RZC Appendix 8A
Marymoor Subarea Street Requirements

For additional design details for Marymoor Subarea infrastructure, refer to the 2017 Marymoor Subarea Infrastructure Planning Report.

STREET REQUIREMENTS

OVERVIEW

Street Requirements is a guide to the horizontal layout of the various roadway features contained within the public right-of-way for each of the different street types in the Marymoor Subarea. These features are described below and illustrated in Figures 1-10.

The street requirements apply to the following areas:

Right-of-Way

Right-of-way is the publicly owned area between private property lines. It includes transportation infrastructure for pedestrian, bicycle, and transit vehicle circulation. Some pedestrian infrastructure may also be accommodated in easements instead of right-of-way depending on site-specific characteristics.

Roadway

The roadway is measured from face-of-curb to face-of-curb within the right-of-way. It includes travel and turn lanes and may include curbside parking and striped bike lanes or cycle tracks. For Woonerf streets, a curb may not separate the roadway from the sidewalk. In this case, the transition between the two areas will generally be marked by other features such as bollards, different hardscape surface materials, or in other ways.

Landscape/Bioretention

The landscape/bioretention area is located between the curb and sidewalk and may include traditional landscaping, bioretention cells or a combination of the two.

Sidewalks

Sidewalks are measured from development property line to edge of landscape strips/bioretention zones within the right-of-way. Sidewalks and landscape strips/bioretention areas may also be located partially or entirely within easements depending on site-specific characteristics. Sidewalks are provided on both sides of Type I and II streets. Type III streets maintain a 4-foot ADA-compliant pedestrian walk route and a 20-foot shared use space for pedestrians, bicyclists and vehicles for property and service access.

STREET TYPES

Each street within the Marymoor Subarea is assigned a street type. Each street type reflects the street's intended character, transportation function, and adjacent land uses. Figure 1 illustrates the preferred street network in the Marymoor subarea and highlights the different street types as discussed below.

Type I Street

Type I streets are shown in green and provide primary circulation within the subarea for all modes of transportation.

Type II Street

Type II streets are shown in blue and provide secondary circulation within the subarea and property access. Dedicated bicycle facilities and transit vehicles are not intended on Type II streets.

Type III Street

Type III streets are shown in purple and provide property and service access. They are intended primarily for non-motorized uses. Several Type III Streets provide pedestrians and bicyclists with direct connections between the Marymoor Subarea and Marymoor Park.

Multi-purpose Trails

Proposed multi-purpose trails are shown as black and white dashed line segments and provide bicycle and pedestrian connections to local and regional facilities. The multi-purpose trails will provide pedestrian and bicycle connections between Marymoor Park, the East Lake Sammamish Trail and the Southeast Redmond light rail station. These facilities will also be connected to the Bear Creek and Redmond Central Connector trail systems on the west side of SR 520.

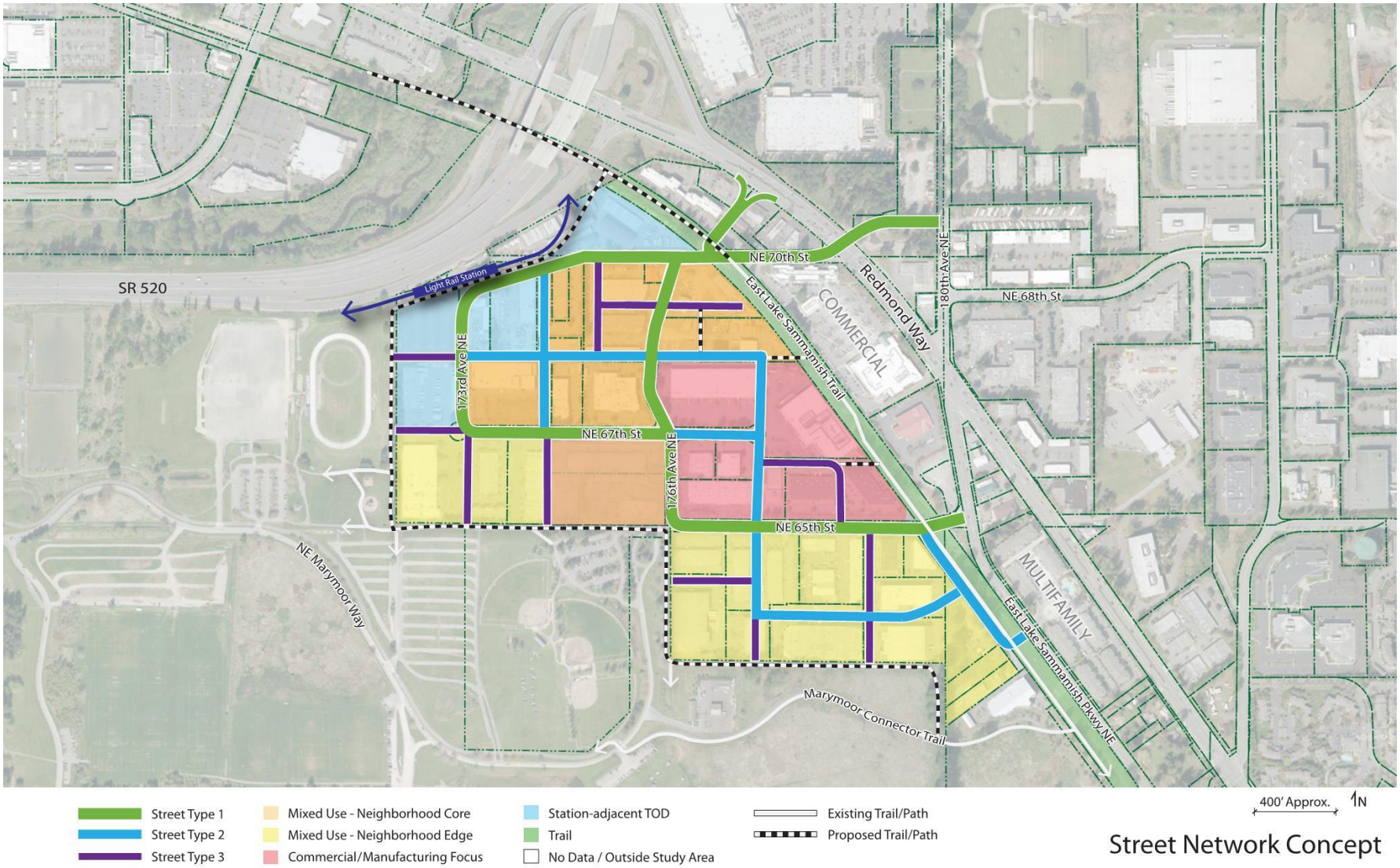


Figure 1. Street Network Concept

TYPE I STREETS

Type I Street Description

Type I streets provide one travel lane in each direction to accommodate motor vehicle circulation within the subarea. In-street cycle tracks are provided on both sides of the street to allow safe and convenient bicycle mobility. Parking is accommodated on one side of the street between the general purpose lane and cycle track. Stormwater is managed with Filterra-type treatment cells located in the landscape strips/bioretention areas. ADA-compliant sidewalks are placed behind the landscape strips/bioretention areas. The Type I street standard section and typical block plan are shown in Figures 2 and 3, respectively.

Type I Street Standard Section

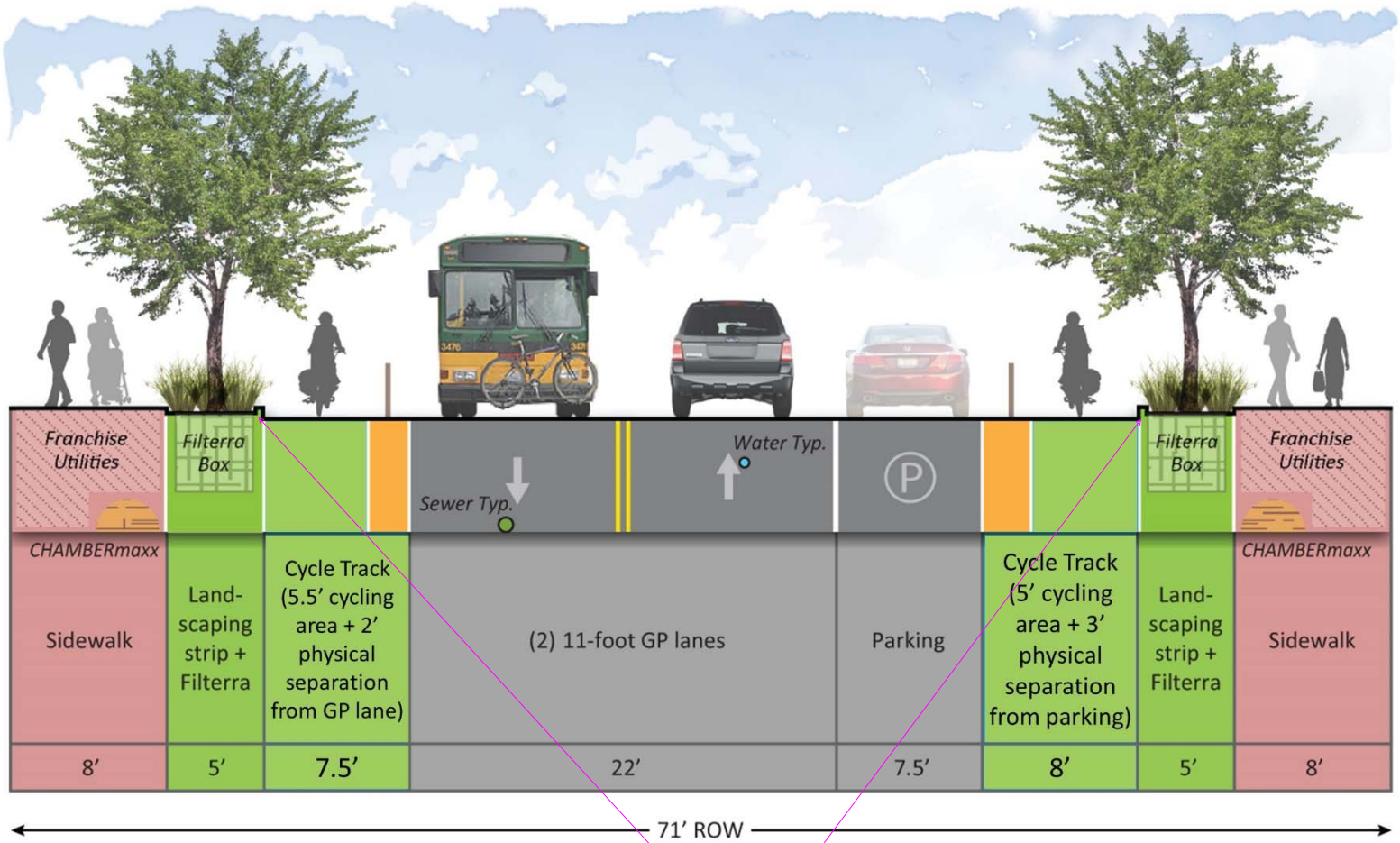


Figure 2. Type I Street Standard Section

missing curb width 0.5 feet or planter width is 4.5 feet.

Recommendation: Clarify curb width 0.5' and landscaping strip+Filterra 4.5'

Standard Section Notes

1. Type I street sections are based on collector arterial standards found in RZC Appendix 2.
2. Water and sewer services are shown in standard locations for streets 34 feet wide and wider per City of Redmond Design Requirements for Water and Wastewater System Extensions.
3. The only typical block is on 173rd Avenue NE between NE 70th Street and NE 67th Street.
4. Other blocks are atypical in order to retrofit improvements or transition to existing streets.
5. Saves existing trees if present, leading to wide landscape strips in most segments.
6. Widens most existing sidewalks to the 8-foot City standard.

Variations from the Standard

The Type I street section varies from the standard everywhere except along 173rd Avenue NE. This variation from the standard occurs for the following key reasons:

- The City of Redmond prefers to maximize the use of existing infrastructure in lieu of comprehensive reconstruction. Consequently, it is planned that existing streets will be retrofitted to reflect Type I standards where feasible. This generally entails keeping the wide landscape strips that exist in many locations and widening existing sidewalks to 8 feet. Proposed street sections for existing streets are contained in Appendix 8A.1.

- A majority of new Type I streets provide access into the subarea from principal arterials on the east margin of the subarea. They also provide direct access and circulation to and from the light rail station and park & ride garage. These streets require a wider than standard roadway section to accommodate heavier volumes of peak period traffic and to transition from the principal arterials and through the intersection of 176th Avenue NE and NE 70th Street.

Type I Street Typical Block Plan

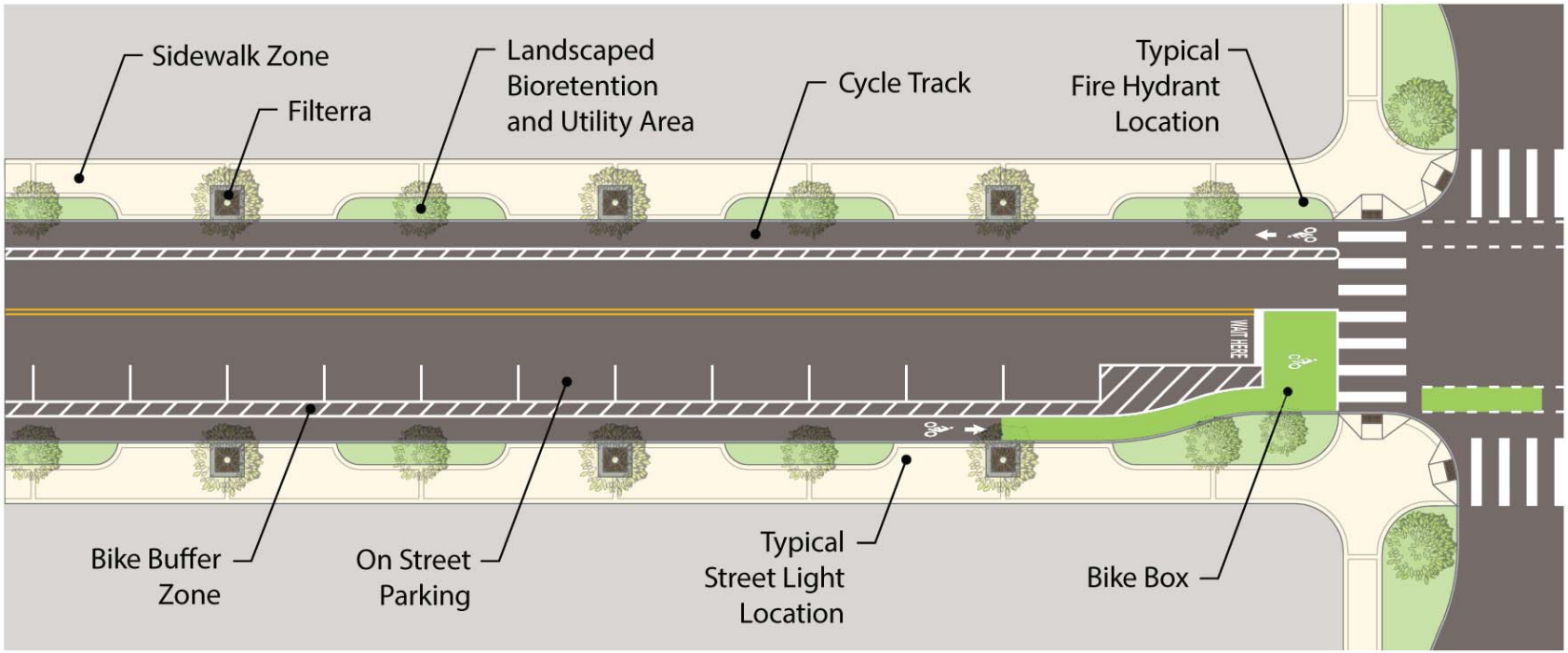


Figure 3. Type I Street Typical Block Plan

TYPE II STREETS

Type II Street Description

Type II streets contain one general purpose lane in each direction with curbside parking allowed on both sides of the street. Stormwater is managed with a variety of bioretention treatments located in an 8-foot landscape strip/bioretention area. ADA compliant sidewalks are placed behind the landscape strips/bioretention areas. Type II streets are either connector streets with parking on both sides of the street or local streets with parking on one side only. For conceptual design purposes the connector street is assumed and shown in this report. The Type II street standard section and typical block plan are shown in Figures 4 and 5, respectively.

Type II Connector Street Standard Section

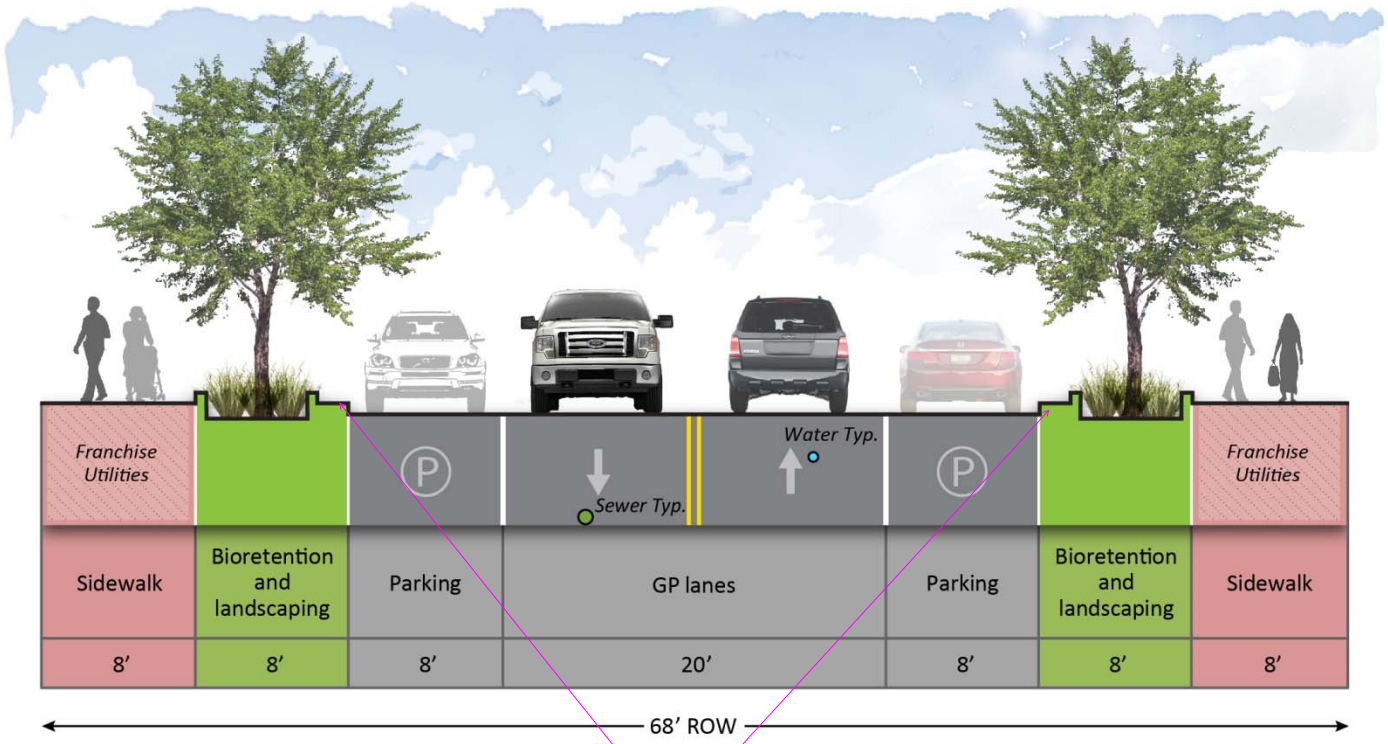


Figure 4. Type II Connector Street Standard Section

missing curb width 0.5 feet or planter width is 4.5 feet.

Recommendation: Clarify curb width 0.5' and landscaping strip+Filterra 4.5'

Standard Section Notes

1. Based on connector arterial and local access street standards found in RZC Appendix 2.
2. Water & sewer services shown in standard locations for streets 34 feet wide or wider per City of Redmond Design Requirements for Water and Wastewater System Extensions

Variations from the Standard

The Type II Street sections are all shown as connector streets. There are no Type II streets that vary from the standard. When Type II streets are constructed there may be some locations that are more appropriate for the local street standard. Type II streets that are to be constructed using the local street standard or that deviate from the connector or local street standards will be determined in conjunction with development.

Type II Street Typical Block Plan (Connector Street)

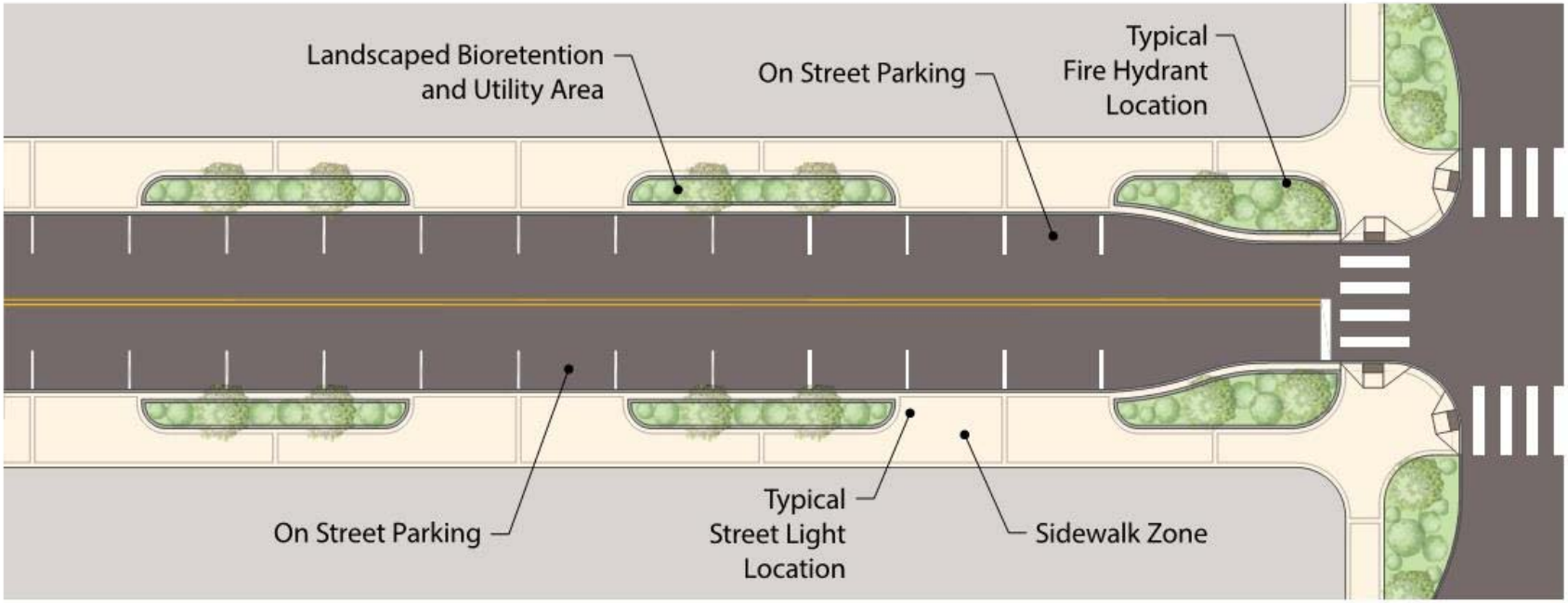


Figure 5. Type II Street Typical Block Plan (Connector Street)

TYPE III STREETS

Type III Street Description

Type III streets are “woonerf”-like streets. “Woonerf” is a Dutch term that describes a circulation facility that can serve a number of different functions usually with narrower space requirements. Type III streets contain a 40-foot shared space intended principally for local non-motorized uses and limited underground utilities. The surface and subsurface are configured to accommodate shared vehicle and pedestrian space, an ADA-compliant walk route, emergency access, loading/unloading areas that do not impede emergency access, stormwater management, water and wastewater pipes (if necessary), dry utilities (if necessary), lighting, and hydrants (if necessary). Stormwater is managed using a variety of bioretention treatments located in 8-foot-wide and variable length bioretention areas. Type III streets can provide access for vehicles and pedestrians and can function like an alley for service, delivery, and parking access, or like a plaza primarily used for pedestrian activity. Many Type III streets provide direct connections to the Marymoor Park perimeter trails.

Type III Street Standard Section

There is no standard section defined for the Type III street; each section will be designed according to its unique context in order to facilitate placemaking and experiences unique to that specific Type III street. Street elements will be designed to create the envisioned shared space environment. Type III streets should avoid three linear strips of space (car, bioretention, pedestrian) and may see traditional surface elements rearranged, such as a fountain in the middle of the shared space with the vehicle path chicaning around it. A hypothetical block plan for Type III streets is shown in Figure 6, and a hypothetical section is shown in Figure 7. The specific design details will be determined in conjunction with future redevelopment. The 40-foot standard may be reduced on a site-specific basis, at the discretion of the City, if an applicant demonstrates that all necessary elements can be accommodated in less than 40 feet.

Type III Street Hypothetical Block Plan

move the light symbols to the edge of sidewalk, not in the middle of sidewalk for meeting ADA purpose because the sidewalk width is 5' per the cross section on next page.

Recommendation: Call out sidewalk width, move the street light symbols to the back of sidewalk or place on the opposite landscape strip areas in order to meet ADA compliance within the 5' sidewalk.

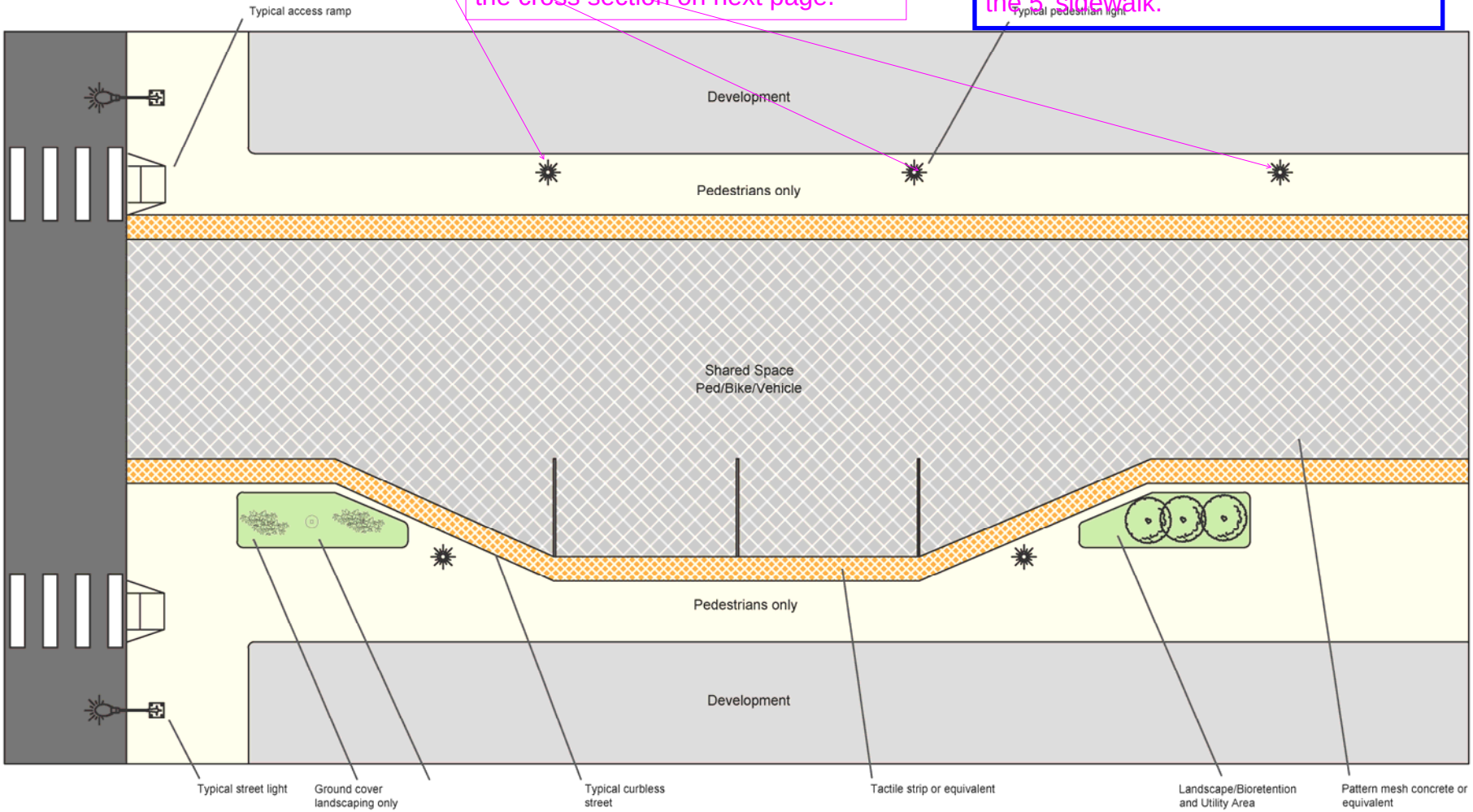


Figure 6. Type III Street Hypothetical Block Plan

Type III Street Hypothetical Street Sections

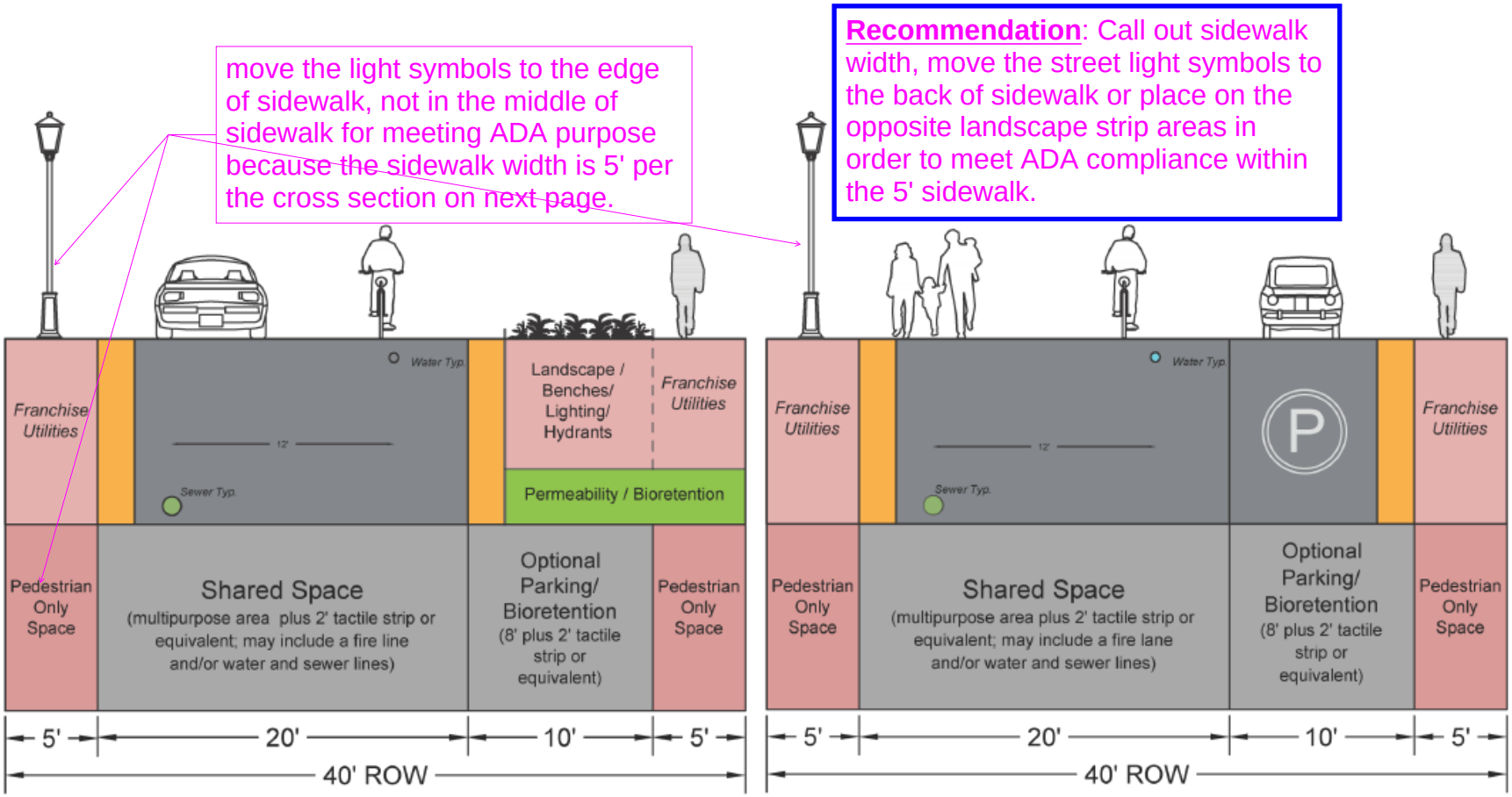


Figure 7. Type III Street Hypothetical Street Sections

MULTI-PURPOSE TRAILS

Multi-Purpose Trails Description

New multi-purpose trails are provided at the perimeter of the Marymoor Subarea to facilitate non-motorized access to Marymoor Park, the East Lake Sammamish Trail, the Southeast Redmond light rail station, and other regional trail facilities. Trail alignments shown in this report are conceptual and may change considerably as preliminary and final designs are prepared for the Sound Transit light rail station and parking garage and for NE 70th Street including the intersection at 176th Avenue NE.

Standard trail sections for perimeter trails are per the 2009 King County Regional Trails System Draft Development Guidelines. The Marymoor Subarea utilizes a variation on the King County RTS Section 2 and RTS Section 3 standard trail cross sections as described in the notes for each trail section type. The RTS Section 2 standard trail (see Figure 8) extends to the north and east from the intersection of the north/south and east/west trending perimeter trail segments. It provides connections to the SE Redmond light rail station and East Lake Sammamish Trail. The RTS Section 3 standard trail (see Figure 9) extends east from this same intersection of the two perimeter trail segments to the west edge of the planned Marymoor Park Apartments development site. It then turns south connecting to the Marymoor Central Connector trail (see Figure 1). For perimeter trails the shy distance for signs could be reduced or eliminated in certain areas through further design. The goal is to only take that space where necessary, such as at decision points (trail intersections).

The standard trail section for non-perimeter trails is per the City's regional trail standard as shown in Figure 10. This trail section allows for flexibility in providing a paved and soft surface trail or just a paved trail, but provides a minimum of 22 feet for a regional trail with shoulders and clear zones. Stormwater associated with multi-purpose trails will be infiltrated, possibly in the shoulder areas.

RTS Section 2 Standard

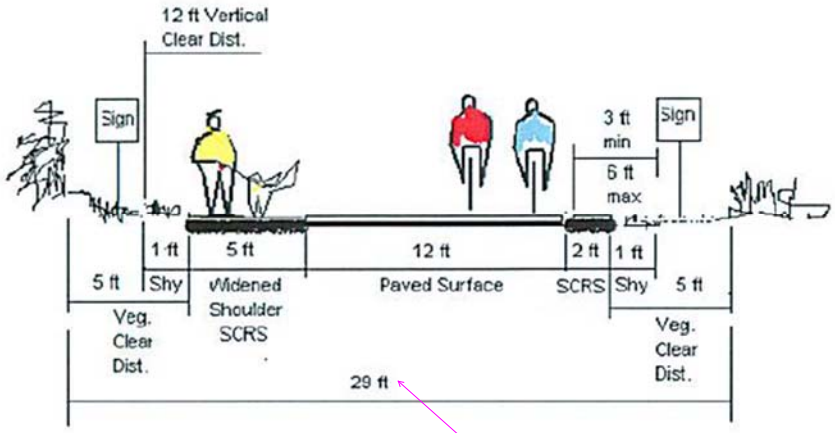


Figure 8. RTS Section 2 Standard

specify these dimensions need to be an access easement.

RTS Section 2 Notes

1. Multi-purpose trails are assumed to be outside the Marymoor Park boundary pending future discussions with King County.
2. Non-motorized connections to Marymoor Park assumed to be built by King County.
3. Section will have a 14 foot concrete surface with signature design treatment.
4. 6-foot adjacent soft-surface path on park side (where adjacent to park).
5. All shoulders not adjacent to park are hard surface.

Recommendation: Add note to specify trail width needs to be covered by public access easement.

RTS Section 3 Standard

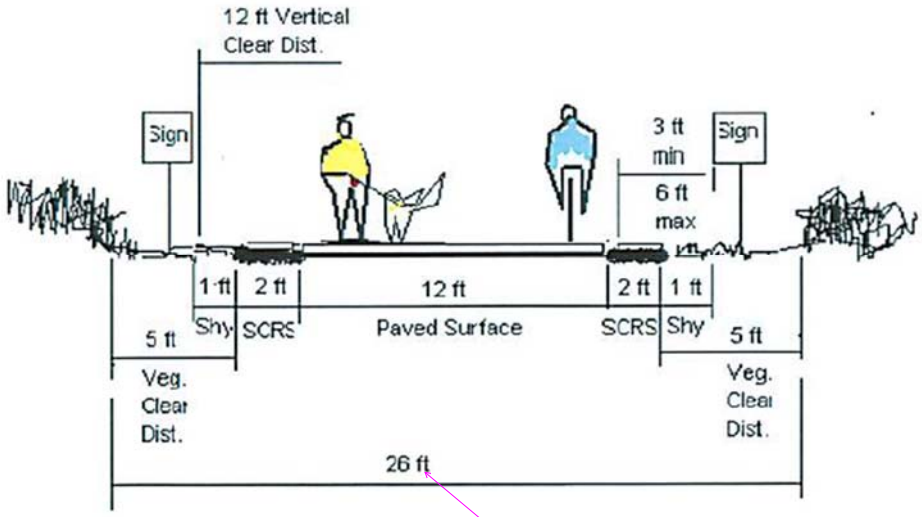


Figure 9. RTS Section 3 Standard

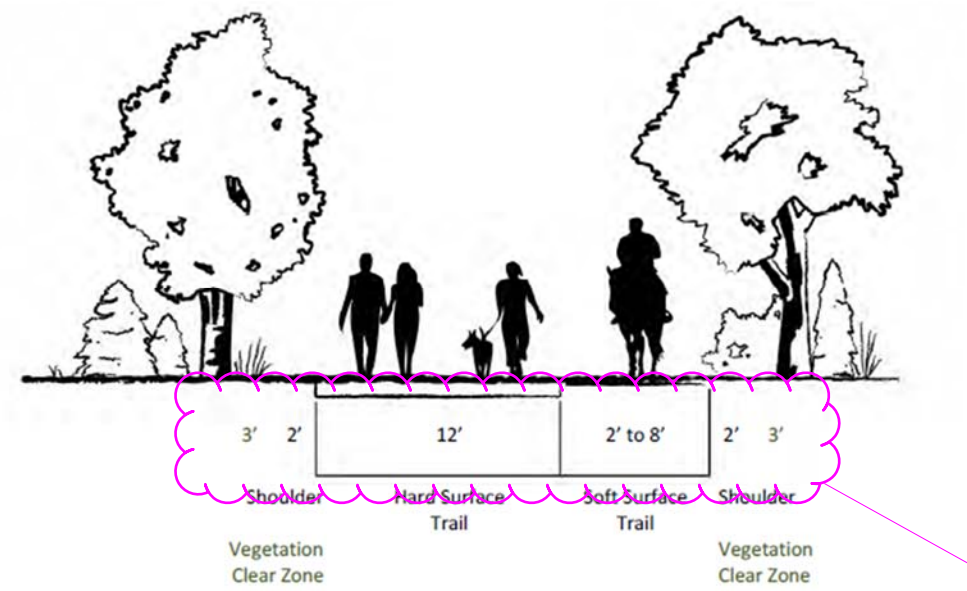
specify these dimensions need to be access easement.

RTS Section 3 Notes

1. Multi-purpose trails are assumed to be outside the Marymoor Park boundary pending future discussions with King County.
2. Non-motorized connections to Marymoor Park assumed to be built by King County.
3. Section will have a 12-foot asphalt paved surface with hard surface shoulders.

Recommendation: Add note to specify trail width needs to be covered by public access easement.

City Regional Trail Standard



Recommendation: Add note to specify trail width needs to be covered by public access easement.

specify these dimensions need to be an access easement.

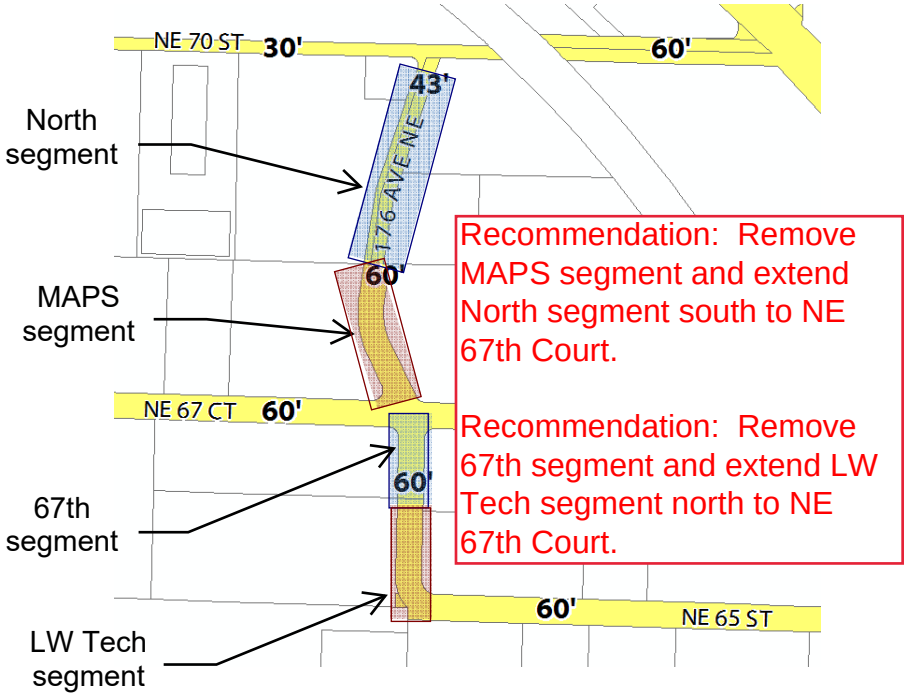
Figure 10. City Regional Trail Standard

Variations from the Standard

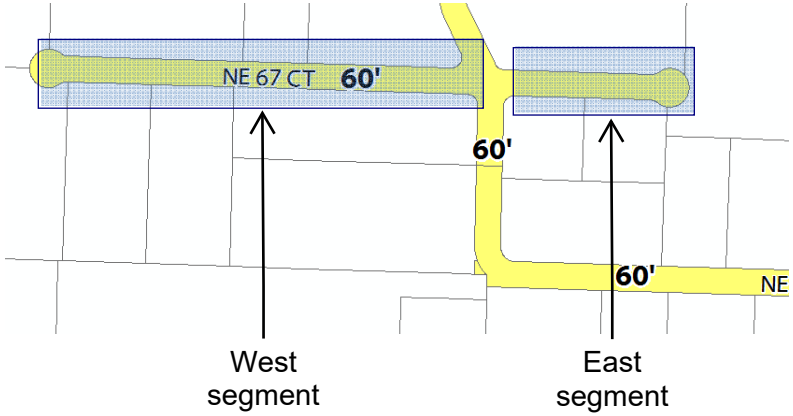
The RTS Section 2 Trail varies from the standard as noted in items 4 and 5 in the RTS Section 2 Trail notes listed above (all trail shoulders to be hard surface except the shoulder on the park side of the trail immediately adjacent to Marymoor Park). The RTS Section 3 Trail varies from the standard as noted in item 3 in the RTS Section 3 Trail notes listed above (trail shoulders to be hard surface versus soft). Variations from the City Regional Trail standard are to be determined during future phases of design.

APPENDIX 8A.1 – Sections for Existing Type I Streets

176th segments for retrofitting



67th segments for retrofitting



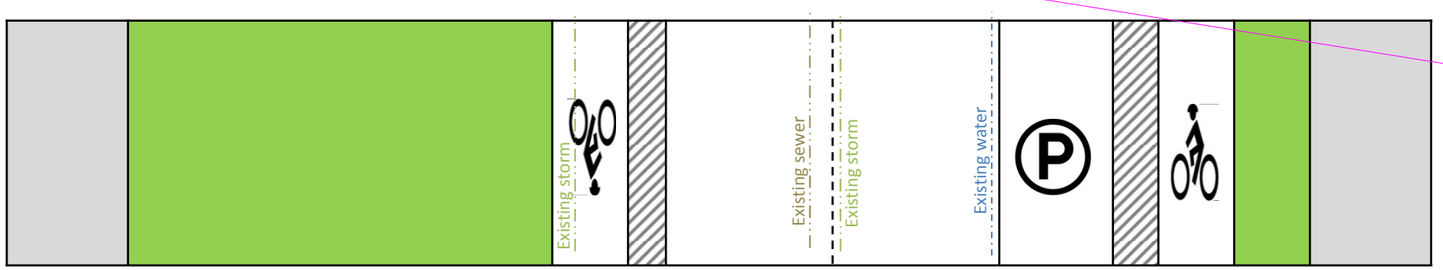
176th – segment cross sections and plan views

North segment (west on left)

New sidewalk built behind existing landscaping		← Existing curb (no curb on other side)			New curb →	New amenities	
Sidewalk	Existing landscaping strip + Filterra	Cycletrack (5.5' cycling area + 2' physical separation from GP lane)	GP lanes	Parking	Cycletrack (5' cycling area + 3' physical separation from GP lane)	Land-scaping strip (Fil-terra)	Sidewalk (with infiltration?)
8	28	7.5	22	7.5	8	5	8

New ROW | Existing ROW: 45 ft | New ROW

Total surface cross section: 94 ft ROW



Specify ROW or easement

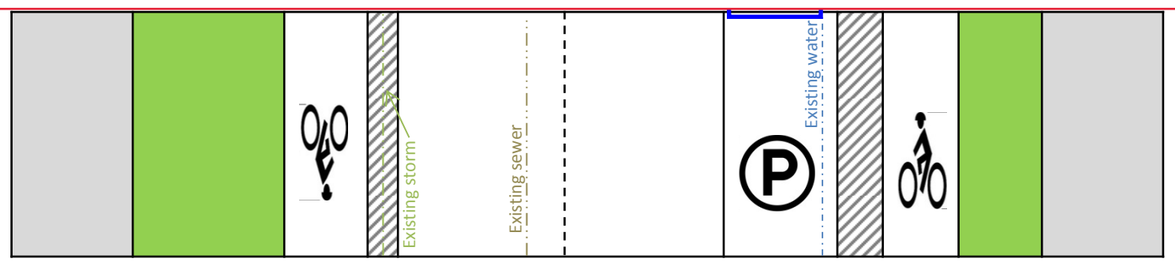
Comments

- Curb exists only on west side
- Wide existing landscape strip on west side remains

MAPS segment (west on left)

Widened sidewalk behind existing landscaping		Within existing curbs				New – behind curb	
Widened sidewalk	Landscape buffer (add Filterra)	Cycletrack (5.5' cycling area + 2' physical separation from GP lane)	GP lanes	Parking	Cycletrack (5' cycling area + 3' physical separation from GP lane)	Land-scaping strip (Fil-terra)	Sidewalk (with infiltration?)
8	10	7.5	21.5	7.5	8	5	8

Recommend removal of MAPS segment and use of NORTH segment for 176th from NE 70th Street to NE 67th Court.



Comments

- Sidewalk on west side widened from 4 to 8 ft

176th – segment cross sections and plan views

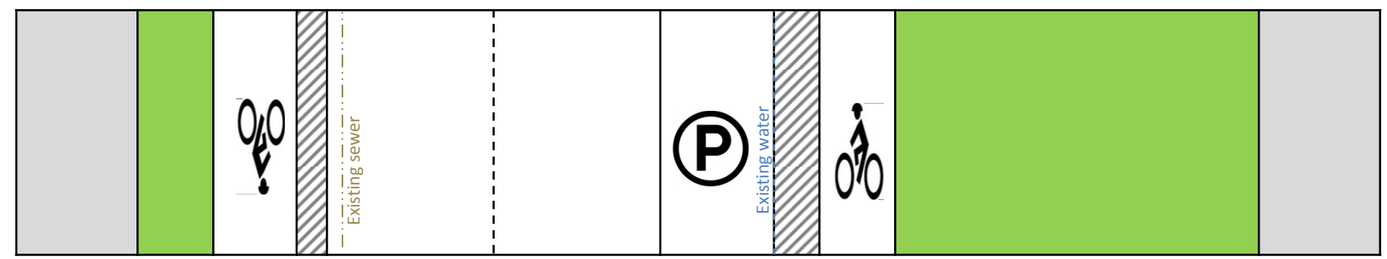
67th segment (west on left)

Comments

- Wide existing landscape strip on east side remains

New amenities		Within existing curbs				New sidewalk built behind existing landscaping	
Sidewalk (with infiltration?)	Land-scaping strip + Filterra	Cycletrack (5.5' cycling area + 2' physical separation from GP lane)	GP lanes	Parking	Cycletrack (5' cycling area + 3' physical separation from GP lane)	Existing landscaping strip + Filterra	Sidewalk
8	5	7.5	21.5	7.5	8	24	8

Recommend removal of 67th segment and use of LW Tech segment for 176th from NE 67th Court to NE 65th Street, as recommended in illustration below.



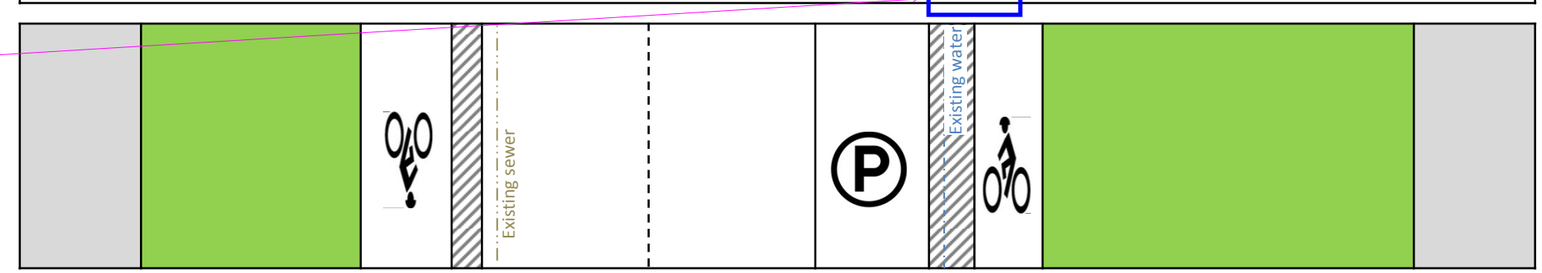
LW Tech segment (west on left)

Comments

- Sidewalk on west side widened from 6.5 to 8 ft
- Wide existing landscape strips remain on both sides

Existing amenities behind curb		Within existing curbs				New sidewalk built behind existing landscaping	
Widen sidewalk	Existing landscaping strip + Filterra Recommend 14 foot width	Cycletrack (5.5' cycling area + 2' physical separation from GP lane)	GP lanes	Parking	Cycletrack (5' cycling area + 3' physical separation from GP lane)	Existing landscaping strip + Filterra	Sidewalk
8	15	7.5	21.5	7.5	8	24	8
New ROW	Existing ROW: 60 ft					New ROW	
Total surface cross section: 99.5 ft					ROW		

Specify ROW or easement



67th – segment cross sections and plan views

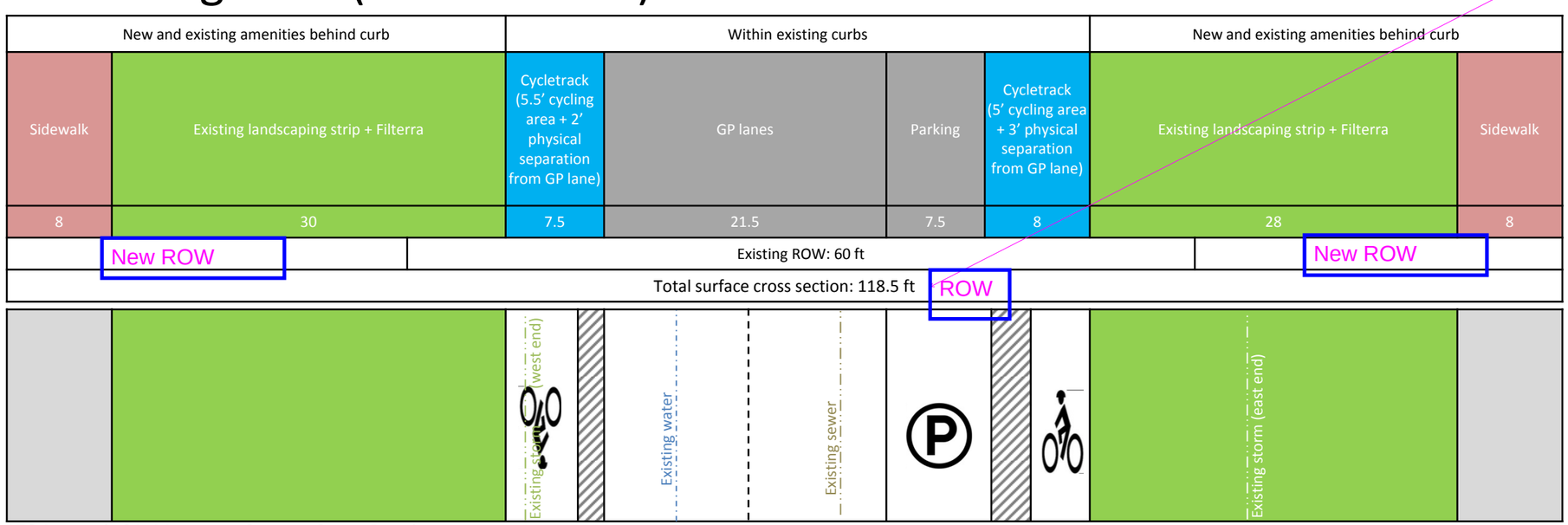
West segment (north of left)

Comments

- Widen sidewalk on north side from 5.5 to 8 ft
- Wide existing landscape strip on south side remains

Specify ROW or easement

East segment (north on left)



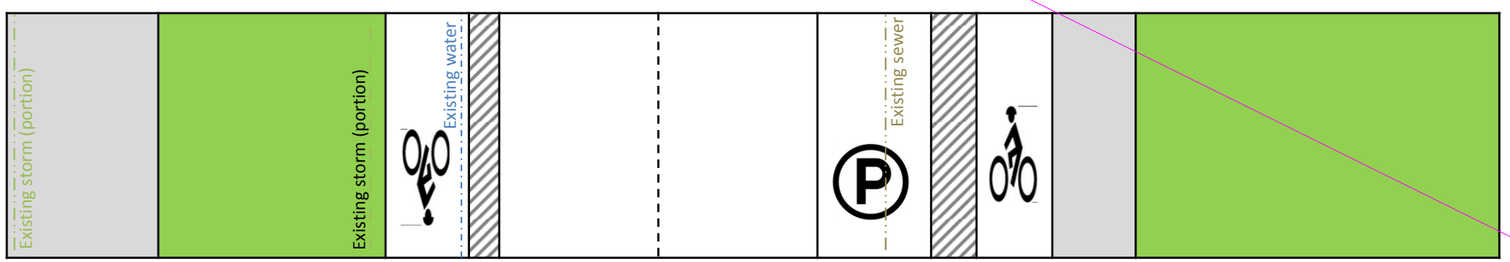
Comments

- Wide existing landscape strips on both sides remains

65th cross section and plan view

65th (north on left)

Existing amenities behind curb		Within existing curbs				Existing amenities behind curb	
Existing trail (pave)	Existing land-scaping strip + Filterra	Cycletrack (5.5' cycling area + 2' physical separation from GP lane)	GP lanes	Parking	Cycletrack (5' cycling area + 3' physical separation from GP lane)	Existing sidewalk	Existing landscaping strip + Filterra
10	15	7.5	21	7.5	8	5.5	24+ (varies)
New ROW	Existing ROW: 60 ft						New ROW
Total surface cross section: 78 ft (ROW ~~+ easement~~)							
** does not meet collector arterial standard*							



Specify which portion is ROW and which portion is easement.

Comments

- Retain cross section on north side
- Pave trail on north side
- Retain sidewalk on south side
- Retain landscaping on south side for trees (may not need all 24+ feet)