD., SUITE 203-B
RALEIGH, NC 27615

COMMONWEALTH OF MASSACHUSETTS
JAMES J. BARLOW
CIVIL
NO. 49508
REGISTERED PROFESSIONAL ENGINEER

12/05/17

STATE OF CONNECTICUT
JAMES J. BARLOW
No. 29184
LICENSED PROFESSIONAL ENGINEER

10/17/16

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SECTION 14

50, 60 & 70 psf GROUND SNOW SHED TRUSSES
w/ CONNECTIONS & LOAD SUMMARIES

SHED-23-8 **P1 - P9**
SHED-27-6 **P10 - P18**
SHED-31-6 **P19 - P27**

STATE OF MARYLAND
JAMES J. BARLOW
No. 33421
PROFESSIONAL ENGINEER

"Professional Certification. I hereby certify that these documents were prepared or approved by me and that I am a duly licensed professional engineer under the laws of the State of Maryland." License No.:33421 Expiration Date:7/16/16

STATE OF NEW JERSEY
JAMES J. BARLOW
No. 24GE04906100
LICENSED PROFESSIONAL ENGINEER

10/07/15

NORTH CAROLINA
PROFESSIONAL SEAL
11879
ENGINEER
JAMES J. BARLOW

SOUTH CAROLINA
REGISTERED PROFESSIONAL ENGINEER
No. 19584
JAMES J. BARLOW

06/10/15

COMMONWEALTH OF VIRGINIA
James Joseph Barlow
Lic. No. 035206
PROFESSIONAL ENGINEER

STATE OF NEW YORK
JAMES JOSEPH BARLOW
078757
LICENSED PROFESSIONAL ENGINEER

06/09/16

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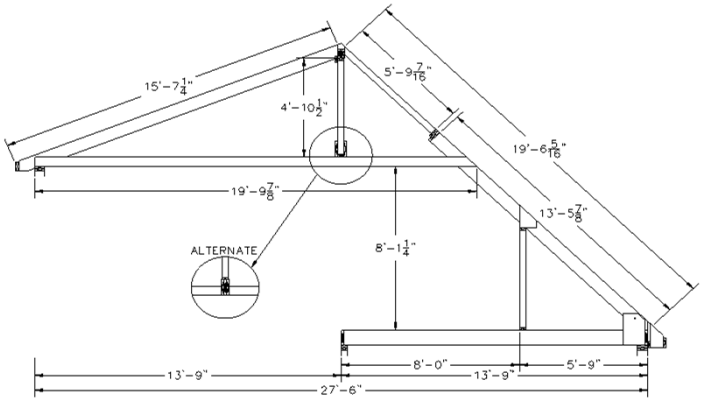

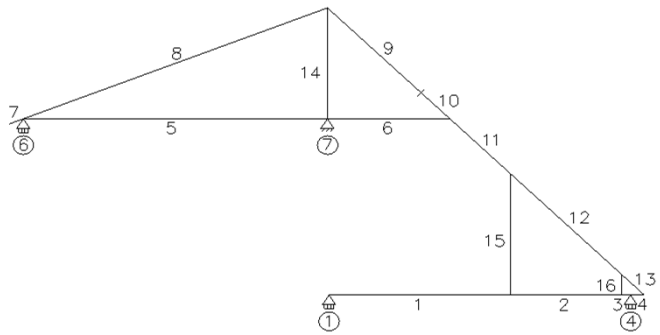

TRUSS NO.: SHED-27-6	**TRUSS CENTERS:**	FOR 50 psf GROUND SNOW:		16 in O.C.
JOB NO.: 150137		FOR 60 psf GROUND SNOW:		16 in O.C.
HIGH SIDE PITCH: 4.8125/12		FOR 70 psf GROUND SNOW:		16 in O.C.
LOW SIDE PITCH: 12/12		FOR 90 / 117 mph WIND:		16 in O.C.
SPAN: 27'-6"		FOR 120 / 155 mph WIND:		16 in O.C.

	GROUND SNOW LOAD:	**50 psf**	**60 psf**	**70 psf**
HIGH (4.8125/12) SIDE	**BALANCED SNOW LOAD:**	38.5	46.2	53.9 psf
	UNBALANCED SNOW LOAD:	61.64	72.6	83.58 psf
	OPPOSITE SIDE UNB. SNOW LOAD:	11.55	13.86	16.17 psf
	UNBALANCED SNOW LOAD LENGTH:	8.08	8.67	9.19 ft
LOW (12/12) SIDE	**BALANCED SNOW LOAD:**	29.61	35.53	41.45 psf
	UNBALANCED SNOW LOAD:	N/A	N/A	N/A psf
	OPPOSITE SIDE UNB. SNOW LOAD:	N/A	N/A	N/A psf
	UNBALANCED SNOW LOAD LENGTH:	N/A	N/A	N/A ft

HIGH (4.8125/12) SIDE **APPLIED MWFRS UPLIFT:**
22.26 psf WINDWARD AT 90 / 117 mph
15.21 psf LEEWARD AT 90 / 117 mph
25.41 psf WINDWARD AT 120 / 155 mph
19.07 psf LEEWARD AT 120 / 155 mph

APPLIED C & C UPLIFT:
31.70 psf AT 90 / 117 mph
52.00 psf AT 120 / 155 mph

LOW (12/12) SIDE **APPLIED MWFRS UPLIFT:**
22.82 psf WINDWARD AT 90 / 117 mph
12.96 psf LEEWARD AT 90 / 117 mph
27.87 psf WINDWARD AT 120 / 155 mph
19.54 psf LEEWARD AT 120 / 155 mph

APPLIED C & C UPLIFT:
24.58 psf AT 90 / 117 mph
43.14 psf AT 120 / 155 mph

TC DL: 10 psf
BC DL: 10 psf
BC LL: 10 psf WHERE h < 42"
BC LL: 20 psf WHERE h 42"
LOWER BC LL: 40 psf BETWEEN KNEEWALLS

MEMBER INFORMATION:

MEMBER	SIZE & SPECIES
1 - 4	2 x 10 SPF #2
5 - 6	2 x 6 SPF #2
7 - 8	2 x 10 SP SELECT STR.
9	2 x 4 SPF #2
10 - 13	2 x 8 SPF #2
14 - 16	2 x 4 SPF #2

MAXIMUM SUPPORT REACTIONS (lbs):

	DEAD LOAD	DL + LL + 50 psf GSL	DL + LL + 60 psf GSL	DL + LL + 70 psf GSL	MWFRS UPLIFT 0.6 DL + 90 / 117 mph UPLIFT	MWFRS UPLIFT 0.6 DL + 120 / 155 mph UPLIFT	C & C UPLIFT 0.6 DL + 90 / 117 mph UPLIFT	C & C UPLIFT 0.6 DL + 120 / 155 mph UPLIFT
LS EXTERIOR WALL (4	198	557	607	669	0	0	0	0
HS EXTERIOR WALL (6	129	546	637	730	-127	-112	-147	-239
INTETMEDIATE BEAM (7	652	1685	1891	2097	-458	-621	-504	-1103
M. WALL VERTICAL (1	85	317	317	317	0	0	0	-17
M. WALL LATERAL (1	0	0	0	0	-317	-382	-223	-420

MAXIMUM INTERACTION & DEFLECTION:

NOTES: 1. MATING WALL REACTIONS ARE PER SIDE.
2. WIND PER ASCE 7-10, 117 & 155 mph (Vult) = 90 & 120 mph (Vasd), EXP. C.
3. SNOW PER ASCE 7-10, 50, 60 & 70 psf GSL, Ct = 1.1, Ce = 1.0
DRIFTING LENGTH IS LATERAL DISTANCE FROM RIDGE.
4. COMPONENT DESIGN IS BASED ON C & C PRESSURES
TRUSS UPLIFT CONNECTIONS ARE BASED ON MWFRS PRESSURES.

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TOP CHORD	0.757	0.617	299	0.960	0.225	1072
WEB	0.196	0.00	*****	0.085	0.00	*****

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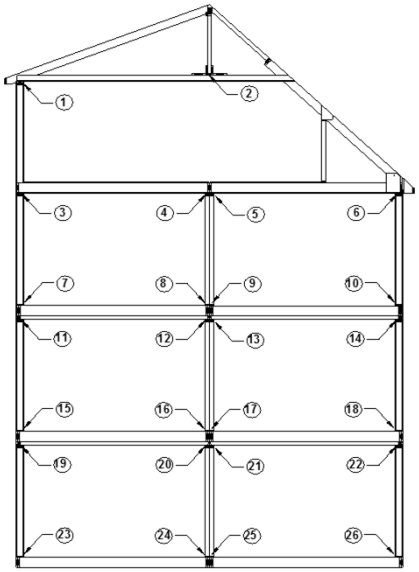
Bloomsburg, PA

COMPONENT LOAD SUMMARY

EXTERIOR WALL DEAD LOAD =	12	psf x	10	ft	=	120 plf
MATING WALL DEAD LOAD =	8	psf x	10	ft	=	80 plf
FLOOR DEAD LOAD =	10	psf x	13.75	ft / 2 =		69 plf
FLOOR LIVE LOAD =	40	psf x	13.75	ft / 2 =		275 plf
CEILING DEAD LOAD =	5	psf x	13.75	ft / 2 =		34 plf

LOCATION 1 = EXT. WALL HEADER & EXT. WALL STUD	LOCATION 14 = EXT. WALL HEADER & EXT. WALL STUD
LOCATION 2 = INTERMEDIATE BEAM (VERTICAL & LATERAL)	LOCATION 15 = PERIMETER BAND
LOCATION 3 = EXT. WALL HEADER & EXT. WALL STUD	LOCATION 16 = CENTER GIRDER
LOCATION 4 = M. WALL HEADER & M. WALL STUD	LOCATION 17 = CENTER GIRDER
LOCATION 5 = M. WALL HEADER & M. WALL STUD	LOCATION 18 = PERIMETER BAND
LOCATION 6 = EXT. WALL HEADER & EXT. WALL STUD	LOCATION 19 = EXT. WALL HEADER & EXT. WALL STUD
LOCATION 7 = PERIMETER BAND	LOCATION 20 = M. WALL HEADER & M. WALL STUD
LOCATION 8 = CENTER GIRDER	LOCATION 21 = M. WALL HEADER & M. WALL STUD
LOCATION 9 = CENTER GIRDER	LOCATION 22 = EXT. WALL HEADER & EXT. WALL STUD
LOCATION 10 = PERIMETER BAND	LOCATION 23 = PERIMETER BAND
LOCATION 11 = EXT. WALL HEADER & EXT. WALL STUD	LOCATION 24 = CENTER GIRDER
LOCATION 12 = M. WALL HEADER & M. WALL STUD	LOCATION 25 = CENTER GIRDER
LOCATION 13 = M. WALL HEADER & M. WALL STUD	LOCATION 26 = PERIMETER BAND
LOCATIONS 7 - 10, 15 - 18 & 23 - 26 MAY BE USED TO GENERATE FOUNDATION LOADS	

* CROSS SECTION IS FOR REFERENCE ONLY AND MAY NOT REFLECT ACTUAL TRUSS



TRUSS SHED-27-6, 4.8125/12 PITCH, 27'-6" WIDTH

COMPONENT LOADS (lbs/ft)

(MATING WALL LOADS ARE PER SIDE OF LINE)

50 psf GROUND SNOW

LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
DEAD LOAD	97	489	286	69	64	149	475	218	213	338	509	252	247	372	698	401	396	561	732	435	430	595	921	584	579	784
LIVE LOAD	313	775	588	275	174	269	863	550	449	544	863	550	449	544	1138	825	724	819	1138	825	724	819	1413	1100	999	1094
TOTAL LOAD	410	1264	874	344	238	418	1338	768	662	882	1372	802	696	916	1836	1226	1120	1380	1870	1260	1154	1414	2334	1684	1578	1878

60 psf GROUND SNOW

LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
DEAD LOAD	97	489	286	69	64	149	475	218	213	338	509	252	247	372	698	401	396	561	732	435	430	595	921	584	579	784
LIVE LOAD	381	930	656	275	174	307	931	550	449	582	931	550	449	582	1206	825	724	857	1206	825	724	857	1481	1100	999	1132
TOTAL LOAD	478	1419	942	344	238	456	1406	768	662	920	1440	802	696	954	1904	1226	1120	1418	1938	1260	1154	1452	2402	1684	1578	1916

70 psf GROUND SNOW

LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
DEAD LOAD	97	489	286	69	64	149	475	218	213	338	509	252	247	372	698	401	396	561	732	435	430	595	921	584	579	784
LIVE LOAD	451	1084	726	275	174	353	1001	550	449	628	1001	550	449	628	1276	825	724	903	1276	825	724	903	1551	1100	999	1178
TOTAL LOAD	548	1573	1012	344	238	502	1476	768	662	966	1510	802	696	1000	1974	1226	1120	1464	2008	1260	1154	1498	2472	1684	1578	1962

C & C UPLIFT

LOCATION	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
UPLIFT (0.6) DEAD LOAD	58	293	172	41	38	89	285	131	128	203	305	151	148	223	419	241	238	337	439	261	258	357	553	350	347	470
90 / 117 mph UPLIFT	-110	-378	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
120 / 155 mph UPLIFT	-179	-827	-7	-	-13	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

BARLOW ENGINEERING, P.C.
6512 SIX FORKS RD., SUITE 203-B
RALEIGH, NC 27615

H

STATE OF CONNECTICUT
JAMES J. BARLOW
No. 29184
LICENSED
PROFESSIONAL ENGINEER

10/17/16

PFS APPROVED
DATE 3/29/17
PFS CORPORATION
Bloomsburg, PA

SECTION 16

UNIFORMLY LOADED BEAM CHARTS **P1 - P137**

NORTH CAROLINA
PROFESSIONAL SEAL
11879
ENGINEER
JAMES J. BARLOW

SOUTH CAROLINA
LICENSED PROFESSIONAL ENGINEER
No. 19584
JAMES J. BARLOW

COMMONWEALTH OF VIRGINIA
James Joseph Barlow
Lic. No. 035206
PROFESSIONAL ENGINEER

06/10/15

STATE OF NEW YORK
JAMES JOSEPH BARLOW
078757
LICENSED PROFESSIONAL ENGINEER

STATE OF MARYLAND
JAMES J. BARLOW
No. 33421
PROFESSIONAL ENGINEER

STATE OF NEW JERSEY
JAMES J. BARLOW
No. 24GE04906100
LICENSED
PROFESSIONAL ENGINEER

10/07/15

06/09/16

"Professional Certification. I hereby certify that these documents were prepared or approved by me and that I am a duly licensed professional engineer under the laws of the State of Maryland." License No.:33421 Expiration Date:7/16/16

NOTES:

1. LOADS ARE UNIFORM ALONG BEAM LENGTH.
2. SEE INSTRUCTIONS FOR REQUIRED BRACING.
3. SPANS ARE LIMITED BY THE MAXIMUM SPAN DUE TO BENDING, DEFLECTION, OR SHEAR.
4. **DURATION FACTOR (Cd) = 1.0 & REPETITIVE FACTOR (Cr) = 1.0.**
5. MULTIPLE PLIES ARE TO BE FASTENED PER MANFACTURER / CODE REQUIREMENTS.
6. DESIGNER TO ACCOUNT FOR DEFLECTION, REQUIRED BEARING LENGTH AND SUPPORT STUDS.
7. SINGLE MEMBER LVL'S GREATER THAN 14" DEEP ARE NOT TO BE USED EXCEPT FOR MATING WALL LOCATIONS WHERE ONE EACH SIDE ARE FASTENED TOGETHER TO FORM A DOUBLE MEMBER
8. MID-SPAN SPLICING IS NOT ALLOWED.

EXT WALL HDR-SHED

UNIFORMLY LOADED BEAM SPAN CALCULATIONS

												BASED ON l / 480 DEFLECTION				BASED ON 1/2" MAX. DEFLECTION			
MEMBER	LOAD (plf)	QUANTITY	d / b	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)
2 x 4 SPF #2	450	1	2.3	2 ' - 5"	Lb	0.862	0.048	2 ' - 5"	Lb	0.862	0.048	2 ' - 5"	Lb	0.862	0.048	2 ' - 5"	Lb	0.862	0.048
		2	1.2	3 ' - 5"	Lb	0.61	0.096	3 ' - 5"	Lb	0.61	0.096	3 ' - 3"	Ld	0.589	0.083	3 ' - 5"	Lb	0.61	0.096
		3	0.8	4 ' - 2"	Lb	0.498	0.143	4 ' - 2"	Ld	0.495	0.14	3 ' - 9"	Ld	0.45	0.095	4 ' - 2"	Lb	0.498	0.143
		4	0.6	4 ' - 10"	Lb	0.431	0.191	4 ' - 7"	Ld	0.409	0.154	4 ' - 2"	Ld	0.372	0.105	4 ' - 10"	Lb	0.431	0.191
2 x 4 SYP #2	450	1	2.3	2 ' - 2"	Lb	0.593	0.034	2 ' - 2"	Lb	0.593	0.034	2 ' - 2"	Lb	0.593	0.034	2 ' - 2"	Lb	0.593	0.034
		2	1.2	3 ' - 1"	Lb	0.42	0.067	3 ' - 1"	Lb	0.42	0.067	3 ' - 1"	Lb	0.42	0.067	3 ' - 1"	Lb	0.42	0.067
		3	0.8	3 ' - 10"	Lb	0.343	0.101	3 ' - 10"	Lb	0.343	0.101	3 ' - 9"	Ld	0.338	0.095	3 ' - 10"	Lb	0.343	0.101
		4	0.6	4 ' - 5"	Lb	0.297	0.134	4 ' - 5"	Lb	0.297	0.134	4 ' - 2"	Ld	0.28	0.105	4 ' - 5"	Lb	0.297	0.134
2 x 4 HEM-FIR #2	450	1	2.3	2 ' - 4"	Lb	0.891	0.049	2 ' - 4"	Lb	0.891	0.049	2 ' - 4"	Lb	0.891	0.049	2 ' - 4"	Lb	0.891	0.049
		2	1.2	3 ' - 4"	Lb	0.63	0.097	3 ' - 4"	Lb	0.63	0.097	3 ' - 3"	Ld	0.603	0.081	3 ' - 4"	Lb	0.63	0.097
		3	0.8	4 ' - 1"	Lb	0.515	0.146	4 ' - 1"	Ld	0.507	0.136	3 ' - 8"	Ld	0.46	0.093	4 ' - 1"	Lb	0.515	0.146
		4	0.6	4 ' - 9"	Lb	0.446	0.194	4 ' - 6"	Ld	0.419	0.15	4 ' - 1"	Ld	0.38	0.102	4 ' - 9"	Lb	0.446	0.194
2 x 4 SP SELECT STR.	450	1	2.3	3 ' - 3"	Lv	0.878	0.125	3 ' - 1"	Ld	0.841	0.106	2 ' - 10"	Ld	0.764	0.072	3 ' - 3"	Lv	0.878	0.125
		2	1.2	4 ' - 6"	Ld	0.607	0.228	3 ' - 11"	Ld	0.53	0.133	3 ' - 7"	Ld	0.482	0.091	5 ' - 6"	Ld	0.738	0.5
		3	0.8	5 ' - 2"	Ld	0.463	0.261	4 ' - 6"	Ld	0.405	0.152	4 ' - 1"	Ld	0.368	0.104	6 ' - 1"	Ld	0.545	0.5
		4	0.6	5 ' - 8"	Ld	0.383	0.287	5 ' - 0"	Ld	0.334	0.167	4 ' - 6"	Ld	0.304	0.114	6 ' - 7"	Ld	0.44	0.5
1.5 x 3.5 LVL	450	1	2.3	3 ' - 8"	Lb	0.627	0.172	3 ' - 3"	Ld	0.559	0.109	2 ' - 11"	Ld	0.508	0.074	3 ' - 8"	Lb	0.627	0.172
		2	1.2	4 ' - 8"	Ld	0.404	0.236	4 ' - 1"	Ld	0.353	0.138	3 ' - 9"	Ld	0.32	0.094	5 ' - 2"	Lb	0.444	0.344
		3	0.8	5 ' - 4"	Ld	0.308	0.27	4 ' - 8"	Ld	0.269	0.158	4 ' - 3"	Ld	0.245	0.107	6 ' - 3"	Ld	0.36	0.5
		4	0.6	5 ' - 11"	Ld	0.255	0.298	5 ' - 2"	Ld	0.223	0.173	4 ' - 8"	Ld	0.202	0.118	6 ' - 9"	Ld	0.29	0.5
2 x 6 SPF #2	450	1	3.7	3 ' - 6"	Lb	1.261	0.056	3 ' - 6"	Lb	1.261	0.056	3 ' - 6"	Lb	1.261	0.056	3 ' - 6"	Lb	1.261	0.056
		2	1.8	5 ' - 0"	Lb	0.892	0.113	5 ' - 0"	Lb	0.892	0.113	5 ' - 0"	Lb	0.892	0.113	5 ' - 0"	Lb	0.892	0.113
		3	1.2	6 ' - 2"	Lb	0.729	0.169	6 ' - 2"	Lb	0.729	0.169	5 ' - 11"	Ld	0.708	0.15	6 ' - 2"	Lb	0.729	0.169
		4	0.9	7 ' - 1"	Lb	0.632	0.225	7 ' - 1"	Lb	0.632	0.225	6 ' - 7"	Ld	0.585	0.165	7 ' - 1"	Lb	0.632	0.225
2 x 6 SYP #2	450	1	3.7	3 ' - 4"	Lb	0.889	0.044	3 ' - 4"	Lb	0.889	0.044	3 ' - 4"	Lb	0.889	0.044	3 ' - 4"	Lb	0.889	0.044
		2	1.8	4 ' - 8"	Lb	0.629	0.087	4 ' - 8"	Lb	0.629	0.087	4 ' - 8"	Lb	0.629	0.087	4 ' - 8"	Lb	0.629	0.087
		3	1.2	5 ' - 9"	Lb	0.514	0.13	5 ' - 9"	Lb	0.514	0.13	5 ' - 9"	Lb	0.514	0.13	5 ' - 9"	Lb	0.514	0.13
		4	0.9	6 ' - 8"	Lb	0.446	0.173	6 ' - 8"	Lb	0.446	0.173	6 ' - 7"	Ld	0.44	0.165	6 ' - 8"	Lb	0.446	0.173
2 x 6 HEM-FIR #2	450	1	3.7	3 ' - 6"	Lb	1.304	0.057	3 ' - 6"	Lb	1.304	0.057	3 ' - 6"	Lb	1.304	0.057	3 ' - 6"	Lb	1.304	0.057
		2	1.8	4 ' - 11"	Lb	0.923	0.114	4 ' - 11"	Lb	0.923	0.114	4 ' - 11"	Lb	0.923	0.114	4 ' - 11"	Lb	0.923	0.114
		3	1.2	6 ' - 0"	Lb	0.754	0.171	6 ' - 0"	Lb	0.754	0.171	5 ' - 10"	Ld	0.724	0.146	6 ' - 0"	Lb	0.754	0.171
		4	0.9	7 ' - 0"	Lb	0.653	0.228	7 ' - 0"	Lb	0.653	0.228	6 ' - 5"	Ld	0.599	0.161	7 ' - 0"	Lb	0.653	0.228
2 x 6 SP SELECT STR.	450	1	3.7	5 ' - 2"	Lv	1.379	0.196	4 ' - 11"	Ld	1.322	0.166	4 ' - 6"	Ld	1.201	0.113	5 ' - 2"	Lv	1.379	0.196
		2	1.8	7 ' - 2"	Ld	0.954	0.359	6 ' - 3"	Ld	0.834	0.209	5 ' - 8"	Ld	0.757	0.142	7 ' - 9"	Ld	1.037	0.5
		3	1.2	8 ' - 2"	Ld	0.729	0.41	7 ' - 2"	Ld	0.637	0.239	6 ' - 6"	Ld	0.579	0.163	8 ' - 7"	Ld	0.766	0.5
		4	0.9	9 ' - 0"	Ld	0.602	0.451	7 ' - 10"	Ld	0.526	0.263	7 ' - 1"	Ld	0.478	0.179	9 ' - 3"	Ld	0.618	0.5
1.5 x 5.5 LVL	450	1	3.7	5 ' - 8"	Lb	0.971	0.255	5 ' - 1"	Ld	0.88	0.172	4 ' - 8"	Ld	0.799	0.117	5 ' - 8"	Lb	0.971	0.255
		2	1.8	7 ' - 5"	Ld	0.635	0.371	6 ' - 5"	Ld	0.555	0.216	5 ' - 10"	Ld	0.504	0.147	7 ' - 11"	Ld	0.684	0.5
		3	1.2	8 ' - 5"	Ld	0.485	0.425	7 ' - 5"	Ld	0.424	0.247	6 ' - 8"	Ld	0.385	0.169	8 ' - 10"	Ld	0.505	0.5
		4	0.9	9 ' - 4"	Ld	0.401	0.467	8 ' - 1"	Ld	0.35	0.272	7 ' - 5"	Ld	0.318	0.185	9 ' - 6"	Ld	0.408	0.5

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8. MID-SPAN SPLICING IS NOT ALLOWED.

EXT WALL HDR
SHED

UNIFORMLY LOADED BEAM SPAN CALCULATIONS

				BASED ON I / 240 DEFLECTION				BASED ON I / 360 DEFLECTION				BASED ON I / 480 DEFLECTION				BASED ON 1/2" MAX. DEFLECTION			
MEMBER	LOAD (plf)	QUANTITY	d / b	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)
2 x 8 SPF #2	450	1	4.8	4 ' - 6"	Lb	1.597	0.063	4 ' - 6"	Lb	1.597	0.063	4 ' - 6"	Lb	1.597	0.063	4 ' - 6"	Lb	1.597	0.063
		2	2.4	6 ' - 4"	Lb	1.13	0.126	6 ' - 4"	Lb	1.13	0.126	6 ' - 4"	Lb	1.13	0.126	6 ' - 4"	Lb	1.13	0.126
		3	1.6	7 ' - 9"	Lb	0.924	0.189	7 ' - 9"	Lb	0.924	0.189	7 ' - 9"	Lb	0.924	0.189	7 ' - 9"	Lb	0.924	0.189
		4	1.2	9 ' - 0"	Lb	0.801	0.252	9 ' - 0"	Lb	0.801	0.252	8 ' - 8"	Ld	0.772	0.217	9 ' - 0"	Lb	0.801	0.252
2 x 8 SYP #2	450	1	4.8	4 ' - 2"	Lb	1.128	0.049	4 ' - 2"	Lb	1.128	0.049	4 ' - 2"	Lb	1.128	0.049	4 ' - 2"	Lb	1.128	0.049
		2	2.4	5 ' - 11"	Lb	0.798	0.098	5 ' - 11"	Lb	0.798	0.098	5 ' - 11"	Lb	0.798	0.098	5 ' - 11"	Lb	0.798	0.098
		3	1.6	7 ' - 3"	Lb	0.653	0.147	7 ' - 3"	Lb	0.653	0.147	7 ' - 3"	Lb	0.653	0.147	7 ' - 3"	Lb	0.653	0.147
		4	1.2	8 ' - 5"	Lb	0.566	0.195	8 ' - 5"	Lb	0.566	0.195	8 ' - 5"	Lb	0.566	0.195	8 ' - 5"	Lb	0.566	0.195
2 x 8 HEM-FIR #2	450	1	4.8	4 ' - 5"	Lb	1.652	0.064	4 ' - 5"	Lb	1.652	0.064	4 ' - 5"	Lb	1.652	0.064	4 ' - 5"	Lb	1.652	0.064
		2	2.4	6 ' - 3"	Lb	1.169	0.128	6 ' - 3"	Lb	1.169	0.128	6 ' - 3"	Lb	1.169	0.128	6 ' - 3"	Lb	1.169	0.128
		3	1.6	7 ' - 8"	Lb	0.956	0.192	7 ' - 8"	Lb	0.956	0.192	7 ' - 8"	Lb	0.956	0.192	7 ' - 8"	Lb	0.956	0.192
		4	1.2	8 ' - 10"	Lb	0.828	0.256	8 ' - 10"	Lb	0.828	0.256	8 ' - 5"	Ld	0.79	0.212	8 ' - 10"	Lb	0.828	0.256
2 x 8 SP SELECT STR.	450	1	4.8	6 ' - 8"	Lb	1.793	0.245	6 ' - 6"	Ld	1.743	0.219	5 ' - 11"	Ld	1.584	0.149	6 ' - 8"	Lb	1.793	0.245
		2	2.4	9 ' - 5"	Ld	1.259	0.473	8 ' - 3"	Ld	1.099	0.275	7 ' - 6"	Ld	0.999	0.188	9 ' - 6"	Lb	1.269	0.488
		3	1.6	10 ' - 9"	Ld	0.962	0.541	9 ' - 5"	Ld	0.84	0.315	8 ' - 6"	Ld	0.763	0.215	10 ' - 7"	Ld	0.943	0.5
		4	1.2	11 ' - 10"	Ld	0.795	0.595	10 ' - 4"	Ld	0.694	0.346	9 ' - 5"	Ld	0.631	0.236	11 ' - 4"	Ld	0.761	0.5
1.5 x 7.25 LVL	450	1	4.8	7 ' - 5"	Lb	1.269	0.325	6 ' - 9"	Ld	1.16	0.226	6 ' - 2"	Ld	1.054	0.154	7 ' - 5"	Lb	1.269	0.325
		2	2.4	9 ' - 9"	Ld	0.838	0.489	8 ' - 6"	Ld	0.732	0.285	7 ' - 9"	Ld	0.665	0.194	9 ' - 10"	Ld	0.842	0.5
		3	1.6	11 ' - 2"	Ld	0.64	0.56	9 ' - 9"	Ld	0.559	0.326	8 ' - 10"	Ld	0.508	0.222	10 ' - 10"	Ld	0.622	0.5
		4	1.2	12 ' - 3"	Ld	0.529	0.615	10 ' - 9"	Ld	0.462	0.358	9 ' - 9"	Ld	0.42	0.244	11 ' - 8"	Ld	0.502	0.5
2 x 10 SPF #2	450	1	6.2	5 ' - 6"	Lb	1.952	0.068	5 ' - 6"	Lb	1.952	0.068	5 ' - 6"	Lb	1.952	0.068	5 ' - 6"	Lb	1.952	0.068
		2	3.1	7 ' - 9"	Lb	1.382	0.135	7 ' - 9"	Lb	1.382	0.135	7 ' - 9"	Lb	1.382	0.135	7 ' - 9"	Lb	1.382	0.135
		3	2.1	9 ' - 6"	Lb	1.129	0.203	9 ' - 6"	Lb	1.129	0.203	9 ' - 6"	Lb	1.129	0.203	9 ' - 6"	Lb	1.129	0.203
		4	1.5	10 ' - 11"	Lb	0.979	0.269	10 ' - 11"	Lb	0.979	0.269	10 ' - 11"	Lb	0.979	0.269	10 ' - 11"	Lb	0.979	0.269
2 x 10 SYP #2	450	1	6.2	5 ' - 0"	Lb	1.339	0.047	5 ' - 0"	Lb	1.339	0.047	5 ' - 0"	Lb	1.339	0.047	5 ' - 0"	Lb	1.339	0.047
		2	3.1	7 ' - 1"	Lb	0.948	0.093	7 ' - 1"	Lb	0.948	0.093	7 ' - 1"	Lb	0.948	0.093	7 ' - 1"	Lb	0.948	0.093
		3	2.1	8 ' - 8"	Lb	0.775	0.14	8 ' - 8"	Lb	0.775	0.14	8 ' - 8"	Lb	0.775	0.14	8 ' - 8"	Lb	0.775	0.14
		4	1.5	10 ' - 0"	Lb	0.672	0.186	10 ' - 0"	Lb	0.672	0.186	10 ' - 0"	Lb	0.672	0.186	10 ' - 0"	Lb	0.672	0.186
2 x 10 HEM-FIR #2	450	1	6.2	5 ' - 5"	Lb	2.018	0.069	5 ' - 5"	Lb	2.018	0.069	5 ' - 5"	Lb	2.018	0.069	5 ' - 5"	Lb	2.018	0.069
		2	3.1	7 ' - 8"	Lb	1.429	0.138	7 ' - 8"	Lb	1.429	0.138	7 ' - 8"	Lb	1.429	0.138	7 ' - 8"	Lb	1.429	0.138
		3	2.1	9 ' - 4"	Lb	1.168	0.206	9 ' - 4"	Lb	1.168	0.206	9 ' - 4"	Lb	1.168	0.206	9 ' - 4"	Lb	1.168	0.206
		4	1.5	10 ' - 10"	Lb	1.013	0.274	10 ' - 10"	Lb	1.013	0.274	10 ' - 9"	Ld	1.009	0.27	10 ' - 10"	Lb	1.013	0.274
2 x 10 SP SELECT STR.	450	1	6.2	7 ' - 8"	Lb	2.046	0.199	7 ' - 8"	Lb	2.046	0.199	7 ' - 7"	Ld	2.022	0.19	7 ' - 8"	Lb	2.046	0.199
		2	3.1	10 ' - 10"	Lb	1.448	0.398	10 ' - 6"	Ld	1.404	0.351	9 ' - 6"	Ld	1.275	0.239	10 ' - 10"	Lb	1.448	0.398
		3	2.1	13 ' - 3"	Lb	1.184	0.595	12 ' - 0"	Ld	1.073	0.402	10 ' - 11"	Ld	0.975	0.274	12 ' - 8"	Ld	1.133	0.5
		4	1.5	15 ' - 1"	Ld	1.015	0.758	13 ' - 2"	Ld	0.887	0.442	12 ' - 0"	Ld	0.806	0.301	13 ' - 7"	Ld	0.915	0.5
1.5 x 9.25 LVL	450	1	6.2	9 ' - 4"	Lb	1.607	0.401	8 ' - 7"	Ld	1.48	0.289	7 ' - 10"	Ld	1.345	0.197	9 ' - 4"	Lb	1.607	0.401
		2	3.1	12 ' - 5"	Ld	1.07	0.624	10 ' - 10"	Ld	0.934	0.363	9 ' - 10"	Ld	0.849	0.248	11 ' - 9"	Ld	1.012	0.5
		3	2.1	14 ' - 3"	Ld	0.818	0.714	12 ' - 5"	Ld	0.714	0.416	11 ' - 3"	Ld	0.649	0.283	13 ' - 0"	Ld	0.748	0.5
		4	1.5	15 ' - 8"	Ld	0.676	0.785	13 ' - 8"	Ld	0.591	0.457	12 ' - 5"	Ld	0.537	0.311	14 ' - 0"	Ld	0.604	0.5

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UNIFORMLY LOADED BEAM SPAN CALCULATIONS

				BASED ON I / 240 DEFLECTION				BASED ON I / 360 DEFLECTION				BASED ON I / 480 DEFLECTION				BASED ON 1/2" MAX. DEFLECTION			
MEMBER	LOAD (plf)	QUANTITY	d / b	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)
2 x 8 SPF #2	350	1	4.8	5 ' - 1"	Lb	1.409	0.081	5 ' - 1"	Lb	1.409	0.081	5 ' - 1"	Lb	1.409	0.081	5 ' - 1"	Lb	1.409	0.081
		2	2.4	7 ' - 2"	Lb	0.998	0.162	7 ' - 2"	Lb	0.998	0.162	7 ' - 2"	Lb	0.998	0.162	7 ' - 2"	Lb	0.998	0.162
		3	1.6	8 ' - 10"	Lb	0.815	0.243	8 ' - 10"	Lb	0.815	0.243	8 ' - 6"	Ld	0.79	0.214	8 ' - 10"	Lb	0.815	0.243
		4	1.2	10 ' - 2"	Lb	0.707	0.323	10 ' - 2"	Lb	0.707	0.323	9 ' - 5"	Ld	0.653	0.236	10 ' - 2"	Lb	0.707	0.323
2 x 8 SYP #2	350	1	4.8	4 ' - 9"	Lb	0.995	0.063	4 ' - 9"	Lb	0.995	0.063	4 ' - 9"	Lb	0.995	0.063	4 ' - 9"	Lb	0.995	0.063
		2	2.4	6 ' - 9"	Lb	0.705	0.126	6 ' - 9"	Lb	0.705	0.126	6 ' - 9"	Lb	0.705	0.126	6 ' - 9"	Lb	0.705	0.126
		3	1.6	8 ' - 3"	Lb	0.576	0.188	8 ' - 3"	Lb	0.576	0.188	8 ' - 3"	Lb	0.576	0.188	8 ' - 3"	Lb	0.576	0.188
		4	1.2	9 ' - 6"	Lb	0.5	0.25	9 ' - 6"	Lb	0.5	0.25	9 ' - 5"	Ld	0.492	0.236	9 ' - 6"	Lb	0.5	0.25
2 x 8 HEM-FIR #2	350	1	4.8	5 ' - 0"	Lb	1.457	0.083	5 ' - 0"	Lb	1.457	0.083	5 ' - 0"	Lb	1.457	0.083	5 ' - 0"	Lb	1.457	0.083
		2	2.4	7 ' - 1"	Lb	1.032	0.165	7 ' - 1"	Lb	1.032	0.165	7 ' - 1"	Lb	1.032	0.165	7 ' - 1"	Lb	1.032	0.165
		3	1.6	8 ' - 8"	Lb	0.843	0.247	8 ' - 8"	Lb	0.843	0.247	8 ' - 4"	Ld	0.809	0.209	8 ' - 8"	Lb	0.843	0.247
		4	1.2	10 ' - 0"	Lb	0.731	0.328	10 ' - 0"	Lb	0.731	0.328	9 ' - 2"	Ld	0.669	0.23	10 ' - 0"	Lb	0.731	0.328
2 x 8 SP SELECT STR.	350	1	4.8	7 ' - 7"	Lb	1.582	0.314	7 ' - 1"	Ld	1.475	0.238	6 ' - 5"	Ld	1.34	0.162	7 ' - 7"	Lb	1.582	0.314
		2	2.4	10 ' - 3"	Ld	1.065	0.514	8 ' - 11"	Ld	0.93	0.299	8 ' - 1"	Ld	0.845	0.204	10 ' - 2"	Ld	1.058	0.5
		3	1.6	11 ' - 9"	Ld	0.814	0.588	10 ' - 3"	Ld	0.711	0.342	9 ' - 3"	Ld	0.646	0.233	11 ' - 3"	Ld	0.782	0.5
		4	1.2	12 ' - 11"	Ld	0.673	0.646	11 ' - 3"	Ld	0.588	0.376	10 ' - 3"	Ld	0.534	0.256	12 ' - 1"	Ld	0.631	0.5
1.5 x 7.25 LVL	350	1	4.8	8 ' - 5"	Lb	1.12	0.417	7 ' - 4"	Ld	0.981	0.246	6 ' - 8"	Ld	0.892	0.168	8 ' - 5"	Lb	1.12	0.417
		2	2.4	10 ' - 7"	Ld	0.709	0.532	9 ' - 3"	Ld	0.619	0.31	8 ' - 5"	Ld	0.563	0.211	10 ' - 5"	Ld	0.698	0.5
		3	1.6	12 ' - 1"	Ld	0.542	0.608	10 ' - 7"	Ld	0.474	0.354	9 ' - 7"	Ld	0.43	0.241	11 ' - 6"	Ld	0.516	0.5
		4	1.2	13 ' - 4"	Ld	0.448	0.669	11 ' - 8"	Ld	0.392	0.389	10 ' - 7"	Ld	0.356	0.265	12 ' - 5"	Ld	0.417	0.5
2 x 10 SPF #2	350	1	6.2	6 ' - 3"	Lb	1.722	0.087	6 ' - 3"	Lb	1.722	0.087	6 ' - 3"	Lb	1.722	0.087	6 ' - 3"	Lb	1.722	0.087
		2	3.1	8 ' - 9"	Lb	1.219	0.174	8 ' - 9"	Lb	1.219	0.174	8 ' - 9"	Lb	1.219	0.174	8 ' - 9"	Lb	1.219	0.174
		3	2.1	10 ' - 9"	Lb	0.997	0.26	10 ' - 9"	Lb	0.997	0.26	10 ' - 9"	Lb	0.997	0.26	10 ' - 9"	Lb	0.997	0.26
		4	1.5	12 ' - 5"	Lb	0.865	0.346	12 ' - 5"	Lb	0.865	0.346	12 ' - 0"	Ld	0.835	0.301	12 ' - 5"	Lb	0.865	0.346
2 x 10 SYP #2	350	1	6.2	5 ' - 8"	Lb	1.181	0.06	5 ' - 8"	Lb	1.181	0.06	5 ' - 8"	Lb	1.181	0.06	5 ' - 8"	Lb	1.181	0.06
		2	3.1	8 ' - 0"	Lb	0.837	0.12	8 ' - 0"	Lb	0.837	0.12	8 ' - 0"	Lb	0.837	0.12	8 ' - 0"	Lb	0.837	0.12
		3	2.1	9 ' - 10"	Lb	0.684	0.179	9 ' - 10"	Lb	0.684	0.179	9 ' - 10"	Lb	0.684	0.179	9 ' - 10"	Lb	0.684	0.179
		4	1.5	11 ' - 4"	Lb	0.594	0.238	11 ' - 4"	Lb	0.594	0.238	11 ' - 4"	Lb	0.594	0.238	11 ' - 4"	Lb	0.594	0.238
2 x 10 HEM-FIR #2	350	1	6.2	6 ' - 1"	Lb	1.781	0.089	6 ' - 1"	Lb	1.781	0.089	6 ' - 1"	Lb	1.781	0.089	6 ' - 1"	Lb	1.781	0.089
		2	3.1	8 ' - 8"	Lb	1.261	0.177	8 ' - 8"	Lb	1.261	0.177	8 ' - 8"	Lb	1.261	0.177	8 ' - 8"	Lb	1.261	0.177
		3	2.1	10 ' - 7"	Lb	1.031	0.264	10 ' - 7"	MW CLG BM			0 ' - 7"	Lb	1.031	0.264	10 ' - 7"	Lb	1.031	0.264
		4	1.5	12 ' - 3"	Lb	0.894	0.351	12 ' - 3"				1 ' - 8"	Ld	0.855	0.293	12 ' - 3"	Lb	0.894	0.351
2 x 10 SP SELECT STR.	350	1	6.2	8 ' - 8"	Lb	1.805	0.256	8 ' - 8"	Lb	1.805	0.256	8 ' - 3"	Ld	1.71	0.207	8 ' - 8"	Lb	1.805	0.256
		2	3.1	12 ' - 3"	Lb	1.278	0.511	11 ' - 5"	Ld	1.188	0.382	10 ' - 4"	Ld	1.079	0.26	12 ' - 2"	Ld	1.271	0.5
		3	2.1	14 ' - 11"	Ld	1.04	0.749	13 ' - 1"	Ld	0.908	0.436	11 ' - 10"	Ld	0.825	0.297	13 ' - 6"	Ld	0.94	0.5
		4	1.5	16 ' - 5"	Ld	0.86	0.824	14 ' - 4"	Ld	0.751	0.48	13 ' - 0"	Ld	0.682	0.327	14 ' - 6"	Ld	0.759	0.5
1.5 x 9.25 LVL	350	1	6.2	10 ' - 7"	Lb	1.418	0.515	9 ' - 4"	Ld	1.253	0.314	8 ' - 6"	Ld	1.138	0.214	10 ' - 6"	Ld	1.407	0.5
		2	3.1	13 ' - 6"	Ld	0.906	0.678	11 ' - 10"	Ld	0.791	0.395	10 ' - 9"	Ld	0.719	0.269	12 ' - 6"	Ld	0.839	0.5
		3	2.1	15 ' - 6"	Ld	0.693	0.775	13 ' - 6"	Ld	0.605	0.451	12 ' - 3"	Ld	0.55	0.308	13 ' - 10"	Ld	0.621	0.5
		4	1.5	17 ' - 0"	Ld	0.573	0.852	14 ' - 10"	Ld	0.501	0.496	13 ' - 6"	Ld	0.455	0.338	14 ' - 11"	Ld	0.502	0.5

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NOTES:

1. LOADS ARE UNIFORM ALONG BEAM LENGTH.
2. SEE INSTRUCTIONS FOR REQUIRED BRACING.
3. SPANS ARE LIMITED BY THE MAXIMUM SPAN DUE TO BENDING, DEFLECTION, OR SHEAR.
4. **DURATION FACTOR (Cd) = 1.0 & REPETITIVE FACTOR (Cr) = 1.0.**
5. MULTIPLE PLIES ARE TO BE FASTENED PER MANFACTURER / CODE REQUIREMENTS.
6. DESIGNER TO ACCOUNT FOR DEFLECTION, REQUIRED BEARING LENGTH AND SUPPORT STUDS.
7. SINGLE MEMBER LVL'S GREATER THAN 14" DEEP ARE NOT TO BE USED EXCEPT FOR MATING WALL LOCATIONS WHERE ONE EACH SIDE ARE FASTENED TOGETHER TO FORM A DOUBLE MEMBER
8. MID-SPAN SPLICING IS NOT ALLOWED.

UNIFORMLY LOADED BEAM SPAN CALCULATIONS

				BASED ON I / 240 DEFLECTION				BASED ON I / 360 DEFLECTION				BASED ON I / 480 DEFLECTION				BASED ON 1/2" MAX. DEFLECTION			
				MAXIMUM	LIMITED	BEARING	DEFLECTION	MAXIMUM	LIMITED	BEARING	DEFLECTION	MAXIMUM	LIMITED	BEARING	DEFLECTION	MAXIMUM	LIMITED	BEARING	DEFLECTION
MEMBER	LOAD (plf)	QUANTITY	d / b	SPAN	BY	LENGTH (in)	(in)	SPAN	BY	LENGTH (in)	(in)	SPAN	BY	LENGTH (in)	(in)	SPAN	BY	LENGTH (in)	(in)
2 x 8 SPF #2	300	1	4.8	5 ' - 6"	Lb	1.305	0.095	5 ' - 6"	Lb	1.305	0.095	5 ' - 6"	Lb	1.305	0.095	5 ' - 6"	Lb	1.305	0.095
		2	2.4	7 ' - 9"	Lb	0.924	0.189	7 ' - 9"	Lb	0.924	0.189	7 ' - 9"	Lb	0.924	0.189	7 ' - 9"	Lb	0.924	0.189
		3	1.6	9 ' - 6"	Lb	0.755	0.283	9 ' - 6"	Lb	0.755	0.283	9 ' - 0"	Ld	0.714	0.226	9 ' - 6"	Lb	0.755	0.283
		4	1.2	11 ' - 0"	Lb	0.655	0.376	10 ' - 11"	Ld	0.65	0.364	9 ' - 11"	Ld	0.59	0.248	11 ' - 0"	Lb	0.655	0.376
2 x 8 SYP #2	300	1	4.8	5 ' - 2"	Lb	0.921	0.074	5 ' - 2"	Lb	0.921	0.074	5 ' - 2"	Lb	0.921	0.074	5 ' - 2"	Lb	0.921	0.074
		2	2.4	7 ' - 3"	Lb	0.653	0.147	7 ' - 3"	Lb	0.653	0.147	7 ' - 3"	Lb	0.653	0.147	7 ' - 3"	Lb	0.653	0.147
		3	1.6	8 ' - 11"	Lb	0.534	0.219	8 ' - 11"	Lb	0.534	0.219	8 ' - 11"	Lb	0.534	0.219	8 ' - 11"	Lb	0.534	0.219
		4	1.2	10 ' - 3"	Lb	0.463	0.291	10 ' - 3"	Lb	0.463	0.291	9 ' - 10"	Ld	0.445	0.248	10 ' - 3"	Lb	0.463	0.291
2 x 8 HEM-FIR #2	300	1	4.8	5 ' - 5"	Lb	1.349	0.096	5 ' - 5"	Lb	1.349	0.096	5 ' - 5"	Lb	1.349	0.096	5 ' - 5"	Lb	1.349	0.096
		2	2.4	7 ' - 8"	Lb	0.956	0.192	7 ' - 8"	Lb	0.956	0.192	7 ' - 8"	Lb	0.956	0.192	7 ' - 8"	Lb	0.956	0.192
		3	1.6	9 ' - 4"	Lb	0.781	0.288	9 ' - 4"	Lb	0.781	0.288	8 ' - 9"	Ld	0.731	0.22	9 ' - 4"	Lb	0.781	0.288
		4	1.2	10 ' - 10"	Lb	0.678	0.382	10 ' - 7"	Ld	0.665	0.355	9 ' - 8"	Ld	0.604	0.242	10 ' - 10"	Lb	0.678	0.382
2 x 8 SP SELECT STR.	300	1	4.8	8 ' - 3"	Lb	1.465	0.367	7 ' - 6"	Ld	1.331	0.25	6 ' - 9"	Ld	1.209	0.17	8 ' - 3"	Lb	1.465	0.367
		2	2.4	10 ' - 9"	Ld	0.962	0.541	9 ' - 5"	Ld	0.84	0.315	8 ' - 6"	Ld	0.763	0.215	10 ' - 7"	Ld	0.943	0.5
		3	1.6	12 ' - 4"	Ld	0.735	0.618	10 ' - 9"	Ld	0.642	0.36	9 ' - 9"	Ld	0.583	0.245	11 ' - 8"	Ld	0.697	0.5
		4	1.2	13 ' - 7"	Ld	0.608	0.68	11 ' - 10"	Ld	0.531	0.396	10 ' - 9"	Ld	0.482	0.27	12 ' - 7"	Ld	0.563	0.5
1.5 x 7.25 LVL	300	1	4.8	8 ' - 10"	Ld	1.014	0.445	7 ' - 9"	Ld	0.886	0.259	7 ' - 0"	Ld	0.805	0.176	9 ' - 1"	Lb	1.037	0.486
		2	2.4	11 ' - 2"	Ld	0.64	0.56	9 ' - 9"	Ld	0.559	0.326	8 ' - 10"	Ld	0.508	0.222	10 ' - 10"	Ld	0.622	0.5
		3	1.6	12 ' - 9"	Ld	0.49	0.64	11 ' - 2"	Ld	0.428	0.373	10 ' - 4"	Ld	0.389	0.254	12 ' - 0"	Ld	0.46	0.5
		4	1.2	14 ' - 0"	Ld	0.405	0.703	12 ' - 3"	Ld	0.354	0.41	11 ' - 2"	Ld	0.322	0.279	12 ' - 11"	Ld	0.372	0.5
2 x 10 SPF #2	300	1	6.2	6 ' - 9"	Lb	1.594	0.102	6 ' - 9"	Lb	1.594	0.102	6 ' - 9"	Lb	1.594	0.102	6 ' - 9"	Lb	1.594	0.102
		2	3.1	9 ' - 6"	Lb	1.129	0.203	9 ' - 6"	Lb	1.129	0.203	9 ' - 6"	Lb	1.129	0.203	9 ' - 6"	Lb	1.129	0.203
		3	2.1	11 ' - 7"	Lb	0.924	0.303	11 ' - 7"	Lb	0.924	0.303	11 ' - 6"	Ld	0.912	0.288	11 ' - 7"	Lb	0.924	0.303
		4	1.5	13 ' - 5"	Lb	0.801	0.402	13 ' - 5"	Lb	0.801	0.402	12 ' - 7"	Ld	0.755	0.316	13 ' - 5"	Lb	0.801	0.402
2 x 10 SYP #2	300	1	6.2	6 ' - 1"	Lb	1.094	0.07	6 ' - 1"	Lb	1.094	0.07	6 ' - 1"	Lb	1.094	0.07	6 ' - 1"	Lb	1.094	0.07
		2	3.1	8 ' - 8"	Lb	0.775	0.14	8 ' - 8"	Lb	0.775	0.14	8 ' - 8"	Lb	0.775	0.14	8 ' - 8"	Lb	0.775	0.14
		3	2.1	10 ' - 7"	Lb	0.634	0.209	10 ' - 7"	Lb	0.634	0.209	10 ' - 7"	Lb	0.634	0.209	10 ' - 7"	Lb	0.634	0.209
		4	1.5	12 ' - 2"	Lb	0.55	0.277	12 ' - 2"	Lb	0.55	0.277	12 ' - 2"	Lb	0.55	0.277	12 ' - 2"	Lb	0.55	0.277
2 x 10 HEM-FIR #2	300	1	6.2	6 ' - 7"	Lb	1.649	0.103	6 ' - 7"	Lb	1.649	0.103	6 ' - 7"	Lb	1.649	0.103	6 ' - 7"	Lb	1.649	0.103
		2	3.1	9 ' - 4"	Lb	1.168	0.206	9 ' - 4"	Lb	1.168	0.206	9 ' - 4"	Lb	1.168	0.206	9 ' - 4"	Lb	1.168	0.206
		3	2.1	11 ' - 5"	Lb	0.955	0.308	11 ' - 5"	Lb	0.955	0.308	11 ' - 2"	Ld	0.934	0.281	11 ' - 5"	Lb	0.955	0.308
		4	1.5	13 ' - 2"	Lb	0.829	0.409	13 ' - 2"	Lb	0.829	0.409	12 ' - 4"	Ld	0.773	0.308	13 ' - 2"	Lb	0.829	0.409
2 x 10 SP SELECT STR.	300	1	6.2	9 ' - 4"	Lb	1.671	0.299	9 ' - 4"	Lb	1.671	0.299	8 ' - 8"	Ld	1.544	0.217	9 ' - 4"	Lb	1.671	0.299
		2	3.1	13 ' - 3"	Lb	1.184	0.595	12 ' - 0"	Lb	1.073	0.402	10 ' - 11"	Ld	0.975	0.274	12 ' - 8"	Ld	1.133	0.5
		3	2.1	15 ' - 9"	Ld	0.939	0.788	13 ' - 9"	Ld	0.82	0.459	12 ' - 6"	Ld	0.745	0.313	14 ' - 0"	Ld	0.838	0.5
		4	1.5	17 ' - 4"	Ld	0.777	0.867	15 ' - 1"	Ld	0.679	0.505	13 ' - 9"	Ld	0.616	0.344	15 ' - 1"	Ld	0.677	0.5
1.5 x 9.25 LVL	300	1	6.2	11 ' - 4"	Ld	1.295	0.567	9 ' - 10"	Ld	1.131	0.33	9 ' - 0"	Ld	1.027	0.225	10 ' - 11"	Ld	1.254	0.5
		2	3.1	14 ' - 3"	Ld	0.818	0.714	12 ' - 5"	Ld	0.714	0.416	11 ' - 3"	Ld	0.649	0.283	13 ' - 0"	Ld	0.748	0.5
		3	2.1	16 ' - 3"	Ld	0.626	0.816	14 ' - 3"	Ld	0.547	0.475	12 ' - 11"	Ld	0.497	0.324	14 ' - 5"	Ld	0.554	0.5
		4	1.5	17 ' - 11"	Ld	0.518	0.896	15 ' - 7"	Ld	0.453	0.522	14 ' - 2"	Ld	0.411	0.356	15 ' - 5"	Ld	0.448	0.5

MW CLG BM (PORCH)

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UNIFORMLY LOADED BEAM SPAN CALCULATIONS

				BASED ON I / 240 DEFLECTION				BASED ON I / 360 DEFLECTION				BASED ON I / 480 DEFLECTION				BASED ON 1/2" MAX. DEFLECTION			
MEMBER	LOAD (plf)	QUANTITY	d / b	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)
2 x 4 SPF #2	900	1	2.3	1 ' - 7"	Lv	1.153	0.019	1 ' - 7"	Lv	1.153	0.019	1 ' - 7"	Lv	1.153	0.019	1 ' - 7"	Lv	1.153	0.019
		2	1.2	2 ' - 5"	Lb	0.862	0.048	2 ' - 5"	Lb	0.862	0.048	2 ' - 5"	Lb	0.862	0.048	2 ' - 5"	Lb	0.862	0.048
		3	0.8	2 ' - 11"	Lb	0.704	0.072	2 ' - 11"	Lb	0.704	0.072	2 ' - 11"	Lb	0.704	0.072	2 ' - 11"	Lb	0.704	0.072
		4	0.6	3 ' - 5"	Lb	0.61	0.096	3 ' - 5"	Lb	0.61	0.096	3 ' - 3"	Ld	0.589	0.083	3 ' - 5"	Lb	0.61	0.096
2 x 4 SYP #2	900	1	2.3	1 ' - 6"	Lb	0.839	0.017	1 ' - 6"	Lb	0.839	0.017	1 ' - 6"	Lb	0.839	0.017	1 ' - 6"	Lb	0.839	0.017
		2	1.2	2 ' - 2"	Lb	0.593	0.034	2 ' - 2"	Lb	0.593	0.034	2 ' - 2"	Lb	0.593	0.034	2 ' - 2"	Lb	0.593	0.034
		3	0.8	2 ' - 8"	Lb	0.485	0.05	2 ' - 8"	Lb	0.485	0.05	2 ' - 8"	Lb	0.485	0.05	2 ' - 8"	Lb	0.485	0.05
		4	0.6	3 ' - 1"	Lb	0.42	0.067	3 ' - 1"	Lb	0.42	0.067	3 ' - 1"	Lb	0.42	0.067	3 ' - 1"	Lb	0.42	0.067
2 x 4 HEM-FIR #2	900	1	2.3	1 ' - 8"	Lb	1.26	0.024	1 ' - 8"	Lb	1.26	0.024	1 ' - 8"	Lb	1.26	0.024	1 ' - 8"	Lb	1.26	0.024
		2	1.2	2 ' - 4"	Lb	0.891	0.049	2 ' - 4"	Lb	0.891	0.049	2 ' - 4"	Lb	0.891	0.049	2 ' - 4"	Lb	0.891	0.049
		3	0.8	2 ' - 11"	Lb	0.728	0.073	2 ' - 11"	Lb	0.728	0.073	2 ' - 11"	Lb	0.728	0.073	2 ' - 11"	Lb	0.728	0.073
		4	0.6	3 ' - 4"	Lb	0.63	0.097	3 ' - 4"	Lb	0.63	0.097	3 ' - 3"	Ld	0.603	0.081	3 ' - 4"	Lb	0.63	0.097
2 x 4 SP SELECT STR.	900	1	2.3	1 ' - 11"	Lv	1.033	0.03	1 ' - 11"	Lv	1.033	0.03	1 ' - 11"	Lv	1.033	0.03	1 ' - 11"	Lv	1.033	0.03
		2	1.2	3 ' - 3"	Lv	0.878	0.125	3 ' - 1"	Ld	0.841	0.106	2 ' - 10"	Ld	0.764	0.072	3 ' - 3"	Lv	0.878	0.125
		3	0.8	4 ' - 1"	Ld	0.735	0.207	3 ' - 7"	Ld	0.642	0.121	3 ' - 3"	Ld	0.583	0.082	4 ' - 9"	Lv	0.856	0.381
		4	0.6	4 ' - 6"	Ld	0.607	0.228	3 ' - 11"	Ld	0.53	0.133	3 ' - 7	Ld	0.482	0.091	5 ' - 6"	Ld	0.738	0.5
1.5 x 3.5 LVL	900	1	2.3	2 ' - 7"	Lb	0.887	0.086	2 ' - 7"	Lb	EXT WALL HDR			Ld	0.807	0.059	2 ' - 7"	Lb	0.887	0.086
		2	1.2	3 ' - 8"	Lb	0.627	0.172	3 ' - 3"	Ld	0.50	0.109	2 ' - 11	Ld	0.508	0.074	3 ' - 8"	Lb	0.627	0.172
		3	0.8	4 ' - 3"	Ld	0.489	0.215	3 ' - 9"	Ld	0.427	0.125	3 ' - 4"	Ld	0.388	0.085	4 ' - 5"	Lb	0.512	0.258
		4	0.6	4 ' - 8"	Ld	0.404	0.236	4 ' - 1"	Ld	0.353	0.138	3 ' - 9"	Ld	0.32	0.094	5 ' - 2"	Lb	0.444	0.344
2 x 6 SPF #2	900	1	3.7	2 ' - 6"	Lb	1.783	0.028	2 ' - 6"	Lb	1.783	0.028	2 ' - 6"	Lb	1.783	0.028	2 ' - 6"	Lb	1.783	0.028
		2	1.8	3 ' - 6"	Lb	1.261	0.056	3 ' - 6"	Lb	1.261	0.056	3 ' - 6"	Lb	1.261	0.056	3 ' - 6"	Lb	1.261	0.056
		3	1.2	4 ' - 4"	Lb	1.03	0.085	4 ' - 4"	Lb	1.03	0.085	4 ' - 4"	Lb	1.03	0.085	4 ' - 4"	Lb	1.03	0.085
		4	0.9	5 ' - 0"	Lb	0.892	0.113	5 ' - 0"	Lb	0.892	0.113	5 ' - 0"	Lb	0.892	0.113	5 ' - 0"	Lb	0.892	0.113
2 x 6 SYP #2	900	1	3.7	2 ' - 4"	Lb	1.257	0.022	2 ' - 4"	Lb	1.257	0.022	2 ' - 4"	Lb	1.257	0.022	2 ' - 4"	Lb	1.257	0.022
		2	1.8	3 ' - 4"	Lb	0.889	0.044	3 ' - 4"	Lb	0.889	0.044	3 ' - 4"	Lb	0.889	0.044	3 ' - 4"	Lb	0.889	0.044
		3	1.2	4 ' - 1"	Lb	0.727	0.065	4 ' - 1"	Lb	0.727	0.065	4 ' - 1"	Lb	0.727	0.065	4 ' - 1"	Lb	0.727	0.065
		4	0.9	4 ' - 8"	Lb	0.629	0.087	4 ' - 8"	Lb	0.629	0.087	4 ' - 8"	Lb	0.629	0.087	4 ' - 8"	Lb	0.629	0.087
2 x 6 HEM-FIR #2	900	1	3.7	2 ' - 5"	Lb	1.844	0.029	2 ' - 5"	Lb	1.844	0.029	2 ' - 5"	Lb	1.844	0.029	2 ' - 5"	Lb	1.844	0.029
		2	1.8	3 ' - 6"	Lb	1.304	0.057	3 ' - 6"	Lb	1.304	0.057	3 ' - 6"	Lb	1.304	0.057	3 ' - 6"	Lb	1.304	0.057
		3	1.2	4 ' - 3"	Lb	1.065	0.086	4 ' - 3"	Lb	1.065	0.086	4 ' - 3"	Lb	1.065	0.086	4 ' - 3"	Lb	1.065	0.086
		4	0.9	4 ' - 11"	Lb	0.923	0.114	4 ' - 11"	Lb	0.923	0.114	4 ' - 11"	Lb	0.923	0.114	4 ' - 11"	Lb	0.923	0.114
2 x 6 SP SELECT STR.	900	1	3.7	3 ' - 0"	Lv	1.623	0.047	3 ' - 0"	Lv	1.623	0.047	3 ' - 0"	Lv	1.623	0.047	3 ' - 0"	Lv	1.623	0.047
		2	1.8	5 ' - 2"	Lv	1.379	0.196	4 ' - 11"	Ld	1.322	0.166	4 ' - 6"	Ld	1.201	0.113	5 ' - 2"	Lv	1.379	0.196
		3	1.2	6 ' - 6"	Ld	1.156	0.326	5 ' - 8"	Ld	1.009	0.19	5 ' - 2"	Ld	0.917	0.129	6 ' - 9"	Lb	1.2	0.379
		4	0.9	7 ' - 2"	Ld	0.954	0.359	6 ' - 3"	Ld	0.834	0.209	5 ' - 8"	Ld	0.757	0.142	7 ' - 9"	Ld	1.037	0.5
1.5 x 5.5 LVL	900	1	3.7	4 ' - 0"	Lb	1.373	0.128	4 ' - 0"	Lb	1.373	0.128	3 ' - 8"	Ld	1.268	0.093	4 ' - 0"	Lb	1.373	0.128
		2	1.8	5 ' - 8"	Lb	0.971	0.255	5 ' - 1"	Ld	0.88	0.172	4 ' - 8"	Ld	0.799	0.117	5 ' - 8"	Lb	0.971	0.255
		3	1.2	6 ' - 8"	Ld	0.769	0.337	5 ' - 10"	Ld	0.672	0.197	5 ' - 4"	Ld	0.61	0.134	6 ' - 11"	Lb	0.793	0.383
		4	0.9	7 ' - 5"	Ld	0.635	0.371	6 ' - 5"	Ld	0.555	0.216	5 ' - 10"	Ld	0.504	0.147	7 ' - 11"	Ld	0.684	0.5

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UNIBEAM

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NOTES:

1. LOADS ARE UNIFORM ALONG BEAM LENGTH.
2. SEE INSTRUCTIONS FOR REQUIRED BRACING.
3. SPANS ARE LIMITED BY THE MAXIMUM SPAN DUE TO BENDING, DEFLECTION, OR SHEAR.
4. **DURATION FACTOR (Cd) = 1.0 & REPETITIVE FACTOR (Cr) = 1.0.**
5. MULTIPLE PLIES ARE TO BE FASTENED PER MANFACTURER / CODE REQUIREMENTS.
6. DESIGNER TO ACCOUNT FOR DEFLECTION, REQUIRED BEARING LENGTH AND SUPPORT STUDS.
7. SINGLE MEMBER LVL'S GREATER THAN 14" DEEP ARE NOT TO BE USED EXCEPT FOR MATING WALL LOCATIONS WHERE ONE EACH SIDE ARE FASTENED TOGETHER TO FORM A DOUBLE MEMBER
8. MID-SPAN SPLICING IS NOT ALLOWED.

UNIFORMLY LOADED BEAM SPAN CALCULATIONS

				BASED ON l / 240 DEFLECTION				BASED ON l / 360 DEFLECTION				BASED ON l / 480 DEFLECTION				BASED ON 1/2" MAX. DEFLECTION			
MEMBER	LOAD (plf)	QUANTITY	d / b	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)
2 x 8 SPF #2	900	1	4.8	3 ' - 2"	Lb	2.258	0.032	3 ' - 2"	Lb	2.258	0.032	3 ' - 2"	Lb	2.258	0.032	3 ' - 2"	Lb	2.258	0.032
		2	2.4	4 ' - 6"	Lb	1.597	0.063	4 ' - 6"	Lb	1.597	0.063	4 ' - 6"	Lb	1.597	0.063	4 ' - 6"	Lb	1.597	0.063
		3	1.6	5 ' - 6"	Lb	1.305	0.095	5 ' - 6"	Lb	1.305	0.095	5 ' - 6"	Lb	1.305	0.095	5 ' - 6"	Lb	1.305	0.095
		4	1.2	6 ' - 4"	Lb	1.13	0.126	6 ' - 4"	Lb	1.13	0.126	6 ' - 4"	Lb	1.13	0.126	6 ' - 4"	Lb	1.13	0.126
2 x 8 SYP #2	900	1	4.8	2 ' - 11"	Lb	1.594	0.025	2 ' - 11"	Lb	1.594	0.025	2 ' - 11"	Lb	1.594	0.025	2 ' - 11"	Lb	1.594	0.025
		2	2.4	4 ' - 2"	Lb	1.128	0.049	4 ' - 2"	Lb	1.128	0.049	4 ' - 2"	Lb	1.128	0.049	4 ' - 2"	Lb	1.128	0.049
		3	1.6	5 ' - 2"	Lb	0.921	0.074	5 ' - 2"	Lb	0.921	0.074	5 ' - 2"	Lb	0.921	0.074	5 ' - 2"	Lb	0.921	0.074
		4	1.2	5 ' - 11"	Lb	0.798	0.098	5 ' - 11"	Lb	0.798	0.098	5 ' - 11"	Lb	0.798	0.098	5 ' - 11"	Lb	0.798	0.098
2 x 8 HEM-FIR #2	900	1	4.8	3 ' - 1"	Lb	2.335	0.032	3 ' - 1"	Lb	2.335	0.032	3 ' - 1"	Lb	2.335	0.032	3 ' - 1"	Lb	2.335	0.032
		2	2.4	4 ' - 5"	Lb	1.652	0.064	4 ' - 5"	Lb	1.652	0.064	4 ' - 5"	Lb	1.652	0.064	4 ' - 5"	Lb	1.652	0.064
		3	1.6	5 ' - 5"	Lb	1.349	0.096	5 ' - 5"	Lb	1.349	0.096	5 ' - 5"	Lb	1.349	0.096	5 ' - 5"	Lb	1.349	0.096
		4	1.2	6 ' - 3"	Lb	1.169	0.128	6 ' - 3"	Lb	1.169	0.128	6 ' - 3"	Lb	1.169	0.128	6 ' - 3"	Lb	1.169	0.128
2 x 8 SP SELECT STR.	900	1	4.8	4 ' - 0"	Lv	2.139	0.062	4 ' - 0"	Lv	2.139	0.062	4 ' - 0"	Lv	2.139	0.062	4 ' - 0"	Lv	2.139	0.062
		2	2.4	6 ' - 8"	Lb	1.793	0.245	6 ' - 6"	Ld	1.743	0.219	5 ' - 11"	Ld	1.584	0.149	6 ' - 8"	Lb	1.793	0.245
		3	1.6	8 ' - 3"	Lb	1.465	0.367	7 ' - 6"	Ld	1.331	0.25	6 ' - 9"	Ld	1.209	0.17	8 ' - 3"	Lb	1.465	0.367
		4	1.2	9 ' - 5"	Ld	1.259	0.473	8 ' - 3"	Ld	1.099	0.275	7 ' - 6"	Ld	0.999	0.188	9 ' - 6"	Lb	1.269	0.489
1.5 x 7.25 LVL	900	1	4.8	5 ' - 3"	Lb	1.794	0.162	5 ' - 3"	Lb	1.794	0.162	4 ' - 10"	Ld	1.672	0.122	5 ' - 3"	Lb	1.794	0.162
		2	2.4	7 ' - 5"	Lb	1.269	0.325	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Ld	1.054	0.154	7 ' - 5"	Lb	1.269	0.325
		3	1.6	8 ' - 10"	Ld	1.014	0.445	7 ' - 9"	[illegible]	[illegible]	[illegible]	7 ' - 0"	Ld	0.805	0.176	9 ' - 1"	Lb	1.037	0.486
		4	1.2	9 ' - 9"	Ld	0.838	0.489	8 ' - 6"	Ld	0.732	0.285	7 ' - 9"	Ld	0.665	0.194	9 ' - 10"	Ld	0.842	0.5
2 x 10 SPF #2	900	1	6.2	3 ' - 10"	Lb	2.758	0.034	3 ' - 10"	Lb	2.758	0.034	3 ' - 10"	Lb	2.758	0.034	3 ' - 10"	Lb	2.758	0.034
		2	3.1	5 ' - 6"	Lb	1.952	0.068	5 ' - 6"	Lb	1.952	0.068	5 ' - 6"	Lb	1.952	0.068	5 ' - 6"	Lb	1.952	0.068
		3	2.1	6 ' - 9"	Lb	1.594	0.102	6 ' - 9"	Lb	1.594	0.102	6 ' - 9"	Lb	1.594	0.102	6 ' - 9"	Lb	1.594	0.102
		4	1.5	7 ' - 9"	Lb	1.382	0.135	7 ' - 9"	Lb	1.382	0.135	7 ' - 9"	Lb	1.382	0.135	7 ' - 9"	Lb	1.382	0.135
2 x 10 SYP #2	900	1	6.2	3 ' - 6"	Lb	1.892	0.023	3 ' - 6"	Lb	1.892	0.023	3 ' - 6"	Lb	1.892	0.023	3 ' - 6"	Lb	1.892	0.023
		2	3.1	5 ' - 0"	Lb	1.339	0.047	5 ' - 0"	Lb	1.339	0.047	5 ' - 0"	Lb	1.339	0.047	5 ' - 0"	Lb	1.339	0.047
		3	2.1	6 ' - 1"	Lb	1.094	0.07	6 ' - 1"	Lb	1.094	0.07	6 ' - 1"	Lb	1.094	0.07	6 ' - 1"	Lb	1.094	0.07
		4	1.5	7 ' - 1"	Lb	0.948	0.093	7 ' - 1"	Lb	0.948	0.093	7 ' - 1"	Lb	0.948	0.093	7 ' - 1"	Lb	0.948	0.093
2 x 10 HEM-FIR #2	900	1	6.2	3 ' - 10"	Lb	2.853	0.035	3 ' - 10"	Lb	2.853	0.035	3 ' - 10"	Lb	2.853	0.035	3 ' - 10"	Lb	2.853	0.035
		2	3.1	5 ' - 5"	Lb	2.018	0.069	5 ' - 5"	Lb	2.018	0.069	5 ' - 5"	Lb	2.018	0.069	5 ' - 5"	Lb	2.018	0.069
		3	2.1	6 ' - 7"	Lb	1.649	0.103	6 ' - 7"	Lb	1.649	0.103	6 ' - 7"	Lb	1.649	0.103	6 ' - 7"	Lb	1.649	0.103
		4	1.5	7 ' - 8"	Lb	1.429	0.138	7 ' - 8"	Lb	1.429	0.138	7 ' - 8"	Lb	1.429	0.138	7 ' - 8"	Lb	1.429	0.138
2 x 10 SP SELECT STR.	900	1	6.2	5 ' - 1"	Lv	2.729	0.079	5 ' - 1"	Lv	2.729	0.079	5 ' - 1"	Lv	2.729	0.079	5 ' - 1"	Lv	2.729	0.079
		2	3.1	7 ' - 8"	Lb	2.046	0.199	7 ' - 8"	Lb	2.046	0.199	7 ' - 7"	Ld	2.022	0.19	7 ' - 8"	Lb	2.046	0.199
		3	2.1	9 ' - 4"	Lb	1.671	0.299	9 ' - 4"	Lb	1.671	0.299	8 ' - 8"	Ld	1.544	0.217	9 ' - 4"	Lb	1.671	0.299
		4	1.5	10 ' - 10"	Lb	1.448	0.398	10 ' - 6"	Ld	1.404	0.351	9 ' - 6"	Ld	1.275	0.239	10 ' - 10"	Lb	1.448	0.398
1.5 x 9.25 LVL	900	1	6.2	6 ' - 7"	Lb	2.271	0.201	6 ' - 7"	Lb	2.271	0.201	6 ' - 2"	Ld	2.133	0.156	6 ' - 7"	Lb	2.271	0.201
		2	3.1	9 ' - 4"	Lb	1.607	0.401	8 ' - 7"	Ld	1.48	0.289	7 ' - 10"	Ld	1.345	0.197	9 ' - 4"	Lb	1.607	0.401
		3	2.1	11 ' - 4"	Ld	1.295	0.567	9 ' - 10"	Ld	1.131	0.33	9 ' - 0"	Ld	1.027	0.225	10 ' - 11"	Ld	1.254	0.5
		4	1.5	12 ' - 5"	Ld	1.07	0.624	10 ' - 10"	Ld	0.934	0.363	9 ' - 10"	Ld	0.849	0.248	11 ' - 9"	Ld	1.012	0.5

EXT WALL HDR

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NOTES:

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6. DESIGNER TO ACCOUNT FOR DEFLECTION, REQUIRED BEARING LENGTH AND SUPPORT STUDS.
7. SINGLE MEMBER LVL'S GREATER THAN 14" DEEP ARE NOT TO BE USED EXCEPT FOR MATING WALL LOCATIONS WHERE ONE EACH SIDE ARE FASTENED TOGETHER TO FORM A DOUBLE MEMBER
8. MID-SPAN SPLICING IS NOT ALLOWED.

UNIFORMLY LOADED BEAM SPAN CALCULATIONS

				BASED ON l / 240 DEFLECTION				BASED ON l / 360 DEFLECTION				BASED ON l / 480 DEFLECTION				BASED ON 1/2" MAX. DEFLECTION			
				MAXIMUM	LIMITED	BEARING	DEFLECTION	MAXIMUM	LIMITED	BEARING	DEFLECTION	MAXIMUM	LIMITED	BEARING	DEFLECTION	MAXIMUM	LIMITED	BEARING	DEFLECTION
MEMBER	LOAD (plf)	QUANTITY	d / b	SPAN	BY	LENGTH (in)	(in)	SPAN	BY	LENGTH (in)	(in)	SPAN	BY	LENGTH (in)	(in)	SPAN	BY	LENGTH (in)	(in)
2 x 12 SPF #2	900	1	7.5	4 ' - 6"	Lb	3.199	0.034	4 ' - 6"	Lb	3.199	0.034	4 ' - 6"	Lb	3.199	0.034	4 ' - 6"	Lb	3.199	0.034
		2	3.8	6 ' - 4"	Lb	2.264	0.068	6 ' - 4"	Lb	2.264	0.068	6 ' - 4"	Lb	2.264	0.068	6 ' - 4"	Lb	2.264	0.068
		3	2.5	7 ' - 9"	Lb	1.85	0.102	7 ' - 9"	Lb	1.85	0.102	7 ' - 9"	Lb	1.85	0.102	7 ' - 9"	Lb	1.85	0.102
		4	1.9	9 ' - 0"	Lb	1.603	0.136	9 ' - 0"	Lb	1.603	0.136	9 ' - 0"	Lb	1.603	0.136	9 ' - 0"	Lb	1.603	0.136
2 x 12 SYP #2	900	1	7.5	4 ' - 3"	Lb	2.301	0.029	4 ' - 3"	Lb	2.301	0.029	4 ' - 3"	Lb	2.301	0.029	4 ' - 3"	Lb	2.301	0.029
		2	3.8	6 ' - 1"	Lb	1.629	0.057	6 ' - 1"	Lb	1.629	0.057	6 ' - 1"	Lb	1.629	0.057	6 ' - 1"	Lb	1.629	0.057
		3	2.5	7 ' - 5"	Lb	1.331	0.085	7 ' - 5"	Lb	1.331	0.085	7 ' - 5"	Lb	1.331	0.085	7 ' - 5"	Lb	1.331	0.085
		4	1.9	8 ' - 7"	Lb	1.154	0.113	8 ' - 7"	Lb	1.154	0.113	8 ' - 7"	Lb	1.154	0.113	8 ' - 7"	Lb	1.154	0.113
2 x 12 HEM-FIR #2	900	1	7.5	4 ' - 5"	Lb	3.309	0.035	4 ' - 5"	Lb	3.309	0.035	4 ' - 5"	Lb	3.309	0.035	4 ' - 5"	Lb	3.309	0.035
		2	3.8	6 ' - 3"	Lb	2.341	0.069	6 ' - 3"	Lb	2.341	0.069	6 ' - 3"	Lb	2.341	0.069	6 ' - 3"	Lb	2.341	0.069
		3	2.5	7 ' - 8"	Lb	1.913	0.104	7 ' - 8"	Lb	1.913	0.104	7 ' - 8"	Lb	1.913	0.104	7 ' - 8"	Lb	1.913	0.104
		4	1.9	8 ' - 10"	Lb	1.658	0.138	8 ' - 10"	Lb	1.658	0.138	8 ' - 10"	Lb	1.658	0.138	8 ' - 10"	Lb	1.658	0.138
2 x 12 SP SELECT STR.	900	1	7.5	6 ' - 1"	Lb	3.254	0.089	6 ' - 1"	Lb	3.254	0.089	6 ' - 1"	Lb	3.254	0.089	6 ' - 1"	Lb	3.254	0.089
		2	3.8	8 ' - 7"	Lb	2.302	0.177	8 ' - 7"	Lb	2.302	0.177	8 ' - 7"	Lb	2.302	0.177	8 ' - 7"	Lb	2.302	0.177
		3	2.5	10 ' - 7"	Lb	1.881	0.266	10 ' - 7"	Lb	1.881	0.266	10 ' - 6"	Ld	1.878	0.264	10 ' - 7"	Lb	1.881	0.266
		4	1.9	12 ' - 2"	Lb	1.63	0.354	12 ' - 2"	Lb	1.63	0.354	11 ' - 7"	Ld	1.552	0.291	12 ' - 2"	Lb	1.63	0.354
1.5 x 11.25 LVL	900	1	7.5	8 ' - 0"	Lb	2.745	0.238	8 ' - 0"	Lb	2.745	0.238	7 ' - 7"	Ld	2.595	0.19	8 ' - 0"	Lb	2.745	0.238
		2	3.8	11 ' - 4"	Lb	1.943	0.475	10 ' - 6"	Ld	1.801	0.351	9 ' - 6"	Ld	1.637	0.239	11 ' - 4"	Lb	1.943	0.475
		3	2.5	13 ' - 9"	Ld	1.575	0.69	12 ' - 0"	Ld	1.376	0.402	10 ' - 11"	Ld	1.25	0.274	12 ' - 8"	Ld	1.454	0.5
		4	1.9	15 ' - 2"	Ld	1.302	0.759	13 ' - 3"	Ld	1.137	0.442	12 ' - 0"	Ld	1.033	0.301	13 ' - 8"	Ld	1.173	0.5
1.5 x 12 LVL	900	1	8	8 ' - 6"	Lb	2.922	0.252	8 ' - 6"	Lb	2.922	0.252	8 ' - 1"	Ld	2.768	0.203	8 ' - 6"	Lb	2.922	0.252
		2	4	12 ' - 1"	Lb	2.068	0.502	11 ' - 2"	Ld	1.922	0.374	10 ' - 2"	Ld	1.746	0.255	12 ' - 0"	Ld	2.066	0.5
		3	2.7	14 ' - 8"	Ld	1.681	0.735	12 ' - 10"	Ld	1.468	0.428	11 ' - 8"	Ld	1.334	0.292	13 ' - 4"	Ld	1.526	0.5
		4	2	16 ' - 2"	Ld	1.389	0.809	14 ' - 1"	Ld	1.214	0.471	12 ' - 10"	Ld	1.103	0.321	14 ' - 4"	Ld	1.232	0.5
1.5 x 14 LVL	900	1	9.3	9 ' - 11"	Lb	3.393	0.288	9 ' - 11"	Lb	3.393	0.288	9 ' - 5"	Ld	3.23	0.236	9 ' - 11"	Lb	3.393	0.288
		2	4.7	14 ' - 0"	Lb	2.402	0.574	13 ' - 1"	Ld	2.243	0.437	11 ' - 10"	Ld	2.038	0.298	13 ' - 6"	Ld	2.32	0.5
		3	3.1	17 ' - 1"	Ld	1.962	0.858	14 ' - 11"	Ld	1.714	0.5	13 ' - 7"	Ld	1.557	0.34	14 ' - 11"	Ld	1.715	0.5
		4	2.3	18 ' - 10"	Ld	1.622	0.943	16 ' - 5"	Ld	1.417	0.549	14 ' - 11"	Ld	1.287	0.374	16 ' - 1"	Ld	1.384	0.5
1.5 x 16 LVL	900	1	10.7	11 ' - 3"	Lb	3.861	0.323	11 ' - 3"	Lb	3.861	0.323	10 ' - 9"	Ld	3.692	0.27	11 ' - 3"	Lb	3.861	0.323
		2	5.3	15 ' - 11"	Lb	2.734	0.644	14 ' - 11"	Ld	2.564	0.499	13 ' - 7"	Ld	2.33	0.34	14 ' - 11"	Ld	2.566	0.5
		3	3.6	19 ' - 6"	Lb	2.235	0.964	17 ' - 1"	Ld	1.96	0.571	15 ' - 6"	Ld	1.781	0.389	16 ' - 6"	Ld	1.896	0.5
		4	2.7	21 ' - 6"	Ld	1.855	1.078	18 ' - 9"	Ld	1.621	0.628	17 ' - 1"	Ld	1.473	0.428	17 ' - 9"	Ld	1.531	0.5
1.5 x 18 LVL	900	1	12	12 ' - 7"	Lb	4.327	0.358	12 ' - 7"	Lb	4.327	0.358	12 ' - 1"	Ld	4.155	0.304	12 ' - 7"	Lb	4.327	0.358
		2	6	17 ' - 10"	Lb	3.064	0.713	16 ' - 10"	Ld	2.886	0.561	15 ' - 3"	Ld	2.622	0.382	16 ' - 4"	Ld	2.804	0.5
		3	4	21 ' - 10"	Lb	2.505	1.067	19 ' - 3"	Ld	2.207	0.642	17 ' - 5"	Ld	2.005	0.437	18 ' - 1"	Ld	2.073	0.5
		4	3	24 ' - 2"	Ld	2.089	1.212	21 ' - 2"	Ld	1.825	0.706	19 ' - 2"	Ld	1.658	0.481	19 ' - 5"	Ld	1.674	0.5
1.5 x 20 LVL	900	1	13.3	14 ' - 0"	Lb	4.793	0.392	14 ' - 0"	Lb	4.793	0.392	13 ' - 6"	Ld	4.617	0.338	14 ' - 0"	Lb	4.793	0.392
		2	6.7	19 ' - 9"	Lb	3.394	0.781	18 ' - 8"	Ld	3.208	0.623	16 ' - 11"	Ld	2.915	0.425	17 ' - 8"	Ld	3.036	0.5
		3	4.4	24 ' - 2"	Lb	2.776	1.168	21 ' - 4"	Ld	2.453	0.713	19 ' - 5"	Ld	2.229	0.486	19 ' - 6"	Ld	2.245	0.5
		4	3.3	26 ' - 11"	Ld	2.323	1.346	23 ' - 6"	Ld	2.029	0.784	21 ' - 4"	Ld	1.844	0.534	21 ' - 0"	Ld	1.814	0.5
1.5 x 22 LVL	900	1	14.7	15 ' - 4"	Lb	5.257	0.426	15 ' - 4"	Lb	5.257	0.426	14 ' - 10"	Ld	5.08	0.371	15 ' - 4"	Lb	5.257	0.426
		2	7.3	21 ' - 8"	Lb	3.724	0.849	20 ' - 6"	Ld	3.53	0.686	18 ' - 8"	Ld	3.208	0.467	19 ' - 0"	Ld	3.262	0.5
		3	4.9	26 ' - 6"	Lb	3.045	1.269	23 ' - 6"	Ld	2.7	0.784	21 ' - 4"	Ld	2.453	0.534	21 ' - 0"	Ld	2.413	0.5
		4	3.7	29 ' - 7"	Ld	2.557	1.48	25 ' - 10"	Ld	2.234	0.862	23 ' - 5"	Ld	2.03	0.587	22 ' - 6"	Ld	1.95	0.5
1.5 x 24 LVL	900	1	16	16 ' - 8"	Lb	5.72	0.459	16 ' - 8"	Lb	5.72	0.459	16 ' - 2"	Ld	5.543	0.405	16 ' - 8"	Lb	5.72	0.459
		2	8	23 ' - 7"	Lb	4.052	0.915	22 ' - 5"	Ld	3.853	0.748	20 ' - 4"	Ld	3.501	0.51	20 ' - 3"	Ld	3.484	0.5
		3	5.3	28 ' - 10"	Lb	3.314	1.367	25 ' - 7"	Ld	2.948	0.855	23 ' - 3"	Ld	2.678	0.583	22 ' - 5"	Ld	2.578	0.5
		4	4	32 ' - 3"	Ld	2.792	1.614	28 ' - 2"	Ld	2.439	0.94	25 ' - 7"	Ld	2.216	0.64	24 ' - 0"	Ld	2.083	0.5

EXT WALL HDR

PFS

APPROVED

DATE 3/29/17

PFS CORPORATION
Bloomsburg, PA

Project: 108503

Location: SHED DORMER BM
Multi-Loaded Multi-Span Beam
Multi-Loaded Multi-Span Beam [2021 International Building Code(2018 NDS)]
(3) 1.5 IN x 24.0 IN x 41.0 FT (24 + 17)
2.0 Rigidlam LVL - Roseburg Forest Products
Section Adequate By: 12.5%
Controlling Factor: Shear

Modular Building Systems of PA
72 E. Market St.
Middleburg, PA 17852

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CAUTIONS

* Laminations are to be fully connected to provide uniform transfer of loads to all members

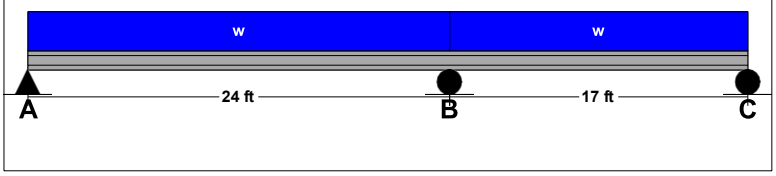
DEFLECTIONS	Center		Right	
Live Load	0.36	IN L/791	0.11	IN L/1929
Dead Load	0.20	in	-0.01	in
Total Load	0.56	IN L/513	0.11	IN L/1807

Live Load Deflection Criteria: L/360 Total Load Deflection Criteria: L/240

REACTIONS	A		B		C	
Live Load	7939	lb	20336	lb	5905	lb
Dead Load	4964	lb	13540	lb	2652	lb
Total Load	12903	lb	33876	lb	8557	lb
Uplift (1.5 F.S)	0	**lb**	0	**lb**	**-153**	**lb**
Bearing Length	3.82	in	10.04	in	2.54	in

BEAM DATA	Center		Right	
Span Length	24	ft	17	ft
Unbraced Length-Top	0	ft	0	ft
Unbraced Length-Bottom	0	ft	0	ft
Live Load Duration Factor	1.00			
Notch Depth	0.00			

LOADING DIAGRAM



UNIFORM LOADS	Center		Right	
Uniform Live Load	775	plf	775	plf
Uniform Dead Load	489	plf	489	plf
Beam Self Weight	27	plf	27	plf
Total Uniform Load	1291	plf	1291	plf

MATERIAL PROPERTIES

2.0 Rigidlam LVL - Roseburg Forest Products

	Base Values		Adjusted	
Bending Stress:	Fb = 3100	psi	Fb' = 2843	psi
	Cd=1.00 CF=0.92			
Shear Stress:	Fv = 290	psi	Fv' = 290	psi
	Cd=1.00			
Modulus of Elasticity:	E = 2000	ksi	E' = 2000	ksi
Comp. ⊥ to Grain:	Fc - ⊥ = 750	psi	Fc - ⊥' = 750	psi

Controlling Moment: -73748 ft-lb
Over right support of span 2 (Center Span)
Created by combining all dead loads and live loads on span(s) 2, 3
Controlling Shear: -18565 lb
At right support of span 2 (Center Span)
Created by combining all dead loads and live loads on span(s) 2, 3

Comparisons with required sections:	Req'd		Provided	
Section Modulus:	311.31	in3	432	in3
Area (Shear):	96.03	in2	108	in2
Moment of Inertia (deflection):	2426.2	in4	5184	in4
Moment:	-73748	ft-lb	102338	ft-lb
Shear:	-18565	lb	20880	lb

COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

PFS APPROVED
DATE 12/6/23
PFS CORPORATION
Bloomsburg, PA

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Project: 108503

Location: 2ND FLR EXT WALL HDR
Multi-Loaded Multi-Span Beam
Multi-Loaded Multi-Span Beam [2021 International Building Code(2018 NDS)]
(3) 1.5 IN x 9.25 IN x 6.5 FT
2.0 Rigidlam LVL - Roseburg Forest Products
Section Adequate By: 41.1%
Controlling Factor: Moment

Modular Building Systems of PA
72 E. Market St.
Middleburg, PA 17852

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CAUTIONS

* Laminations are to be fully connected to provide uniform transfer of loads to all members

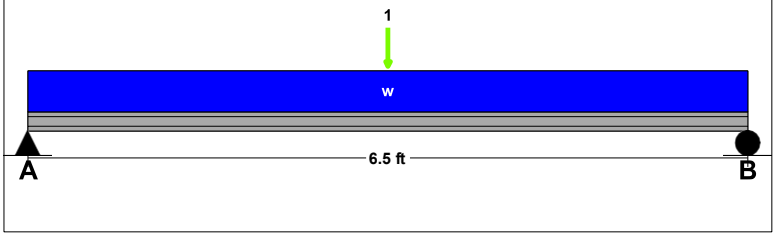
DEFLECTIONS	Center	
Live Load	0.10	IN L/793
Dead Load	0.04	in
Total Load	0.14	IN L/545

Live Load Deflection Criteria: L/240 Total Load Deflection Criteria: L/180

REACTIONS	A		B	
Live Load	2953	lb	2953	lb
Dead Load	1360	lb	1360	lb
Total Load	4313	lb	4313	lb
Bearing Length	1.28	in	1.28	in

BEAM DATA	Center	
Span Length	6.5	ft
Unbraced Length-Top	0	ft
Unbraced Length-Bottom	0	ft
Live Load Duration Factor	1.15	
Notch Depth	0.00	

LOADING DIAGRAM



UNIFORM LOADS	Center	
Uniform Live Load	0	plf
Uniform Dead Load	0	plf
Beam Self Weight	10	plf
Total Uniform Load	10	plf

MATERIAL PROPERTIES

2.0 Rigidlam LVL - Roseburg Forest Products

	Base Values		Adjusted	
Bending Stress:	Fb =	3100 psi	Fb' =	3683 psi
	Cd=1.15 CF=1.03			
Shear Stress:	Fv =	290 psi	Fv' =	334 psi
	Cd=1.15			
Modulus of Elasticity:	E =	2000 ksi	E' =	2000 ksi
Comp. ⊥ to Grain:	Fc - ⊥ =	750 psi	Fc - ⊥' =	750 psi

POINT LOADS - CENTER SPAN

Load Number	One *	
Live Load	5905	lb
Dead Load	2652	lb
Location	3.25	ft

* Load obtained from Load Tracker. See Summary Report for details.

Controlling Moment: 13960 ft-lb
3.25 Ft from left support of span 2 (Center Span)
Created by combining all dead loads and live loads on span(s) 2

Controlling Shear: 4312 lb
At left support of span 2 (Center Span)
Created by combining all dead loads and live loads on span(s) 2

Comparisons with required sections:	Req'd	Provided
Section Modulus:	45.49 in3	64.17 in3
Area (Shear):	19.4 in2	41.63 in2
Moment of Inertia (deflection):	98.09 in4	296.79 in4
Moment:	13960 ft-lb	19695 ft-lb
Shear:	4312 lb	9255 lb

COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

APPROVED

DATE 12/6/23

PFS CORPORATION

Bloomsburg, PA

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Project: 108503

Location: MW COLUMN (PER SIDE)
Column
Column [2021 International Building Code(2018 NDS)]
3.5 IN x 6.0 IN x 8 FT
2.0 Rigidlam LVL - Roseburg Forest Products
Section Adequate By: 13.8%

Modular Building Systems of PA
72 E. Market St.
Middleburg, PA 17852

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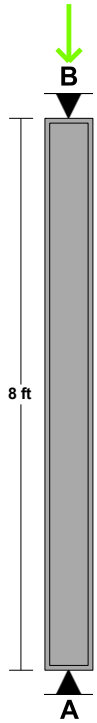
VERTICAL REACTIONS

Live Load:	Vert-LL-Rxn =	11796	lb
Dead Load:	Vert-DL-Rxn =	7294	lb
Total Load:	Vert-TL-Rxn =	19090	lb

COLUMN DATA

Total Column Length:	8	ft
Unbraced Length (X-Axis) Lx:	8	ft
Unbraced Length (Y-Axis) Ly:	8	ft
Column End Condition-K (e):	1	
Axial Load Duration Factor	1.00	

LOADING DIAGRAM



COLUMN PROPERTIES

2.0 Rigidlam LVL - Roseburg Forest Products

	Base Values	Adjusted
Compressive Stress:	Fc = 3000 psi	Fc' = 1054 psi
	Cd=1.00 Cp=0.35	
Bending Stress (X-X Axis):	Fbx = 3100 psi	Fbx' = 3381 psi
	Cd=1.00 CF=1.09	
Bending Stress (Y-Y Axis):	Fby = 3100 psi	Fby' = 3381 psi
	Cd=1.00 CF=1.09	
Modulus of Elasticity:	E = 2000 ksi	E' = 2000 ksi

Column Section (X-X Axis):	dx =	6	in
Column Section (Y-Y Axis):	dy =	3.5	in
Area:	A =	21	in2
Section Modulus (X-X Axis):	Sx =	21	in3
Section Modulus (Y-Y Axis):	Sy =	12.25	in3
Slenderness Ratio:	Lex/dx =	16	
	Ley/dy =	27.43	

Column Calculations (Controlling Case Only):
Controlling Load Case: Axial Total Load Only (L + D)

Actual Compressive Stress:	Fc =	909	psi
Allowable Compressive Stress:	Fc' =	1054	psi
Eccentricity Moment (X-X Axis):	Mx-ex =	0	ft-lb
Eccentricity Moment (Y-Y Axis):	My-ey =	0	ft-lb
Moment Due to Lateral Loads (X-X Axis):	Mx =	0	ft-lb
Moment Due to Lateral Loads (Y-Y Axis):	My =	0	ft-lb
Bending Stress Lateral Loads Only (X-X Axis):	Fbx =	0	psi
Allowable Bending Stress (X-X Axis):	Fbx' =	3381	psi
Bending Stress Lateral Loads Only (Y-Y Axis):	Fby =	0	psi
Allowable Bending Stress (Y-Y Axis):	Fby' =	3381	psi
Combined Stress Factor:	**CSF =**	**0.86**	

AXIAL LOADING

Live Load:	PL =	11796	lb
Dead Load:	PD =	7252	lb
Column Self Weight:	CSW =	42	lb
Total Axial Load:	PT =	19090	lb

COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

PFS APPROVED
DATE 12/6/23
PFS CORPORATION
Bloomsburg, PA

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NOTES:

1. LOADS ARE UNIFORM ALONG BEAM LENGTH.
2. SEE INSTRUCTIONS FOR REQUIRED BRACING.
3. SPANS ARE LIMITED BY THE MAXIMUM SPAN DUE TO BENDING, DEFLECTION, OR SHEAR.
4. **DURATION FACTOR (Cd) = 1.0 & REPETITIVE FACTOR (Cr) = 1.0.**
5. MULTIPLE PLIES ARE TO BE FASTENED PER MANFACTURER / CODE REQUIREMENTS.
6. DESIGNER TO ACCOUNT FOR DEFLECTION, REQUIRED BEARING LENGTH AND SUPPORT STUDS.
7. SINGLE MEMBER LVL'S GREATER THAN 14" DEEP ARE NOT TO BE USED EXCEPT FOR MATING WALL LOCATIONS WHERE ONE EACH SIDE ARE FASTENED TOGETHER TO FORM A DOUBLE MEMBER
8. MID-SPAN SPLICING IS NOT ALLOWED.

UNIFORMLY LOADED BEAM SPAN CALCULATIONS

				BASED ON I / 240 DEFLECTION				BASED ON I / 360 DEFLECTION				BASED ON I / 480 DEFLECTION				BASED ON 1/2" MAX. DEFLECTION			
MEMBER	LOAD (plf)	QUANTITY	d / b	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)	MAXIMUM SPAN	LIMITED BY	BEARING LENGTH (in)	DEFLECTION (in)
2 x 8 SPF #2	950	1	4.8	3 ' - 1"	Lb	2.32	0.03	3 ' - 1"	Lb	2.32	0.03	3 ' - 1"	Lb	2.32	0.03	3 ' - 1"	Lb	2.32	0.03
		2	2.4	4 ' - 4"	Lb	1.641	0.06	4 ' - 4"	Lb	1.641	0.06	4 ' - 4"	Lb	1.641	0.06	4 ' - 4"	Lb	1.641	0.06
		3	1.6	5 ' - 4"	Lb	1.34	0.09	5 ' - 4"	Lb	1.34	0.09	5 ' - 4"	Lb	1.34	0.09	5 ' - 4"	Lb	1.34	0.09
		4	1.2	6 ' - 2"	Lb	1.161	0.12	6 ' - 2"	Lb	1.161	0.12	6 ' - 2"	Lb	1.161	0.12	6 ' - 2"	Lb	1.161	0.12
2 x 8 SYP #2	950	1	4.8	2 ' - 11"	Lb	1.638	0.023	2 ' - 11"	Lb	1.638	0.023	2 ' - 11"	Lb	1.638	0.023	2 ' - 11"	Lb	1.638	0.023
		2	2.4	4 ' - 1"	Lb	1.159	0.047	4 ' - 1"	Lb	1.159	0.047	4 ' - 1"	Lb	1.159	0.047	4 ' - 1"	Lb	1.159	0.047
		3	1.6	5 ' - 0"	Lb	0.947	0.07	5 ' - 0"	Lb	0.947	0.07	5 ' - 0"	Lb	0.947	0.07	5 ' - 0"	Lb	0.947	0.07
		4	1.2	5 ' - 9"	Lb	0.82	0.093	5 ' - 9"	Lb	0.82	0.093	5 ' - 9"	Lb	0.82	0.093	5 ' - 9"	Lb	0.82	0.093
2 x 8 HEM-FIR #2	950	1	4.8	3 ' - 0"	Lb	2.399	0.031	3 ' - 0"	Lb	2.399	0.031	3 ' - 0"	Lb	2.399	0.031	3 ' - 0"	Lb	2.399	0.031
		2	2.4	4 ' - 4"	Lb	1.697	0.061	4 ' - 4"	Lb	1.697	0.061	4 ' - 4"	Lb	1.697	0.061	4 ' - 4"	Lb	1.697	0.061
		3	1.6	5 ' - 3"	Lb	1.386	0.091	5 ' - 3"	Lb	1.386	0.091	5 ' - 3"	Lb	1.386	0.091	5 ' - 3"	Lb	1.386	0.091
		4	1.2	6 ' - 1"	Lb	1.201	0.122	6 ' - 1"	Lb	1.201	0.122	6 ' - 1"	Lb	1.201	0.122	6 ' - 1"	Lb	1.201	0.122
2 x 8 SP SELECT STR.	950	1	4.8	3 ' - 10"	Lv	2.175	0.056	3 ' - 10"	Lv	2.175	0.056	3 ' - 10"	Lv	2.175	0.056	3 ' - 10"	Lv	2.175	0.056
		2	2.4	6 ' - 6"	Lv	1.836	0.229	6 ' - 5"	Ld	1.807	0.215	5 ' - 10"	Ld	1.642	0.146	6 ' - 6"	Lv	1.836	0.229
		3	1.6	8 ' - 0"	Lb	1.505	0.347	7 ' - 4"	Ld	1.38	0.246	6 ' - 8"	Ld	1.254	0.167	8 ' - 0"	Lb	1.505	0.347
		4	1.2	9 ' - 3"	Lb	1.304	0.463	8 ' - 1"	Ld	1.14	0.27	7 ' - 4"	Ld	1.036	0.184	9 ' - 3"	Lb	1.304	0.463
1.5 x 7.25 LVL	950	1	4.8	5 ' - 1"	Lb	1.843	0.154	5 ' - 1"	Lb	1.843	0.154	4 ' - 9"	Ld	1.733	0.12	5 ' - 1"	Lb	1.843	0.154
		2	2.4	7 ' - 2"	Lb	1.304	0.308	6 ' - 8"	Ld	1.202	0.222	6 ' - 0"	Ld	1.092	0.151	7 ' - 2"	Lb	1.304	0.308
		3	1.6	8 ' - 8"	Ld	1.051	0.437	7 ' - 7"	Ld	0.918	0.254	6 ' - 11"	Ld	0.834	0.173	8 ' - 10"	Lb	1.065	0.461
		4	1.2	9 ' - 7"	Ld	0.868	0.481	8 ' - 4"	Ld	0.759	0.28	7 ' - 7"	Ld	0.689	0.191	9 ' - 8"	Ld	0.877	0.5
2 x 10 SPF #2	950	1	6.2	3 ' - 9"	Lb	2.834	0.032	3 ' - 9"	Lb	2.834	0.032	3 ' - 9"	Lb	2.834	0.032	3 ' - 9"	Lb	2.834	0.032
		2	3.1	5 ' - 4"	Lb	2.005	0.064	5 ' - 4"	Lb	2.005	0.064	5 ' - 4"	Lb	2.005	0.064	5 ' - 4"	Lb	2.005	0.064
		3	2.1	6 ' - 6"	Lb	1.638	0.096	6 ' - 6"	Lb	1.638	0.096	6 ' - 6"	Lb	1.638	0.096	6 ' - 6"	Lb	1.638	0.096
		4	1.5	7 ' - 7"	Lb	1.419	0.128	7 ' - 7"	Lb	1.419	0.128	7 ' - 7"	Lb	1.419	0.128	7 ' - 7"	Lb	1.419	0.128
2 x 10 SYP #2	950	1	6.2	3 ' - 5"	Lb	1.944	0.022	3 ' - 5"	Lb	1.944	0.022	3 ' - 5"	Lb	1.944	0.022	3 ' - 5"	Lb	1.944	0.022
		2	3.1	4 ' - 10"	Lb	1.375	0.044	4 ' - 10"	Lb	1.375	0.044	4 ' - 10"	Lb	1.375	0.044	4 ' - 10"	Lb	1.375	0.044
		3	2.1	5 ' - 11"	Lb	1.124	0.066	5 ' - 11"	Lb	1.124	0.066	5 ' - 11"	Lb	1.124	0.066	5 ' - 11"	Lb	1.124	0.066
		4	1.5	6 ' - 10"	Lb	0.974	0.089	6 ' - 10"	Lb	0.974	0.089	6 ' - 10"	Lb	0.974	0.089	6 ' - 10"	Lb	0.974	0.089
2 x 10 HEM-FIR #2	950	1	6.2	3 ' - 8"	Lb	2.931	0.033	3 ' - 8"	Lb	2.931	0.033	3 ' - 8"	Lb	2.931	0.033	3 ' - 8"	Lb	2.931	0.033
		2	3.1	5 ' - 3"	Lb	2.074	0.065	5 ' - 3"	Lb	2.074	0.065	5 ' - 3"	Lb	2.074	0.065	5 ' - 3"	Lb	2.074	0.065
		3	2.1	6 ' - 5"	Lb	1.694	0.098	6 ' - 5"	Lb	1.694	0.098	6 ' - 5"	Lb	1.694	0.098	6 ' - 5"	Lb	1.694	0.098
		4	1.5	7 ' - 5"	Lb	1.468	0.13	7 ' - 5"	Lb	1.468	0.13	7 ' - 5"	Lb	1.468	0.13	7 ' - 5"	Lb	1.468	0.13
2 x 10 SP SELECT STR.	950	1	6.2	4 ' - 11"	Lv	2.775	0.072	4 ' - 11"	Lv	2.775	0.072	4 ' - 11"	Lv	2.775	0.072	4 ' - 11"	Lv	2.775	0.072
		2	3.1	7 ' - 5"	Lb	2.102	0.189	7 ' - 5"	Lb	2.102	0.189	7 ' - 5"	Ld	2.096	0.187	7 ' - 5"	Lb	2.102	0.189
		3	2.1	9 ' - 1"	Lb	1.717	0.283	9 ' - 1"	Lb	1.717	0.283	8 ' - 6"	Ld	1.6	0.214	9 ' - 1"	Lb	1.717	0.283
		4	1.5	10 ' - 6"	Lb	1.488	0.377	10 ' - 4"	Ld	1.455	0.345	9 ' - 4"	Ld	1.322	0.235	10 ' - 6"	Lb	1.488	0.377
1.5 x 9.25 LVL	950	1	6.2	6 ' - 5"	Lb	2.333	0.19	6 ' - 5"	Lb	2.333	0.19	6 ' - 1"	Ld	2.211	0.153	6 ' - 5"	Lb	2.333	0.19
		2	3.1	9 ' - 1"	Lb	1.651	0.38	8 ' - 6"	Ld	1.535	0.284	7 ' - 8"	Ld	1.394	0.193	9 ' - 1"	Lb	1.651	0.38
		3	2.1	11 ' - 1"	Ld	1.342	0.557	9 ' - 8"	Ld	1.172	0.324	8 ' - 10"	Ld	1.065	0.221	10 ' - 10"	Ld	1.306	0.5
		4	1.5	12 ' - 3"	Ld	1.109	0.613	10 ' - 8"	Ld	0.969	0.357	9 ' - 8"	Ld	0.88	0.243	11 ' - 7"	Ld	1.054	0.5

PORCH HDR

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DATE 3/29/17
PFS CORPORATION
Bloomsburg, PA

UNIBEAM

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Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date: 2023-11-15
Registry ID:
Ekotrope ID: LK5AEzkv

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DATE 12/6/23
PFS CORPORATION
Bloomsburg, PA

HERS® Index Score:

52 Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings*

$1,958

*Relative to an average U.S. home

Home:
26 Cricket Ln
Littleton, MA 01460

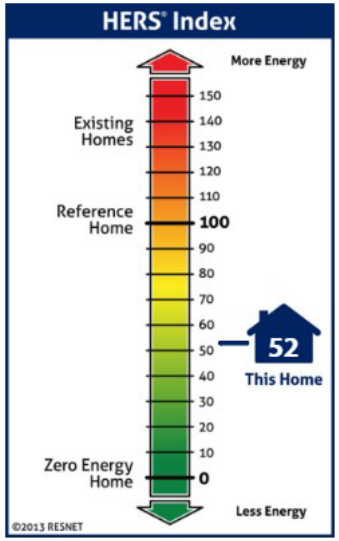
Builder:
Pros Edge Quality Homes

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	18.6	$522
Cooling	0.9	$24
Hot Water	8.3	$337
Lights/Appliances	17.5	$396
Service Charges		$72
Generation (e.g. Solar)	0.0	$0
Total:	**45.3**	**$1,351**

This home meets or exceeds the criteria of the following:

Massachusetts Stretch Code
2021 International Energy Conservation Code



Home Feature Summary:

Home Type:	Single family detached
Model:	2 Story
Community:	Littleton/Middlesex County
Conditioned Floor Area:	1,847 ft^2
Number of Bedrooms:	2
Primary Heating System:	Dual Fuel Heat Pump • Electric • 11 HSPF
Primary Cooling System:	Air Source Heat Pump • Electric • 21 SEER
Primary Water Heating:	Residential Water Heater • Propane • 0.95 Energy Factor
House Tightness:	758 CFM50 (3.00 ACH50)
Ventilation:	50 CFM • 41 Watts • ERV
Duct Leakage to Outside:	55 CFM @ 25Pa (2.98 / 100 ft^2)
Above Grade Walls:	R-26
Ceiling:	Attic, R-76
Window Type:	U-Value: 0.26, SHGC: 0.27
Foundation Walls:	N/A
Framed Floor:	R-35

Rating Completed by:

Energy Rater: Bill Patrick
RESNET ID: 1568598

Rating Company: Certified Energy Raters
301A Regency Ridge
(800) 671-1895

Rating Provider: Energy Efficient Homes Midwest

Bill Patrick

Bill Patrick, Certified Energy Rater
Digitally signed: 11/29/23 at 6:05 PM

ekotrope

Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:4.2.0.3286
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

2021 IECC R-406 Projected Energy Rating Index Report

Property

Builder:Pros Edge Quality Homes
Address:26 Cricket Ln, Littleton, MA 01460

Organization

Company:Certified Energy Raters
Phone:
Rater:Bill Patrick

Energy Rating Index Information

Projected Rating
Rating No:
Date Rated:2023-11-15
Rater ID (RTIN):1568598

Estimated Annual Energy Consumption*

	Rated Home Calculated Energy Use (MBtu)	Rated Home Cost ($/yr)
Heating	18.6	$522
Cooling	0.9	$24
Water Heating	8.3	$337
Lights & Appliances	17.5	$396
Photovoltaics	0.0	$0
Service charge	-	$72
Total	**45.3**	**$1,351**

*Based on standard operating conditions

ERI with PV:52 **ERI without PV:52**

Annual Estimates

Electric (kWh):9,876.8
Natural Gas (Therms):28.0
CO2 Emissions (Tons):3.7

Maximum Energy Rating Index:55	This Home's Energy Rating Index:52	PASS

This home MEETS the Energy Rating Index Score requirement of 2021 IECC R-406 for Climate Zone 5. It MEETS all of the requirements verified by Ekotrope. Mandatory requirements are summarized on the 2nd page of this report, some of which are not verified by Ekotrope.

Name: Bill Patrick
Signature: Bill Patrick
Organization: Certified Energy Raters
Digitally signed: 11/29/23 at 6:05 PM

Rating Provider Data and Seal

Company:Energy Efficient Homes Midwest
Address:
Phone #:
Fax #:

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NATIONAL MORTGAGE INDUSTRY HERS ACCREDITATION REGISTRY No. 1998-054

To determine if a provider is properly accredited go to: **www.resnet.us/professional/programs/search_directory**

(Projected. Confirmation required.)

Climate Zone 5	Mandatory Requirements	
Provision Number	**Topic**	**Compliance Decision**
R406.5	IECC 2021 ERI: 52 Max allowed: 95% of 55 (52.25)	Pass
R402.4.1.2	Air Leakage Testing	Warning
R403.3.1	Duct Insulation	Pass
R403.3.5	Duct Testing	Pass
R404.1	Lighting Equipment	Pass
Mandatory Checklist	Mandatory code requirements that are not checked by Ekotrope must be met.	Pass
R403.6.2	Mechanical Ventilation Efficacy	Pass
R403.6.1	Mechanical Ventilation Energy Recovery	Pass
R406.2	All other requirements from Table R406.2 not explicitly checked by Ekotrope.	FAIL*

* This is a projected rating. These items must eventually be field-verified by the Rater, Field Inspector, Code Inspector, or Builder.

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IECC 2021 Performance Compliance

Property
26 Cricket Ln
Littleton, MA 01460
Model: 2 Story
Community: Littleton/Middlesex Count

MBSP - Job# 108503 (Pros Edge) - 2023-11-29- revised
Clark & McAnespie Residence

Organization
Certified Energy Raters
Bill Patrick

Builder
Pros Edge Quality Homes

Inspection Status
Results are projected

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This report is based on a proposed design and does not confirm field enforcement of design elements.

Annual Energy Cost

Design	IECC 2021 Performance	As Designed
Heating	$778	$753
Cooling	$96	$84
Water Heating	$554	$554
Mechanical Ventilation	$44	$53
SubTotal - Used to determine compliance	**$1,472**	**$1,445**
Lights & Appliances w/out Ventilation	$622	$622
Onsite generation	$0	$0
Total	**$2,094**	**$2,067**

R405.3 Source Energy Exception: The proposed home uses 1.16 MBtu LESS source energy than the reference home.

Requirements

⚠	R405.2	Performance-based compliance passes by 1.9%	The proposed house meets the IECC 2021 Performance reference energy bill requirement by $27.33 (1.16 MBtu), but a post construction blower door test is required for confirmation.
✓	R405.2 Item 2	Total UA alternative compliance passes by 21.8%.	The proposed home meets the UA requirement by 21.8%
✓	R405.2 Item 2	Glazed Fenestration SHGC	
⚠	R402.4.1.2	Air Leakage Testing	A post construction blower door test is required to verify the air leakage meets the requirement.
✓	R403.3.1	Duct Insulation	All ducts are inside the thermal envelope or outside and insulated to at least R8.0.
✓	R403.3.5	Duct Testing	
✓	R404.1	Lighting Equipment	At least 100.0% of fixtures shall be high-efficacy lamps, currently 100.0% are high-efficacy.
✓	Mandatory Checklist	Mandatory code requirements that are not checked by Ekotrope must be met.	2021 IECC Required Items must be checked as complete.
✓	R403.6.2	Mechanical Ventilation Efficacy	
✓	R403.6.1	Mechanical Ventilation Energy Recovery	
✓	R402.5	Area-weighted average fenestration SHGC	Area-weighted average fenestration SHGC is 0.268. The maximum allowed value is [No Limit].
✓	R402.5	Area-weighted average fenestration U-Factor	
✓	R401.2.5 Option 2	Additional energy efficiency	R401.2.5: 2.1 R408 item met: R408.2.2

Design exceeds requirements for IECC 2021 Performance compliance by 1.9%.

As a 3rd party extension of the code jurisdiction utilizing these reports, I certify that this energy code compliance document has been created in accordance with the requirements of Chapter 4 of the adopted International Energy Conservation Code based on MIDDLESEX County. If rating is Projected, I certify that the building design described herein is consistent with the building plans, specifications, and other calculations submitted with the permit application. If rating is Confirmed, I certify that the address referenced above has been inspected/tested and that the mandatory provisions of the IECC have been installed to meet or exceed the intent of the IECC or will be verified as such by another party.

Name: Bill Patrick
Signature: Bill Patrick
Organization: Certified Energy Raters
Digitally signed: 11/29/23 at 6:05 PM

Ekotrope RATER - Version 4.2.0.3286

IECC 2021 Performance compliance results calculated using Ekotrope RATER's energy and code compliance algorithm.
Ekotrope RATER is a RESNET Accredited HERS Rating Tool. All results are based on data entered by Ekotrope users.
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IECC 2021 Building UA Compliance

Property
26 Cricket Ln
Littleton, MA 01460
Model: 2 Story
Community: Littleton/Middlesex Count

MBSP - Job# 108503 (Pros Edge) - 2023-11-29- revised
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Pros Edge Quality Homes

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Building UA

Elements	IECC Reference	As Designed
Ceilings	26.0	23.9
Above-Grade Walls	87.7	89.0
Windows, Doors and Skylights	155.0	136.2
Slab Floor:	0.0	0.0
Framed Floors	38.1	36.2
Foundation Walls	0.0	0.0
Rim Joists	7.9	5.7
Overall UA (Design must be equal or lower):	**314.7**	**291.0**

Requirements

✓	R402.1.5	Total UA alternative compliance passes by 7.5%.	The proposed home meets the UA requirement by 7.5%
✓	402.3.2	Average SHGC: 0.27 Max SHGC: 0.40	Average SHGC of 0.27 is greater than the maximum of 0.40.
⚠	R402.4.1.2	Air Leakage Testing	A post construction blower door test is required to verify the air leakage meets the requirement.
✓	R403.3.1	Duct Insulation	All ducts are inside the thermal envelope or outside and insulated to at least R8.0.
✓	R404.1	Lighting Equipment	At least 100.0% of fixtures shall be high-efficacy lamps, currently 100.0% are high-efficacy.
✓	Mandatory Checklist	Mandatory code requirements that are not checked by Ekotrope must be met.	2021 IECC Required Items must be checked as complete.
✓	R403.6.2	Mechanical Ventilation Efficacy	
✓	R403.6.1	Mechanical Ventilation Energy Recovery	
✓	R403.3.6	Duct Leakage Testing	
✓	R403.5.2	Hot water pipe insulation	Hot water pipes at least 3/4 in diameter must be insulated to R-3 at minimum.
✓	R402.5	Area-weighted average fenestration SHGC	Area-weighted average fenestration SHGC is 0.268. The maximum allowed value is [No Limit].
✓	R402.5	Area-weighted average fenestration U-Factor	
⚠	R402.4.1.3	Prescriptive Air Leakage	A post construction blower door test is required to verify the air leakage meets the requirement.
✓	IRC M1505.4.3	Mechanical Ventilation Rate	
✓	R408.2	Additional efficiency package options	✓ R408.2.1 - Enhanced envelope performance ✓ R408.2.2 - More efficient HVAC equipment performance ✓ R408.2.3 - Reduced energy use in service water-heating

Design exceeds requirements for IECC 2021 Prescriptive compliance by 7.5%.

Name: Bill Patrick
Signature: Bill Patrick
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Air Leakage Report

Property
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Pros Edge Quality Homes

Inspection Status
Results are projected

General Information

Conditioned Floor Area [ft^2]	1,847
Infiltration Volume [ft^3]	15,171
Number of Bedrooms	2

Air Leakage

Measured Infiltration	758 CFM50 (3.00 ACH50)
ACH50 (Calculated)	3.00
ELA [sq. in.] (Calculated)	41.59
ELA per 100 s.f. Shell Area (Calculated)	0.845
CFM50 (Calculated)	758
CFM50 / s.f. Shell Area (Calculated)	0.154

Duct Leakage

	System 1
Leakage to Outdoors	55 CFM @ 25Pa (2.98 / 100 ft^2)
Total Leakage Test Type	Post-Construction
Total Leakage [CFM @ 25 Pa]	73.0
Total Leakage [CFM25 / 100 s.f.]	4.0
Total Leakage [CFM25 / CFA]	0.040

Mechanical Ventilation

Rate [CFM]	50 CFM
Hours per day	24.0
Fan Power	41 Watts
Recovery Efficiency %	70.0
Runs at least once every 3 hrs?	true
Average Rate [CFM]	50.0 CFM
2010 ASHRAE 62.2 Req. Cont. Ventilation	41.0
2013 ASHRAE 62.2 Req. Cont. Ventilation	49.2
2016 ASHRAE 62.2 Req. Cont. Ventilation	49.2

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Building Summary

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Clark & McAnespie Residence

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Inspection Status
Results are projected

General Building Information

Number Of Bedrooms	2
Number Of Floors	2
Conditioned Floor Area [sq. ft.]	1,847
Has Electric Vehicle Ready Space	Yes
Unconditioned, attached garage?	No
Conditioned Volume [cu. ft.]	15,171
Total Units in Building	1
Residence Type	Single family detached
Number of Floors in Building	-
Floor Number	-
Model	2 Story
Community	Littleton/Middlesex County
RESNET/IECC 2006-2018 Climate Zone	5A
IECC 2021 Climate Zone	5A

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Foundation Wall

None Present

Foundation Wall Library List

None Present

Slab

None Present

Slab Library List

None Present

Framed Floor

Name	Library Type	Carpet R	Floor Grade	Surface Area	Location
Floor 1	2x10 R-35 Batts	1	Above Grade	1,155.0 ft²	Uninsulated Unconditioned Basement

Building Summary

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Framed Floor Library List

Name	Effective R-value
2x10 R-35 Batts	31.933

Rim Joist

Name	Library Type	Surface Area	Location
Rim Joist 1	R 35.0	104.6 ft²	Attic
Rim Joist 2 - Knee	R & B R-30	33.3 ft²	Exposed Exterior
Rim Joist 3	Rim Joist R-30	76.0 ft²	Exposed Exterior

Rim Joist Library List

Name	Effective Insulation R-value
R & B R-30	30.00
R 35.0	35.00
Rim Joist R-30	30.00

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Wall

Name	Library Type	Surface Color	Surface Area	Location
Wall 1	2x6 R-21, R-5 Ext	Medium	2,160.0 ft²	Exposed Exterior
Wall 2 - Attic	R-21, OSB	Medium	210.0 ft²	Attic
Wall 3	2x4 R-13 Batt	Medium	96.0 ft²	Uninsulated Unconditioned Basement

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Inspection Status
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Wall Library List

Name	Effective R-value
2x4 R-13 Batt	11.141
2x6 R-21, R-5 Ext	23.484
R-21, OSB	18.776

Glazing

Name	Library Type	Wall Assignment	Foundation Wall Assignment	Is Operable	Overhang Depth	Overhang Ft To Top	Overhang Ft To Bottom	Orientation	Surface Area
Back / Glass Door	Door Glass .26/.26	Wall 1		Yes	10	0.5	7.2	West	40.0 ft²
Back / Glass Door	Patio Door 0.25/0.17	Wall 1		Yes	10	0.5	7.2	West	9.0 ft²
Back Window	Dbl/LoE/Vin 0.26/0.33	Wall 1		Yes	10	0.5	5	West	27.0 ft²
Front Window	DH Vinyl 0.26/0.27	Wall 1		Yes	0	0	0	East	54.0 ft²
Left Window	DH Vinyl 0.26/0.27	Wall 1		Yes	0.5	0.5	5	South	27.0 ft²
Left Window	DH Vinyl 0.26/0.27	Wall 1		Yes	0.5	0.5	4.3	South	12.0 ft²
Right / Glass Door	Door Glass .26/.26	Wall 1		Yes	0.5	0.5	5	North	118.0 ft²
Right Window	DH Vinyl 0.26/0.27	Wall 1		Yes	0	0	0	North	64.0 ft²
Right Window	DH Vinyl 0.26/0.27	Wall 1		Yes	0.5	0.5	5	North	118.0 ft²

Glazing Library List

Name	Shgc	U-factor
DH Vinyl 0.26/0.27	0.27	0.260
Dbl/LoE/Vin 0.26/0.33	0.33	0.260
Door Glass .26/.26	0.26	0.260
Patio Door 0.25/0.17	0.17	0.250

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Skylight

None Present

Skylight Library List

None Present

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Opaque Door

Name	Library Type	Wall Assignment	Foundation Wall Assignment	Emittance	Solar Absorptance	Surface Color	Surface Area	Location
Door 1	Steel Thermo Tru 0.14	Wall 1		0.9	0.75	Medium	20.0 ft²	Exposed Exterior
Door 2	Therma Tru 0.26	Wall 1		0.9	0.75	Medium	11.0 ft²	Exposed Exterior
Door 3	Steel Thermo Tru 0.52	Wall 3		0.9	0.75	Medium	16.7 ft²	Uninsulated Unconditioned Basement

Opaque Door Library List

Name	Effective U-factor
Steel Thermo Tru 0.14	0.140
Steel Thermo Tru 0.52	0.520
Therma Tru 0.26	0.260

Roof Insulation

Name	Library Type	Attic Exterior Area [ft²]	Clay or Concrete Roof Tiles	Surface Color	Surface Area	Location
Attic 1	2x10, R-38/R-38	822	No	Medium	822.0 ft²	Attic
Attic 2	2x10, R-21 - Vault	263	No	Medium	263.0 ft²	Vaulted Roof

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Roof Insulation Library List

Name	Has Radiant Barrier	Effective R-value
2x10, R-21 - Vault	No	21.024
2x10, R-38/R-38	No	72.101

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Whole House Infiltration

Infiltration	Measurement Type	Shelter Class
758 CFM at 50 Pa	To be blower-door tested	3

Mechanical Ventilation

Ventilation Type	Ventilation Rate [ft³ / Minute]	Operational hours per day	Fan Watts	Runs once every three hours	Energy Recovery Percent	Model Number	Manufacturer
ERV	50 CFM	24	41 Watts	Yes	70		

Lighting

% Interior Fluorescent Lighting	% Interior LED Lighting	% Exterior Fluorescent Lighting	% Exterior LED Lighting	% Garage Fluorescent Lighting	% Garage LED Lighting
0	100	0	100	0	0

Onsite Generation

None Present

Onsite Generation Library List

None Present

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Solar Generation

None Present

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Dehumidifier

None Present

Dehumidifier Library List

None Present

Whole House Fan

None Present

Whole House Fan Library List

None Present

Conditioning Equipment

Name	Library Type	Serial Number	Heating Percent Load	Cooling Percent Load	Hot Water Percent Load	Location
Air/Air Heat Pump	Air/Air Ht Pmp 21SEER 11HSPF w/96% AFUE back		100%	100%	0%	Unconditioned Basement / Crawlspace
Water Heater	OD NAVIEN 240A PRO		0%	0%	100%	Unconditioned Basement / Crawlspace

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Equipment Type: Air/Air Ht Pmp 21SEER 11HSPF w/96% AFUE back up

Equipment Type	Air Source Heat Pump
Fuel Type	Electric
Distribution Type	Forced Air
Motor Type	PSC (Single Speed)
Heat Pump System Type	Split System
Heating Efficiency	11 HSPF
Heating Capacity [kBtu/h]	56
Backup Fuel Type	Propane
Switchover Temperature [°F]	0
Backup Heating Efficiency	96 AFUE
Backup Capacity [kBtu/h]	56
Cooling Efficiency	21 SEER
Cooling Capacity [kBtu/h]	56

Equipment Type: OD NAVIEN 240A PRO

Equipment Type	Residential Water Heater
Fuel Type	Propane
Distribution Type	Hydronic Delivery (Radiant)
Hot Water Efficiency	0.95 Energy Factor
Tankless?	Yes

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Distribution System

Distribution Type	Forced Air
Heating Equipment	Air/Air Heat Pump
Cooling Equipment	Air/Air Heat Pump
Sq. Feet Served	1,847
# Return Grilles	6
Supply Duct R Value	8
Return Duct R Value	8
Supply Duct Area [ft^2]	498
Return Duct Area [ft^2]	461
Leakage to Outdoors	55 CFM @ 25Pa (2.98 / 100 ft^2)
Total Leakage	73 CFM25
Total Leakage Duct Test Conditions	Post-Construction
Use Default Flow Rate	Yes
Duct 1	
Duct Location	Basement (uninsulated)
Percent Supply Area	34
Percent Return Area	34
Duct 2	
Duct Location	Conditioned Space
Percent Supply Area	33
Percent Return Area	33
Duct 3	
Duct Location	Attic (well vented)
Percent Supply Area	33
Percent Return Area	33
Duct 4	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 5	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0
Duct 6	
Duct Location	Conditioned Space
Percent Supply Area	0
Percent Return Area	0

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HVAC Grading

HVAC Grading Not Conducted

Ceiling Fan

Has Ceiling Fan	No
Cfm Per Watt	70.42253521

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Water Distribution

Water Fixture Type	Standard
Use Default Hot Water Pipe Length	No
Hot Water Pipe Length [ft]	85
At Least R3 Pipe Insulation?	Yes
Hot Water Recirculation System?	No
Recirculation System Pipe Loop Length [ft]	170
Drain Water Heat Recovery?	No

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Clothes Dryer

Cef	3.01
Fuel Type	Electric
Field Utilization	Timer Controls
Is Outside Conditioned Space	No
Clothes Dryer Available	Yes
Defaults Type	HERS Reference

Clothes Washer

Label Energy Rating	152 kWh/Year
Annual Gas Cost	$12.00
Electric Rate	$0.12/kWh
Gas Rate	$1.09/Therm
Capacity	4.2
Imef	2.06
Defaults Type	ENERGY STAR
Load Type	Front-load
Loads Per Week	6
Is Outside Conditioned Space	No
Clothes Washer Available	Yes

Dishwasher

Dishwasher Defaults Type	ENERGY STAR Standard
Dishwasher Size	Standard
Dishwasher Efficiency	270 kWh
Annual Gas Cost	$22.23
Electric Rate	$0.12/kWh
Gas Rate	$1.09/Therm
Is Outside Conditioned Space	No
Dishwasher Available	Yes

Building Summary

Property
26 Cricket Ln
Littleton, MA 01460
Model: 2 Story
Community: Littleton/Middlesex County

MBSP - Job# 108503 (Pros Edge) - 2023-11-29- revised
Clark & McAnespie Residence

Organization
Certified Energy Raters
Bill Patrick

Builder
Pros Edge Quality Homes

Inspection Status
Results are projected

Appliances and Controls

Programmable thermostat?	Yes
Range/Oven Fuel	Natural Gas
Convection Oven?	No
Induction Range?	No
Range/Oven Outside Conditioned Space?	No
Refrigerator Consumption	691 kWh/Year
Refrigerator Outside Conditioned Space?	No

Notes

PFS APPROVED
DATE 12/6/23
PFS CORPORATION
Bloomsburg, PA

Professional Building Systems, Inc.

P108503

Wind Speeds: 123mph Vult

Exposure: C

ASCE: 7-10

Max Wall Height: 8'-0" 2nd Story, 8'-0" 1st Story

Max Mean Roof Height: 24.5'

PFS APPROVED
DATE 12/6/23
PFS CORPORATION
Bloomsburg, PA

Page	Description
1	1st Story Design Criteria and Loading
2	1st Story Shearwalls
3	1st Story Diaphragm and Sliding

NOTE:
-These calculations are applicable only to the structural elements and loading criteria specifically noted herein.
-Structural elements not contained herein are to be constructed in accordance with the prescriptive requirements of the adopted building code or designed by other registered design professionals.
-Specified design criteria are based solely on information provided by the client and must be verified and approved by the LAHJ.
-Ryan W. Boring, P.E. is not responsible for fabrication or erection.

COMMONWEALTH OF MASSACHUSETTS
RYAN W. BORING
CIVIL
NO. 49506
REGISTERED PROFESSIONAL ENGINEER

Nov 16, 2023

1st Story

Wind Pressures for buildings of all heights
ASCE 7-10 :

Wind Speed, Vult:	123 MPH	Roof Style:	Gable
		Roof Pitch:	4 /12
Wind Exposure:	C	Roof Angle:	18.4
Mean Roof Height:	24.50 FT	Width	24.00 ft
		2a:	6 ft
Ke:	1.00	2nd Wall Height:	8 ft
Kd:	0.85	1st Wall Height:	8 ft
Kzt:	1	Heel Ht:	9.25 in
kt:	0.94	Roof Ht:	4.50 ft
qh:	18.59 psf	Stud Spacing:	16 "oc
Building Type:	Enclosed	Overhang:	12 "
Gcpi:	0.18	Int. Shearwall:	No
	-0.18		
Min net pressure:	16 psf		

		Factor	Pressure:
wall	Windward	0.8	15.5
wall	Leeward	-0.3	-1.9
roof	windward	-0.08	1.6
roof	leeward	-0.6	-12.3

PFS APPROVED
DATE 12/6/23
PFS CORPORATION
Bloomsburg, PA

Design Loading
Horz

Roof	Wall	
14.0	17.4	psf

Added Porch Load:	Area =	139.1 sq ft
	Pressure =	14.0 psf
	Total =	1941 lbs

Shearwalls:

Wall 1-1: Double-sided

1st Trib:	21.00 ft
2nd Trib:	21.00 ft
Roof:	1319 lb
Wall:	5392 lb
Total force:	8652 lb
Sheathing Thickness:	7/16 in
Fastener:	.148 nail
Wall Length:	24.00 ft
FHS Length:	6.00 ft
Wall Height:	8 ft
Tallest Opening:	5h/6
r:	0.29
Co:	0.47
Perf or Segmented:	S
Blocked:	YES
PLF required:	1442.01
Framing:	SPF
Required Spacing:	3 " OC
Tiedown:	11536 lb
Strap for:	5191 lb

PFS APPROVED
DATE 12/6/23
PFS CORPORATION
Bloomsburg, PA

Summary:	Fastener	Edge Spacing	Tiedown Force	Perf/ Segment	Corner Connect
Wall 1-1: Double-sided	.148 nail	3 " OC	11536 lb	S	NO

All Chord Splices Use (10) .131 nails each side of each top plate splice

** 6 "oc .131 nails from sidewall to endwall where both walls have tiedown at the corner, then the sidewall is transfered

2" oc fastener spacing requires double studs and staggered fasteners at panel seams.

Double sided requires endwalls to run past sidewalls to achieve full length sheathing on both sides of wall

Diaphragm:

Max Force:	5591.7 lbs
Load:	233.0 plf
Sheathing:	19/32 in
Fastener:	.131 Nail
Framing:	SPF
Unblocked Capacity:	308.2 plf
Blocked @ 6" edge:	345.0 plf
Blocking distance:	0.0 ft

0 ft blocked each end with .131 Nail

Chord Splice:

w:	139.1 plf
moment:	30664.57 ft-lbs
top plate tension:	1277.69 lbs
.131 nail:	132 lbs
# .131 nails:	9.68

Use (10) .131 nails each side of each top plate splice

Notes:
all 16ga staples minimum length of 1.5"
all .131 nails minimum length of 2"

Lateral Connection:		Length	PLF	.131 lap	Spacing	Cap(PLF)	
Wall 1-1: Double-sided	10112 lbs	24.0	421.3	108	3.0	432	OK

PFS APPROVED
DATE 12/6/23
PFS CORPORATION
Bloomsburg, PA

General Information

What authority does the Board of Appeals have?
The Board of Appeals obtains its authority under the Massachusetts General Laws Chapter 40A §14 and the Town of Littleton's Zoning By-law 173-6 to hear and decide *appeals*, to hear and decide applications for *Chapter 40A special permits*, and to hear and decide petitions for *variances*. The Board of Appeals also hears and decides applications for *special permits for low and moderate income housing* under Massachusetts General Laws Chapter 40B Sections 20, 21, 22, and 23.

What is an Appeal?
Pursuant to Massachusetts General Laws Chapter 40A §8 and Littleton Zoning By-law 173-6 B(3) and 173-6 B(3) the Board of Appeals hears and decides appeals by any person aggrieved by any written order or decision of the Zoning Enforcement Officer or other administrative official in violation of any provision of Massachusetts General Laws Chapter 40A or the Littleton Zoning By-laws. Building permits withheld by the Building Commissioner acting under MGL C. 41, §81Y as a means of enforcing the Subdivision Control Law may also be issued by the Board of Appeals. Action taken by the Building Commissioner acting under the Code of Littleton Chapter 152 will also be heard by the Board of Appeals. *If the Zoning Enforcing Officer or other administrative official does not issue a written order or decision, the Board of Appeals will not hear the appeal.* Appeals from the written decisions of the Zoning Enforcement Officer or other administrative official must be filed with the Office of the Town Clerk pursuant to Massachusetts General Laws Chapter 40A Section 15 within thirty (30) days from the date of the written order or decision which is being appealed. **Failure to file a timely appeal is fatal.**

What is a Chapter 40A Special Permit?
Certain uses of property are permitted as a matter of right. However, the Littleton Zoning By-laws provide that other uses are not allowed in certain zoning districts, and that specific types of uses shall only be permitted in specified zoning districts upon the issuance of a Special Permit from the Board of Appeals pursuant to Massachusetts General Laws Chapter 40A § 9, 9A, and 9B. Special Permits may be issued only for uses which are in harmony with the general purpose and intent of the By-law, and may be subject to general or specific provisions set forth therein, and such permits may also impose conditions, safeguards and limitations on time or use. A Special Permit, unlike a Variance, may be conditioned by limiting its duration to the term of ownership or use by the Applicant. When a Special Permit application is accompanied by plans or specifications detailing the work to be undertaken, the plans and specifications become conditions of the issuance of the permit. Therefore, once a Special Permit is granted, modification of the plans or specifications require as a prerequisite, modification of the Special Permit through the filing of a successive Special Permit application. No building permit may be issued by the Building Commissioner for a use or structure that requires a Special Permit until 1) a Special Permit has been granted by the Board of Appeals; 2) the expiration of the twenty (20) day appeal period pursuant to Massachusetts General Laws Chapter 40A Section 11, and 3) the Special Permit has been recorded at the Middlesex South District Registry of Deeds. The Building Commissioner shall require proof of recording at the Registry of Deeds from the Town Clerk prior to issuance of a building permit. No party is entitled "as a matter of right" to a Special Permit. The Board of Appeals, in the proper exercise of its discretion, is free to deny a Special Permit even if the facts show that such a permit could be lawfully granted. **Special Permits 40A shall lapse 24 months following the granting unless substantial use or construction has commenced.**

What is a Chapter 40B Special Permit?
Chapter 40B is a state statute, which enables local Boards of Appeals to approve affordable housing developments under flexible rules if at least 25% of the units have long-term affordability restrictions. Also known as the Comprehensive Permit Law, Chapter 40B was enacted in 1969 to help address the shortage of affordable housing statewide by reducing unnecessary barriers created by local approval processes, local zoning, and other restrictions. Its goal is to encourage the production of affordable housing in all communities throughout the Commonwealth. **Special Permits 40B shall lapse 3 years from the date the permit becomes final unless construction authorized by a comprehensive permit has begun, or unless specifically noted otherwise in the permit by the Board of Appeals.**

What is a Variance?
A Variance is a waiver of the zoning rules adopted by the Citizens of Littleton at Town Meeting. A Variance may be granted pursuant to the Littleton Zoning By-laws and Massachusetts General Laws Chapter 40A Section 10. Accordingly, it is only in rare instances and under exceptional circumstances that relaxation of the general restrictions established by the Zoning By-laws are permitted. A Variance is distinguished from a Special Permit. The Variance is used to authorize an otherwise prohibited use or to loosen dimensional requirements otherwise applicable to a structure. No person has a right to a Variance. *Variance of "use" is almost never granted by the Board of Appeals. Variance of "dimensional" requirements is granted in rare occasions.* **The Board of Appeals has no discretion to grant a Variance unless the petitioner provides evidence, and that the Board of Appeals determines that, owing to circumstances relating to the soil conditions, shape, or topography of such land or structures and especially affecting such land or structures but not affecting generally the zoning district in which it is located, a literal enforcement of the provisions of the ordinance or by-law would involve substantial hardship, financial or otherwise, to the petitioner or appellant, and that desirable relief may be granted without substantial detriment to the public good and without nullifying or substantially derogating from the intent or purpose of such ordinance or by-law.** Even if the Board of Appeals find that such hardship exists, it may exercise its discretion and not grant a Variance. No building permit may be issued by the Building Commissioner for a use or structure that requires a Variance until 1) a Variance has been granted by the Board of Appeals, 2) the expiration of the twenty (20) day appeal period pursuant to Massachusetts General Laws Chapter 40A Section 11, and 3) the Variance has been recorded at the Middlesex South District Registry of Deeds. The Building Commissioner shall require proof of recording at the Registry of Deeds from the Town Clerk prior to issuance of a building permit. Rights authorized by a Variance must be exercised within 1 year of granting, or said variance shall lapse.

ZBA Case No.: 24-971 Address 26, 25, 30 Cricket Lane

TOWN OF LITTLETON
BOARD OF APPEALS
37 Shattuck Street
P.O. Box 1305
Littleton, MA 01460
Tel: 978-540-2420

APPLICATION FOR PUBLIC HEARING
Pursuant to MGL Chapter 40A, 40B and 41 and the Littleton Zoning Bylaws

TOWN USE ONLY
Received by the Town Clerk Office
3/12/2024 Diane Crory 10Am
The filing is not official until stamped by the Town Clerk
Filing Fee paid: $ 506 53 . Check # 1049

Pursuant to the provisions of Chapter 40, §57 of the Massachusetts General Laws as adopted by Town Meeting 2003, this document must be signed by the Tax Collector verifying payment of taxes.

Deborah A Richards
Signature of Tax Collector

The undersigned hereby submits this petition for the following action (check all that apply):
- ☐ Appeal of Decision of Building Inspector or other administrative official(see page 2)
- ☐ Special Permit *(40A)*(see page 2)
- ☒ Variance (see page 3)
- ☐ Comprehensive Permit (40B) Complete additional application (see page 2)

PETITIONER: Signature: [signature] Date: 3-6-2024
Peter McAnesple
Print Name
2 Cricket Lane
Address
Littleton, Ma. 01460
Town, State, Zip
Phone #
Email Address
Deed Reference: Bk 75619 *Page* 106

PROPERTY OWNER: *Include authorization of Owner for Petitioner to represent Owner, if unsigned*
Signature *Date*
781-718 7383
Phone #
Peter McAnesple
Print Name (if different from petitioner)
mcanespie@gmail.com
Email
2 Cricket Lane Littleton, Ma.
Address (if different from petitioner)
Book 75619 *Page* 106

ASSESSOR MAP & PARCEL NUMBER

ZONING DISTRICT: (R) VC B IA IB *(Circle all that apply)*

Check box if applicable
☐ AQUIFER DISTRICT
☐ WATER RESOURCE DISTRICT

FEES
Residential Property $200 filing + $105 recording fee + $25 abutter list + $176.53 public hearing notice = $ 506.53
Commercial Property $350 filing + $105 recording fee + $25 abutter list + $176.53 public hearing notice= $ 656.53
Comprehensive Permit $1000 + $100/unit over 10 units
Please make check payable to Town of Littleton

Revised May 25, 2022

Appeal

Under MGL c. 40A §. 8

The undersigned hereby appeals a written order or decision of the Building Commissioner / Zoning Officer or other administrative official alleged to be in violation of the provisions of MGL c. 40A or the Zoning By-laws to the Board of Appeals for the Town of Littleton.

1. From what Town Official or Board is the appeal being sought?
   Mandatory: Attach copies of written order or decision under appeal

   Administrative Official_____ Date of order / decision_____

2. Which statute or Zoning Bylaw do you rely for your appeal?

   MGL c.40A § _____ Zoning Bylaw § _____ Code of Littleton § _____
   You may also consider whether you qualify for relief under any other authority of the Board to grant a Special Permit or Variance.

3. ***I hereby certify that I have read the Board of Appeals Instructions for Appellants and that the statements within my appeal and attachments are true and accurate to the best of my knowledge and belief.***

   Signature _____ Print name _____

Special Permit 40A

Under MGL c. 40A §. 9

The undersigned hereby petitions the Board of Appeals for the Town of Littleton to grant a Special Permit for the reasons hereinafter set forth and in accordance with the applicable provisions of the Zoning By-law.

1. Special Permits are expressly permitted in the Zoning Bylaws. Which Zoning Bylaw section do you rely for your appeal?
   Zoning Bylaw § Chapter 173 Intensity of Use Regulations

2. Why are you applying for a Special Permit? Attach a written statement that specifically describes existing conditions and your objectives, along with necessary exhibits as listed in the filing instructions. ***You may also consider whether you qualify for relief under any other authority of the Board to grant a variance.***

3. ***I hereby certify that I have read the Board of Appeals Instructions for petitioners and that the statements within my petition and attachments are true and accurate to the best of my knowledge and belief.***

   Signature _____ Print Name _____

See supplemental instructions: Littleton Zoning Board of Appeals Rules for the Issuance of a Comprehensive Permit under

Special Permit 40B

Under MGL c. 40B

M.G.L.c40B

Variance

Under MGL c. 40A §. 10

The undersigned hereby petitions the Board of Appeals for the Town of Littleton to vary, in the manner and for the reasons hereinafter set forth, the applicable provisions of the Zoning By-law.

1. Specifically, from what Zoning bylaw section are you seeking relief? _____

2. Why are you seeking relief from a literal enforcement of this Zoning Bylaw?
   Attach a written statement that specifically describes existing conditions and your objectives, along with plans, specifications, certified plot plan and any documentation necessary to support your request.

3. Show evidence that you meet the minimum requirements of a variance under section 173-6 B (2) of the Littleton Zoning Bylaws.
   Attach a written statement which specifically includes why, owing to conditions (soil, shape, or topography) especially affecting the premises, but not affecting generally the zoning district in which it is located, a literal enforcement of the Zoning By-law would result in a substantial hardship to you. Applicant must clearly demonstrate the lack of alternative remedies.

4. ***I hereby certify that I have read the Board of Appeals Instructions for petitioners and that the statements within my petition and attachments are true and accurate to the best of my knowledge and belief.***

   Signature _____ Print name PETER A. McALESPIE

Filing Instructions

1. **IMPORTANT: SEE THE BUILDING COMMISSIONER/ZONING ENFORCEMENT OFFICER <u>BEFORE</u> YOU FILL OUT THIS APPLCATION.** He will assist you with the proper zoning sections and application request(s). His review may save time by preventing delays in the hearing process.
2. Bring the completed application packet to the Administrative Assistant to the Building Commissioner who will assist you in filing with the Town Clerk.

Necessary Exhibits— provide 3 copies and an electronic copy of the following with the completed application:

1. A copy of the most recently recorded plan of land or where no such plan exists, a copy of a plot plan endorsed by a registered engineer or land surveyor. The plan should show;
   A) metes and bounds of the subject land
   B) adjacent streets and other names and readily identifiable landmarks and fixed objects
   C) dimensional layout of all buildings
   D) distances and setbacks from the various boundaries
   E) exact dimensions, setbacks and specifications of any new construction, alterations, additions or installations
   F) direction of North
   G) the name of each abutting property owner
2. Copy of the latest recorded deed
3. A written statement which details the basis for your petition
4. Pictures, plans, maps, drawings and models are always helpful in explaining the problem
5. In cases pertaining to signs, a scale print of the sign lettering and colors
6. In cases pertaining to subdivisions of land, prints should show the proposed subdivision endorsed by a registered engineer or land surveyor
7. In cases pertaining to Accessory dwellings evidence that the Board of Health has approved the septic system
8. The date of the building construction and the history of ownership are useful in finding facts about the case

Completed applications filed with the Town Clerk by the third Thursday of the month will be considered at the next regularly scheduled Zoning Board of Appeals meeting, held on the third Thursday of the following month.
The Board in its discretion may dismiss an application or petition for failure to comply with any of the foregoing rules

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DAVID E. ROSS ASSOCIATES, INC.

Civil Engineers, Land Surveyors, Environmental Consultants

March 5, 2024

Town of Littleton
Zoning Board of Appeals
37 Shattuck Street
Littleton, Ma. 01460

Re: Zoning Board of Appeals Application
Peter McAnespie
Cricket Lane
Littleton, Ma.
Project No.33242

Dear Board Members,

On behalf of our client, this office is submitting a Variance request for property located at 26, 28 & 30 Cricket Lane for the construction of a single-family dwelling. Currently there are three existing structures on the property in various states of disrepair.

It is our client's intention to raze the existing 3 structures and construct a single dwelling unit. The property is being described as Lots B, C & D on a plan dated April 24, 1946 and are located at the terminus of a Right of Way now known as Cricket Lane. This project has already received Board of Health Approval and Conservation Commission approval for the proposed development. We are seeking relief from Chapter 173 of the Town of Littleton Zoning Bylaws-Intensity of Use Regulations since the property is classified as a preexisting nonconforming lot and the proposed dwelling will be within the required yard setback requirements. As the enclosed plan indicates, the proposed structure will be placed closer to the existing end of Cricket Lane will be not increase the non-conforming setbacks of the existing structures.

Please review the application and related documents and contact this office with any comments or questions.

Very Truly Yours;
David E. Ross Associates, Inc.:

Kevin R. Conover

6 Lancaster County Road P.O. Box 795 Harvard, Massachusetts 01451
978-772-6232 FAX 978-772-6258 davideross.com

General Information

What authority does the Board of Appeals have?
The Board of Appeals obtains its authority under the Massachusetts General Laws Chapter 40A §14 and the Town of Littleton's Zoning By-law 173-6 to hear and decide *appeals*, to hear and decide applications for *Chapter 40A special permits*, and to hear and decide petitions for *variances*. The Board of Appeals also hears and decides applications for *special permits for low and moderate income housing* under Massachusetts General Laws Chapter 40B Sections 20, 21, 22, and 23.

What is an Appeal?
Pursuant to Massachusetts General Laws Chapter 40A §8 and Littleton Zoning By-law 173-6 B(3) and 173-6 B(5) the Board of Appeals hears and decides appeals by any person aggrieved by any written order or decision of the Zoning Enforcement Officer or other administrative official in violation of any provision of Massachusetts General Laws Chapter 40A or the Littleton Zoning By-laws. Building permits withheld by the Building Commissioner acting under MGL C. 41, §81Y as a means of enforcing the Subdivision Control Law may also be issued by the Board of Appeals. Action taken by the Building Commissioner acting under the Code of Littleton Chapter 152 will also be heard by the Board of Appeals. *If the Zoning Enforcing Officer or other administrative official does not issue a written order or decision, the Board of Appeals will not hear the appeal.* Appeals from the written decisions of the Zoning Enforcement Officer or other administrative official must be filed with the Office of the Town Clerk pursuant to Massachusetts General Laws Chapter 40A Section 15 within thirty (30) days from the date of the written order or decision which is being appealed. **Failure to file a timely appeal is fatal.**

What is a Chapter 40A Special Permit?
Certain uses of property are permitted as a matter of right. However, the Littleton Zoning By-laws provide that other uses are not allowed in certain zoning districts, and that specific types of uses shall only be permitted in specified zoning districts upon the issuance of a Special Permit from the Board of Appeals pursuant to Massachusetts General Laws Chapter 40A § 9, 9A, and 9B. Special Permits may be issued only for uses which are in harmony with the general purpose and intent of the By-law, and may be subject to general or specific provisions set forth therein, and such permits may also impose conditions, safeguards and limitations on time or use. A Special Permit, unlike a Variance, may be conditioned by limiting its duration to the term of ownership or use by the Applicant. When a Special Permit application is accompanied by plans or specifications detailing the work to be undertaken, the plans and specifications become conditions of the issuance of the permit. Therefore, once a Special Permit is granted, modification of the plans or specifications require as a prerequisite, modification of the Special Permit through the filing of a successive Special Permit application. No building permit may be issued by the Building Commissioner for a use or structure that requires a Special Permit until 1) a Special Permit has been granted by the Board of Appeals, 2) the expiration of the twenty (20) day appeal period pursuant to Massachusetts General Laws Chapter 40A Section 11, and 3) the Special Permit has been recorded at the Middlesex South District Registry of Deeds. The Building Commissioner shall require proof of recording at the Registry of Deeds from the Town Clerk prior to issuance of a building permit. No party is entitled "as a matter of right" to a Special Permit. The Board of Appeals, in the proper exercise of its discretion, is free to deny a Special Permit even if the facts show that such a permit could be lawfully granted. **Special Permits 40A shall lapse 24 months following the granting unless substantial use or construction has commenced.**

What is a Chapter 40B Special Permit?
Chapter 40B is a state statute, which enables local Boards of Appeals to approve affordable housing developments under flexible rules if at least 25% of the units have long-term affordability restrictions. Also known as the Comprehensive Permit Law, Chapter 40B was enacted in 1969 to help address the shortage of affordable housing statewide by reducing unnecessary barriers created by local approval processes, local zoning, and other restrictions. Its goal is to encourage the production of affordable housing in all communities throughout the Commonwealth. **Special Permits 40B shall lapse 3 years from the date the permit becomes final unless construction authorized by a comprehensive permit has begun, or unless specifically noted otherwise in the permit by the Board of Appeals.**

What is a Variance?
A Variance is a waiver of the zoning rules adopted by the Citizens of Littleton at Town Meeting. A Variance may be granted pursuant to the Littleton Zoning By-laws and Massachusetts General Laws Chapter 40A Section 10. Accordingly, it is only in rare instances and under exceptional circumstances that relaxation of the general restrictions established by the Zoning By-laws are permitted. A Variance is distinguished from a Special Permit. The Variance is used to authorize an otherwise prohibited use or to loosen dimensional requirements otherwise applicable to a structure. No person has a right to a Variance. *Variance of "use" is almost never granted by the Board of Appeals. Variance of "dimensional" requirements is granted in rare occasions.* **The Board of Appeals has no discretion to grant a Variance unless the petitioner provides evidence, and that the Board of Appeals determines that, owing to circumstances relating to the soil conditions, shape, or topography of such land or structures and especially affecting such land or structures but not affecting generally the zoning district in which it is located, a literal enforcement of the provisions of the ordinance or by-law would involve substantial hardship, financial or otherwise, to the petitioner or appellant, and that desirable relief may be granted without substantial detriment to the public good and without nullifying or substantially derogating from the intent or purpose of such ordinance or by-law.** Even if the Board of Appeals find that such hardship exists, it may exercise its discretion and not grant a Variance. No building permit may be issued by the Building Commissioner for a use or structure that requires a Variance until 1) a Variance has been granted by the Board of Appeals, 2) the expiration of the twenty (20) day appeal period pursuant to Massachusetts General Laws Chapter 40A Section 11, and 3) the Variance has been recorded at the Middlesex South District Registry of Deeds. The Building Commissioner shall require proof of recording at the Registry of Deeds from the Town Clerk prior to issuance of a building permit. **Rights authorized by a Variance must be exercised within 1 year of granting, or said variance shall lapse.**

ZBA Case No.: 24-971 Address 26, 28, 30 Cricket Lane

TOWN OF LITTLETON
BOARD OF APPEALS
37 Shattuck Street
P.O. Box 1305
Littleton, MA 01460
Tel: 978-540-2420

APPLICATION FOR PUBLIC HEARING
Pursuant to MGL Chapter 40A, 40B and 41 and the Littleton Zoning Bylaws

TOWN USE ONLY
Received by the Town Clerk Office
3/12/2024 Diane Cory 10 AM
The filing is not official until stamped by the Town Clerk
Filing Fee paid: $ 506.53 Check # 1049

Pursuant to the provisions of Chapter 40, §57 of the Massachusetts General Laws as adopted by Town Meeting 2003, this document must be signed by the Tax Collector verifying payment of taxes.

Deborah A. Richards
Signature of Tax Collector

The undersigned hereby submits this petition for the following action (check all that apply):
- ☐ Appeal of Decision of Building Inspector or other administrative official(see page 2)
- ☒ Special Permit *(40A)*(see page 2)
- ☐ Variance (see page 3)
- ☐ Comprehensive Permit (40B) Complete additional application (see page 2)

PETITIONER: Signature [signature] Date: 3.6.2024
Peter McAnespie
Print Name
2 Cricket Lane
Address
Littleton, Ma. 01460
Town, State, Zip
Phone #
Email Address
Deed Reference: Bk 75619 *Page* 106

PROPERTY OWNER: *(include authorization of Owner for Petitioner to represent Owner, if unsigned)*
Signature *Date*
781-718 7383
Peter McAnespie
Print Name (if different from petitioner)
Phone #
mcanespie@gmail.com
Email
2 Cricket Lane Littleton, Ma.
Address (if different from petitioner)
Book 75619 *Page* 106

ASSESSOR MAP & PARCEL NUMBER

ZONING DISTRICT: (R) VC B IA IB *(Circle all that apply)*

Check box if applicable
☐ AQUIFER DISTRICT
☐ WATER RESOURCE DISTRICT

FEES
Residential Property $200 filing + $105 recording fee + $25 abutter list + $176.53 public hearing notice = $ 506.53
Commercial Property $350 filing + $105 recording fee + $25 abutter list + $176.53 public hearing notice= $ 656.53
Comprehensive Permit $1000 + $100/unit over 10 units
Please make check payable to Town of Littleton

Revised May 25, 2022

Appeal

Under MGL c. 40A §. 8

The undersigned hereby appeals a written order or decision of the Building Commissioner / Zoning Officer or other administrative official alleged to be in violation of the provisions of MGL c. 40A or the Zoning By-laws to the Board of Appeals for the Town of Littleton.

1. From what Town Official or Board is the appeal being sought?
   Mandatory: Attach copies of written order or decision under appeal

   Administrative Official _____ Date of order / decision _____

2. Which statute or Zoning Bylaw do you rely for your appeal?

   MGL c.40A §_____ Zoning Bylaw §_____ Code of Littleton §_____
   You may also consider whether you qualify for relief under any other authority of the Board to grant a Special Permit or Variance.

3. ***I hereby certify that I have read the Board of Appeals Instructions for Appellants and that the statements within my appeal and attachments are true and accurate to the best of my knowledge and belief.***

   _____ _____
   Signature Print name

Special Permit 40A

Under MGL c. 40A §. 9

The undersigned hereby petitions the Board of Appeals for the Town of Littleton to grant a Special Permit for the reasons hereinafter set forth and in accordance with the applicable provisions of the Zoning By-law.

1. Special Permits are expressly permitted in the Zoning Bylaws. Which Zoning Bylaw section do you rely for your appeal?
   Zoning Bylaw §_____

2. Why are you applying for a Special Permit? Attach a written statement that specifically describes existing conditions and your objectives, along with necessary exhibits as listed in the filing instructions. *You may also consider whether you qualify for relief under any other authority of the Board to grant a variance.*

3. ***I hereby certify that I have read the Board of Appeals Instructions for petitioners and that the statements within my petition and attachments are true and accurate to the best of my knowledge and belief.***

   [signature] PETER A. McAMESPIE
   Signature Print Name

See supplemental instructions: Littleton Zoning Board of Appeals Rules for the Issuance of a Comprehensive Permit under

Special Permit 40B

Under MGL c. 40B

M.G.L.c40B

Variance

Under MGL c. 40A §. 10

The undersigned hereby petitions the Board of Appeals for the Town of Littleton to vary, in the manner and for the reasons hereinafter set forth, the applicable provisions of the Zoning By-law.

1. Specifically, from what Zoning bylaw section are you seeking relief? Chapter 173 Intensity of Use Regulations

2. Why are you seeking relief from a literal enforcement of this Zoning Bylaw?
   Attach a written statement that specifically describes existing conditions and your objectives, along with plans, specifications, certified plot plan and any documentation necessary to support your request.

3. Show evidence that you meet the minimum requirements of a variance under section 173-6 B (2) of the Littleton Zoning Bylaws.
   Attach a written statement which specifically includes why, owing to conditions (soil, shape, or topography) especially affecting the premises, but not affecting generally the zoning district in which it is located, a literal enforcement of the Zoning By-law would result in a substantial hardship to you. Applicant must clearly demonstrate the lack of alternative remedies.

4. ***I hereby certify that I have read the Board of Appeals Instructions for petitioners and that the statements within my petition and attachments are true and accurate to the best of my knowledge and belief.***

   _____ _____
   Signature Print name

Filing Instructions

1. **IMPORTANT: SEE THE BUILDING COMMISSIONER/ZONING ENFORCEMENT OFFICER BEFORE YOU FILL OUT THIS APPLCATION.** He will assist you with the proper zoning sections and application request(s). His review may save time by preventing delays in the hearing process.
2. Bring the completed application packet to the Administrative Assistant to the Building Commissioner who will assist you in filing with the Town Clerk.

Necessary Exhibits—provide 3 copies and an electronic copy of the following with the completed application:

1. A copy of the most recently recorded plan of land or where no such plan exists, a copy of a plot plan endorsed by a registered engineer or land surveyor. The plan should show;
   - A) metes and bounds of the subject land
   - B) adjacent streets and other names and readily identifiable landmarks and fixed objects
   - C) dimensional layout of all buildings
   - D) distances and setbacks from the various boundaries
   - E) exact dimensions, setbacks and specifications of any new construction, alterations, additions or installations
   - F) direction of North
   - G) the name of each abutting property owner
2. Copy of the latest recorded deed
3. A written statement which details the basis for your petition
4. Pictures, plans, maps, drawings and models are always helpful in explaining the problem
5. In cases pertaining to signs, a scale print of the sign lettering and colors
6. In cases pertaining to subdivisions of land, prints should show the proposed subdivision endorsed by a registered engineer or land surveyor
7. In cases pertaining to Accessory dwellings evidence that the Board of Health has approved the septic system
8. The date of the building construction and the history of ownership are useful in finding facts about the case

Completed applications filed with the Town Clerk by the third Thursday of the month will be considered at the next regularly scheduled Zoning Board of Appeals meeting, held on the third Thursday of the following month.
The Board in its discretion may dismiss an application or petition for failure to comply with any of the foregoing rules

You created this PDF from an application that is not licensed to print to novaPDF printer (http://www.novapdf.com)

DAVID E. ROSS ASSOCIATES, INC.

6 Lancaster County Road - P.O. Box 795
Harvard, MA 01451
(978) 772-6232 FAX (978) 772-6258

LETTER OF TRANSMITTAL

DATE	3/7/2024	JOB NO.	33242
ATTENTION			
RE:	PETER McANESPIE		
	#26, #28 & #30 CRICKET LANE		
	LITTLETON, MA.		

TO *TOWN OF LITTLETON*
BOARD OF APPEALS
37 SHATTUCK STREET
LITTLETON, MA. 01460

WE ARE SENDING YOU ☐ Attached ☐ Under separate cover via _____ the following items:

☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change Order ☐ _____

COPIES	DATE	NO.	DESCRIPTION
3		L-14345	SITE PLAN OF LAND PREPARED FOR PETER McANESPIE DATED MARCH 5,2024
			BY DAVID E. ROSS ASSOCIATES, INC.
1			FILING FEE FOR $506.53 (CHECK #1049)
3			BOARD OF APPEALS APPLICATIONS
3			PROEJCT NARRATIVES
3			COPIES OF CURRENT DEEDS AND RECORED PLANS
3			PROPOSED HOUSE PLANS
1			CERTIFIED LIST OF ABUTTERS

THESE ARE TRANSMITTED as checked below:

☐ For Approval ☐ Approved as submitted ☐ Resubmit_____copies for approval
☐ For your use ☐ Approved as noted ☐ Submit_____copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return_____corrected prints
☐ For review and comment ☐ _____
☐ FOR BIDS DUE _____ 19_____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS

RECEIVED BY: [illegible] Costell
3-7-24

COPY TO

SIGNED: ***Kevin R. Conover***

If enclosures are not as noted, kindly notify us at once.

DAVID E. ROSS ASSOCIATES, INC.

Civil Engineers, Land Surveyors, Environmental Consultants

March 5, 2024

Town of Littleton
Zoning Board of Appeals
37 Shattuck Street
Littleton, Ma. 01460

Re: Zoning Board of Appeals Application
Peter McAnespie
Cricket Lane
Littleton, Ma.
Project No.33242

Dear Board Members,

On behalf of our client, this office is submitting a Special Permit request for property located at 26, 28 & 30 Cricket Lane for the construction of a single-family dwelling. Currently there are three existing structures on the property in various states of disrepair.

It is our client's intention to raze the existing 3 structures and construct a single dwelling unit. The property is being described as Lots B, C & D on a plan dated April 24, 1946 and are located at the terminus of a Right of Way now known as Cricket Lane. This project has already received Board of Health Approval and Conservation Commission approval for the proposed development. We are seeking relief from Chapter 173 of the Town of Littleton Zoning Bylaws-Intensity of Use Regulations since the property is classified as a preexisting nonconforming lot and the proposed dwelling will be within the required yard setback requirements. As the enclosed plan indicates, the proposed structure will be placed closer to the existing end of Cricket Lane will be not increase the non-conforming setbacks of the existing structures.

Please review the application and related documents and contact this office with any comments or questions.

Very Truly Yours;
David E. Ross Associates, Inc.:

Kevin R. Conover

6 Lancaster County Road P.O. Box 795 Harvard, Massachusetts 01451
978-772-6232 FAX 978-772-6258 davideross.com

Town of Littleton

DATE: 3/11/2024

176 - Appeals

Schedule of Departmental Payments to the Treasurer

Source/From Whom		Account Name		Account Number			Amount
26, 28, 30 Cricket Lane	--	Board Receipts		01176420-432000		ZBAFEE	$200.00
Peter McAnespie	--		--			CLK FEE	$105.00
24-971	--		--			BOA FEE	$25.00
		Adertising		20605200-538210		ZBAADS	$176.53
	--		--				$
	--		--				$
	--		--				$
	--		--				$
	--		--				$

TOTAL Turnover **$506.53**

Credit	$	
Cash	$	
Checks	$	**$506.53**
TOTAL		**$506.53**

Must equal total above

The above listed receipts, collected by the Committee/Department have been turned over to the Treasurer.

Lucia Parelli — Committee/Department Signature — Date 3/11/24

Received from the Committee/Department the total as listed above.

Treasurer's Office Signature — Date 3/11/24

PETER A. MCANESPIE, SR
2 CRICKET LANE
LITTLETON, MA 01460

1049
53-8156/2113

March 4th 2024
DATE

PAY TO THE ORDER OF Town of Littleton $ 506.53

Five Hundred Six 53/100 DOLLARS

Security features included. Details on back.

Burlington Municipal Employees Federal Credit Union
7 BEDFORD STREET
BURLINGTON, MASSACHUSETTS 01803

FOR

MP

⑆211381563⑆ 7413214163 63⑈ 1049

Main Street Traditional Blue

TOWN OF LITTLETON
BOARD OF ASSESSORS
P.O. BOX 1305
LITTLETON, MA 01460
(978) 540-2410 FAX: (978) 952-2321

Date: February 23, 2024

Re: **Certified List of Abutters for Board of Appeals (300 feet - public hearings, special permits And/or for Variances)**

Applicant Peter McAnespie
Mailing Address 6 Lancaster County Rd. P.O. Box 795 Harvard, Mass. 01451

Subject Parcel Location: 26, 28, & 30 Cricket Ln
Subject Owner Peter McAnespie
Subject Map & Parcel No: U46-9-0, U46-10-0, U46-11-0

M.G.L. Chapter 40A, Section 11. "In all cases where notice of a public hearing is required notice shall be given by publication in a newspaper of general circulation in the city or town once in each of two successive weeks, the first publication to be not less than fourteen days before the day of the hearing and by posting such notice in a conspicuous place in the city or town hall for a period of not less than fourteen days before the day of such hearing. In all cases where notice to individuals or specific boards or other agencies is required, notice shall be sent by mail, postage prepaid. **"Parties in interest" as used in this chapter shall mean the petitioner, abutters, owners of land directly opposite on any public or private street or way, and abutters to the abutters within three hundred feet of the property line of the petitioner as they appear on the most recent applicable tax list, notwithstanding that the land of any such owner is located in another city or town, the planning board of the city or town, and the planning board of every abutting city or town.** The assessors maintaining any applicable tax list shall certify to the permit granting authority or special permit granting authority the **names and addresses of parties in interest and such certification shall be conclusive for all purposes.** The permit granting authority or special permit granting authority may accept a waiver of notice from or an affidavit of actual notice to any party in interest or, in his stead, any successor owner of record who may not have received a notice by mail, and may order special notice to any such person, giving not less than five nor more than ten additional days to reply." .....

I hereby certify the attached list of abutter(s) as stated in the M.G.L. Chapter 40A, Section 11.

Number of Abutter(s) **21** including the subject parcels + **1** Applicant Requesting Abutter's List. And Also abuts **Mill Pond and Interstate Route 495**

Certified by:

Hanna Axon, Office Assistant

BLUEBIRD WAY R23 4 A
LUC: 950
LITTLETON CONSERVATION TRUST
P.O. BOX 594
LITTLETON, MA 01460

28 CRICKET LN U46 10 0
LUC: 101
MCANESPIE PETER A SR
2 CRICKET LANE
LITTLETON, MA 01460

30 CRICKET LN U46 11 0
LUC: 132
MCANESPIE PETER
2 CRICKET LN
LITTLETON, MA 01460

29 CRICKET LN U46 12 0
LUC: 101
MCKENNA GAIL K
29 CRICKET LN
LITTLETON, MA 01460

25 CRICKET LN U46 12 A
LUC: 101
WARNER ROBERT G
WARNER KRISTEN F
25 CRICKET LANE
LITTLETON, MA 01460

23 CRICKET LN U46 13 0
LUC: 101
PENNINI FAMILY TRUST
PENNINI GREGORY, TRUSTEE
23 CRICKET LN
LITTLETON, MA 01460

21 CRICKET LN U46 14 0
LUC: 101
COLEMAN MARY
P.O. BOX 332
LITTLETON, MA 01460

19 CRICKET LN U46 15 0
LUC: 101
LUCIANO DARYL C
LUCIANO ABIGAIL S
19 CRICKET LN
LITTLETON, MA 01460

15 CRICKET LN U46 19 0
LUC: 101
OLIVEIRA JENNIFER L
DE OLIVEIRA JULIMAR
15 CRICKET LANE
LITTLETON, MA 01460

11 BARON WY U46 21 0
LUC: 101
CARLSON CHRISTOPHER V
SARETTE BL FAM REV TR OF 2009
PO BOX 1342
AMHERST, NH 03031

BARON WY U46 25 0
LUC: 132
BARON DAVID E
BARON JENNY D
6 BARON WY
LITTLETON, MA 01460

1 SANDAS POINT RD U46 29 B
LUC: 109
PELAGATTI ANNE A
GAETZ ROBERT W
P O BOX 811
LITTLETON, MA 01460

14 CRICKET LN U46 3 0
LUC: 101
SCANTLEBURY PETER W
SCANTLEBURY JEANNINE
14 CRICKET LN
LITTLETON, MA 01460

16 CRICKET LN U46 3 A
LUC: 132
SCANTLEBURY PETER W
SCANTLEBURY JEANNINE
14 CRICKET LN
LITTLETON, MA 01460

18 CRICKET LN U46 4 0
LUC: 101
BLAINE BRYCEN JAMES
BLAINE LINNEA JOY
18 CRICKET LN
LITTLETON, MA 01460

CRICKET LN U46 4 A
LUC: 132
BLAINE BRYCEN JAMES
BLAINE LINNEA JOY
18 CRICKET LN
LITTLETON, MA 01460

20 CRICKET LN U46 5 0
LUC: 101
BORR NANCY E
20 CRICKET LN
LITTLETON, MA 01460

CRICKET LN U46 6 0
LUC: 132
WARNER ROBERT G
WARNER KRISTEN F
25 CRICKET LN
LITTLETON, MA 01460

22 CRICKET LN U46 7 0
LUC: 101
FLANNERY ROBERT JAMES
22 CRICKET LN
LITTLETON, MA 01460

24 CRICKET LN U46 8 0
LUC: 101
LADEY FHARAH
AKA GEM LADEFARA
38 SPRING ST. #242
NASHUA, NH 03060

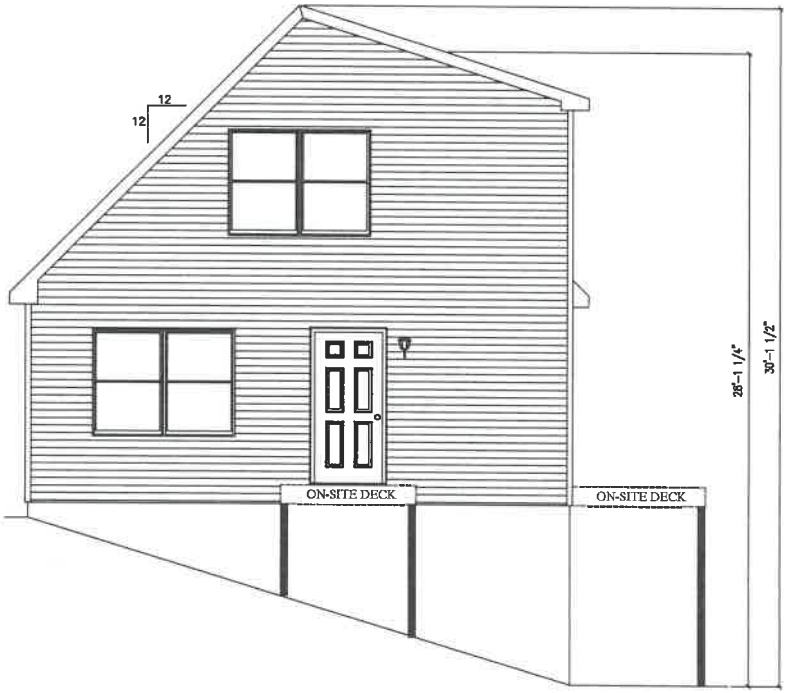
26 CRICKET LN U46 9 0
LUC: 132
MCANESPIE PETER
2 CRICKET LN
LITTLETON, MA 01460

PFS Corporation
Northeast Region
APPROVED
H Raup – 3
12/6/23
Approval limited to
Factory Built Portion

COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

SHIPLOOSE SIDING



CEILING
8'-0"
FLOOR

CEILING
FLOOR

ATTIC VENTILATION
LOWER 50% @ EAVES
REQ'D 1.68 SUPPLIED 2.6
UPPER 50% 3'-0" MIN. ABOVE EAVES
REQ'D 1.68 SUPPLIED 2.16 (3 PCS)

CHRISO 12/4/2023 7:39:29 AM

ACTUAL HOUSE MAY VARY FROM ELEVATION—ACCESS TO GRADE ON-SITE BY BUILDER

BUILDER	PROS EDGE QUALITY HOMES L
CUSTOMER	CLARK AND MC
CITY	LITTLETON
COUNTY	MIDDLESEX
STATE	MA
WIND SPEED	123 MPH VULT
SNOW LOAD	50
SQ. FT.	1008
ORDER NO.	108503
SERIAL NO.	
FILE NO.	P108503(620)

2442—PRESTIGE RANCH
FRONT ELEVATION

Professional Building Systems, Inc.
Professional Building Systems
72 East Market Street
Middleburg, PA 17842
(800) 233-1461
www.pbsmodular.com

MBSP
MODULAR BUILDING SYSTEMS OF PA

DATE:	DRAWN BY:	STATUS:
6/30/23	NFL	CONFO
08/09/2023	MDC	FINAL
09/07/2023	MDC	REV FINAL
10/26/2023	SMW	REV. FINAL
11/9/2023	CQB	APPROVAL

PAGE: 2.1

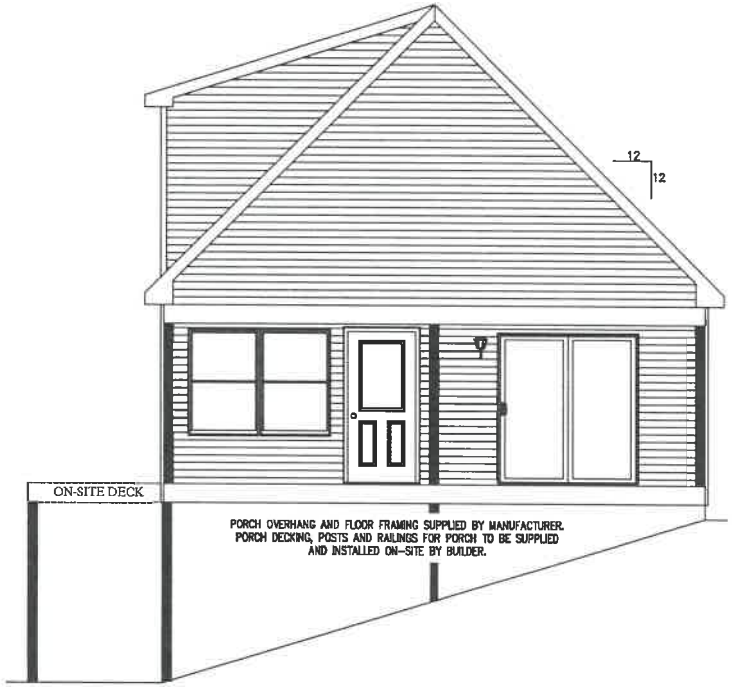
PFS Corporation
Northeast Region
APPROVED
H Raup – 3
12/6/23
Approval limited to
Factory Built Portion

COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

CEILING

FLOOR



CEILING

FLOOR

CHRISO 12/4/2023 7:39:29 AM

ACTUAL HOUSE MAY VARY FROM ELEVATION–ACCESS TO GRADE ON–SITE BY BUILDER

BUILDER	PROS EDGE QUALITY HOMES L	CUSTOMER	CLARK AND MC
CITY	LITTLETON	COUNTY	MIDDLESEX
STATE	MA		
WIND SPEED	123 MPH VULT	SNOW LOAD	50
SQ. FT.	1008		
ORDER NO.	108503	SERIAL NO.	
FILE NO.	P108503(620)		

2442–PRESTIGE RANCH
REAR ELEVATION

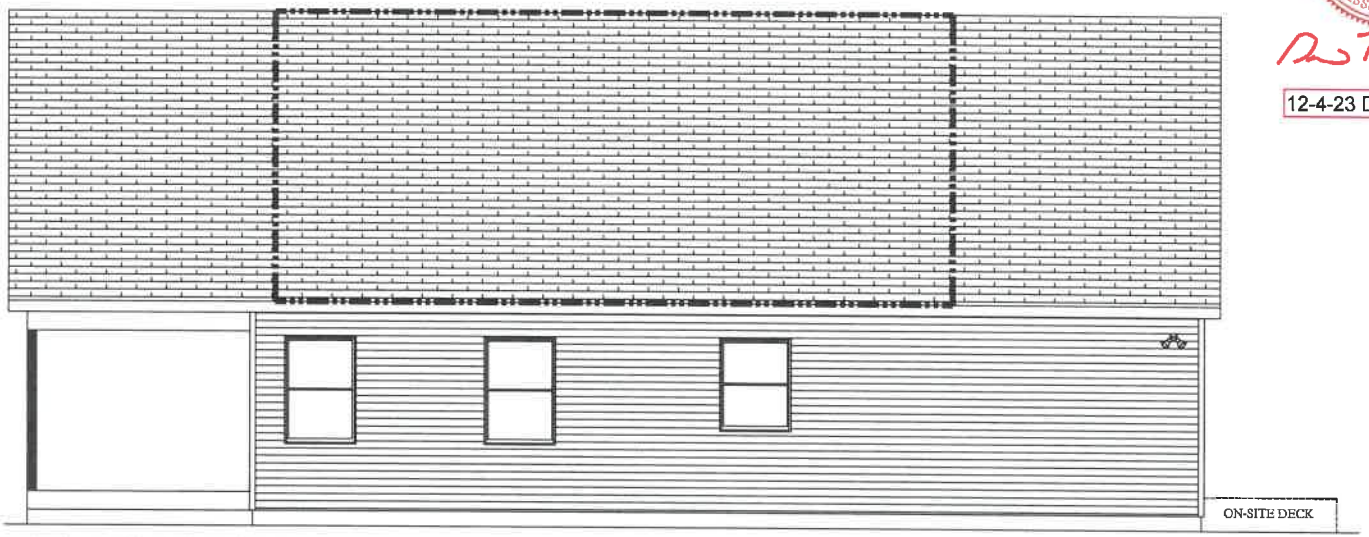
Professional Building Systems, Inc.
MBSP Modular Building Systems of PA
Professional Building Systems
72 East Market Street
Mahanoy, PA 17942
(800) 355-1414
www.modularbuilder.com

DATE:	DRAWN BY:	STATUS:
6/30/23	NFL	CONFO
08/09/2023	MDC	FINAL
09/07/2023	MDC	REV FINAL
10/26/2023	SMW	REV. FINAL
11/9/2023	CDB	APPROVAL

PAGE: 2.2

PFS Corporation
Northeast Region
APPROVED
H Raup – 3
12/6/23
Approval limited to
Factory Built Portion

ROOF AREA MEETS THE 600 SQ FT REQUIREMENT
PER SECTION AU103 SOLAR–READY ZONE.
TRUSSES ARE DESIGNED WITH 10 PSF DEAD LOAD
FOR ADDITIONAL OVERFRAMING



PORCH OVERHANG AND FLOOR FRAMING SUPPLIED BY MANUFACTURER.
PORCH DECKING, POSTS AND RAILINGS FOR PORCH TO BE SUPPLIED
AND INSTALLED ON–SITE BY BUILDER.

COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

CHRISO 12/4/2023 7:39:29 AM

ACTUAL HOUSE MAY VARY FROM ELEVATION–ACCESS TO GRADE ON–SITE BY BUILDER

BUILDER	PROS EDGE QUALITY HOMES L
CUSTOMER	CLARK AND MC
CITY	LITTLETON
COUNTY	MIDDLESEX
STATE	MA
WIND SPEED	123 MPH VULT
SNOW LOAD	50
SQ. FT.	1008
ORDER NO.	108503
SERIAL NO.	
FILE NO.	P108503(620)

2442–PRESTIGE RANCH
LEFT ELEVATION

Professional Building Systems, Inc.
72 East Market Street
Middlebury, PA 17942
(800) 383-1484
www.PROBUILDLAP.com

MBSP MODULAR BUILDING SYSTEMS OF PA

DATE:	DRAWN BY:	STATUS:
6/30/23	NPL	CONFD
08/09/2023	MDC	FINAL
09/07/2023	MDC	REV FINAL
10/28/2023	SMW	REV. FINAL
11/9/2023	CQB	APPROVAL

PAGE: 2.3

PFS Corporation
Northeast Region
APPROVED
H Raup – 3
12/6/23
Approval limited to
Factory Built Portion

COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

ROOF AREA MEETS THE 600 SQ FT REQUIREMENT
PER SECTION AU103 SOLAR-READY ZONE.
TRUSSES ARE DESIGNED WITH 10 PSF DEAD LOAD
FOR ADDITIONAL OVERFRAMING

PORCH OVERHANG AND FLOOR FRAMING SUPPLIED BY MANUFACTURER.
PORCH DECKING, POSTS AND RAILINGS FOR PORCH TO BE SUPPLIED
AND INSTALLED ON-SITE BY BUILDER.

CHRISO 12/4/2023 7:39:29 AM

ACTUAL HOUSE MAY VARY FROM ELEVATION–ACCESS TO GRADE ON-SITE BY BUILDER

BUILDER	CUSTOMER
PROS EDGE QUALITY HOMES L	CLARK AND MC

CITY	COUNTY	STATE
LITTLETON	MIDDLESEX	MA

WIND SPEED	SNOW LOAD	SQ. FT.
123 MPH VULT	50	1008

ORDER NO.	SERIAL NO.	FILE NO.
108503		P108503(620)

2442–PRESTIGE RANCH
RIGHT ELEVATION

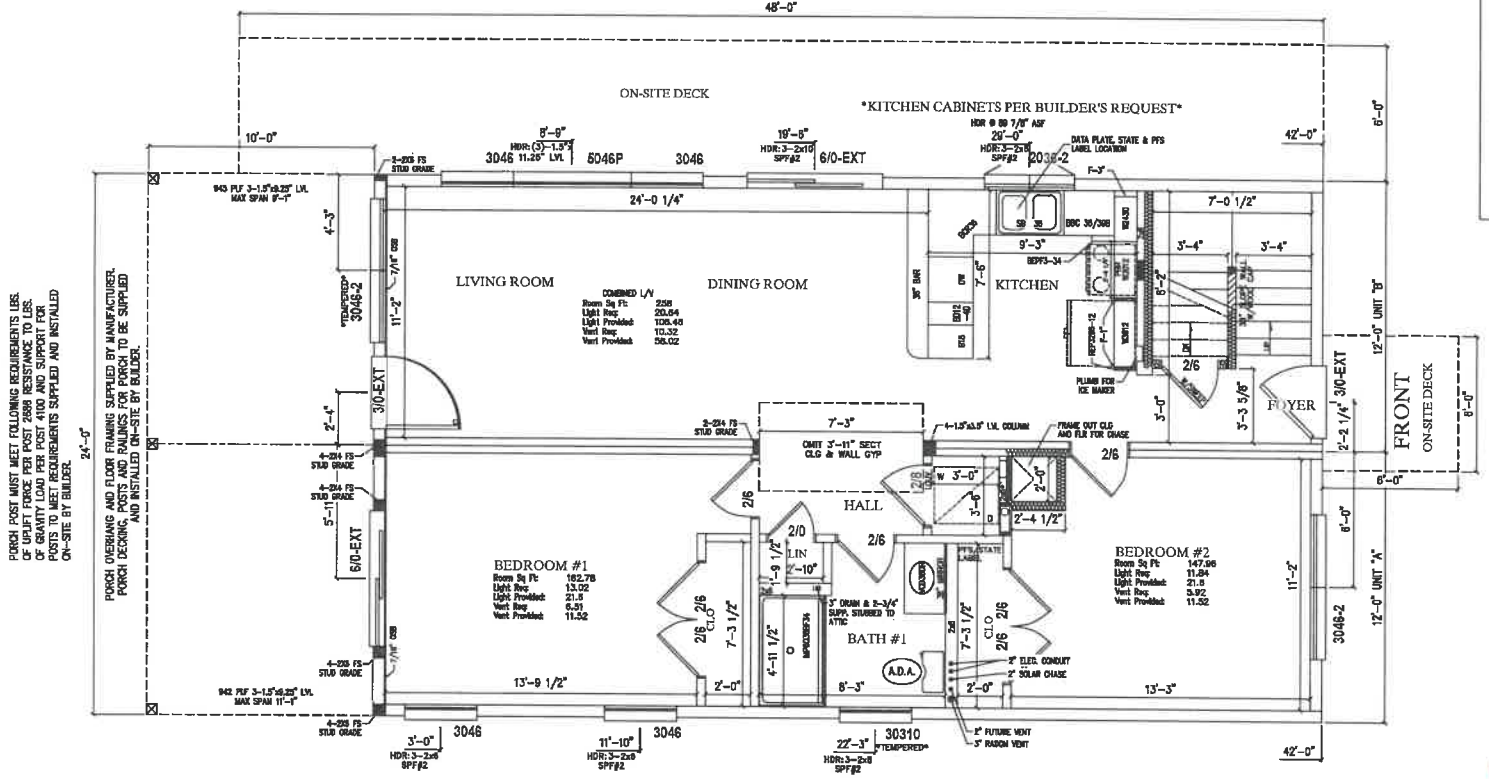
Professional Building Systems, Inc.
Professional Building Systems
72 East Market Street
Middleburg, PA 17842
(570) 837-1414
www.pbsmodular.com

MBSP
MODULAR BUILDING SYSTEMS OF PA

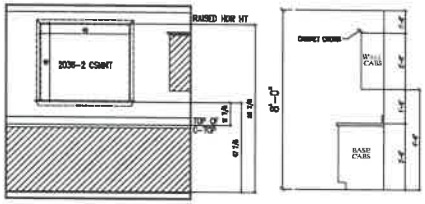
DATE:	DRAWN BY:	STATUS:
6/30/23	NFL	CONFO
08/09/2023	MDC	FINAL
09/07/2023	MDC	REV FINAL
10/26/2023	SMW	REV. FINAL
11/9/2023	CGB	APPROVAL

PAGE: 2.4

5/8" CEILING GYP MECHANICALLY FASTENED



PBR - DENOTES PER BUILDER'S REQUEST



GENERAL NOTES:

1. *5/8" CEILING GYP MECHANICALLY FASTENED*
2. ALL LVL (LAMINATED VENEER LUMBER) SPECIFIED IN PLAN SET SHALL BE TYPE "2.0E/Fb 3100 PSI"
3. MECHANICAL VENTILATION ON-SITE BY BUILDER PER TABLE N1103.6.
4. THE ON-SITE WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM SHALL COMPLY WITH 2015 IRC 1507.3 W/SONE RATING OF 1.0 OR LESS.
5. BUILDER RESPONSIBLE FOR COMPLIANCE WITH SECTION R312.2 (WINDOW SILLS) OF THE 2015 IRC (TO BE DONE ON-SITE IF APPLICABLE).
6. DUCT TIGHTNESS AND BLOWER DOOR TESTING ON-SITE BY BUILDER AND CERTIFIED BY STATE.
7. TENT INSULATION AROUND H20 SUPPLY LINES ON EXTERIOR WALLS TO PREVENT FREEZING.
8. SHOWER COMPARTMENTS TO CONFORM TO [248 CMR 10.10(7)(C)].
9. LOT LINE SET BACK FIRE-RATING/SEPARATION NOT REQUIRED UNLESS SPECIFIED OTHERWISE.
10. HEAT REQUIREMENT AND SYSTEM IS TO BE DESIGNED AND INSTALLED ON-SITE BY BUILDER. HEAT SYSTEM TO BE INSPECTED AND APPROVED BY LOCAL BUILDING INSPECTOR.
11. STRUCTURE DEPICTED AT THIS SITE ADDRESS TO BE DEMOLISHED BY BUILDER AND REPLACED WITH THIS HOUSE.

COMMONWEALTH OF MASSACHUSETTS
DAVID T. FEENEY
No. 54747
REGISTERED PROFESSIONAL ENGINEER

12-4-23 D.Feeney

PFS Corporation
Northeast Region
APPROVED
H Raup – 3
12/6/23
Approval limited to Factory Built Portion

CODES:

MA SINGLE & TWO FAMILY DWELLING CODE (780 CMR)–9TH EDITION
248 CMR, THE MASSACHUSETTS STATE PLUMBING AND GAS CODE
2015 INTERNATIONAL MECHANICAL CODE W/AMENDMENTS
2021 INTERNATIONAL ENERGY CONSERVATION CODE
W/ 2023 MA STRETCH ENERGY CODE AMENDMENTS
2023 NATIONAL ELECTRICAL CODE W/ MA AMENDMENTS
SOLAR READY ZONE PER AU103
STRETCH ENERGY COMMUNITY

NOTES: 1. *- DENOTES ADDITIONAL COLUMN IN BASEMENT
2. 2X6 EXTERIOR WALLS 16" O.C.
3. 2X4 MARRIAGE WALLS 16" O.C.
4. ROOF RAFTERS 16" O.C.
5. 8'-0" CLG.
6. STAIRS TO BE 8 1/4" RISERS AND 9" TREADS.
7. MW CLG BEAM OVER DIN/HALL: 21.5" X 9.25" LVL (PER SIDE)
8. MW CLG BEAM OVER PORCH: 1-1.5" X 9.25" LVL (PER SIDE)
9. MW FLR BM: 3-2X10 SYP#2 (PER SIDE)
10.
11.

CHRISO 12/4/2023 7:39:29 AM

BUILDER	PROS EDGE QUALITY HOMES L
CUSTOMER	CLARK AND MC
CITY	LITTLETON
COUNTY	MIDDLESEX
STATE	MA
WIND SPEED	123 MPH VULT
SNOW LOAD	50
SQ. FT.	1008
ORDER NO.	108503
SERIAL NO.	
FILE NO.	P108503(620)

2442–PRESTIGE RANCH
1st STORY FLOOR PLAN

Professional Building Systems, Inc.
72 East Market Street
Middleburg, PA 17842
(570) 837-1500
www.pbsmodular.com

MBSP MODULAR BUILDING SYSTEMS OF PA

DATE:	DRAWN BY:	STATUS:
6/30/23	NPL	CONFO
08/09/2023	MDC	FINAL
09/07/2023	MDC	REV. FINAL
10/26/2023	SMW	REV. FINAL
11/9/2023	COB	APPROVAL

PAGE: 3.1

Middlesex South Registry of Deeds

Electronically Recorded Document

This is the first page of the document - Do not remove

Recording Information

Document Number	: 202329
Document Type	: DEED
Recorded Date	: December 20, 2019
Recorded Time	: 08:44:47 AM
Recorded Book and Page	: 73861 / 459
Number of Pages(including cover sheet)	: 3
Receipt Number	: 2408097
Recording Fee (including excise)	: $125.00

****
MASSACHUSETTS EXCISE TAX
Southern Middlesex District ROD # 001
Date: 12/20/2019 08:44 AM
Ctrl# Doc# 00202329
Fee: $.00 Cons: $1.00
****

Middlesex South Registry of Deeds
Maria C. Curtatone, Register
208 Cambridge Street
Cambridge, MA 02141
617-679-6300
www.middlesexsouthregistry.com

QUITCLAIM DEED

WE, SUSAN CLARK and PETER MCANESPIE, of Littleton, Massachusetts, for consideration paid of One and 00/100 Dollar ($1.00) grant to **PETER MCANESPIE,** individually, 26 Cricket Lane, Littleton, Massachusetts,

With ***QUITCLAIM COVENANTS*** the following described premises:

A certain parcel of land with the buildings thereon in Littleton, Middlesex County, Massachusetts known as 26 Cricket Lane, and more particularly described in the attached Exhibit "A."

For Grantor's title, see Deed recorded in the Middlesex County Registry of Deeds, Book 71540, Page 301.

We release any and all rights of homestead in the property conveyed hereunder and affirm under the pains and penalties of perjury that no other person is entitled to claim the benefit of a homestead in and to the said property.

Property Address: 26 Cricket Lane, Littleton, MA 01460

EXECUTED as a sealed instrument this 17th day of December, 2019.

Susan Clark

SUSAN CLARK

PETER MCANESPIE

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss.
(county)

On this 17 day of December, 2019, before me, the undersigned notary public, personally appeared Susan Clark, the above-named, and proved to me through satisfactory evidence of identification being Drivers License, to be the person whose name is signed on this document, and acknowledged to me that she signed it voluntarily for its stated purpose and that the foregoing instrument is her free act and deed.

Notary Public: Michael A Dixon
My Commission Expires: 5/21/21

MICHAEL A. DIXON
NOTARY PUBLIC
COMMONWEALTH OF MASSACHUSETTS
My Comm. Expires May 21, 2021

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss.
(county)

On this 17th day of December, 2019, before me, the undersigned notary public, personally appeared Peter Mcanespie, the above-named, and proved to me through satisfactory evidence of identification being Drivers License, to be the person whose name is signed on this document, and acknowledged to me that he signed it voluntarily for its stated purpose and that the foregoing instrument is his free act and deed.

Notary Public: Michael A Dixon
My Commission Expires: 5/21/21

MICHAEL A. DIXON
NOTARY PUBLIC
COMMONWEALTH OF MASSACHUSETTS
My Comm. Expires May 21, 2021

CAI Property Card

Town of Littleton, MA

L01 D

GENERAL PROPERTY INFORMATION

LOCATION: 26 CRICKET LN
ACRES: 0.06045
PARCEL ID: U46 9 0
LAND USE CODE: 101
CONDO COMPLEX:
OWNER: MCANESPIE PETER
CO - OWNER:
MAILING ADDRESS: 26 CRICKET LN
LITTLETON, MA 01460
ZONING: R
PATRIOT ACCOUNT #: 3648

SALE INFORMATION

SALE DATE: 12/20/2019
BOOK & PAGE: 73861-459
SALE PRICE: $1
SALE DESCRIPTION: CONVIENCE
SELLER: CLARK SUSAN,

PRINCIPAL BUILDING AREAS

GROSS BUILDING AREA: 886
FINISHED BUILDING AREA: 886
BASEMENT AREA: 0
 # OF PRINCIPAL BUILDINGS: 1

ASSESSED VALUES

LAND: 80,600
YARD: 0
BUILDING: 9,000
TOTAL: $89,600

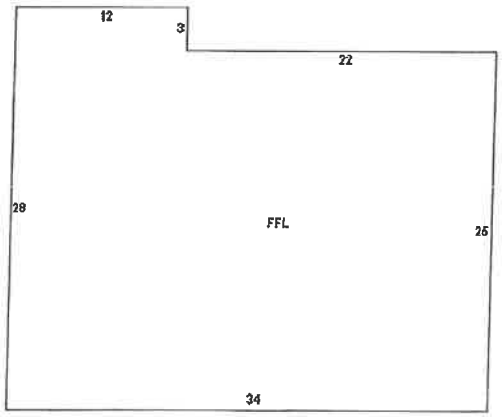
BUILDING EXTERIOR

BUILDING STYLE: CAMP,SEAS
UNITS: 1
YEAR BUILT: 1960
FRAME: WOOD
EXTERIOR WALL COVER: BOARD+BATT
ROOF STYLE: GABLE
ROOF COVER: ASPHALT

BUILDING INTERIOR

INTERIOR WALL: NONE
FLOOR COVER: PLYWOOD
HEAT TYPE: NONE
FUEL TYPE: NONE
PERCENT A/C: 0
 # OF ROOMS: 3
 # OF BEDROOMS: 2
 # OF FULL BATHS: 1
 # OF HALF BATHS: 0
 # OF ADDITIONAL FIXTURES: 0
 # OF KITCHENS: 1
 # OF FIREPLACES: 0
 # OF METAL FIREPLACES: 1
 # OF BASEMENT GARAGES: 0

SKETCH



PHOTO

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Middlesex South Registry of Deeds

Electronically Recorded Document

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Recording Information

Document Number	: 31396
Document Type	: CONFDEED
Recorded Date	: February 28, 2022
Recorded Time	: 03:56:17 PM
Recorded Book and Page	: 79753 / 330
Number of Pages(including cover sheet)	: 4
Receipt Number	: 2788420
Recording Fee (including excise)	: $155.00

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MASSACHUSETTS EXCISE TAX
Southern Middlesex District ROD # 001
Date: 02/28/2022 03:56 PM
Ctrl# Doc# 00031396
Fee: $.00 Cons: $1.00
****

Middlesex South Registry of Deeds
Maria C. Curtatone, Register
208 Cambridge Street
Cambridge, MA 02141
617-679-6300
www.middlesexsouthregistry.com

CONFIRMATORY QUITCLAIM DEED

We, Susan Clark and Peter McAnespie, of Littleton, Massachusetts (collectively, the "Grantor"),

For consideration paid of One and 00/100 ($1.00) Dollar,

Grant to Peter McAnespie, an individual, of 26 Cricket Lane, Littleton, Massachusetts (the "Grantee"),

With QUITCLAIM COVENANTS,

the following described premises:

A certain parcel of land with the buildings thereon in Littleton, Middlesex County, Massachusetts known as 26 Cricket Lane, and more particularly described in the attached Exhibit "A."

For Grantor's title, see Deed recorded in the Middlesex County Registry of Deeds, Book 71540, Page 301.

We release any and all rights of homestead in the property conveyed hereunder and affirm under the pains and penalties of perjury that no other person is entitled to claim the benefit of a homestead in and to the said property.

This deed is given to ratify and confirm a prior deed from the Grantors to the Grantee dated December 17, 2019 and recorded in the Middlesex South District Registry of Deeds at Book 73861, Page 459 on December 20, 2019, which did not include the referenced attached Exhibit "A."

[SIGNATURE PAGE FOLLOWS]

Property Address: 26 Cricket Lane, Littleton, MA 01460

EXECUTED as an instrument under seal at this 23rd day of February, 2022.

Susan Clark

Susan Clark

Peter McAnespie

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss.

On this 23rd day of February, 2022, before me, the undersigned notary public, personally appeared Susan Clark, who proved to me through satisfactory evidence of identification, which was MA Driver's License, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that she signed it voluntarily for its stated purpose, as her free act and deed.

JAMES E. CLANCY IV
Notary Public
Commonwealth of Massachusetts
My Commission Expires
November 17, 2028

Notary Public: James E. Clancy IV
My Commission expires: 11/17/28

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss.

On this 23rd day of February, 2022, before me, the undersigned notary public, personally appeared Peter McAnespie, who proved to me through satisfactory evidence of identification, which was MA Driver's License, to be the person whose name is signed on the preceding or attached document, and acknowledged to me that he signed it voluntarily for its stated purpose, as his free act and deed.

JAMES E. CLANCY IV
Notary Public
Commonwealth of Massachusetts
My Commission Expires
November 17, 2028

Notary Public: James E. Clancy IV
My Commission expires: 11/17/28

EXHIBIT A

The land and buildings in Littleton, Massachusetts known and numbered as 26 Cricket Lane, Littleton, Massachusetts, being shown as lot "D" on a plan of land titled "Plan of Land in Littleton, Mass." dated April 24, 1946, prepared by Joseph C. Shaw, Surveyor, Belmont, Mass., and recorded in the Middlesex South District Registry of Deeds as Plan No. 727 of 1946, and being further bounded and described as follows:

EASTERLY:	By the center line of a way as shown on said plan, forty-nine and 37/100 (49.37) feet;
SOUTHERLY:	By the center line of said way, thirteen and 49/100 (13.49) feet;
EASTERLY:	Again by the center line of said way, twenty-two (22) feet;
SOUTHWESTERLY:	By Spectacle Pond, seventy-four and 52/100 (74.52) feet;
WESTERLY:	By said Spectacle Pond, forty-two and 24/100 (42.24) feet;
NORTHEASTERLY:	By lot "C", twenty-seven and 85/100 (27.85) feet;
NORTHWESTERLY:	By lot "C", twenty-five and 42/100 (25.42) feet.

Containing twenty-six hundred thirty-three (2,633) square feet of land or however said lot "D" may be bounded, measured or described.

A strip of land three (3) feet wide along the Easterly, Southerly, and Easterly side of said parcel as shown on said plan is to be kept forever open as a common passage-way for the use of the owner and occupants of this parcel and all other parcels shown on the plan hereinbefore referred to.

Middlesex South Registry of Deeds

Electronically Recorded Document

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Recording Information

Document Number	: 147386
Document Type	: DEED
Recorded Date	: September 27, 2019
Recorded Time	: 08:53:45 AM
Recorded Book and Page	: 73353 / 213
Number of Pages(including cover sheet)	: 5
Receipt Number	: 2373694
Recording Fee (including excise)	: $467.00

****
MASSACHUSETTS EXCISE TAX
Southern Middlesex District ROD # 001
Date: 09/27/2019 08:53 AM
Ctrl# 308233 16853 Doc# 00147386
Fee: $342.00 Cons: $75.000.00
****

Middlesex South Registry of Deeds
Maria C. Curtatone, Register
208 Cambridge Street
Cambridge, MA 02141
617-679-6300
www.middlesexsouthregistry.com

CAI Property Card

Town of Littleton, MA

Lot C

GENERAL PROPERTY INFORMATION

LOCATION: 28 CRICKET LN
ACRES: 0.08567
PARCEL ID: U46 10 0
LAND USE CODE: 101
CONDO COMPLEX:
OWNER: MCANESPIE PETER A SR
CO - OWNER:
MAILING ADDRESS: 2 CRICKET LANE
LITTLETON, MA 01460
ZONING: R
PATRIOT ACCOUNT #: 3612

SALE INFORMATION

SALE DATE: 9/27/2019
BOOK & PAGE: 73353-213
SALE PRICE: $75,000
SALE DESCRIPTION: SOLD ABUTTER
SELLER: VILCANS PAUL C,

PRINCIPAL BUILDING AREAS

GROSS BUILDING AREA: 764
FINISHED BUILDING AREA: 390
BASEMENT AREA: 0
 # OF PRINCIPAL BUILDINGS: 1

ASSESSED VALUES

LAND: 114,300
YARD: 0
BUILDING: 16,900
TOTAL: $131,200

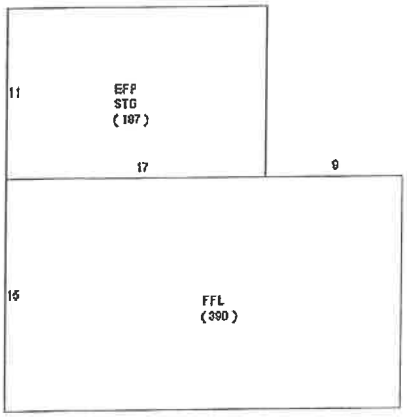
BUILDING EXTERIOR

BUILDING STYLE: CAMP,SEAS
UNITS: 1
YEAR BUILT: 1930
FRAME: WOOD
EXTERIOR WALL COVER: WD SH
ROOF STYLE: GABLE
ROOF COVER: ROLLED

BUILDING INTERIOR

INTERIOR WALL: SOLID WOOD
FLOOR COVER: SOFTWOOD
HEAT TYPE: NONE
FUEL TYPE: WOOD/COMBO
PERCENT A/C: 0
 # OF ROOMS: 4
 # OF BEDROOMS: 2
 # OF FULL BATHS: 0
 # OF HALF BATHS: 1
 # OF ADDITIONAL FIXTURES: 0
 # OF KITCHENS: 1
 # OF FIREPLACES: 0
 # OF METAL FIREPLACES: 1
 # OF BASEMENT GARAGES: 0

SKETCH



PHOTO

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QUITCLAIM DEED

We, **Paul C. Vilcans**, unmarried, of Carlisle, MA and **Peter T. Vilcans**, married, of Littleton, MA for consideration paid and in full consideration of **SEVENTY-FIVE THOUSAND AND 00/100 ($75,000.00) DOLLARS**

Grant to **Peter A. McAnespie, Sr.**, individually, of 2 Cricket Lane, Littleton, MA,

WITH QUITCLAIM COVENANTS

The land in Littleton in said Middlesex County, and being shown as Lot "C" on a plan entitled, "Plan of Land in Littleton, Mass.", dated April 24, 1946, by Joseph C. Shaw, Surveyor which plan is recorded in Middlesex South District Registry of Deeds in Book 6986, Page 196 and being bounded and described as follows:

Locus: 28 Cricket Lane, Littleton, MA 01460

SOUTHEASTERLY	By the center line of a way and by lot "D" as shown on said plan, eighty-three and 83/100 (83.83) feet;
SOUTHWESTERLY	By said lot "D", twenty-seven and 85/100 (27.85) feet;
WESTERLY	By Spectacle Pond, twenty-five and 93/100 (25.93) feet;
NORTHWESTERLY	By said Spectacle Pond, fifty and 66/100 (50.66) feet; and
NORTHEASTERLY	By lot "B" as shown on said plan, sixty-four and 51/100 (64.51) feet.

Containing thirty-seven hundred thirty-two (3,732) square feet of land or however said lot "C" may be bounded, measured or described.

A strip of land three (3) feet wide on the Southeasterly side of this parcel as shown on said plan hereinabove referred to is to be kept forever open as common passageway for the use of the owners and occupants of this parcel and all other parcels shown on the plan hereinbefore referred to.

There is further conveyed the right to pass and repass from said premises over the existing right of way to the public way.

MARRIED GRANTOR hereby states under penalties of perjury that he has no spouse then entitled to claim the benefit of an existing estate of homestead.

We, Paul C. Vilcans and Peter T. Vilcans, declare under the pains and penalties of perjury that no person, either individually or as trustee, is entitled to claim the benefit of an existing estate of homestead that have declared or acquired as to the above described premises; and we hereby release and terminate any and all rights and estates of homestead in and to the property conveyed herein, whether created automatically pursuant to Massachusetts law or declaration.

Meaning and intending to convey the premises acquired by deed recorded with the Middlesex South District Registry of Deeds on December 6, 1989 in Book 20245, Page 357.

Executed under the pains and penalties of perjury this 16th day of September 2019.

Paul C. Vilcans

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss. September 16, 2019

On this 16 day of September 2019, before me, the undersigned notary public, personally appeared Paul C. Vilcans, and proved to me through satisfactory evidence of identification, which was his drivers license to be signed on the preceding or attached document, in my presence and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his knowledge and belief,

Notary Public: James P. Haroutunian
My Commission Expires: 03/27/2020

JAMES P. HAROUTUNIAN
Notary Public
Commonwealth of Massachusetts
My Commission Expires
March 27, 2020

Executed under the pains and penalties of perjury this 17th day of September 2019.

Peter T. Vilcans

COMMONWEALTH OF MASSACHUSETTS

Middlesex, ss. September 17, 2019

On this 17th day of September 2019, before me, the undersigned notary public, personally appeared Peter T. Vilcans, and proved to me through satisfactory evidence of identification, which was his driver's license to be signed on the preceding or attached document, in my presence and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of his knowledge and belief,

Notary Public: James P. Haroutunian
My Commission Expires: 03/27/2020

JAMES P. HAROUTUNIAN
Notary Public
Commonwealth of Massachusetts
My Commission Expires
March 27, 2020

Middlesex South Registry of Deeds

Electronically Recorded Document

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Recording Information

Document Number	: 162083
Document Type	: DEED
Recorded Date	: September 15, 2020
Recorded Time	: 11:39:13 AM
Recorded Book and Page	: 75619 / 106
Number of Pages(including cover sheet)	: 4
Receipt Number	: 2520061
Recording Fee (including excise)	: $383.00

****
MASSACHUSETTS EXCISE TAX
Southern Middlesex District ROD # 001
Date: 09/15/2020 11:39 AM
Ctrl# 324779 05224 Doc# 00162083
Fee: $228.00 Cons: $50.000.00
****

Middlesex South Registry of Deeds
Maria C. Curtatone, Register
208 Cambridge Street
Cambridge, MA 02141
617-679-6300
www.middlesexsouthregistry.com

Property Address: 30 Cricket Lane, Littleton, Massachusetts 01460

QUITCLAIM DEED

I, **KATHLEEN A. MCNAMARA, Trustee** of the **A. D. MCNAMARA TRUST**, under Declaration of Trust dated October 14, 1994 and recorded in the Middlesex North Registry of Deeds at Book 7268, Page 102, with an amendment also recorded at said Registry at Book 18891, Page 159 of Dracut, Middlesex County, Massachusetts. Reference Trustee Certificate recorded at said Registry in Book 29808, Page 56.

for consideration paid and in full consideration of **FIFTY THOUSAND AND 00/100 ($50,000.00) DOLLARS**

grant to **PETER MCANESPIE**, being Individually, of 30 Bridle Path Tewksbury, MA

with Quitclaim Covenants

A certain parcel of land, with the buildings thereon, situated in Littleton in said County and Commonwealth, being shown as Lot B on a plan entitled "Plan of Land in Littleton, Mass." dated April 24, 1946, by Joseph C. Shaw, Surveyor, which plan is recorded with Middlesex South District Registry of Deeds, Book 6986, Page 196, bounded and described as follows:

SOUTHEASTERLY by the center line of a way as shown on said plan, 42.38 feet;
SOUTHWESTERLY by Lot C as shown on said plan, 64.51 feet;
NORTHWESTERLY by Spectacle Pond, 43.11 feet; and
NORTHEASTERLY by land of George E. Jones as shown on said plan, 76.93 feet.

Containing 2,815 square feet of land, be said contents and any or all of said measurements more or less and however otherwise said premises may be measured, bounded or described.

This conveyance is made subject to and with the benefit of a right of way three feet wide over a strip of land on the Southeasterly side of this parcel, more fully described in a deed from Marion Florence Kimball to Chester W. McInnis, et ux, dated May 31, 1946 and recorded with said Registry of Deeds, Book 6986, Page 197; and subject also to any and all other rights, easements and restrictions of record, if any there may be, insofar as the same may now be in force and effect.

By execution of this Deed, the Trustees hereby declare that the **A. D. MCNAMARA TRUST** is still in force and effect, all of the beneficiaries are competent and not minors or corporations and all of the beneficiaries have consented to the transfer of 30 Cricket Lane, Littleton, Massachusetts to the Grantee herein, for the amount of $50,000.00, and they have authorized **Kathleen A. McNamara** as Trustee to execute any and all documents necessary to effectuate said transaction.

This is not homestead property of the Grantor and therefore no one is entitled to a homestead exemption on this property.

Being the same premises conveyed to Grantor by Deed dated October 14, 1994, and recorded with the Middlesex North District Registry of Deeds in Book 24964, Page 431.

Executed as a sealed instrument this 14th day of September, 2020.

A. D. MCNAMARA TRUST

Kathleen A. McNamara Tr.
KATHLEEN A. MCNAMARA, TRUSTEE

COMMONWEALTH OF MASSACHUSETTS

MIDDLESEX, ss. September 14, 2020

On this day, before me, the undersigned Notary Public, personally appeared the above-named **KATHLEEN A. MCNAMARA,** Trustee as aforesaid, who proved to me through satisfactory evidence of identification, which was the presentation of a driver's license, to be the person whose name is signed on the preceding document, and acknowledged to me that she signed it voluntarily for its stated purpose and who swore or affirmed to me that the contents of the document are truthful and accurate to the best of her knowledge and belief.

Susan C. Pedi
Notary Public: Susan C. Pedi
My Commission Expires: 12/14/23

SUSAN C. PEDI
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
December 14, 2023

CAI Property Card

Town of Littleton, MA

LOT B

GENERAL PROPERTY INFORMATION

LOCATION: 30 CRICKET LN
ACRES: 0.06462
PARCEL ID: U46 11 0
LAND USE CODE: 101
CONDO COMPLEX:
OWNER: MCANESPIE PETER
CO - OWNER:
MAILING ADDRESS: 2 CRICKET LN
LITTLETON, MA 01460
ZONING: R
PATRIOT ACCOUNT #: 3613

SALE INFORMATION

SALE DATE: 9/15/2020
BOOK & PAGE: 75619-106
SALE PRICE: $50,000
SALE DESCRIPTION:
SELLER: MCNAMARA ALICE TRUSTEE OF THE,

PRINCIPAL BUILDING AREAS

GROSS BUILDING AREA: 1,780
FINISHED BUILDING AREA: 560
BASEMENT AREA: 560
 # OF PRINCIPAL BUILDINGS: 1

ASSESSED VALUES

LAND: 86,200
YARD: 0
BUILDING: 13,000
TOTAL: $99,200

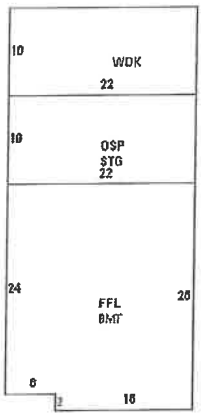
BUILDING EXTERIOR

BUILDING STYLE: CAMP,SEAS
UNITS: 1
YEAR BUILT: 1930
FRAME: WOOD
EXTERIOR WALL COVER: CLAPBOARD
ROOF STYLE: GABLE
ROOF COVER: ASPHALT

BUILDING INTERIOR

INTERIOR WALL: MINIMUM
FLOOR COVER: PLYWOOD
HEAT TYPE: NONE
FUEL TYPE: WOOD/COMBO
PERCENT A/C: 0
 # OF ROOMS: 4
 # OF BEDROOMS: 2
 # OF FULL BATHS: 1
 # OF HALF BATHS: 0
 # OF ADDITIONAL FIXTURES: 0
 # OF KITCHENS: 1
 # OF FIREPLACES: 0
 # OF METAL FIREPLACES: 0
 # OF BASEMENT GARAGES: 0

SKETCH



PHOTO

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Continued Public Hearing – Notice of Intent. Healy Corner – 195 Tahattawan (R07-1-0; MADEP # 204-899). Continued at request of Applicant's representative.

Continued Public Hearing – Notice of Intent. 336-338 King Street (U19-38-0 and 38-1; MADEP #204-9xx). Continued at request of Applicant's representative.

Administrative Discussion continued

- **Request for Certificate of Compliance 265 Foster Street (204-648).** Ms. Green and Ms. Seaward reported that work under and old Order of Conditions had proceeded but not necessarily in full, and that there were areas of encroachments further into the buffer zone and possibly BVW. The owner was in the process of cleaning up areas when the site walk was conducted. They will be contracting with Places Associates to do a new Notice of Intent.
- **Request for Certificate of Compliance Bennett Orchard (204-745).** Ms. Green reported that the construction punch list has been completed. Ms. Seaward moved to issue the Certificate of Compliance. Mr. Maxfield seconded. Roll call vote – Mr. Melberg (aye), Ms. Seaward (aye), Mr. Pickard (aye), Ms. Rupp (aye); Mr. Maxfield (aye), Mr. Crowley (aye), all in favor (6-0).
- **Land Use Permit - Littleton Little Town Tree Hunt.** Ms. Green reported on the third year of this activity. Ms. Seward moved to issue a Land Use Permit; Mr. Melberg seconded. Roll call vote –Mr. Melberg (aye), Ms. Seaward (aye), Mr. Pickard (aye), Ms. Rupp (aye); Mr. Maxfield (aye), Mr. Crowley (aye), all in favor (6-0).
- **Town Meeting Warrants.** Ms. Green reviewed some of the proposed Town Meeting warrants, particularly the purchase of 119 Tahattawan and the numerous road acceptances. Only Edwards Drive at Bennett Orchard has received a Certificate of Compliance from the Commission (earlier tonight). The Commission was particularly concerned that the wetland creation site (under a separate Order) had not been completed for Chestnut; that Durkee and Kaye basins may not be fully stabilized and observed under heavy rain conditions; that the Kaye bike trail easement had not been built; and the condition of the Couper basins and erosion at their trail. Ms. Green was directed to write a letter to the Planning Board outlining the concerns.
- **26-28-30 Cricket Lane.** Ms. Green reported that the owners of 26 and 28 had purchased 30 Cricket as they had indicated they might, which gives them more options for building one house. They would like to demolish the three cottages on those lots as they are a safety hazard. Ms. Green had raised the concern that they might lose their "grandfathering" with regards to work in the 50-foot No Disturb Area. The Commission agreed to go on the record that they would consider the existing cottages as the existing conditions if there are plans showing their original locations and the NOI for the new house is filed within a year. They will need to file an NOI for the demolition.

Continued Discussion – Enforcement Order – 5 Scott Road. Matt Marro (consultant for the owner) was present to discuss the restoration. Grading and seeding has been done and the surveyors are preparing the as-builts. He said by October 19th he should have photos of any new growth. He will monitor the area after this week's rain. He will provide the as-builts before the October 19th meeting.

-V46-9-D

Informal Discussion- 26 and 28 Cricket Lane. Owners Sue Clark ad Peter McAnespie were present to provide some preliminary plans and to discuss that they would like to tear down the two cabins at these addresses and build one house. It would be built as a year-round house with a holding tank, although since they live at 2 Cricket Lane it would be lightly used. The entire property is in the 50-foot No Disturb Area (NDA). The cabin at #26 is on piers, in poor shape, and the foundation at #28 is stone mason. They said they might be able to re-use the foundation if required. The holding tank must be 50 feet from adjacent wells which in turn dictates the location of the new house. They may look into buying a third lot for more options. The Commission discussed generally what would be need for a Waiver, including showing that the new house is no closer to the Pond, tree cutting and lawn size would be minimized, and perhaps other environmental improvements. A site walk was set for Thursday August 13th after the 3 Westchester site walk.

Continued Discussion – Enforcement Order – 5 Scott Road. Matt Marro (consultant for the owner) was present to discuss the restoration. He said Peter Scott, the owner, has spoken with him and that Mr. Scott will be mobilizing equipment to do the work soon. When asked, he said that the erosion controls are still in pace and in good condition. They will be giving me notice before any work starts, as required in the Order of Conditions for 204-907, which covers the restoration work. When asked for a specific schedule he said work would start within the next two weeks and would take 3-4 days, followed by seeding. When pressed for specific dates, he agreed that he will report back by the August 24th meeting that work has started and will provide photographs, and that by the September 14th meeting he will provide an as-built of the completed work. He was reminded to be careful about spreading any excavated purple loosestrife as it has been spreading in the area. He said that he had expected to pull and bag the loosestrife, but will get back to Ms. Green about handling and disposal plans.

Continued Public Hearing – Notice of Intent. Healy Corner – 195 Tahattawan (R07-1-0; MADEP #2204-899). Bruce Ringwall, GPR Engineers, was present to discuss the project. He reviewed the changes he has made to the CR and site plans in response to comments at the last meeting. The John's Way trail has been extended to show the approximate trail through to the Town Forest and has added the locations of the three boardwalks/foot bridges (the first two to be constructed by the applicant). On site pan sheets C-5.2, C-6.2 and C-8.1 they have moved all work so that erosion controls and grading do not cross the 50-foot No Disturb Area (NDA) for the Lot 15 and 16 houses. The extended trails were also added in where they show on these plans. With regard to the concerns the Commission expressed about salt impacts, he said that the MADEP stormwater guidance has no BMPs to treat salt. He said that they could commit to no NaCl on the private Alfred Way (which would mean using sand and/or CaCl) and that Dennis Circle, which is intended to be taken by the town, would have a long treatment train before any stormwater could get to the wetlands (deep sump basins to forebay to infiltration basin which only discharges in 100-year storm with 50-60 feet of vegetated slope before reaching the Wetland Creation Area #1). The sand filter has a low level discharge pipe. Without it, the sand filter would fill up with water and overflow. He said that the discharge pipe could be stopped +/- 30 feet from the wetland edge/Wetland Creation Area #2. Commissioners continued to express concern about water quality impacts, and especially salt impacts, to the groundwater and wetlands, especially given that the site is in the Fort Pond Brook/Assabet River watershed.

Lucia Pacitti

From: Amy Green
Sent: Monday, March 11, 2024 8:35 AM
To: Lucia Pacitti
Cc: Tim Pearson
Subject: 24-26-28 Cricket

I have looked at the plans dated March 2024 which is the subject of a variance request to ZBA. Conservation Commission did issue an Order of Conditions approving the plan dated August 6, 2021 (MADEP #204-0938). A proposed amendment was submitted with a plan date of May 12, 2023, but the Commission did not accept that amendment as per the meeting of June 6, 2023. It should be noted that almost the entire property, including the demolition of the other two houses, is within the restricted 50-foor No Disturb Area under the Littleton Wetlands Bylaw, but that a Waiver was issued.

I would request that the engineer/applicant confirm that the plan submitted (and associated grading, holding tank and other features) to the ZBA is consistent with the August 6, 2021 plan approved by the Conservation Commission. It does appear that the approved northern deck is wider and that the approved deck/stairs on the eastern side of the house has been removed.

Amy Green
Conservation Agent
Littleton Conservation Commission
37 Shattuck Street
PO Box 1305/Room B100
Littleton, MA 01460
978-540-2428
Hours – M-Th 9:00 – 1:00

NOTICE OF INTENT

Filed Under the Massachusetts Wetlands Protection Act
and the Littleton Wetlands Bylaw Chapter 171

for

Razing the three existing dwellings, construction of a new dwelling and sewage disposal system within the 100' Buffer Zone to a Bordering Vegetated Wetland

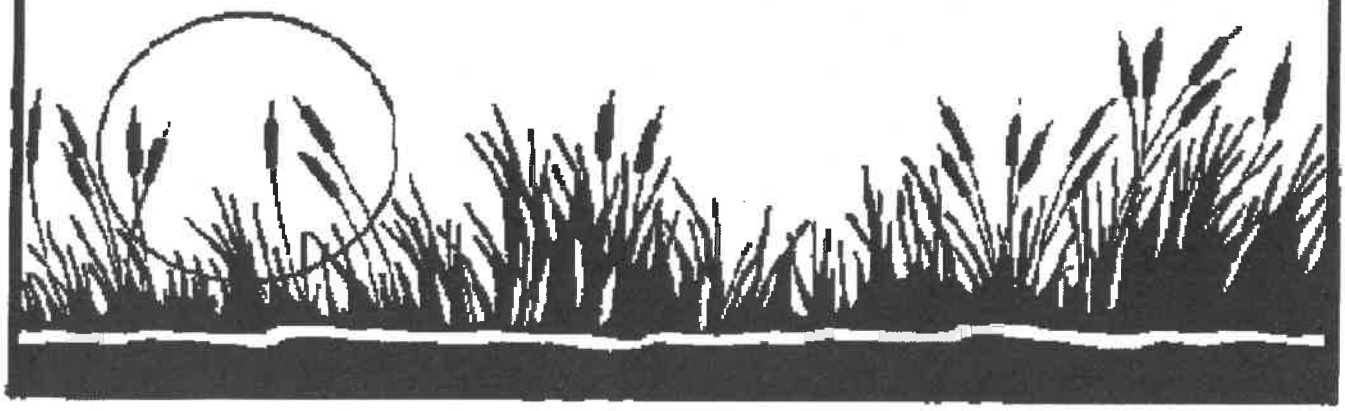
Located at

26, 28 & 30 Cricket Lane – Littleton, MA 01460
(Assessor's Map U 46, Parcels 9, 10 & 11)
(0.21 AC.)

APPLICANT/OWNER
Peter McAnespie
D.E.R.A. Project Number 33242

REPRESENTATIVE
Brandon Ducharme
David E. Ross Associates, Inc.
Civil Engineers, Land Surveyors
& Environmental Consultants
P. O. Box 795
Harvard, MA 01451

July, 2021



Massachusetts Department of Environmental Protection

Bureau of Resource Protection – Wetlands

WPA Attachment A.

Massachusetts Wetlands Protection Act M.G.L. c. 131 s. 40

Proposed Project Description

PROJECT LOCATION
26, 28 & 30 Cricket Lane
Littleton, MA
(Assessor's Map U 46 Parcel 9, 10 & 11)

OWNER/APPLICANT
Peter McAnespie
2 Cricket Lane
Littleton, MA 01460

SITE DESCRIPTION
The project site consists of three residential house lots (26, 28 & 30 Cricket Lane) along Spectacle Pond. Each of the lots are "pre-existing" "non-conforming" lots with access to Cricket Lane, a private way off Spectacle Pond Road. 26 Cricket Lane is a 2,633 S.F. lot with an existing 2-bedroom home constructed in 1960. 28 Cricket Lane is a 3,732 S.F. lot with an existing 2-bedroom home constructed in 1930. Lastly, 30 Cricket Lane is a 2,815 S.F. lot with an existing 2-bedroom home constructed in 1930. There isn't any information available pertaining to existing septic or well locations on any of the lots. The properties slope moderately steeply down from Cricket Lane to Spectacle Pond. The landscape is relatively open with specimen trees consisting of white pine, red oak, red maple, hemlock and birch located between the cottages. There is an existing foot path that provides access off Cricket Lane. All three homes are located within a Residential Zoning district.

Spectacle Pond is considered Land Under Water pursuant to 310 CMR 10.56. There is an associated mean-annual high water line (top of bank) that defines confines of the pond which is identified by wetland delineation flags 20-1 through 20-19, 20-1A and 20-2A. There is a 100' Buffer Zone that extends landward from wetland line. Almost the entirety of the project site is located within the 50-foot "No Disturb" area of the Buffer Zone. There is a portion of the site adjacent to the pond that is subject to the 100-year frequency storm event as shown on Map 25017C0217E dated June 4, 2010 by the Federal Emergency Management Agency (FEMA). No base flood elevation is determined in this area. This area is considered Bordering Land Subject to Flooding pursuant to 310 CMR 10.57. Soil testing performed at the site identified a well-drained medium to course sand below the top and subsoil.

PROJECT DESCRIPTION
The proposed projects consist of the demolition of all three of the existing cottages and the re-construction of a new 24'x42' single-family dwelling in the general location of 30 Cricket Lane. 30 Cricket Lane is located approximately 1.8 feet from the wetland boundary. The proposed dwelling will be further up the side-slope towards Cricket lane to provide an 11.4 foot separation from the wetland at the closest point. Given that none of three existing residences currently have a viable potable water source we are proposing to install a new well to serve the new dwelling. The proposed well is located approximately 39 feet from the wetland. The proposed project will also include the installation of a new sewage disposal system consisting of a 4,000 gallon Holding Tank located between Cricket Lane and the proposed house. Stormwater runoff will be collected from the proposed driveway to be directly infiltrated at the site via a recharge trench. Furthermore, Roof top runoff will be collected by gutters and directed to the recharge trench.

Massachusetts Department of Environmental Protection

Bureau of Resource Protection – Wetlands

WPA Attachment A.

Massachusetts Wetlands Protection Act M.G.L. c. 131 s. 40

Proposed Project Description

There is approximately 2,170 square feet of existing impervious area from the combined three properties all of which is located within the 50-foot wetland offset. The dwellings at 26 & 28 Cricket Lane will be razed and the site will be restored to a vegetated "natural" state. The proposed site improvements will have 1,731 S.F. of impervious area of which only 1,378 S.F. will be within the 50-foot wetland setback. There is a net reduction of 439 S.F. impervious area at the site.

A waiver is required from Section 4.2(2)(a) of the Littleton Wetland Protection Regulation to allow work within the No-Disturbance Area. There is only a small amount of area at the site that is outside the 50-foot No-Disturb Area. The proposed structure has been located with a greater setback from the wetland than all three of the existing dwellings. Due to the constraints of the existing site an alternative location for the re-constructed dwelling outside the No-Disturb Area does not exist. Much of work proposed in the No-Disturb is associated with razing the existing structures and restoring the site to a more natural state.

EROSION CONTROL/SILTATION BARRIRER

Erosion and sediment controls have been incorporated in the plan with the objective of retaining sediment on site, filtering and reducing storm water discharge and protecting wetland and undisturbed areas. A siltation barrier consisting of a straw wattles will be installed up gradient from Wetland Resource Areas that may receive runoff from the construction activities. The siltation barrier will be installed prior to the commencement of work at the limit of the proposed disturbance. The proposed siltation barrier shall remain in place and be maintained until all disturbed areas have become stable and with the approval of the Conservation Commission.

SUPPLEMENTAL INFORMATION

- The project is not within an ORW
- The project is not within a NHESP rare and endangered species area
- The project is not within an ACEC
- A portion of project site is located within a FEMA designated flood zone

PLANS/MAPS INCLUDED IN NOI

- USGS Topo
- NHESP Map
- FEMA Flood Insurance Rate Map
- Sewage Disposal System Holding Tank- Designed for Peter McAnspie, Plan No. L-14345

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

WPA Form 3 – Notice of Intent

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Provided by MassDEP:

MassDEP File Number

Document Transaction Number

Littleton
City/Town

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

Note: Before completing this form consult your local Conservation Commission regarding any municipal bylaw or ordinance.

A. General Information

1. Project Location (**Note:** electronic filers will click on button to locate project site):

26, 28 & 30 Cricket Lane — a. Street Address
Littleton — b. City/Town
01460 — c. Zip Code

Latitude and Longitude:
42.5622 — d. Latitude
-71.5170 — e. Longitude

U 46 — f. Assessors Map/Plat Number
9, 10 & 11 — g. Parcel /Lot Number

2. Applicant:

Peter — a. First Name
McAnespie — b. Last Name
c. Organization
2 Cricket Lane — d. Street Address
Littleton — e. City/Town
MA — f. State
01460 — g. Zip Code
(781) 718-7983 — h. Phone Number
i. Fax Number
mcanespie@gmail.com — j. Email Address

3. Property owner (required if different from applicant): ☐ Check if more than one owner

a. First Name
b. Last Name
c. Organization
d. Street Address
e. City/Town
f. State
g. Zip Code
h. Phone Number
i. Fax Number
j. Email address

4. Representative (if any):

Brandon — a. First Name
Ducharme — b. Last Name
David E. Ross Associates, Inc. — c. Company
PO Box 795 — d. Street Address
Harvard — e. City/Town
MA — f. State
01451 — g. Zip Code
978-772-6232 — h. Phone Number
978-772-6258 — i. Fax Number
bducharme@davideross.com — j. Email address

5. Total WPA Fee Paid (from NOI Wetland Fee Transmittal Form):

$500.00 — a. Total Fee Paid
$237.50 — b. State Fee Paid
$262.50 — c. City/Town Fee Paid

A. General Information (continued)

6. General Project Description:

Razing three existing dwellings, constructin of a new dwelling and sewage disposal system

7a. Project Type Checklist: (Limited Project Types see Section A. 7b.)

1. ☒ Single Family Home
2. ☐ Residential Subdivision
3. ☐ Commercial/Industrial
4. ☐ Dock/Pier
5. ☐ Utilities
6. ☐ Coastal engineering Structure
7. ☐ Agriculture (e.g., cranberries, forestry)
8. ☐ Transportation
9. ☐ Other

7b. Is any portion of the proposed activity eligible to be treated as a limited project (including Ecological Restoration Limited Project) subject to 310 CMR 10.24 (coastal) or 310 CMR 10.53 (inland)?

1. ☐ Yes ☒ No

If yes, describe which limited project applies to this project. (See 310 CMR 10.24 and 10.53 for a complete list and description of limited project types)

2. Limited Project Type

If the proposed activity is eligible to be treated as an Ecological Restoration Limited Project (310 CMR10.24(8), 310 CMR 10.53(4)), complete and attach Appendix A: Ecological Restoration Limited Project Checklist and Signed Certification.

8. Property recorded at the Registry of Deeds for:

Middlesex South	
a. County	b. Certificate # (if registered land)
73861, 73353, 75619	459, 213, 106
c. Book	d. Page Number

B. Buffer Zone & Resource Area Impacts (temporary & permanent)

1. ☒ Buffer Zone Only – Check if the project is located only in the Buffer Zone of a Bordering Vegetated Wetland, Inland Bank, or Coastal Resource Area.
2. ☐ Inland Resource Areas (see 310 CMR 10.54-10.58; if not applicable, go to Section B.3, Coastal Resource Areas).

Check all that apply below. Attach narrative and any supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

For all projects affecting other Resource Areas, please attach a narrative explaining how the resource area was delineated.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Bank	1. linear feet	2. linear feet
b. ☐ Bordering Vegetated Wetland	1. square feet	2. square feet
c. ☐ Land Under Waterbodies and Waterways	1. square feet 3. cubic yards dredged	2. square feet

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
d. ☐ Bordering Land Subject to Flooding	1. square feet 3. cubic feet of flood storage lost	2. square feet 4. cubic feet replaced
e. ☐ Isolated Land Subject to Flooding	1. square feet 2. cubic feet of flood storage lost	3. cubic feet replaced

f. ☐ Riverfront Area

1. Name of Waterway (if available) - **specify coastal or inland**

2. Width of Riverfront Area (check one):

☐ 25 ft. - Designated Densely Developed Areas only

☐ 100 ft. - New agricultural projects only

☐ 200 ft. - All other projects

3. Total area of Riverfront Area on the site of the proposed project: _____ square feet

4. Proposed alteration of the Riverfront Area:

a. total square feet _____ b. square feet within 100 ft. _____ c. square feet between 100 ft. and 200 ft. _____

5. Has an alternatives analysis been done and is it attached to this NOI? ☐ Yes ☐ No

6. Was the lot where the activity is proposed created prior to August 1, 1996? ☐ Yes ☐ No

3. ☐ Coastal Resource Areas: (See 310 CMR 10.25-10.35)

Note: for coastal riverfront areas, please complete **Section B.2.f**. above.

B. Buffer Zone & Resource Area Impacts (temporary & permanent) (cont'd)

Check all that apply below. Attach narrative and supporting documentation describing how the project will meet all performance standards for each of the resource areas altered, including standards requiring consideration of alternative project design or location.

Online Users: Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

Resource Area	Size of Proposed Alteration	Proposed Replacement (if any)
a. ☐ Designated Port Areas	Indicate size under Land Under the Ocean, below	
b. ☐ Land Under the Ocean	1. square feet 2. cubic yards dredged	
c. ☐ Barrier Beach	Indicate size under Coastal Beaches and/or Coastal Dunes below	
d. ☐ Coastal Beaches	1. square feet	2. cubic yards beach nourishment
e. ☐ Coastal Dunes	1. square feet	2. cubic yards dune nourishment
	Size of Proposed Alteration	Proposed Replacement (if any)
f. ☐ Coastal Banks	1. linear feet	
g. ☐ Rocky Intertidal Shores	1. square feet	
h. ☐ Salt Marshes	1. square feet	2. sq ft restoration, rehab., creation
i. ☐ Land Under Salt Ponds	1. square feet 2. cubic yards dredged	
j. ☐ Land Containing Shellfish	1. square feet	
k. ☐ Fish Runs	Indicate size under Coastal Banks, inland Bank, Land Under the Ocean, and/or inland Land Under Waterbodies and Waterways, above 1. cubic yards dredged	
l. ☐ Land Subject to Coastal Storm Flowage	1. square feet	

4. ☐ Restoration/Enhancement
If the project is for the purpose of restoring or enhancing a wetland resource area in addition to the square footage that has been entered in Section B.2.b or B.3.h above, please enter the additional amount here.

a. square feet of BVW _____ b. square feet of Salt Marsh _____

5. ☐ Project Involves Stream Crossings

a. number of new stream crossings _____ b. number of replacement stream crossings _____

C. Other Applicable Standards and Requirements

☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section C and complete Appendix A: Ecological Restoration Limited Project Checklists – Required Actions (310 CMR 10.11).

Streamlined Massachusetts Endangered Species Act/Wetlands Protection Act Review

1. Is any portion of the proposed project located in **Estimated Habitat of Rare Wildlife** as indicated on the most recent Estimated Habitat Map of State-Listed Rare Wetland Wildlife published by the Natural Heritage and Endangered Species Program (NHESP)? To view habitat maps, see the *Massachusetts Natural Heritage Atlas* or go to http://maps.massgis.state.ma.us/PRI_EST_HAB/viewer.htm.

   a. ☐ Yes ☒ No

   If yes, include proof of mailing or hand delivery of NOI to:

   Natural Heritage and Endangered Species Program
   Division of Fisheries and Wildlife
   1 Rabbit Hill Road
   Westborough, MA 01581

   Current MassGIS
   b. Date of map

   If *yes*, the project is also subject to Massachusetts Endangered Species Act (MESA) review (321 CMR 10.18). To qualify for a streamlined, 30-day, MESA/Wetlands Protection Act review, please complete Section C.1.c, and include requested materials with this Notice of Intent (NOI); *OR* complete Section C.2.f, if applicable. *If MESA supplemental information is not included with the NOI, by completing Section 1 of this form, the NHESP will require a separate MESA filing which may take up to 90 days to review (unless noted exceptions in Section 2 apply, see below).*

   c. Submit Supplemental Information for Endangered Species Review*

      1. ☐ Percentage/acreage of property to be altered:

         (a) within wetland Resource Area _____ percentage/acreage

         (b) outside Resource Area _____ percentage/acreage

      2. ☐ Assessor's Map or right-of-way plan of site

2. ☐ Project plans for entire project site, including wetland resource areas and areas outside of wetlands jurisdiction, showing existing and proposed conditions, existing and proposed tree/vegetation clearing line, and clearly demarcated limits of work **

   (a) ☐ Project description (including description of impacts outside of wetland resource area & buffer zone)

   (b) ☐ Photographs representative of the site

---

* Some projects **not** in Estimated Habitat may be located in Priority Habitat, and require NHESP review (see http://www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/regulatory-review/). Priority Habitat includes habitat for state-listed plants and strictly upland species not protected by the Wetlands Protection Act.

** MESA projects may not be segmented (321 CMR 10.16). The applicant must disclose full development plans even if such plans are not required as part of the Notice of Intent process.

C. Other Applicable Standards and Requirements (cont'd)

(c) ☐ MESA filing fee (fee information available at http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_fee_schedule.htm). Make check payable to "Commonwealth of Massachusetts - NHESP" and ***mail to NHESP*** at above address

*Projects altering **10 or more acres** of land, also submit:*

(d) ☐ Vegetation cover type map of site

(e) ☐ Project plans showing Priority & Estimated Habitat boundaries

(f) OR Check One of the Following

1. ☐ Project is exempt from MESA review.
Attach applicant letter indicating which MESA exemption applies. (See 321 CMR 10.14, http://www.mass.gov/dfwele/dfw/nhesp/regulatory_review/mesa/mesa_exemptions.htm; the NOI must still be sent to NHESP if the project is within estimated habitat pursuant to 310 CMR 10.37 and 10.59.)

2. ☐ Separate MESA review ongoing. a. NHESP Tracking # b. Date submitted to NHESP

3. ☐ Separate MESA review completed.
Include copy of NHESP "no Take" determination or valid Conservation & Management Permit with approved plan.

3. For coastal projects only, is any portion of the proposed project located below the mean high water line or in a fish run?

a. ☒ Not applicable – project is in inland resource area only b. ☐ Yes ☐ No

If yes, include proof of mailing, hand delivery, or electronic delivery of NOI to either:

South Shore - Cohasset to Rhode Island border, and the Cape & Islands:

Division of Marine Fisheries -
Southeast Marine Fisheries Station
Attn: Environmental Reviewer
1213 Purchase Street – 3rd Floor
New Bedford, MA 02740-6694
Email: DMF.EnvReview-South@state.ma.us

North Shore - Hull to New Hampshire border:

Division of Marine Fisheries -
North Shore Office
Attn: Environmental Reviewer
30 Emerson Avenue
Gloucester, MA 01930
Email: DMF.EnvReview-North@state.ma.us

Also if yes, the project may require a Chapter 91 license. For coastal towns in the Northeast Region, please contact MassDEP's Boston Office. For coastal towns in the Southeast Region, please contact MassDEP's Southeast Regional Office.

C. Other Applicable Standards and Requirements (cont'd)

Online Users: Include your document transaction number (provided on your receipt page) with all supplementary information you submit to the Department.

4. Is any portion of the proposed project within an Area of Critical Environmental Concern (ACEC)?

   a. ☐ Yes ☒ No — If yes, provide name of ACEC (see instructions to WPA Form 3 or MassDEP Website for ACEC locations). **Note:** electronic filers click on Website.

   b. ACEC

5. Is any portion of the proposed project within an area designated as an Outstanding Resource Water (ORW) as designated in the Massachusetts Surface Water Quality Standards, 314 CMR 4.00?

   a. ☐ Yes ☒ No

6. Is any portion of the site subject to a Wetlands Restriction Order under the Inland Wetlands Restriction Act (M.G.L. c. 131, § 40A) or the Coastal Wetlands Restriction Act (M.G.L. c. 130, § 105)?

   a. ☐ Yes ☒ No

7. Is this project subject to provisions of the MassDEP Stormwater Management Standards?

   a. ☐ Yes. Attach a copy of the Stormwater Report as required by the Stormwater Management Standards per 310 CMR 10.05(6)(k)-(q) and check if:

      1. ☐ Applying for Low Impact Development (LID) site design credits (as described in Stormwater Management Handbook Vol. 2, Chapter 3)

      2. ☐ A portion of the site constitutes redevelopment

      3. ☐ Proprietary BMPs are included in the Stormwater Management System.

   b. ☒ No. Check why the project is exempt:

      1. ☒ Single-family house

      2. ☐ Emergency road repair

      3. ☐ Small Residential Subdivision (less than or equal to 4 single-family houses or less than or equal to 4 units in multi-family housing project) with no discharge to Critical Areas.

D. Additional Information

☐ This is a proposal for an Ecological Restoration Limited Project. Skip Section D and complete Appendix A: Ecological Restoration Notice of Intent – Minimum Required Documents (310 CMR 10.12).

Applicants must include the following with this Notice of Intent (NOI). See instructions for details.

Online Users: Attach the document transaction number (provided on your receipt page) for any of the following information you submit to the Department.

1. ☒ USGS or other map of the area (along with a narrative description, if necessary) containing sufficient information for the Conservation Commission and the Department to locate the site. (Electronic filers may omit this item.)

2. ☒ Plans identifying the location of proposed activities (including activities proposed to serve as a Bordering Vegetated Wetland [BVW] replication area or other mitigating measure) relative to the boundaries of each affected resource area.

D. Additional Information (cont'd)

3. ☒ Identify the method for BVW and other resource area boundary delineations (MassDEP BVW Field Data Form(s), Determination of Applicability, Order of Resource Area Delineation, etc.), and attach documentation of the methodology.

4. ☒ List the titles and dates for all plans and other materials submitted with this NOI.

Sewage Disposal System Holding Tank, designed for Peter McAnespie (Plan #L-14345)
a. Plan Title

David E. Ross Associates, Inc.
b. Prepared By

Daniel B. Wolfe, P.E.
c. Signed and Stamped by

d. Final Revision Date

1=20'
e. Scale

f. Additional Plan or Document Title

g. Date

5. ☐ If there is more than one property owner, please attach a list of these property owners not listed on this form.

6. ☐ Attach proof of mailing for Natural Heritage and Endangered Species Program, if needed.

7. ☐ Attach proof of mailing for Massachusetts Division of Marine Fisheries, if needed.

8. ☐ Attach NOI Wetland Fee Transmittal Form

9. ☐ Attach Stormwater Report, if needed.

E. Fees

1. ☐ Fee Exempt: No filing fee shall be assessed for projects of any city, town, county, or district of the Commonwealth, federally recognized Indian tribe housing authority, municipal housing authority, or the Massachusetts Bay Transportation Authority.

Applicants must submit the following information (in addition to pages 1 and 2 of the NOI Wetland Fee Transmittal Form) to confirm fee payment:

555
2. Municipal Check Number

6/25/2021
3. Check date

556
4. State Check Number

6/25/2021
5. Check date

Susan
6. Payor name on check: First Name

Clark
7. Payor name on check: Last Name

F. Signatures and Submittal Requirements

I hereby certify under the penalties of perjury that the foregoing Notice of Intent and accompanying plans, documents, and supporting data are true and complete to the best of my knowledge. I understand that the Conservation Commission will place notification of this Notice in a local newspaper at the expense of the applicant in accordance with the wetlands regulations, 310 CMR 10.05(5)(a).

I further certify under penalties of perjury that all abutters were notified of this application, pursuant to the requirements of M.G.L. c. 131, § 40. Notice must be made by Certificate of Mailing or in writing by hand delivery or certified mail (return receipt requested) to all abutters within 100 feet of the property line of the project location.

(AGENT)	7/1/2021
1. Signature of Applicant	2. Date
3. Signature of Property Owner (if different)	4. Date
	7/1/2021
5. Signature of Representative (if any)	6. Date

For Conservation Commission:
Two copies of the completed Notice of Intent (Form 3), including supporting plans and documents, two copies of the NOI Wetland Fee Transmittal Form, and the city/town fee payment, to the Conservation Commission by certified mail or hand delivery.

For MassDEP:
One copy of the completed Notice of Intent (Form 3), including supporting plans and documents, one copy of the NOI Wetland Fee Transmittal Form, and a **copy** of the state fee payment to the MassDEP Regional Office (see Instructions) by certified mail or hand delivery.

Other:
If the applicant has checked the "yes" box in any part of Section C, Item 3, above, refer to that section and the Instructions for additional submittal requirements.

The original and copies must be sent simultaneously. Failure by the applicant to send copies in a timely manner may result in dismissal of the Notice of Intent.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

Important: When filling out forms on the computer, use only the tab key to move your cursor - do not use the return key.

A. Applicant Information

1. Location of Project:

26, 28 & 30 Cricket Lance	Littleton
a. Street Address	b. City/Town
556	$237.50
c. Check number	d. Fee amount

2. Applicant Mailing Address:

Peter	McAnspie
a. First Name	b. Last Name

c. Organization

2 Cricket Lane
d. Mailing Address

Littleton	MA	01460
e. City/Town	f. State	g. Zip Code

(781) 718-7983		mcanespie@gmail.com
h. Phone Number	i. Fax Number	j. Email Address

3. Property Owner (if different):

a. First Name	b. Last Name

c. Organization

d. Mailing Address

e. City/Town	f. State	g. Zip Code

h. Phone Number	i. Fax Number	j. Email Address

To calculate filing fees, refer to the category fee list and examples in the instructions for filling out WPA Form 3 (Notice of Intent).

B. Fees

Fee should be calculated using the following process & worksheet. ***Please see Instructions before filling out worksheet.***

Step 1/Type of Activity: Describe each type of activity that will occur in wetland resource area and buffer zone.

Step 2/Number of Activities: Identify the number of each type of activity.

Step 3/Individual Activity Fee: Identify each activity fee from the six project categories listed in the instructions.

Step 4/Subtotal Activity Fee: Multiply the number of activities (identified in Step 2) times the fee per category (identified in Step 3) to reach a subtotal fee amount. Note: If any of these activities are in a Riverfront Area in addition to another Resource Area or the Buffer Zone, the fee per activity should be multiplied by 1.5 and then added to the subtotal amount.

Step 5/Total Project Fee: Determine the total project fee by adding the subtotal amounts from Step 4.

Step 6/Fee Payments: To calculate the state share of the fee, divide the total fee in half and subtract $12.50. To calculate the city/town share of the fee, divide the total fee in half and add $12.50.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands

NOI Wetland Fee Transmittal Form

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

B. Fees (continued)

Step 1/Type of Activity	Step 2/Number of Activities	Step 3/Individual Activity Fee	Step 4/Subtotal Activity Fee
2a. Construction of a house	1	$500.00	$500.00

Step 5/Total Project Fee: $500.00

Step 6/Fee Payments:

Total Project Fee:	$500.00 a. Total Fee from Step 5
State share of filing Fee:	$237.50 b. 1/2 Total Fee **less** $12.50
City/Town share of filling Fee:	$262.50 c. 1/2 Total Fee **plus** $12.50

C. Submittal Requirements

a.) Complete pages 1 and 2 and send with a check or money order for the state share of the fee, payable to the Commonwealth of Massachusetts.

Department of Environmental Protection
Box 4062
Boston, MA 02211

b.) **To the Conservation Commission:** Send the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and the city/town fee payment.

To MassDEP Regional Office (see Instructions): Send a copy of the Notice of Intent or Abbreviated Notice of Intent; a **copy** of this form; and a **copy** of the state fee payment. (E-filers of Notices of Intent may submit these electronically.)

Notification to Abutters
Under the MASSACHUSETTS WETLANDS PROTECTION ACT AND LITTLETON WETLANDS BYLAW

[CMR 310 10.00 & Chapter 171 Wetland Protection]

In accordance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, you are hereby notified of the following:

Applicant: Peter McAnespie
Municipality: Littleton

Project Description (as it applies under the Massachusetts Wetlands Protections Act and the Lancaster Wetlands Bylaw): Razing three existing dwellings, construction of a new dwelling and sewage disposal system.

Address of Lot where project is proposed:

26, 28 & 30 Cricket Lance – Littleton, Mass. 01460
(Assessor's Map U 46 – Parcel 9, 10 & 11)

For more information, call: 978-540-2428

Copies of the Notice of Intent may be obtained from the ☐ Applicant, or the ■ Applicants Representative by calling this telephone number: **(978) 772-6232** between 8:00 and 3:30 - Monday through Friday, ($20.00 copying cost).

The Public Hearing is scheduled for Monday July26, 2021. There will be no in-person public attendance, given building closures due to COVID-19. The Public may participate by watching or joining remotely; information on remote access to the meeting will be posted on the Agenda 48 hours in advance of the meeting. The agenda will be on the Town website at littletonma.org. The application can be viewed on the calendar at https://www.littletonma.org/conservation (where information on remote access will also be posted at least 48 hours in advance of the meeting). Contact the Conservation Commission office at (978) 540-2428 if there are questions.

Notice of the Public Hearing, including date, time, and place will be published at least five (5) days in advance in the The Lowell Sun

AFFIDAVIT OF SERVICE

Under the Massachusetts Wetlands Protection Act

(to be submitted to the Massachusetts Department of Environmental Protection and the Littleton Conservation Commission when filing a Notice of Intent)

I, **Brandon Ducharme,** hereby certify under the pains and penalties of perjury that on July 2, 2021, I gave notification to abutters in compliance with the second paragraph of Massachusetts General Laws Chapter 131, Section 40, and the DEP Guide to Abutter Notification dated April 8, 1994 in connection with the following matter:

A Notice of Intent was filed under the Massachusetts Wetlands Protection Act by Peter McAnspie

with the **Littleton Conservation Commission**

for property located at: **26, 28 & 30 Cricket Lane – Littleton, MA**
(Assessor's Map U 46– Parcel 9, 10 & 11)

The form of the notification, and a list of the abutters to whom it was given and their addresses, are attached to this Affidavit of Service.

Name

7/2/2021
Date

TOWN OF LITTLETON
BOARD OF ASSESSORS
P.O. BOX 1305
LITTLETON, MA 01460
(978) 540-2410
FAX: (978) 952-2321

Date: May 28, 2021

Re: Certified List of Abutters - Conservation Commission

Applicant: Pam Taylor
Name of Firm: David E. Ross Associates
Mailing Address 6 Lancaster County Road, Harvard MA 01451

Subject Parcel Location: 26, 28 and 30 Cricket Lane
Subject Parcel No.: U46-9-0, U46-10-0 and U46-11-0
Subject Owner Name: Peter McAnespie

M.G.L. Chapter 131: Section 40 ..... "Any person filing a notice of intention with a conservation commission shall at the same time give written notification thereof, by delivery in hand or certified mail, return receipt requested, to all abutters within one hundred feet of the property line of the land where the activity is proposed, but not limited to, owners of land directly opposite said proposed activity on any public or private street or way, and in another municipality or across a body of water. When a notice of intent proposes activities on land under water bodies and waterways or on a tract of land greater than 50 acres, written notification shall be given to all abutters within 100 feet of the proposed project site. For the purposes of this action, "project site" shall mean lands where the following activities are proposed to take place: dredging, excavating, filling, grading, the erection, reconstruction or expansion of a building or structure, the driving of pilings, the construction or improvement of roads or other ways and the installation of drainage, sewerage and water systems, and "land under water bodies and waterways" shall mean the bottom of, or land under, the surface of the ocean or an estuary, creek, river stream, pond or lake. When a notice of intent proposes activity on a linear shaped project site longer than 1,000 feet in length, notification shall be given to all abutters within 1,000 feet of the proposed project site. If the linear project site takes place wholly within an easement through another person's land, notice shall also be given to the landowner. Said notification shall be at the applicant's expense, and shall state where copies of the notice of intention may be examined and obtained and where information regarding the date, time and place of the public hearing may be obtained. Proof of such notification, with a copy of the notice mailed or delivered, shall be filed with the conservation commission."…….

I hereby certify the attached list of abutter (s) as stated in the M.G.L. Chapter 131, Section 40.

Number of Abutter (s) *10* including subject parcel.

Certified by:

Christine Kumar

Christine Kumar, Assistant Assessor

28 CRICKET LN U46 10 0

LUC: 101

MCANESPIE PETER A SR

2 CRICKET LANE

LITTLETON, MA 01460

30 CRICKET LN U46 11 0

LUC: 101

MCANESPIE PETER

2 CRICKET LN

LITTLETON, MA 01460

29 CRICKET LN U46 12 0

LUC: 101

MCKENNA GAIL K

29 CRICKET LN

LITTLETON, MA 01460

25 CRICKET LN U46 12 A

LUC: 101

WARNER ROBERT G

WARNER KRISTEN F

25 CRICKET LANE

LITTLETON, MA 01460

BARON WY U46 25 0

LUC 132

BARON DAVID E

BARON JENNY D

6 BARON WY

LITTLETON, MA 01460

20 CRICKET LN U46 5 0

LUC 101

BORR NANCY E

20 CRICKET LN

LITTLETON, MA 01460

CRICKET LN U46 6 0

LUC: 132

WARNER ROBERT G

WARNER KRISTEN F

25 CRICKET LN

LITTLETON, MA 01460

22 CRICKET LN U46 7 0

LUC: 101

FLANNERY ROBERT JAMES

22 CRICKET LN

LITTLETON, MA 01460

24 CRICKET LN U46 8 0

LUC: 101

SWAIDA MONICA O

60 DEPOT ST

WESTFORD, MA 01886

26 CRICKET LN U46 9 0

LUC: 101

MCANESPIE PETER

26 CRICKET LN

LITTLETON, MA 01460

Littleton, MA

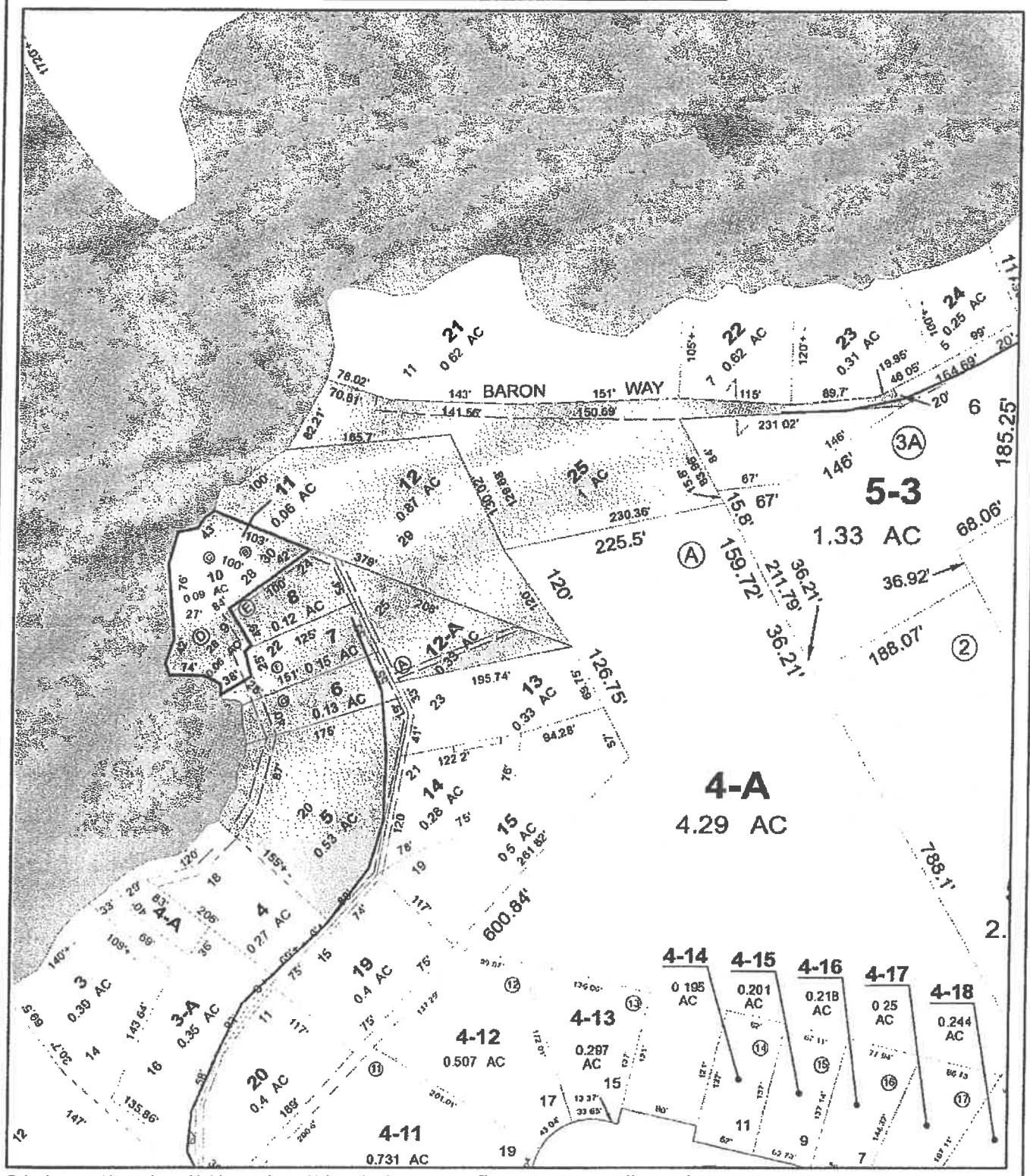
1 inch = 138 Feet

May 27, 2021

0 138 276 414

CAI Technologies

www.cai-tech.com



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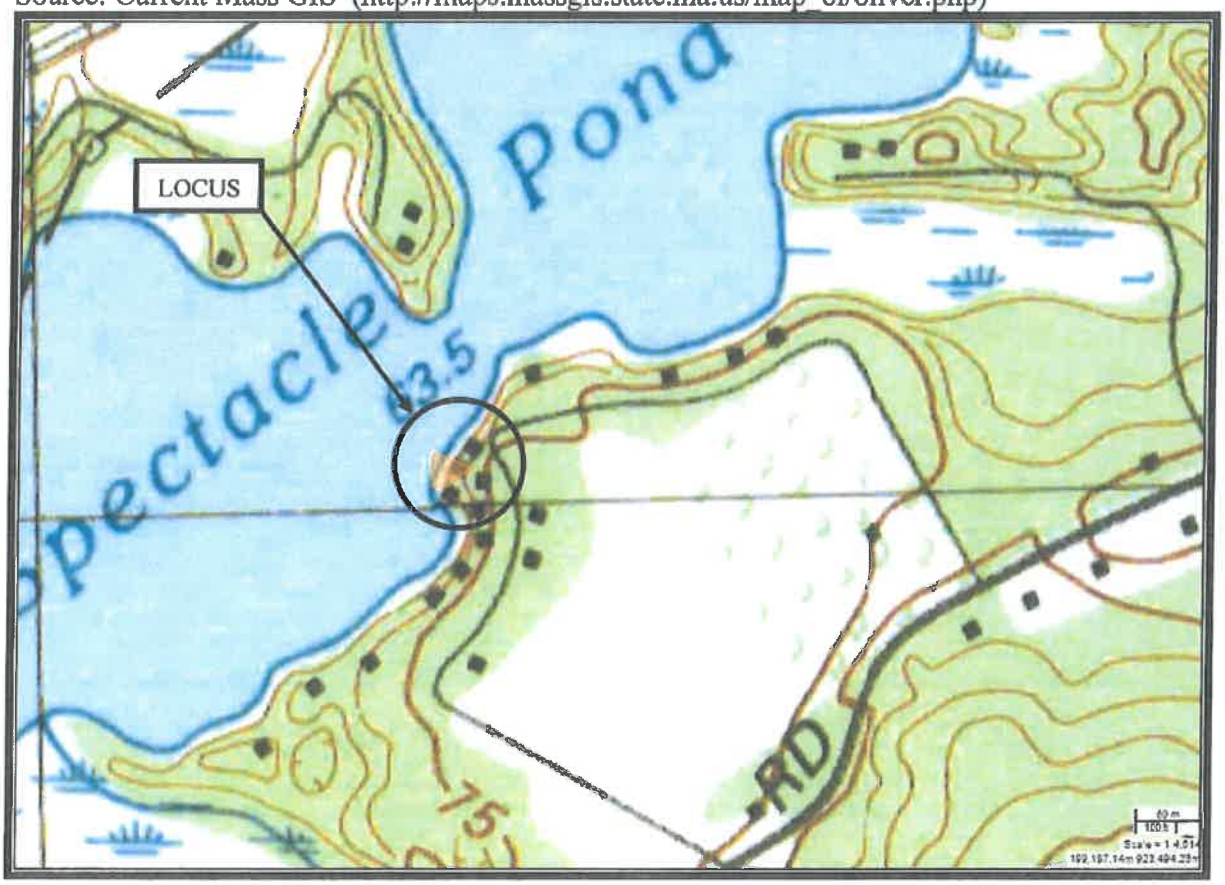
DAVID E. ROSS ASSOCIATES, INC.

Civil Engineers, Land Surveyors, Environmental Consultants

USGS Map

Site: #26, #28 and #30 Cricket Lane – Littleton, MA 01460
(Map U46 – Parcels 9, 10 and 11)

Source: Current Mass GIS (http://maps.massgis.state.ma.us/map_ol/oliver.php)



6 Lancaster County Road P.O. Box 795 Harvard, Massachusetts 01451
978-772-6232 FAX 978-772-6258 davideross.com

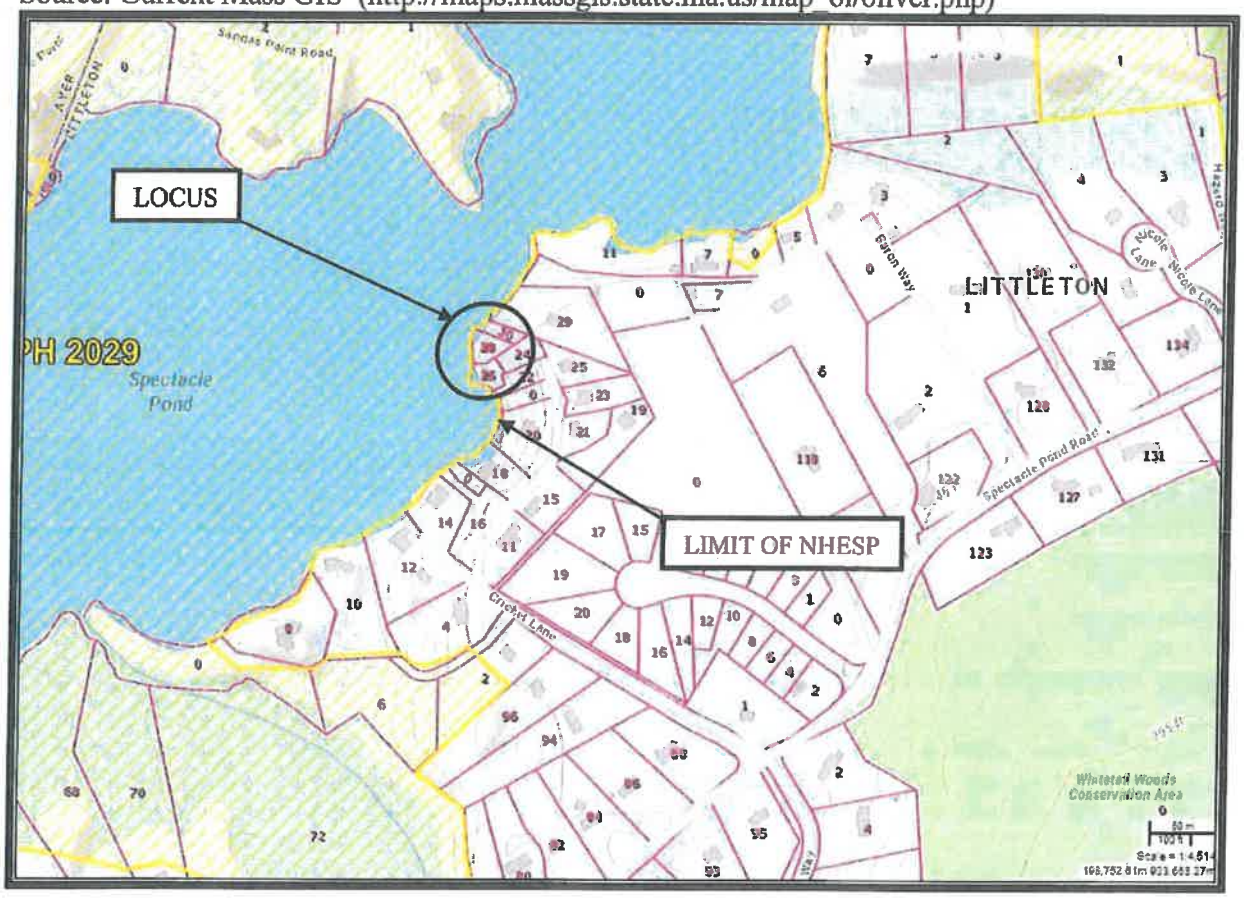
DAVID E. ROSS ASSOCIATES, INC.

Civil Engineers, Land Surveyors, Environmental Consultants

NHESP Map

Site: #26, #28 and #30 Cricket Lane – Littleton, MA 01460
(Map U46 – Parcels 9, 10 and 11)

Source: Current Mass GIS (http://maps.massgis.state.ma.us/map_ol/oliver.php)



6 Lancaster County Road P.O. Box 795 Harvard, Massachusetts 01451
978-772-6232 FAX 978-772-6258 davideross.com

National Flood Hazard Layer FIRMette

FEMA

71°31'20"W 42°33'57"N

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

71°30'43"W 42°33'30"N

Legend

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

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, Area of 1% annual chance flood with average depth less than one foot or with drainag 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
- Area of Undetermined Flood Hazard *Zone*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- B 20.2 17.5 Cross Sections with 1% Annual Chance Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represe 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 5/27/2021 at 1:39 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.

Littleton Conservation Commission
37 Shattuck Street / Room 303
Phone: 978 540-2428
Fax: 978 952-2321

Filing Procedure Summary (rev Feb 16, 2017)

Submit this checklist with application

The following procedures must be followed when filing under M.G.L. c. 131, §40 or the Littleton Wetlands Protection, Chapter 171 for a wetland permit. The procedure applies to Notice of Intents, Abbreviated Notice of Intents, Request for Determinations, and Abbreviated Notice of Resource Area Determinations.

This summary is not to be considered all inclusive and in no way should an applicant misconstrue its contents to replace any part of M.G.L. c. 131, §40 or the Littleton Wetlands Protection, Chapter 171.

X (1) one electronic file of complete submittal emailed to the Conservation Coordinator and 2 hard copies (with full sized, color plans) filed with the Conservation Commission hand delivered or mailed and received in the office before noon of filing deadline. Additional copies may be required of some projects. Please call ahead to determine meeting dates and filing deadlines.

X (1) one complete copy of the application must be filed with Department of Environmental Protection at:
Department of Environmental Protection
8 New Bond Street
Worcester, Massachusetts 01608

X The applicant must include a certified list of abutters (including those in adjacent Towns) located within 100 feet of the property boundaries, according to the most recent records of the Town Assessors, or as determined by MADEP policy on abutter notification. If a Town line is within 300 feet of the Limit of Work, then that Town's Conservation Commission must also be notified.

X The applicant, at the applicant's expense, shall post to each abutter (and owner if owner is not applicant) by Certificated Mail (Return Receipt Requested), or by hand delivery with signature of abutter a copy of the Abutter Notification Form. An Affidavit of Service of such notification shall also be provided. Abutters' signed acknowledgement of notification (ie, green Return Receipt cards) shall be provided at the first public meeting/hearing.

X At the applicant's expense, the Commission shall publish a legal notice in a newspaper of local circulation announcing the public hearing. The Notice will be published at least five (5) working days prior to the meeting and will include the date, time and location of the public hearing. The newspaper will bill the applicant directly. This bill must be paid before the legal notice will be published. **Please provide information on who will pay the newspaper (owner, applicant and/or representative) with the application (Name, address, phone and email).** _____

Peter McAnespie, 2 Cricket Lane, Littleton MA 01460, (781)-718-7983 mcanespie@gmail.com

X Filing fees for MADEP and Town of Littleton under the MA Wetlands Protection Act regulations, as well as the Littleton Wetlands Protection ByLaw filing fee. Provide a copy of all checks with the filing.

X Waiver Request if required

PROJECT NAME/ADDRESS: 26, 28 & 30 Cricket Lane DATE: 6/25/2021

Plans Checklist to accompany application for Notice of Intent (NOI). This is a Bylaw Supplemental form to aid you in submitting complete and appropriate information on your plans.

All lines must be marked X or identified as Not Applicable ("N/A"), or noted as to where the information can be found.

(1) X North arrow X Locus insert X Bar scale (preferably 1 in = 20 to 40 ft.)

(2) Title Block with Following Information:

X Plan Title

X Applicant's Name(s), address & phone

X Property Owner Name(s), address & phone

X Location/street name & number

X Assessor map, lot, Registry book, page on all lots w/activity

X Plan preparer's name, title, stamp, company name, address phone & fax

X Date plan prepared, last revised, and revision notes

(3) X Existing contours

(4) X Existing structure(s) with natural and man-made features, including stone walls and trails

(5) X Trees over 8-inch diameter breast height within resource areas and buffer zones

(6) X Property lines; clearly mark limits of review area if entire property is not under review

(7) X Existing utilities, rights-of-way, easements, ancient ways or other deeded ways

(8) ____ Name of wetland scientist responsible for identifying wetland boundaries

(9) X Date wetland was flagged (must be no more than 3 years prior to current date)

(10) X Wetland resource area boundaries with flag numbers

(11) X 100 foot buffer zone limits and 50-foot No Disturb limit

(12) X Notations identifying all wetland types and delineation methodology

(13) X Shortest distance to all resource areas from closest proposed structure (use arrow)

(14) X Shortest distance to all resource areas from closest point of erosion control materials

PROJECT NAME/ADDRESS: 26, 28 & 30 Cricket Lane DATE: 6/25/2021

(15) X Proposed contours (one foot increments)

(16) X Proposed location of utility lines

(17) X Proposed structure(s) (including driveway work, septic components, etc)

(18) X Existing and proposed stormwater management features (including temporary controls)

(19) ____ Watersheds and drainage areas

(20) X Test pit, boring holes and logs

(21) ____ Conservation post detail and plaque detail

(22) X Location of temporary stockpiles w/notation of content (e.g. excavated soils)

(23) ____ Location of snow storage areas

(24) ____ Cross-sections, particularly at key areas of slopes near wetland resource areas

(25) ____ Mitigation plans as needed

(26) X Construction sequencing

PROJECT NAME/ADDRESS: 26, 28 & 30 Cricket Lane DATE: 6/25/2021

The two full sized color plans (and presentation plan) should be colored as follows.

Check if present	Feature	Line Type
	Existing tree line	Green solid
	Proposed tree line	Green dashed
X	Bordering Vegetated Wetlands*	Dark blue solid
	Bank/Land Under Water	Light blue dashed
X	100 foot buffer from BVW and/or Bank	Yellow solid
X	50 foot No Disturb limit from BVW and/or Bank	Yellow dashed
	Vernal Pool	Purple solid
	Vernal Pool 100 foot	Purple dashed

Check if present	Feature	Line Type
	Bordering Lands Subject to Flooding	Orange solid
	Isolated Lands Subject to Flooding	Orange dashed
	Mean Annual High Water	Light red solid
	100 foot and 200 foot Riverfront Area	Light red dashed
	Wetland/Land Under Water impact	Red solid with yellow stripes as shading
	Mitigation Area	Red solid line with stipled green and yellow as shading
X	Erosion controls	Brown dashed
	Limit of work	Brown solid

*Note locations of any federal, non-state isolated vegetated wetlands

PROJECT NAME/ADDRESS: 26, 28 & 30 Cricket Lane DATE: 6/25/2021

1/2 40'

Middlesex Registry of Deeds, So. Dist.
CAMBRIDGE, MASS.
Plan Number 727 of 1946
Rec'd June 1, 1946 at 11 h. 0 m. 0 m
with Wtd Doc. No. 3 19 325 May 31.
Attest: Albert F. Pettham REGISTER

PLAN OF LAND IN LITTLETON, MASS.

SCALE: 1 IN. = 20 FT. APRIL 24, 1946

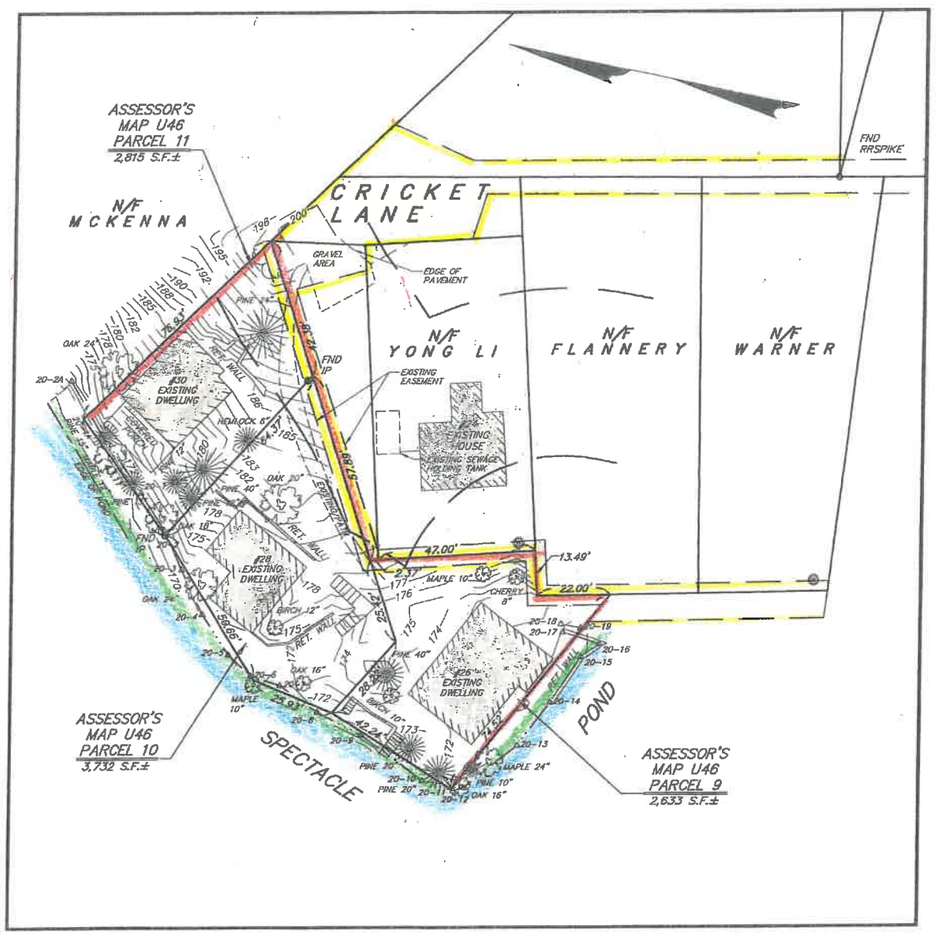
JOSEPH C. SHAW SURVEYOR
BELMONT, MASS.

LEGEND

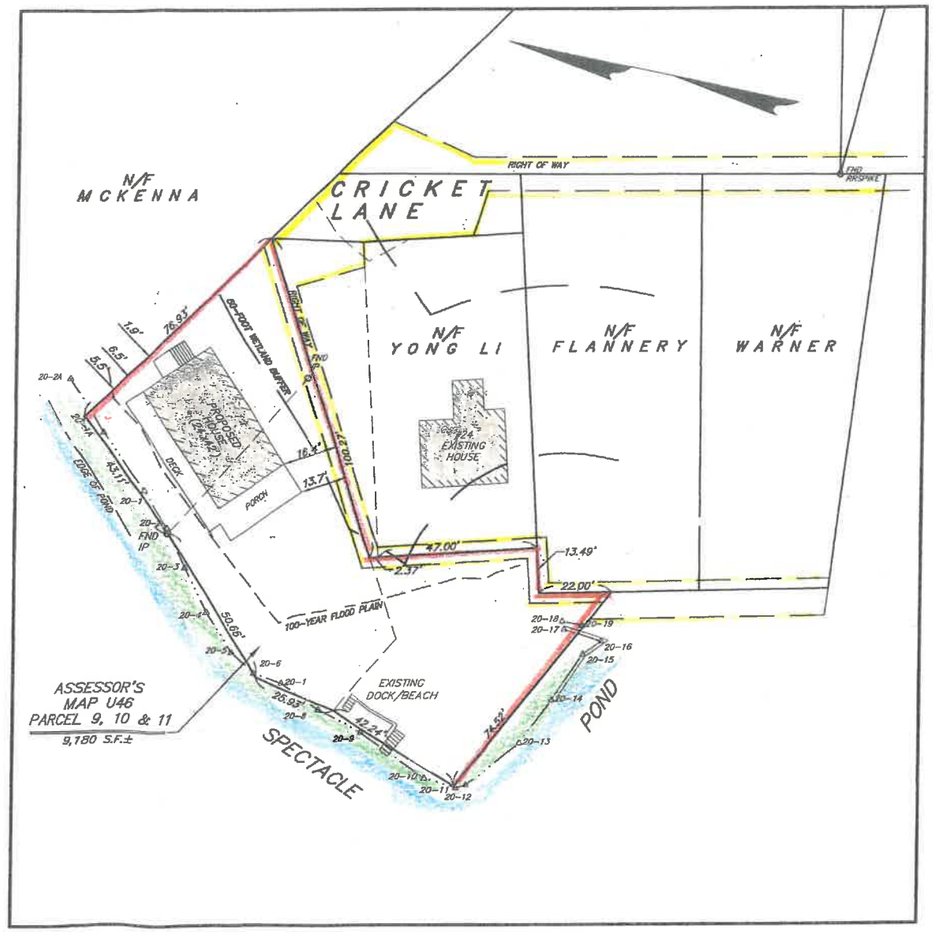
- 300 — EXISTING CONTOUR
- 300 — PROPOSED CONTOUR
- PERCOLATION TEST HOLE
- OBSERVATION TEST HOLE
- S — SEWER LINE
- W — WATER LINE
- EDGE OF WETLANDS
- EXISTING TREE TO REMAIN (PROPOSED SITE PLAN)

ZONING REQUIREMENTS "R" RESIDENTIAL DISTRICT					
DESCRIPTION	REQUIRED	EXISTING (#26)	EXISTING (#28)	EXISTING (#30)	PROVIDED
LOT AREA	40,000 S.F.	2,633 S.F.±*	3,732 S.F.±*	2,815 S.F.±*	9,180 S.F.±*
MIN. LOT FRONTAGE	150'	0'*	0'*	0'*	0'*
MIN. FRONT SETBACK	25'	N/A	N/A	N/A	N/A
MIN. SIDE SETBACK	15'	0.9'*	11.8'*	1.7'*	SEE PLAN
MIN. REAR SETBACK	15'	14.4'*	1.6'*	3.7'*	SEE PLAN

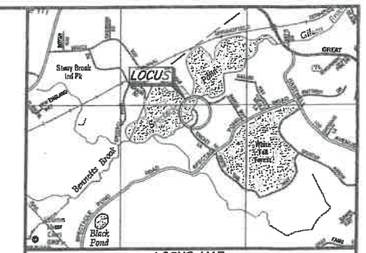
*PRE-EXISTING, NON-CONFORMING
*ALL SETBACK DIMENSIONS ARE TO THE FOUNDATION OF THE PROPOSED STRUCTURE



EXISTING SITE PLAN
1"=20'



PROPOSED SITE PLAN
1"=20'



LOCUS MAP
NOT TO SCALE

NOTES:

THE PURPOSE OF THIS PLAN IS TO DEPICT THE EXISTING CONDITIONS ON THE PROPERTY AND THE PROPOSED SINGLE FAMILY DWELLING.

THE TOWN OF LITTLETON BOARD OF HEALTH ISSUED A SUBSURFACE SEWAGE DISPOSAL SYSTEM PERMIT ON 10/27/2021 AND AN ORDER OF CONDITIONS WAS ISSUED BY THE TOWN OF LITTLETON CONSERVATION COMMISSION ON 8/30/2021–DEP FILE #204–938–BK.79959–523 FOR THE PROPOSED WORK AS SHOWN ON THIS PLAN.

SEE ARCHITECURAL PLANS BY PROFESSIONAL BUILDING SYSTEMS, INC. DATED 11–9–2023 FOR DIMENSIONS OF THE PROPOSED DWELLING.

20 0 10 20 40 60
GRAPHIC SCALE IN FEET

SURV: MSB/JDS	CALC.: JPG	DRAFT: BJD
NB: 815–8	DEED: 73353–313 73681–459 75619–106	CHECK: DBW

REVISIONS

COMMONWEALTH OF MASSACHUSETTS DANIEL B. WOLFE CIVIL No. 35303 REGISTERED PROFESSIONAL ENGINEER
3-5-24

SHEET TITLE: SITE PLAN OF LAND

DESIGNED FOR: PETER McANESPIE

ADDRESS: #26, #28 & 30 CRICKET LANE LITTLETON, MA

LOT NO.:	ASSESSOR MAP: U46	ASSESSOR PARCEL: 9, 10 & 11

DAVID E. ROSS ASSOCIATES, INC.
CIVIL ENGINEERS - LAND SURVEYORS
ENVIRONMENTAL CONSULTANTS
6 Lancaster County Road
P.O. Box 795
Harvard, MA 01451-0795
978-772-6232
FAX 978-772-6258
www.davideross.com

SCALE: 1"=20'	DATE: MARCH, 2024
REF.: L–14345	PLAN NO.: L–14345–ZBA
JOB NO.: 33242	SHEET NO.: 1 of 1

1/2 40'

PARK HERE

George E. Jones

N 55° 30' 00" W

207.77

A
10,782#

B
2815#

C
3732#

D
2633#

E
4418#

F
6320#

G
5866#

1408#

#1

#26

#28

NEW SDS

LOCATE

Kimball

Florence

Marion

SPECTACLE POND

N 11° 43' 00" W

143.76 WAY

150.00 WAY

55.10

S 12° 43' 00" E

38.71 WAY

64.85 WAY

N 85° 17' 30" E

124.24

124.41

125.23

94.00

47.00

53.92

27.70

76.93

64.51

50.66

25.93

27.85

74.52

S 62° 43' 00" E

S 20° 31' 00" W

S 46° 06' 00" W

S 42° 01' 15" W

Middlesex Registry of Deeds, So. Dist.
CAMBRIDGE, MASS.
Plan Number 721 of 1946
Rec'd June 1, 1946 at 11 h. 0 m. 0 m
Doc. No. 319325 May 31.
Attest: Albert P. Berthiaume REGISTER

PLAN OF LAND IN LITTLETON, MASS.

SCALE: 1 IN. = 20 FT. APRIL 24, 1946

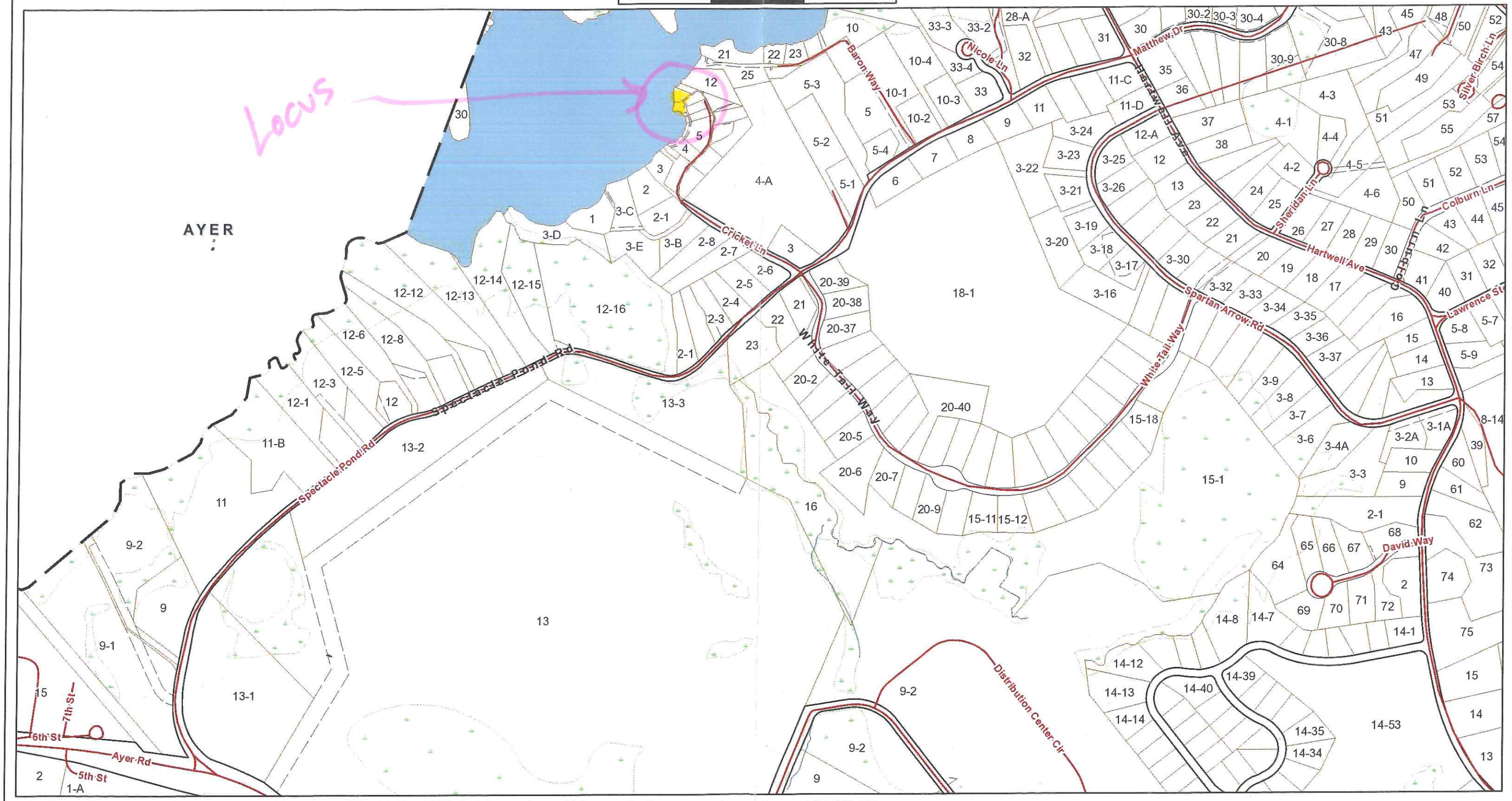
JOSEPH C. SHAW SURVEYOR
BELMONT, MASS.

Littleton, MA

1 inch = 555 Feet

0 555 1110 1665

April 14, 2020



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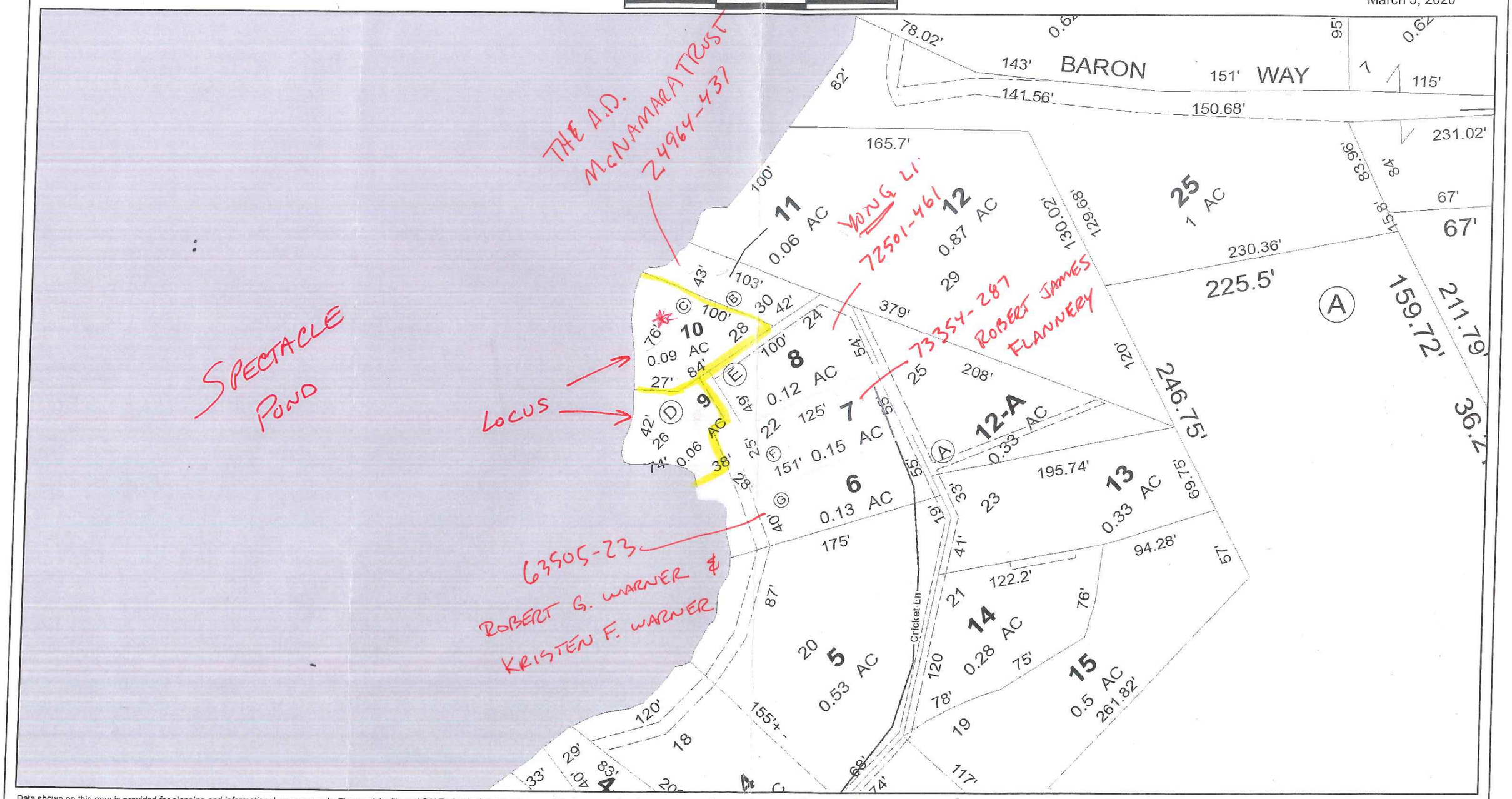
Littleton, MA

1 inch = 69 Feet

0 69 138 208

March 5, 2020



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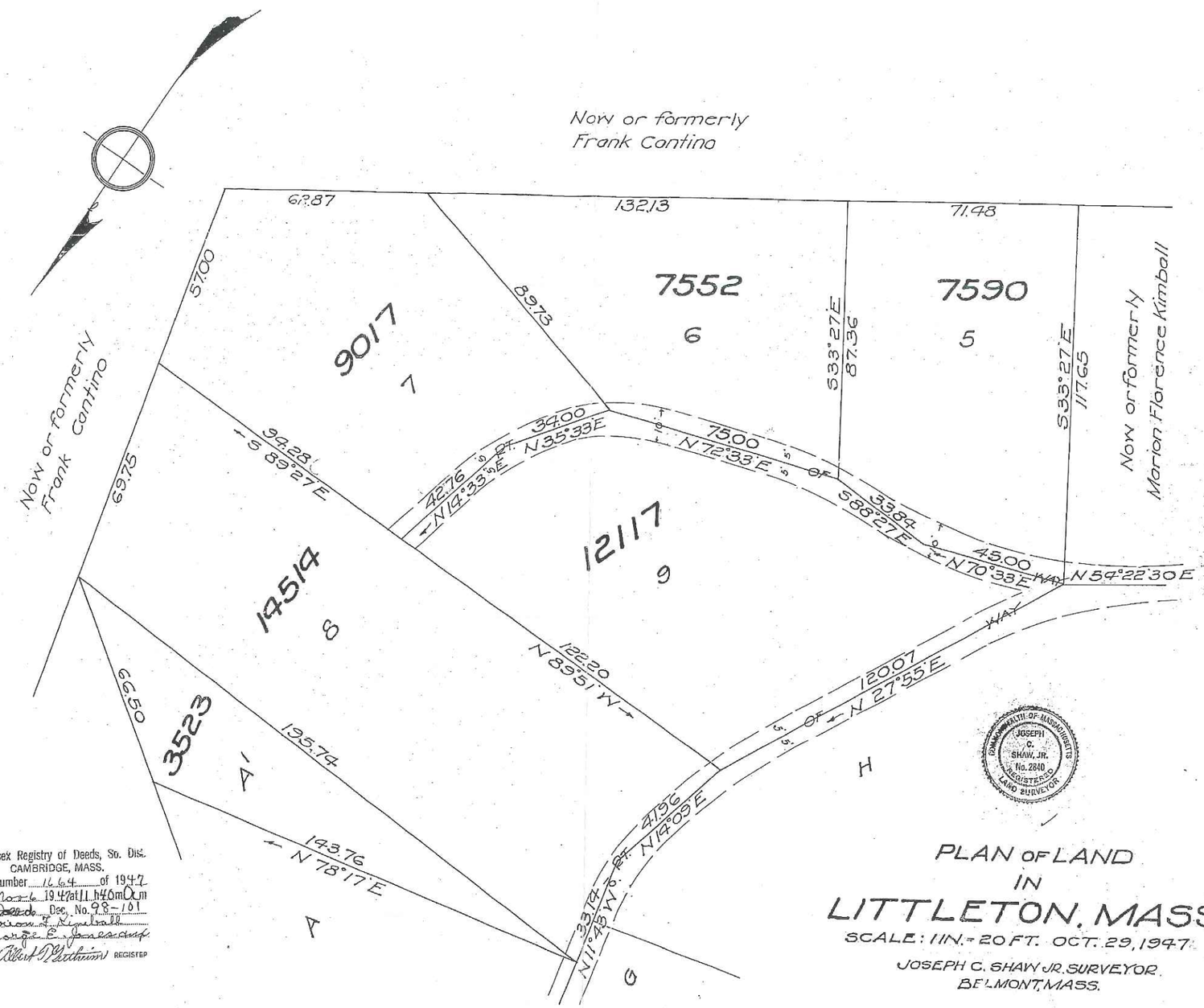


Middlesex Registry of Deeds, So. Dist.
CAMBRIDGE, MASS.
Plan Number 1664 of 1947
Rec'd Nov 6 1947 at 11 h 40 m A.M.
With Deed Doc. No. 98-101
Marion F. Kimball
George E. Jones
Attest: Albert D. Pattison REGISTER

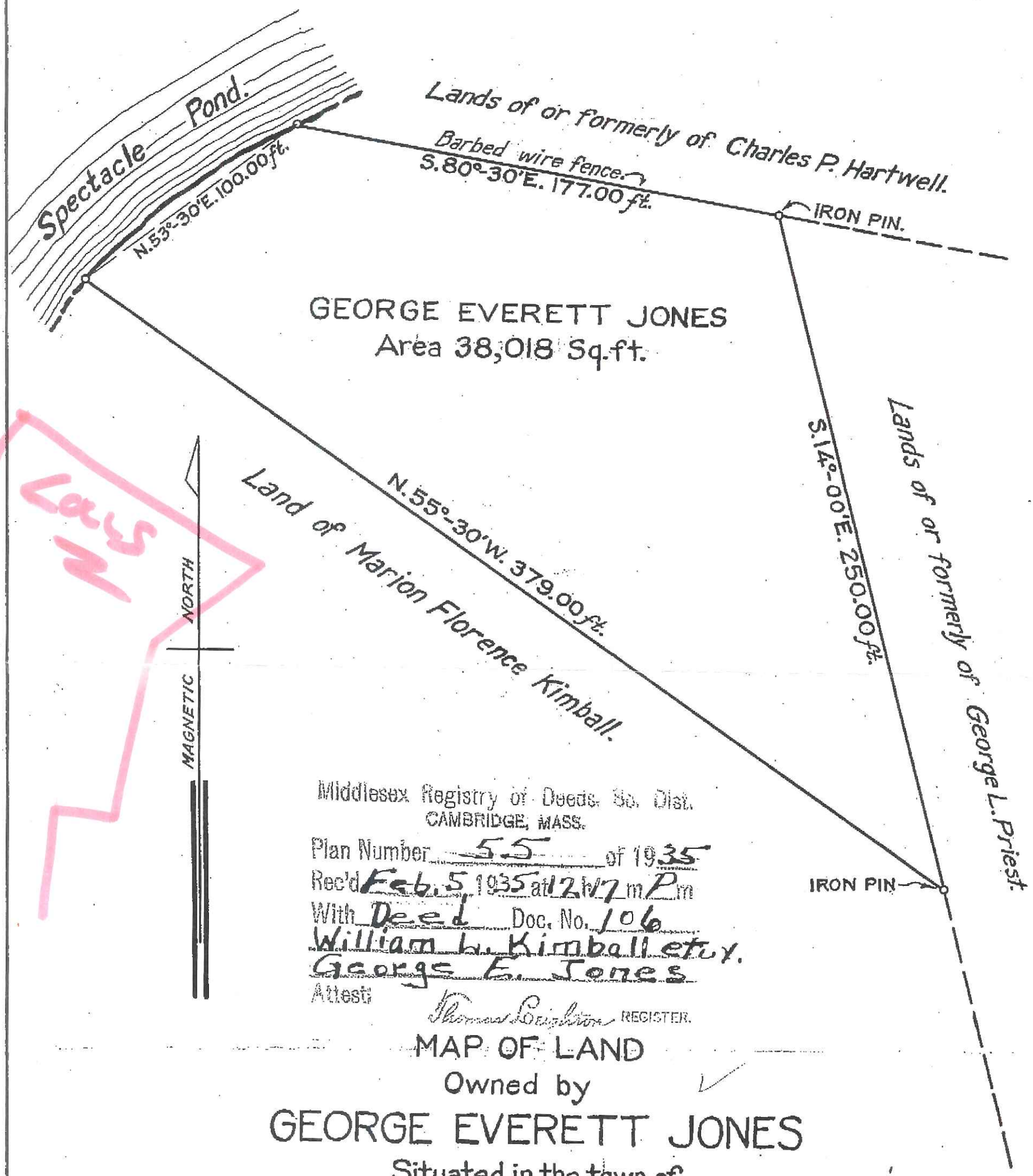
COMMONWEALTH OF MASSACHUSETTS
JOSEPH C. SHAW, JR.
No. 2840
REGISTERED LAND SURVEYOR

PLAN OF LAND IN LITTLETON, MASS.

SCALE: 1 IN. = 20 FT. OCT. 29, 1947

JOSEPH C. SHAW JR. SURVEYOR
BELMONT, MASS.

Trim Line



Middlesex Registry of Deeds. So. Dist.
CAMBRIDGE, MASS.
Plan Number 55 of 1935
Rec'd Feb. 5 1935 at 12 h 7 m P m
With Deed Doc. No. 106
William L. Kimball et ux.
George E. Jones
Attest: Thomas Leighton REGISTER.

MAP OF LAND
Owned by
GEORGE EVERETT JONES
Situated in the town of
LITTLETON,
MIDDLESEX COUNTY
MASSACHUSETTS.

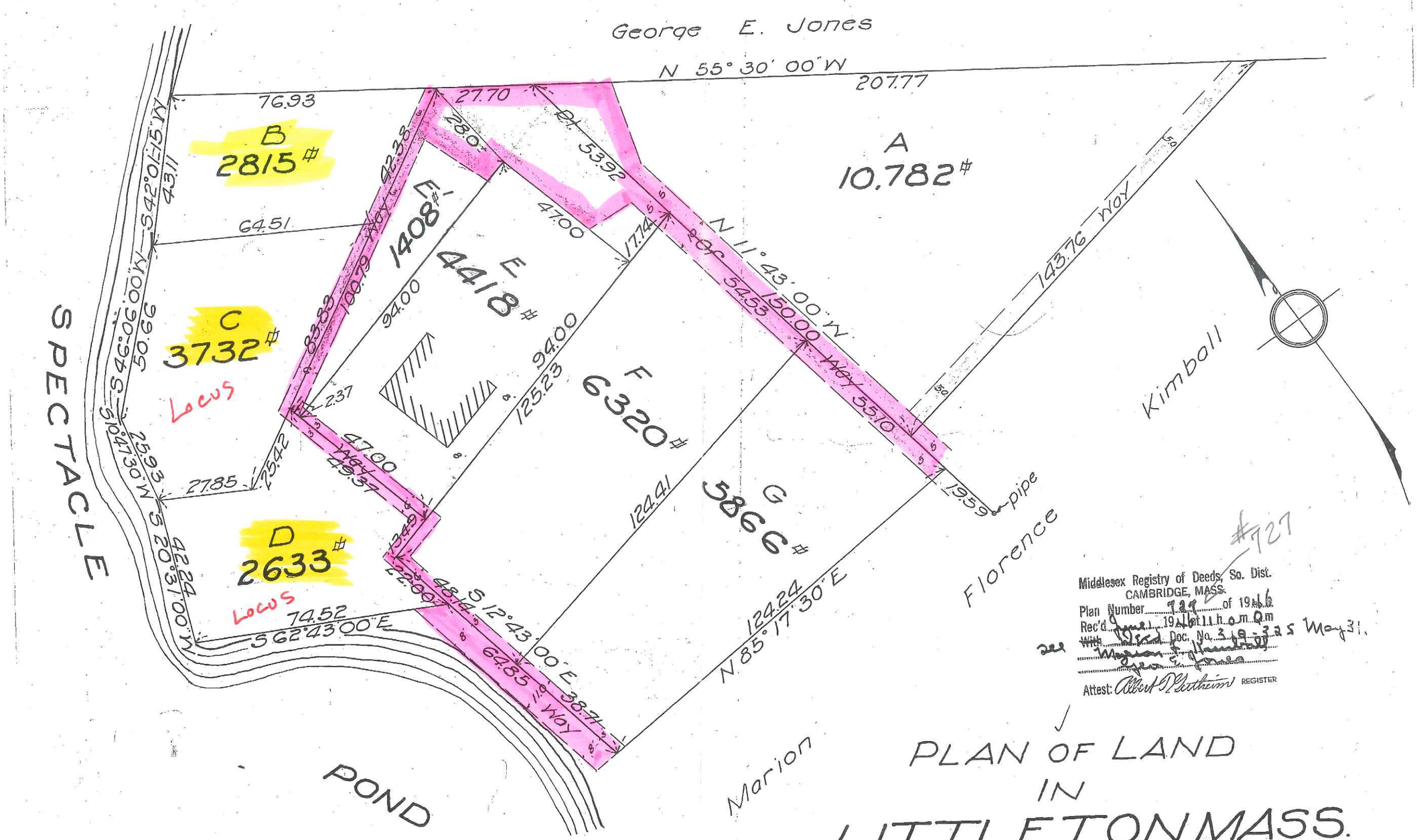
Scale: 1 inch = 48 feet.

0 10 20 30 40 50 100 150 200 250

55

J.F. Burton, Feb. 13, 1933

1/2
40'



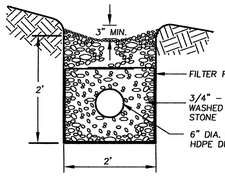
#727

Middlesex Registry of Deeds, So. Dist.
CAMBRIDGE, MASS.
Plan Number 727 of 1946
Rec'd June 1, 1946 at 11 h 0 m Am
With Decl. Doc. No. 3 19 325 May 31.
see Marion E. Jones
Marion E. Jones
Attest: Albert P. Rheiheim REGISTER

PLAN OF LAND IN LITTLETON, MASS.

SCALE: 1 IN. = 20 FT. APRIL 24, 1946

JOSEPH C. SHAW SURVEYOR
BELMONT, MASS.

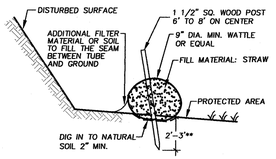


(CROSS SECTION)

1. LINE EXCAVATED TRENCH WITH FILTER FABRIC.
2. ADD CRUSHED STONE TO TOP OF PERFORATED PIPE.
3. FOLD FILTER FABRIC OVER TOP OF STONE AND PIPE.
4. ADD REMAINING CRUSHED STONE TO FINISH GRADE.

RECHARGE TRENCH

NOT TO SCALE



WATTLE NETTING SHALL BE MADE OF NATURAL MATERIAL; PLASTIC IS PROHIBITED.

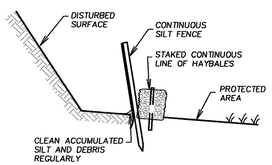
ACCUMULATED SEDIMENT SHOULD BE REMOVED, OR A NEW WATTLE INSTALLED, WHEN IT REACHES APPROXIMATELY ONE–HALF OF THE WATTLE DIAMETER.

IF SHEET FLOWS ARE BYPASSING OR BREACHING THE WATTLE DURING STORM EVENTS, IT MUST BE REPAIRED IMMEDIATELY AND BETTER SECURED, EXPANDED ENLARGED OR AUGMENTED WITH ADDITIONAL EROSION AND SEDIMENT CONTROL PRACTICES.

AN ADDITIONAL 25 FEET OF WATTLES SHALL BE STORED IN A DRY SPACE ON SITE FOR EMERGENCY PURPOSES.

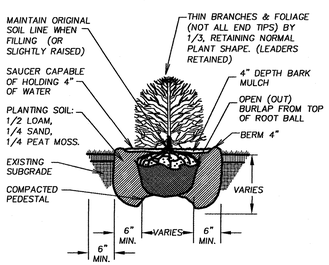
SILTATION BARRIER WATTLE DETAIL

NOT TO SCALE



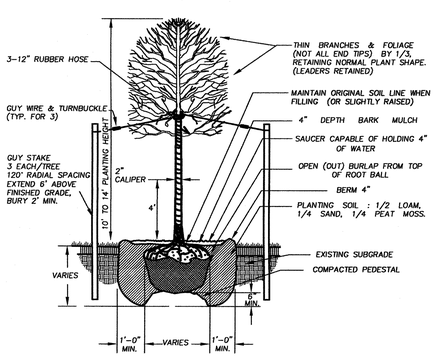
SILTATION BARRIER

(NOT TO SCALE)



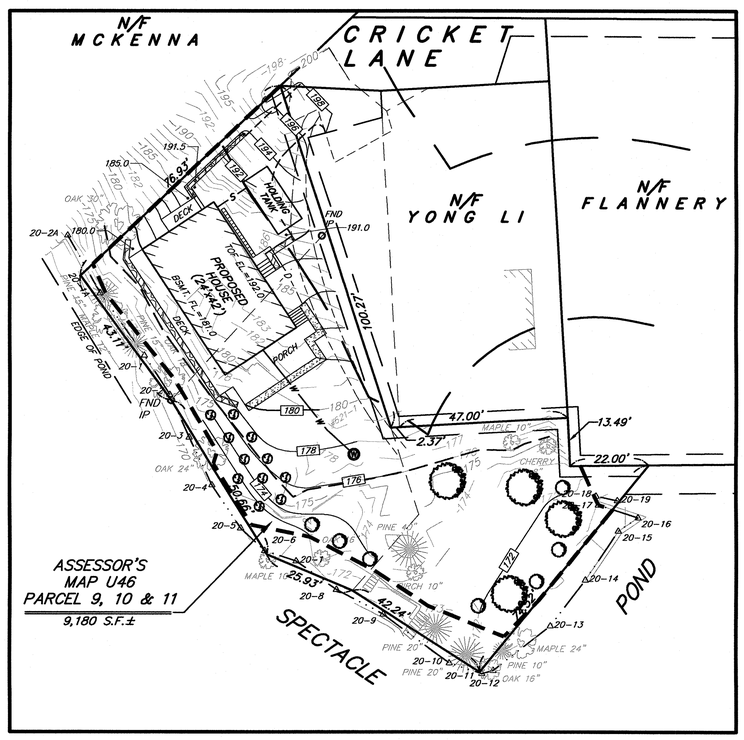
SHRUB PLANTING DETAIL

NOT TO SCALE



DECIDUOUS TREE PLANTING DETAIL

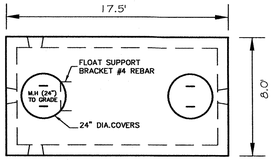
NOT TO SCALE



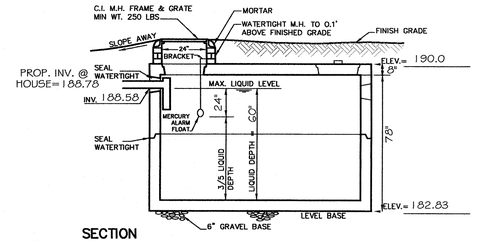
PLANTING PLAN DETAIL

1" = 20'

RECOMMENDED PLANTING SCHEDULE				
SYM.	COMMON NAME	SCIENTIFIC NAME	HEIGHT RANGE	QUANTITY
	Common juniper	Juniperis communis	15–18"	11
	Early azalea	Rododendron roseum	24–40"	7
	Red Maple	Acer rubrum	2" Cal.	2
	Northern Red Oak	Quercus rubra	2" Cal.	2



PLAN VIEW



SECTION

4,000 GALLON HOLDING TANK (H–20)

NOT TO SCALE

ENGINEER SPECIFIED TANK BY:
E.F. SHEA CONCRETE PRODUCTS, INC.
773 SALEM STREET (RTE 62), WILMINGTON, MA 01887
978-658-2645

TANK TO BE VENTED THROUGH BUILDING PLUMBING SYSTEM AS REQUIRED BY BUILDING CODE.

TANK TO HAVE ALL JOINTS SEALED WATERTIGHT IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS.

CONSTRUCTION MATERIALS AND DIMENSIONS TO CONFORM TO TITLE 5, AASHTO HS 20–44 LOADING.

TANK DIMENSIONS MAY VARY, DEPENDING UPON MANUFACTURER'S STANDARD, AS LONG AS LIQUID VOLUME CONFORMS WITH REQUIRED LIQUID CAPACITY.

TANK LOCATION MUST BE ACCESSIBLE YEAR ROUND.

ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.

ALARM SPECIFICATIONS

ALARM TO BE SIGNALED BY SELF CONTAINED MERCURY FLOAT SWITCH AT 3/5 TANK CAPACITY.

ALARM TO BE LOCATED INSIDE BUILDING AT VISIBLE LOCATION.

ALARM TO BE AUDIO/VISUAL WITH MANUAL RESET ON AUDIO ONLY.

ALL WORK TO CONFORM WITH STATE AND LOCAL CODES.

NO JUNCTION BOXES SHALL BE PLACED WITHIN TANK OR OUTSIDE HOUSE.

ALARM SHALL BE SEPARATE–FUSED CIRCUIT.

CONSTRUCTION SEQUENCE

1. INSTALL SILTATION/EROSION CONTROL BARRIER (STRAW WATTLES ON THE PERIMETER OF PROJECT AND THE HAY BALES AND SILT FENCE BETWEEN THE DWELLING AND THE POND).
2. PRE-CONSTRUCTION MEETING AND INSPECTION WITH THE LITTLETON CONSERVATION COMMISSION.
3. RAZE EXISTING DWELLINGS AND REMOVE TREES AND PULL STUMPS REQUIRED TO CONSTRUCT THE IMPROVEMENTS TO THE SITE.
4. RE-GRADE AND COMPACT SITE FOR WELL INSTALLATION EQUIPMENT ACCESS.
5. EXCAVATE TEMPORARY SLURRY BASIN AND INSTALL SLURRY BASIN EROSION CONTROL.
6. INSTALL WELL.
7. GRADE LAND WITHIN THE 50' BUFFER ZONE AND IMMEDIATELY STABILIZE BETWEEN THE PROPOSED DWELLING AND POND WITH JUTE NETTING (NOTE: JUTE NETTING SHALL NOT CONTAIN ANY PLASTIC).
8. EXCAVATE FOUNDATION HOLE, PLACING EXCAVATED SOILS IN STOCKPILE AREA AS IDENTIFIED ON THE PLAN WITH 24" SILT FENCE AROUND THE BASE.
9. CONSTRUCT FOUNDATION WALLS, FOOTING DRAIN AND INTERLOCKING CONCRETE BLOCK RETAINING WALL.
10. BACKFILL FOUNDATION, INTERLOCKING CONCRETE BLOCK RETAINING WALL.
11. CONSTRUCT ROOF DRAINAGE RECHARGE TRENCHES.
12. COMPLETE CONSTRUCTION OF DWELLING AND SEWAGE DISPOSAL SYSTEM (HOLDING TANK).
13. COMPLETE CONSTRUCTION OF DRIVEWAY.
14. PERFORM LANDSCAPING AND INSTALLATION OF MITIGATION PLANTINGS

DESIGN CRITERIA

FLOWS: 2 BEDROOM AT 110 GPD = 220 GPD

HOLDING TANK: PROPOSED 4,000 **GAL. TANK**

ABSOLUTE MIN. PER TITLE 5 POLICY = 2,000 GAL. TANK
CALCULATED MIN.: 110 GPD X 5.0= 1,100 GAL. TANK

ESTIMATED FREQUENCY OF REMOVAL (PUMPING)

18 DAYS PER TITLE 5 ESTIMATION OF FLOWS.
NOTE: ALTHOUGH TITLE 5 ESTIMATIONS SHOW A FREQUENCY OF PUMPING EVERY 18 DAYS, CONSERVATIVE USE OF ALL WATER GENERATING FACILITIES WILL YIELD A LESS FREQUENT PUMPING SCHEDULE.

TIGHT TANK OPERATION AND MAINTENANCE PLAN

FREQUENCY OF PUMPING: THE TANK SHALL BE PUMPED WHEN THE CAPACITY REACHES THREE FIFTHS OF THE TOTAL CAPACITY (2400 GALLONS). THIS POINT SHALL BE SIGNALED BY THE ALARM FLOAT SWITCHES DETAILED ON THE PROPOSED PLAN. TITLE 5 ESTIMATES THAT THIS PEAK FREQUENCY WILL BE EVERY 18 DAYS, HOWEVER, CONSERVATIVE USE OF ALL WATER GENERATING FACILITIES WILL YIELD A LESS FREQUENT PUMPING SCHEDULE.

METHOD OF DISPOSAL: THE WASTE IS TO BE DISPOSED OF AT A WASTE WATER TREATMENT FACILITY LICENSED TO ACCEPT DOMESTIC WASTE WATER.

MAINTENANCE: THE WASTE HAULER IS TO VISUALLY INSPECT THE TANK FOR STRUCTURAL INTEGRITY AT EACH PUMPING. HE WILL REPORT ANY OBSERVED IRREGULARITIES TO THE FACILITY OWNER WHO WILL INVESTIGATE AND FOLLOW UP AS NEEDED.

THE FLOAT SWITCHES AND ALARM SYSTEM ARE TO BE INSPECTED AT LEAST ONCE EACH YEAR, AND TESTED MONTHLY. IF THE TANK REACHES THREE FIFTHS CAPACITY (2400 GALLONS) AND THE ALARM PROPERLY ACTIVATES, THIS IS CONSIDERED TO BE A SUCCESSFUL TEST.

NO PERMANENT STRUCTURES ARE TO BE PLACED SUCH THAT THEY WILL INTERFERE WITH ACCESS TO THE TANK.

THE LOCAL BOARD OF HEALTH MAY ADD ADDITIONAL ITEMS TO THIS OPERATION AND MAINTENANCE PLAN IF IT FEELS THEY ARE NEEDED TO PROTECT PUBLIC HEALTH AND THE ENVIRONMENT.

WETLAND PROTECTION ACT (C131 S40)

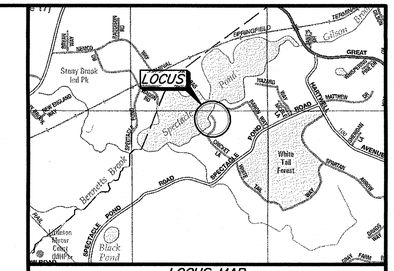
PRIOR TO INITIATING ANY ALTERATIONS (REMOVAL OF VEGETATION, EXCAVATIONS, GRADING, ETC.) WITHIN 100' OF WETLANDS (PONDS, BROOKS, SWAMPS, ETC.) OR WITHIN 200' OF AN AREA SUBJECT TO THE RIVER'S ACT (PERENNIALLY FLOWING RIVER, BROOK OR STREAM), A REQUEST FOR DETERMINATION OF APPLICABILITY OR A NOTICE OF INTENT UNDER THE WETLANDS PROTECTION ACT (310 CMR 10.00) SHOULD BE FILED WITH THE TOWN'S CONSERVATION COMMISSION. LOCAL BYLAWS MAY ALSO APPLY.

OBSERVATION TEST HOLE DATA
BY DANIEL B WOLFE, D.E.R.A., INC.
WITNESSED BY JIM GARRETT (NABOH)
6/10/2021

120-1: ELEV. = 178.5'

Ap	0" - 6"	FINE SANDY LOAM	10YR 3/2
Bw	6" - 27"	FINE SANDY LOAM	10YR 5/6
C	27" - 103"	M-C SAND	10YR 5/3

NO MOTTLING
NO GROUNDWATER OBSERVED
NO REFUSAL
E.S.H.W.T. > 103" (169.9)



LOCUS MAP

NOT TO SCALE

NOTES

THE EXISTING CONDITIONS AND TOPOGRAPHIC SURVEY WAS COMPLETED BY DAVID E. ROSS IN APRIL AND OCTOBER OF 2020.

THE PROPERTY LINES AS SHOWN ARE TAKEN FROM PLAN ENTITLED "PLAN OF LAND IN LITTLETON MASS." DATED APRIL 24, 1946, BY JOSEPH C. SHAW RECORDED IN THE MIDDLESEX (SOUTH DISTRICT) REGISTRY OF DEEDS BOOK 6986 PAGE 196.

PRIOR TO THE ISSUANCE OF A CERTIFICATE OF COMPLIANCE FOR THE SYSTEM, THE SYSTEM OWNER SHALL RECORD AND/OR REGISTER IN THE APPROPRIATE REGISTRY OF DEEDS AND/OR LAND REGISTRATION OFFICE, A NOTICE DISCLOSING THE USE OF HOLDING TANK.

A NOTICE IS REQUIRED WITH THE REGISTRY OF DEEDS DISCLOSING A BEDROOM COUNT DEED RESTRICTION FOR TWO BEDROOMS.

CONTRACTOR SHALL GRADE TO ENSURE PROPER DRAINAGE AND TO AVOID CREATING PONDING AREAS.

OWNER OF RECORD: PETER McANESPIE
#26 CRICKET DEED BOOK: 73861 PAGE: 459
#28 CRICKET DEED BOOK: 73353 PAGE: 213
#30 CRICKET DEED BOOK: 75619 PAGE: 106

OWNER IS RESPONSIBLE FOR OBTAINING BUILDING PERMITS ASSOCIATED WITH RETAINING WALLS AND FENCES AS REQUIRED BY STATE OR LOCAL REGULATIONS.

OWNER SHALL VERIFY EFFECTIVE ZONING REGULATIONS PRIOR TO CONSTRUCTION.

THE DESIGN ENGINEER IS NOT RESPONSIBLE FOR ANY GROUNDWATER OR STORMWATER RUN-OFF THAT MAY ENTER THE BUILDING DUE TO IMPROPER GRADING.

THE DESIGN ENGINEER SHALL BE NOTIFIED PROMPTLY OF ANY PLAN DEFICIENCIES FOUND DUE TO UNFORESEEN SUBSURFACE CONDITIONS OR OTHER REASONS THAT MIGHT AFFECT THE FUNCTION OF THIS DESIGNED SYSTEM.

CONTRACTOR SHALL NOTIFY "DIG SAFE" PRIOR TO ANY EXCAVATION. 1-888-DIG-SAFE (344-7233)

HOLDING TANK, MANHOLE COVERS MUST BE CONCRETE OR OTHER SOLID MATERIAL. PLASTIC MANHOLE COVERS ARE NOT ALLOWED IN ACCORDANCE WITH LITTLETON BOARD OF HEALTH REGULATION 33.

THE PURPOSE OF THIS PLAN IS TO RECONSTRUCT A SINGLE FAMILY DWELLING IN PLACE OF THREE EXISTING HOMES AND REPLACE THE EXISTING SEWAGE DISPOSAL SYSTEM.

VARIANCE REQUIRED:

15.211(1) MINIMUM DISTANCES REQUIRE THAT THE HOLDING TANK BE SETBACK A MINIMUM OF 10 FEET FROM A PROPERTY LINE. THE PROPOSED HOLDING TANK IS SETBACK 5.6 FEET FROM THE PROPERTY LINE.

20 0 10 20 40 60
GRAPHIC SCALE IN FEET

SURV.: MSB/JDS	CALC.: JPG	DRAFT: BJD
NB: 815–8	DEED: 73353–213 73861–459 75619–106	CHECK: DBW

REVISIONS
8/6/21: REV. PER CON COM COMMENTS

COMMONWEALTH OF MASSACHUSETTS
DANIEL B. WOLFE
CIVIL
No 36523
REGISTERED PROFESSIONAL ENGINEER
8-6-21

SHEET TITLE:
SEWAGE DISPOSAL SYSTEM
HOLDING TANK

DESIGNED FOR:
PETER McANESPIE

ADDRESS:
#26, #28 & 30 CRICKET LANE
LITTLETON, MA

LOT NO.:	ASSESSOR MAP:	ASSESSOR PARCEL:
	U46	9, 10 & 11

DAVID E. ROSS ASSOCIATES, INC.
CIVIL ENGINEERS - LAND SURVEYORS
ENVIRONMENTAL CONSULTANTS
6 Lancaster County Road
P.O. Box 795
Harvard, MA 01451-0795
978-772-6232
FAX 978-772-6258
www.davideross.com

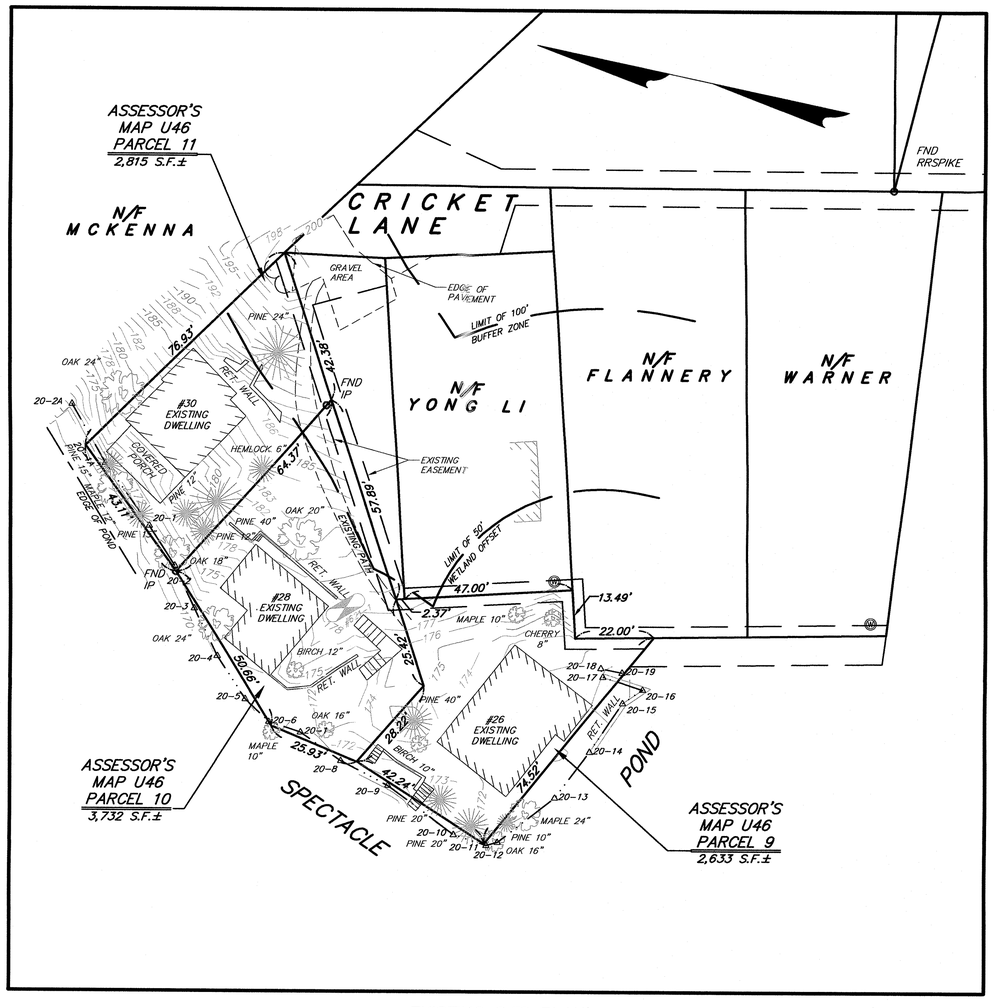
SCALE: 1"=20'	DATE: JULY, 2021
REF.:	PLAN NO.: L–14345
JOB NO.: 33242	SHEET NO.: 1 of 2

LEGEND

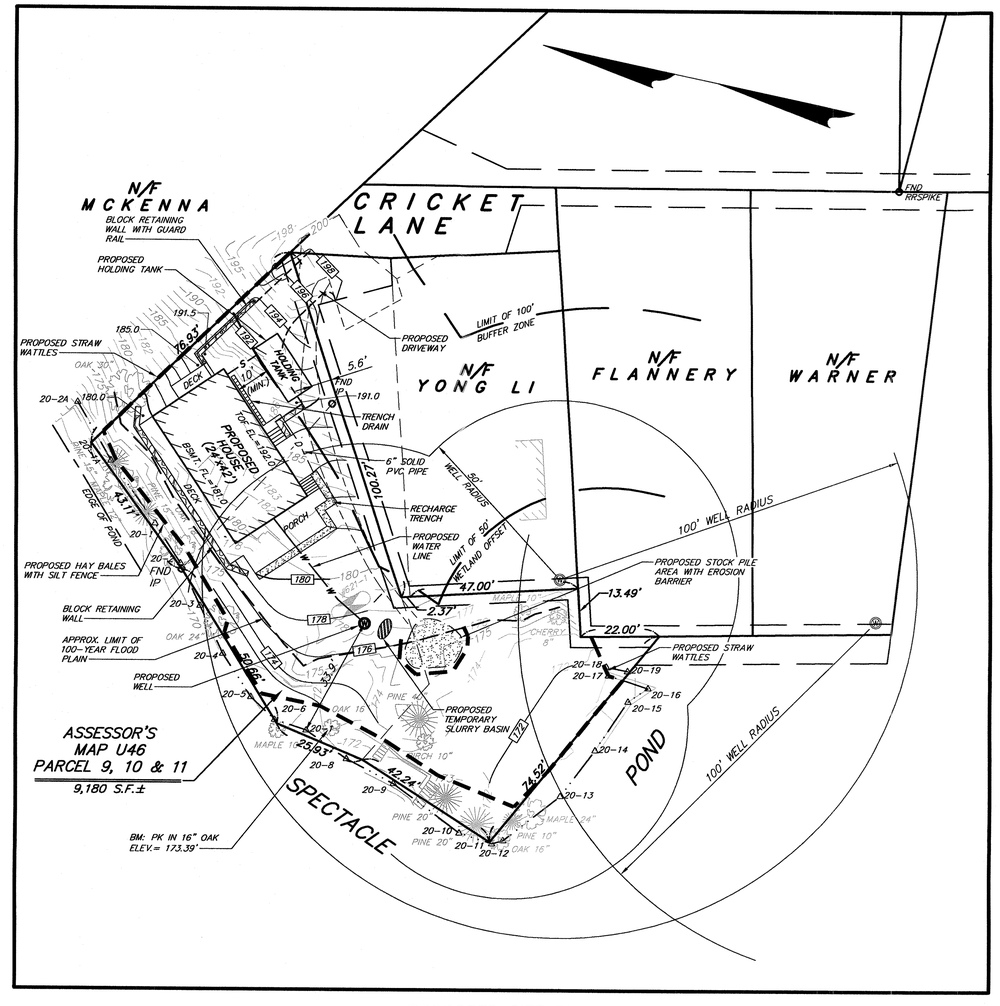
- 300 — EXISTING CONTOUR
- 300 — PROPOSED CONTOUR
- PERCOLATION TEST HOLE
- OBSERVATION TEST HOLE
- S — SEWER LINE
- W — WATER LINE
- EDGE OF WETLANDS
- EXISTING TREE TO REMAIN (PROPOSED SITE PLAN)

ZONING REQUIREMENTS					
"R" RESIDENTIAL DISTRICT					
DESCRIPTION	REQUIRED	EXISTING (#26)	EXISTING (#28)	EXISTING (#30)	PROVIDED
LOT AREA	40,000 S.F.	2,633 S.F.±*	3,732 S.F.±*	2,815 S.F.±*	9,180 S.F.±*
MIN. LOT FRONTAGE	150'	0'*	0'*	0'*	0'*
MIN. FRONT SETBACK	25'	N/A	N/A	N/A	N/A
MIN. SIDE SETBACK	15'	0.9'*	11.8'*	1.7'*	4.1'*
MIN. REAR SETBACK	15'	14.4'*	1.6'*	3.7'*	12.0'*

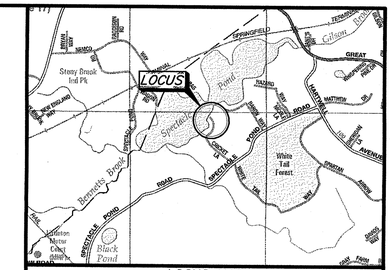
*PRE-EXISTING, NON-CONFORMING



EXISTING SITE PLAN
1"=20'



PROPOSED SITE PLAN
1"=20'



LOCUS MAP
NOT TO SCALE

20 0 10 20 40 60
GRAPHIC SCALE IN FEET

SURV.: MSB/JDS	CALC.: JPG	DRAFT: BJD
NB: 815-8	DEED: 73353-213 73881-459 75619-106	CHECK: DBW

REVISIONS
8/6/21: REV. PER CON COM COMMENTS

COMMONWEALTH OF MASSACHUSETTS
DANIEL B. WOLFE
CIVIL
No. 36523
REGISTERED PROFESSIONAL ENGINEER
8-6-21

SHEET TITLE: SEWAGE DISPOSAL SYSTEM HOLDING TANK

DESIGNED FOR: PETER McANESPIE

ADDRESS: #26, #28 & 30 CRICKET LANE LITTLETON, MA

LOT NO.:	ASSESSOR MAP: U46	ASSESSOR PARCEL: 9, 10 & 11

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SCALE: 1"=20'	DATE: JULY, 2021
REF.:	PLAN NO.: L-14345
JOB NO.: 33242	SHEET NO.: 2 of 2