

Community Advisory Committee – Meeting #3

Thursday, December 13, 2018

6:00 – 8:30 PM

Happy Valley Community Policing Center (CPC) Annex

12915 SE King Road, Happy Valley, OR 97086

ITEM	TIME
Welcome and Introductory Items	6:00-6:05 PM
a. Welcome and introductions (Michael Walter, all)	
b. Approval of Meeting #1 and #2 minutes (see p. 2 and p. 6)	
c. Where we are in the process (Joe Dills, APG)	
Revisions to Documents Reviewed in Meeting #2	6:05-6:20 PM
a. Buildable Land Inventory – Revisions (Jamin Kimmell, APG) (see p. 10)	
b. Vision Statement and Guiding Principles (Jamin Kimmell, APG) (see p. 13)	
Transportation Existing Conditions (see p. 15)	6:20-7:00 PM
a. Presentation (Reah Flisakowski, DKS Associates)	
b. Discussion (all)	
Housing and Employment Market Analysis (see p. 33 for Housing, p. 56 for Employment)	7:00-7:40 PM
a. Presentation (Todd Chase, FCS Group)	
b. Discussion (all)	
Plan Concepts	7:40-8:20 PM
• Walkable Neighborhoods (Joe Dills, APG)	
• Carver Opportunities and Constraints (Ken Pirie, Walker Macy) (see p. 79)	
Next Steps	8:20-8:30 PM
a. Monthly public involvement update (Joe Dills, APG)	
b. Public comment and next steps	

**Pleasant Valley/North Carver Comprehensive Plan
Community Advisory Committee Meeting #1 Minutes
October 11, 2018 – 6:00pm – 8:00pm**

Welcome and Introductions

- Mayor Lori Chavez-DeRemer and City Manager Jason Tuck welcomed the group to the meeting and thanked the committee members for their participation.
- Michael Walter, City of Happy Valley, welcomed the group to the meeting

Project Overview

- Joe Dills, APG, reviewed the charter for the CAC, and noted:
 - The CAC is advisory to the Planning Commission and City Council
 - Advisory groups are subject to public meetings law
 - The goal is to operate on a consensus basis as much as possible
- Michael W. and Joe D. responded to questions about the planning process:
 - Committee member asked if information discussed at the TAC would be shared with the CAC. Joe D. responded that APG/the City will share what the TAC discusses and there will be coordination between the groups.
 - Committee member asked what the final outcome of the plan will be. Michael W. responded that a key outcome is land use designations for every property in the study area. The city's land use map and all infrastructure master plans, including the Transportation System Plan (TSP), will be updated to incorporate the PV/NC.
 - Committee member asked how the plan will be funded. Michael W. responded that most infrastructure will be built and funded by private development, however, the plan will help to identify projects that may need public funding.
 - Committee member asked if the plan will be coordinated with the Pleasant Valley Comprehensive Plan area in Gresham. Joe D. noted that it would and that the team has made initial contact with the City of Gresham.
 - Committee member asked if the City could provide information about the amount and type of development in the East Happy Valley Comprehensive Plan area, as it might be a useful comparison for PV/NC. Michael W. noted that this information will be provided for a future meeting.
- Joe Dills and Jamin Kimmell, APG, presented an overview of the project:
 - Overview of study area
 - Challenges in the area (topography, floodplains, infrastructure)
 - Buildable Lands Inventory (BLI) and how it relates to slopes/Habitat Conservation Area/etc.
 - General schedule

- Research and learning
- Vision and plan concepts
- Plan and code amendments
- Public involvement
 - Vision and key issues
 - Tabling (Fall 2018)
 - Plan concepts
 - Two community workshops (Spring 2019)
 - Draft comprehensive plan
 - Format TBD (Fall 2019/Winter 2020)

Envisioning a Great Plan for Pleasant Valley/North Carver

- Precedents to PV/NC (Joe D.)
 - Pleasant Valley comprehensive plan (Gresham)
 - South Cooper Mountain (Beaverton)
 - Frog Pond (Wilsonville)
- General guiding principles for concept/comprehensive plans (Joe D.)
 - Walkable neighborhoods (physical health, marketability, etc.)
 - Transportation choices
 - Housing choice
 - Access to nature
 - Planning for schools and parks in the community
 - Planning for mixed use centers as community gathering places
 - Plan and fund infrastructure
 - Identify and plan “special” spaces
- The group discussed some challenges or considerations for implementing these principles in the PV/NC area:
 - Committee member asked if there was a requirement for a certain level of density or mix of housing types. Jamin K. responded that an overall density of 6 units per acre and at least 50% of new housing must be attached single-family or multi-family, per Metro.
 - Committee member noted there is a lack of commercial development and jobs in the area, will be important to attract jobs so people can work and live in area.
 - Committee member noted that there are some challenges with the multiple school districts in the plan area. This affects developability of the area. Important to have schools involved and perhaps this project can inform district boundary decisions.

- Committee member noted that Carver and the riverfront are a key asset and would like the plan to pay special attention to this area.
- Visioning Exercise:
 - The committee was asked to consider the following prompt: *Imagine you had to leave Pleasant Valley/North Carver tomorrow to go live on a beautiful South Sea island. You return in twenty years and the Pleasant Valley/North Carver Plan has been successfully implemented. You are very pleased and impressed – you really like what you see. What do you see?*
 - Key themes of the responses included:
 - Walkable neighborhoods
 - A “village concept”
 - Healthy ecosystem
 - Protecting and embracing natural resources
 - Preserve mature trees
 - Preserve scenic vistas: rolling hills, butte views
 - Wildlife corridors
 - Inclusive place
 - All-ages community, aging-in-place
 - Diversity and sustainability as twin concepts, paired
 - Sustainability = walkability
 - Not a “diaper city”
 - Village of all ages
 - Placemaking
 - Housing not all the same, some variety and uniqueness
 - System of gateways, corridors, and centers – has some identity
 - Smooth traffic flow
 - Careful that employment uses don’t generate too much traffic
 - Sunrise corridor is crucial
 - Numbers that pencil, infrastructure can be funded
 - Carver as town center, waterfront destination
 - Connection to the river
 - Jobs/housing balance
 - Self-sustaining community, complete community
 - Live/work/play community
 - Right types of jobs/employment uses
 - Industry as a destination: cannery, winery, along the river?

- Economic cluster around the river: what makes sense?
- Living wage jobs, clean good businesses (non-polluting)
- Robust public transit
- Schools as community hubs (joint use)
- Compatibility/coordination with Portland, Gresham, Happy Valley
 - Not a distinct “sliver” but integrated with neighboring areas
- Traditional vertical mixed-use town center

The meeting adjourned at approximately 8:00pm.

Minutes were taken by Chris Alfino, City of Happy Valley, and Jamin Kimmell, APG.

Pleasant Valley/North Carver Comprehensive Plan
Community Advisory Committee Meeting #2 Minutes
November 15, 2018 – 6:00pm – 8:00pm

Attendance

See Sign-In sheet - Introductions were made.

Meeting began at 6:00 p.m.

The following discussion was made:

- Thanked everyone for their attendance
- Tabling events were held at the Happy Valley Fred Meyer and at the city's Harvest Fest event
- Not a lot of feedback but the majority was generally against more growth

Angelo Planning Group

Joe Dills & Jamin Kimmell

Walker Macy

Saumya Kini & Ken Pirie

- The project schedule is still in the research and learning phase
- This is the second out of nine meetings to be held
- This is the second part of a two-part committee
- The next meeting will be held on December 13, 2018
- The existing conditions are in four parts
 - Buildable Lands Inventory
 - Landscape Context / Neighborhood Analysis
 - Park Needs Assessment
 - Historic Resources Assessment
- Showed the Buildable Lands Inventory Map
 - Trying to get an understanding of where they are located and how much is available as well as non-buildable lands
 - Steep slopes appear to be around 15%
 - The wetland flood plains have been removed from the development
 - Reviewed vacant and partially vacant lands – partially vacant land has dwellings but is big enough for future development
 - After calculating acreage of buildable lands approximately 900 acres are buildable
 - Roadways were removed from the calculation
- Landscape and Neighborhood Analysis

- Like to have walkable neighborhoods
- There is a collection of areas that have already had expansion
- This is an exercise of learning the land – The Clackamas River is a huge asset for the study areas along with the steep buttes
- The water quality resource areas have been mapped with a 200ft buffer – will be defining if these areas are edges of the area or an area that brings things together
- A new school is being built by Vogel Road
- Protected water quality resources are undevelopable – can transfer density from the constrained lands – discussed Title 3 and Title 13
- Conservation steep slopes greater than 25% are not buildable - 15%-25% are somewhat buildable
- Existing Employment Areas
 - A lot of the land in the northern part of the study area is employment
 - Preparing a job analysis for this area for the December 13th meeting to show how much employment land is needed – this area is called Title 4
 - Title 4 is a chapter within the Metros Functional Plan
- There is great access to parks – will need to think about how to distribute trail access to pedestrians
- The City of Happy Valley has a Parks Master Plan which will include this new area in the future
- Have collected street connection data from various sources and have applied it to one map
- Most of the study area is out of the transit boundary area – transit will expand to meet the needs of the developed areas
- A majority of the roadways will be built by development – major arterials are best candidates for government funding, but all others are through development
- This is a wide valley with buttes on each side and gives a lot of character along with the views – working to protect the character of the area
- Will review tree clusters and riparian areas
- Have looked at the existing buildings either homes, shops or barns – this helps to understand the patterns and prominent open fields
- Will review street extension to confirm that they make sense
- It is nice to be able to walk to Commercial and Mixed-Use areas – these should become part of the access to neighborhoods
- The area south of Troge Road and west of 172nd has large fields and agriculture but also has potential for landslides – will need to review this
- There appears to be a water shed in the Tong Road area draining to Rock Creek
- Sunnyside Village is an example of where having public facilities available creates a walkable neighborhood – reviewing what we can learn from this and applying it to the future walkable areas

- The TAC is researching and will be bringing maps and ideas for the sewer and roadways and will be presenting this information to the CAC
- It is unusual to have such a large area on septic
- It was requested by a resident if there was some way to help make the Orchard Lakes neighborhood not so isolated and more walkable so that it feels like it is part of the area
- It was noted that it would be nice to be able to get down to the Clackamas River via walking or biking rather than by car
- Carver could be a very desirable area if we could help make it a more convenient and accessible area
- Discussed park needs and assessments, recreation trails and the potential for a recreation center
- A lot of residents are asking if Vogel Park will be transferred to Happy Valley – the park is part of the asset packet, but we don't know for sure what will happen
- Some regional trail alignments will be incorporated into the study
- School acreage is separate from the park study, but it is nice to have the parks placed next to schools
- The school situation and needs will also be discussed with the school district
- Historic Resource Assessment
 - A total of six properties have been identified
 - Out of the six, two of them are historic landmarks; Carver School and John Byers house and farm
 - Other properties were inventoried but have no protection – will confirm the status
- Discussed the results of the tabling outreach programs
- Discussed the Vision Statement
 - Jim Syring asked to have “in 2040” removed from the vision statement
 - Shelley Parini stated that they captured a good vision of the statement but does not think that the environmental compartment is as strong as she would like it to be – should be a little more clear
 - Regarding the Carver riverfront - Add “preserved and transforming”

All were in favor of adopting the Vision Statement as amended.

Public Comments:

- How are the outreach tables being advertised –
 - Didn't know it was happening
 - Does not feel that 45 people is very many for an outreach program
 - Would like to have additional outreach programs – could advertise in the monthly paper
 - Outreach should be discussed at every meeting and continually reaching out to residents

- There are seasonal creeks in the area but will only be able to define how strong they are during different times of the year
- One resident appreciates being able to speak during the meeting and likes what he is hearing and the vision – working as a community so that everyone has a voice – asked about the annexation process
 - Annexation is either done by completing a petition voluntarily with the right of way or adjacent property – it is better to have an entire neighborhood annexed together rather than spot annexing
 - Only one resident within the Orchard Lakes neighborhood annexed during the Damascus annexation process
 - Happy Valley taxes are not as high as Damascus but higher than unincorporated Clackamas County
- Need all three as guiding principles: Connectivity, Diversity and Sustainability

The meeting was adjourned at 8:47 p.m.

Minutes were taken by Cheryl Whitehead, Planning Department.



 MEMORANDUM

Buildable Lands Inventory – Summary of Revisions Pleasant Valley/North Carver Comprehensive Plan

DATE December 4, 2018
 TO PV/NC TAC and CAC
 FROM Jamin Kimmell, and Joe Dills, Angelo Planning Group

A draft Buildable Lands Inventory (BLI) was presented at the second meeting of the TAC and CAC for the Pleasant Valley/North Carver (PV/NC) Comprehensive Plan, on November 15, 2018. Since that meeting, three revisions were made to ensure the BLI accurately reflects the amount of land that is buildable and expected to develop within the plan horizon:

- Partially Vacant parcels: Partially Vacant parcels have an existing building today but are large enough to subdivide or potentially redevelop in the future (more than a half-acre of unconstrained land). The draft BLI assumed that all existing buildings on Partially Vacant parcels would be redeveloped. The revised BLI assumes that buildings (mostly single-family homes) with market value over \$300,000 would not redevelop. A quarter-acre was deducted from the buildable area of these lots to account for the preservation of the existing building and surrounding site area.
- Protected Water Quality Resources (PWQR): PWQR are wetlands, streams, and other water quality resources that are protected under the Happy Valley development code (also known as Metro Title 13 areas). The draft BLI established a 200-foot buffer from these areas and assumed all areas in the buffer were not buildable. This is the maximum width of a buffer (also known as a Vegetated Corridor) required by code. The revised BLI uses a 75-foot buffer from these areas, which is more consistent with typical buffer width, as delineated during the development review process. Also, the BLI memo noted that a buffer was also applied to Habitat Conservation Areas (HCAs). This was a typo – no buffer was applied to these areas as that is not required by the City’s development code.
- Transition Slopes: Transition Slopes are areas that are sloped between 15 and 25 percent. The draft BLI assumed that 100% of Transition Slope areas are not buildable. The City’s development regulations require special study of these areas during development review; however, a portion of these areas are typically buildable. To better align with past development patterns, only 50% of the Transition Slope areas were considered not buildable.

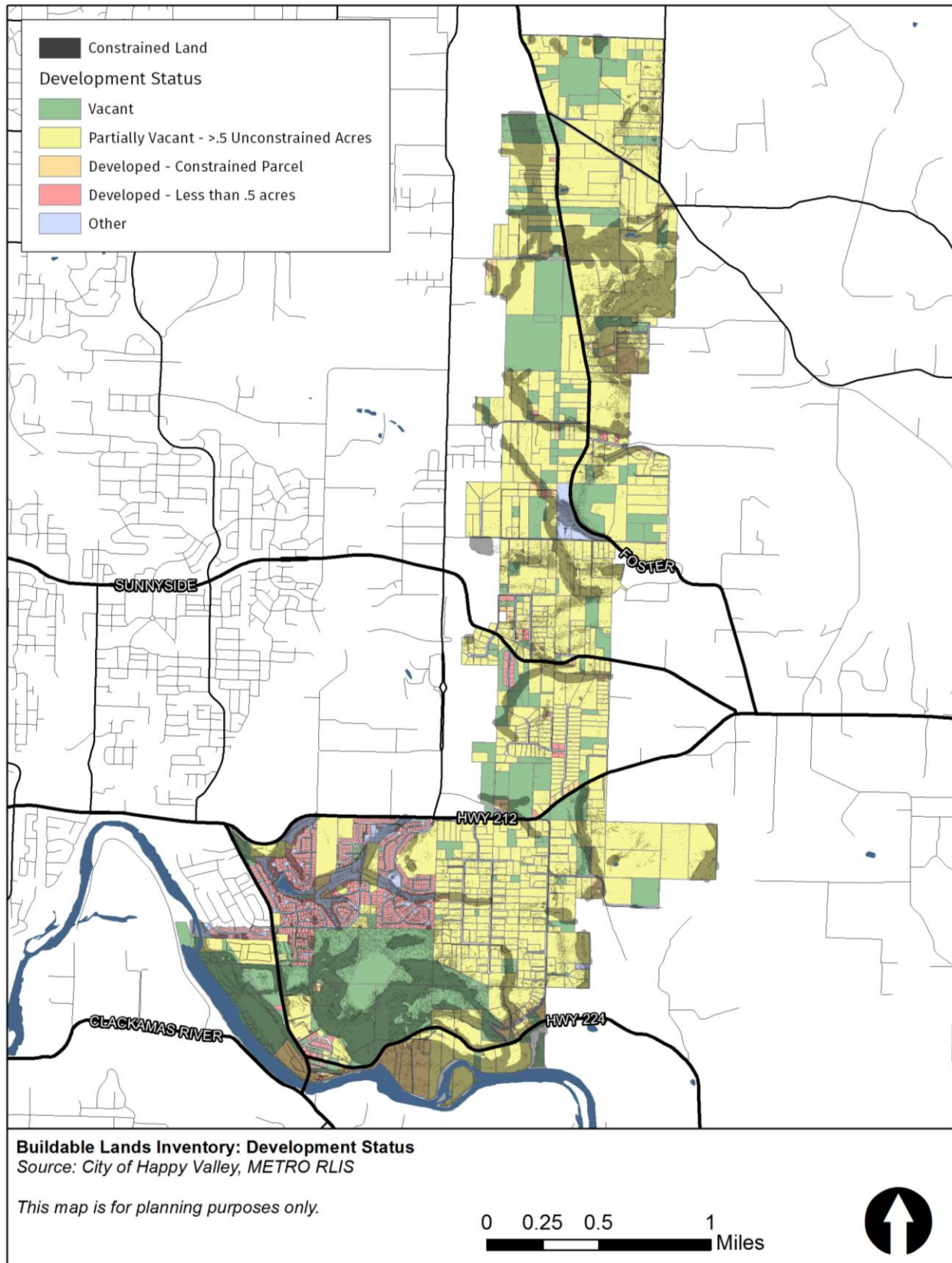
The revised results of the BLI are summarized in Table 1. The number of parcels that were classified as buildable (Vacant or Partially Vacant) increased from 731 to 827. The total unconstrained acres on

those parcels increased from 1,336 to 1,490. The implications of the BLI in terms of meeting the need for various land uses will be discussed as part of the discussion of the market analysis and land needs projections. A map of the BLI results is provided below as Figure 1.

Table 1. Summary of BLI Results

Classification	Parcels	Total Acres	Unconstrained Acres
Vacant (no building value)	235	722	400
Partially Vacant (more than half-acre unconstrained land)	592	1,573	1,090
Total Buildable Lands	827	2,295	1,490
Developed-Constrained (less than half-acre unconstrained land)	55	83	10
Developed (total size is less than half-acre)	735	128	92
Total Not Buildable Lands	790	212	102
Other (public facilities and open space)	64	213	11

Figure 1. BLI Results: Development Status





MEMORANDUM

Vision and Guiding Principles

Pleasant Valley/North Carver Comprehensive Plan

DATE December 5, 2018
 TO PV/NC Comprehensive Plan TAC and CAC Members
 FROM Joe Dills and Jamin Kimmell, Angelo Planning Group

The purpose of this memo is to document a draft vision statement and set of guiding principles for the Pleasant Valley/North Carver (PV/NC) Comprehensive Plan. The vision and principles set forth key ideas that will shape the development and implementation of the plan. They were drafted based on input received from the first meetings of the Technical Advisory Committee (TAC) and Community Advisory Committee (CAC) on October 11, 2018.

VISION STATEMENT

The Pleasant Valley/North Carver area is an integral part of the growing Happy Valley community, and a natural extension of East Happy Valley. The area is comprised of a network of walkable neighborhoods, vibrant mixed-use centers, and thriving employment areas. The natural beauty of the landscape is embraced, the ecological health of the area is preserved and enhanced through environmental stewardship, and nature is made part of every neighborhood. The Carver riverfront has been transformed to include great public access and unique destinations. The area is supported by a resilient and safe network of streets, transit service, infrastructure, high-quality schools, and attractive parks and trails.

GUIDING PRINCIPLES

Promote a Sense of Community. All development is planned and design to create a strong identity and sense of community in Pleasant Valley and North Carver.

Preserve and Celebrate Nature. Nature is protected, celebrated, and integrated into the community. Stream and habitat corridors are preserved and enhanced to ensure they can provide critical ecological functions. People can experience nature up-close through a network of parks and trails. People can appreciate nature from afar, in everyday situations, though views of rolling hills and forested buttes.

Form Walkable, Welcoming Neighborhoods. Neighborhoods are more than a collection of housing. Neighborhoods feel and function like villages: welcoming communities that make room for people of all ages, abilities, and life experiences. Within each neighborhood, housing options include family-sized homes, compact cottages, and livable townhomes and apartments where appropriate. Streets and blocks are designed for walking and local shops and services are within walking distance.

Create Vibrant, Mixed-Use Centers. People gather in town centers to shop, play, and celebrate as a community. Mixed-use buildings allow people to live in these centers, ensuring that streets are alive with activity both during the day and in the evenings. The centers are destinations because they are built around special places, such as the waterfront of the Clackamas River or the confluence of important streets.

Craft Distinctive Places. People perceive the communities in the plan area as distinctive places. Homes and buildings are designed to be varied and interesting. Gateways into the area and individual neighborhoods are marked with distinctive public art or monuments. Unique features are designed into corridors and centers to reinforce a sense of place.

Attract Local Jobs and Businesses. Residents have opportunities to live and work in the same community. Local jobs are available to people with a range of backgrounds and skills, and all pay a living wage. Businesses are attracted by unique advantages of locating in the area and reinforce the development of industry clusters.

Design a Resilient, Connected Transportation System. A robust network of streets and transit routes allow people to move efficiently in, out, and across the area. Streets are designed to both manage traffic flow and encourage walking, biking, and riding transit. Transportation infrastructure is built prior to or concurrent with development.

Ensure Regional Fit. The plan area is integrated with the regional transportation system, land use patterns, and public facilities network. The plan area is viewed both as a distinct, individual place and a part of a larger system of neighboring cities and rural areas.

Plan for Fiscal Health. The plan can be implemented because it addresses fiscal realities. Service providers—including transportation, sewer, water, stormwater, parks, schools, and parks—can build infrastructure to support development because funding mechanisms are aligned with needs and costs.



MEMORANDUM

Existing Transportation Conditions Pleasant Valley/North Carver Comprehensive Plan

DATE October 19, 2018
 TO Michael Walter, City of Happy Valley
 FROM Reah Flisakowski, DKS Associates

This memorandum summarizes the existing transportation conditions in the Pleasant Valley/North Carver planning area, which includes approximately 2,700 acres east of the City of Happy Valley. The project study area (shown in Figure 1) is generally bordered by 172nd Avenue to the west, the Clackamas River to the south, 190th Avenue to the east, and Cheldelin Road to the north. This memorandum includes a review of existing transportation conditions, standards, and multimodal operations in the study area.

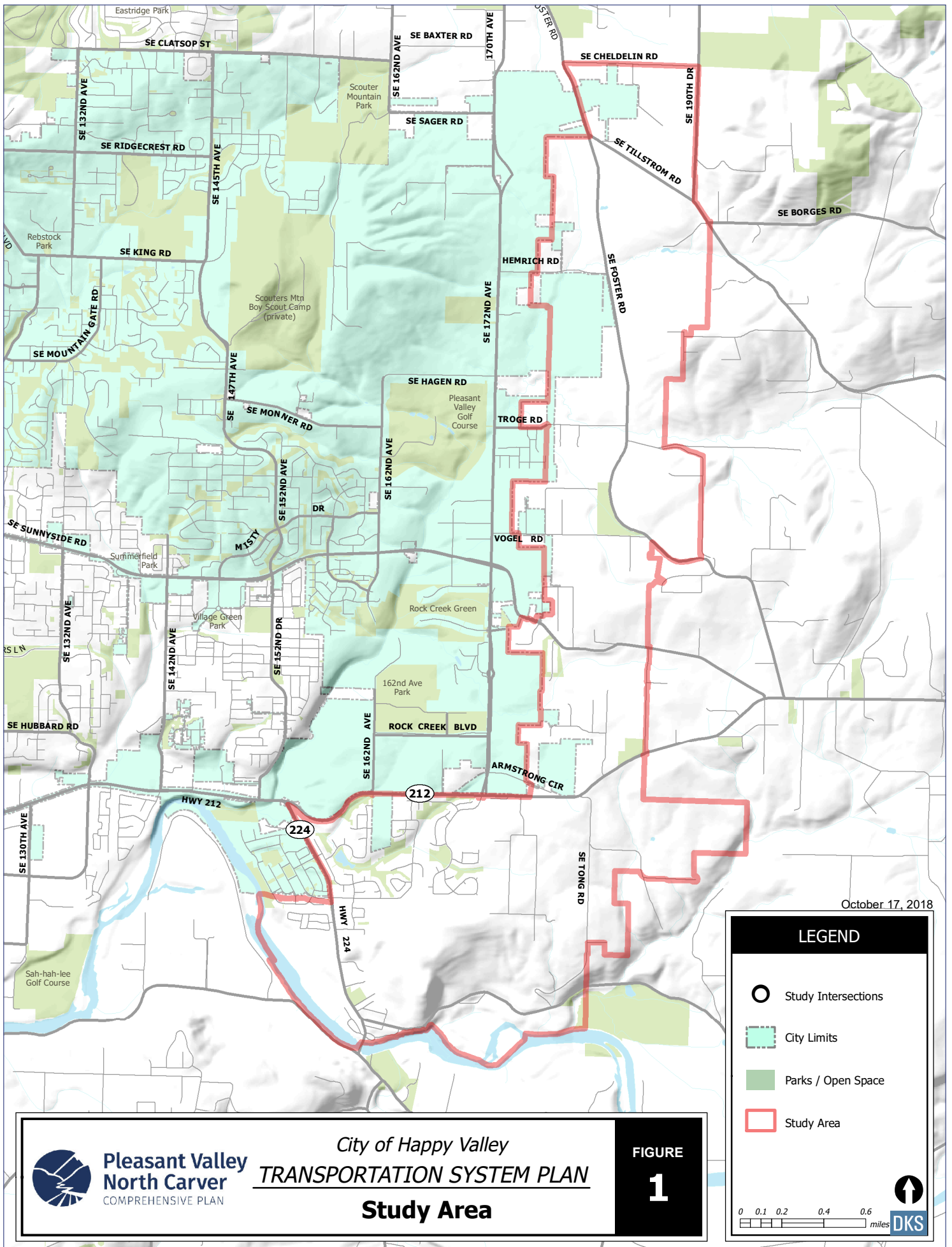
EXISTING TRANSPORTATION INFRASTRUCTURE

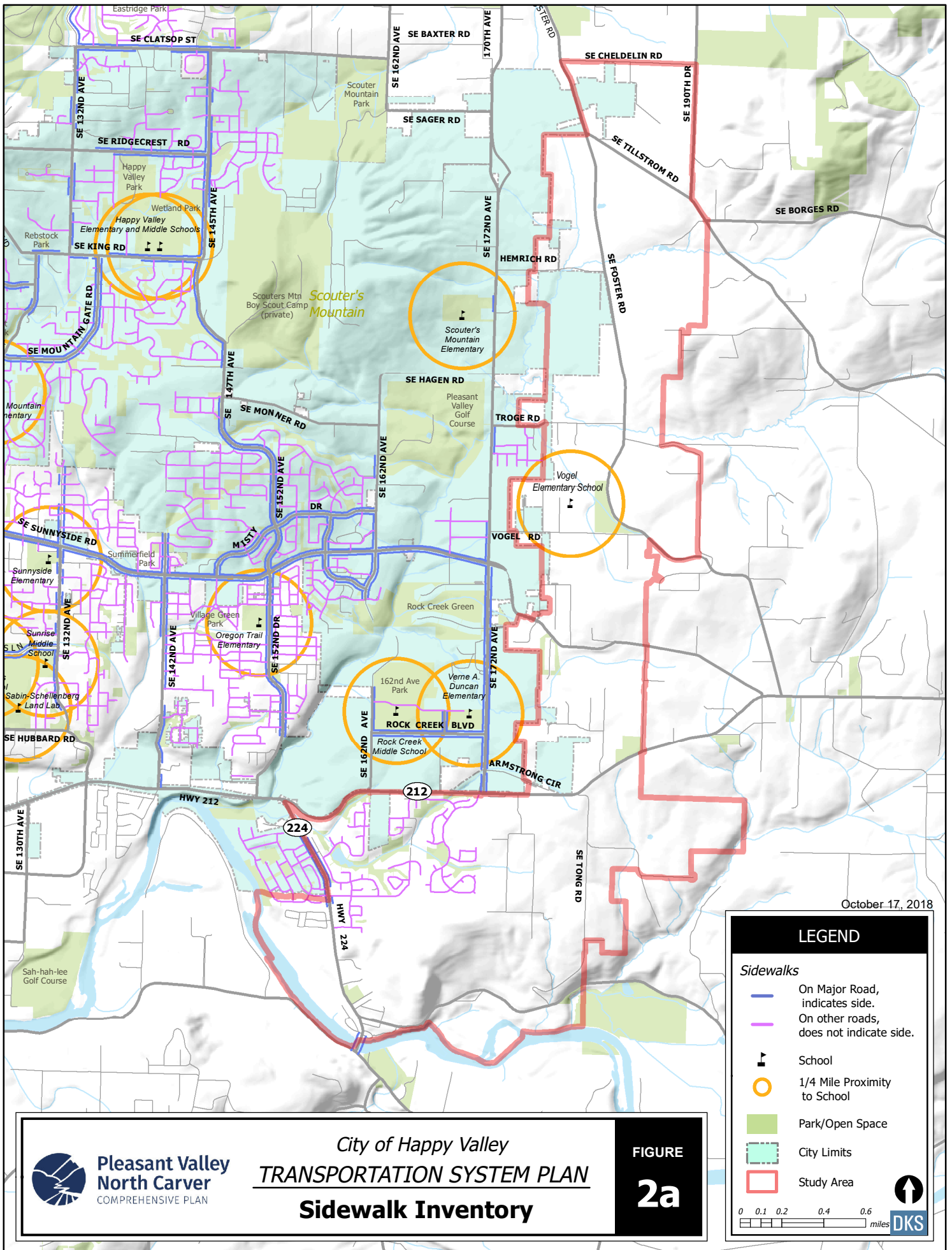
Much of the land within the study area is rural residential. An exception is suburban neighborhoods and commercial uses located near the OR 212/OR 224 intersection and urban development in Carver. As a result, most roadways are not constructed to urban standards. In addition, there are several buttes, creeks and the Clackamas River in the area, which limit the ability to provide system connectivity in a cost-effective manner. Evaluating the transportation impacts of new Comprehensive Plan designations requires an understanding of the current transportation facilities in this area. This section includes descriptions of existing infrastructure to serve pedestrian, bicycle, transit, and motor vehicle modes of travel in the study area.

Pedestrian and Bicycle System

The available pedestrian and bicycle facilities are summarized in Figures 2 through 3 and in Table 1. Due to the rural nature of the abutting land uses, most streets have not been improved to urban standards and generally lack accommodation for pedestrian and bicycle users. A segment of OR 224 near Eckert Lane is an exception; it provides sidewalks and bike lanes on both sides of the street.

Those walking or biking in the study area typically travel along the edge of a street. The quality of the roadway shoulder area varies from pavement beyond the travel lane to a narrow gravel strip. Several of the roadway segments have no shoulder area available or narrow shoulder areas against constraints such as steep slopes, drainage ditches and vegetation. Most of the key roadways have posted speeds up to 45 miles per hour combined with sharp curves and steep grades. These combined conditions are generally not conducive to comfortable conditions for walking and biking in a travel lane shared with vehicles.





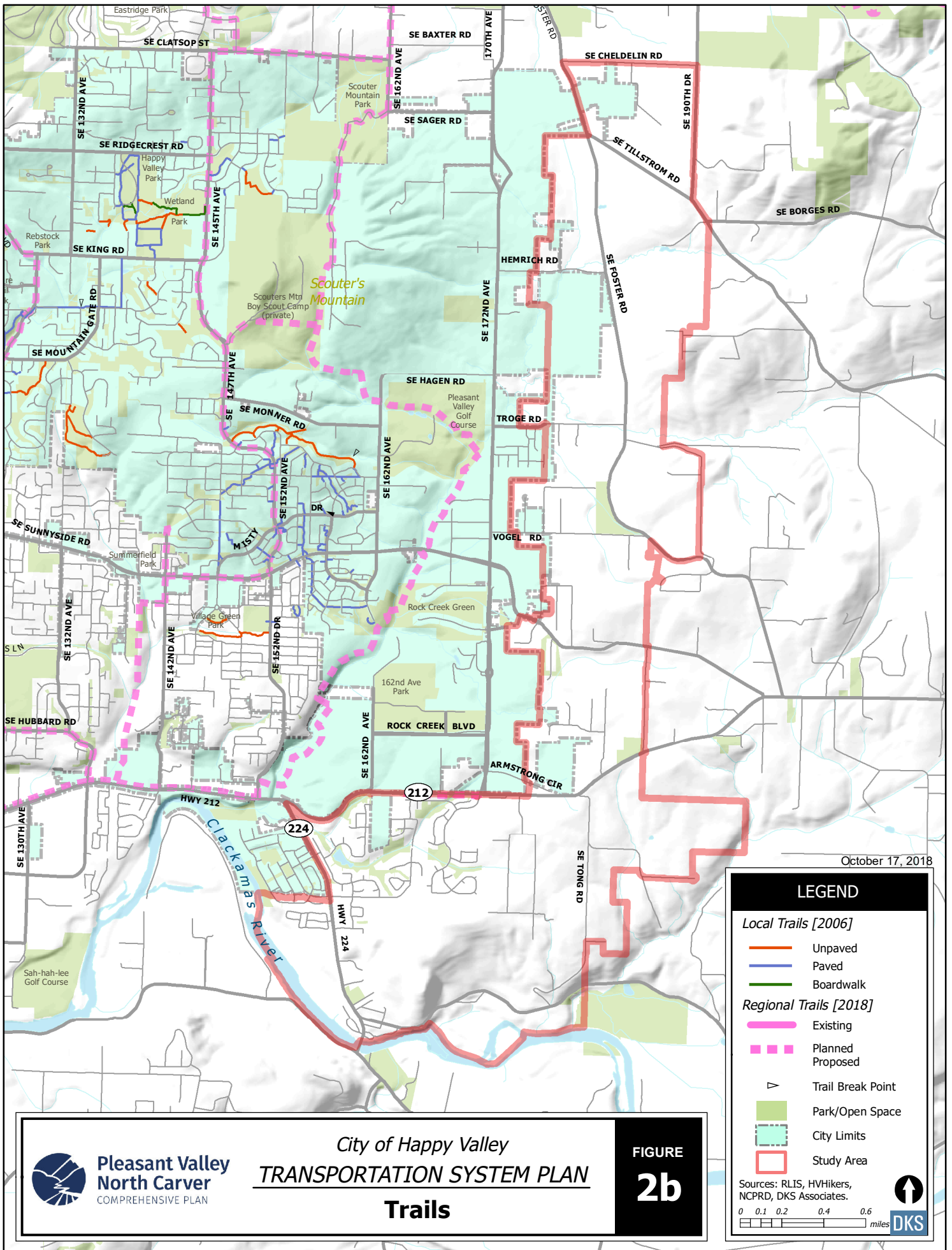


Table 1: Existing Pedestrian and Bicycle Characteristics

Roadway (limits)	Pedestrian Facility	Bike Facility
OR 212 (OR 224 to 187 th Avenue)	shoulder	shoulder
OR 224 (OR 212 to Tong Road)	shoulder sidewalks at Eckert Ln	shoulder bike lanes at Eckert Ln
Foster Road (Cheldelin Road to Winston Road)	narrow shoulder	narrow shoulder
Sunnyside Road (172 nd Avenue to 187 th Avenue)	shoulder	Shoulder bike lane segment east of 172 nd Avenue
Vogel Road (172 nd to Foster Road)	shoulder	shoulder
Troge Road (172 nd to Foster Road)	narrow shoulder	narrow shoulder
Hemrich Road (172 nd to Foster Road)	shoulder	shoulder
Cheldelin Road (172 nd to Foster Road)	narrow shoulder	narrow shoulder
Tillstrom Road (Foster Road to Borges Road)	shoulder	shoulder
190 th Avenue (Cheldelin Road to Tillstrom Road)	shoulder	shoulder
Winston Road (Foster Road north to Foster Road south)	shoulder	shoulder
187 th Avenue (Sunnyside Road to OR 224)	shoulder	shoulder
Tong Road (OR 212 to OR 224)	narrow shoulder	narrow shoulder
Market Road (OR 224 to north side of Clackamas River bridge)	narrow shoulder	narrow shoulder
Market Road bridge over Clackamas River	sidewalks	bike lanes

Public Transit System

TriMet is the regional transit provider for the Portland metro area and operates one bus route within the study area. The existing transit system is shown in Figure 4. Bus Route 30 – Estacada operates on OR 224 between the Clackamas Town Center and City of Estacada. The route operates weekdays with approximate 30-minute headways and Saturdays with one-hour headways. Route 30 provides eight bus stop pairs (eastbound and westbound) on OR 224 between OR 212 and Tong Road. Year 2015 ridership data shows each of the Route 30 stops along this segment serve less than 10 transit trips per day.

Transit users in the study area are generally more than one-half mile from the closest bus stop on OR 224. This distance is greater than the average comfortable walking or biking trip to connect to transit service.



Roadway System

Located between the cities of Happy Valley and Gresham, the study area is characterized by unimproved rural facilities with many curves and grade changes. Field inventories were conducted to determine characteristics of key roadways within the study area. Data collected included posted speed limits, roadway lanes, lane configurations, and intersection controls. These characteristics define corridor capacity and operating speeds throughout the system, which affect travel path choices for drivers. The summary of study area roadway characteristics is listed in Table 2 and shown in Figures 5 to 7.

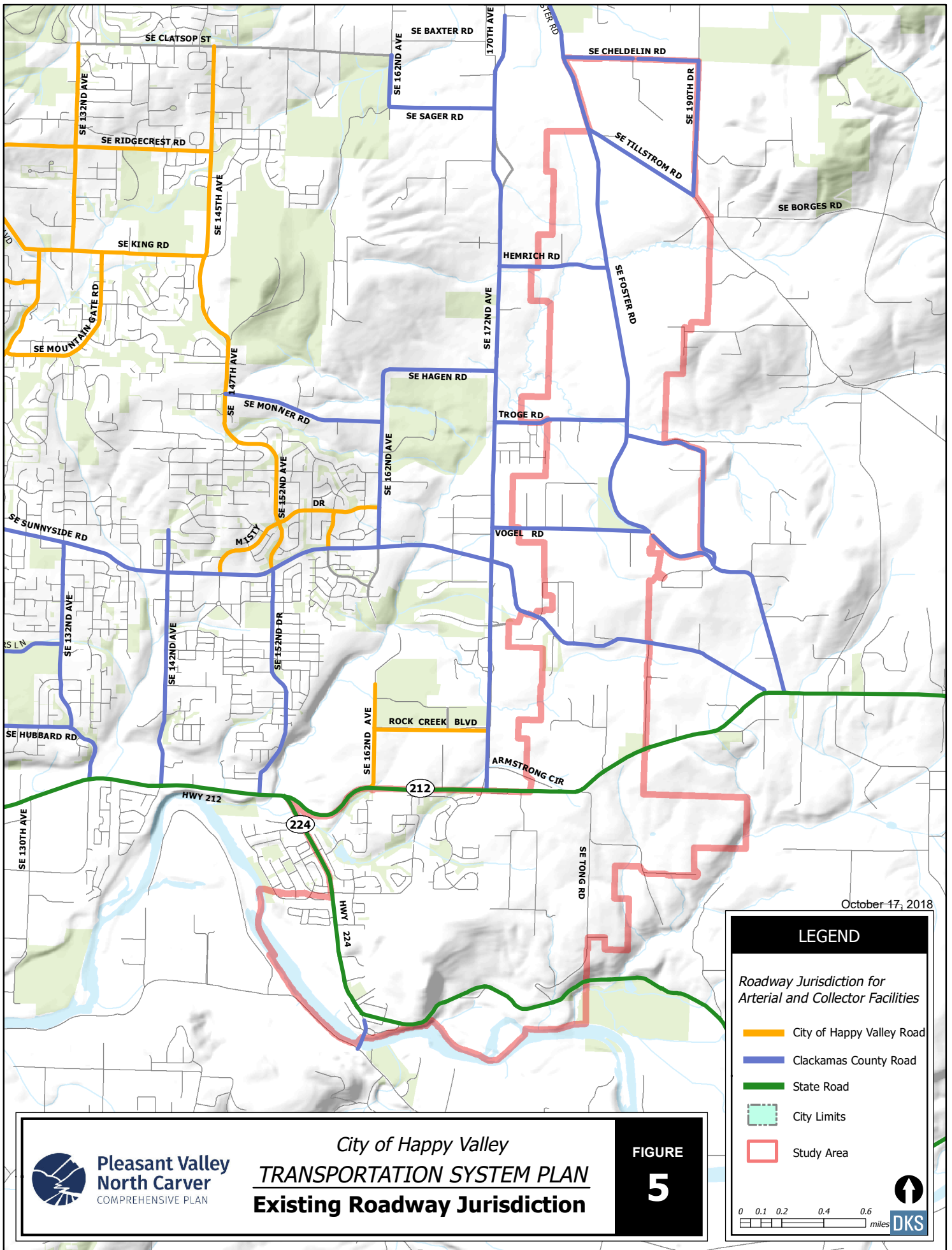
Table 2: Existing Key Study Area Roadway Characteristics

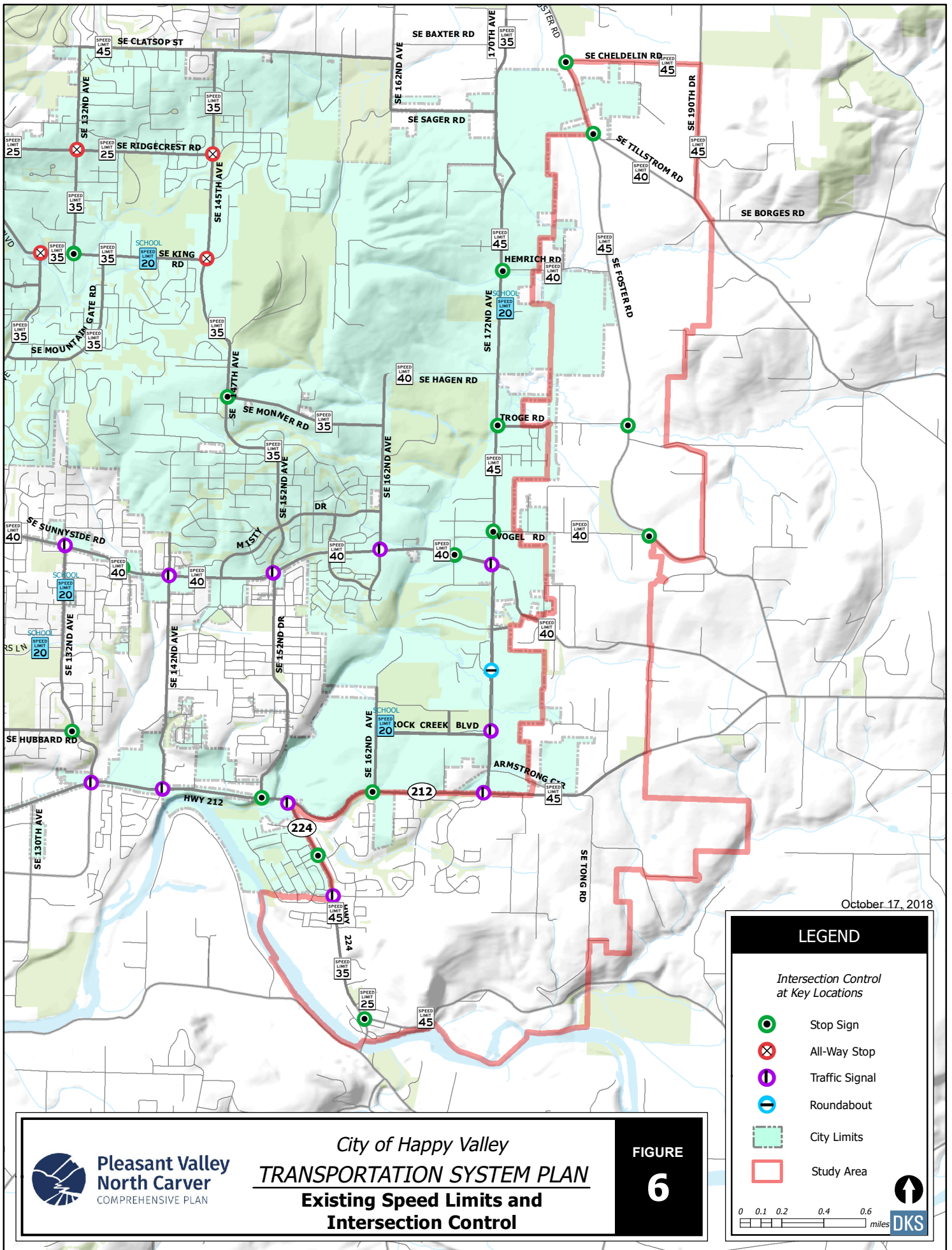
Roadway	Agency	Functional Classification*	Posted Speed Limit (MPH)	Number of Lanes	Lane Width (ft)	Shoulder Width (ft)
OR 212	ODOT	Urban Principal Arterial	45	2/5	12-18	1-8
OR 224 OR 212 to Carver	ODOT	Urban Principal Arterial	25 to 45	2/4	12-15	2-6
OR 224 Carver to Tong Rd	ODOT	Urban Minor Arterial	25 to 45	2	12-13	1-6
Foster Road	Clackamas County	Minor Arterial	45	2/3	11-13	1-5
Sunnyside Road	Clackamas County	Major Arterial	40	2/5	11-16	0-6
Vogel Road	Clackamas County	Collector	40	2	10-11	0-4
Troge Road	Clackamas County	Collector	not posted	2	10-11	0-3
Hemrich Road	Clackamas County	Collector	40	2	10-11	0-4
Cheldelin Road	Clackamas County	Minor Arterial	45	2	10-11	0-2
Tillstrom Road	Clackamas County	Minor Arterial	40	2	10-11	1-4
190 th Avenue	Clackamas County	Collector	45	2	10-12	1-4
Winston Road	Clackamas County	Local	25	2	9-11	0-3
187 th Avenue	Clackamas County	Local	not posted	2	8-10	0-3
Tong Road	Clackamas County	Local	40	2	10-13	0-4
Market Road	Clackamas County	Major Arterial	25	2	11-13	0-2

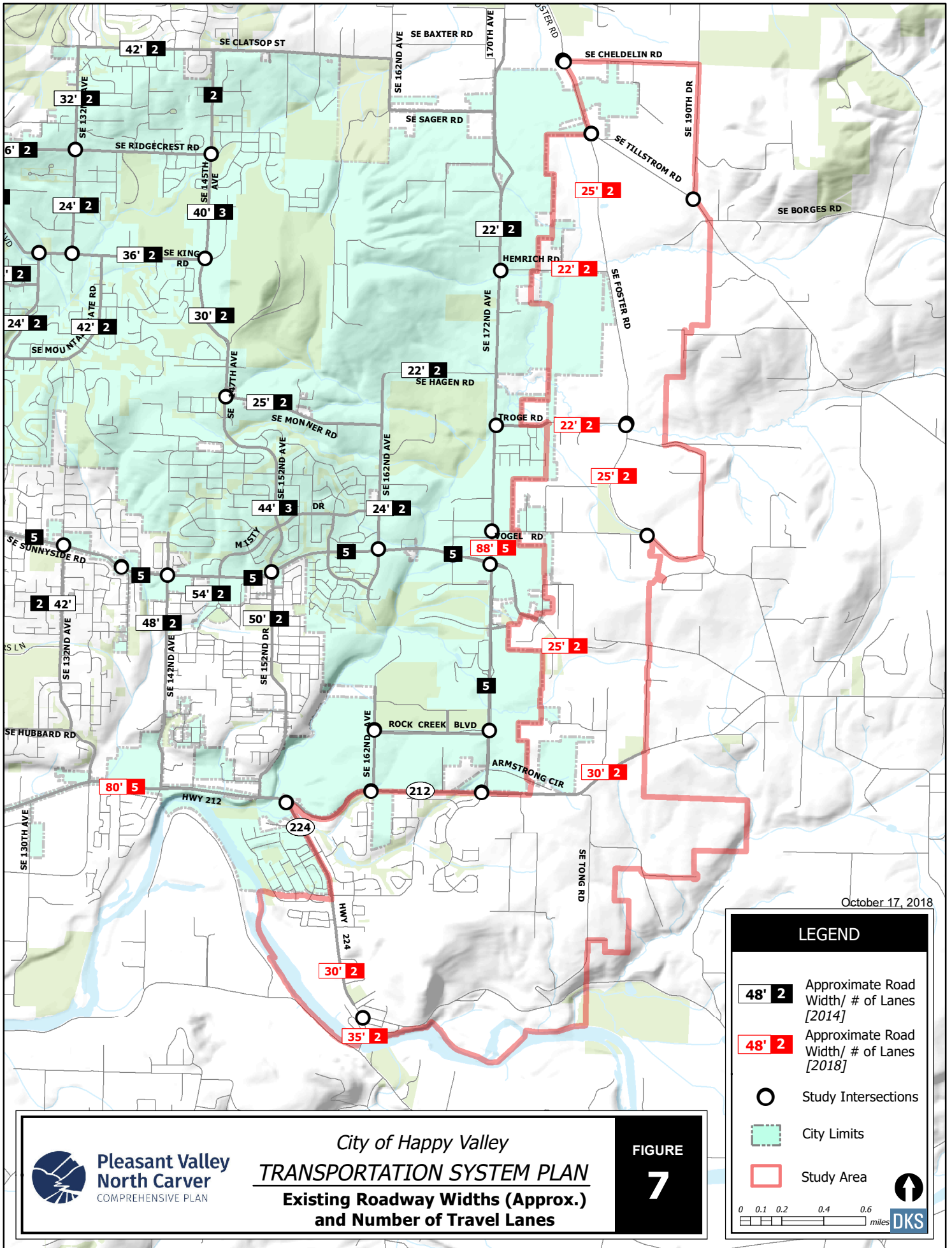
*Source: Oregon Highway Plan, Happy Valley Transportation System Plan and Clackamas County Transportation System Plan.

Other observations were made during the field inventory that help describe the study area characteristics.

- Many of the roadways have segments signed with a lower advisory speed limit (20 to 30 miles per hour) to mitigate safety concerns at sharp curves and steep grades.
- The surface condition on 187th Avenue is poor with large sections of gravel roadway and shoulder area.
- The Market Road bridge over the Clackamas River has a new 50-foot wide bridge structure that provides vehicle lanes, sidewalks, and bike lanes.







TRANSPORTATION STANDARDS

The following sections describe the transportation standards for the street network serving the study area, including access spacing and mobility.

Access Management Standards

Proper roadway access spacing is important to maintain operating characteristics and safety. While all parcels are allowed access, it is desired that access to parcels along major roadways be limited to side streets or consolidated and shared with adjacent properties. When roadway access points are located too frequently along a roadway, safety and roadway performance are diminished. It is best to incorporate appropriate access spacing practices upon initial development or redevelopment to limit the amount of management required in the future. Access spacing standards for study area roadways are identified in Table 3. ODOT standards are shown for state facilities and City of Happy Valley standards are shown for the remaining facilities.

Table 3: Access Spacing Standards

Facility by Agency	Minimum Access Spacing (full access)	Minimum Access Spacing (restricted access)	Maximum Access Spacing
ODOT Statewide Highway			
OR 212 – urban area, 45 mph	-	-	800 feet
OR 224 – urban area, 45 mph	-	-	800 feet
OR 224 – urban area, 35 mph	-	-	500 feet
OR 224 – urban area, 25 mph	-	-	350 feet
City of Happy Valley			
Arterial	1,000 feet	500 feet	
Collector	400 feet	200 feet	530 feet
Neighborhood/Local	-	-	530 feet

Source: 1999 Oregon Highway Plan, Appendix D – Highway Classification by Mile point and Appendix C, Table 14. Happy Valley Transportation System Plan Update, Table 8-2.

Mobility Standards

Intersection operations are important to ensure the mobility needs of the transportation system are being met. The performance standards for intersections within the study area are summarized below.

State Highways

- OR 212 and OR 224 have a mobility standard¹ that requires intersections located on the highway to operate at or below a volume-to-capacity (V/C) ratio of 0.99 during the first and second hours of peak travel times. ODOT does not apply a standard to the intersection level of service (LOS).

City of Happy Valley Facilities

- All signalized intersections shall operate at LOS D and V/C ratio of 0.90 or better during the peak hours of analysis. Individual movements must meet level of service E and a V/C ratio of 1.0.
- All roundabout intersections shall operate at LOS D or better during the peak hours of analysis. Each approach must meet LOS E and a V/C ratio of 0.85.
- All unsignalized two-way stop-controlled intersections shall operate at LOS E or better (based on average approach delay) for all side street approaches during the peak hours of analysis.
- All unsignalized all-way stop controlled intersections shall operate at LOS D or better based on average intersection delay during the peak hours of analysis.

Clackamas County Facilities

- Requires a LOS D as the minimum acceptable performance standard² for signalized and unsignalized intersections on arterial and collector roadways under Clackamas County jurisdiction.

EXISTING TRAFFIC CONDITIONS

The following sections summarize the existing traffic volumes and operations. Study intersections were selected for analysis based on proximity to the plan area and potential impacts of urban development in the plan area:

- Foster Road/Cheldelin Road
- Foster Road /Tillstrom Road
- 190th Drive/Tillstrom Road
- 172nd Avenue/Hemrich Road
- 172nd Avenue/OR 212
- Foster Road /Troge Road
- Foster Road /Vogel Road
- 172nd Avenue/Sunnyside Road
- OR 212/OR 224
- OR 224/Market Road

¹ Oregon Highway Plan, Table 7: Volume to Capacity Ratio Targets within Portland Metropolitan Region, Corridors.

² Clackamas County Comprehensive Plan, Chapter 5- Transportation.

Motor Vehicle Volumes

The existing intersections within the study area were selected for focused analysis to address areas of concern along key roadways and to evaluate potential impacts of new Comprehensive Plan designations. Intersection turn movement counts were conducted during the weekday PM peak hour (4:00 to 6:00 p.m.) at the study area intersections during 2017 and 2018. The existing average daily traffic volumes on key roadways, estimated based on the PM peak hour counts, are shown in Figure 8.

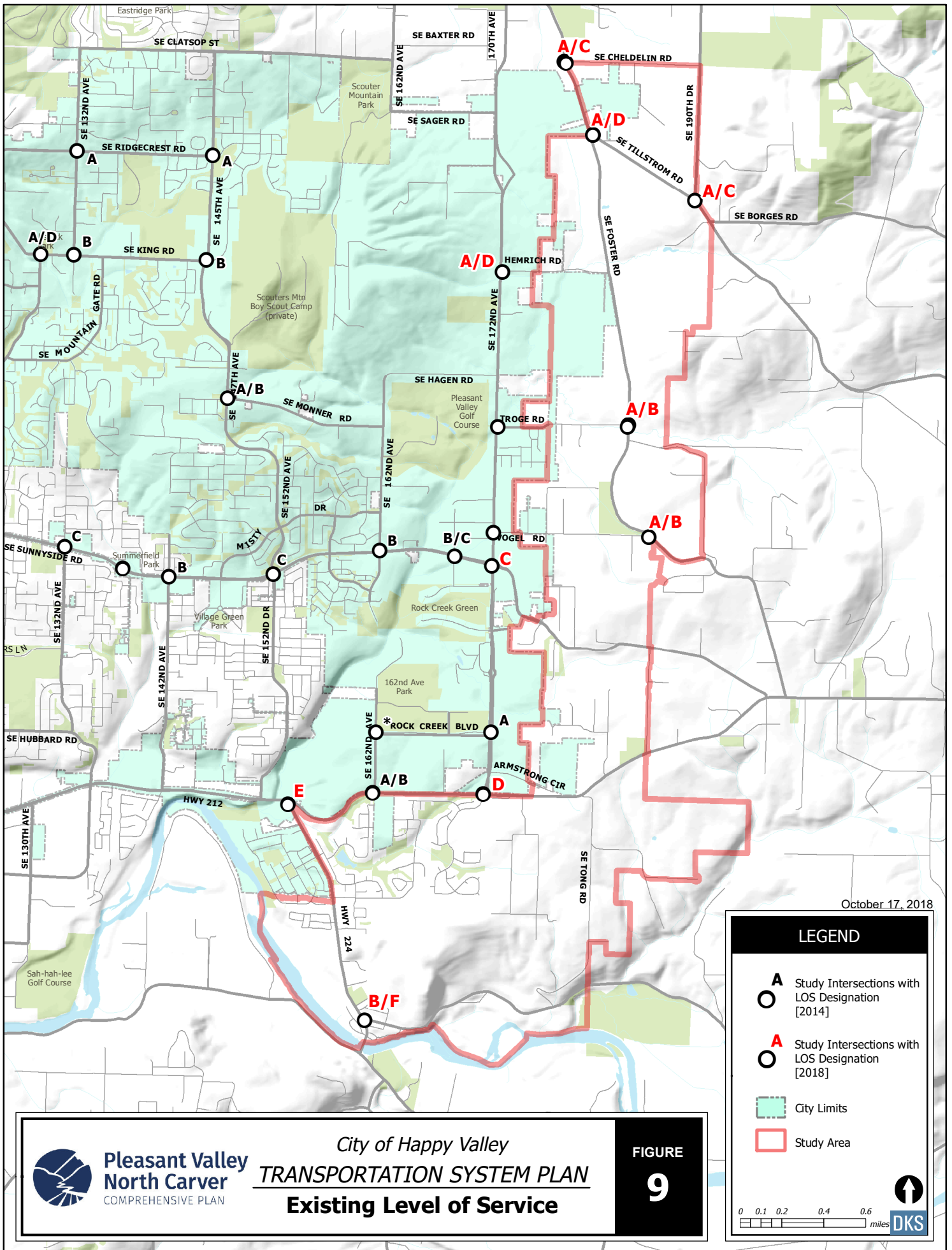
Intersection Operations

The PM peak hour intersection volumes were used to determine the existing study intersection operating conditions based on the 2000 Highway Capacity Manual³ (HCM) methodology for signalized and the 2010 Highway Capacity Manual (HCM) methodology for unsignalized intersections. The results of this analysis are listed in Table 4 and shown in Figure 9. The OR 212/OR 224 intersection exceeds the ODOT volume to capacity ratio mobility standard. The OR 224/Market Road intersection exceeds both the ODOT volume to capacity ratio mobility standard and the Clackamas County level of service mobility standard.

Table 4: Existing Intersection Performance (PM Peak Hour)

Signalized Intersection	Delay	Level of Service	V/C
172nd Avenue/Sunnyside Road	27.8	C	0.42
172 nd Avenue/OR 212	38.2	D	0.84
OR 212/OR 224	45.4	D	1.00
Unsignalized Intersection	Delay	Level of Service	V/C
Foster Road/Cheldelin Road	18.1	A/C	0.16
Foster Road /Tillstrom Road	31.8	A/D	0.55
190th Drive/Tillstrom Road	15.4	A/C	0.27
172nd Avenue/Hemrich Road	27.7	A/D	0.40
Foster Road /Troge Road	13.0	A/B	0.27
Foster Road /Vogel Road	13.0	A/B	0.35
OR 224/Market Road	>200.0	B/F	1.42
Signalized Intersection: Delay = Average Intersection Delay (sec.) LOS = Level of Service V/C = Volume-to-Capacity Ratio Shaded values do not meet standards	Unsignalized Intersection: Delay = Critical Approach Delay (sec.) LOS = Major Street/Minor Street V/C = Critical Volume-to-Capacity Ratio Shaded values do not meet standards		

³ 2000 Highway Capacity Manual, Transportation Research Board, Washington DC, 2000. 2010 Highway Capacity Manual, Transportation Research Board, Washington DC, 2010.



Safety Assessment

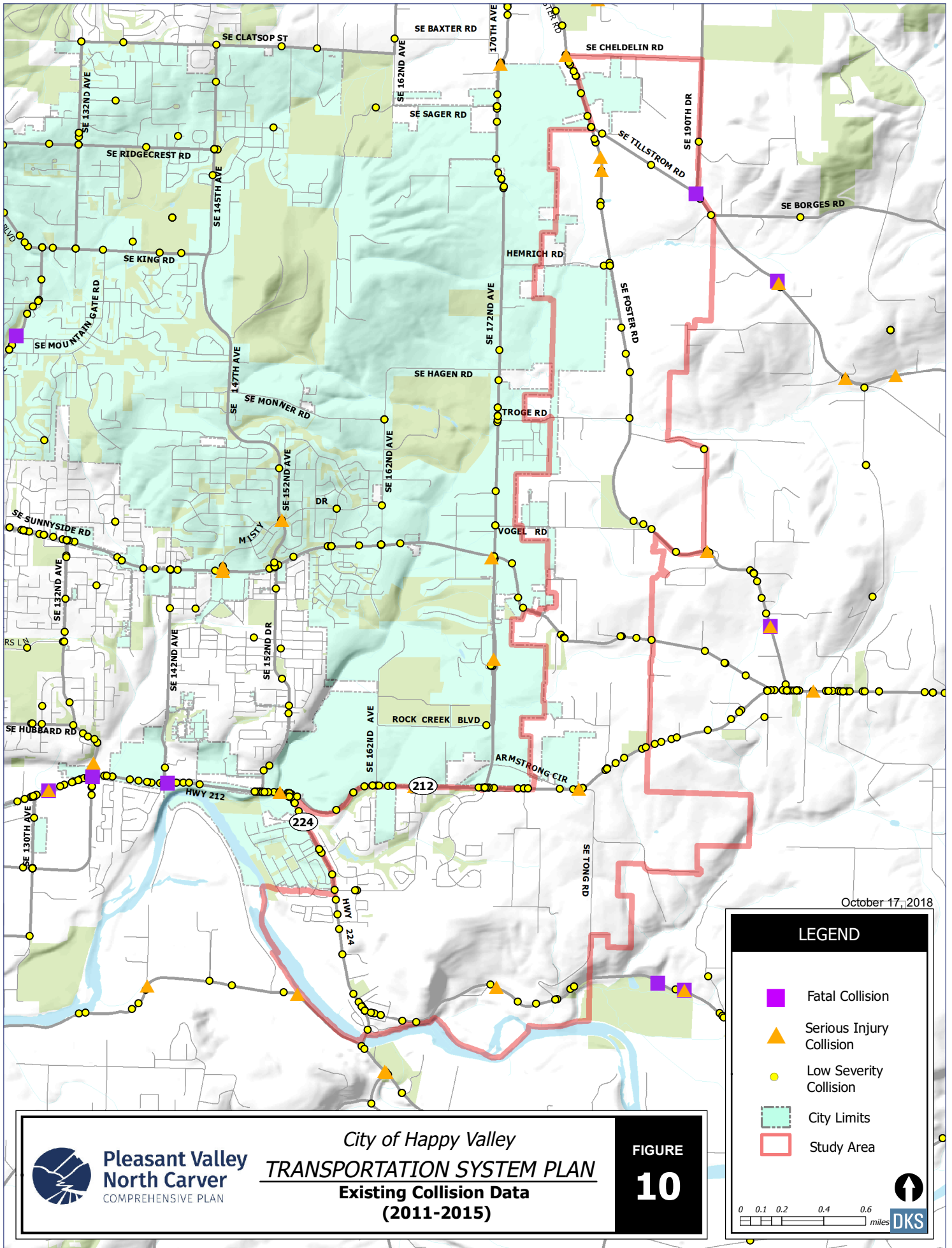
Collision data for the most recent five-year period (2012 – 2016) was obtained from ODOT for the calculation of crash rates for study area intersections. The total number of collisions experienced at an intersection is typically proportional to the number of vehicles entering it. Therefore, a collision rate describing the frequency of collisions per million entering vehicles (MEV) is used to evaluate the intersection. Rates over 1.0 crashes per MEV should be flagged for further investigation. All the study intersections had crash rates of less than 0.7 crashes per MEV. The collision data is summarized in Table 5.

The highest crash rates were observed at the Foster Road/Tillstrom Road and OR 224/Market Road intersections. A review of the collision data for both intersections found no trends related to crash type, vehicle direction, vehicle type (i.e. large truck), time of day, and weather.

ODOT has a Safety Priority Index System (SPIS) that it uses for the identification and analysis of locations on the state highway system with potential safety needs. Each year, the system is used to produce a list of sites within each ODOT Region that are ranked within the top 5th or 10th percentiles of all SPIS locations statewide. The SPIS score is based on three years of crash data (2013 – 2015) and reflects crash frequency, crash rate, and crash severity. There are no top 5th or 10th percentile ODOT SPIS locations in the study area.

Table 5: Study Intersection Collision Data (2012 – 2016)

Intersection	Serious Injury (Inj. A)	Evident Injury (Inj. B)	Possible Injury (Inj. C)	Property Damage Only (PDO)	Total Crashes	Observed Crash Rate
172nd Avenue/Sunnyside Road	0	2	8	11	11	0.26
172 nd Avenue/OR 212	0	7	24	8	22	0.45
OR 212/OR 224	0	0	4	6	6	0.09
Foster Road/Cheldelin Road	1	3	6	7	7	0.43
Foster Road /Tillstrom Road	0	4	6	12	13	0.62
190th Drive/Tillstrom Road	0	2	5	0	5	0.42
172nd Avenue/Hemrich Road	0	1	0	2	2	0.10
Foster Road /Troge Road	0	0	0	2	1	0.09
Foster Road /Vogel Road	0	0	3	2	3	0.30
OR 224/Market Rd	0	3	4	14	19	0.65



To: Joe Dills, AICP, Angelo Planning Group **Date:** December 4, 2018
From: Todd Chase, Timothy Wood; FCS GROUP
CC: Project file #2874
RE: Pleasant Valley/North Carver Comprehensive Plan, Housing Needs Projection (Task 1.3-f)

I.A. EXECUTIVE SUMMARY

As part of the larger Pleasant Valley/North Carver Comprehensive Plan process, FCS GROUP is evaluating the housing needs within the area. Important conclusions from this effort are summarized below.

I.A.1. Economic Overview

Analysis of a housing market must consider the broader economic climate. Summarized below is the overall outlook for the national, state, and regional economies impacting Happy Valley and the Pleasant Valley/North Carver area.

- Nationally, economic growth is expected to continue in the near-term with GDP increases projected into 2020 by the Federal Reserve Bank.
- Statewide unemployment in Oregon fell for the 8th consecutive year while overall employment increased for the 9th consecutive year.
- Household growth forecasts from Metro estimate an additional 4,809 households in Happy Valley between 2015 and 2040. In addition, the Pleasant Valley/North Carver area is expected to add 4,234 households in the same timeframe.

I.A.2. Market Analysis

- Happy Valley's housing stock is predominantly single family detached housing, however, townhomes and apartments have been added in recent years.
- Home values in Happy Valley are stable and relatively high compared with similar markets in the Portland Metropolitan Area.
- Rental units have increased as a share of Happy Valley's housing stock, moving from 5% of occupied housing units in the city in 2000 to 15% in 2016.

I.A.3. Housing Growth Forecast Scenarios

- Two scenarios of residential build out have been formulated based on the above-mentioned 4,234 housing units expected to be added to the Pleasant Valley/North Carver area.
- Variations between the two scenarios examine different densities and owner/renter splits.
- Both scenarios indicate an excess of residential-zoned land to accommodate anticipated housing unit growth until

I.A.4. Housing Affordability Considerations

- According to HUD guidelines, houses in the Portland Metropolitan Area priced at \$323,000 or less or renting for \$1,628 a month or less would be affordable to households earning 80% of median family income.
- The projected mix of housing types in the Pleasant Valley/North Carver Plan are expected to result in higher densities, including construction of townhomes and apartments.
- Presently, median rents for housing in Happy Valley are \$1,282 per month, well under the above-mentioned “affordability” threshold established by HUD.
- Based on this information, a market-oriented approach is possible for providing affordable rental housing in the Pleasant Valley/North Carver area.

I.B. INTRODUCTION

This memorandum provides analysis and recommendations regarding housing for use in the Pleasant Valley/North Carver Comprehensive Plan process. As part of this task FCS GROUP performed the following activities:

- Evaluated current real estate trends in residential lands within the Portland Metro area as well as primary market areas for the Happy Valley area.
- Evaluated state and regional data which identifies projected growth patterns in population and employment in Happy Valley and the surrounding area.
- Analyzed Census and local market data to identify further demographic and socioeconomic trends that define the Happy Valley area.
- Formulated draft recommendations that help inform a market-supportable development program for housing land needs in the Happy Valley area over a long-term planning period.

These findings are discussed in detail below.

I.C. ECONOMIC OVERVIEW

FCS GROUP conducted an economic overview of the geographic area that influences the Primary Market Area (PMA). The PMA was identified based on an understanding of the Pleasant Valley/Carver planning area’s role within the broader tri-county Metro Region (consisting of Clackamas, Multnomah and Washington counties), with particular emphasis on the East Happy Valley and former Damascus portion of Clackamas County.

For analysis purposes, the PMA includes Clackamas County, and the Pleasant Valley / North Carver subarea as defined by Traffic Analysis Zones (TAZs) within the planning area. The basis for the PMA is the relevance the area has with respect to long term Metro growth forecasts for the planning area and the area’s contribution to urban Clackamas County.

I.C.1. National and Regional Overview

The current economic recovery, which began in June of 2009, has entered its 9th year, among the longest economic upturns in modern history. Overall consumer confidence continues to be high while

unemployment has consistently ticked down. In Oregon, 38,900 jobs were added between 2016 and 2017, the 7th consecutive year of overall statewide job growth. Meanwhile, the unemployment rate in Oregon fell to 4.1 percent at the end of 2017 from 4.3 percent in 2017, the 8th consecutive year of falling unemployment in the state.

The U.S. and Oregon economies are expected to continue their steady recoveries according to many economic indicators. National economic growth (as measured by Gross Domestic Product) is expected to increase by between 2.6 and 3 percent in 2018, between 2.2 and 2.6 percent in 2019 and by 1.8 to 2.1 percent in 2020 according to the Federal Reserve Bank¹.

Like many regions along the U.S. West Coast, the Portland Metropolitan Area is experiencing rapid increases in home values along with modest increases in income levels, decreasing unemployment, and relatively low office and industrial vacancies within the last few years. These factors, along with in-migration will lead to emerging development opportunities.

The population in the Portland-Beaverton-Vancouver Primary Metropolitan Statistical Area (PMSA) increased from 1.9 million in 2000 to over 2.2 million by 2010 and nearly 2.5 million by 2017².

According to Metro, the regional planning authority, Metro population is forecasted to increase over the foreseeable future. Metro projections suggest the region may add around 700,000 residents over the next between 2015 and 2040³. Within Clackamas County the historic 2000 to 2017 population growth rate averaged 1.2 percent per year, as county population increased from 338,391 in 2000 to 413,000 in 2017⁴.

Increasing population within the greater Portland Region will also result in an expanding labor force, which will lead to increased employment as businesses add jobs. Long-term job growth forecasts by Metro expect around 470,000 jobs to be added to the PMSA between 2015 and 2040⁵.

¹ March 21, 2018: FOMC Projections materials, Accessible version, (<https://www.federalreserve.gov/monetarypolicy/fomcproptabl20180321.htm>)

² Sources: US Census 2000 population estimate and Portland State University Population Research Center for 2010 and 2017 population estimates. Estimates represent a combination of Clackamas, Columbia, Multnomah, Washington, and Yamhill Counties in Oregon and Clark and Skamania Counties in Washington.

³ 2014 Metro Urban Growth Report Appendix 1a "Population and Employment Forecast for the Portland-Vancouver-Hillsboro Metropolitan Statistical Area (2015-2035)" pg. 3 2014 Vintage Regional Forecast Population Column.

⁴ Sources: US Census 2000 population estimate and Portland State University Population Research Center for 2017 population estimate.

⁵ 2014 Metro Urban Growth Report Appendix 1a "Population and Employment Forecast for the Portland-Vancouver-Hillsboro Metropolitan Statistical Area (2015-2035)" pg. 3 2014 Vintage Regional Forecast Employment Column.

I.C.2. Happy Valley Overview

According to the U.S. Census, the City of Happy Valley had a population of 19,985 in 2017, up from 4,519 in 2000, adding 12,955 residents and 4,148 households over that timeframe. Nearly 100% of the population and household growth which occurred in Happy Valley since 2000 is attributed to new construction rather than annexation of developed properties. As identified in **Table 1**, population growth in Happy Valley far exceeds the growth rates for Clackamas County, the Tri-county Metro Region, and Oregon statewide growth rates.

Table 1: Population Trends 2000-2017

	2000	2010	2017	Change, 2000-2017
Happy Valley	4,519	14,330	19,985	342.2%
Clackamas County	338,391	376,780	413,000	22.0%
Tri County Region *	1,444,219	1,644,635	1,811,860	25.5%
Oregon	3,421,399	3,837,300	4,141,100	21.0%

Source: U.S. Census Bureau and Portland State University Population Research Center

Happy Valley households have fluctuated with regards to their median ages, dropping from 37.1 years in 2000 to 33.4 years in 2010 and increasing to 38.6 years in 2016 (**Table 2**).

Table 2: Happy Valley Demographic and Socioeconomic Trends 2000-2016

	2000	2010	2016
Population	4,519	14,330	17,474
Group Quarters Population	-	-	41
Households	1,431	3,674	5,579
Family Households	1,335	3,337	4,433
Nonfamily Households	96	337	1,146
Population per Household	3.2	3.9	3.1
Average Household Size	3.2	3.4	3.1
Median Age	37.1	33.4	38.6
Median Household Income	\$90,978	\$103,633	\$106,197
Median Family Income	\$95,922	\$108,769	\$114,965
Per Capita Income	\$36,665	\$35,648	\$41,790

Note: Incomes for 2000 are reported in 1999 dollars, incomes for 2010 are reported in 2009 dollars and incomes for 2016 are reported in 2015 dollars.

Source: U.S. Census Bureau and Portland State University Population Research Center

Income levels have risen measurably in Happy Valley since 2000 and they are significantly higher than income levels in Clackamas County and the statewide average (see **Table 3**).

Table 3: Demographic and Socioeconomic Characteristics (2016)

	Happy Valley	Clackamas County	Oregon
Average Household Size	3.2	2.6	2.5
Median Age	38.6	41.4	39.1
Median Household Income	\$106,197	\$68,915	\$53,270
Median Family Income	\$114,965	\$83,308	\$65,479
Per Capita Income	\$41,790	\$35,506	\$28,822

Note: Incomes reported in 2015 dollars.

Source: U.S. Census Bureau

As household counts have rapidly increased in Happy Valley, the income characteristics of those households have remained fairly similar. As indicated in **Table 4**, the share of households earning over \$75,000 has remained consistent while the number of such households has increased dramatically.

Table 4: Households by Income Level, Happy Valley

Income Level	2000 Census		2010 Census		2012-2016 ACS		Change, 2000-2016	
	Number	Dist. %	Number	Dist. %	Number	Dist. %	Number	Dist. %
Less than \$10,000	9	0.6%	82	2.2%	89	1.6%	80	2.0%
\$10,000 to \$14,999	9	0.6%	19	0.5%	78	1.4%	69	1.7%
\$15,000 to \$24,999	72	4.7%	56	1.5%	173	3.1%	101	2.5%
\$25,000 to \$34,999	57	3.7%	145	3.9%	128	2.3%	71	1.8%
\$35,000 to \$49,999	151	9.9%	282	7.6%	262	4.7%	111	2.7%
\$50,000 to \$74,999	263	17.3%	472	12.7%	1,071	19.2%	808	19.9%
\$75,000 to \$99,999	273	17.9%	691	18.6%	764	13.7%	491	12.1%
\$100,000 to \$149,999	376	24.7%	917	24.7%	1,451	26.0%	1,075	26.5%
\$150,000 to \$199,999	128	8.4%	583	15.7%	736	13.2%	608	15.0%
\$200,000 or more	185	12.1%	468	12.6%	826	14.8%	641	15.8%
Total	1,523	100%	3,714	100%	5,579	100%	4,056	100%

Note: Incomes for 2000 are reported in 1999 dollars, incomes for 2010 are reported in 2009 dollars and incomes for 2016 are reported in 2015 dollars.

Source: U.S. Census Bureau

Happy Valley has experienced an increase in population in virtually all age cohorts, with the exception of the very young (under age 9 category). The fastest growing age cohort between 2010 and 2016 is in the age 50-64 category, as indicated in **Table 5**.

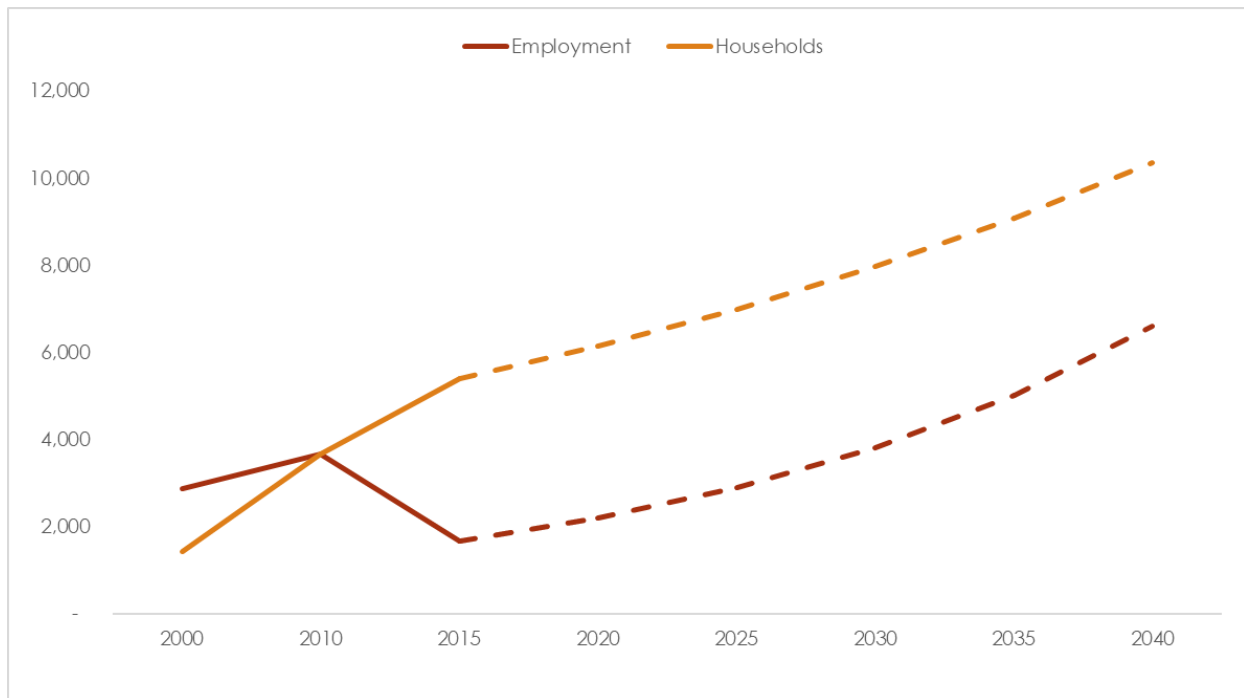
Table 5 Population by Age Cohort, Happy Valley 2010-2016

Income Level	2010 Census		2012-2016 ACS		Change	
	Number	Dist. %	Number	Dist. %	Number	Dist. %
Under 5 Years	1,591	11.1%	1,083	6.2%	(507)	-12.5%
5 to 9 Years	1,591	11.1%	1,206	6.9%	(385)	-9.5%
10 to 14 Years	1,404	9.8%	1,590	9.1%	186	4.6%
15 to 19 Years	931	6.5%	1,083	6.2%	152	3.7%
20 to 24 Years	659	4.6%	1,206	6.9%	547	13.5%
25 to 29 Years	487	3.4%	961	5.5%	474	11.7%
30 to 34 Years	731	5.1%	594	3.4%	(137)	-3.4%
35 to 39 Years	1,275	8.9%	1,398	8.0%	123	3.0%
40 to 44 Years	1,490	10.4%	1,468	8.4%	(23)	-0.6%
45 to 49 Years	1,247	8.7%	1,380	7.9%	134	3.3%
50 to 54 Years	802	5.6%	1,468	8.4%	665	16.4%
55 to 59 Years	717	5.0%	1,363	7.8%	646	15.9%
60 to 64 Years	573	4.0%	1,083	6.2%	510	12.6%
65 to 69 Years	344	2.4%	489	2.8%	145	3.6%
70 to 74 Years	229	1.6%	419	2.4%	190	4.7%
75 to 79 Years	201	1.4%	280	1.6%	79	1.9%
80 to 84 Years	43	0.3%	262	1.5%	219	5.4%
85 Years and Over	57	0.4%	175	1.0%	117	2.9%
Total	14,330	100%	17,474	100%	3,144	-

Source: U.S. Census Bureau

I.C.3. Long-Term Growth Forecasts

The most current long-term growth forecast by Metro anticipates that Happy Valley (current city limits. Excluding Pleasant Valley/North Carver plan area portion) will add approximately 4,809 households and 4,836 jobs between 2015 and 2040 as indicated in **Figure 2**.

Figure 2: Happy Valley Employment and Households, 2000-2040

Note: Dashed line indicates projections provided by Metro.

Source: U.S. Census (data from 2000-2010) and Metro (Data from 2025 to 2040).

The Pleasant Valley/North Carver area (based on traffic analysis zone analysis provided in Appendix A) is expected to add approximately 4,234 households and 1,384 jobs between 2015-2040, according to Metro forecasts (**Table 6**).⁶

⁶ Metro Source: 2015-2040 Distributed Forecast (Scenario #1610). Oregon Metro Research Center. Metro Region Data Adopted 2016 by Metro Ordinance 16-1371. Clark County Data Provided by Regional Transportation Commission. The 2015 and 2040 household allocations have been reviewed by local jurisdictions and adopted by the Metro Council in 2016.

Model Vintage: Scenario 1610, William 2 forecast, file created 07/21/2017

Table 6: Forecasts for Households and Employment (2015-2040)

	2015	2040 (Projected)	Projected Change (2015- 2040)	Projected CAGR (2015- 2040)
Pleasant Valley/North Carver Households	1,735	5,969	4,234	5.1%
Happy Valley Households*	5,381	10,190	4,809	2.6%
Clackamas County Households	151,352	199,420	48,068	1.1%
Tri-County Metro Region Households	687,123	961,317	274,194	1.4%
Pleasant Valley/North Carver Employment	324	1,708	1,384	6.9%
Happy Valley Employment	1,646	6,482	4,836	5.6%
Clackamas County Employment	152,401	226,537	74,136	1.6%
Tri-County Metro Region Employment	888,658	1,289,052	400,394	1.5%

*excluding Pleasant Valley/North Carver Plan area portion.

Source: Metro.

I.D. MARKET ANALYSIS

I.D.1. Housing Market

Citywide, Happy Valley's residential development patterns are primarily characterized by single-family detached housing. However, recent growth shows more of a mix of housing types. Happy Valley added 1,105 single-family detached units between 2010 and 2016, according to the U.S. Census. During this time frame, Happy Valley added 267 townhomes, 444 multifamily units, and 8 mobile homes (**Table 7**). Median home values at the end of 2016 were \$425,800, while median rents were \$1,282, according to the U.S. Census. Citywide home values and rents decreased slightly between 2010 and 2016 according to US Census data due in part to an increase in mid-market housing and apartment construction. More recent trends indicate that home prices are starting to increase as vacancy rates decline.

Housing vacancy rates have grown tight in recent years with the most recent data suggesting a 1.8 percent vacancy rate for all housing units in Happy Valley.

Table 7: Happy Valley Housing Inventory (2010-2016)

	2010	2016	2000-2010 Avg. Annual Absorption	2010-2016 Avg. Annual Absorption
Owner Occupied	3,354	4,728	193	229
Renter Occupied	360	851	29	82
Vacant	344	104	28	(40)
Total	4,058	5,683	249	271
Owner Occupied %	90.3%	84.7%	87.0%	73.7%
Renter Occupied %	9.7%	15.3%	13.0%	26.3%
Total	100.0%	100.0%	100.0%	100.0%
Vacant Dwellings %	8.5%	1.8%		
Single-Family Detached	3,448	4,552	326	184
Townhome/Plexes	84	351	13	45
Multifamily	158	603	26	74
Mobile Home	24	73	4	8
Total	3,714	5,579	369	311
Median Home Value	\$472,700	\$425,800		
Median Gross Rent	\$1,341	\$1,282		

Source: U.S. Census Bureau

In comparison to other market areas, Happy Valley home values are relatively stable, having increased 2.4 percent year-over-year between June 2017 and June 2018. As indicated on **Table 8**, median home sales prices in Happy Valley increased to \$509,000 in June of this year according to Zillow.com.

Table 8: Median Home Sales Price Trends in Selected Markets

	June 2017	June 2018	Change %
Happy Valley	\$497,000	\$509,000	2.4%
Canby	\$322,000	\$379,000	17.7%
Lake Oswego	\$540,000	\$602,000	11.5%
Oregon City	\$356,000	\$406,000	14.0%
Portland	\$388,000	\$411,000	5.9%
Tualatin	\$417,000	\$447,000	7.2%
West Linn	\$475,000	\$525,000	10.5%
Wilsonville	\$436,000	\$446,000	2.3%

Source: Zillow.com

FCS GROUP compiled statistics for the Happy Valley area which reflects real estate sales over the past 24 months. Results indicate that as of August 15th 2018 there were 240 homes listed for sale, of which the majority were over \$450,000 (**Table 9**).

December, 2018
 City of Happy Valley
 Pleasant Valley/Carver Housing Needs

FCS GROUP Memorandum

Over the past 24 months there have been 1,288 recorded home sales in Happy Valley. The pace of sales indicates that the current standing inventory of unsold homes in Happy Valley now stands at just 4.5 months overall, and well below 3 months for units priced less than \$450,000.

Table 9: Happy Valley Area Home Sales Trends

Price Level	Homes Sold (Past 24 Months)	Homes Listed (AS of August 13, 2018)	Inventory (Months Until Sold)
Less than \$150,000	26	16	15
\$150,001 to \$250,000	64	6	2
\$250,001 to \$350,000	199	14	2
\$350,001 to \$450,000	265	18	2
\$450,001 to \$550,000	288	53	4
\$550,001 or more	446	133	7
Total	1,288	240	4.5

Source: Zillow.com

FCS GROUP also analyzed home sales figures for the Damascus area given that most of the annexation area is located due east of the Pleasant Valley/North Carver Plan area. Currently, 64 homes are on the market in the Damascus area and like Happy Valley, the majority of those homes have asking prices above \$450,000 (**Table 10**).

Over the last 24 months 498 home sales have been recorded in the Damascus area, the pace of which suggests that the presently available inventory will be absorbed in just over three months.

Table 10: Damascus Area Home Sales Trends

Price Level	Homes Sold (Past 24 Months)	Homes Listed (AS of August 13, 2018)	Inventory (Months Until Sold)
Less than \$150,000	16	4	6
\$150,001 to \$250,000	16	-	-
\$250,001 to \$350,000	70	3	1
\$350,001 to \$450,000	187	11	1
\$450,001 to \$550,000	122	17	3
\$550,001 or more	87	29	8
Total	498	64	3.1

Source: Zillow.com

Despite a slight drop in 2017 compared with the prior 5 years, Happy Valley and Clackamas County have experienced a significant uptick in residential building permits since the end of the “Great Recession” (**Tables 11 and 12**). County-wide total permit volume was 1,702 in 2017, down from 2,450 permits recorded in 2016. It should be noted that over the past three years, there has been a measurable increase in multifamily development permits in Clackamas County.

Table 11: Privately-Owned Residential Units Permitted, Clackamas Cnty. (2012-2017)

Units in Structure	2012	2013	2014	2015	2016	2017
Single Family	1,142	1,344	1,278	1,607	1,368	1,228
2 Unit Multifamily	4	14	32	12	14	18
3 & 4 Unit Multifamily	-	14	19	32	23	19
5+ Unit Multifamily	435	131	151	180	1,045	437
Total Units Permitted	1,581	1,503	1,480	1,831	2,450	1,702

Source: U.S. Department of Housing and Urban Development.

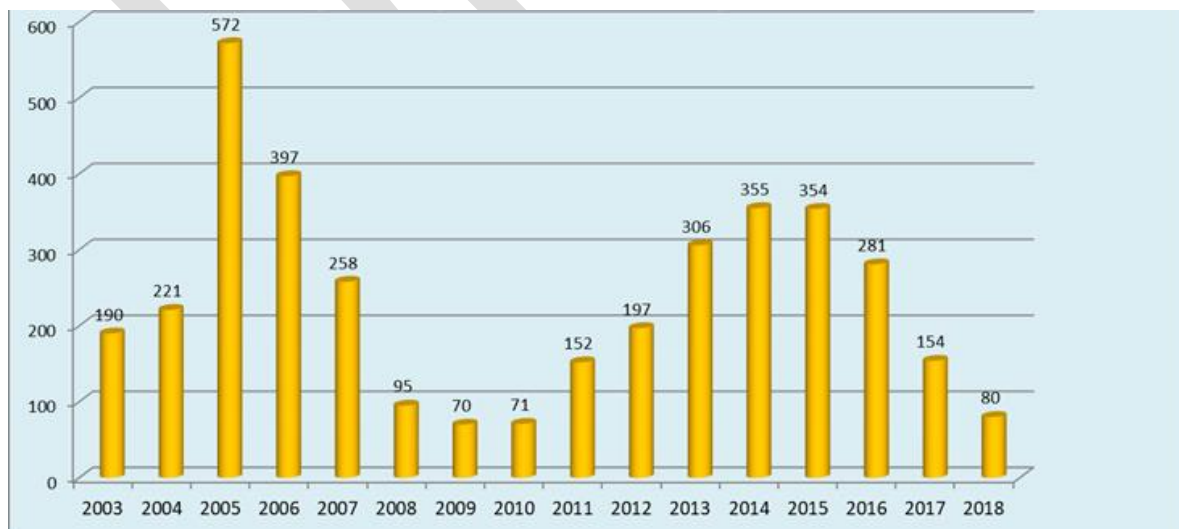
Similar to the patterns found County-wide, residential permit volume in Happy Valley has seen an uptick in multifamily permitting while single family permitting has stabilized. The city issued 225 total residential dwelling units in 2017, a drop from the prior 4 years but was still relatively high for the post-recession era.

Table 12: Privately-Owned Residential Units Permitted, Happy Valley (2012-2017)

Units in Structure	2012	2013	2014	2015	2016	2017
Single Family	200	309	354	317	281	154
2 Unit Multifamily	-	-	-	4	-	-
3 & 4 Unit Multifamily	-	-	-	29	-	-
5+ Unit Multifamily	-	-	-	6	308	71
Total Units Permitted	200	309	354	356	589	225

Source: U.S. Department of Housing and Urban Development.

According to City permit records, Happy Valley permitted 234 new single-family (detached and townhome) dwelling units annually during the current economic expansion (2010-2017). As the number of buildable home sites within the City declines, so too has the rate of housing absorption.

Figure 3: New Single Family Dwelling Units, City of Happy Valley (2003-2018)

Source: City of Happy Valley.

As the number of multifamily dwelling units in Happy Valley has increased, the residential market characteristics in Happy Valley are changing. As shown in **Table 13**, the citywide ratio of detached to multifamily/attached housing in Happy Valley has changed from 99:1 to 82:18 over the past 16 years. During this time frame, the mix of new housing that was added to the City consisted of: 57.9 percent single family detached; 12.5 percent single family attached (townhomes); 27.2 percent multifamily; and 2.4 percent mobile homes (manufactured housing). Fully 42 percent of new housing in this recent period has been non-single family detached homes.

Table 13: Occupied housing units by structure type, City of Happy Valley

	2000		2006-2010		2012-2016		Change (2008-2014)	
	Units	%	Units	%	Units	%	Units	%
Occupied housing units	1,499	100%	3,714	100%	5,579	100%	1,865	Mix
Single Family Detached	1,490	99.4%	3,476	93.6%	4,555	81.6%	1,079	57.9%
Townhomes / Plexes ¹	9	0.6%	117	3.2%	351	6.3%	234	12.5%
Multi family ²	0	0.0%	95	2.6%	603	10.8%	508	27.2%
Mobile home / other ³	0	0.0%	26	0.7%	70	1.3%	44	2.4%

Source: 2006-2010 and 2012-2016 American Community Survey 5-Year Estimates and 2000 SF4 sample data.

¹ Townhomes / Plexes: 1-unit attached, 2 units, 3 or 4 units

² Multifamily: 5 to 9 units, 10 to 19 units, 20 to 49 units, and 50 or more

³ Mobile home / other: Mobile home, boat, RV, van, etc.

Consistent with the trend towards multifamily permitting activity, the number of renters within the City of Happy Valley has increased measurably during the 2008 to 2014 time frame (**Table 14**).

Table 14: Occupied housing units by tenure, City of Happy Valley

	2000		2006-2010		2012-2016		Change (2008-2014)	
	Units	%	Units	%	Units	%	Units	%
Owner Occupied	1,428	95%	3,354	90%	4,728	85%	1,374	74%
Renter Occupied	71	5%	360	10%	851	15%	491	26%
Total Occupied	1,499	100%	3,714	100%	5,579	100%	1,865	100%

Source: 2006-2010 and 2012-2016 American Community Survey 5-Year Estimates and 2000 SF4 sample data.

The current housing inventory within the City of Happy Valley as estimated by the U.S. Census, American Community Survey (ACS) 2012-2016 is shown in **Table 15**. These “base year” estimates are utilized along with the changing market characteristics described above to ascertain the general level of demand that is likely to occur in the future.

Table 15: City of Happy Valley Housing Inventory, 2012-2016 ACS Estimates

Housing Type	Owner-Occupied Dwelling Units	Renter-Occupied Dwelling Units	Other Vacant Units	All Dwelling Units
Single Family Detached	4,323	232	82	4,637
Townhomes / Plexes	319	32	6	357
Multi family (5+ units)	51	552	11	614
Mobile home / other	35	35	1	71
Total Units	4,728	851	100	5,679
Distribution	83.2%	15.0%	1.8%	100.0%

Housing Type	Owner-Occupied Dwelling Units	Renter-Occupied Dwelling Units	Other Vacant Units	All Dwelling Units
Single Family Detached	91%	27%	82%	82%
Townhomes / Plexes	7%	4%	6%	6%
Multi family (5+ units)	1%	65%	11%	11%
Mobile home / other	1%	4%	1%	1%
Total	100%	100%	100%	100%

Source: American Community Survey, 2012-2016; compiled by FCS GROUP.

I.D.2. Summary of Housing Needs

Based on Metro growth projections for the Pleasant Valley/North Carver Planning Area (detailed in **Table 6**), it is assumed that 4,234 additional housing units will be added in the area between 2015 and 2040. This represents a proportional share of traffic analysis zones (TAZs) within the planning area boundary (consult Appendix A for further information). Determining the mix of housing types in the planning area will factor in housing mix observed in Happy Valley (discussed above) and state planning requirements (discussed below).

I.D.3. Housing Growth Forecast Scenarios

This housing needs forecast considers two alternative land use scenarios. Both scenarios are intended to take into account emerging market characteristics along with state and regional regulations for planning urban areas. As part of the Comprehensive Plan amendment, the PV/NC housing element must address the requirements of Goal 10 (OAR 660-008), and its implementing/guiding measure: Division 7 Metropolitan Housing Rule (OAR 660-007).

In short, the Metropolitan Housing Rule (MHR) requires that Happy Valley designate sufficient buildable land to *provide the opportunity* for meeting the minimum density and dwelling mix. According to the MHR, new residential units in the City of Happy Valley is to consist of **at least 50**

percent attached single family housing or multifamily housing⁷; and the City must provide “clear and objective”⁸ zoning and development code standards that provide an overall density of ***six or more*** dwelling units per net buildable acre⁹.

Both Scenarios are intended to accommodate the net increase in households that has been projected by Metro for the PV/NC plan area, meet or exceed the MHR requirements for minimum housing density and housing mix, and address the housing needs summarized above. Based on recent development activity, the ensuing analysis assumes average residential density levels as follows:

- Large Lot: 10,000 sf (4 units per acre)
- Standard Lot: 8,500 sf (5 units per acre)
- Small Lot: 5,000 sf (8.7 units per acre)

The Pleasant Valley / North Carver Planning Area can meet the projected housing need of 4,361 dwelling units and achieve density and housing mix requirements through planned land use regulations that guide the overall housing mix. Two residential forecast scenarios have been identified and are consistent with the housing trends discussed previously.

Scenario A: plans for a mix of standard and large-lot single family home sites, townhomes and multifamily apartments, with a relatively higher orientation of owner-occupants in comparison with Scenario B.

Scenario B: plans for a mix of standard and small-lot single family home sites, townhomes and multifamily apartments with a relatively higher orientation of renter-occupants in comparison with Scenario A.

The key assumptions for each scenario are shown below in **Table 16**.

Table 16: Pleasant Valley/North Carver Area Residential Forecast Assumptions

⁷ OAR 660-007-0030(1): “Jurisdictions other than small developed cities must either designate sufficient buildable land to provide the opportunity for at least 50 percent of new residential units to be attached single family housing or multiple family housing or justify an alternative percentage based on changing circumstances.”

⁸ OAR 660-007-0015(1): “...a local government may adopt and apply only clear and objective standards, conditions and procedures regulating the development of needed housing on buildable land. The standards, conditions and procedures may not have the effect, either in themselves or cumulatively, of discouraging needed housing through unreasonable cost or delay.”

⁹ OAR 660-007-0035(1): “The Cities of Cornelius, Durham, Fairview, Happy Valley and Sherwood must provide for an overall density of six or more dwelling units per net buildable acre.”

	Owner-Occupied Dwelling Units	Renter-Occupied Dwelling Units	Vacancy Factor (@2%)	All Dwelling Units	Avg. Density (DU per Net Buildable Acre)
Housing Tenure Distribution:	70.0%	30.0%		100%	
Housing Unit/Type Distribution					
Large Lot SFD	10%	0%		7.0%	4.0
Standard Lot SFD	31%	0.5%		21.9%	5.0
Small Lot SFD	30%	0.5%		21.2%	8.7
Townhomes / Plexes	23%	4%		17.3%	12.0
Multi family (5+ units)	6%	95%		32.7%	22.0
Total	100%	100%		100%	

Scenario B: 20-Year Residential Land Need Baseline Forecast, PV/NC Area

	Owner-Occupied Dwelling Units	Renter-Occupied Dwelling Units	Vacancy Factor (@2%)	All Dwelling Units	Avg. Density (DU per Net Buildable Acre)
Housing Tenure Distribution:	67.0%	33.0%		100%	
Housing Unit/Type Distribution					
Large Lot SFD	15%	0%		10.5%	4.0
Standard Lot SFD	39%	0.5%		27.5%	5.0
Small Lot SFD	20%	0.5%		14.2%	8.7
Townhomes / Plexes	21%	4%		15.9%	12.0
Multi family (5+ units)	5%	95%		32.0%	22.0
Total	100%	100%		100%	

The resulting housing land needs for each scenario are depicted in **Table 17**. While both scenarios would achieve the MHR density and mix requirements, Scenario A would require more land area to accommodate approximately 4,234 net new households projected for the plan area.

Table 17: Pleasant Valley/North Carver Area Residential Land Needs Forecast

Scenario A: Dwelling Unit Baseline Forecast, PV/NC Area					4,234	households
	Owner Units	Renter Units	Vacancy Factor (@2%)	Net New Dwelling Units	Average Density (DU per Net Buildable Acre)	Potential Land Need (Net Buildable Acres)*
Housing Tenure Distribution:	2,667	1,567	127	4,361	6.8	645.4
	63%	37%	3%	100%		
Housing Unit/Type Distribution						
Large Lot SFD	133	16	4	154	4.0	44.1
Standard Lot SFD	1,947	16	59	2,022	5.0	465.0
Small Lot SFD						
Townhomes / Plexes	427	63	15	504	12.0	48.3
Multi family (5+ units)	160	1,473	49	1,682	22.0	87.9
Total	2,667	1,567	127	4,361	6.8	645.4
Percent Multifamily and Attached					50%	
Scenario B: Dwelling Unit Baseline Forecast, PV/NC Area					4,234	households
	Owner Units	Renter Units	Vacancy Factor (@2%)	Net New Dwelling Units	Average Density (DU per Net Buildable Acre)	Potential Land Need (Net Buildable Acres)*
Housing Tenure Distribution:	2,540	1,694	127	4,361	7.0	621.2
	60%	40%	3%	100%		
Housing Unit/Type						
Large Lot SFD						
Standard Lot SFD	1,982	0	59	2,041	5.0	469.4
Small Lot SFD	76	17	3	96	8.7	12.7
Townhomes / Plexes	356	152	15	523	12.0	50.2
Multi family (5+ units)	127	1,524	50	1,701	22.0	88.9
Total	2,540	1,694	127	4,361	7.0	621.2
Percent Multifamily and Attached					51%	

* assumes 15% of land area dedicated to public roads and other infrastructure.

I.D.4. Reconciliation of Land Need

The draft Buildable Land Inventory (BLI) for the PV/NC area is summarized below in **Table 18**.

Table 18: Pleasant Valley/North Carver Area Buildable Land Inventory

Land Designation	Taxlot Size			Total
	<1 Acre	1-5 Acres	>5 Acres	
Neighborhood	122	451	294	867
Employment	9	42	6	57
Industrial	12	186	326	524
Regionally Significant Industrial	2	15	25	42
Total	145	694	651	1,490

Source: Angelo Planning Group, Buildable Land Inventory, December 4, 2018.

The findings indicate that there is more than an adequate supply of vacant buildable land area (867 acres) within the “neighborhood” designation to accommodate a planned increase of 4,234 households under both housing forecast scenarios. It is recommended that the Pleasant Valley/North

Carver Plan area be planned to accommodate at least 4,361 dwelling units which would require approximately 621.2 acres (Scenario B) to 645.4 acres (Scenario A) of net unconstrained land area.

I.E. HOUSING AFFORDABILITY CONSIDERATIONS

I.E.1. Findings

The Pleasant Valley/North Carver Comprehensive Plan will need to meet State Land Use Planning Goal 10, and MHR requirements. The development program for the Pleasant Valley/North Carver Comprehensive Plan is based upon a current housing market analysis with pending review by Metro staff, the study technical advisory committee, and a local stakeholder workgroup. The draft housing market analysis identifies trends in Happy Valley households by income level, housing mix, tenancy, home sales median prices, gross rents, median home value, and approved permitted dwelling units by housing type. The Pleasant Valley/North Carver Comprehensive Plan indicates that the existing median home sales prices within Happy Valley are higher than most comparative cities in the Metro region.

The Pleasant Valley/North Carver Comprehensive Plan considers housing affordability criteria consistent with Housing and Urban Development (HUD) guidelines. A summary analysis of housing affordability price points is provided in **Table 19 and Appendix B**. The findings indicate that at the current fiscal year 2018 median family income (MFI) level for the region (\$81,400); homes priced at \$323,000 or less (monthly payment of \$1,628 or less) would qualify as being “affordable” to households earning 80 percent of the median household income. Hence homes priced at or below \$323,000 and apartments that rent less than \$1,628 are assumed to be “affordable” in the Portland-Vancouver-Hillsboro MSA.

Given regional MFI levels and the broad assumption that housing costs should be near 30 percent of total income, homes priced at \$202,000 would be affordable to those at 50 percent MFI and homes priced at \$323,000 to \$403,000 would be affordable to households at 80 percent to 100 percent of MFI. While affordable housing at 50 percent of the MFI is not currently feasible without public subsidy in the Pleasant Valley/North Carver area, “market rate” housing at 80 percent to 100 percent (or higher) of the MFI is expected.

Table 19: Analysis of Affordability, Pleasant Valley/North Carver Comprehensive Plan

FY 2018 HUD Portland Region Median Family Income (MFI) ¹ :			\$81,400		
HUD Guideline	Percent of MFI	Qualifying Income Level	Annual Housing Payment	Affordable Gross Monthly Housing Payment	Homes Sales Price ³
Very Affordable Affordable ²	50%	\$40,700	\$12,210	\$1,018	\$202,000
	80%	\$65,120	\$19,536	\$1,628	\$323,000
Somewhat Affordable	100%	\$81,400	\$24,420	\$2,035	\$403,000

¹ based on HUD user guide income thresholds for Portland-Vancouver-Hillsboro MSA.

² based on Metro Code, Section 3.07.1120.D guidelines.

³ assumes 30-year fixed rate mortgage with 20 percent down payment at 6 percent interest.

As discussed above, the Pleasant Valley/North Carver area is expected to add approximately 4,361 dwelling units (at permitted density levels by year 2040) on land to be residentially zoned. It should be noted that additional housing could also be accommodated in commercial mixed-use areas and though the provision of accessory dwelling units.

It is expected that between 50 and 51 percent of the housing types proposed in the Pleasant Valley/North Carver area are “medium” and “high” density (multifamily and townhomes/plexes). These would include approximately 1,682 to 1,701 apartments/condos and 504 to 523 townhomes and duplex units. “Affordable” units would need to be priced at or below \$323,000-\$403,000 (for sale units) or have rents at or below \$1,600-2,035/month. New multifamily and townhome dwelling units are likely to be “affordable” to households earning between 80 percent of the regional MFI.

A range of single-family detached housing types (with 2,177 dwellings) would also be expected at densities between 4.0 and 8.7 units per acre. Single-family detached dwellings would appeal to middle- and upper-income homeowners with starting prices of approximately \$425,000 (2018 dollars). Townhomes would appeal to lower-income and entry level households as well as seniors that are downsizing, with entry-level sales prices at about \$323,000.

For rental housing, it should be noted that the current median rent level in Happy Valley (\$1,282/month in Happy Valley per the American Community Survey 2012-2016) is affordable for households making 80 percent or more than regional MFI. New apartment units within the Pleasant Valley/North Carver Plan area are expected to be constructed at density levels ranging from 18-22 units per acre. Based on the findings shown in Table 19, it is expected that the majority of new apartment units would have rents that would comply with Metro Title 11 affordable housing price points (with units offered at median rents at or below \$1,628/month).

Senior assisted living and congregate care housing developments are also expected as part of the overall housing mix, including both for-sale and rental opportunities.

If we assume an average size of 850 square feet per new apartment dwelling, a developer would be able to charge up to \$1.92 per square foot per month to abide by the 80 percent MFI affordability levels that meet affordable housing guidelines contained in Metro Title 11 (based on the analysis of MFI in the area shown in Table 19). The Q1 2018 multifamily market report published by Colliers indicates that average monthly rents in Clackamas County are \$1.40 per square foot and vacancy rates are only 4 percent. Hence, it is very likely that Pleasant Valley/North Carver developers can provide new apartments in the area at a price point that is above the current median rate (\$1.40/sf) and well below the “affordable” price level of \$1.92/sf (which is 1.4 times the current median rent level in the area).

The housing market analysis and recommended land use classifications contained in the Pleasant Valley/North Carver Plan include a general approach to meeting the housing mix, density and affordability requirements, including:

1. A market-driven approach to providing a wide mix of housing types though the development of market-rate homes at affordable price points. The housing market analysis concluded that the housing demand within the Plan area (2040 forecast) should be comprised of approximately 49 percent single family detached dwellings, and 51 percent attached/townhome/multifamily units. This housing mix will improve Happy Valley’s current mix of non-single family detached dwellings which currently account for 18.4 percent of the housing inventory (as of 2012-2016 American Community Survey).

December, 2018

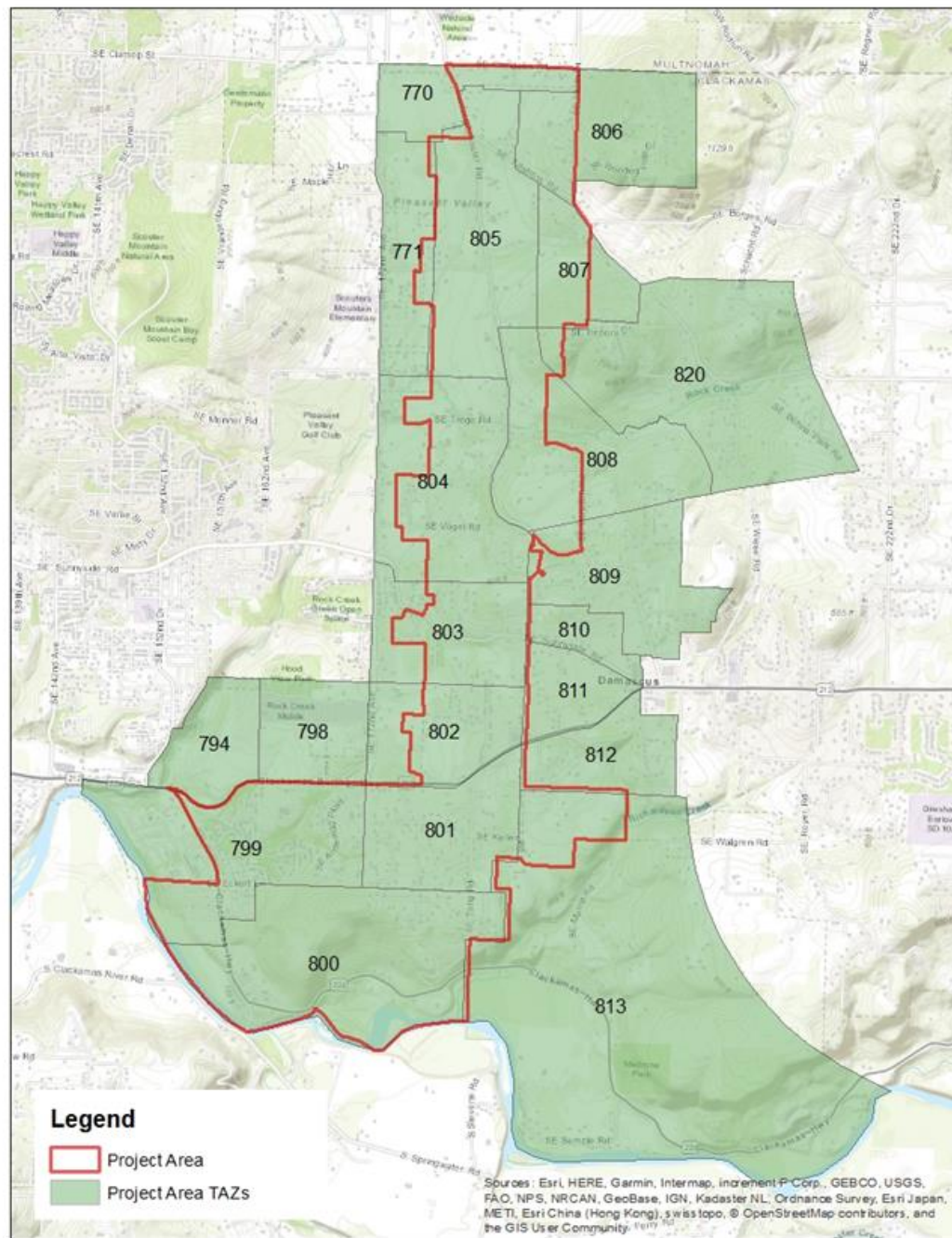
City of Happy Valley

Pleasant Valley/Carver Housing Needs

FCS GROUP Memorandum

2. Compared with existing conditions in Happy Valley, the projected mix of housing in the Pleasant Valley/North Carver area is weighted more towards attached/townhome/multifamily dwelling units; which will be more affordable (on average) per dwelling unit than single family detached dwellings.
3. The projected mix of housing types in the Pleasant Valley/North Carver Plan will result in an average density level of up to 6.8-7.0 dwelling units per acre, excluding the additional housing density that may be achieved through the provision of accessory dwelling units and housing within mixed use commercial areas.
4. The Pleasant Valley/North Carver Plan identifies implementation strategies that are focused on ensuring that the overall public facility infrastructure development costs are affordable and will not become overly burdensome on future developers; thereby reducing total construction costs.

APPENDIX A: Metro Traffic Analysis Zones within PV/NC Plan Area



December, 2018
 City of Happy Valley
 Pleasant Valley/Carver Housing Needs

FCS GROUP Memorandum

APPENDIX A (continued)**Traffic Analysis Zones and Metro Households and Employment Estimates and Forecasts**

TAZ		2015 HH	2040 HH	HH Change	2015 Employment	2040 Employment	Employment Change
471	Total	87	1,087	1,000	14	762	748
770	Total	17	240	223	29	250	221
771	Total	43	859	816	51	287	236
799	Total	1,094	1,780	686	139	316	177
800	Total	168	1,262	1,094	56	271	215
801	Total	145	295	150	19	67	48
802	Total	92	179	87	32	392	360
803	Total	134	511	377	1	91	90
804	Total	109	1,039	930	32	326	294
806	Total	64	118	54	1	2	1
808	Total	80	841	761	7	94	87
805	Total	46	637	591	39	308	269
807	Total	28	352	324	10	20	10
809	Total	133	411	278	25	120	95
810	Total	23	93	70	84	199	115
811	Total	52	62	10	29	154	125
812	Total	49	127	78	13	130	117
813	Total	107	185	78	35	155	120
820	Total	153	953	800	27	52	25
821	Total	50	308	258	10	15	5
899	Total	169	197	28	165	162	(3)
900	Total	153	953	800	27	52	-
928	Total	393	425	32	131	153	22
Subtotal PV/NC Planning Area+		3,389	12,914	9,525	974	4,378	3,379

TAZ	In Project Area?	2015 HH	2040 HH	HH Change	2015 Employment	2040 Employment	Employment Change
471	Mostly Out	0	1	1	0	1	1
770	Mostly Out	6	84	78	10	87	77
771	Mostly Out	4	84	80	5	28	23
799	Mostly In	1,034	1,683	649	132	299	167
800	Mostly In	165	1,241	1,076	55	266	211
801	Mostly In	144	294	149	19	67	48
802	Mostly In	62	121	59	22	264	243
803	Mostly In	93	355	262	1	63	63
804	Mostly In	77	736	659	23	231	208
806	Mostly Out	19	35	16	1	1	0
808	Mostly Out	38	400	362	3	45	42
805	Mostly In	45	621	576	39	300	262
807	Mostly In	18	232	214	7	13	7
809	Mostly Out	11	33	23	2	10	8
810	Mostly Out	0	2	1	2	4	2
811	Mostly Out	3	3	0	1	8	6
812	Mostly Out	3	7	4	1	7	7
813	Mostly Out	8	14	6	3	11	9
820	Mostly Out	4	23	19	1	1	1
821	Mostly Out	0	0	0	0	0	0
899	Mostly Out	0	0	0	0	0	0
900	Mostly Out	0	0	0	-	0	0
928	Mostly Out	0	0	0	0	0	0
PV/NC Plan Area (adjusted)		1,735	5,969	4,234	324	1,708	1,384

December, 2018
 City of Happy Valley
 Pleasant Valley/Carver Housing Needs

FCS GROUP Memorandum

APPENDIX A (continued)

TAZ Adjustment Factors for PV/NC Area **

TAZ	Area In	Area Out	Total	Share In
471	24,699	18,958,344	18,983,043	0%
770	1,987,261	3,692,631	5,679,892	35%
771	815,333	7,502,621	8,317,955	10%
794	37,908	6,504,941	6,542,849	1%
798	84,535	7,317,300	7,401,835	1%
799***	14,144,248	5,445,319	19,589,566	95%
800	24,466,130	415,760	24,881,890	98%
801	10,885,549	52,212	10,937,761	100%
802	6,388,115	3,082,931	9,471,046	67%
803	7,465,812	3,276,349	10,742,160	70%
804	12,602,676	5,194,637	17,797,314	71%
806	3,749,564	9,022,710	12,772,274	29%
808	7,549,797	8,331,304	15,881,101	48%
805	16,474,085	417,245	16,891,331	98%
807	4,204,146	2,171,298	6,375,443	66%
809	1,000,240	11,340,139	12,340,379	8%
810	61,533	3,210,873	3,272,406	2%
811	250,757	4,797,969	5,048,726	5%
812	416,026	6,869,213	7,285,238	6%
813	4,813,511	60,795,455	65,608,967	7%
820	641,986	26,371,014	27,013,000	2%
821	35,020	20,121,464	20,156,484	0%
899	37,794	42,101,280	42,139,074	0%
900	9,134	10,032,362	10,041,496	0%
928	17,101	335,796,753	335,813,854	0%

Notes:

* Denotes data suppressed due to confidentiality restrictions.

** Area (share) was calculated in ArcGIS based on portions of TAZs inside and outside of PV/NC area

*** Most of area outside of TAZ 799 is developed so it is assumed that 95% of remaining development will occur within PV/C Area

TAZ = traffic analysis zone.

Source: Metro RLIS Data and Metro TAZ Data; compiled by FCS GROUP.

Metro Source: 2015-2040 Distributed Forecast (Scenario #1610). Oregon Metro Research Center. Metro Region Data Adopted 2016 by Metro Ordinance 16-1371. Clark County Data Provided by Regional Transportation Commission. The 2015 and 2040 household allocations have been reviewed by local jurisdictions and adopted by the Metro Council in 2016.

Model Vintage: Scenario 1610, William 2 forecast, file created 07/21/2017

APPENDIX B: Housing Affordability Analysis

Portland MSA Median Family Income Level (2018)*		\$81,400
Market Segment by Income Level	Lower-end	Upper-End
High (100% or more of MFI)	100%	120%
Upper Middle (80% to 100% of MFI)	80%	100%
Lower Middle (50% to 80% of MFI)	50%	80%
Low (30% to 50%)	30%	50%
Very Low (less than 30% of MFI)	30%	
Qualifying Income Level	Lower-end	Upper-End
High (100% or more of MFI)	\$81,400	or more
Upper Middle (80% to 100% of MFI)	\$65,120	\$81,400
Lower Middle (50% to 80% of MFI)	\$40,700	\$65,120
Low (30% to 50%)	\$24,420	\$40,700
Very Low (less than 30% of MFI)	\$24,420	or less
Available Annual Housing Payment (@30% of income level)	Lower-end	Upper-End
High (100% or more of MFI)	\$24,420	or more
Upper Middle (80% to 100% of MFI)	\$19,536	\$24,420
Lower Middle (50% to 80% of MFI)	\$12,210	\$19,536
Low (30% to 50%)	\$7,326	\$12,210
Very Low (less than 30% of MFI)	\$7,326	or less
Available Monthly Rent or Payment (@30% of income level)	Lower-end	Upper-End
High (100% or more of MFI)	\$2,035	or more
Upper Middle (80% to 100% of MFI)	\$1,628	\$2,035
Lower Middle (50% to 80% of MFI)	\$1,018	\$1,628
Low (30% to 50%)	\$611	\$1,018
Very Low (less than 30% of MFI)	\$611	or less
Approximate Attainable Home Price**	Lower-end	Upper-End
High (100% or more of MFI)	\$403,000	or more
Upper Middle (80% to 100% of MFI)	\$323,000	\$403,000
Lower Middle (50% to 80% of MFI)	\$202,000	\$323,000
Low (30% to 50%)	\$121,000	\$202,000
Very Low (less than 30% of MFI)	\$121,000	or less

Notes:

* based on Housing and Urban Development thresholds for The Portland-Vancouver-Hillsboro MSA for FY 2018

Note, this analysis is generally consistent with 4-person household size characteristics.

** assumes 20% down payment on 30-year fixed mortgage at 6.0% interest.

Source: analysis by FCS Group using Housing and Urban Development, and US Census data. (<https://www.huduser.gov/portal/datasets/il/il2018/2018MedCalc.odn>)

To: Joe Dills, AICP, Angelo Planning Group

Date: December 4, 2018

From: Todd Chase, Timothy Wood; FCS GROUP

CC: Project file #2874

RE Pleasant Valley/North Carver Comprehensive Plan, Employment Land Needs Projection (Task 1.3-g)

I.A. EXECUTIVE SUMMARY

As part of the larger Pleasant Valley/North Carver (PV/NC) Comprehensive Plan process, FCS GROUP is evaluating the employment land needs within the area. Important conclusions from this effort are summarized below.

I.A.1. Economic Overview

Analysis of employment land needs must consider the broader economic climate. Summarized below is the overall outlook for the national, state, and regional economies impacting Happy Valley and the PV/NC Plan area.

- Nationally, economic growth is expected to continue in the near-term with GDP increases projected into 2020 by the Federal Reserve Bank.
- Happy Valley has grown significantly both in terms of population and income between 2000 and 2016. With regard to employment, Happy Valley has experienced modest growth broadly through the same timeframe.
- Major growth sectors in Happy Valley are expected to include health care, retail, and professional business services
- Metro projects a gain of 4,234 households in the PV/NC Plan area between 2015 and 2040 and 1,384 jobs in the same timeframe.

I.A.2. Market Analysis

- Happy Valley is presently experiencing a significant trade “leakage” in which retail shoppers living in Happy Valley travel outside of the City to purchase goods.
- Office construction in the “Eastside” submarket is predominantly occurring closer to Portland.
- Industrial employment growth could be significant but is largely contingent on the completion of the “Sunrise Corridor” highway project.

I.A.3. Growth Forecast Scenarios

- High, medium, and low scenarios were run to project employment land need.

- The “medium” forecast (Scenario B) is expected to be the most likely over the 20-year forecast time frame; and would result in a job capture for the NC/PV Plan Area that exceeds job growth forecasts for the PV/NC area provided by Metro.
- Juxtaposition of all three employment land need projections with the City’s Buildable Land Inventory (BLI) in the PV/NC Plan area reveals that there is a significant surplus of land designated for employment, industrial, and regionally significant industrial uses as compared to Metro Title 4 designations.

I.A.4. Housing Affordability Considerations

- According to HUD guidelines, houses in the Portland Metropolitan Area priced at \$323,000 or less or renting for \$1,628 a month or less would be affordable to households earning 80 percent of median family income.
- The projected mix of housing types in the PV/NC Plan area are expected to result in higher densities, including construction of townhomes and apartments.
- Presently, median rents for housing in Happy Valley are \$1,282 per month, well under the above-mentioned “affordability” threshold established by HUD.
- Based on this information, a market-oriented approach is possible for providing affordable rental housing in the PV/NC Plan area.

I.B. INTRODUCTION

This memorandum provides an overview of the real estate and demographic trends in Happy Valley as part of the larger PV/NC Plan process. As part of this task FCS GROUP performed the following activities:

- Evaluated current real estate trends in retail and office lands within the Portland Metro area as well as primary market areas for the Happy Valley area.
- Evaluated state and regional data which identifies projected growth patterns in employment, office, and retail development in Happy Valley and the surrounding area.
- Analyzed Census and local market data to identify further socioeconomic trends that define the Happy Valley area.
- Formulated draft recommendations that help inform a market-supportable development program for employment land needs in the Happy Valley area over a long-term planning period.

These findings are discussed in detail below.

I.C. ECONOMIC OVERVIEW

FCS GROUP conducted an economic overview of the geographic area that influences the Primary Market Area (PMA). The PMA was identified based on an understanding of the PV/NC Plan area’s role within the broader tri-county Metro Region (consisting of Clackamas, Multnomah and Washington counties), with particular emphasis on the East Happy Valley and former Damascus portion of Clackamas County.

For analysis purposes, the PMA includes Clackamas County and the plan area as defined by Traffic Analysis Zones (TAZs) within the plan area. The basis for the PMA is the relevance the plan area has with respect to real estate submarkets within the greater Portland region as they pertain to commercial, office, and industrial leasing activity. In addition, the PMA considers the long-term Metro growth forecasts for the planning area and the area's contribution to urban Clackamas County.

I.C.1. National and Regional Overview

The current economic recovery, which began in June of 2009, has entered its 9th year, among the longest economic upturns in modern history. Overall consumer confidence continues to be high while unemployment has consistently ticked down. In Oregon, 38,900 jobs were added between 2016 and 2017, the 7th consecutive year of overall statewide job growth. Meanwhile, the unemployment rate in Oregon fell to 4.1 percent at the end of 2017 from 4.3 percent in 2017, the 8th consecutive year of falling unemployment in the state.

The U.S. and Oregon economies are expected to continue their steady recoveries according to many economic indicators. National economic growth (as measured by Gross Domestic Product) is expected to increase by between 2.6 and 3 percent in 2018, between 2.2 and 2.6 percent in 2019 and by 1.8 to 2.1 percent in 2020 according to the Federal Reserve Bank¹.

Like many regions along the U.S. West Coast, the Portland Metropolitan Area is experiencing rapid increases in home values along with modest increases in income levels, decreasing unemployment, and relatively low office and industrial vacancies within the last few years. These factors, along with in-migration will lead to emerging development opportunities.

The population in the Portland-Beaverton-Vancouver Primary Metropolitan Statistical Area (PMSA) increased from 1.9 million in 2000 to over 2.2 million by 2010 and nearly 2.5 million by 2017². According to Metro, the regional planning authority, Metro population is forecasted to increase over the foreseeable future. Metro projections suggest the region may add around 700,000 residents between 2015 and 2040³. Within Clackamas County, the historic 2000 to 2017 population growth

¹ March 21, 2018: FOMC Projections materials, Accessible version, (<https://www.federalreserve.gov/monetarypolicy/fomcproptabl20180321.htm>)

² Sources: US Census 2000 population estimate and Portland State University Population Research Center for 2010 and 2017 population estimates. Estimates represent a combination of Clackamas, Columbia, Multnomah, Washington, and Yamhill Counties in Oregon and Clark and Skamania Counties in Washington.

³ 2014 Metro Urban Growth Report Appendix 1a "Population and Employment Forecast for the Portland-Vancouver-Hillsboro Metropolitan Statistical Area (2015-2035)" pg. 3 2014 Vintage Regional Forecast Population Column.

rate averaged 1.2 percent per year, as county population increased from 338,391 in 2000 to 413,000 in 2017⁴.

Increasing population within the greater Portland Region will also result in an expanding labor force, which will lead to increased employment as businesses add jobs. Long-term job growth forecasts by Metro expect around 470,000 jobs to be added to the PMSA between 2015 and 2040⁵.

I.C.2. Happy Valley Overview

According to the U.S. Census, the City of Happy Valley had a population of 19,985 in 2017, up from 4,519 in 2000, adding 12,955 residents and 4,148 households over that timeframe. Nearly 100 percent of the employment growth which occurred in Happy Valley since 2000 is attributed to new construction rather than annexation of developed properties. As identified in **Table 1**, population growth in Happy Valley far exceeds the growth rates for Clackamas County, the Tri-county Metro Region, and Oregon statewide growth rates.

Table 1: Population Trends 2000-2017

	2000	2010	2017	Change, 2000-2017
Happy Valley	4,519	14,330	19,985	342.2%
Clackamas County	338,391	376,780	413,000	22.0%
Tri County Region *	1,444,219	1,644,635	1,811,860	25.5%
Oregon	3,421,399	3,837,300	4,141,100	21.0%

Source: U.S. Census Bureau and Portland State University Population Research Center

The median age of households in Happy Valley has fluctuated over time, dropping from 37.1 years in 2000 to 33.4 years in 2010 and increasing to 38.6 years in 2016 (**Table 2**). In comparison, the median age of households in the Portland-Vancouver-Hillsboro Metropolitan Statistical Area was 37.6 in 2016.

⁴ Sources: US Census 2000 population estimate and Portland State University Population Research Center for 2017 population estimate.

⁵ 2014 Metro Urban Growth Report Appendix 1a "Population and Employment Forecast for the Portland-Vancouver-Hillsboro Metropolitan Statistical Area (2015-2035)" pg. 3 2014 Vintage Regional Forecast Employment Column.

Table 2: Happy Valley Demographic and Socioeconomic Trends 2000-2016

	2000	2010	2016
Population	4,519	14,330	17,474
Group Quarters Population	-	-	41
Households	1,431	3,674	5,579
Family Households	1,335	3,337	4,433
Nonfamily Households	96	337	1,146
Population per Household	3.2	3.9	3.1
Average Household Size	3.2	3.4	3.1
Median Age	37.1	33.4	38.6
Median Household Income	\$90,978	\$103,633	\$106,197
Median Family Income	\$95,922	\$108,769	\$114,965
Per Capita Income	\$36,665	\$35,648	\$41,790

Note: Incomes for 2000 are reported in 1999 dollars, incomes for 2010 are reported in 2009 dollars and incomes for 2016 are reported in 2015 dollars.

Source: U.S. Census Bureau and Portland State University Population Research Center

Income levels have risen notably in Happy Valley since 2000 and they are significantly higher than income levels in Clackamas County and the statewide average (see **Table 3**).

Table 3: Demographic and Socioeconomic Characteristics (2016)

	Happy Valley	Clackamas County	Oregon
Average Household Size	3.2	2.6	2.5
Median Age	38.6	41.4	39.1
Median Household Income	\$106,197	\$68,915	\$53,270
Median Family Income	\$114,965	\$83,308	\$65,479
Per Capita Income	\$41,790	\$35,506	\$28,822

Note: Incomes reported in 2015 dollars.

Source: U.S. Census Bureau

As household counts have rapidly increased in Happy Valley, the income characteristics of those households have remained fairly similar. As indicated in **Table 4**, the share of households earning over \$75,000 has remained consistent while the number of such households has increased dramatically.

Table 4: Households by Income Level, Happy Valley

Income Level	2000 Census		2010 Census		2012-2016 ACS		Change, 2000-2016	
	Number	Dist. %	Number	Dist. %	Number	Dist. %	Number	Dist. %
Less than \$10,000	9	0.6%	82	2.2%	89	1.6%	80	2.0%
\$10,000 to \$14,999	9	0.6%	19	0.5%	78	1.4%	69	1.7%
\$15,000 to \$24,999	72	4.7%	56	1.5%	173	3.1%	101	2.5%
\$25,000 to \$34,999	57	3.7%	145	3.9%	128	2.3%	71	1.8%
\$35,000 to \$49,999	151	9.9%	282	7.6%	262	4.7%	111	2.7%
\$50,000 to \$74,999	263	17.3%	472	12.7%	1,071	19.2%	808	19.9%
\$75,000 to \$99,999	273	17.9%	691	18.6%	764	13.7%	491	12.1%
\$100,000 to \$149,999	376	24.7%	917	24.7%	1,451	26.0%	1,075	26.5%
\$150,000 to \$199,999	128	8.4%	583	15.7%	736	13.2%	608	15.0%
\$200,000 or more	185	12.1%	468	12.6%	826	14.8%	641	15.8%
Total	1,523	100%	3,714	100%	5,579	100%	4,056	100%

Note: Incomes for 2000 are reported in 1999 dollars, incomes for 2010 are reported in 2009 dollars and incomes for 2016 are reported in 2015 dollars.

Source: U.S. Census Bureau

I.C.3. Existing Employment

In 2016 (latest year in which data were available), the Happy Valley area (which includes businesses with a Happy Valley, OR 97086 zip code that are outside of the city limits) was comprised of 804 business entities with 5,575 workers. As indicated in **Table 5**, this represented about 3.6 percent of the total “covered employment” within Clackamas County. The largest local employment sector in the Happy Valley area is services with 2,949 jobs, followed by retail with 1,533 jobs. The industrial and government/education sectors round out the remaining jobs with 583 and 510 jobs, respectively.

Table 5: Happy Valley Area Employment Characteristics (2016)

Sector	Happy Valley Area*	Clackamas County	HV Area Share
Industrial	583	49,115	1.2%
Retail	1,533	18,934	8.1%
Service	2,949	71,837	4.1%
Government/Education	510	15,102	3.4%
Total	5,575	154,988	3.6%

** reflects businesses with Happy Valley zip code.*

Source: Oregon Employment Department.

Within the Happy Valley area, it is estimated that nearly 3,000 employees work within the existing city limits. As shown in **Table 6**, total employment in the City of Happy Valley increased by 3.2 percent between 2002 and 2015. In 2015, the leading industries (measured by employment) in Happy Valley were retail trade, accommodations/food service, and health care. Significant shifts have occurred in Happy Valley’s employment mix with some industries losing jobs such as manufacturing, transportation and warehousing, and administration & support, waste management and remediation. This is consistent with the City’s significant residential growth between 2002 and 2015.

Table 6 Employment by Industry, City of Happy Valley, 2002 and 2015

Sector	2002 Employment	2015 Employment	% Change
Agriculture, Forestry, Fishing and Hunting	4	18	350.0%
Mining, Quarrying, and Oil and Gas Extraction	-	-	0.0%
Utilities	21	25	19.0%
Construction	203	403	98.5%
Manufacturing	164	33	-79.9%
Wholesale Trade	231	76	-67.1%
Retail Trade	265	655	147.2%
Transportation and Warehousing	160	24	-85.0%
Information	3	14	366.7%
Finance and Insurance	184	81	-56.0%
Real Estate and Rental and Leasing	92	65	-29.3%
Professional, Scientific, and Technical Services	99	100	1.0%
Management of Companies and Enterprises	4	1	-75.0%
Administration & Support, Waste Management and Remediation	221	55	-75.1%
Educational Services	70	251	258.6%
Health Care and Social Assistance	753	435	-42.2%
Arts, Entertainment, and Recreation	28	54	92.9%
Accommodation and Food Services	231	436	88.7%
Other Services (excluding Public Administration)	113	204	80.5%
Public Administration	29	36	24.1%
Total	2,875	2,966	3.2%

Source: U.S. Census Bureau

I.C.4. Target Business Cluster Analysis

FCS GROUP developed a business cluster analysis similar to the analysis performed for the City's 2012 Economic Opportunities Analysis (EOA), which is summarized in **Figure 1**. The analysis identifies the business sectors in Happy Valley using broad categories tracked by the Oregon Employment Department (OED). The data used for this analysis is derived from a classified OED database of businesses in Clackamas County which can be sub-aggregated by industry type and location, among other factors. The size of the bubbles in the chart indicates the total wages earned in that cluster in Happy Valley, based on 2016 data. The bubble's location along the horizontal axis indicates the cluster's location quotient (LQ), which represents the propensity of an industry to locate in Happy Valley relative to Clackamas County. The vertical access corresponds with the growth forecast for each cluster in the Portland Metro Area (tri-county region) according to OED.

The cluster analysis classifies the existing business sectors in Happy Valley into four categories:

- **“Star” industries (high LQ and growth projections):** Educational Services & Health Care
- **“Emerging” industries (small LQ, high growth projections):** Construction, Professional Business Services, Transportation & Warehousing

- **“Mature” industries (high LQ, low growth projections):** Miscellaneous Services & Retail Trade
- **“Challenged” industries (low LQ, low growth projections):** Manufacturing, Wholesale Trade, Information, Government and Financial Activities.

Figure 2: Existing Business Clusters in Happy Valley (2016)



The PV/NC Plan area includes a significant amount of future employment land (as designated by Metro Title 4 maps) that could become a viable location for a wide mix of businesses. In the near-term, the types of businesses that are attracted to the area will be “local serving” retail and service establishments that benefit from proximity to household buying power within a 10-minute drive or short-walk or bike trip.

Longer-term opportunities will stem from improved transportation accessibility once Phase 2 of the Sunrise Expressway is constructed. The \$130M Phase 1 Sunrise Expressway improvement was completed on July 1, 2016. It provides a two-mile long, four-lane highway connecting the

Milwaukie Expressway to 122nd Avenue where it links up with OR 212/224. A shared use path for pedestrians and cyclists parallels the highway. A five-mile Phase 2 segment is still in the planning phase and funding has not been identified at this time. However, once it is constructed, it will provide improved access and reduced travel times between I-205 and areas east of 172nd Avenue.

As part of this project, FCS GROUP interviewed real estate brokers from the Portland office of Jones, Lang, Lasalle to establish an understanding of how the annexation of the plan area might impact the real estate market. In discussions with commercial and industrial real estate brokers, the Sunrise Expressway is expected to significantly improve the marketability and attractiveness of future office and general industrial development along 172nd Avenue. The 172nd Avenue corridor would become a magnet for Class A Office, back-office operations, research and development, and light industrial uses that require flexible (flex) building formats. Until the Sunrise Expressway is extended to 172nd Ave., the types of businesses that will be most attracted to the plan area will include local-serving clusters such as:

- Retail trades, entertainment, lodging, food services
- Health care and medical office
- Professional and business services (i.e., financial and legal services, management of companies)

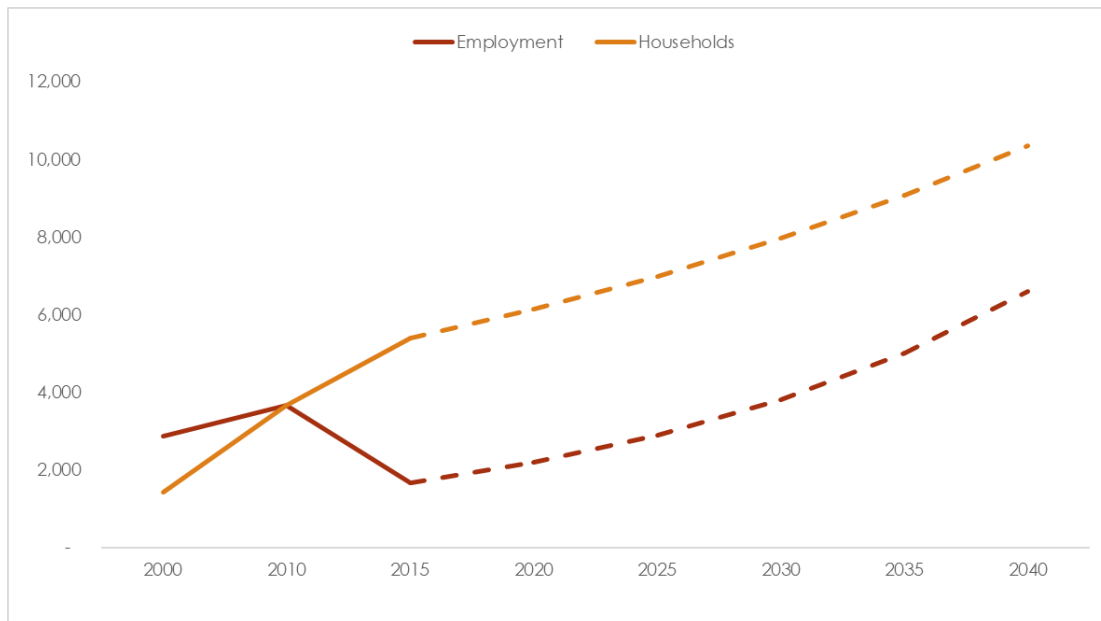
Improved transportation accessibility provided by the Sunrise Expressway extension to 172nd Ave. would enhance attraction and development of regional business activity such as:

- Research and development
- Education and training facilities
- Back office operations (insurance, call centers, financial)
- Light manufacturing and food/beverage processing (with retail storefronts)
- Sub-regional warehousing and distribution

I.C.5. Long-Term Growth Forecasts

The most current long-term growth forecast by Metro anticipates that Happy Valley (current city limits excluding the PV/NC Plan area portion) will add approximately 4,809 households and 4,836 jobs between 2015 and 2040 as indicated in **Figure 2**.

Figure 2: Happy Valley Employment and Households figures 2000-2040



Note: Dashed line indicates projections provided by Metro.

Source: U.S. Census (data from 2000-2010) and Metro (Data from 2025 to 2040).

The plan area (see analysis provided in Appendix A) is expected to add approximately 4,234 households and up to 1,384 jobs according to Metro forecasts (**Table 7**).⁶

⁶ Metro Source: 2015-2040 Distributed Forecast (Scenario #1610). Oregon Metro Research Center. Metro Region Data Adopted 2016 by Metro Ordinance 16-1371. Clark County Data Provided by Regional Transportation Commission. The 2015 and 2040 household allocations have been reviewed by local jurisdictions and adopted by the Metro Council in 2016.

Model Vintage: Scenario 1610, William 2 forecast, file created 07/21/2017

See Appendix A for detailed estimates and forecasts for the Pleasant Valley/North Carver Plan area.

Table 7: Forecasts for Households and Employment (2015-2040)

	2015	2040 (Projected)	Projected Change (2015- 2040)	Projected CAGR (2015- 2040)
Pleasant Valley/North Carver Households	1,735	5,969	4,234	5.1%
Happy Valley Households*	5,381	10,190	4,809	2.6%
Clackamas County Households	151,352	199,420	48,068	1.1%
Tri-County Metro Region Households	687,123	961,317	274,194	1.4%
Pleasant Valley/North Carver Employment	324	1,708	1,384	6.9%
Happy Valley Employment	1,646	6,482	4,836	5.6%
Clackamas County Employment	152,401	226,537	74,136	1.6%
Tri-County Metro Region Employment	888,658	1,289,052	400,394	1.5%

*excluding Pleasant Valley/North Carver Plan area portion.

Source: Metro.

The plan area will be an important location for accommodating regional job growth, especially within urban portions of Clackamas County. It is estimated that within the tri-county region, Clackamas County currently accommodates approximately 16.4 percent of the total employment or 170,391 jobs. If we extrapolate the most current 10-year job growth forecast by the Oregon Employment Department into the future, and assume the current ratio of Clackamas County jobs remains fairly constant among broad industry sectors, Clackamas County would add approximately 49,116 net new jobs by year 2040 (see **Table 8**).

Table 8: Forecasts for Households and Employment (2017-2040)

Sector	2017 Estimates			Happy Valley Area Share of County
	Tri-County Metro Area ¹	Clackamas County ²	Happy Valley Area ²	
Industrial	243,300	50,588	583	1.2%
Retail	95,000	19,502	1,533	7.9%
Service	495,700	73,992	2,949	4.0%
Government/Education	136,900	15,555	510	3.3%
Self-employment	65,400	10,753	376	3.5%
Total	1,036,300	170,391	5,951	3.5%

Sector	2017-2040 Growth Forecast		
	Tri-County Metro Area ¹	Clackamas County ²	Clackamas County Share of Region
Industrial	59,340	12,338	20.8%
Retail	22,770	4,674	20.5%
Service	173,650	25,920	14.9%
Government/Education	27,140	3,084	11.4%
Self-employment	19,090	3,139	16.4%
Total	301,990	49,116	16.3%

¹ Source: Oregon Employment Department (OED), published June 26, 2018, extrapolated to 2040.

² OED 2016 Quarterly Census of Emp. & Wages (QCEW) estimates, adjusted to 2017, extrapolated to 2040.

³ OED 2016 QCEW estimates for Happy Valley zipcode, adjusted to 2017, extrapolated to 2040.

I.D. MARKET ANALYSIS

I.D.1. Retail Market

Within the City of Happy Valley, there is a sizable retail sales leakage, which occurs when households must travel outside of an area to make desired retail purchases. **Table 9** reflects two broad retail categories (general retail and food/drink) within the current City of Happy Valley (municipal boundary) which experienced a trade leakage during 2018. The retail inflow/outflow analysis indicates that the current retail trade leakage from existing households in Happy Valley supports 508,000 square feet of commercial floor area in places outside the city, such as the Clackamas and Damascus town centers.

The PV/NC Plan area should be able to add new commercial centers with both general retail as well as restaurants, thereby capturing some existing retail trade outflow.

Table 8: Existing Retail Trade Leakage, City of Happy Valley 2018

Population	16,853				
Households	5,381				
Median Income	\$78,293				
Per Capita Income	\$44,220				
	Demand	Supply	Retail Gap (Trade Leakage)	Supportable Floor Area (SF)	Supportable Acres
Retail	\$269,816,400	\$49,682,857	\$220,133,543	458,612	30.0
Food & Drink	\$30,402,076	\$6,978,535	\$23,423,541	48,799	3.2
Total	\$300,218,475	\$56,661,392	\$243,557,083	507,411	33.2

Source: ESRI Business Analyst Online; assumes \$480 sales per SF, and 0.35 FAR.

A similar analysis was conducted for the plan area. **Table 9** displays data derived using the net new growth expected within the plan area boundaries. The findings indicate that by year 2040, the projected growth in households and related buying power is expected to support nearly 372,000 square feet of retail floor area, which would require at least 24.3 acres of buildable land.

Table 9: Retail Trade Leakage, Pleasant Valley/North Carver Planning Area (2018-2040)**Net New Retail Demand**

Households	4,234				
	Demand	Supply	Retail Gap (Trade Leakage)	Supportable Floor Area (SF)	Supportable Acres
Retail	\$171,666,554	\$10,583,126	\$161,083,428	335,590	21.9
Food & Drink	\$18,995,585	\$1,489,589	\$17,505,996	36,471	2.4
Total	\$190,662,139	\$12,072,712	\$178,589,427	372,061	24.3

Source: ESRI Business Analyst Online; with Metro growth forecast for households.

I.D.2. Office Market

Real estate brokers consider Happy Valley and the PV/NC Plan area to be within the “Eastside” office submarket of the Portland Region. According to Jones Lang Lasalle (JLL), the Eastside has a total Class A office inventory of 1.1 million square feet, of which only 1.9 percent is currently vacant. Average annual rental rates for Class A office in the Eastside are at an all-time high of \$32.29 per square foot (2018 2nd quarter statistics). The Clackamas/Milwaukie subarea accounted for 595,032 square feet of the Class A space, most of which is situated near I-205. Like other markets outside of the Urban Core (downtown Portland) very little new office inventory is being added (see **Table 10**).

Table 10 Class A Office Characteristics, Eastside Market Area, Q2 2018

Market	Inventory	YTD Total Net Absorption	Vacancy	YTD Under Development	Average Asking Rent (per sq. ft.)
Airport Way/Columbia Corridor	437,634	7,409	2.8%	-	\$27.17
Clackamas / Milwaukie	595,032	3,140	1.6%	-	\$26.51
North / Northeast Close In	107,310	-	0.0%	43,546	\$39.98
Total Eastside	1,139,976	10,549	1.9%	43,546	\$32.29

Source: Jones Lang LaSalle IP Portland Office Insight Q 2 2018

I.D.3. Industrial Market

Real estate brokers consider Happy Valley and the PV/NC Plan area to lie within the Clackamas/Milwaukie industrial submarket. According to JLL, the Clackamas/ Milwaukie subarea has a total industrial and flex inventory of 23.4 million square feet of which 5.2 percent is vacant with an average lease rate of \$0.60 per square foot (**Table 11**). Real estate professionals from JLL suggested that upon completion of the Sunrise Expressway Phase 2, the plan area will have the potential to attract major industrial employers, especially near the confluence of OR 224/172nd Avenue. JLL representatives were also optimistic that the plan area will be an attractive location for flex industrial space. Flex space and co-working space is now viewed as an economic alternative to office space for many small businesses within the Clackamas/Milwaukie sub market, where vacancy for flex space is only 0.9 percent. In fact, one of the largest industrial leases in 2018 came from NW Flex Space, which leased 205,000 SF in Milwaukie.

Table 11: Industrial Property Characteristics, Clackamas/Milwaukie Market Area, Q2 2018

Market	Inventory	YTD Total Net Absorption	Vacancy	YTD Under Development	Average Asking Rent
Warehouse / Distribution	17,500,874	54,279	3.0%	-	\$0.52
Manufacturing	5,078,641	(504,757)	13.3%	-	\$0.77
Subtotal	22,579,515	(450,478)	5.4%	-	\$0.68
Flex	790,772	6,359	0.9%	12,000	\$1.14
Total	23,370,287	(444,119)	5.2%	12,000	\$0.60

Source: Jones Lang LaSalle IP Portland Industrial Insight Q 2 2018

I.D.4. Growth Forecast Scenarios

This employment land needs forecast considers three alternative scenarios. Each scenario is intended to account for emerging market characteristics along with Metro employment forecasts for Happy Valley and the PV/NC Plan area.

All job growth scenarios are intended to reflect the most likely distribution of market demand among the broad employment sectors over the forecast time frame.

Scenario A is intended to reflect current market patterns within the Happy Valley area, which reflects a proportionate share of Clackamas County employment growth. This level of development activity would not necessarily require the completion of the Sunrise Expressway Phase 2 extension to

December, 2018
 City of Happy Valley
 Pleasant Valley/Carver Employment Land Needs

FCS GROUP Memorandum

172nd Ave. Scenario A is projected to result in approximately 1,891 jobs added inside the City and the Pleasant Valley/North Carver Plan area by year 2040, which equates to 3.9 percent of the net new Clackamas County jobs.

Scenarios B and C are intended to reflect the enhanced business attraction that would be afforded after completion of the Sunrise Expressway Phase 2.

Scenario B reflects the mid-point between Scenarios A and C. This would result in approximately 3,434 jobs added inside the City and the plan area by year 2040, which equates to seven percent of the net new Clackamas County jobs.

Scenario C is intended to be consistent with the overall Metro employment growth forecast for the City of Happy Valley and the plan area. This scenario reflects the upper limit of potential 20-year job growth by assuming all the net gains in employment projected by Metro over the 2017-2040 timeframe for Happy Valley occur within the plan Area. This would result in approximately 5,000 jobs added inside the plan area by year 2040, which equates to 10 percent of the net new Clackamas County jobs.

The key assumptions for each scenario are shown below in **Tables 12 & 13**.

Table 12: Happy Valley and Pleasant Valley/North Carver Plan Area Job Growth Scenarios, (Percent Growth, 2017-2040)

Sector	Percent Employment Growth		
	Scenario A	Scenario B	Scenario C
Industrial	2.0%	3.6%	5.3%
Retail	8.0%	14.5%	21.1%
Service	4.0%	7.3%	10.5%
Government/Education	3.5%	6.4%	9.2%
Self-employment	4.0%	7.3%	10.5%
Total	3.9%	7.0%	10.1%

Source: derived from Table 8.

Table 13: Happy Valley and Pleasant Valley/North Carver Plan Area Job Growth Scenarios, (Total Employment Growth, 2017-2040)

Sector	Employment Growth		
	Scenario A	Scenario B	Scenario C
Industrial	247	448	649
Retail	374	679	984
Service	1,037	1,883	2,728
Government/Education	108	196	284
Self-employment	126	228	330
Total	1,891	3,434	4,976

Source: derived from Table 8.

The projected level of employment that would be “captured” within the plan area under each scenario is depicted in **Table 14**. The results indicate that the plan area will likely exceed the level of net new job growth for the area that has been projected by Metro. Excluding self-employed (home-based) workers, Scenario A would result in 1,765 jobs added inside the plan area, which is over one-third higher than Metro’s 2040 job growth forecast (see **Appendix A**). Scenarios B and C anticipate far

greater job growth for the plan area due to the potential construction of the Sunrise Corridor (Phase 2).

Table 14: Pleasant Valley/North Carver Plan Area Employment Growth Forecasts

Happy Valley & PV/NC Area Net New Employment Forecast: 2017-2040*			
	Scenario A	Scenario B	Scenario C
Industrial	247	448	649
Retail	374	679	984
Services	1,037	1,883	2,728
Government & Education	108	196	284
Total	1,765	3,206	4,646
<i>* excludes self-employed (home based) workers.</i>			
Pleasant Valley/North Carver Area Job Growth Capture Rates: 2017-2040			
	Scenario A	Scenario B	Scenario C
Industrial	100%	100%	100%
Retail	60%	60%	60%
Services	60%	60%	60%
Government & Education	95%	95%	95%
Pleasant Valley/North Carver Area Job Growth Forecast: 2017-2040			
	Scenario A	Scenario B	Scenario C
Industrial	247	448	649
Retail	224	407	590
Services	622	1,130	1,637
Government & Education	103	186	270
Total	1,196	2,171	3,147
Source: Derived from Table 12.			

The land needed to accommodate the employment growth within the plan area ranges from approximately 80 acres in Scenario A; 203 acres in Scenario B; and, 293 acres in Scenario C. While all scenarios would exceed Metro's job growth forecasts for the plan area, Scenario B would likely reflect potential growth that is most consistent with emerging market conditions due to increasingly limited industrial development opportunities in urban Clackamas County and the primary office and industrial sub-markets. Please refer to **Appendix B** for detailed land needs assumptions.

Table 15: Pleasant Valley/North Carver Plan Area Employment Land Needs

Land Use Classification	Scenario A	Scenario B	Scenario C
Commercial (retail, office, lodging)	23.7	27.2	39.5
General Industrial & Flex	33.0	133.6	193.5
Public & Education (excl. open space & parks)	23.0	41.8	60.3
Total (unconstrained acres)	79.7	202.6	293.4

Source: Derived from Appendix B.

I.D.5. Reconciliation of Land Need

The draft Buildable Land Inventory (BLI) for the PV/NC Plan area is summarized below in **Table 16**. The land designations presented in this table are based on the Metro 2040 Growth Concept designations for the plan area.

Table 16: Pleasant Valley / North Carver Area Buildable Land Inventory

Land Designation	Taxlot Size			Total
	<1 Acre	1-5 Acres	>5 Acres	
Neighborhood	122	451	294	867
Employment	9	42	6	57
Industrial	12	186	326	524
Regionally Significant Industrial	2	15	25	42
Total	145	694	651	1,490

Source: Angelo Planning Group, Buildable Land Inventory, December 4, 2018.

The findings indicate that the amount of vacant unconstrained buildable land area (623 acres) within the “employment,” “industrial” and “regional significant industrial” designations can accommodate the planned increase of employment jobs and land area under each land needs scenario. As shown in **Tables 17-19**, throughout each scenario, a portion of the land demand for public and educational facilities could be derived from a portion of the land currently designated as “industrial” and “RSI” to address future land demand.

Table 17: Pleasant Valley / North Carver Buildable Land Supply and Demand (Scenario A)

Employment Type	Current General Landuse Classification	Scenario A Vacant Land Demand	Existing Vacant Land Supply in PV/NC Area	Net Land Need
Commercial (retail, office, lodging)	Employment	23.7	57.0	(33.3)
General Industrial & Flex	Industrial & RSI*	33.0	566.0	(533.0)
Public & Education (excl. open space & parks)	n/a	23.0	-	23.0
Total (unconstrained acres)		79.7	623.0	(543.3)

* Buildable land supply reflects 524 acres of Industrial and 42 acres of Regionally Significant Industrial land.

Source: findings based on assumptions provided in prior tables and Appendix B.

Table 18: Pleasant Valley / North Carver Buildable Land Supply and Demand (Scenario B)

Employment Type	Current General Landuse Classification	Scenario B Vacant Land Demand	Existing Vacant Land Supply in PV/NC Area	Net Land Need
Commercial (retail, office, lodging)	Employment	27.2	57.0	(29.8)
General Industrial & Flex	Industrial & RSI*	133.6	566.0	(432.4)
Public & Education (excl. open space & parks)	n/a	41.8	-	41.8
Total (unconstrained acres)		202.6	623.0	(420.4)

* Buildable land supply reflects 524 acres of Industrial and 42 acres of Regionally Significant Industrial land.

Source: findings based on assumptions provided in prior tables and Appendix B.

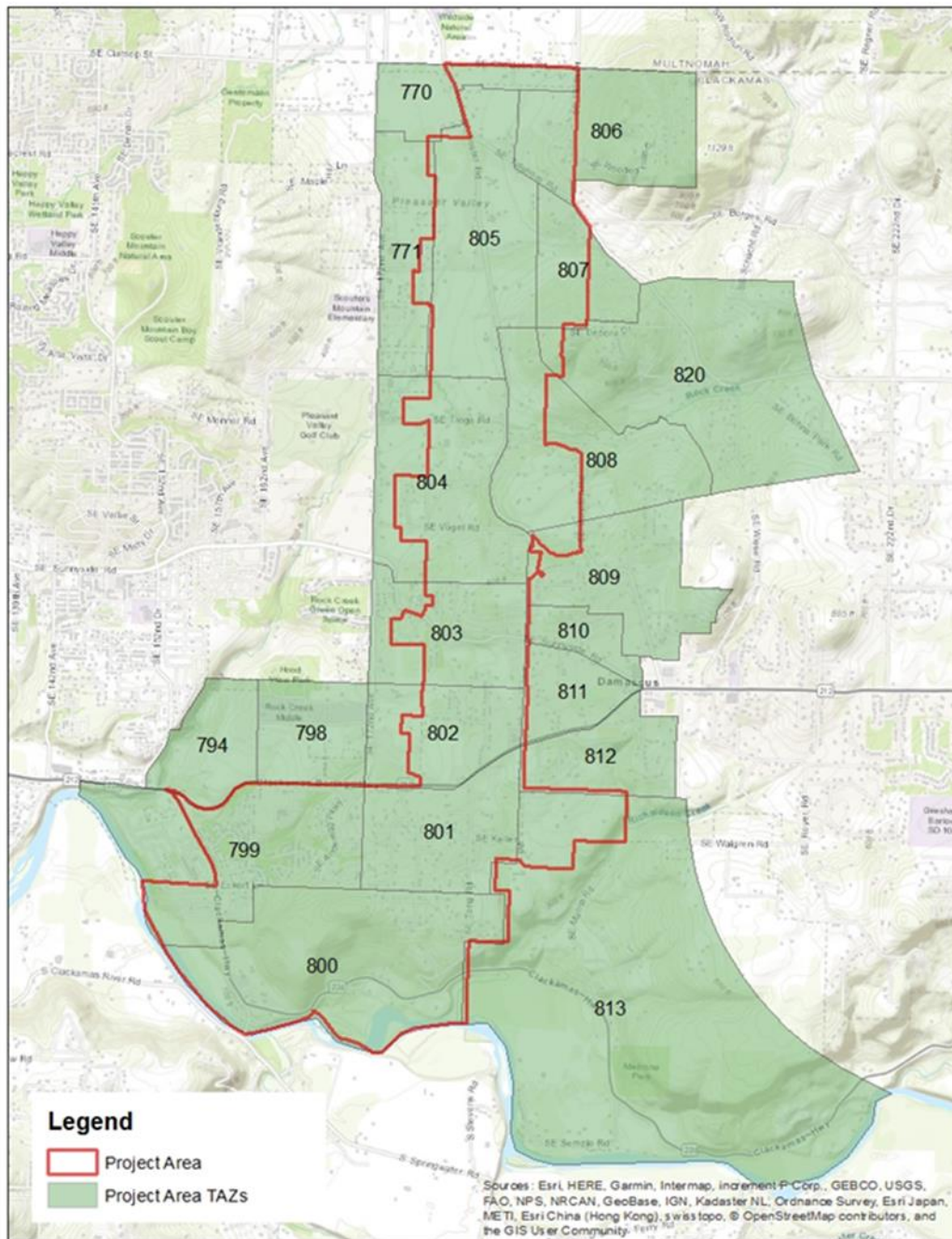
Table 19: Pleasant Valley / North Carver Buildable Land Supply and Demand (Scenario C)

Employment Type	Current General Landuse Classification	Scenario C Vacant Land Demand	Existing Vacant Land Supply in PV/NC Area	Net Land Need
Commercial (retail, office, lodging)	Employment	39.5	57.0	(17.5)
General Industrial & Flex	Industrial & RSI*	193.5	566.0	(372.5)
Public & Education (excl. open space & parks)	n/a	60.3	-	60.3
Total (unconstrained acres)		293.4	623.0	(329.6)

* Buildable land supply reflects 524 acres of Industrial and 42 acres of Regionally Significant Industrial land.

Source: findings based on assumptions provided in prior tables and Appendix B.

In all three scenarios the quantity of land zoned for employment, industrial, and regionally significant industrial appears to exceed even the high end of what can be expected in the plan area by 2040. Absent a significant upward shift in forecast employment, consideration should be given to land reclassification in the forthcoming planning process.

APPENDIX A**Metro Traffic Analysis Zones within PV/NC Plan Area**

December, 2018
 City of Happy Valley
 Pleasant Valley/Carver Employment Land Needs

APPENDIX A (continued)**Traffic Analysis Zones and Metro Households and Employment Estimates and Forecasts**

TAZ		2015 HH	2040 HH	HH Change	2015 Employment	2040 Employment	Employment Change
471	Total	87	1,087	1,000	14	762	748
770	Total	17	240	223	29	250	221
771	Total	43	859	816	51	287	236
799	Total	1,094	1,780	686	139	316	177
800	Total	168	1,262	1,094	56	271	215
801	Total	145	295	150	19	67	48
802	Total	92	179	87	32	392	360
803	Total	134	511	377	1	91	90
804	Total	109	1,039	930	32	326	294
806	Total	64	118	54	1	2	1
808	Total	80	841	761	7	94	87
805	Total	46	637	591	39	308	269
807	Total	28	352	324	10	20	10
809	Total	133	411	278	25	120	95
810	Total	23	93	70	84	199	115
811	Total	52	62	10	29	154	125
812	Total	49	127	78	13	130	117
813	Total	107	185	78	35	155	120
820	Total	153	953	800	27	52	25
821	Total	50	308	258	10	15	5
899	Total	169	197	28	165	162	(3)
900	Total	153	953	800	27	52	-
928	Total	393	425	32	131	153	22
Subtotal PV/NC Planning Area+		3,389	12,914	9,525	974	4,378	3,379

TAZ	In Project Area?	2015 HH	2040 HH	HH Change	2015 Employment	2040 Employment	Employment Change
471	Mostly Out	0	1	1	0	1	1
770	Mostly Out	6	84	78	10	87	77
771	Mostly Out	4	84	80	5	28	23
799	Mostly In	1,034	1,683	649	132	299	167
800	Mostly In	165	1,241	1,076	55	266	211
801	Mostly In	144	294	149	19	67	48
802	Mostly In	62	121	59	22	264	243
803	Mostly In	93	355	262	1	63	63
804	Mostly In	77	736	659	23	231	208
806	Mostly Out	19	35	16	1	1	0
808	Mostly Out	38	400	362	3	45	42
805	Mostly In	45	621	576	39	300	262
807	Mostly In	18	232	214	7	13	7
809	Mostly Out	11	33	23	2	10	8
810	Mostly Out	0	2	1	2	4	2
811	Mostly Out	3	3	0	1	8	6
812	Mostly Out	3	7	4	1	7	7
813	Mostly Out	8	14	6	3	11	9
820	Mostly Out	4	23	19	1	1	1
821	Mostly Out	0	0	0	0	0	0
899	Mostly Out	0	0	0	0	0	0
900	Mostly Out	0	0	0	-	0	0
928	Mostly Out	0	0	0	0	0	0
PV/NC Plan Area (adjusted)		1,735	5,969	4,234	324	1,708	1,384

December, 2018
 City of Happy Valley
 Pleasant Valley/Carver Employment Land Needs

FCS GROUP Memorandum

APPENDIX A (continued)

TAZ Adjustment Factors for PV/NC Area **

TAZ	Area In	Area Out	Total	Share In
471	24,699	18,958,344	18,983,043	0%
770	1,987,261	3,692,631	5,679,892	35%
771	815,333	7,502,621	8,317,955	10%
794	37,908	6,504,941	6,542,849	1%
798	84,535	7,317,300	7,401,835	1%
799***	14,144,248	5,445,319	19,589,566	95%
800	24,466,130	415,760	24,881,890	98%
801	10,885,549	52,212	10,937,761	100%
802	6,388,115	3,082,931	9,471,046	67%
803	7,465,812	3,276,349	10,742,160	70%
804	12,602,676	5,194,637	17,797,314	71%
806	3,749,564	9,022,710	12,772,274	29%
808	7,549,797	8,331,304	15,881,101	48%
805	16,474,085	417,245	16,891,331	98%
807	4,204,146	2,171,298	6,375,443	66%
809	1,000,240	11,340,139	12,340,379	8%
810	61,533	3,210,873	3,272,406	2%
811	250,757	4,797,969	5,048,726	5%
812	416,026	6,869,213	7,285,238	6%
813	4,813,511	60,795,455	65,608,967	7%
820	641,986	26,371,014	27,013,000	2%
821	35,020	20,121,464	20,156,484	0%
899	37,794	42,101,280	42,139,074	0%
900	9,134	10,032,362	10,041,496	0%
928	17,101	335,796,753	335,813,854	0%

Notes:

* Denotes data suppressed due to confidentiality restrictions.

** Area (share) was calculated in ArcGIS based on portions of TAZs inside and outside of PV/NC area

*** Most of area outside of TAZ 799 is developed so it is assumed that 95% of remaining development will occur within PV/C Area

TAZ = traffic analysis zone.

Source: Metro RLIS Data and Metro TAZ Data; compiled by FCS GROUP.

Metro Source: 2015-2040 Distributed Forecast (Scenario #1610). Oregon Metro Research Center. Metro Region Data Adopted 2016 by Metro Ordinance 16-1371. Clark County Data Provided by Regional Transportation Commission. The 2015 and 2040 household allocations have been reviewed by local jurisdictions and adopted by the Metro Council in 2016.

Model Vintage: Scenario 1610, William 2 forecast, file created 07/21/2017

December, 2018
 City of Happy Valley
 Pleasant Valley/Carver Employment Land Needs

FCS GROUP Memorandum

APPENDIX B: Employment Land Needs Assumptions

Employment Sectors to Building Type Assignment Assumptions

Employment Sectors	Building Types					Total
	Office	Government	Flex/Bus. Park	Gen. Industrial	Retail	
Retail	0%		10%	0%	90%	100%
Services	60%		10%	0%	30%	100%
Industrial			30%	70%	0%	100%
Government/Education/Other Public		100%		0%		100%

Source: reflects local assumptions by FCS GROUP.

Net New Employment Forecast by Building Type, Scenario A Forecast for 2040

Employment Sectors	Office	Government	Flex/Bus. Park	Gen. Industrial	Retail	Total
Retail	-	-	22	-	202	224
Services	373	-	62	-	187	622
Industrial	-	-	74	173	-	247
Government/Other Public	-	103	-	-	-	103
Total	373	103	159	173	389	1,196

Net New Employment Forecast by Building Type, Scenario B Forecast for 2038

Employment Sectors	Office	Government	Flex/Bus. Park	Gen. Industrial	Retail	Total
Retail Trades	-	-	45	-	403	448
Services	244	-	41	-	122	407
Industrial	-	-	339	791	-	1,130
Government/Other Public	-	186	-	-	-	186
Total	244	186	424	791	525	2,171

Source: FCS GROUP based on local market assumptions.

Net New Employment Forecast by Building Type, Scenario C Forecast for 2040

Employment Sectors	Office	Government	Flex/Bus. Park	Gen. Industrial	Retail	Total
Retail Trades	0	0	65	0	584	649
Services	354	0	59	0	177	590
Industrial	0	0	491	1146	0	1637
Government/Other Public	0	270	0	0	0	270
Total	354	270	615	1,146	762	3,147

Source: FCS GROUP based on local market assumptions.

Building Type to Land Needs Assumptions*

	Office	Government	Flex/Bus. Park	Gen. Industrial	Retail
Refill/Redevelopment Job Allocation ¹	0%	0%	0%	0%	2%
Jobs Needing Vacant Land Allocation ²	100%	100%	100%	100%	98%
Building SF Per Job ²	250	750	550	1,000	500
Floor-Area-Ratio ²	0.35	0.10	0.25	0.20	0.30
Public Facility Net:Gross Adjustment ³	1.15	1.30	1.15	1.20	1.15

* assumptions are intended to reflect a long-term average.

1/ Adjusts for building refill & vacancy allowances.

2/ Building density derived from Metro Urban Growth Report assumptions.

3/ Allowances take into account land dedicated to public/utility easements.

Source: assumptions reflect local observations.

December, 2018

City of Happy Valley

Pleasant Valley/Carver Employment Land Needs

FCS GROUP Memorandum

APPENDIX B: Employment Land Needs Assumptions (continued)**Net New Redevelopment Building Space Needs (Floor Area) - 2040 Forecast**

	Office	Government	Flex/Bus. Park	Gen. Industrial	Retail	Total
Scenario A	-	-	-	-	4,000	4,000
Scenario B	-	-	-	-	5,000	5,000
Scenario C	-	-	-	-	8,000	8,000

Net New Building Floor Area Development on Vacant Lands (Floor Area) - 2040 Forecast

	Office	Government	Flex/Bus. Park	Gen. Industrial	Retail	Total
Scenario A	93,000	77,000	87,000	173,000	190,000	620,000
Scenario B	61,000	140,000	233,000	791,000	257,000	1,482,000
Scenario C	89,000	202,000	338,000	1,146,000	373,000	2,148,000

Vacant Land Need (gross buildable acres) - 2040 Forecast

	Office	Government	Flex/Bus. Park	Gen. Industrial	Retail	Total
Scenario A	7.0	23.0	9.2	23.8	16.7	79.7
Scenario B	4.6	41.8	24.6	109.0	22.6	202.6
Scenario C	6.7	60.3	35.7	157.9	32.8	293.4

Building to Land Use Assignment Assumptions

Land Use Classification	Office	Government	Flex/Bus. Park	Gen. Industrial	Retail
Commercial (retail, office, lodging)	100%	0%	0%	0%	100%
Mixed Use	0%	0%	0%	0%	0%
Public	0%	100%	0%	0%	0%
General Industrial & Flex	0%	0%	100%	100%	0%
Total	100%	100%	100%	100%	100%

*Assumptions by FCS GROUP and City staff based on local observations.***Vacant Land Needs Forecast by Zoning Classification, Scenario A Forecast for 2038**

Land Use Classification	Office	Government	Flex/Bus. Park	Gen. Industrial	Retail	Total
Commercial (retail, office, lodging)	7.0	-	-	-	16.7	23.7
Mixed Use	-	-	-	-	-	-
Public	-	23.0	-	-	-	23.0
General Industrial & Flex	-	-	9.2	23.8	-	33.0
Total	7.0	23.0	9.2	23.8	16.7	79.7

Vacant Land Needs Forecast by Zoning Classification, Scenario B Forecast for 2040

Land Use Classification	Office	Government	Flex/Bus. Park	Gen. Industrial	Retail	Total
Commercial (retail, office, lodging)	4.6	-	-	-	22.6	27.2
Mixed Use	-	-	-	-	-	-
Public	-	41.8	-	-	-	41.8
General Industrial & Flex	-	-	24.6	109.0	-	133.6
Total	4.6	41.8	24.6	109.0	22.6	202.6

Vacant Land Needs Forecast by Zoning Classification, Scenario C Forecast for 2040

Land Use Classification	Office	Government	Flex/Bus. Park	Gen. Industrial	Retail	Total
Commercial (retail, office, lodging)	6.7	-	-	-	32.8	39.5
Mixed Use	-	-	-	-	-	-
Public	-	60.3	-	-	-	60.3
General Industrial & Flex	-	-	35.7	157.9	-	193.5
Total	6.7	60.3	35.7	157.9	32.8	293.4

Pleasant Valley / North Carver Planning Area 2040 Land Needs for Employment

Land Use Classification	Scenario A	Scenario B	Scenario C
Commercial (retail, office, lodging)	23.7	27.2	39.5
General Industrial & Flex	33.0	133.6	193.5
Public & Education (excl. open space & parks)	23.0	41.8	60.3
Total (unconstrained acres)	79.7	202.6	293.4

Source: Appendix B tables.



MEMORANDUM**Carver Opportunities and Constraints**
Pleasant Valley/North Carver Comprehensive Plan

DATE December 3, 2018
TO Project Committees
FROM Project Team

At the December 13th Committee meetings, there will be a discussion of the Carver Area. This will be an initial discussion of opportunities and constraints, intended to identify issues and plan concepts to be brought back in January. Attached is an opportunities and constraints diagram to help inform the discussion. Please review and bring your ideas regarding the following questions:

1. What are the opportunities you see for the Carver Area?
2. Where might river access be developed or improved?
3. What can be done to increase connections to the developed areas to the north?
4. What are the major constraints, and what potential solutions are there for those challenges?

