

Large House Review (LHR) Committee
Monday August 25, 2025
7:00 p.m.

Select Board Chambers
Needham Town Hall, 1471 Highland Avenue, Needham, MA
AND
Virtual Meeting using Zoom
Meeting ID: **885 4714 5967**
(Instructions for accessing below)

To view and participate in this virtual meeting on your phone, download the “Zoom Cloud Meetings” app in any app store or at www.zoom.us. At the above date and time, click on “Join a Meeting” and enter the following Meeting ID: **885 4714 5967**

To view and participate in this virtual meeting on your computer, at the above date and time, go to www.zoom.us click “Join a Meeting” and enter the following ID: **885 4714 5967**

Or to Listen by Telephone: Dial (for higher quality, dial a number based on your current location):

US: +1 312 626 6799 or +1 646 558 8656 or +1 301 715 8592 or +1 346 248 7799 or +1 669 900 9128 or +1 253 215 8782 Then enter ID: **885 4714 5967**

Direct Link to meeting: <https://needham-k12-ma-us.zoom.us/j/88547145967>

1. Modeling presentation.
2. Review of spreadsheet prepared by Ed Quinlan and Paul McGovern comparing Needham to Lexington, Concord & Wellesley allowable built area.
3. Discussion of potential recommendations for dimensional controls.
4. Discussion: Agenda for September 15 Community meeting and outreach protocol.

LHR Committee Members:

Artie Crocker	Planning Board Member / Planning Board Designee
Jeanne McKnight	Planning Board Member / Planning Board Designee
Heidi Frail	Select Board Member / Select Board Designee
Marianne Cooley	Select Board Member / Select Board Designee
Moe Handel	Design Review Board Member / Design Review Board Designee
Tina Burgos	Finance Committee Member / Finance Committee Designee
Nik Ligris	Zoning Board of Appeals Member / Zoning Board of Appeals Designee
Bill Paulson	Real Estate Broker appointed by the Planning Board
Paul McGovern	Developer appointed by the Planning Board
Oscar Mertz	Architect appointed by the Planning Board
Chris Cotter	At Large appointed by the Planning Board
Rob Dangel	At Large appointed by the Planning Board
Joe Matthews	At Large appointed by the Planning Board
Ed Quinlan	At Large appointed by the Planning Board



Large House Review Study Committee

*House Reduction Studies
(draft review)*

some final edits in progress

AUGUST 25, 2025

Reduction Study Parameters:

- Select three sample houses on varying lot sizes between 7,500 and 10,000 sf
- Prepare three levels of house “bulk” reduction for each sample house
- Adjust limits for all dimensional controls for each reduction step including:
 1. FAR (measured using 1, 2, 3 and G)
 2. Coverage
 3. Height
- Reduction studies use 3D modeling to visualize the various levels of change
- This final draft review includes updated presentation following committee review but needs final graphic refinements and clarifications to prepare for Public Meeting #2





Base

BASE: 5,700	
1st fl	1,370
2nd fl	1,606
attic	1,004
basement	1,245
garage	475
TOTAL AREA EXISTING 5,700	
footprint	1,875
Lot Size	7,828
1st-2nd Flr	10'-2 1/2"
2nd-Attic	9'-2 3/4"
FAR	57% (4,455)
LFAR	67% (5,225)
Coverage	24%
Ave Grade - Ridge	34'-2 1/2"



Reduction 1

1st Reduction: 5,207		
1st fl	1,300	-67
2nd fl	1,460	-146
attic	872	-132
basement	1,152	-93
garage	420	-55
TOTAL AREA REDUCED 493		
footprint	1,720	-122
Lot Size	7,828	
1st-2nd Flr	10'-2 1/2"	0
2nd-Attic	9'-2 3/4"	0
FAR	51% (4,029)	-10%
LFAR	60% (4,754)	-9%
Coverage	22%	
Ave Grade - Ridge	33'-4 1/2"	-10"



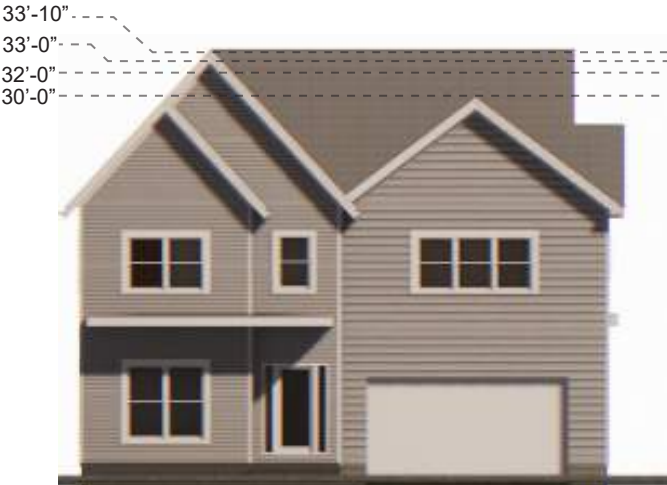
Reduction 2

2nd Reduction: 4,614		
1st fl	1,300	-67
2nd fl	1,152	-454
attic	587	-417
basement	1,152	-93
garage	420	-55
TOTAL AREA REDUCED 1,086		
footprint	1,720	-122
Lot Size	7828	
1st-2nd Flr	9'-8 1/2"	-6"
2nd-Attic	8'-8 3/4"	-6"
FAR	44% (3,459)	-22%
LFAR	54% (4,191)	-20%
Coverage	22%	
Ave Grade - Ridge	32'-4 1/2"	-1'-10"



Reduction 3

3rd Reduction: 4,013		
1st fl	1,226	-144
2nd fl	1,317	-289
attic	0	-1,004
basement	1,050	-195
garage	420	-55
TOTAL AREA REDUCED 1,687		
footprint	1,627	-248
Lot Size	7,828	
1st-2nd Flr	9'-6"	-8 1/2"
2nd-Attic	8'-6"	-8 3/4"
FAR	38% (2,963)	-33%
LFAR	46% (3,593)	-31%
Coverage	20%	
Ave Grade - Ridge	30'-4 1/2"	-3'-10"



Base



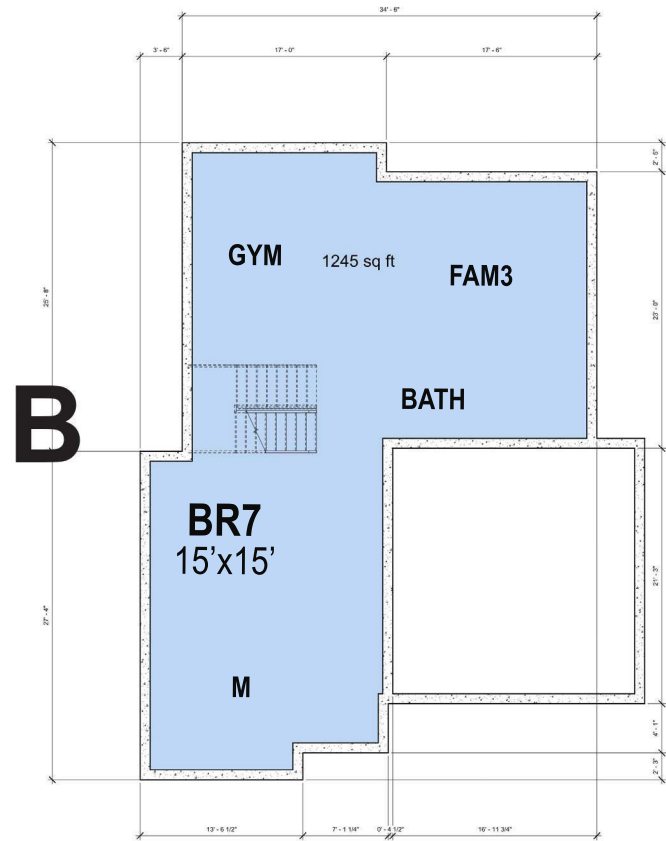
Reduction 1



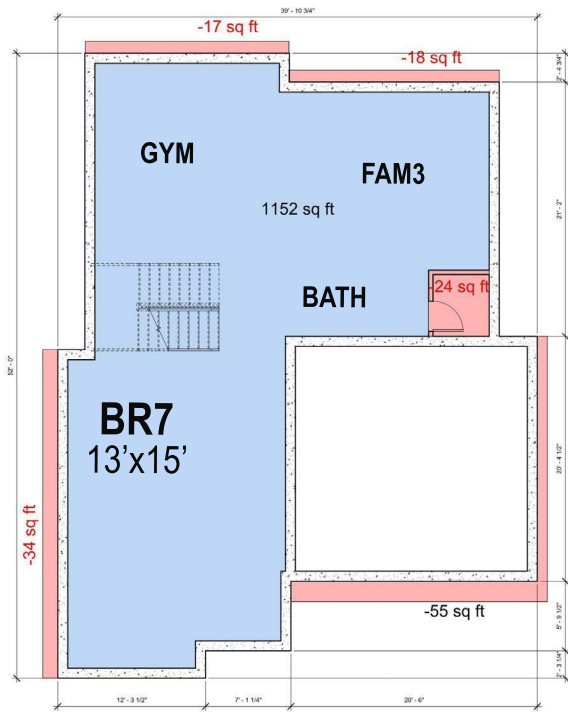
Reduction 2



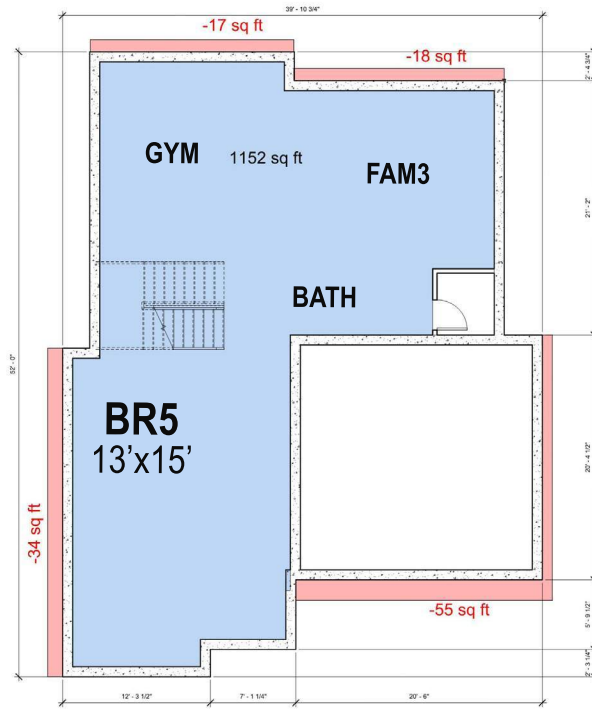
Reduction 3



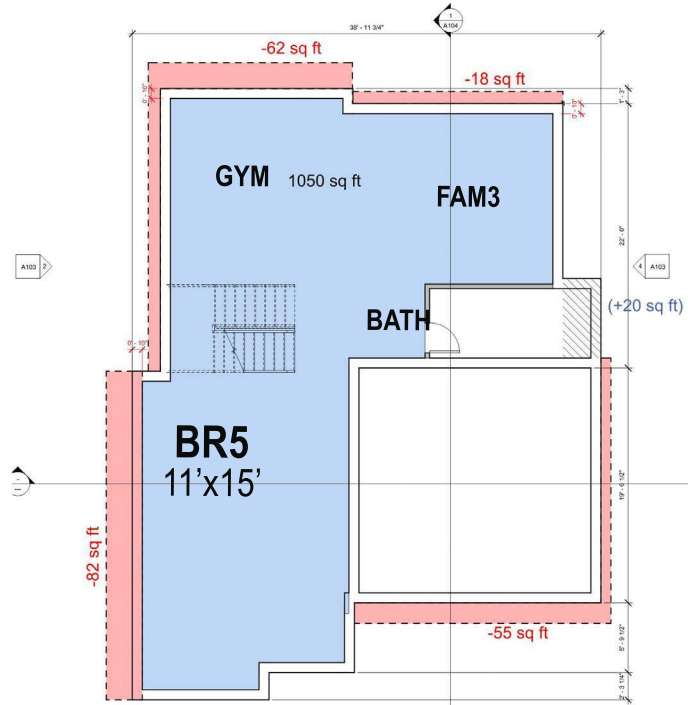
(1,245 sf)



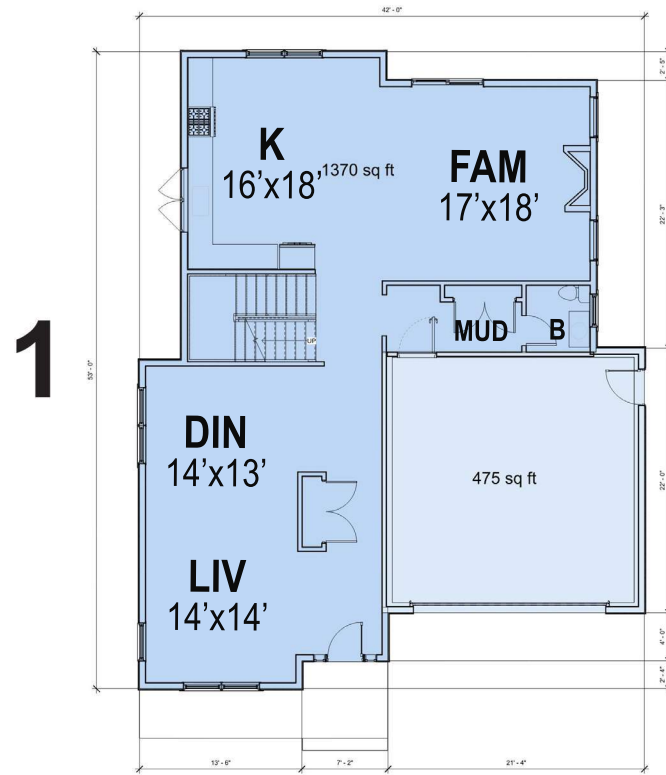
(1,152 sf)(-93)



(1,152 sf)(-93)

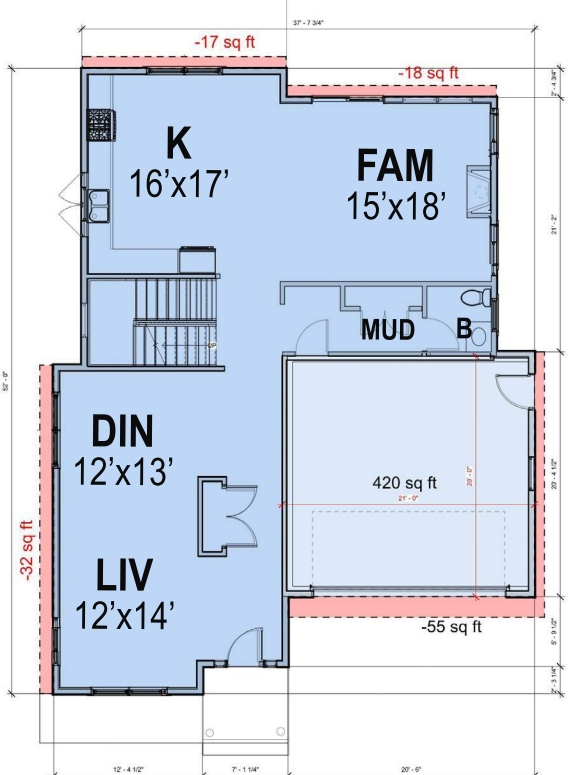


(1,050 sf)(-195)



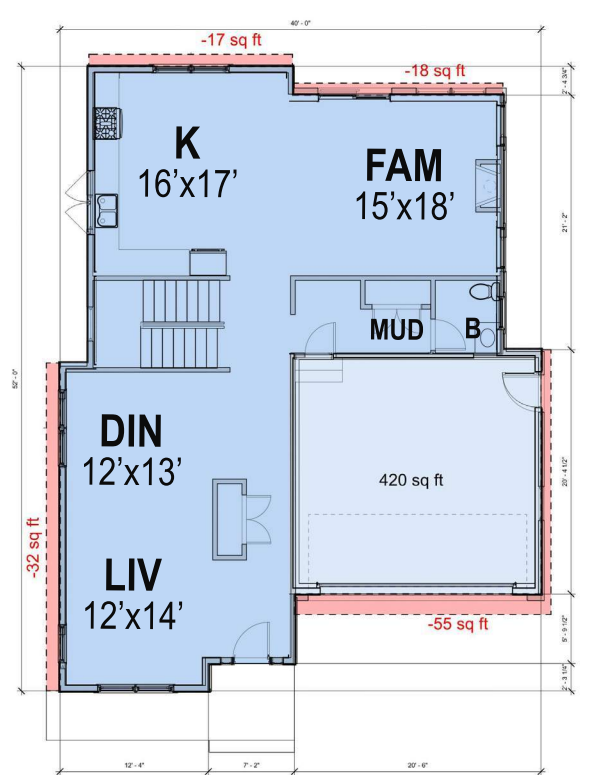
(1,370 sf)

Base



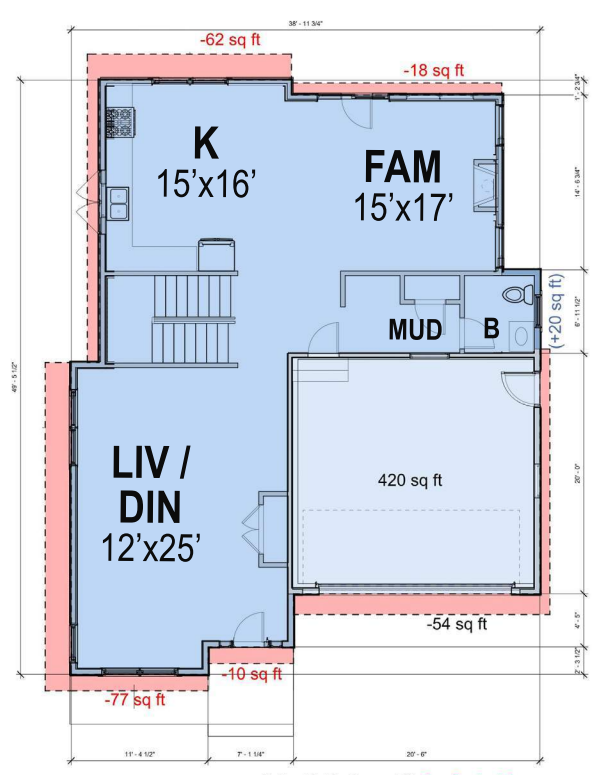
(1,300 sf)(-70)

Reduction 1



(1,300 sf)(-70)

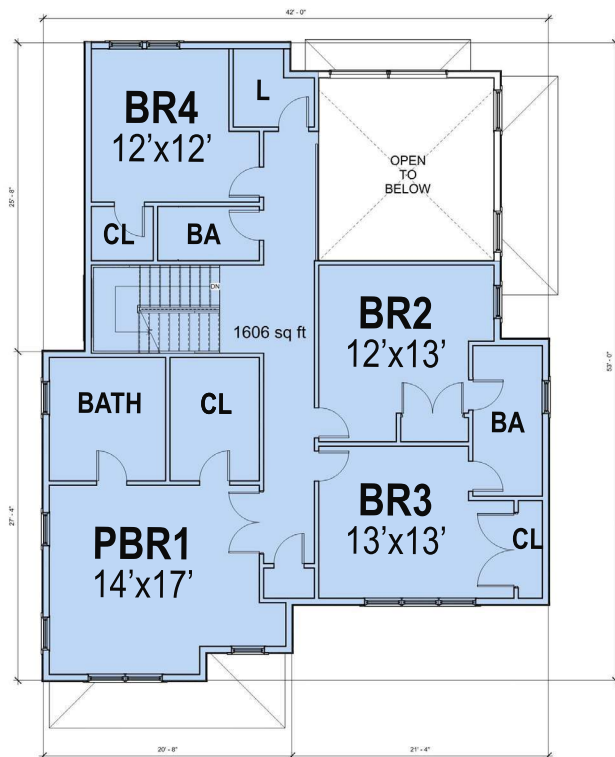
Reduction 2



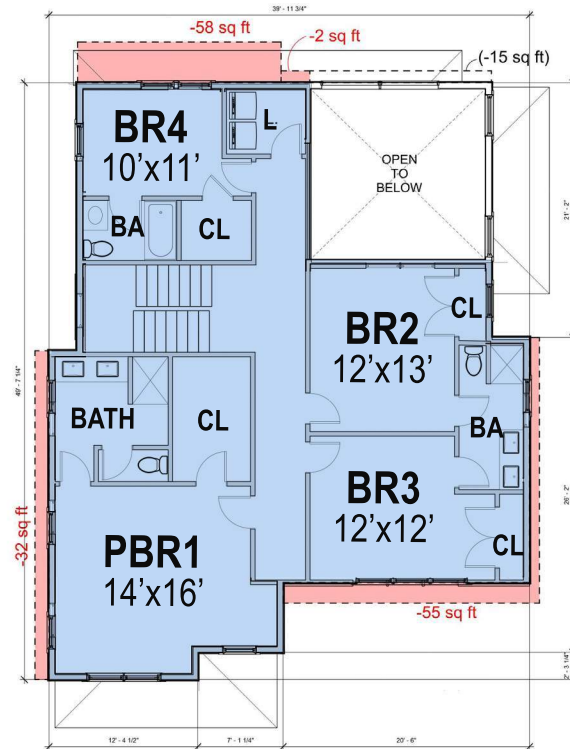
(1,226 sf)(-144)

Reduction 3

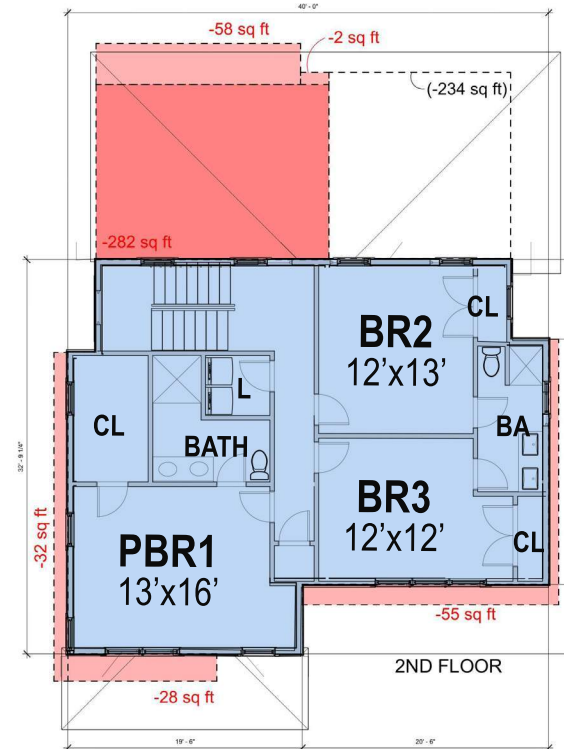
2



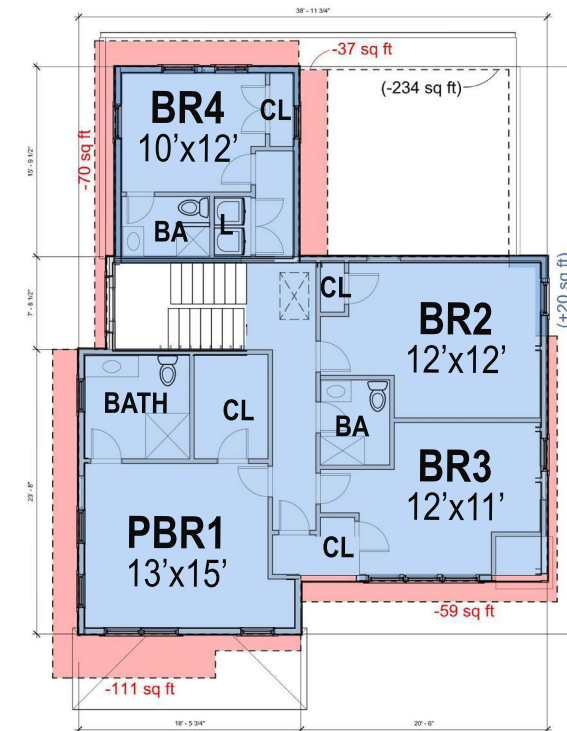
(1,606 sf)



(1,460 sf)(-146)

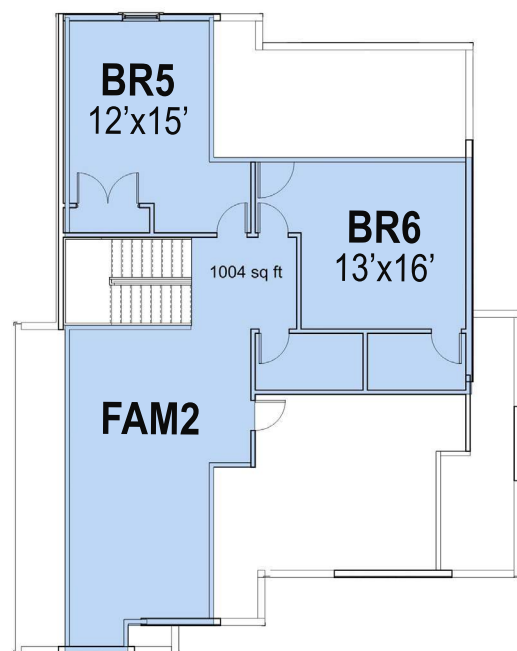


(1,152 sf)(-454)



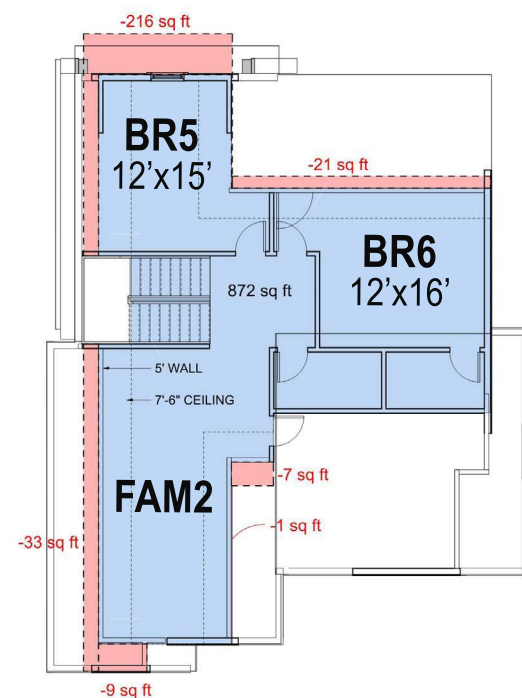
(1,317 sf)(-289)

A



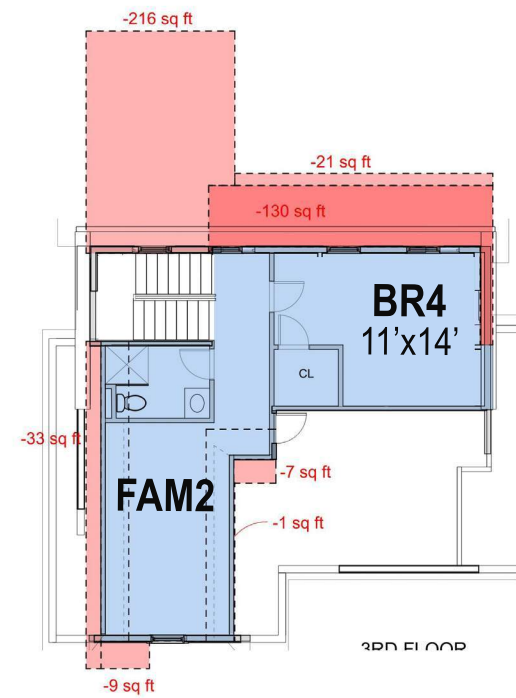
(1,004 sf)

Base



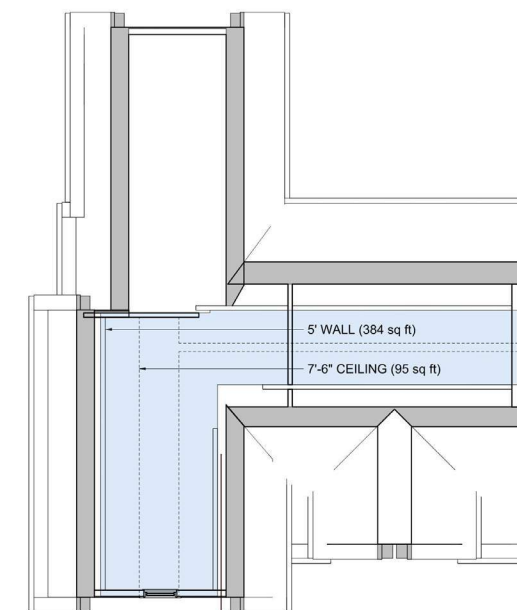
(872 sf)(-132)

Reduction 1



(587 sf)(-417)

Reduction 2



(unhabitable)(-1,004)

Reduction 3



Base
(5,700 sf)



Base
(5,700 sf)

House 1



Base
(5,700 sf)



Reduction 1
(5,207 sf)



Base
(5,700 sf)



Reduction 2
(4,614 sf)



Base
(5,700 sf)



Reduction 3
(4,013 sf)



Base
(5,700 sf)



Base
(5,700 sf)

House 1



Base
(5,700 sf)



Reduction 1
(5,207 sf)



Base
(5,700 sf)



Reduction 2
(4,614 sf)



Base
(5,700 sf)



Reduction 3
(4,013 sf)



Base
(5,700 sf)



Base
(5,700 sf)

House 1



Base
(5,700 sf)



Reduction 1
(5,207 sf)

House 1

(TOTAL AREA REDUCED: 493 sf)



Base
(5,700 sf)



Reduction 2
(4,614 sf)

House 1

(TOTAL AREA REDUCED: 1,086 sf)



Base
(5,700 sf)



Reduction 3
(4,013 sf)



8.18.2025

House 1 - Base (5,700 sf)

RDA



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House 1 - Reduction 1 (5,207 sf)
(TOTAL AREA REDUCED: 493 sf)

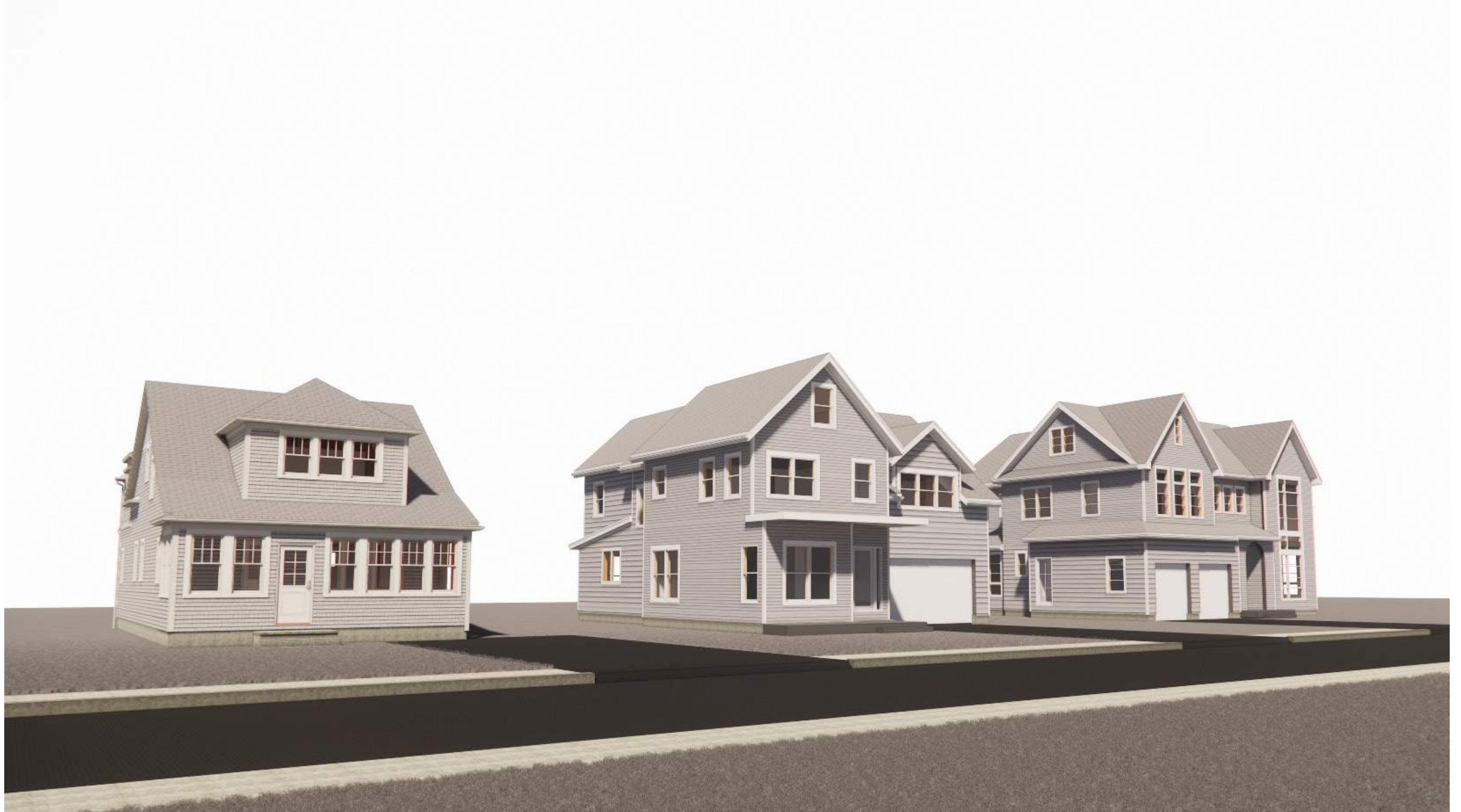
RDA



8.18.2025

House 1 - Reduction 2 (4,614 sf)
(TOTAL AREA REDUCED: 1,086 sf)

RDA



8.18.2025

House 1 - Reduction 3 **(4,013 sf)**
(TOTAL AREA REDUCED: 1,687 sf)

RDA



8.18.2025

House 1 - Base (5,700 sf)

RDA



8.18.2025

House 1 - Reduction 1 (5,207 sf)
(TOTAL AREA REDUCED: 493 sf)

RDA



8.18.2025

House 1 - Reduction 2 (4,614 sf)
(TOTAL AREA REDUCED: 1,086 sf)

RDA



8.18.2025

House 1 - Reduction 3 **(4,013 sf)**
(TOTAL AREA REDUCED: 1,687 sf)

RDA

House 1

Summary of Reductions

BASE:	5,700	1st Reduction:	5,207	2nd Reduction:	4,614	3rd Reduction:	4,013
1st fl	1,370	1,300	-67	1,300	-67	1,226	-144
2nd fl	1,606	1,460	-146	1,152	-454	1,317	-289
attic	1,004	872	-132	587	-417	0	-1,004
basement	1,245	1,152	-93	1,152	-93	1,050	-195
garage	475	420	-55	420	-55	420	-55
TOTAL AREA EXISTING	5,700	TOTAL AREA REDUCED	493	TOTAL AREA REDUCED	1,086	TOTAL AREA REDUCED	1,687
footprint	1,875	1,720	-122	1,720	-122	1,627	-248
Lot Size	7,828	7,828		7828		7,828	
1st-2nd Flr	10'-2 1/2"	10'-2 1/2"	0	9'-8 1/2"	-6"	9'-6"	-8 1/2"
2nd-Attic	9'-2 3/4"	9'-2 3/4"	0	8'-8 3/4"	-6"	8'-6"	-8 3/4"
FAR	57% (4,455)	51% (4,029)	-10%	44% (3,459)	-22%	38% (2,963)	-33%
LFAR	67% (5,225)	60% (4,754)	-9%	54% (4,191)	-20%	46% (3,593)	-31%
Coverage	24%	22%		22%		20%	
Ave Grade - Ridge	34'-2 1/2"	33'-4 1/2"	-10"	32'-4 1/2"	-1'-10"	30'-4 1/2"	-3'-10"



Base

BASE: 6,736	
1st fl	1,684
2nd fl	1,774
attic	1,177
basement	1,535
garage	566
TOTAL AREA EXISTING 6,736	
footprint	2,250
Lot Size	9,191
1st-2nd Flr	10'-0"
2nd-Attic	10'-0"
FAR	57% (5,201)
LFAR	67% (6,170)
Coverage	24%
Ave Grade - Ridge	33'-10"



Reduction 1

1st Reduction: 5,957	
1st fl	1,480 -204
2nd fl	1,654 -120
attic	1,049 -128
basement	1,341 -194
garage	453 133
TOTAL AREA REDUCED 779	
footprint	1,933 -317
Lot Size	9,191
1st-2nd Flr	10'-0" 10'-0"
2nd-Attic	10'-0" 10'-0"
FAR	50% (4,636) -11%
LFAR	50% (5,524) -10%
Coverage	21%
Ave Grade - Ridge	33'-0" -10"



Reduction 2

2nd Reduction: 5,239	
1st fl	1,480 -204
2nd fl	1,283 -491
attic	683 -494
basement	1,341 -195
garage	453 -113
TOTAL AREA REDUCED 1,497	
footprint	1,933 -317
Lot Size	9,191
1st-2nd Flr	9'-6" -6"
2nd-Attic	9'-6" -6"
FAR	42% (-3,899) -25%
LFAR	52% (-4,787) -22%
Coverage	
Ave Grade - Ridge	32'-0" -1'-10"



Reduction 3

3rd Reduction: 4,568	
1st fl	1,388 -296
2nd fl	1,477 -297
attic	0 -1,177
basement	1,250 -285
garage	453 -113
TOTAL AREA REDUCED 2,168	
footprint	1,841 -409
Lot Size	9,191
1st-2nd Flr	9'-2" -10"
2nd-Attic	9'-2" -10"
FAR	36% (3,318) -36%
LFAR	45% (4,115) -33%
Coverage	
Ave Grade - Ridge	30'-0" -3'-10"



Base



Reduction 1



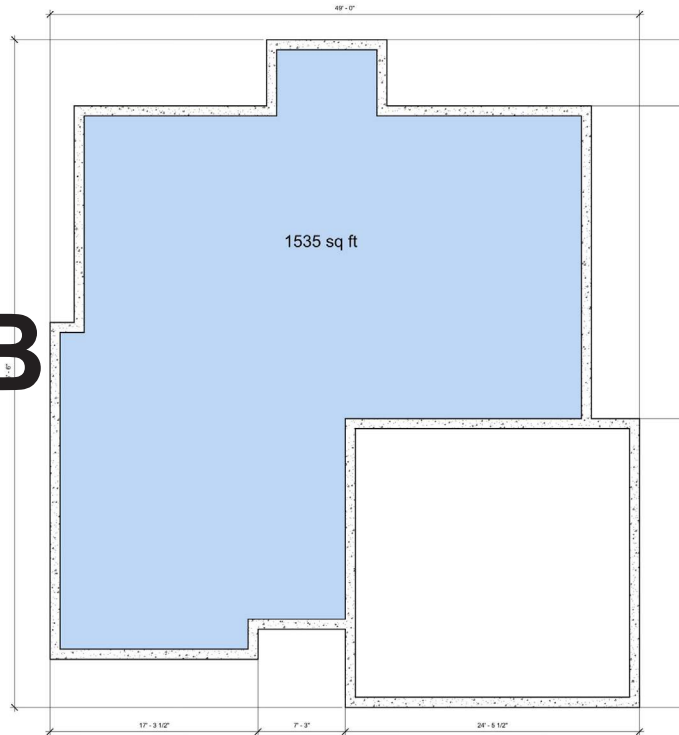
Reduction 2



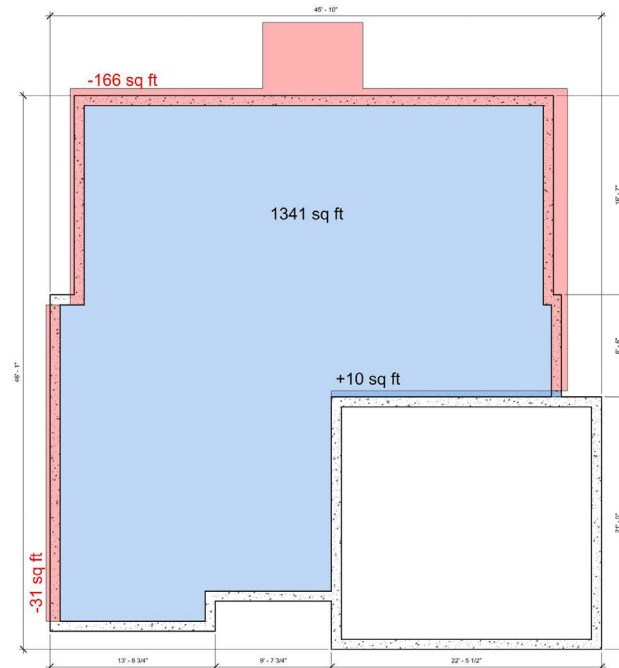
Reduction 3

labeling plans in progress

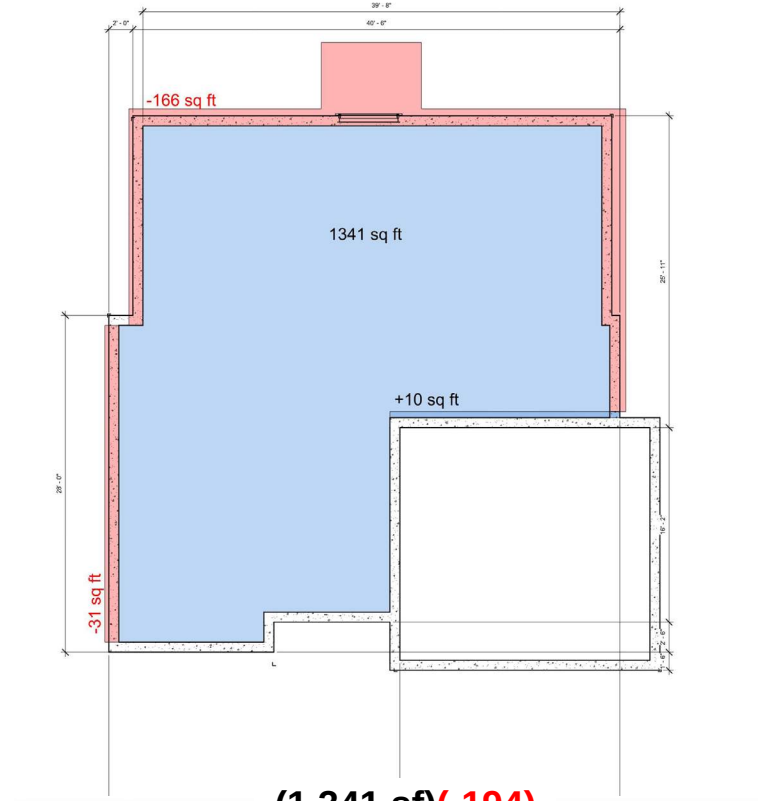
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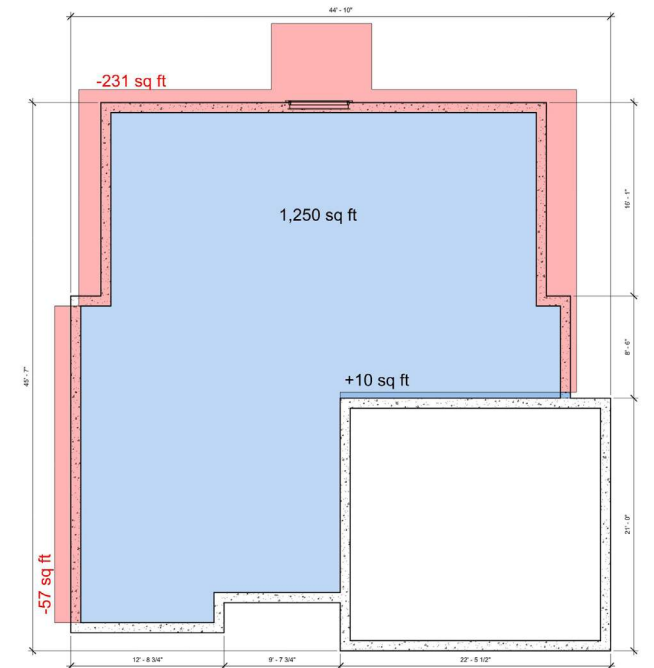
(1,535 sf)



(1,341 sf)(-194)

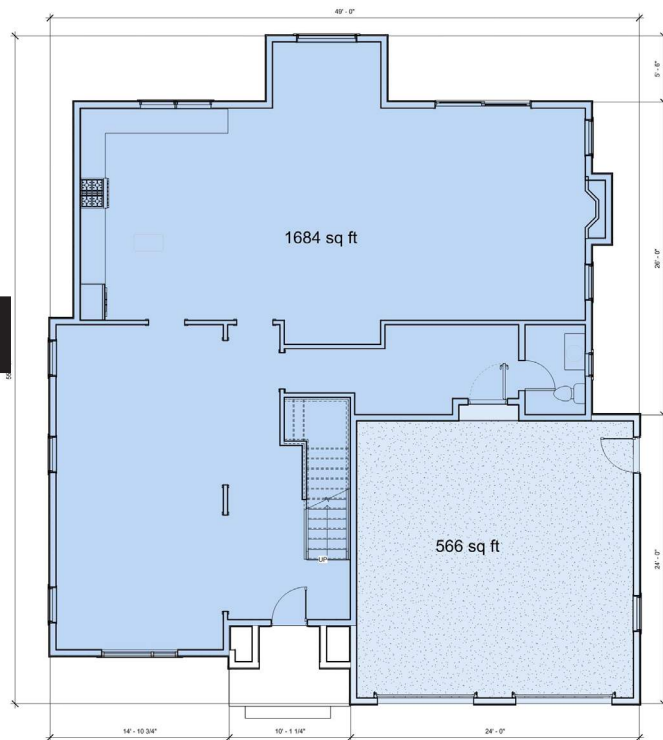


(1,341 sf)(-194)

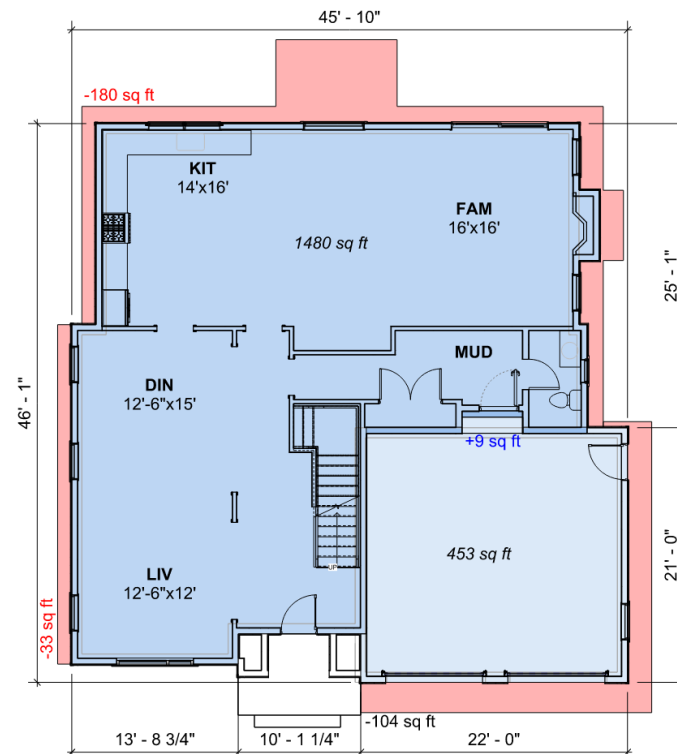


(1,250 sf)(-285)

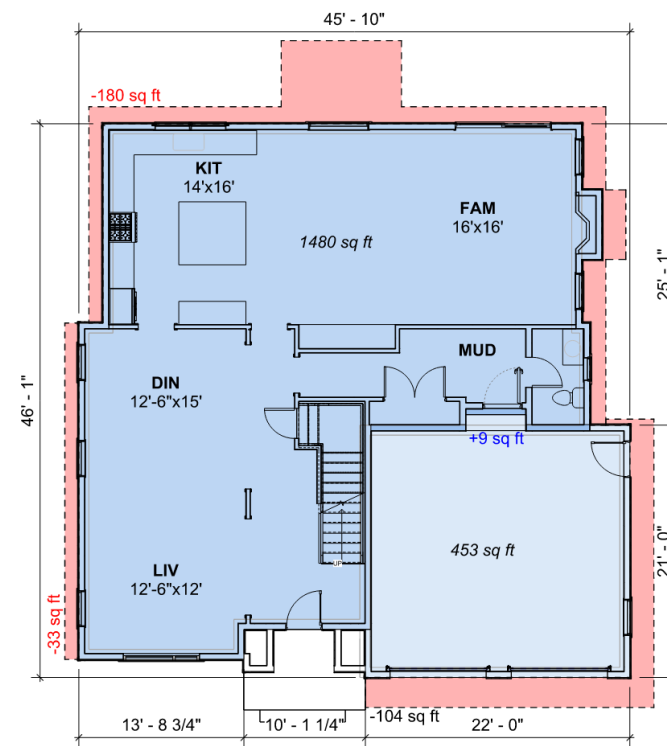
1



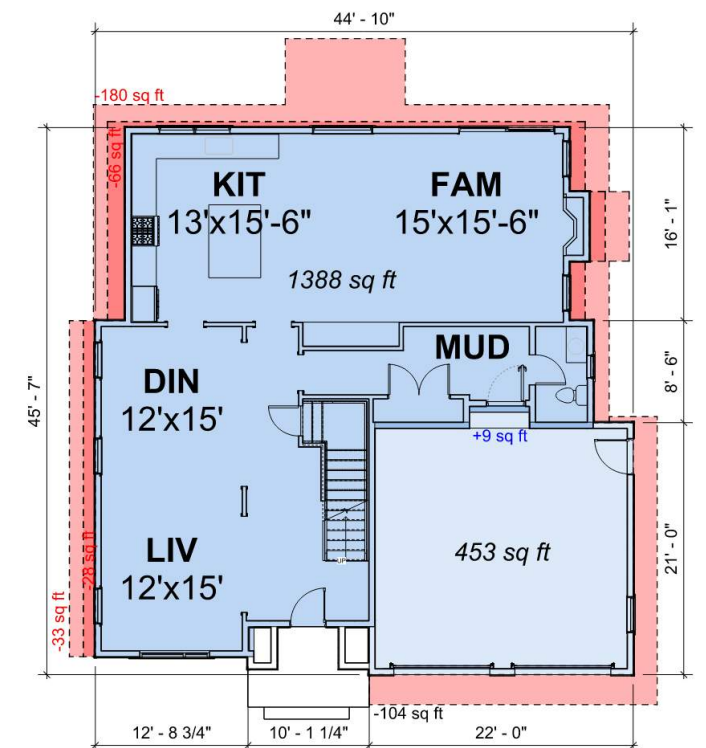
(1,684 sf)
Base



(1,480 sf)(-204)
Reduction 1



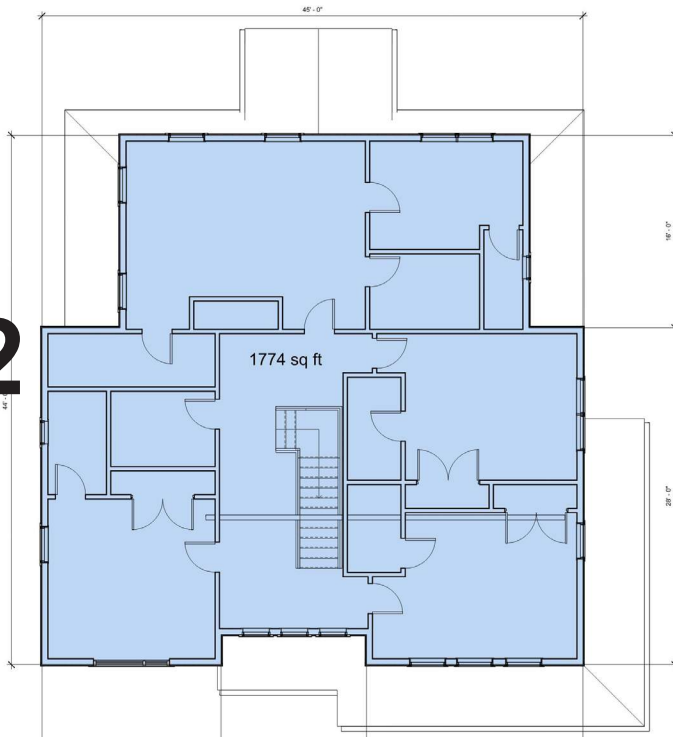
(1,480 sf)(-204)
Reduction 2



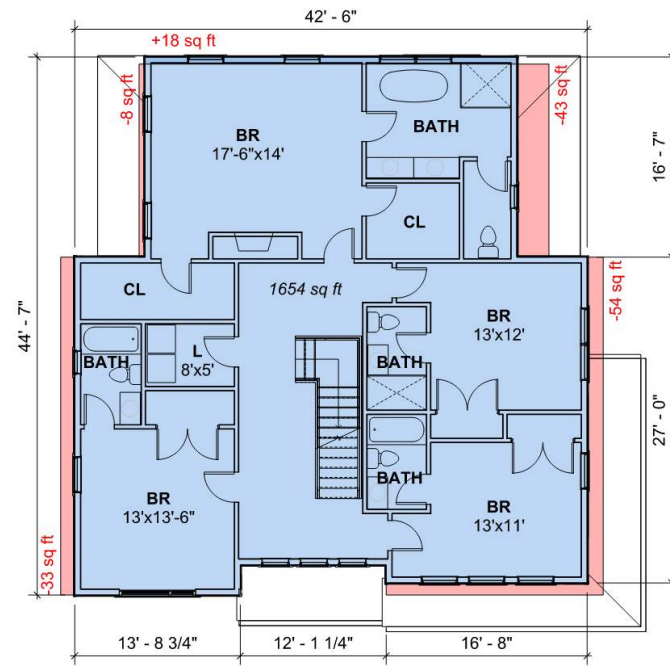
(1,226 sf)(-144)
Reduction 3

labeling plans in progress

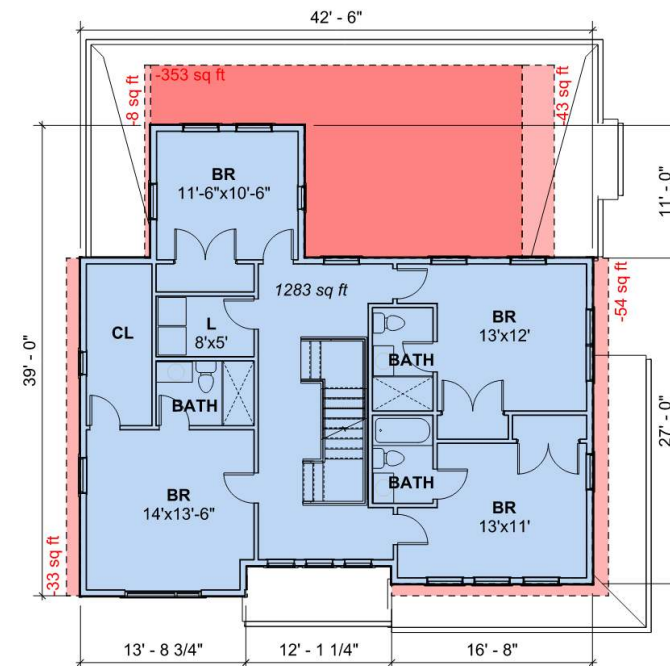
2



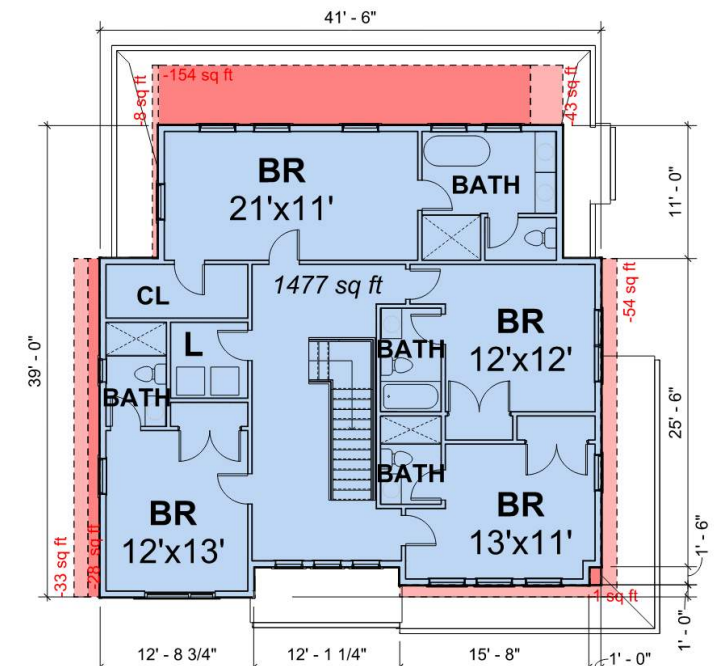
(1,774 sf)



(1,654 sf)(-120)

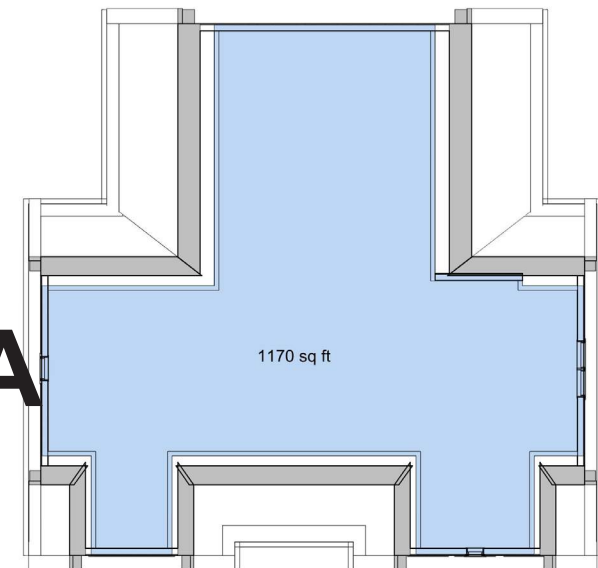


(1,283 sf)(-491)

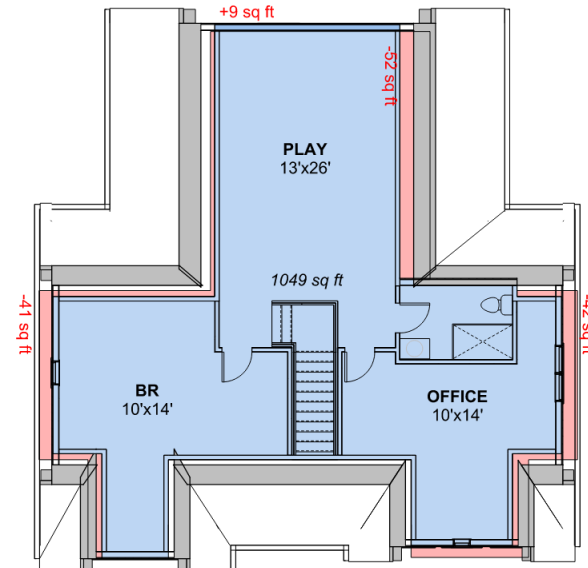


(1,477 sf)(-297)

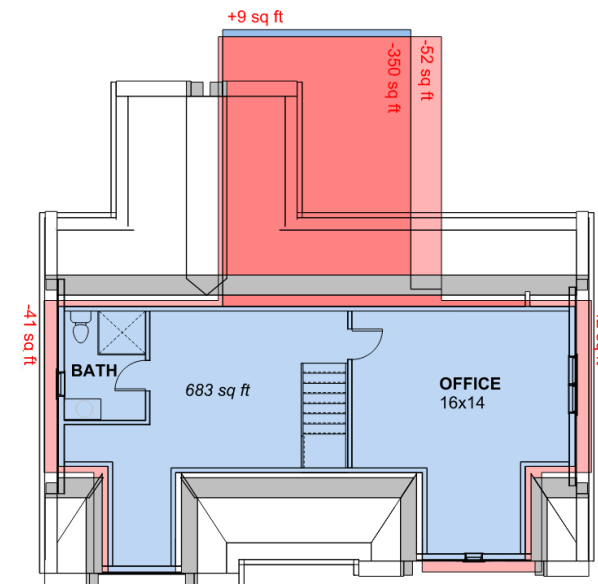
A



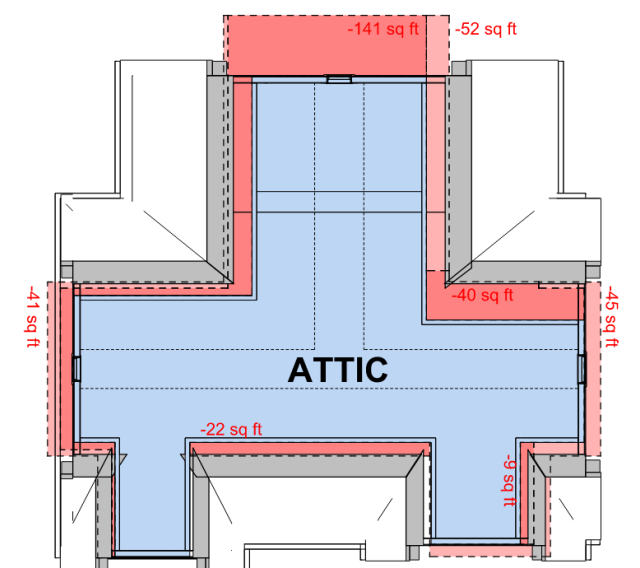
(1,177 sf)
Base



(1,049 sf)(-128)
Reduction 1



(683 sf)(-494)
Reduction 2



(uninhabitable)(-1,177)
Reduction 3



Base
(6,736 sf)

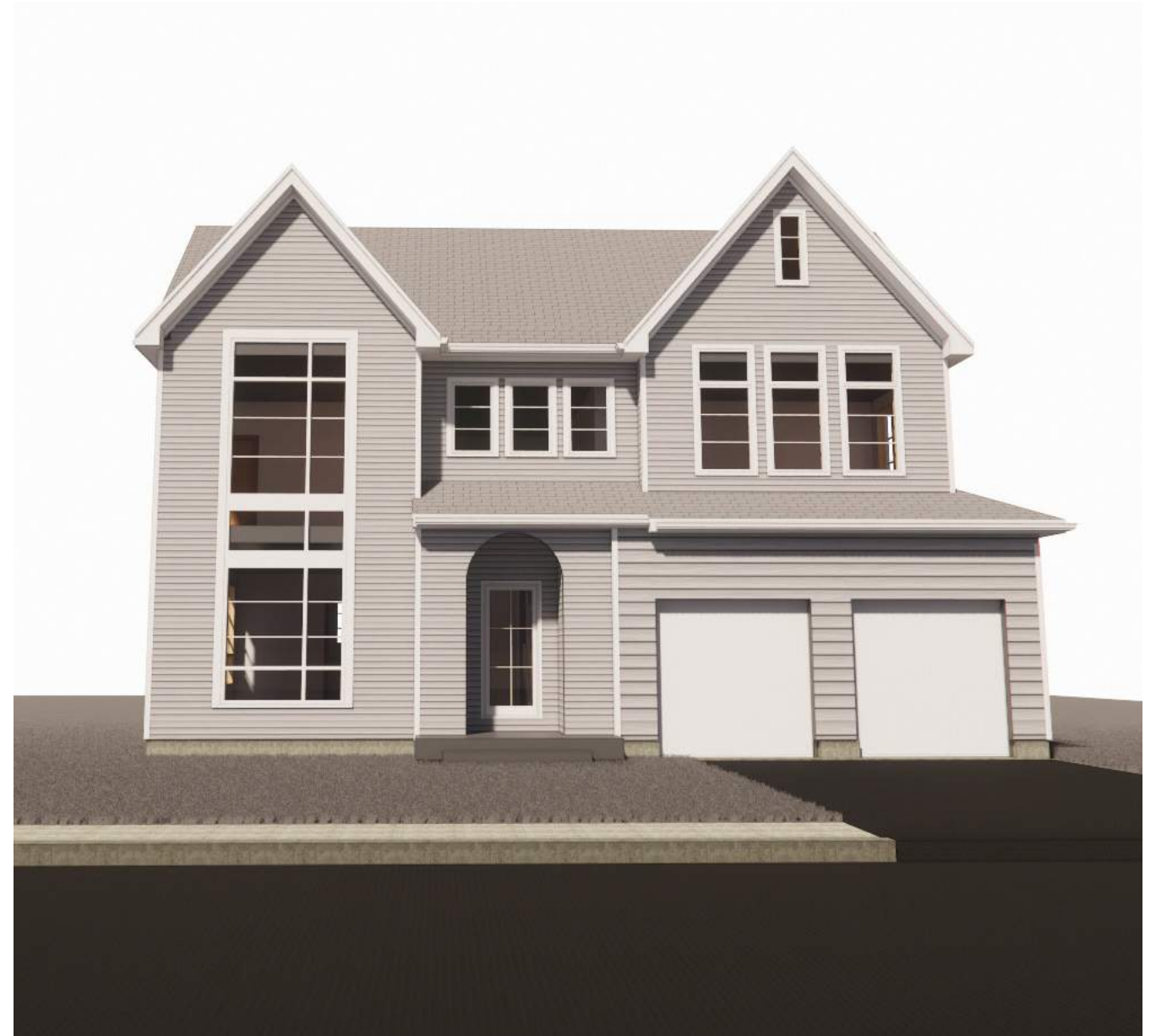


Base
(6,736 sf)

House 2



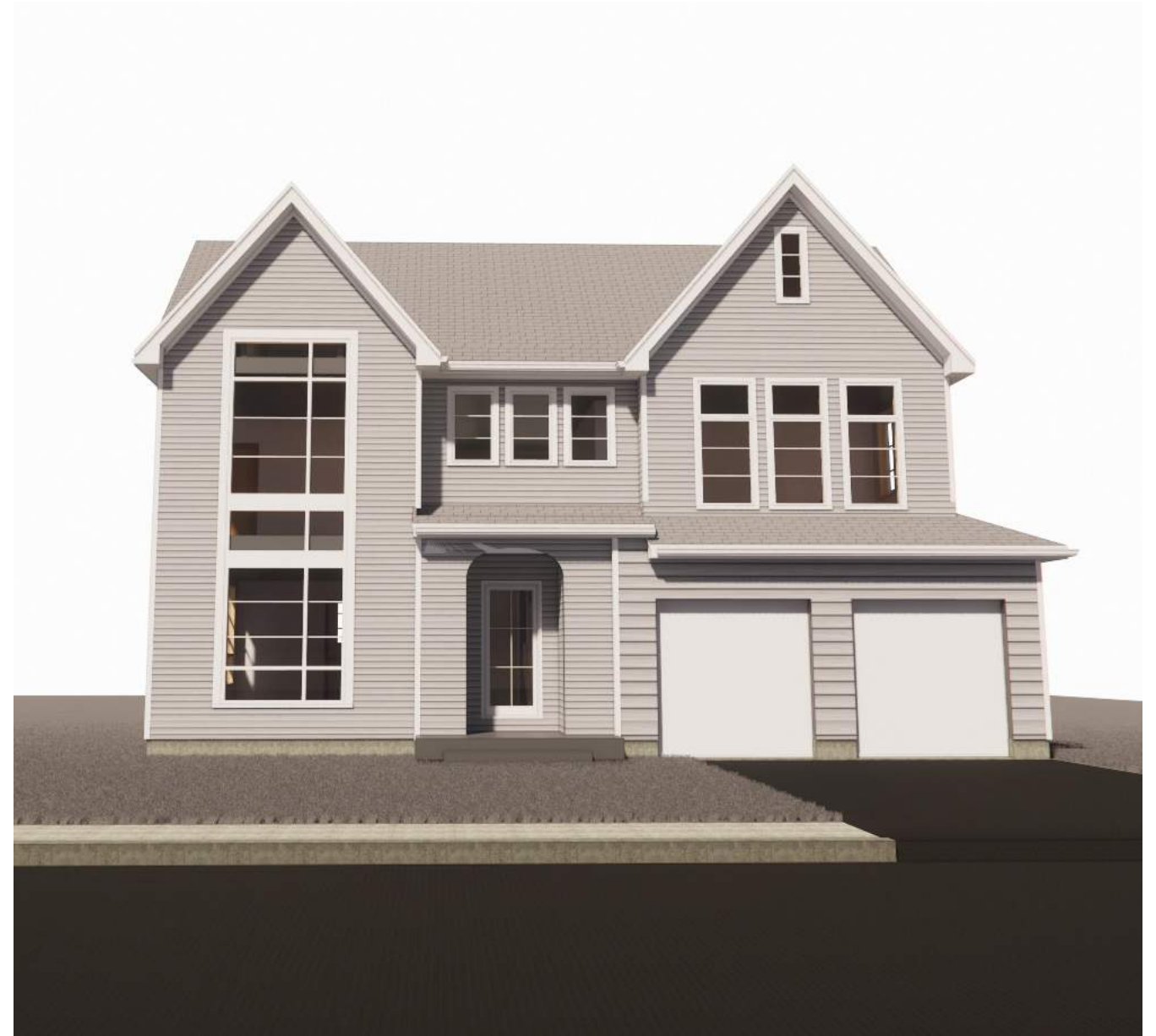
Base
(6,736 sf)



Reduction 1
(5,957 sf)



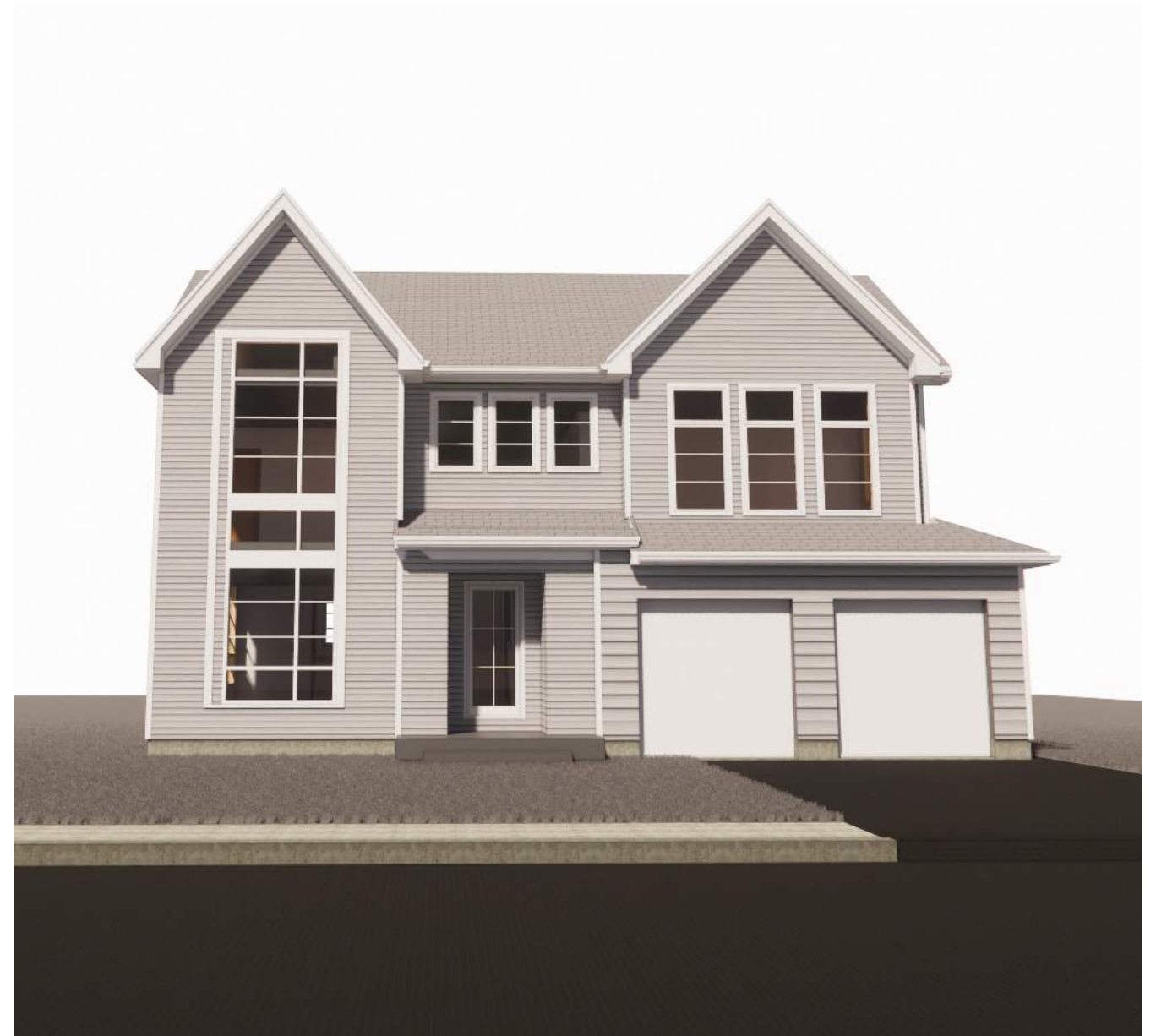
Base
(6,736 sf)



Reduction 2
(5,239 sf)



Base
(6,736 sf)



Reduction 3
(4,568 sf)



Base
(6,736 sf)



Base
(6,736 sf)

House 2



Base
(6,736 sf)



Reduction 1
(5,957 sf)

House 2

(TOTAL AREA REDUCED: 779 sf)



Base
(6,736 sf)



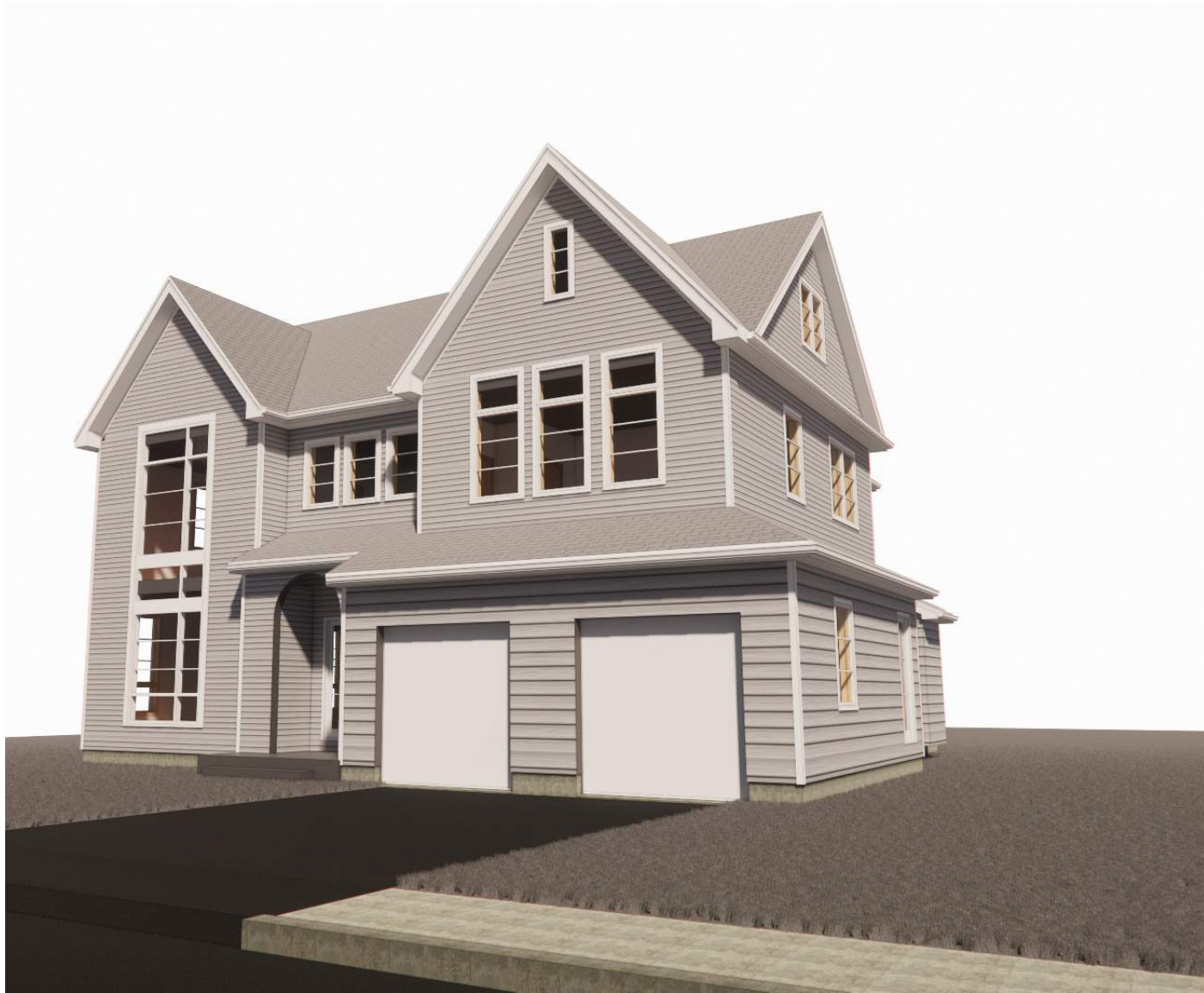
Reduction 2
(5,239 sf)



Base
(6,736 sf)



Reduction 3
(5,568 sf)



Base
(6,736 sf)



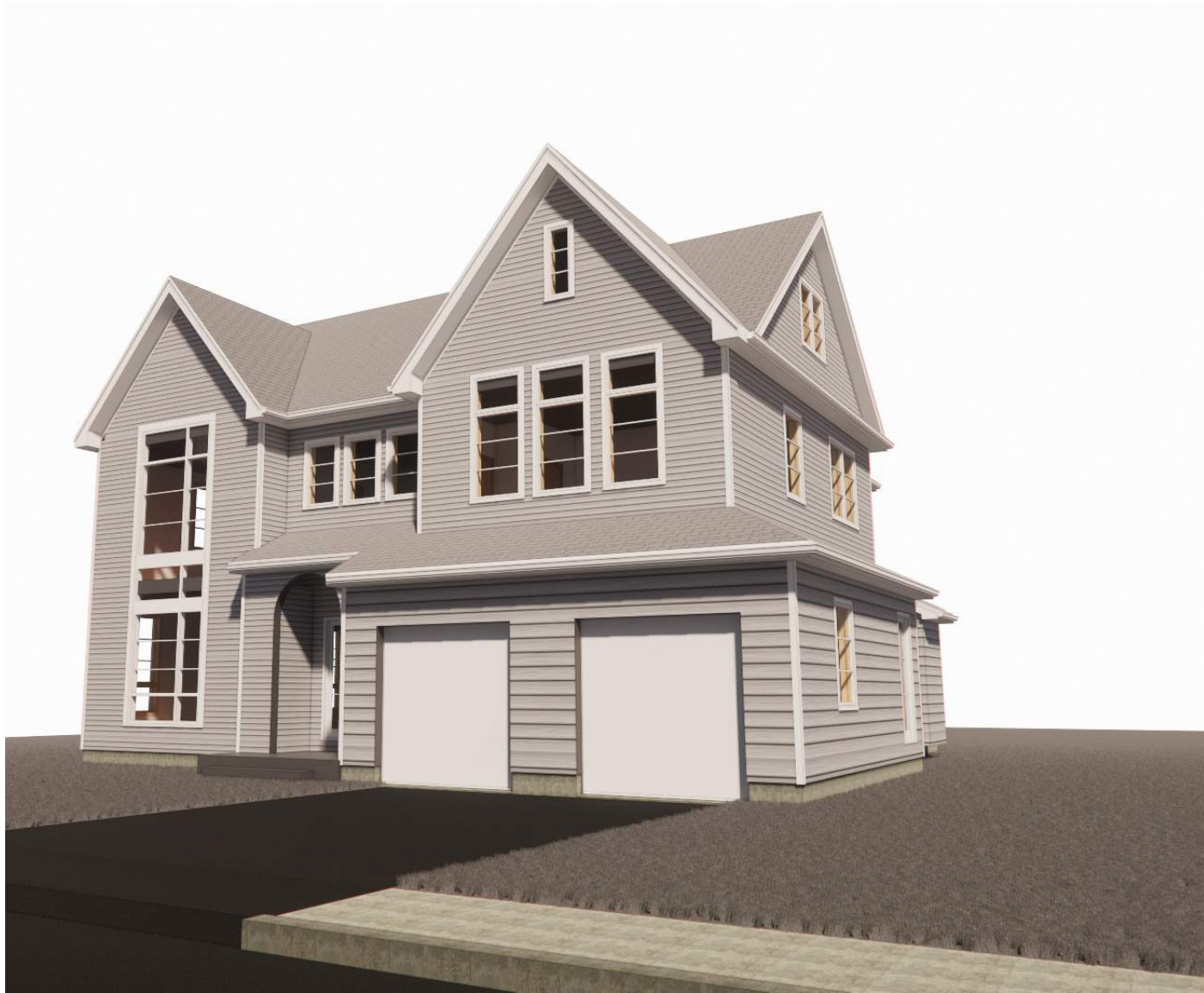
Base
(6,736 sf)



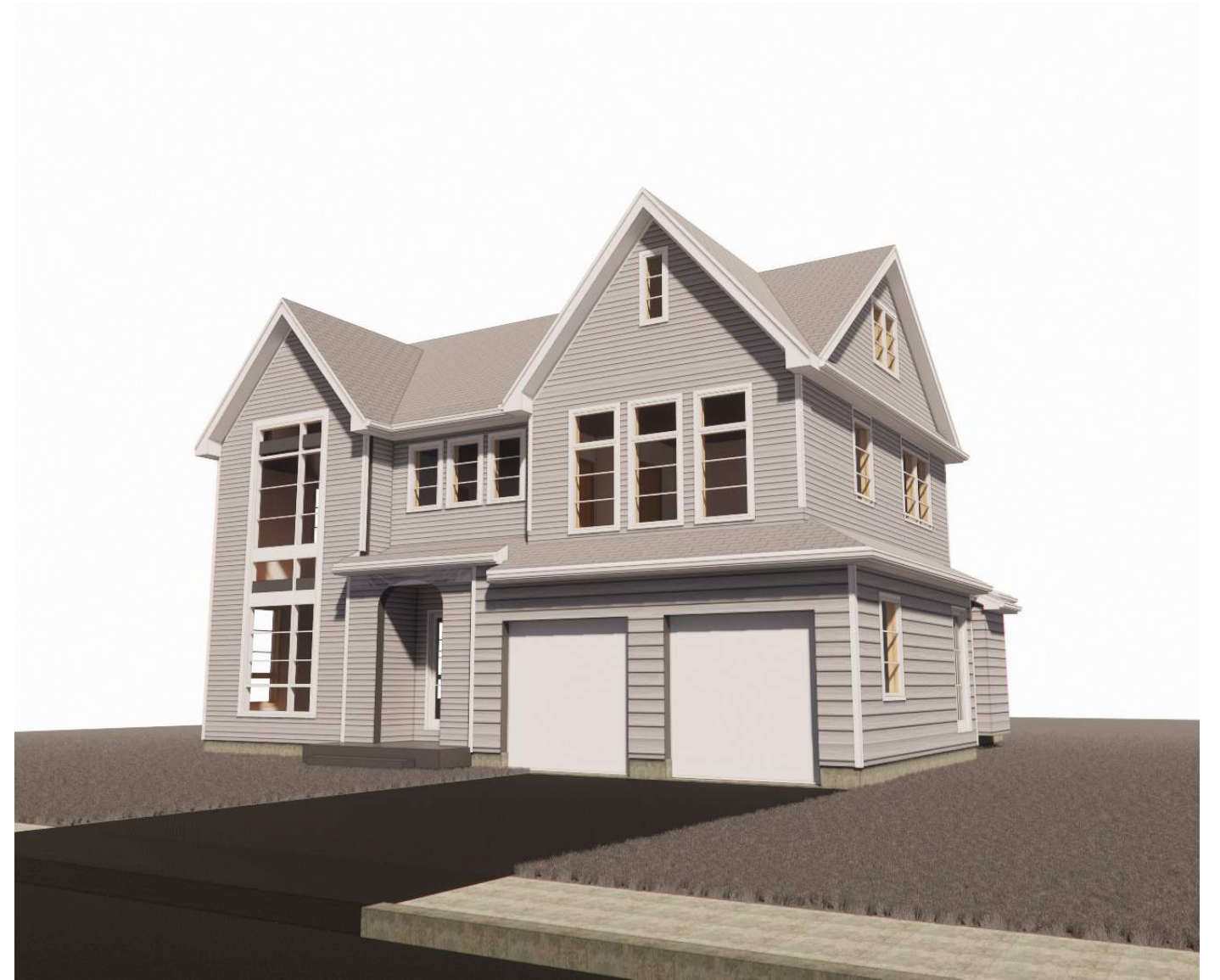
Base
(6,736 sf)



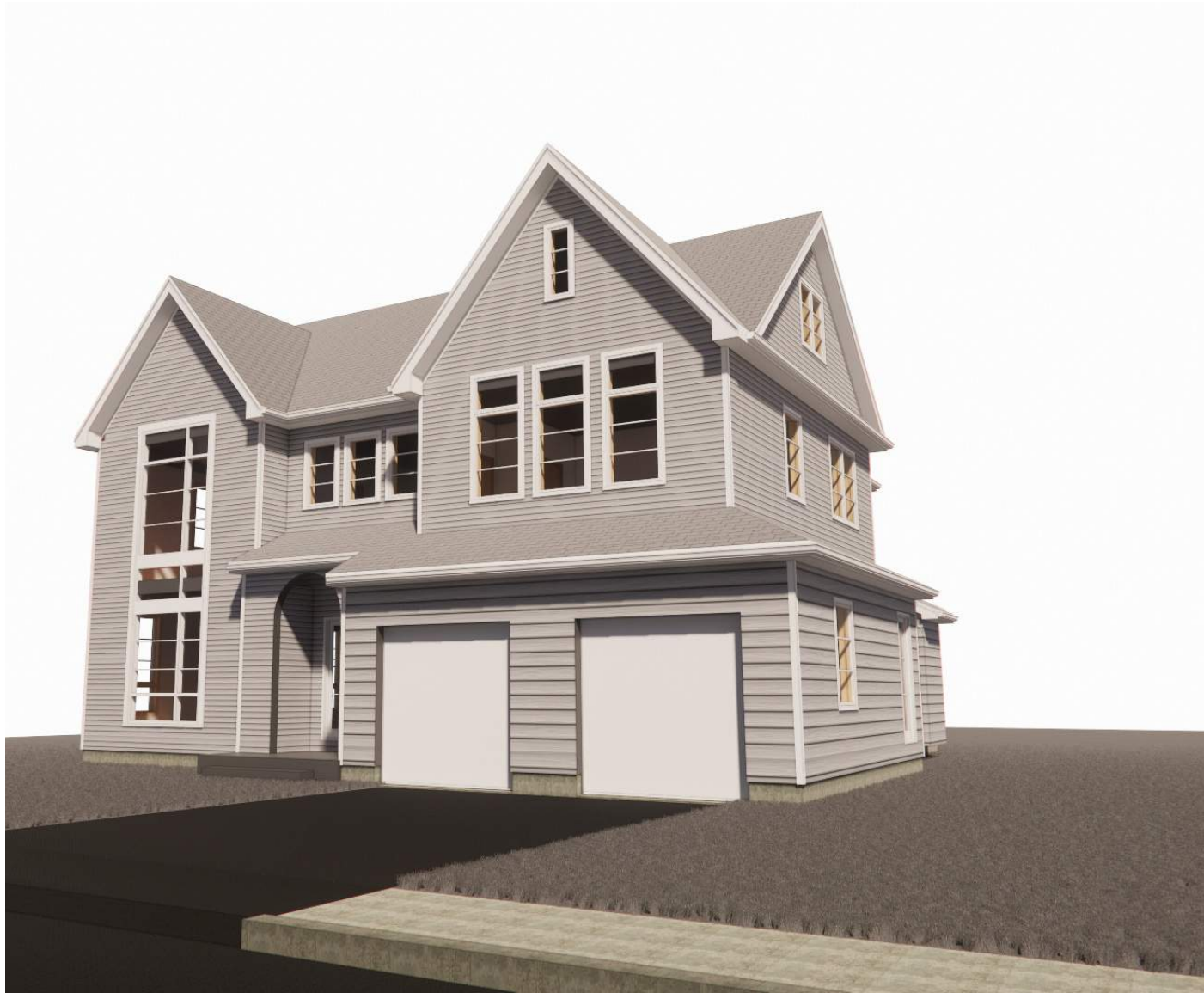
Reduction 1
(5,957 sf)



Base
(6,736 sf)



Reduction 2
(5,239 sf)



Base
(6,736 sf)



Reduction 3
(4,568 sf)



8.18.2025

House 2 - Base (6,736 sf)

RDA



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House 2 - Reduction 1 (5,957 sf)
(TOTAL AREA REDUCED: 779 sf)

RDA



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House 2 - Reduction 2 (5,239 sf)
(TOTAL AREA REDUCED: 1,497 sf)





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House 2 - Reduction 3 (4,568 sf)
(TOTAL AREA REDUCED: 2,168 sf)

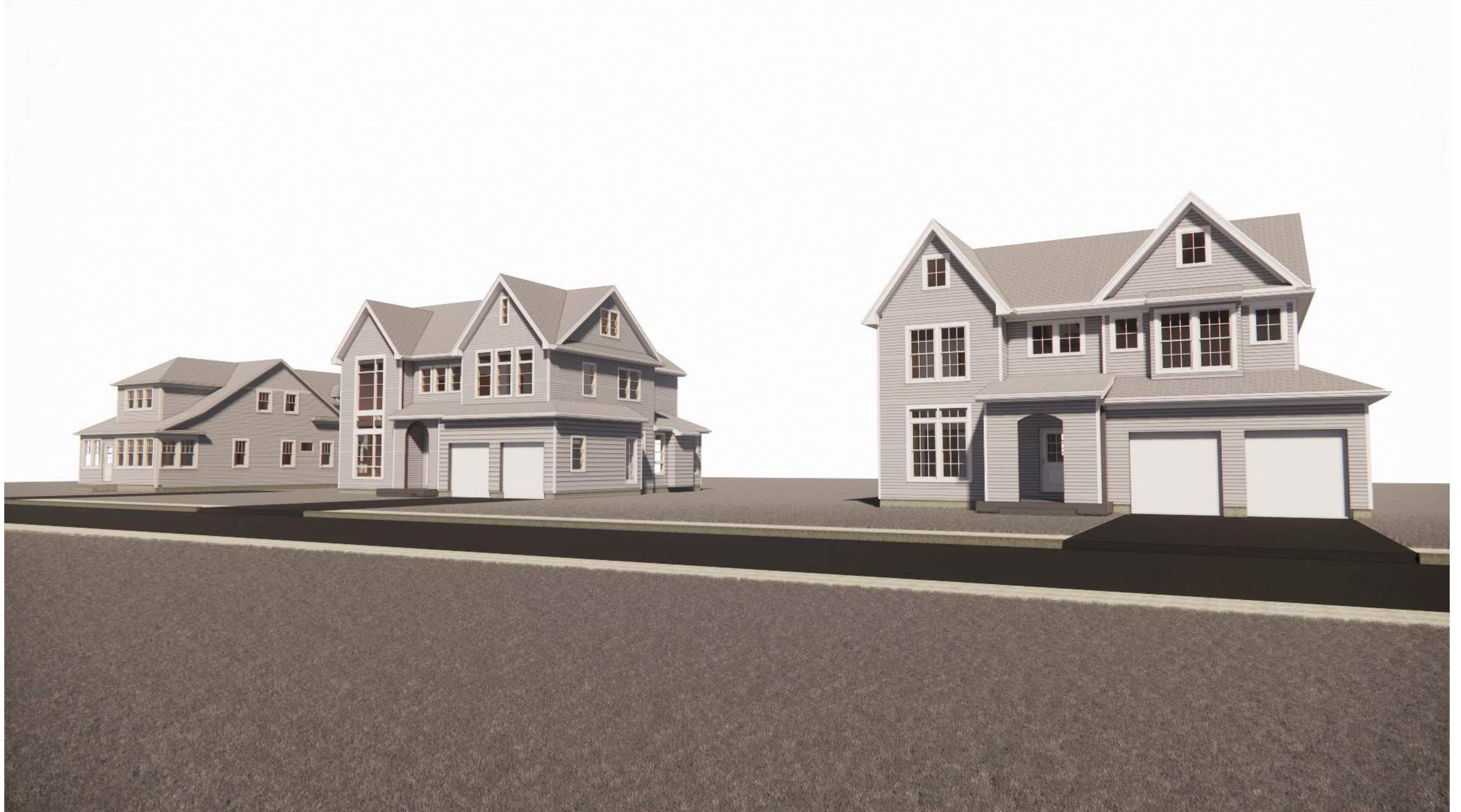
RDA



8.18.2025

House 2 - Base (6,736 sf)

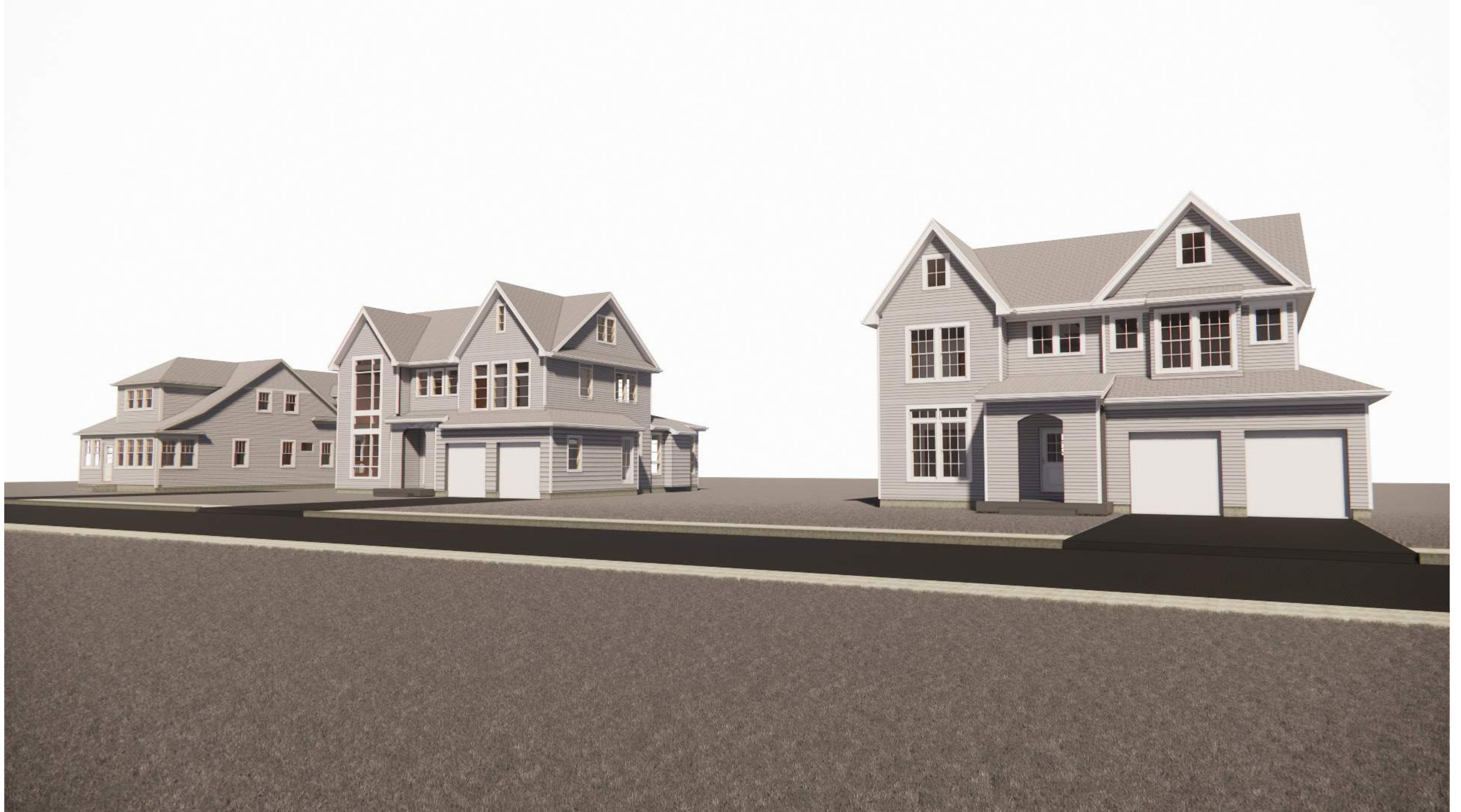
RDA



8.18.2025

House 2 - Reduction 1 **(5,957 sf)**
(TOTAL AREA REDUCED: 779 sf)

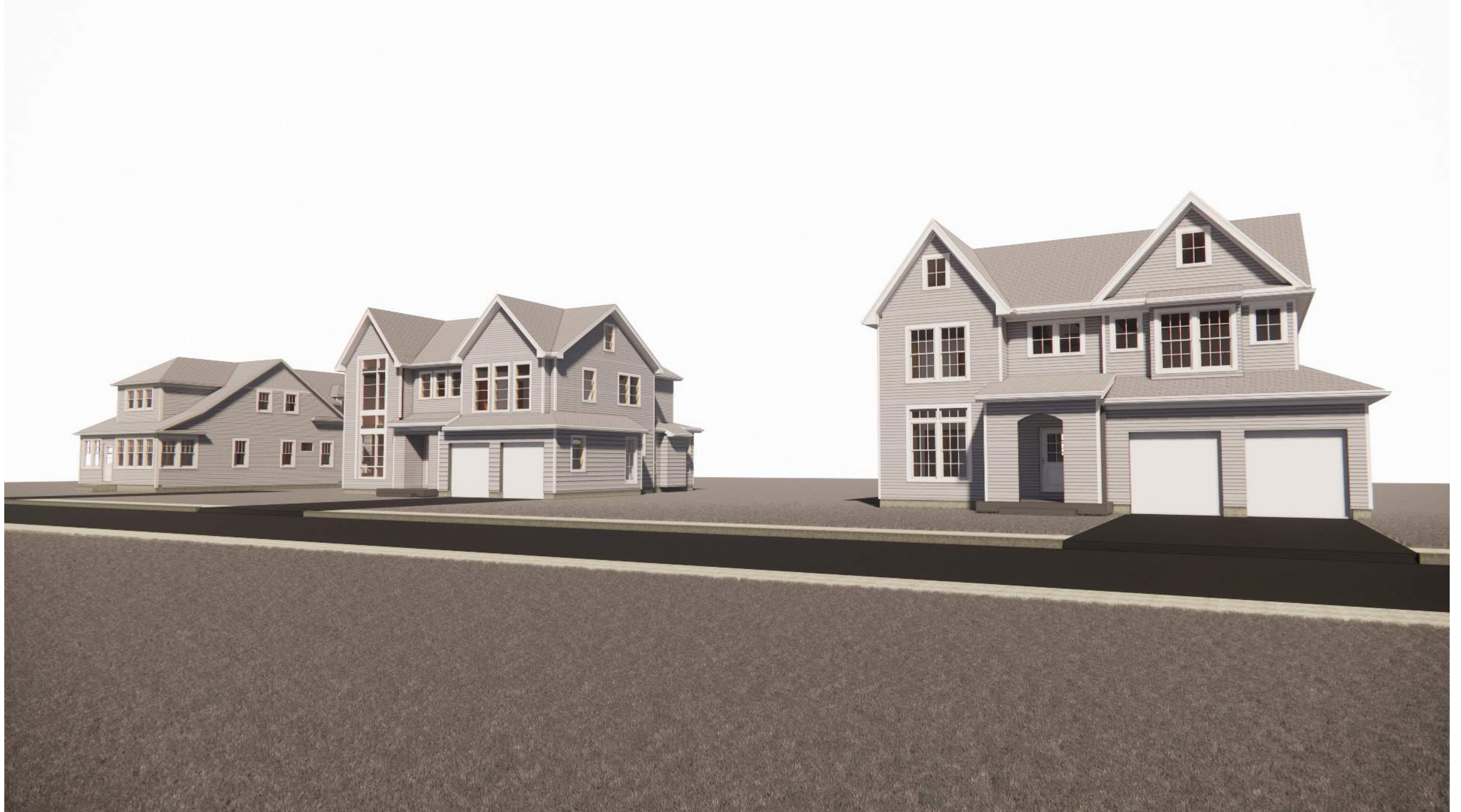
RDA



8.18.2025

House 2 - Reduction 2 (5,239 sf)
(TOTAL AREA REDUCED: 1,497 sf)





8.18.2025

House 2 - Reduction 3 (4,568 sf)
(TOTAL AREA REDUCED: 2,168 sf)

RDA

House 2

Summary of Reductions

BASE:	6,736	1st Reduction:	5,957	2nd Reduction:	5,239	3rd Reduction:	4,568
1st fl	1,684	1,480	-204	1,480	-204	1,388	-296
2nd fl	1,774	1,654	-120	1,283	-491	1,477	-297
attic	1,177	1,049	-128	683	-494	0	-1,177
basement	1,535	1,341	-194	1,341	-195	1,250	-285
garage	566	453	133	453	-113	453	-113
TOTAL AREA EXISTING	6,736	TOTAL AREA REDUCED	779	TOTAL AREA REDUCED	1,497	TOTAL AREA REDUCED	2,168
footprint	2,250	1,933	-317	1,933	-317	1,841	-409
Lot Size	9,191	9,191		9,191		9,191	
1st-2nd Flr	10'-0"	10'-0"	10'-0"	9'-6"	-6"	9'-2"	-10"
2nd-Attic	10'-0"	10'-0"	10'-0"	9'-6"	-6"	9'-2"	-10"
FAR	57% (5,201)	50% (4,636)	-11%	42% (-3,899)	-25%	36% (3,318)	-36%
LFAR	67% (6,170)	50% (5,524)	-10%	52% (-4,787)	-22%	45% (4,115)	-33%
Coverage	24%	21%					
Ave Grade - Ridge	33'-10"	33'-0"	-10"	32'-0"	-1'-10"	30'-0"	-3'-10"



Base

BASE:		7,682
1st fl		2,041
2nd fl		1,992
attic		1,292
basement		1,837
garage		520
TOTAL AREA EXISTING		7,682
footprint		2,561
Lot Size		
1st-2nd Flr		10'-3"
2nd-Attic		10'-3"
FAR		58% (5,811)
LFAR		71% (7,128)
Coverage		26%
Ave Grade - Ridge		34'-2 1/2"



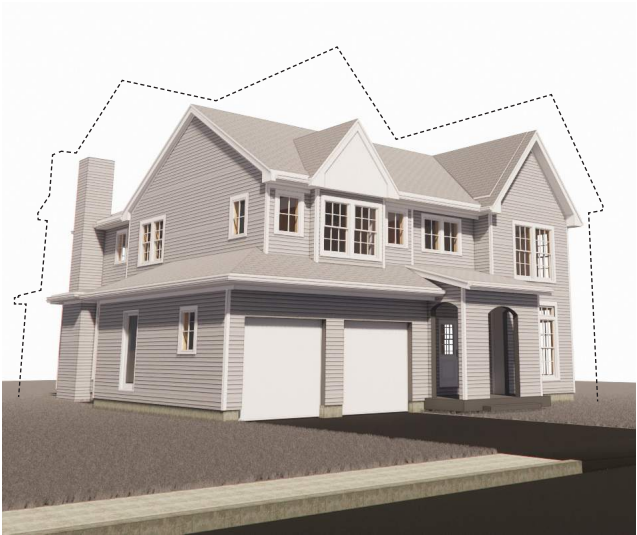
Reduction 1

1st Reduction:			6,019
1st fl	1,517		-524
2nd fl	1,711		-281
attic	975	317	-336
basement	1,351		-486
garage	420		-55
TOTAL AREA REDUCED			1,663
footprint	1937		-122
Lot Size			
1st-2nd Flr	10'-3"		0
2nd-Attic	10'-3"		0
FAR	46% (4,623)		-10%
LFAR	54% (5,355)		-9%
Coverage	19%		
Ave Grade - Ridge	33'-0"		-1' 2 1/2"



Reduction 2

2nd Reduction:			5,362
1st fl	1,517		-524
2nd fl	1324		-668
attic	705		-587
basement	1,351		-486
garage	420		-55
TOTAL AREA REDUCED			2,320
footprint	1,937		-122
Lot Size			
1st-2nd Flr	9'-9"		-6"
2nd-Attic	9'-9"		-6"
FAR	40% (3,966)		-32%
LFAR	49% (4,897)		-32%
Coverage	19%		
Ave Grade - Ridge	32'-0"		-2'-2 1/2"



Reduction 3

3rd Reduction:			4,658
1st fl	1,417		-624
2nd fl	1,521		471
attic	0	1,292	-1,929
basement	1,255		-582
garage	420		-55
TOTAL AREA REDUCED			3,024
footprint	1,837		-724
Lot Size			
1st-2nd Flr	9'-6"		-9"
2nd-Attic	9'-3"		-1'-0"
FAR	(34%) 3,358		-42%
LFAR	(42%) 4193		-41%
Coverage			
Ave Grade - Ridge	30'		-4'-2 1/2"



Base



Reduction 1

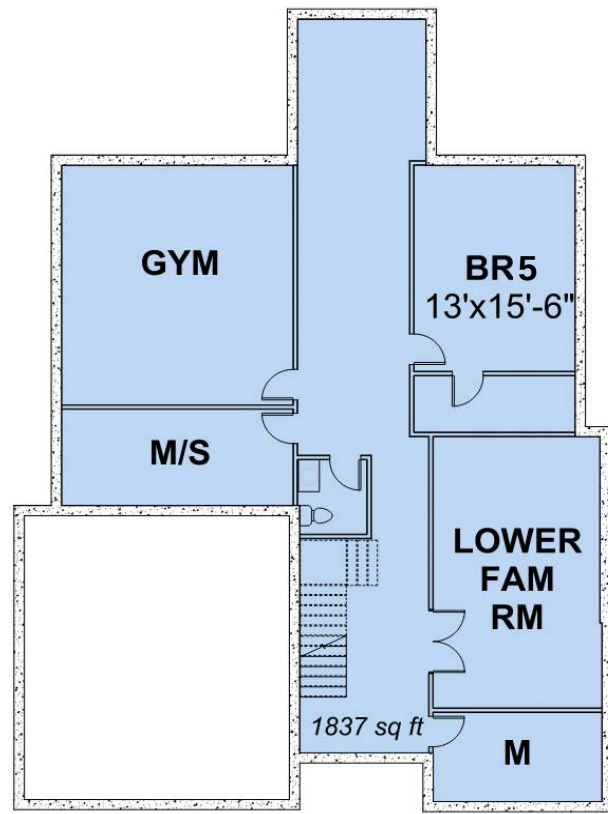


Reduction 2

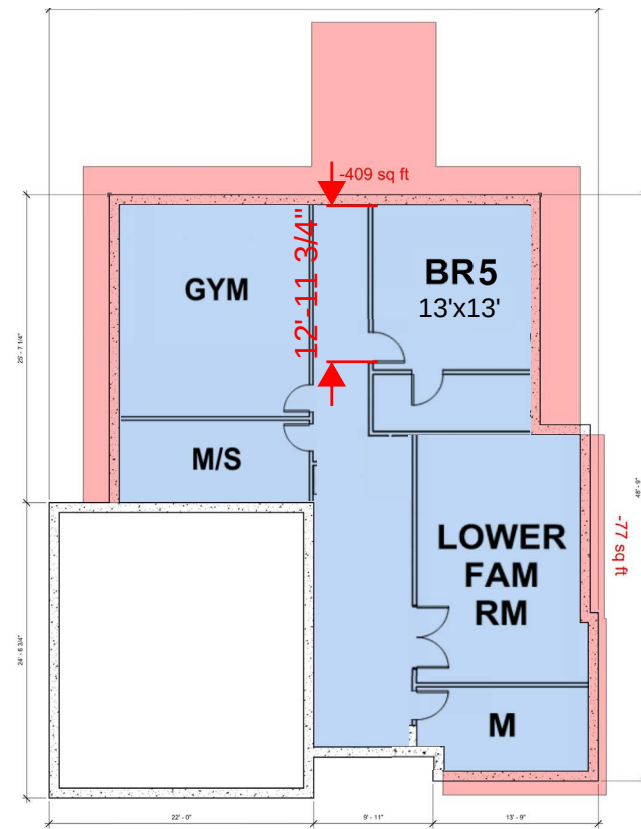


Reduction 3

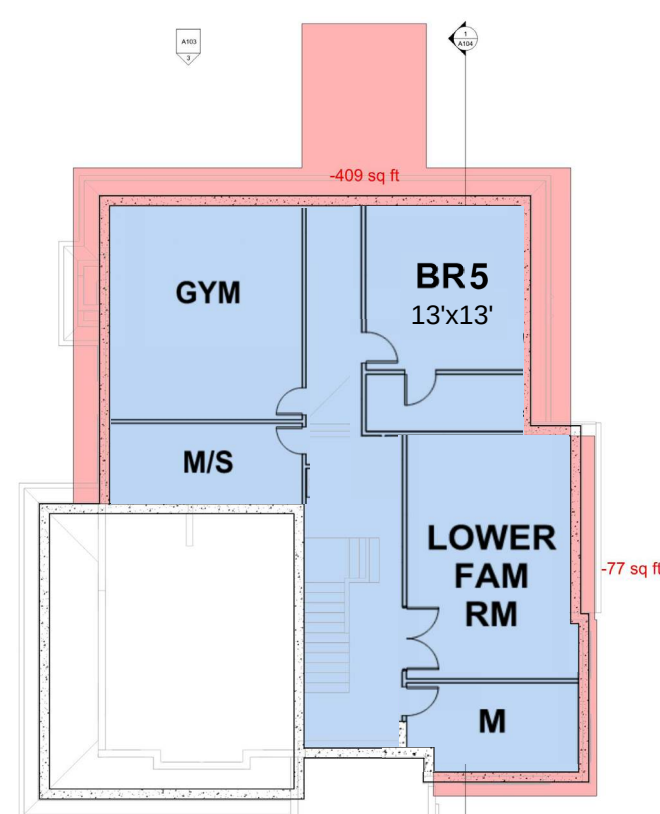
B



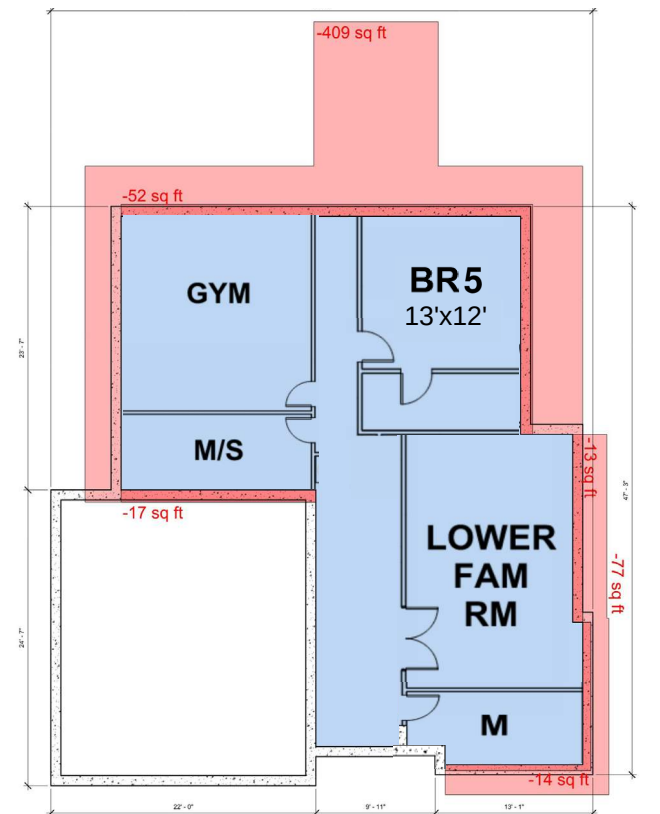
(1,837 sf)



(1,351 sf)(-486)

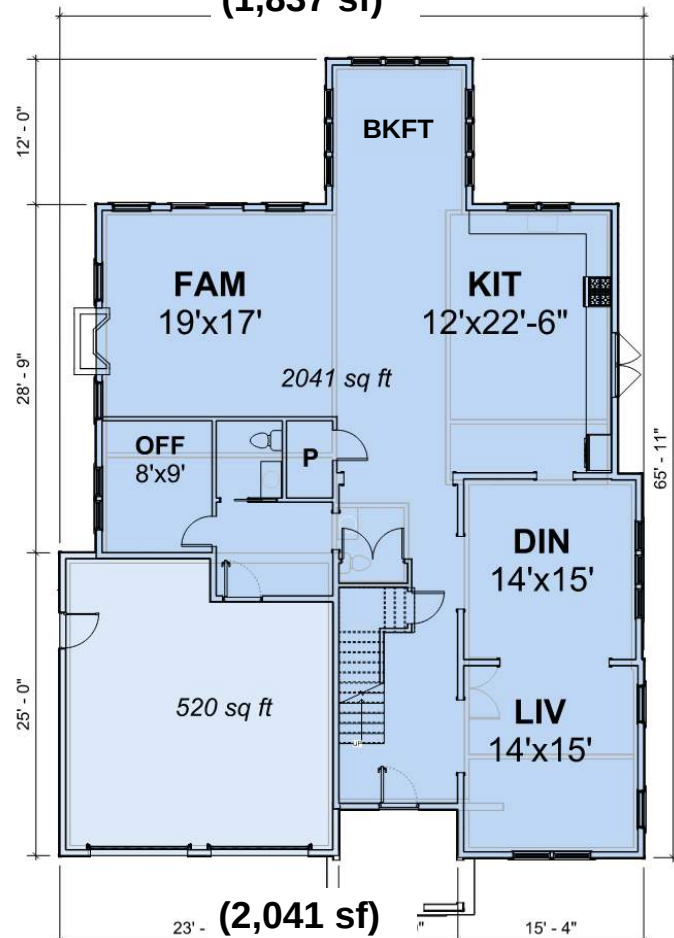


(1,351 sf)(-486)



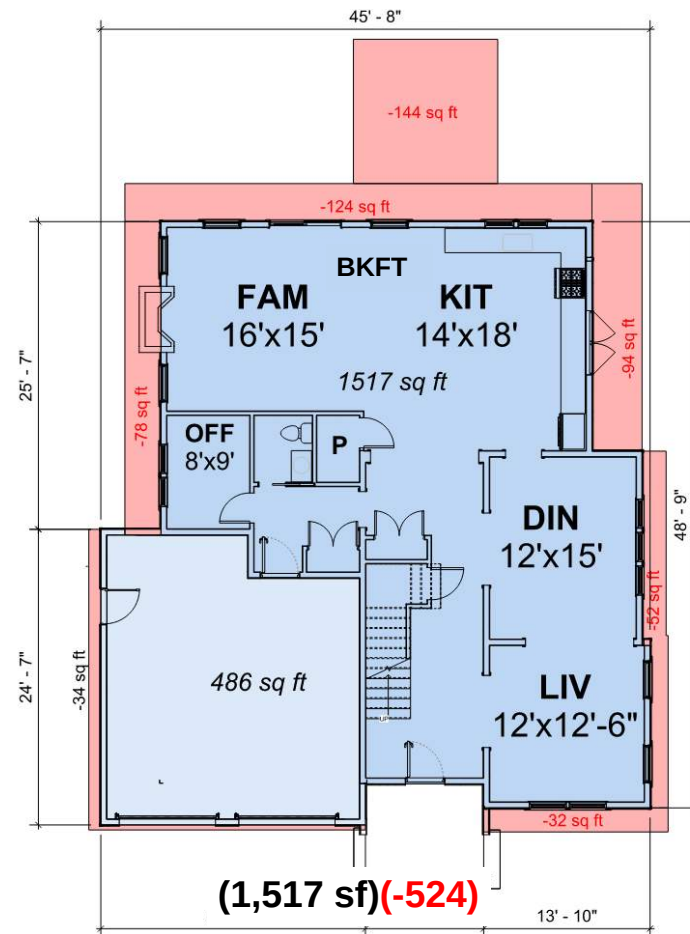
(1,255 sf)(-582)

1



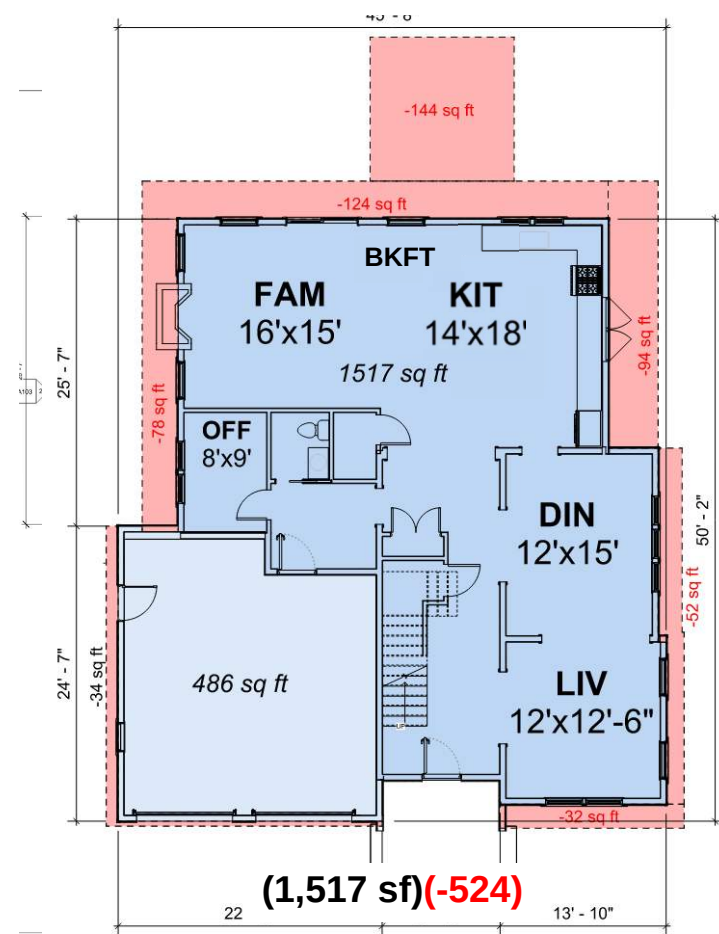
(2,041 sf)

Base



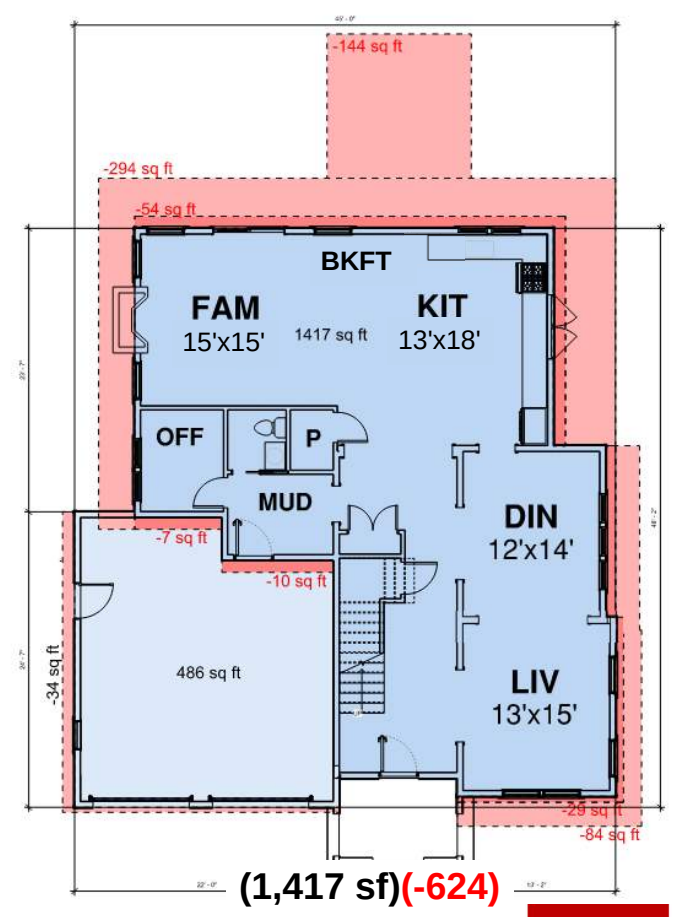
(1,517 sf)(-524)

Reduction 1



(1,517 sf)(-524)

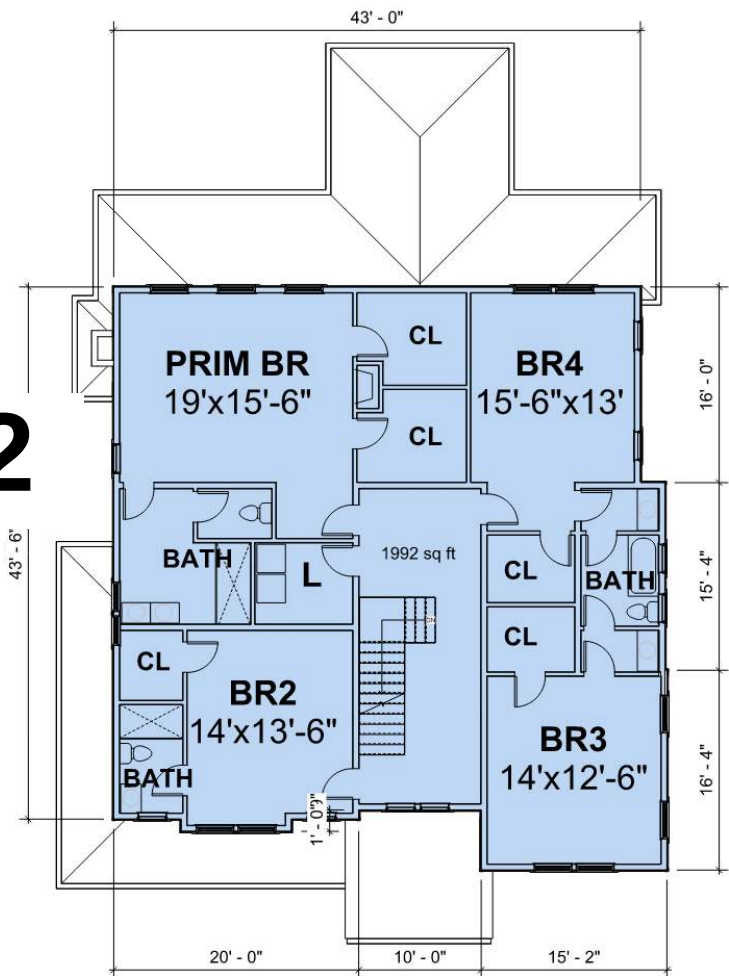
Reduction 2



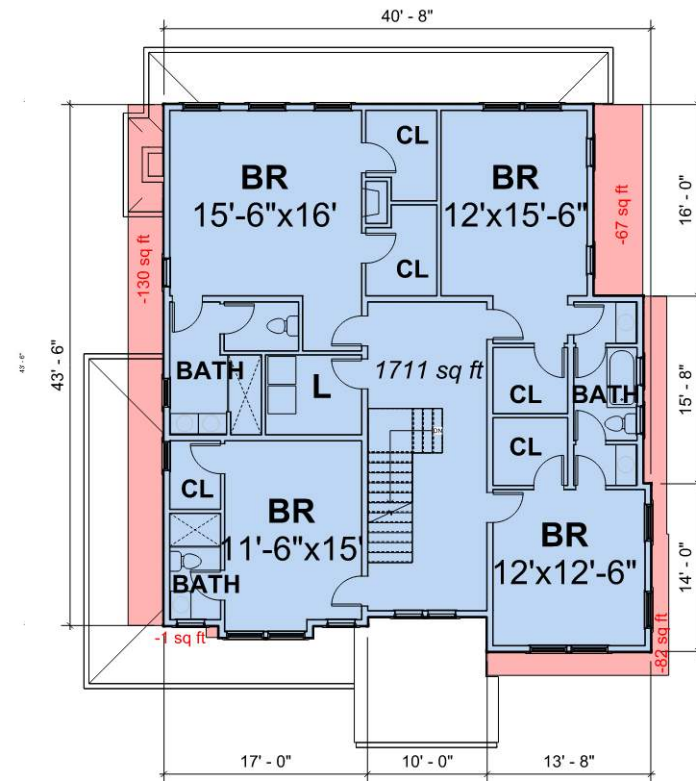
(1,417 sf)(-624)

Reduction 3

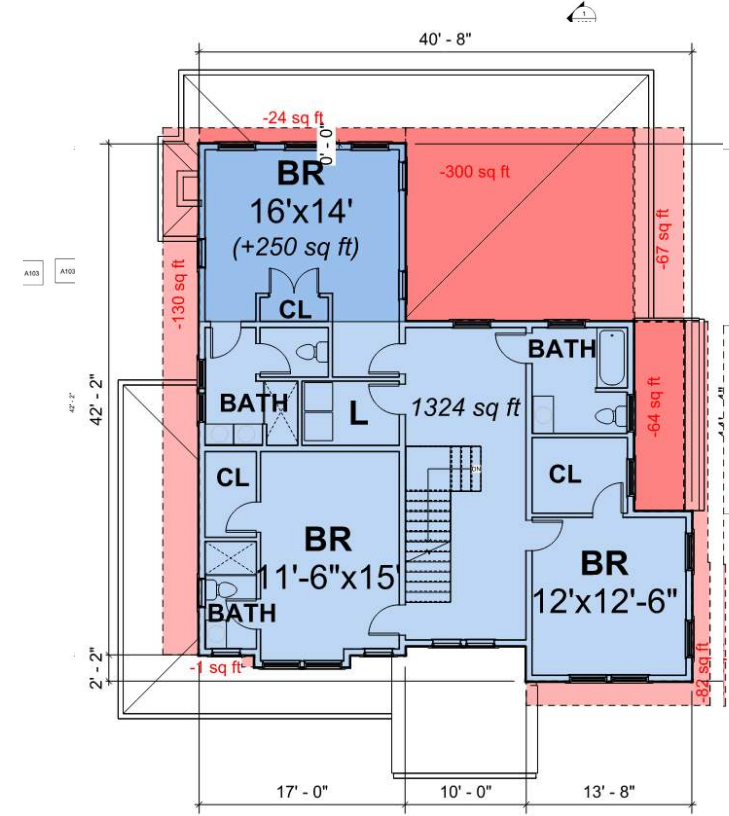
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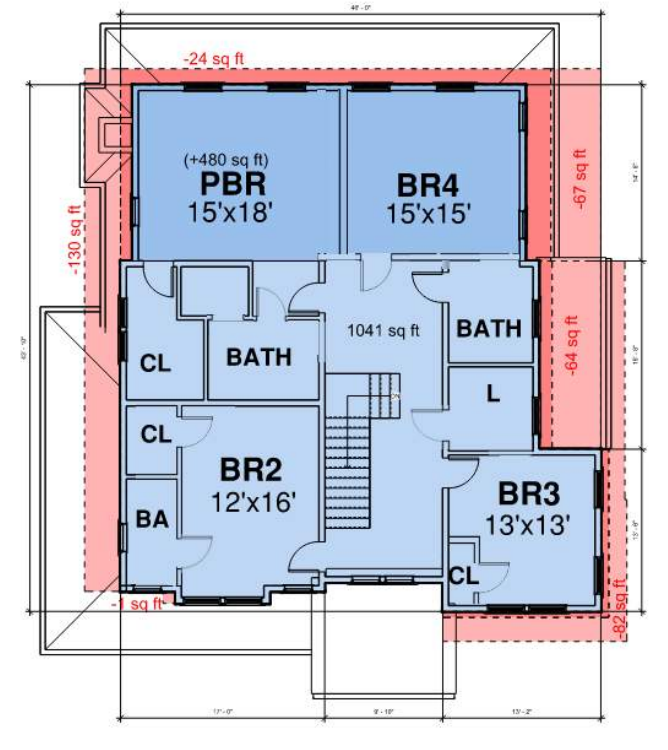
(1,992 sf)



(1,711 sf)(-281)

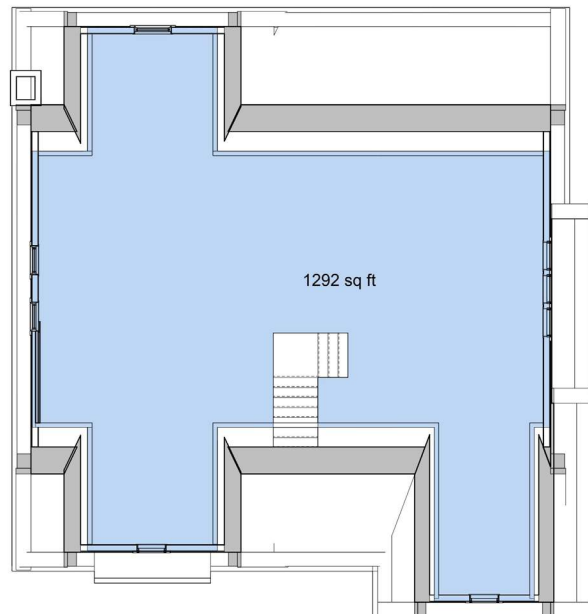


(1,324 sf)(-668)

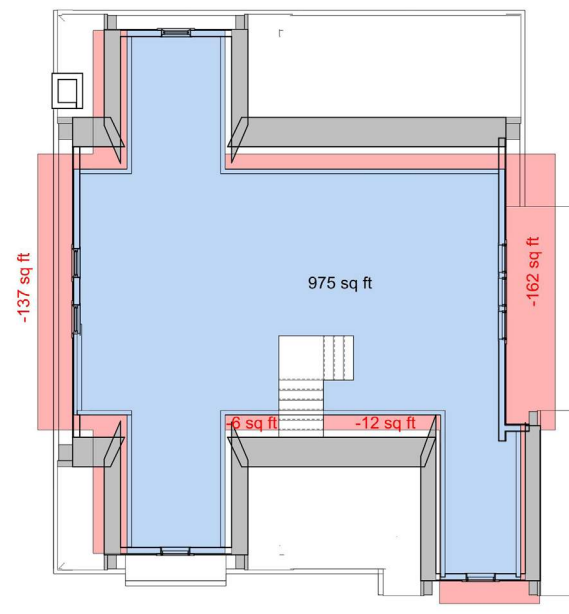


(1,521 sf)(-471)

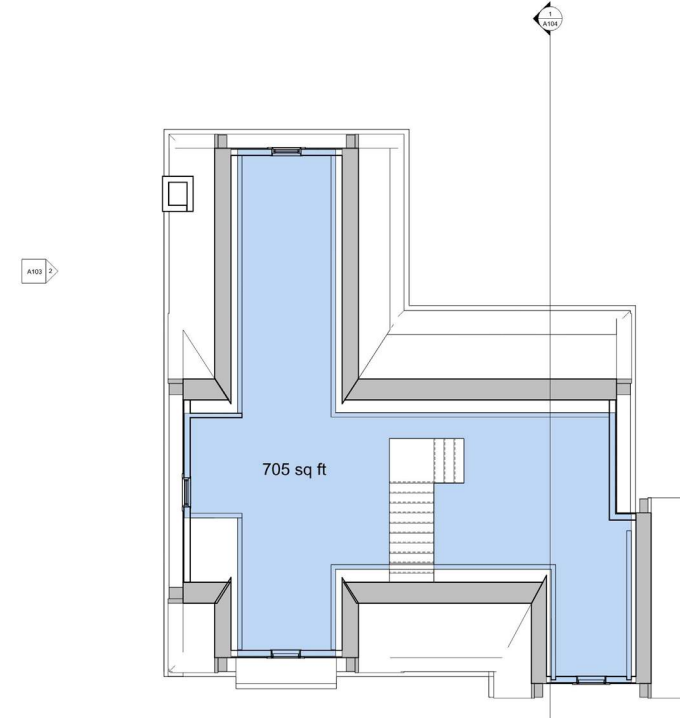
A



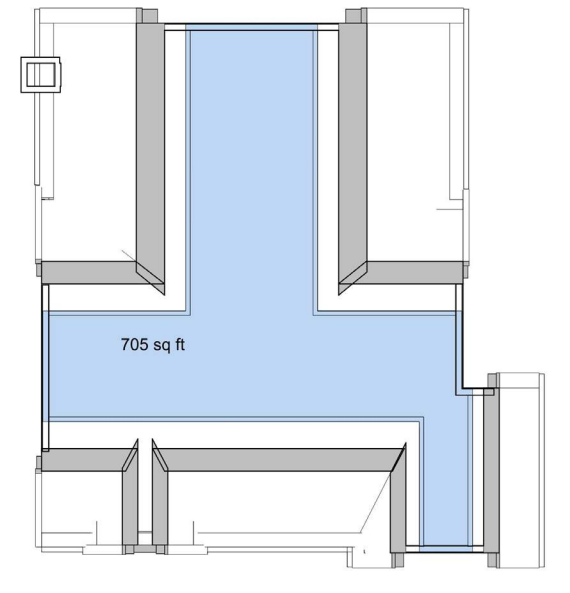
(1,292 sf)
Base



(975 sf)(-317)
Reduction 1



(705 sf)(-587)
Reduction 2



(unhabitable)(-1,292)
Reduction 3



Base
(7,682 sf)

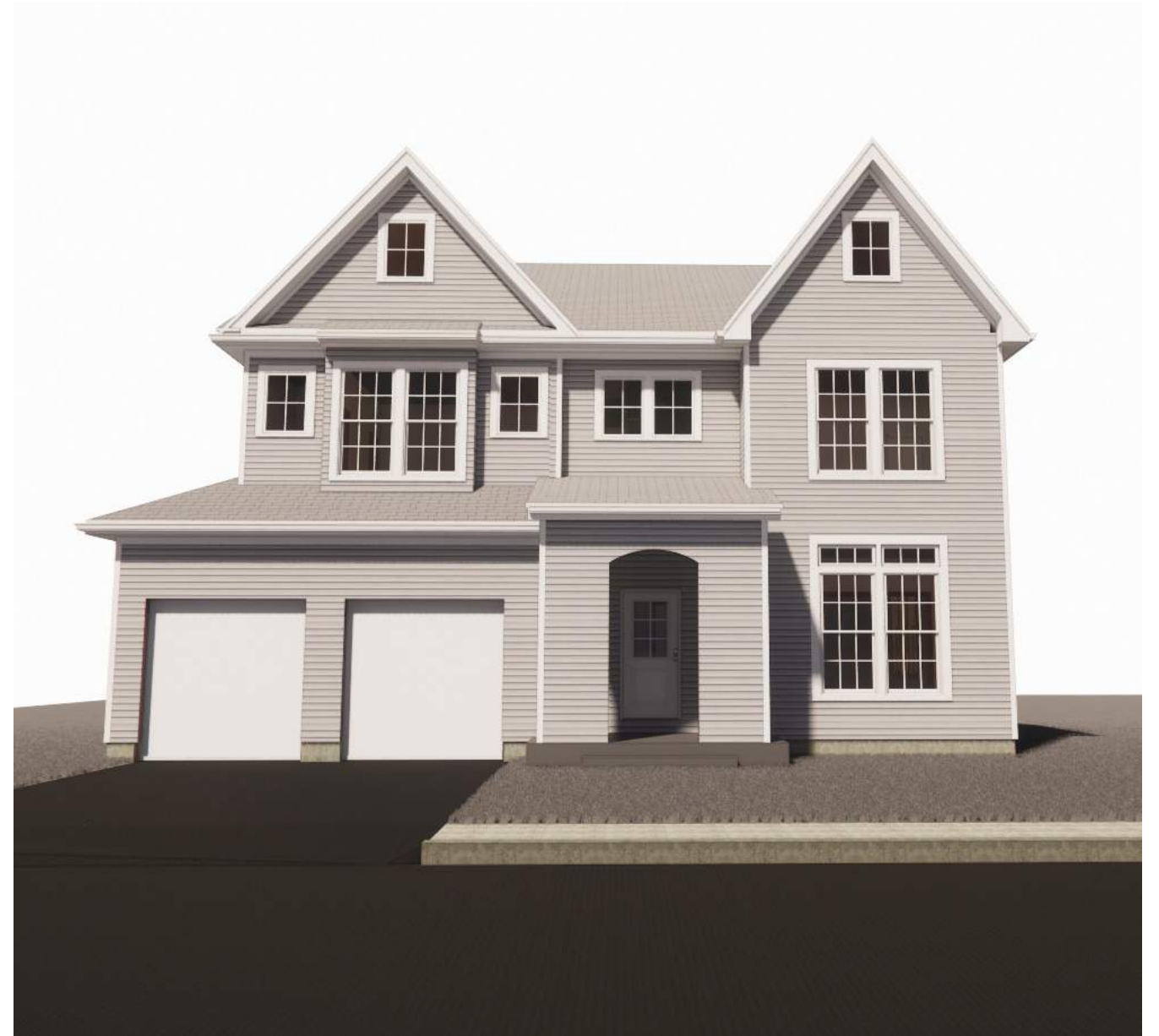


Base
(7,682 sf)

House 3



Base
(7,682 sf)



Reduction 1
(6,019 sf)

House 3

(TOTAL AREA REDUCED: 1,663 sf)



Base
(7,682 sf)



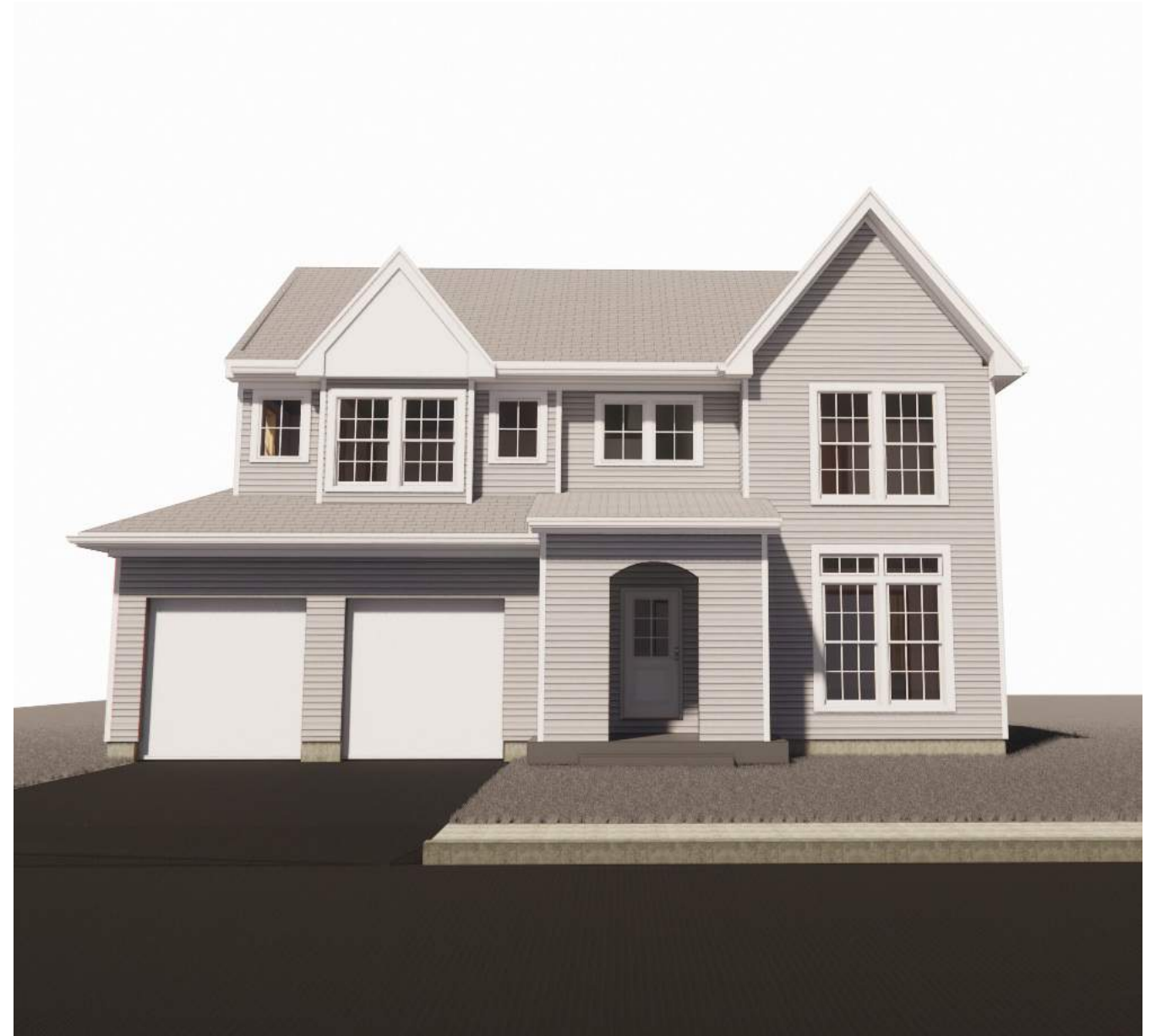
Reduction 2
(5,362 sf)

House 3

(TOTAL AREA REDUCED: 2,320 sf)



Base
(7,682 sf)



Reduction 3
(4,658 sf)

House 3

(TOTAL AREA REDUCED: 3,024 sf)



Base
(7,682 sf)



Base
(7,682 sf)

House 3



Base
(7,682 sf)



Reduction 1
(6,019 sf)

House 3

(TOTAL AREA REDUCED: 1,663 sf)



Base
(7,682 sf)



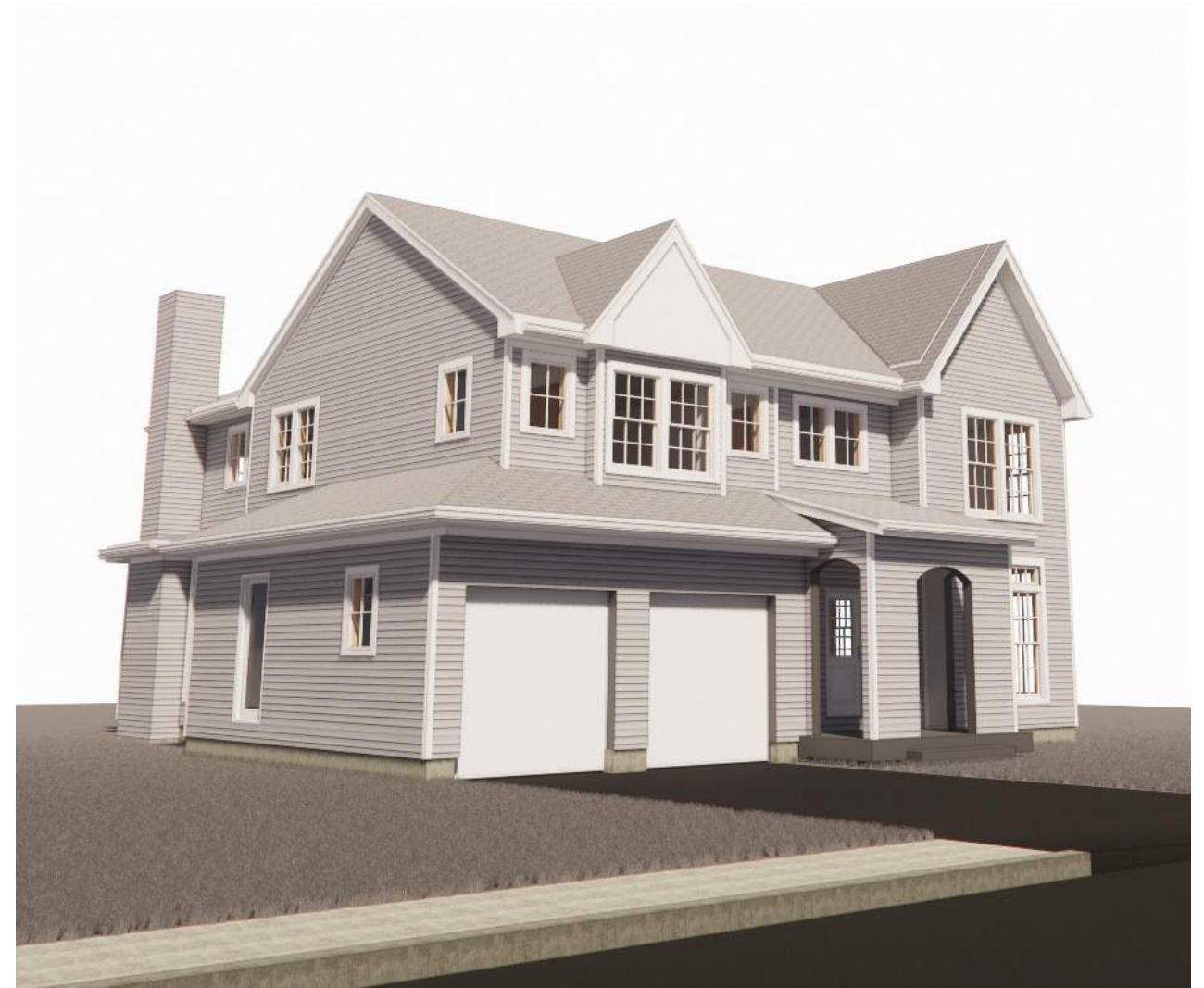
Reduction 2
(5,362 sf)

House 3

(TOTAL AREA REDUCED: 2,320 sf)



Base
(7,682 sf)



Reduction 3
(4,658 sf)



Base
(7,682 sf)



Base
(7,682 sf)

House 3



Base
(7,682 sf)



Reduction 1
(6,019 sf)



Base
(7,682 sf)



Reduction 2
(5,362 sf)



Base
(7,682 sf)



Reduction 3
(4,658 sf)



8.18.2025

House 3 - Base (7,682 sf)

RDA



8.18.2025

House 3 - Reduction 1 (6,019 sf)
(TOTAL AREA REDUCED: 1,663 sf)

RDA



8.18.2025

House 3 - Reduction 2 (5,362 sf)
(TOTAL AREA REDUCED: 2,320 sf)

RDA



House 3 - Reduction 3 (4,658 sf)
(TOTAL AREA REDUCED: 3,024 sf)



8.18.2025

House 3 - Base (7,682 sf)





8.18.2025

House 3 - Reduction 1 (6,019 sf)
(TOTAL AREA REDUCED: 1,663 sf)





8.18.2025

House 3 - Reduction 2 (5,362 sf)
(TOTAL AREA REDUCED: 2,320 sf)





8.18.2025

House 3 - Reduction 3 (4,658 sf)
(TOTAL AREA REDUCED: 3,024 sf)



House 3

Summary of Reductions

BASE:	7,682	1st Reduction:	6,019	2nd Reduction:	5,362	3rd Reduction:	4,658
1st fl	2,041	1,517	-524	1,517	-524	1,417	-624
2nd fl	1,992	1,711	-281	1324	-668	1,521	471
attic	1,292	975	317 -336	705	-587	0	1,292 -1,929
basement	1,837	1,351	-486	1,351	-486	1,255	-582
garage	520	420	-55	420	-55	420	-55
TOTAL AREA EXISTING	7,682	TOTAL AREA REDUCED	1,663	TOTAL AREA REDUCED	2,320	TOTAL AREA REDUCED	3,024
footprint	2,561	1937	-122	1,937	-122	1,837	-724
Lot Size	10,001	10,001		10,001		10,001	
1st-2nd Flr	10'-3"	10'-3"	0	9'-9"	-6"	9'-6"	-9"
2nd-Attic	10'-3"	10'-3"	0	9'-9"	-6"	9'-3"	-1'-0"
FAR	58% (5,811)	46% (4,623)	-10%	40% (3,966)	-32%	(34%) 3,358	-42%
LFAR	71% (7,128)	54% (5,355)	-9%	49% (4,897)	-32%	(42%) 4193	-41%
Coverage	26%	19%		19%			
Ave Grade - Ridge	34'-2 1/2"	33'-0"	-1' 2 1/2"	32'-0"	-2'-2 1/2"	30'	-4'-2 1/2"

Reduction Study Comparisons with neighboring towns:

- The following charts reflect the information used in these reduction studies:
 1. Charts of Three Existing Sample Houses compared to three towns
(Wellesley, Concord and Lexington)
 2. Graphs of Above Comparison between Needham and three towns
 3. Charts of 20 Needham Sample Houses compared to four towns
(Wellesley, Concord, Lexington and Newton)
 4. Sample House Modeling charts - target limits for house reduction study



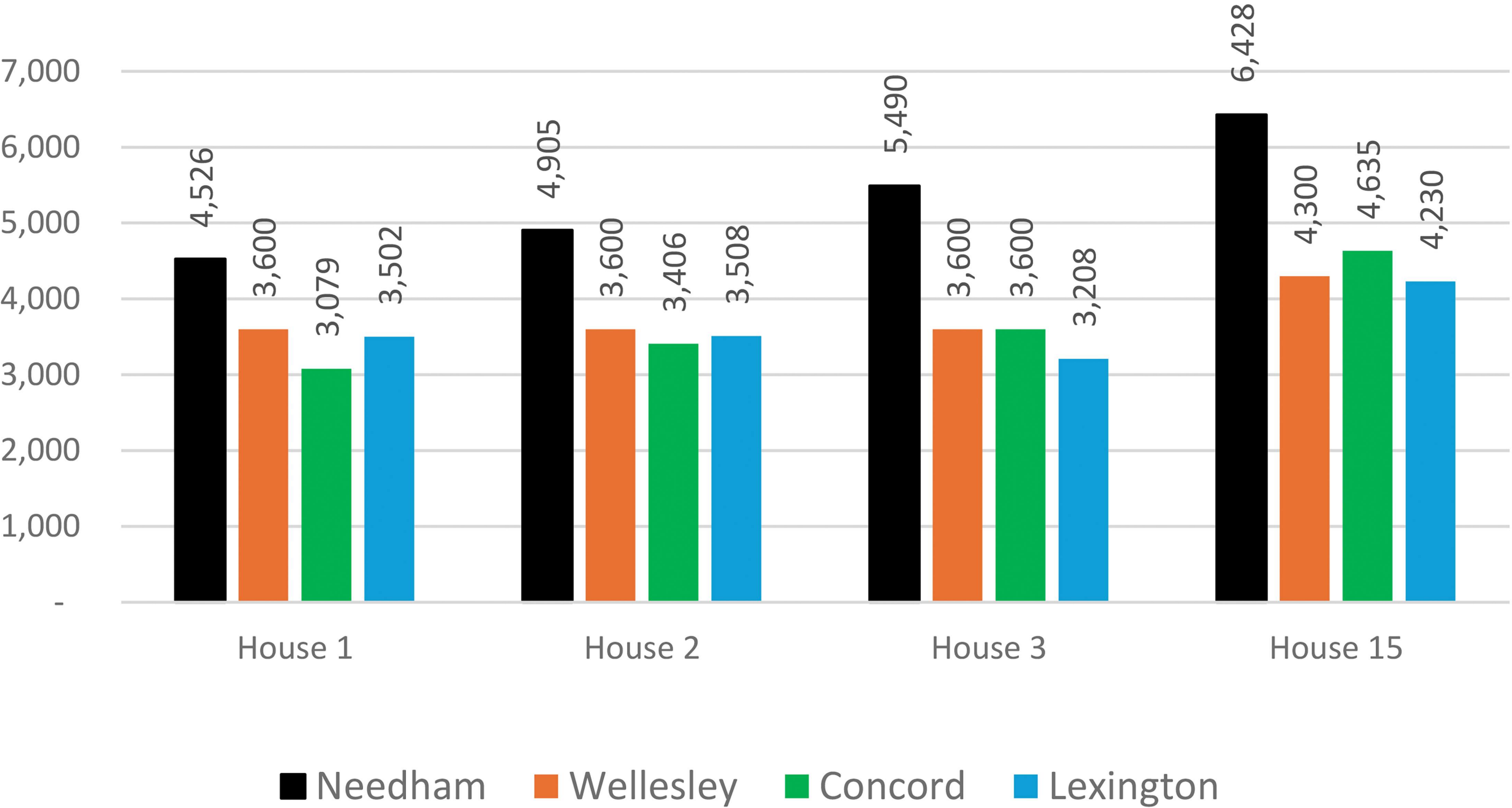
House Size Limit Comparison Needham, Wellesely, Concord, Lexington Floor Area Above Ground (1,2,3+G)									
Needham House ID	Model House (Existing As-Built)						Conforming House		
	#1		#2		#3		#15		
Lot Area	7,828	SF	9,191	SF	10,001	SF	14,314	SF	
Lot Coverage	1,841	SF	2,298	SF	2,500	SF	3,722	SF	
Lot Coverage %	23.5%		25.0%		25.0%		26.0%		
Floor Area (By Floor)									
Bsmt Gross	1,388	SF	1,544	SF	1,942	SF	1,395	SF	
Bsmt Net (10% Utility Rm Deduct)	1,249	SF	1,390	SF	1,748	SF	1,256	SF	
Garage	473	SF	572	SF	529	SF	598	SF	
First (w/o G)	1,368	SF	1,680	SF	2,039	SF	2,558	SF	
Second	1,604	SF	1,748	SF	1,974	SF	2,462	SF	
Third	1,081	SF	905	SF	948	SF	810	SF	
Total Gross (ALL Floor Area)	5,914	SF	6,449	SF	7,432	SF	7,823	SF	
Total 1,2,3+G SF (proposed FAR)	4,526	SF	4,905	SF	5,490	SF	6,428	SF	
Floor Area Above Ground (1,2,3+G) Based on Current Town Bylaws									
Needham Above Ground Area (As-Built)	4,526	SF	%Less	4,905	SF	%Less	5,490	SF	%Less
Wellesley Above Ground Area	3,600	SF	-20%	3,600	SF	-27%	3,600	SF	-34%
Concord Above Ground Area	3,079	SF	-32%	3,406	SF	-31%	3,600	SF	-34%
Lexington Above Ground Area	3,502	SF	-23%	3,508	SF	-28%	3,208	SF	-42%

Fixed FAR	38%	2,975	SF	-34%	3,493	SF	-29%	3,800	-31%	5,439	-15%
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Summary of House Size Bylaws in Comparable Towns	
Wellesley Bylaw (does not include basement)	
10,000 SF Lot District*	3,600 SF House Size limit (includes X% of basement area when X% >25% exposede wall)
15,000 SF Lot District*	4,300 SF House Size limit (includes X% of basement area when X% >25% exposede wall)
20,000 SF Lot District*	5,900 SF House Size limit (includes X% of basement area when X% >25% exposede wall)
* Actual lot size may be greater than the Lot Discript size	
Concord Bylaw (does not include basement)	
Max Floor Area = Lot Area * (0.24 + (1200 / Lot Area))	
Lexington Bylaw (includes all areas)	
0-5,000 SF = 0.76*Lot Area	
5,000-7,500 SF = 3,800+0.42*(Lot Area-5,000)	
7,500-10,000 SF = 4,850+0.12*(Lot Area-7,500)	
10,000-15,000 SF = 5,150+0.11*(Lot Area-10,000)	
15,000-30,000 SF = 5,700+0.1*(Lot Area-15,000)	

Current Town Bylaws

Floor Area SF Above Ground (1,2,3+G)



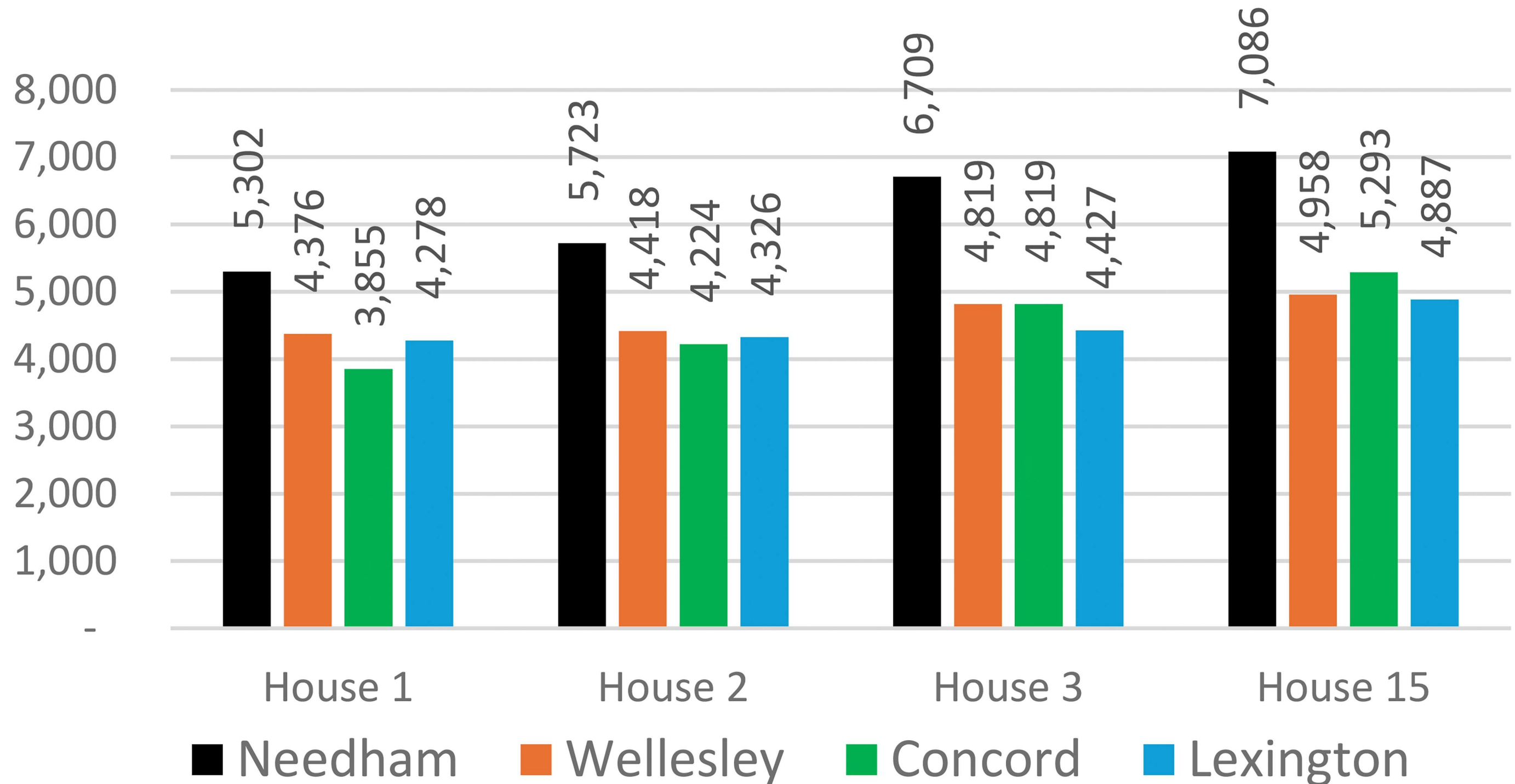
House Size Limit Comparison Needham, Wellesely, Concord, Lexington Livable Floor Area Calculation (B,1,2,3-G)										
Needham House ID	Model House							Conforming House		
	#1			#2			#3			15
Lot Area	7,828	SF		9,191	SF		10,001	SF		14,314 SF
Lot Coverage	1,841	SF		2,298	SF		2,500	SF		3,722 SF
Lot Coverage %	23.5%			25.0%			25.0%			26.0%
Floor Area (By Floor)										
Bsmt Gross	1,388	SF		1,544	SF		1,942	SF		1,395 SF
Bsmt Net (10% Utility Rm Deduct)	1,249	SF		1,390	SF		1,748	SF		1,256 SF
Garage	473	SF		572	SF		529	SF		598 SF
First (w/o G)	1,368	SF		1,680	SF		2,039	SF		2,558 SF
Second	1,604	SF		1,748	SF		1,974	SF		2,462 SF
Third	1,081	SF		905	SF		948	SF		810 SF
Total Gross	5,914	SF		6,449	SF		7,432	SF		7,823 SF
Total Livable SF (B,1,2,3-G)	5,302	SF		5,723	SF		6,709	SF		7,086 SF
Livable Floor Area (B,1,2,3-G) Based on Current Town Bylaws										
Needham Livable Floor Area (As-Built)	5,302	SF	%Less	5,723	SF	%Less	6,709	SF	%Less	7,086 SF %Less
Wellesley Livable Floor Area	4,376	SF	-17%	4,418	SF	-23%	4,819	SF	-28%	4,958 SF -30%
Concord Livable Floor Area	3,855	SF	-27%	4,224	SF	-26%	4,819	SF	-28%	5,293 SF -25%
Lexington Livable Floor Area	4,278	SF	-19%	4,326	SF	-24%	4,427	SF	-34%	4,887 SF -31%

Fixed FAR 0.38 3,751 SF -29% 4,311 SF -25% 5,019 SF -25% 6,097 SF -14%

Summary of House Size Bylaws in Comparable Towns	
Wellesley Bylaw (does not include basement)	
10,000 SF Lot District*	3,600 SF House Size limit (includes X% of basement area when X% >25% exposede wall)
15,000 SF Lot District*	4,300 SF House Size limit (includes X% of basement area when X% >25% exposede wall)
20,000 SF Lot District*	5,900 SF House Size limit (includes X% of basement area when X% >25% exposede wall)
* Actual lot size may be greater than the Lot Discript size	
Concord Bylaw (does not include basement)	
Max Floor Area = Lot Area * (0.24 + (1200 / Lot Area))	
Lexington Bylaw (includes all areas)	
0-5,000 SF = 0.76*Lot Area	
5,000-7,500 SF = 3,800+0.42*(Lot Area-5,000)	
7,500-10,000 SF = 4,850+0.12*(Lot Area-7,500)	
10,000-15,000 SF = 5,150+0.11*(Lot Area-10,000)	
15,000-30,000 SF = 5,700+0.1*(Lot Area-15,000)	

Current Town Bylaws

Livable Floor Area SF (B,1,2,3-G)



Comparison of FAR SF by town

NOTE:
The calculation of Lexington **FAR** is being modified to be in line with other towns that include only 1,2,3 + G. Currently, Lexington is the only town including ALL floors in their FAR which includes the basement.

The calculation of Lexington **FAR** is being modified to be in line with other towns that include only 1,2,3 + G. Currently, Lexington is the only town including ALL floors in their FAR which includes the basement.

As-built using proposed FAR Definition 1,2,3,G							
		Needham		Wellesley	Concord	Lexington	Newton
	Lot Size	As built FAR	FAR SF				
Sample 1	7,828	0.57	4,455	3,600	3,079	4,589	3,914
Sample 2	7,000	0.69	4,823	3,600	2,880	4,490	3,500
Sample 3	7,000	0.55	3,870	3,600	2,880	4,490	3,500
Sample 4	7,274	0.45	3,280	3,600	2,946	4,523	3,637
Sample 5	7,353	0.49	3,620	3,600	2,965	4,532	3,677
Sample 6	7,828	0.57	4,465	3,600	3,079	4,589	3,914
Sample 7	8,159	0.56	4,532	3,600	3,158	4,629	4,080
Sample 8	7,353	0.56	4,132	3,600	2,965	4,532	3,677
Sample 9	8,250	0.54	4,495	3,600	3,180	4,640	4,125
Sample 10	9,191	0.56	5,148	3,600	3,406	4,753	4,596
Sample 11	9,801	0.58	5,692	3,600	3,552	4,826	4,901
Sample 12	9,953	0.46	4,604	3,600	3,589	4,844	4,977
Sample 13	10,001	0.58	5,817	4,300	3,600	3,680	5,001
Sample 14	10,001	0.56	5,625	4,300	3,600	3,750	5,001
Sample 15	10,001	0.51	5,075	4,300	3,600	3,539	5,001
Sample 16	10,061	0.52	5,186	4,300	3,615	3,932	5,031
Sample 17	10,045	0.45	4,526	4,300	3,611	3,705	5,023
Sample 18	10,149	0.49	4,970	4,300	3,636	3,457	5,075
Sample 19	10,568	0.52	5,489	4,300	3,736	3,742	5,284
Sample 20	10,785	0.51	5,454	4,300	3,788	3,634	5,393

REDUCTION 1 using proposed FAR Definition 1,2,3,G							
		Needham		Wellesley	Concord	Lexington	Newton
	Lot Size	RED 1 FAR	SF				
Sample 1	7,828	0.52	4,085	3,600	3,079	4,589	3,914
Sample 2	7,000	0.55	3,870	3,600	2,880	4,490	3,500
Sample 3	7,000	0.55	3,870	3,600	2,880	4,490	3,500
Sample 4	7,274	0.54	3,941	3,600	2,946	4,523	3,637
Sample 5	7,353	0.54	3,962	3,600	2,965	4,532	3,677
Sample 6	7,828	0.52	4,085	3,600	3,079	4,589	3,914
Sample 7	8,159	0.51	4,171	3,600	3,158	4,629	4,080
Sample 8	7,353	0.54	3,962	3,600	2,965	4,532	3,677
Sample 9	8,250	0.51	4,195	3,600	3,180	4,640	4,125
Sample 10	9,191	0.48	4,440	3,600	3,406	4,753	4,596
Sample 11	9,801	0.47	4,598	3,600	3,552	4,826	4,901
Sample 12	9,953	0.47	4,638	3,600	3,589	4,844	4,977
Sample 13	10,001	0.46	4,650	4,300	3,600	3,680	5,001
Sample 14	10,001	0.46	4,650	4,300	3,600	3,750	5,001
Sample 15	10,001	0.46	4,650	4,300	3,600	3,539	5,001
Sample 16	10,061	0.46	4,666	4,300	3,615	3,932	5,031
Sample 17	10,045	0.46	4,662	4,300	3,611	3,705	5,023
Sample 18	10,149	0.46	4,689	4,300	3,636	3,457	5,075
Sample 19	10,568	0.45	4,798	4,300	3,736	3,742	5,284
Sample 20	10,785	0.45	4,854	4,300	3,788	3,634	5,393

FAR = 0.26 + (2050 / Lot Size)

charts in progress

REDUCTION 2 using proposed FAR Definition 1,2,3,G							
		Needham		Wellesley	Concord	Lexington	Newton
	Lot Size	RED 2 FAR	SF				
Sample 1	7,828	0.46	3,579	3,600	3,079	4,589	3,914
Sample 2	7,000	0.48	3,380	3,600	2,880	4,490	3,500
Sample 3	7,000	0.48	3,380	3,600	2,880	4,490	3,500
Sample 4	7,274	0.47	3,446	3,600	2,946	4,523	3,637
Sample 5	7,353	0.47	3,465	3,600	2,965	4,532	3,677
Sample 6	7,828	0.46	3,579	3,600	3,079	4,589	3,914
Sample 7	8,159	0.45	3,658	3,600	3,158	4,629	4,080
Sample 8	7,353	0.47	3,465	3,600	2,965	4,532	3,677
Sample 9	8,250	0.45	3,680	3,600	3,180	4,640	4,125
Sample 10	9,191	0.42	3,906	3,600	3,406	4,753	4,596
Sample 11	9,801	0.41	4,052	3,600	3,552	4,826	4,901
Sample 12	9,953	0.41	4,089	3,600	3,589	4,844	4,977
Sample 13	10,001	0.41	4,100	4,300	3,600	3,680	5,001
Sample 14	10,001	0.41	4,100	4,300	3,600	3,750	5,001
Sample 15	10,001	0.41	4,100	4,300	3,600	3,539	5,001
Sample 16	10,061	0.41	4,115	4,300	3,615	3,932	5,031
Sample 17	10,045	0.41	4,111	4,300	3,611	3,705	5,023
Sample 18	10,149	0.41	4,136	4,300	3,636	3,457	5,075
Sample 19	10,568	0.40	4,236	4,300	3,736	3,742	5,284
Sample 20	10,785	0.40	4,288	4,300	3,788	3,634	5,393

$$FAR = 0.24 + (1700 / \text{Lot Size})$$

REDUCTION 3 using proposed FAR Definition 1,2,3,G							
		Needham		Wellesley	Concord	Lexington	Newton
	Lot Size	RED 3 FAR	SF				
Sample 1	7,828	0.40	3,097	3,600	3,079	4,589	3,914
Sample 2	7,000	0.42	2,915	3,600	2,880	4,490	3,500
Sample 3	7,000	0.42	2,915	3,600	2,880	4,490	3,500
Sample 4	7,274	0.41	2,975	3,600	2,946	4,523	3,637
Sample 5	7,353	0.41	2,993	3,600	2,965	4,532	3,677
Sample 6	7,828	0.40	3,097	3,600	3,079	4,589	3,914
Sample 7	8,159	0.39	3,170	3,600	3,158	4,629	4,080
Sample 8	7,353	0.41	2,993	3,600	2,965	4,532	3,677
Sample 9	8,250	0.39	3,190	3,600	3,180	4,640	4,125
Sample 10	9,191	0.37	3,397	3,600	3,406	4,753	4,596
Sample 11	9,801	0.36	3,531	3,600	3,552	4,826	4,901
Sample 12	9,953	0.36	3,565	3,600	3,589	4,844	4,977
Sample 13	10,001	0.36	3,575	4,300	3,600	3,680	5,001
Sample 14	10,001	0.36	3,575	4,300	3,600	3,750	5,001
Sample 15	10,001	0.36	3,575	4,300	3,600	3,539	5,001
Sample 16	10,061	0.36	3,588	4,300	3,615	3,932	5,031
Sample 17	10,045	0.36	3,585	4,300	3,611	3,705	5,023
Sample 18	10,149	0.36	3,608	4,300	3,636	3,457	5,075
Sample 19	10,568	0.35	3,700	4,300	3,736	3,742	5,284
Sample 20	10,785	0.35	3,748	4,300	3,788	3,634	5,393

FAR = 0.22 + (1375 / Lot Size)

charts in progress

NOTE:
The calculation of Lexington **Livable** is being modified to be in line with other towns that include only B,1,2,3 - G. In process of confirming the house size based on Lexington FAR which is different from other towns.

As-built Livable under Proposed FAR Definition.							
		Needham		Wellesley	Concord	Lexington	Newton
	Lot Size	Prop FAR def	SF				
Sample 1	7,828	0.57	5,101	4,246	4,199	5,535	4,560
Sample 2	7,000	0.69	5,759	4,536	3,816	5,726	4,436
Sample 3	7,000	0.55	3,939	3,669	2,949	4,859	3,569
Sample 4	7,274	0.45	3,659	3,979	3,324	5,202	4,016
Sample 5	7,353	0.49	4,125	4,105	3,470	5,338	4,182
Sample 6	7,828	0.57	5,152	4,287	3,765	5,576	4,601
Sample 7	8,159	0.56	4,778	3,846	3,404	5,175	4,325
Sample 8	7,353	0.56	4,623	4,091	3,456	5,323	4,168
Sample 9	8,250	0.54	4,862	3,967	3,547	5,307	4,492
Sample 10	9,191	0.56	5,730	4,182	3,988	5,635	5,177
Sample 11	9,801	0.58	6,298	4,206	4,158	5,732	5,507
Sample 12	9,953	0.46	5,221	4,217	4,206	5,761	5,593
Sample 13	10,001	0.58	6,618	4,401	4,401	5,951	5,802
Sample 14	10,001	0.56	6,385	4,360	4,360	5,910	5,761
Sample 15	10,001	0.51	5,990	4,515	4,515	6,065	5,915
Sample 16	10,061	0.52	5,729	4,143	4,157	5,700	5,573
Sample 17	10,045	0.45	5,334	4,408	4,419	5,963	5,831
Sample 18	10,149	0.49	5,836	4,466	4,501	6,034	5,940
Sample 19	10,568	0.52	6,204	4,315	4,451	5,933	5,999
Sample 20	10,785	0.51	6,428	4,574	4,762	6,218	6,366

Livable SF with proposed FAR Reduction 2							
		Needham		Wellesley	Concord	Lexington	Newton
	Lot Size	RED 2 FAR	SF				
Sample 1	7,828	0.46	4,224	4,246	4,199	5,535	4,560
Sample 2	7,000	0.48	4,316	4,536	3,816	5,726	4,436
Sample 3	7,000	0.48	3,449	3,669	2,949	4,859	3,569
Sample 4	7,274	0.47	3,824	3,979	3,324	5,202	4,016
Sample 5	7,353	0.47	3,970	4,105	3,470	5,338	4,182
Sample 6	7,828	0.46	4,265	4,287	3,765	5,576	4,601
Sample 7	8,159	0.45	3,904	3,846	3,404	5,175	4,325
Sample 8	7,353	0.47	3,956	4,091	3,456	5,323	4,168
Sample 9	8,250	0.45	4,047	3,967	3,547	5,307	4,492
Sample 10	9,191	0.42	4,488	4,182	3,988	5,635	5,177
Sample 11	9,801	0.41	4,658	4,206	4,158	5,732	5,507
Sample 12	9,953	0.41	4,706	4,217	4,206	5,761	5,593
Sample 13	10,001	0.41	4,901	4,401	4,401	5,951	5,802
Sample 14	10,001	0.41	4,860	4,360	4,360	5,910	5,761
Sample 15	10,001	0.41	5,015	4,515	4,515	6,065	5,915
Sample 16	10,061	0.41	4,657	4,143	4,157	5,700	5,573
Sample 17	10,045	0.41	4,919	4,408	4,419	5,963	5,831
Sample 18	10,149	0.41	5,001	4,466	4,501	6,034	5,940
Sample 19	10,568	0.40	4,951	4,315	4,451	5,933	5,999
Sample 20	10,785	0.40	5,262	4,574	4,762	6,218	6,366

FAR = 0.24 + (1700 / Lot Size)

Livable SF with proposed FAR Reduction 1							
		Needham		Wellesley	Concord	Lexington	Newton
	Lot Size	RED 1 FAR	SF				
Sample 1	7,828	0.52	4,731	4,246	4,199	5,535	4,560
Sample 2	7,000	0.55	4,806	4,536	3,816	5,726	4,436
Sample 3	7,000	0.55	3,939	3,669	2,949	4,859	3,569
Sample 4	7,274	0.54	4,320	3,979	3,324	5,202	4,016
Sample 5	7,353	0.54	4,467	4,105	3,470	5,338	4,182
Sample 6	7,828	0.52	4,772	4,287	3,765	5,576	4,601
Sample 7	8,159	0.51	4,417	3,846	3,404	5,175	4,325
Sample 8	7,353	0.54	4,453	4,091	3,456	5,323	4,168
Sample 9	8,250	0.51	4,562	3,967	3,547	5,307	4,492
Sample 10	9,191	0.48	5,021	4,182	3,988	5,635	5,177
Sample 11	9,801	0.47	5,204	4,206	4,158	5,732	5,507
Sample 12	9,953	0.47	5,255	4,217	4,206	5,761	5,593
Sample 13	10,001	0.46	5,451	4,401	4,401	5,951	5,802
Sample 14	10,001	0.46	5,410	4,360	4,360	5,910	5,761
Sample 15	10,001	0.46	5,565	4,515	4,515	6,065	5,915
Sample 16	10,061	0.46	5,208	4,143	4,157	5,700	5,573
Sample 17	10,045	0.46	5,470	4,408	4,419	5,963	5,831
Sample 18	10,149	0.46	5,554	4,466	4,501	6,034	5,940
Sample 19	10,568	0.45	5,513	4,315	4,451	5,933	5,999
Sample 20	10,785	0.45	5,828	4,574	4,762	6,218	6,366

FAR = 0.26 + (2050 / Lot Size)

Livable SF with proposed FAR Reduction 3							
		Needham		Wellesley	Concord	Lexington	Newton
	Lot Size	RED 3 FAR	SF				
Sample 1	7,828	0.40	3,743	4,246	4,199	5,535	4,560
Sample 2	7,000	0.42	3,851	4,536	3,816	5,726	4,436
Sample 3	7,000	0.42	2,984	3,669	2,949	4,859	3,569
Sample 4	7,274	0.41	3,354	3,979	3,324	5,202	4,016
Sample 5	7,353	0.41	3,498	4,105	3,470	5,338	4,182
Sample 6	7,828	0.40	3,784	4,287	3,765	5,576	4,601
Sample 7	8,159	0.39	3,415	3,846	3,404	5,175	4,325
Sample 8	7,353	0.41	3,484	4,091	3,456	5,323	4,168
Sample 9	8,250	0.39	3,557	3,967	3,547	5,307	4,492
Sample 10	9,191	0.37	3,979	4,182	3,988	5,635	5,177
Sample 11	9,801	0.36	4,137	4,206	4,158	5,732	5,507
Sample 12	9,953	0.36	4,182	4,217	4,206	5,761	5,593
Sample 13	10,001	0.36	4,376	4,401	4,401	5,951	5,802
Sample 14	10,001	0.36	4,335	4,360	4,360	5,910	5,761
Sample 15	10,001	0.36	4,490	4,515	4,515	6,065	5,915
Sample 16	10,061	0.36	4,131	4,143	4,157	5,700	5,573
Sample 17	10,045	0.36	4,393	4,408	4,419	5,963	5,831
Sample 18	10,149	0.36	4,473	4,466	4,501	6,034	5,940
Sample 19	10,568	0.35	4,415	4,315	4,451	5,933	5,999
Sample 20	10,785	0.35	4,722	4,574	4,762	6,218	6,366

FAR = 0.22 + (1375 / Lot Size)

NOTE:

1. These Reduction Charts for the modeling consultant reflect hypothetical area reductions in three steps using three sample Needham houses on lots between 7,500 and 10,000 sf.

2. The reduction targets were created modifying the **FAR, Coverage and Height** limits for each step of house reduction.

3. The study prioritized the ground floor area to allow for program flexibility and sizable basement. Second and attic floor sizes are secondary and discretionary for size and program use.

Large House Review - Reduction Study (FINAL) - (using coverage limits varying from 7K lot @ 24% coverage to 10K lot @ 20% coverage, then capped)

	House #1					House #2					House #3			
	(lot: 7,828 sf; frontage: 68')					(lot: 9,191 sf; frontage: 80')					(lot: 10,001 sf; frontage: 80')			
	Existing House	Reduc. #1	Reduc. #2	Reduc. #3		Existing House	Reduc. #1	Reduc. #2	Reduc. #3		Existing House	Reduc. #1	Reduc. #2	Reduc. #3
Basement *	1,249	1,235	1,235	1,165		1,390	1,330	1,330	1,247		1,748	1,365	1,365	1,275
First	1,368	1,373	1,373	1,294		1,680	1,477	1,477	1,385		2,039	1,516	1,516	1,416
Second	1,604	1,524	1,183	1,371		1,748	1,648	1,280	1,478		1,974	1,700	1,320	1,520
(limit % footprint)	n/a	85%	66%	80%		n/a	85%	66%	80%		n/a	85%	66%	80%
Attic **	1,081	762	592	no habit. ****		905	824	640	no habit. ****		948	850	660	no habit. ****
Garage	473	420	420	420		572	462	462	462		529	484	484	484
	22x21.5	(garage assumption 20x21)				24x23.8	(garage assumption 21x22)				23x21 / 23x25	(garage assumption 22x22)		
Footprint	1,841	1,793	1,793	1,714		2,298	1,939	1,939	1,847		2,500	2,000	2,000	1,900
Coverage	24.8%	22.9%	22.9%	21.9%		24.5%	21.1%	21.1%	20.1%		25.7%	20.0%	20.0%	19.0%
TLAG	4,526	4,078	3,567	3,086		4,905	4,412	3,859	3,325		5,490	4,550	3,980	3,420
TLAG Reduction		9.9%	21.2%	31.8%			10.1%	21.3%	32.2%			17.1%	27.5%	37.7%
FAR	57.8%	52.1%	45.6%	39.4%		53.4%	48.0%	42.0%	36.2%		54.9%	45.5%	39.8%	34.2%
Livable	5,302	4,894	4,383	3,831		5,723	5,279	4,727	4,110		6,709	5,431	4,861	4,211
Livable Reduction		7.7%	17.3%	27.7%			7.7%	17.4%	28.2%			19.0%	27.5%	37.2%
Lot Size:	7,828	7,828				9,191	9,191				10,001	10,001.00		
Roof Height: (w/ avg grade)	34.0 ft (35 ft. max)	33.0	32.0	30.0 or 31.0		33.7 ft (35 ft. max)	33.0	32.0	30.0 or 31.0		34.9 ft (35 ft. max)	33.0	32.0	30.0 or 31.0
Roof Height: (max w/ slope)	(41 ft. max)	39.0	38.0	36.0 or 37.0		(41 ft. max)	39.0	38.0	36.0 or 37.0		(41 ft. max)	39.0	38.0	36.0 or 37.0
FAR Definition:	1 & 2	1,2,3 +G				1 & 2	1,2,3 +G				1 & 2	1,2,3 +G		
Coverage:	24.8% (25% max)	22.9%	22.9%	21.9%		24.5% (25% max)	21.1%	21.1%	20.1%		25.7% (25% max)	20.0%	20.0%	19.0%
Setbacks:														
Front	20'	20' unless matching a neighborhood pattern				20'	20' unless matching a neighborhood pattern				20'	20' unless matching a neighborhood pattern		
Side ***	NC: 12'/14'	NC: 13'/15'	NC: 13'/15'	NC: 14'/16'		C: 14'/16'	C: 15'/17'	C: 15'/17'	C: 16'/18'		C: 14'/16'	C: 15'/17'	C: 15'/17'	C: 16'/18'

Notes:

* Assume 90% of first floor area to allow for mech in basement

** Assume attic is 50% of second floor

*** Increase side setbacks either 1 or 2 feet, depending on which scenario. Note - the two dimensions are for added 2' side wall setback after 32 feet

**** For reduction #3, roof height is lowered to 30'/31' so storage is possible but not habitable attic space.(Def. of Habitable Attic: If the attic has sloped ceilings, at least 50% of the floor area must have a ceiling height of at least 6 feet 8 inches, and no portion of the ceiling can be less than 5 feet.

NOTE: These Coverage formulas are a sliding scale to calculate the Coverage based on the lot size and slightly favors smaller lots with higher Coverage.

NOTE: These FAR formulas are variations on the Concord approach that calculates the FAR based on the lot size and slightly favors smaller lots with higher FAR.

COVERAGE CALCULATION: (using coverage limits varying from 7K lot @ 24% coverage UP to 10K lot @ 20% coverage, then capped)				
Max SF Range	10,000	SF	(use 20% coverage limit then capped)	
Min SF Range	7,000	SF	(use 24% coverage limit)	
Cov % Limit at Max SF	20%			
Cov % Limit at Min SF	24%			
	Test:		H1	H2 H3
Lot Size	8,500		7,828	9,191 10,001
Lot Cov Limit	22.0%		22.9%	21.1% 20.0%
Pick a lot size between 7K & 10K	9,500			
Get the coverage percentage	20.7%			

Possible Needham FAR Calculation:			
NOTE: This study is using Concord FAR calculation approach adjusted for target Needham FARs			
SRB (10,000 min lot): (using sample house lots)	H1	H2	H3
	7,828	9,191	10,001
FAR Calculation Options: (approximate)			
(Opt 1 - Avg of Reductions 1 & 2):	49.0%	45.4%	43.7%
.25 + (1,875 / lot size) = FAR	3,832	4,173	4,375
(Opt 2 - Avg of Reductions 2 & 3):	42.8%	39.9%	38.5%
.23 + (1,550 / lot size) = FAR	3,350	3,664	3,850
(Reduction #1):	52.2%	48.3%	46.5%
.26 + (2,050 / lot size) = FAR	4,085	4,440	4,650
(Reduction #2):	45.7%	42.5%	41.0%
.24 + (1,700 / lot size) = FAR	3,579	3,906	4,100
(Reduction #3):	39.6%	37.0%	35.7%
.22 + (1,375 / lot size) = FAR	3,097	3,397	3,575

OTHER TOWN HOUSE CALCULATIONS:				
		H1	H2	H3
Lot Size		7,828	9,191	10,001
Wellesley	FAR (TLAG) = Total Livable Area + Garage	3,600 or LHR	3,600 or LHR	3,600 or LHR
SR10 district has 3,600 sf max TLAG before LHR is triggered				
Lexington	Gross Floor Area (Calculation formulas - below)	4,889	5,053	5,150
No lot coverage limit				
Concord	Floor Area Ratio (Calculation formulas - below)	39%	37%	36%
FAR		3,079	3,406	3,600

Lexington Formula (GFA):

Lot Area	Max GFA (New Homes & shell > 50% removed)	Max GFA (Homes built before 1/1/24 w/ shell < 50% removed)
5K to 7.5K	3,800 + 0.42 * (Lot Area - 5,000)	4,000 + 0.55 * (Lot Area - 5,000)
7.5K to 10.0K	4,850 + 0.12 * (Lot Area - 7,500)	5,375 + 0.23 * (Lot Area - 7,500)
10K to 15K	5,150 + 0.11 * (Lot Area - 10,000)	5,950 + 0.20 * (Lot Area - 10,000)
15K to 30K	5,700 + 0.10 * (Lot Area - 15,000)	6,950 + 0.16 * (Lot Area - 15,000)

Concord Formula (FAR):

Residence C (10,000 SF lot) .24 + (1,200 / lot size)

(All lot districts are the same)

No lot coverage limit