

# TORONTO COMPLETE STREETS

Stakeholder Advisory Group #3  
February 23 2016



# Presentation Outline

- I. Introduction + Update
- II. Guiding Principles
- III. Street Types
- IV. Design Framework and Decision Making
- V. Street Elements
- VI. Implementation and Performance Measures
- VII. Next Steps

# I: Introduction + Update



## Overall Purpose

### **Complete Streets is a “Decision Guide”**

- Provides tools to think differently
- Already numerous examples around Toronto, big and small, of projects that apply Complete Streets thinking
- Institutionalize consistent process and procedures

# Integration with Existing City Policies and Parallel Projects

## Existing Policies and Plans

- Official Plan
- Road Classification System
- Roadwork Standards
- Active City: Designing for Health Sustainable Transportation Initiatives
- Walking Strategy
- Pedestrian Charter
- Bike Plan
- Streetscape Manual
- Vibrant Streets Guidelines
- Accessibility Guidelines

- Green Standards
- Strategic Forest Management Plan
- Wet Weather Flow Management Guidelines

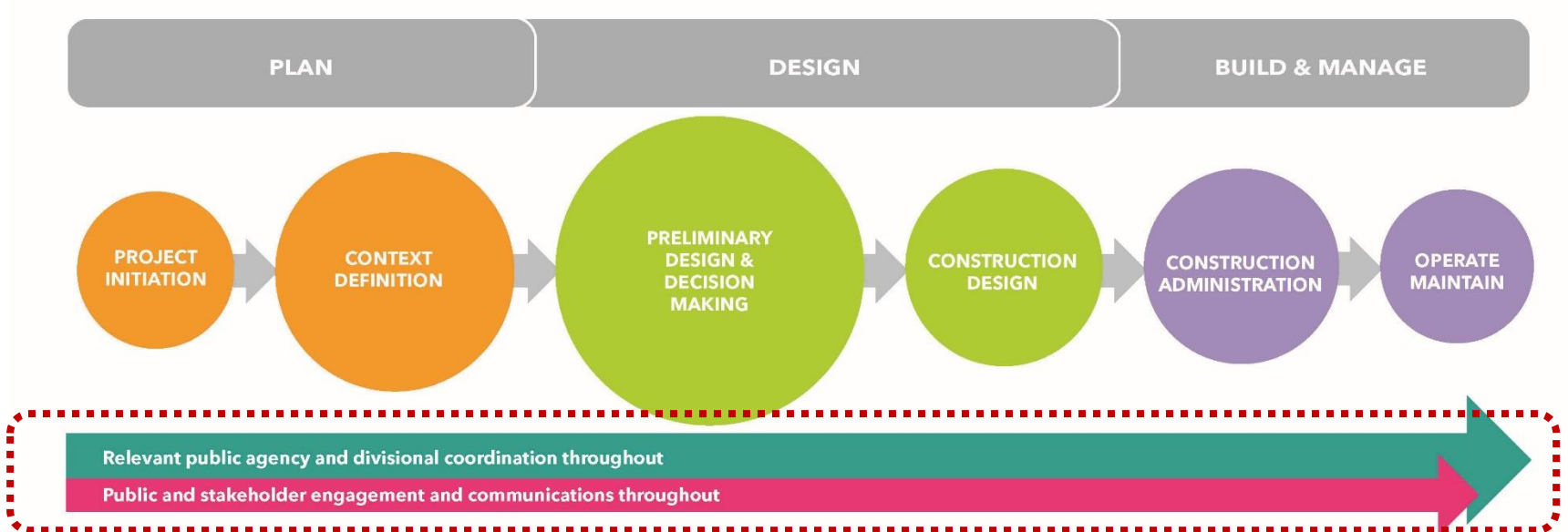
## Under Development (2016)

- Cycling Network Plan
- Cafe Design Guidelines
- On-Street Bikeway Design Guidelines
- Green Streets Technical Guidelines

# Guide Table of Contents

- 1. Overview**
- 2. Vision and Guiding Principles**
- 3. Street Types**
- 4. Design Framework and Decision Making**
- 5. Street Elements**
- 6. Tools to Make It Happen**
- 7. Performance Measures**

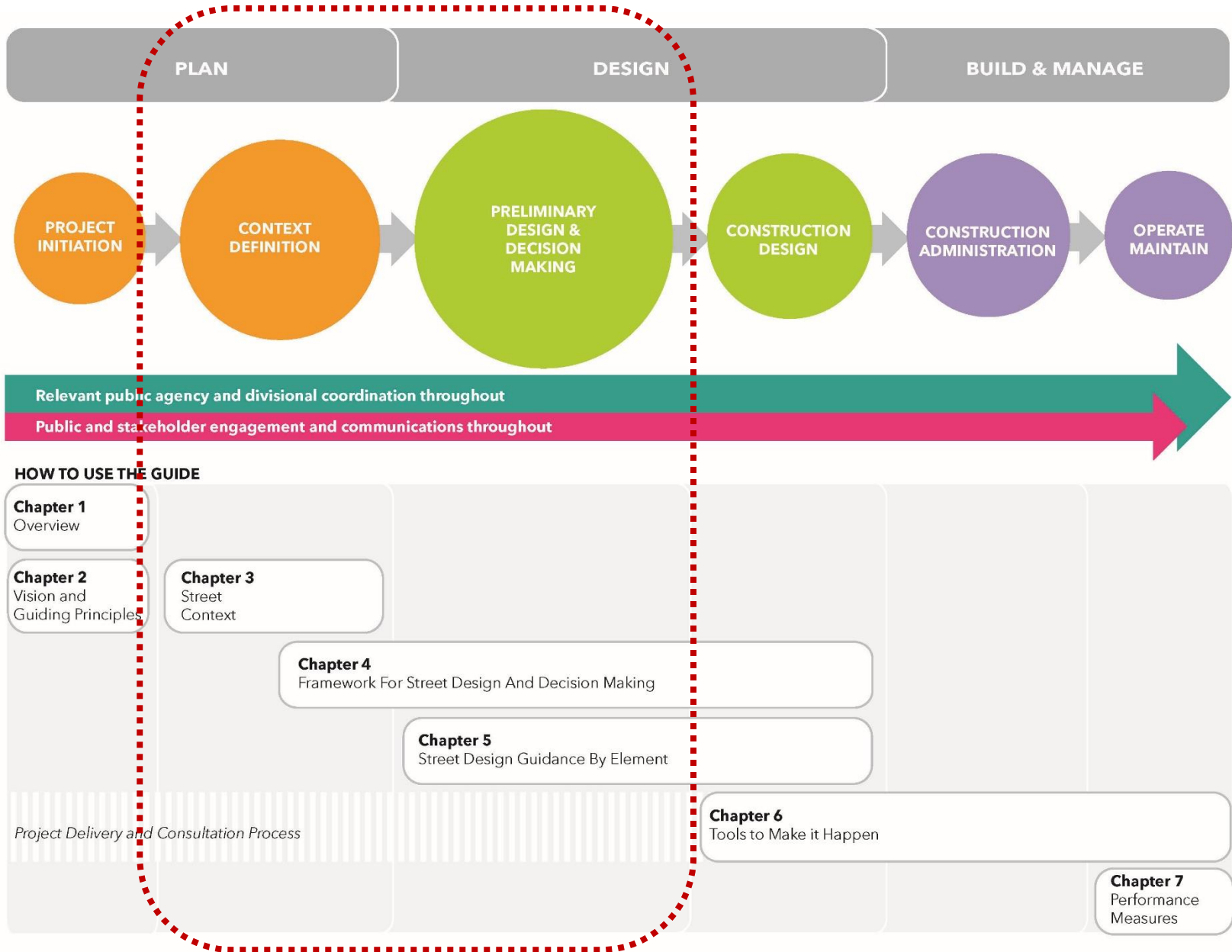
# Project Delivery Process + Engagement



## HOW TO USE THE GUIDE

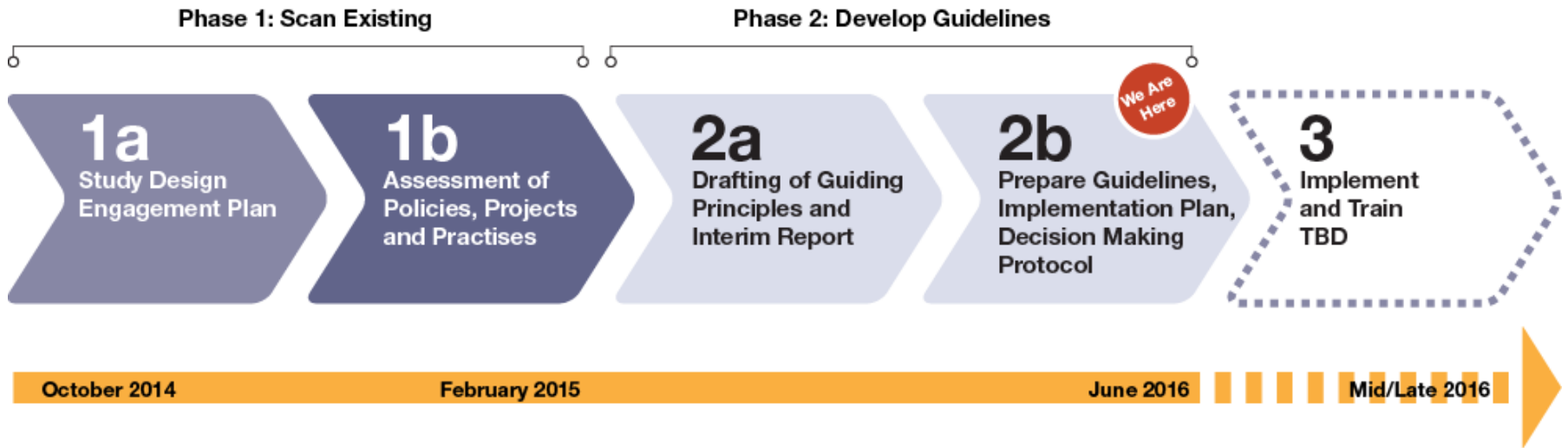
<b>Chapter 1</b> Overview					
<b>Chapter 2</b> Vision and Guiding Principles	<b>Chapter 3</b> Street Context				
		<b>Chapter 4</b> Framework For Street Design And Decision Making			
			<b>Chapter 5</b> Street Design Guidance By Element		
<i>Project Delivery and Consultation Process</i>				<b>Chapter 6</b> Tools to Make it Happen	
					<b>Chapter 7</b> Performance Measures

# Project Delivery Process and Guide Focus





# Project Timeline



## What We've Heard: SAG #2 (June 1, 2015) - Overall Guide

- The messaging around safety should be more explicit
- Explain what the definition of "safety" is
- Explain *what will be better* because of the Guidelines

## Activities since SAG #2 (June 1, 2015)

### Public Engagement

- Public Open House + Panels
- Moving Conversations
- Online Survey
- Photo Contest
- YIMBY festival

### Stakeholder Engagement

- Disability, Access and Inclusion Advisory Committee
- TCAT Forum
- BILD Toronto Chapter
- Technical Advisory #5
- Steering Committee #4

### Review Submissions

- Annotated Outline
- Chapters 1,2,3

### Content Development

- Drafts completed for Chapters 1, 2, 3, 4
- Organization clarified for Chapter 5. First Draft of Elements Completed
- Outlines developed for Chapters 6 and 7

## Activities since SAG #2 (June 1, 2015)

### **Feedback from 22 City, Agency and Provincial staff representing the following Organizations and Units**

- **Transportation Services**
  - General Manager's Office
  - Cycling Infrastructure and Programs
  - Pedestrian Projects
  - Traffic Operations
- **City Planning**
  - Urban Design
  - Transportation Planning
- **Toronto Water**
- **TTC**
- **Fire Services**
- **Toronto Public Health**
- **Toronto Parking Authority**
- **Municipal Licencing and Standards**
- **Metrolinx**

## Draft Key Messages: TAC 05, February 11, 2016

- TAC interested in seeing entire consolidated guide (as opposed to piecemeal, chapter-by-chapter).
- Street Types are generally clear. Transit not yet identified as priority use by type.
- The directives are on the right track (especially safety): consider adding directives or more clarity around place making, and accessibility.
- The steps to designing streets seem logical. Perhaps define more clearly (similar to EA processes).
- Interest in implementation tools.
- Street elements seem generally right, with suggested changes.

## II. Guiding Principles



## Purpose of Guiding Principles

- The foundation for successful street design
- States what you are trying to achieve
- Often more than one way to solve the problem or meet the overall goal; principle-based planning and design provides flexibility without being overly prescriptive

## What We Heard: Guiding Principles

- **The grouping of the principles into three categories makes sense**
- **Explain how the principles will be applied/measured**
- **Add more references to diversity (gender, income, religion, sexual orientation, and abilities)**



## Guiding Principles

### Streets For People

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Improve Safety &  
Accessibility

Give People  
Mobility Choices

Make Connected  
Networks

Promote Healthy &  
Active Living

### Streets As Places

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Create Beautiful &  
Vibrant Public Spaces

Respond to Local  
Area Context

Improve  
Environmental  
Sustainability

### Streets For Prosperity

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Support Economic  
Vitality

Enhance Social  
Equity

Balance Flexibility &  
Cost-Effectiveness



# III: Street Types



# Street Types: Purpose



## What We Heard: SAG #2 - Street Types

- Explain how network maps and network planning connect to Street Types and the street design process
- Explain if/how Street Types encourage mode shifts or mode priority

## A Starting Point: 15 Toronto Street Types

- **Civic Street**
- **Main Street**
  - Core and Centres
  - Avenues and Neighbourhood
- **Connector**
  - Mixed Use
  - Residential
- **Residential Street**
  - High Density
  - Moderate Density
  - Low Density
- **Mixed-Use Access Street**
- **Employment Street**
- **Scenic Street**
- **Park Street**
- **Lanes**
  - Mixed Use
  - Residential

## For Each Street Type

- **Description**
- **Objectives: Design and Functional**
- **Desired Activities**
- **Street Elements: Required and Optional**
- **Sample Toronto Streets**

## Key Differences between Civic and Main Street Types

### Civic Street

- Placemaking and identity
- High pedestrian and bike travel
- Often well served by enhanced transit

### Main Streets, Core and Centres

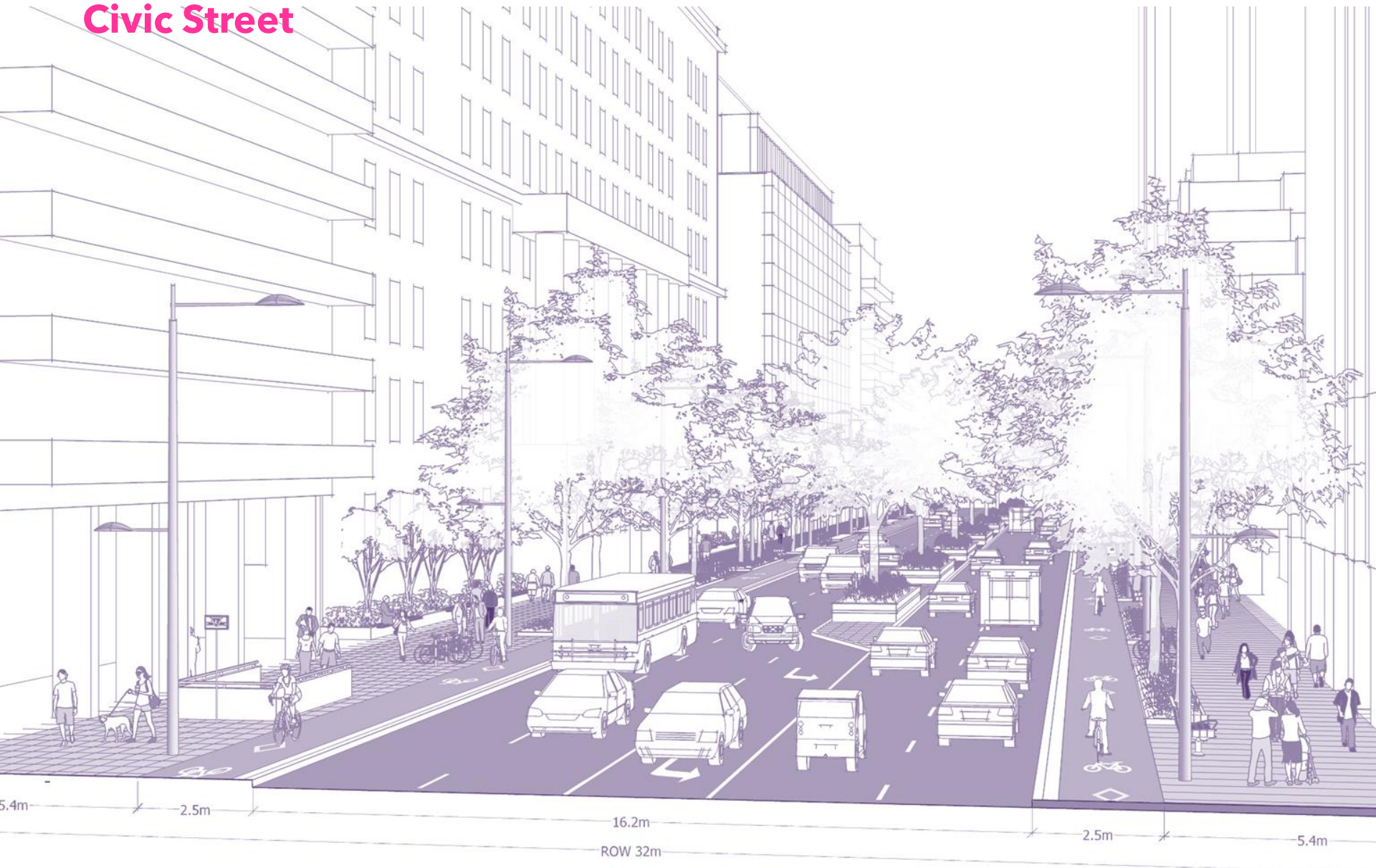
- Support local businesses
- Outdoor dining and retailing
- Seating
- High to moderate pedestrian travel
- Often well served by enhanced transit

### Main Streets, Avenue and Neighbourhood

- Support local businesses
- Outdoor dining and retailing
- Seating
- High to moderate pedestrian travel
- Parking and multi-modal access

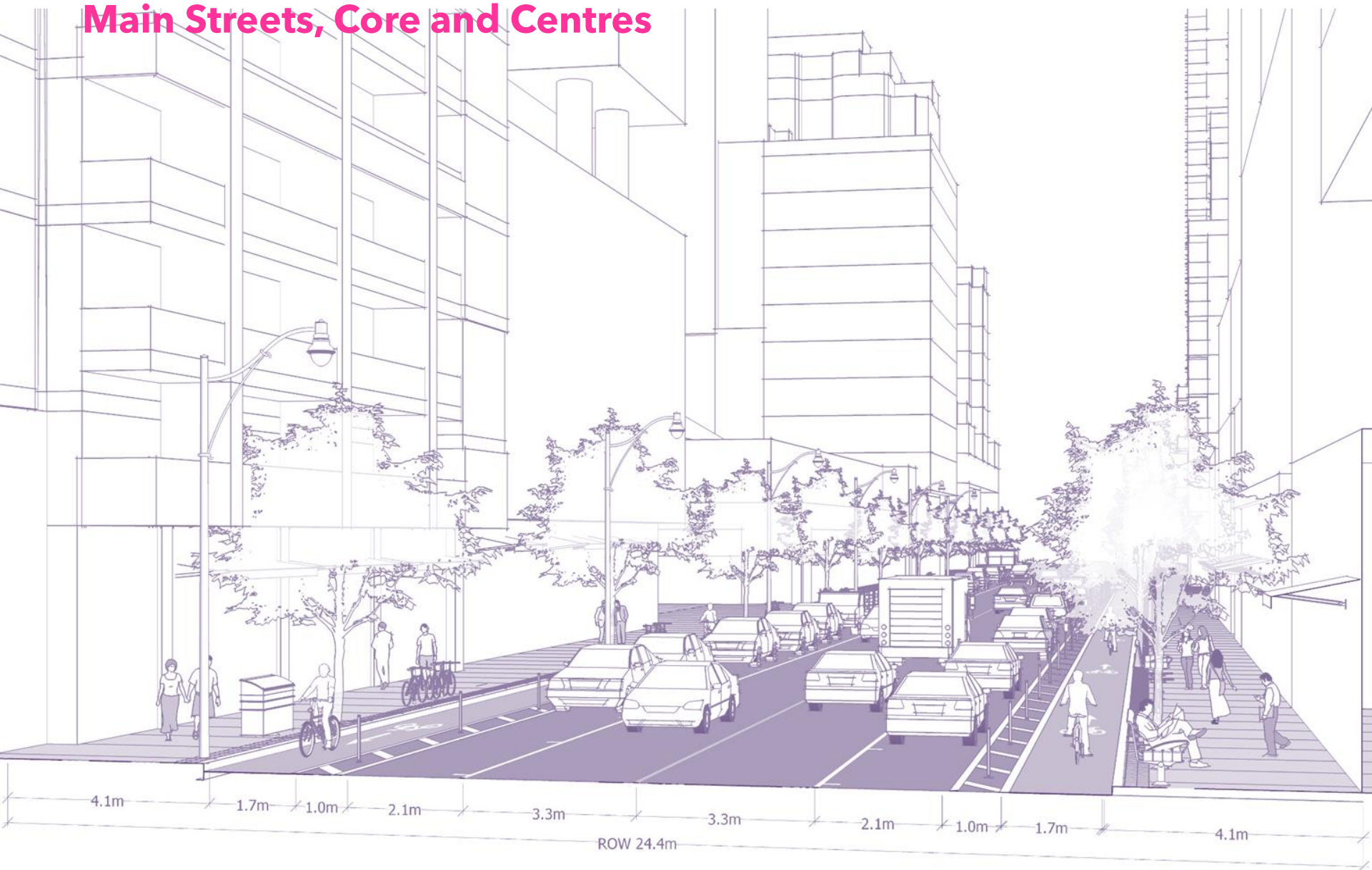


# Civic Street



5.4m 2.5m 16.2m 2.5m 5.4m  
ROW 32m

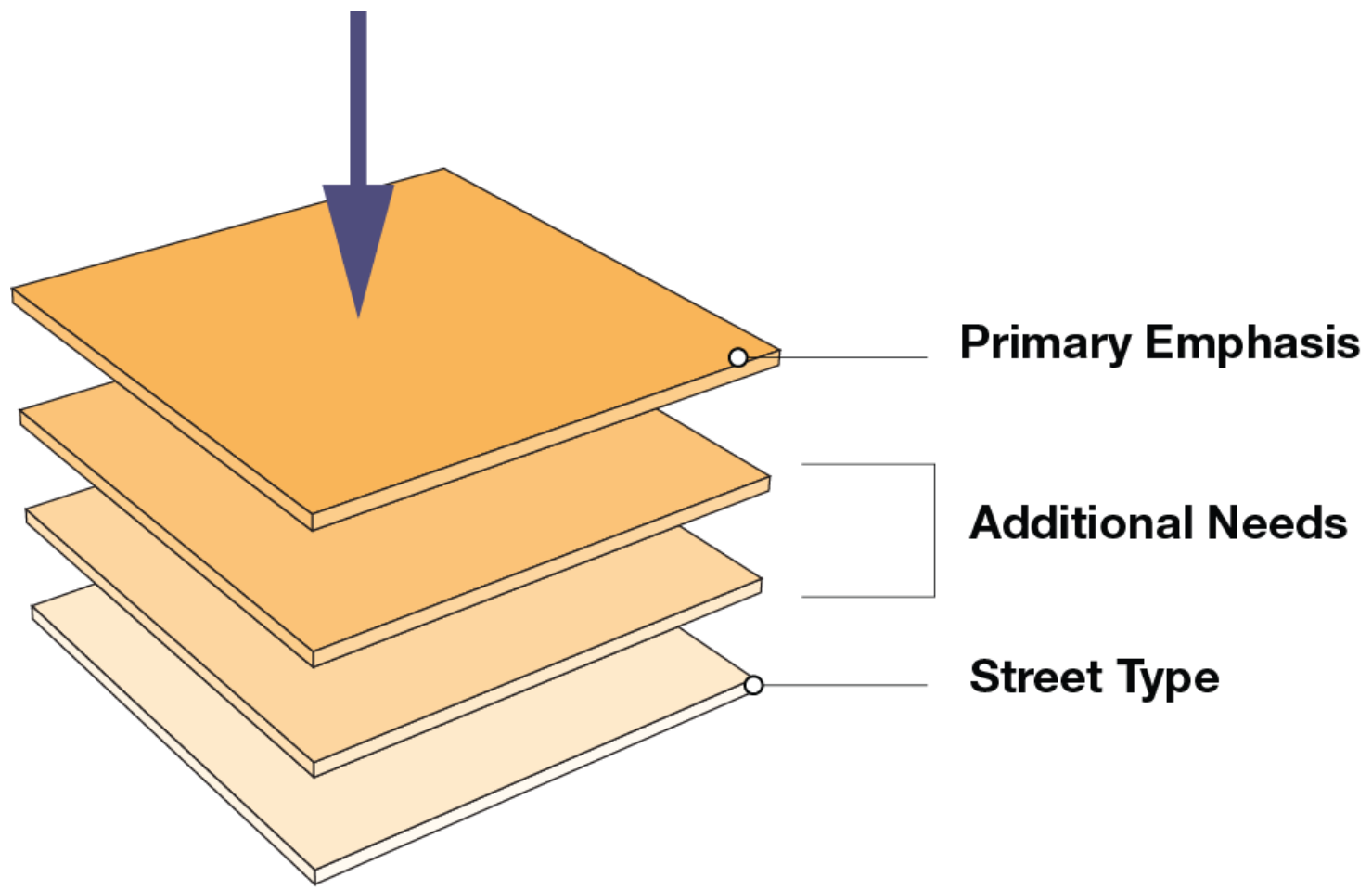
# Main Streets, Core and Centres



# Main Streets, Avenues and Neighbourhood



# Overlays



Type of Overlay	Characteristic of Overlay	Examples of Sources
Official Plan (zoning and land use, population and employment growth, secondary plans, community improvement plans, etc.)	Place (e.g., kinds of land use and type of density)	<a href="#">Zoning Map</a> <a href="#">Projected Population Change Map (P. 78)</a> <a href="#">Development Applications Character Area Map</a> <a href="#">Environmentally Significant Areas</a> <a href="#">"Avenues" Urban Structure Map</a>
Streetscape Manual (also related are BIA master plans, or streetscape plans)	Place (e.g., kinds of land use and streetscape approach)	<a href="#">Streetscape Manual Map</a> <a href="#">BIA Map</a>
Employment Areas	Place (e.g., type and concentration of employment)	<a href="#">2014 Toronto Employment Survey</a> <a href="#">Employment Concentration Map</a>
Neighbourhood Improvement Area	Place	<a href="#">NIA Map</a>
Official Plan (regional connections, "Avenues", ROW, transit, etc.)	Link (e.g., types of users and demand)	<a href="#">Regional Connections Map</a> <a href="#">"Avenues" Urban Structure Map</a> <a href="#">ROW Widths On Major Streets</a> <a href="#">Transit Priority Network Map</a> <a href="#">High Order Transit Corridor Map</a>
Pedestrian Priority Map	Link (e.g., types of users and demand)	<a href="#">Pedestrian Priority Map</a>
Cycling Network	Link (e.g., types of users and demand)	<a href="#">Open Data</a>
Freight and Goods Movement Network	Link (e.g., types of users and demand)	<a href="#">Intersections With High Through Truck Traffic Map (Pg. 15)</a>
Parking	Link (e.g., types of users and demand)	<a href="#">Open Data</a>

## Discussion: Street Types

- Do you understand the purpose of street types?
- Do you have any suggestions on how we could make it clearer?

# IV: Design Framework + Decision Making



## Purpose of the Design Framework

- **Overview of key street design tactics to consider throughout the street design process**
- **Will apply to all street types; help to establish design priorities for a street**
- **Range of subjects we as practitioners shall consider for every street project throughout the street's lifecycle**



## What We Heard: SAG #2 - Design Framework + Decision Making

- Describe the street design process as collaborative (instead of as trade-offs)
- Clarify how and when decisions will be evaluated during the steps to designing streets
- Include public and stakeholder engagement throughout the process (including at project initiation, construction, and auditing)
- Indicate the role of politicians in street design processes
- Show some examples of projects going through the process

# Design Framework Directives



## What to achieve...

<b>VISION &amp; PRINCIPLES</b>
<i>A principle is a core value that forms the foundation for planning the needs of a street.</i>
<b>STREETS FOR PEOPLE</b>
Improve Safety and Accessibility
Give People Mobility Choices
Make Connected Networks
Promote Healthy and Active Living
<b>STREETS AS PLACES</b>
Create Beautiful & Vibrant Public Spaces
Respond to Local Area Context
Improve Environmental Sustainability
<b>STREETS FOR PROSPERITY</b>
Support Economic Vitality
Enhance Social Equity
Balance Flexibility and Cost Effectiveness

## How to achieve it...

<b>Street Design Framework: 5 Key Directives</b>				
<i>A directive is authoritative instruction or "formal direction" that guides practitioners, requiring them to assess and carry out these directives in their activities to help shape Complete Streets.</i>				
Safety	Place	Link	Greening	Life-Cycle & Maintenance
●	●	●		●
●		●		●
●	●	●		●
●	●	●	●	●
●	●		●	●
●	●	●		
●	●	●	●	●
●	●	●	●	●
●				●

## Chapter 4 Outline

4.1 Safety Directives

4.2 Place Directives

4.3 Link Directives

4.4 Greening Directives

4.5 Lifecycle and Maintenance Directives

4.6 Decision Making:

- Steps to Assembling the Street
- Cross Section Elements
- Assessing and Deciding Trade-Offs
- Exceptions

<b>Directives and Best Practices</b>	NACTO (2013)	ITE (2010)	Chicago (2010)	Boston (2013)	NYC (09,13,15)	Philly (2010)	LA (2015)	Calgary (2014)	Edmonton ('13)	Abu Dhabi '10)
<b>Safety</b>										
Vulnerable User	x	x	x	x	x	x	x	x		x
Target Speed	x	x	x	x	x		x	x	x	x
Exposure Risk	x	x	x							
Design Vehicle	x	x	x		x			x	x	x
Predictability/Self Regulating Design	x		x							
<b>Place</b>										
Streets in Context	x	x	x	x	x	x	x	x	x	x
Pedestrian Comfort	x	x	x	x	x	x	x	x	x	x
<b>Link</b>										
Desire Lines	x		x		x					x
Person Throughput and Mobility	x	x	x	x			x			x
Complete Networks	x	x	x	x		x	x	x	x	x
<b>Greening</b>										
Street Trees	x			x	x	x	x	x	x	x
Stormwater Management	x			x	x	x	x	x		
<b>Life-Cycle Cost and Maintenance</b>										
Total Cost	x	x	x	x				x	x	
Four Season Use									x	
Materials				x	x	x				x

## Safety Directives

1. **Prioritize Vulnerable Users**
2. **Target Speed**
3. **Minimize Exposure Risk**
4. **Accommodate the Most Common Design Vehicle/Control Vehicle**
5. **Predictability/Self-Regulating Design**

## **Prioritize Vulnerable User: Statement**

**Safety is the paramount objective of complete streets. Vulnerable users such as pedestrians and cyclists, especially children, the elderly and people with disabilities, are at greater risk of injury and mortality during a collision than vehicle occupants.**

## MASS OF VARIOUS STREET USERS

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**Bus/Streetcar**  
**11,000 - 48,000 kg**



**Automobile**  
**900 kg**



**Cyclist/Pedestrian**  
**10 - 110 kg**

*"For every action, there is an equal and opposite reaction"*

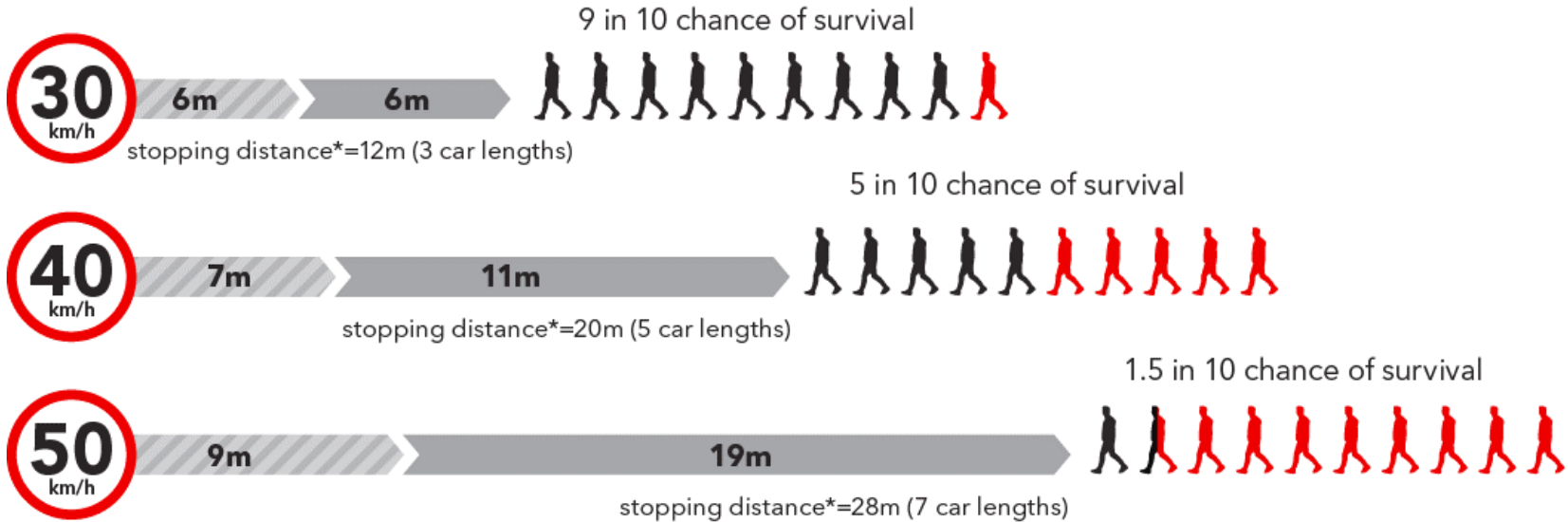
Sir Issac Netwton's 3rd Law of Motion

The force between two colliding objects is a factor of mass (weight) multiplied by velocity (speed in a straight line).

Mass differential between street users results in more severe injuries to the lighter of the two colliding bodies. The force of the collision increases as user weight and speed increases.



## VEHICLE SPEED, STOPPING DISTANCE, AND CHANCE OF SURVIVAL

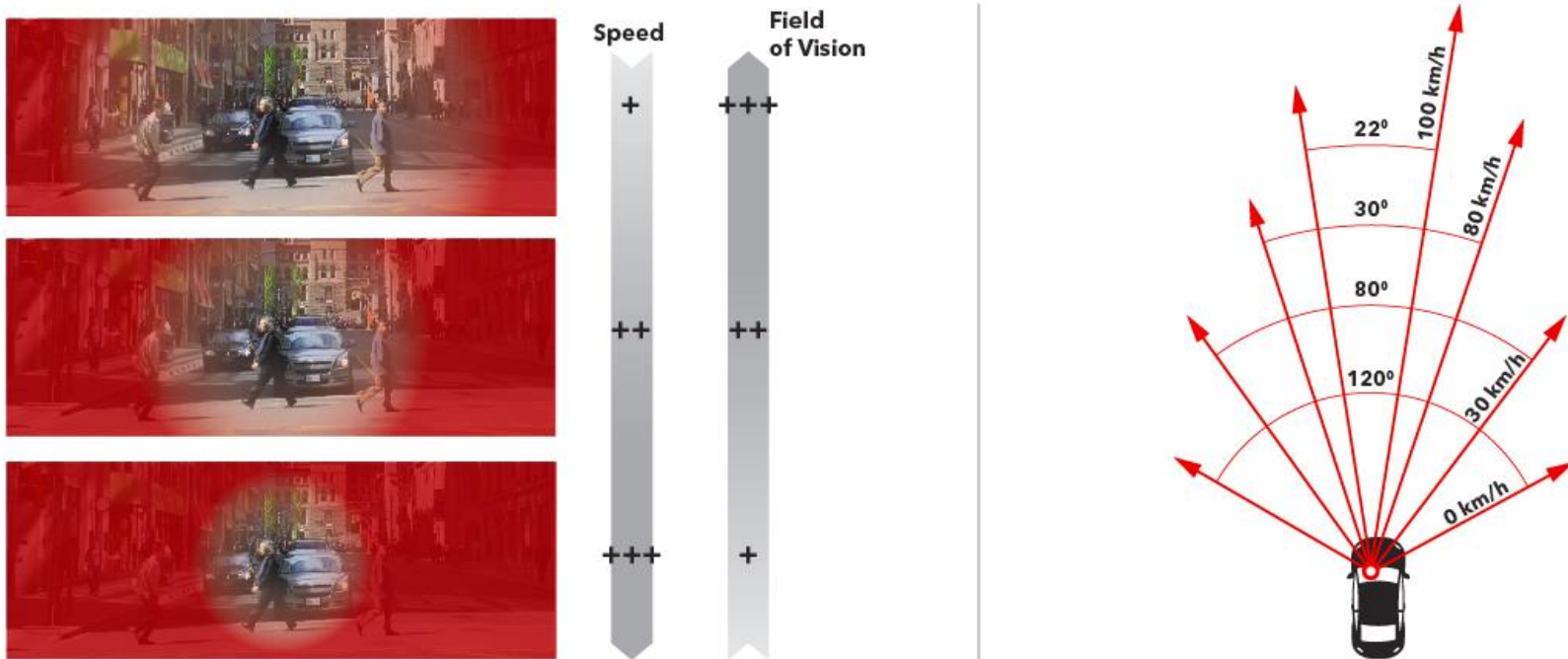


 Thinking distance   
  Braking distance

\*Stopping distances during dry conditions. Single car length=4m

source: adapted from World Health Organization

## SPEED + NARROWING FIELD OF VISION



Speed is especially lethal to vulnerable users like people walking or riding a bicycle. The risk of severe injury increases as a driver's field of vision narrows.

source: base image: mark.watmough flickr: cc.2.0; Federal Motor Carrier Safety Administration; DTAH

## Prioritize Vulnerable User: Guidance

- Lower speeds to reduce severe injuries and deaths
- Fewer and narrower travel lanes to slow speeds and shorten crossing distances and exposure
- Curb extensions and tighter corners to slow turning speeds
- Bicycle facilities designed according to context, and to make cyclists more visible to turning vehicles
- Fewer and narrower driveways with proper ramps to privilege people on sidewalks

## Link Directives

- Understand and Accommodate Desire Lines
- **Design for Person Throughput and Mobility**
- Design Complete Streets to Support a Complete Network
- Enhance Network Connectivity

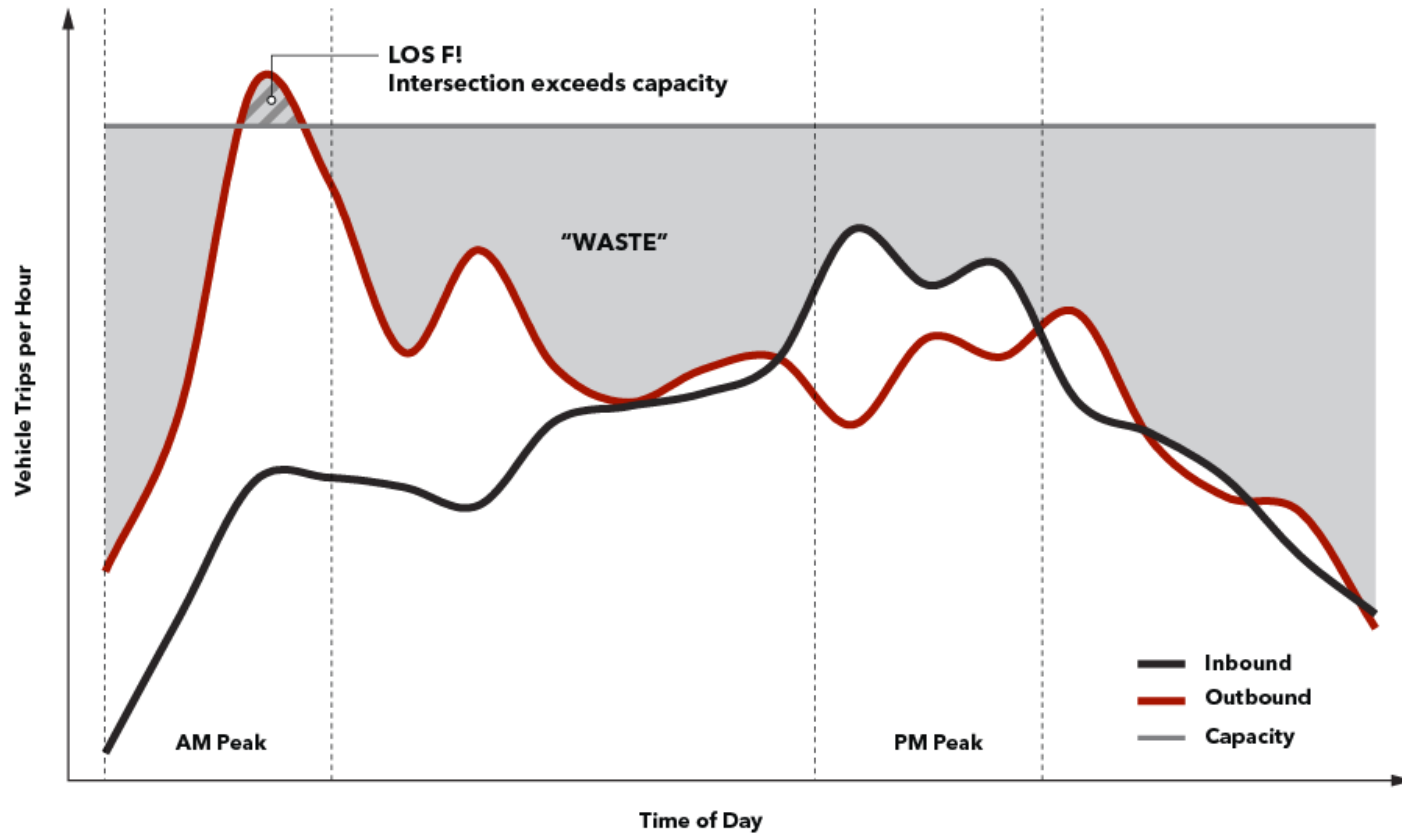
## **Person Throughput + Mobility: Statement**

**Street rights-of-way are limited and finite.**

**Optimizing their use requires that designers evaluate alternatives based on the maximum use and throughput by persons rather than vehicles.**

**Street design should support and encourage travel by higher volume and more space efficient modes.**

## CAPACITY AND DELAY



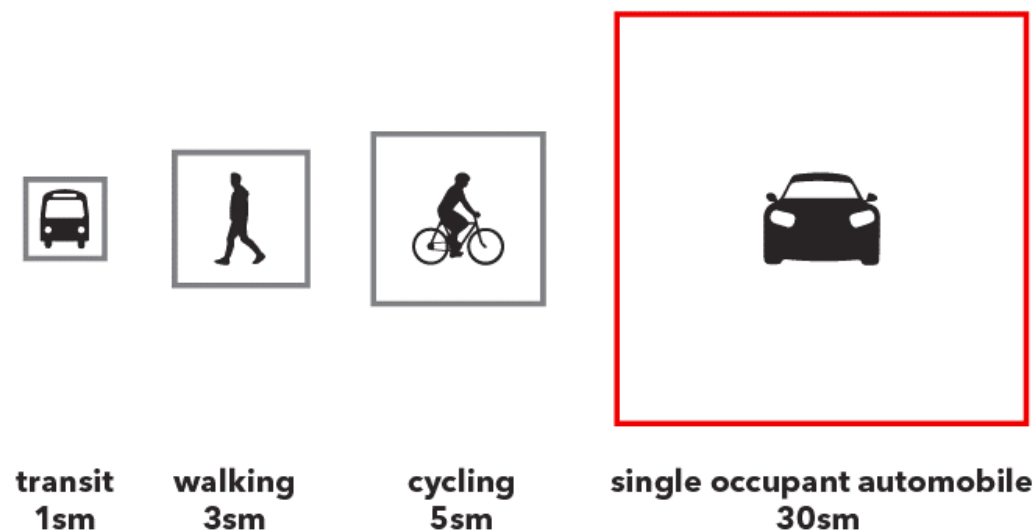






## ROAD SPACE REQUIRED PER PASSENGER FOR VARIOUS TRAVEL MODES

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Road space requirements increase with vehicle size and speeds (faster vehicles require more distance between them and other objects), and declines with more passengers per vehicle.

Single occupant automobile travel on arterials requires approximately ten times as much space as walking, cycling and public transport.

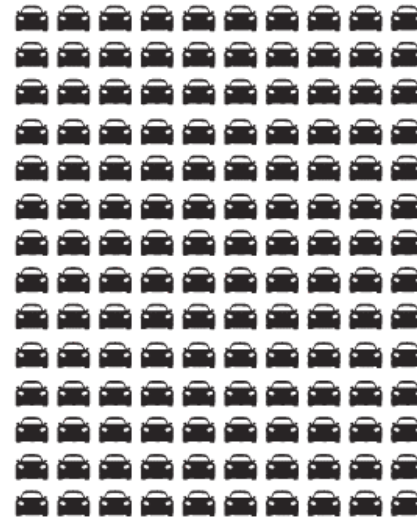
## MODE PRIORITY: PERSON CAPACITY



**1 single occupancy vehicle**



**50 people per bus**



**143 passengers per LRT**

## Person Throughput: Guidance

- Accommodate and provide choice to all users, and increase opportunities for non-auto travel
- Appropriately allocate the public right-of-way to anticipated multi-modal transportation demand
- Prioritize non-auto travel and include a broader set of objectives such as equity, public health, and sustainability
- Use the fewest travel lanes, narrowest lane width and tightest curb radii as possible based on the identified design vehicle
- Understand the actual demand for parking, both on and off street, in order to meet corridor needs through a broader strategy

## Place Directives

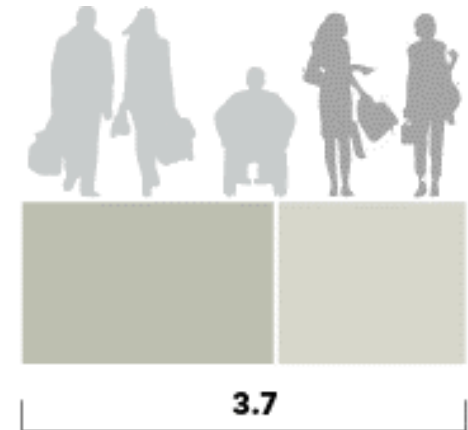
- Streets in Context
- **Pedestrian Comfort**

## **Pedestrian Comfort: Statement**

**Design streets to offer a comfortable pedestrian environment, with sufficient space to support walking and reduce crowding of sidewalks and crosswalks.**

**Streets should also provide suitable microclimatic conditions to reduce cooling winds in winter, provide shade in summer, and protection from rain and snow where possible.**

## Pedestrian Comfort



## Pedestrian Comfort: Guidance

- **Make informed decisions based on existing and anticipated pedestrian volumes and an understanding of the experience as one walks down the street**
- **Understand the demands on the street for different times of day and days of the week, possibly as part of a multi-modal assessment for street users**
- **Provide unobstructed Pedestrian Clearway Zones that relate to street context**
- **Include Furnishing and Planting Zones (benches, shade trees, buffer from moving autos) that support pedestrian activities**
- **Provide level walking surfaces and smooth grade transitions in pedestrian clearways and crosswalks at intersections**

## Greening Directives

- **Street Trees**
- **Stormwater Management**



## **Street Trees: Statement**

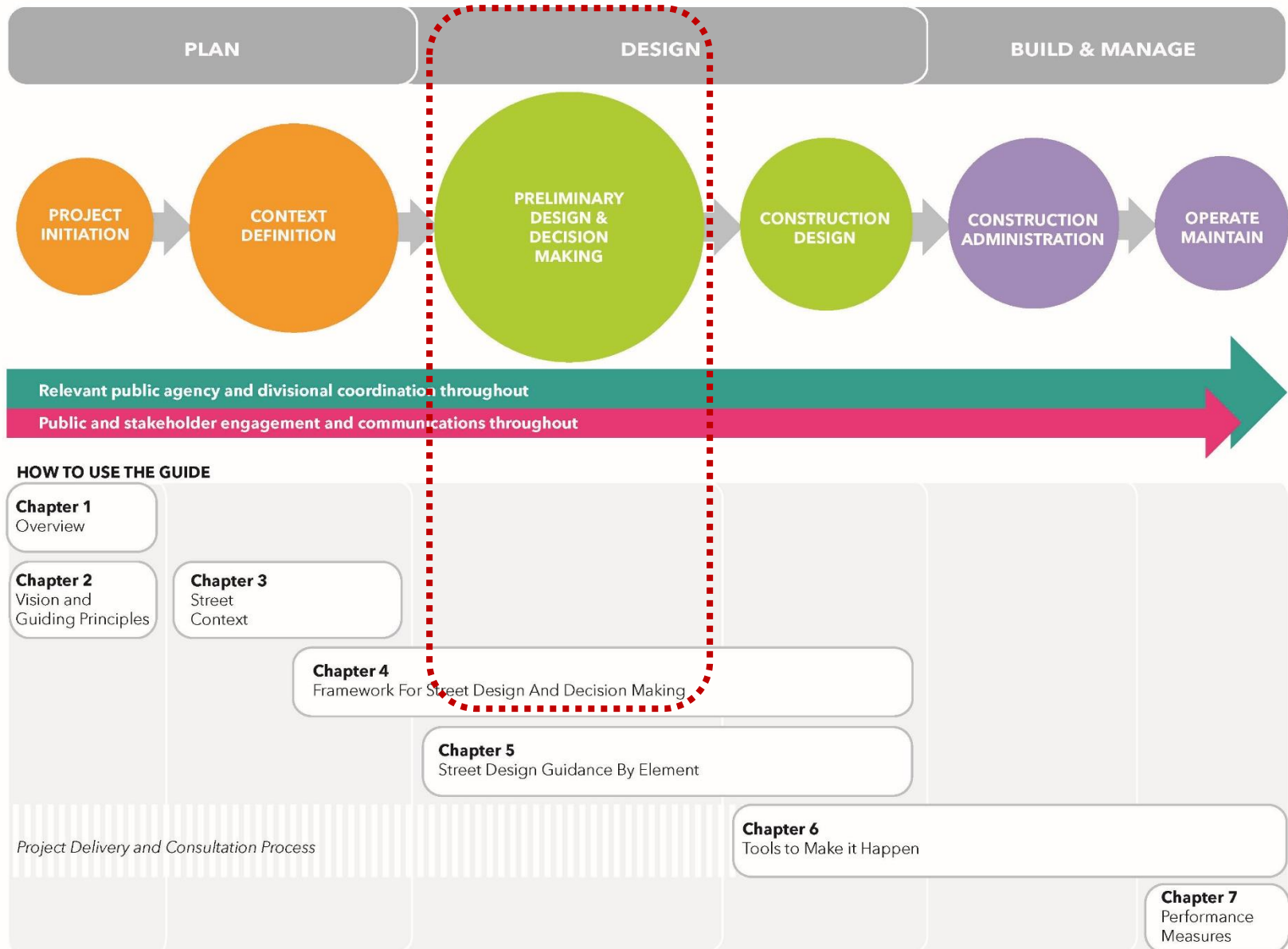
**Street trees are a highly desirable element for making pleasant, comfortable and sustainable streets.**

**Consider street trees an integral component of Toronto's infrastructure. Where provided, street trees should have non-compacted soil volume and growing conditions to grow to be healthy and mature.**

## Street Trees: Guidance

- For street reconstruction projects, include street tree planting with available space and suitable growing conditions. Ensure suitable tree planting budget is included in the overall cost
- For other street projects, seek opportunities to introduce street trees and improve growing conditions (for example, in curb extensions or rain gardens)
- Introduce open tree planters wherever possible
- Coordinate utilities to minimize impact on the root zone
- Ensure sufficient budget for on-going maintenance

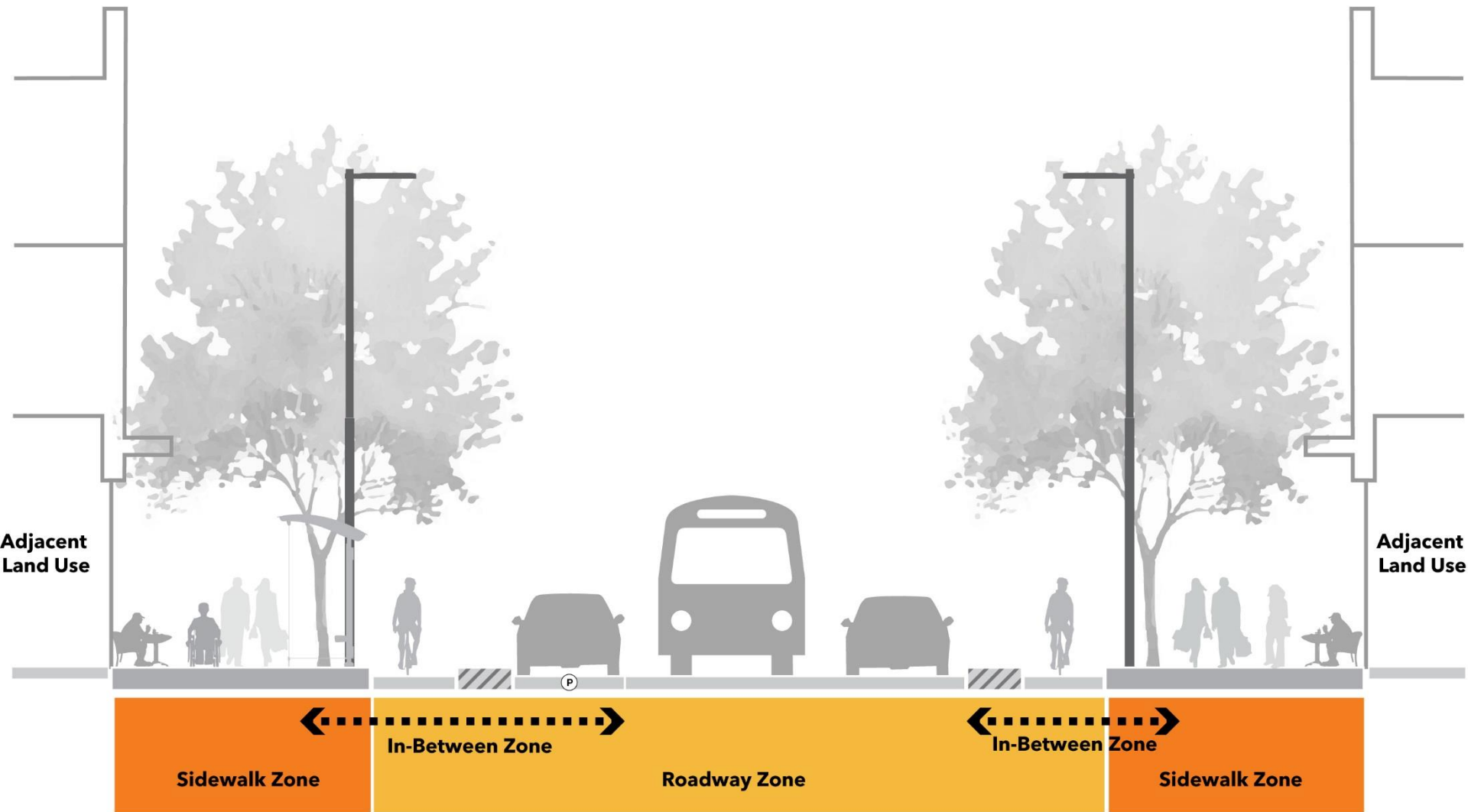
# Project Delivery Process / Assemblage



## Assemblage / Steps to Assembling the Street

1. Define Project Objectives
2. Inventory of Existing Conditions and Background Policy Review
3. Identify Context
4. Establish User Profile
5. Identify Networks
- 6. Develop the Initial Cross Section**
7. Develop the Plan
8. Locate Street Elements
9. Identify Areas of Interaction
10. Develop Solutions
11. Develop the Initial Streetscape Design

# Cross Section: Street Zones



## Cross Section: Elements

### **Sidewalk Zone**

- Edge
- Furnishing and Planting
- Clearway
- Frontage

### **Roadway Zone**

- Vehicle Travel Lanes
- Medians
- Transit Lanes
- Cycling Infrastructure

### **In-Between Zone**

- Planting and Furnishing
- Curbs and catch basins
- Cycling infrastructure
- Transit lanes and stops
- Parking lanes
- Right-turn or transit queue jump lanes

## Sidewalk Zones



**1. Frontage Zone.** Where the street interfaces with adjacent properties. This area need not exist entirely within the public right-of-way if a building setback is present. The dimension of this area will vary and often increase after other space requirements are met.

**2. Pedestrian Clear Zone.** This is the most important area of all streets. It is where people walk, linger, and wait to cross the roadway. All streets in Toronto shall maintain a minimum pedestrian clearway of 1.8m. A higher minimum dimension is required for many streets and locations with greater pedestrian intensity. See Chapter 5: Sidewalk Dimensions, for more information.

**3. Furnishing Zone.** This is the space typically between the pedestrian clearway and edge zone or curb, although it may possibly locate elsewhere such as to the other side of the pedestrian clearway. It is where trees and other plantings are situated, and where street furniture and utility poles are normally placed.

**4. Edge Zone.** This is the space that typically occupies from the face of curb to the Planting and Furnishing zone. This dimension is important to accommodate door swing from curbside parked vehicles and mirror overhang.

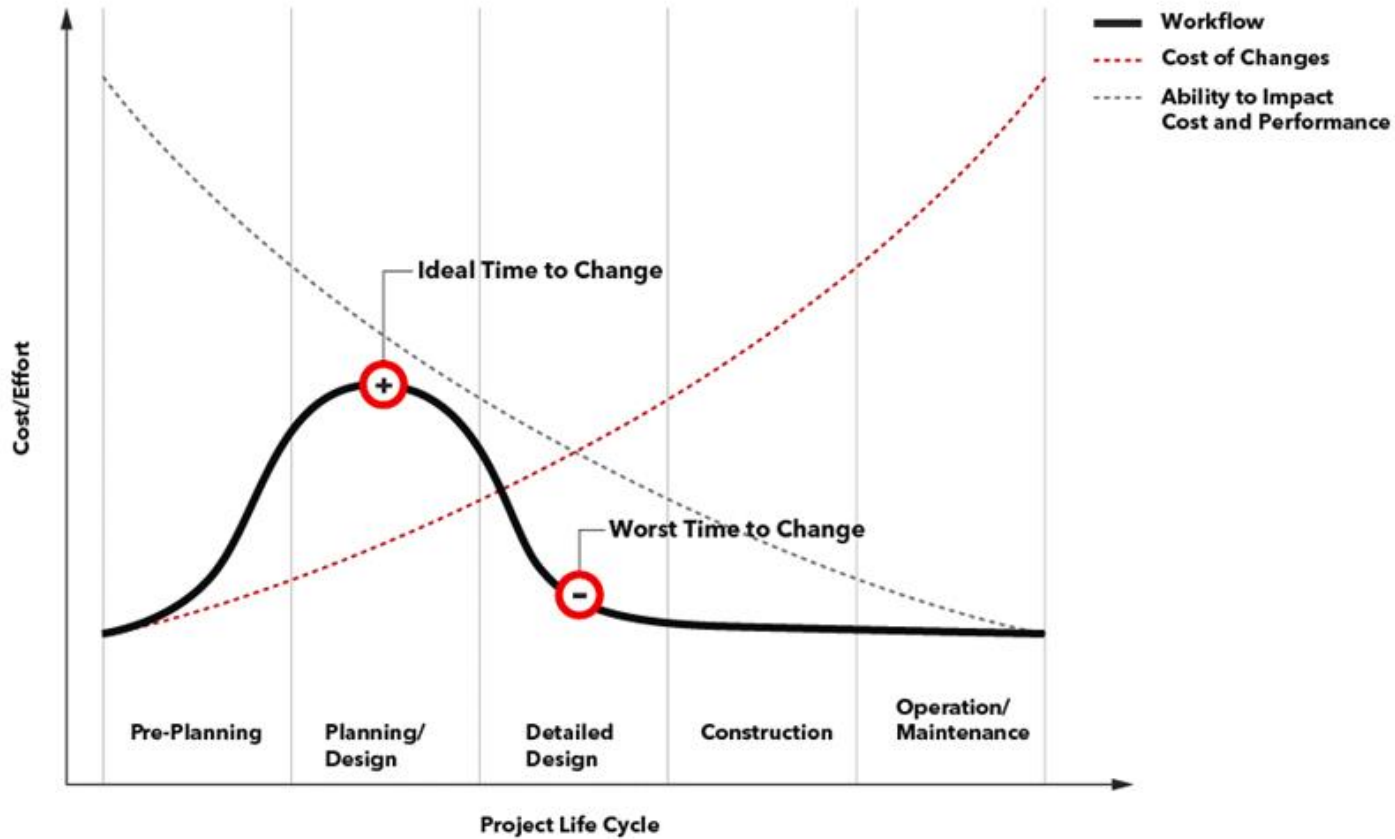
**5. In-Between Zone.** This zone inhabits the space between the Sidewalk Zones and Roadway Zones and often overlaps both. Traditional practice divides the road into two: roadway and roadside. This third zone speaks to the more complex and nuanced nature of streets—elements that are particular to neither the roadway nor roadside.

## Collaborative Decision Making

1. Develop Ideal Cross Section/  
Prepare Alternative Designs
- 2. Establish Trade-Off Methodology**
3. Refine Cross Section
4. Finalize and Document Decision



## DECISION MAKING: LIFE CYCLE COST / COLLABORATION



## Discussion: Design Framework + Decision Making

- **What (if anything) do you think is missing from the design directives?**
- **Do the steps to assembling streets seem logical to you? What suggested changes (if any) do you have?**

# V: Street Elements



## Purpose of Street Elements

- Provide guidance for each element used in the cross section and plan, midblock and intersection
- Focus on context and user need
- Levels of guidance ranges from high to low
- Application: Critical, Recommended, Optional

## **What We Heard: SAG #2 - Street Elements**

- **Clarify if the Guidelines will give guidance on which kind of facility is appropriate on each Street type**
- **Include utilities, transit facilities, and stormwater facilities in the list of street elements**
- **Explain if/how this will encourage minimum standards for Street Elements**

# Street Elements

## Four Main Sections

- Sidewalk Design
- Roadway Design
- Intersections - Geometry
- Intersections - Operations

# Sidewalk Design

- **Sidewalk Design Principles**
- **Organization of Street Elements in the Sidewalk Zone**
- **Pedestrian Clearway Widths**
- **Green Infrastructure**
- **Landscaping**
- **Street Furniture**
- **Lighting**
- **Cafes and Marketing**
- **Cycling Facilities (Sidewalk level)**
- **Bike Parking**
- **Transit Stops**
- **Curb Extensions**
- **Parklets**
- **Sidewalk Materials**
- **Pedestrian Wayfinding**
- **Utilities**
- **Catch Basins and Utility Covers**
- **Snow Storage and Waste/Recycling Collection**

# Roadway Design

- Roadway Design Principles
- **Motor Vehicle Lane Width**
- Cycling Facilities (Roadway level)
- Transit Lanes
- On-Street Parking
- Medians
- Pedestrian Refuges
- Traffic Calming
- Access Management
- Roadway Materials



## Intersection Design - Geometry

- Intersection Geometry Principles
- Lane Alignment and Transitions
- Sight Lines/Sight Distance
- **Curb Radii**
- Curb Extensions/Bumpouts
- Pedestrian Crossings
- Bicycle Accommodations at Intersections
- **Transit Accommodations at Intersections**
- Skewed Intersections
- Offset Intersections
- Complex Intersections
- Highway Ramps
- Turn and Slip Lanes (Right Turn Channels)
- U-Turns at Intersection

## Intersection Design - Operations

- Intersection Operation and Signalization Principles
- Warrants / Justification
- Introduction to Traffic Signal Operation Policies and Strategies
- Pedestrian Signals
- Bicycle Signals
- Mode of Control
- Timing Plans
- Phasing (Vehicle / Pedestrian / Bike)
- Cycle Length
- Signal Coordination and Spacing
- Pre-Emptions
- Accessibility (APS / Countdown / PXO Timing)
- Turns On Red

## Example: Levels of Guidance

### High

No existing guidance and highly important for Complete Streets.

#### Example

- Sidewalks
- Transit Lanes

### Medium

Existing guidance and highly important for Complete Streets.

#### Example

- Curb Radii
- Lane Widths
- Transit at Intersections

### Low

Existing guidance, important but not critical to Complete Streets.

#### Example

- Roadway Materials
- Offset Intersections
- Catch Basins

## Sidewalk Design Principles

**1. Provide Continuous Sidewalks.** Places that support walking are healthier, more successful, and resilient. Enhance walkability and the overall network by providing clear and continuous sidewalks with dedicated space for pedestrians safely separated from vehicles.

**2. Design for Comfort.** Provide comfortable, efficient and four season sidewalks, with street trees offering shade and relief from sun, rain and snow. Carefully arrange street elements to support and encourage pedestrian activities.

**3. Storm Water Management.** Incorporate passive stormwater measures where possible. Diver stormwater into rain gardens, planting beds, or permeable paving to reduce potential for ponding, improve the City's green infrastructure and enhance the quality of the street.

**4. Design for Efficient Maintenance.** Well-considered sidewalks are durable and easier to maintain. Provide adequate access to utilities. Coordinate upgrades where possible to minimize impact to pedestrian movement caused by damages and repairs. Provide sufficient soil and water for street trees to reach maturity.

**5. Placemaking.** Sidewalks are public spaces where people interact with each other and conduct business. Design to provide comfort and invite, with seating, cafés, trees, public art, and places to gather. Create opportunities for placemaking wherever sufficient space exists.

**6. Accessibility and Mobility.** A top priority in sidewalk design is to provide accessible sidewalks for all users regardless of physical abilities or age. Ensure clear, unobstructed continuous paths of a suitable and context sensitive width to serve existing and anticipated pedestrian flow.

**7. Flexibility.** Design sidewalks to evolve with changing demands. Consider the street's context for current and future uses.



Street Type	Recommended Preferred Sidewalk Width
Civic Street	5.0m and greater
Core & Centres Main Street	3.5m to 6.0m
Avenues & Neighbourhood Main Street	3.5m to 6.0m
Mixed-Use Access Street	3.5m
High Density Residential Street	3.5m to 5.0m
Moderate Density Residential Street	2.1m*
Low Density Residential Street	2.1m*
Mixed Use Connector	3.5m
Residential Connector	3.5m
Scenic Street	varies
Employment Street	3.5m
Park Street	varies
Shared Street	N/A. Entire Street
Mixed Use Lane	N/A. Entire Street
Residential Lane	N/A. Entire Street

## Sidewalk: Main Streets

### Three Preferred Widths

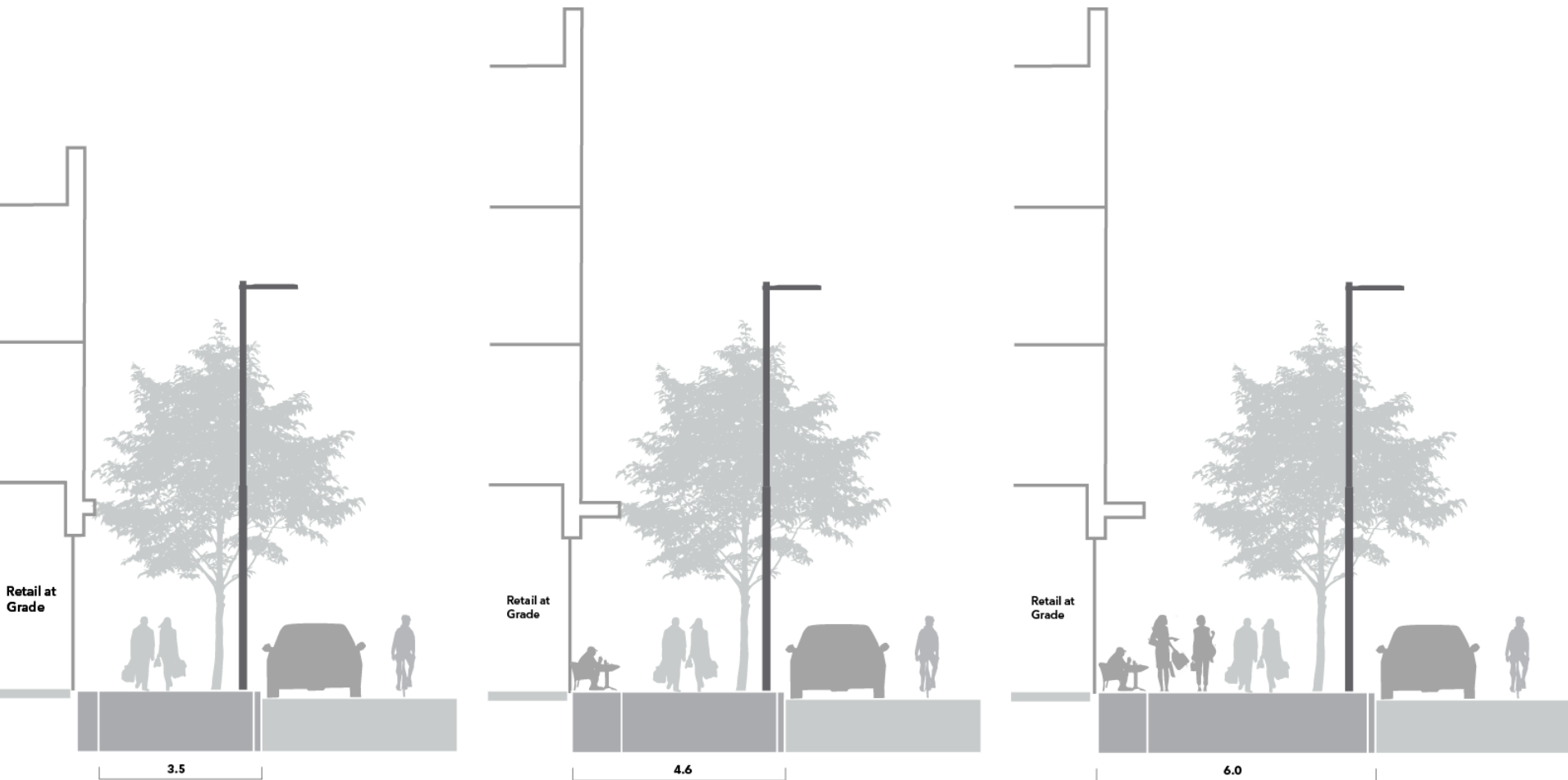
- 3.5m
- 4.6m
- 6.0m

### Four Cross Section Zones In Play

- Pedestrian Clearway Zone
- Furnishing and Planting Zone
- Edge Zone
- Frontage Zone

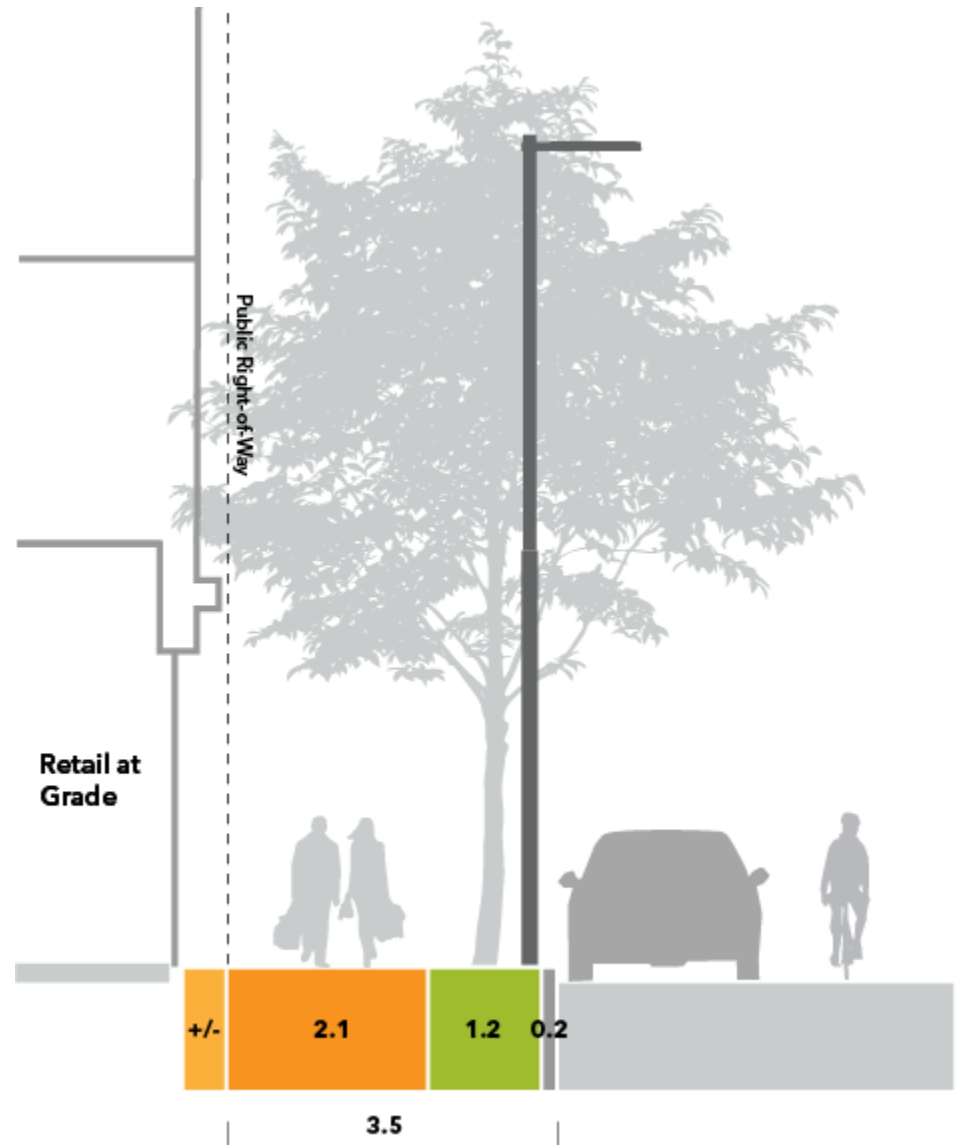
**Space allocated to each zone informed by context, user profile, intensity of pedestrian activity and other project objectives**

# Main Streets: Preferred Sidewalk Widths



## Main Streets: 3.5m Sidewalk with 2.1m Clearway

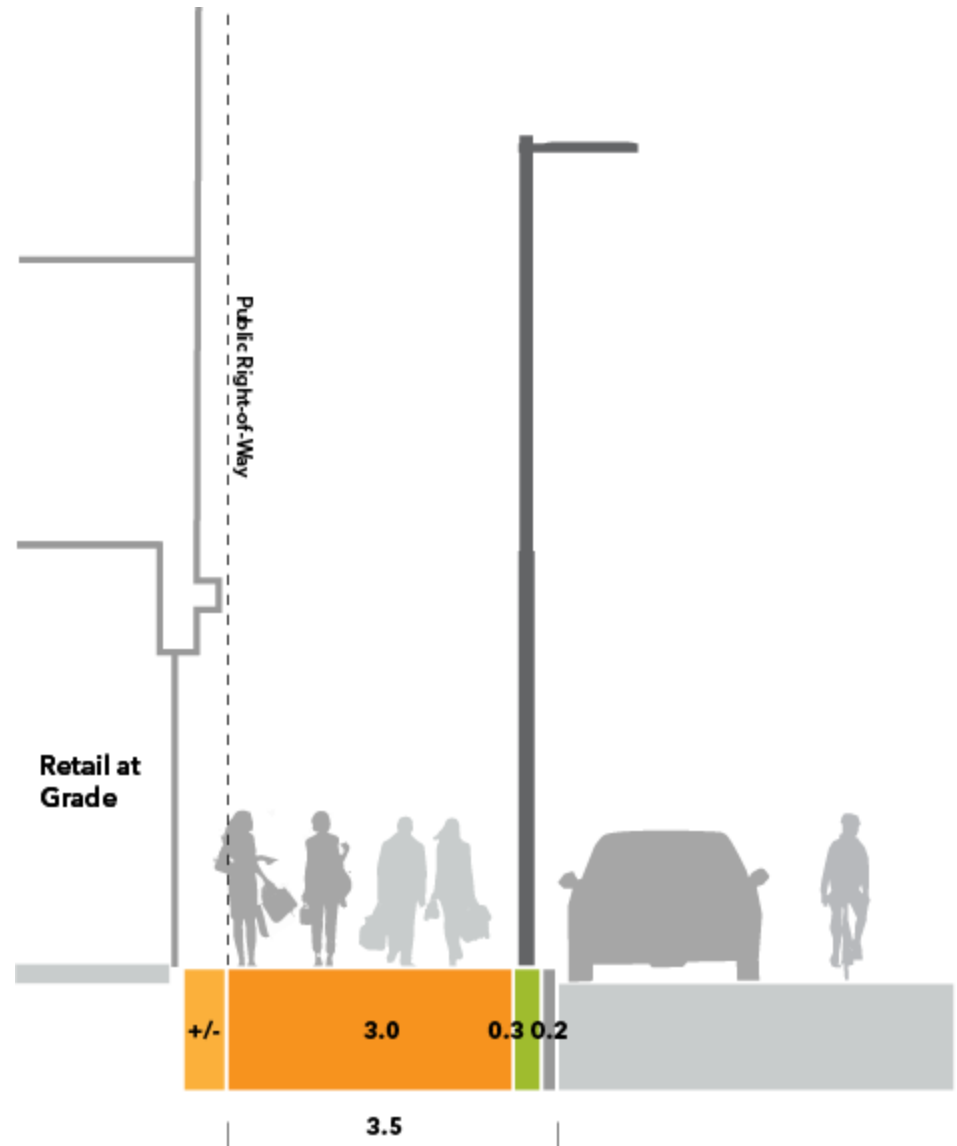
- Cores and Centres
- Avenue and Neighbourhood Main Streets
- Common 20m ROWs
- Often with Character Area or HCD Overlays
- Moderate to high pedestrian volumes
- Greening important place making quality





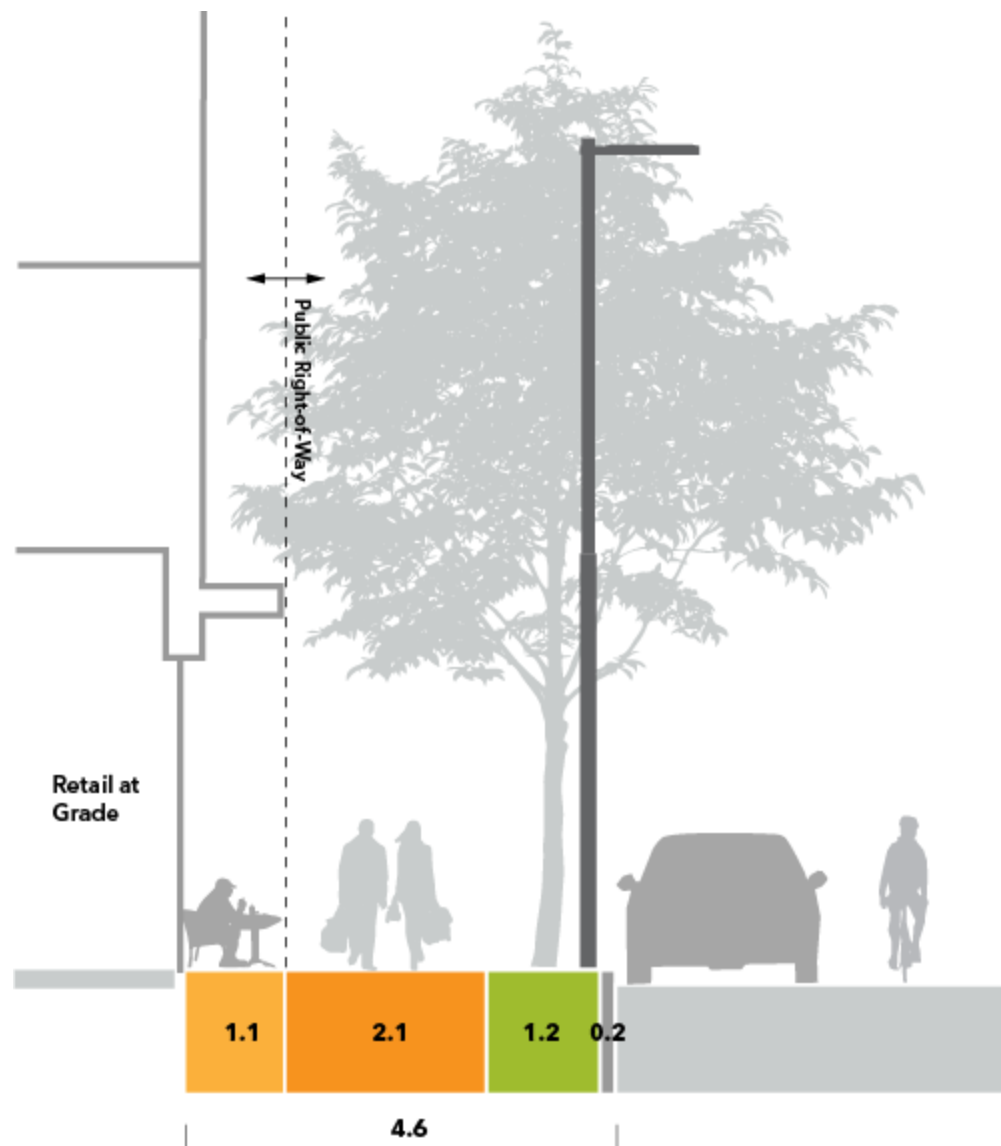
## Main Streets: 3.5m Sidewalk Maximum Possible Clearway

- Located primarily in the Downtown Core
- Highest Pedestrian Volumes and Longest Peak Hours in the City
- Major walking routes to key destinations



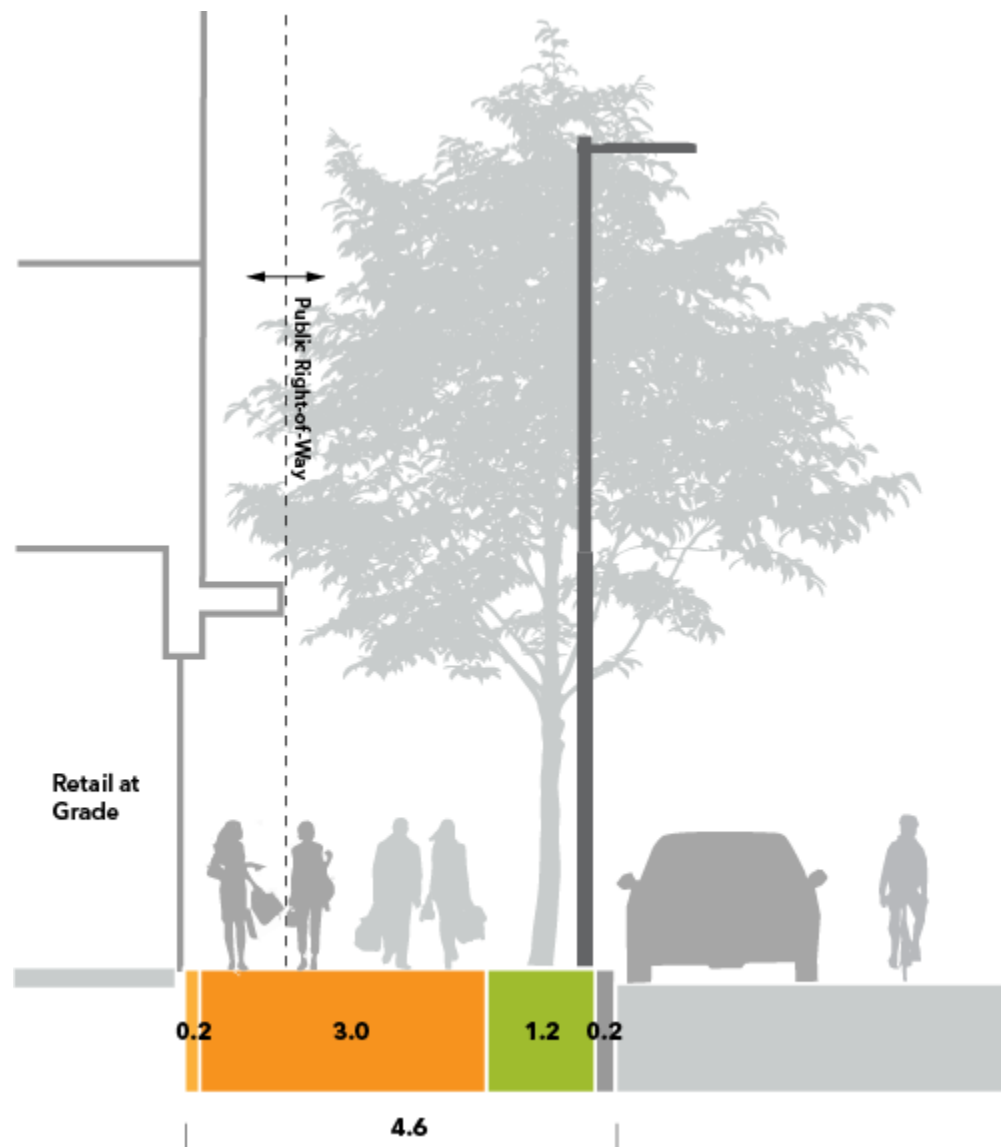
## Main Streets: 4.6m Sidewalk with 2.1m Clearway

- Core and Centres
- Avenue and Neighbourhoods
- Often associated with new mid-rise development
- Achieved through setbacks
- Additional width can go to many zones



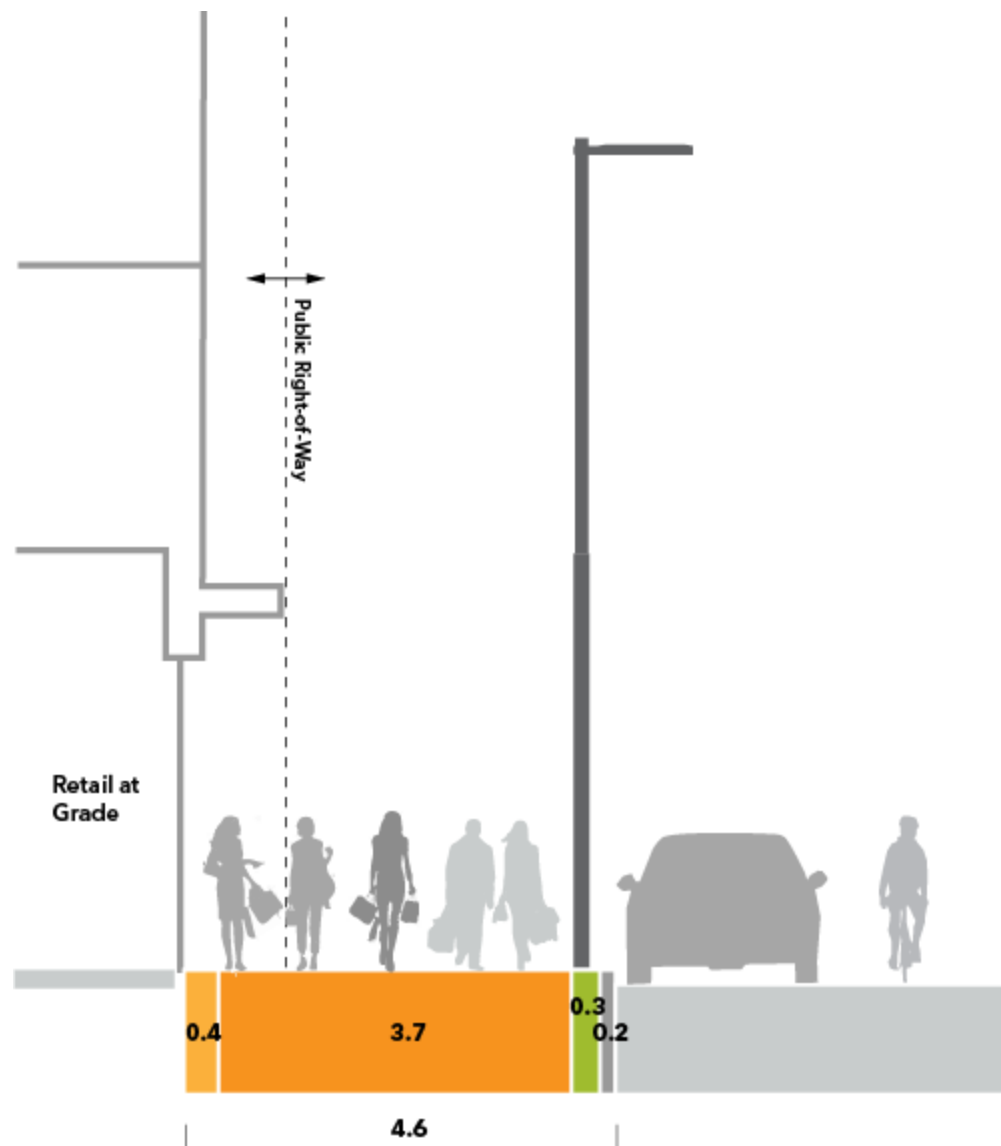
## Main Streets: 4.6m Sidewalk with 3.0m Clearway

- Core and Centres
- Avenue and Neighbourhoods
- Higher pedestrian volumes
- Major walking routes to key destinations



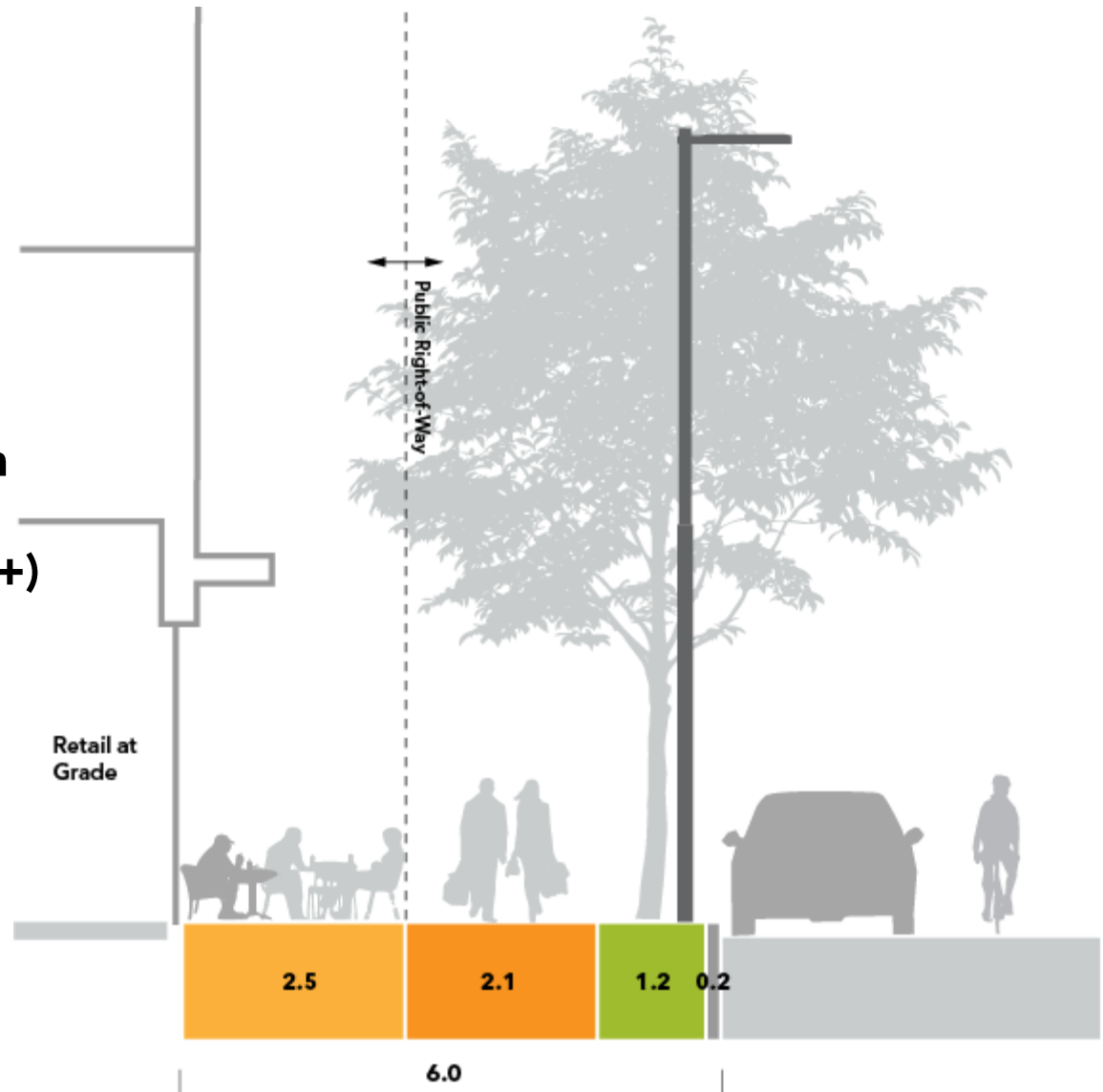
## Main Streets: 4.6m Sidewalk with 3.7m Clearway

- Located primarily in the Downtown Core
- Highest Pedestrian Volumes and Longest Peak Hours in the City
- Major walking routes to key destinations



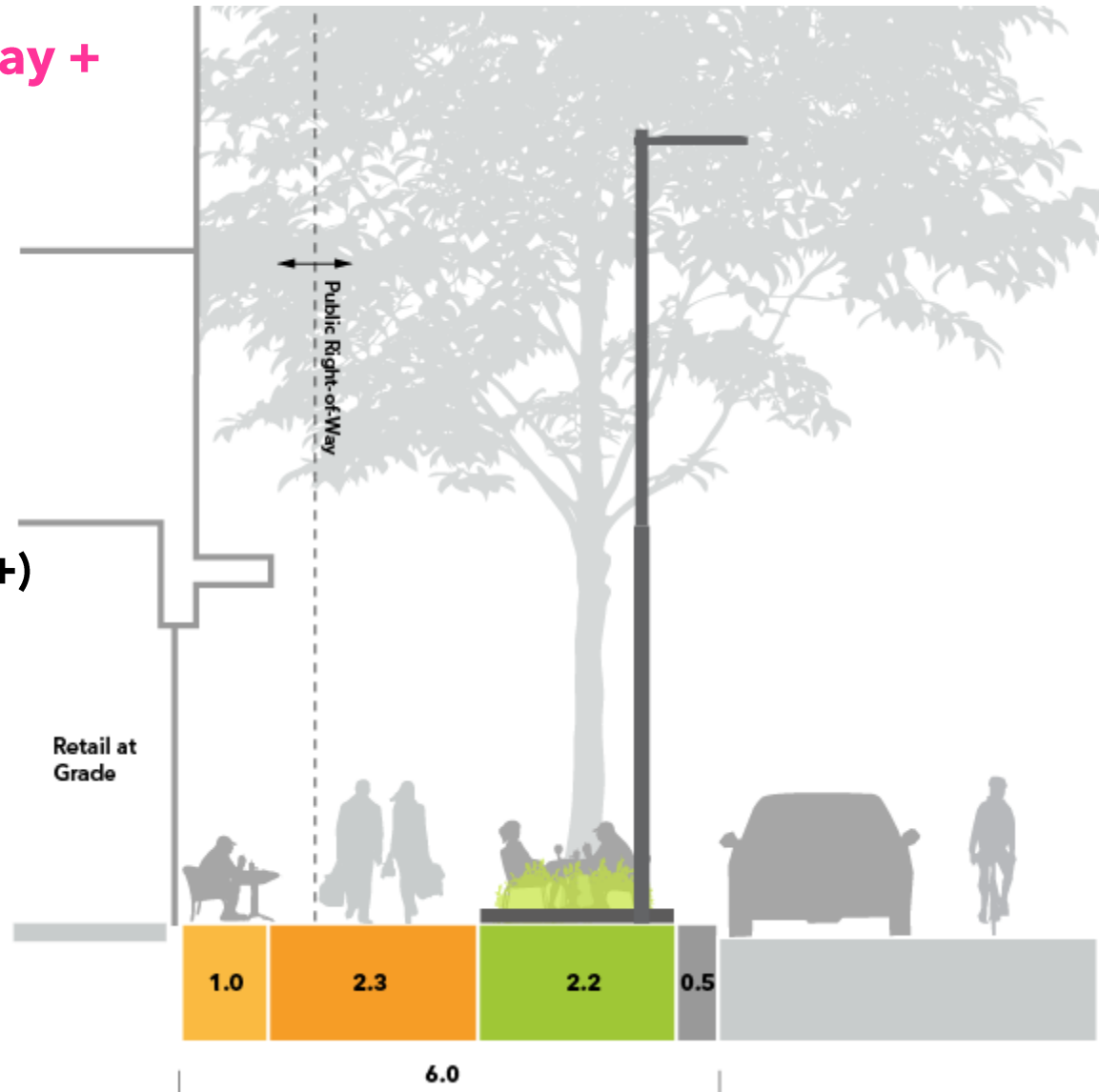
## Main Streets: 6.0m Sidewalk with Trees and Cafes

- Core and Centres
- Avenues and Neighbourhoods
- Often associated with Tall Building Sites and Larger Avenues (30m+)
- Moderate pedestrian volumes
- Optimize outdoor seating



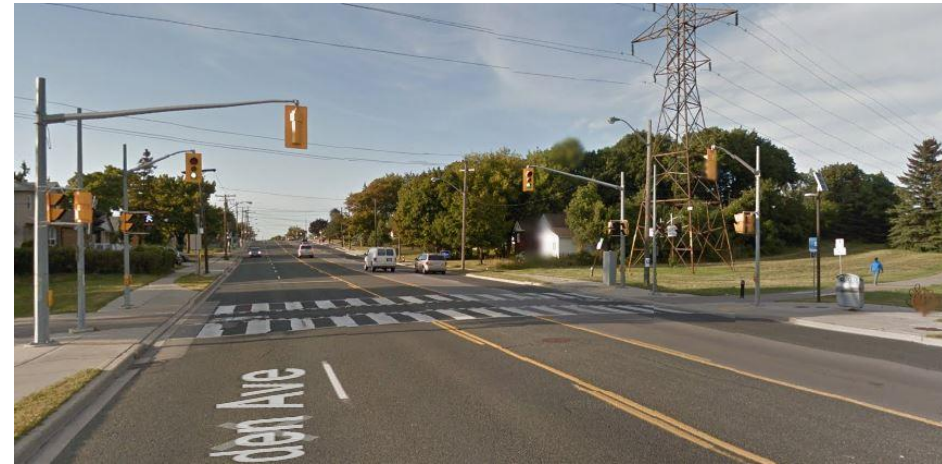
## Main Streets: 6.0m with 2.3 Clearway + Open Planter

- Core and Centres
- Avenues and Neighbourhoods
- Often associated with Tall Building Sites and Larger Avenues (30m+)
- Greening and place making is highly important



## Example: Gatineau Multi-Use Trail, Scarborough

### Street Type: Residential Connector



#### Primary Directives applied

- Vulnerable User
- Desire Lines
- Exposure Risk
- Complete Networks

#### Elements Applied

- Added crossing signal light
- Zebra striping to clearly mark crossing zone

## Example: Westhumber Boulevard, Etobicoke

### Street Type: Low Density Residential



#### Primary Directives Applied

- Vulnerable User
- Streets in Context
- Street Trees
- Complete Networks



#### Elements Applied

- Reduce lane widths
- Added cycling facilities
- Included green infrastructure
- Added median to calm traffic



## Discussion: Street Elements



## **VI: Implementation + Performance Measures**

## **What We Heard: SAG #2 - Implementation**

- **The Guidelines should include a checklist that shows how street designers considered safety**
- **Consider adding external stakeholders to the Compliance & Oversight Committee and giving the Committee a role at the funding & construction stages of a street project**

## Chapter 6: Tools to Make It Happen / Implementation



Ensure  
Compliance  
With TCSG



Transparent  
Decision Making














































































































Documented  
Decisions  
Informing  
Future Projects



Performance  
Based Expectations

## Chapter 7: Performance Measures - DRAFT

Measure:	Civic Street	Main Streets	Connector	Residential Street	Scenic & Park Streets	Employment Street	Shared Street	Lane	Desired Outcome
1. Collisions/1000 users for each mode									
2. Change in 85 <sup>th</sup> Percentile Speed									
3. Perceived Safety									
4. Non-Automotive Facility Installation									
5. User counts by mode									
6. Transit Reliability									
7. Vehicle Travel Time Variability									No change
8. Network Connectivity									
9. Tree Cover									
10. Access to non-automotive Facilities									
11. Pedestrian use of space									
12. Street Furniture Elements installed or organized									
13. Number of Café Permits									
14. Commercial vacancy rates									
15. Employment Rate									
16. State of Good Repair Status									

### LEGEND



Critical



Recommended

## Discussion: Implementation + Performance Measures

# VII. Next Steps



## Project Schedule

### **The Big Date: Public Works and Infrastructure, June Session**

#### **Before Then:**

- Planning Review Panel (April 2<sup>nd</sup>)
- Further Technical Advisory Committee Input
- Further SAG and Public Input
- Survey #2
- Complete Chapters 5, 6 and 7
- Document Layout

#### **And After:**

- Further Implementation Discussions
- Internal Training



**THANK YOU. THE END**

