Battle Ground Complete Streets Project List

Final Report

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9/24/15

The following report summarizes the process and outcomes of OPHI's work with the City of Battle Ground Department of Public Works to develop a list of projects that would increase and improve opportunities for walking, biking, and transit use in Battle Ground.

Earlier this year, Battle Ground's City Council passed a Complete Streets Resolution to "promote the inclusion of sidewalks, bikeways, and transit facilities in every transportation planning process." With support from the Clark County Public Health Department, Battle Ground Public Works staff have been working with OPHI to review current Battle Ground transportation infrastructure and proposed transportation projects to identify additional projects that would help improve the ability of Battle Ground residents to move about their community by bike, foot, or bus.

Complete Streets are streets that have been designed for everyone in a community, including people such as youth and elderly residents, who can't or choose not to move around by car. They are designed and operated to enable safe access for all users, including pedestrians, bicyclists, motorists and transit riders of all ages and abilities. Complete Streets make it easy to cross the street, walk to shops, and bicycle to work. Improving multi-modal mobility has been shown to positively impact community livability, community health, and economic development.

It is important to note that Battle Ground's current transportation policies already go a long way towards ensuring that new facilities are planned and build with all users in mind. Despite this, passage of the resolution was deemed to be valuable in part to communicate the city's commitment to supporting travel for all modes, but also to make the city competitive for additional funding opportunities that are designed for Complete Streets projects. Specifically, the State of Washington's Complete Streets Act (2011) created a framework for a grant program, which now has available funding. In order for local jurisdictions to apply for this funding, they must have

passed a Complete Streets ordinance or resolution, and have developed a Complete Streets project list.

Between June and September, 2015, OPHI worked with Battle Ground staff (Scott Sawyer and Mark Herceg) to develop an initial list and map of projects that would improve multi-modal mobility in Battle Ground. The project lists and maps for Battle Ground's four quadrants are included as attachments to this report. In developing the project list, the project team focused on identifying projects that are not already included in the city's short and medium term project lists. Thus, for example, the project team did not suggest adding sidewalks or "sharrows" (see inset), to NW 20th Ave because they are already included in the planned redevelopment of this road. The project team also focused on projects that would better connect people with key destinations including: schools, parks and community centers, and commercial areas.

Sharrows (short for "shared lane bicycle marking") are pavement markings that include a bicycle symbol and two white chevrons, and are used to not only remind motorists that bicyclists are permitted to use the full lane and are likely to be using the particular road, but also to mark designated bike routes and support wayfinding for cyclists. There are no striped bicycle lanes on streets marked with sharrows, and they are often used on streets that are not wide enough to safely accommodate bike lanes.



Project identification relied on the use of a combination of resources to detail existing conditions and identify gaps. These resources included:

- Satellite images from Google Earth
- Existing maps in the Battle Ground Transportation System Plan
- Existing maps developed for public schools' Safe Routes to School programs
- Site visits to select parts of town
- In person input from Public Works staff

Once the initial project list was developed by the project team, it was shared with members of the public who were asked to:

- point out additional project ideas the project team may have missed that would improve the ability of bicyclists, pedestrians, and transit users move about Battle Ground and get to where they need to go, and
- prioritize the project list so that, when funding opportunities arise, city staff have additional input on which projects to put forward.

After getting public input on the project list, OPHI staff presented the project to the Battle Ground City Council on September 21st. The presentation described the project's rationale and the process used to develop the list and briefly characterized the project list in terms of the number and types of projects. The Council asked one question about the methods the consultant used to identify projects, and the consultant described how Google Earth, existing maps, input from city staff, and site visits were used to survey existing conditions and identify gaps.

Once the list was project list was finalized, the projects were scored according to the following criteria:

- completes existing or planned (short/medium term) network
- improves pedestrian safety
- improves bike safety
- encourages use of low traffic streets or off street paths and trails
- improves access to key destinations

Each project was scored on a scale of 0-2 for each of these criteria. The total score for each project was calculated as the sum of the scores for each of the criteria.

The prioritized list of projects is provided in Appendix A. Appendix B contains the list of projects organized by geographic area and also contains the project cost estimates. Appendix C contains quadrant maps with project locations. Numbers on the maps correspond with the project numbers.

TABLE 1: Prioritized Project List—based on TOTAL scores *(scoring: 0=no impact; 1=moderate impact; 2=significant impact)*							
#	**Project**	**completes existing or planned (short/medium term) network**	**improves pedestrian safety**	**improves bike safety**	**encourages use of low traffic streets or off street paths**	**access to destinations**	**TOTAL**
2	503: extend multi-use path between Main St and northern UGB boundary	2	2	2	2	2	10
12	Rail alignment: build Chelatchie Trail section between E Main St and Northern UGB boundary	2	2	2	2	1	9
39	East of Maple Grove School: build multi-use trail connecting future SW 6th Ave and proposed	1	2	2	2	2	9
28	SE Clark Ave: build multi-use path between southern terminus and SE 4th St	2	1	1	2	2	8
29	Weaver Creek: build multi-use trail between SE Eaton Blvd and southern terminus of SE Clark Ave	1	2	2	2	1	8
30	Rail alignment: build Chelatchie Trail section between SE Rasmussen and southern UGB boundary	1	2	2	2	1	8
35	SW 19th St: build multiuse trail connecting SW 19th St and SW Eaton Blvd	1	2	2	2	1	8
3	NW 5th/6th Ave: add sharrows between Main St and NW 25th St	2	0	1	2	2	7
31	SE 18th St: build multi-use path across Weaver Creek on existing alignment between SE 1st Ave and SE 2nd Ave	2	1	1	2	1	7
1	NW 15th Ave: add sharrows to planned improvements	2	0	1	1	2	6
8	NE 3rd Ave: add sharrows and sidewalks between NE 1st St and NE 7th St	1	1	1	1	2	6
11	NE Grace Ave: add signalized pedestrian crossing at intersection with NE Fairground	1	2	1	1	1	6
40	SW Eaton: Build signalized crossing at intersection of SW Eaton Blvd and SW 6th Ave when SW	0	2	2	1	1	6
6	NW 5th St: add sharrows to planned street improvements and additions	2	0	1	1	1	5
41	503 at about SW 2nd St: build bike ramp connecting northern shoulder terminus with sidewal	1	0	2	1	1	5

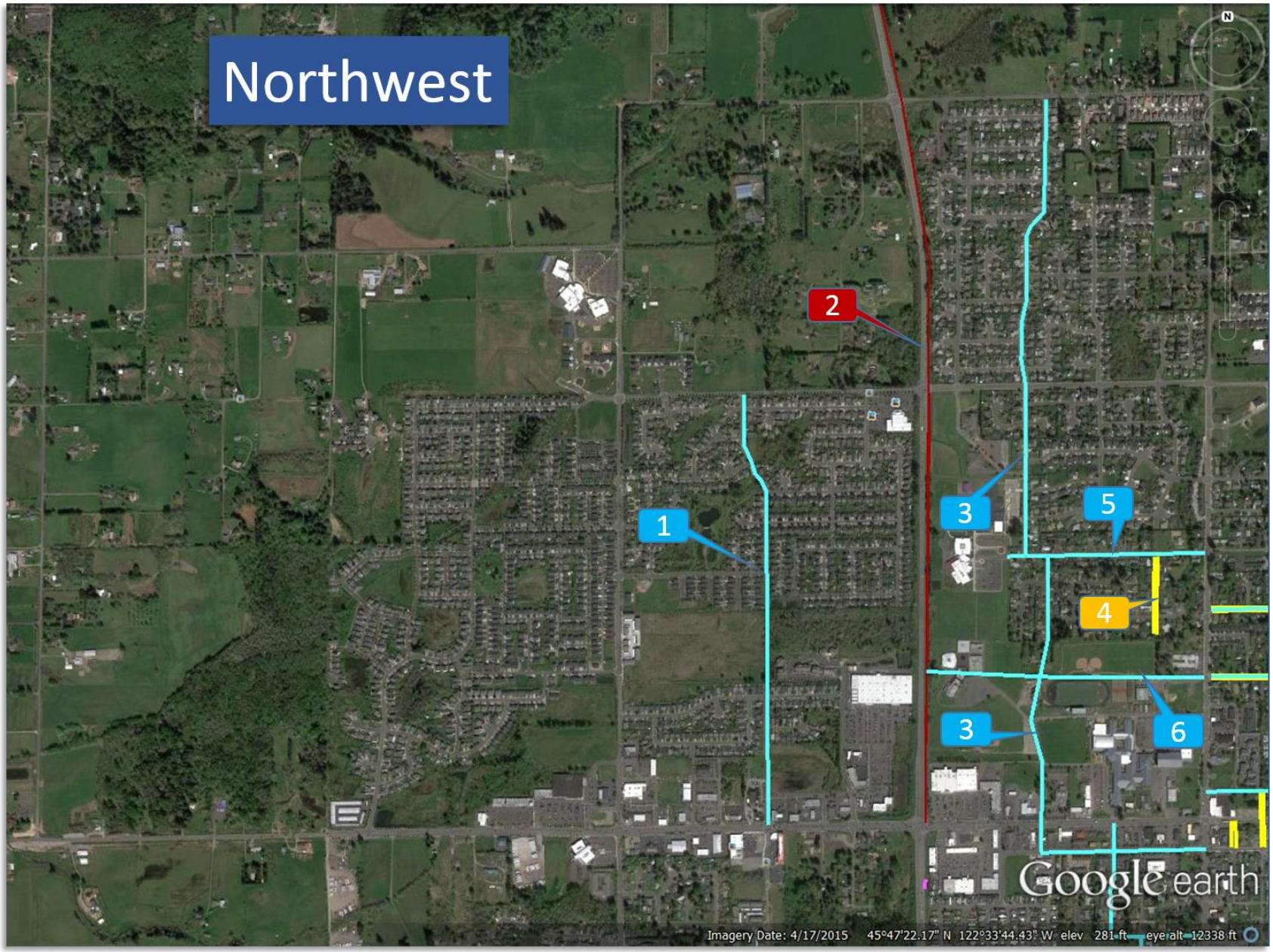
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4	NW 2nd Ave: add sidewalks between NW 9th St and southern terminus at play fields	1	1	0	1	1	4
5	NW 9th St: add sharrows between N Parkway Ave and western terminus at school grounds	1	0	1	1	1	4
7	NE 2nd Ave: build sidewalks on both sides between W Main St and NE 1st Street	1	1	0	1	1	4
9	NE Clark Ave: add sidewalks to both sides of street between E Main St and NE 1st St	1	1	0	1	1	4
10	NE Grace Ave: add sharrows between E Main St and NE 1st St	1	0	1	1	1	4
14	NE 7th St: add sharrows between N Parkway Ave and NE Clark Ave	1	0	1	1	1	4
15	NE 7th St: add sidewalks on both sides between N Parkway Ave and NE Clark Ave	1	1	0	1	1	4
16	NE 6th St: add sharrows between NE 3rd Ave and NE Grace Ave	1	0	1	1	1	4
17	NE 6th St: add sidewalks between NE 3rd Ave and NE Grace Ave	1	1	0	1	1	4
18	NE 5th St: add sharrows between N Parkway Ave and NE 3rd Ave	1	0	1	1	1	4
19	NE 5th St: add sidewalks between N Parkway Ave and NE 3rd Ave	1	1	0	1	1	4
20	NE 1st St: add sharrows between N Parkway Ave and NW Clark Ave	1	0	1	1	1	4
23	SE 1st Ave: build sidewalks on both sides between SW 1st St and W Main St	1	1	0	1	1	4
24	SE 2nd Ave: build sidewalks on both sides between SW 1st St and W Main St	1	1	0	1	1	4
25	SE 3rd Ave: build sidewalks on both sides between SW 1st St and W Main St	1	1	0	1	1	4
26	SE 4th Ave: build sidewalks on both sides between SW 1st St and W Main St	1	1	0	1	1	4
27	SE Clark Ave: build sidewalks on west side between SW 1st St and W Main St	1	1	0	1	1	4

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32	SW 5th Ave: add sharrows between W Main St and SW 1st St	1	0	1	1	1	4
33	SW 3rd Ave: add sharrows between W Main St and SW 4th St, and between SW Rasmussen Blvd and	1	0	1	1	1	4
34	SW 2nd Ave: add sharrows between SW 4th and SW 6th St	1	0	1	1	1	4
36	SW 1st St: add sharrows between SW 5th Ave and S Parkway Ave	1	0	1	1	1	4
37	SW 4th St: add sharrows between SW 3rd Ave and S Parkway Ave	1	0	1	1	1	4
38	SW 6th St: add sharrows between SW 3rd Ave and S Parkway Ave	1	0	1	1	1	4
42a	New route segment on SW Eaton between 503 and S Parkway, and on S Parkway between SW Eaton and	1	0	0	1	2	4
13	NE Fairground Ave: extend westside sidewalk from fairground parking lot to NE Grace Ave	1	1	0	0	1	3
21	E Main St: add sharrows between NE Grace Ave and eastern city limits	1	0	1	0	1	3
22	E Main St: complete sidewalks between new E Grace alignment and sidewalks east of the railroad tracks	1	1	0	0	1	3
42b	New bus stop at SE Scotton and Parkway	0	0	0	1	2	3
42c	New bus stop at SW Eaton and SW 3rd Ave	0	0	0	1	2	3

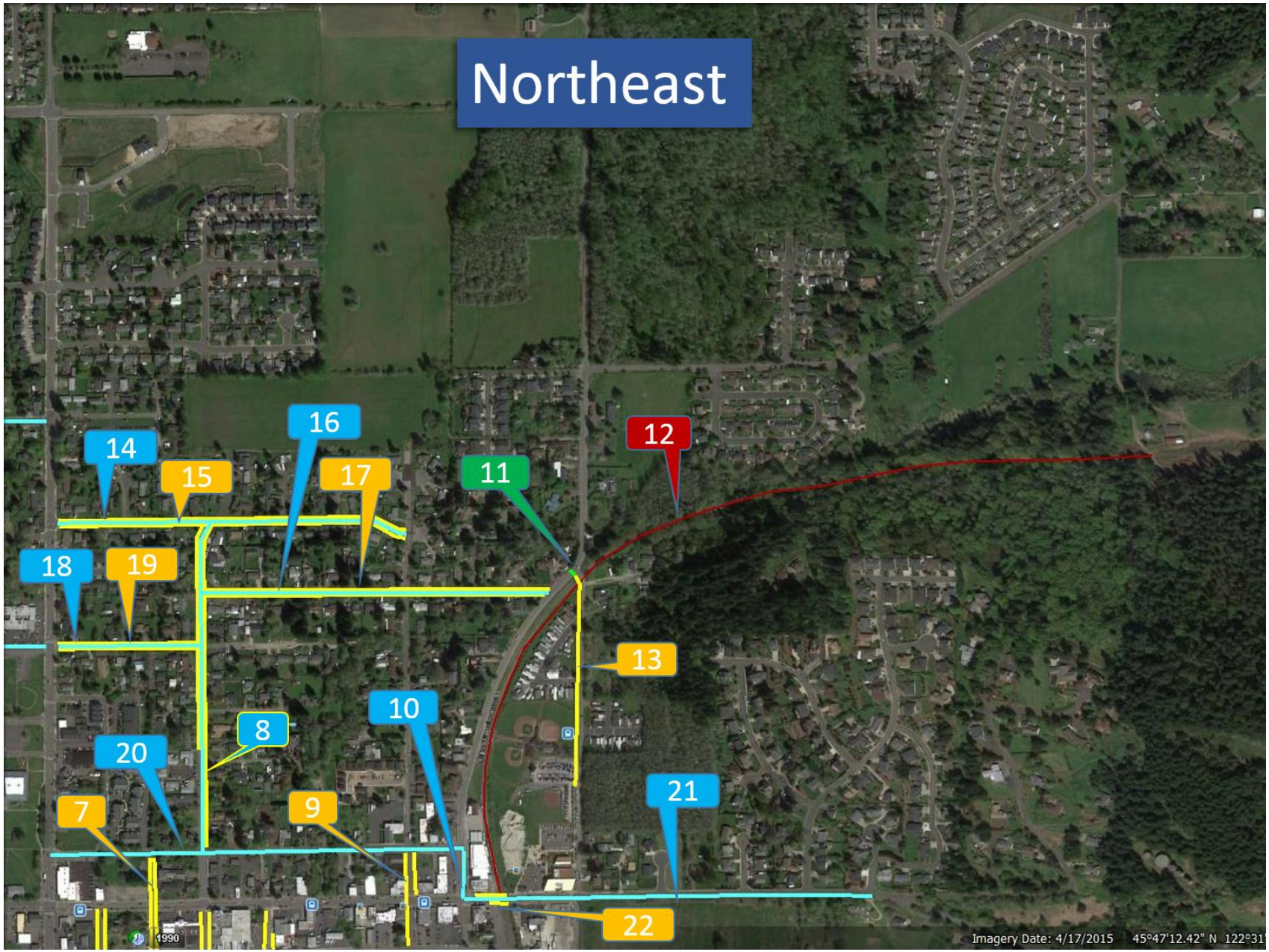
#	Location	Recommended Improvement	Length	Assumptions	Cost
NORTHWEST					
1	NW 15th Ave Between W Main St and NW Onsdorff Blvd	Add sharrows (both directions) to planned improvements	3,975′	• Cost per sharrow=$250 • 2 sharrows per 150′ of road	$13,500
2	503 between Main St and northern UGB boundary	Extend multi-use path	6,570′	• Based on costs provided in TSP for projects 119 and 120	$1,795,000
3	NW 5th/6th Ave between Main St and NW 25th St	Add sharrows (both directions)	6,950′	• Cost per sharrow=$250 • 2 sharrows per 150′ of road	$23,000
4	NW 2nd Ave between NW 9th St and southern terminus at play fields	Add sidewalks	705′ x 2	• Cost per foot=$31.70	$44,697
5	NW 9th St between N Parkway Ave and western terminus at school grounds	Add sharrows (both directions)	1,800′	• Cost per sharrow=$250 • 2 sharrows per 150′ of road	$6,000
6	NW 5th St between N Parkway Ave and 503	Add sharrows (both directions) to planned street improvements and additions	2,530′	• Cost per sharrow=$250 • 2 sharrows per 150′ of road	$8,500
NORTHEAST					
7	NE 2nd Ave between W Main St and NE 1st Street	Build sidewalks on both sides of NE 2nd Ave	250′ x 2	• Cost per foot=$31.70	$15,850
8	NE 3rd Ave between NE 1st St and NE 7th St	Add sharrows (both directions) and sidewalks on both sides	1,650′ x 2	• Cost per sharrow=$250 • 2 sharrows per 150′ of road	$5,500
9	NE Clark Ave between E Main St and NE 1st St	Add sidewalks to both sides of street	250′ x 2	• Cost per foot=$31.70	$15,850
10	NE Grace Ave between E Main St and NE 1st St	Add sharrows (both directions)	250′	• Cost per sharrow=$250 • 2 sharrows per 150′ of road	$1,000
11	NE Grace Ave at intersection with NE Fairground	Add signalized pedestrian crossing	NA	• Calculated as half the cost of a new 4 way signalization project ($250,000)	$125,000
12	Rail alignment between E Main St and Northern UGB boundary	Build Chelatchie Trail section, with associated drainage	5,940′	• Updated cost originally provided by Clark County in 2010	$1,200,000
13	NE Fairground Ave from fairground parking lot to NE Grace Ave	Extend westside sidewalk	1,060′	• Cost per foot=$31.70	$33,602
14	NE 7th St between N Parkway Ave and NE Clark Ave	Add sharrows (both directions)	1,755′	• Cost per sharrow=$250 • 2 sharrows per 150′ of road	$6,000
15	NE 7th St between N Parkway Ave and NE Clark Ave	Add sidewalks on both sides	1,755′ x 2	• Cost per foot=$31.70	$111,267

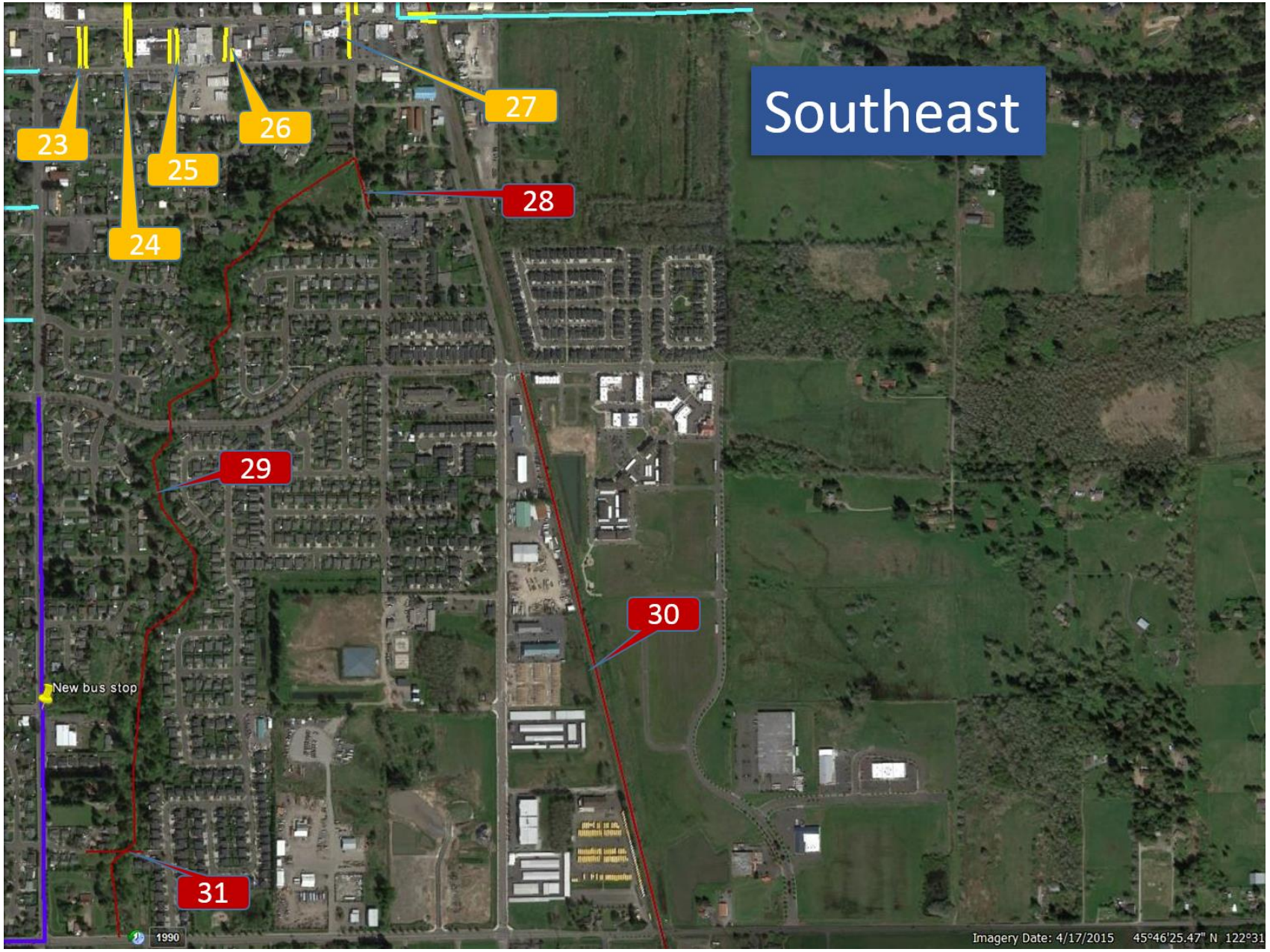
#	Location	Recommended Improvement	Length	Assumptions	Cost
16	NE 6th St between NE 3rd Ave and NE Grace Ave	Add sharrows (both directions)	1,750′	• Cost per sharrow=$250 • 2 sharrows per 150′ of road	$6,000
17	NE 6th St between NE 3rd Ave and NE Grace Ave	Add sidewalks	1,750′ x 2	• Cost per foot=$31.70	$110,950
18	NE 5th St between N Parkway Ave and NE 3rd Ave	Add sharrows (both directions)	700′	• Cost per sharrow=$250 2 sharrows per 150′ of road	$2,500
19	NE 5th St between N Parkway Ave and NE 3rd Ave	Add sidewalks	700′ x 2	• Cost per foot=$31.70	$44,380
20	NE 1st St between N Parkway Ave and NW Clark Ave	Add sharrows (both directions)	2,000′	• Cost per sharrow=$250 • 2 sharrows per 150′ of road	$6,500
21	E Main St between NE Grace Ave and eastern city limits	Add sharrows (both directions)	2,050′	• Cost per sharrow=$250 • 2 sharrows per 150′ of road	$6,500
22	E Main St between new E Grace alignment and sidewalks east of the railroad tracks	Complete sidewalks	250′ x 2	• Cost per foot=$31.70	$15,850
SOUTHEAST					
23	SE 1st Ave between SW 1st St and W Main St	Add sidewalks on both sides	220′ x 2	• Cost per foot=$31.70	$13,948
24	SE 2nd Ave between SW 1st St and W Main St	Add sidewalks on both sides	220′ + 110′	• Cost per foot=$31.70	$10,461
25	SE 3rd Ave between SW 1st St and W Main St	Add sidewalks on both sides	220′ x 2	• Cost per foot=$31.70	$13,948
26	SE 4th Ave between SW 1st St and W Main St	Add sidewalks on west side	220′	• Cost per foot=$31.70	$6,974
27	SE Clark Ave between SW 1st St and W Main St	Add sidewalks on west side	220′	• Cost per foot=$31.70	$6,974
28	SE Clark Ave between southern terminus and SE 4th St	Add multi-use path	400′	• Cost per foot=$240	$96,000
29	Weaver Creek corridor between SE Eaton Blvd and southern terminus of SE Clark Ave	Add multi-use path	5,400′	• Cost per foot=$240	$1,296,000
30	Rail alignment between SE Rasmussen and southern UGB boundary	Build Chelatchie Trail section	11,500′	• Based on costs detailed in TSP for projects 115-118	$6,081,245
31	SE 18th St between SE 1st Ave and SE 2nd Ave	Build multi-use path across Weaver Creek	330′	• Cost per foot=$240	$79,200

#	Location	Recommended Improvement	Length	Assumptions	Cost
SOUTHWEST					
32	SW 5th Ave between W Main St and SW 1st St	Add sharrows (both directions)	220′	• Cost per sharrow=$250 • 2 sharrows per 150′ of road	$1,000
33	SW 3rd Ave: between W Main St and SW 4th St, and between SW Rasmussen Blvd and SW 6th	Add sharrows (both directions)	1,470′	• Cost per sharrow=$250 • 2 sharrows per 150′ of road	$5,000
34	SW 2nd Ave between SW 4th and SW 6th St	Add sharrows (both directions)	650′	• Cost per sharrow=$250 • 2 sharrows per 150′ of road	$2,000
35	SW 19th St between SW 2nd Ave and SW 4th Ave	Build multiuse trail connecting SW 19th St and SW Eaton Blvd	210′	• Cost per foot=$240	$50,400
36	SW 1st St between SW 5th Ave and S Parkway Ave	Add sharrows (both directions)	1,500′	• Cost per sharrow=$250 • 2 sharrows per 150′ of road	$5,000
37	SW 4th St between SW 3rd Ave and S Parkway Ave	Add sharrows (both directions)	860′	• Cost per sharrow=$250 • 2 sharrows per 150′ of road	$3,000
38	SW 6th St between SW 3rd Ave and S Parkway Ave	Add sharrows (both directions)	880′	• Cost per sharrow=$250 • 2 sharrows per 150′ of road	$3,000
39	East of Maple Grove School	Build multi-use path connecting future SW 6th Ave and SW Eaton Blvd just east of SW 3rd Ave	1,240′	• Cost per foot=$240	$297,600
40	Intersection of SW Eaton Blvd and SW 6th Ave	Build signalized crossing	NA	• Calculated as half the cost of a new 4 way signalization project ($250,000)	$125,000
41	503 at about SW 2nd St:	Build bike ramp connecting northern shoulder terminus with sidewalk	NA		$1,500
42a	SW Eaton between 503 and S Parkway, and on S Parkway between SW Eaton and	New transit route segment	NA	• Will need to be provided by C-TRAN	TBD
42b	SE Scotton and Parkway	Add new bus stop	NA	• Will need to be provided by C-TRAN	TBD
42c	SW Eaton and SW 3rd Ave	Add new bus stop	NA	• Will need to be provided by C-TRAN	TBD


Northwest
1
2
3
3
4
5
6
Google earth
Imagery Date: 4/17/2015 45°47'22.17" N 122°33'44.43" W elev 281 ft eye alt 12338 ft

Appendix C: Projects Map




Southeast
23
24
25
26
27
28
29
30
31
New bus stop
1990
Imagery Date: 4/17/2015 45°46'25.47" N 122°31

Appendix C: Projects Map

