

Incentivizing Densification:
The Case for
Attached Garages

Urban Planning Committee Meeting

June 20, 2023

Disclosures

I am **NOT**

- An architect or designer
- A builder or developer
 - A real estate agent
 - An urban planner

I **AM**:

- A **resident** of Edmonton
(since 2005)
- A **father** of 3 young children
- A frontline **healthcare worker**

Attached Garages: Advantages

Individuals/Families

- Convenience
- Health & Safety
- Accessibility
- Security & Privacy
- Affordability

The Public

- Sustainability
- Densification
- Equitability
- Diversity

Attached Garages: Advantages

Individuals/Families

- Convenience
- Health & Safety
- Accessibility
- Security & Privacy
- Affordability

Convenience

- Vehicle loading/unloading
 - Children
 - Groceries/supplies/equipment
- Avoiding Bad Weather
 - Hot/cold; extremes

Edmonton: The Weather?

Long Cold Streaks...
e.g., Nov-Jan 2023

Heat Waves...
e.g., May 2023

CTV NEWS
EDMONTON

NEWS ▾ VIDEO ▾ SHOWS ▾ ABOUT ▾ LOCAL ▾

EDMONTON | News

Sub-zero streak ends (finally)

CONSECUTIVE DAYS BELOW 0°

1956	:	83	
1950	:	67	
1978	:	52	
2023	:	52	(Nov 27, 2022 - Jan 18, 2023)
1952	:	48	

CBC | MENU ▾

NEWS Top Stories Local Climate World Canada Politics Indigen

Edmonton · CBC Explains

You guessed it: May was the hottest on record for much of Alberta, including Edmonton

[f](#) [t](#) [e](#) [r](#) [i](#)

9 areas in Alberta saw hottest May on record

[Christy Climenhaga](#) · CBC News · Posted: Jun 04, 2023 6:00 AM MDT | Last Updated: June 4

More Extreme Weather



Attached Garages: Advantages

Individuals/Families

- Convenience
- Health & Safety
- Accessibility
- Security & Privacy
- Affordability

Convenience

- Vehicle loading/unloading
- Avoiding Bad Weather
- Storage
 - Extra accessible storage
- Workspace
 - Workshop, hobbies, craft area

Attached Garages: Advantages

Individuals/Families

- Convenience
- Health & Safety
- Accessibility
- **Security & Privacy**
- Affordability

Security & Privacy

- Reduced Exterior Visibility
- Personal protection
- Property protection

Attached Garages: Advantages

Individuals/Families

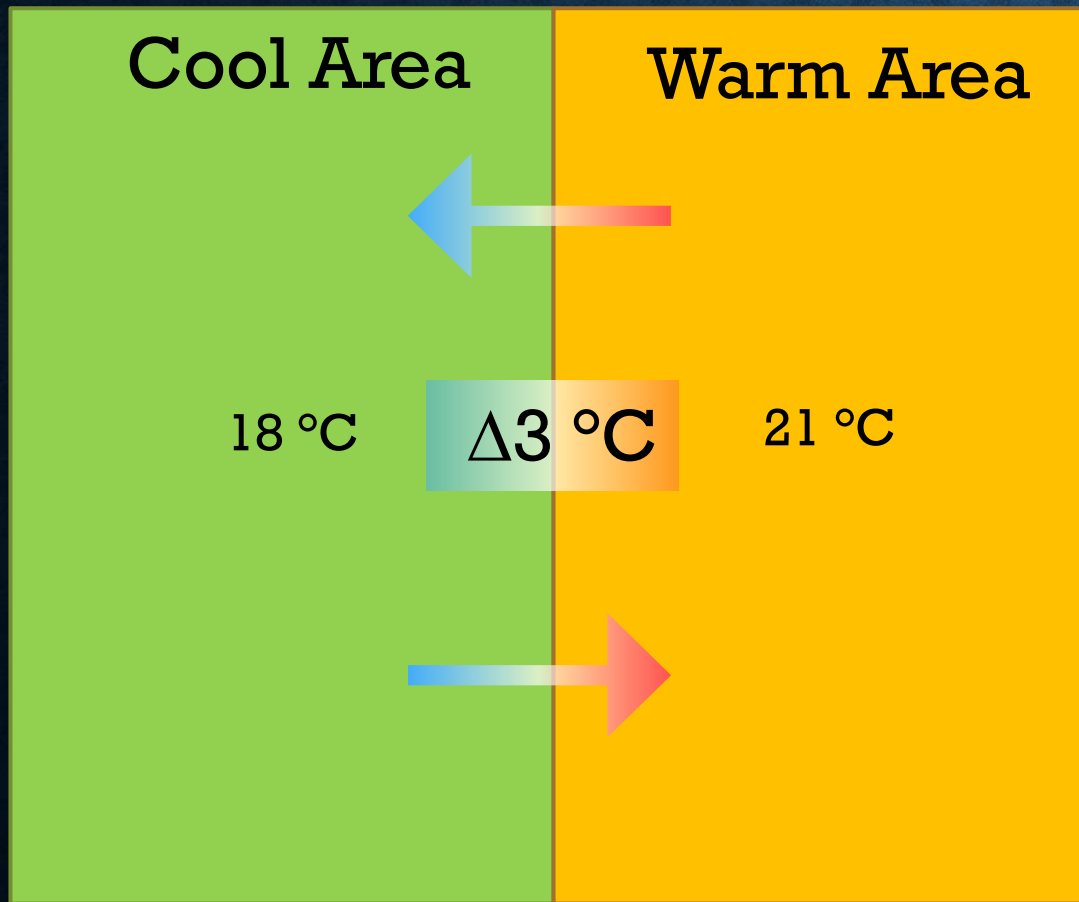
- Convenience
- Health & Safety
- Accessibility
- Security & Privacy
- **Affordability**

Affordability

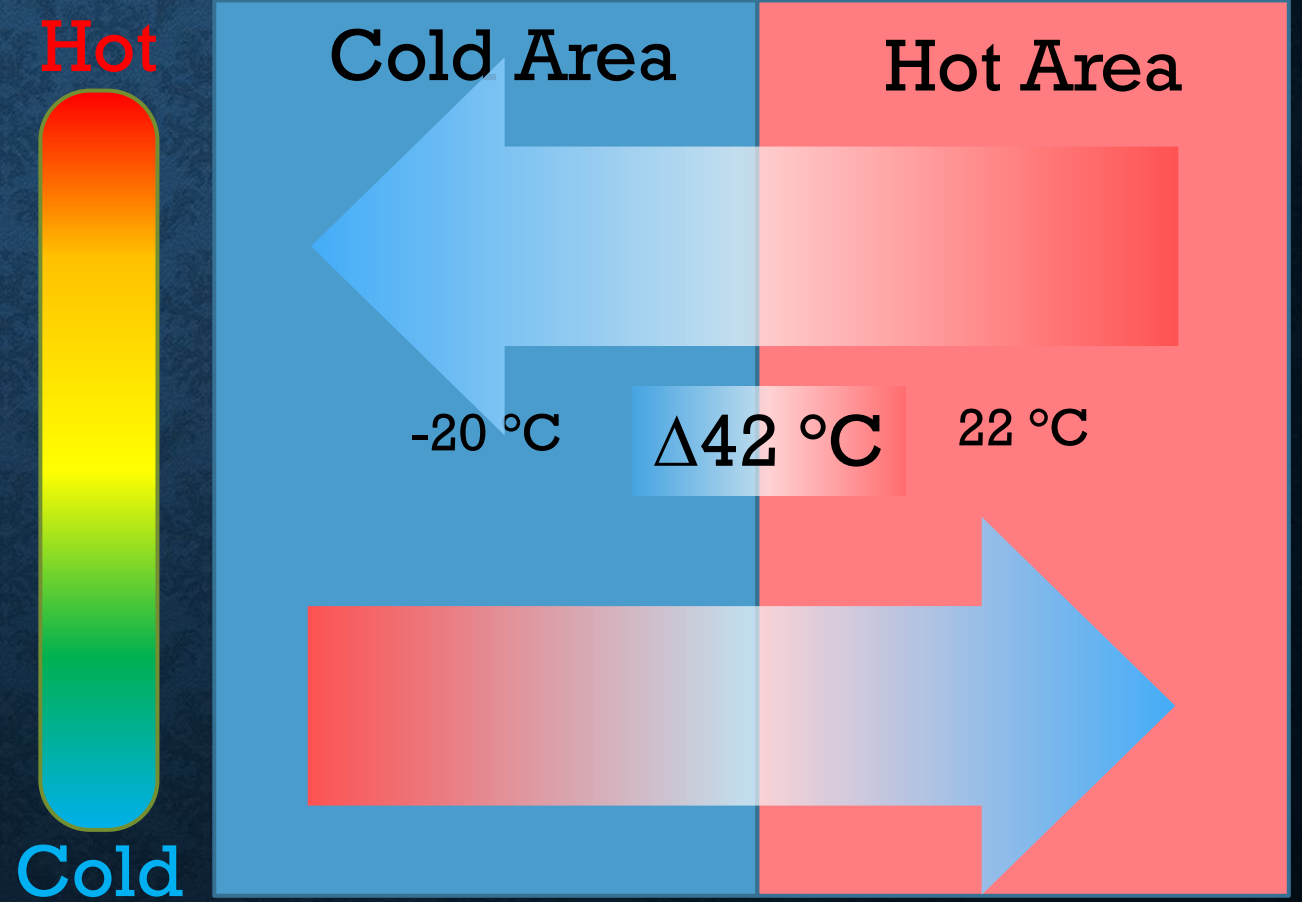
- Reduced **Thermal Transfer**
 - Decreased door openings
 - Shared insulated space
- Reduced Utility Costs
- Reduced Commute Times
 - If allowed within **central city**, promotes re-location!

Thermal Transfer Rate Depends on Temperature **Difference**

Slow Heat Loss/Gain



Rapid Heat Loss/Gain



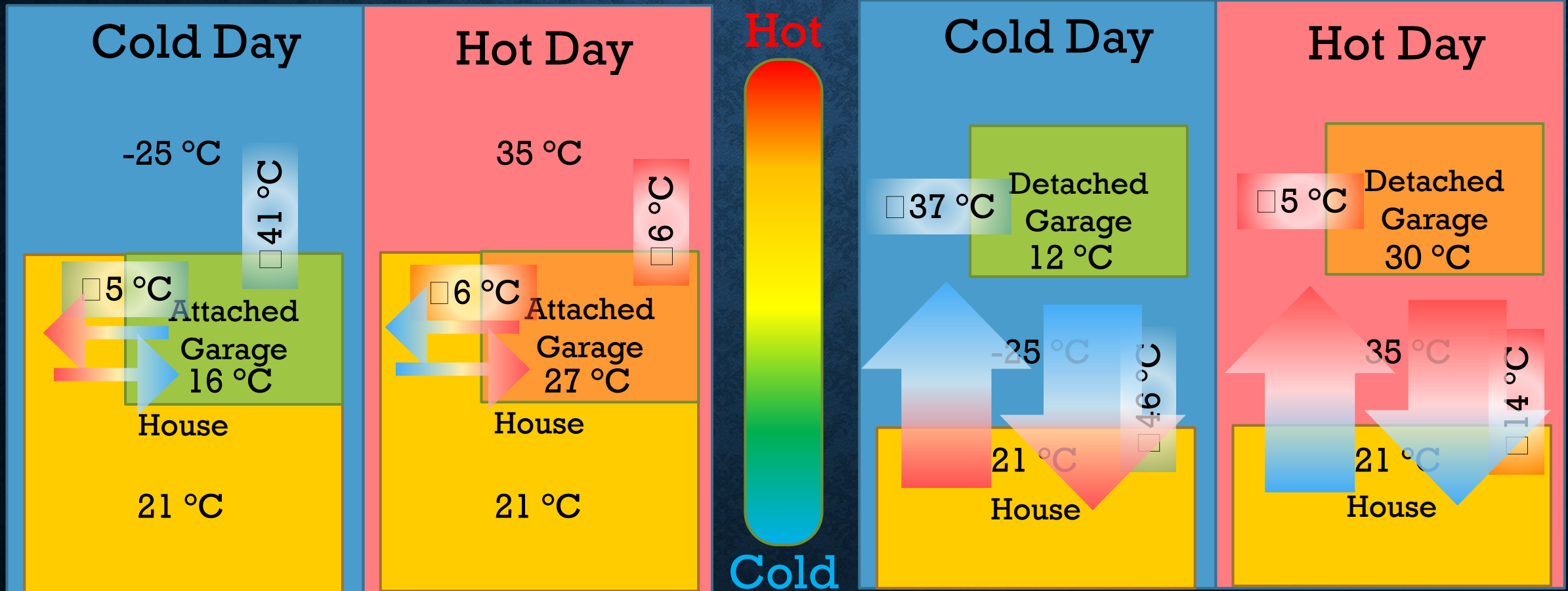
Less Energy Loss with **Attached** Garage

Less Heat Loss/Gain

More Heat Loss/Gain

☐ \$ Utilities

☐ \$\$\$\$ Utilities



Attached Garages: Advantages

Health & Safety

Accessibility

Individuals/Families

- Convenience
- Health & Safety
- Accessibility
- Security & Privacy
- Affordability

- Health/safety for all, but especially:
 - Children
 - Elderly (Age in Place)
 - Disabled
- Inclusive design:
 - Wheelchair ramps between dwelling and garage

Making the Best of Bad Conditions



Fall Prevention: Leading Cause of Injury



Public Health
Agency of Canada

Agence de la santé
publique du Canada



**You CAN
prevent falls!**

The facts

- Falls are the leading cause of injury among older Canadians.
- 20-30% of seniors experience one or more falls each year.
- Falls are the cause of 85% of seniors' injury-related hospitalizations.
- Falls are the cause of 95% of all hip-fractures.
- 50% of all falls causing hospitalization happen at home.

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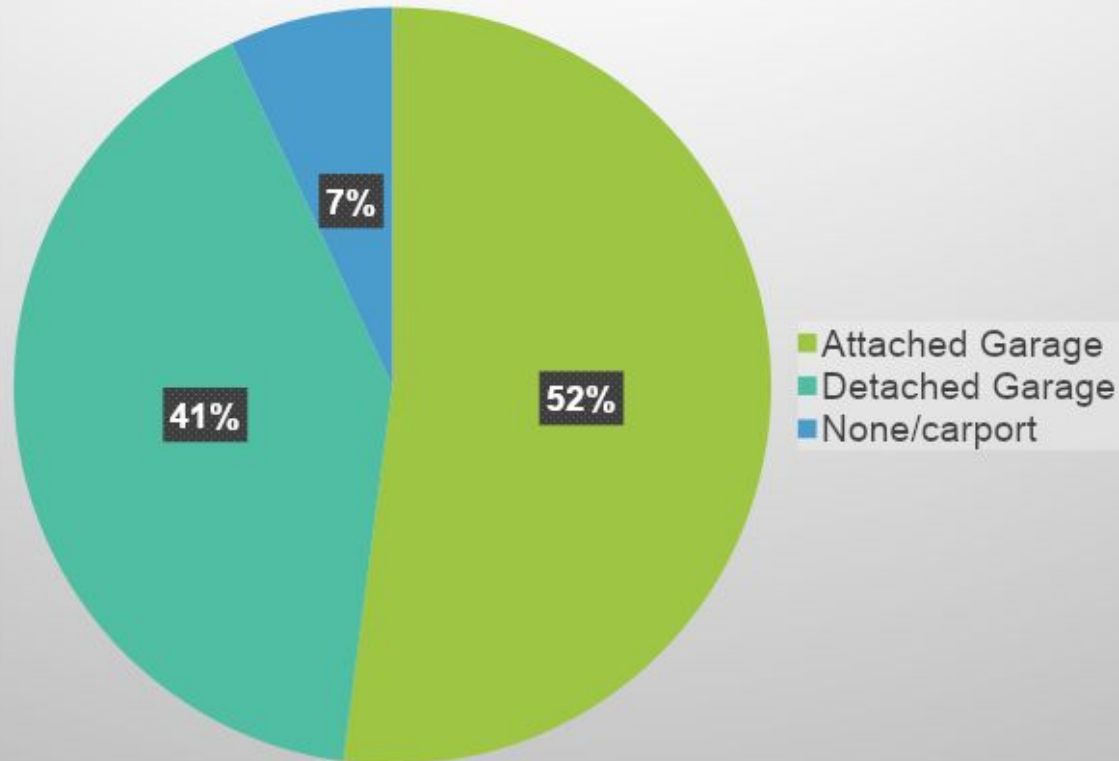
Objection #1:
**“Not typical in any Canadian
municipality”**

Many Attached Garages

(MLS Search Single Family Homes, June 17, 2023)

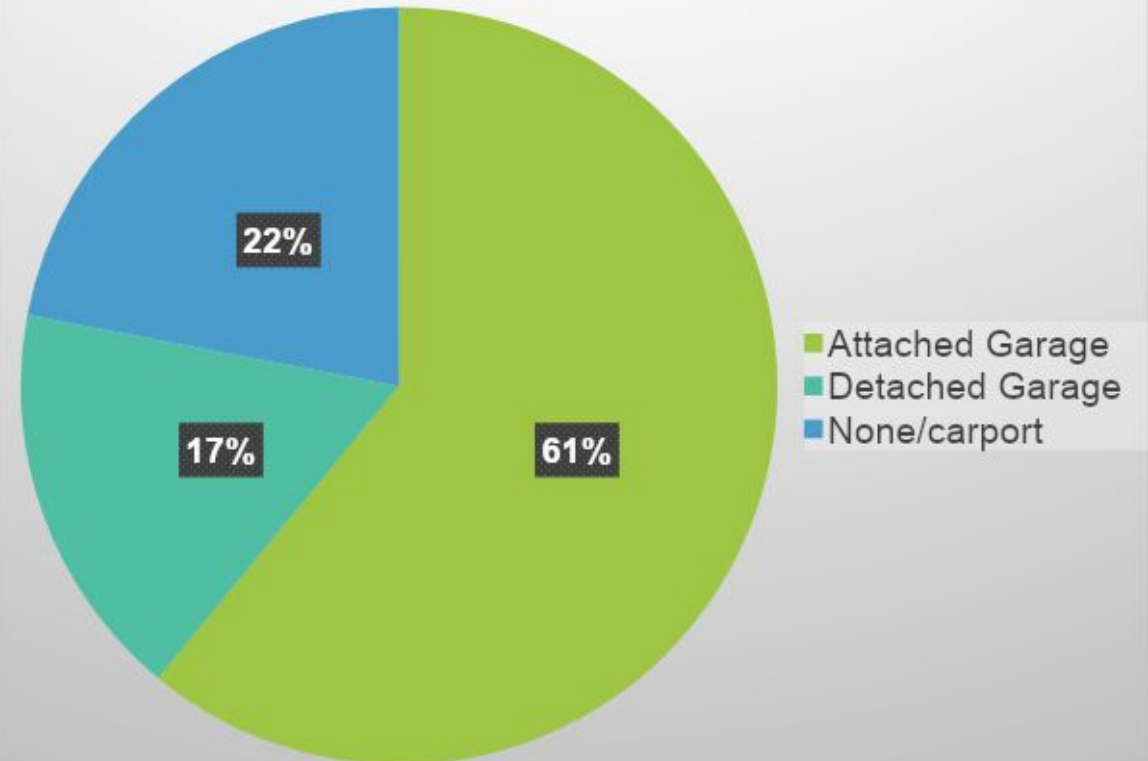
Edmonton, AB

2874 listings



Ottawa, ON

2314 listings



Attached Garages: **A Social Good**

Individuals/Families

- Convenience
- Health & Safety
- Accessibility
- Security & Privacy
- Affordability

The Public

- Sustainability
- Densification
- Equitability
- Diversity

Attached Garages: A Social Good

Sustainability

- Attached garage homes have greater **energy efficiency**
 - Reduced thermal transfer
 - Decreased energy usage for heating/cooling
- Good for **health** and **economy**
 - Less falls/injuries/disability
 - Fewer sick days

The Public

- **Sustainability**
- Densification
- Equitability
- Diversity

**So what's the problem? Aren't Attached
Garages pretty **common** and still **allowed**
in the new Zoning bylaws?**

Attached Garages... NOT everywhere!

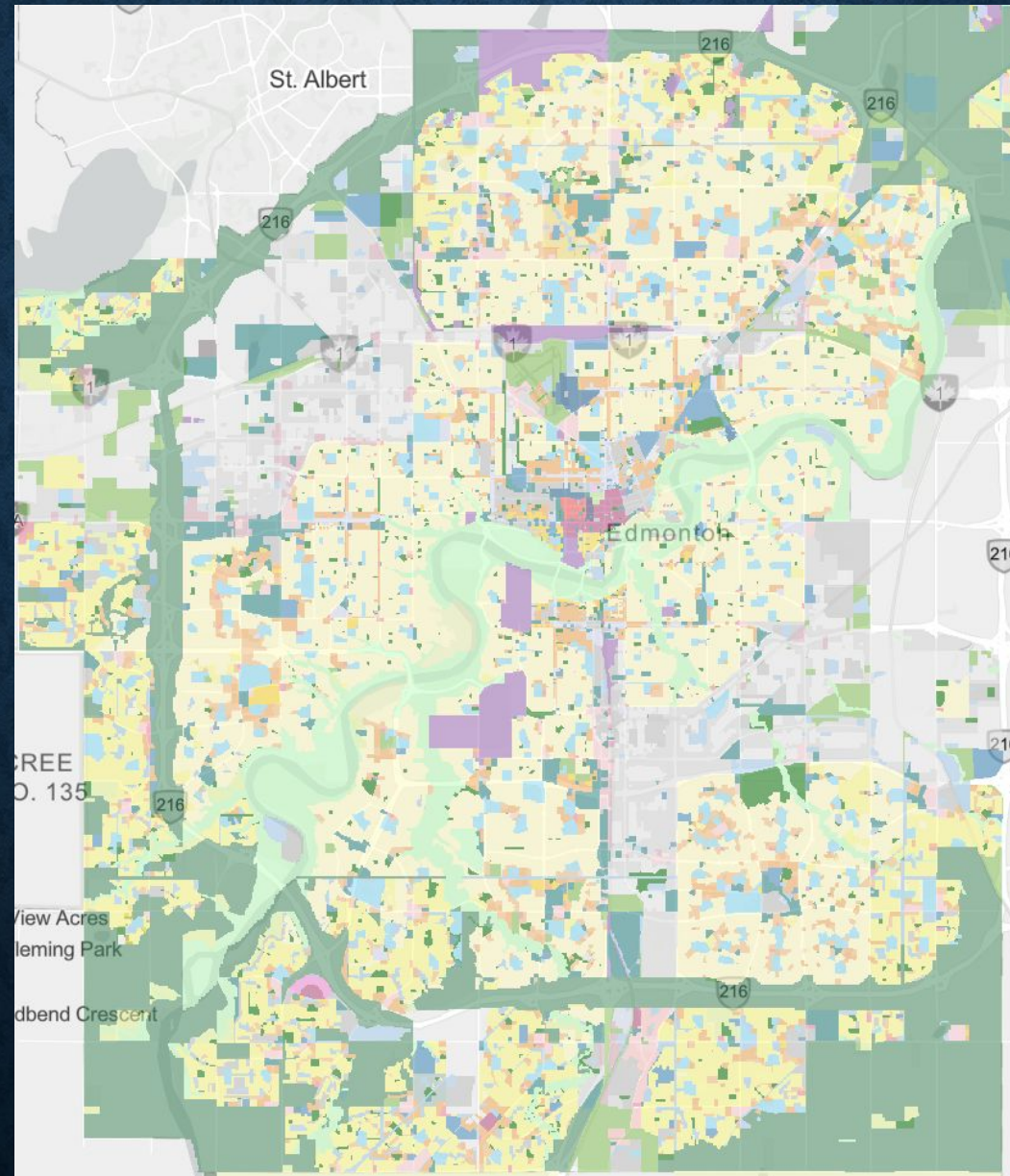
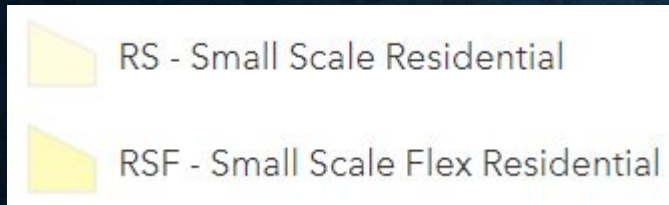
The Public

- Sustainability
- **Densification**
- **Equitability**
- **Diversity**

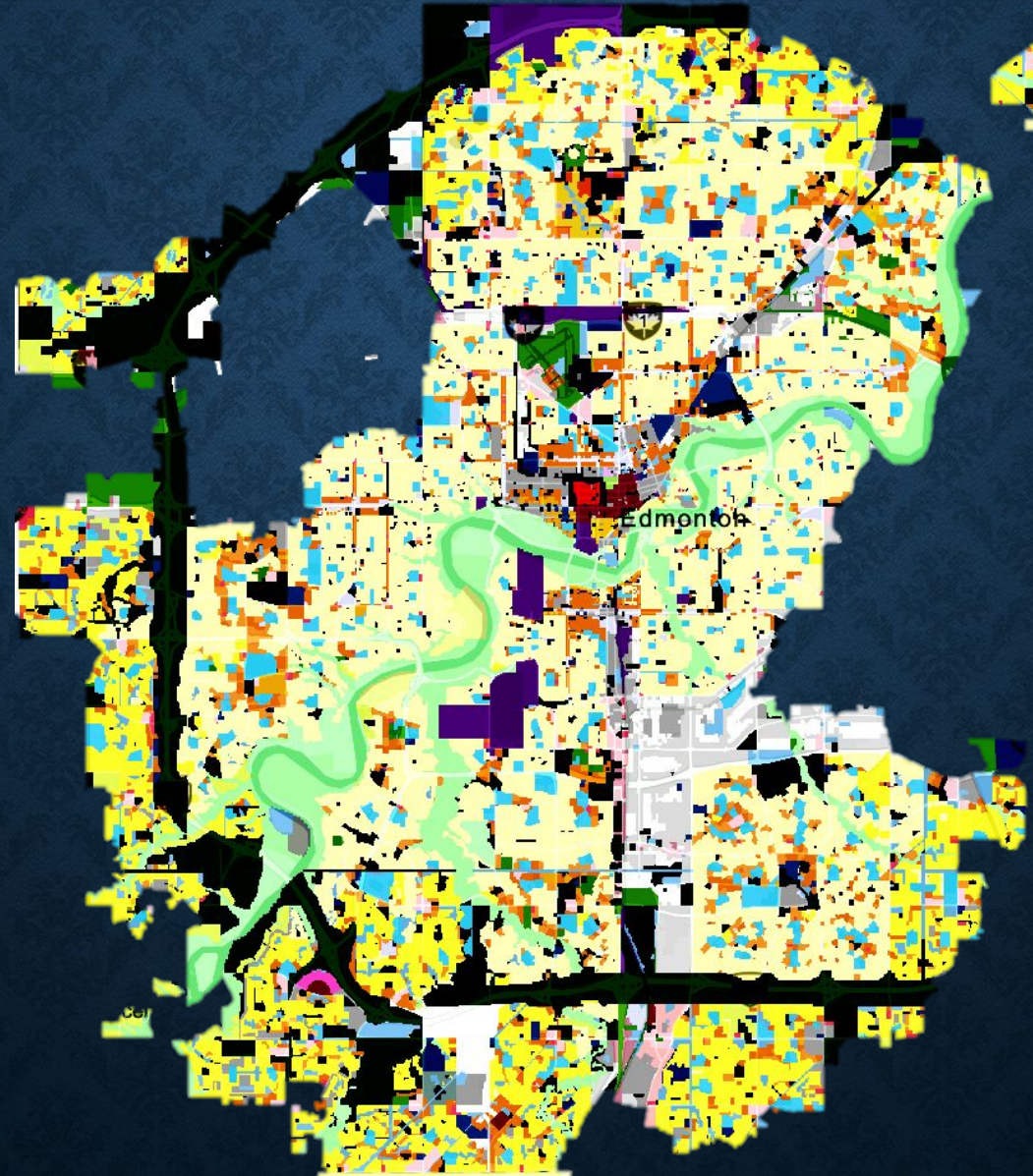
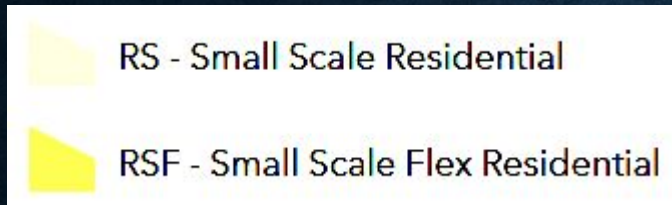
The Map: RS vs. RSF

- A City Divided:
 - Small Scale Residential Zone:
 - 2.10 RS
 - Small Scale Flex Residential Zone
 - 2.20 RSF

Zoning Map: RS=Core vs. RSF=Periphery

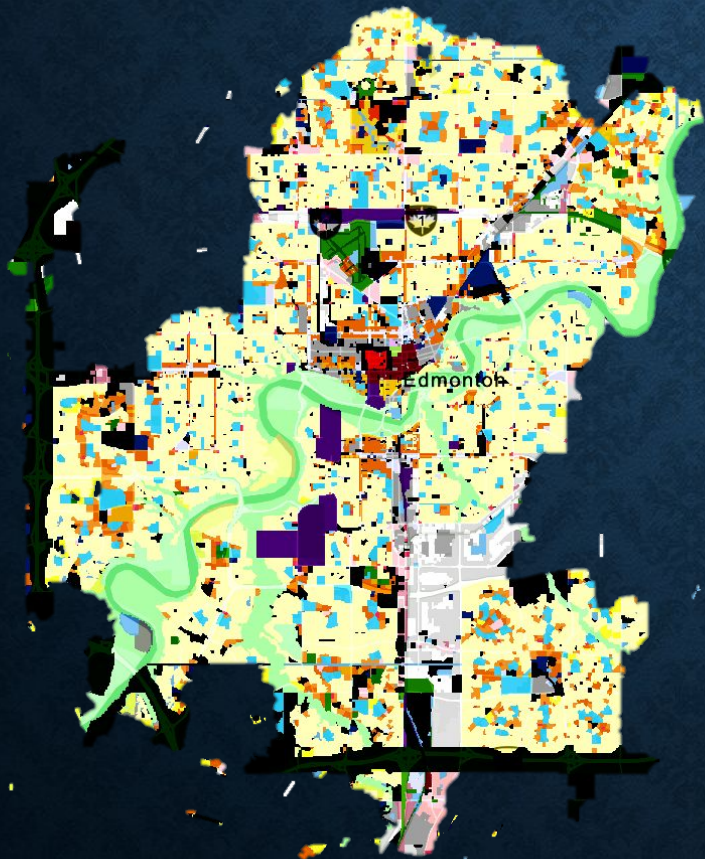


Zoning Map: RS=Core vs. RSF=Periphery

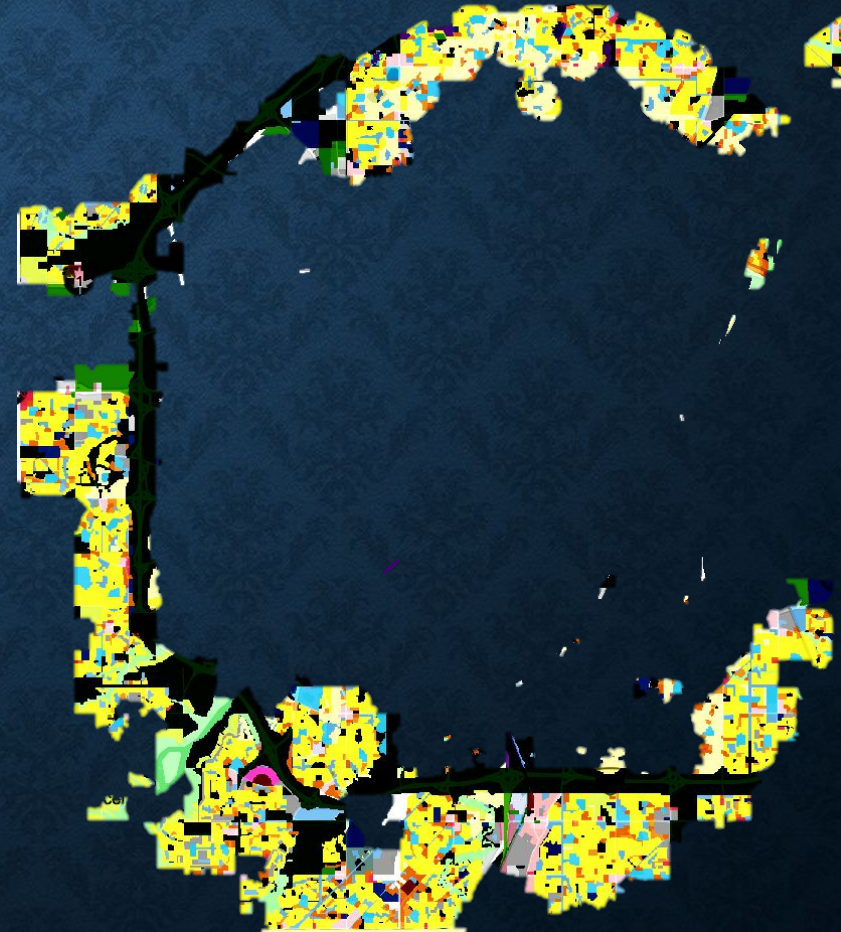


RS (former MNO) vs. RSF (former RF1)

City Core (RS):



Periphery (RSF):



Bylaws **Before** (RF1 / MNO)

Rear Attached Garage

- Mature Neighbourhood Overlay (MNO) 814.3.19:
- “Rear attached Garages shall **not be allowed.**”

•BUT...

Front Attached Garage

- 814.3.17:
 - “Where the **Site Abuts a Lane**, vehicular access shall be from the Lane and **no existing vehicular access** from a public roadway other than a Lane shall be permitted to continue.”

•BUT...

814.5: Neighbourhood Consultation for Variances

Rear Attached Garage (Tier 2)

- Variance **allowed** through neighbourhood consultation

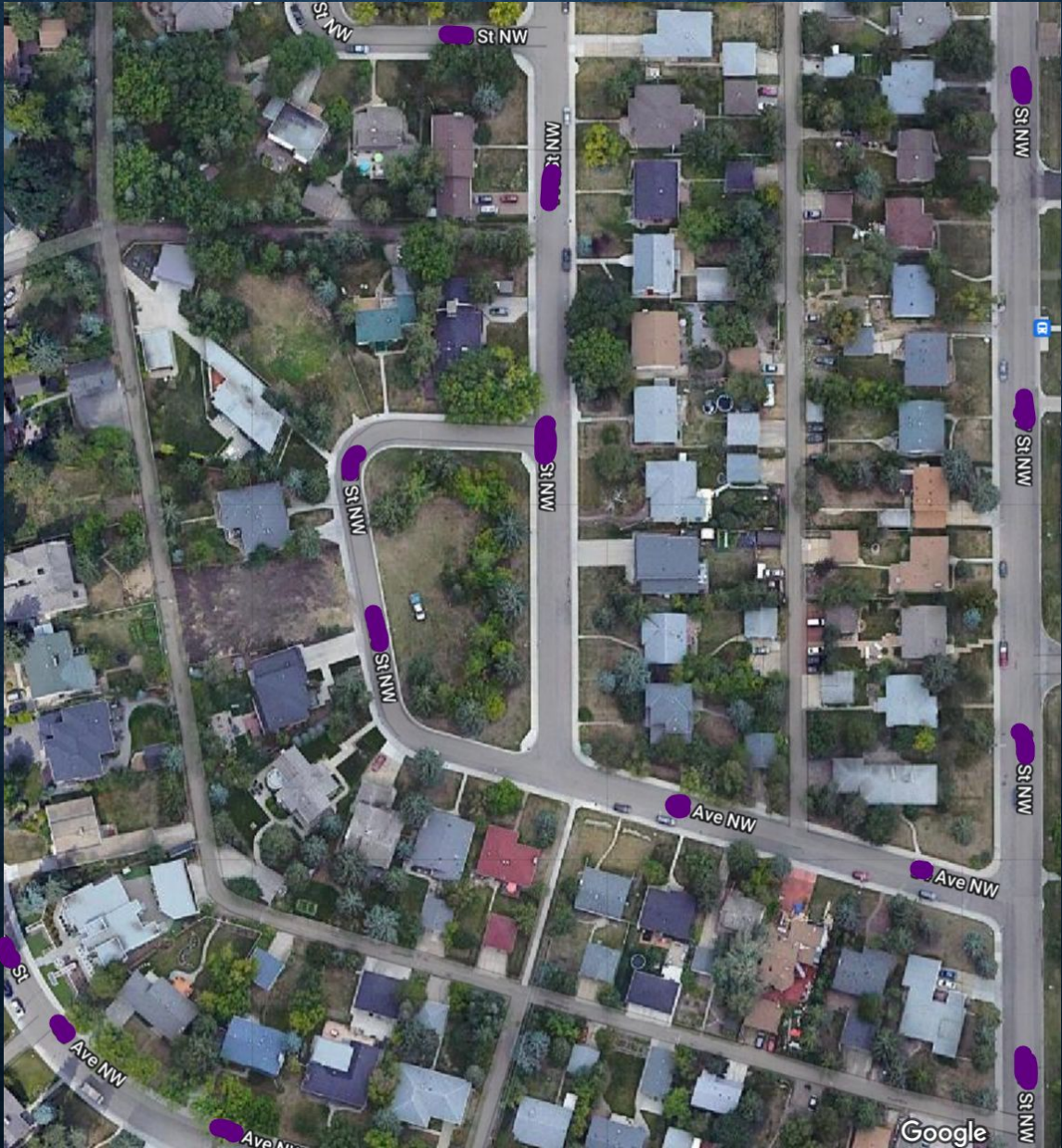
Front Attached Garage (Tier 1)

- Variance **allowed** through neighbourhood consultation

Table 814.5(2)

Tier #	Recipient Parties	Affected Parties	Regulation of this Overlay Proposed to be Varied
Tier 1	The municipal address and assessed owners of the land wholly or partially located within a distance of <u>60.0 m</u> of the Site of the proposed development and the President of each Community League	The assessed owners of the land wholly or partially located within a distance of <u>60.0 m</u> of the Site of the proposed development and the President of each Community League	814.3(13) – Façade Articulation between Semi-Detached Dwellings 814.3(14) – Façade Articulation for Row Housing Dwellings 814.3(15) – Architectural Treatment 814.3(16) – Variation of Building Design <u>814.3(17) – Driveway Access</u> <u>814.3(18) – Attached Garage</u>
Tier 2	The municipal address and assessed owners of the land Abutting the Site, directly adjacent across a Lane from the Site of the proposed development and the President of each Community League	The assessed owners of the land Abutting the Site and directly adjacent across a Lane from the Site of the proposed development	<u>814.3(4) – Rear Setback</u> <u>814.3(19) – Rear Attached Garage</u>

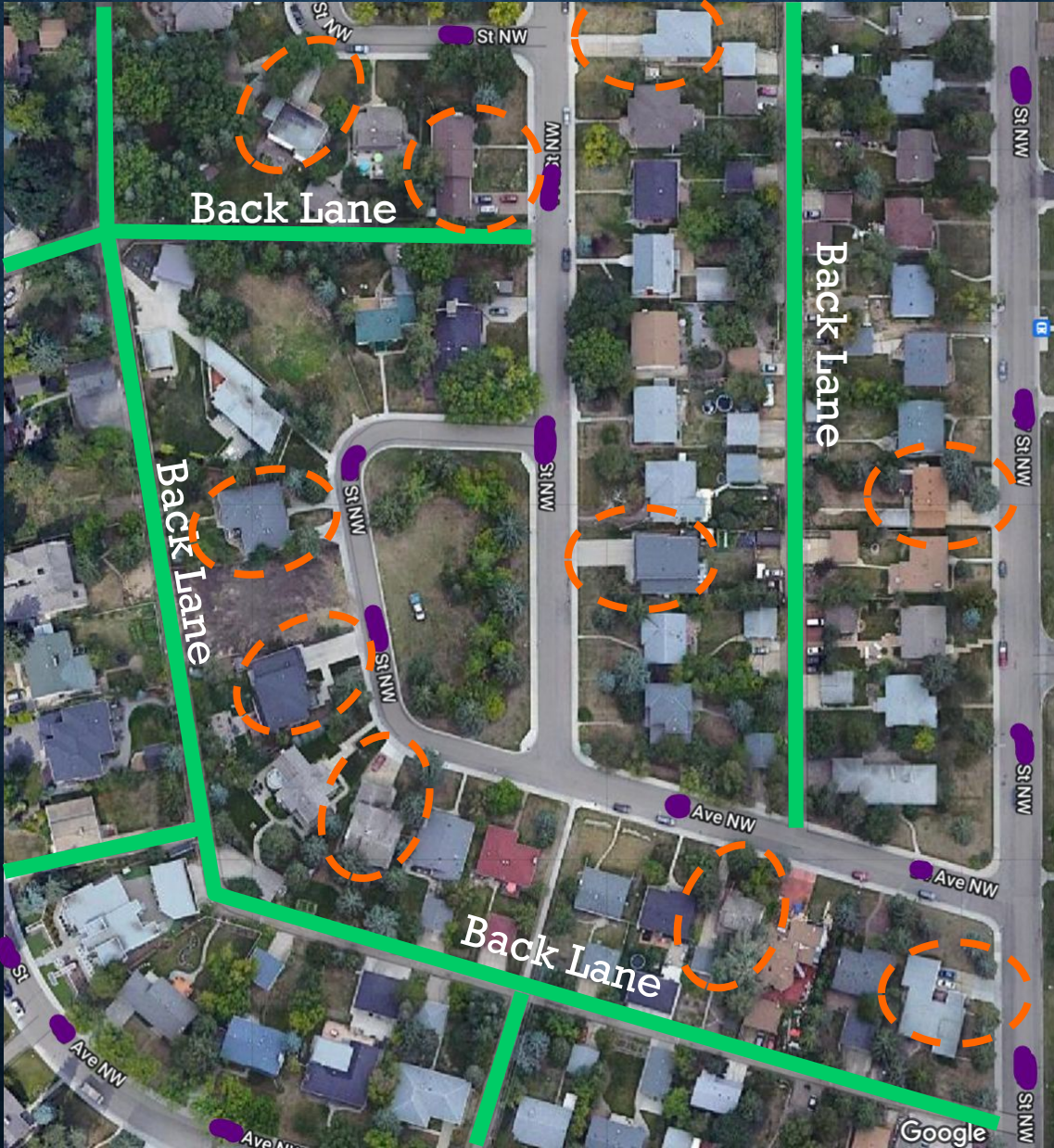
Front Attached Common in City Centre



Front Attached Common in City Centre



Front Attached **Common** in City Centre



Restrictions Transferred: Attached Garages (MNO to RS)

NO Rear Attached

- 4.4: Rear attached Garages are **not permitted.**

NO Front Attached with Back Alley

- 6.1: Vehicle access **must be from an Alley** where a Site Abuts an Alley.

Most RS neighbourhoods have a **Back Alley**,
so Attached Garages are effectively **prohibited!**

The Big **Catch 22** for City Core

NO Rear Attached

- 4.4: Rear attached Garages are **not permitted.**

NO Front Attached with Back Alley

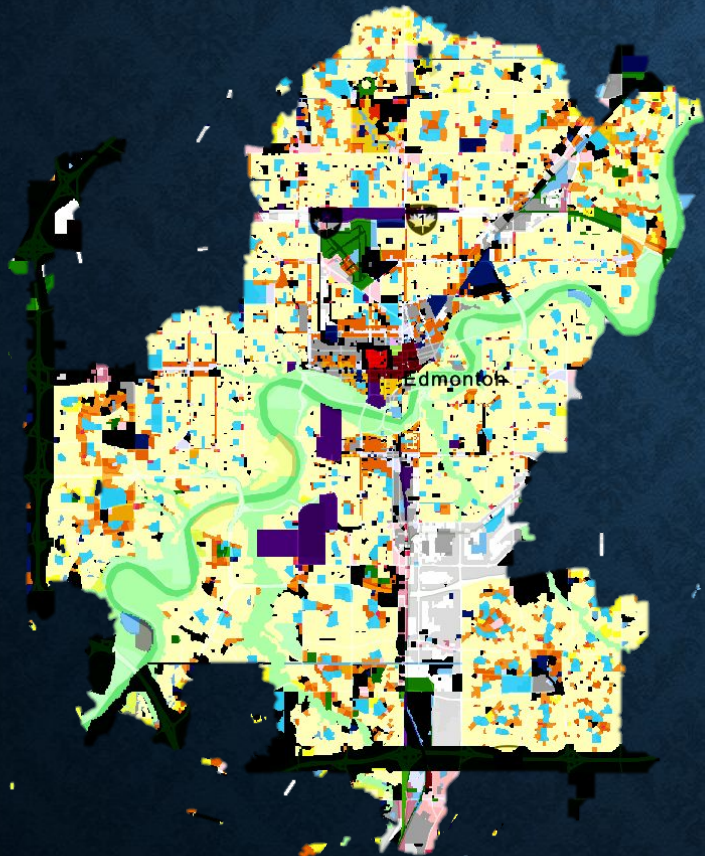
- 6.1: Vehicle access **must be from an Alley** where a Site Abuts an Alley.

Most RS neighbourhoods have a **Back Alley**, so attached garages are effectively **prohibited!**

NO MORE Consultation Provision
for Variance Exceptions

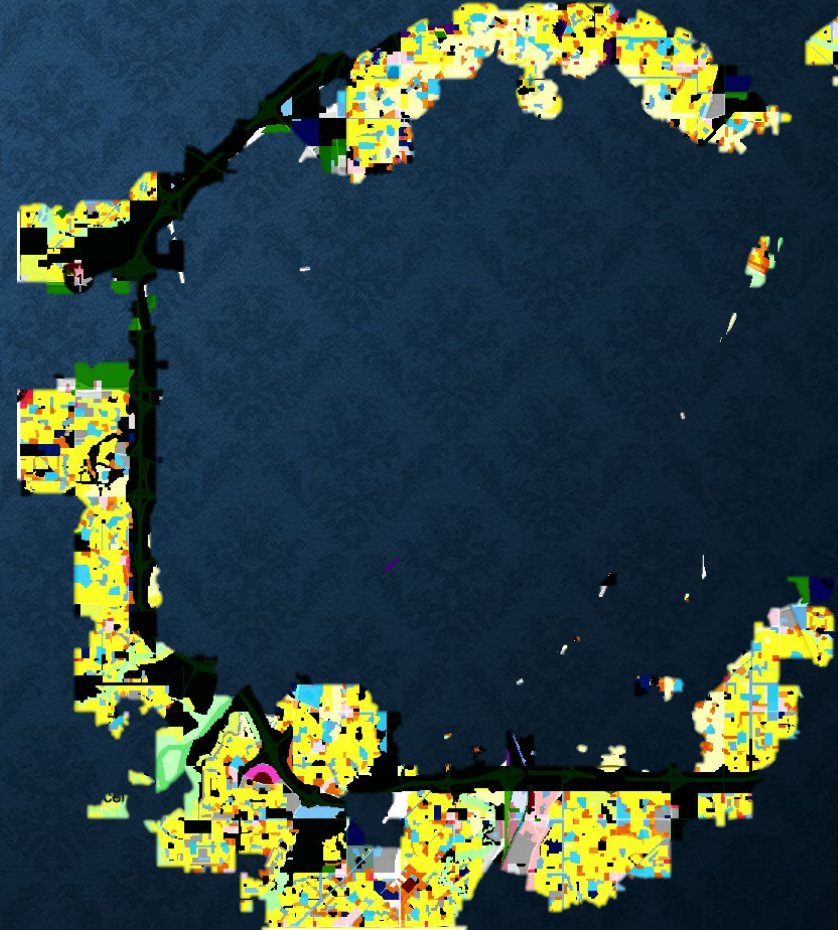
Inequity by Zone: Outward migration

+++ **Detached** garages



RS

+++ **Attached** garages



RSF

Outward Migration / Urban Sprawl

Garage Inequity

- More residents **move** to periphery (RSF) with attached garage
- Fewer residents **choose** to live in city core (RS) with detached garage

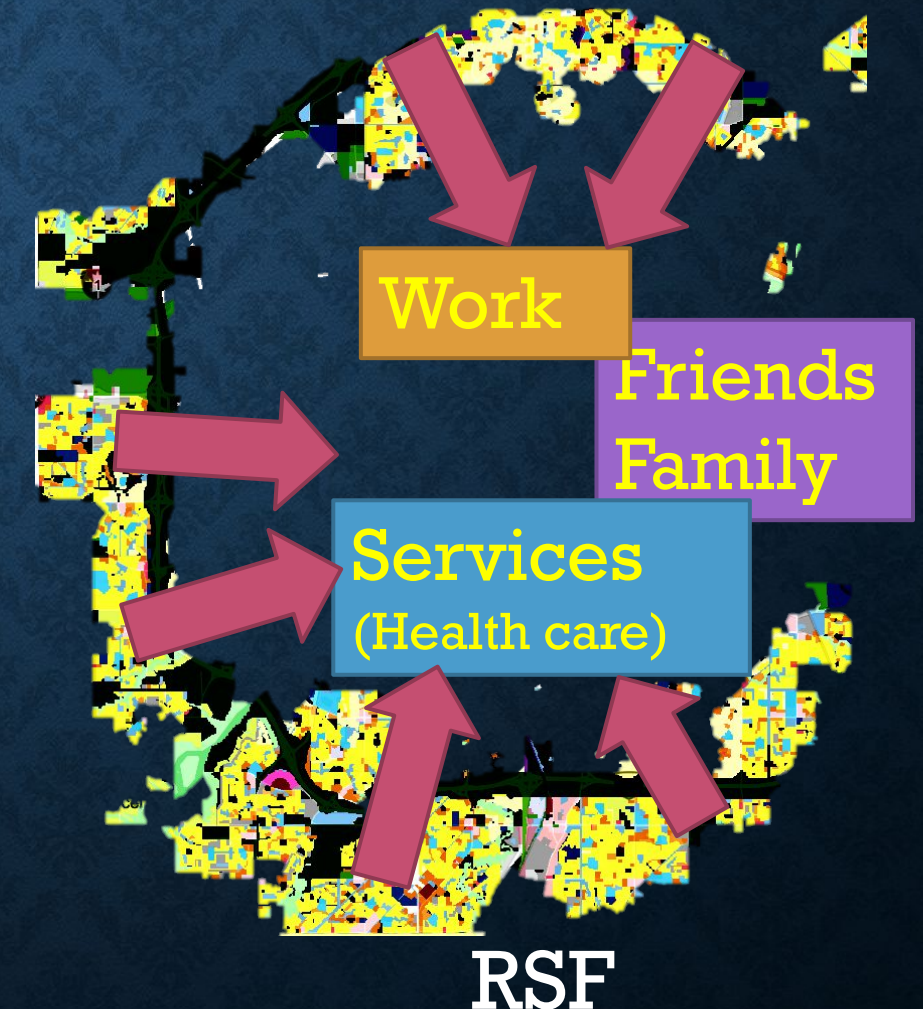
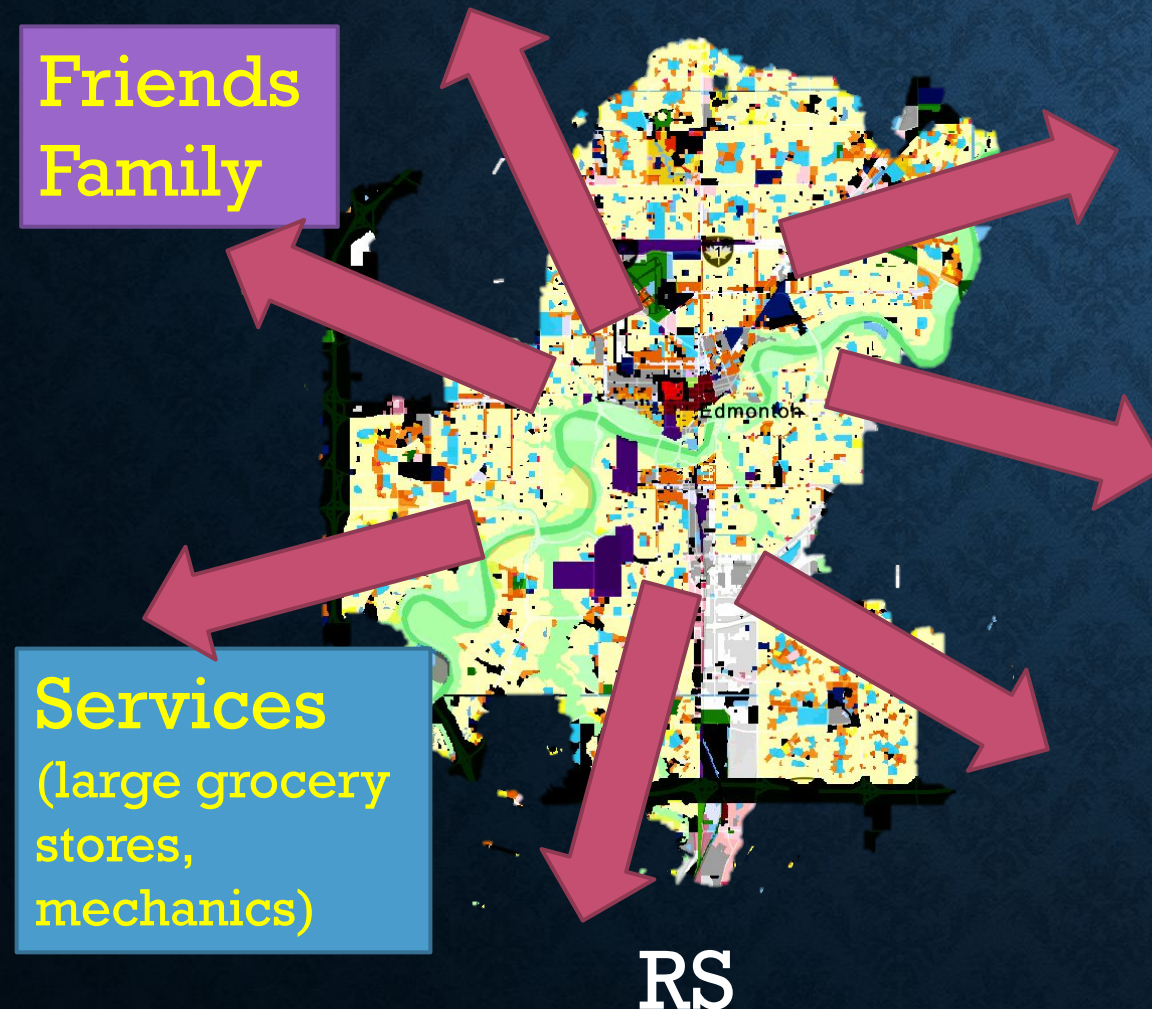
Result

- Decreased population density (urban sprawl)
- Increased **commute times** / distances for RSF residents
 - Work and services often still in city centre
- Increased **commute times** / distances for RS residents
 - Friends, family and some services in RSF zone

Increased Commuter Traffic for **All**

RS Residents:
Outward Travel

RSF Residents:
Inward Travel



Works Against 15 Minute Communities

- Central Communities

- Many services exist, but need to increase capacity to support densification
- Need to provide incentives for residents to move back to city centre

- New Communities

- Cluster services nearby:
 - Schools
 - Shopping
 - Services
- May decrease traffic to city centre

However...

Many **Large Employers** located in Central City Core:
Hospitals, Universities, Downtown Commercial Centre

Attached Garages: A Social Good

Equitability / Diversity

- Inequity forces families to choose
 - RSF Periphery: longer commutes
 - RS Central: shorter commutes
- Diversity
 - Attached Garages especially welcoming for:
 - Immigrants/families from warmer climate zones
 - Limited mobility individuals

The Public

- Sustainability
- Densification
- Equitability
- Diversity

Neighbourhood Consultation: A Laborious Process

Past / Present

- Development Office **workload**
 - MNO **excessive** & **cumbersome**
- Communities already **consulted**
 - **Past**: through MNO requirement
 - **Present**: bylaw renewal initiative
- Communities generally:
 - **Support** Front Attached Garages
 - Mixed **Support** Rear Attached Garages

Future

- **Codify** past consultation into bylaws:
 - **Allow** Attached Garages
 - Have **restrictions** to mitigate community concerns
- **Streamline** development approval
- Improve community **awareness**
 - Reduce mail
 - Modernize with electronic notification

Objections: Neighbours / Neighbourhoods

Rear Attached Garage

- Represent **Majority** of objections by:
 - Neighbours
 - Community League
- But objections can be **addressed**

Front Attached Garage

- Generally **Supported** by neighbours
 - Best preserves backyard rear amenity space
- Already **common** in MNO/RS
 - (despite need for neighbourhood consultation!)
- New bylaws **prohibit**

Solution #1A: Front Attached Garages

COPY RSF Regulations

Current Draft Bylaw

- RS (2.10) 6. General Regulation
- 6.1: Vehicle access must be from an Alley where a Site Abuts an Alley.

Proposed Revision

- **COPY** RSF (2.20) 6. General Regulation
- 6.1 Where a Site Abuts an Alley at the Rear Lot Line, vehicle access must be from the Alley, except that:
 - 6.1.1. Vehicle access may be from a Street for a maximum of 50% of principal Dwellings per Site, not including Backyard Housing.
 - 6.1.2. Vehicle access may be from a Street where it will result in a consistent streetscape with Lots on the same side of the Street that do not Abut an Alley.

Solution #1: Front Attached Garages

ADD **Approve** unless Objections

Past Community Consultation

- **Transfer** past 814.5
Neighbourhood Consultation
experience over as 6.1.3

Proposed Revision

- **COPY** RSF (2.20) 6. General
Regulation and,
- **ADD: 6.1.3. Vehicle access may be
from a Street where no objection from
the Neighbourhood or Community
League President is received.**

Rear Attached Garages: The **Objections**

Site Factors

- **Building Safety** (carbon monoxide, fire safety)
- Decreased **Backyard** (Rear Amenity Area)
- Decreased **Tree / Vegetation**

Neighbourhood Impact

- Not “typical in any Canadian municipality”
- Disrupted “**building alignment**”
- Perceived “**building massing and shadowing**”
- “Improve airflow”

Backyards: The Big “Idea”

Back Lane

Garage

Garage

Garage

Garage

Garage

Garage

Garage

Big
Backyard

Big
Backyard

Big
Backyard

Big
Backyard

Big
Backyard

Big
Backyard

Big
Backyard

House

House

House

House

House

House

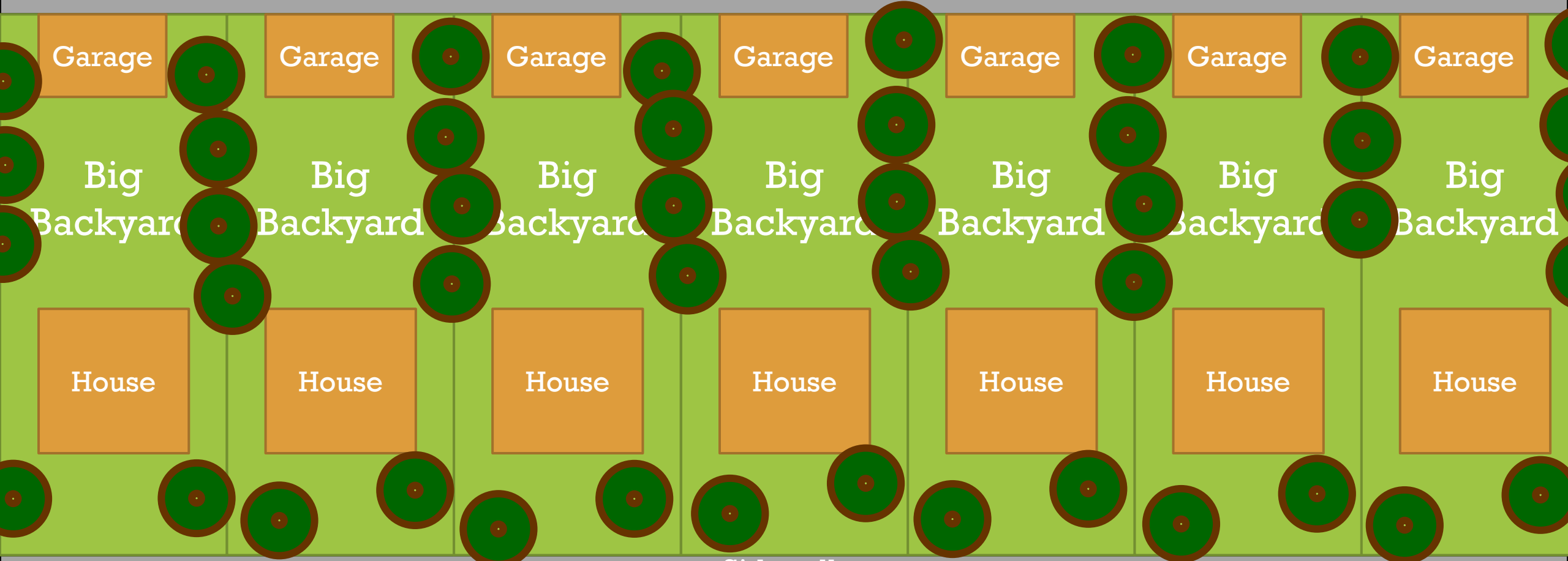
House

Sidewalk

Street

Trees for Shading and Privacy

Back Lane



Sidewalk

Street

Buildings Aligned Along Block

Back Lane

Garage

Garage

Garage

Garage

Garage

Garage

Garage

Big
Backyard

Big
Backyard

Big
Backyard

Big
Backyard

Big
Backyard

Big
Backyard

Big
Backyard

House

House

House

House

House

House

House

Sidewalk

Street

Current Zoning Bylaws 12800

Mature Neighbourhood

110 (RF1)

Overlay (814.3)

- **Min Rear Setback:**
7.5 m
- **Attached Garages?**
YES
- **Min Separation Dwelling to Garage:**
NONE
- **Detached Garage within rear:**
N/A

- **Min Rear Setback:**
40% site depth (14-18 m)
- **Attached Garages?**
NO Rear Attached
NO Front Attached w/ Alley
- **Min Separation Dwelling to Garage:**
3.0 m
- **Detached Garage within rear:**
12.8 m

Edmonton City Core: The Reality

Back Lane



Street

MNO: **NOT** Aligned is the Norm

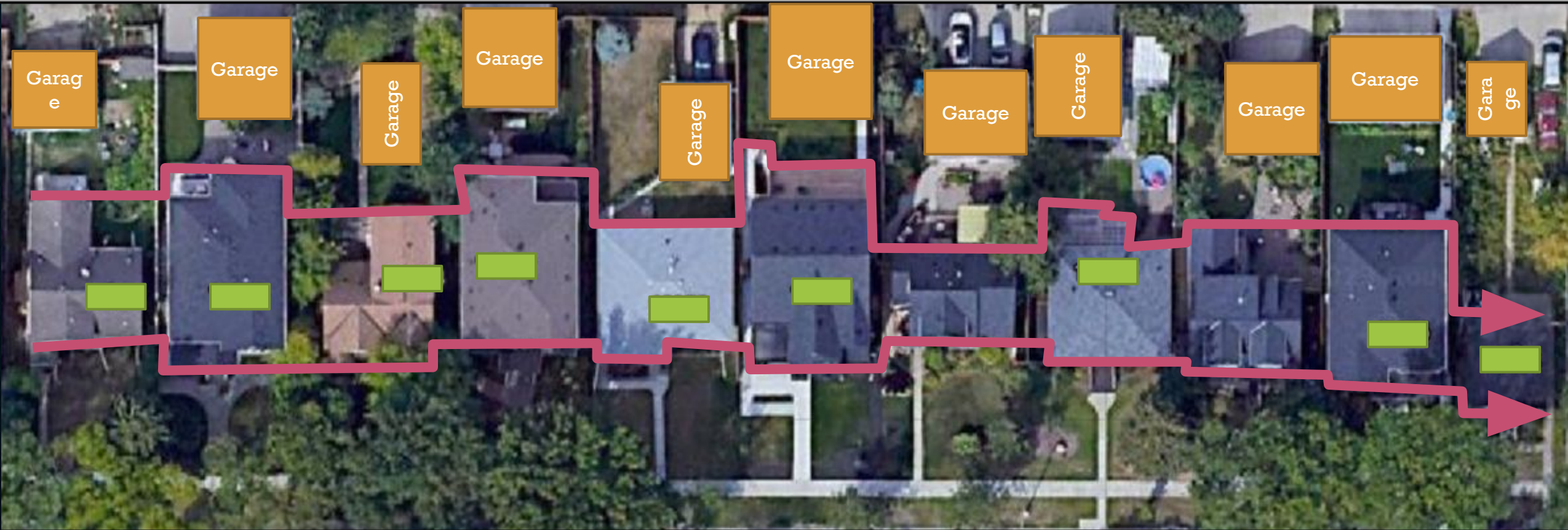
Back Lane



Street

Garages Are Often Inset

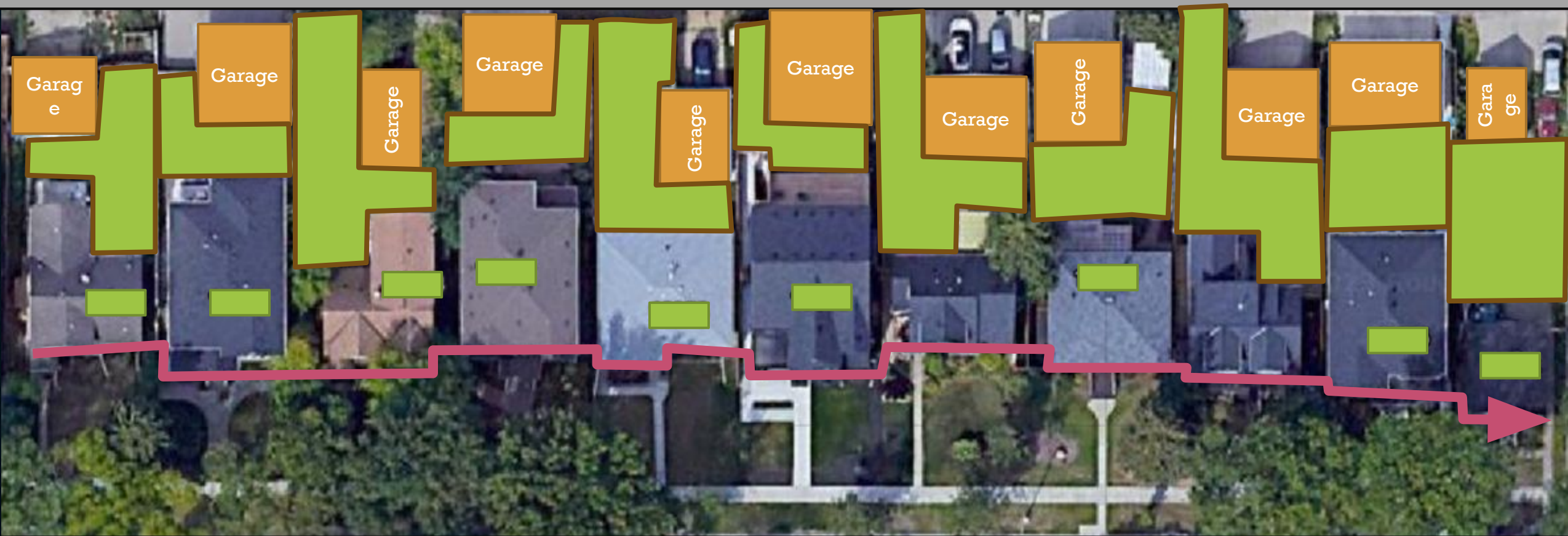
Back Lane



Street

Backyards Are ... Quite Small and Odd Shaped!

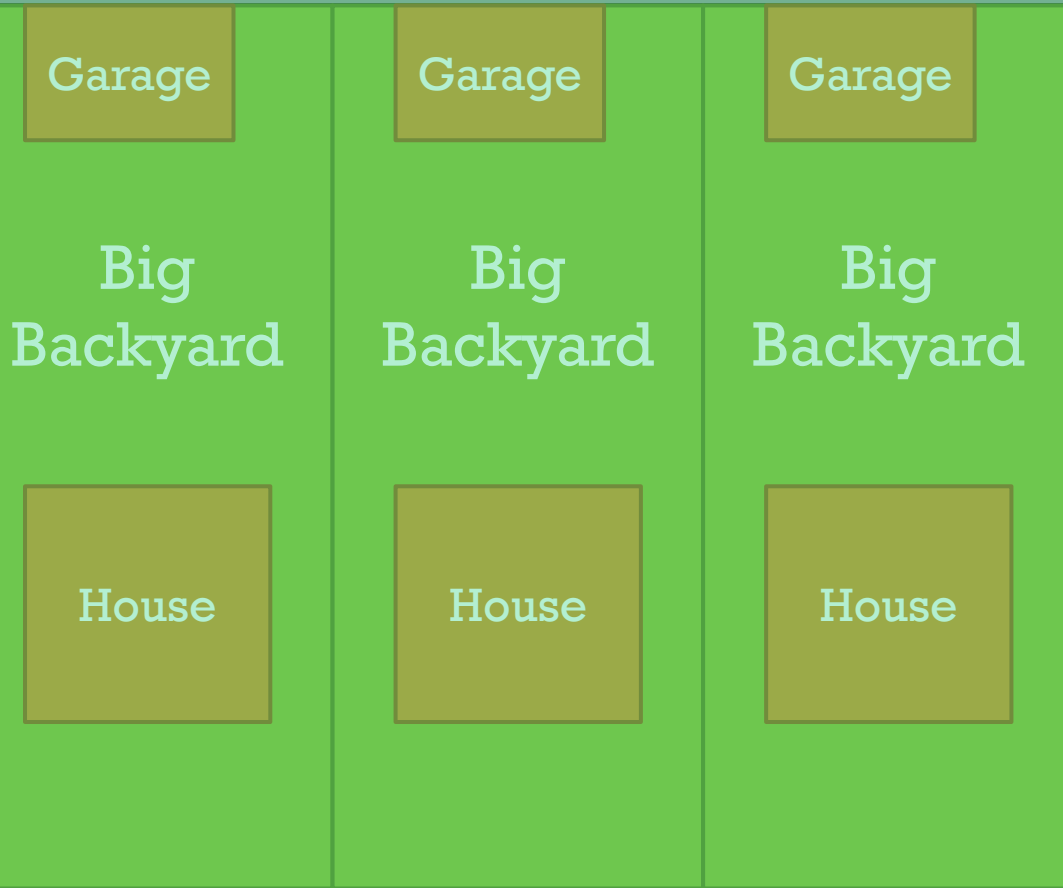
Back Lane



Street

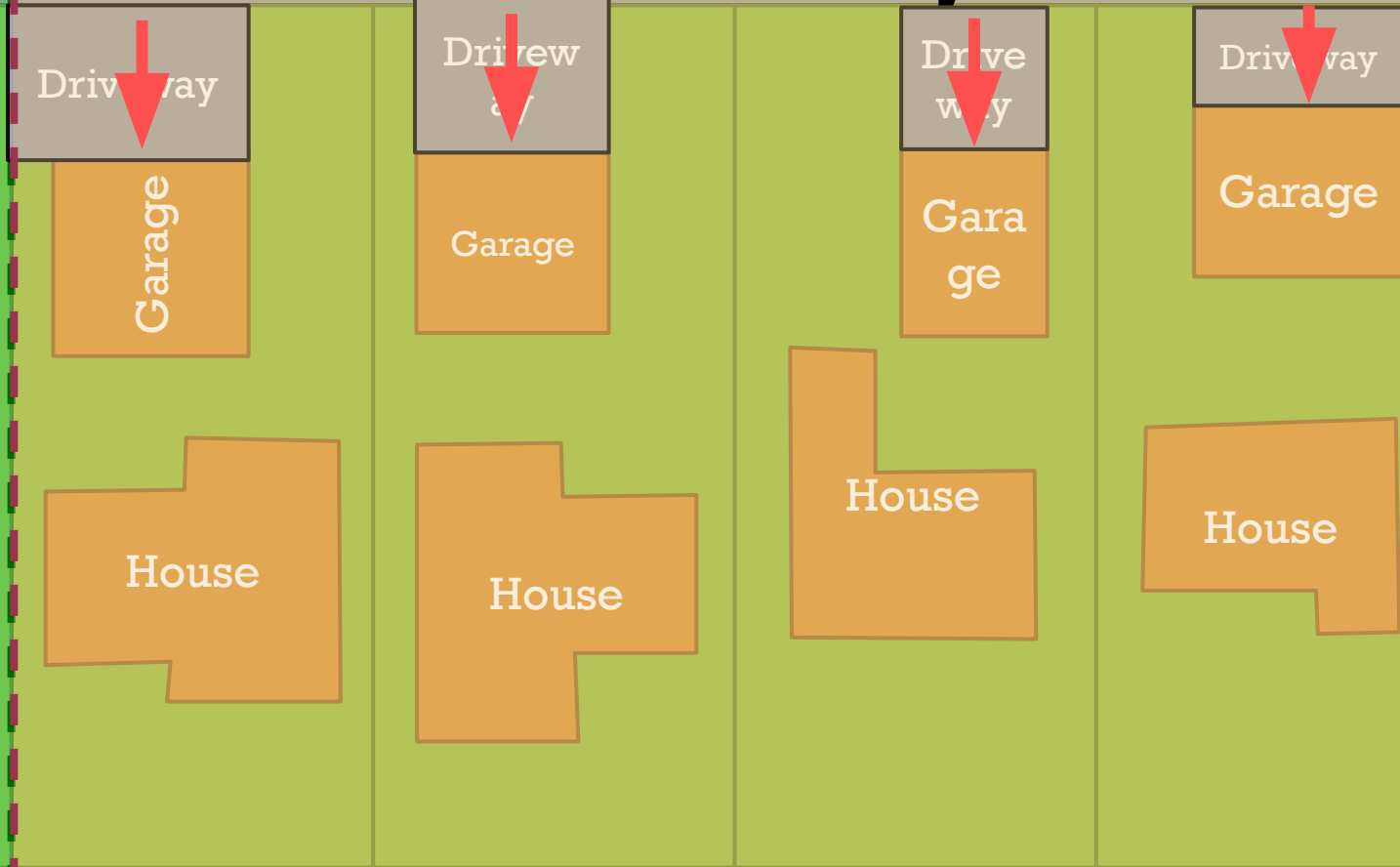
People want Garages Close to House!

The "Ideal"



Back Lane

The "Reality"

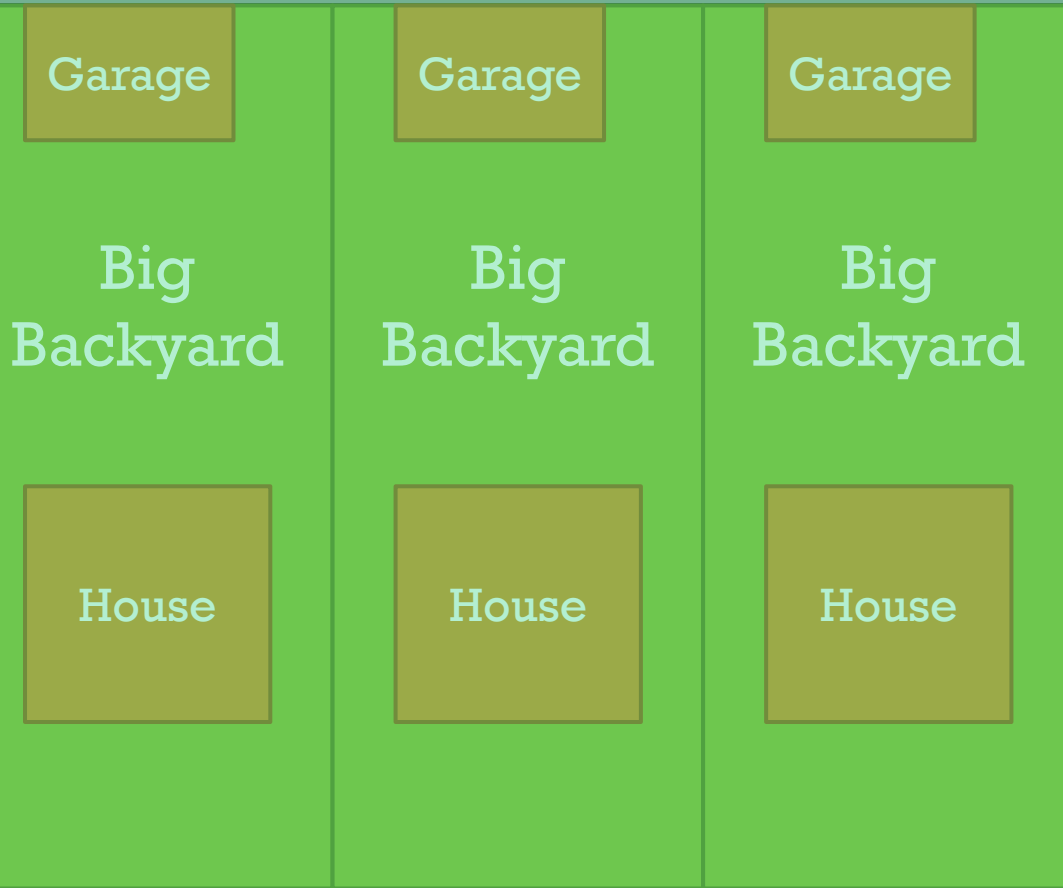


Sidewalk

Street

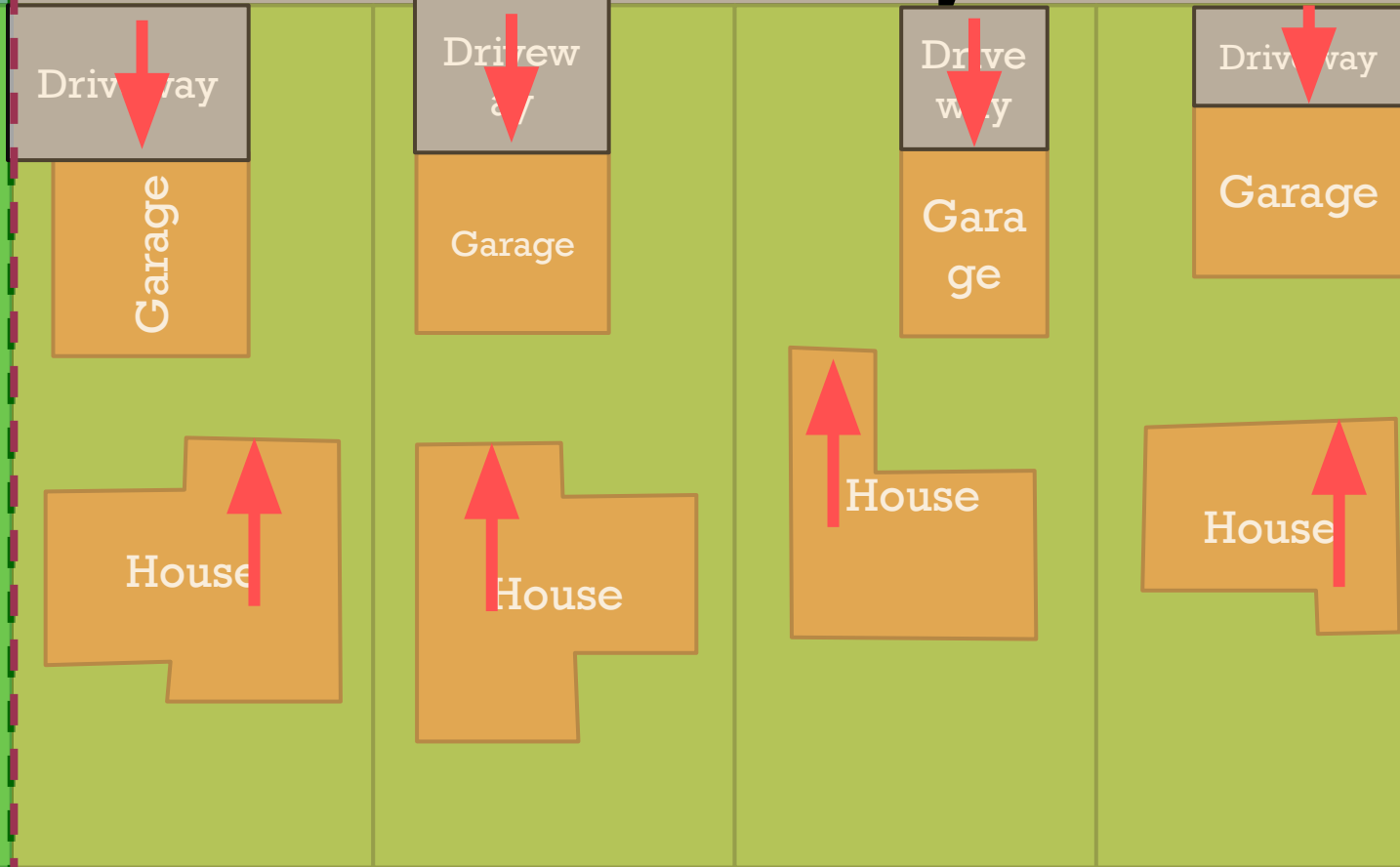
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Back Lane

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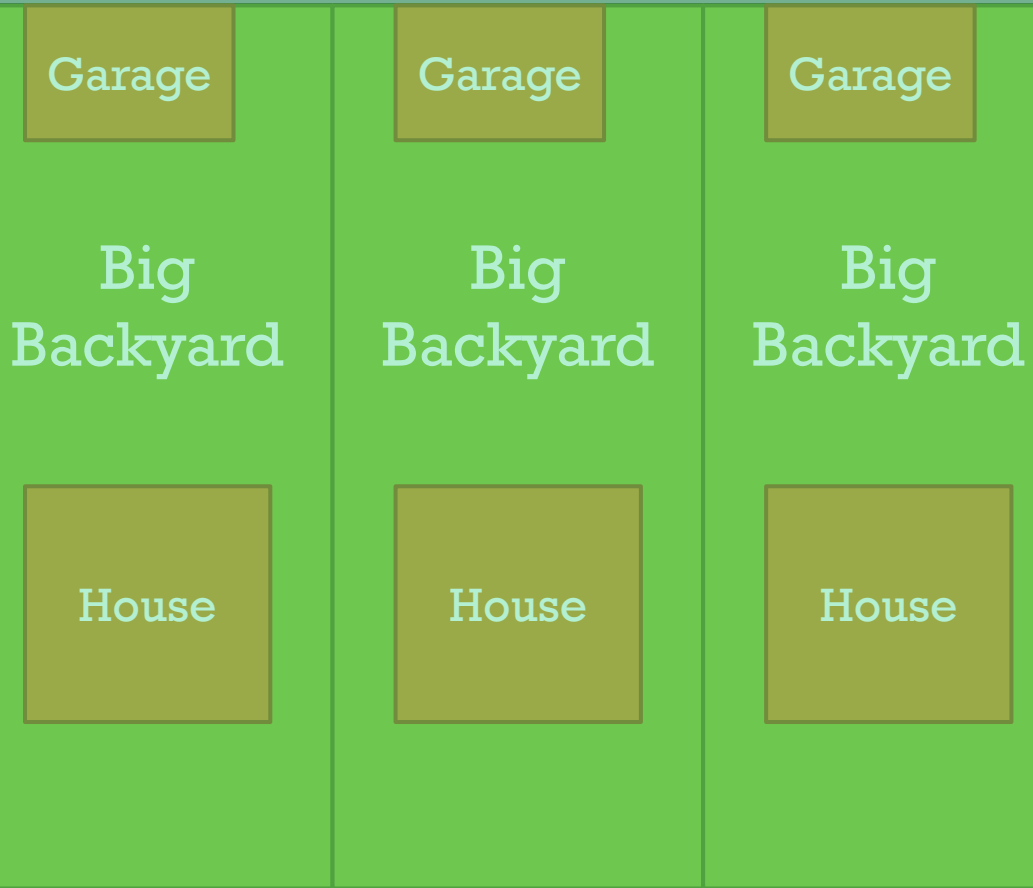


Sidewalk

Street

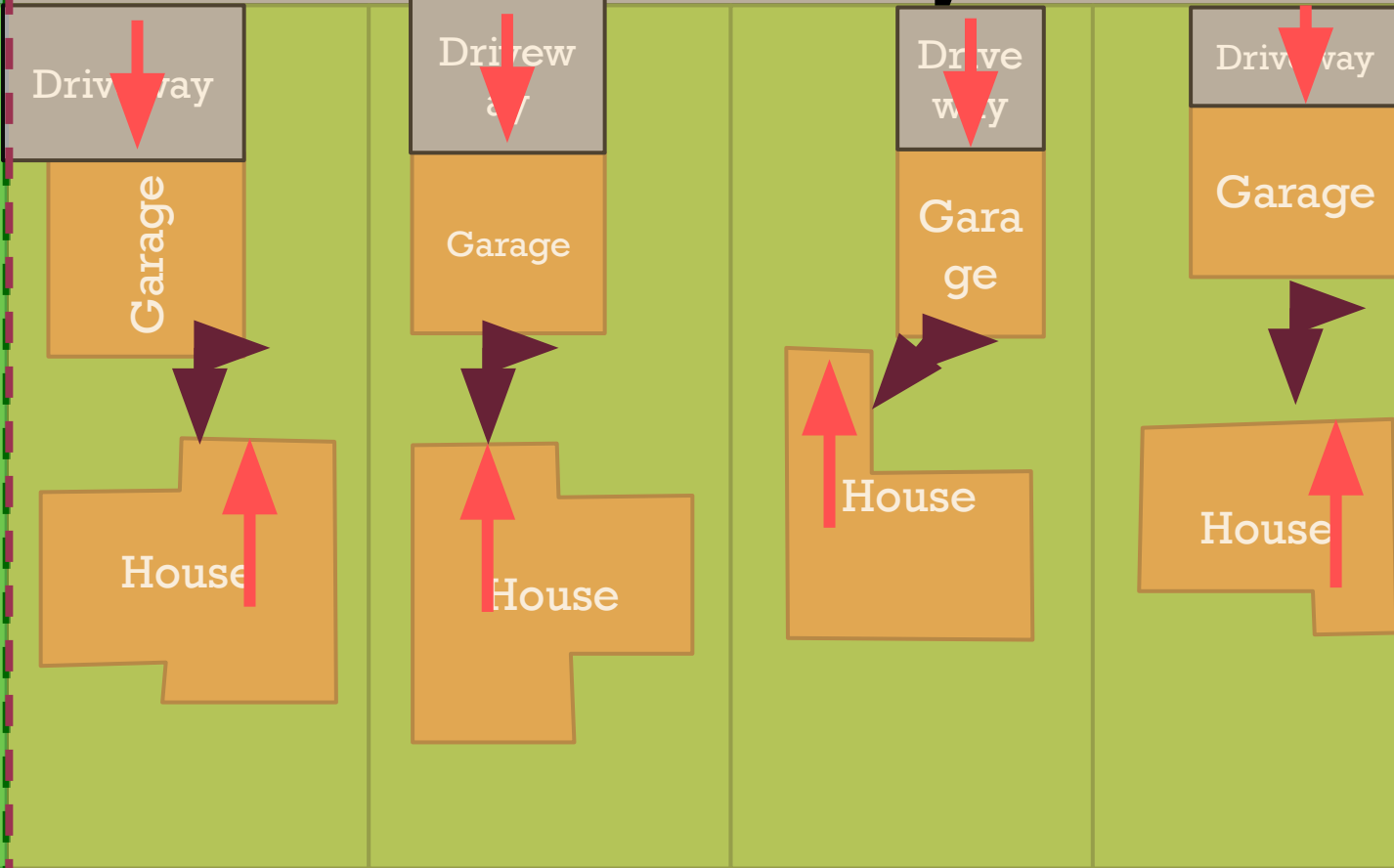
Garage Proximity Valued over Backyard

The "Ideal"



Back Lane

The "Reality"



Sidewalk

Street

Rear Attached Garages: The **Objections**

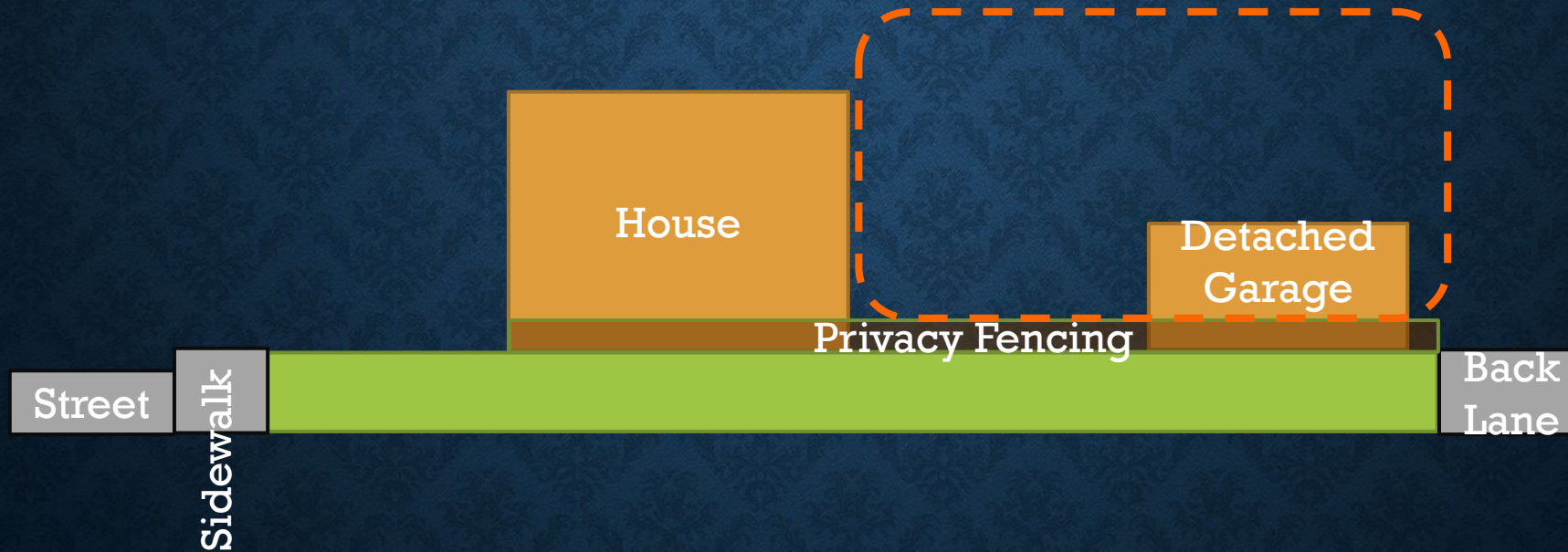
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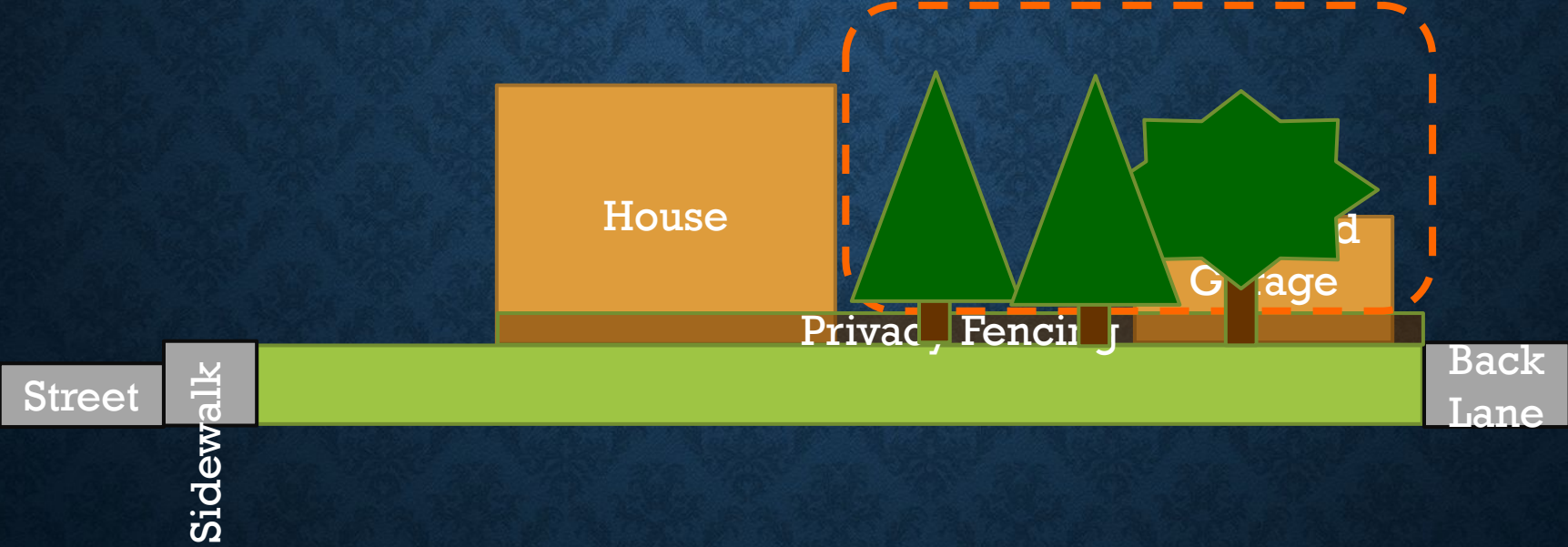
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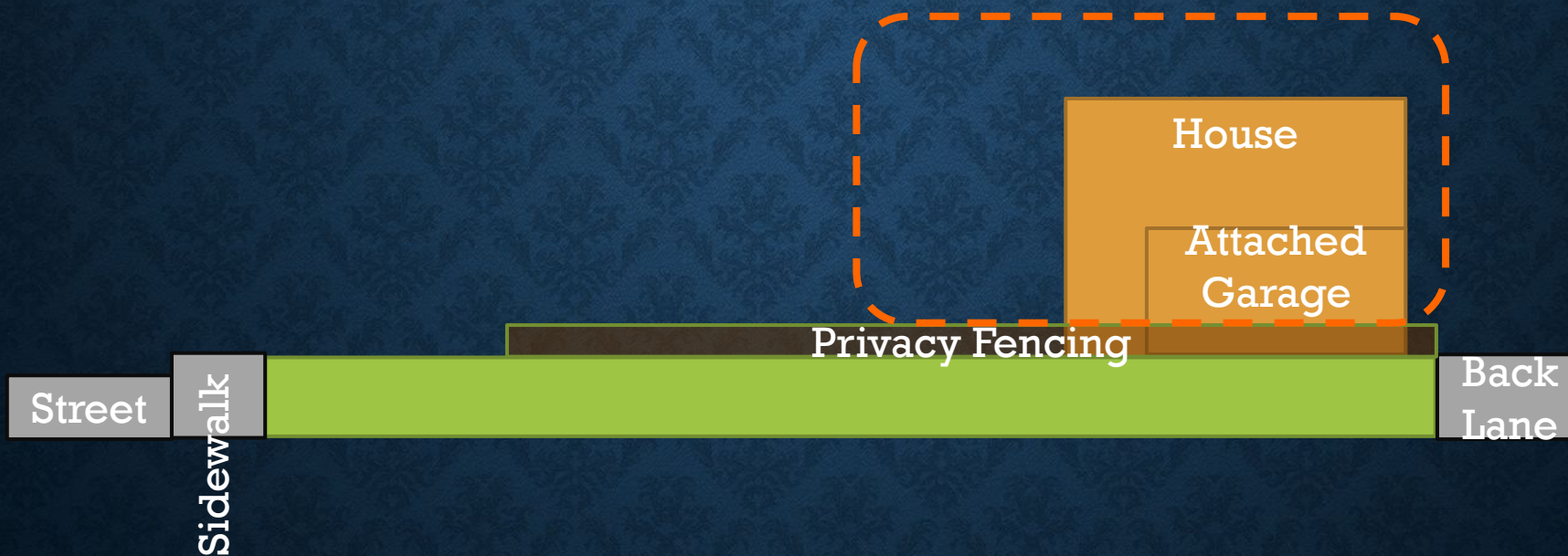
Side View: Building Mass Perception



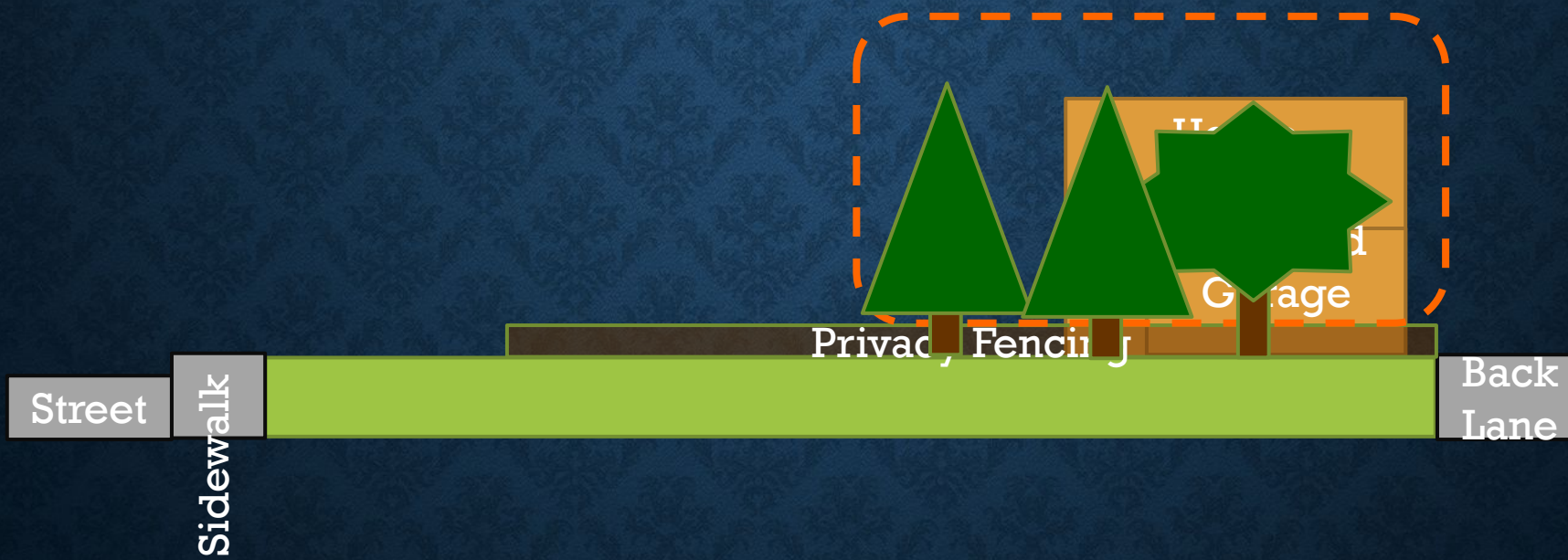
Side View: Trees also shield



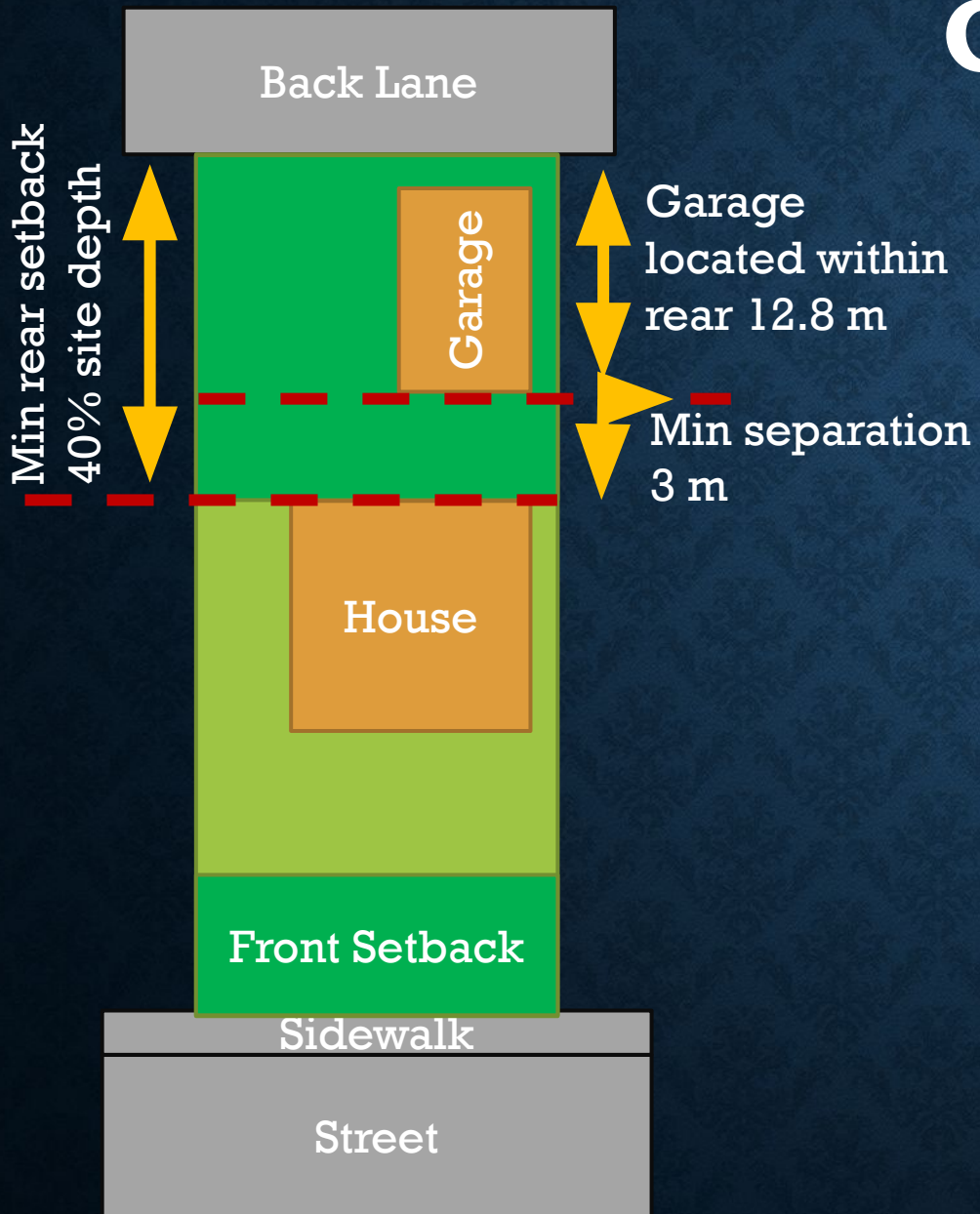
Concern with Rear Attached: Building Massing in the Rear Yard



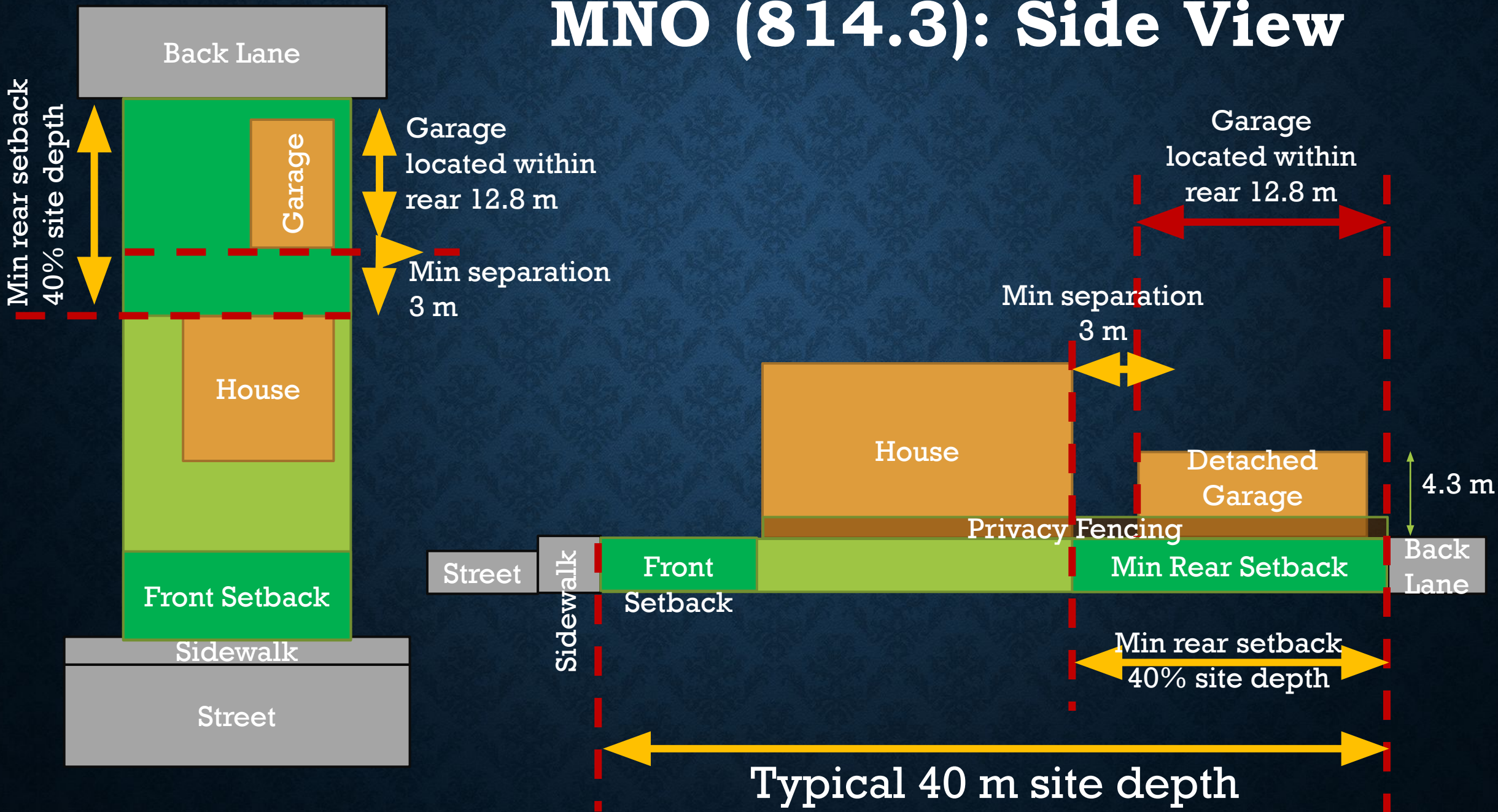
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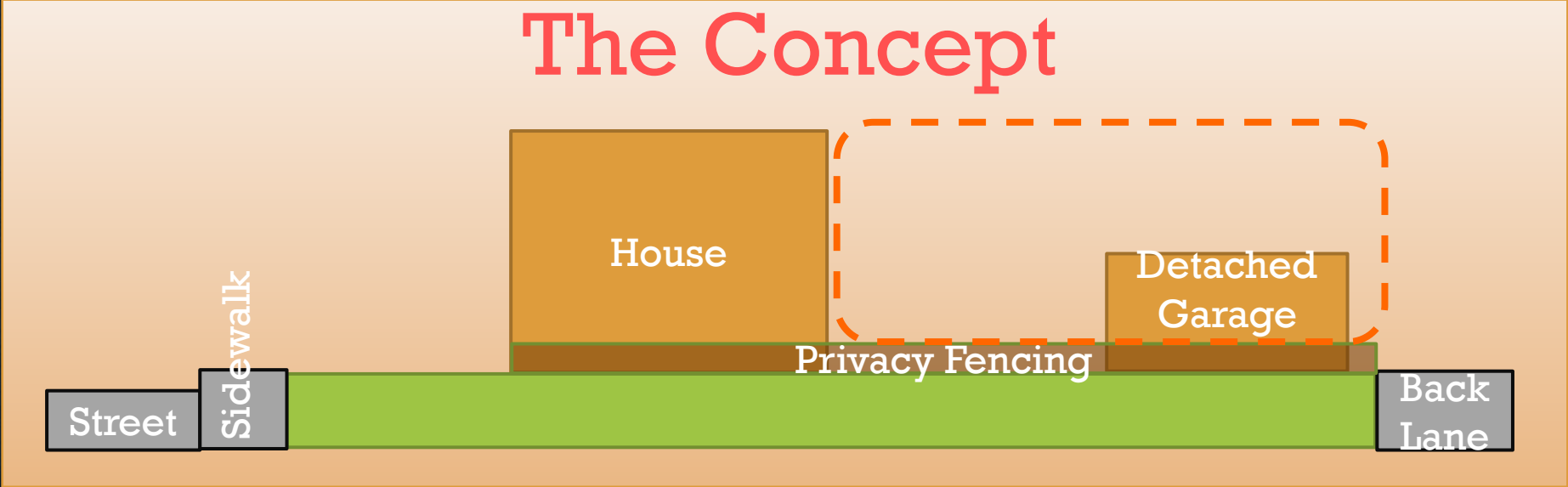
Current MNO (814.3)



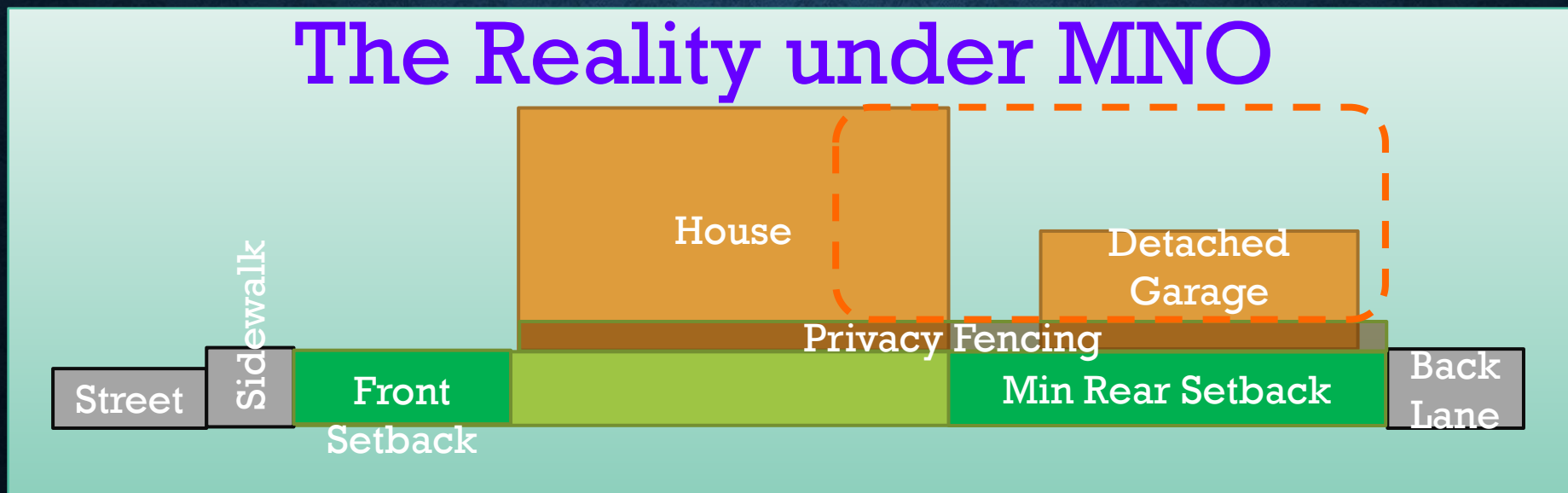
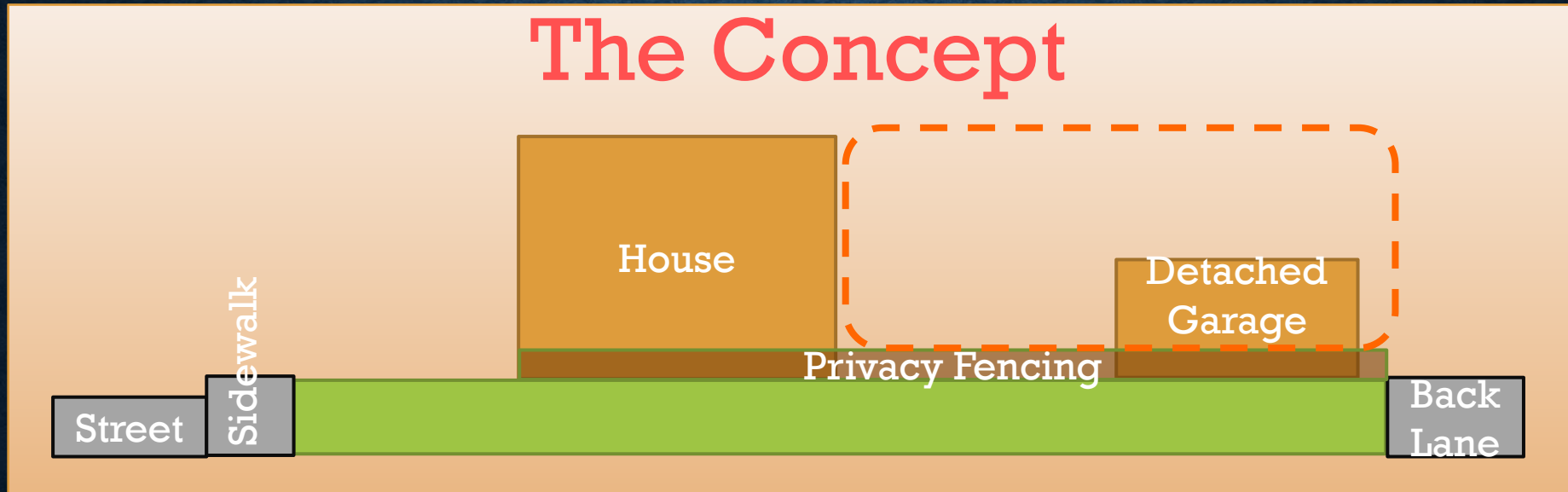
MNO (814.3): Side View



Allowed Building Mass (40 m site depth)

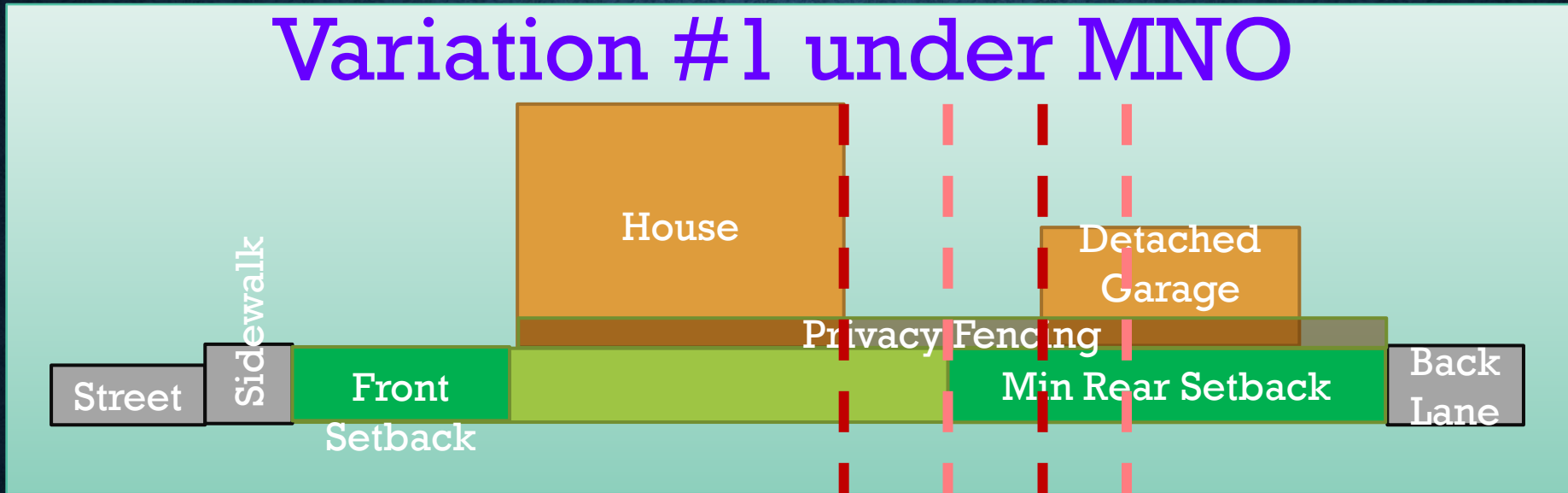


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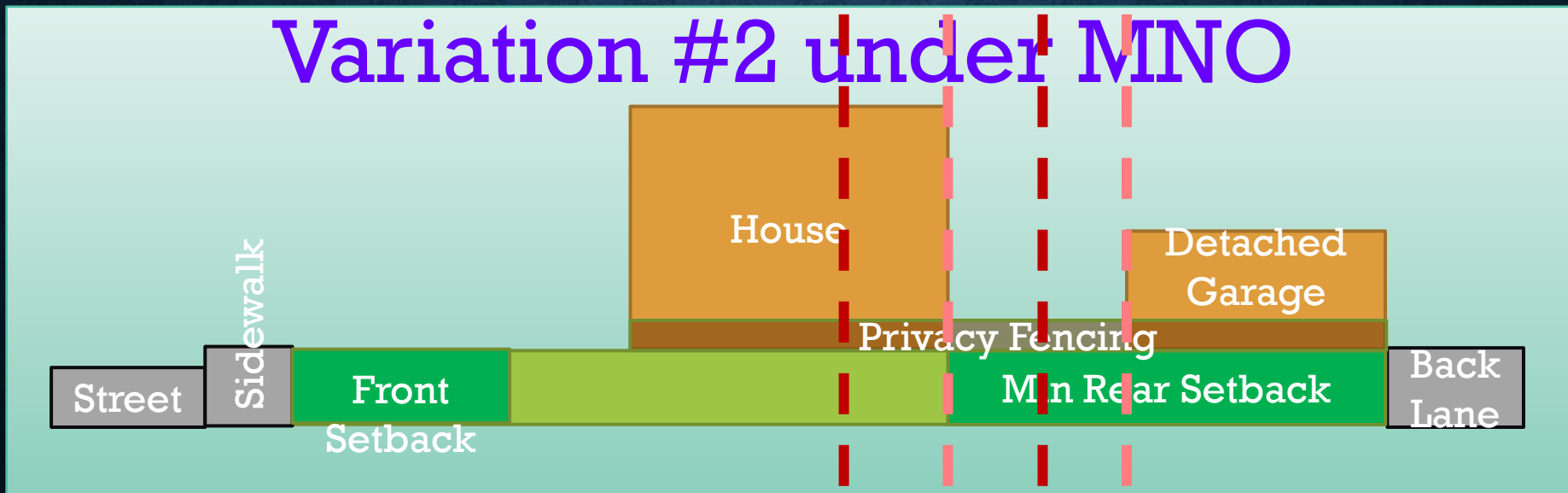


MNO: Variable Building Alignment

Variation #1 under MNO

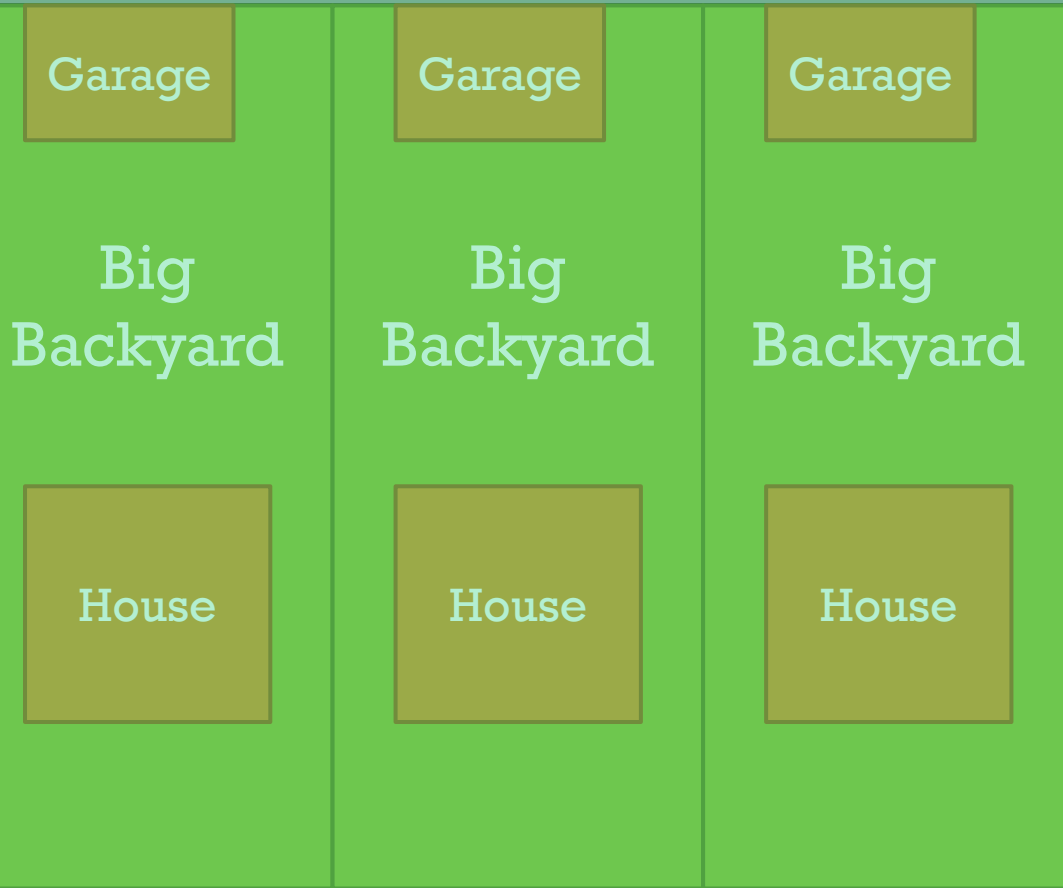


Variation #2 under MNO



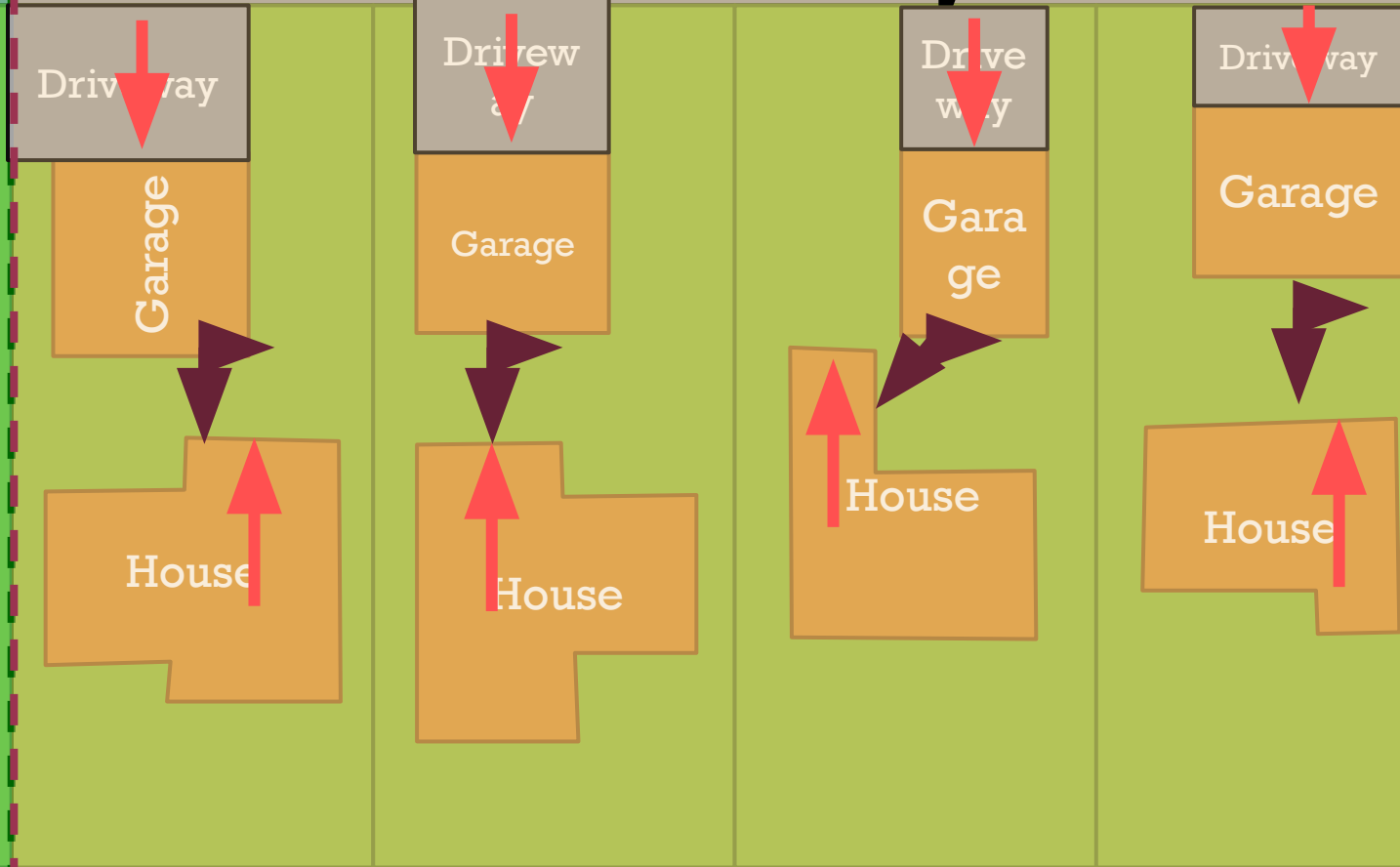
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The "Ideal"



Back Lane

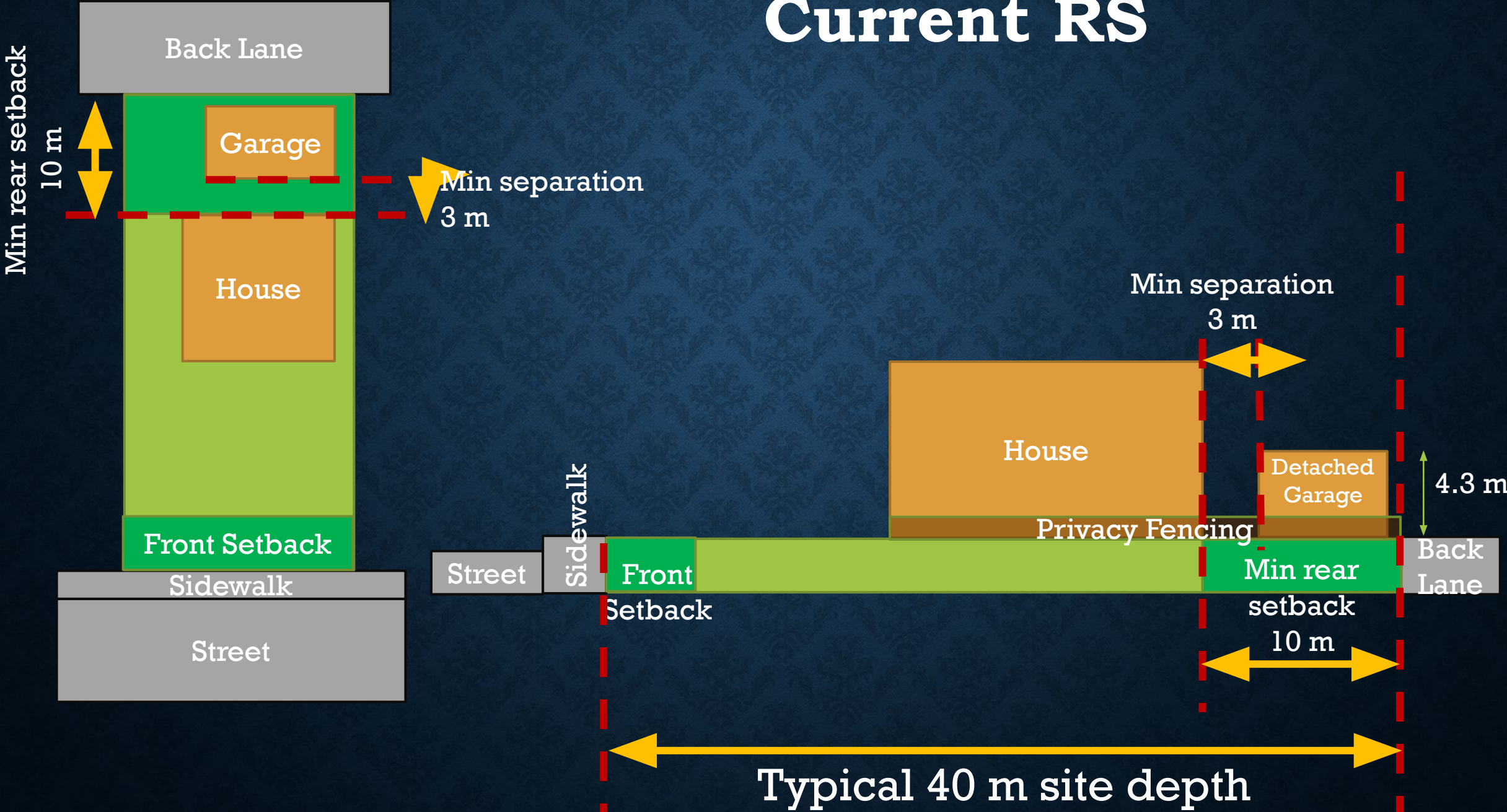
The "Reality"



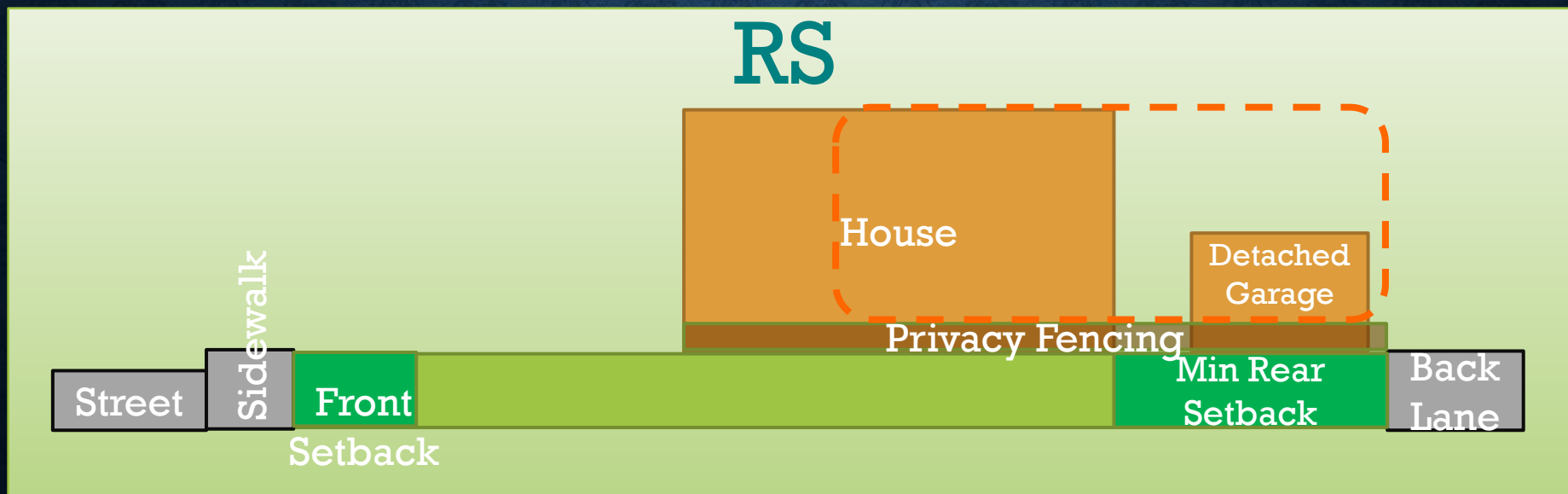
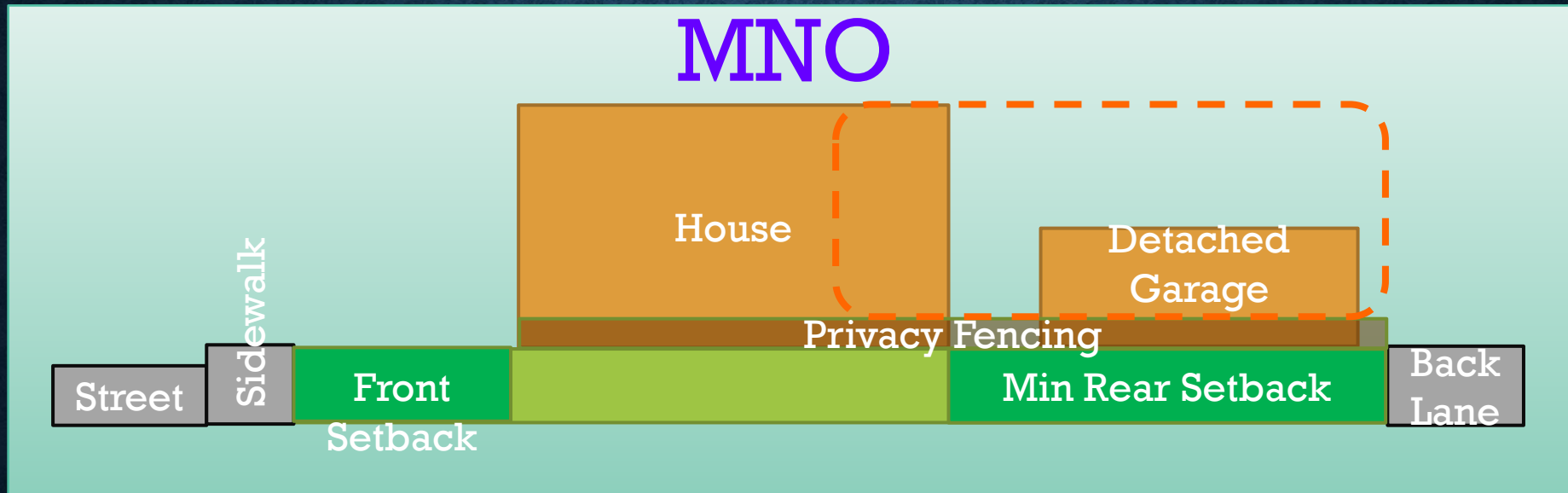
Sidewalk

Street

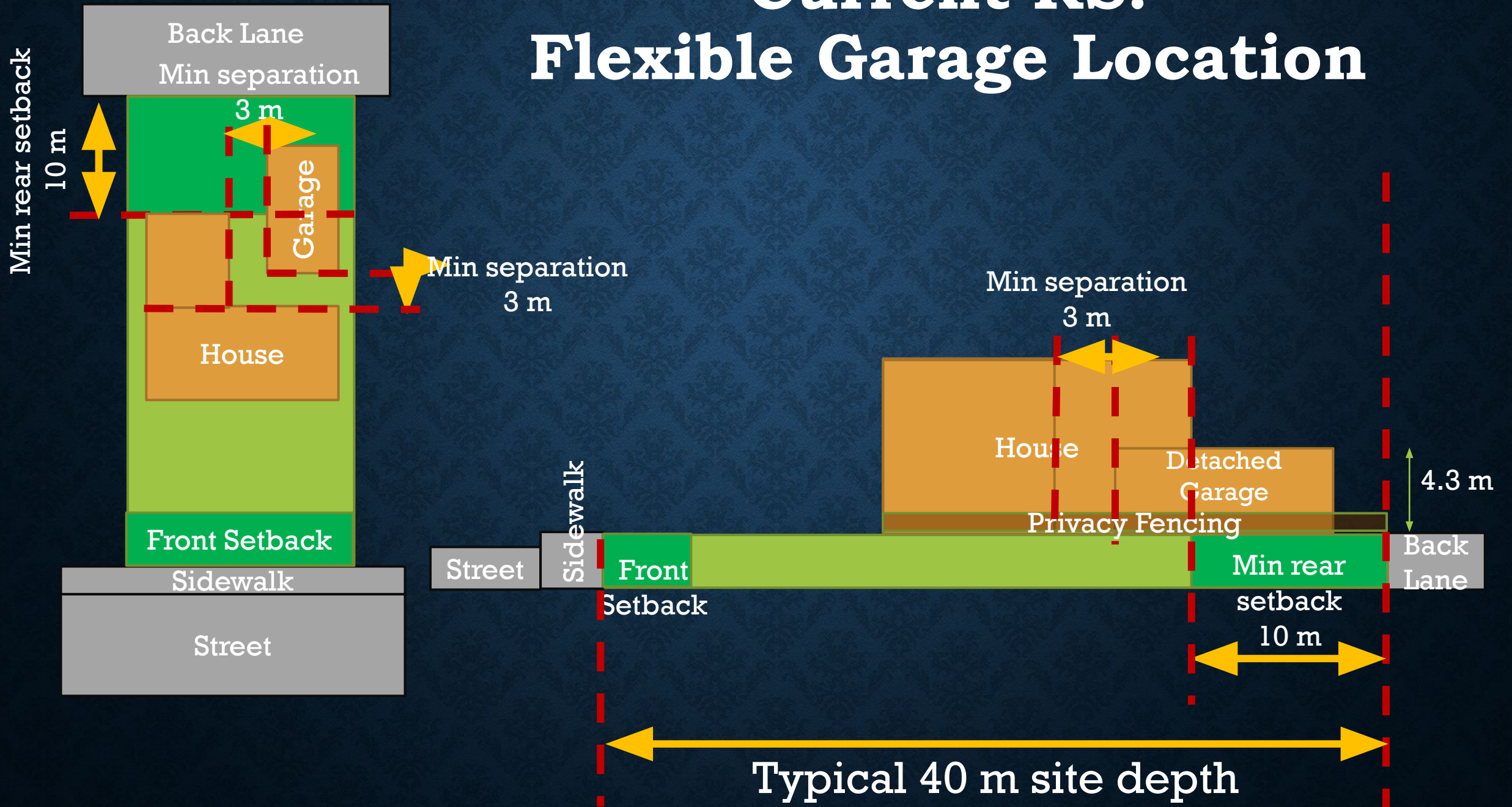
Current RS



More Allowed Rear Building Mass

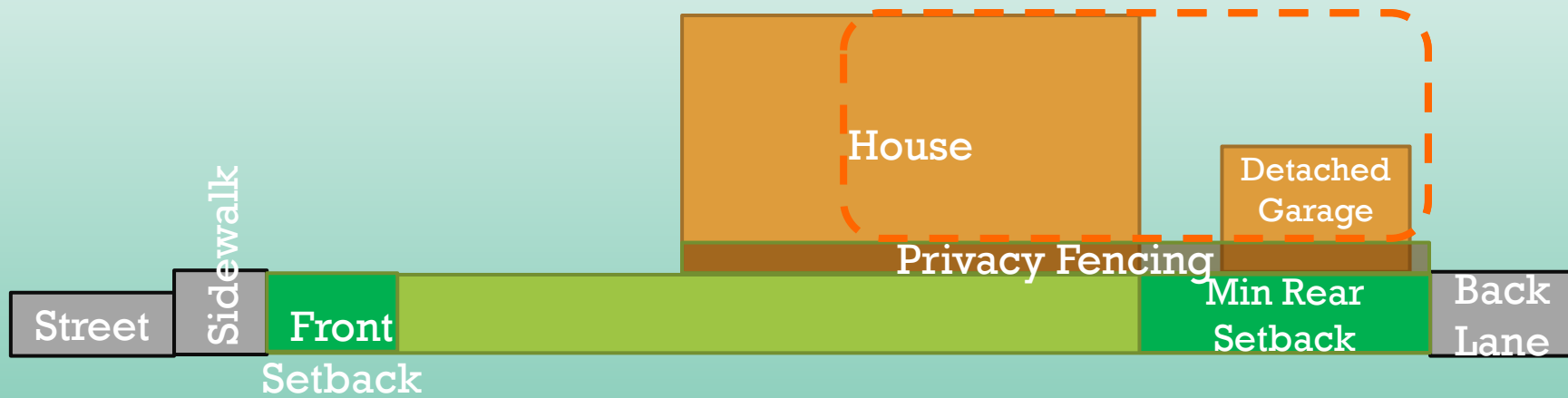


Current RS: Flexible Garage Location

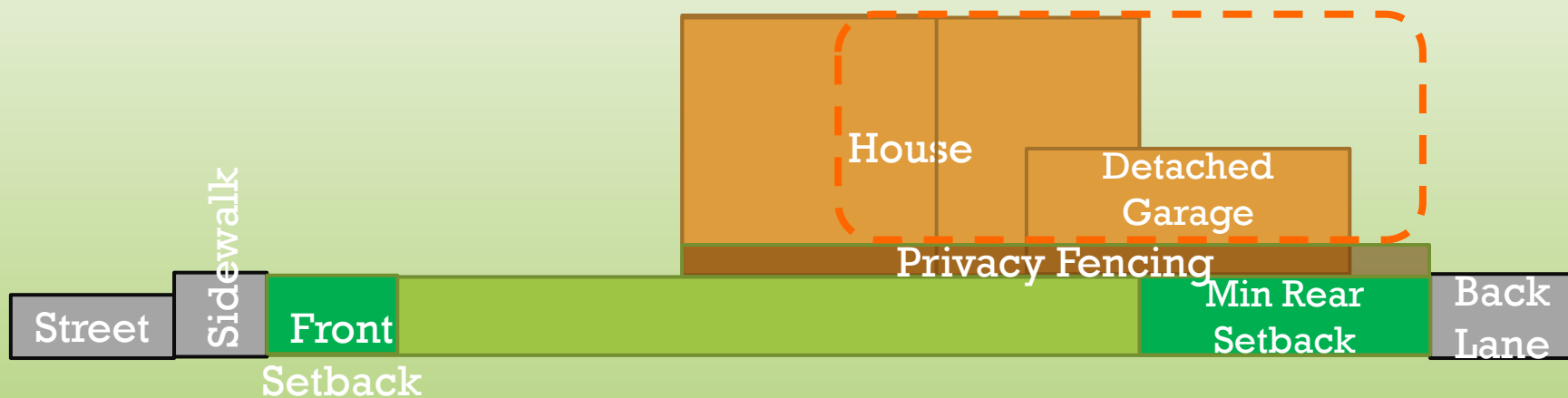


RS Allowed Variations

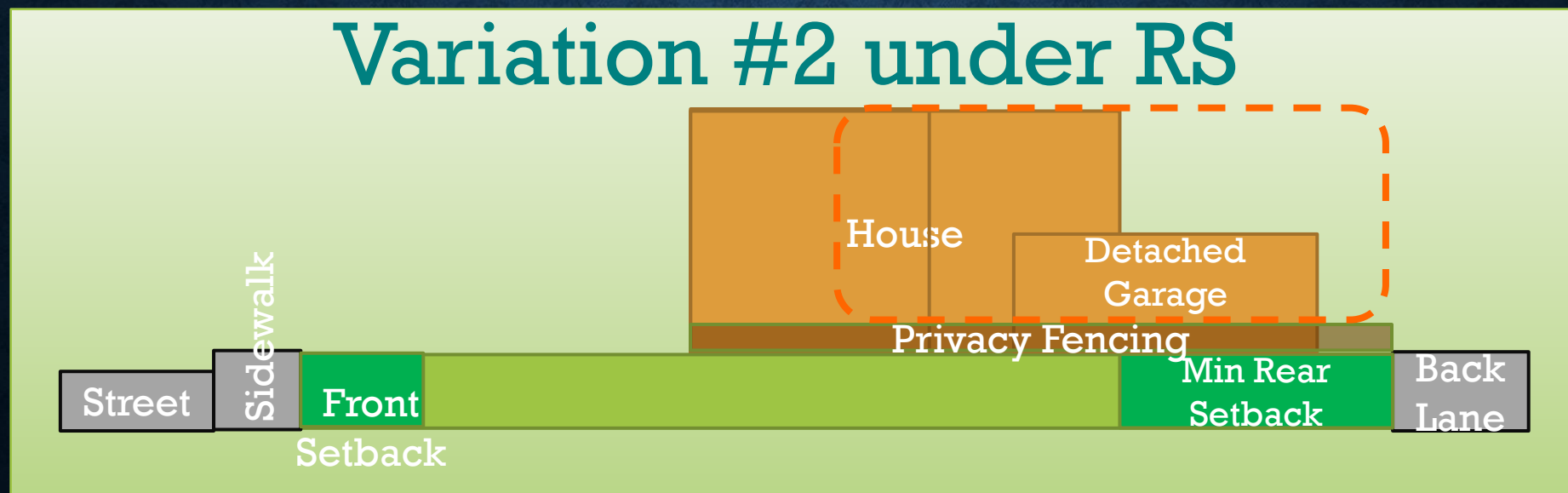
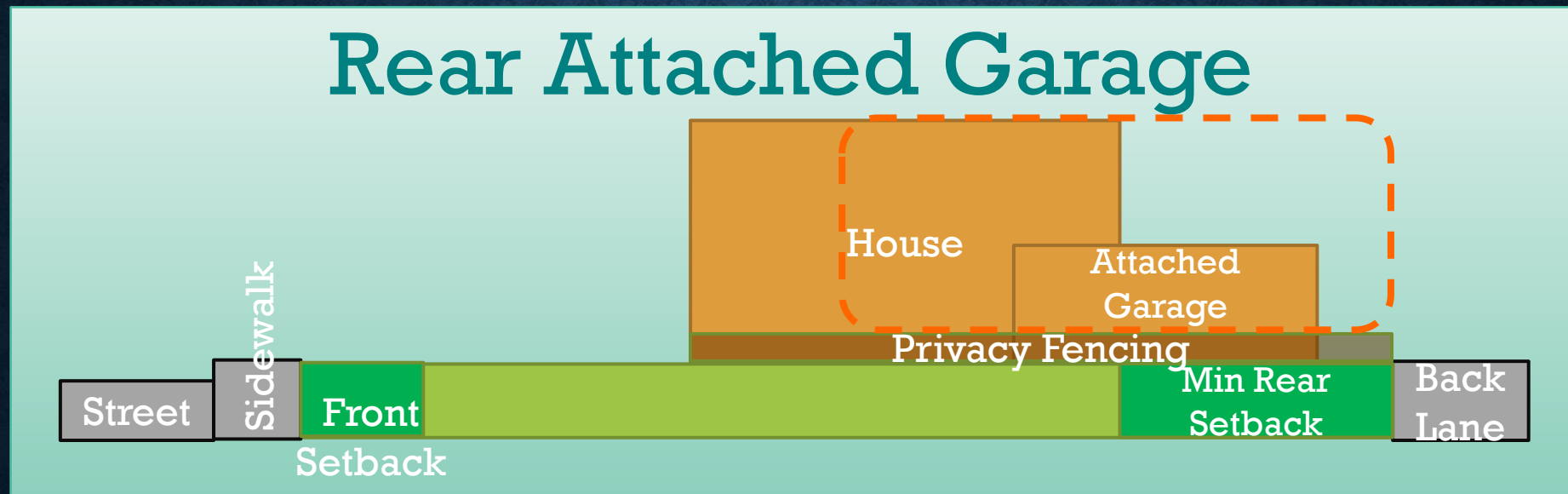
Variation #1 under RS



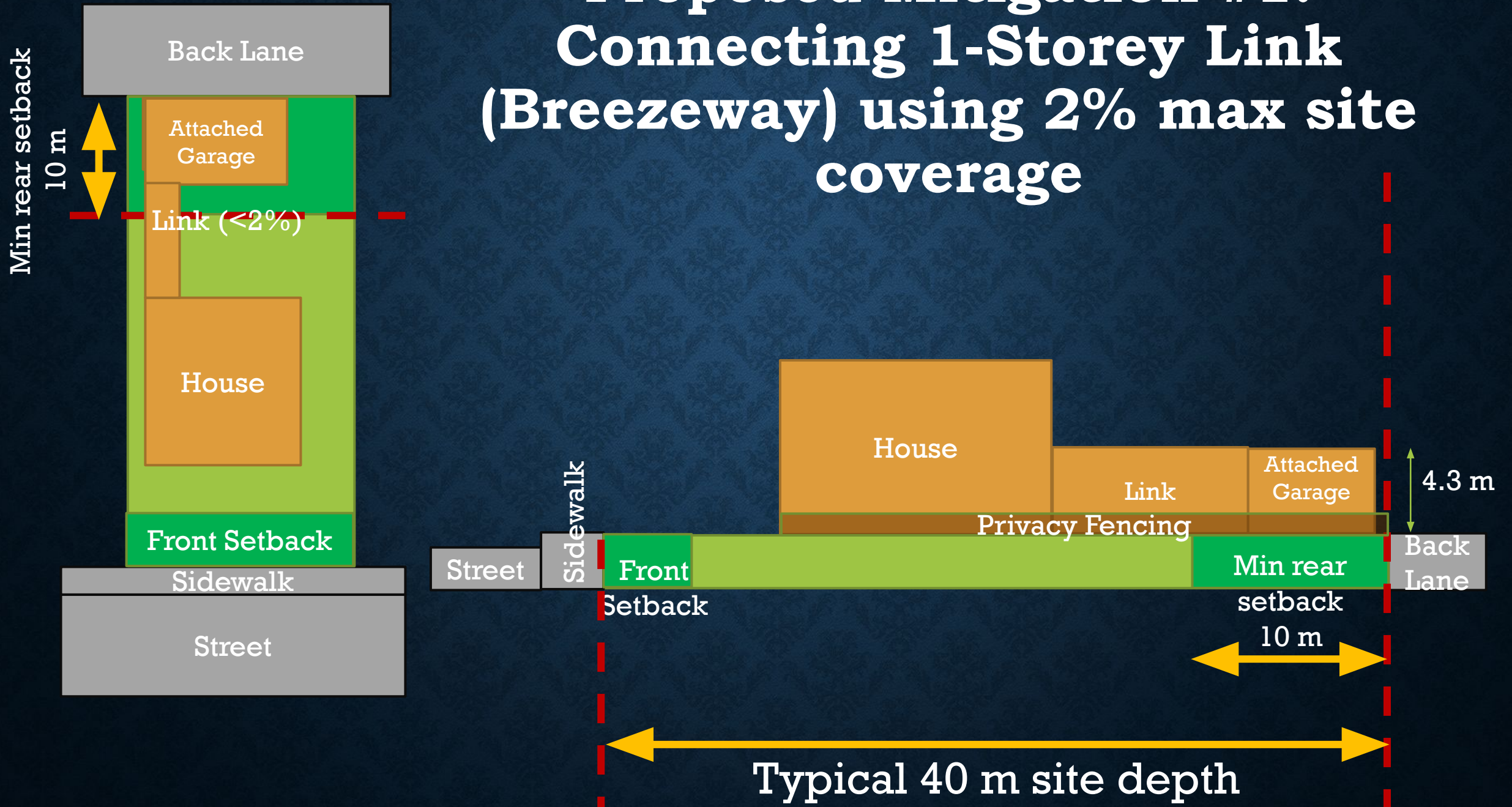
Variation #2 under RS



No Different than Rear Attached Garage

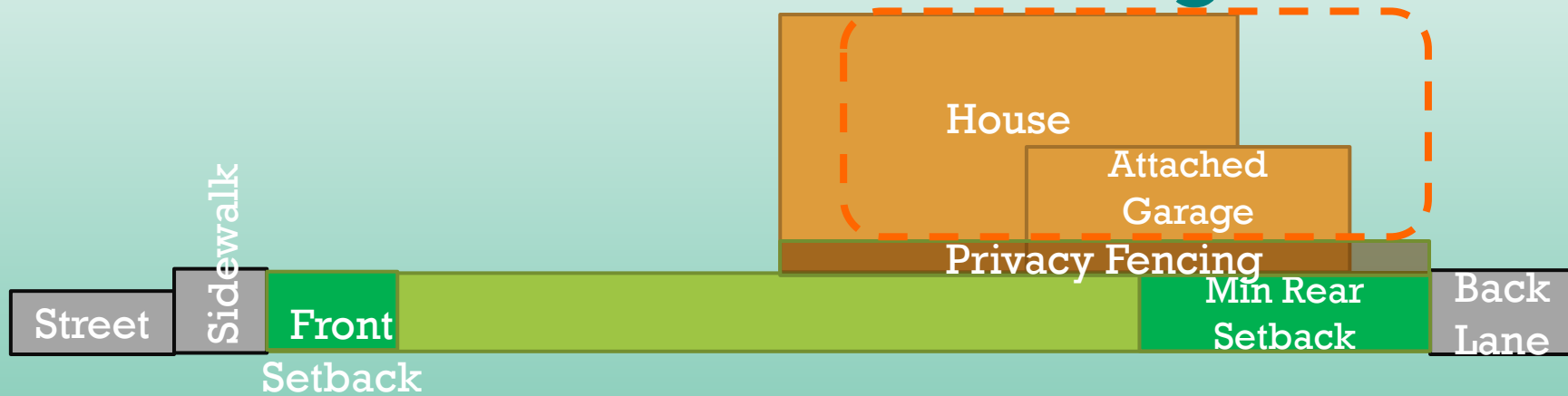


Proposed Mitigation #1: Connecting 1-Storey Link (Breezeway) using 2% max site coverage

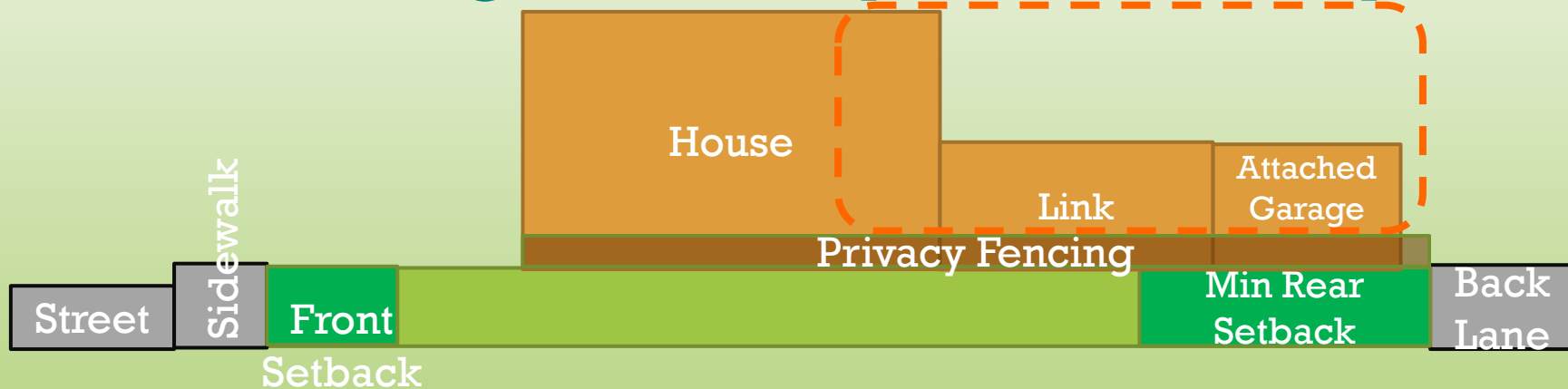


Mitigation #1: Link

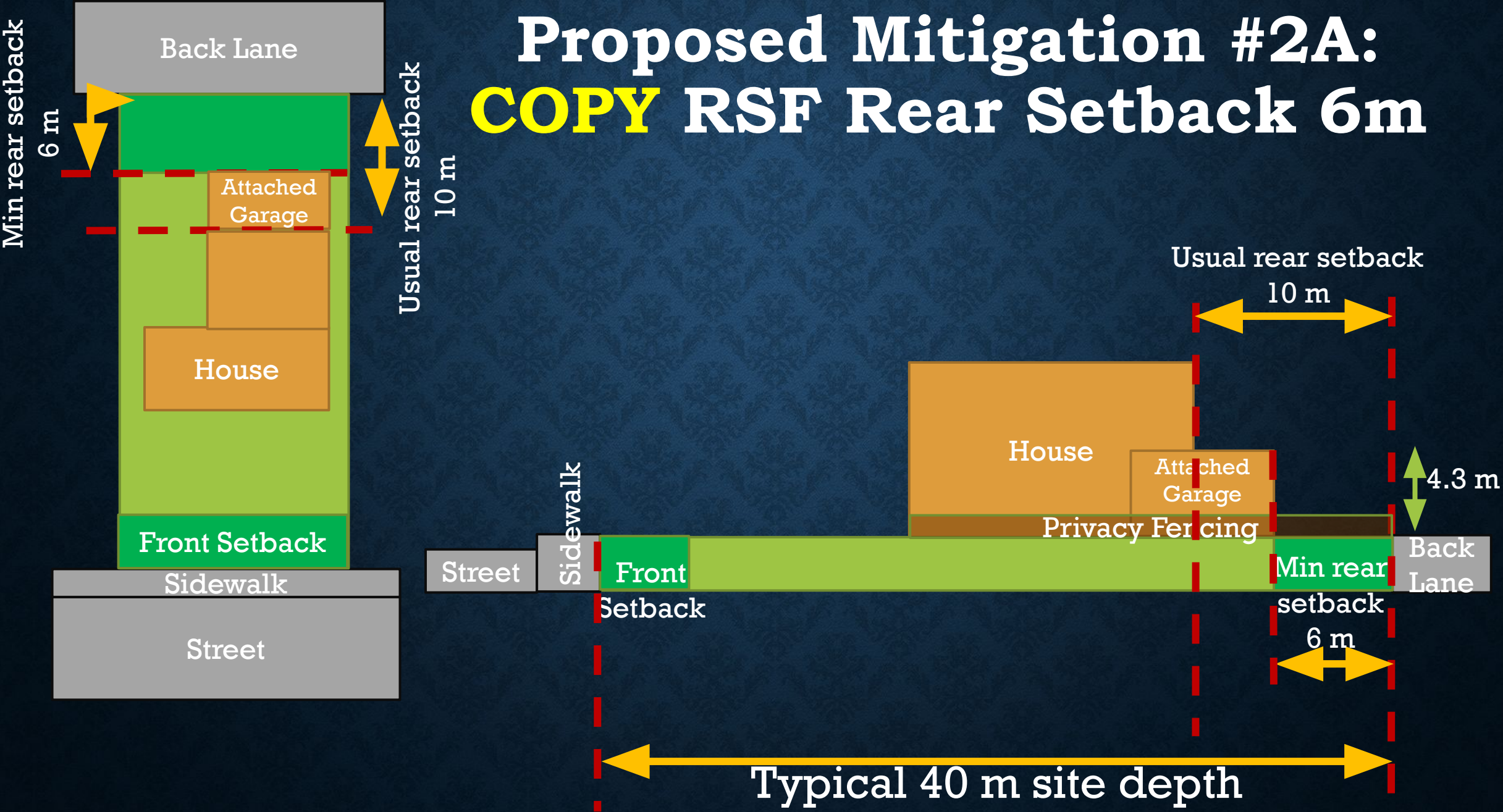
Rear Attached Garage



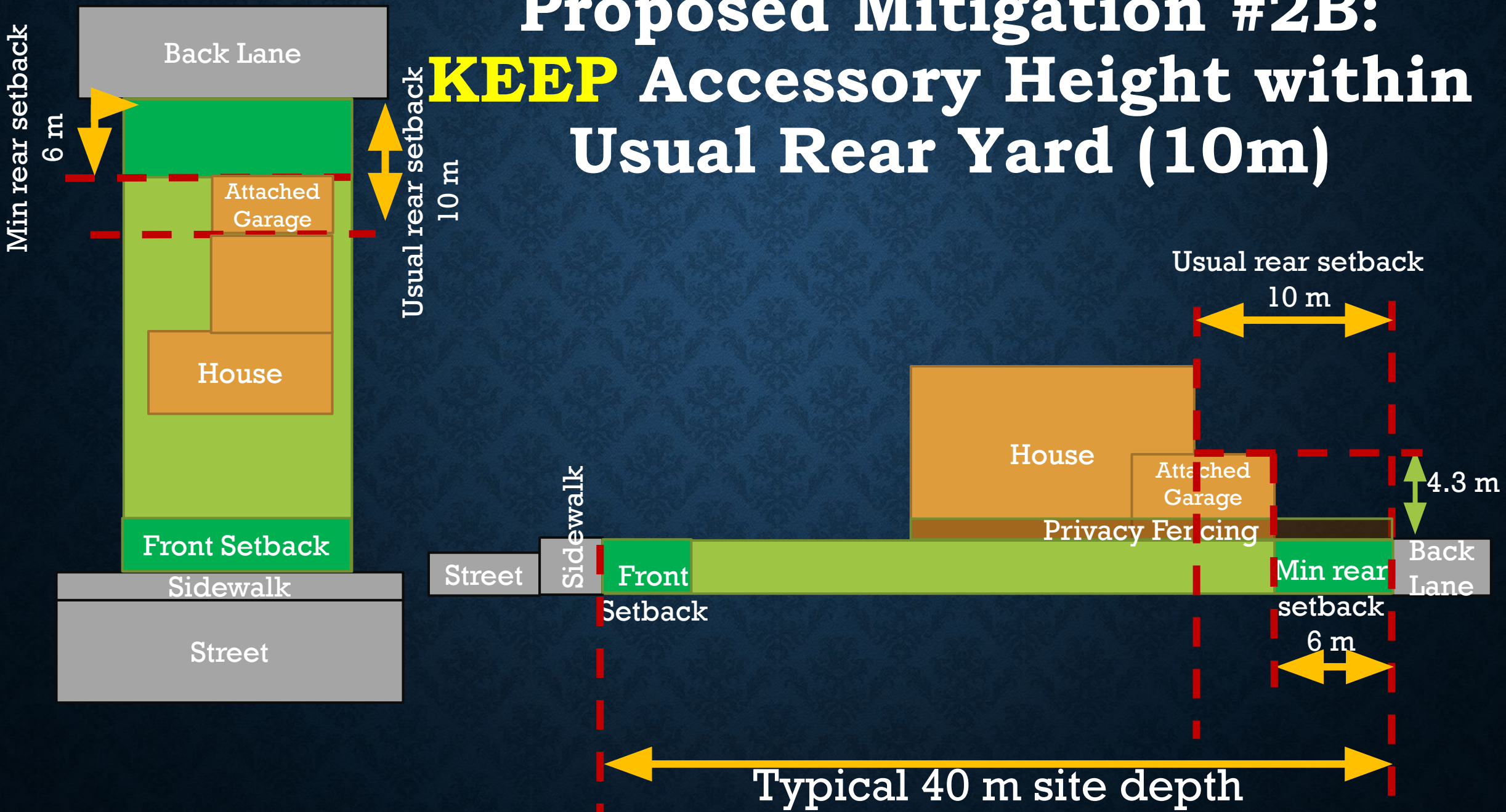
Linking 1-Storey Breezeway



Proposed Mitigation #2A: **COPY** RSF Rear Setback 6m

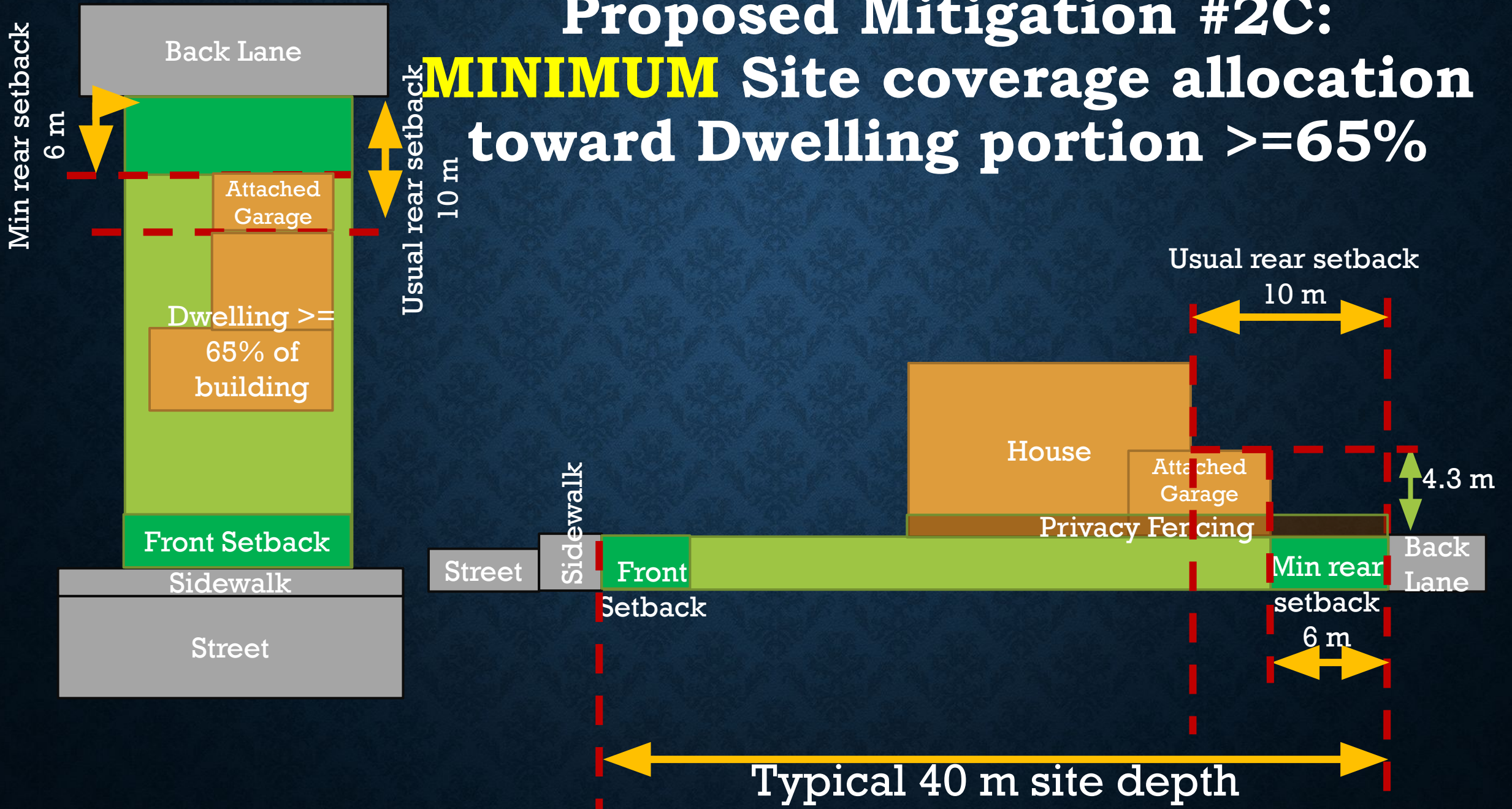


Proposed Mitigation #2B: **KEEP** Accessory Height within Usual Rear Yard (10m)



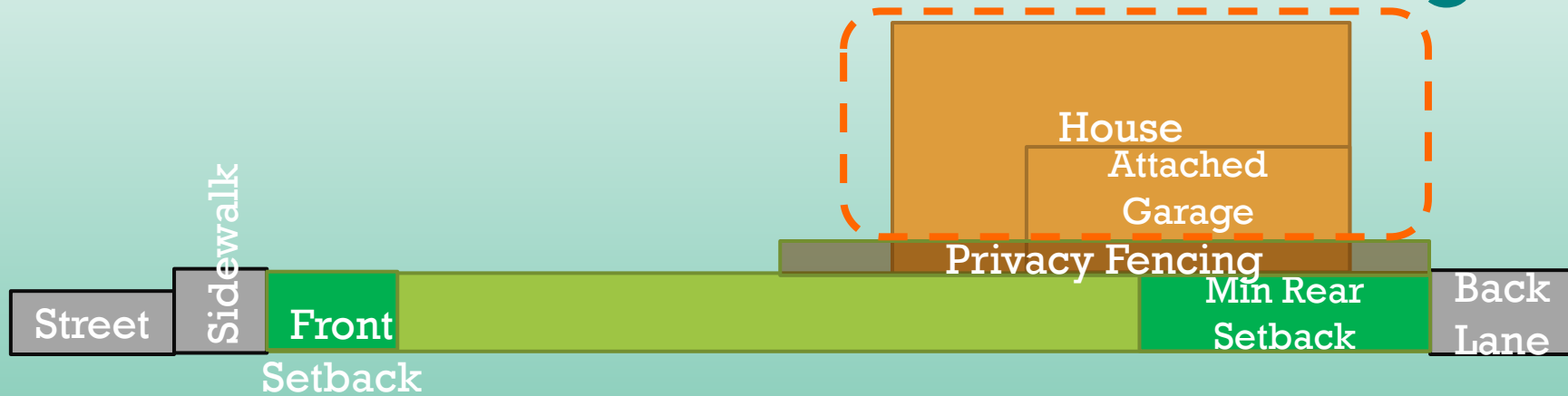
Proposed Mitigation #2C:

MINIMUM Site coverage allocation
toward Dwelling portion $\geq 65\%$

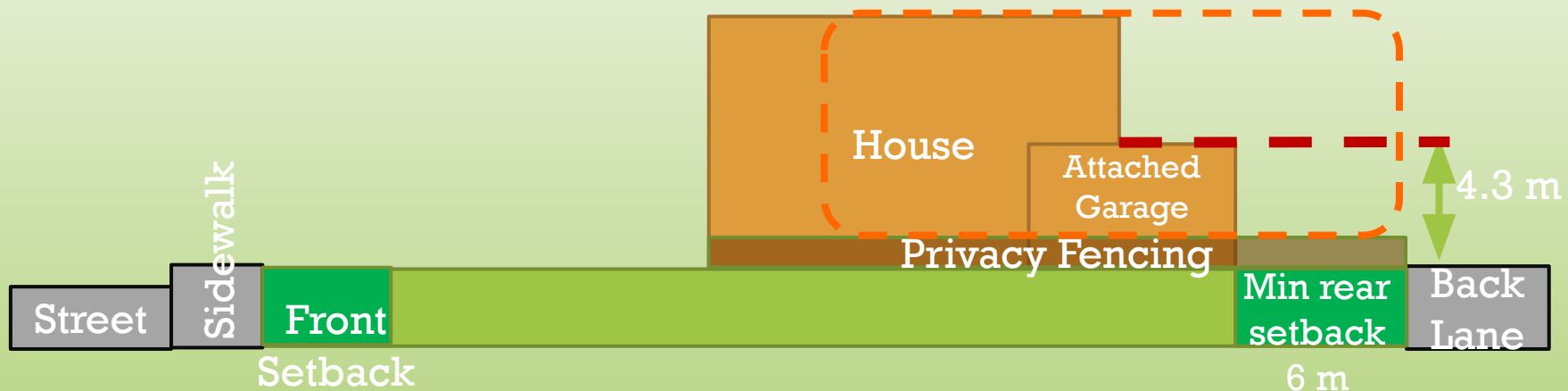


Mitigation #2: With Restriction

Traditional Rear Attached Garage



New Restricted Rear Attached



Rear Attached Revisions

Current

- 4.2.2. Minimum Rear Setback
10.0 m

Proposed

- **COPY** from RSF 4.2.5:
- Unless the following applies:
- 4.2.2.1 Minimum Rear Setback for a building with an integral rear attached Garage per 4.4.2 shall be 6.0 m

Proposed Revisions - Link

Current

- 4.4 Rear attached Garages are not permitted.

Proposed Link

- 4.4 Rear attached Garages are not permitted, unless:
 - 4.4.1 Attachment between otherwise compliant Principal Building and Detached is made with a compliant Breezeway, where the Breezeway is limited to 2% of total site coverage and Maximum Height not exceeding regulations for Accessory Buildings in that zone (5.10.8.1); or,

Proposed Revisions – Rear Attached

Current

- 4.4 Rear attached Garages are not permitted.

Proposed Mitigation

- 4.4.2 An integral building combining a Rear Attached Garage and Principal Building shall have no less than 65% of the overall building structure's site coverage situated in front of the usual rear setback for the zone (4.2.2); the Maximum Height for any portion of the building structure situated rear of the usual minimum rear setback (4.2.2) shall be the same as for Accessory Buildings in that zone (5.10.8.1).

Rear Attached Garages: The **Objections**

Site Factors

- Building Safety (carbon monoxide, fire safety)
- Decreased Backyard (Rear Amenity Area)
- Decreased Tree / Vegetation

Neighbourhood Impact

- Not “typical in any Canadian municipality”
- Disrupted “building alignment”
- Perceived “**building massing** and **shadowing**”
- “Improve airflow”

Rear Attached Garages: The **Objections**

Site Factors

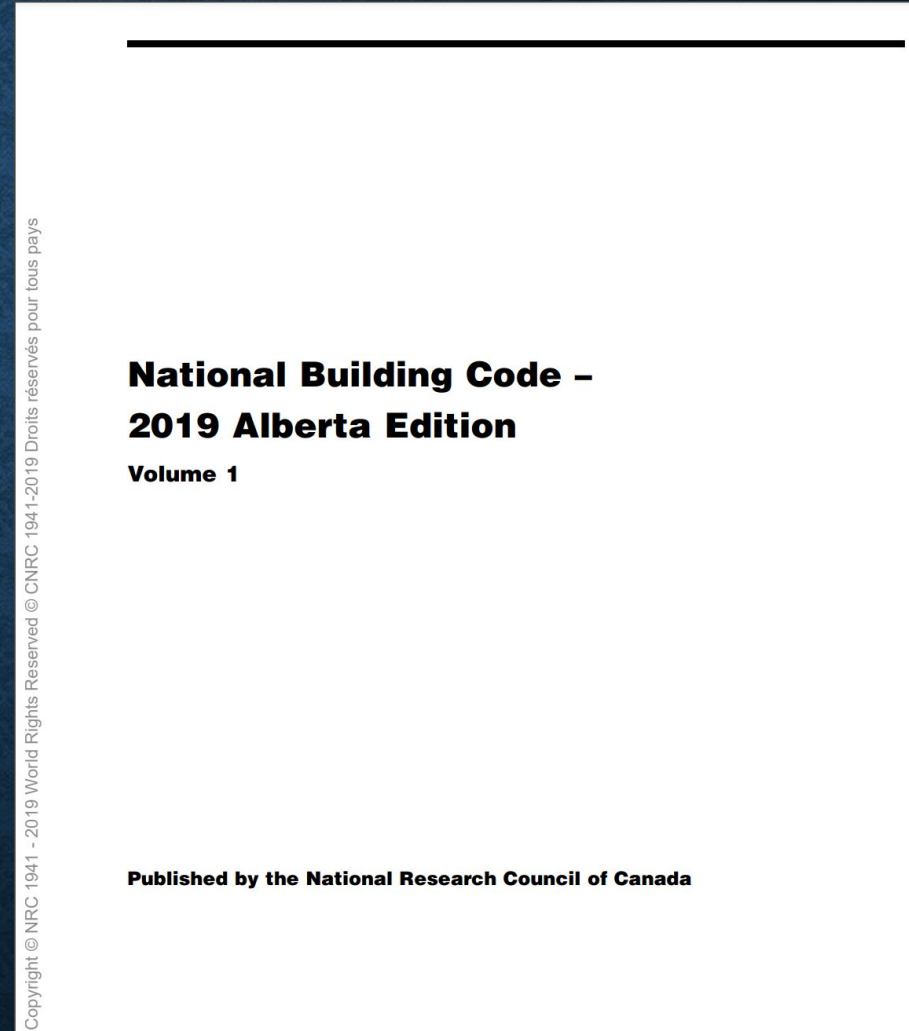
- **Building Safety** (carbon monoxide, fire safety)
- Decreased Backyard (Rear Amenity Area)
- Decreased Tree / Vegetation

Neighbourhood Impact

- Not “typical in any Canadian municipality”
- Disrupted “building alignment”
- Perceived “building massing and shadowing”
- “Improve airflow”

Building Safety

- National Building Code (Alberta Edition 2019)
 - Storage garage + Dwelling Units
 - Stipulates requirements for:
 - Materials
 - Fire-resistance
 - Fire separation
- Attached garages common in construction around the province and country



Rear Attached Garages: The **Objections**

Site Factors

- Building Safety (carbon monoxide, fire safety)
- Decreased Backyard (Rear Amenity Area)
- **Decreased Tree / Vegetation**

Neighbourhood Impact

- Not “typical in any Canadian municipality”
- Disrupted “building alignment”
- Perceived “building massing and shadowing”
- “Improve airflow”

Old Bylaws: Trees & Impermeable Coverage

Trees

Impermeable Coverage

- 55.1.d trees and shrubs shall be provided in accordance with Table 55.2(1)(d), as follows:

Measure	Table 55.2(1)(d) Tree and Shrub Planting Requirements		
Site Width	Single Detached Housing	Semi-Detached Housing and Duplex Housing (per Dwelling)	Row Housing (per Dwelling)
Less than 10.0 m	One deciduous tree, one coniferous tree and four shrubs	One deciduous tree, one coniferous tree and four shrubs	One deciduous tree, one coniferous tree and four shrubs
10.0 m – 13.0 m	Two deciduous trees, one coniferous tree and six shrubs		
Greater than 13.0 m	Two deciduous trees, two coniferous trees and eight shrubs		

Charter Bylaw 18967 August 26, 2019

- 55.10 Impermeable Material
 - “Except where developed as part of a Multi-unit Project Development, for Single Detached Housing, Semi-detached Housing and Row Housing, the area covered by Impermeable Material shall not exceed **70 percent** of the total Lot area.”

New Bylaws: Trees & Impermeable Coverage

Trees

Impermeable Coverage

- 5.80.3.1 Trees and shrubs for Single Detached Housing, Duplex Housing, Semi-detached Housing, and Row Housing, excluding Backyard Housing and Cluster Housing developments , must comply with Table 3.1:



Table 3.1. Minimum Trees and Shrubs ¹		
Subsection	Measure	Minimum Tree and Shrub Requirements
Single Detached Housing, Semi-detached Housing, and Duplex Housing		
3.1.1.	Site Width less than 8.0 m	1 tree and 4 shrubs
3.1.2.	Site Width 8.0 m - 15.0 m	2 trees and 6 shrubs
3.1.3.	Site Width greater than 15.0 m	4 trees and 8 shrubs
Row Housing		
3.1.4.	Per principal Dwelling	1 tree and 4 shrubs

- 5.80.3.2 Maximum Impermeable Materials
- The area covered by Impermeable Material must not exceed **70%** of the total Lot area for



Apparent Conflict of Interest

Community League Representative


Landscaping Industry Influence?


 May 29 2023 at 10:48AM **Community League Representative** 


Attached rear garages must not be allowed. This results in potential for continuous front to rear development, increased massing & shadowing and reduced air flow impacts. It impacts potential for rear amenity area and room for trees. There are areas in the city this is allowed, but it should not be allowed in mature areas as it does not contribute toward density, only convenience and choice at the expense of others.


 3  0

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Attached Garages **NOT ALLOWED** in RS Neighbourhood Consultation **REMOVED**

Benefits of Attached Garages

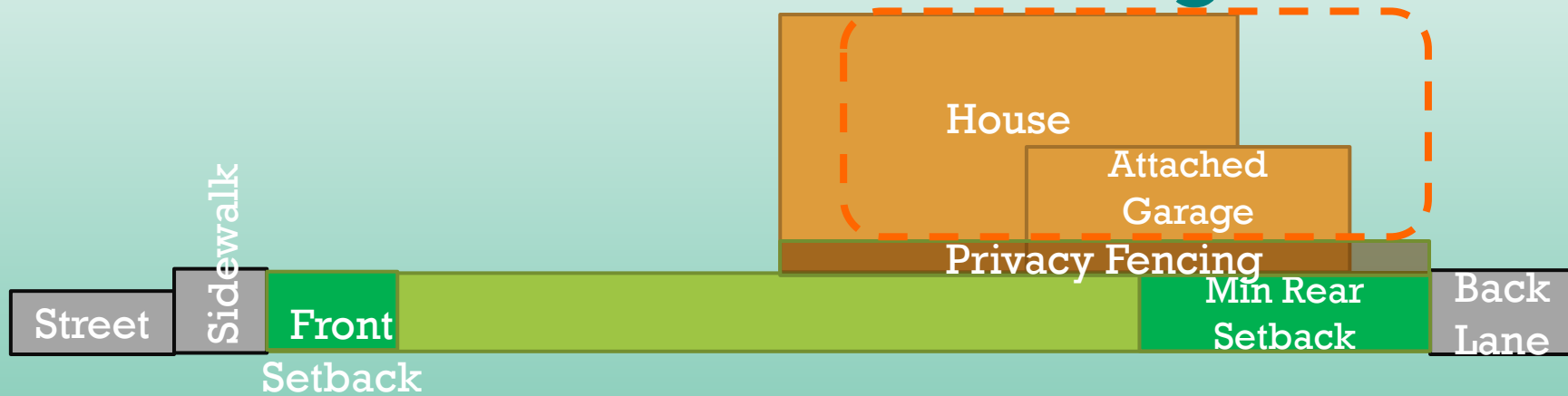
- Improve access to convenient & safe Attached Garages for ALL residents, BOTH:
 - City Core (RS)
 - Periphery (RSF)
- Reduce urban sprawl
- Increase densification, sustainability and affordability

How to Achieve for RS?

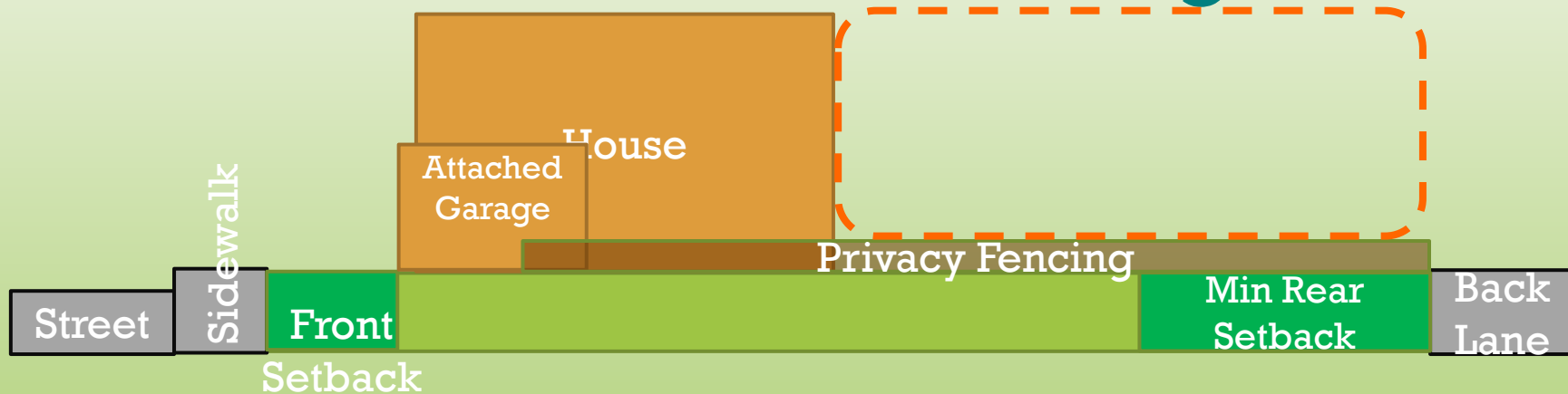
- Allow Front Attached Garages as per regulations in RSF
 - **Community preference!**
- Restrict Rear Attached Garages with exceptions **mitigating** perceived rear building mass:
 - #1: 1-Storey Link
 - #2: 1-Storey structure in within usual rear yard

Front Attached: Biggest Backyard

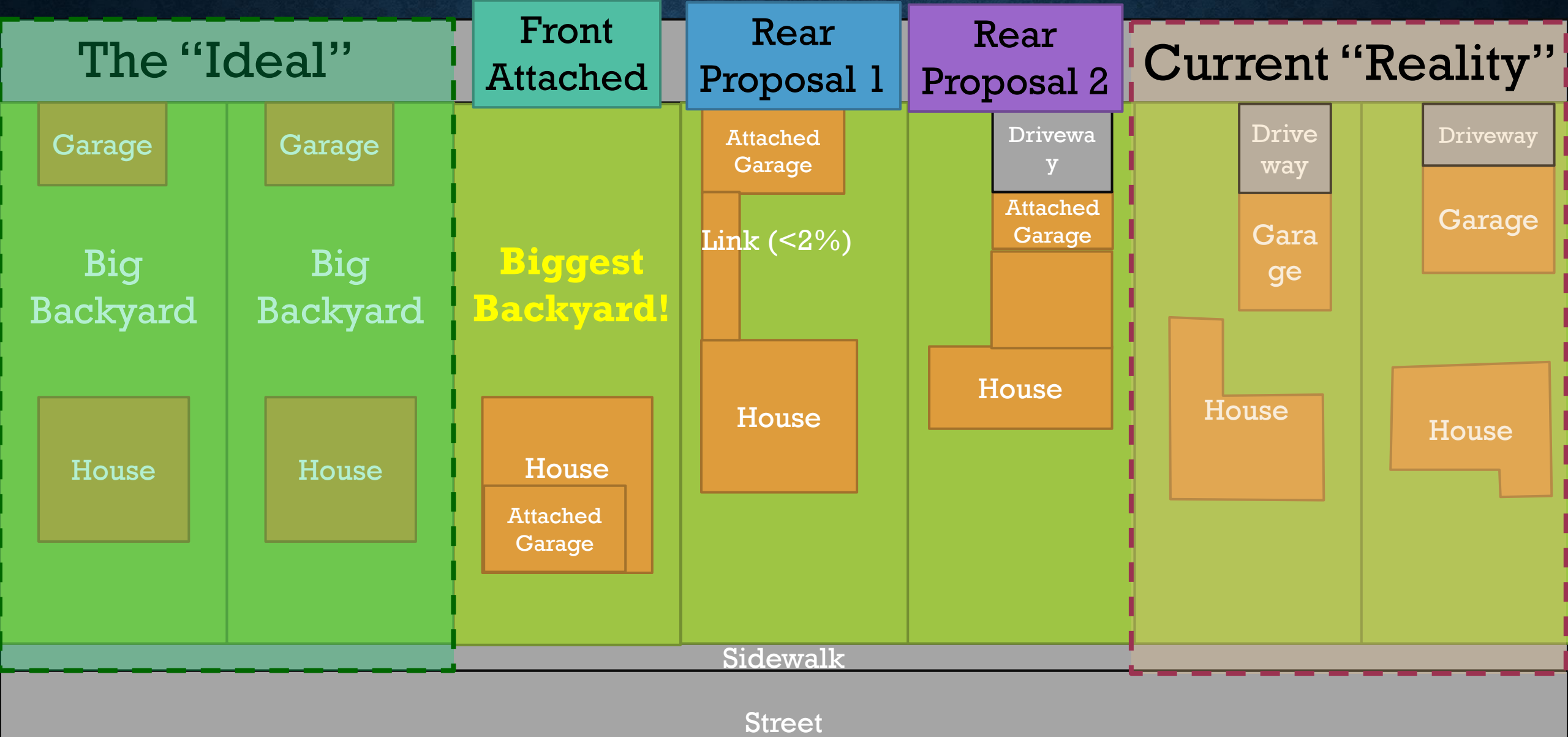
Rear Attached Garage



Front Attached Garage

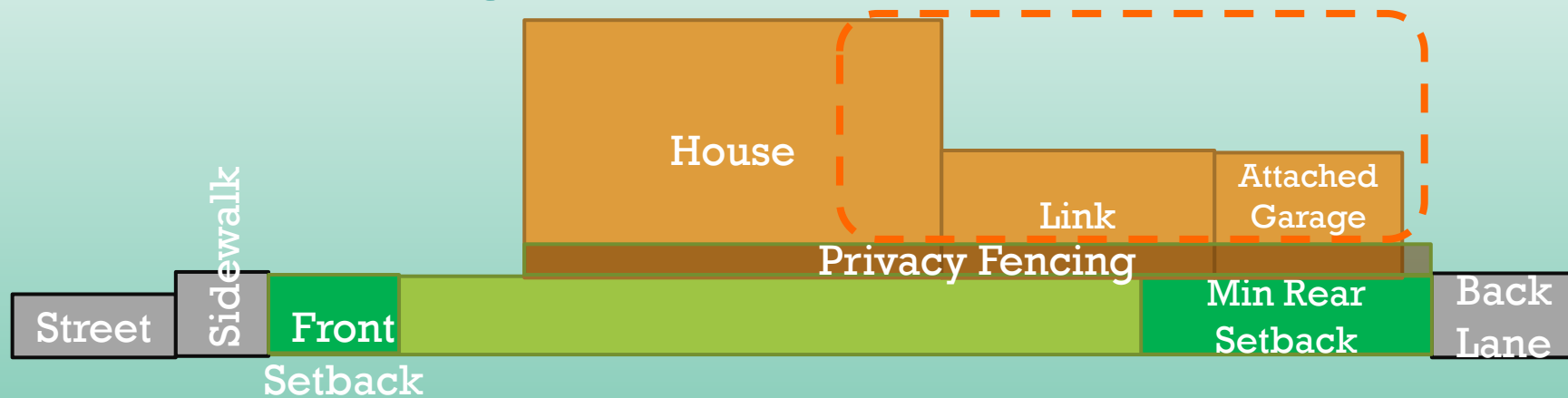


Summary

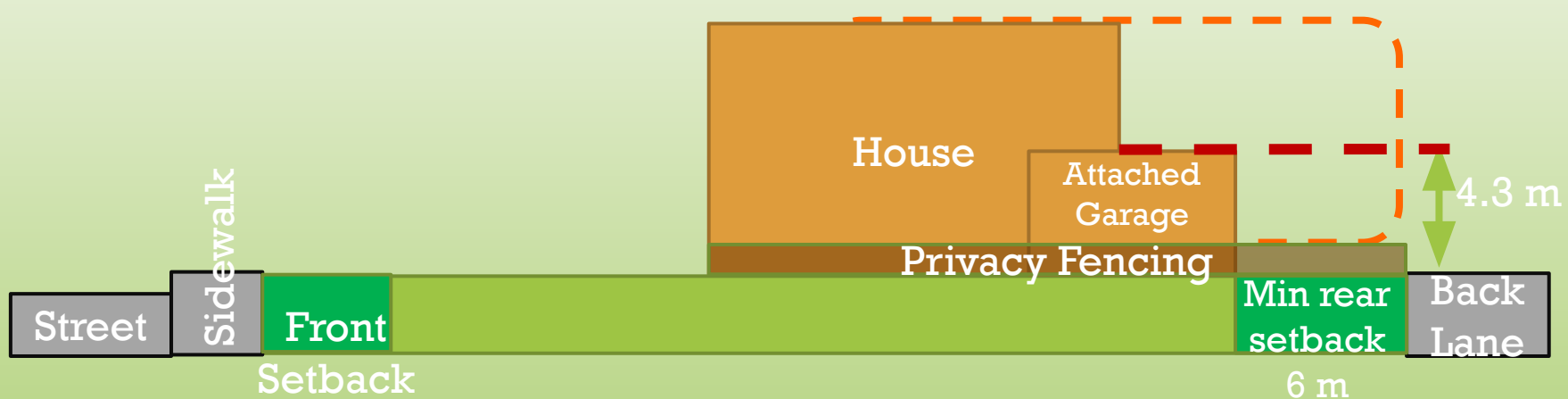


Rear Attached Impact Mitigation

Linking 1-Storey Breezeway



New Restricted Rear Attached



Densification???



Densification: **NOT** Just About High Rises

2-bedroom home

4-5 bedroom home



3-8 x INCREASED
DENSITY

1-2 residents

6-8 residents

Personal Experience

- Central Edmonton

- House

- Short commute
- **Detached garage**

- Condo

- Short commute
- **Underground parking**
- But, no backyard for the kids

- Outskirts of Edmonton

- House #1

- Long commute
- **Rear attached** garage
- Large backyard

- House #2 (current)

- Long commute
- **Front attached** garage
- Large backyard

Given the chance to build a house with an **attached garage**, I would gladly move my family of 5 back inward, reducing daily commute and carbon emissions.

Questions?