



PARK PLACE URBANIZATION PLAN

FINAL PLAN

City of Oregon City Project #PS 20-027
December 2021



WE #1509A

wallis
engineering



EXPIRES: 12/31/21

TABLE OF CONTENTS

SECTION 1: INTRODUCTION	1
1.1 Background	1
1.2 Purpose of Report	2
1.3 Planning Process	2
1.4 Plan Organization	2
SECTION 2: EXISTING CONDITIONS ANALYSIS	4
2.1 Neighborhood Characteristics and Land Use	4
2.2 Existing Transportation Facilities	9
2.3 Existing Streetscape Elements	17
2.4 Planned Improvements	17
2.5 Public Utilities	20
2.6 Development Projects	21
SECTION 3: ALTERNATIVE DEVELOPMENT AND SELECTION	23
3.1 Public Engagement Process	23
3.2 Public Outreach #1	23
3.3 Speed Management	25
3.4 Alternatives Development	25
3.4.1 Sidewalk Prioritization Plan	25
3.4.2 Proposed Roadway Classification and Cross Sections	27
3.4.3 Trail Connectivity Plan	34
3.4.4 Mailbox Banking	36
3.4.5 Traffic Calming Measures	36
3.5 Public Outreach #2	37
SECTION 4: FINAL CONCEPT PLAN	41
4.1 Sidewalk Prioritization Plan	41
4.2 Proposed Roadway Classification	41
4.2.1 Proposed Roadway Classification and Cross Sections	41
4.3 Trail Connectivity Plan	47
4.4 Traffic Calming	49
4.5 Connectivity Needs	49
4.6 Bike Lanes	49
4.7 Right of Way Impacts	49
SECTION 5: IMPLEMENTATION PLAN	51
5.1 Plan Implementation	51
5.2 Cost Estimates	51

5.3 Potential Funding Sources	51
5.3.1 Local Funding.....	51
5.3.2 State Funding	51

List of Figures

Figure 1-1: Park Place Vicinity Map	1
Figure 2-1: Activity Generators.....	5
Figure 2-2: Zoning.....	6
Figure 2-3: Environmentally Sensitive Areas.....	8
Figure 2-4: Existing Narrow Roadways	11
Figure 2-5: Narrow Roadway (Hiram Ave).....	12
Figure 2-6: Variable Roadway Widths (Cleveland St.).....	12
Figure 2-7: Existing Bicycle and Pedestrian Facilities.....	13
Figure 2-8: Existing Sidewalk Gaps.....	14
Figure 2-9: End of Sidewalks Hunter Ave.....	15
Figure 2-10: No Sidewalk Transition S. Ames St.....	15
Figure 2-11: Sidewalk Dead End Swan Ave.....	15
Figure 2-12: Existing Public Transit Facilities	16
Figure 2-13: Mailboxes on Apperson Blvd.....	17
Figure 2-14: City Planned Projects Within the Corridor	19
Figure 2-15: Development Projects	22
Figure 3-1: Public Survey #1 Results	24
Figure 3-2: Sidewalk Prioritization Plan	26
Figure 3-3: Roadway Classification Plan	28
Figure 3-4: Family Friendly Street (Local Rural Street) Cross Section.....	29
Figure 3-5: Family Friendly (Local Rural Street) at Stormwater Facilities*	29
Figure 3-6: Apperson Blvd Existing Cross Section	30
Figure 3-7: Apperson Blvd Proposed Cross Section	30
Figure 3-8: Front Ave Proposed Cross Section – Option 1	31
Figure 3-9: Front Ave Proposed Cross Section – Option 2	32
Figure 3-10: Hunter Ave Alternative Cross Section	32
Figure 3-11: Swan Ave Alternative Cross Section	33
Figure 3-12: Local Roadway Cross Section	33
Figure 3-13: Conceptual Trail Connection Plan	35
Figure 3-14: Mailbox Banking.....	36
Figure 3-15: Speed Humps	36
Figure 3-16: Neck Downs.....	36
Figure 3-17: Traffic Circles	37
Figure 3-18: Speed Lumps.....	37

Figure 3-19: Curb Extensions.....	37
Figure 3-20: Public Survey #2 Results Apperson Blvd & Front Ave.....	38
Figure 3-21: Public Survey #2 Results Hunter Ave & Swan Ave	39
Figure 3-22: Public Survey #2 Results Family Friendly Street*, Mailbox Options and Traffic Calming.....	40
Figure 4-1: Sidewalk Prioritization Plan.....	42
Figure 4-2: Approved Classification Plan.....	43
Figure 4-3: Apperson Blvd Cross Section.....	44
Figure 4-4: Front Ave Cross Section	44
Figure 4-5: Hunter Ave Cross Section.....	45
Figure 4-6: Swan Ave Cross Section.....	45
Figure 4-7 : Local Rural Street Cross Section	46
Figure 4-8 : Local Rural Street at Stormwater Facilities.....	46
Figure 4-9: Trail Connection Plan.....	48
Figure 4-10 : Right-of-Way Impacts.....	50

List of Tables

Table 2-1: Existing Roadway Variation.....	9
Table 2-2: Study Area Safety History – 2010 to 2019.....	10

Appendices

Appendix A: Park Place Neighborhood Survey #1
Appendix B: Park Place Neighborhood Survey #2
Appendix C: Sidewalk Prioritization Plan Cost Estimates
Appendix D: Transportation System Plan Projects

SECTION 1: INTRODUCTION

1.1 BACKGROUND

The Park Place Neighborhood (the neighborhood) is located in the northeast corner of Oregon City. It was annexed into the City of Oregon City in 1989. The Neighborhood is bounded approximately by Forsythe Rd on the north, Highway 213 on the west, Livesay Creek on the south and Kitty Hawk Ave on the east. Holcomb Blvd remained under Clackamas County jurisdiction until 2012 when the responsibilities of Holcomb were transferred to the City of Oregon City. Over the years, it has developed in piecemeal fashion, creating a mix of urban and rural areas. As a result, the streets have developed over time to different Oregon City Transportation System Plan (TSP) standard street cross sections. The Neighborhood currently lacks connectivity to surrounding neighborhoods and desired community destinations. Areas to the east of Swan Ave consist of more recent development and are, for the most part, fully-developed roadways built to local roadway standards. The areas to the east of Swan Ave have been reviewed for existing gaps and possible network improvements, but the focus area of this project is intended to be the underdeveloped roadways from Swan Ave west within Park Place Neighborhood.

A vicinity map of Park Place Neighborhood is included as **Figure 1-1**. Holcomb Blvd is not included in this plan.

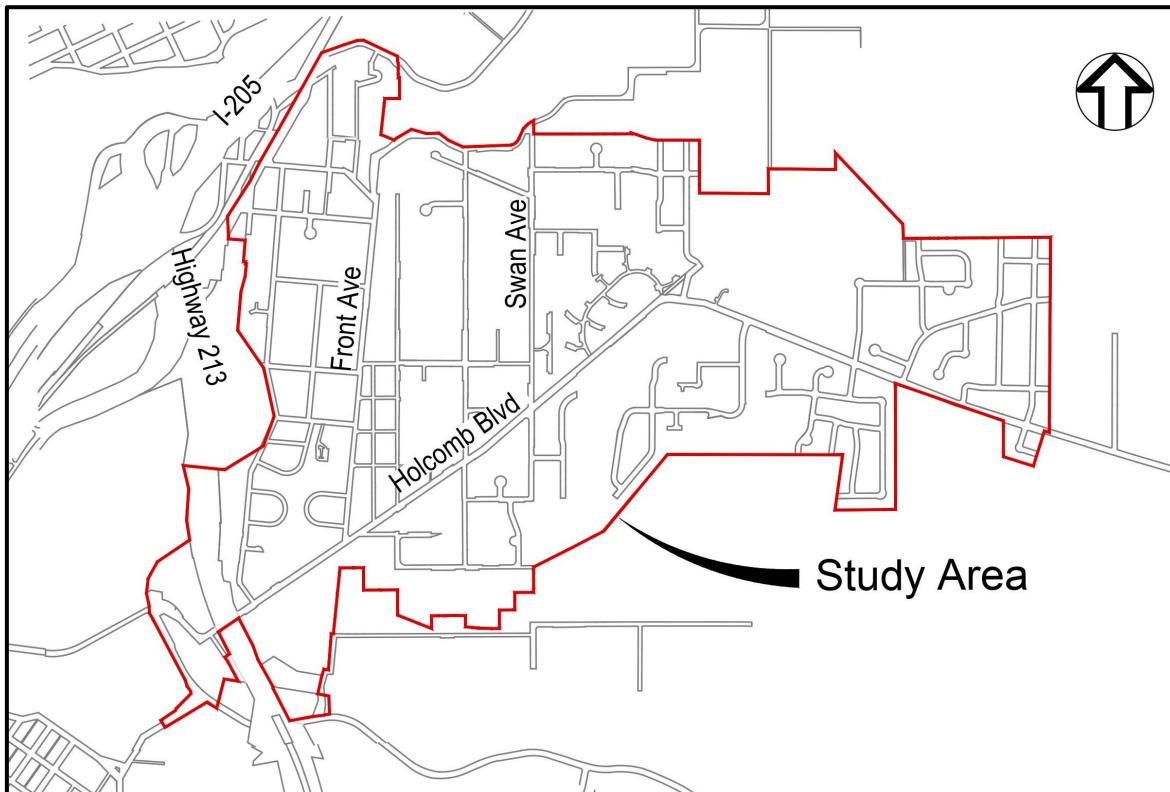


Figure 1-1: Park Place Vicinity Map

1.2 PURPOSE OF REPORT

The City of Oregon City contracted with Wallis Engineering (Wallis) to develop an Urbanization Plan for the Park Place Neighborhood. The goal of this plan is to:

- Identify transportation problems within the Neighborhood
- Understand where projects can be constructed to provide the greatest benefit
- Identify preferred roadway cross sections
- Prepare cost estimates for the various improvements
- Identify how public transportation improvements in the Neighborhood should be prioritized

The Park Place Urbanization Plan (Plan) analyzed existing conditions and potential alternative improvements, and makes recommendations for improvements. It identifies a process by which to implement public works improvements within the existing network of streets to create a more connected transportation system for the community.

This plan will be used by the City to guide future projects to improve the transportation system within the neighborhood. It does not stand alone, but builds on several other City planning documents. In particular, it modifies, supplements, and clarifies some of the projects described in the City's *2013 Transportation System Plan (TSP)*. As referenced City planning documents and conditions change over time, this plan should be updated accordingly.

As funding sources are limited at this time, it is anticipated that improvements described within will be mainly driven by private development. Should funding become available, improvements identified within the Plan should be prioritized in coordination with project improvements identified in the TSP and other adopted area plans within the City.

Holcomb Blvd is not considered within this Urbanization Plan as it has its own plan - the Holcomb Boulevard Pedestrian Enhancement Concept Plan. The Park Place Concept Plan is also not included in this study area. Other related plans are discussed in Section 2.4.

1.3 PLANNING PROCESS

The Plan followed a step-by-step process, structured to include public involvement and participation throughout plan development. The following steps were included in the planning process:

1. Defined the scope and focus of the plan, including the overall goals and vision for the neighborhood.
2. Evaluated existing conditions and transportation infrastructure gaps throughout the neighborhood and its users.
3. Communicated project information to the community, identified community desires, and solicited feedback.
4. Identified alternative concept plans to provide adequate access to desired community locations.
5. Presented options and alternatives to the neighborhood for feedback and identification of preferred alternatives.
6. Prepared final Urbanization Plan and process to implement improvements.

1.4 PLAN ORGANIZATION

The Park Place Urbanization Plan is divided into a total of six sections. A brief description of each section (except Section 1) follows:

Section 2: Existing Conditions Analysis

The existing conditions throughout the neighborhood are described in detail, including its character, transportation facilities, safety, streetscape elements, and public utilities.

Section 3: Alternative Development and Selection

The criteria used to develop concept alternatives are defined, as well as other criteria included in the scope of this Plan. The process and results of public engagement are summarized. The alternatives and their expected implications for addressing future transportation needs are discussed.

Section 4: Final Urbanization Plan

The final Urbanization Plan is described in detail. Roadway cross sections, sidewalk infill projects, and streetscape improvements are provided.

Section 5: Implementation Plan

This section describes how the final Urbanization Plan will be implemented. Planning-level cost estimates for the proposed improvements and potential funding opportunities are also included here.

SECTION 2: EXISTING CONDITIONS ANALYSIS

The existing conditions of the Park Place Neighborhood are analyzed in this chapter. A discussion of these conditions includes the character of the neighborhood and its designated land uses, transportation facilities for each mode of travel and existing streetscape elements. Holcomb Blvd is not included in this plan.

2.1 NEIGHBORHOOD CHARACTERISTICS AND LAND USE

The Park Place Neighborhood contains multiple desired community destinations: City parks, schools, churches, stores or gas stations, municipal buildings, and bus stops. Gaps in existing sidewalks prevent convenient travel to these community locations. There are several public facilities and properties which generate activity through the study area, including public parks, schools, and churches. These are shown on **Figure 2-1** on the following page.

The City's TSP describes the Park Place Neighborhood as an area of significantly low-income households, with little projected change in employment growth between 2010 and 2035. The TSP also projects more than 300 households being added to the study area through additional lot development and densification between 2010 and 2035.

Land use through the Park Place Neighborhood includes a mix of urban and rural areas. The neighborhood is largely zoned residential with some commercial properties, as shown in **Figure 2-2** on page 6. A small area of mixed-use commercial properties is located along Holcomb Blvd between Apperson Blvd and Front Ave.

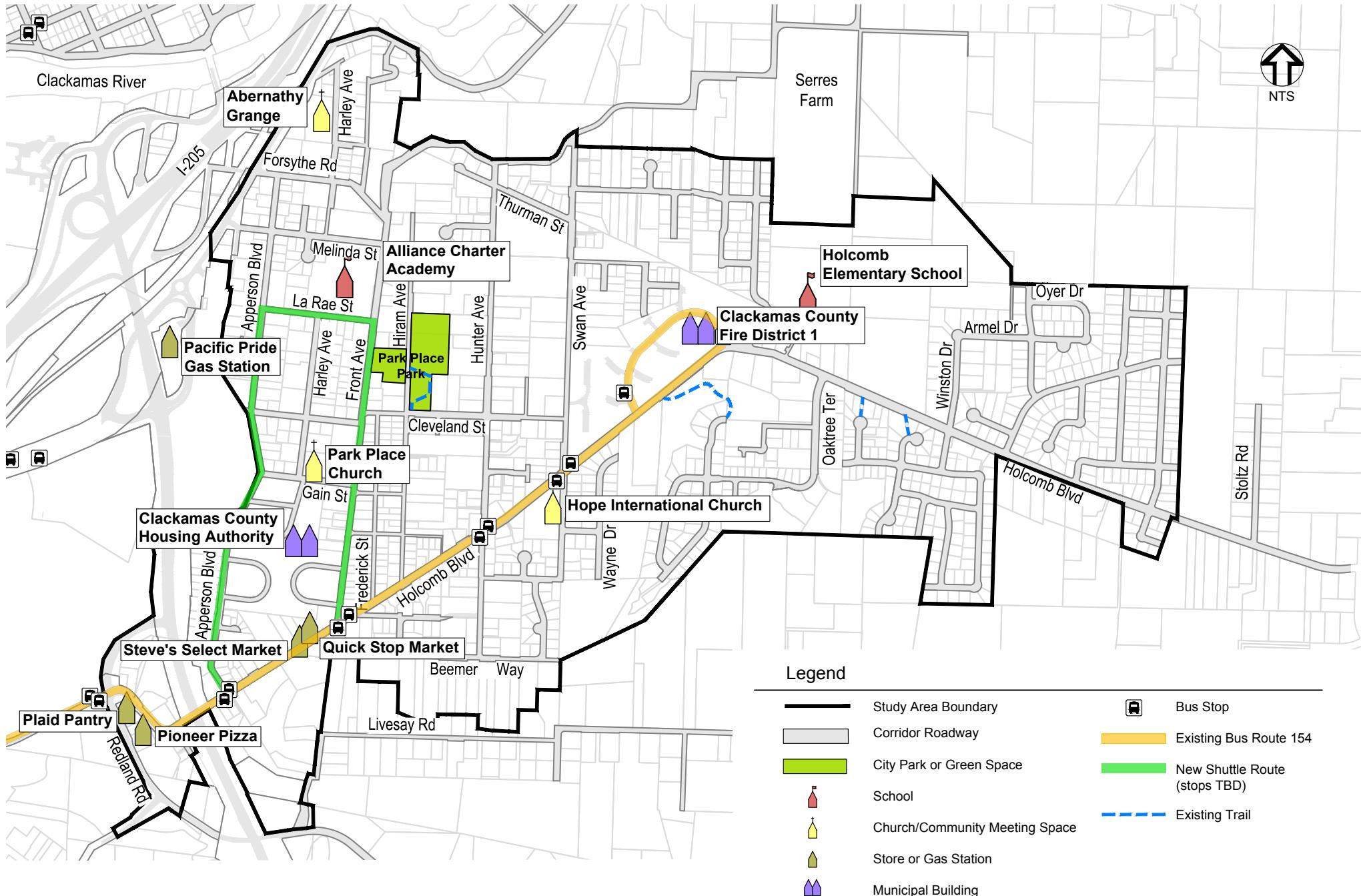


Figure 2-1: Activity Generators

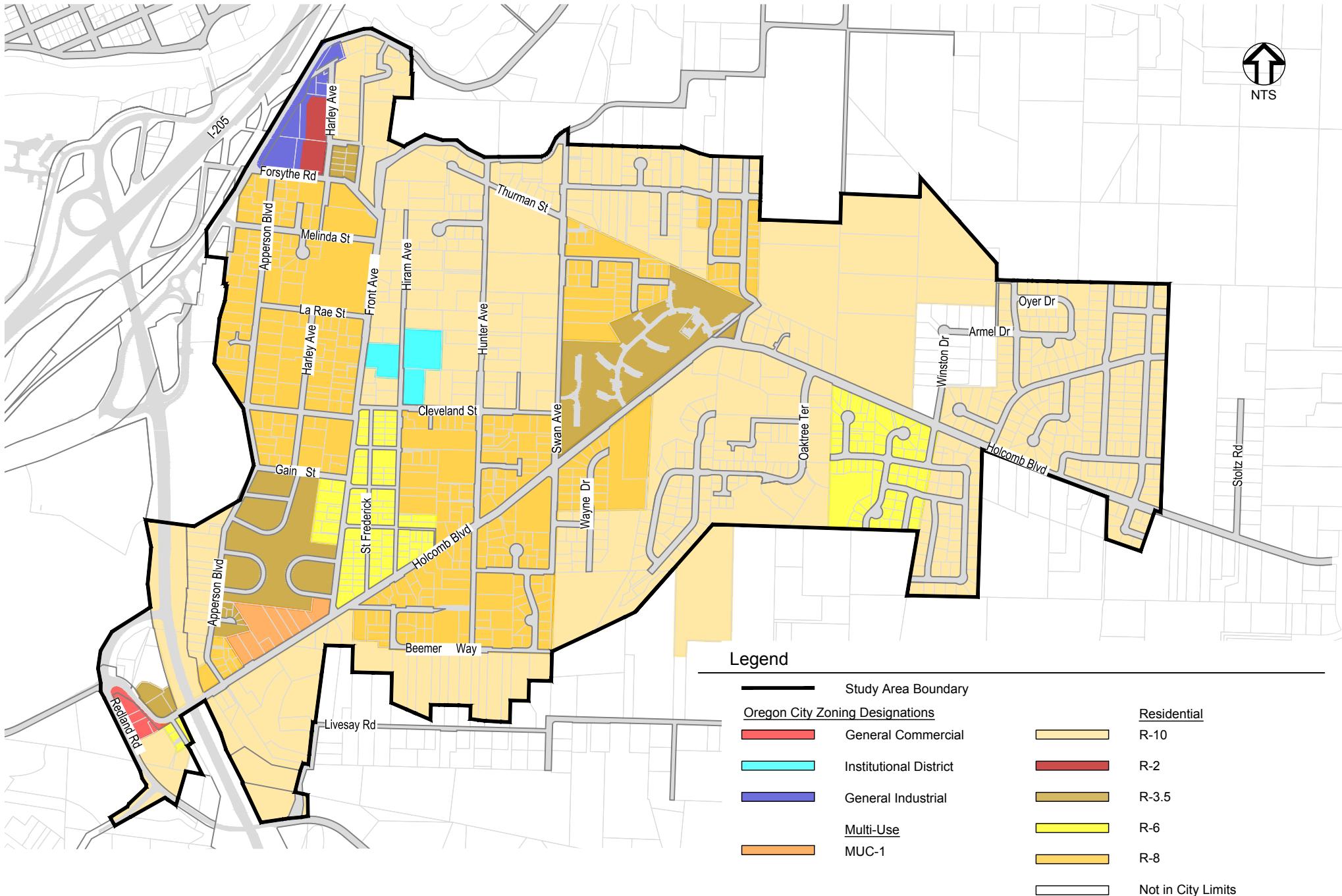


Figure 2-2: Zoning

Environmentally Sensitive Areas

The study area encompasses and is adjacent to environmentally-sensitive areas associated with streams and creeks. The City identifies a number of such areas, including wetlands and streams, steep slopes, and a Natural Resources Overlay District (NROD). These environmentally-sensitive areas are shown in more detail in **Figure 2-3** on the following page. Future streetscape improvement work within or impacting designated environmentally sensitive areas will require permit approval.

Steep Slopes

Steep slope areas exist within the study area. Steep topography includes areas steeper than twenty-five percent (25%), located predominantly along Hiram Ave, Swan Ave, Hunter Ave and Cleveland St.

Streams and Wetlands

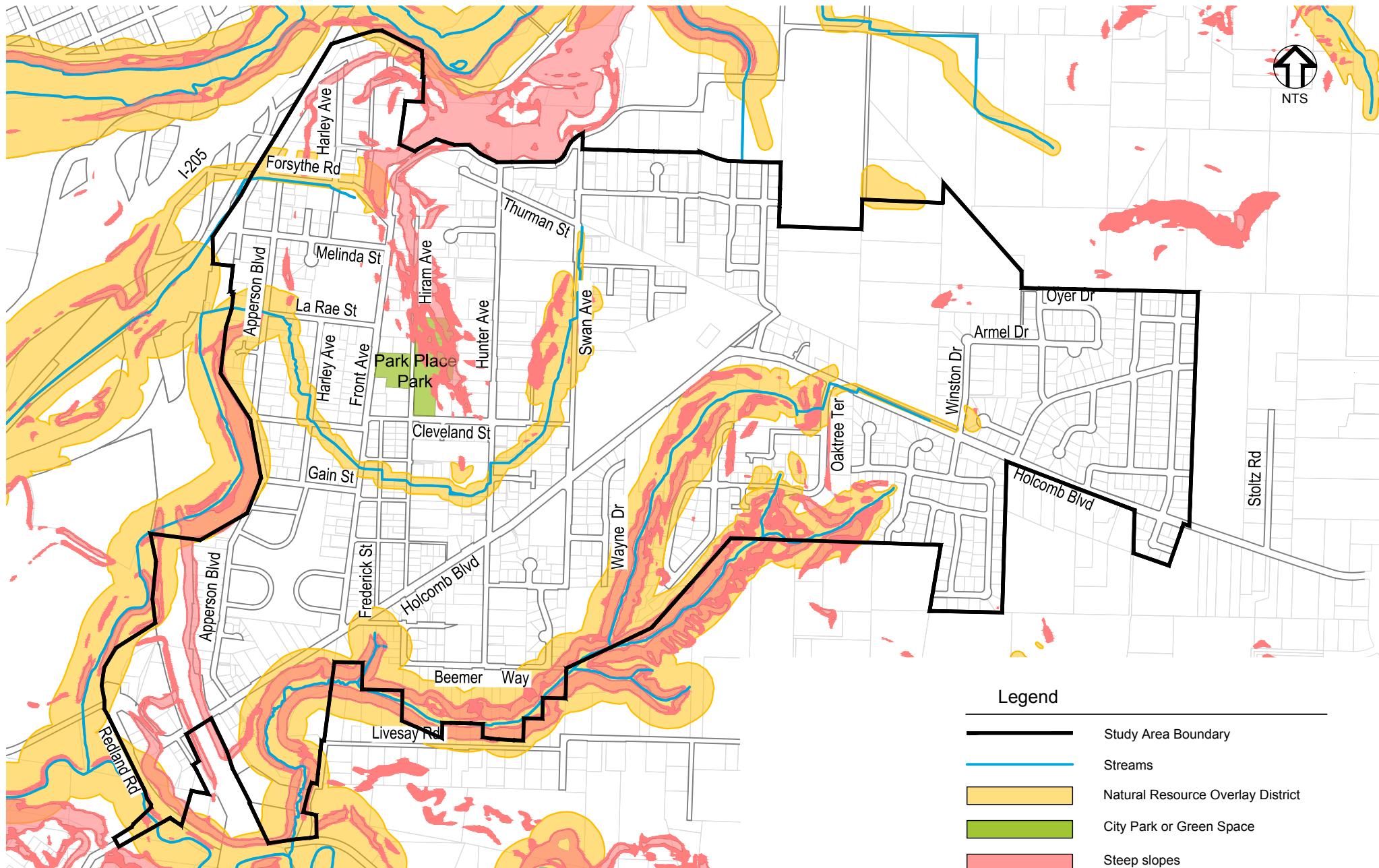
Two designated Title 3 streams cross through the neighborhood boundaries. These areas are mapped as part of the guidelines set out in Title 3 of *Metro's Urban Growth Management Functional Plan*. The Title 3 designation constitutes areas protected by the *Stream and Floodplain Protection Plan*, which aims to protect the region's health and public safety by reducing flood and landslide hazards, controlling soil erosion, and reducing pollution of the region's waterways. These areas are delineated as Title 3 for the following purposes: 1) to protect against flooding, 2) to enhance water quality in the region's streams, rivers, and wetlands, and 3) to protect regionally significant fish and wildlife habitat areas. One stream corridor is contained within a canyon to the south of Holcomb Blvd. The other stream is a combination of piped conveyance, roadside ditches and formal stream corridors.

The *Oregon City Local Wetland Inventory* (prepared by Shapiro and Associates, 1999) identified a number of wetlands within the study area. These designated wetlands are located adjacent to the streams within the Natural Resource Overlay District (NROD) boundaries shown on **Figure 2-3**.

NROD

The Natural Resource Overlay District (NROD) protects the habitats and associated functions of the streams, riparian corridors, wetlands and the regulated wildlife habitat found in Oregon City. The NROD regulates water quality and ensures habitat protection through the enforcement of permanent vegetated corridors between sensitive resources and developed areas.

An NROD buffer area of varying widths follows the two stream corridors through the neighborhood. Future improvements constructed within the NROD or its buffer will be required to comply with City environmental standards.



2.2 EXISTING TRANSPORTATION FACILITIES

The Park Place Neighborhood offers transportation opportunities for vehicles, bicycles, pedestrians, and users of public transit. However, facilities for these users are incomplete and deficient throughout the study area. Description of current transportation infrastructure is described below.

Roadway Classification

Roadway classifications are typically assigned to streets according to their character, dimensions, and facilities for various users. The City's 2013 TSP includes several roadway classifications for the streets within the study area. Holcomb Blvd is classified as a minor arterial, one of the larger classifications. Swan Ave, Front Ave and Forsythe Rd are classified as collector roadways. Collector roadways are used as a connection between local roads and arterial roads, and provide a balance between access and mobility. All other roadways within the study area are designated as local roads.

Connectivity

The neighborhood grid system within the study area consists of south to north connections from Holcomb Blvd to Forsythe Rd on Apperson Blvd, Front Ave, Hunter Ave, and Swan Ave. In the east-west direction, there is limited connectivity. Cleveland St acts as the main east to west roadway within the study area. However, Cleveland terminates at Swan Ave, and does not provide full access through to the east side of the neighborhood.

General Roadway Characteristics

The roadways within the Park Place Neighborhood vary greatly in their dimensions and facilities for roadway users, due to the variable nature of development over time. Most of the streets were not built to current roadway classification standards – with the exception of the recently-constructed roadways east of Swan Ave. In the older section of the neighborhood, there is considerable dimensional variation in right-of-way, travel lanes, stormwater conveyance, and widths and existence of both sidewalk and bike lanes. **Table 2-1** below summarizes some of the variation in roadways within the Park Place Neighborhood.

Table 2-1: Existing Roadway Variation

Street	ROW Width	Paved Width	Parking (Y/N)	Surface Drainage (Y/N)	Sidewalk Widths
Apperson Blvd	48'	27'	N	Y	6'
Harley Ave	50'	18'	Y	N	N/A ¹
Front Ave	45'	36'	Y	Y	5.5'
Hiram Ave	34'	15'	N	N	N/A ¹
Hunter Ave	45'	19'	N	Y	N/A ¹
Swan Ave	43'	19'	N	Y	6'
Oaktree Ter	60'	36'	Y	Y	N/A ¹
Forsythe Rd	50'	23'	N	N	N/A ¹
Thurman St	46'	26'	N	N	5'
Ames St	40'	23'	N	Y	5.5'
Cleveland St	35'	19'	N	N	N/A ¹

Street	ROW Width	Paved Width	Parking (Y/N)	Surface Drainage (Y/N)	Sidewalk Widths
Gain St	50'	19'	N	N	4'
Beemer Way	45'	22'	Y	N	5'

1. Sidewalk width not provided because street currently lacks sidewalk.

According to current City standards, roadways shall have a minimum paved width of 20 feet to provide fire service. Several sections of roadway have substandard paved width according to this fire service requirement. **Figure 2-4** on the following page shows the locations of roadway sections within the study area with substandard pavement width. **Figure 2-5** and **Figure 2-6** on page 12 show examples of narrow and variable width roadways within the study area.

Geometry

Neighborhood roadways are aligned in a rough grid pattern, with streets extending north and south from Holcomb Blvd. Because Holcomb Blvd passes through the neighborhood at a skewed angle, there are a number of acute angle roadway intersections in the study area. An acute angle roadway intersection is defined as an intersection where roadways enter the intersection at less than 90 degrees. Generally speaking, acute angle intersections make it more difficult to enter and exit an intersection. In the case of the study area, these acute angles at intersections create sightline difficulties for motorists attempting to enter Holcomb Blvd. The tighter corner radii also complicate motorist right turn movements into the neighborhood. Locations of acute angle intersections are shown on **Figure 2-4**.

Safety

To help identify safety issues and concerns, the crash history of the Park Place Neighborhood was reviewed. The Oregon Department of Transportation (ODOT) supplied historical information summarizing all reported collisions within the Park Place Neighborhood occurring in the nine-year period between 01/01/2010 and 12/31/2019 (more recent data is not available). Crash information was analyzed, and the results are summarized in **Table 2-2** below.

The majority of these crashes occurred on Holcomb Blvd and are outside the scope of this Urbanization Plan. The remaining crashes were minor injury and property damage only, and were typically rear end and turning movement type incidents.

Table 2-2: Study Area Safety History – 2010 to 2019

Intersection/Area	Crash Severity			Collision Type							Total Crashes
	PDO	Injury	Fatal	Rear	Fix	Turn	Ped	Head	SS	Angle	
Forsythe Rd	7	4		1	4	4			2		11
“D” St		1		1							1
Oaktree Terrace		1								1	1
Holcomb School Rd		3		3							3

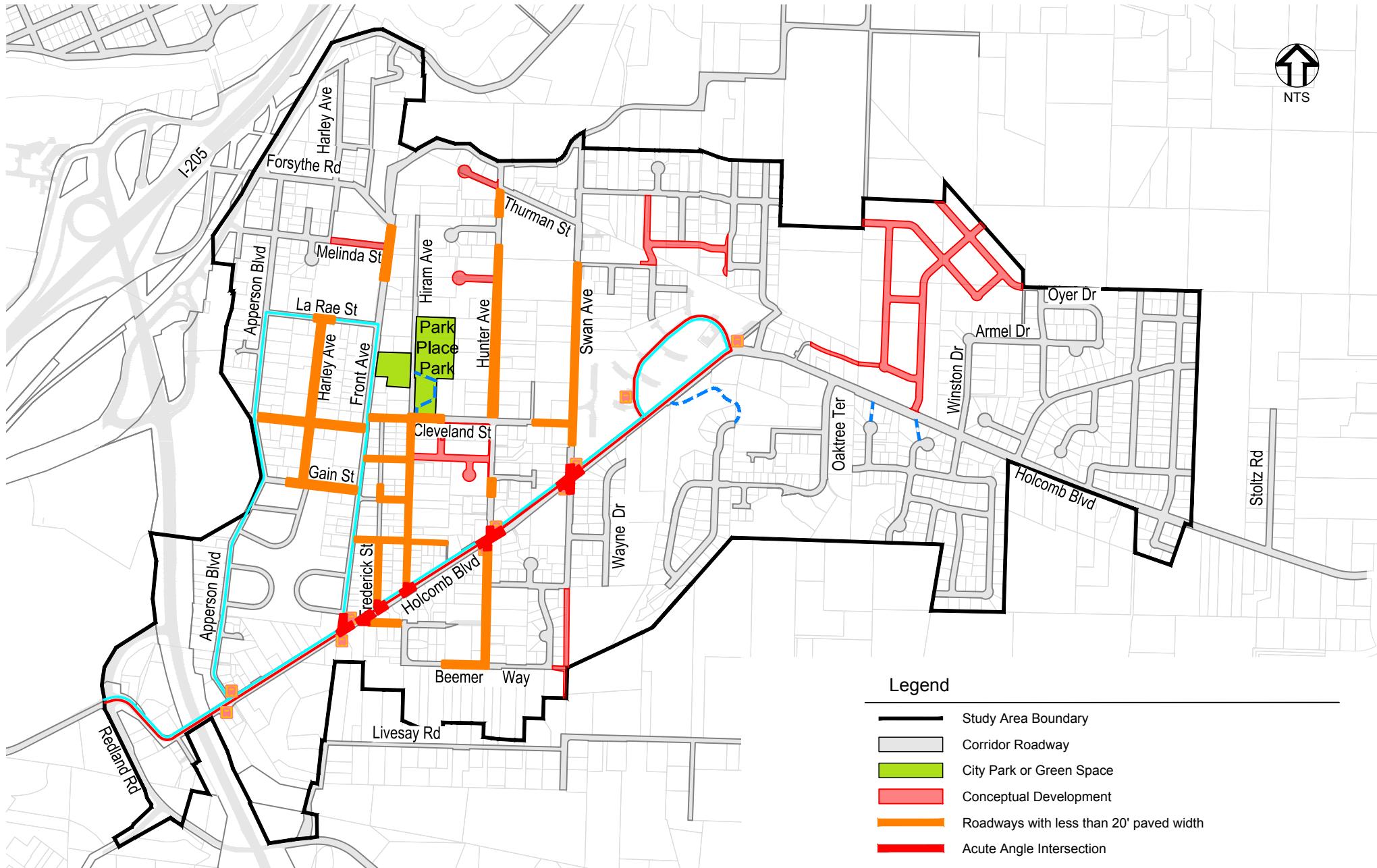
PDO: Property Damage Only Crash

Fix: Fixed Object or Other Object

Ped: Pedestrian

Head: Head-on

SS: Side Swipe



Legend

- Study Area Boundary
- Corridor Roadway
- City Park or Green Space
- Conceptual Development
- Roadways with less than 20' paved width
- Acute Angle Intersection



wallis
engineering

Figure 2-4: Existing Narrow Roadways
PARK PLACE URBANIZATION PLAN
December, 2021



**Figure 2-5: Narrow Roadway
(Hiram Ave)**



**Figure 2-6: Variable Roadway Widths
(Cleveland St.)**

Speed data was not collected as part of this Plan. However, high speeds have been anecdotally noted as a major concern among Neighborhood residents.

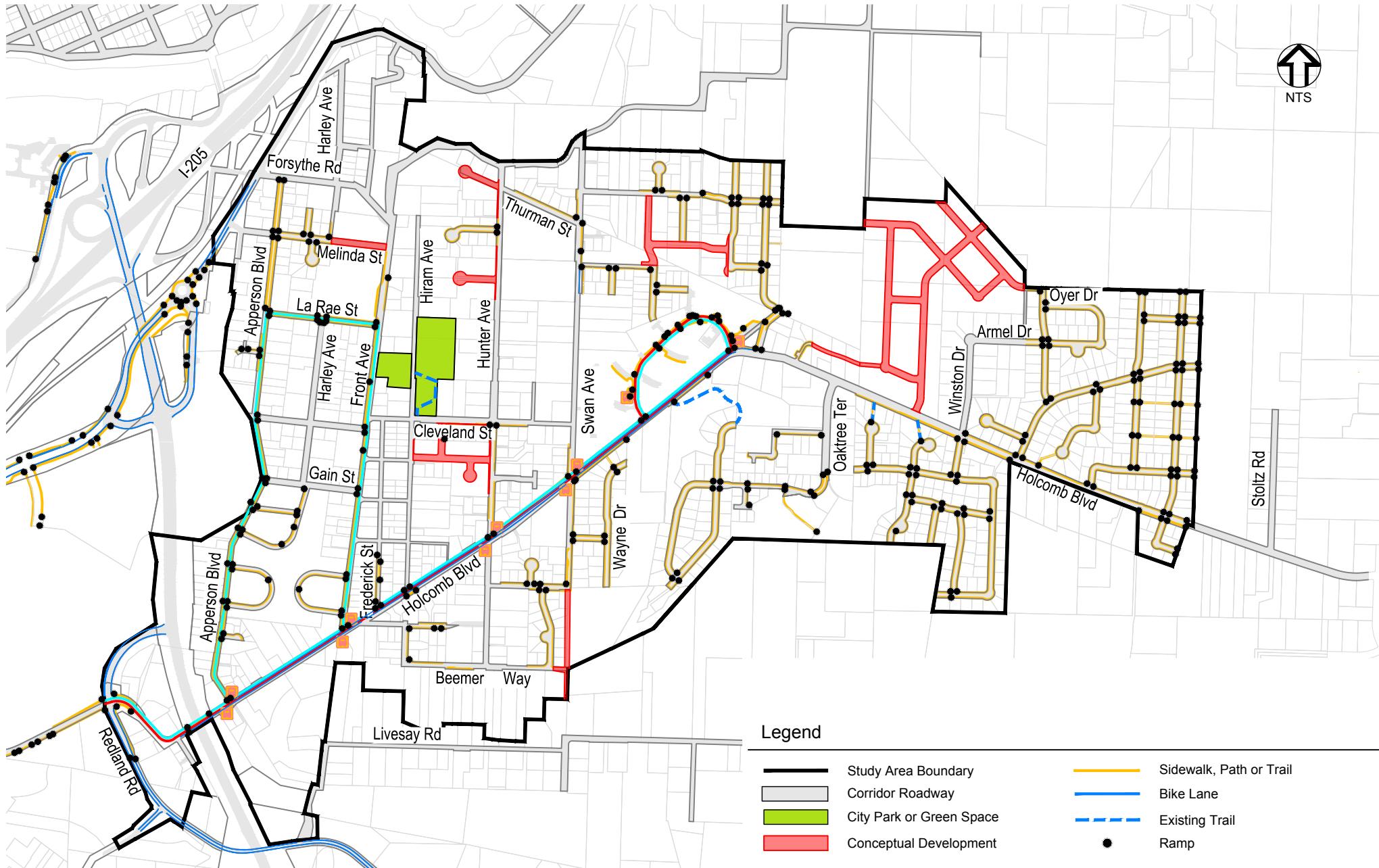
Speed Control Measures

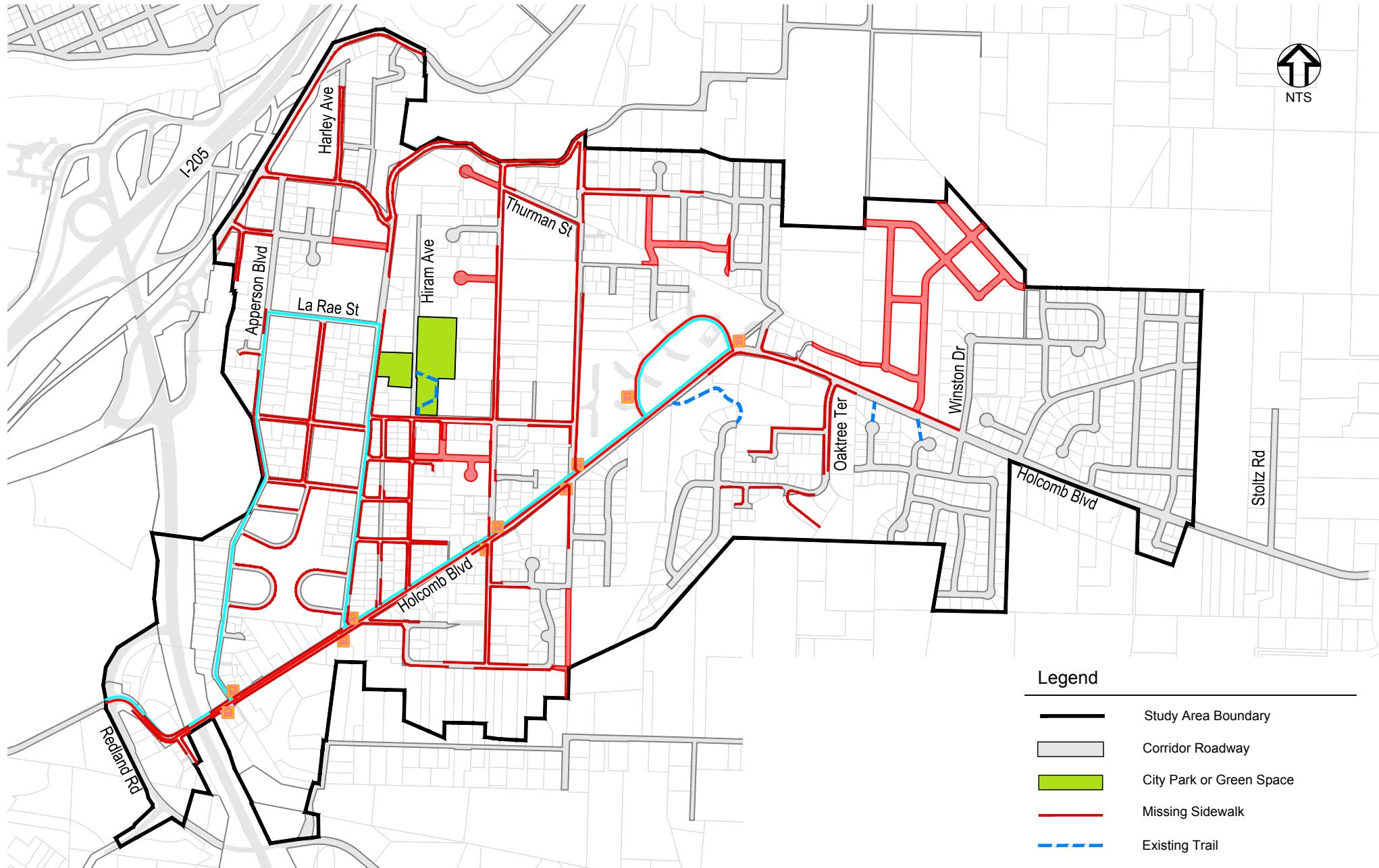
Some speed reduction measures have been implemented within the Park Place Neighborhood. Speed humps have been added along Apperson Blvd and Front Ave. Roadway narrowing was completed at the intersection of La Rae St and Harley Ave near the Alliance Academy.

Pedestrian Facilities

Pedestrian facilities throughout the neighborhood are not continuous. Sidewalks (where they exist) are typically five feet wide, and are a mixture of sidewalks directly adjacent to the roadway (curb tight) or positioned behind a landscape strip (setback). It should be noted that this study did not assess if existing sidewalks and curb ramps complied with the Americans with Disabilities (ADA) requirements for these facilities. A map of existing pedestrian and bicyclist facilities within the study area is included in **Figure 2-7** on the following page.

To highlight the gaps within the pedestrian network, a figure showing existing gaps sidewalk gaps is included as **Figure 2-8** on page 14. Some photographic examples of gaps within the network are included as **Figure 2-9, Figure 2-10, Figure 2-11** on page 15.





wallis
engineering

Figure 2-8: Existing Sidewalk Gaps
PARK PLACE URBANIZATION PLAN
December, 2021



**Figure 2-9: End of Sidewalks
Hunter Ave**



**Figure 2-10: No Sidewalk Transition
S. Ames St**

Bicycle Facilities

The only striped bicycle lanes within the study area are along Holcomb Blvd, the minor arterial bisecting the neighborhood. Swan Ave has two small areas with widened pavement for future facilities. There are a few small sections of shared use pathways that connect along the south side of Holcomb Blvd. Lack of striped bike lanes, narrow road widths, steep roadway slopes, and minimal connectivity between roadways in the neighborhood make it difficult for bikes to travel in the neighborhood.

Public Transit Facilities

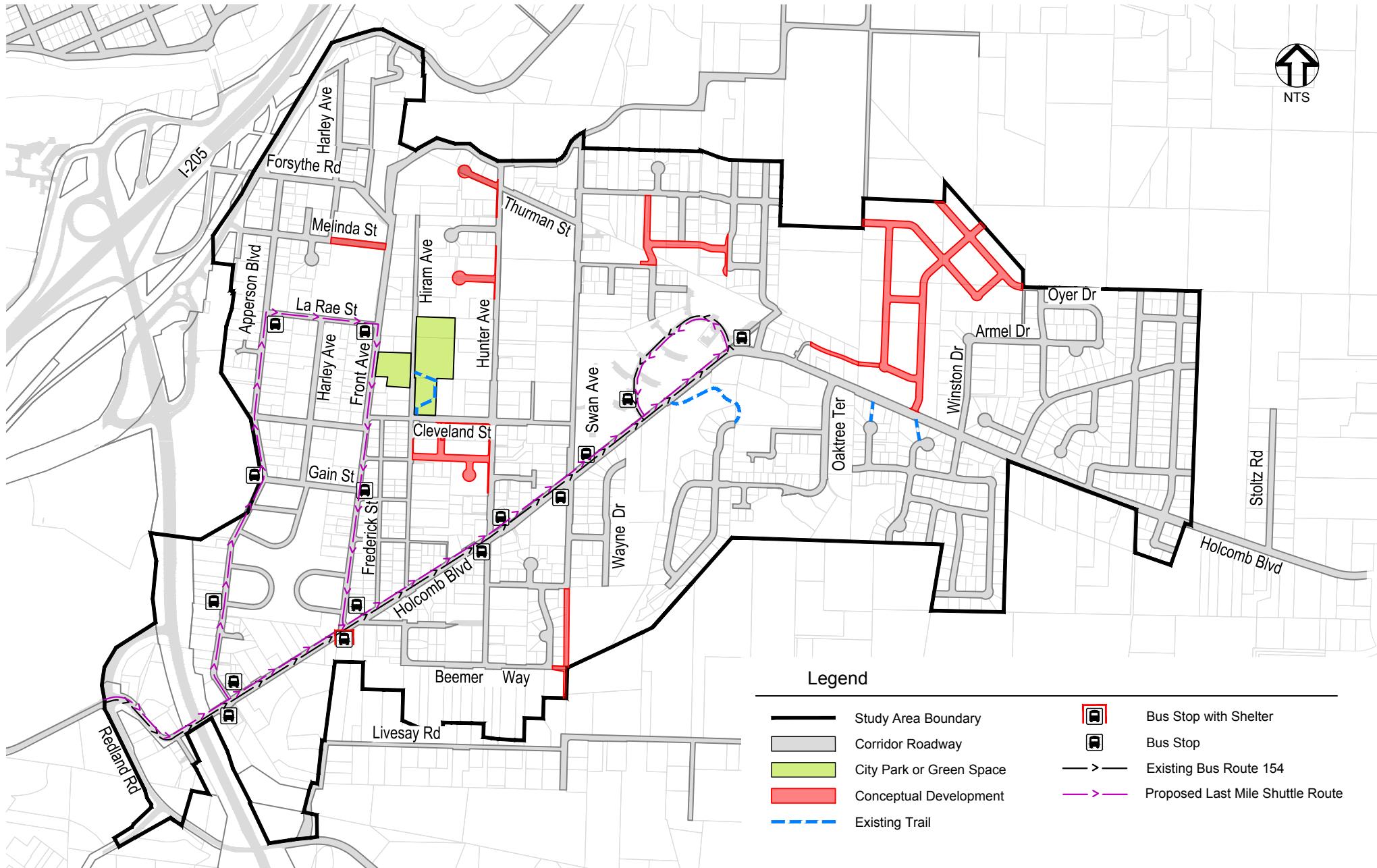
TriMet provides public transit services along Holcomb Blvd and S. Longview Way as part of the Willamette/Clackamas Heights Route 154. There are a total of twelve bus stops along this section of Route 154 within the neighborhood. The majority of the bus stops are not equipped with benches or covered areas for pedestrians.

The City is in the process of finalizing a city shuttle service to provide access to various destinations within Oregon City. The draft route map for the First Mile – Last Mile Shuttle service includes stops within the Park Place Neighborhood.

Bus stops and routes are shown on the Existing Public Transit Facilities **Figure 2-12** on the following page.



**Figure 2-11: Sidewalk Dead End
Swan Ave**



wallis
engineering

Figure 2-12: Existing Public Transit Facilities

PARK PLACE URBANIZATION PLAN
December, 2021

2.3 EXISTING STREETSCAPE ELEMENTS

Pavement Markings / Crossings

The majority of the roadways in the Park Place Neighborhood do not have pavement markings for pedestrian crosswalks, center lines, bike lanes, or street parking. Only a small number of roads connected to Holcomb Blvd have pavement markings for center lines and speed bumps.

On-street Parking & Driveways

There is limited on-street parking within the neighborhood to accommodate all residents. Some areas of gravel parking exist in the shoulder of narrow roads.

Mailboxes

Mailboxes within the neighborhood are a mix of individual mailboxes and consolidated drop boxes. A large percentage of the individual mailboxes within the neighborhood are installed within the limits of existing sidewalks. As seen in **Figure 2-13**, these mailboxes can constitute an accessible barrier to some users, due to the limited remaining width of sidewalk around them.



Figure 2-13: Mailboxes on Apperson Blvd

Connectivity

Connectivity through the study area is limited, particularly for pedestrians and bicyclists. Swan Ave and Hunter Ave provide North-South connectivity through the neighborhood for motorists. However, there is no continuous east-west connection through the study area with the exception of Holcomb Blvd. Holcomb Blvd as an arterial roadway with high traffic volumes presents a barrier to bicycle users, due to the need to cross back and forth across Holcomb Blvd. Cleveland St has some east-west connectivity, but it terminates at Swan Ave on the east side, and includes sections with steep elevation changes which make it less suitable for bicycle and pedestrian travel.

Speed Control

Concerns over speeding have been provided through public comment within the neighborhood. Speed humps are currently installed on both Apperson Blvd and Front Ave. La Rae St adjacent to the Alliance Academy incorporates some traffic calming as it narrows to accommodate crosswalks at S. Harley Ave. Additional speed control measures may be necessary to control vehicle speeds throughout the study area.

2.4 PLANNED IMPROVEMENTS

There are several planned improvements within the study area which are described in City planning documents outside of this Urbanization Plan. The following paragraphs include a short description of each planning document, planned improvements within the study area, and relevance to the Urbanization Plan.

Transportation System Plan (TSP)

The *2013 Transportation System Plan (TSP)* defines transportation systems within the City and provides a long-term guide to transportation investments within the City. The TSP describes proposed cross sections for the development of existing streets within the neighborhood. The TSP also prioritizes projects within the neighborhood, defining them as ‘likely to be funded’ and ‘not likely to be funded’. Projects anticipated as part of the TSP are included in **Figure 2-14** on page 19.

The TSP also identifies a regional trail network crossing through the neighborhood at Holcomb Elementary School, along Forsythe Rd and along the stream corridor south of Holcomb Blvd. The approximate routing for this network is shown on **Figure 2-14**. These projects are described further in **Appendix D**.

The TSP also identifies three projects within the neighborhood designated as Family Friendly projects on Front Street (FF2), Cleveland Street (FF3) and Jacobs/Beemer Way (FF4). These projects are intended to fill gaps and provide wayfinding and shared use lane markings.

Holcomb Boulevard Pedestrian Enhancement Concept Plan

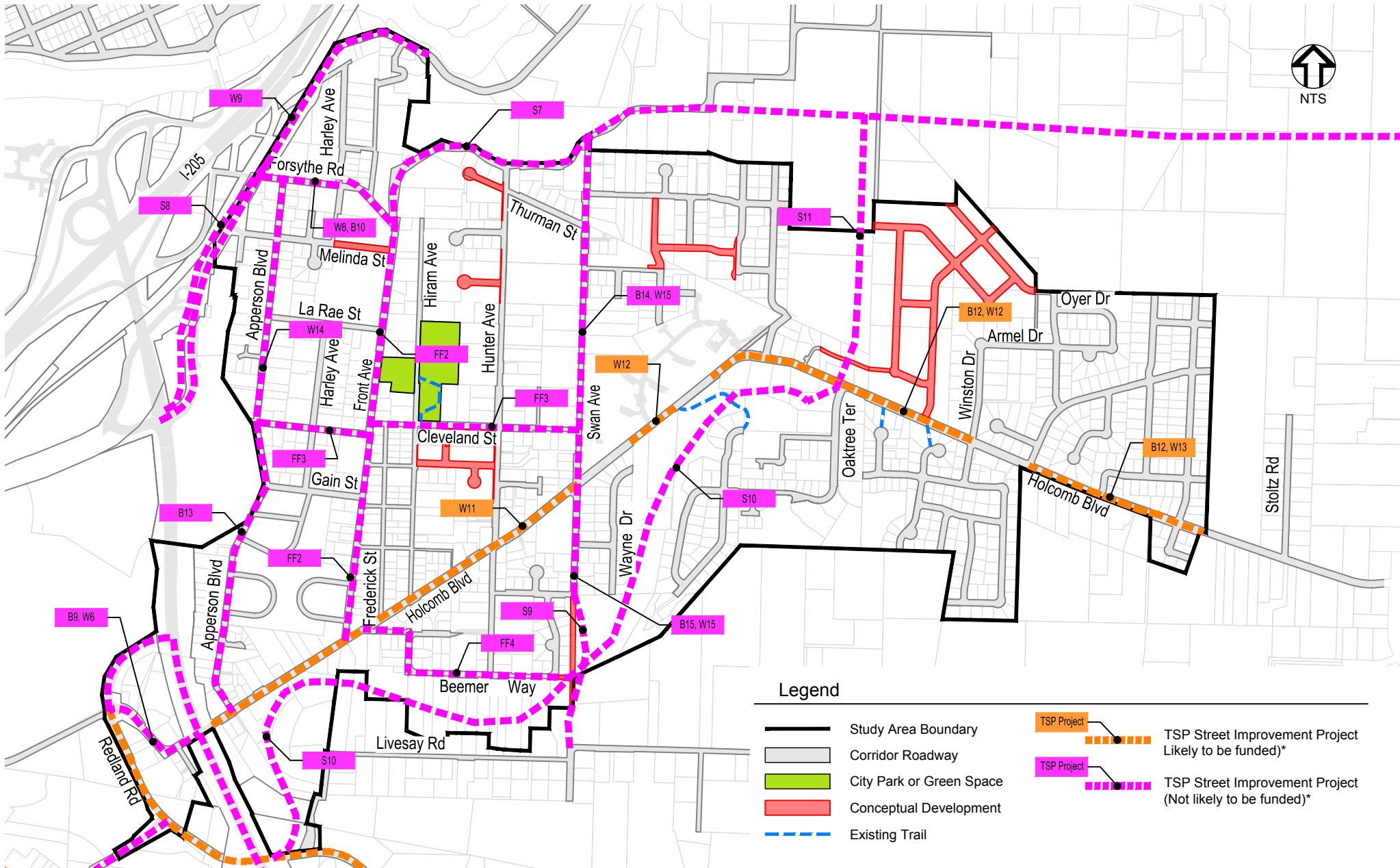
The *Holcomb Boulevard Pedestrian Enhancement Concept Plan (2005)* describes goals and objectives for Holcomb Blvd Improvements. This plan also describes improvements intended to increase safety along Holcomb for pedestrians, bicyclists, and drivers.

Park Place Concept Plan

The *Park Place Concept Plan (March 2008)* describes a planned development to the south of the study area. This plan includes planned roadway extensions and connectivity to Holcomb Blvd at Swan Ave, and near the eastern end of the Park Place Neighborhood near Jada Way and Barlow Dr. The plan defines a proposed roadway cross section for Swan Ave south of Holcomb Blvd.

Trails Master Plan

The *Oregon City Trails Master Plan (October 2004)* describes existing and planned trail networks within Oregon City and connection to existing and planned regional trails. The plan includes trail development standards applicable to any planned trails within the Park Place Neighborhood. The Plan includes several proposed trail segments within the neighborhood.



wallis
engineering

Figure 2-14: City Planned Projects within the Corridor

PARK PLACE URBANIZATION PLAN
December, 2021

2.5 PUBLIC UTILITIES

Water, sewer, and storm utilities within the Park Place Neighborhood are owned, operated, and maintained by the City of Oregon City. The existing conditions of these facilities are briefly summarized in the paragraphs below. Planned improvements to the City's public utility systems are included in associated master plans and are summarized below. Improvements to transportation network elements should consult master planning documents to ensure street work is coordinated efficiently.

Water

Potable water throughout the neighborhood is conveyed through steel, cast iron, and ductile iron pipe. The South Fork Water Board operates a water treatment plant within the neighborhood at the corner of Hunter Ave and Thurman St. One water pump station is located in the neighborhood at the intersection of Hillock Ln and Hunter Ave. A reservoir is located on Oyer Drive. The Clackamas River Water District services properties within the study area to the east of S Winston Dr.

The *Oregon City Water Distribution System Master Plan (February 2012)* gives recommendations for water needs based on future growth within Park Place. Projects include pipeline upsizing, replacing deficient pipes, and installing pressure reducing valve stations. A summary of proposed improvements within the study area is included below:

- Recommended storage reservoir in northeast corner of the study area next to existing Oyer Drive storage reservoir
- Future 12 inch, 8 inch, and 6 inch diameter pipelines in northeast Park Place neighborhood.
- Future 14 inch, 12 inch, 8 inch diameter pipelines in south Park Place and southeast Park Place neighborhood
- Recommended pressure reducing valve station in southeast Park Place neighborhood (existing system CIP)
- Recommended pipe replacement on Longview Way (existing system CIP)
- Recommended 8 inch diameter pipe addition off Oaktree Terrace (existing system CIP)

Sewer

Sanitary sewer service is provided through gravity sewers for majority of the customers in the neighborhood.

The *Oregon City Sanitary Sewer Master Plan (2014)* includes sewer replacement projects within the Park Place Neighborhood limits. There are modeled sewer improvements throughout the neighborhood that extend into the proposed South Park Place concept developments located south of the neighborhood. A summary of proposed improvements is included below.

- Sewer replacement project #6, within the neighborhood limits
- Sewer replacement project on Holcomb Blvd
- Park Place Concept Plan - South Park Place sewer extension

Storm & Drainage

Stormwater throughout the neighborhood is collected by catch basins and ditches and conveyed by underground storm mains and ditches. Open stormwater conveyance systems exist on Swan Ave, Hunter Ave, Hiram Ave, Cleveland St and small sections of Gain St and Ames St.

The *Oregon City Stormwater Master Plan (2020)* modeled two basins within the neighborhood: the Park Place Basin and the Livesay/Holcomb Basin. The Park Place Basin discharges to the stream running through the west side of the neighborhood, north of Holcomb. This system is a combination of open channels and culverts modeled from Swan Ave to Apperson Blvd. The Livesay/Holcomb Basin discharges to the stream on the south side of Holcomb. This system is also a combination of open channels and piped flow.

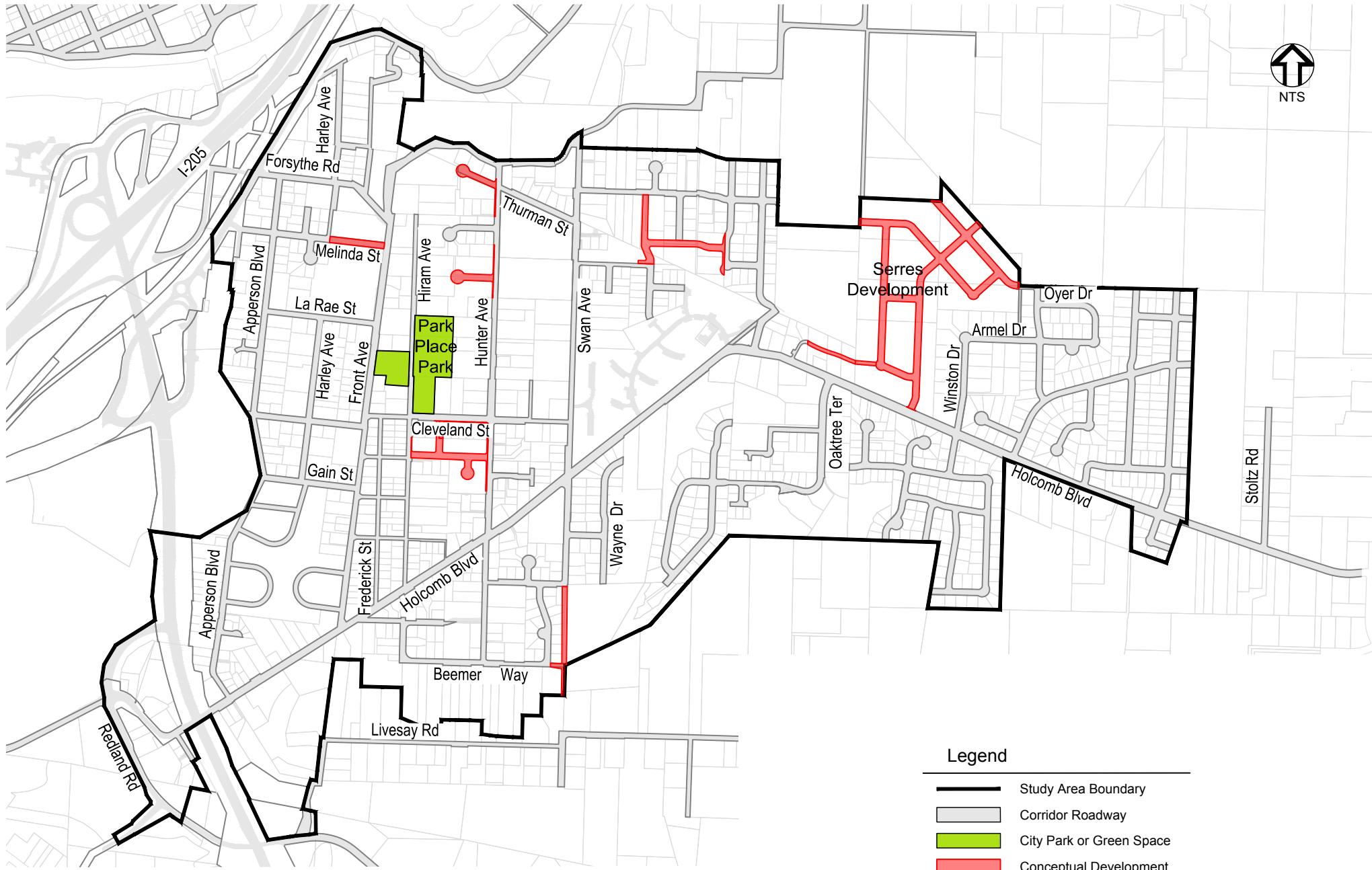
The Stormwater Master Plan summarizes stormwater capacity in these two basins as follows:

- Existing culverts in the Park Place Basin may not have capacity for current flows, but the drainage system is likely to be modified with future development.
- The Holcomb Blvd conveyance system is not large enough to accommodate current flows and is expected to be further stressed by projected development in the Livesay basin.

CIP #9, the Holcomb Blvd Capacity Improvement project was the only stormwater project identified within the study area.

2.6 DEVELOPMENT PROJECTS

A number of development projects are in various planning stages within the neighborhood. These developments are shown in the following **Figure 2-15** on the following page. They include a large development anticipated east of Holcomb School, currently named the Serres Development. This development will provide additional connectivity to the Holcomb school for properties to the east. A trail project is anticipated to be a condition of development approval completing a link between Holcomb Blvd and Forsythe Rd. This would likely be located along the western edge of the development, as part of the regional trail network expansion.



wallis
engineering

Figure 2-15: Development Projects
PARK PLACE URBANIZATION PLAN
December, 2021

SECTION 3: ALTERNATIVE DEVELOPMENT AND SELECTION

This section describes the process by which proposed improvement alternatives were developed, including the objectives and public engagement efforts that informed alternative development. These alternatives are defined and their expected implications for transportation and safety are discussed in the following pages.

3.1 PUBLIC ENGAGEMENT PROCESS

The project team attended two Park Place Neighborhood Association meetings. After each meeting, the team administered a public outreach survey. The surveys were provided to community members within the Park Place Neighborhood to obtain feedback on transportation deficiencies and preferences on alternative designs. The first survey allowed community members to express their top safety concerns and describe their daily experiences travelling in the Park Place Neighborhood. The second survey provided visuals of proposed transportation improvements to the study area, and allowed participants to provide opinions on which improvements were most desirable. These results were used in determining final design improvements and alternatives to the Park Place Neighborhood.

3.2 PUBLIC OUTREACH #1

The intent of the first public outreach effort was to confirm the design team's understanding of existing facilities, destinations, desired modes and transportation challenges within the study area. The first community survey had 200 responses. A summary of the results is included below in **Figure 3-1**.

CITY OF OREGON CITY

Park Place Neighborhoods

PUBLIC OUTREACH SUMMARY



95%

of survey respondents live within the neighborhood or in one of the adjoining neighborhoods

NEIGHBORHOOD EXPERIENCE:

91%



of survey respondents travel by car in the neighborhood daily or every weekday

57%



of survey respondents travel by walking daily or every weekday

SURVEY RESPONDENTS SAID:



57%

would travel in the neighborhood more often if there were safer sidewalks



63%

believe it's important to provide space for bikes separate from cars in the neighborhood



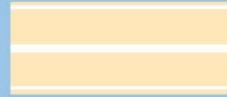
62%

believe it is not important to widen the streets within the neighborhood

TOP SAFETY CONCERN:



Speeding



Lack of Sidewalks

Figure 3-1: Public Survey #1 Results

In summary, the results from the first survey show that most respondents travel by driving daily or every weekday within the study area, while a little over half of respondents travel by walking. The top safety concerns from respondents were the lack of sidewalks, and speeding. If there were safer sidewalks, a little over half of respondents say they would travel more often within the neighborhood. Over half of respondents stated they do not think it is important for the city to widen existing roadways, but do believe it is important to separate bicyclists from cars. Over half of respondents do not believe sharrows provide adequate protection when bicycling within the neighborhood.

Appendix A includes full results from Survey #1.

3.3 SPEED MANAGEMENT

Concerns over speeding have been provided through public comment within the neighborhood. Speed humps are currently installed on both Apperson Blvd and Front Ave. La Rae St adjacent to the Alliance Academy narrows to accommodate crosswalks at S. Harley Ave, another traffic calming method implemented. Additional speed control measures may be necessary to control vehicle speeds throughout the study area.

3.4 ALTERNATIVES DEVELOPMENT

Based upon the concerns expressed during the first public outreach effort, the design team developed a sidewalk prioritization plan, proposed roadway classification and cross sections, mailbox banking options, and a set of potential traffic calming measures.

The existing roadways provide important and continuous routes through the Park Place Neighborhood. However, there are discontinuous and incomplete facilities for pedestrians, bicyclists, and public transit users. This section discusses future needs for the study area as identified by the design team and previous City planning documents.

3.4.1 Sidewalk Prioritization Plan

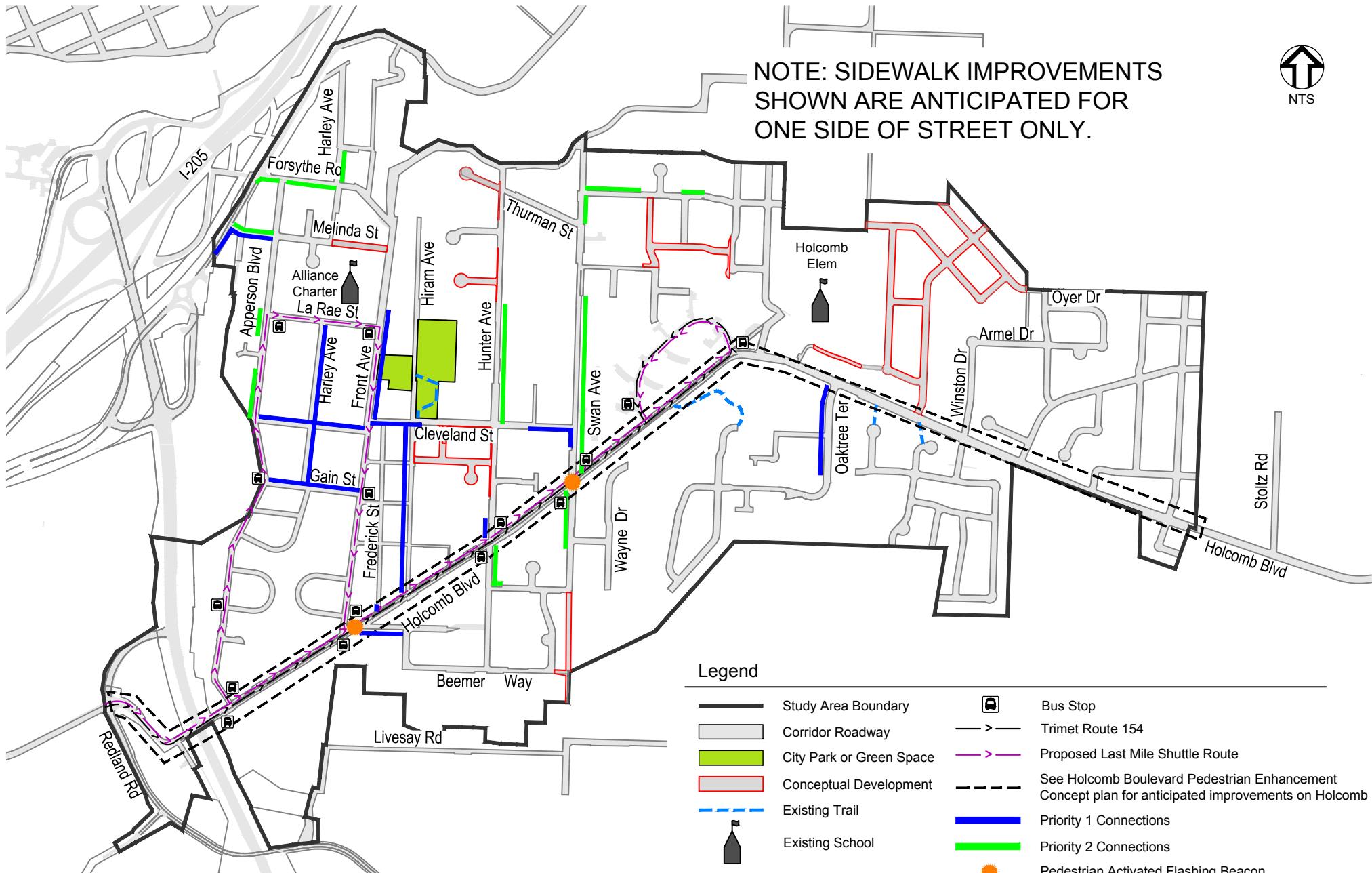
A clear outcome of the first public outreach effort was a large neighborhood desire to address gaps within the pedestrian network. The design team developed a sidewalk prioritization plan to address these gaps and prioritize pedestrian improvements. The intent of this plan is to provide continuous pedestrian routes within the neighborhood, with the primary goal of providing access to facilities along Holcomb Blvd, neighborhood schools and the Park Place Park. As discussed, the study area includes areas with potential for near-term development. Developers would be required to complete frontage improvements, which might include the addition of sidewalk and ADA-compliant curb ramps. Therefore, the plan prioritizes sidewalk improvement locations near properties that were unlikely to develop in the near term.

Pedestrian improvements were broken into two phases. The first phase would include those projects that accomplished the plan goals at the lowest cost, and with the lowest possible impact. Impacts were defined as requiring the purchase of Right-of-Way, proximity to NROD boundaries and challenges to construction. The second phase would include sidewalk segments that were further from Holcomb Blvd, served fewer residents, or were necessary to complete a continuous connected network but had development potential.

A graphic illustration of the plan is included on the following page as **Figure 3-2**.



NOTE: SIDEWALK IMPROVEMENTS SHOWN ARE ANTICIPATED FOR ONE SIDE OF STREET ONLY.



wallis
engineering

Figure 3-2: Sidewalk Prioritization Plan
PARK PLACE URBANIZATION PLAN
December, 2021

3.4.2 Proposed Roadway Classification and Cross Sections

Due to the variable nature of the existing streets in the study area, the project team developed a menu of roadway cross sections for application over each individual street. The intent of this effort was to establish a roadway classification system unique to the study area that most closely matched the existing cross sections, while also providing space for pedestrians, bicycles and motor vehicles as needed. This plan is intended to guide development of street improvements associated with development within the Park Place Neighborhood.

Roadway Classification Plan

Figure 3-3 on the following page represents a plan to classify roadways within the study area to a variety of standards discussed below.

This plan includes alternative cross sections for street classifications for Family Friendly Streets, Apperson Blvd, Front Ave, Hunter Ave, and Swan Ave.

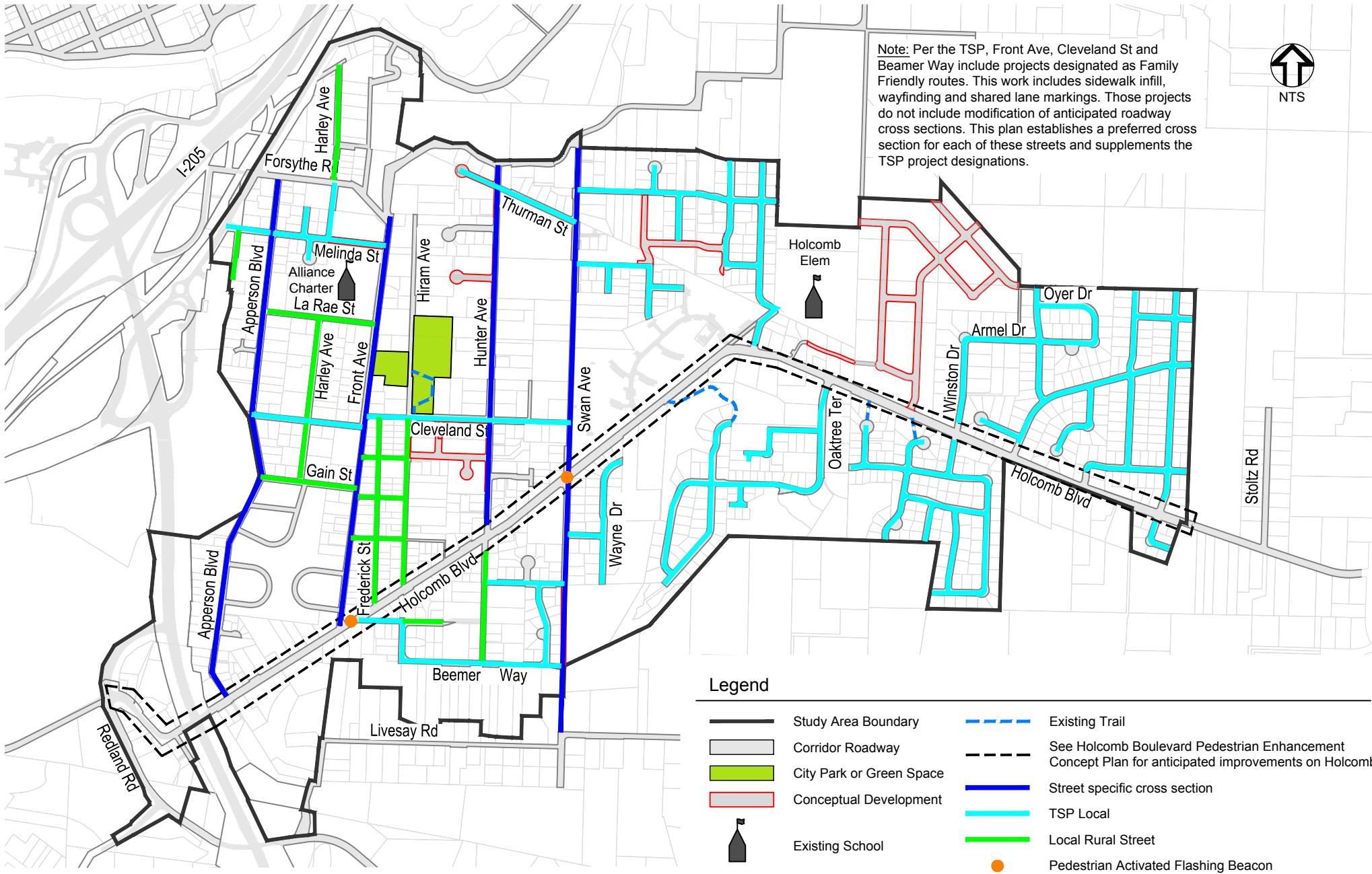
Local Rural Streets

During the public outreach and plan development process, local rural streets were called Family Friendly Streets. Public outreach efforts indicated that widening of existing roadways was not a priority. A greater priority was to establish walkable areas with provisions for pedestrians and bicyclists. The design team prepared cross sections for Family Friendly Streets to accomplish this goal. This cross section was applied to those streets that were currently narrow, in areas of limited right-of-way and were anticipated to have lower traffic volumes. The proposed cross section for Family Friendly Streets included a reduced width section where stormwater management facilities could be required.

Figure 3-4 and **Figure 3-5** on page 29 illustrate draft cross sections for Family Friendly Streets, with and without stormwater facilities.



Note: Per the TSP, Front Ave, Cleveland St and Beamer Way include projects designated as Family Friendly routes. This work includes sidewalk infill, wayfinding and shared lane markings. Those projects do not include modification of anticipated roadway cross sections. This plan establishes a preferred cross section for each of these streets and supplements the TSP project designations.



wallis
engineering

Figure 3-3: Roadway Classification Plan
PARK PLACE URBANIZATION PLAN
December, 2021

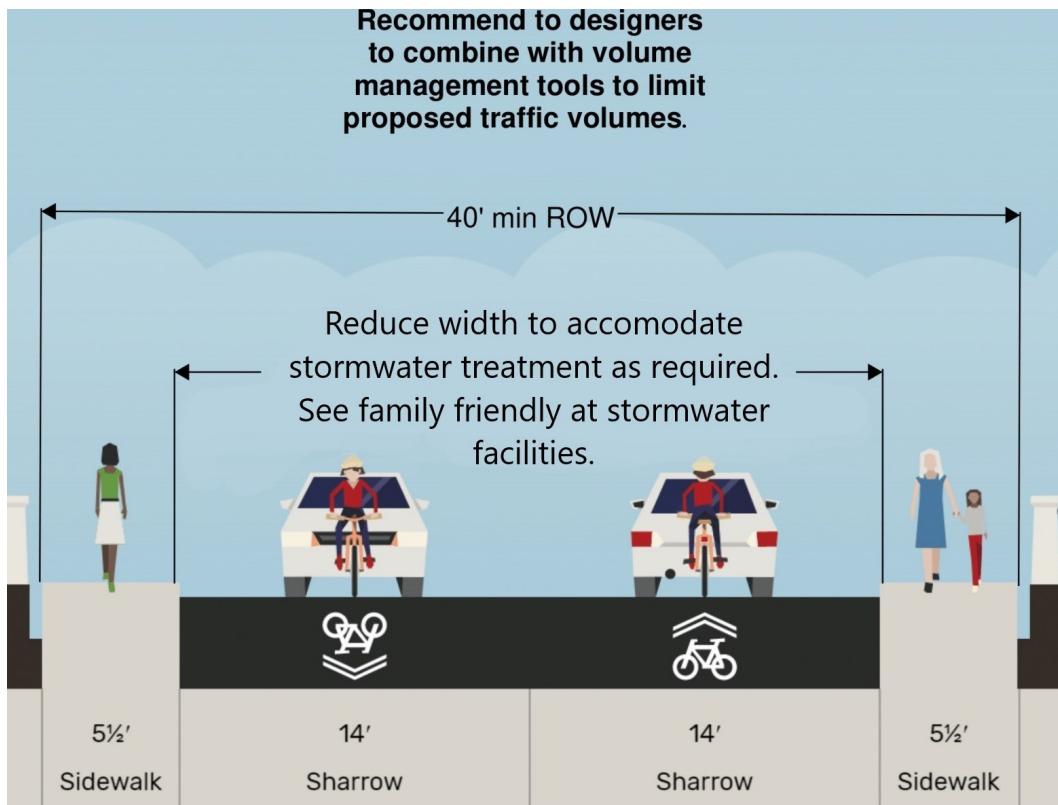


Figure 3-4: Family Friendly Street (Local Rural Street) Cross Section

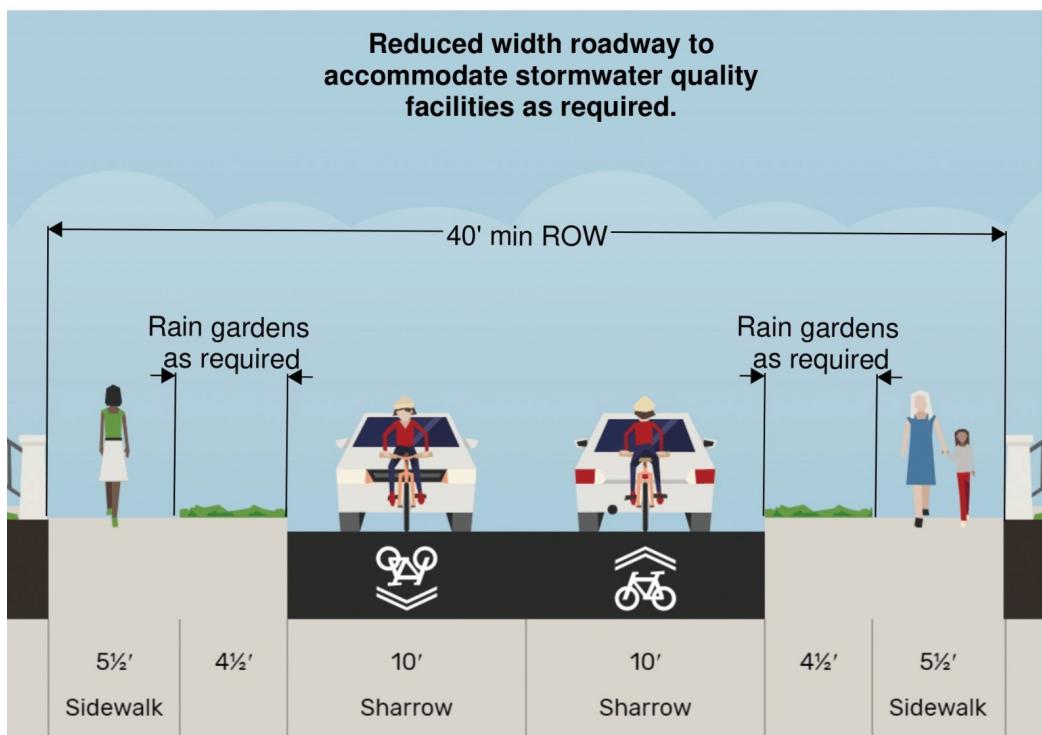


Figure 3-5: Family Friendly (Local Rural Street) at Stormwater Facilities*

*-The final cross sections have been renamed Local Rural Streets

Apperson Blvd

Apperson Blvd is essentially built out. The current configuration of Apperson includes two 14-foot wide lanes with sidewalks on both sides where they currently exist. This current configuration allows for limited parking, though most residents along this roadway appear to park off street. This existing configuration is shown in **Figure 3-6**.

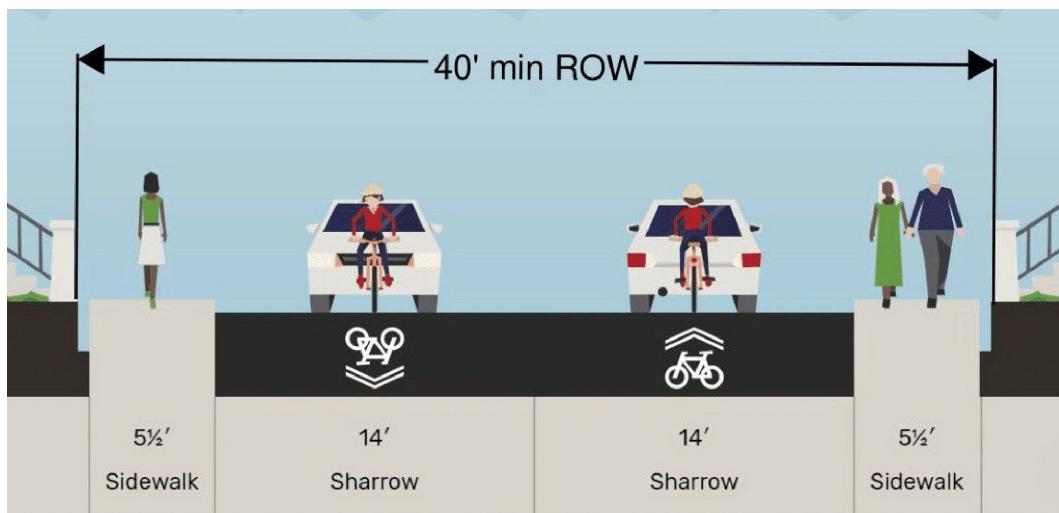


Figure 3-6: Apperson Blvd Existing Cross Section

The existing curb to curb width on Apperson Blvd allows for an opportunity to narrow the vehicle lanes to include bike lanes on either side. A proposed alternative was developed to provide the public with the opportunity to select which configuration would be preferred. The proposed cross section is included below as **Figure 3-7**.

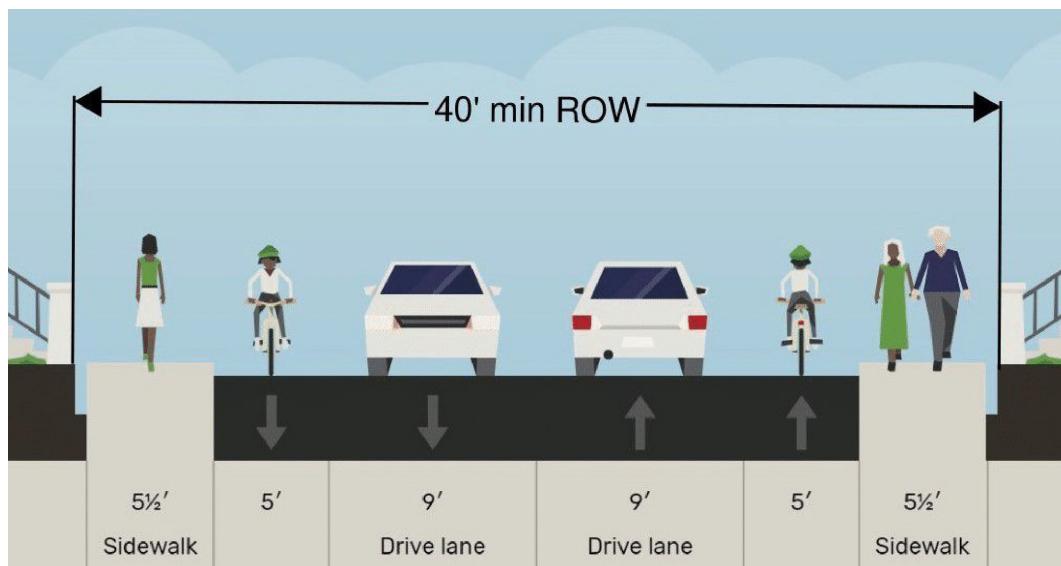


Figure 3-7: Apperson Blvd Proposed Cross Section

Front Avenue

Front Ave currently includes approximately 36 feet of paved width, with sporadic curb tight sidewalks located mainly on the west side of the street. The current paved width allows for parking on either side of the roadway. The east side of the street is constrained in several locations by limited right-of-way and retaining walls. As Front Ave is a direct connection to Holcomb Blvd, Alliance Academy and Park Place Park, it would be a convenient location to provide biking facilities. Two alternatives, were prepared to allow the public an opportunity to choose a preference. Option 1 is shown below as **Figure 3-8**, and Option 2 is included as **Figure 3-9** on the following page. Both options include sidewalk on both sides of the roadway.

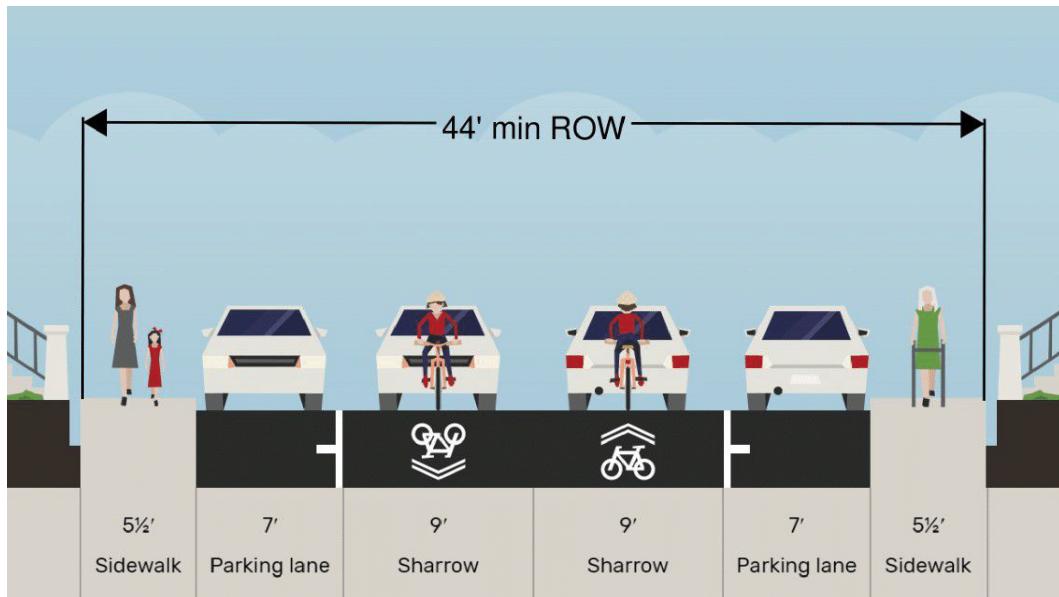


Figure 3-8: Front Ave Proposed Cross Section – Option 1

Option 1 maintains the current road space allocation for on-street parking with bicycles and vehicles sharing the road.

Option 2 removes parking on one side of the roadway and reduces the vehicular lane width to allow for bike lanes on either side. The parking lane in this configuration could alternate sides of the roadway to create an effective chicane along the roadway to reduce vehicle speeds. A chicane is an artificial narrowing or turn on a road. The curving nature of the roadway has been found to reduce vehicle speeds.

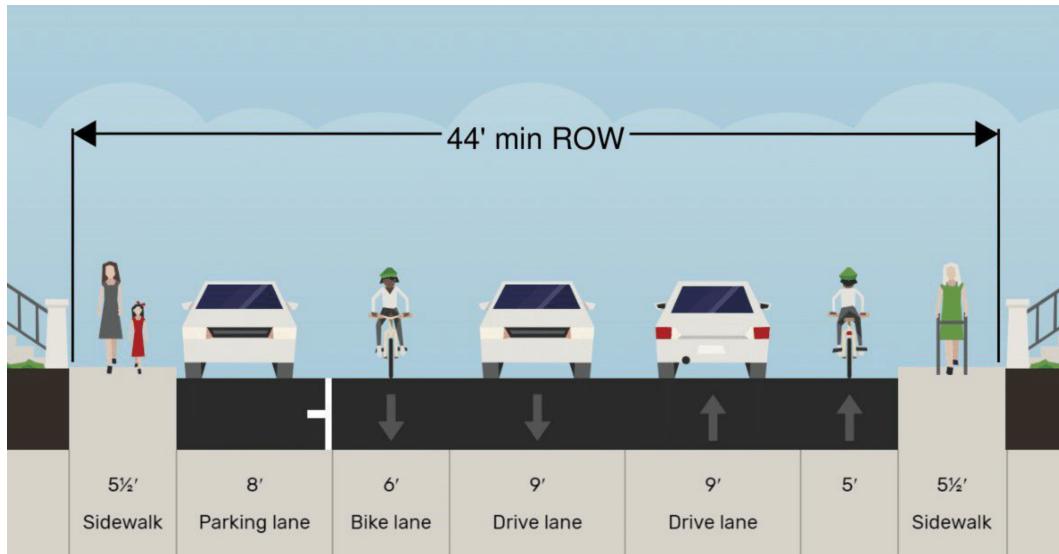


Figure 3-9: Front Ave Proposed Cross Section – Option 2

Hunter Avenue

Hunter Ave is predominantly a narrow rural character roadway, with the exception of some recent development between Holcomb Blvd and Cleveland St. The recently-developed street segments include approximately 32 feet of paved width, space for on-street parking on either side of the roadway, a 5-foot landscape buffer and 5-foot sidewalks. North of Cleveland St, Hunter Ave is constrained on either side by steep topography and environmentally-sensitive areas. The cross section shown below as **Figure 3-10** was proposed to match the existing improvements, and allow for flexibility to reduce the design width when confronted with topographic or environmental constraints.

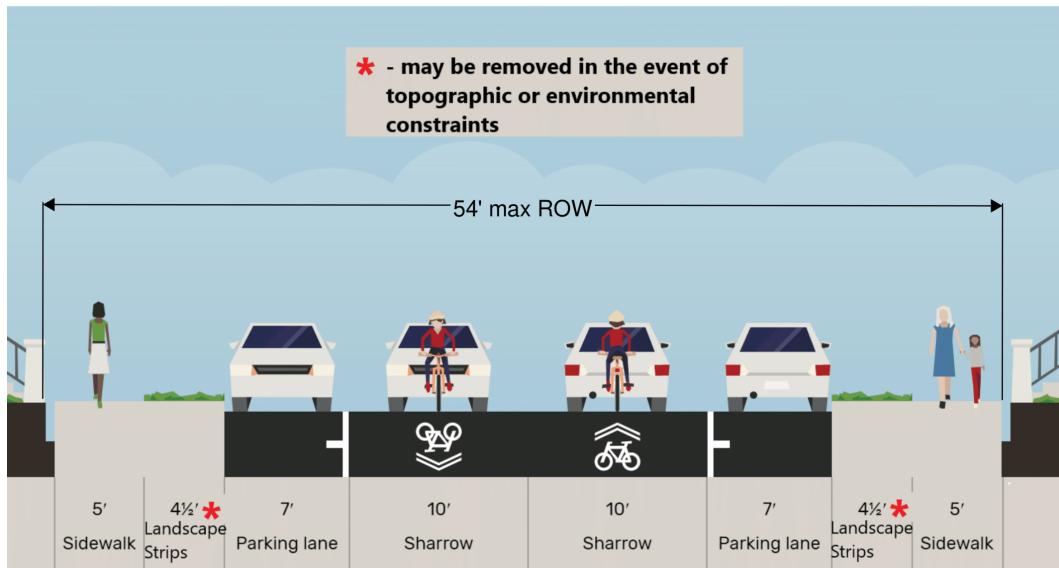


Figure 3-10: Hunter Ave Alternative Cross Section

Swan Avenue

Swan Ave as it currently exists has a rural character throughout most of its length. North of Cleveland St, the road is constrained by topographic and environmentally-sensitive areas. Swan Ave is designated as a collector roadway and will eventually connect to the Park Place Development planned for south of the study area. The following cross section, **Figure 3-11**, was developed to conform to the future development section. It allows for flexibility to reduce the design width when confronted with topographic or environmental constraints.

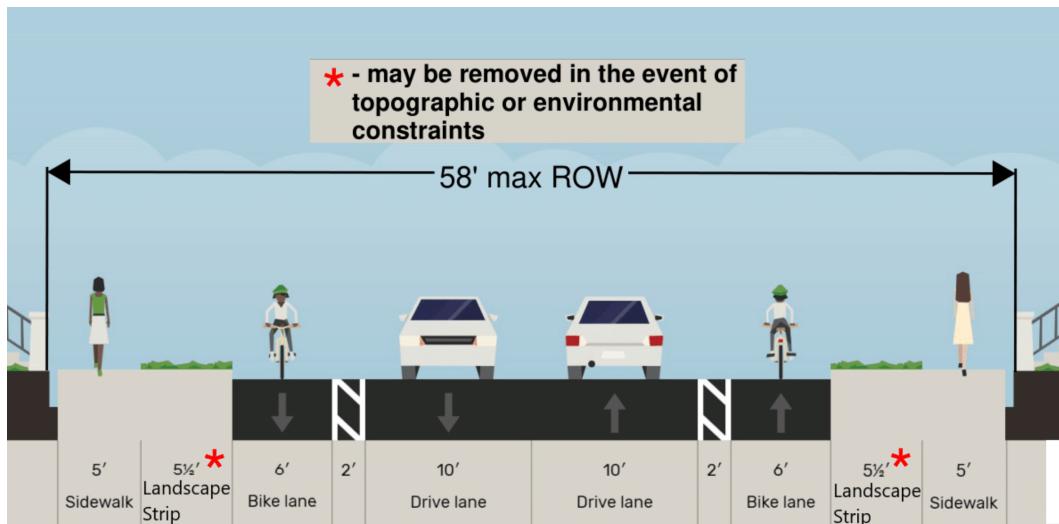


Figure 3-11: Swan Ave Alternative Cross Section

Local Roadways

The bulk of roadways within the study area are currently designated as local roadways per the TSP. It was determined that several streets should remain in this local designation due to the current built out nature of those roadways primarily meeting this standard. The local roadway cross section is provided in **Figure 3-12**.

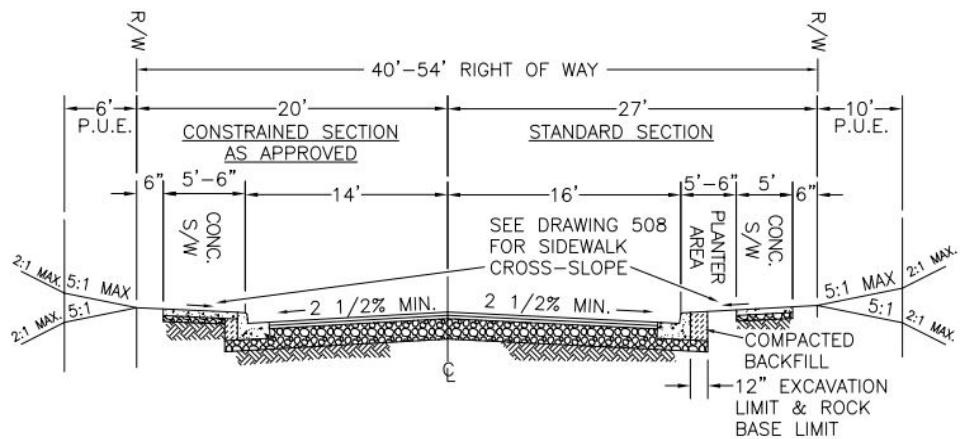
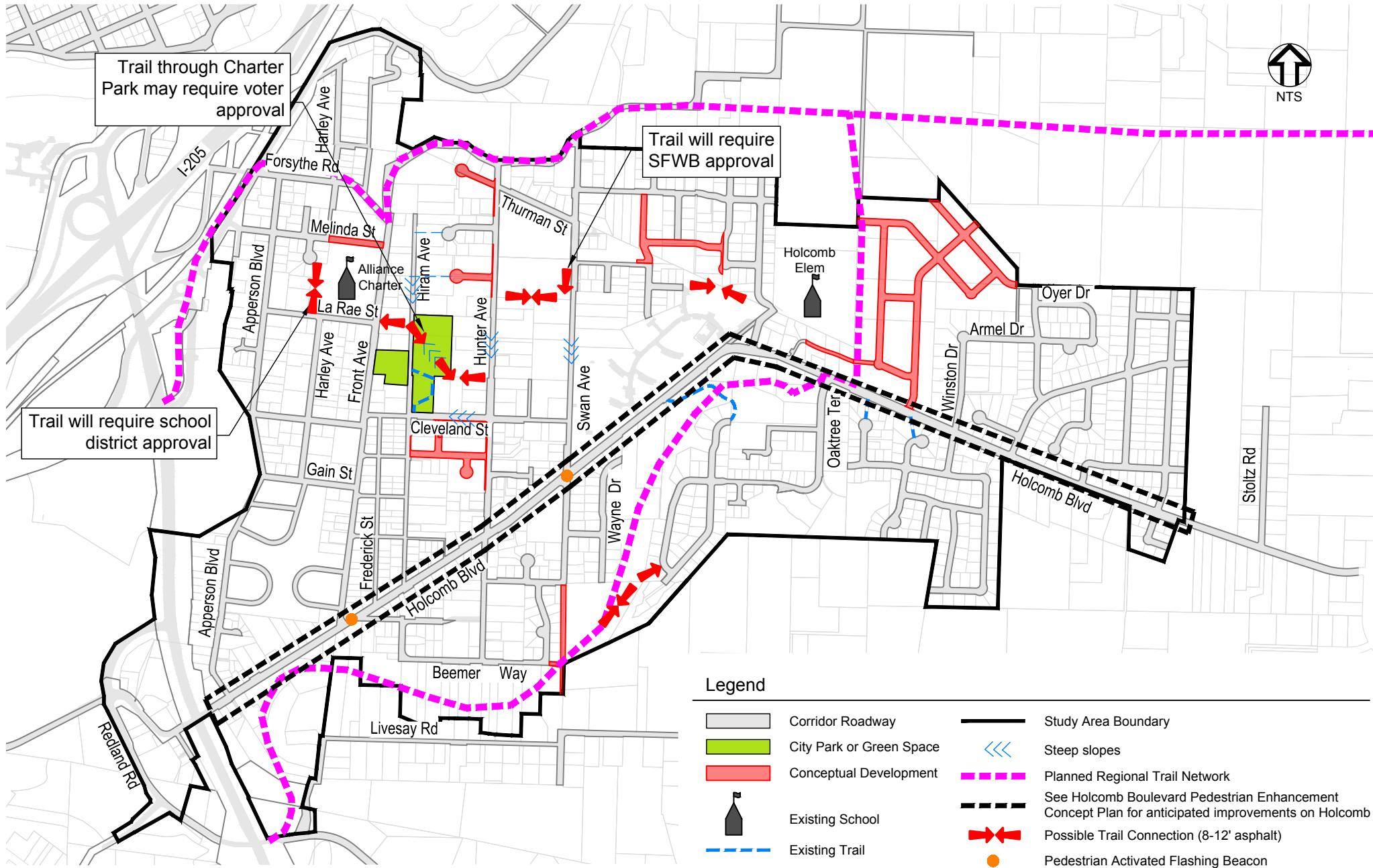


Figure 3-12: Local Roadway Cross Section

3.4.3 Trail Connectivity Plan

To address the lack of east-west connectivity within the neighborhood, several trail routes were investigated to provide connections between Holcomb Elementary, Alliance Charter school and the Park Place Park. **Figure 3-13** on the following page identifies possible locations to provide separated trail facilities. The development of these facilities will require approval and right-of-way acquisition from private entities.



Legend

- Corridor Roadway
- Study Area Boundary
- City Park or Green Space
- Planned Regional Trail Network
- Conceptual Development
- See Holcomb Boulevard Pedestrian Enhancement
- Existing School
- Possible Trail Connection (8-12' asphalt)
- Existing Trail
- Steep slopes
- Concept Plan for anticipated improvements on Holcomb
- Pedestrian Activated Flashing Beacon

3.4.4 Mailbox Banking

The City received a number of citizen complaints regarding existing mailboxes obstructing sidewalks within the Park Place Neighborhood. As part of public outreach, the project team gauged resident willingness to invest resources into the consolidation of mailboxes and removal of private individual boxes along the roadway. Two options were presented to the public: keeping existing mailboxes (as shown in **Figure 2-13**), or mailbox banking, as shown in **Figure 3-14**.



Figure 3-14: Mailbox Banking

The design team presented the public with a variety of speed management options to gauge which measures were preferred. These traffic calming measures were suggested to address speeding issues within the study area, and facilitate the development of family-friendly bike routes. Speed management tools described in the following paragraphs were obtained from the NACTO urban bikeway design guide.

The following options were presented:

Speed Humps – Speed humps are 3 to 4 inches high and 12 to 14 feet long, such that speeds are reduced to 15 to 20 mph. They are often referred to as “bumps” on signage and by the general public.



Figure 3-15: Speed Humps

Neck Downs - Neckdowns are pinchpoints at intersections; they are minor street crossing treatments that narrow at least one side of an intersection using curb extensions or edge islands on both sides of the street. They are often combined with parking bays on side streets off commercial main streets.



Figure 3-16: Neck Downs

Traffic Circles – Neighborhood traffic circles are minor street crossing treatments that also provide speed management. They are raised or delineated islands placed at intersections that reduce vehicle speeds by narrowing turning radii, narrowing the travel lane, and, if planted, obscure the visual corridor along the roadway. It should be noted that the City of Portland has found such circles to be less effective than frequently spaced speed humps, and many people on bicycles complain that motorists overtake them when approaching the circles, creating a hazardous condition.



Figure 3-17: Traffic Circles

Speed Lumps - Speed cushions or speed lumps are either speed humps or speed tables that include wheel cutouts to allow large vehicles and bicycles to pass unaffected, while reducing passenger car speeds. They can be offset to allow unimpeded passage by emergency vehicles and are typically used on key emergency response routes. They should be used with caution, however, as people driving sometimes seek out the space between the lumps, reducing the traffic calming effect and causing unpredictable driving.



Figure 3-18: Speed Lumps

Curb Extensions - Curb extensions or bulb-outs extend the sidewalk or curb face into the parking lane at an intersection. When placed on the bicycle boulevard, they visually narrow the roadway. Curb extensions on the cross street act as a minor street crossing. All curb extensions reduce the crossing distance for pedestrians, can increase the amount of space available for street furniture and trees, and can act as stormwater management features.



Figure 3-19: Curb Extensions

3.5 PUBLIC OUTREACH #2

The intent of the second public outreach effort was to solicit feedback from the Park Place Neighborhood on the alternatives developed by the project team. The team presented design alternatives to the neighborhood association on April 19, 2021, followed by an online link to a community survey. The second community survey had 103 responses. A summary of responses is included in **Figures 3-20, 3-21, and 3-22** on the following pages. See **Appendix B** for full results from Survey #2.

CITY OF OREGON CITY
Park Place Neighborhoods
PUBLIC OUTREACH SUMMARY



APPERSON OPTIONS

Apperson Option 1



60% of survey respondents prefer to keep existing conditions

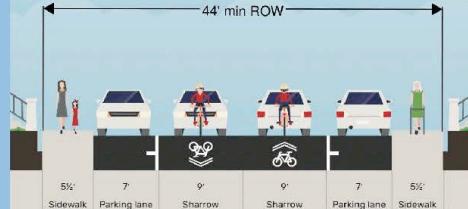
Apperson Option 2



40% of survey respondents prefer this alternative

FRONT STREET OPTIONS

Front St Option 1



53% of survey respondents prefer to keep existing conditions

Front St Option 2



47% of survey respondents prefer this alternative

**Figure 3-20: Public Survey #2 Results
Apperson Blvd & Front Ave**

HUNTER AVENUE PROPOSED OPTION

Hunter Cross Section

* - may be removed in the event of topographic or environmental constraints



77% of respondents say "Yes"

23% of respondents say "No"

SWAN AVE PROPOSED OPTION

Swan Cross Section

* - may be removed in the event of topographic or environmental constraints



71% of respondents say "Yes"

29% of respondents say "No"

**Figure 3-21: Public Survey #2 Results
Hunter Ave & Swan Ave**

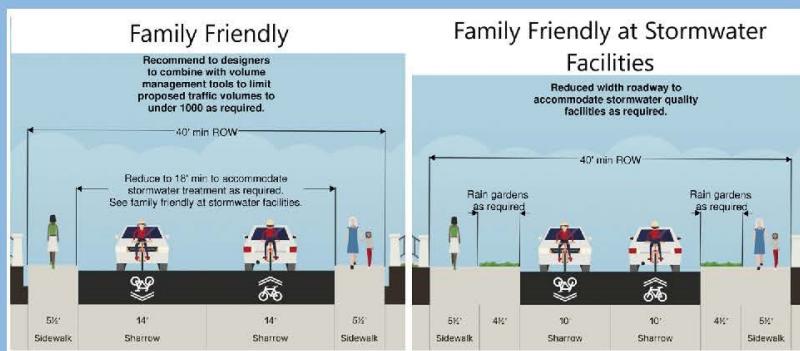
FAMILY FRIENDLY PROPOSED OPTION



Respondents were shown a map of highlighted family friendly streets and asked to vote on proposed cross sections:

82% of respondents
say "Yes"

18% of respondents
say "No"



* Note: These cross sections were renamed Local Rural Street in the final cross sections

MAILBOX OPTIONS



37% of survey respondents
want to keep them
where they are



63% of survey respondents
want to invest in
mailbox banking

TOP RANKED CALMING MEASURES



1. Traffic circles



2. Speed humps



3. Speed lumps

Figure 3-22: Public Survey #2 Results Family Friendly Street*, Mailbox Options and Traffic Calming

SECTION 4: FINAL CONCEPT PLAN

The final plan recommended for adoption by the City includes the following plan elements:

4.1 SIDEWALK PRIORITIZATION PLAN

The following sidewalk prioritization plan is recommended for adoption as shown in **Figure 4-1** on the following page.

4.2 PROPOSED ROADWAY CLASSIFICATION

4.2.1 Proposed Roadway Classification and Cross Sections

The roadway classification plan and associated cross sections are recommended for adoption as shown in **Figure 4-2** on page 43. All roadways highlighted as local roadways remain unchanged from their prior TSP designations. Road specific cross sections are shown in **Figure 4-3, Figure 4-4, Figure 4-5** and **Figure 4-6, Figure 4-7, Figure 4-8** on pages 44 through 46.

Constrained sections

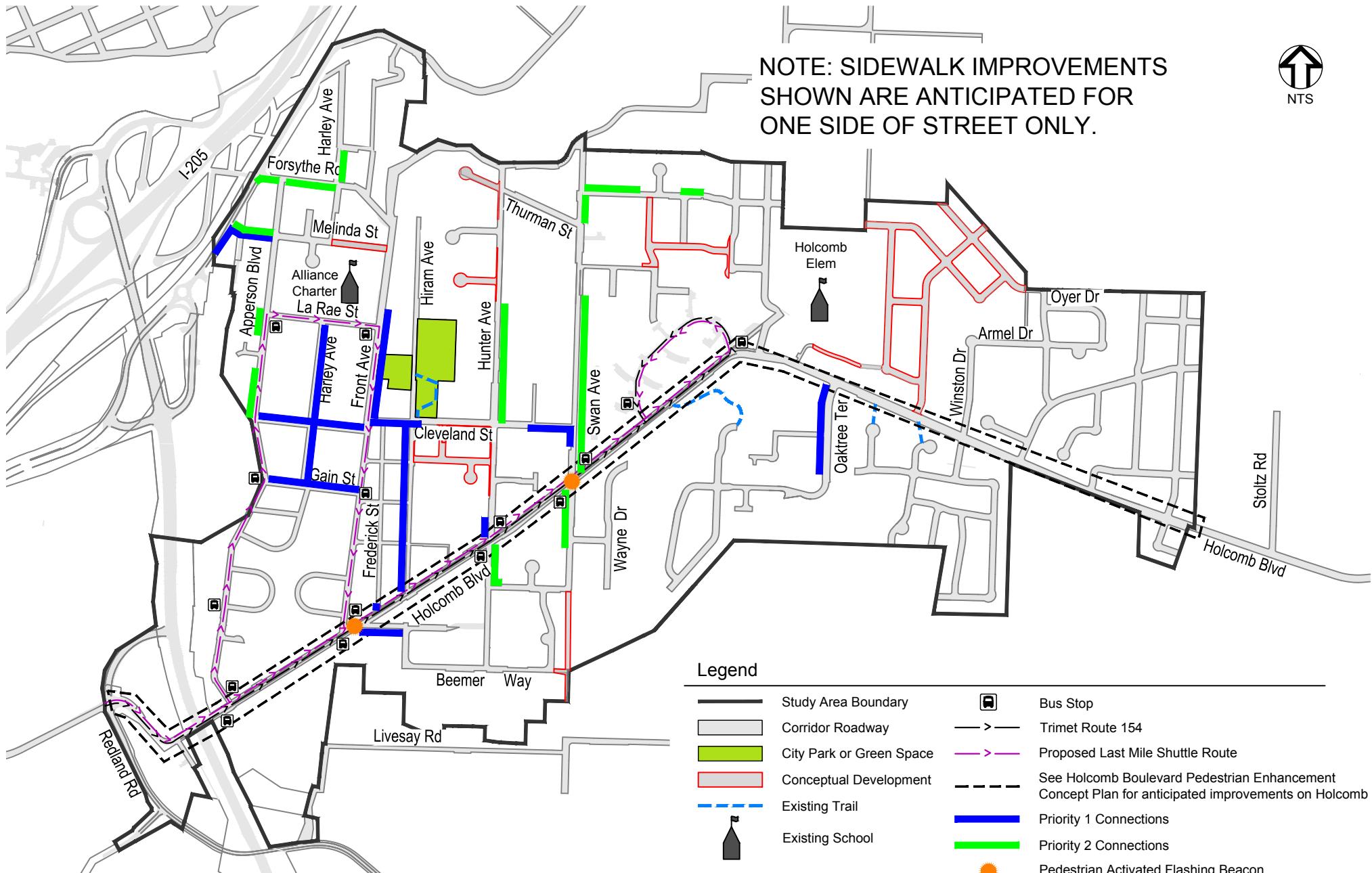
Several of the proposed roadway cross sections allow for deviation from the standard section when roadway corridors are constrained by topographic or environmentally-sensitive areas. Some roadway sections may be too narrow for landscaping within the ROW, but it is anticipated that planting (groundcover/ shrubs/ trees) will be incorporated behind the sidewalk. Approval of any reduced section will be at the sole discretion of the City Engineer.

TSP clarification

Within the current TSP, Front Ave, Cleveland St and Beamer Way include projects designated as Family Friendly routes. This work includes sidewalk infill, wayfinding and shared lane markings. Those projects do not include modification of anticipated roadway cross sections. During public outreach and plan implementation, these roadways were referred to as Family Friendly Routes. To not conflict with the intent of the TSP and to clarify why these streets have fewer urbanized improvements, the classification was renamed to Local Rural Street. This plan establishes a preferred cross section for each of these streets and supplements the TSP project designations.



NOTE: SIDEWALK IMPROVEMENTS SHOWN ARE ANTICIPATED FOR ONE SIDE OF STREET ONLY.



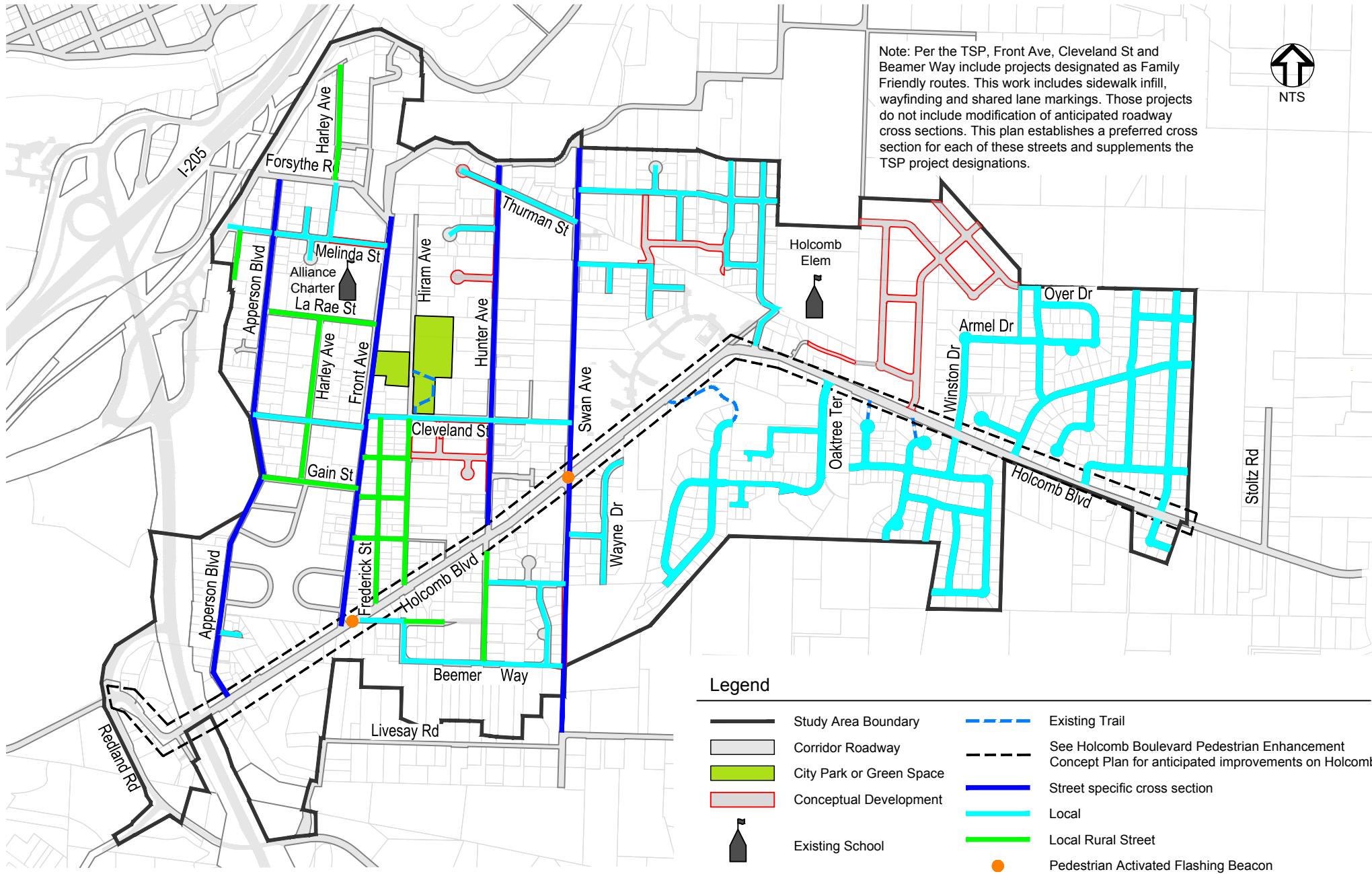
Legend

Study Area Boundary	Bus Stop
Corridor Roadway	> Trimet Route 154
City Park or Green Space	Proposed Last Mile Shuttle Route
Conceptual Development	See Holcomb Boulevard Pedestrian Enhancement Concept Plan for anticipated improvements on Holcomb Blvd
Existing Trail	Priority 1 Connections
	Priority 2 Connections
Existing School	Pedestrian Activated Flashing Beacon





Note: Per the TSP, Front Ave, Cleveland St and Beamer Way include projects designated as Family Friendly routes. This work includes sidewalk infill, wayfinding and shared lane markings. Those projects do not include modification of anticipated roadway cross sections. This plan establishes a preferred cross section for each of these streets and supplements the TSP project designations.



wallis
engineering

Figure 4-2: Approved Classification Plan
PARK PLACE URBANIZATION PLAN
December, 2021

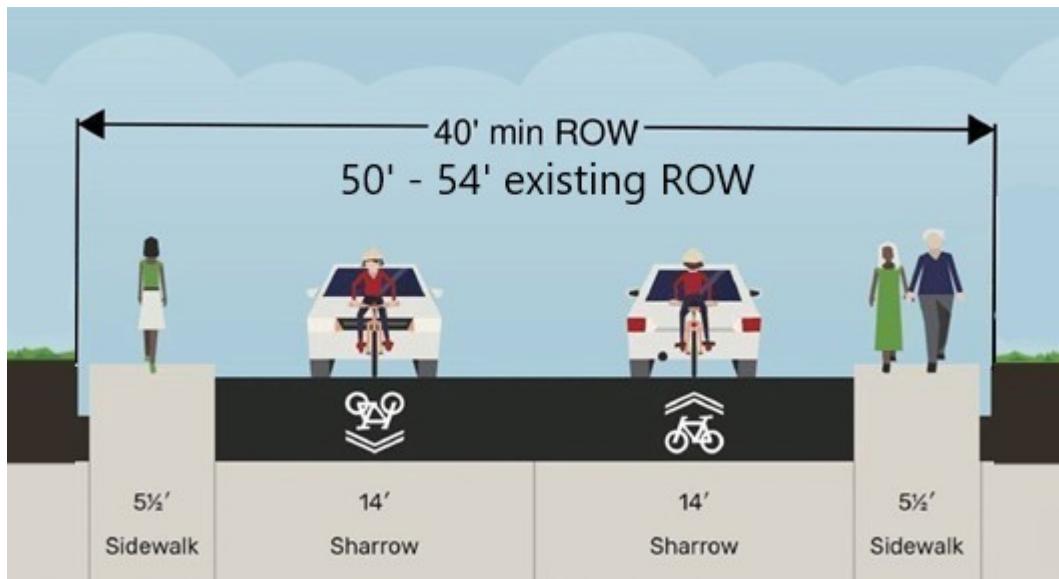


Figure 4-3: Apperson Blvd Cross Section

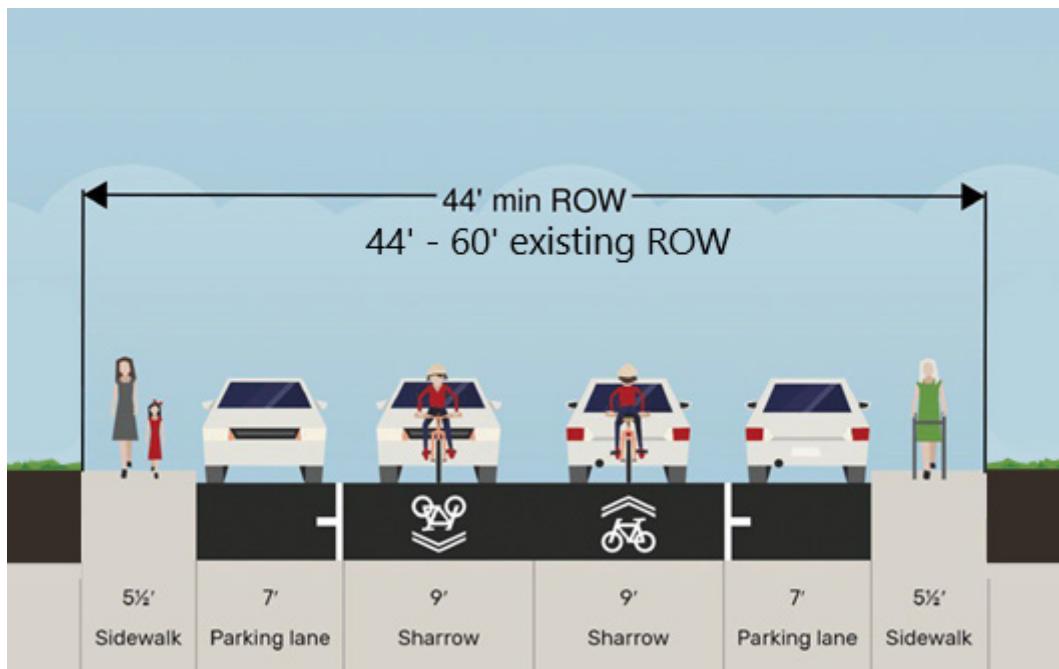


Figure 4-4: Front Ave Cross Section

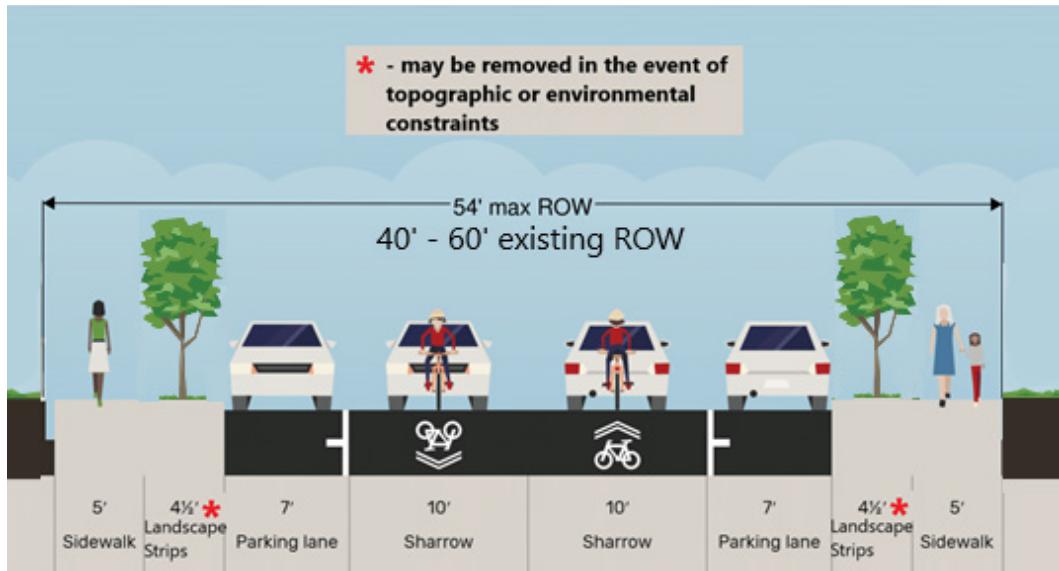


Figure 4-5: Hunter Ave Cross Section

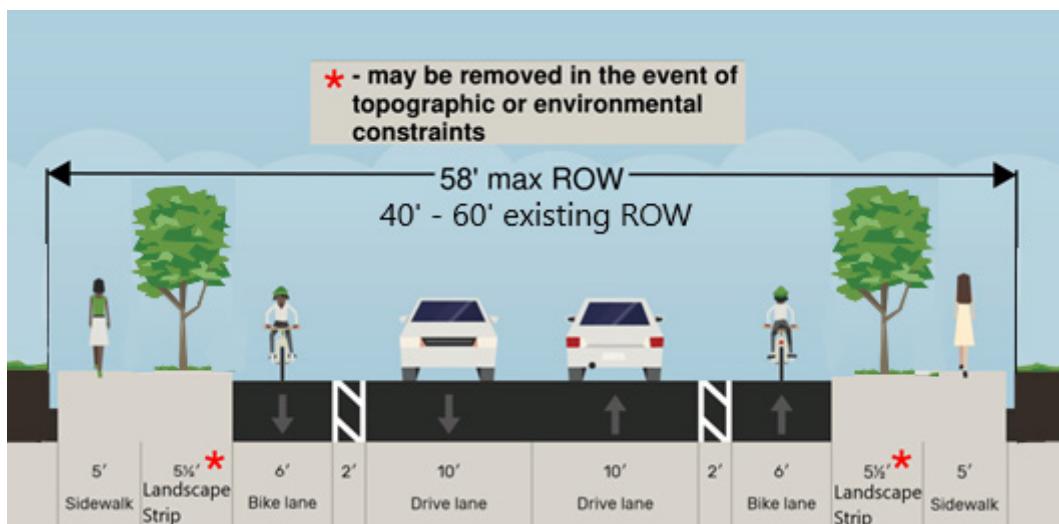


Figure 4-6: Swan Ave Cross Section

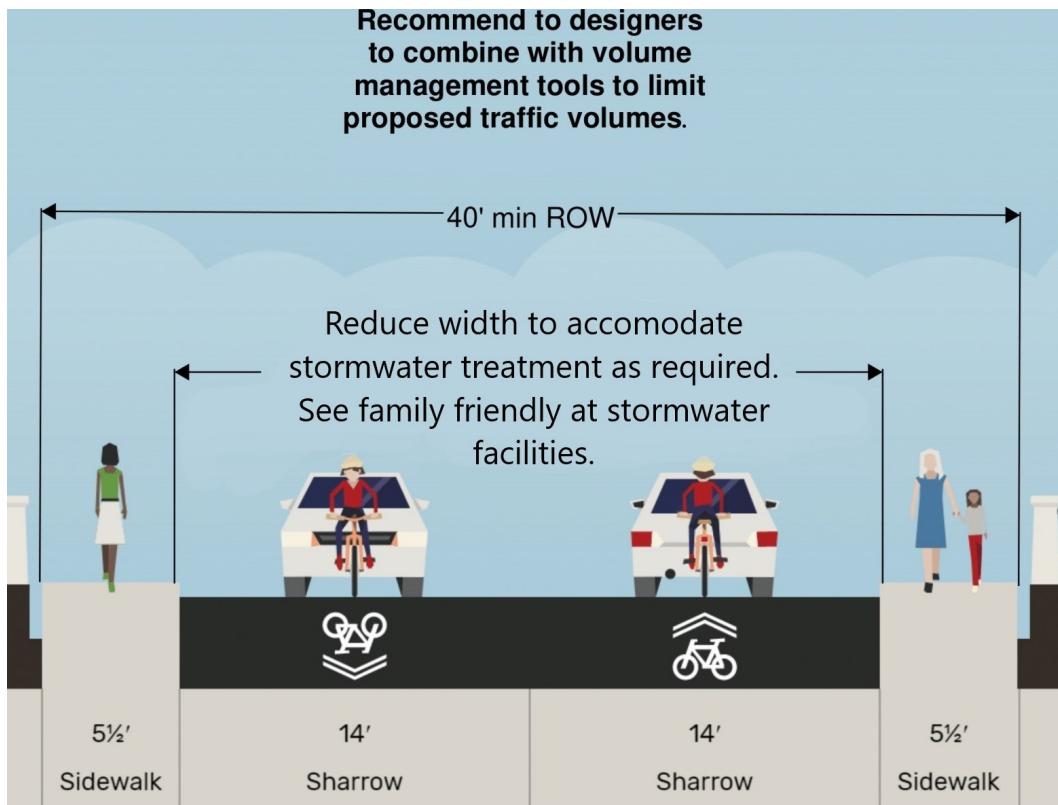


Figure 4-7 : Local Rural Street Cross Section

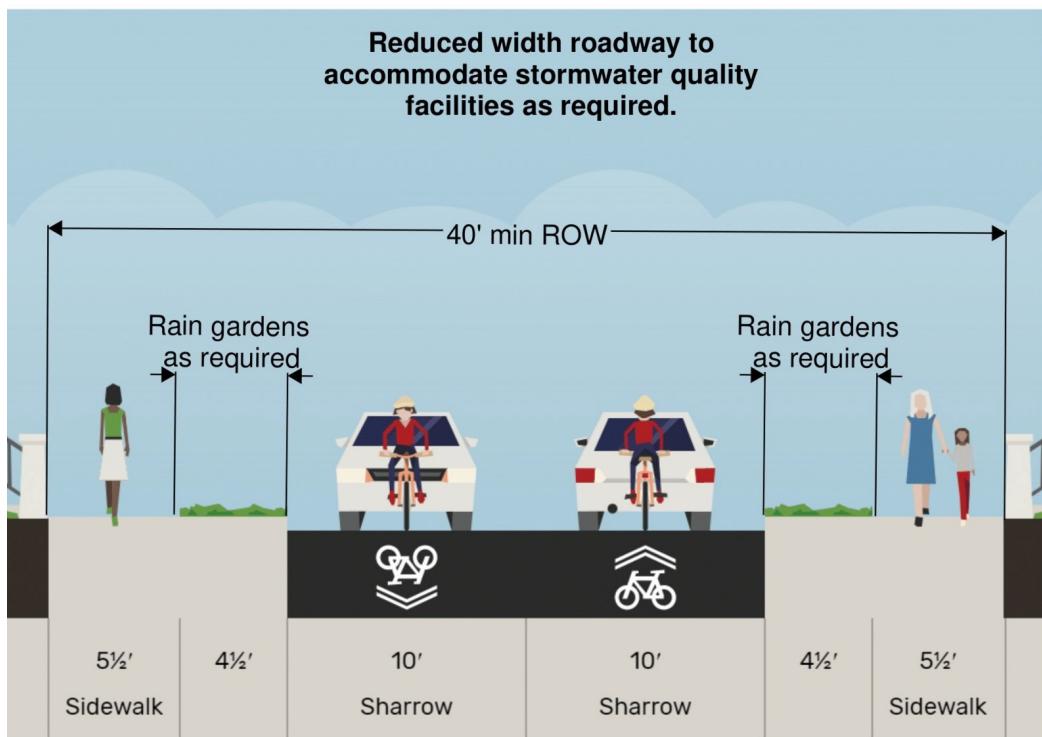
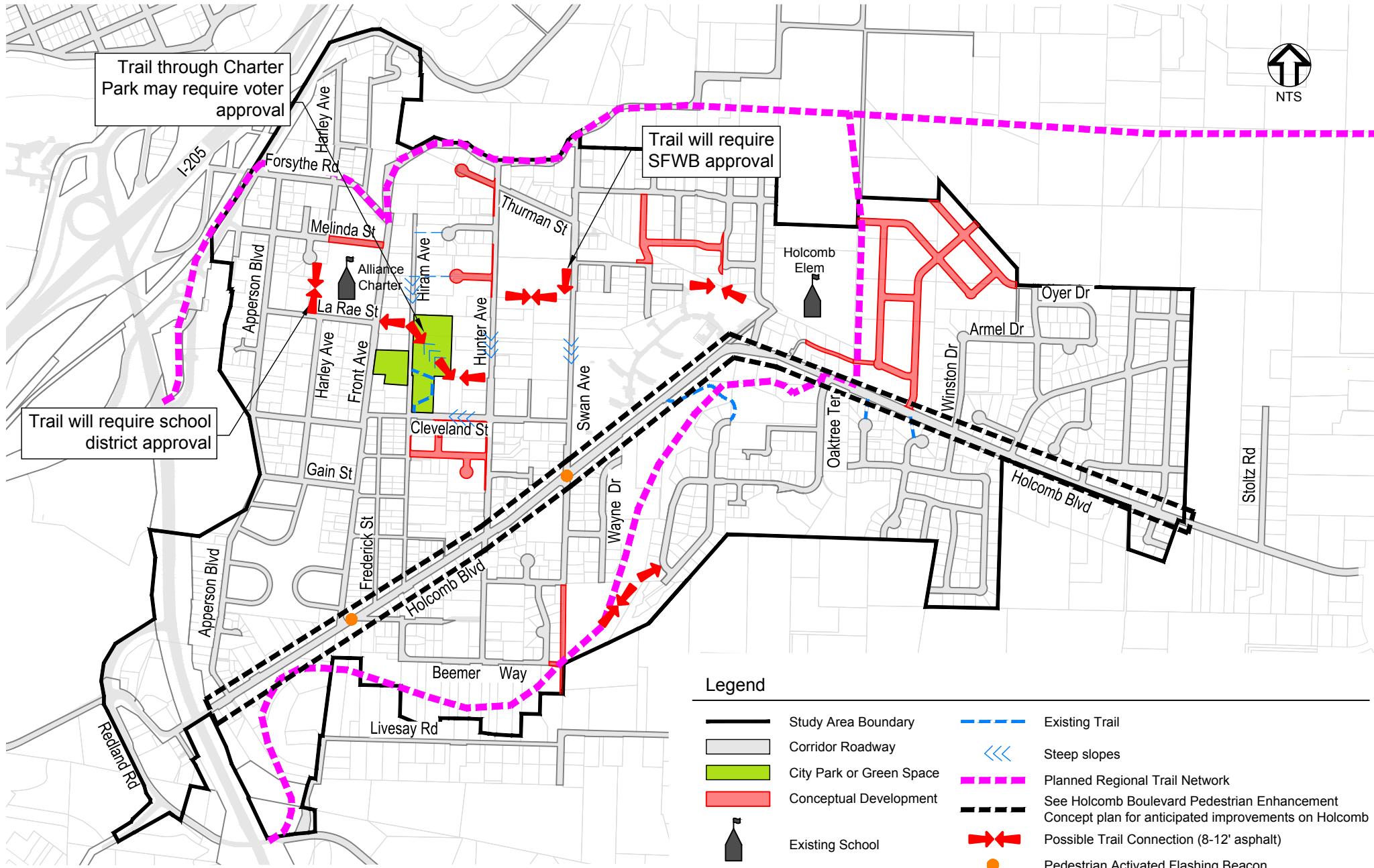


Figure 4-8 : Local Rural Street at Stormwater Facilities

4.3 TRAIL CONNECTIVITY PLAN

Trail connectivity options should be considered as funding and/or development opportunities present themselves. The plan included as **Figure 4-9** on the following page, is a guide for possible trail routes to be considered.



4.4 TRAFFIC CALMING

As the neighborhood develops, it is recommended traffic calming measures are implemented to manage vehicle speeds. These improvements should be considered especially for all roadways designated as Local Rural. The outreach results should provide to future designers a hierarchy of speed management measures from which to choose. Designers should still assess traffic calming measures for safety and effectiveness on an individual use basis. City Staff should prioritize, consider, and provide traffic calming measures where possible based on a transportation impact analysis.

4.5 CONNECTIVITY NEEDS

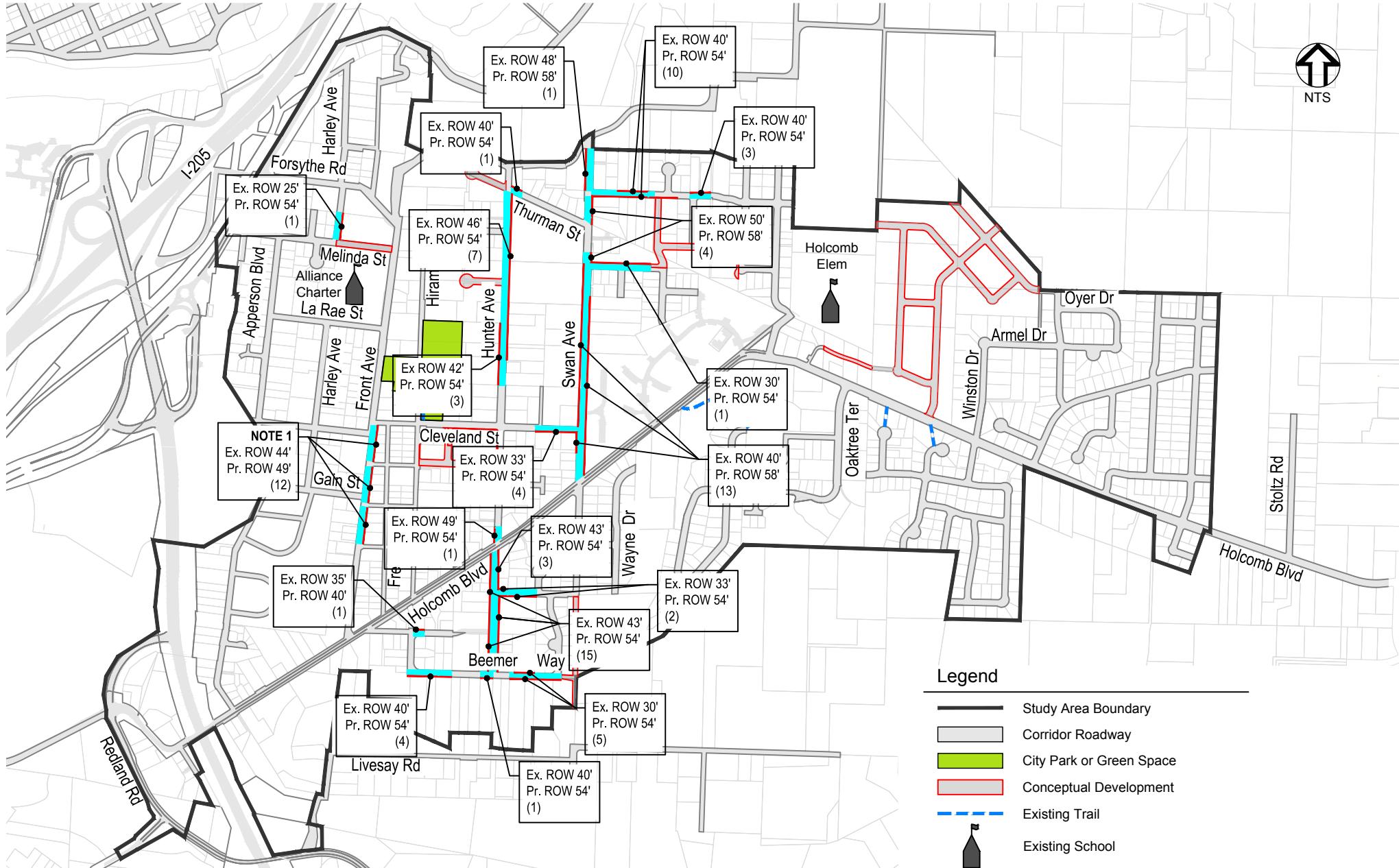
The design team noted that connectivity through the study area is limited, particularly for pedestrians and bicyclists. Swan Ave and Hunter Ave provide north-south connectivity through the neighborhood for motorists. However, there is no continuous east-west connection through the study area with the exception of Holcomb Blvd. Holcomb Blvd being an arterial roadway with high traffic volumes is a barrier to bicycle users due to the need to cross back and forth across Holcomb Blvd. Cleveland St has some east-west connectivity, but it terminates at Swan Ave on the east side and includes sections with steep elevation changes which make it less suitable for bicycle and pedestrian travel. Development projects should be reviewed for opportunities to address east-west connectivity within the study area.

4.6 BIKE LANES

City Staff should consider providing bike lanes where room is available. For example, Front Ave should add bike lanes beyond the chosen cross section if room allows. These bike lanes would not eliminate for parking along these streets.

4.7 RIGHT OF WAY IMPACTS

Due to the variability in existing right of way within the neighborhood. Several of the proposed cross sections will require acquisition of additional public right of way. **Figure 4-10** represents an approximate understanding of the right of way impacts associated with implementation of the proposed cross sections and sidewalk infill work. Specific detailed impacts should be determined at the time street improvements are designed, and based on property survey.



NOTE 1: On Front Ave, additional right away required to accommodate sidewalk improvements due to apparent offset of roadway.



SECTION 5: IMPLEMENTATION PLAN

5.1 PLAN IMPLEMENTATION

As funding sources are limited at this time, it is anticipated that improvements will be driven largely by development. Should funding become available, improvements identified within this Plan should be prioritized in coordination with project improvements identified in the TSP and other adopted area plans within the City.

5.2 COST ESTIMATES

Sidewalk Prioritization Improvements

The proposed prioritization plan had general support from the neighborhood. The project team developed cost estimates for each priority sidewalk group.

Priority 1 sidewalks ~ \$2,214,000

Priority 2 sidewalks ~ \$1,765,000

All estimates are at 2021 costs and should be adjusted for inflation as appropriate.

A breakdown of total costs and assumptions is included in **Appendix C**. These projects may be moved forward into capital projects as funding becomes available.

If private development were to complete sidewalk improvements required by code, it is projected that could include approximately 51% of priority 1 sidewalks and 63% of priority 2 sidewalks. Remaining improvements or 'gaps' would likely need to be completed by the City as funds become available and prioritized to be used for these sidewalk projects.

Roadway Classification Improvements

It is assumed that development of roadway elements to meet the preferred alternative cross sections will occur as part of private development efforts. No cost estimates were developed for these alternatives.

5.3 POTENTIAL FUNDING SOURCES

5.3.1 Local Funding

The City of Oregon City funds transportation projects through revenue collected from the Street fund, System Development Charge (SDC) fund and Pavement Maintenance Utility Fee (PMUF) fund. More information on these local funding sources can be found on the City Transportation System Plan (TSP). As described in the TSP, these funding sources are currently inadequate to complete all described capital improvement projects, and additional funding sources should be considered if the projects described above are prioritized.

5.3.2 State Funding

Statewide Transportation Improvement Program (STIP)

ODOT's main capital improvement program is the STIP, funded by various sources. The STIP is a three- or four-year document, but is amended often. The priority sidewalks identified within this plan may qualify for funding through the non-highway or local government categories. However, these categories can be highly competitive. Proposals can be made to the state through local regional offices.

Safe Routes to School

ODOT manages competitive funding for Safe Routes infrastructure (\$10 million/year). This competitive grant program may not be eligible for all the priority sidewalk routes identified within this plan. Segments closer than 1/4 mile to the school and schools that have a majority of free or reduced lunches

are prioritized as part of this program. Latest available data (2017) shows Holcomb Elementary School having approximately 53% eligibility for free or reduced lunches. This level may or may not qualify sidewalk improvements for this grant program. If considered, applications for this grant should focus on those areas which act as a barrier to school access.