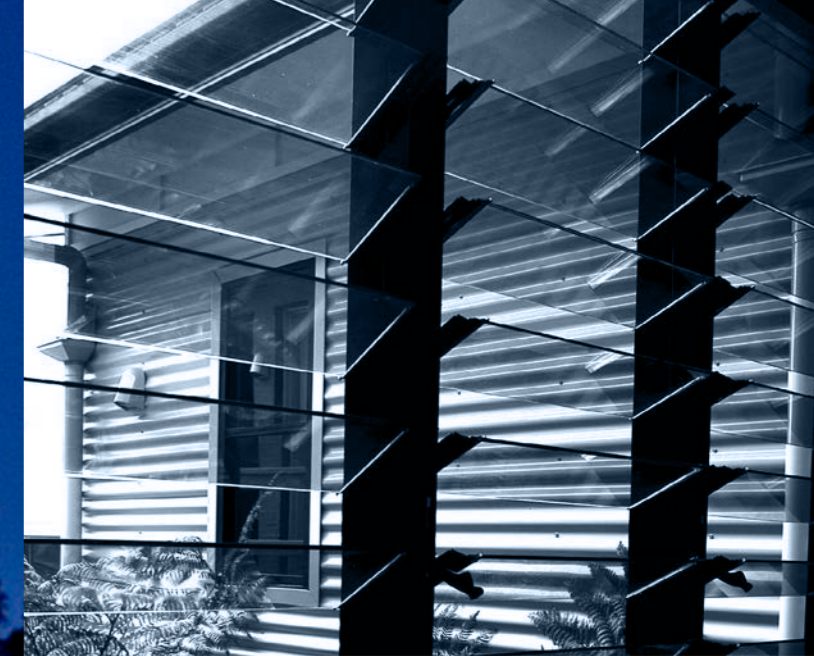


IMPLEMENTATION
GUIDELINE
No.17



SPRINGFIELD LAKES DESIGN MANUAL

CONTENTS

1.0	INTRODUCTION
2.0	VISION STATEMENT
3.0	DEVELOPMENT PRINCIPLES
4.0	DESIGN SOLUTIONS
4.1	ROADS
4.2	PUBLIC REALM
4.3	LOT LAYOUT & HOUSING DENSITY
4.4	DRAINAGE AND WATER SENSITIVE URBAN DESIGN
4.5	BUILT FORM
4.6	SOCIAL INFRASTRUCTURE (FUTURE EDITION)
4.7	PLACE MAKING (FUTURE EDITION)
4.8	INFRASTRUCTURE (FUTURE EDITION)
4.9	PARKING (FUTURE EDITION)
4.10	ONGOING MANAGEMENT (FUTURE EDITION)
5.0	SOLUTION MATRIX

1.0 INTRODUCTION

Date of Council Resolution

These guidelines were adopted by council on 21 February 2007, and take effect on 21 February 2007, in accordance with section 2.3(2) of the Planning Scheme. The guidelines were amended by Council on 31 January 2017 and took effect on 13 February 2017.

Background and Applicability

This manual was developed collaboratively by Delfin Lend Lease and Ipswich City Council.

The manual was developed specifically for the use within Springfield Lakes, however it may also be used, where circumstances warrant, throughout the balance of the Springfield estate.

The purpose of the manual is to:

- outline a shared vision for Springfield Lakes,
- set out principles to achieve the vision, and that all development proposals and decisions must respect,
- establish a palette of solutions – relating to urban, landscape and engineering design – that enable the vision and principles to be implemented,
- consist of design solutions that are appropriate to Springfield Lakes, its geography and context, and which set benchmarks for development standards in Ipswich,
- evolve over time, addressing the physical and social challenges of the day, and continue to be a useful resource for future developers and Ipswich City Council teams.

Council's Implementation Guidelines are intended to apply a standard approach to the interpretation and implementation of the relevant aspects of the Planning Scheme. They offer a degree of certainty and formality to applicants, Council and the community. Where an applicant is proposing a variation to the guidelines the onus is on the applicant to demonstrate the facts and circumstances to support the variation.

Discretion to be applied

Notwithstanding the actual provisions contained in the guidelines, care must be exercised in their application in order to consider -

- the specific impacts on individual cases, including adjoining lands; and
- whether non compliance, by a marginal amount, with a specific numerical standard would affect the overall intent of the guidelines.

2.0 VISION STATEMENT

Springfield Lakes is a modern suburb of **distinct residential villages** and **leafy streets** nestled amongst a **greenspace network** of parks and lakes. Springfield Lakes makes the most of its topography and green setting to exploit views and celebrate **slope-responsive** housing.

A **choice of housing** types, from traditional detached homes to contemporary attached housing, ensures a diverse demographic mix and allows the project to respond to a changing market.

Springfield Lakes is **easy and safe to get around**, whether by walking, cycling, driving or on public transport. A **lively** and **memorable public realm** active with people walking, neighbours talking and children playing demonstrates the high levels of community interaction.

Springfield Lakes demonstrates best practice in design and sets a **new benchmark** for the region.

DEVELOPMENT PRINCIPLES

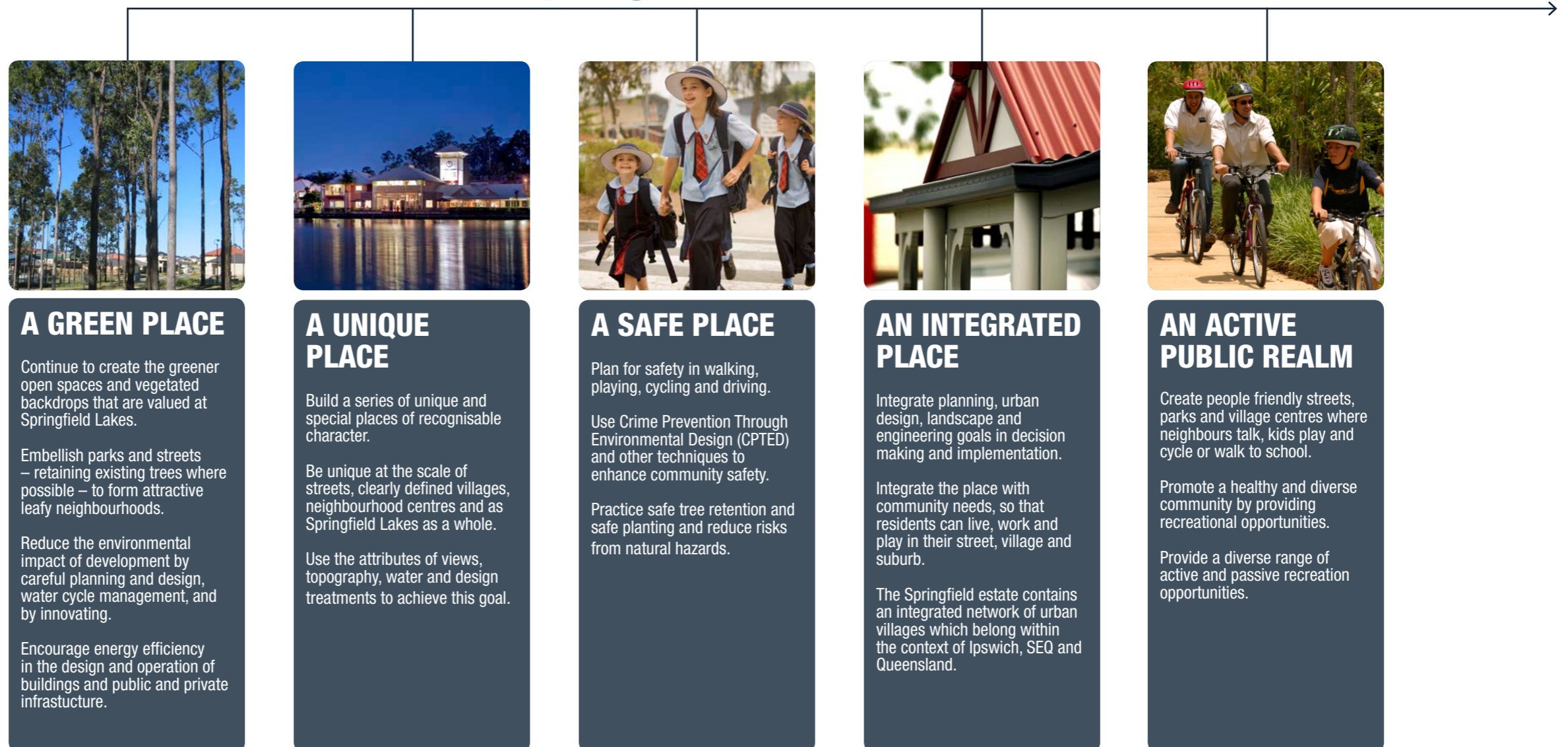
3.0

These ten principles elaborate on the Vision Statement. All development proposals and decisions should be checked against these principles.

The design solutions for urban, landscape and engineering design that make up the body of this manual have been developed with these development principles in mind.

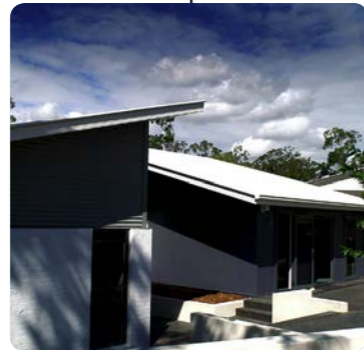
At the end of this manual a matrix of development principles and design solutions is used to illustrate this relationship.

Springfield Lakes



DEVELOPMENT PRINCIPLES (continued)

Springfield Lakes

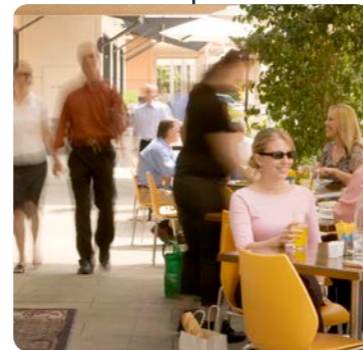


A RESPONSIVE PLACE

Use slope responsive solutions in road, lot, building and park design.

Respect ridges, hillsides, gullies, vistas and climate.

Respond to the market with a choice of housing and through innovation.



A PLACE OF CHOICES AND FLEXIBILITY

Be willing to experiment and learn.

Provide for non-residential uses such as shops, offices, education and other attractions.

Offer a wide range of housing products to appeal to multiple demographics.

Create a complete community with opportunities to live, work and play.



A PLACE OF MOBILITY AND CONNECTIVITY

Build direct and legible routes for pedestrians, cyclists, cars and public transport.

Reduce the divisive nature of major traffic routes to improve walkability.

Make Springfield Lakes an accessible place however we choose to travel.



A PLACE OF PARTNERSHIPS

Achieve results by building rapport and trust between Ipswich City Council, developers and the community.

Use open discussion to leverage from the experience and knowledge inbuilt in our teams.



A PLACE OF COMMUNITY

Establish a community with a high degree of social capital and social prosperity.

4.0 DESIGN SOLUTIONS

These design solutions for urban, landscape and engineering design provide the method of implementing the vision statement.

All design solutions have been tested against the development principles of the previous chapter. As individual solutions may not address all ten principles, the focus of each solution is highlighted on the right hand side of the page.

These design solutions supplement the existing Ipswich City Council standards as contained in the Ipswich Planning Scheme and its standard drawings. Where there is a discrepancy between the existing standards and these design solutions, the design solutions outlined in this manual shall prevail. The design solutions outlined in this manual however do not supersede the requirements outlined in the Springfield Infrastructure Agreement or any local area plan approved under the Springfield Structure Plan.

Notes accompanying each solution are used to explain the design criteria and to indicate when each solution should be used.

Dimensions stated are desirable minimum dimensions. In some cases an absolute minimum is also given in the notes.

Notwithstanding these standard solutions, alternative solutions and dimensions may be used in special circumstances when agreed by Ipswich City Council and the developer.

Particular attention is drawn to those solutions that aim to assist the retention of existing vegetation. These solutions include: 4.1.1, 4.1.4, 4.1.5, 4.1.10, 4.1.17, 4.1.19, 4.1.24 (islands), 4.2.1.1, 4.2.1.2, 4.2.1.3, 4.2.1.12, 4.2.2.2 and 4.5.1.

4.1 ROADS

4.1.1

Road Hierarchy Plan

A diagrammatical illustration of the road and street types proposed for use at Springfield Lakes

Road / Street Types:

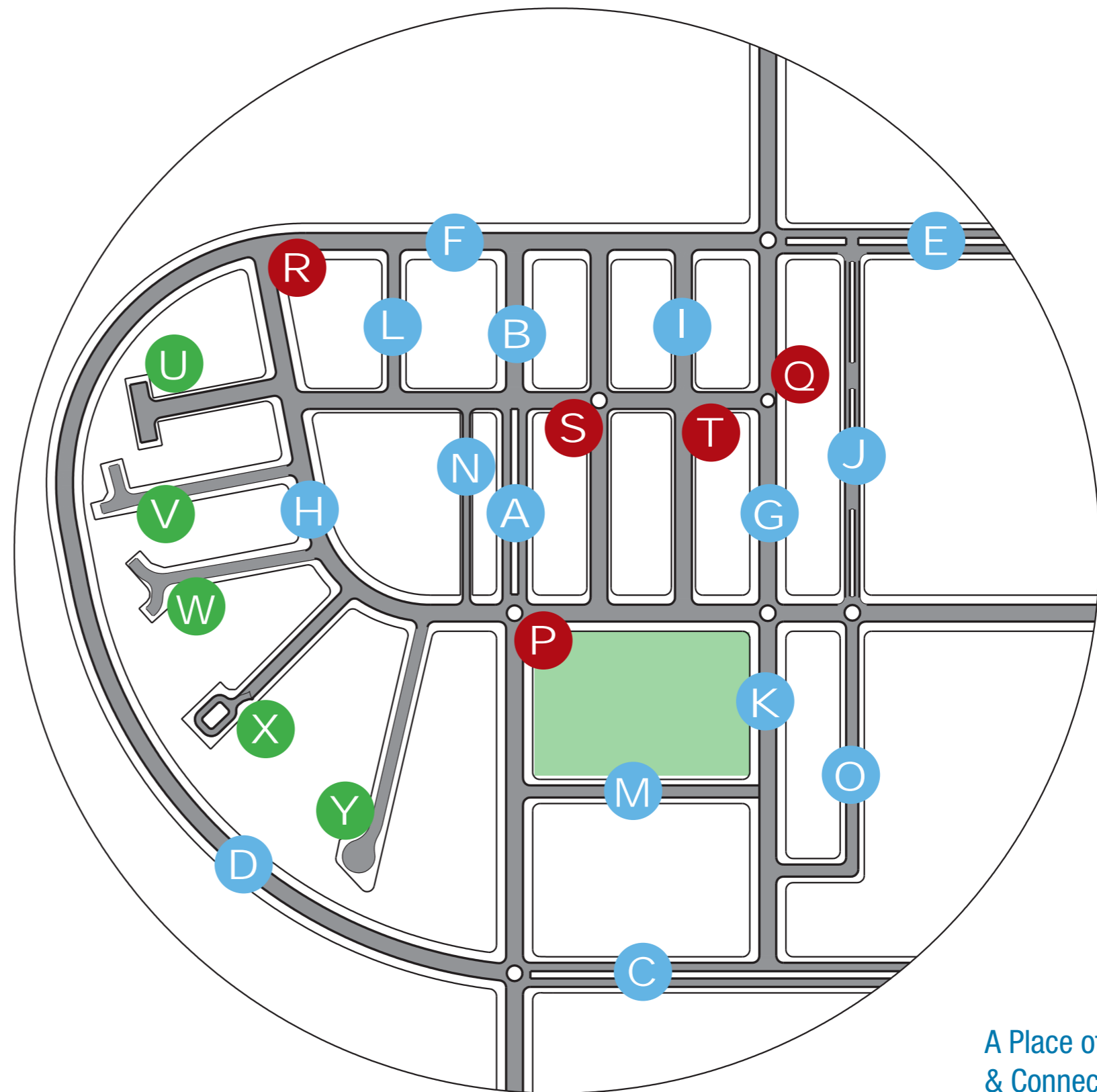
- A Neighbourhood Commercial Street (Dual Carriageway)
- B Neighbourhood Commercial Street
- C No-Access Trunk Collector Street With Bicycle Lanes (Dual Carriageway)
- D No-Access Trunk Collector Street With Bicycle Lanes
- E Access Trunk Collector Street (Dual Carriageway)
- F Access Trunk Collector Street
- G Collector Street
- H Access Street / Access Place
- I 3-Lane Access Street
- J Split Access Street
- K Parkfront Access Street
- L Lane
- M Parkfront Lane
- N Rear Lane
- O Single-sided Lane

Intersection Types:

- P 4-way Roundabout
- Q 3-way Roundabout
- R 3-way T-intersection
- S 4-way Mini Roundabout
- T Signed 4-way Intersection

Cul-de-sac Turning Areas:

- U T-head
- V Offset Square
- W Y-head
- X Island
- Y R9 Turning Circle

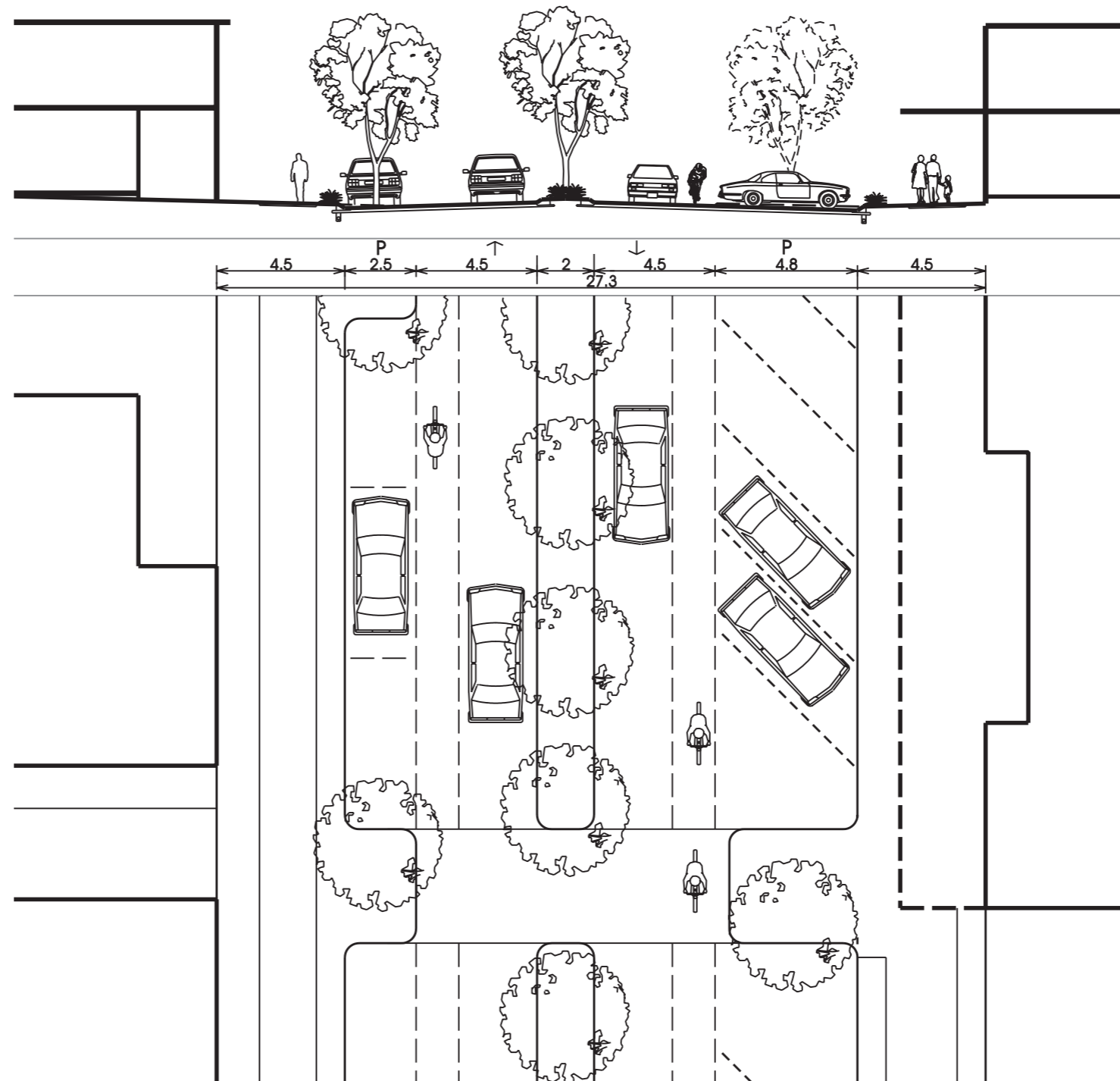


A Place of Mobility
& Connectivity

4.1.1 Neighbourhood Commercial Street (Dual Carriageway)

NOTES:

1. Appropriate for neighbourhood centres, local shops and commercial streets.
2. Intended to provide convenient access to premises and a safe, comfortable environment for pedestrians and cyclists.
3. Footpath or verge width may vary from 4.5-5.5m depending on intensity of commercial activity (e.g. outdoor dining). > 5.5m may be required to protect significant native vegetation or where topography requires batters.
4. Where a commercial street is intended to become a 'Main Street' a total design package is to be negotiated with Council, inclusive of:
 - roadworks (eg. travel lanes and parking areas);
 - landscaped treatments, paving and street furniture;
 - vehicle parking and loading areas;
 - public transport (eg. bus stop); and
 - building location and design.
5. Absolute minimum median width 2m. Desirable 4m. > 4m may be required to protect significant native vegetation or where topography requires batters.
6. Posted speed 50 km/h.
7. Bicycle lanes to be linemarked when linking to similar lanes at each end of neighborhood commercial street.

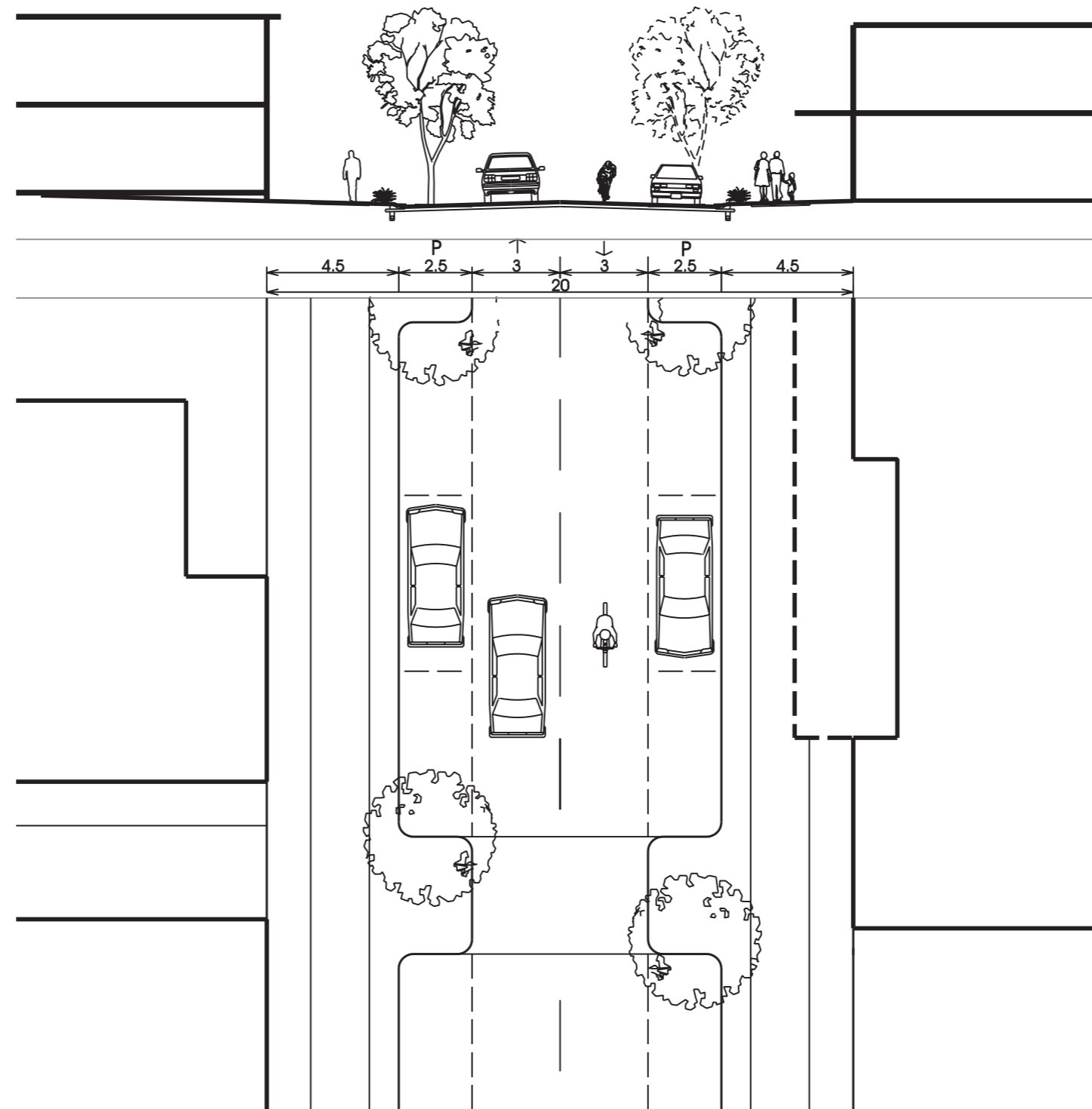


A Safe Place
An Active Public Realm
A Place of Mobility
& Connectivity

4.1.2 Neighbourhood Commercial Street

NOTES:

1. Appropriate for neighbourhood centres, local shops and commercial streets.
2. Intended to provide convenient access to premises and a safe, comfortable environment for pedestrians and cyclists.
3. Footpath or verge width may vary from 4.5-5.5m depending on intensity of commercial activity (e.g. outdoor dining). > 5.5m may be required to protect significant native vegetation or where topography requires batters.
4. Where a commercial street is intended to become a 'Main Street' a total design package is to be negotiated with Council, inclusive of:
 - roadworks (eg. travel lanes and parking areas);
 - landscaped treatments, paving and street furniture;
 - vehicle parking and loading areas;
 - public transport (eg. bus stop); and
 - building location and design.
5. Absolute minimum verge width 4m.
6. Posted speed 50 km/h.
7. Additional lane width may be desirable for bicycle lanes if linking to similar lanes at each end of neighborhood commercial street.

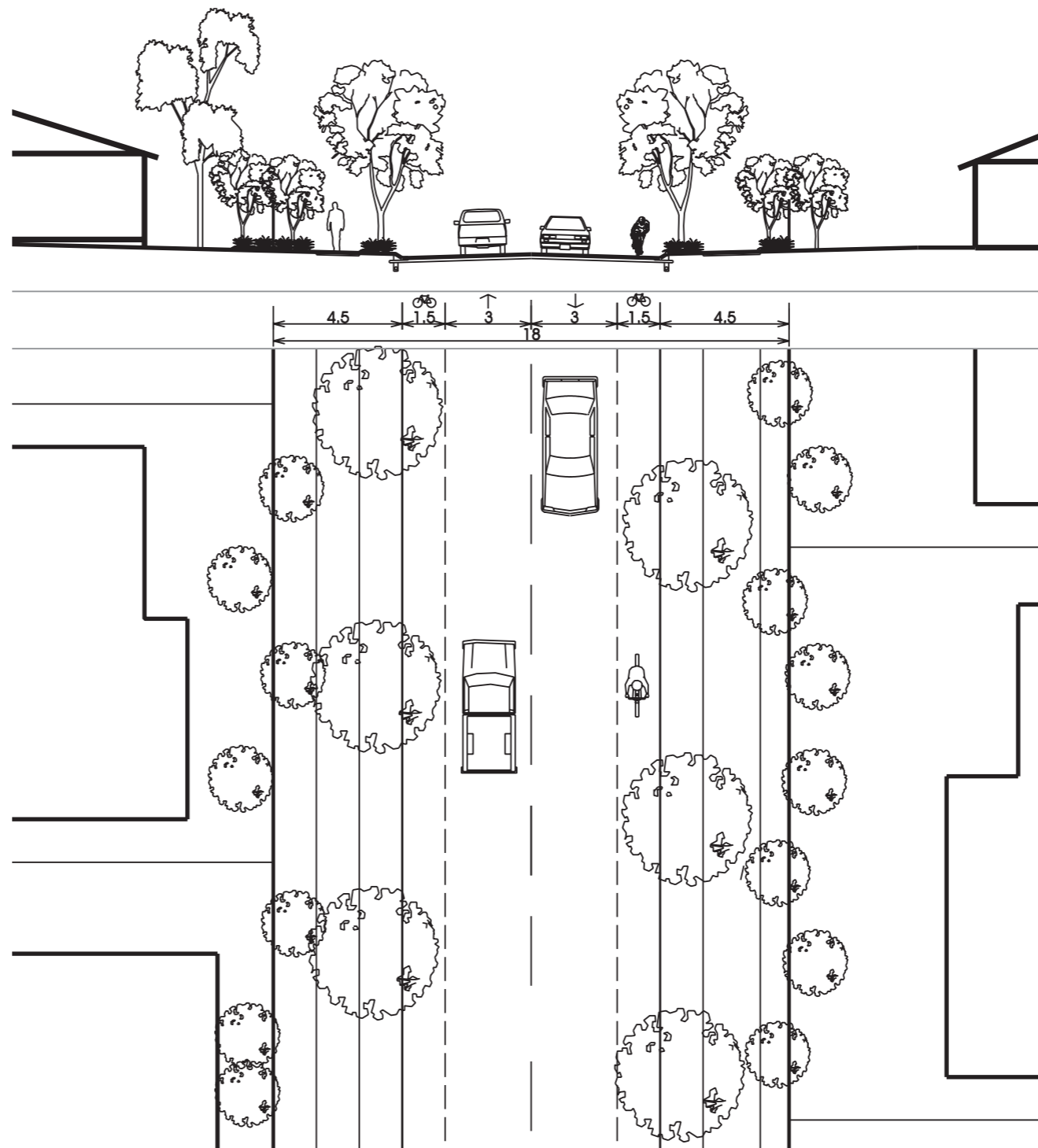


A Safe Place
An Active Public Realm
A Place of Mobility
& Connectivity

4.1.3 No -Access Trunk Collector Street with Bicycle Lanes (Dual Carriageway)

NOTES:

1. Alternative to standard Trunk Collector Street - using same pavement width - but with line-marked bicycle lanes in both directions.
2. Preferred form is Access Trunk Collector Street.
3. Design Speed 60 km/h. Posted speed 60km/h. Safe Intersection Sight Distance based on 60 km/h must be achieved at all intersections.
4. No residential driveways, access or frontage.
5. Driveway access to shopping centres, office complexes and integrated residential developments may be acceptable.
6. Absolute minimum verge width 4m. > 4.5m may be required to protect significant native vegetation or where topography requires batters.
7. Absolute minimum median width 2m. Desirable 4m. >6m may be required to protect significant native vegetation.
8. Minimum planting zone between footpath and property boundary of 1.5m, to be densely planted.
9. Indented bus bays to be provided at a maximum of 800m intervals (desirable 400m) on both sides of street.
10. Central median turnaround facility to be provided at approximately 300m intervals.
11. Ramp between bicycle lanes and footpath, such as those detailed in Austroads part 14, are required only at intersections with sub-arterial or arterial roads, or at the termination of bicycle lanes.



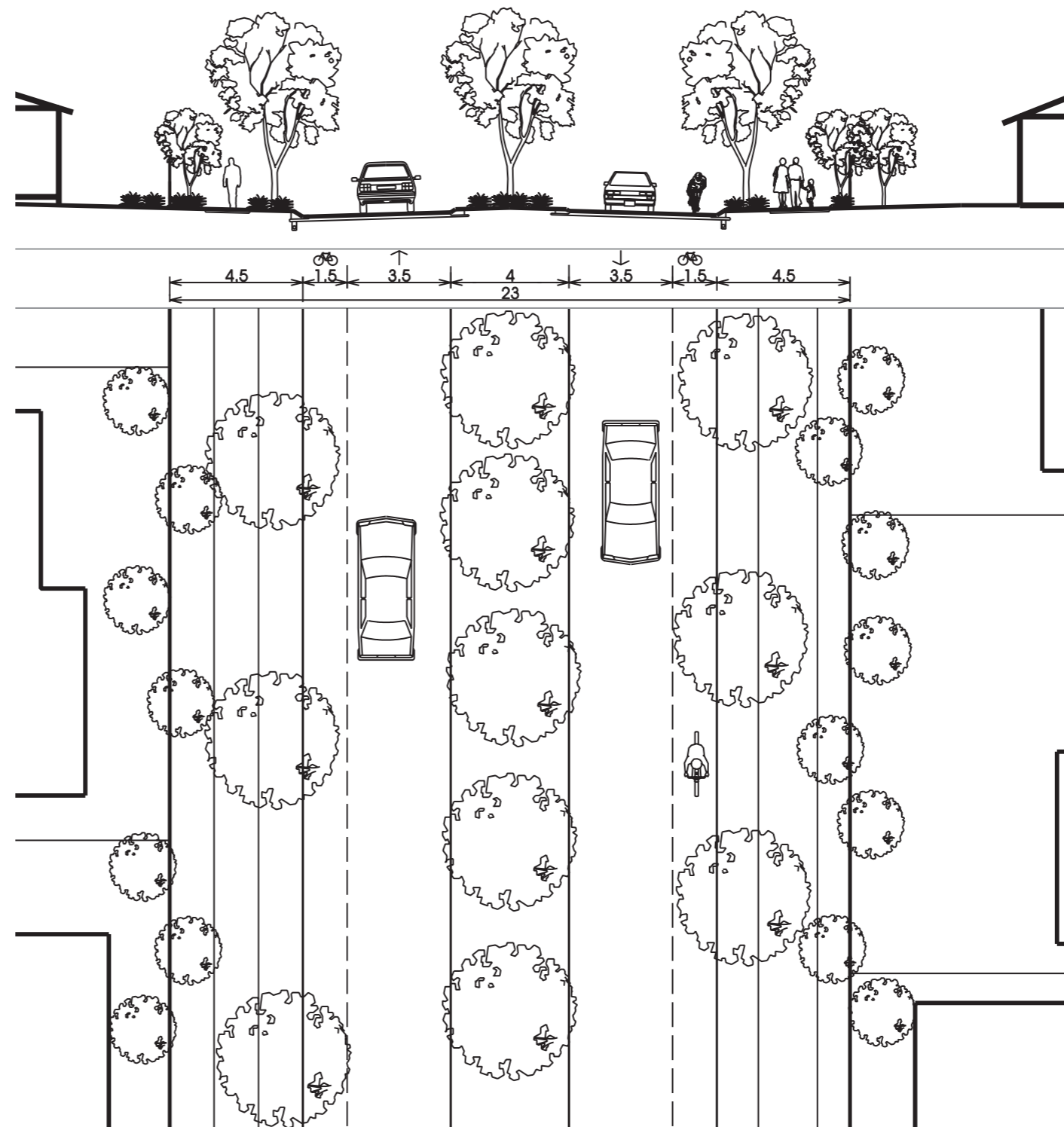
A Safe Place
An Active Public Realm
A Place of Mobility
& Connectivity



4.1.4 No -Access Trunk Collector Street with Bicycle Lanes

NOTES:

1. Alternative to standard Trunk Collector Street - using same pavement width - but with line-marked bicycle lanes in both directions.
2. Preferred form is Access Trunk Collector Street.
3. Design Speed 60 km/h. Posted speed 60km/h. Safe Intersection Sight Distance based on 60 km/h must be achieved at all intersections.
4. No residential driveways, access or frontage.
5. Driveway access to shopping centres, office complexes and integrated residential developments may be acceptable.
6. Absolute minimum verge width 4m. > 4.5m may be required to protect significant native vegetation or where topography requires batters.
7. Minimum planting zone between footpath and property boundary of 1.5m, to be densely planted.
8. Indented bus bays to be provided at a maximum of 800m intervals (desirable 400m) on both sides of street.
9. Ramp between bicycle lanes and footpath, such as those detailed in Austroads part 14, are required only at intersections with sub-arterial or arterial roads, or at the termination of bicycle lanes.

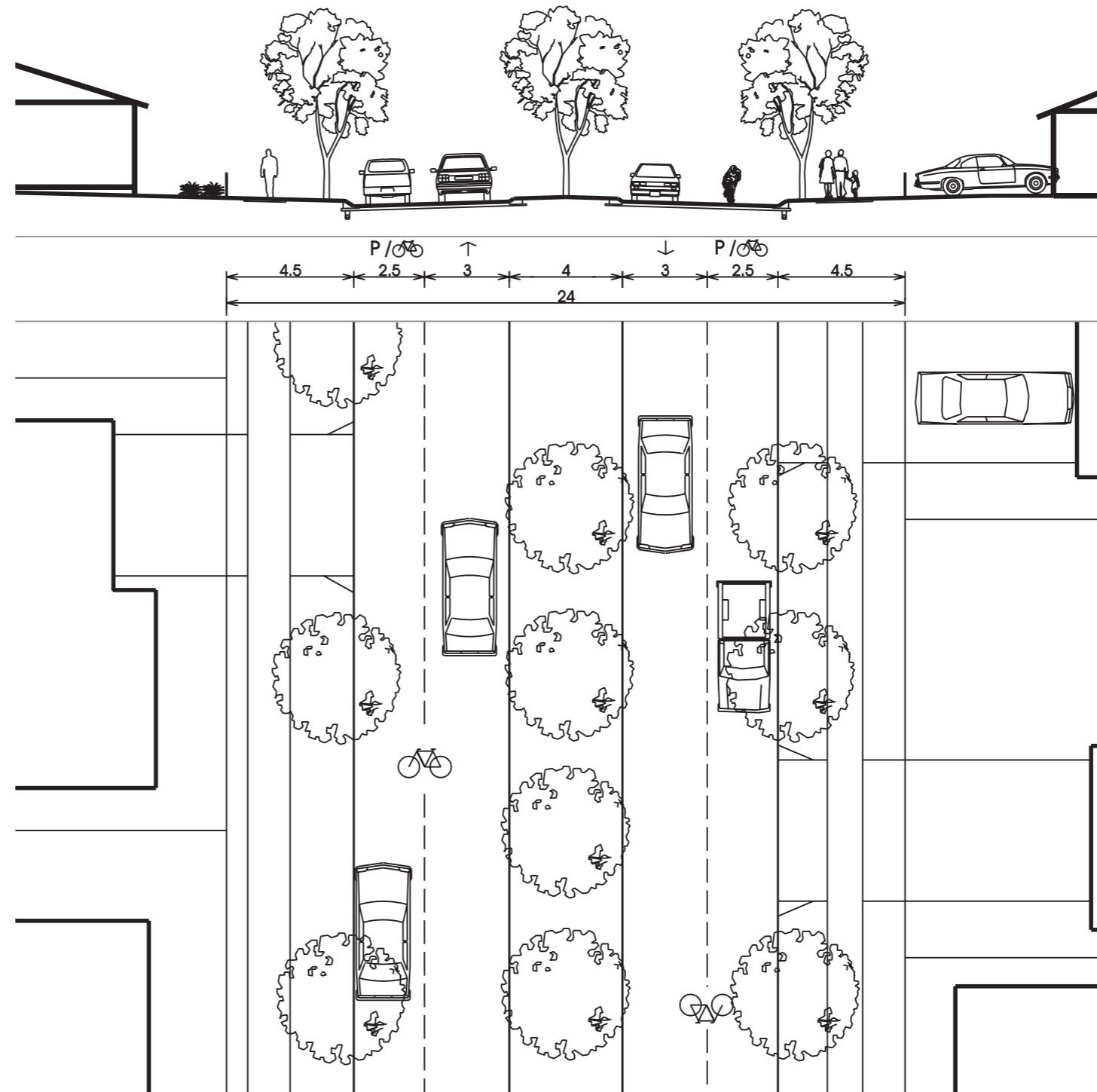


A Safe Place
An Active Public Realm
A Place of Mobility
& Connectivity

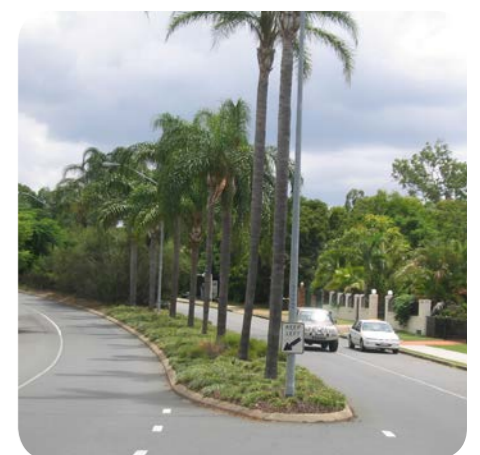
4.1.5 Access Trunk Collector Street (Dual Carrigeway)

NOTES:

1. Appropriate for Trunk Collector Streets where residential frontage is desired to activate the street.
2. No residential driveways > 8000vpd. Residential frontage may still be achieved using rear-loaded dwellings. Limited driveway access to integrated residential developments may be acceptable.
3. Design Speed 60 km/h. Posted speed 60km/h. Safe Intersection Sight Distance based on 60 km/h must be achieved at all intersections.
4. Number and location of driveways controlled by one or more of the following methods:
 - access from rear lane or street;
 - access from side street or battleaxe;
 - angled driveways;
 - minimum driveway spacing;
 - minimum off street parking requirement;
 - minimum lot width or lot size; and
 - shared driveways.
5. Absolute minimum verge width 4m. > 4.5m may be required to protect significant native vegetation or where topography requires batters.
6. Absolute minimum median width 2m. Desirable 4m. >6m may be required to protect significant native vegetation.
7. Bus stops to be provided at a maximum of 800m intervals (desirable 400m) on both sides of street. Bus stops to be located within 2.5m parking / cycle lanes.
8. Central median turnaround facility to be provided at approximately 300m intervals.



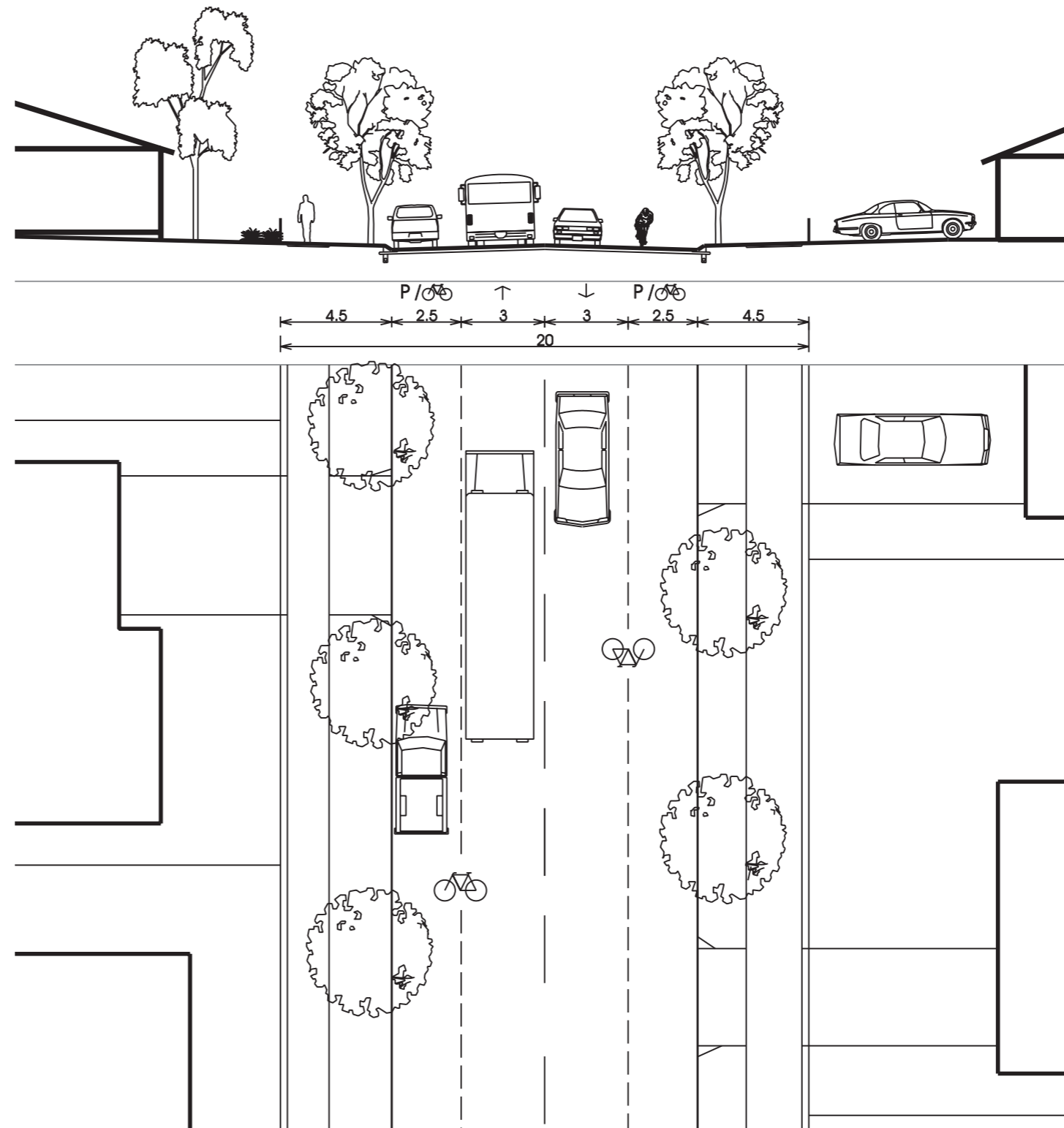
A Safe Place
An Active Public Realm
A Place of Mobility and
Connectivity



4.1.6 Access Trunk Collector Street

NOTES:

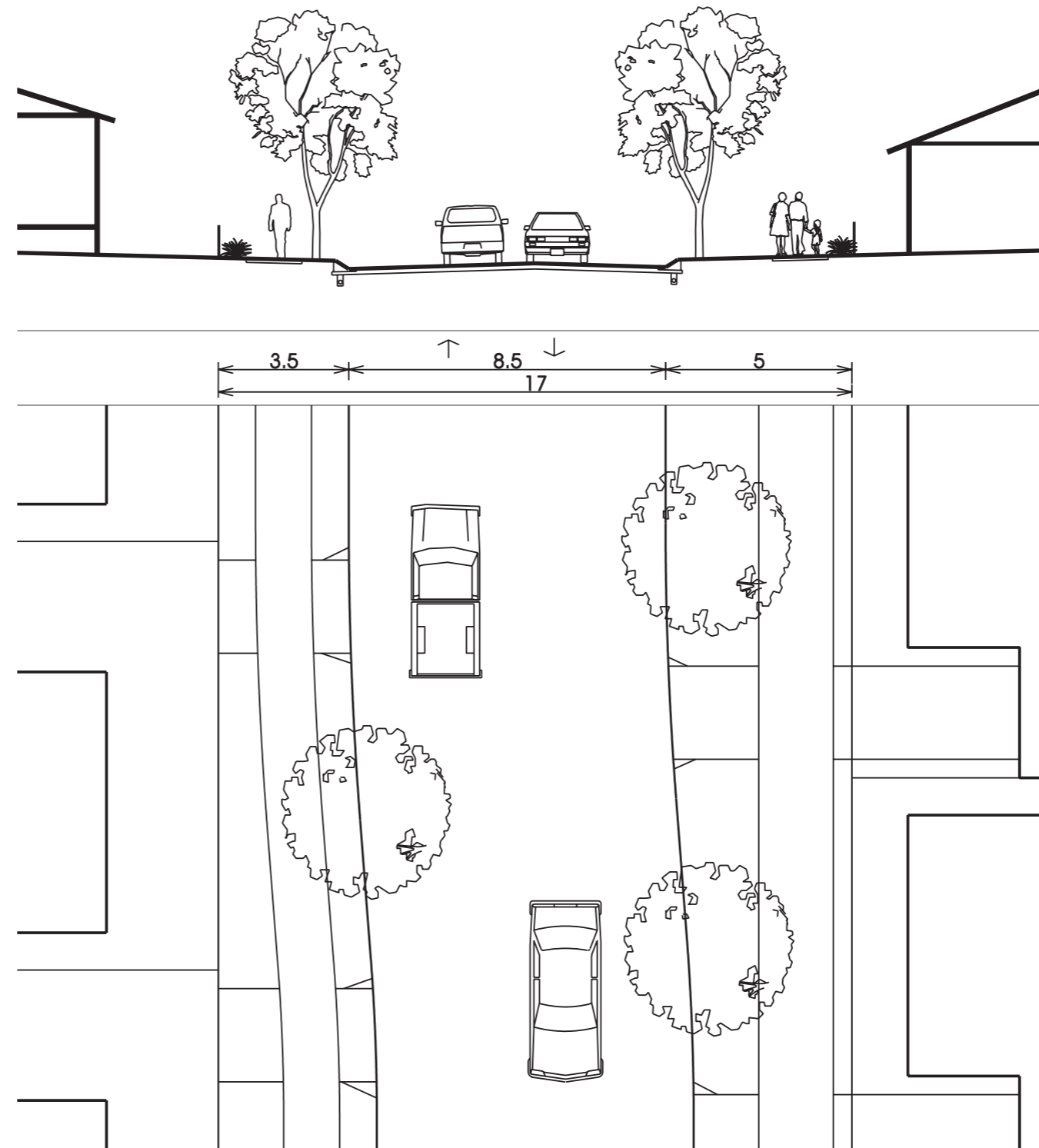
1. Appropriate for Trunk Collector Streets where residential frontage is desired to activate the street.
2. No residential driveways > 7500vpd. Residential frontage may still be achieved using rear-loaded dwellings. Limited driveway access to integrated residential developments may be acceptable.
3. Design Speed 60 km/h. Posted speed 60km/h. Safe Intersection Sight Distance based on 60 km/h must be achieved at all intersections.
4. Number and location of driveways controlled by one or more of the following methods:
 - access from rear lane or street;
 - access from side street or battleaxe;
 - angled driveways;
 - minimum driveway spacing;
 - minimum off street parking requirement;
 - minimum lot width or lot size; and
 - shared driveways.
5. Absolute minimum verge width 4m. > 4.5m may be required to protect significant native vegetation or where topography requires batters.
6. Bus stops to be provided at a maximum of 800m intervals (desirable 400m) on both sides of street. Bus stops to be located within 2.5m parking / cycle lanes.



A Safe Place
An Active Public Realm
A Place of Mobility and
Connectivity



4.1.7
Collector Street



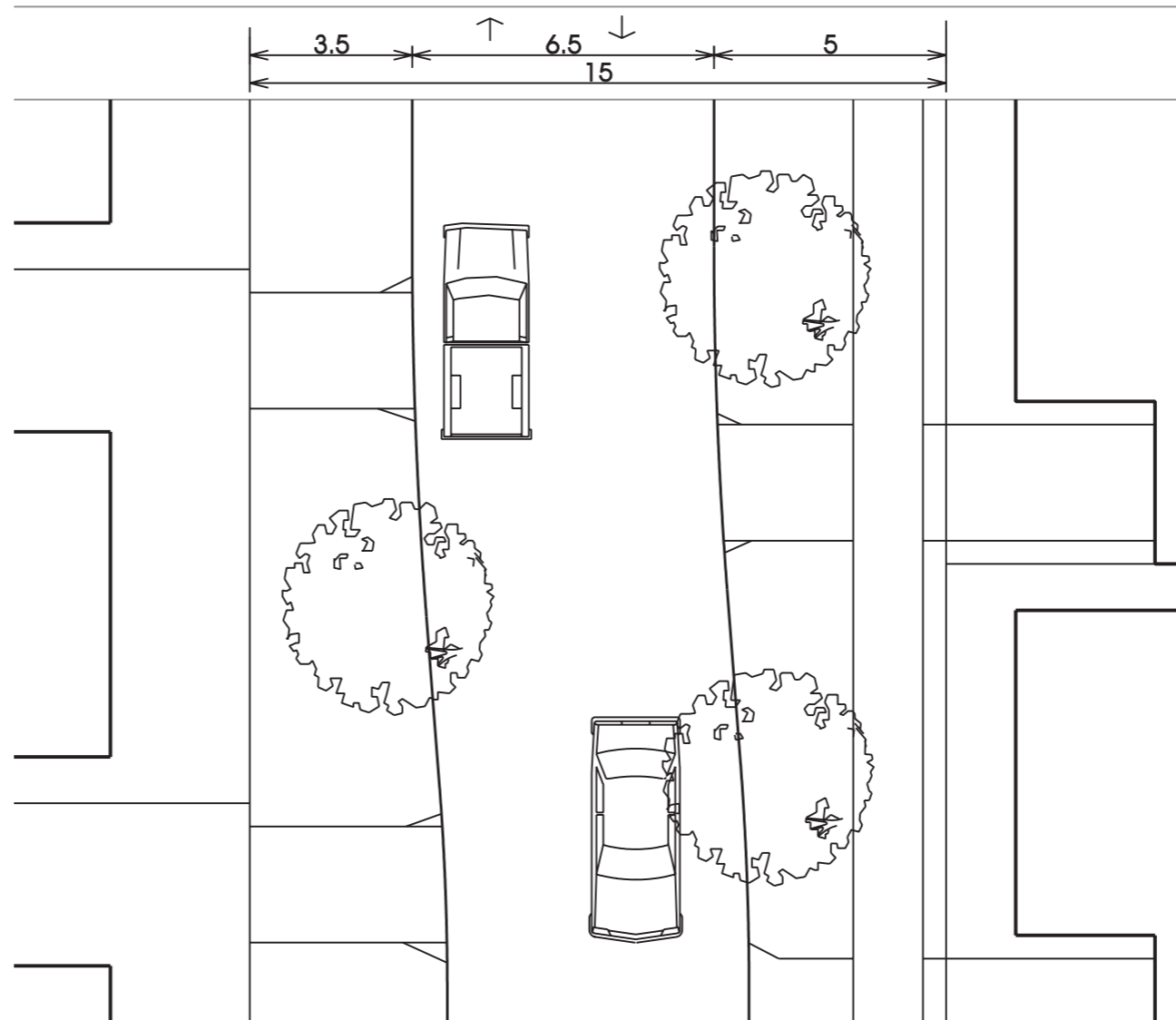
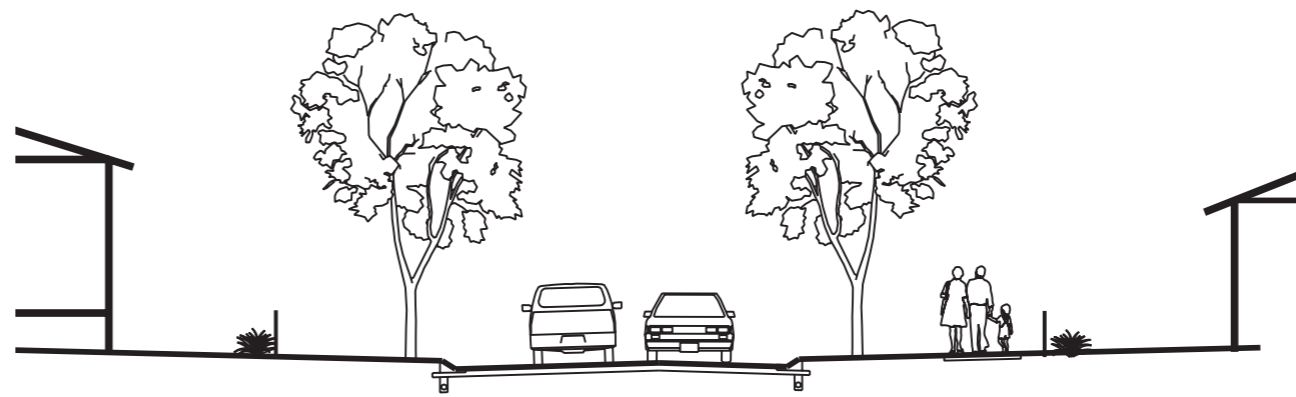
NOTES:

1. Cross-section as per ICC Standard Drawings.
2. Absolute minimum verge width 3.5m for short lengths only.
3. Design speed 40 km/h. Legal speed limit 50 km/h (unposted). Safe Intersection Sight Distance based on 40 km/h must be achieved at all intersections.

A Place of Mobility and Connectivity



4.1.8
Access Street / Access Place



NOTES:

1. Cross-section as per ICC Standard Drawings.
2. Absolute minimum verge width 3.0m for short lengths only.
3. Design speed 30 km/h. Legal speed limit 50 km/h (unposted). Safe Intersection Sight Distance based on 30 km/h must be achieved at all intersections.

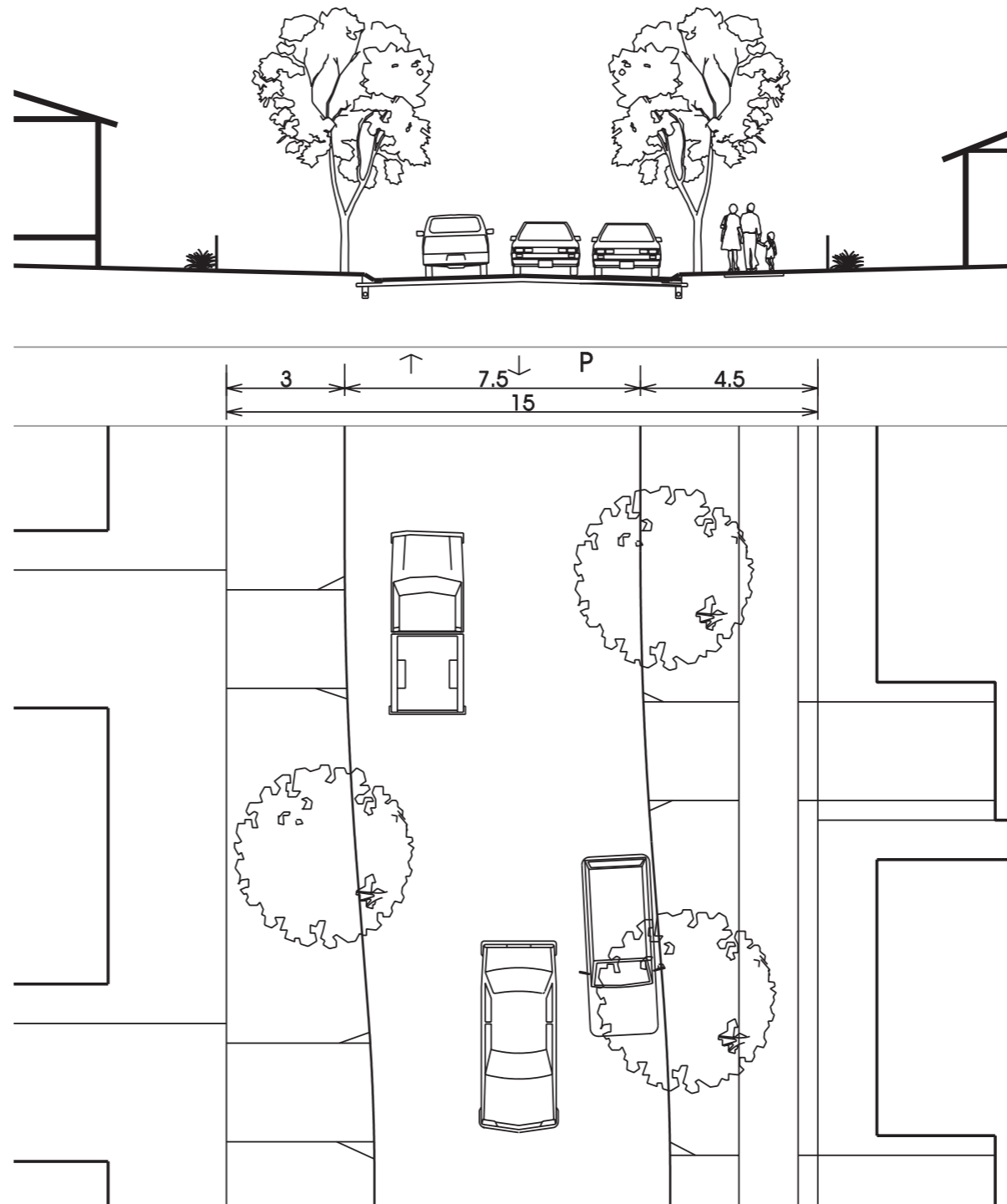
A Place of Mobility and Connectivity



4.1.9 3-Lane Access Street

NOTES:

1. Three lane (unmarked) carriageway allowing one parking and two moving lanes.
2. Appropriate for streets with narrow lot frontages.
3. Design speed 30 km/h. Legal speed limit 50 km/h (unposted). safe intersection sight distance based on 30 km/h must be achieved at all intersections.
4. Alternative to two-lane carriageway with constructed parking bays.
5. On-street parking capacity ensured by lot layout and nominating driveway locations on setback plan.
6. Desirable maximum length 200m.
7. Absolute minimum 3m verge for short lengths only. Desirable 3.5-4.5m.



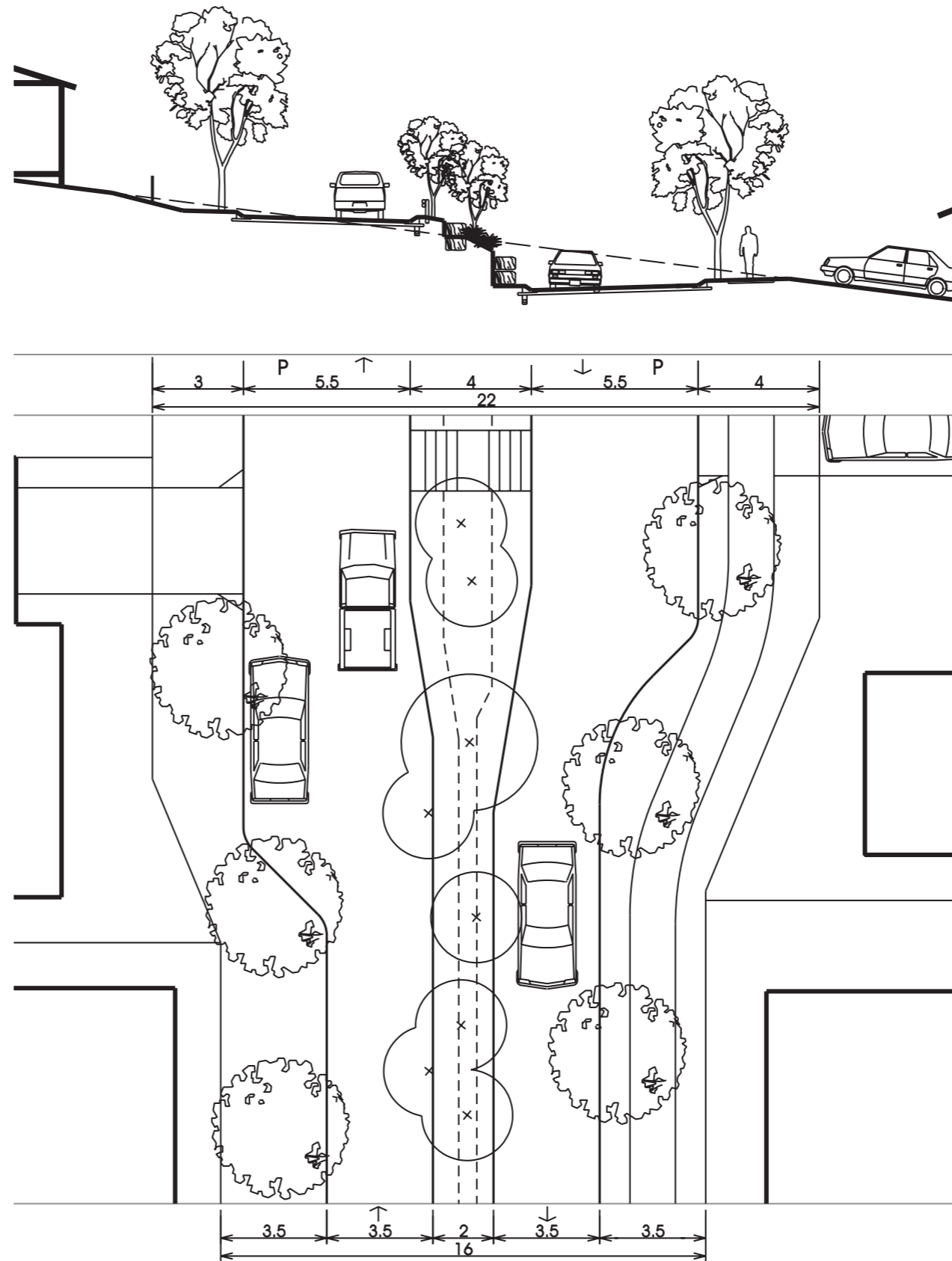
An Active Public Realm
A Place of Mobility & Connectivity



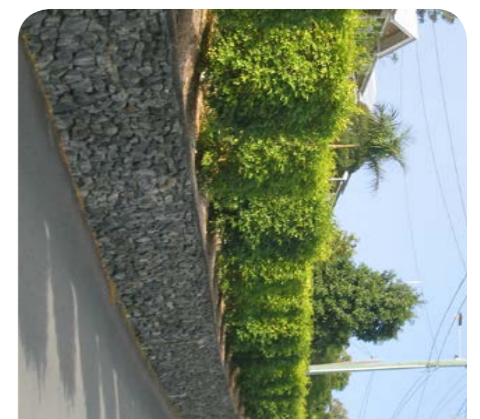
4.1.10 Split Access Street

NOTES:

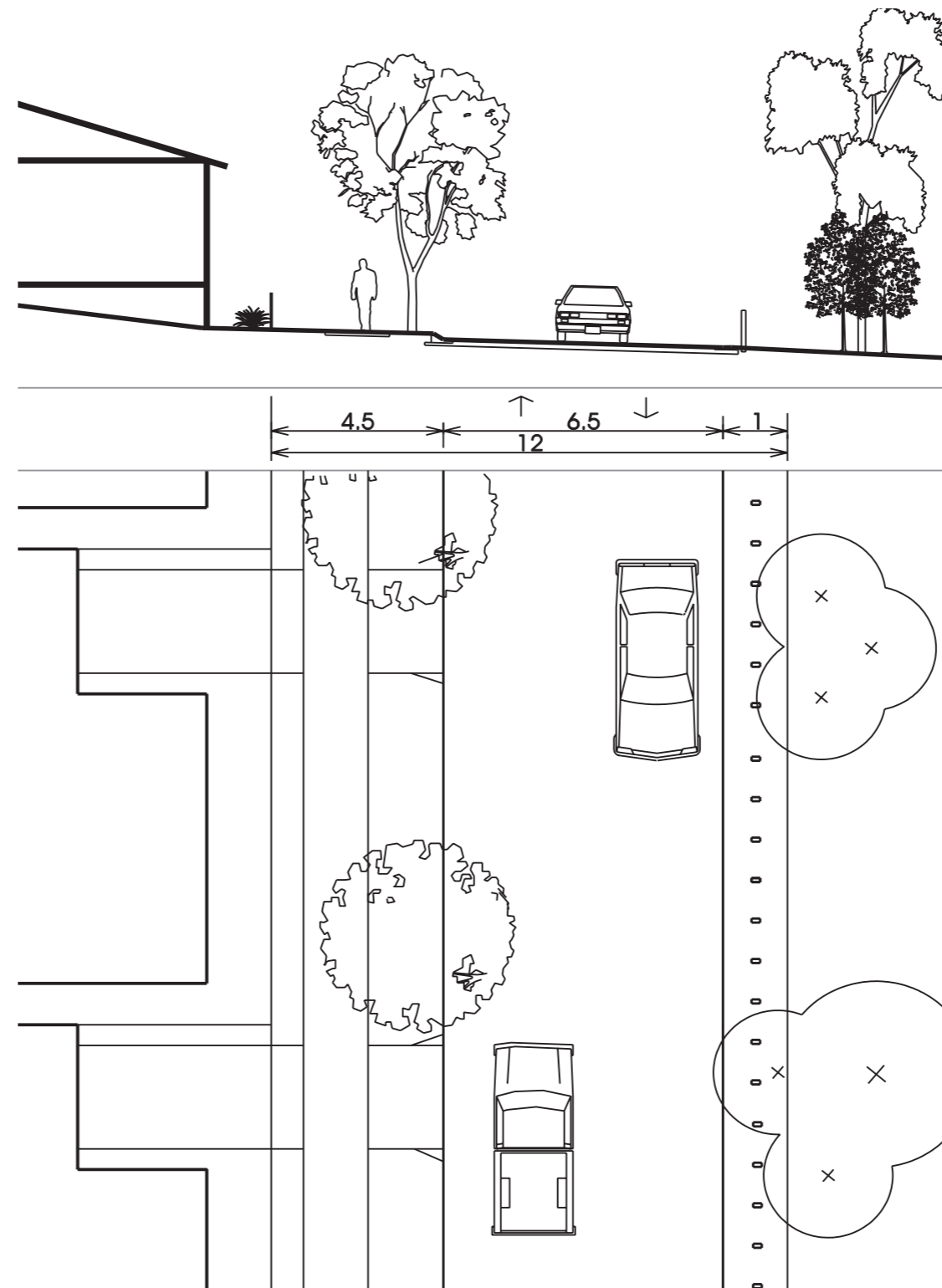
1. Allows access along contours on steeply sloping land, with reduced earthworks and improved lot access.
2. Provides a landscape feature within streetscape.
3. Guard rail (if >900mm fall) to top of retaining/batter.
4. Min 1:1 level change.
5. Retaining > 900mm in height requires structural certification. For walls > 900mm gravity walls are generally not preferred. Detailed design and separate approval required.
6. Maximum length of road between U-turn facilities:
 - 150m for access streets; and
 - 300m for collector streets.
7. Absolute minimum 3m verge for short lengths only. Desirable 3.5-4.5m.
8. Absolute minimum median width 2m. Desirable 4m. > 6m may be required to protect significant native vegetation.
9. Single lane (3.5m) where no frontage. Two lane (5.5m) where there is residential frontage to allow for on street parking.
10. Where practical, important pedestrian connections between upper and lower carriageways should be provided using steps or stairs.



A Responsive Place



4.1.11 Parkfront Access Street



NOTES:

1. Provides activity, surveillance and casual parking to park frontages.
2. Drains to park via flush or slotted kerb where practical.
3. Alternatively footpath may be located on park boundary if pedestrian connectivity is improved.
4. Absolute minimum verge 4m on property side.

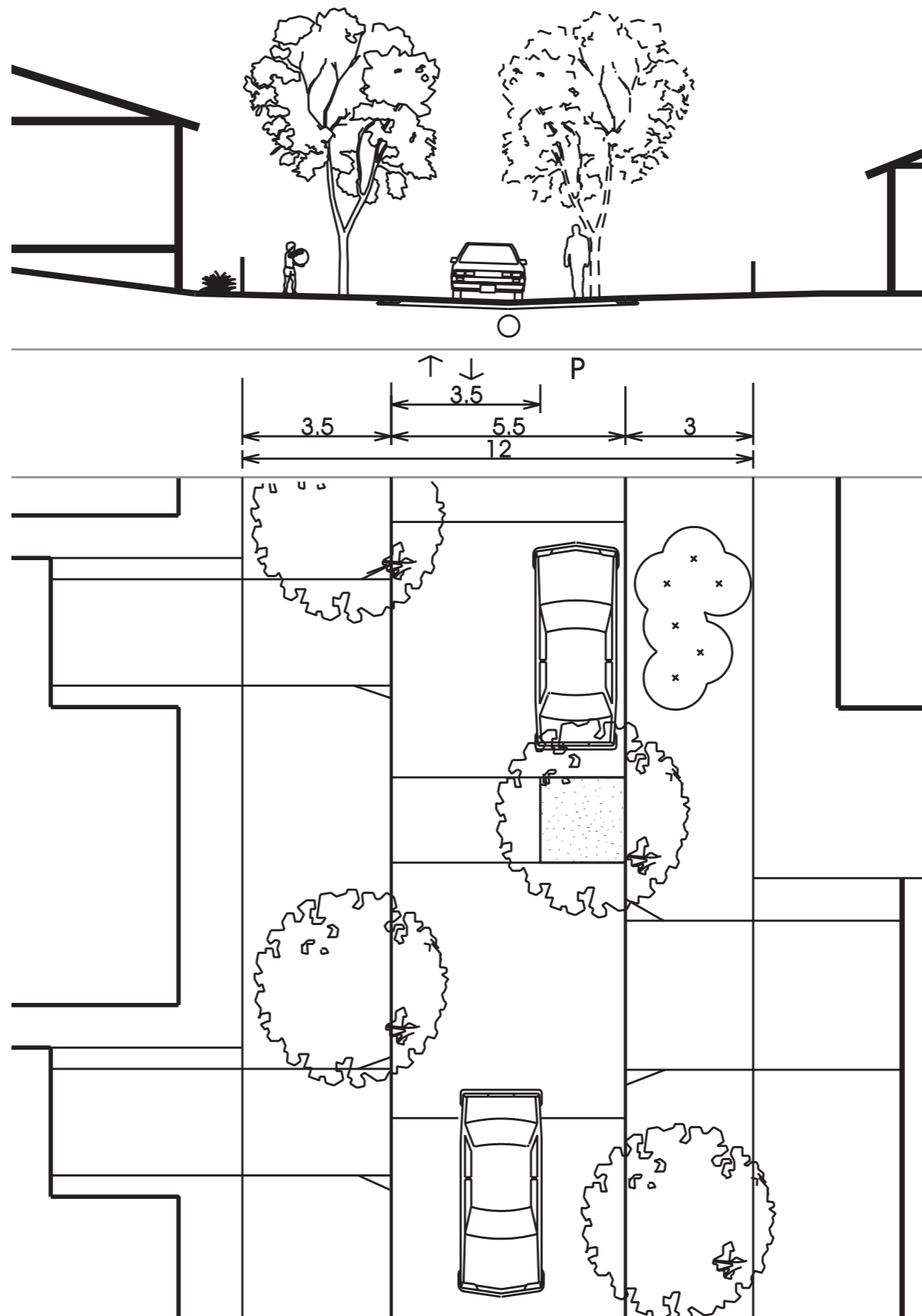
An Active Public Realm
An Integrated Place



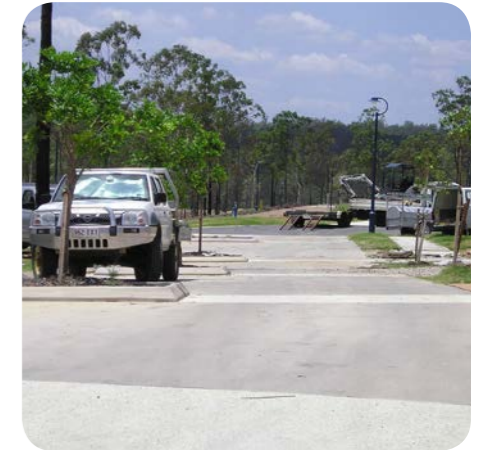
4.1.12
Lane

NOTES:

1. 100 vehicles per day.
2. Max length of 80m or 5 driveways.
3. Shared Zone, no footpath.
4. Max Design Speed 20km/h for pedestrian & cyclist safety.
5. Preferred central V-drain. One-way crossfall with kerb and channel an alternative. Roofwater connections where necessary.
6. Creates amenity, pedestrian connectivity, and opportunity for social use of street.
7. Preferred feature concrete finish rather than a.c.
8. Design should maximise habitable rooms overlooking lane for casual surveillance.



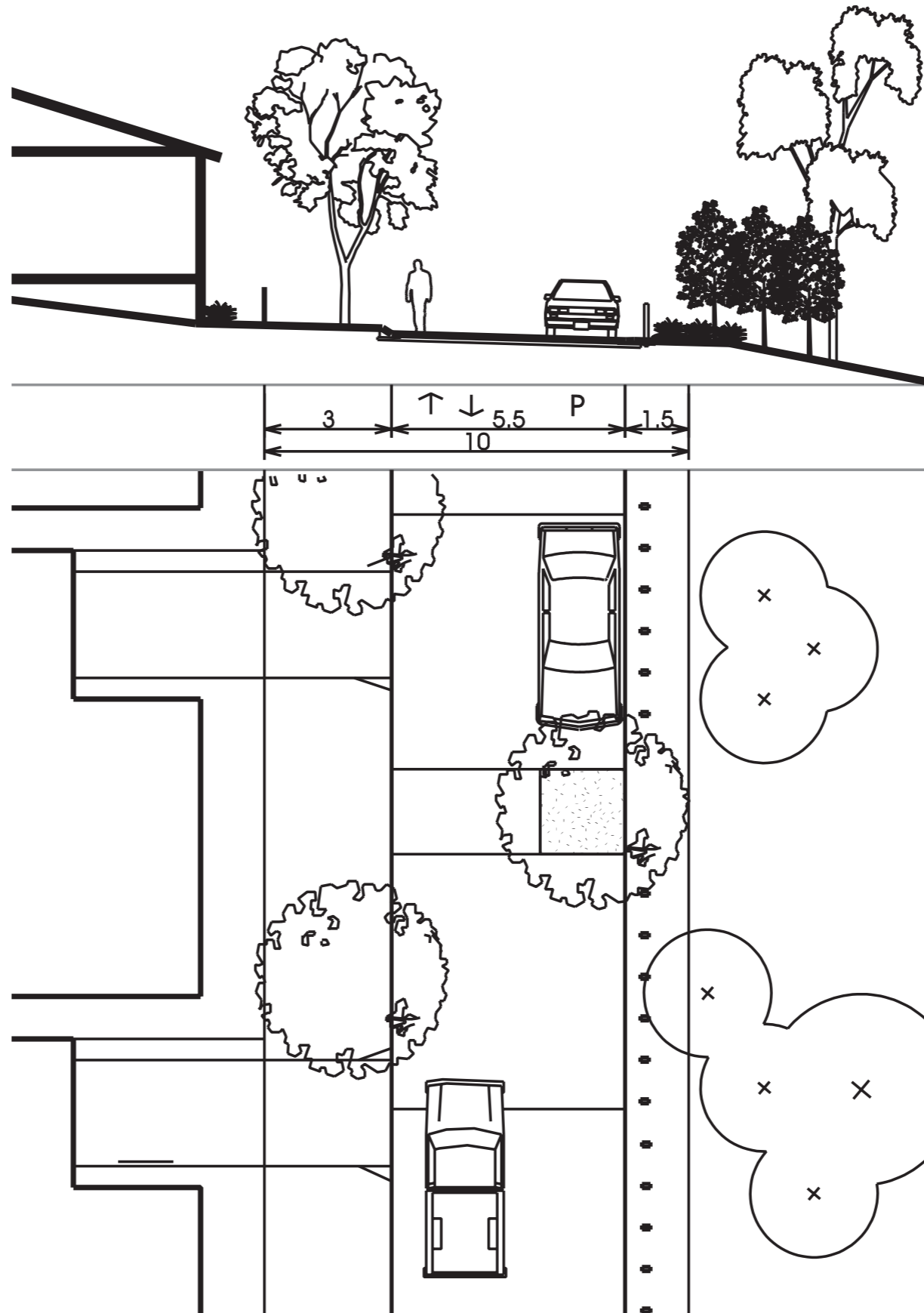
An Active Public Realm
A Safe Place



4.1.13
Parkfront Lane

NOTES:

1. 100 vehicles per day.
2. Desirable max length of 100m between exit points.
3. Shared Zone, no footpath.
4. Max Design Speed 20km/h for pedestrian & cyclist safety.
5. Drains to park; flush or slotted kerb where practical.
6. Creates amenity, pedestrian connectivity, and opportunity for social use of street.
7. Preferred feature concrete finish rather than a.c.
8. Design should maximise habitable rooms overlooking lane for casual surveillance.
9. Not to be used as primary (i.e. min 50%) frontage to any recreation parks or sports grounds.



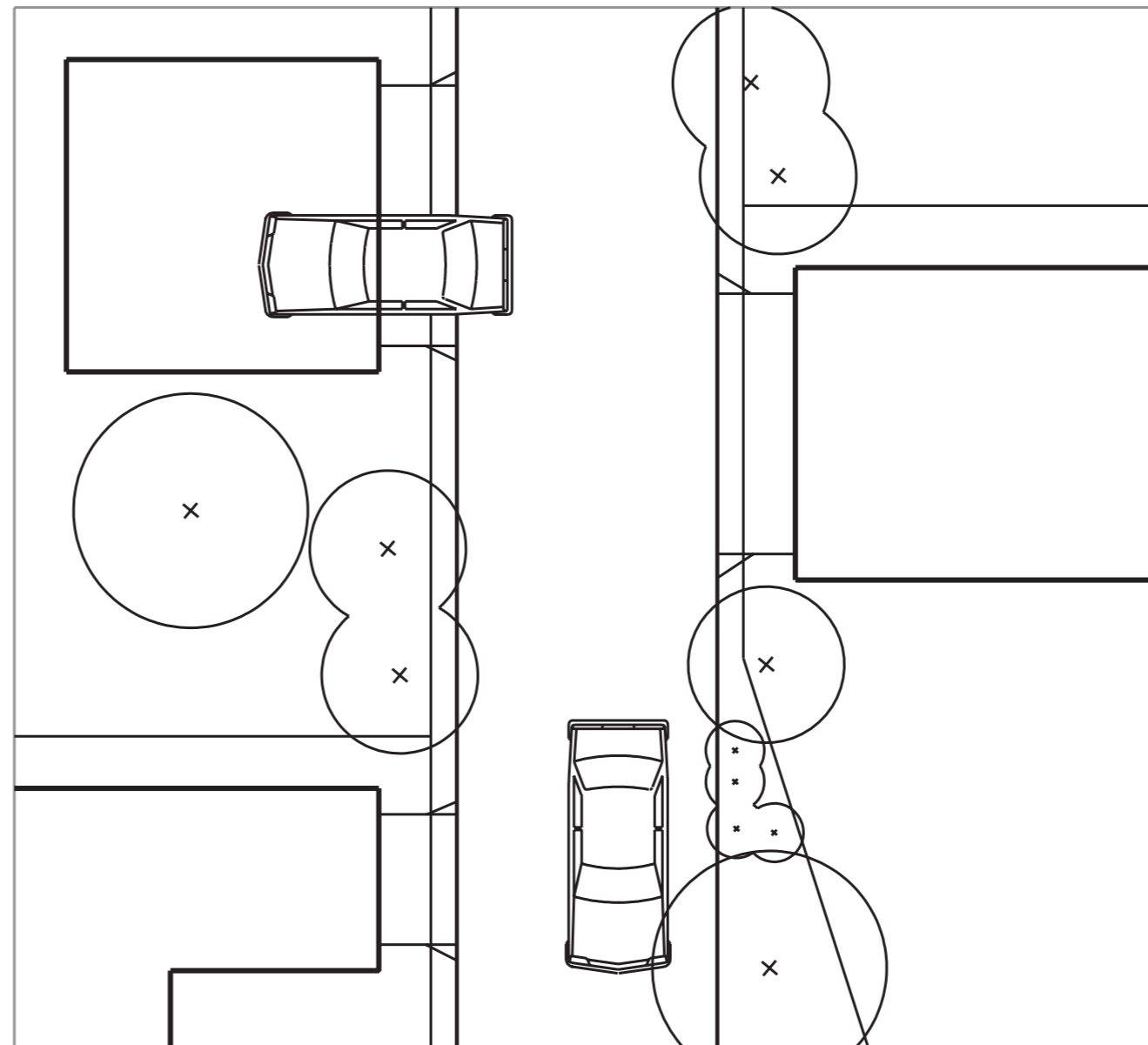
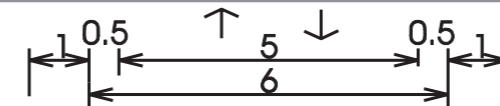
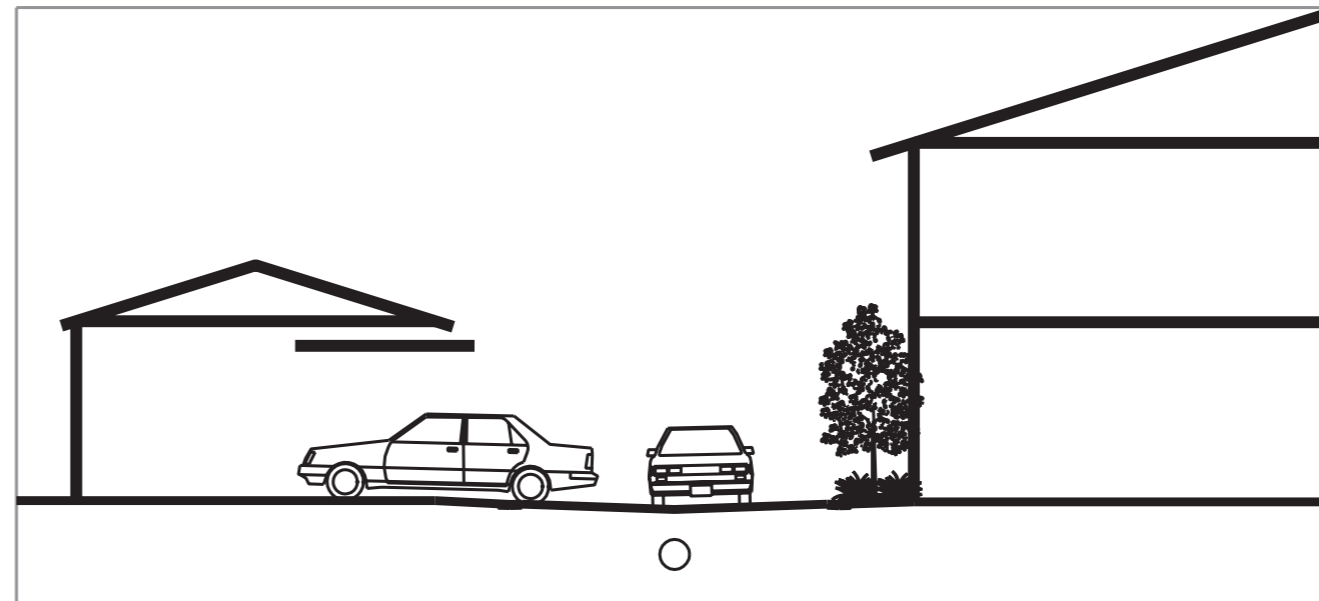
An Active Public Realm
A Safe Place



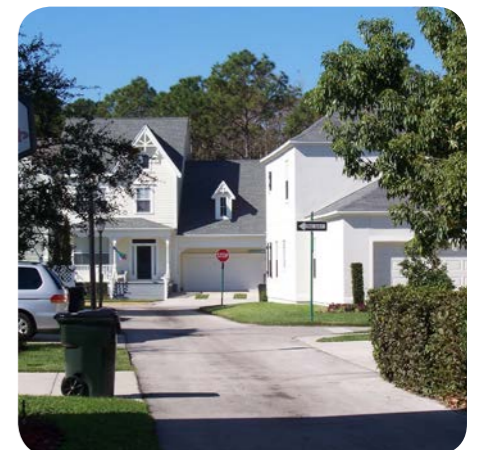
4.1.14 Rear Lane

NOTES:

1. Garage access for rear - loaded housing.
2. 100 vehicles per day.
3. Desirable max length of 100m between exit points.
4. Shared Zone, no footpath.
5. Max Design Speed 20km/h.
6. Design should maximise habitable rooms overlooking lane for casual surveillance both within the rear lane itself and at ends of lane. Habitable rooms over garages within lane are encouraged to increase casual surveillance.
7. Preferred central V-drain. One-way crossfall with kerb and channel an alternative. Roofwater connections where necessary.
8. Preferred feature concrete finish rather than a.c.
9. Preference for rear lane to be elevated slightly above street network.
10. Design must ensure ability to enter garage.
11. Rear lane to be lit.
12. Additional reserve width is desirable at intervals and at entry points to allow for landscaping. Alternatively, landscaping may be provided within properties to soften built form of lane.



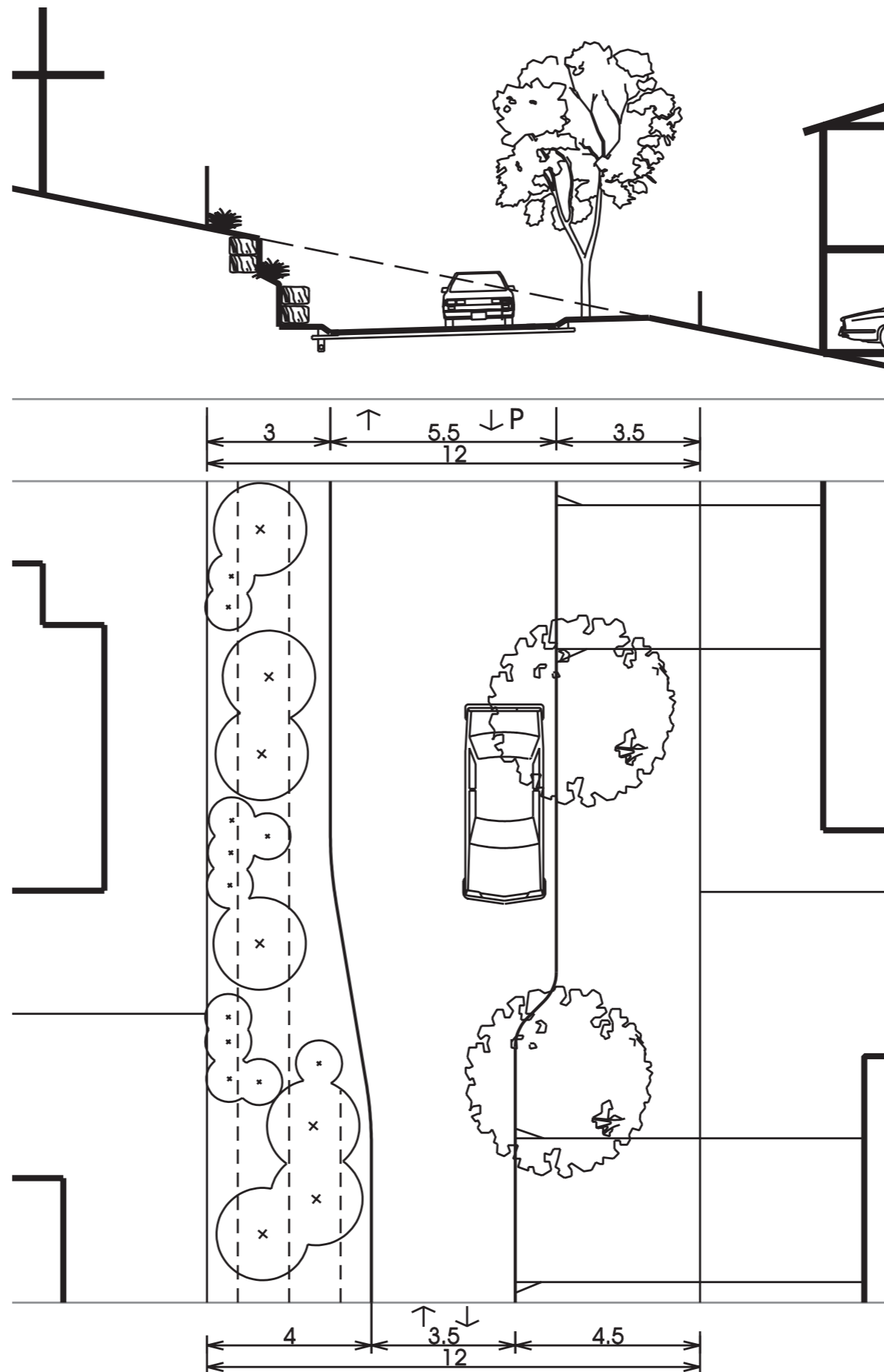
An Integrated Place A Safe Place



4.1.15
Single-sided Lane

NOTES:

1. Access to low-side only on steeply sloping land.
2. Single moving lane with passing places.
3. Preferred max length of 150m.
4. Retaining > 900mm in height requires structural certification. For walls > 900mm gravity walls are generally not preferred. Detailed design and separate approval required.



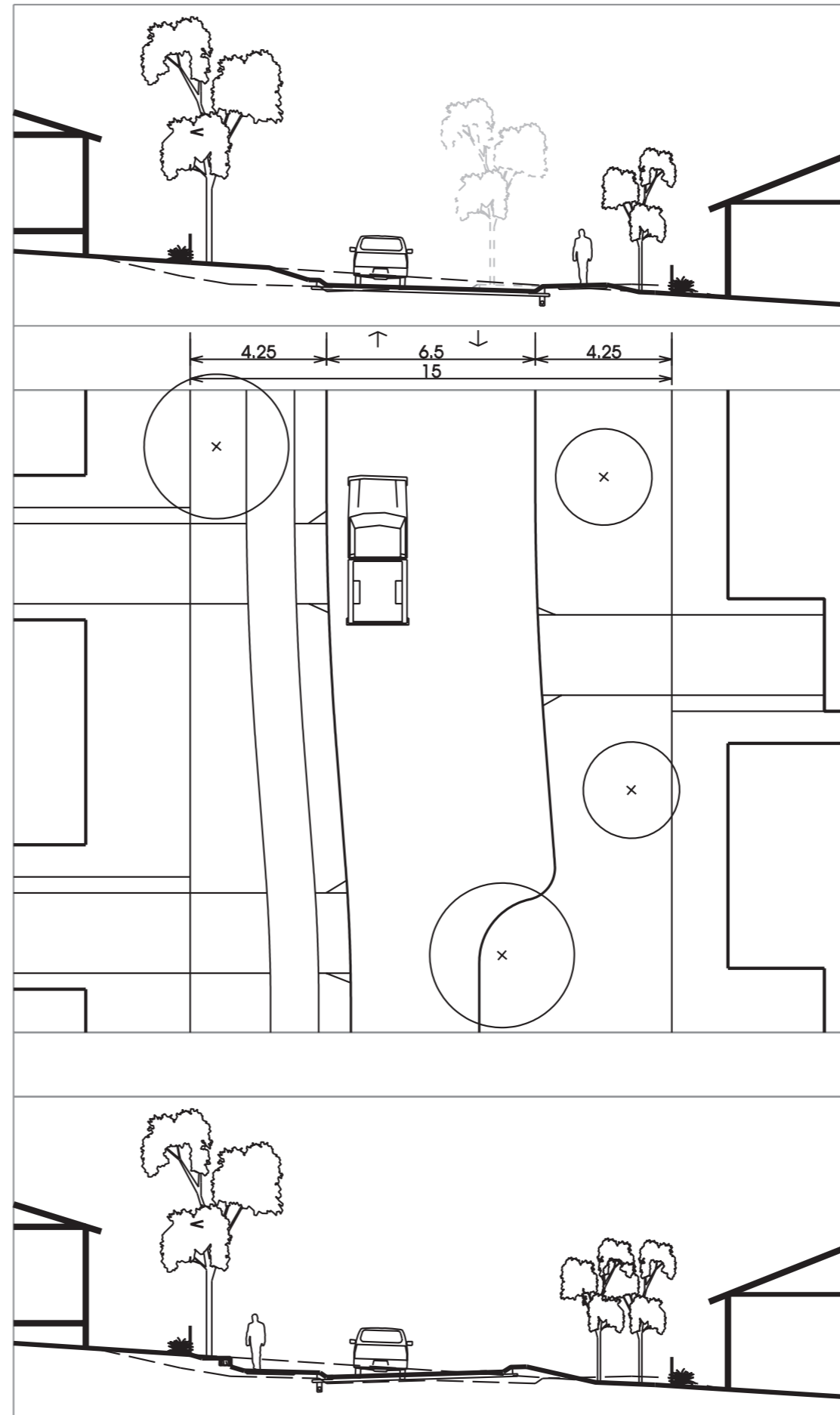
A Responsive Place



4.1.16
One-way Crossfall Street

NOTES:

1. Used to reduce slope impact to lots and enable tree retention.
2. Creates shady, attractive streets for pedestrians and residents.
3. Suitable for access, collector and trunk collector streets (footpaths on both sides to be provided for collector and trunk collector streets).
4. Typical verge widths shown.
5. Low side crossfall option not generally preferred but can occur to protect significant native vegetation if verge profile can be guaranteed to prevent stormwater inundation by, for example, locating a footpath on the low side.



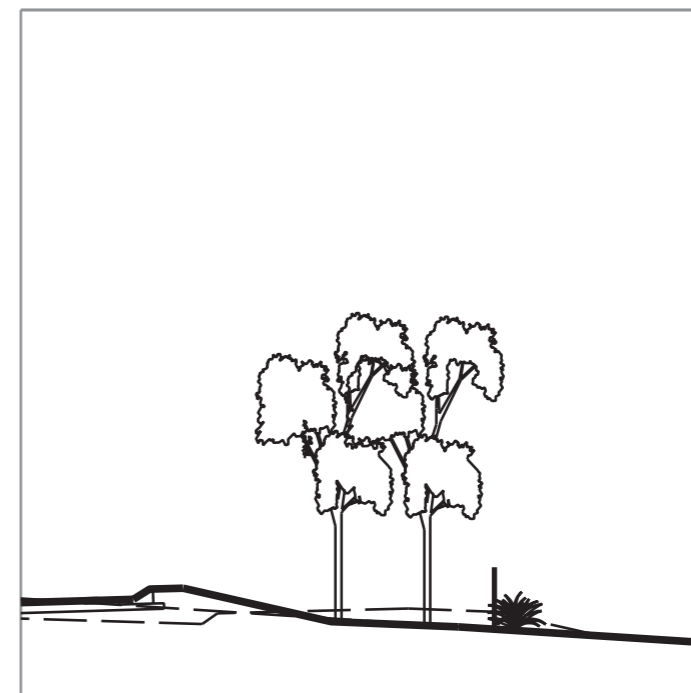
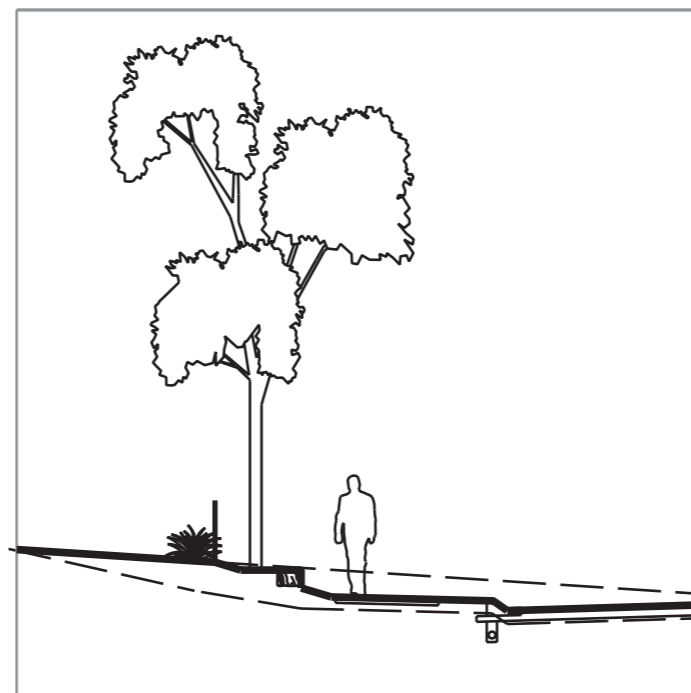
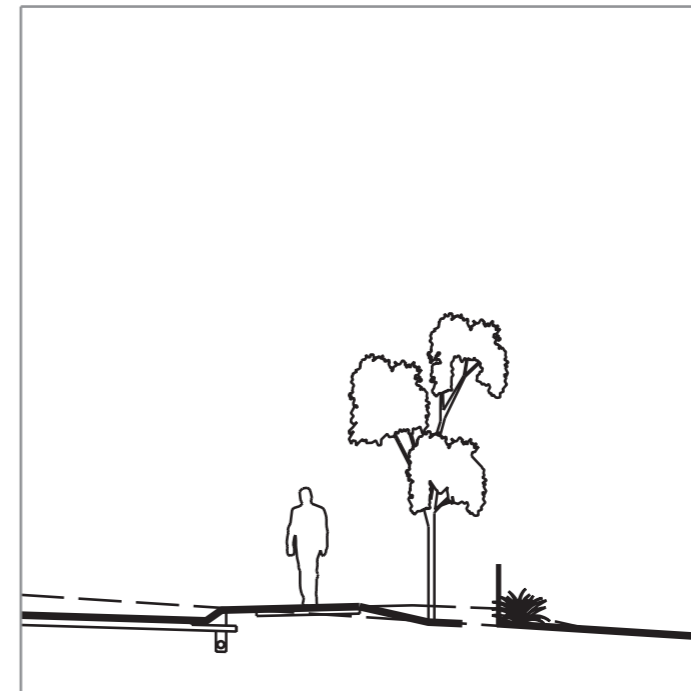
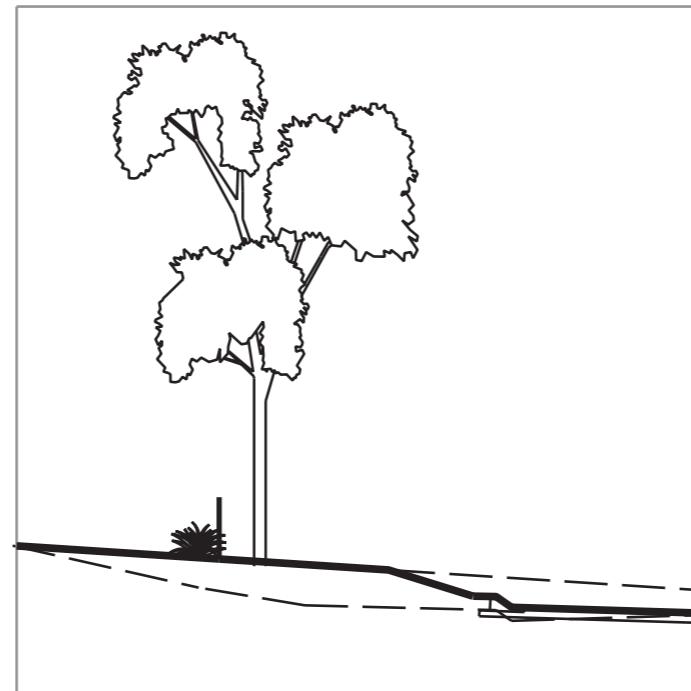
A Responsive Place



4.1.17 Alternative Verge Profiles

NOTES:

1. Used to reduce slope impact to lots and enable tree retention.
2. Retaining > 900mm height requires structural certification. For walls > 900mm gravity walls not preferred. Detailed design and separate approval required.
3. Desirable maximum grade 1:4.
4. Absolute maximum grade 1:2.
5. Maximum 1:6 where driveway access required.
6. Verges > 1:6 require landscaping other than turf.
7. Decision to use alternative verge profile to retain existing trees may be made on site by the developer and Ipswich City Council officers. Works to be surveyed and included in "as constructed" package.



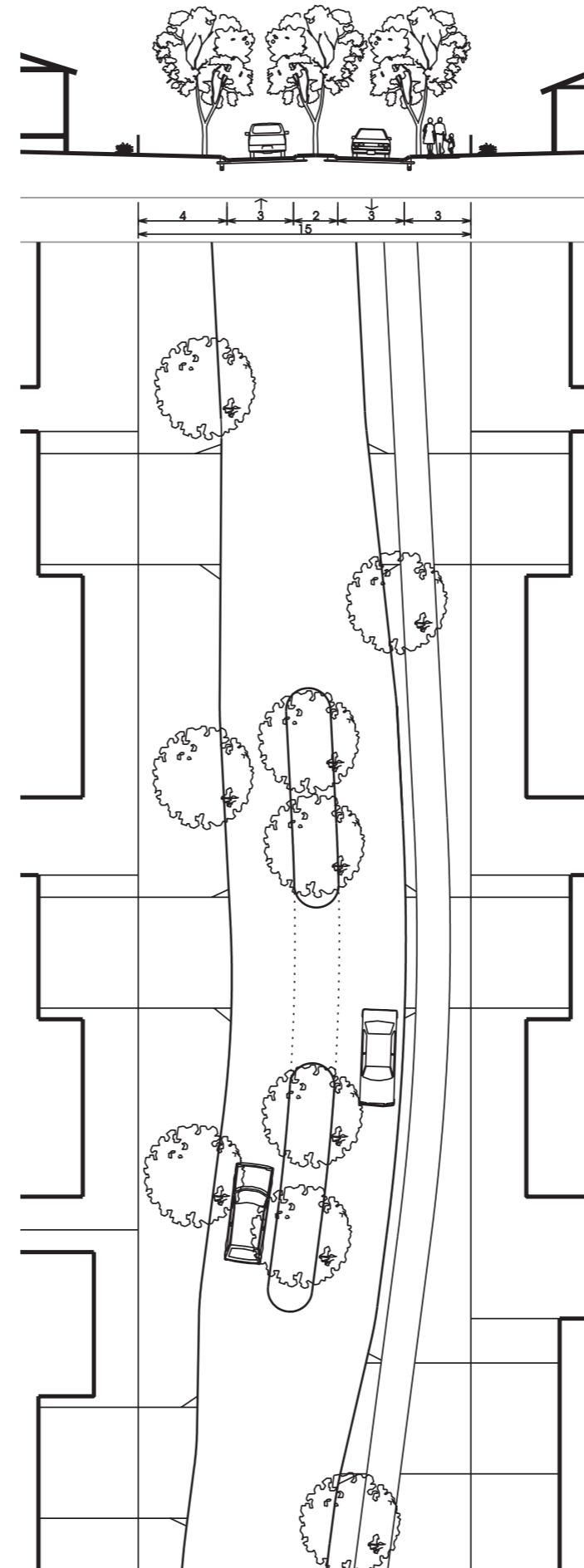
A Green Place
A Responsive Place



**4.1.18
Median Strip
Speed Control Device**

NOTES:

1. Preferred carriageway narrowing speed control device for access and collector streets <1500vpd.
2. Min median width 2m. >2m may be required to protect significant native vegetation.
3. Median landscaped for amenity, visibility and effectiveness.
4. Breaks in median to facilitate driveway access.
5. Lots allowing double garage preferred adjacent to speed control device to maximise off-street parking opportunities.



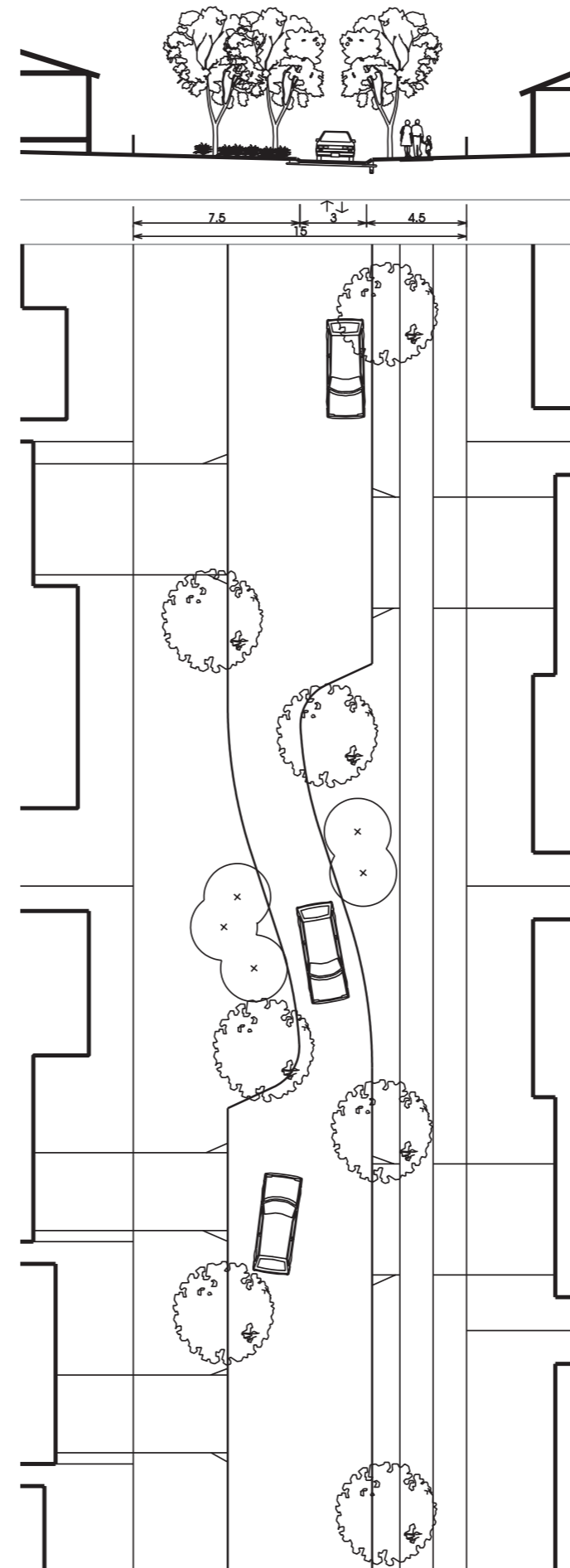
**A Safe Place
A Green Place**



4.1.19 Driveway Link Speed Control Device

NOTES:

1. Single moving lane speed control device for access streets <400vpd.
2. Landscaped for amenity, visibility and effectiveness.
3. Opportunity to coincide with tree retention.
4. Contrasting pavement treatment may be used.
5. Driveway locations to be determined on a setback plan.
6. Limit use to short access streets in exceptional circumstances. Preferred speed control device is median strip - see 4.1.18.



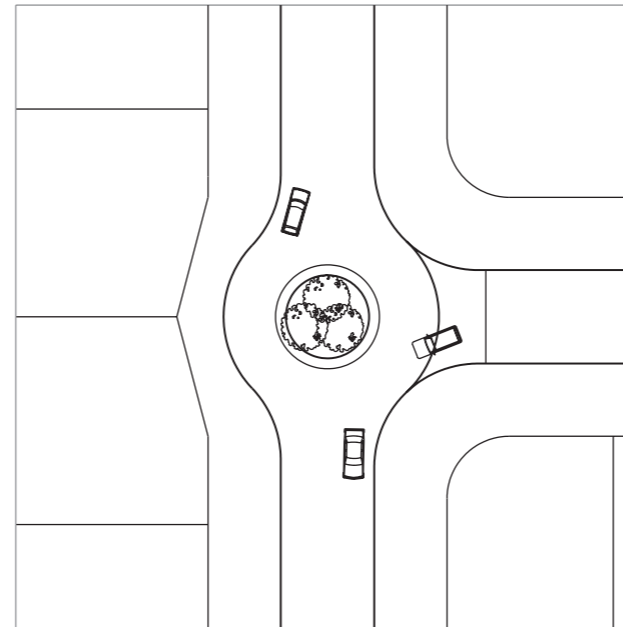
A Safe Place



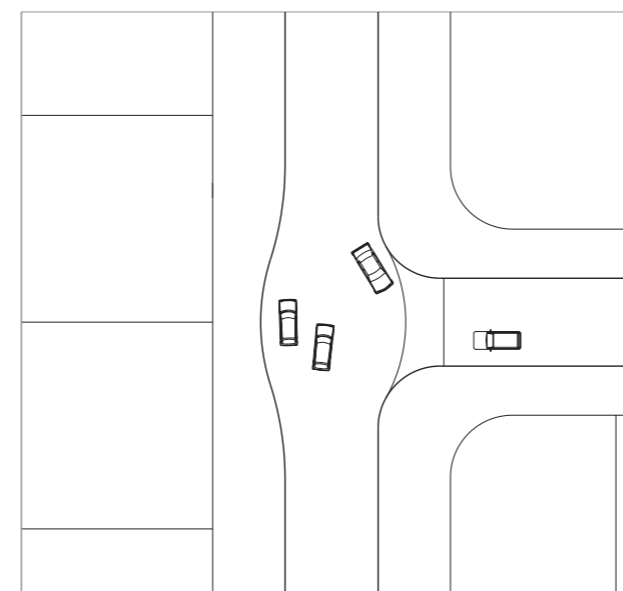
**4.1.20
Acceptable Intersections
Types**

**No Access Trunk Collector
Streets**

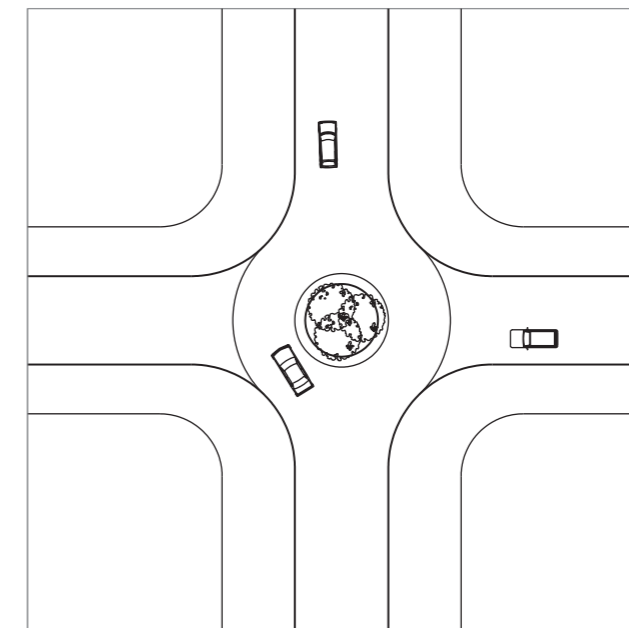
3-way roundabout



**3-way T
with passing space**



4-way roundabout



NOTES:

1. Queensland Streets [1998 Edition](#) 2.11; Austroads Part 6 – Roundabouts; and DMR Road Planning and Design Manual - Ch14 Roundabouts set criteria for determining whether a roundabout is appropriate. For example when:

- 'T' results in delays to minor road traffic;
- high proportions of right-turning traffic;
- locations where high traffic growth is expected; and
- intersections where it is desirable not to give priority.

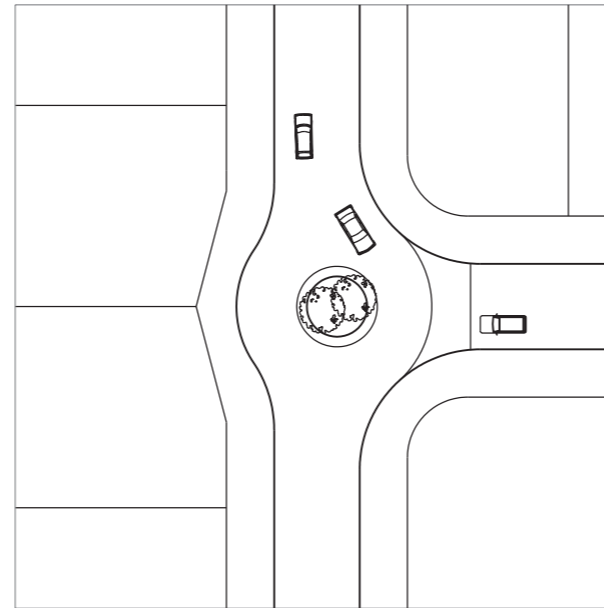
2. 3-way 'T' with passing as Austroads Type B.

**A Place of Mobility and
Connectivity
A Safe Place**

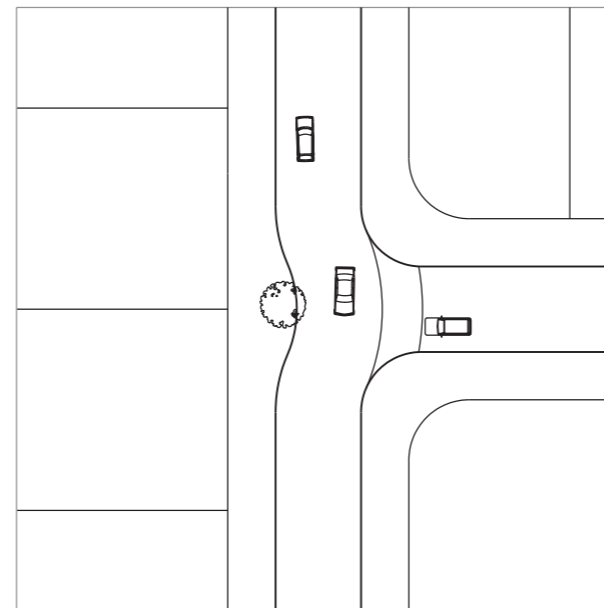
**4.1.21
Acceptable Intersections
Types**

**Access Trunk Collector
Streets**

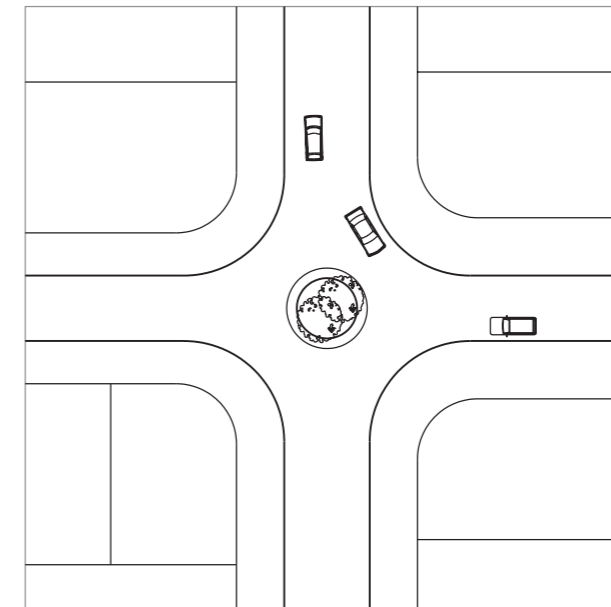
3-way roundabout



3-way T



4-way roundabout



NOTES:

1. Queensland Streets [1998 Edition](#) 2.11; Austroads Part 6 – Roundabouts; and DMR Road Planning and Design Manual - Ch14 Roundabouts set criteria for determining whether a roundabout is appropriate. For example when:

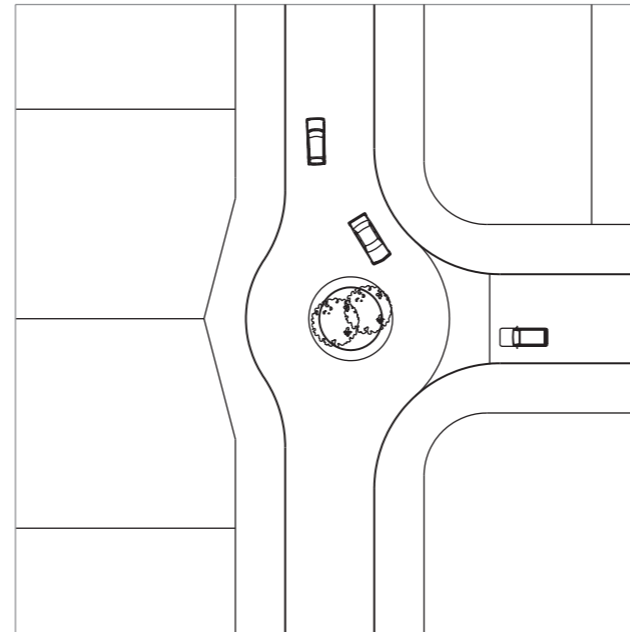
- 'T' results in delays to minor road traffic;
- high proportions of right-turning traffic;
- locations where high traffic growth is expected; and
- intersections where it is desirable not to give priority.

**A Place of Mobility and
Connectivity
A Safe Place**

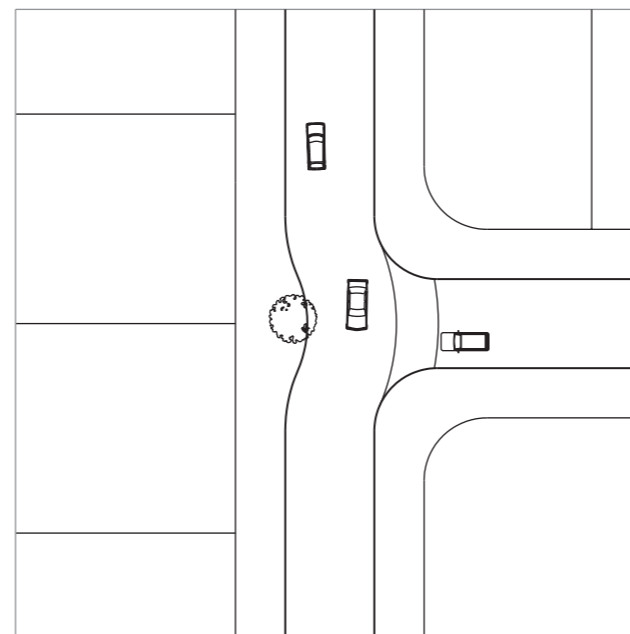
**4.1.22
Acceptable Intersections
Types**

Collector Streets

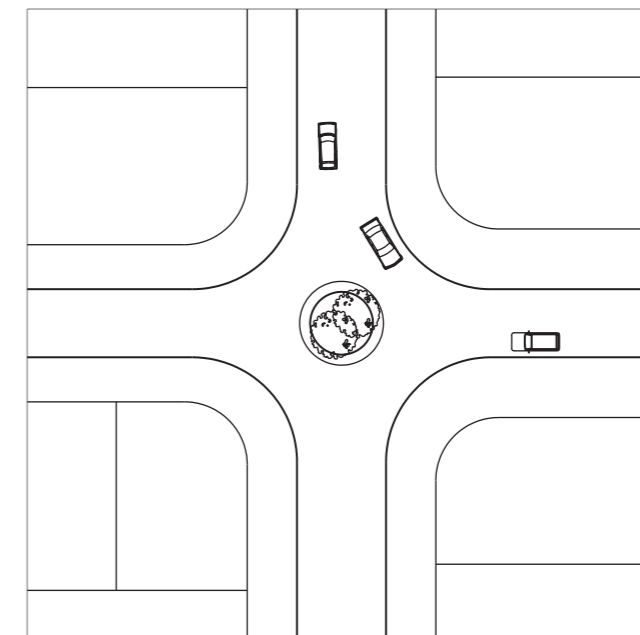
3-way roundabout



3-way T



4-way roundabout



NOTES:

1. Queensland Streets [1998 Edition](#) 2.11; Austroads Part 6 – Roundabouts; and DMR Road Planning and Design Manual - Ch14 Roundabouts set criteria for determining whether a roundabout is appropriate. For example when:

- 'T' results in delays to minor road traffic;
- high proportions of right-turning traffic;
- locations where high traffic growth is expected; and
- intersections where it is desirable not to give priority.

2. 6-10m kerb radius acceptable for collector streets.

**A Place of Mobility and
Connectivity
A Safe Place**

4.1.23 Acceptable Intersections Types – Access Street

NOTES:

1. Queensland Streets [1998 Edition](#) 2.11; Austroads Part 6 – Roundabouts; and DMR Road Planning and Design Manual - Ch14 Roundabouts set criteria for determining whether a roundabout is appropriate. For example when:

- 'T' results in delays to minor road traffic;
- high proportions of right-turning traffic;
- locations where high traffic growth is expected; and
- intersections where it is desirable not to give priority.

2. Signed 4-way appropriate for access streets <300vpd in exceptional circumstances for example:

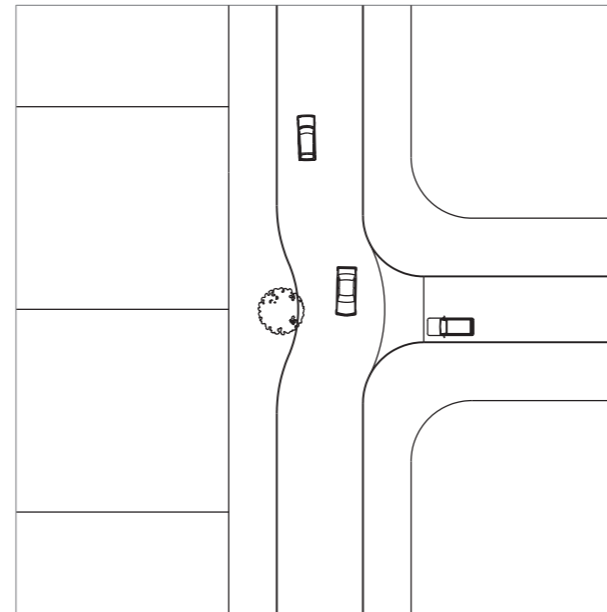
- allow long vistas;
- grades prevent roundabout;
- to improve legibility;
- in areas of urban character where 4-ways are characteristic; and
- safety can be achieved by stop signs; good sightlines; low traffic speeds and volumes etc.

3. 3-6m kerb radius acceptable for access streets.

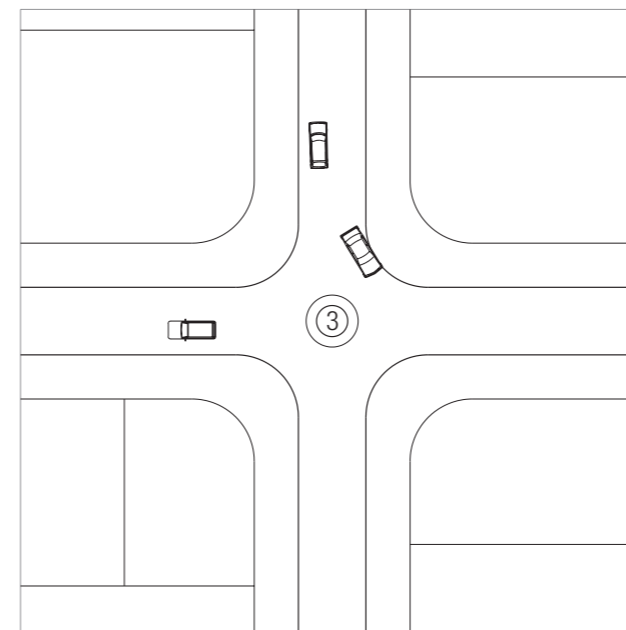
4. Mini-roundabouts suitable for access streets where additional lot truncations are undesirable. Desirable minimum 3m diameter centre plus 1m concrete shoulder. Absolute minimum 2m diameter centre plus 1m concrete shoulder.

5. 3-way T and signed 4-way generally preferred intersection forms for access streets.

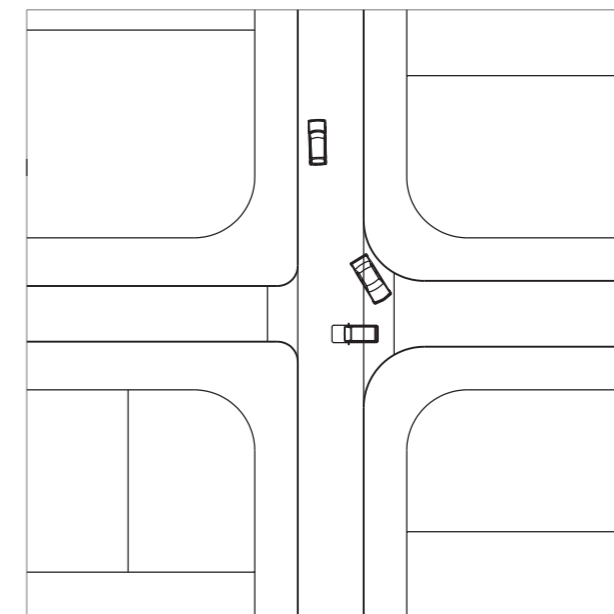
3-way T



4-way mini-roundabout



Signed 4-way



A Place of Mobility and
Connectivity
A Safe Place

4.1.24 Acceptable Cul-de-sac Heads

NOTES:

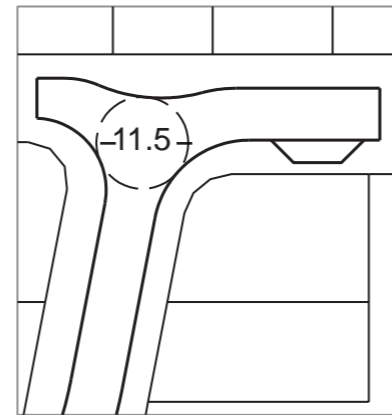
1. Use of cul-de-sacs must not prevent a connected, walkable street network developing. Where cul-de-sacs are used-for example where site dimensions and topography dictate - alternatives to R9 Turning Circle can be used to:

- Reduce road reserve area and allow regular lot layout;
- Enable cul-de-sacs on steep grades (to 12-16% rather than 3%);
- Provide additional parking opportunities;
- Facilitate landscape and bio-retention opportunities (if proven to be implementable); and
- Provide open space areas within cul-de-sac heads incorporating seating or local gathering opportunities.

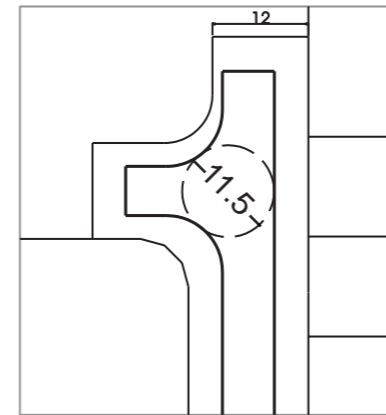
2. T, Y and Offset Square types to incorporate an 11.5m turning circle at the divergence point to accommodate turning circle of the 85 percentile vehicle (see AS 2890.1:2004).

3. T and Y-head design must allow for movements of larger service vehicles.

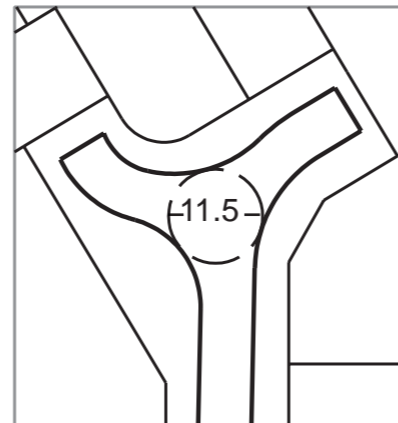
T-Head



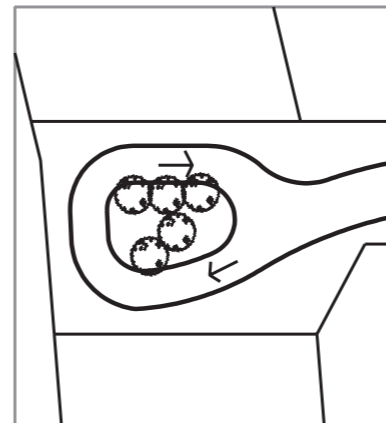
Offset Square



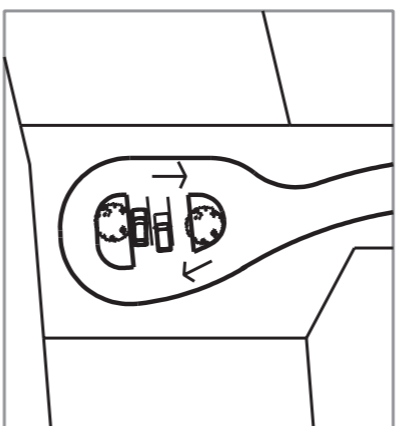
Y - Head



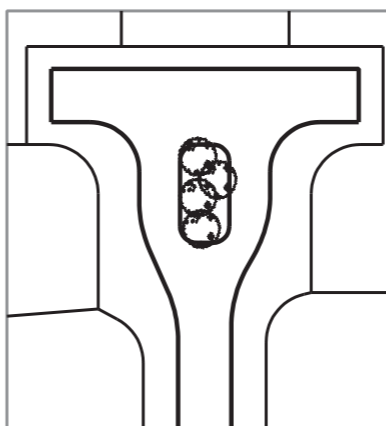
Island 1



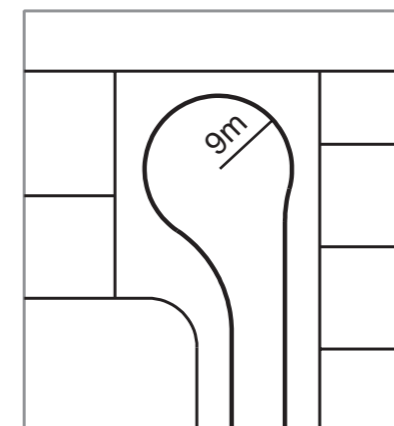
Island 2



Island 3



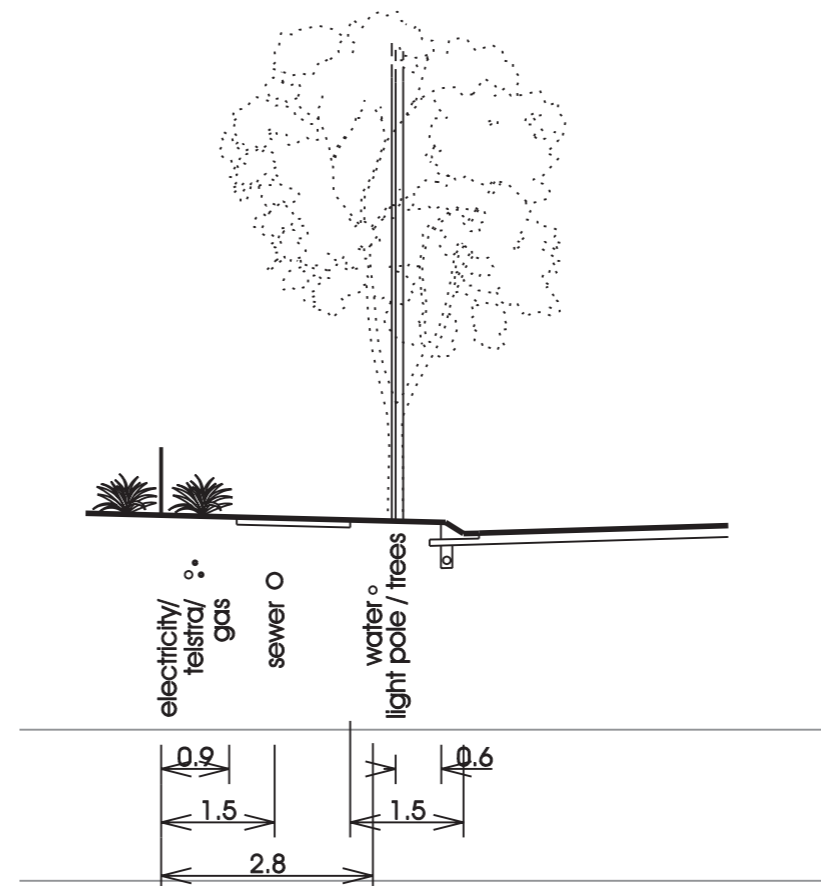
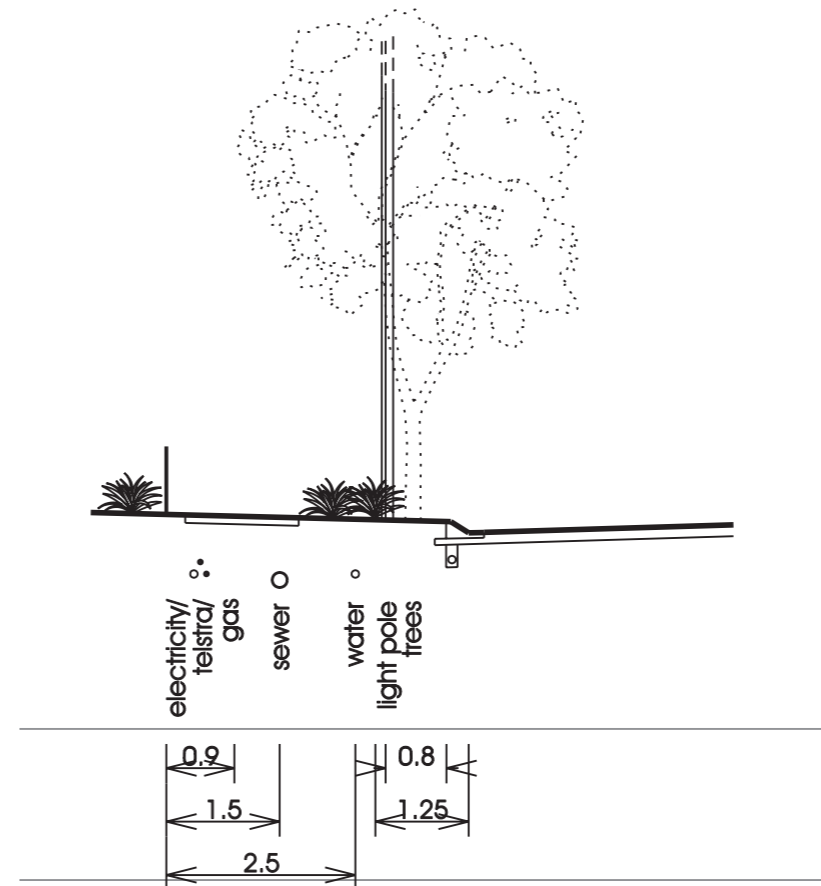
R9 Turning Circle



A Responsive Place



4.1.25 Alternative Services Alignment in Verge



NOTES:

1. Location of footpath in vegetation may be varied between
 - central location;
 - adjoining property boundary; and
 - adjoining back of kerb.
2. Footpath adjoining property boundary is preferred to
 - increase planting area; and
 - improve opportunities for street trees to shade pedestrians and parked cars.

An Integrated Place
A Green Place



**4.1.26
Linemarking**

	Trunk Collector Streets	Collector Streets	Access Streets	Laneways
Separation Lines	✓	If > 2500vpd	X	X
Edge Lines	Parking / cycle lanes	X	X	X
Outline Markings around islands & medians	✓	✓	✓	X
Kerb markings	X	X	X	X
Chevron / diagonal splayed approaches to islands	✓	✓	✓	X

NOTES:

1. To improve residential and visual amenity, the use of linemarking should be kept to the essential minimum and in accordance with the M.U.T.C.D.

An Integrated Place



4.2 PUBLIC REALM

4.2.1 STREETScape

4.2.1.1 Landscaped Island in Road Reserve

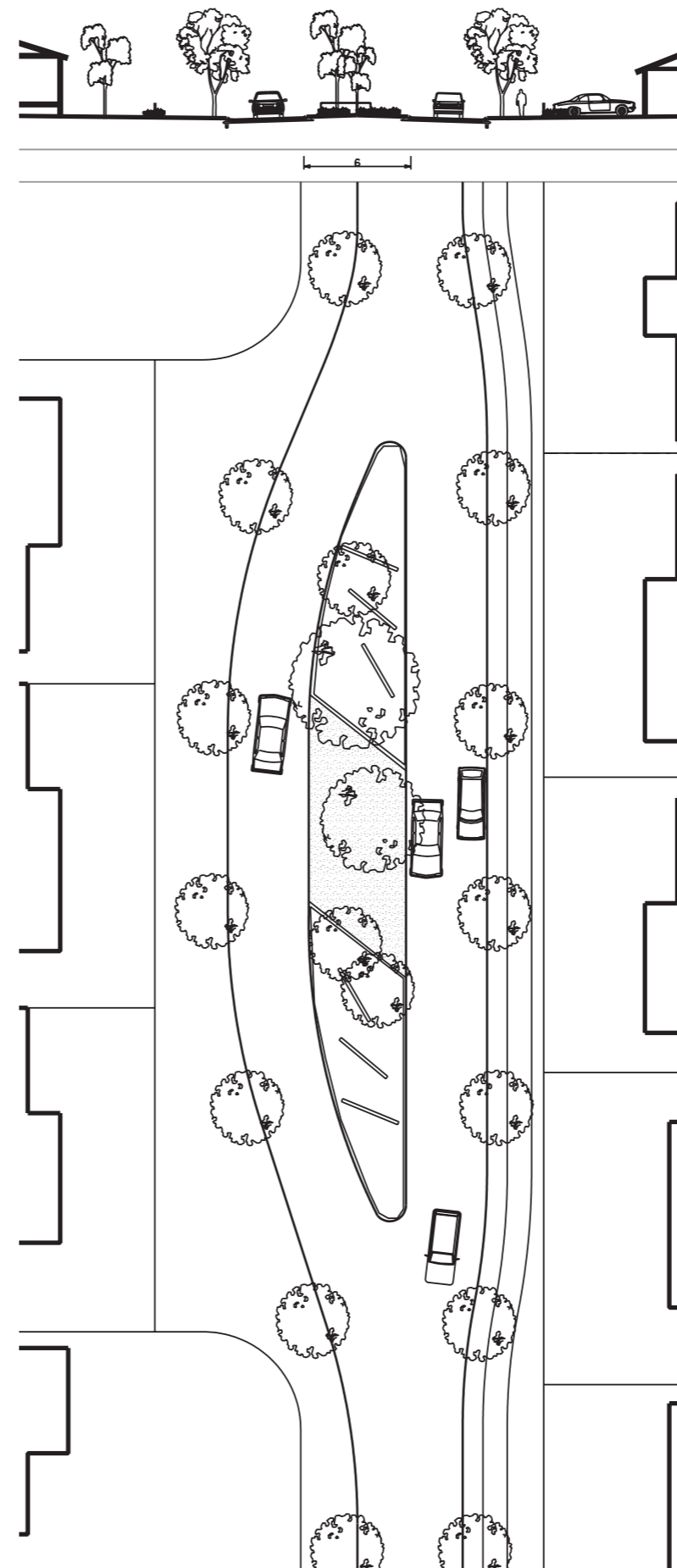
NOTES:

1. A local landscape feature containing retained and additional trees and low-maintenance planting. Can include hardscape elements such as walls if deemed safe.

2. Desirable minimum width 6m.

3. For species selection see 4.2.1.8 and 4.2.1.9.
Turf not preferred.

5. Absolute minimum verge width 3m.



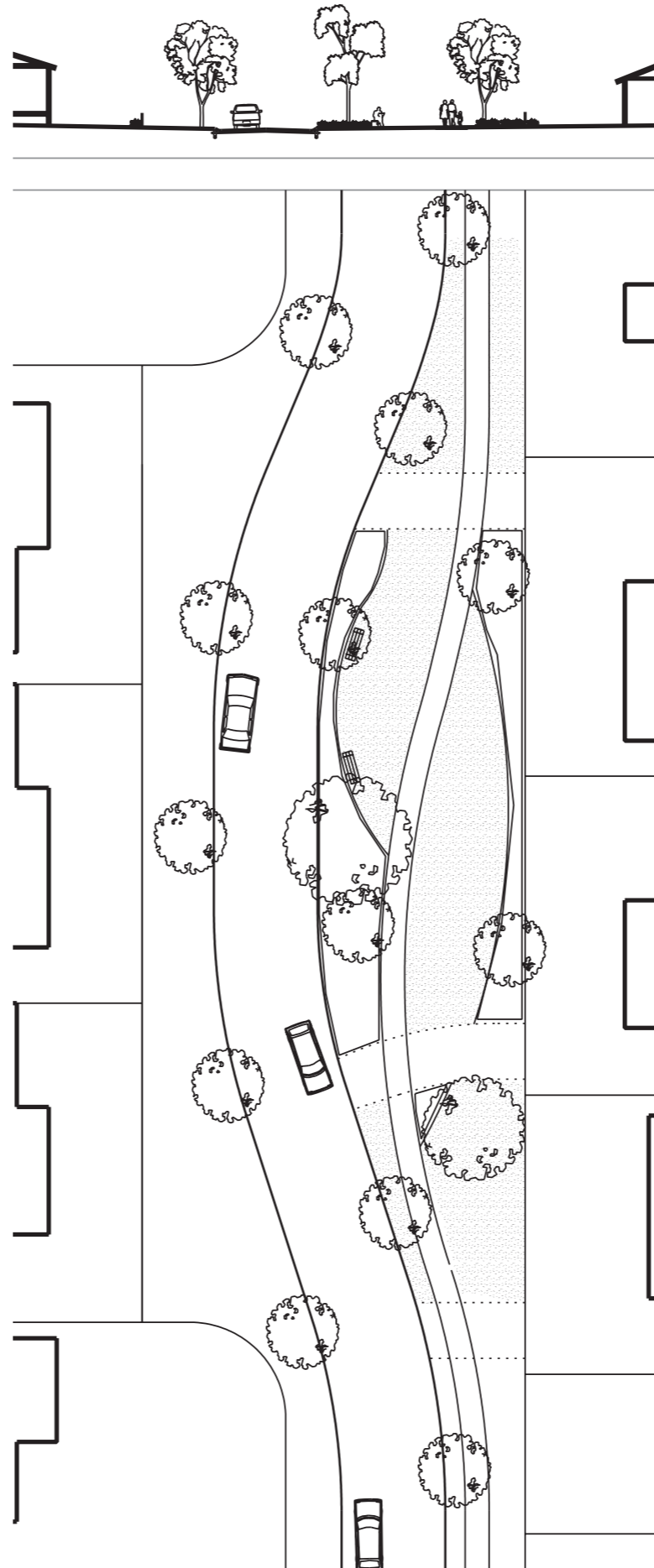
A Green Place A Unique Place



**4.2.1.2
Landscaped Verge in Road
Reserve**

NOTES:

1. Opportunities for informal seating and social space as well as feature planting.
2. Planting to road edge for safety.
3. Designated driveways to contain space.
4. For species selection see 4.2.1.8 and 4.2.1.9.
5. Absolute minimum verge width 3m.



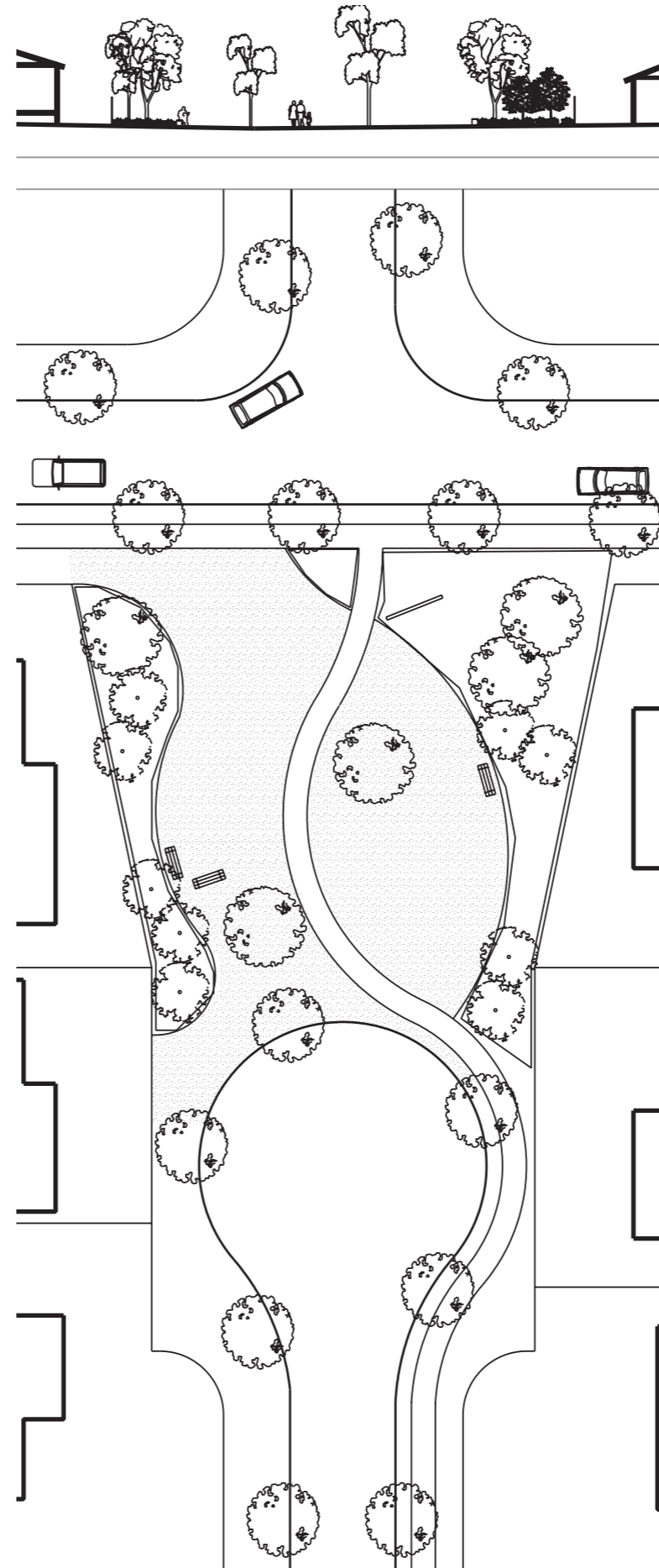
An Active Public Realm
A Green Place
A Unique Place



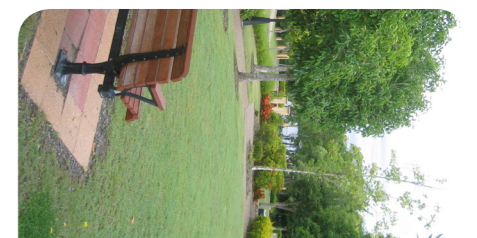
4.2.1.3 Landscaped Node in Road Reserve

NOTES:

1. Passive space which provides enhanced local identity, pedestrian connectivity and community ownership opportunities.
2. Can be located in prominent viewlines and thresholds such as village entries or edge of conservation estates.
3. For species selection see 4.2.1.8 and 4.2.1.9.
4. Minimum width as continuation of road reserve or wider.
5. Minimum depth of node equivalent to one lot.
6. Design of dwellings should maximise habitable rooms overlooking node for casual surveillance and corner site presentation to two road frontages.



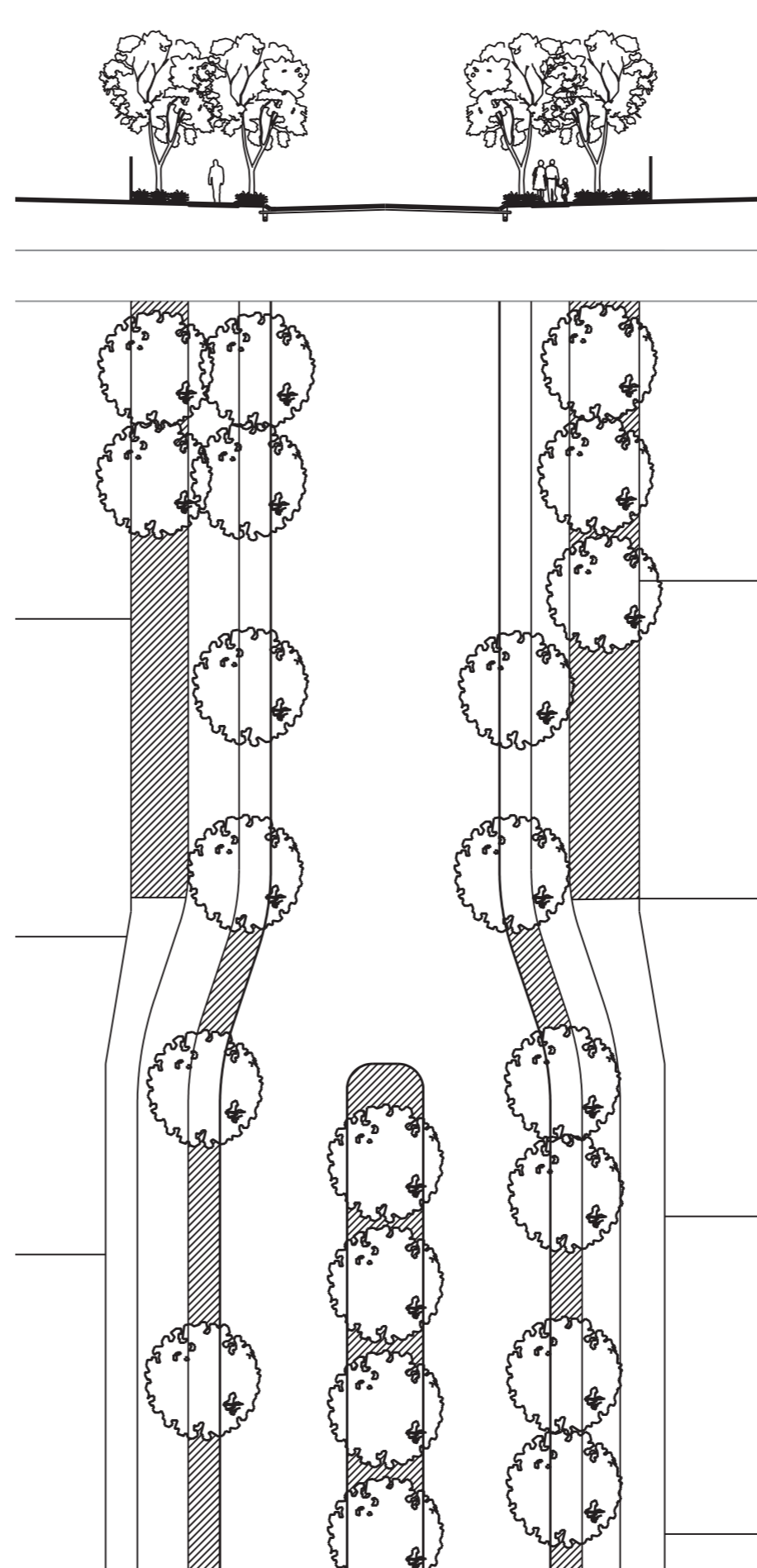
An Active Public Realm
A Place of Mobility & Connectivity
A Green Place
A Unique Place



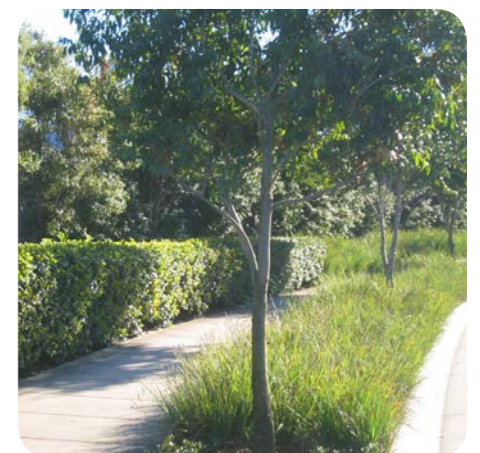
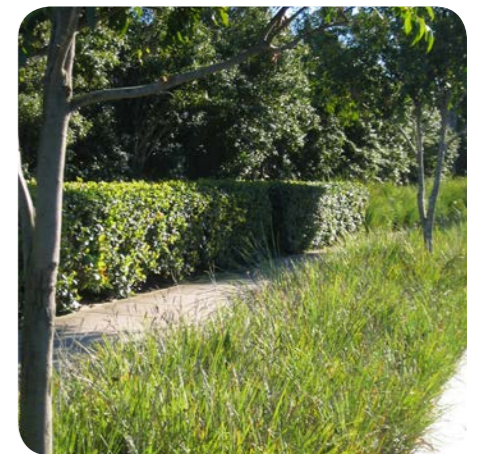
4.2.1.4 Street Tree Planting in Trunk Collector Streets

NOTES:

1. Tree planting at 4-8m spacing to median and verge – appropriate for street hierarchy and shade cover to footpaths.
2. Formal and informal street tree groupings to verge where width allows.
3. Low maintenance screen planting of shrubs and ground covers.
4. For species selection see 4.2.1.8 and 4.2.1.9.
5. Double-row planting may require additional verge width to allow for services.
6. Additional Planting must take account of driveways and stormwater infrastructure.



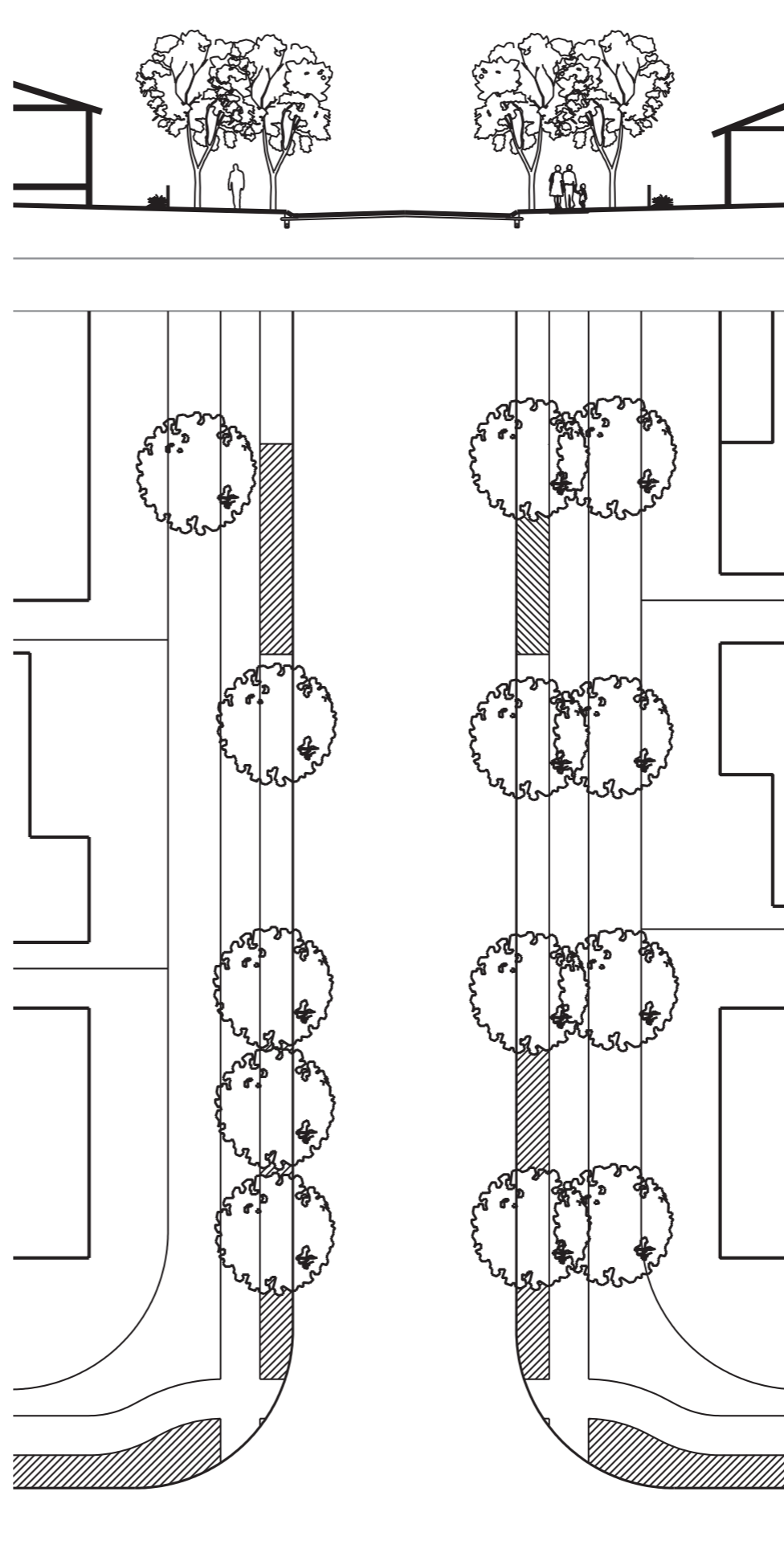
A Green Place
A Unique Place



4.2.1.5 Street Tree Planting in Collector Streets

NOTES:

1. Formal or informal planting of street trees including double-row planting to emphasise street hierarchy and provide continuous shade cover to footpaths.
2. Ground cover planting and embellishments to differentiate street.
3. For species selection see 4.2.1.8 and 4.2.1.9.
4. Double-row planting may require additional verge width to allow for services.
5. Additional Planting must take account of driveways and stormwater infrastructure.



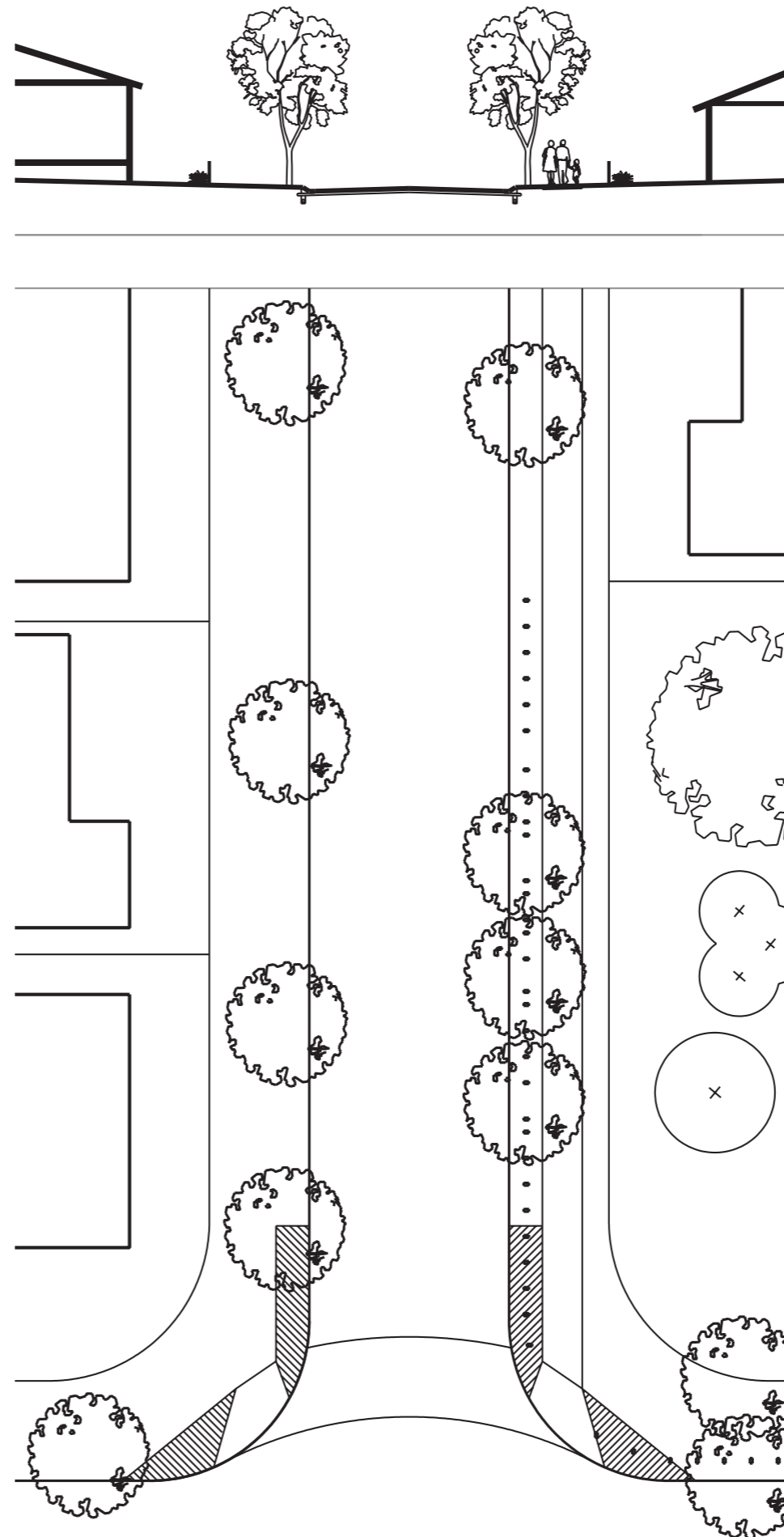
A Green Place
A Unique Place



4.2.1.6 Street Tree Planting in Access Streets

NOTES:

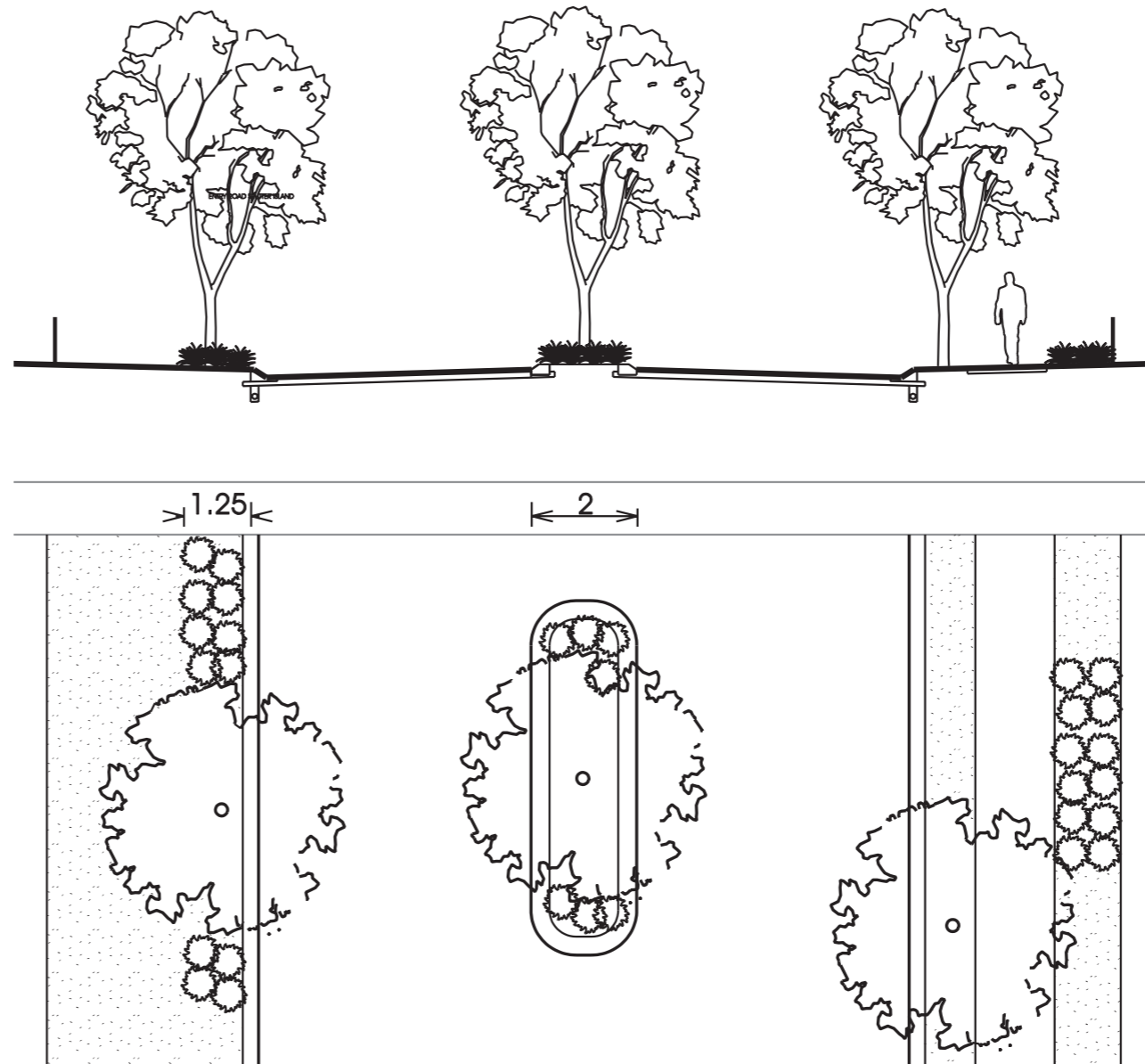
1. Informal layout of native street trees based on one tree per lot.
2. Additional tree planting for frontages >15m width and at corners.
3. Row and groups of trees in verge to park frontage.
4. Bollards in road verge to prevent vehicle access to park and car parking on verge.
5. Groundcover planting to street corners to define thresholds.
6. For species selection see 4.2.1.8 and 4.2.1.9.
7. Additional Planting must take account of driveways and stormwater infrastructure.
8. Mainly to be used for key feature streets accessing centres and parks.



A Green Place A Unique Place



4.2.1.7 Planting in Medians, Verges and Islands



NOTES:

1. Desired to establish attractive leafy streets and neighbourhoods and to make medians more visible to motorists.
2. Min width of 2m between inverts for medians.
3. 200mm deep semi-mountable kerb to median to prevent plants overgrowing road pavement and reduce vehicle damage. Median kerb should widen to 450mm with concrete infill where median tapers or at nose of islands.
4. For species selection see 4.2.1.8 and 4.2.1.9.

A Green Place
A Unique Place



4.2.1.8
Tree Planting Schedule for
Road Reserves

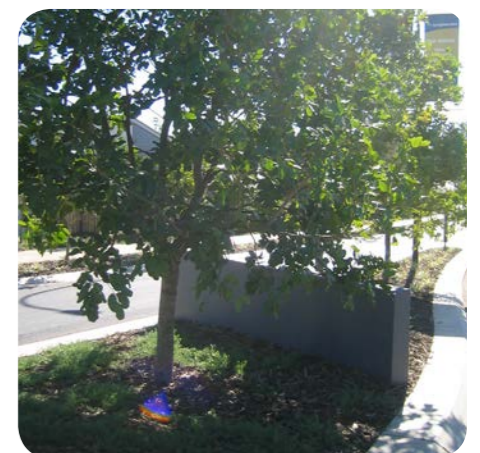
Typical Planting Schedule
for Road Reserves

Trees	Lanes				Access Streets				Collector Streets				Trunk Collector				Landscape Features							
	Verge		Median		Verge		Median		Verge		Median		Verge		Median		Island		Verge		Node			
	45L	100L	45L	100L	45L	100L	45L	100L	45L	100L	45L	100L	45L	100L	45L	100L	45L	100L	45L	100L	45L	100L		
Tuckeroo (Cupaniopsis anarcooides)	•		•		•		•		•		•		•		•		•		•		•		•	
Brushbox (Lophostemon Confertus)	•		•		•		•		•		•		•		•		•		•		•		•	
White Oak (Grevillea baileyana)	•		•		•		•		•		•		•		•		•		•		•		•	
Ivory-Curl Tree (Buckinghamia celsissima)	•		•		•		•		•		•		•		•		•		•		•		•	
Tulipwood (Harpulia pendula)	•		•		•		•		•		•		•		•		•		•		•		•	
Kauri Pine (Agathis robusta)													•		•		•		•		•		•	
Crows Ash (Flindersia australis)	•		•		•		•		•		•		•		•		•		•		•		•	
Blue Quandong (Elaeocarpus grandis)																	•		•		•		•	
Fine leaved Paper Bark (Melaleuca leucadendron)	•		•		•		•		•		•		•		•		•		•		•		•	
Broad leaved Paper Bark (Melaleuca quinquineria)	•		•		•		•		•		•		•		•		•		•		•		•	
Blue Gum (Eucalyptus tessellaris)	•		•		•		•		•		•		•		•		•		•		•		•	
Red Flowering Gum (Eucalyptus ficifolia)	•		•		•		•		•		•		•		•		•		•		•		•	

NOTES:

1. Planting on street corners to respect sight-line requirements.
2. 100L street trees preferred within trunk collector streets.

A Green Place
A Unique Place



4.2.1.9 Shrubs and Groundcover Planting Schedule for Road Reserves

Typical Planting Schedule for Road Reserves

Shrubs and Groundcovers	Lanes		Access Streets		Collector Streets		Trunk Collector Streets		Landscape Features		
	Verge	Median	Verge	Median	Verge	Median	Verge	Median	Island	Verge	Node
Lomandra longifolia (Mat Rush)	•	•	•	•	•	•	•	•	•	•	•
Dieties Bi-colour	•	•	•	•	•	•	•	•	•	•	•
Dieties grandiflora (Wild Iris)	•	•	•	•	•	•	•	•	•	•	•
Myoporum parvifolium (Myoporum)	•	•	•	•	•	•	•	•	•	•	•
Agapanthus africanus (African lilly)	•	•	•	•	•	•	•	•	•	•	•
Liriope "Muscari" (Evergreen Giant)	•	•	•	•	•	•	•	•	•	•	•
Liriope "Stripey White" (Stripey White)	•	•	•	•	•	•	•	•	•	•	•
Dianella caerulea (Blue flax lily)	•	•	•	•	•	•	•	•	•	•	•
Grevillea "Bronze Rambler"	•	•	•	•	•	•	•	•	•	•	•
Themeda triandra (Kangaroo grass)	•	•	•	•	•	•	•	•	•	•	•
Pennisetum alopecurioides (Swamp Foxtail grass)	•	•	•	•	•	•	•	•	•	•	•
Anigozanthus flavidus (Kangaroo Paw)	•	•	•	•	•	•	•	•	•	•	•
Melaleuca Thymifolia	•		•		•		•	•	•	•	•
Trachelospermum jasminoides (Star Jasmine)	•	•	•	•	•	•	•	•	•	•	•
Westringia fruticosa (Wynyabbie Gem)	•		•		•		•	•	•	•	•
Melaleuca Claret Tops (Claret Tops)	•		•		•		•	•	•	•	•
Grevillea "Honey Gem" (Honey gem)	•		•		•		•		•	•	•
Metrosideros excelsa (New Zealand Christmas bush)	•		•		•		•	•	•	•	•
Grevillea Coconut Ice (Coconut Ice)	•		•		•		•	•	•	•	•

NOTES:

1. Planting on street corners to respect sight-line requirements.

A Green Place
A Unique Place

4.2.1.10 Tree Retention in Road Reserves

	Technical Criteria	Engineering Considerations	Exceptions	Maintenance Procedure
Retained Trees in Road Reserves	Trunk <200mm diameter	Road design and alignment can accommodate retained trees	Individual important trees – for example with habitat values or landmark qualities – that are outside the criteria may be retained following individual assessment including site inspection by the developer and ICC	On Maintenance (no requirements)
	<15m height	Boring or hand-dug trenches may be required within drip zone of significant vegetation to be retained		Off Maintenance Inspection (by appropriate qualified arborist)
	Healthy, free from disease and insect attack	Footpath realignment if necessary		Off maintenance request by the developer with arborist's report
	Balanced branching structure	Public safety requirements		Formal acceptance of off maintenance by ICC
	Trunk sufficient to hold canopy			
	Not multi-trunked at base			
	No injury from construction equipment			
	<100mm fill to base			
	No root damage			
Species suitable for new microclimate and hydrology				

NOTES:

- Retaining trees has many benefits, including:
 - improved residential amenity;
 - shade;
 - neighbourhood character;
 - creation of attractive leafy streetscapes; and
 - biodiversity.

A Responsive Place
A Green Place
A Unique Place



4.2.1.11 Street Furniture in Road Reserves

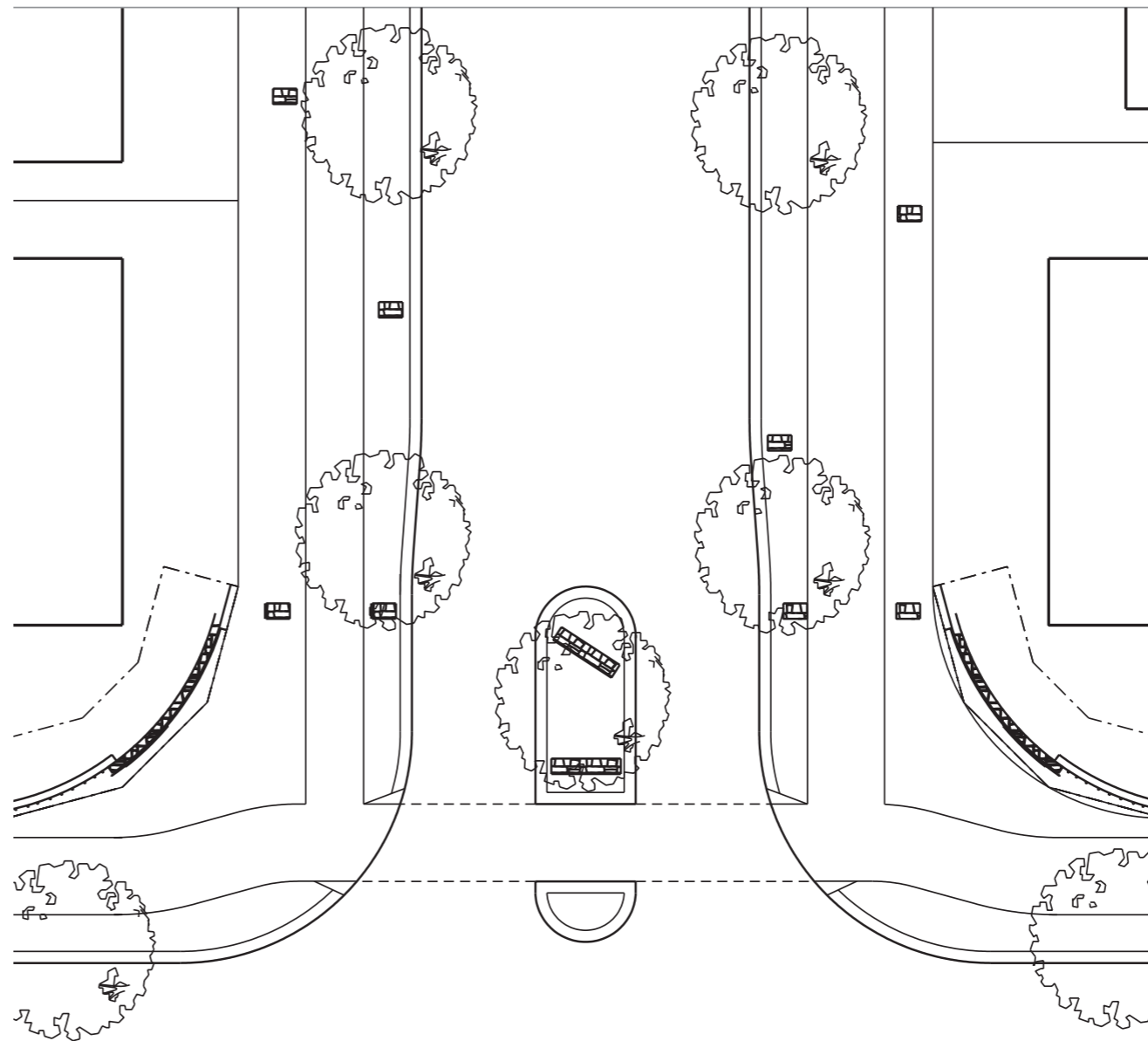
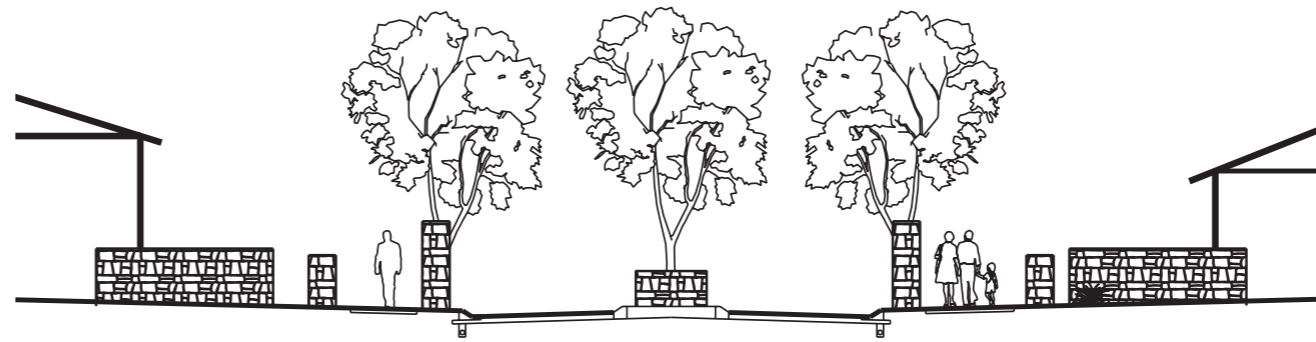
NOTES:

1. Formal or informal seating, and play opportunities in the street create opportunities for social interaction at a street-scale.
2. Seating can also be used to celebrate the many spectacular views around the development, forming local destinations.
3. Seating can aid walkability by providing rest stops on important pedestrian routes such as to neighbourhood centres.
4. Seating may also be appropriate near schools, key focal points, neighbourhood main streets.
5. Street furniture is also intended to be used as a character element for villages.
6. Street furniture should be durable and low maintenance.
7. Rubbish bins may be appropriate near bus shelters and neighbourhood main streets.

An Active Public Realm A Place of Mobility and Connectivity



4.2.1.12 Entry Statements



NOTES:

1. Entry Statements aid legibility by defining village boundaries. Preferred for use in limited occasions near signature entry points.
2. Feature walls in medians and verges can have a stronger gateway effect than larger walls located in nearby lots.
3. Entry Statements typically blockwork walls with render or stone cladding.
4. Signage to be simple, low maintenance and designed to reduce vandalism opportunities.
5. Entry statements should be a mix of hard and soft landscape elements.
6. Design of walls (i.e. height and width) must ensure appropriate visibility for vehicles and pedestrians.
7. Where signage is proposed to be fixed to feature walls and structures within road reserve, separate approval is required.

A Unique Place



4.2.1.13 Footpath Treatments

NOTES:

1. Alternative surface treatments providing a higher standard of hard landscape treatment, as a unique identifying feature to a village, or for better traction for pedestrians on steep footpaths.
2. For use only in key feature locations (e.g. neighbourhood main streets) and shared zones.
3. Care must be taken to avoid creating trip hazards due to texture changes.

A Unique Place



4.2.1.14 Poles for Street Signs and Streetlights

NOTES:

1. Colours and pole designs to differentiate village addresses in keeping with streetscape elements.
2. Street sign poles and light poles limited to dark blue, heritage green and black.

A Unique Place



4.2.2 PARKS
4.2.2.1 Tree Retention in Parks

	Technical Criteria	Exceptions	Maintenance Procedure
Retained Trees in Parks	No maximum trunk diameter	Individual important trees – for example with habitat values or landmark qualities – that are outside the criteria may be retained following individual assessment including site inspection by the developer and ICC	On Maintenance (no requirements)
	No maximum height – location in park does not present safety concerns to nearby lots		Off Maintenance Inspection (by appropriate qualified arborist)
	Healthy, free from disease and insect attack		Off maintenance request by developer with arborist’s report
	Balanced branching structure		Formal acceptance of off maintenance by ICC
	Trunk sufficient to hold canopy		
	Not multi-trunked at base		
	No injury from construction equipment		
	<100mm fill to base		
	No root damage		
	Species suitable for new microclimate and hydrology		

NOTES:

1. Retaining trees has many benefits, including:
- improved residential amenity;
 - shade;
 - neighbourhood character;
 - creation of attractive leafy streetscapes; and
 - biodiversity.

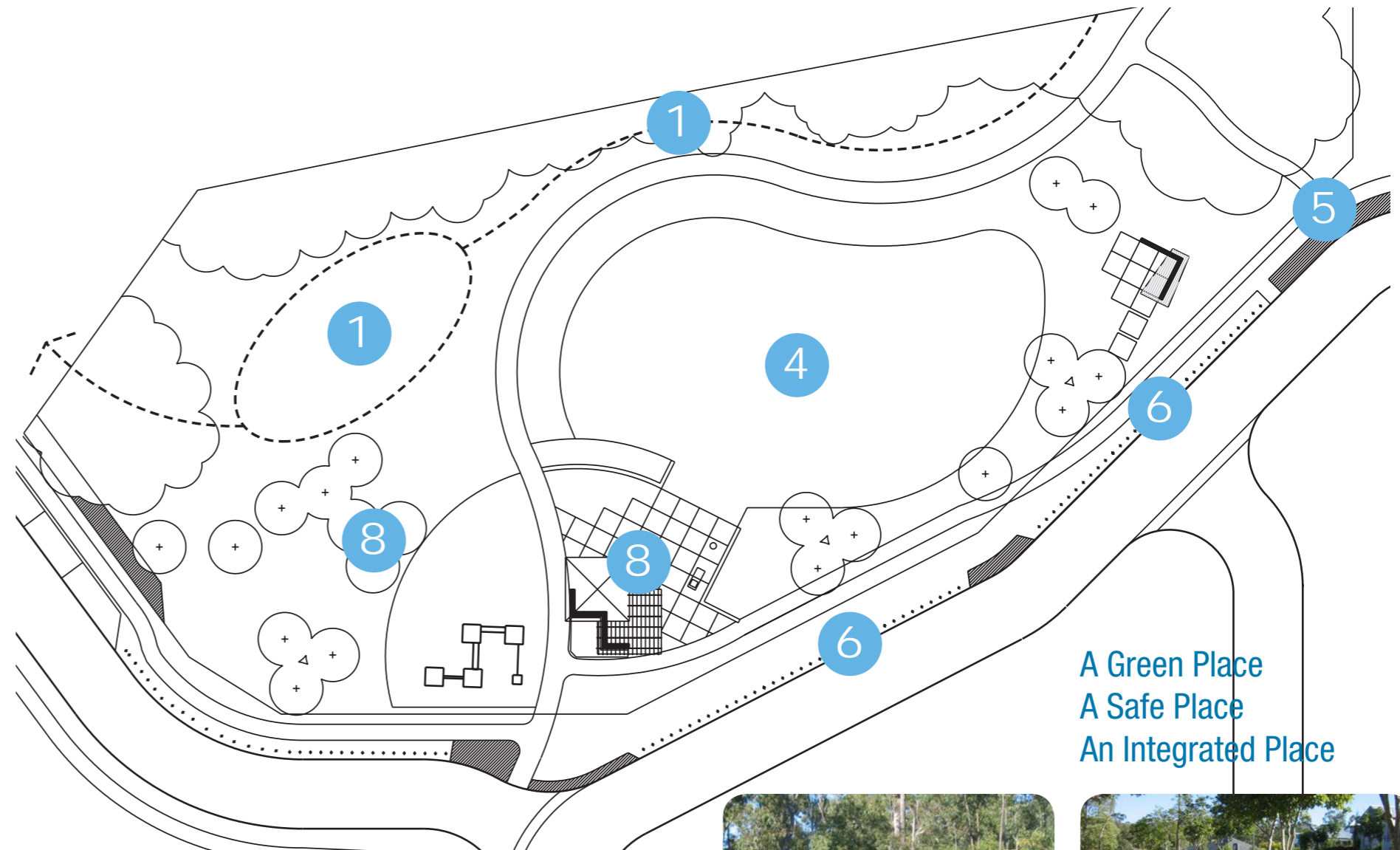
A Responsive Place
A Green Place



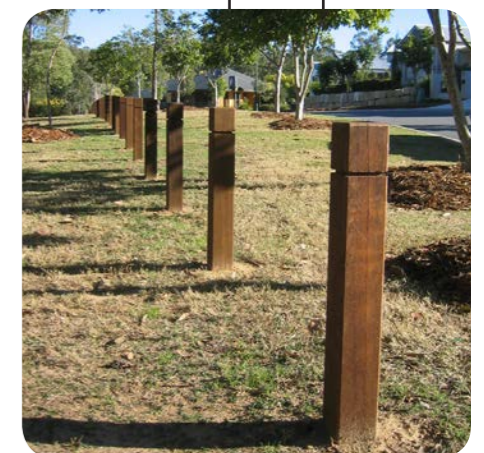
4.2.2.2 Integration of Water Sensitive Urban Design, Shade and Vehicle Access to Parks

NOTES:

1. Bio-retention basins and swales in natural drainage lines which may include parks.
2. The open space system and stormwater management may be integrated providing compliance is achieved with the principles outlined in the Springfield Open Space Master Plan. Where minor drainage infrastructure is proposed, it may form part of the open space system where it can be demonstrated that the land will continue to function as usable parkland which meets the desired standard of service for that parkland setting, or is offset by other usable parkland nearby. It should be noted however that open space credits only apply to areas whose primary function is recreation, not drainage.
3. Bio-retention areas designed as landscape feature and planted.
4. Kickabout area doubling as detention basin for major events.
5. Mounded garden bed to park perimeter to prevent vehicle access.
6. Stand-up kerb and bollards to prevent vehicle access to parks.
7. Lockable gate provides maintenance access.
8. Shade is essential in sub-tropical climate for comfortable park use. Shade to picnic areas from shelters and trees.
9. Retain and plant trees to provide a target of 50% shade cover for park in longer term.



A Green Place
A Safe Place
An Integrated Place



4.3 LOT LAYOUT & HOUSING DENSITY

Springfield Lakes Transect

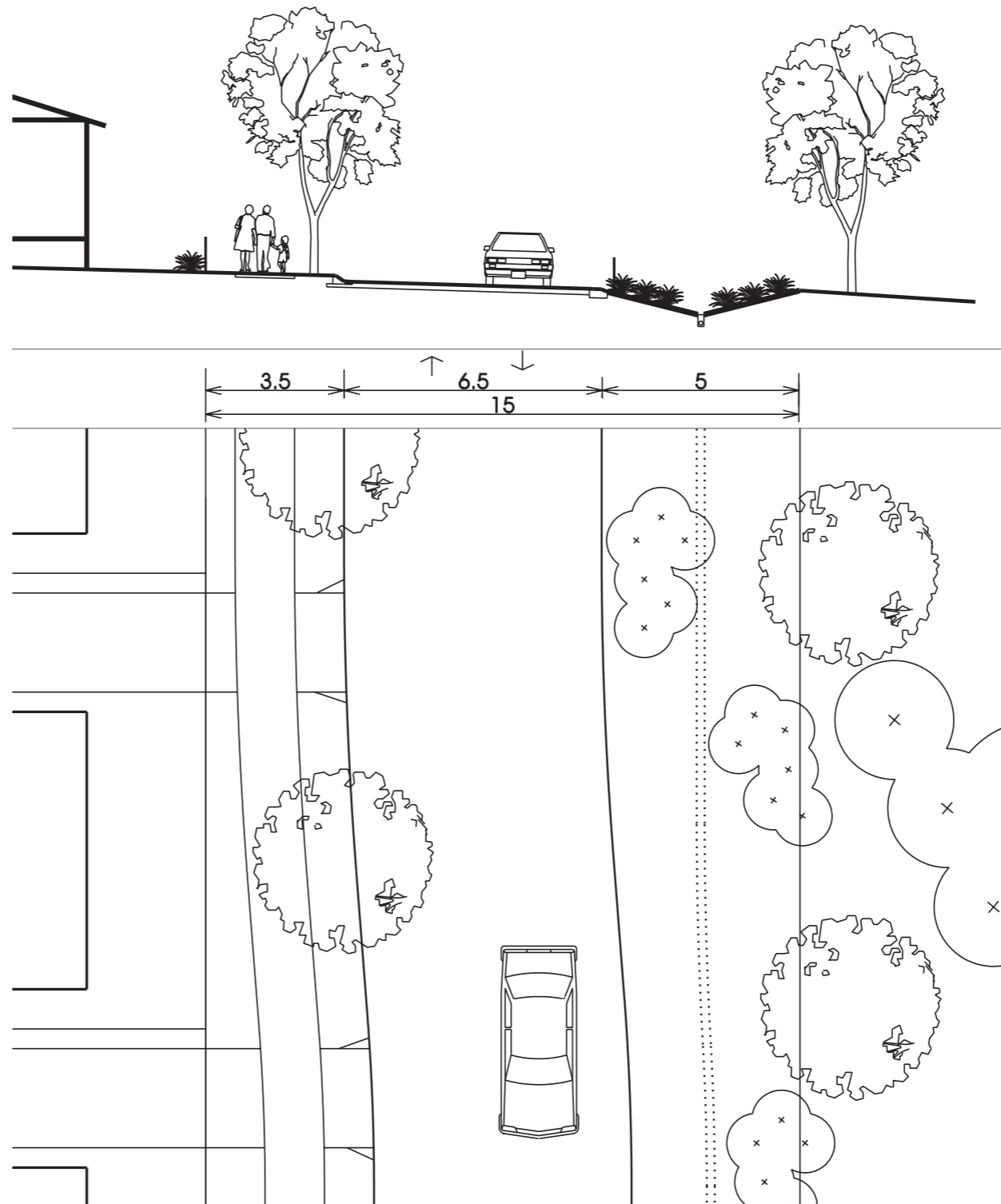


	CONSERVATION ZONE	CONSTRAINED SUBURBAN	SUBURBAN VILLAGES	NEIGHBOURHOOD CENTRES	INNER SUBURBAN VILLAGES	TOWN CENTRE FRAME	TOWN CENTRE CORE
Description	A green belt of protected bushland surrounding the Springfield estate.	Steep residential pockets on the outer edges of the Springfield estate.	Predominant zone of residential neighbourhoods ringing the Springfield estate.	Mixed-use local centres servicing groups of villages.	Finer grain suburban villages supported by good location and amenity.	Inner ring medium density and mixed-use urban districts.	Major urban districts and institutions serving Springfield and the region.
Residential Density	n/a	8-12dw/ha	10-20dw/ha	20-50dw/ha	20-40dw/ha	25-100dw/ha	80-200dw/ha
Typical Land Uses	Conservation & recreation	Residential	Primarily Residential Schools and Child Care	Local Retail & Commercial Residential Schools and Child Care Home Office	Primarily Residential Schools and Child Care Home Office	Mixed-Use	Primarily Commercial Mixed-Use
Public Transport	n/a	800m bus route / transit stop	400m bus route / transit stop	100m bus route / transit stop	400m bus route / transit stop	Bus routes. Walk to rail	Bus & Rail Interchanges Transit Oriented Developments
Dwelling Types	n/a	Detached	Predominantly detached	Detached, attached & apartments	Detached & attached	Detached, attached & apartments	Predominantly apartments
Typical Lot Size	n/a	400 - 800m ²	180 - 600m ²	150 - 300m ² & apartments	150 - 400m ² & apartments	150-300m ² & apartments	0.5ha+
Public Realm	Conservation estate. Network of paths.	Informal street planting and landscape features. Retained vegetation on steep land.	Hierarchy of local, village (neighbourhood) and district parks and lakes. Formal and informal street tree planting and landscape features.	Proximity to district parks and lakes. Formal and informal streetscapes.	Close proximity to parks for use and amenity. Increased level of hard and soft landscaping.	Proximity to district and regional parks. Series of distinct hard and soft landscape treatments.	Town centre park of regional significance and other civic spaces
Private Open Space	n/a	Substantial private yards with retained trees.	Predominantly private gardens. Golf courses and school sports fields.	Predominantly low maintenance courtyards, gardens and balconies.	Predominantly low maintenance courtyards, decks and gardens.	Predominantly low maintenance courtyards, gardens and balconies and shared private open space	Predominantly balconies and shared / communal open space.
Typical Building Setbacks	n/a	3-6mF; 1.5mS; 3-6mR	2-4.5mF; 0-1.5mS; 0.9-6mR	0-1.5mF; 0-1.5mS; 0.9-6mR	1-3mF; 0-1.5mS; 0.9-6mR	Site specific	None
Drainage	Natural creeks and catchments	Swales	Swales	Kerb and channel	Kerb and channel	Kerb and channel	Kerb and channel
Response to Slope	n/a	Primarily elevated construction	Slab, split-slab and elevated	Earthworks	Slab, split-slab and elevated	Slab, split-slab and elevated Earthworks	Earthworks
Max Building Height (storeys)	n/a	2	2	4	3	8	12
Plot Ratio		0.2 - 0.6	0.75	2.0	1.0	1.0-2.0	3.0-8.0
Parking	Access points provided	Predominantly on-site	Predominantly on-site	On-site & on-street	On-site & on-street	On-site & on-street	On-site & on-street
Road Types	n/a	Narrow slope-sensitive access streets within landform	Suburban streets and laneways	Widened boulevards with on-street parking	Suburban streets and lanes with higher parking capacity	Inner urban streetscape	Significant boulevards and urban streets
Built Form	n/a	All dwellings site specific	Developer designed and project homes	Developer and architect designed product	Primarily Developer designed	Architect designed product	Projects
Orientation	n/a	Determined by landform and local views	Balance slope and solar benefits. Local views.	Access, movement, define spaces, slope.	Balance slope and solar benefits. Local views.	Access, movement, define spaces, slope	Urban form and significant vistas

Notes:
Town Centre Frame and Town Centre Core zones fall outside the Springfield Lakes development area. Outcomes for these zones are illustrative only and may not be correct. They are included to show the relationship between the other transect zones and the core.
This table shows **typical** characteristics only.

4.4 DRAINAGE AND WATER SENSITIVE URBAN DESIGN

4.4.1 Swale In Verge



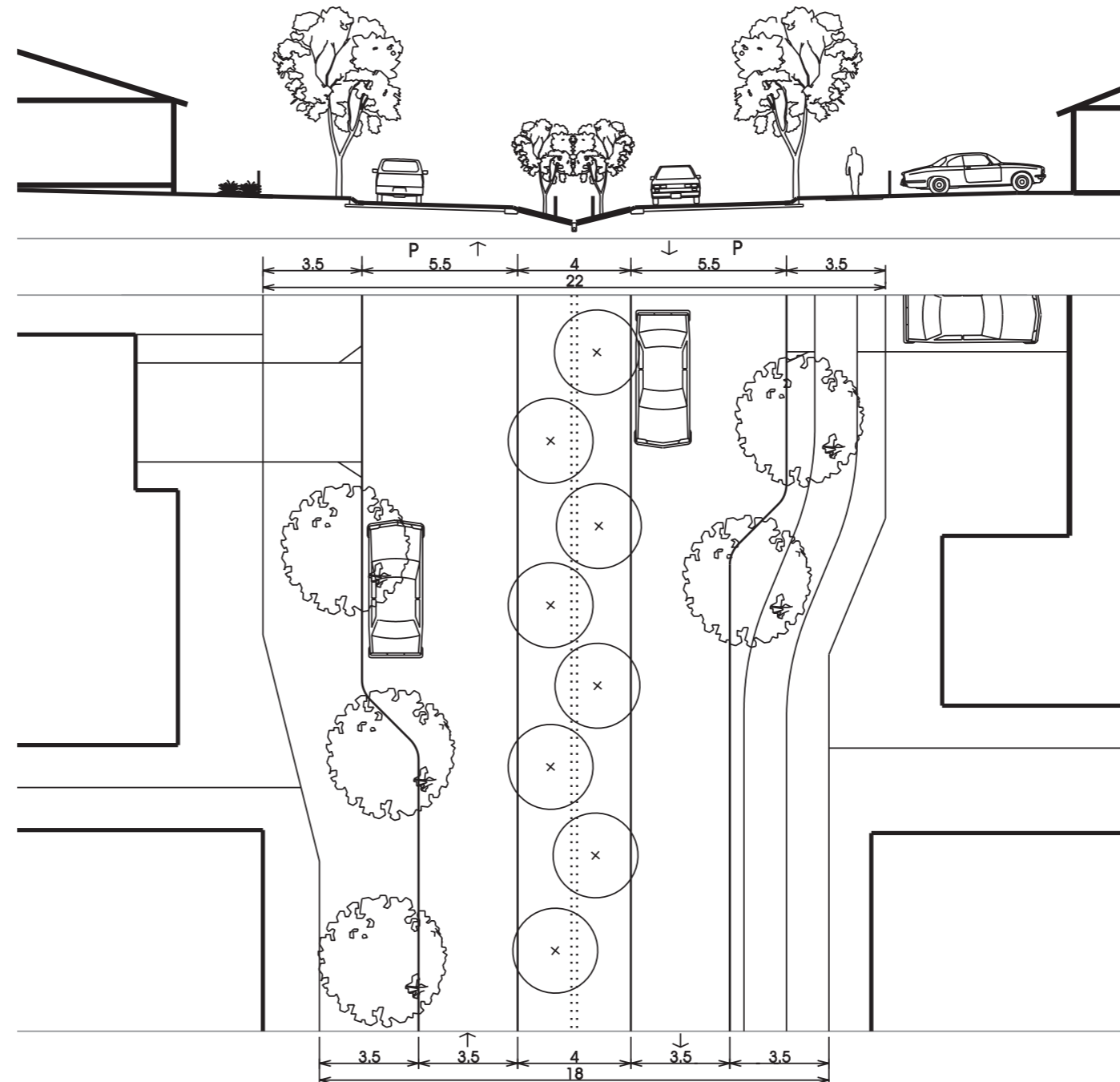
NOTES:

1. Swales slow runoff to creeks and begin stormwater treatment close to source.
2. Landscape feature within streetscape.
3. Preferred 1-4% longitudinal grades.
4. Suitable for access streets.
5. Q2 within swale and Q100 within road reserve.
6. Average verge widths shown.
7. Swale in verge preferred for park / reserve drainage.
8. For detailed design, reference should be made to WSUD Technical guidelines for SEQ produced by Moreton Bay Waterways and Catchments Partnership.

A Green Place
An Integrated Place



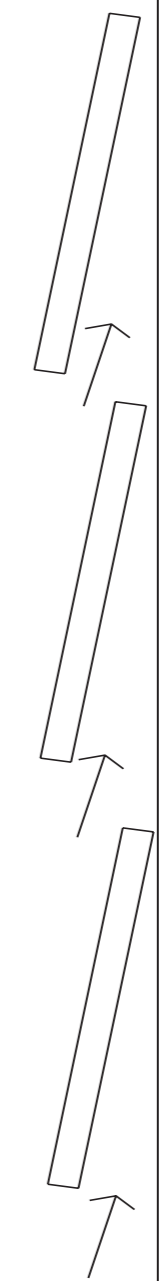
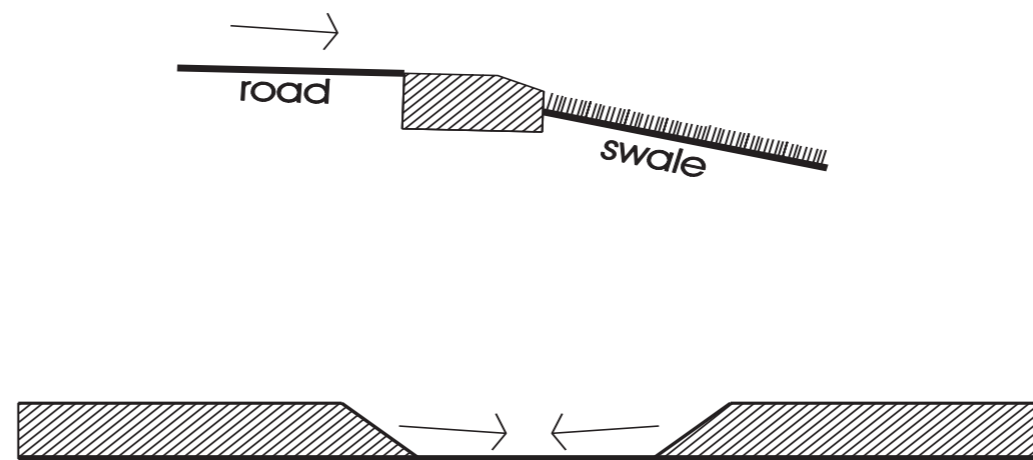
4.4.2 Swale In Median



NOTES:

1. Cross section shown for access street with on-street parking.
2. Also suitable for collector and trunk collector streets, where carriageway widths may vary.
3. For detailed design, reference should be made to WSUD Technical guidelines for SEQ produced by Moreton Bay Waterways and Catchments Partnership.
4. Width of swale determined by the size of catchment (likely 3-6m).

4.4.3 Flush & Slotted Kerbs



NOTES:

1. Allows runoff direct to swale or bio retention pod.
2. Prevents sediment accumulating on road.
3. Concrete or rock lined channel prevents grass overgrowing kerb and reduces maintenance problems around bollards.

An Integrated Place



4.5 BUILT FORM

**Design Solutions relating to
the design of buildings at
Springfield Lakes.**

4.5.1 Building on a Slope- Elevated Construction



NOTES:

1. Elevated construction is where floor structures are suspended off the ground by posts, poles or masonry block.

2. Elevated floor construction offers many advantages:

- optimises views;
- minimises expensive and unsightly earthworks and retaining wall treatments;
- maximises tree and vegetation retention;
- improved ventilation; and
- improved opportunities for house orientation for prevailing breezes and solar access.

A Unique Place
A Responsive Place



4.5.2 Building on a Slope- Split Slab Construction



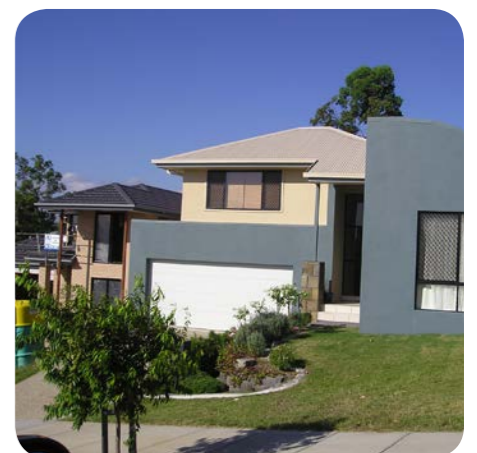
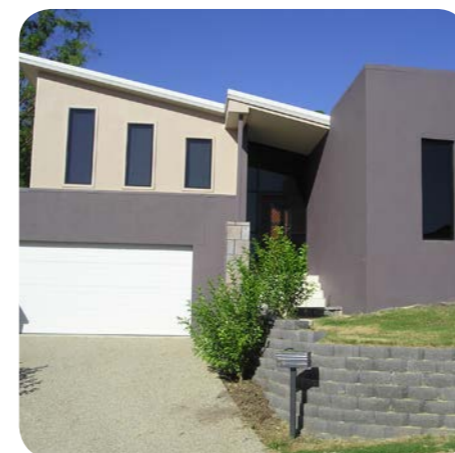
NOTES:

1. Split slab construction involves providing a step or multiple steps in the concrete floor slab. Split slab can also be used in combination with elevated portions of the home to achieve optimum design outcomes.

2. Split slab construction offers many advantages of:

- reduces visible retaining walls; and
- improves opportunities for tree retention.

A Unique Place
A Responsive Place



4.5.3 Streetscape- Roof Styles



NOTES:

1. Varied roof styles can contribute greatly to the architectural character of a building, street and neighbourhood.

2. The following roof forms are suitable:

- gable roof;
- hip roof;
- skillion roof;
- flat roof (considered on merits); and
- curved roof.

3. Eaves (minimum depth 450mm) are preferred to be incorporated into the design of buildings to provide adequate shading for exterior walls and windows from summer sun.

A Unique Place



4.5.4 Streetscape- External Materials

NOTES:

1. Variety is a key in creating visually interesting streets and neighborhoods.

2. The following external building materials are considered appropriate:

- rendered or bagged masonry;
- light weight timber cladding suitably painted or stained (e.g. weather board, plywood); and
- fibre cement with rendered and painted texture finish.

3. Other materials such as stone, face brick and colorbond metal sheeting will be encouraged for use in feature panels complementary to the style of the architecture.



A Unique Place



4.5.5 Streetscape Entries & Driveways

NOTES:

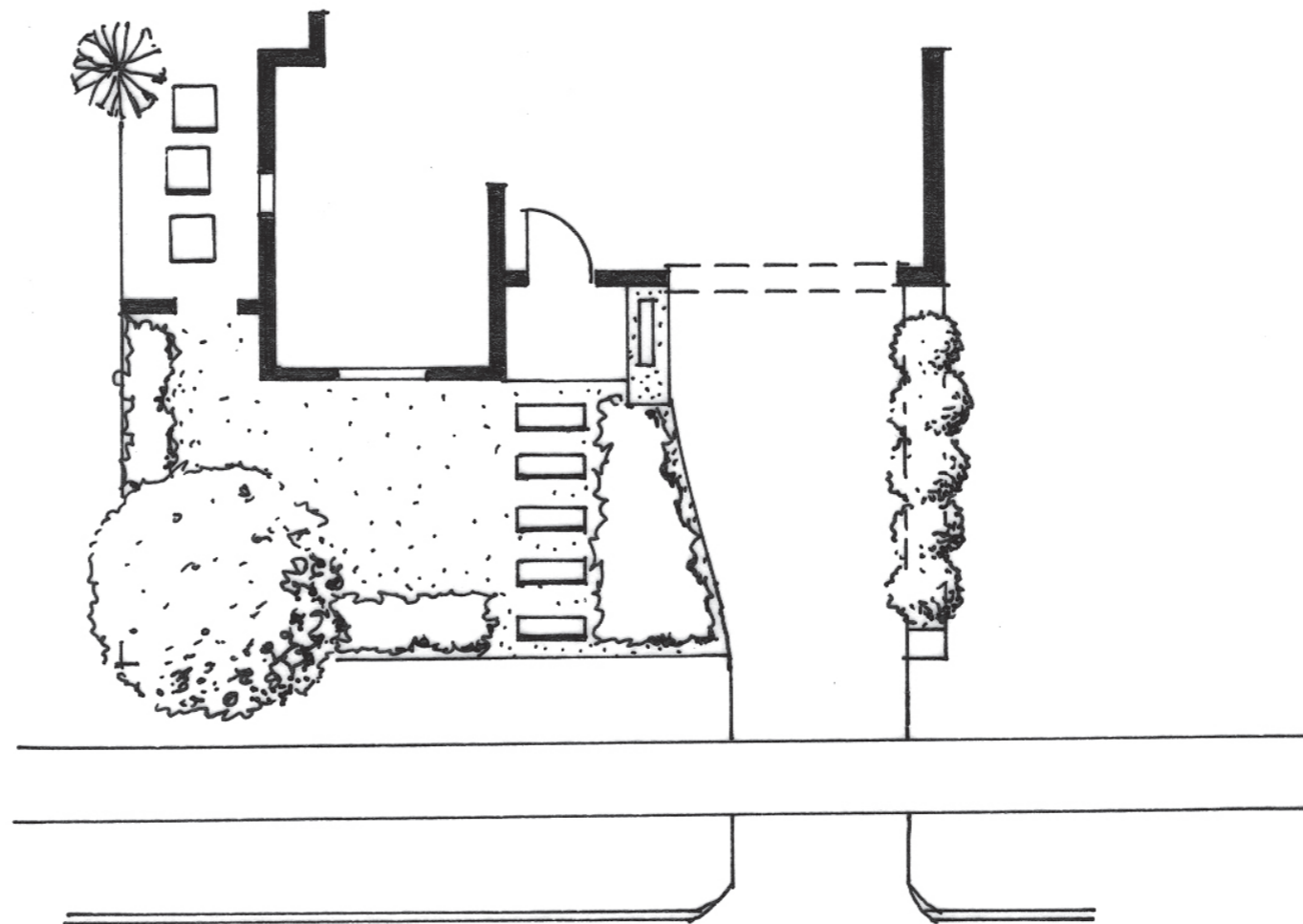
1. Essential to maintaining a high quality residential address, homes must present well to the street and all public areas.

2. Enhanced street frontage can be achieved by:

- a well defined sense of entry;
- a highly visible front door;
- the incorporation of front verandahs / balconies and porches; and
- decorative front fences and entry gates.

3. Similarly, in designing and constructing your driveway the following should be considered:

- selection of driveway materials to complement your building and colour palette;
- the inclusion of feature paving or edge detail;
- maximum widths and gradients;
- the location of services within the street;
- existing footpaths and crossover requirements; and
- drainage and runoff issues, particularly when locating driveways on low side of streets, and where one-way crossfall is used.



A Place of Mobility
& Connectivity
A Responsive Place

4.8.6 Streetscape Rear - Loaded Dwellings

NOTES:

1. Rear Loaded dwellings (where car accommodation is to the rear of the lot) can offer many benefits, such as:

- improved, garage free, streetscapes;
- activity and surveillance to busier residential streets such as trunk collector streets;
- increased off-street (rear) and on-street (front) parking;
- greater housing diversity; and
- fewer driveways to busier residential streets such as trunk collector streets.

2. A well defined pedestrian entry must be provided to the street (front).

3. At least one habitable room must be located on the street (front) side of the dwelling, for each storey if applicable.

4. An outdoor living room must be provided.

5. Min setback to lane (rear) 1m, for max 85% of boundary.

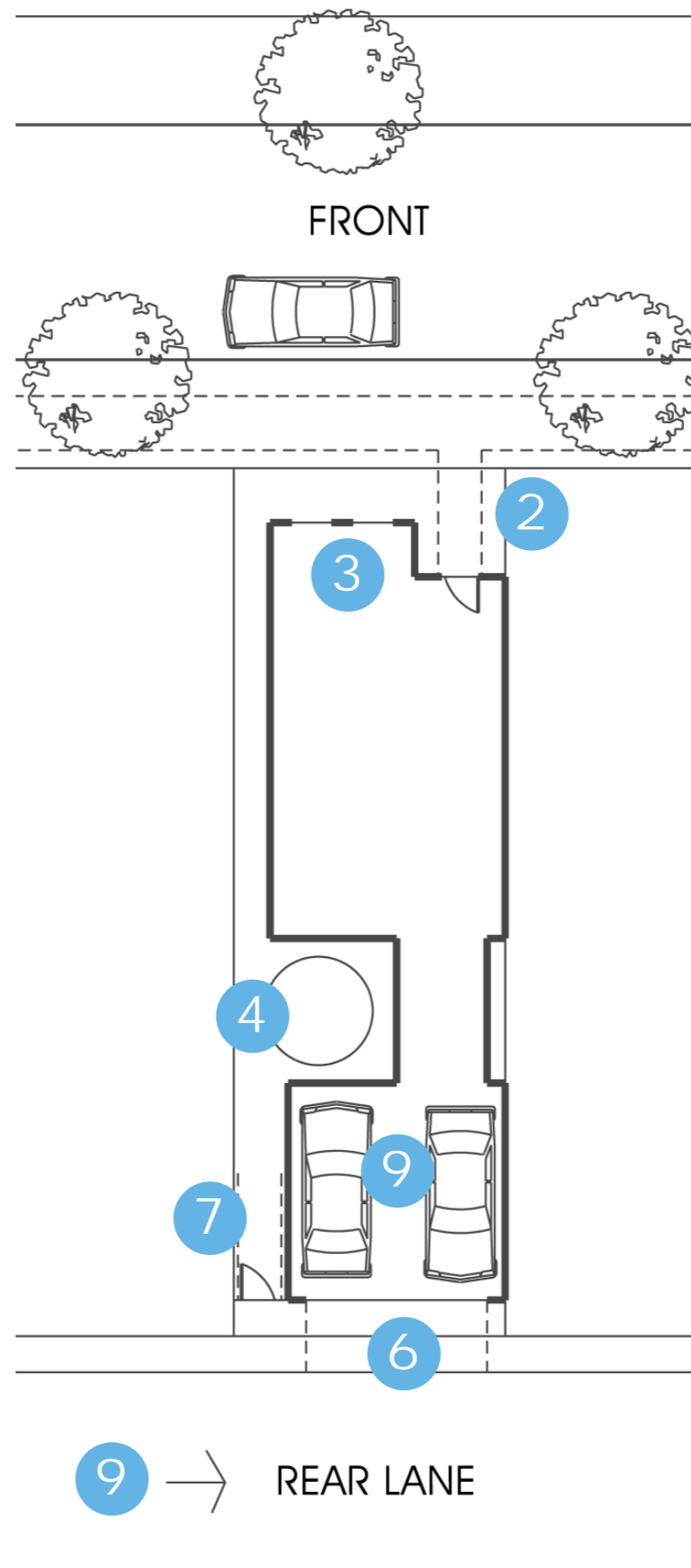
6. Driveway to lane (rear) max 5m wide.

7. A pedestrian access to the lane (rear) must be provided, separate from the garage.

8. Bin storage must be provided within the lot (rear).

9. Design should maximise habitable rooms overlooking lane (rear) for casual surveillance - from rear - loaded dwellings, and dwellings on intersecting streets. Habitable rooms over garages adjoining the lane are encouraged to increase casual surveillance.

10. Landscaping (including street trees) at intervals are encouraged to soften the built form of the lane.



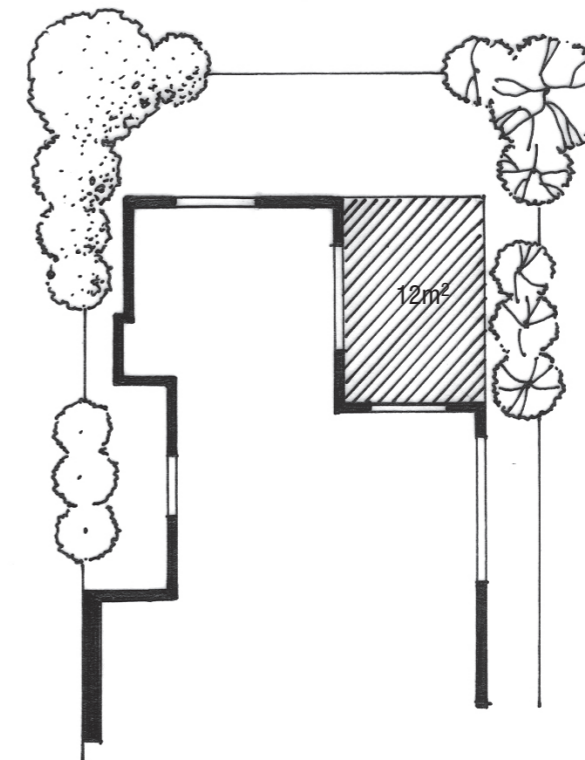
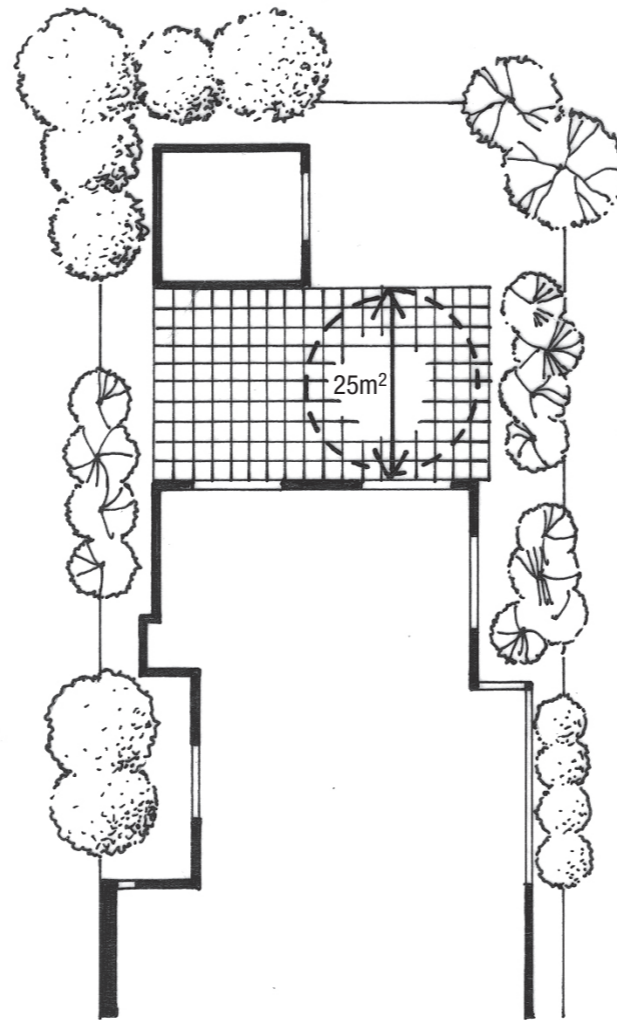
A Safe Place
An Integrated Place
An Active Public Realm
A Place Of Mobility & Connectivity

4.8.7 Subtropical Design Outdoor Living

NOTES:

1. The incorporation of some simple design elements will help homes to be naturally cooler in summer and warmer in winter; have greater access to natural light; be less expensive to run due to reductions in energy and water consumption; and be more comfortable and healthy places to live:

- the dwelling must provide an indoor / outdoor roofed room accessible from the main living area and at least 25m² or 12m² if a deck;
- where possible, living areas and outdoor spaces should be oriented to the north to natural exposure to sunlight;
- planning of internal areas so that the most used spaces have exposure to winter sun while being protected from the summer sun;
- allow for cross-flow ventilation that can cool the home in summer; and
- appropriate ventilation to the roof, ceilings, walls and floors to prevent heat gain in summer and heat loss in winter.



A Responsive Place



5.0 SOLUTION MATRIX

	A Green Place	A Unique Place	A Safe Place	An Integrated Place	An Active Public Realm	A Responsive Place	A Place of Choices and Flexibility	A Place of Mobility and Connectivity	A Place of Partnerships	A Place of Community
Neighbourhood Commercial Street (Dual Carriageway)										
Neighbourhood Commercial Street										
No-Access Trunk Collector Street with Bicycle Lanes (Dual Carriageway)										
No-Access Trunk Collector Street with Bicycle Lanes										
Access Trunk Collector Street (Dual Carriageway)										
Access Trunk Collector Street										
3-Lane Access Street										
Collector Street										
Access Street / Access Place										
Split Access Street										
Parkfront Access Street										
Lane										
Parkfront Lane										
Rear Lane										
Single-sided Lane										
One way Crossfall Street										
Alternative Verge Profiles										
Driveway Link Speed Control Device										
Median Strip Speed Control Device										
Acceptable Intersection Types – No-Access Trunk Collector Streets										
Acceptable Intersection Types – Access Trunk Collector Streets										
Acceptable Intersection Types – Collector Streets										
Acceptable Intersection Types – Access Streets										
Acceptable Cul-de-Sac Heads										
Alternative Service Alignments in Verge										
Linemarking										
Landscaped Island in Road Reserve										
Landscaped Verge in Road Reserve										
Landscaped Node in Road Reserve										
Street Tree Planting in Trunk Collector Streets										
Street Tree Planting in Collector Streets										
Street Tree Planting in Access Streets										
Planting in Medians, Verges and Islands										
Tree Planting Schedule for Road Reserves										
Shrubs and Groundcover Planting Schedule for Road Reserves										

	A Green Place	A Unique Place	A Safe Place	An Integrated Place	An Active Public Realm	A Responsive Place	A Place of Choices and Flexibility	A Place of Mobility and Connectivity	A Place of Partnerships	A Place of Community
Tree Retention In Road Reserves										
Street Furniture in Road Reserves										
Entry Statements										
Footpath Treatments										
Poles for Street Signs and Streetlights										
Tree Retention in Parks										
Integration of WSUD, Shade and Vehicle access to parks										
Swale in Verge										
Swale in Median										
Flush and Slotted Kerbs										
Building on Slope – Elevated Construction										
Building on Slope – Split Slab Construction										
Streetscape – Roof Styles										
Streetscape – External Materials										
Streetscape – Entries & Driveways										
Streetscape – Rear-Loaded Dwellings										
Subtropical Design – Outdoor Living										