

Market, Norkirk, Highlands Neighborhood Plan Update
Single Family Design Focus Group Fall 2019
Summary of Comments and Possible Solutions November 2019

Purpose of The Focus Group

As part of the public outreach process to update the Market, Norkirk, Highlands Neighborhood Plans, a focus group was formed to discuss ways to ensure new construction in predominantly single-family neighborhoods is consistent with the character of the existing housing stock, and other issues. As part of the recent floor area ratio Zoning Code amendments adopted this year, the Planning Commission also asked staff to continue discussing these issues not covered by the amendments. The seven-member group of residents and design professionals met three times.

This document summarizes the group's discussions and possible policy and code amendment solutions (Table 1) to pass on to the Neighborhood Plan update Working Group and Planning Commission. See photos submitted by participants showing examples of house styles that gave them concern. Attachment 1 shows illustrations submitted by one of the participants showing examples of how Daylight Plane regulations could work. Attachment 2 is a checklist from the City of Palo Alto California as an example of what is needed for compliance to meet the City's Daylight Plane regulations.

Focus Group Participants

Deanna Mortensen, residential designer
Janet Pruitt, resident
Leah Kliger, resident
Paul Backstrom, resident
Phil Sandifer, resident

Sheila Edwards, resident/graphic designer
Tim Olson, architect
Staff: Janice Coogan, Allison Zike, Adam
Weinstein, Shaylyn Johanson

Summary of Focus Group's Recommendations

New Policy - The group supports adding the following new draft policy to the three neighborhood plans. The new policy would provide the policy support to consider future potential Zoning Code amendments to address their concerns:

Potential New Policy: Explore new regulations that encourage infill housing to be compatible in scale and mass with the existing development and that allow sufficient light, air, and privacy between residential structures.

Table 1 on the next page is a summary of the focus group's discussion comments and suggested possible code amendment solutions to address their concerns.

Table 1 Summary of Focus Group Comments and Possible Solutions

Focus Group Concerns	Possible Solutions Identified by Focus Group	Staff Comments
A. Design, Size, Bulk, Impacts of New Houses		
<p>Issues: The visual aesthetics of the newer homes (size, bulk, mass, flat roof style) are out of character and incompatible with the existing older housing stock in the three neighborhoods.</p> <p>The homes are being built to the maximum setbacks, lot coverage, and floor area ratio (FAR), resulting in reduced sunlight, overwhelming scale and lack of privacy between structures. <i>See photos below.</i></p> <p>Participant comment themes:</p> <ul style="list-style-type: none"> • Bulky, boxy, flat roofed, style houses don't reflect desired neighborhood character • Taller homes loom over adjacent homes that are one story or located on a lower elevation ("penned in feeling") • Reduced sunlight and view of sky between homes (side and rear yards) resulting from homes built too close and big box flat roof houses (especially when homes are grouped together as on 7th Ave or by Van Aalst park). • Tall building facades visible from street • Lack of diversity of modern architectural style • Preserve character of older, smaller housing stock 	<p>There are several regulatory options that could be considered depending on the desired outcome: to reduce upper story bulk; reduce total house size (FAR); to create more privacy; to increase sunlight; encourage style of roof pitch and so on:</p> <ul style="list-style-type: none"> • Establish "Daylight Plane" zoning regulations - They could be a good way to regulate building volume, reduce upper story floor area, encourage more sunlight, airspace and privacy between properties, and encourage pitched roofs. <p>Other options:</p> <ul style="list-style-type: none"> • Increase interior minimum side setbacks on upper stories (e.g., 7.5 feet measured from lower floor or property line) (Anacortes, Seattle) • Reduce the percent of floor area on upper stories (<i>Similar to recent FAR code amendments to KZC 115</i>) • Provide incentives for larger side yard setbacks in exchange for exceeding 50% FAR (minimum 7.5-foot side yard setbacks on both sides and either Daylight Plane standards, or on upper stories, establish a minimum five-foot setback from the 	<p><i>The Group focused their discussion on one possible solution the Daylight Plane regulations but there are other options to explore. "Daylight Plane" regulations require a 45-degree angle be measured at X feet vertically above either a side yard setback or property line and when combined with the maximum building height establishes a maximum building envelope for structures on a lot. Some cities have different standards for sloped lots greater than 15% grade. See attachment 1 and 2 for illustrations.</i></p> <p><i>Cities with Daylight Plane regulations: Anacortes, Carnation, Bellevue, Port Townsend, San Leandro, Palo Alto, San Mateo, Menlo Park, Coronado, CA</i></p> <p><i>If the Daylight Plane concept moves forward (or the other ideas), the changes could be Citywide or a pilot project in one or more of these three neighborhoods.</i></p> <p><i>Disadvantages of Daylight Plane regulations: Introduction of blanket Daylight Plane regulation is a MAJOR change, which would face opposition...as a taking,</i></p>

<ul style="list-style-type: none"> • Improve integration of new house design with older housing stock 	<p>first floor (a hybrid of the three preceding ideas) (City of Bellevue)</p>	<p><i>reduction of property value, etc. Perhaps use as an incentive to voluntarily use Daylight Plane.</i></p>
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Design, Size, Bulk, Impacts of New Houses Continued...

<ul style="list-style-type: none"> • We realize we cannot control styles of houses or save traditional old housing stock • In drafting code amendments, don't be beholden to maintaining the status quo, and be sure new restrictions are applied equally. • View obstruction of Lake Washington and Olympics 	<ul style="list-style-type: none"> • Incentivize pitched roofs by requiring sliding scale interior side setbacks of a minimum 7.5 feet or greater on each side for gabled or non-gabled roof types of a certain building height (greater than 15 feet or 18 feet); <u>or</u> building heights greater than 25 feet with a minimum side yard setback of 10 feet (<i>Mercer Island staff: easier to understand, apply and enforce than Daylight Plane</i>) • Link maximum building height to roof pitch (simpler version of above) • Regulate maximum FAR to roof pitch 	<p><i>Daylight Plane regulations could be considered complicated to comply with and increased staff review time, result in increased permit costs, require a new inspection, challenging to apply to additions to existing single-family homes, and certification of compliance by surveyor. Some cities require courtesy notice to property owners. In addition, required tree retention in building setbacks could conflict with sunlight retention regulations.</i></p> <p><i>Should discuss Daylight Plane and other ideas with current planners, development community, research other cities. Would need to be added to the Planning Department work program for study of code amendments.</i></p> <p><i>New FAR code amendments allow an increase in FAR if pitched roofs, increased side setbacks, and/or upper story step backs are provided (must provide 2 of 3 options). Is this adequate or do we need to do more?</i></p> <p><i>The City has had a longstanding policy to not protect views from private property only from public street corridors.</i></p>
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Focus Group Concerns	Possible Solutions Identified by Focus Group	Staff Comments
<i>B. Floor Area Ratio (FAR) Regulations</i>		
<p>Issues:</p> <ul style="list-style-type: none"> -floor area ratio has proven to be an ineffective technique to measure the perceived bulk and mass of structures due to the use of exemptions in the KZC 115.42.1(e) -more and more new houses are taking huge advantage of "covered decks" even with the recent code changes -breezeways in-between a house and accessory structures add bulk to the lot and could be enclosed in the future -similarly, interior courtyards, open decks and recesses affect mass of structure and could be enclosed in future -open upper story decks don't count as FAR but are used as outdoor space with landscaping pots, furniture etc. 	<ul style="list-style-type: none"> • Reconsider reducing overall maximum FAR limits to make them more restrictive • Reduce exemptions in Floor Area Ratio (FAR) Regulations KZC 115.42.1(e). • Create more restrictive limitations on breezeway size, volume, and apparent "bulk/density" between detached structure and primary residence. • Limit the number of FAR exemptions allowed per lot. • Have a sliding scale FAR limit based on lot size 	<p><i>Staff clarification-Structures connected by a breezeway that is less than 10' above finished grade in between a house is not counted in FAR calculations (KZC 115.42.1. Interior courtyards are counted as FAR. Depending on the number of walls, upper story decks may not be counted as FAR.</i></p>
<p>Issues:</p> <p>Steepness of some new driveways to access below grade garages result in non-functional garages and are a way to increase floor area in the basement.</p> <p>The finished grade adjacent to the garage door opening determines whether all or part of the basement garage is excluded or included in FAR.</p> <ul style="list-style-type: none"> -Causes the volume of houses to be larger -Garage is hidden -Causes an increase in on-street parking in neighborhood 	<ul style="list-style-type: none"> • Regulate the steepness of garage driveways to lower level garages to reduce floor area (no consensus from group) • Don't use finished grade for subgrade floor area exemptions 	<p><i>There was not much discussion of this. Not clear all agreed that this was a problem.</i></p> <p><i>It was noted that if the code was amended to insure basement garages are accessible and usable for vehicles, it would involve lots of diagrams and review concerning driveway grade between curb/sidewalk and property line, break-over and break-in angles (quite difficult to go from 0% to 15% without high-centering or hitting bumpers, etc), garage door minimum height for</i></p>

because people can't park in their garage.

whatever vehicle is deemed "standard", and more.

Focus Group Concerns	Possible Solutions Identified by Focus Group	Staff Comments
<i>C. Amount of soil manipulation and excavation on lot to build a larger house</i>		
<p>Issues:</p> <ul style="list-style-type: none"> -Amount of soil being excavated on lot to manipulate finished grade to allow for a larger structure (related to FAR calculations and floor area with ceiling height less than 6 feet above finished grade measured outside building Plate 23) -The amount of disturbance and change in grade of lots 	<ul style="list-style-type: none"> • More stringent regulations for amount of soil manipulation and excavation on lots to build a larger house • Regulate the percent of grade change or amount of soil movement on lots • Regulate maximum house façade height that is visible from a public right of way and/or measure height from the original grade rather than finished grade 	<p><i>Regulating the amount of grading or soil disturbance would be difficult to administer. Could look at revising FAR regulations to modify what is included in FAR calculations in relation to finished grade.</i></p> <p><i>Could consider limit the height of structures above finished grade (40 ft?) visible from street.</i></p>
<i>D. Preserve older homes and historic homes from being demolished</i>		
<p>Issues:</p> <ul style="list-style-type: none"> -Older housing stock is being demolished, changing the older character of the housing stock and reducing amount of affordable housing 	<ul style="list-style-type: none"> • Increase incentives and flexibility in zoning regulations that we offer to preserve older homes and historic homes from being demolished. 	<p><i>Existing regulations are in place to allow small lot single family short plats to retain one historic house while allowing for a new house (KMC 22.28.048). The code allows flexibility in zoning regulations to help retain historic homes. For structures listed in the Table CC-1 within the Community Character Element of the City's Comprehensive Plan, the City requires SEPA review prior to demolition or moving of the subject structure. Not sure how we could prohibit older housing stock from being demolished.</i></p>

Focus Group Concerns	Possible Solutions Identified by Focus Group	Staff Comments
<i>E. Visual impacts of fence and wall location along sidewalks</i>		
<p>Issues: -Dislike fences or walls located at back of sidewalk (sometimes within public right of way) with no landscaping between fence and sidewalk.</p> <p>Providing distance between fence and sidewalk with landscaping improves the walking experience.</p>	<ul style="list-style-type: none"> • Prohibit locating fences at back of sidewalk • Require minimum amount of landscaping between sidewalk and fence 	<p><i>Existing fence zoning regulations provide flexibility for home owner to locate fences next to sidewalk or property line (see KZC 115.115 and Public Works Preapproved Plans Policy R-16 on a case by case basis). Zoning Code requires planting of trees to meet minimum tree density requirements. Trees are often located in front, side rear yard setbacks.</i></p>

Photos from Focus group illustrating design problems



5th Ave green space between



521 18th Ave

two homes (across from Kirkland Middle (less dimensional variation))



1415 and 1419 1st St. overscale to lot - fence too close?



Photos from Focus group illustrating positive design examples; modern style homes set back from street with landscaped areas



335 8th Ave New construction modern farm style (East of 3rd St)



Attachment 1 Examples of Daylight Plane photos and illustrations from Deanna Mortensen

Attachment 2 Example of Daylight Plane regulations checklist from Palo Alto

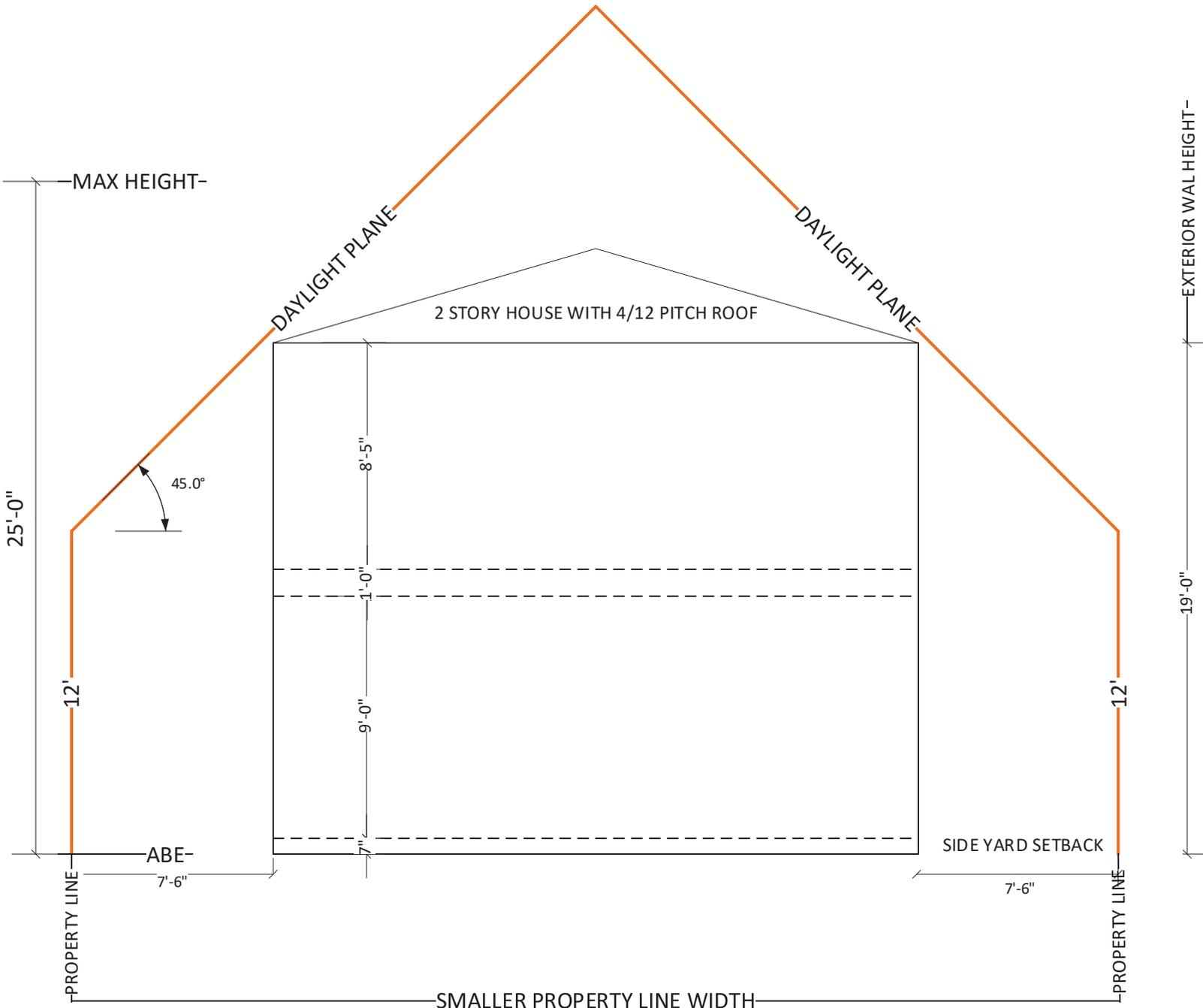
This photo illustrates how much more light a neighboring pitched roof house provides compared to a neighboring flat roof house.



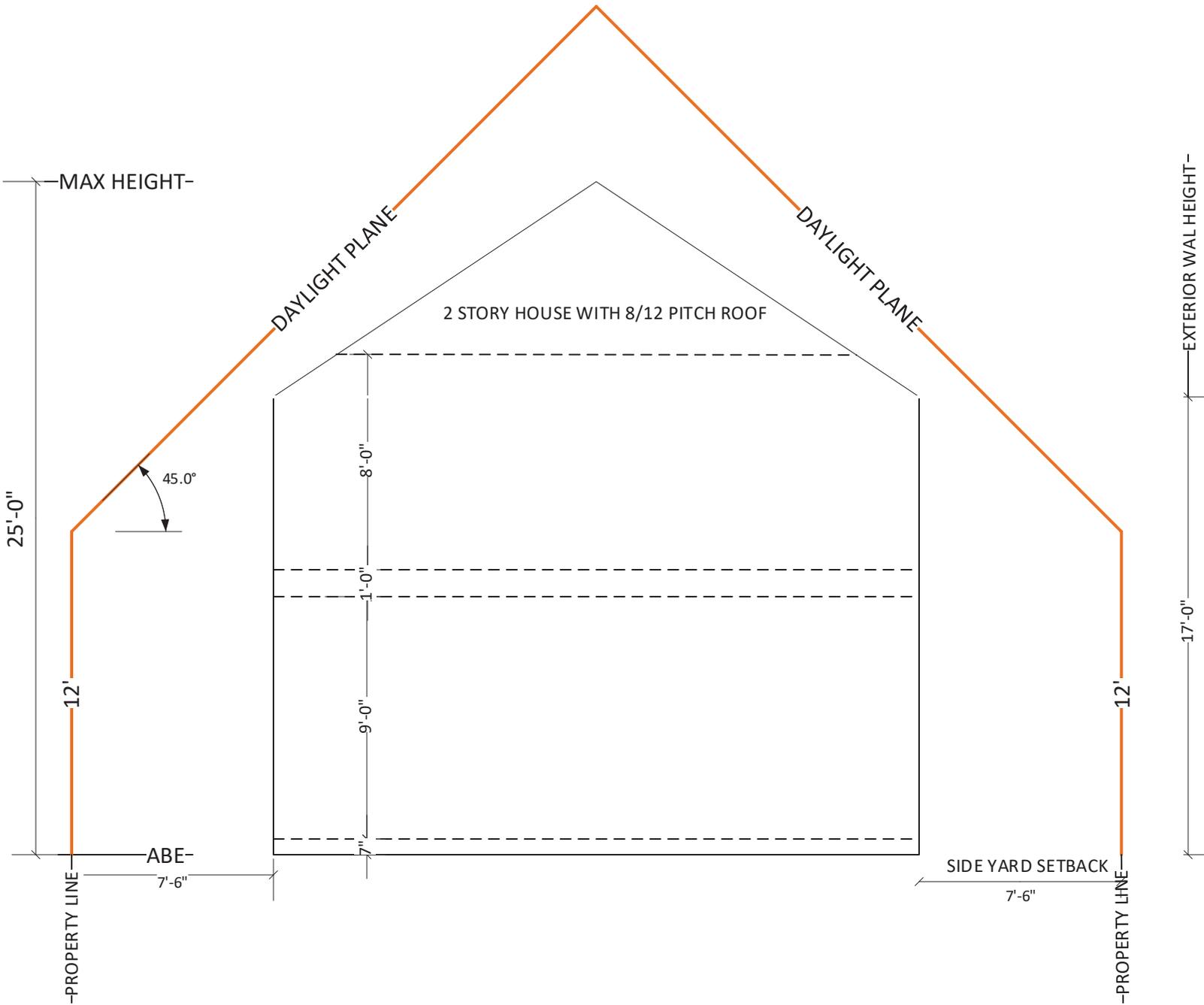
This photo illustrates how much more light a neighboring pitched roof house, even when the roof peak is parallel to the street, provides compared to a neighboring flat roof house.



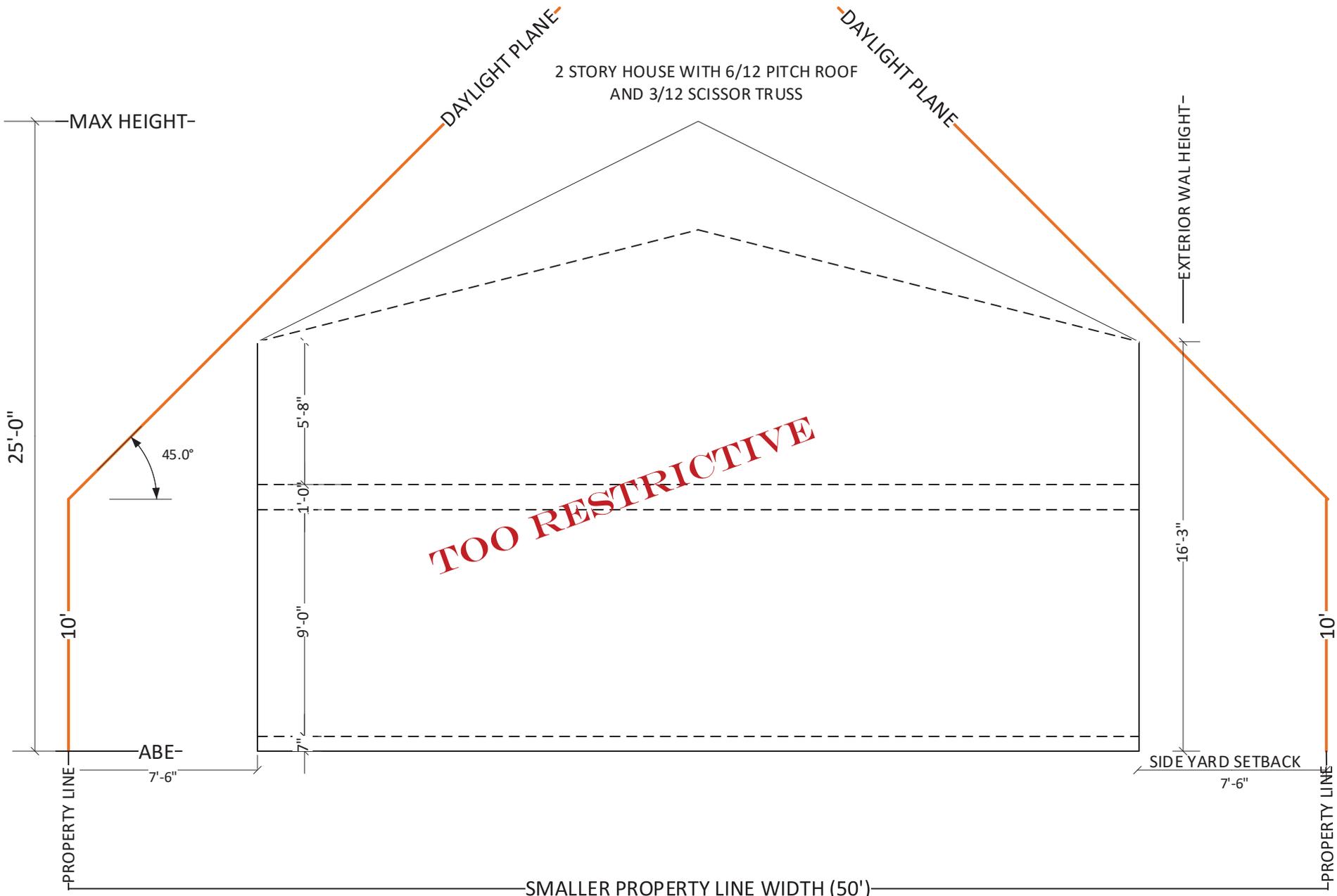
EXAMPLE OF DAYLIGHT PLANE WITH 12' VERTICAL MEASUREMENT STARTING AT PROPERTY LINES, MAXIMIZING CEILING HEIGHTS AND EXTERIOR WALL HEIGHT



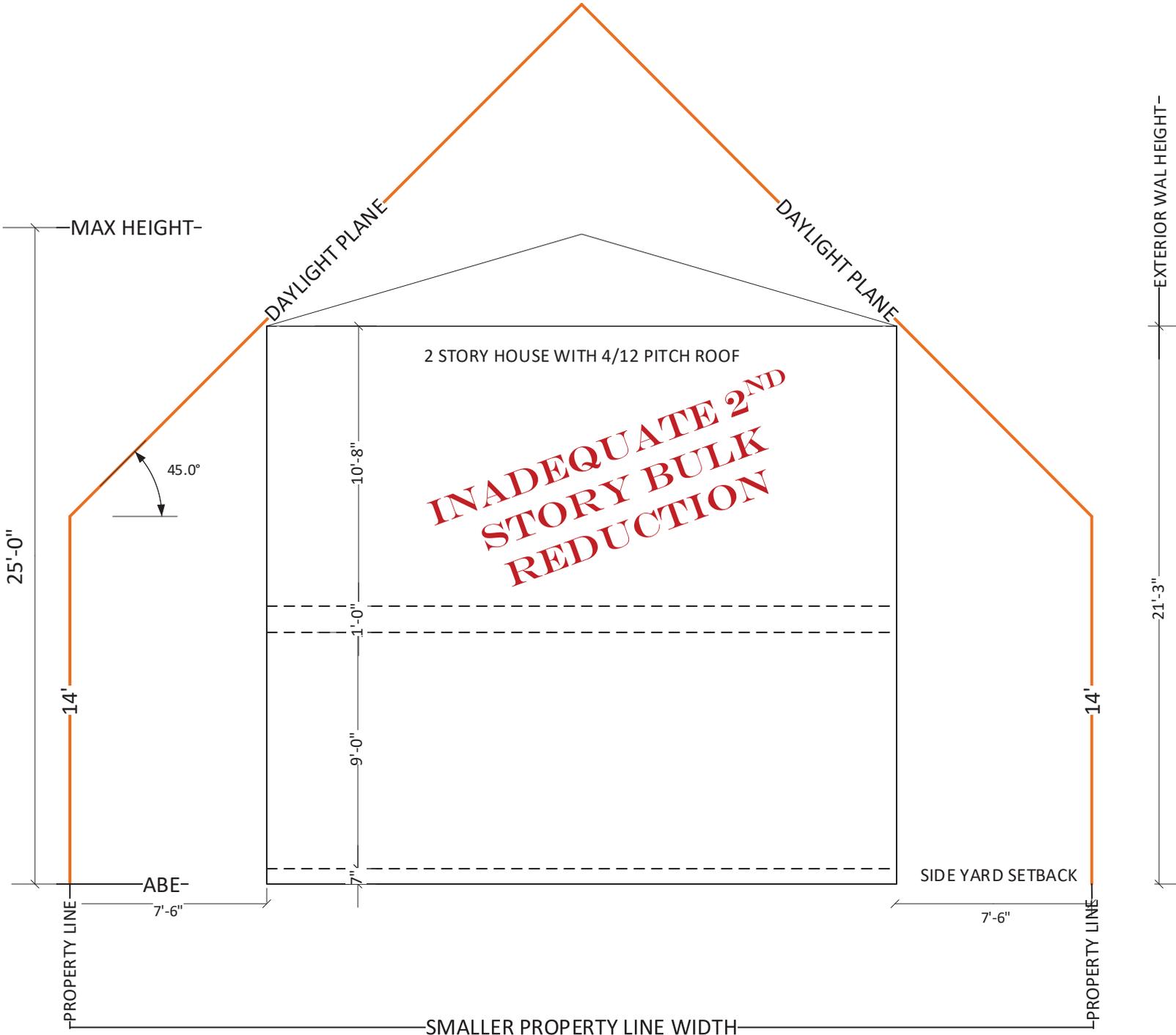
EXAMPLE OF DAYLIGHT PLANE WITH 12' VERTICAL MEASUREMENT STARTING AT SIDE SETBACK, MAXIMIZING CEILING HEIGHTS AND THE OVERALL HOUSE HEIGHT



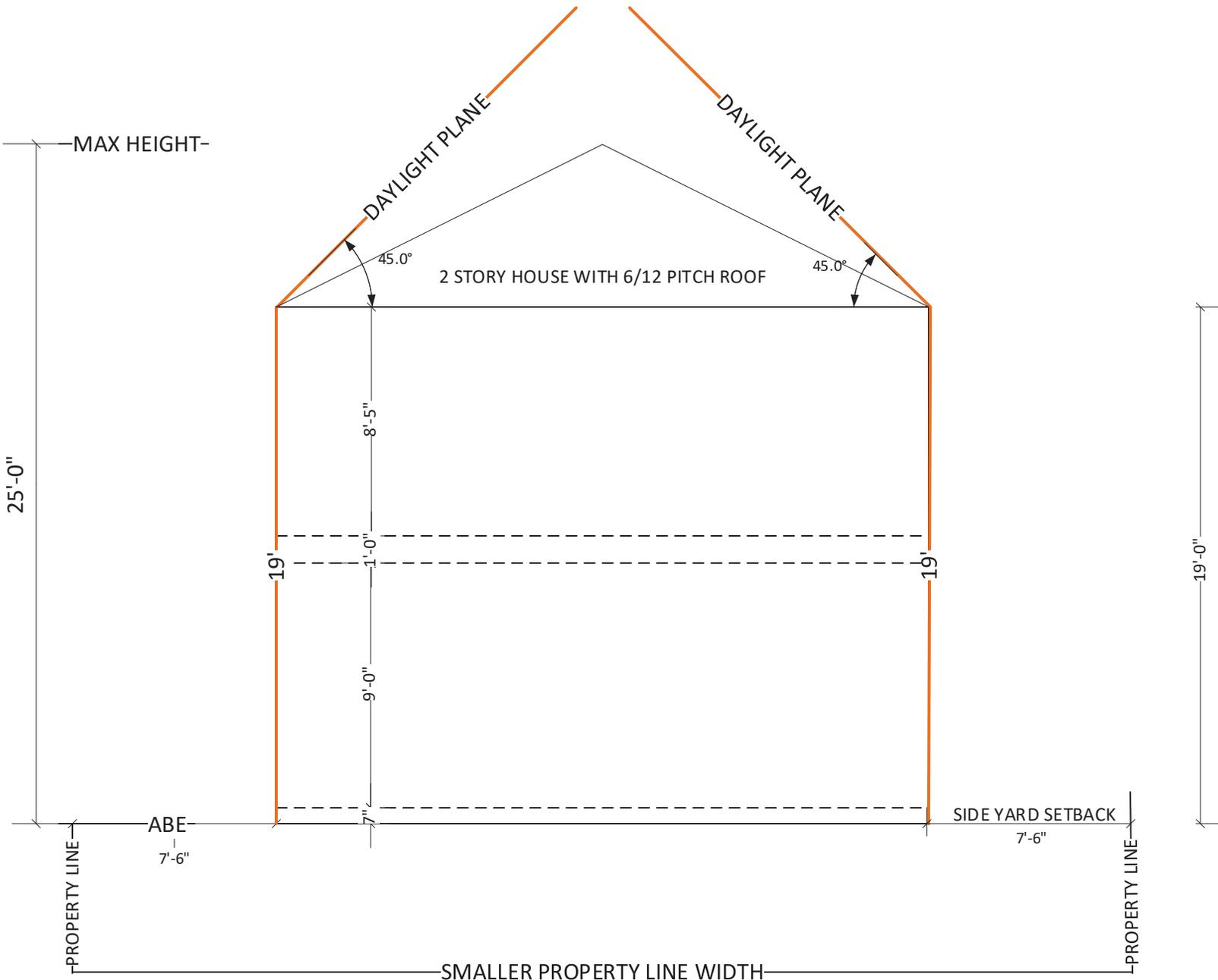
EXAMPLE OF DAYLIGHT PLANE WITH 10' VERTICAL MEASUREMENT STARTING AT SIDE SETBACK, MAXIMIZING CEILING HEIGHTS, EXTERIOR WALL HEIGHT, AND THE OVERALL HOUSE HEIGHT



EXAMPLE OF DAYLIGHT PLANE WITH 14' VERTICAL MEASUREMENT STARTING AT PROPERTY LINES, MAXIMIZING CEILING HEIGHTS AND EXTERIOR WALL HEIGHT



EXAMPLE OF DAYLIGHT PLANE WITH 19' VERTICAL MEASUREMENT STARTING AT SIDE SETBACK, MAXIMIZING CEILING HEIGHTS, EXTERIOR WALL HEIGHT, AND THE OVERALL HOUSE HEIGHT



SUNLIGHT AT AVERAGE SPACING: 7.5' YARD SETBACKS EACH SIDE

ATTACHMENT 1
EAST

WEST

FOR UNLIMITED MAXIMUM HEIGHT FLAT ROOF

FLAT ROOF HOUSE

FLAT ROOF HOUSE

EXISTING COTTAGE

60.0°

15'-0"

15'-0"

FOR DAYLIGHT PLANE WITH 12' VERTICAL LIMIT AT PROPERTY LINE

WITH DAYLIGHT PLANE RULE = 1.38 MORE HOURS OF SUN/DAY OR 30% MORE SUN/DAY

2 STORY HOUSE WITH 4/12
PITCH ROOF

2 STORY HOUSE WITH 4/12
PITCH ROOF

EXISTING COTTAGE

DAYLIGHT PLANE

DAYLIGHT PLANE

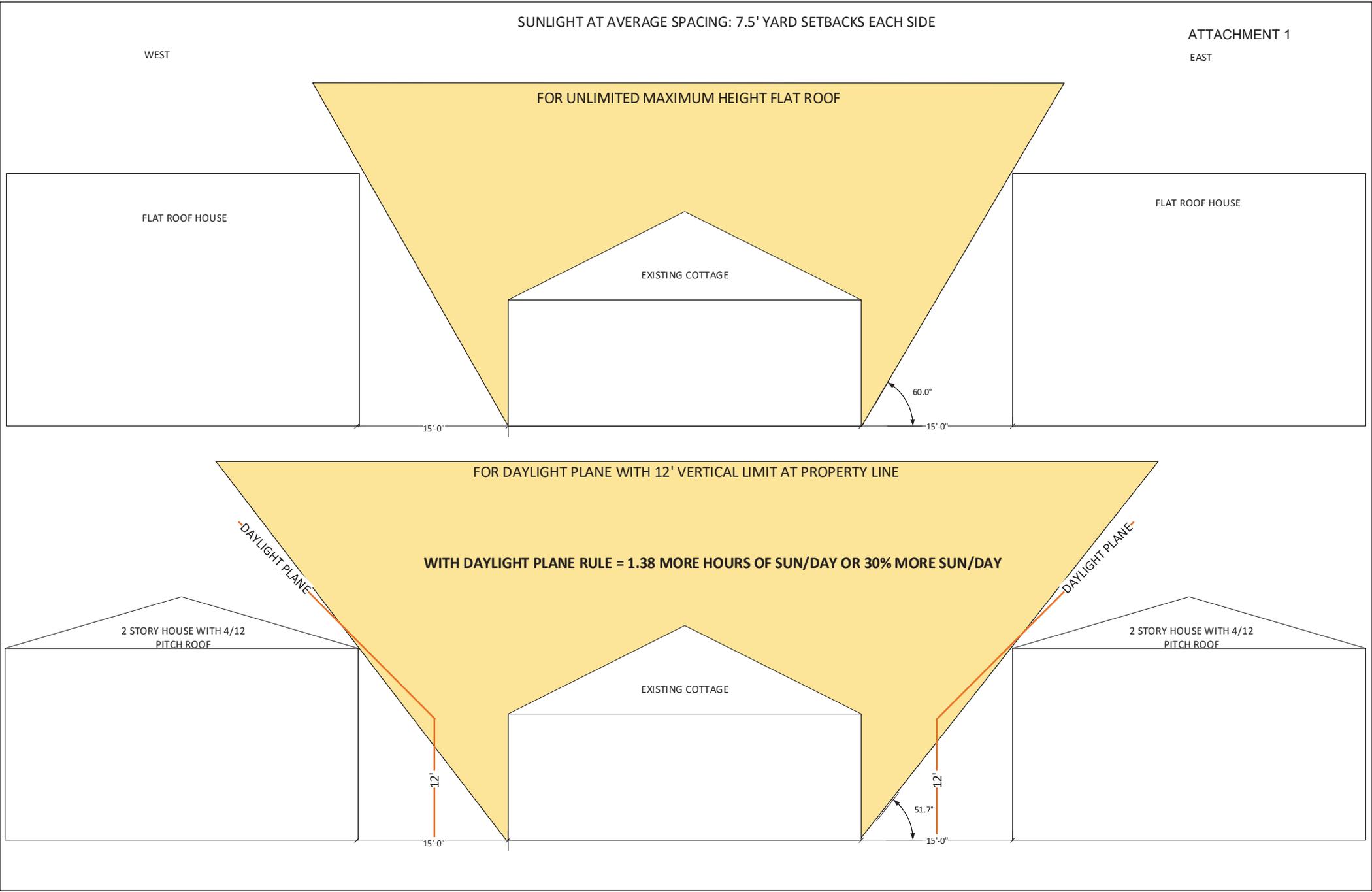
12'

12'

15'-0"

15'-0"

51.7°



SUNLIGHT AT AVERAGE SPACING: 7.5' YARD SETBACKS EACH SIDE

ATTACHMENT 1

WEST

EAST

FOR UNLIMITED MAXIMUM HEIGHT FLAT ROOF

FLAT ROOF HOUSE

FLAT ROOF HOUSE

EXISTING COTTAGE

15'-0"

60.0°

15'-0"

FOR DAYLIGHT PLANE WITH 19' VERTICAL LIMIT AT SIDE SETBACK

WITH DAYLIGHT PLANE RULE = 1.38 MORE HOURS OF SUN/DAY OR 30% MORE SUN/DAY

2 STORY HOUSE WITH 4/12
PITCH ROOF

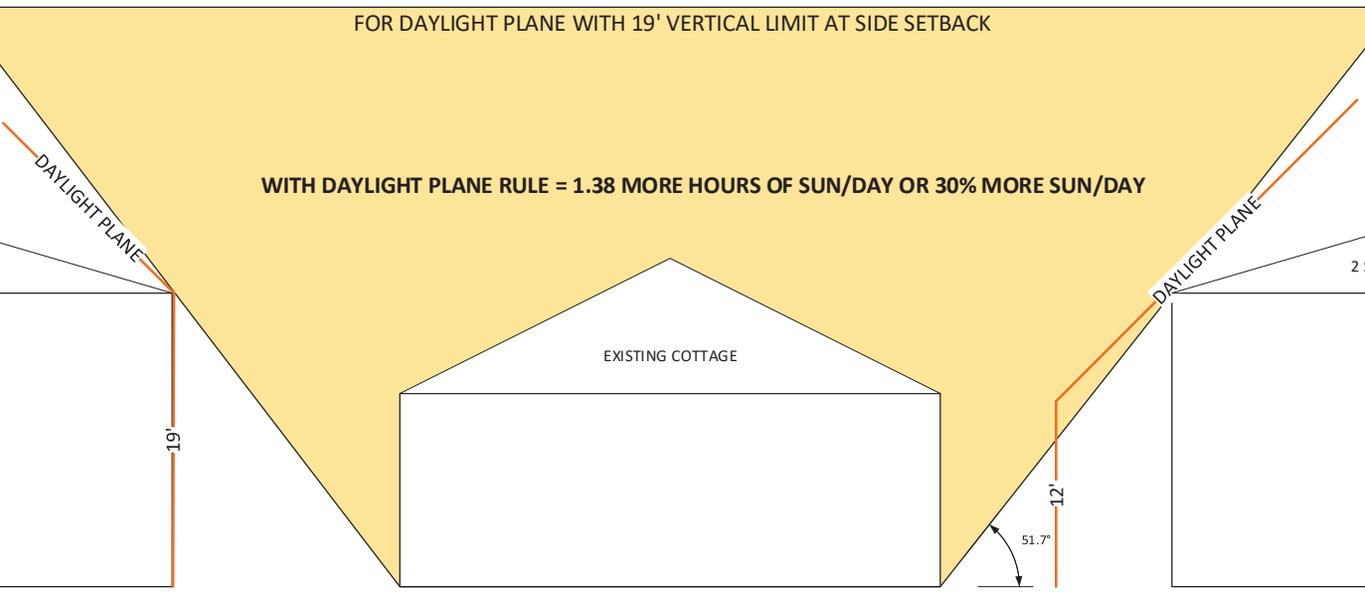
2 STORY HOUSE WITH 4/12
PITCH ROOF

EXISTING COTTAGE

19'

12'

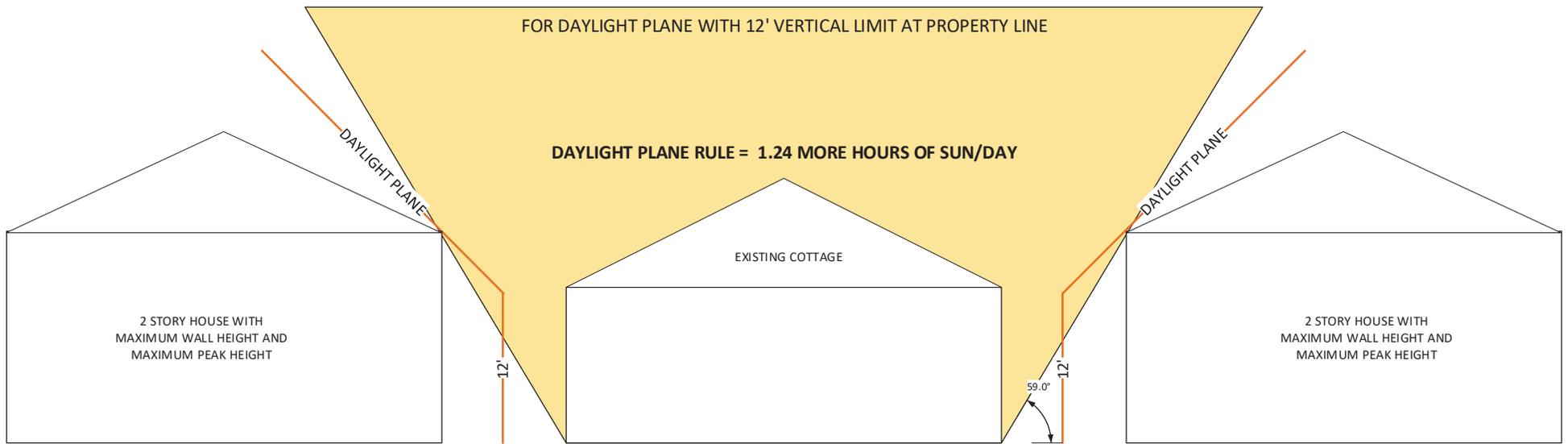
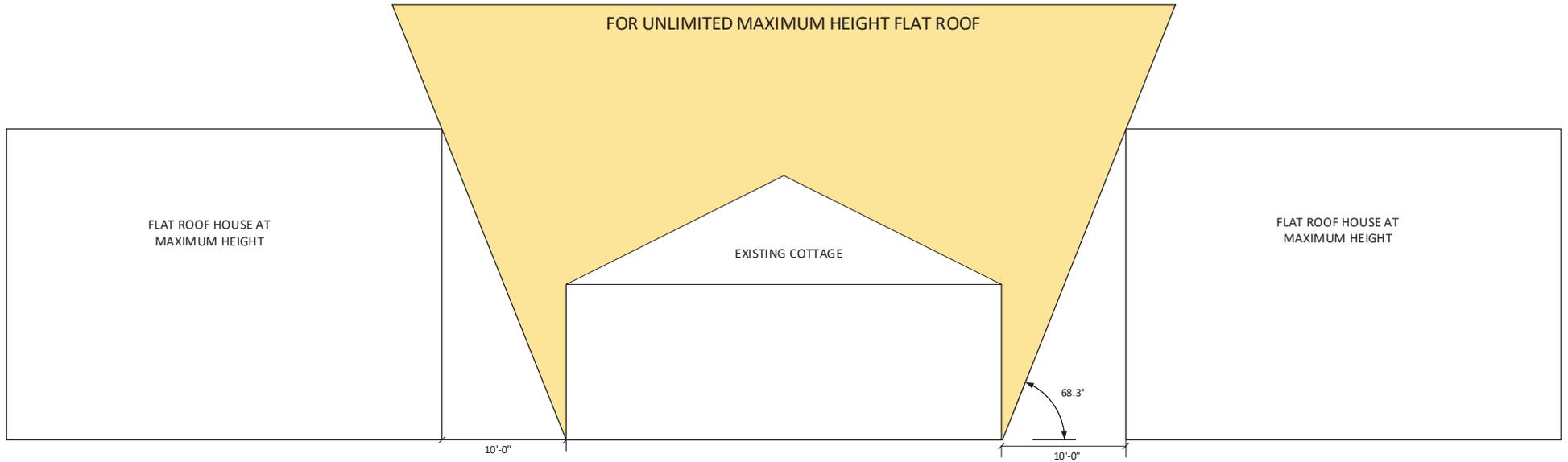
51.7°



SUNLIGHT AT CLOSEST SPACING: 5' YARD SETBACKS EACH SIDE

ATTACHMENT 1
EAST

WEST

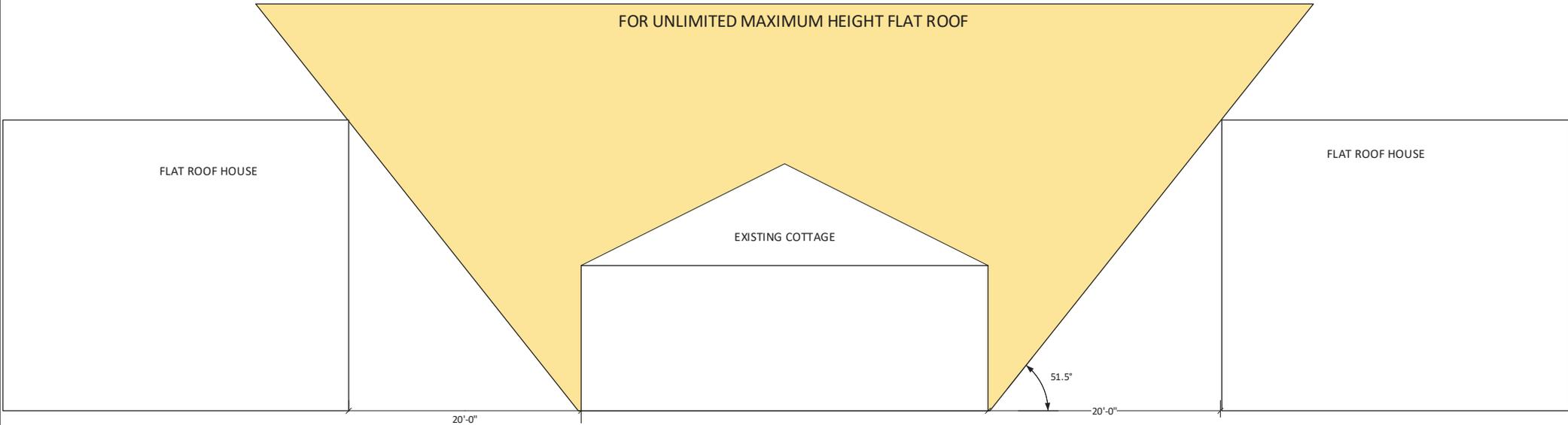


SUNLIGHT AT OPTIMAL SPACING: 10' YARD SETBACKS EACH SIDE

ATTACHMENT 1
EAST

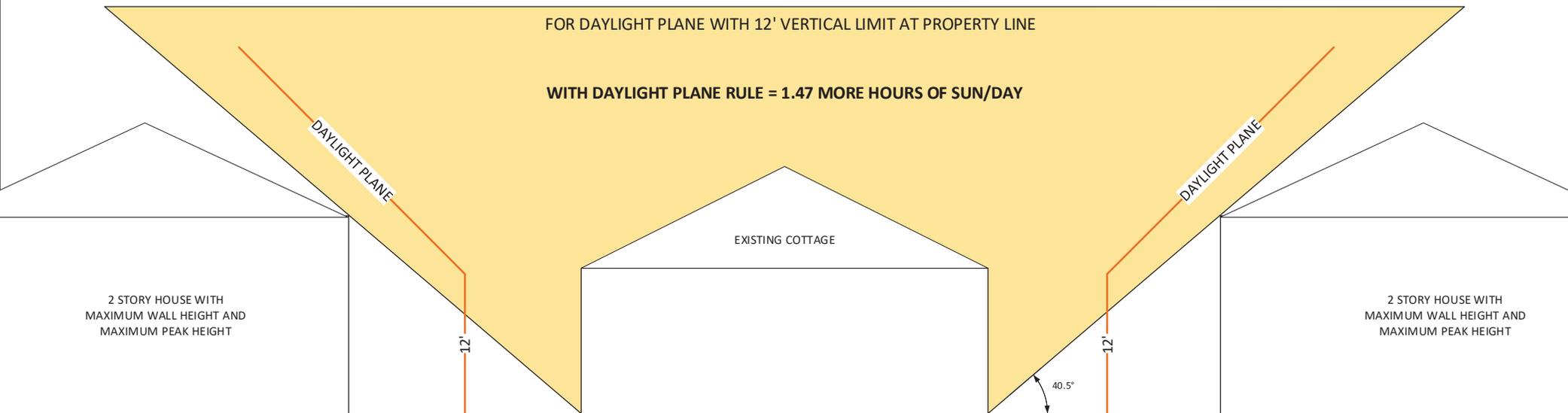
WEST

FOR UNLIMITED MAXIMUM HEIGHT FLAT ROOF



FOR DAYLIGHT PLANE WITH 12' VERTICAL LIMIT AT PROPERTY LINE

WITH DAYLIGHT PLANE RULE = 1.47 MORE HOURS OF SUN/DAY



 <p>Building Division</p>	<p>DAYLIGHT PLANE INSPECTION</p> <p>Primary and Accessory Structures</p> <p>City of Palo Alto Building Inspection Division 285 Hamilton Ave. Inspection Request: 650 329-2496</p>	Revision Date: 12/04/08
		General Requirements/Checklist for: Residential
	<p>IVR# 215</p>	Codes Enforced: 2007 California Building Code Palo Alto Municipal Code (PAMC)
<p>The information provided in this document is general and intended as a guide only. Each project is unique and additional requirements may be enforced as deemed appropriate.</p>		

DAYLIGHT PLANE INSPECTION

- Compliance shall be verified prior to and in conjunction with structural frame inspection.

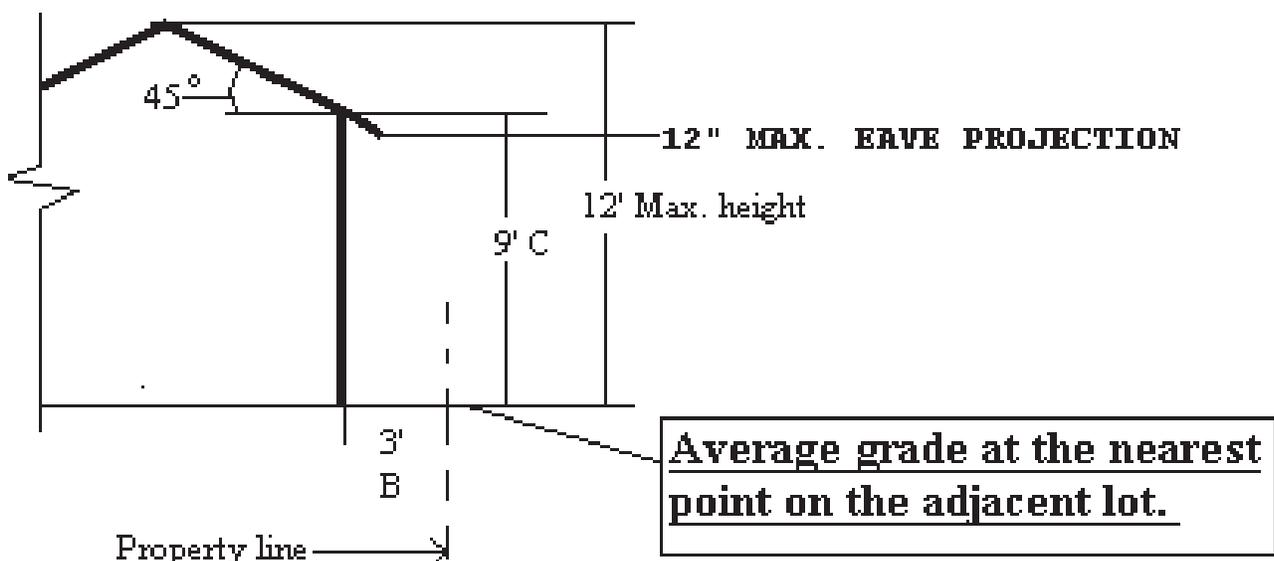
DETACHED GARAGE AND ACCESSORY BUILDINGS *See page 2. for primary residence*

- Daylight plane is measured at the required side setbacks and from the **average grade**. Average grade is established using existing grade, before any grading or fill.
- **Figure A-2** is an example of how the daylight plane is measured for a detached garage.
- For additional information on daylight plane see the City of Palo Alto Zoning Ordinance Technical Manual for single-family residential zones.

Eave Projection

- Eave projection for Figure A-2: 1/3 of 3' set back= 12" maximum projection into property line.
- Eave may protrude 12" into setback if set back is 3'-0" or more.
- Eave shall not protrude into set back 2'-11" or less from property line. *Metal rain gutters are allowed to protrude into set back.*
- *CBC 705, 503.2.1 & 1204, 704.2, 704.2.3 Exception*

FIGURE A-2 Example of daylight plane with a required 3' side set back



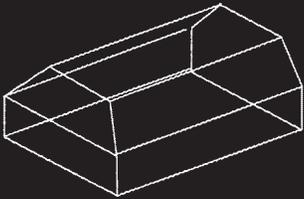
Starting point: A. 8'

Set back: B. 3'

1/3 the set back of (B) plus A= C. 9'

Daylight plane

The daylight plane in conjunction with the setbacks & height limits, create an invisible tent



intended to contain development on the lot in a way that preserves privacy and exposure to natural light.

Code sections

Page 26

18.12.040 (a) Table 2

Page 27

18.04

Page 28

18.12.040 (c) Table 2

Page 29

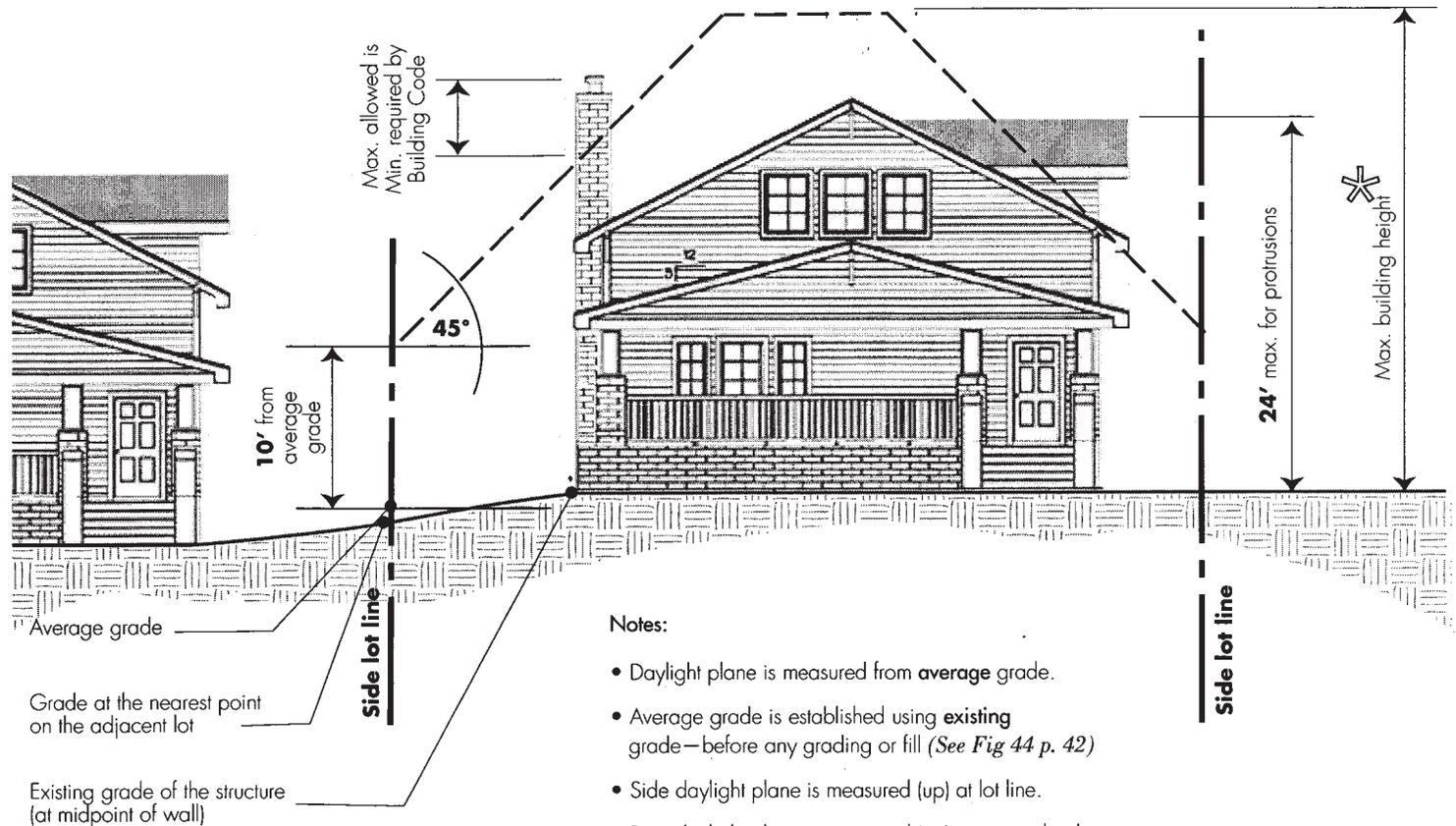
18.12.050 (b) (2)

18.12.040 (j)

Primary daylight plane (sides)

The primary daylight plane regulates structures located within the *buildable area*. Structures located in the rear and/or side yards are regulated by the accessory-structure daylight plan described on the next page.

Fig 20 Front elevation showing side primary daylight plane

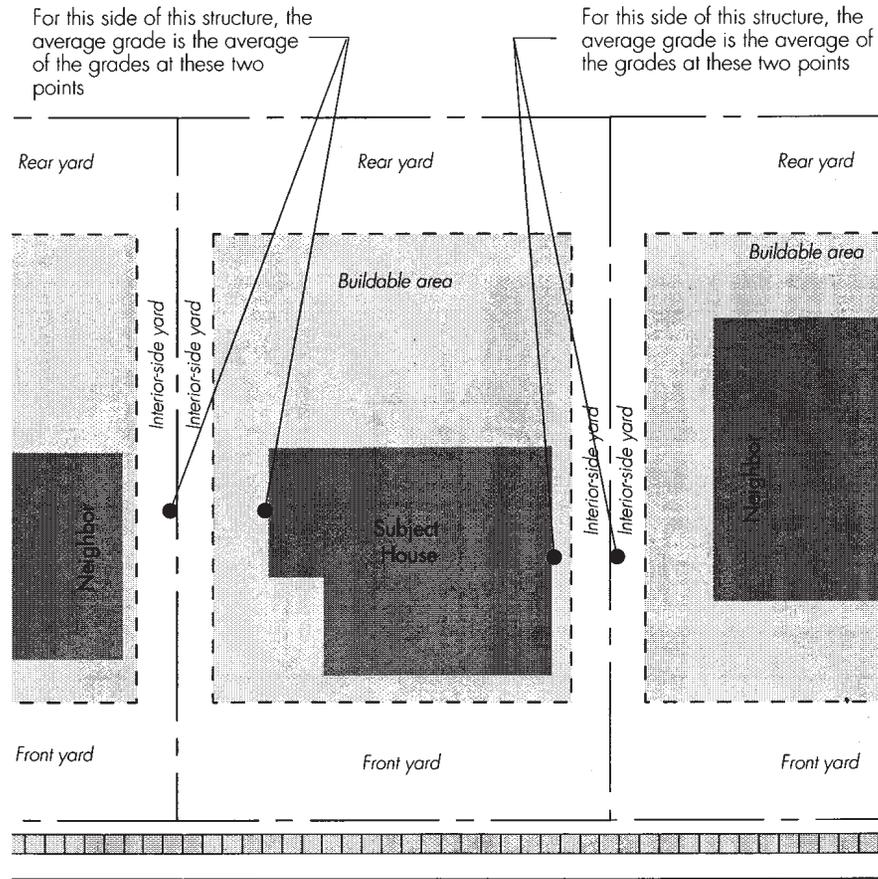


Notes:

- Daylight plane is measured from average grade.
- Average grade is established using existing grade—before any grading or fill (See Fig 44 p. 42)
- Side daylight plane is measured (up) at lot line.
- Rear daylight plane is measured (up) at rear setback.

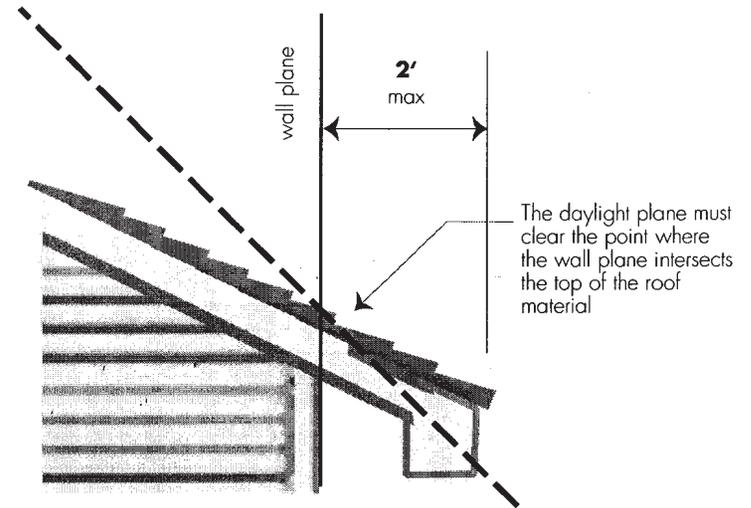
Fig 21 Plan view showing how to determine average grade

When measuring daylight plane, height is measured from the average of the grade at the midpoint of the building and the grade of the closest point on the abutting site.



- Key**
- - - Lot line
 - - - Required setbacks
 - [Grid Pattern] Sidewalk
 - [Dashed Grid Pattern] Buildable area
 - [Solid Black] Existing house

Fig 22 Detail showing allowable eave protrusion

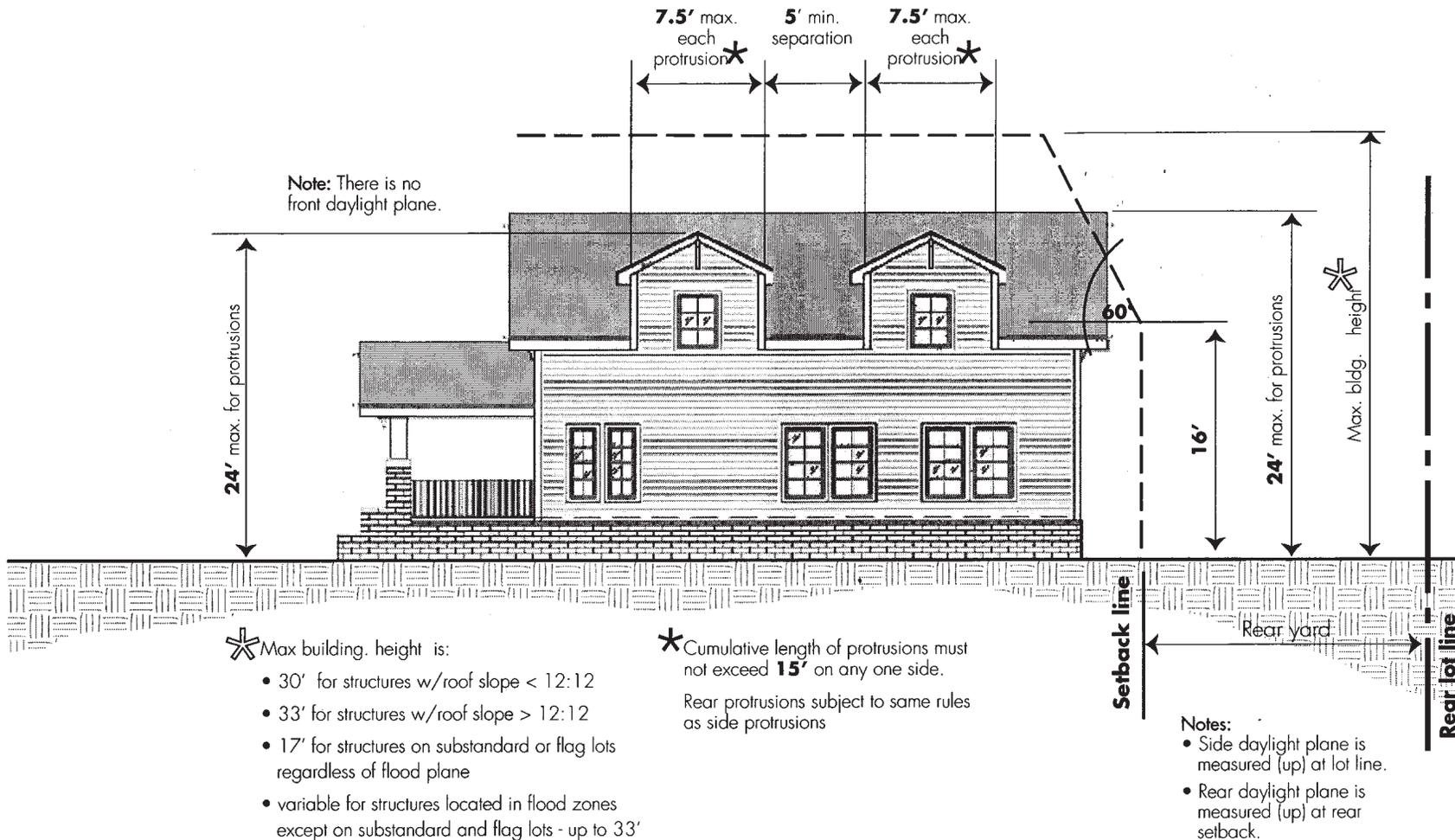


Certification of daylight plane compliance:

Upon request by the building official any person building or making improvements to a structure shall provide a certification that the structure, as built, complies with the daylight plane provisions in Code Section 18.12.040(a). Such certification shall be prepared by a licensed engineer, architect, or surveyor, and shall be provided prior to frame inspection. (Sections 18.12.040(i)).

Primary daylight plane (rear)

Fig 23 Side elevation showing Rear primary daylight plane



Allowable daylight plane protrusions summary

Feature	Allowable protrusion	Illustration
Television and radio antennas	up to 15' above maximum building height	
Chimneys and flues < 5' wide	may extend beyond the daylight plane to meet minimum required clearance of Building Code (Chapter 16.04)	<i>Fig 20 on p. 26</i>
Dormers, roof decks, gables, or similar architectural features	each feature $\leq 7.5'$ long and cumulative length of all features $\leq 15'$ with min 5' separation between features (on each side); height $\leq 24'$;	<i>Fig 20 on p. 26 & Fig 23 on p. 28</i>
Cornices, eaves, and similar architectural features (excluding flat or continuous walls or enclosures usable for interior space)	max 2'	<i>Fig 22 on p. 27</i>

Accessory structures

(other than 2nd-dwelling units)

The code accommodates a wide variety of choices regarding accessory structures while utilizing parameters like setbacks and the daylight plane to preserve the characteristics of a residential neighborhood as well as privacy and daylight to each lot.

Code sections

Page 30–31
18.12.080

Page 32
18.12.080 (b) (4)

Accessory structure standards *(non-dwelling)*

There are no minimum lot size requirements for non-dwelling accessory structures. The regulations are as follows:

All accessory structures...

- Must have a use that is incidental to main dwelling
- Must be detached and at least 3' from main dwelling
- May NOT have a kitchen
- Count toward the total lot coverage
- If over 120 sf, require a building permit and count towards total gross floor area

Accessory structures located in the buildable area....

- Are subject to the same height and daylight plane regulations as the main dwelling

Accessory structures located in the required setback.....

- May not be located in the front yard
- May not be located in the street-side yard
- May not be located in the rear yard of a through lot
- May not cover more than 50% of the rear yard
- May not be used for sleeping or living
- Are subject to the accessory-structure height and daylight plane regulations (see Figs 25-26 on p. 32)
- May NOT have a kitchen
- Count toward the total lot coverage
- If over 120 sf, require a building permit and count towards total gross floor area
- If over 200 sf, may have no more than two plumbing fixtures

Examples of Accessory Structures

- Landscaping elements e.g., gazebos and arbors
- Mechanical equipment e.g., air conditioning units, pool equipment, and generators
- Play structures e.g., basketball hoops and play houses
- Offices and studios including pre-fabricated ones
- Permanent BBQs and fireplaces
- Garages
- Potting sheds, green houses, storage sheds etc.

Note: Accessory structures less than 120 sf do not require a building permit but must still comply with all zoning regulations

Accessory structures site planning

Note: Site planning for accessory buildings differs from that for parking structures in one way. A special allowance enables garages to be located in the rear/side yards even when the lot is not deep enough to maintain the 75' minimum distance from the front lot line. This does not apply to non-parking accessory structures.

Fig 24 Examples of site planning solutions for accessory structures

A Combo garage /small pool cabana (side by side)

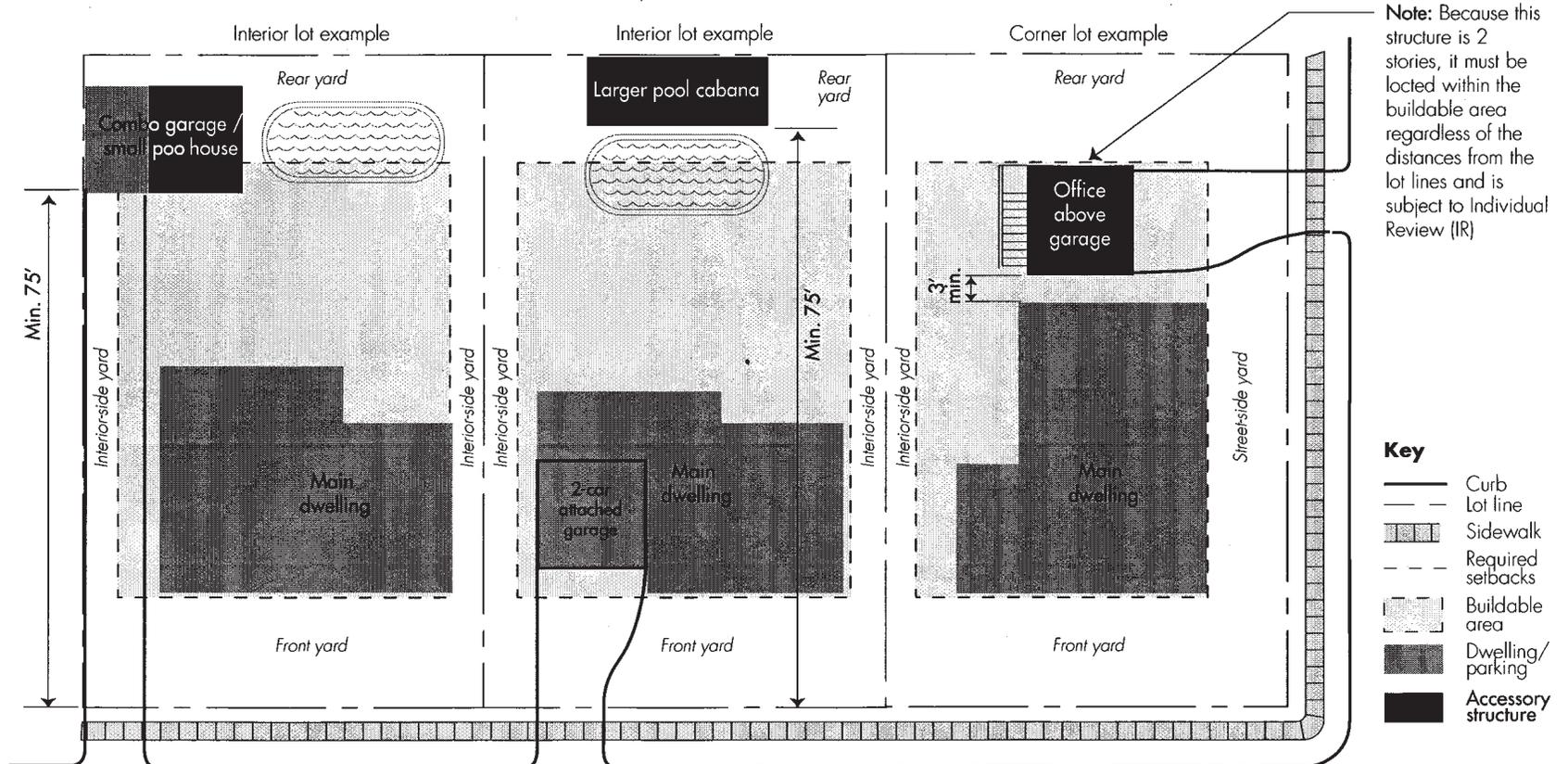
- Structure is located in rear yard so it must:
 - a. be at least 75' from the front lot line
 - b. be no more than 12' high
 - c. comply with accessory-structure daylight plane. (Figs 25 & 26 on p. 32)
- Structure is located right at the side lot line so that wall and the roof must be fire rated.
- Structure has 2 plumbing fixtures.

B Stand-alone pool cabana

- Structure is located in rear yard so it must:
 - a. be at least 75' from the front lot line
 - b. be no more than 12' high
 - c. comply with accessory-structure daylight plane. (Figs 25 & 26 on p. 32)
- Structure is located right at the rear lot line so that wall and the roof must be fire rated.
- Structure has 3 plumbing fixtures— sink, toilet, and shower and is greater than 200 sf, so it requires a CUP.

C Office above garage

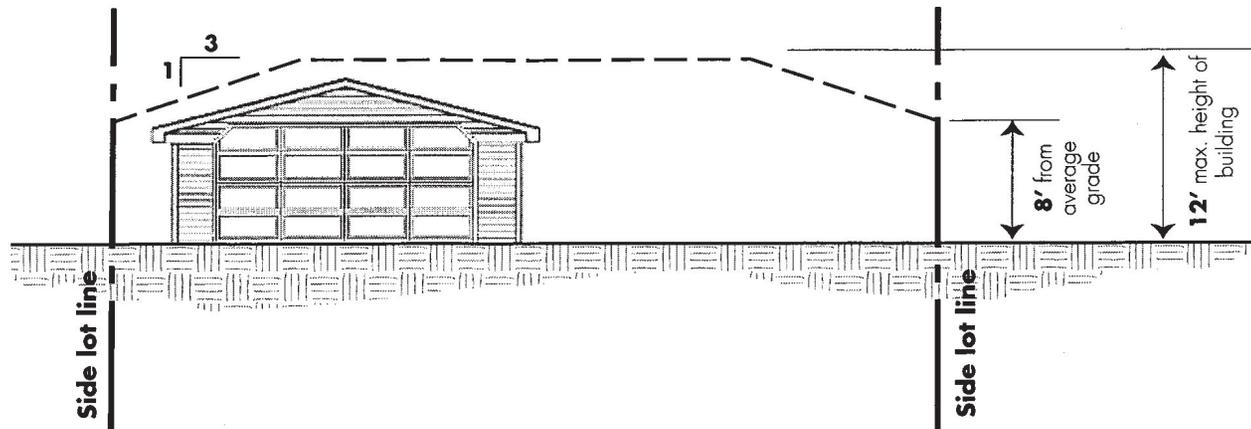
- Structure is located within the buildable area, so it doesn't have to comply with regulations for structures in the required yards and it may be two stories high.
- Structure has 2 plumbing fixtures.
- Structure is new 2nd floor addition and therefore subject to the Planning Department's Individual Review (IR).



Accessory structure daylight plane (sides & rear)

The accessory structure daylight plane is much lower and regulates structures located in the rear/side yards.

Fig 25 Front elevation showing accessory-structure daylight plane at the side of the lot



Note: For accessory buildings near the rear & side lot lines, a hipped-gable roof is often the best solution for complying with the accessory-structure daylight plane.

Fig 26 Side elevation showing accessory-structure daylight plane at the rear of the lot

