

Department of Planning and Development Inspectional Services Department



**FAR INFORMATION SESSION
NOVEMBER 15, 2011**

Introductions

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- John Lojek, Commissioner of Inspectional Services
- Jennifer Molinsky, Chief Planner, Long-Range Planning, Department of Planning and Development

Overview of Session

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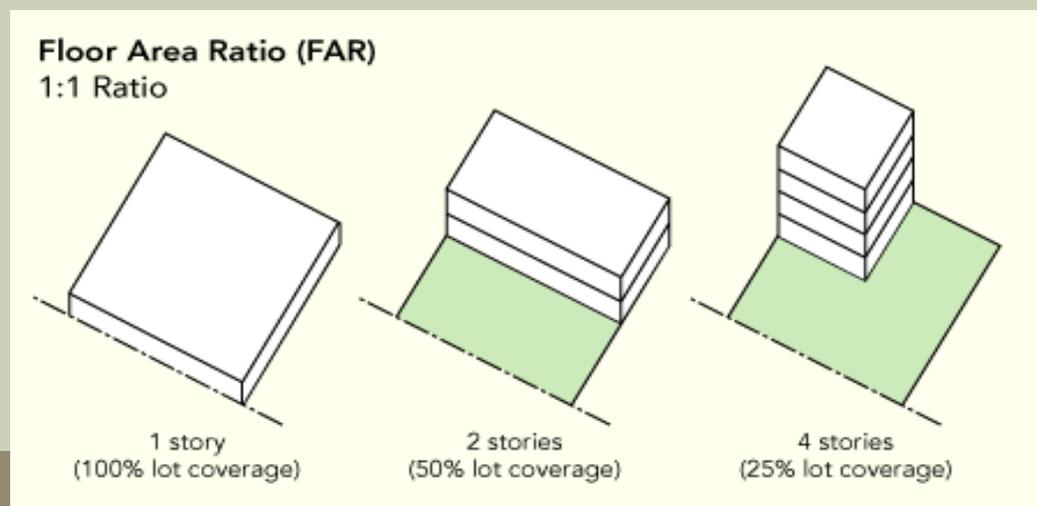
- FAR Basics
- Review of Recent Changes to FAR
 - What counts toward FAR?
 - What is the FAR limit?
 - Limited FAR bonus
- Special Permits
- Your questions

Floor Area Ratio

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$$\text{Floor Area Ratio} = \frac{\text{gross floor area of building(s) on lot}}{\text{lot size}}$$

Floor area ratio (FAR) regulates the amount of **gross floor area** that can be built on a site



Floor Area Ratio

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- Residential FAR limits range from .33 to .58 in Newton; commercial FAR limits from 1.00 to 3.00
 - Example: 10,000 sq. ft. lot, FAR limit of .50 = 5,000 sq. ft. GFA
- “Gross Floor Area” is basis for FAR and **may vary from city to city**
- Newton recently changed definition of Gross Floor Area and FAR limits for residential zones

Role of FAR

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FAR's role is to regulate *mass above grade*

Distinct role from Newton's other dimensional controls

Dimensional Control	Regulates
Height limits, half story regulations	Building proportions
Lot coverage, open space requirements	Open space provision
Setback requirements	Placement of structure on lot, distance from abutters/street
FAR	Above-ground mass

Role of FAR

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- Tells **how much** Gross Floor Area can be put on a lot
- Relevant for understanding:
 - Lot build-out for new construction
 - How large an addition can be
- **Existing** space can be finished without concern for FAR
- As previously, FAR calculations needed when applying for permits to do additions to existing houses or totally new construction

Recent Changes to FAR

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- Adopted February 2011 in Ordinance Z-77
- Affects 1 and 2 family structures in residential zoning districts – all other FAR regulations unchanged
- Took effect October 15, 2011
- Monitoring continues to assess effectiveness

Recent Changes to FAR

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- 1. New definition of Gross Floor Area** – eliminated exemptions, count above-ground mass
- 2. New sliding scale of FAR limits** – raised limits, tied them to lot size, and gave modest increase in capacity to smaller lots
- 3. New modest bonus** – for building to new setback lines on old lots

Recent Changes: What Counts?

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New definition of “Gross Floor Area”

- Eliminates previous exemptions
- With a few exceptions, *if it's above ground, it counts*

Residential Building Element	Previous Definition of GFA (Included in FAR)	New Definition of GFA (Included in FAR)
Basements, crawl spaces, and other above-grade elements below first story	Excluded	Portions may be included depending on grade; never more than 50% of floor area
First and second stories	Included	Included
Atria/other vertical spaces	Included	Included
Space above the second story	Included if full third story; excluded if spaces meets definition of a half story	Portions may be included – those roughly exceeding 70 sq. ft.
Enclosed porches	Included only if heated	Included if enclosed
Open porches, carports, port-cocheres	Excluded	Excluded
Attached garages	Included	Included
Detached garages and any space above	Excluded	Garages included; portion of space above may be included
Other detached accessory buildings	Excluded	Included, one shed up to 120 sq. ft. may be exempt

Mass Below First Story

12

Concerned with
basements, crawl spaces,
etc. more than 4' out of
the ground



Mass Below First Story

13

- **Concern:** All basements floor area now counts toward FAR
- **Fact:** Portions of some basements count, but never more than 50% of a basement floor area. *Some basements do not count at all.*
- **Concern:** Existing basements can't be finished.
- **Fact:** If it's within the existing building envelope, an existing basement **can** be finished without regard to FAR

Mass Below First Story

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- **Mass below first story:** For the purposes of calculating gross floor area, any cellar, crawl space, basement, or other enclosed area lying directly below a first story in a residential structure.
- **Basement areas:** A portion of mass below the first story, to be calculated as follows:

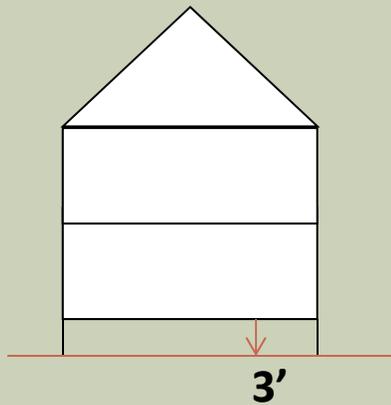
The lesser of 50% of the floor area of mass below first story OR the following:
 $X/Y * \text{floor area of mass below first story}$, where:

X = Sum of the width of those sections of exposed walls below the first story having an exterior height equal to or greater than four (4) feet as measured from existing or proposed grade, whichever is lower, to the top of the subfloor of the first story

Y = Perimeter of exterior walls below first story

Mass Below Grade

15



30'

20'



Example 1:

Basement perimeter is 100'

Foundation is 3' out of ground at all points

Formula: $x/y * \text{floor area}$

Then:

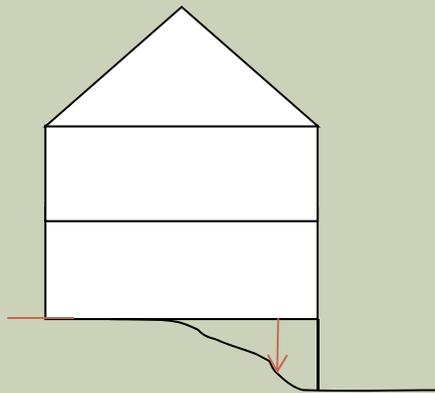
$$0/100 * 600 = 0$$

0 sq. ft. of basement floor area counts toward GFA

Mass Below Grade

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Example 2:



30'

20'



Basement perimeter is 100'

Entire real wall is a walk-out and portions of two sides have portions over 4' tall

Assume 30' of perimeter (in red) has height of 4' or more, then:

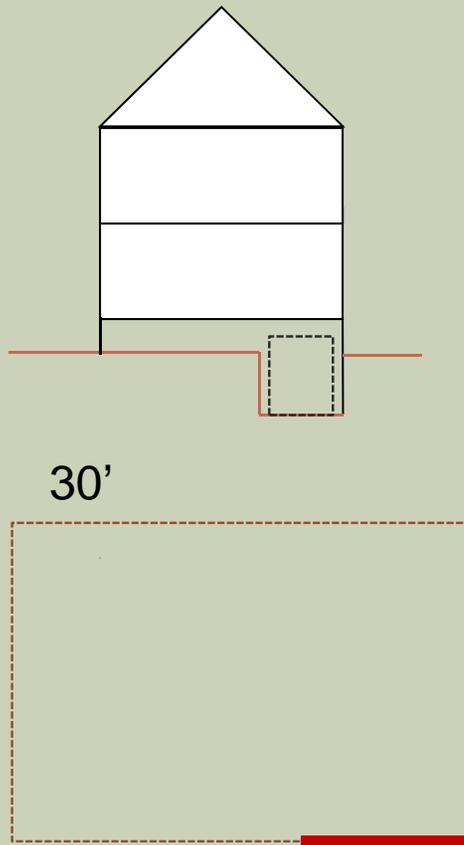
30/100 or 30% of basement floor area would count toward GFA

$30/100 * 600 \text{ sq. ft.} = 180 \text{ sq. ft.}$

180 sq. ft. of basement floor area counts toward GFA

Mass Below Grade

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Example 3:

Basement perimeter is 100'

Foundation is 3' out of ground except for garage under

Assume 10' of perimeter (in red) has height of 4' or more, then:

$$10/100 * 600 \text{ sq. ft.} = 60 \text{ sq. ft.}$$

60 sq. ft. of basement floor area counts toward GFA

First and Second Stories, Atria

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- First and second stories, atria and other vertical spaces: all count as they did under previous regulations – **no change**
- Calculation: multiply the floor level area of such space by a factor equal to the average height in feet divided by 10

Area Above the Second Story

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Concerned with significant mass above second story, habitable or not



Area Above the Second Story

20

- **Concern:** All attic space, even crawl spaces, now counts toward FAR
- **Fact:** Portions of some space under sloped roofs count; some does not

Area Above the Second Story

21

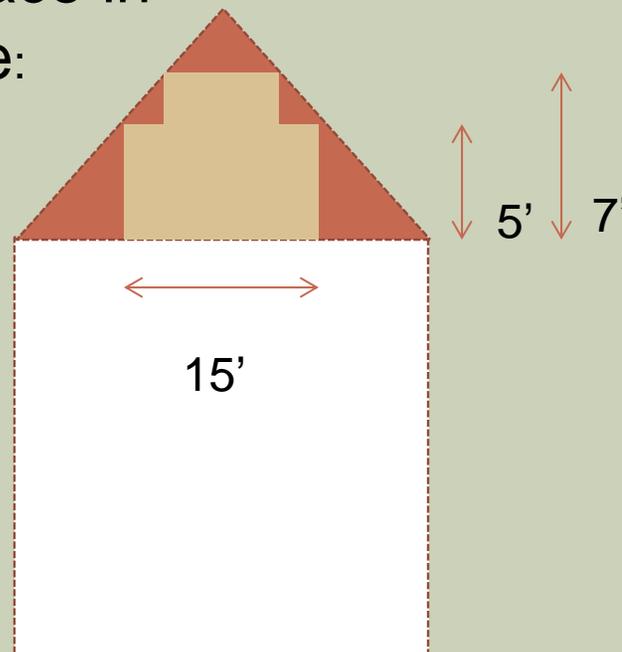
Any space above the second story, whether finished or unfinished, that meets all of the following criteria:

- It lies below the area of a horizontal plane that is five (5) feet above it and which touches the side walls and/or the underside of the roof rafters;
- Is at least seven (7) feet in any horizontal dimension, as measured within the area having a wall height of five feet or more;
- Has a minimum ceiling height of seven (7) feet on at least 50 percent of its required floor area; and
- Has a floor area of not less than 70 square feet as measured within the area having a wall height of five feet or more.

Area Above the Second Story

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Meets **dimensional** requirements for habitable space in building code:

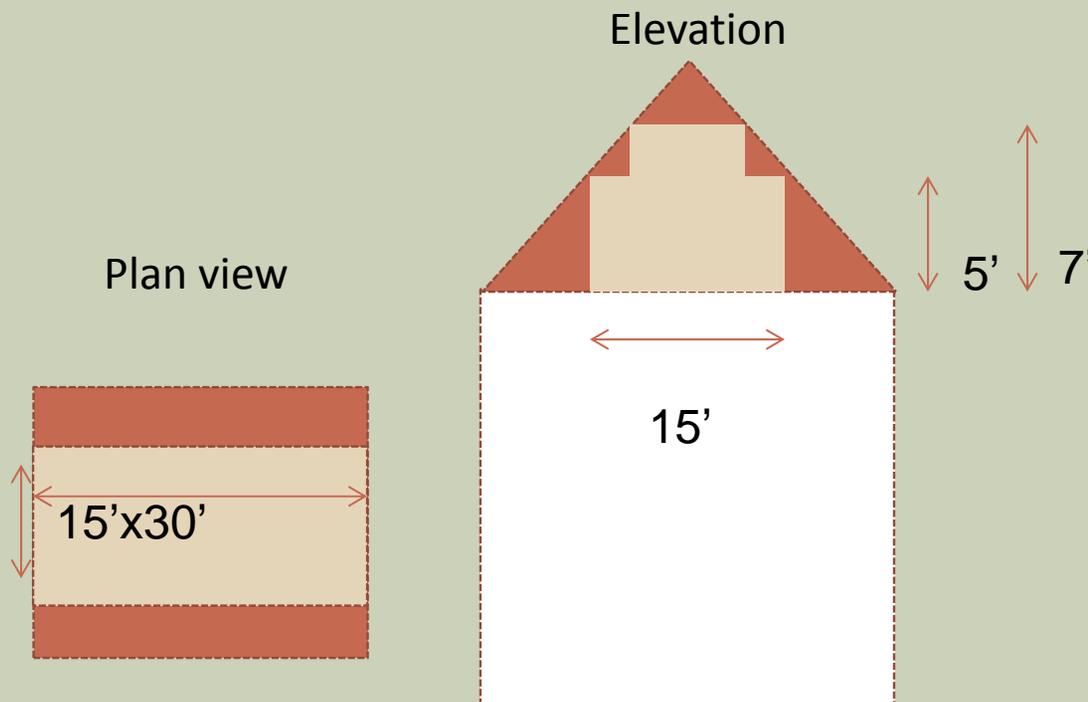


- Within plane that is 5' above the floor & touches rafters
- At least 7' in any horizontal direction
- Minimum ceiling height of 7' on at least 50% of floor area
- Floor area of 70 sq. ft. or more (measured on area that has at least 5' ceiling)

Area Above the Second Story

23

Example 1

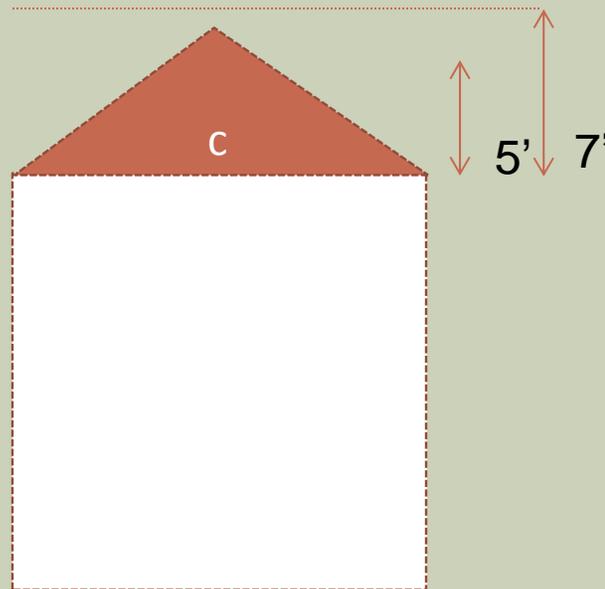


- Within plane that is 5' above the floor & touches rafters
- At least 7' in any horizontal direction
- Minimum ceiling height of 7' on at least 50% of floor area
- Floor area of 70 sq. ft. or more (measured on area that has at least 5' ceiling)
- $15 \times 30 = 450$ sq. ft. counts toward FAR

Area Above the Second Story

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Example 2



- Within plane that is 5' above the floor & touches rafters
- At least 7' in any horizontal direction
- Minimum ceiling height of 7' on at least 50% of floor area
- Floor area of 70 sq. ft. or more (measured on area that has at least 5' ceiling)
- 0 sq. ft. count toward FAR

Cathedral Ceilings

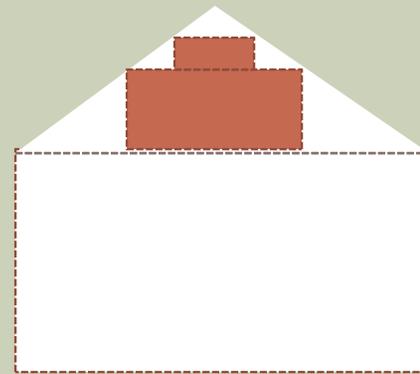
25

- Previous calculation: Considered as an atria
- New calculation: considered as area under a sloped roof



Atria calculation: multiply floor area by average height/10

$$600 \text{ sq. ft.} * 15/10 = 900 \text{ sq. ft.}$$



New calculation: calculate area under sloping roof as if there is a floor

Depending on slope of roof, could be higher or lower than under atria calculation

Porches

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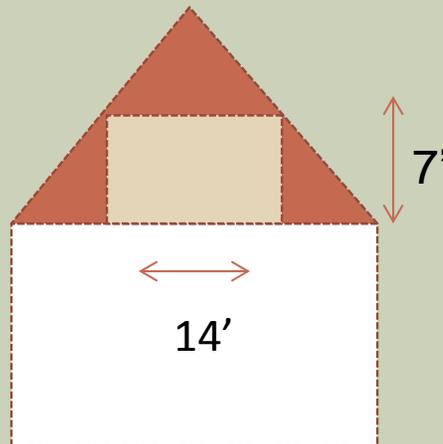
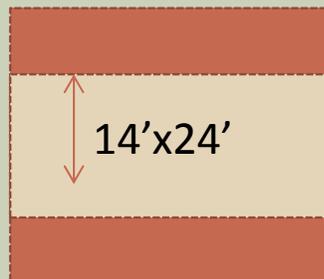
- **Porch:** A roofed structure with sides not more than sixty percent (60%) enclosed by impermeable walls, attached to and accessible from the primary structure, and not heated or air conditioned. A porch may share no more than two exterior walls with the residential structure. Railings or solid walls on the projecting facades of the porch may be no higher than 36” as measured from the finished porch floor; the remainder of these facades may be open to the elements or enclosed by mesh, glass, or similar material.
- **Porch, enclosed:** A porch enclosed for any portion of the year by any nonpermeable material such as glass or a similar material.
- **Porch, unenclosed:** A porch that at all times is either enclosed by permeable materials such as mesh or similar material or is unenclosed by any material.
- **Enclosed porches now count toward FAR; unenclosed porches will not**

Garages

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- Attached garages continue to count toward FAR
- Detached garages now also count toward FAR
- Second floors in detached garages now count if ceilings above 7'

Plan View



24'x 24' garage
14'x24' has ceiling over 7'
14'x24'=336 sq. ft. counts
toward FAR

Carports

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- ***Carport:*** A one-story roofed structure permanently open on at least three sides and designed for or used for occupancy by a motor vehicle. For the purposes of this ordinance, a one-story port-cochere meets the definition of a carport.

Other Detached Structures

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- Count toward FAR under new regulations
- One exception for shed of 120 sq. ft. or less

Previous FAR Calculations for Regulations In Effect Until October 15, 2011			New FAR Calculations for Regulations Effective October 15, 2011		
Inputs			Inputs		
1.	First story	1000	1.	First story	1000
2.	Attached garage		2.	Garage, detached or attached	
3.	Second story	1000	3.	Second story	1000
4.	Atria, open wells, and other vertical spaces		4.	Atria, open wells, and other vertical spaces	
5.	Floor area above the second story if it is more than 2/3 the floor area of the story directly below (otherwise "0")		5.	Certain floor area above the second story ^{1b}	494
6.	Enclosed porches if heated (otherwise "0")		6.	Enclosed porches ^{2b}	
			7.	Mass below first story ^{3b}	348
			8.	Area above detached garages with a ceiling height of 7' or greater	
			9.	Other detached accessory buildings (one detached building up to 120 sq. ft. is exempt)	
FAR of Proposed Structure(s)			FAR of Proposed Structure(s)		
A.	Total gross floor area (sum of rows 1-6 above)	2000	A.	Total gross floor area (sum of rows 1-9 above)	2842
B.	Lot size	5403	B.	Lot size	5403
C.	FAR = A/B	.37	C.	FAR = A/B	.52
Allowed FAR			Allowed FAR		
	Allowed FAR SR1=.2 or .25 depending on age of lot SR2=.3 SR3=.35 MR1, 2, 3=.4			Allowed FAR see FAR calculator at www.newtonma.gov/planning/far.php	
	Bonus of .02 to .07 if eligible ^{1a}			Bonus of .02 if eligible ^{4b}	
	TOTAL Allowed FAR (add two rows above)			TOTAL Allowed FAR (add two rows above)	

Finishing Existing Space

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Q: I have an existing house with unfinished space (e.g. attic, basement). Can I finish that space? Do I need to do FAR calculations?

A: You may finish ANY existing space without regard to FAR.

Recent Changes: What are the new FAR limits?

32

New sliding scale of FAR limits tied to lot size and zoning district, and giving modest increase in capacity to smaller lots

Intent:

- Raise FAR limits to account for more elements counting
- Raise capacity slightly for smaller lots

FAR Limits As Of October 15th (excludes bonus)

SR1		SR2		SR3	
Lot Size (sq. ft.)	Allowable FAR*	Lot Size (sq. ft.)	Allowable FAR*	Lot Size (sq. ft.)	Allowable FAR*
<= 5,333	.46	<= 5,333	.46	<= 7,217	.48
5,334-6,000	.45	5,334-6,000	.45	7,218-7,652	.47
6,001-6,666	.44	6,001-6,666	.44	7,653-8,086	.46
6,667-7,151	.43	6,667-7,294	.43	8,087-8,521	.45
7,152-7,454	.42	7,295-7,882	.42	8,522-8,956	.44
7,455-7,757	.41	7,883-8,470	.41	8,957-9,391	.43
7,758-8,060	.40	8,471-9,058	.40	9,392-9,826	.42
8,061-8,363	.39	9,059-9,647	.39	9,827-10,833	.41
8,364-8,666	.38	9,648-10,500	.38	10,834-12,499	.40
8,667-8,969	.37	10,501-11,500	.37	12,500-14,166	.39
8,970-9,272	.36	11,501-12,500	.36	14,167-21,250	.38
9,273-9,575	.35	12,501-13,500	.35	21,251-23,750	.37
9,576-9,878	.34	13,501-14,500	.34	23,751 and above	.36
9,879-11,250	.33	14,501 and above	.33		
11,251-13,750	.32				
13,751-15,833	.31				
15,834-17,500	.30				
17,501-19,166	.29				
19,167-21,250	.28				
21,251-23,750	.27				
23,751 and above	.26				

FAR Limits As Of October 15th (excludes bonus)

MR1		MR2/MR3	
Lot Size (sq. ft.)	Allowable FAR*	Lot Size (sq. ft.)	Allowable FAR*
<= 5,199	.58	<= 5,199	.58
5,200-5,599	.57	5,200-5,599	.57
5,600-5,999	.56	5,600-5,999	.56
6,000-6,399	.55	6,000-6,399	.55
6,400-6,799	.54	6,400-6,799	.54
6,800-7,294	.53	6,800-10,250	.53
7,295-7,882	.52	10,251-10,750	.52
7,883-8,470	.51	10,751-11,250	.51
8,471-9,058	.50	11,251-11,750	.50
9,059-9,647	.49	11,751-12,250	.49
9,648-15,500	.48	12,251-12,750	.48
15,501-16,500	.47	12,751-13,250	.47
16,501-17,500	.46	13,251-13,750	.46
17,501-18,500	.45	13,751-14,250	.45
18,501-19,500	.44	14,251-14,750	.44
19,501-20,500	.43	14,751-15,500	.43
20,501-21,500	.42	15,501-16,500	.42
21,501-22,500	.41	16,501-17,500	.41
22,501-23,500	.40	17,501-18,500	.40
23,501-24,500	.39	18,501-19,500	.39
24,501 and above	.38	19,501 and above	.38

www.newtonma.gov/planning/far.php

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Residential Floor Area Ratio (FAR)

Floor area ratio, or FAR, regulates the amount of gross floor area that can be built on a lot. It is the ratio of gross floor area of building(s) on a lot divided by lot size.

Newton's Zoning Ordinance sets out FAR limits for residential structures and describes what elements of a building are included in gross floor area.

The Board of Aldermen recently adopted changes to the FAR regulations for residential structures in residential zoning districts. These will take effect October 15, 2011. The Board has requested that the Inspectional Services and Planning departments gather data on FAR calculations under the current and new regulations, beginning immediately. Please [click here](#) for a worksheet and accompanying instructions for calculating FAR under the current and new regulations. If you would like to fill out the form electronically [click here](#).

For more information, please view the [FAQs about FAR](#), or contact us via email FAR@newtonma.gov or call the Planning Department at 617-796-1120.

For a copy of the FAR regulations that will go into effect on October 15, 2011, [click here](#).

A public information session on the new FAR regulations is scheduled for Wednesday, May 11th, at 9 a.m. in the War Memorial at City Hall.

FAR Calculator

The calculator below estimates FAR limits under the new FAR regulations that will take effect October 15, 2011.
(Make sure to **not** use commas in the lot size)

Zone

SR1 SR2 SR3

MR1 MR2/MR3

Lot Size

Zone: sr 1
Lot Size: 5500 square feet
Maximum FAR: 0.45
Maximum Gross Floor Area: 2475 square feet

QUESTIONS? SERVICE REQUESTS?



ONE CALL DOES IT ALL

[CLICK HERE TO ENTER A SERVICE REQUEST](#)

Links

- Assessor's Database
- Budget and Financial Info
- Committees
- Departments
- Events
- Forms
- Internships
- Newton North Construction

Done

New FAR Bonus

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Modest bonus for building to new setback lines

Bonus of .02 for new construction/additions on old (pre-1954) lots built to new side setback standards

Intent: Encourage new construction to new setback requirements

New FAR Bonus

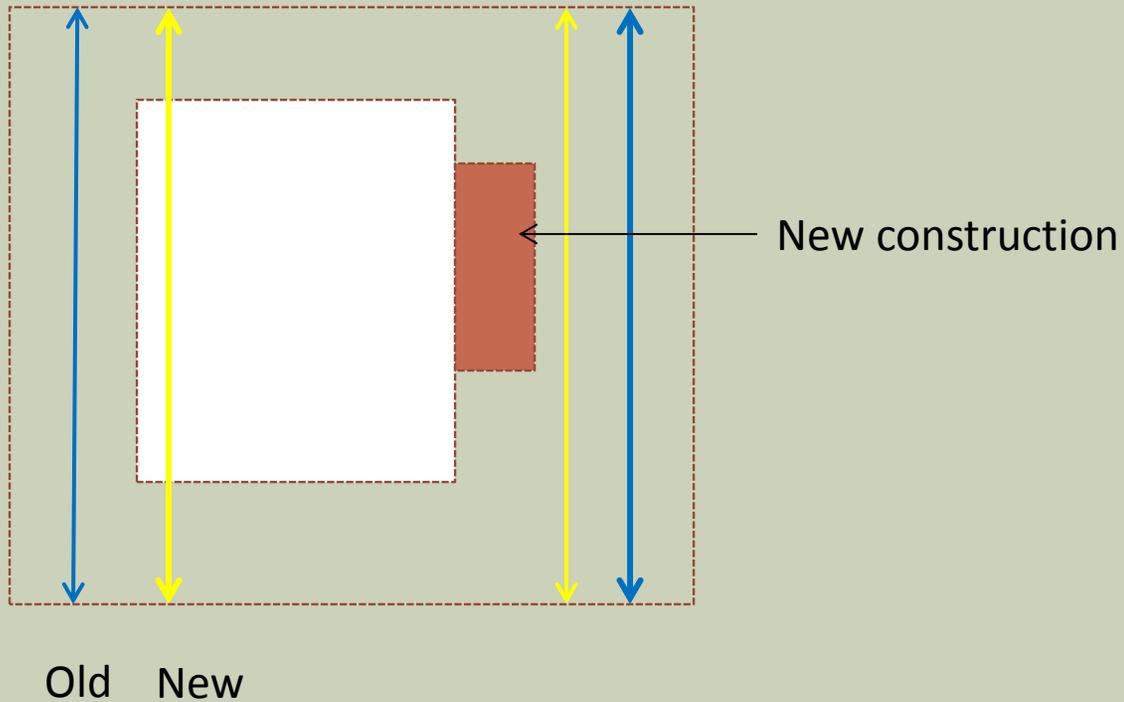
37

- **Previous bonuses:**
 - .05 above FAR limits for additions to existing homes
 - An extra .02 for additions to existing homes where new construction meets new setbacks or doesn't extend further toward old setbacks
 - .05 for new construction on old lots meeting new lot setback and lot coverage standards
- **New bonus gives .02 for any new construction on old lots provided new portion meets new lot setback standards**

FAR Bonus

38

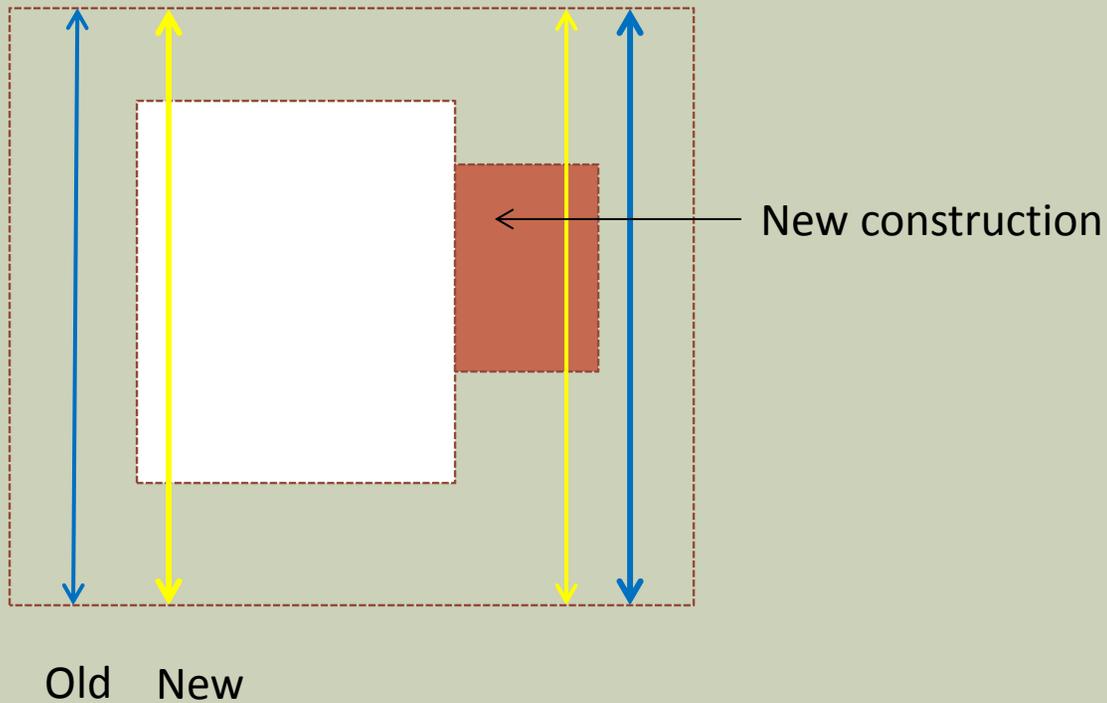
Example 1: Qualifies for new bonus



FAR Bonus

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Example 1: Does not qualify for new bonus



FAR Bonus

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- New FAR bonus may not create or increase nonconformities with respect to lot coverage or open space
- New FAR bonus may not be used in conjunction with *de minimis* section of Zoning Ordinance (30-21(c))

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	Bonus of .02 to .07 if eligible ^{1a}	.07		Bonus of .02 if eligible ^{4b}	.02
	TOTAL Allowed FAR (add two rows above)	.47		TOTAL Allowed FAR (add two rows above)	.59

Exceeding FAR Limits

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- As before, owners can apply for a **special permit** to exceed FAR limits
- Special permits are granted by the Board of Aldermen
- Main criteria for FAR special permit is that “proposed structure is consistent with and not in derogation of the size, scale and design of other structures in the neighborhood”
- Efforts to streamline FAR special permit applications

Exceeding FAR Limits

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- Planning Department welcomes owners, architects, and others to meet at **Development Review Meetings** to discuss options or to begin the special permit process
- To schedule, call 617-796-1120

Implementation

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- Policies took effect October 15
- Data collection & monitoring
- Regular reporting to Board of Aldermen
- For more information, please visit www.newtonma.gov/planning/far.php
- To add your name to an email list for FAR updates, please send an email to far@newtonma.gov