

REQUEST FOR COUNCIL ACTION

DATE ACTION REQUESTED: July 6, 2015

Order XX Ordinance Resolution Motion Information
No. 2015-0037 No. No. No. No.

SUBJECT: Comprehensive Plan Map Amendment from LDR to HDR, and Zoning Map Amendment from R-1 to R-3 for a property located at 1317 Villa Road.

Contact Person (Preparer) for this Motion: Steve Olson, Associate Planner
Dept.: Community Development
File No.: CPA-15-001/ZMA3-15-001

HEARING TYPE: ☐ LEGISLATIVE ☒ QUASI-JUDICIAL ☐ NOT APPLICABLE

RECOMMENDATION:

The Planning Commission adopted Resolution 2015-307, recommending that the City Council adopt the proposed Comprehensive Plan map amendment/Zoning map amendment for 1317 Villa Road. Order 2015-0037 would amend the Comprehensive Plan map designation from Low Density Residential (LDR) to High Density Residential (HDR) and amend the Zoning map designation from R-1 (Low Density Residential) to R-3 (High Density Residential) for a property located at 1317 Villa Road, Yamhill County tax lot 3217BC-800.

EXECUTIVE SUMMARY:

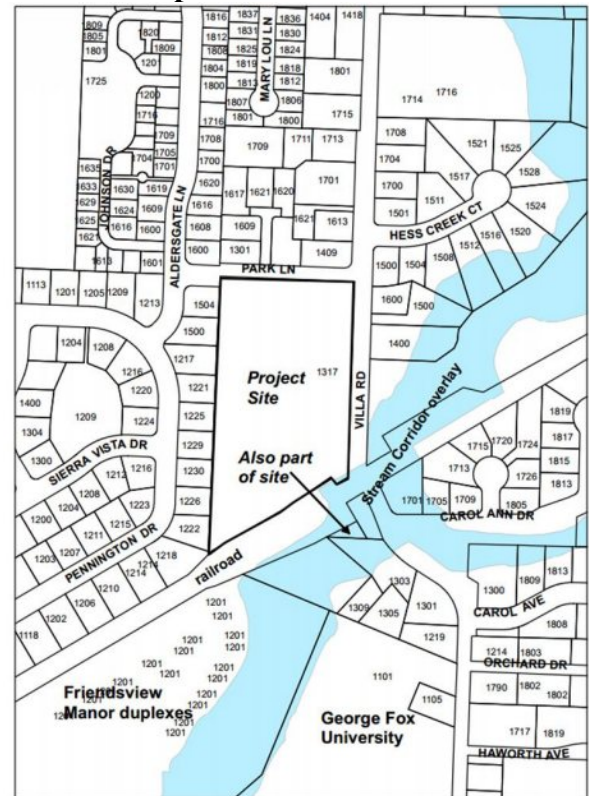
Proposal

Amend the Comprehensive Plan Map designation of the property at 1317 Villa Road from LDR (Low Density Residential) to HDR (High Density Residential) and amend the Zoning designation from R-1 (Low Density Residential) to R-3 (High Density Residential). If this application is approved then the applicant will apply for design review approval for a multifamily apartment project, to be named Martell Commons.

Site Information

The site is approximately 5.94 acres on tax lot 3217BC-800. The property is bifurcated by the railroad right of way; the main parcel is 5.91 acres, and the small remnant parcel is 0.03 acres. The remnant parcel is south of the railroad tracks and entirely within the City stream corridor overlay, so no development is proposed for the remnant parcel. The main parcel contains a single family house, and has remained in farm use as the area around it urbanized.

Location map



Surrounding uses:

- North across Park Lane: Developed with predominantly single family detached homes with primarily R-2 zoning, with some R-1 zoning along Villa Road.
- East across Villa Road: Developed with single family detached homes to the northeast. Most of the property east of the site adjacent to Villa Road is zoned either Institutional or R-1, but is undeveloped because it is in the stream corridor.
- West: The site abuts existing single family detached homes in an R-1 zone.
- South across the railroad corridor and the stream corridor: There are single family detached homes in an R-1 zone and George Fox University facilities to the southeast. To the southwest are duplexes that are part of the Friendsview Manor development.

Process:

This is a Type III application for a Comprehensive Plan map amendment and a Zoning map amendment. A Type III application of this nature goes first to the Planning Commission for a recommendation and then to the City Council for a final decision.

The applicant held a neighborhood meeting in December 2014 to discuss the proposal and the concept plan. This was not required by the city, but enabled the applicant to learn about neighborhood concerns about traffic impacts, the number of units proposed, and adequate parking. Based on the feedback, the applicant revised the concept plan to reduce the number of units, increase the amount of parking provided per dwelling unit, and reduce the number of buildings along the western property line.

It is important to note that the concept plan is not being approved at this time, and the applicant is not bound by the concept plan in this Comprehensive Plan map amendment/Zoning map amendment application. If this Comprehensive Plan map amendment/Zoning map amendment application is approved then the applicant will apply for design review approval. A design review application would include more detailed information about the design of the buildings, parking layout, preliminary grading and utility plans, landscaping and outdoor recreation area plans, and street frontage improvements. A design review application is a Type II process: there is public notice mailed to all property owners within 500 feet, the site will be posted with signs, and there is a two-week period to submit public comment. The Community Development Director then makes a decision on the application. Anyone who submits a comment is sent notice of the decision, and there is a two-week appeal period. If the decision is appealed then it goes to the Planning Commission for a public hearing and review.

Public and agency comments (summarized below; the full comments are included in Attachment 6):**Agency Comments:**

- Oregon Dept. of Transportation:
Gerry Juster and I have reviewed this application and have determined that ODOT will not have any comments. This is due to the limited impact we expect the project will have on state facilities. Thank you for referring this application to ODOT for review. Please feel free to contact me or Gerry if you have questions or need additional information.
Dan Fricke, Senior Transportation Planner
- Oregon Dept. of State Lands: A state permit will not be required for the proposed project because based on the submitted site plan the project appears to avoid impacts to jurisdictional wetlands and waters. This is a preliminary jurisdictional determination and is advisory only.
- PGE: Reviewed, no conflict

- Waste Management: Reviewed, no conflict. Will need input at the building permit stage for trash and recycling.
- Fire Dept: Reviewed, no conflict
- Police Dept.: This is a summary – the full comment is included in Attachment 6. The Department has concerns about pedestrian/vehicle mixed use safety, parking, and the number of driveways within such close proximity of one another. Park Lane must be widened to a full street width. The on-site parking for the apartments seems adequate, but inevitably there will be some on-street parking; consider removing on-street parking along the north side of the street to minimize congestion. It is very important that pedestrian and bike improvements are completed along Villa Road for safety. The driveway on Villa Road is very close to Park Lane, and may create a safety issue.

Public Comments:

The Planning Commission received several public comment letters (in Attachment 6) and substantial oral testimony at the 5/14/15 hearing (summarized in the minutes, Attachments 2 and 3). The primary concerns were about pedestrian and vehicle safety on Villa Road, and the potential for increased traffic and on-street parking in the neighborhood. Some commented that R-3 development should not be placed next to R-1 single-family homes, and that there were other locations better suited to R-3. There were also concerns about the impact to wildlife from development of the site. Please refer to the attachments for more details.

Issues & Analysis summary:

1. **Police Dept. comments:** The department raised many valid concerns about street improvements, pedestrian safety, parking, and driveway locations. The decision on these design issues will actually be made during the design review application phase. The applicant is now aware of the Police Department concerns. If the Comprehensive Plan map amendment/Zoning map amendment is approved then the applicant will need to address these issues in their design review application. The concept plan for the site is not being approved as part of this application, and no decisions are being made on driveway location, parking, or the design of the street improvements that will be required.
2. **Do the relevant Comprehensive Plan policies support the change:**
The Comprehensive Plan includes policies regarding high density housing location, dispersal of high density housing, design of high density housing, and compatibility with surrounding development. These policies are addressed in more detail in the findings. The proposed site is adjacent to a major collector road, which complies with one of the Comprehensive Plan policies for the location of multifamily housing. Changing the site to HDR would comply with the city goal of dispersing high density housing throughout the city instead of concentrating it in any one area. In addition, any R-3 development will have to meet the additional design review criteria for multi-unit housing. Overall, the proposed Comprehensive Plan map amendment/Zoning map amendment promote the efficient use of land within the urban growth boundary, improves housing diversity in this part of the city, provides multifamily housing close to urban services and employment, and is located along a major collector; the amendment is supported by Comprehensive Plan policies.
3. **Does the city need more HDR land and multifamily housing:** The applicant has prepared a Housing Needs Analysis, which shows that Newberg does not have enough land in the urban growth boundary in any of the housing categories (low density, medium density or high density) to accommodate growth over the next 15 years. The greatest shortfall, however, is in the HDR category. Newberg has the current capacity to accommodate 91% of the projected LDR need, 51% of the projected Medium Density Residential (MDR) need, but only 11% of the projected HDR need.

Changing LDR land to HDR would help address the shortfall, as the city currently has a greater need for HDR land than LDR land.

4. **Is this site suitable for HDR land:** The main issues to address are the traffic impacts, and whether there are adequate public facilities to support the potential development

- **Transportation improvements:** The proposed development site is located adjacent to Villa Road and Park Lane and would take direct access from both streets. Park Lane is currently developed below City residential street standards. The future development would construct a 1/2 street improvement on the south side of Park Lane to residential standards, and dedicate additional right of way. Villa Road is currently constructed below City major collector standards. The future development would construct a 1/2 street improvement on the west side of Villa Road to major collector standards, and dedicate additional right of way. The street frontage improvements and right of way dedication would take place after design review approval for the apartment project.
- **City transportation project:** The City is currently beginning design of transportation improvements to Villa Road from Haworth Avenue to Crestview Drive. This project is on the city Capital Improvement Project list, and funded by transportation system development charges (SDCs) the city levies on new development. During the development application review for this apartment project, coordination of street improvements with the City-led project will be necessary, and will be completed at that time. This project is not designed yet, but a primary goal of the project is to improve pedestrian and bicycle facilities on this section of Villa Road. The City does not yet know if there will be room for sidewalks and bike lanes on both sides of the road, but believes there is room for a sidewalk and bike lane on at least one side of the road.
- **Traffic impact:** The application includes a traffic study that analyzes the impact the proposal would have on trip generation & distribution, safety, and operational functions through the year 2035 for several surrounding intersections. According to the applicant's traffic impact study, all intersections studied currently operate at acceptable levels of service during the weekday a.m. and p.m. peak hours.

2016 Year Analysis

All of the study intersections except the Villa Road/HWY 99 intersection are forecast to meet operation standards during the weekday p.m. peak hour. The site is anticipated to be built out in 2016.

- Without development of the site, the intersection of Highway 99 and Villa Road will exceed capacity (ODOT's standard is a v/c ratio of 0.85). The intersection will operate at a v/c of 0.88.
- With development of the site, the intersection of Villa Road and HWY 99 will still operate at a v/c of 0.88. The development's impact to this intersection is minimal. All other study intersections operate at acceptable LOS. If the site is developed in 2016 then no mitigation would be needed at the study intersections.

2035 Year Analysis

All of the study intersections except the Villa Road/HWY 99 intersection and the Villa Road/Fulton Street intersection are forecast to meet operation standards during the weekday p.m. peak hour.

- Without development of the site, the Villa Road/HWY 99 intersection is forecast to operate with a v/c ratio of 1.11 which exceeds the ODOT standard of 0.85, and the Villa Road/Fulton Street intersection is forecast to operate with a LOS F which exceeds the City's standard of LOS D or better.
- With development of the site, all of the study intersections except the Villa Road/HWY 99 and Villa Road/Fulton Street intersections are forecast to continue meeting operational standards during the weekday p.m. peak hour. With full development of the site, the v/c ratio of the Villa Road/HWY 99 intersection is forecast to operate at 1.12 which is an increase of 0.01 from the undeveloped conditions. The impact of this development on that intersection is minimal, and no mitigation is proposed. ODOT has commented that the impact on state facilities is limited, and they had no additional requirements. No mitigation would be required for this project at the Villa/Fulton intersection, as the intersection will operate acceptably in 2016 upon development. The decrease in LOS to F for Villa/Fulton in 2035 is due to the increase in background traffic, as the intersection is expected to have a LOS of F in 2035 whether or not this site is developed. Appropriate changes to the traffic control at that intersection will be considered at that time (the traffic study suggested a 4-way stop as mitigation).

No mitigation will be required at nearby intersections. The applicant is still responsible for the cost of street frontage improvements on Park Lane and Villa Road, however, and will also pay Transportation SDCs toward their general impact on the transportation system (the current transportation SDC is \$2,143.68 per multifamily dwelling unit, so this becomes a significant cost for a project with 128 dwelling units). SDC rates increase over time, so the actual SDC to the applicant will depend on when development occurs.

- **Sight Distance:** The sight distance from the proposed site's frontage on Park Lane is adequate for cars entering and exiting the site. The sight distance from the proposed site's Villa Road frontage may not be adequate depending on the final profile and alignment of Villa Road. If adequate sight distance is not possible, the Villa Road access will be limited to right in/right out movements only. Villa Road is proposed to continue as a 25 MPH road through the developments frontage and through the large sag vertical curve to the south of the property. Excessive speeds are a concern in this area. To help mitigate this problem, a landscaped median (or other approved traffic calming measure) in a portion of the site's Villa Road frontage will be evaluated at the time of development. This can also serve to provide right in/right out access restrictions at the Villa Road driveway access.
- **Public utility infrastructure:** The proposed site has existing water and stormwater facilities to serve the maximum density of the proposed zone change. There is an existing 8" waterline in Villa Road and Park Lane and there is a 21" stormwater line at the southern boundary of the property. The application contains a report on the water system which shows adequate capacity. The post developed stormwater runoff rates will match pre-developed rates with properly designed stormwater facilities.

The existing sewer system directly downstream of the site is currently at capacity and development of the site at the existing R-1 zoning density would put several pipe segments over capacity. A change in zoning from R-1 to R-3 would not significantly increase the demand on the sewer system, and would not require a larger pipe size than is required with

the current zoning. The specifics of pipe upsizing will be determined during development application review.

- **Availability of public services:** The proposed site is within walking distance of many services: Within ¼ mile of a small CPRD park (College Park, off Sierra Vista), the CPRD pool, and George Fox University; within ½ mile of Joan Austin Elementary school; within ¾ mile of Newberg High School, and the Portland Road commercial area. This meets the Comprehensive Plan policies of high density housing being located near public services and public open spaces. It also means that residents of the proposed high density housing may walk or bike to commercial areas, jobs, parks, and schools. Public transit is available on Hwy 99W. An apartment project will pay a School District construction excise tax (currently \$1 per square foot for residential construction) and a Parks District SDC (currently \$1,475 per dwelling unit).

The Planning Commission held hearings on May 14, 2015 and June 11, 2015 to consider the proposal. After reviewing the evidence and hearing substantial public testimony, the Planning Commission adopted Resolution 2015-307 recommending that the City Council approve the requested Comprehensive Plan map amendment and Zoning map amendment. The proposal meets the applicable Development Code criteria and Comprehensive Plan goals and policies, as summarized by the following points:

- There is a demonstrated need for HDR land in the city.
- There is adequate infrastructure to serve the site (water, sewer, stormwater and transportation), in part because of the City transportation improvement project for Villa Road.
- The site is adjacent to a major collector street, and has close proximity to many public services.

FISCAL IMPACT: No direct fiscal impact. The applicant must pay for any costs associated with future development, such as street and utility improvements.

STRATEGIC ASSESSMENT (RELATE TO COUNCIL GOALS):

Some of the Council goals are:

- Create a clear vision for the future of Newberg, maintaining its small town feel.
- Maintain and modernize the City's transportation and utilities infrastructure.
- Implement the highest practicable environmental standards

The Council's adopted Comprehensive Plan for Newberg contains goals to: provide a range of housing types and locations to ensure there is an adequate supply of housing for City residents of various income levels; locate high density housing near collector or arterial streets; and not to concentrate multifamily housing in particular areas of the city.

Newberg has maintained the feel of an independent small town and resisted becoming a bedroom community to the Portland metropolitan area in part because it has a diverse economy and a population with a broad range of incomes and backgrounds. This proposal will help to provide a range of housing types within Newberg. It would also assist in upgrading the transportation and utility infrastructure in the area, and would be developed in accordance with Newberg's latest stormwater standards to protect the creek and downstream rivers. The multifamily zone would be located next to a major collector street, and would help disperse multifamily housing within the city.

ATTACHMENTS:

Order 2015-0037 with:

- Exhibit A: Findings
- Exhibit B: Location Map
- Exhibit C: Legal Description
- Exhibit D: Comprehensive Plan map
- Exhibit E: Zoning map

1. Planning Commission Resolution 2015-307 with:
 - Exhibit A: Findings
 - Exhibit B: Location Map
 - Exhibit C: Legal Description
 - Exhibit D: Comprehensive Plan Map
 - Exhibit E: Zoning Map
2. 5/14/15 Planning Commission Meeting Minutes
3. 6/11/15 Planning Commission Meeting Minutes DRAFT
4. Planning Commission Staff Report (to the 5/14/15 meeting)
5. Application
6. Public Comments
7. Newberg Development Code & Comprehensive Plan (by reference)

AN ORDER AMENDING THE COMPREHENSIVE PLAN MAP DESIGNATION FROM LOW DENSITY RESIDENTIAL (LDR) TO HIGH DENSITY RESIDENTIAL (HDR) AND AMENDING THE ZONING DESIGNATION FROM R-1 (LOW DENSITY RESIDENTIAL) TO R-3 (HIGH DENSITY RESIDENTIAL) FOR A PROPERTY LOCATED AT 1317 VILLA ROAD, YAMHILL COUNTY TAX LOT 3217BC-800.

RECITALS:

1. DJ2 Holdings, LLC submitted an application requesting a Comprehensive Plan map amendment from LDR (Low Density Residential) to HDR (High Density Residential) and a Zoning map amendment from R-1 (Low Density Residential) to R-3 (High Density Residential) for property located at 1317 Villa Road, Yamhill County tax lot 3217BC-800
2. The Planning Commission held hearings to consider the proposal on May 14, 2015 and June 11, 2015. The Commission took public testimony, deliberated, and found that the application met the applicable criteria in the Newberg Development Code, and the goals and policies of the Newberg Comprehensive Plan as shown in the findings in Exhibit A.
3. At their June 11, 2015 meeting the Planning Commission adopted Resolution 2015-307, recommending that the City Council approve the requested Comprehensive Plan map amendment and Zoning map amendment.
4. The City Council held a hearing on July 6, 2015 to consider the proposal. After reviewing the evidence and hearing public testimony, the City Council finds that the application meets the applicable Development Code criteria and Comprehensive Plan goals and policies for approval.

THE CITY OF NEWBERG ORDERS AS FOLLOWS:

1. The Comprehensive Plan designation is changed from Low Density Residential (LDR) to High Density Residential (HDR), and the Zoning designation is changed from R-1 (Low Density Residential) to R-3 (High Density Residential) for the property located at 1317 Villa Road, Tax Lot 3217BC-800, as shown in Exhibit B and described in Exhibit C. Exhibit B and C are hereby adopted and by this reference incorporated.
2. The findings shown in Exhibit A are hereby adopted and by this reference incorporated.

3. The Newberg Comprehensive Plan land need and supply tables shall be amended to reflect the change, and the Newberg Comprehensive Plan map and Zoning map shall be amended to reflect the change.

➤ **EFFECTIVE DATE** of this order is the day after the adoption date, which is: July 7, 2015.

ADOPTED by the City Council of the City of Newberg, Oregon, this 6th day of July, 2015, by the following votes: **AYE:** **NAY:** **ABSENT:** **ABSTAIN:**

Sue Ryan, City Recorder

ATTEST by the Mayor this 9th day of July, 2015.

Bob Andrews, Mayor

ATTACHED:
Exhibit A: Findings
Exhibit B: Location Map
Exhibit C: Legal Description
Exhibit D: Comprehensive Plan map
Exhibit E: Zoning map

Exhibit A: Findings to Order 2015-0037

1317 Villa Road Comprehensive Plan Map Amendment & Zoning Amendment, File: CPA-15-001/ZMA3-15-001

Section I. Newberg Development Code § 15.302.030: Procedures for Comprehensive Plan Map and Zoning Map Amendments.

(A) Type III Plan and zoning map amendments – one parcel or small group of parcels.

(3) Amendment Criteria. The owner must demonstrate compliance with the following criteria:

(a) The proposed change is consistent with and promotes the goals and policies of the Newberg Comprehensive Plan and this Code;

Finding: Section II of these findings addresses the Comprehensive Plan goals and policies. It can be found that this proposal is consistent with and promotes numerous applicable goals and policies, as summarized below.

Density: The site contains 5.94 acres, or 258,746 square feet. Assuming that the net site area after right-of-way dedications will be approximately 85% of the gross area, there would be an approximate net site area of 219,934 square feet. If the site develops as R-1 it would be expected to have approximately 30 single family homes. In the R-3 zone the site would allow an approximate maximum net density of 147 dwelling units and a minimum of 88 dwelling units. The actual density will depend on the final site design and will be limited by parking requirements, open space requirements, and stormwater facilities, but is expected by the applicant to be approximately 128 units.

15.302.032 Purposes of each zoning district.

A. R-1 Low Density Residential District.

- 1. The purpose of this land use designation is to provide for low density urban single-family residential uses at an average overall density of 4.4 units per gross buildable acre in the district. It is intended to provide a stable and healthful environment together with the full range of urban services.*
- 2. Typical housing types will include single-family dwellings and planned unit developments. The district also is intended to allow low intensity institutional uses that operate consistent with peaceful enjoyment of residential neighborhoods. The R-1 district is intended to be consistent with the low density residential (LDR) designation of the comprehensive plan.*

C. R-3 High Density Residential District.

- 1. The purpose of this land use designation is to provide multifamily dwellings of different types and styles at an average overall density of 16.5 units per gross buildable acre in the district.*

2. Typical housing types will include duplexes, multifamily dwellings, and manufactured dwelling and mobile home parks. The district also is intended to allow low intensity institutional uses that operate consistent with peaceful enjoyment of residential neighborhoods. Density may vary depending on lot size, off-street parking area, transportation, landscaping and other site considerations. The R-3 district is intended to be consistent with the high density residential (HDR) designation of the comprehensive plan.

Comprehensive Plan Housing Land Needs and Buildable Land Supply History

Newberg's Comprehensive Plan has consistently shown a significant need for additional HDR (High Density Residential) land.

2005 Comprehensive Plan Land Need and Supply Amendments

In 2005, the City Council adopted amendments to the Comprehensive Plan, including updated residential land need and supply numbers for LDR (Low Density Residential), MDR (Medium Density Residential) and HDR (High Density Residential) land designations. The updates were based on data from the Housing and Residential Land Needs Report compiled by Johnson-Gardner in 2004. The amendments were adopted and acknowledged through the post-acknowledgment plan amendment process in 2005. The 2005 Comprehensive Plan has residential land data for the 20-year period from 2005-2025, and the future planning period out to 2040. That data shows that the City had a demonstrated need for 89 buildable acres of HDR (High Density Residential) through 2025, and an additional 83 acres of HDR land through 2040:

Plan Designation	Buildable Acres Needed 2005-2025	Buildable Acres in UGB (2004)	Surplus (Deficit) for 2005-2025	Buildable Acres Needed 2026-2040
LDR	612	359	(253)	735
MDR	173	142	(31)	191
HDR	89	13	(76)	83
Total	874	514	(380)	1009

Source: Newberg Ordinance 2005-2626

In 2009 the City proposed an update to the Housing Element of the Comprehensive Plan. This item was appealed to LUBA and remanded; it has not yet been revised and readopted, so the 2005 amendments are the latest acknowledged estimates.

This application: For the purposes of this application, the firm of Cogan Owens Greene prepared a housing needs analysis using recent data on buildable lands, and a 2012 population projection for Newberg that has been adopted by Yamhill County as part of a coordinated population projection for every part of Yamhill County.

Excerpted from the application – Population Forecast:

Portland State University's Population Research Center developed a future population forecast for the Newberg Urban Area. This forecast was adopted by Yamhill County as the coordinated population forecast required by state law. This forecast is shown in Table III-2.

Table III-2. Future Population Forecast – Newberg Urban Area

Year Population Forecast

2015 24,663

2020 28,250 (*corrected by city staff – the applicant used 25,250, which was a typographical error*)

2025 32,213

2030 35,408

2032 36,610

2035 38,490

Source: Population Research Center, Portland State University, Population Forecasts for Yamhill County, its Cities and Unincorporated Area, 2011-2035, 2012.

Excerpted from the application – Housing Needs Analysis:

Cogan Owens Greene prepared a Housing Needs Analysis (Exhibit G) based on the 2009 inventory updated with current GIS data provided by City Staff, the projections from the Portland State Report, and refined for the remand findings from LUBA. This supplemental report is included in Exhibit G. It confirms that there will be a shortage of land available in **2030** for LDR, MDR, and HDR lands:

Plan Designation	Buildable Acres Needed	Buildable Acres in UGB	(Deficit)	Percentage of Available Capacity
LDR	406	369	(37)	91%
MDR	179	92	(87)	51%
HDR	62	7	(55)	11%
Total	647	468	(179)	72%

The proposed amendment would add 5.94 acres of HDR land to the buildable land inventory. This would meet about 10% of the HDR need through 2030. The proposed amendment would decrease the amount of buildable LDR land by 5.94 acres, or 1.5% of the LDR need through 2030. The city needs to have an adequate supply of all types of land. This change from LDR to HDR is justified because there is currently a greater shortfall in HDR.

Adequate Infrastructure to Serve the Site

The applicant included an Infrastructure Analysis report. The proposed site has existing water and stormwater facilities to serve the maximum density of the proposed zone change. There is an existing 8" waterline in Villa Road and Park Lane and there is a 21" stormwater line at the southern boundary of the property. The application contains a report on the water system which shows adequate capacity. The post developed stormwater runoff rates will match pre-developed rates with properly designed stormwater facilities.

The existing sewer system directly downstream of the site is currently at capacity and development of the site at the existing R-1 zoning would put several pipe segments over capacity. A change in zone from R-1 to R-3 would not significantly increase the demand on the sewer system, and would not require a larger pipe size than is

required with the current zoning. The specifics of pipe upsizing would be determined during development application review.

The proposed development site is located adjacent to Villa Road and Park Lane and would take direct access from both streets. Park Lane is currently developed below City residential street standards. The development would construct a 1/2 street improvement on the south side of Park Lane to residential standards. Villa Road is currently developed below City major collector standards. The development would construct a 1/2 street improvement on the west side of Villa Road to major collector standards. Right-of-way dedication would be required along both street frontages; the extent of dedication would be determined at the design review phase.

The City is currently beginning design of transportation improvements to Villa Road from Hayworth Avenue to Crestview Drive as a planned Capital Improvement Project. The project intends to improve the vertical alignment of the road and complete multimodal improvements along Villa. During the development application review, coordination of street improvements will be necessary, and will be completed at that time.

According to the applicant's traffic impact study, all of the study intersections except the Villa Road/HWY 99 intersection are forecast to meet operation standards during the weekday p.m. peak hour at the time of development in 2016. The impact of this development on that intersection is minimal and no mitigation is proposed at the time of development. No mitigation would be required at study intersections upon development in 2016. In the year 2035, all of the study intersections except the Villa Road/HWY 99 intersection and the Villa Road/Fulton Street intersection are forecast to meet operation standards during the weekday p.m. peak hour. The impact of this development on those intersections in the year 2035 is minimal and no mitigation is necessary. ODOT has commented that the impact of the development at the Villa/99W intersection is limited, and had no additional comments or requirements.

Availability of Public Services

The proposed site is within walking distance of many services: Within ¼ mile of a small CPRD park (College Park, off Sierra Vista), the CPRD pool, and George Fox University; within ½ mile of Joan Austin Elementary school; within ¾ mile of Newberg High School, A-dec's industrial site, and the Portland Road commercial area. This meets the Comprehensive Plan policies of high density housing being located near public services and public open spaces. It also means that residents of the proposed high density housing may walk or bike to commercial areas, jobs, parks, and schools. Public transit is available on Highway 99W.

Site is Suitable for HDR Development

The proposed site is suitable for HDR development because it meets the Comprehensive Plan policies of high density housing location, dispersal of high density housing, design of high density housing, and compatibility with surrounding development. The proposed site is adjacent to a major collector road which will provide adequate access for higher density housing. There are few apartments north of the railroad tracks, so approval would help the dispersal of R-3 housing within the city. Future development on the site will be compatible with the surrounding area due to the design review criteria for multifamily housing and due to setbacks, lot coverage limits, height limits, and landscaping buffer requirements. For example, the maximum permitted building height in R-3 is limited to 30 feet (the same maximum height as R-1) for a distance of 50 feet from the abutting

boundary of a R-1 district. This ensures that building heights in R-3 will be compatible with abutting R-1 properties.

The application meets this criterion because the proposed change from LDR/R-1 to HDR/R-3 is consistent with many goals and policies in the Comprehensive Plan, and the Development Code.

(b) Public facilities and services are or can be reasonably made available to support the uses allowed by the proposed change.

Finding: The application included an Infrastructure Analysis report. Public facilities and services are available to support the proposed uses. There is an existing 10-inch and 12-inch sanitary sewer line to the property, with a manhole connection at the southern edge of the property. The applicant's sanitary sewer calculations report indicates, and City staff concurs, that there is not adequate capacity in the downstream sanitary sewer system to support further development, but that the sewer system can be upsized to support the development. The sanitary sewer master plan identifies the necessary pipe size required to serve the basin if fully developed with current zoning. The zone change at the maximum density does not change the needed pipe diameter needed for development in the basin. There are existing water lines in Villa Road and Park Lane. A fire flow analysis will be completed at the time of development and water pipe upsizing will be completed with the development. There is adequate capacity to the site which can be reasonably provided through the City's water storage and distribution system. There is an existing 21" stormwater line at the southern boundary of the site which could serve the site.

The site is accessed by Park Lane and Villa Road, both of which are not fully improved streets. A 1/2 street improvement on Park Lane and Villa Road will be required at the time of development. Additional right of way dedication will also be required. Park Lane is a residential street with an ultimate curb-to-curb width of 32 feet. Villa Road is a Major Collector with an ultimate curb-to-curb width of 34 feet with two 12-foot travel lanes, 5-foot bike lanes, and setback sidewalk. Portions of Villa Road may include a landscaped median. No parking will be allowed on Villa Road. According to the applicant's traffic impact study, all of the study intersections except the Villa Road/HWY 99 intersection are forecast to meet operation standards during the weekday p.m. peak hour at the time of development in 2016. The impact of this development on that intersection is minimal and no mitigation is proposed at the time of development. In the year 2035, all of the study intersections except the Villa Road/HWY 99 intersection and the Villa Road/Fulton Street intersection are forecast to meet operation standards during the weekday p.m. peak hour. The impact of this development on the Villa Road/Hwy 99W intersection and the Villa/Fulton intersection in the year 2035 is minimal and no mitigation is necessary. The increase in traffic at both of these intersections in 2035 is primarily due to the increase in background traffic.

The application meets this criterion because public facilities and services are or can be reasonably made available to support the uses allowed by the proposed change from LDR/R-1 to HDR/R-3.

(c) Compliance with the State Transportation Planning Rule (OAR 660-012-0060) for proposals that significantly affect transportation facilities.

Finding: The State Transportation Planning Rule is meant to determine whether proposals “significantly affect” existing or planned transportation facilities, and if they do affect them, to ensure that they are properly mitigated. The Rule says that:

“a plan or land use regulation amendment significantly affects a transportation facility if it would: (a) Change the functional classification of an existing or planned transportation facility; (b) Change standards implementing a functional classification system; or (c) As measured at the end of the planning period identified in the adopted transportation system plan: (A) Allow land uses or levels of development that would result in types of levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility; (B) Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP or comprehensive plan; or (C) Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.”

The proposed plan amendment site is located adjacent to Villa Road, which is classified as a Major Collector in the City’s Transportation System Plan, and Park Lane, which is classified as a Residential Street in the City’s Transportation System Plan. The proposal would not: (a) change the functional classification of Villa Road or Park Lane; or (b) change standards implementing a functional classification system.

One of the main purposes of the traffic impact study included with the applicant’s application package is to determine whether the project meets subsection (c) of the Transportation Planning Rule. The traffic study analyzed the trip generation and distribution, safety analysis, and operational analysis of the proposed project to determine the impact the proposal will have on the transportation system. The trip generation is based on the maximum possible gross density allowed by the proposed zone; in this case that would be 168 possible dwelling units. That number is compared with the trips that would be generated by the possible maximum density allowed by the R-1 zone, 30 units. The traffic study indicates that the proposed zone change could result in a net increase of 74 trips during the evening peak hour, with 25 exiting the site and 49 entering the site. In the morning peak hour, the maximum density could result in a net increase of 55 trips, with 9 entering and 46 exiting the site. The actual trips generated by the site may be fewer due to the unlikelihood of the site being built out at the maximum density – with the topographic and environmental constraints, the site build out will more likely be around 128 units.

Sight distance from the site frontage was examined and determined to be adequate along Park Lane. Sight distance from the site frontage along Villa Road is not adequate. Depending on the ultimate vertical and horizontal profiles of Villa Road, the Villa Road access may be limited to right in/right out access only. A landscaped median would be installed on Villa Road to facilitate this restriction, as well as to provide for some natural traffic calming.

During a five year period between January 2009 and December 2013, there were no accidents reported at any of the study intersections except for the Villa Road/HWY 99 intersection. At this intersection there were 33 crashes, 24 of which were rear-end collisions. The crash rate per million entering vehicles at this intersection was below 1.0. Additionally, the crash history for the segment of Villa Road, not including the study intersections, was analyzed between Park Lane and HWY 99. Of the four crashes reported in this segment, three involved bicycles. Bicycle and pedestrian improvements are planned for the development, which will help mitigate the bicycle incidents. No mitigations are proposed for the Villa Road/HWY 99 intersection.

The traffic study also looked at capacity analysis for the area and surrounding intersections for the expected project build-out in 2016 and to 2035. Capacity analysis looks at the volume-to-capacity (v/c) ratio for intersections; in other words, how much traffic an intersection can handle before it's at peak capacity, which would be a ratio of 1.0. The intersection is then given a letter grade ranging from A (best) to F (worst) for its level of service based on the v/c ratio for the intersection. The traffic study analysis shows that all of the surrounding intersections are operating at an acceptable level of service under all analysis scenarios, except for the Villa Road/HWY99 intersection in 2016 and 2035, and the Villa Road/Fulton Street intersection in 2035.

- With full build out in 2016, the Villa Road/HWY 99 intersection is forecast to operate at a v/c ratio of 0.88 which is over the ODOT standard of 0.85. Without this development, the v/c ratio would be 0.88. The impact of this development is minimal at this intersection. In the 2035 analysis, the Villa Road/HWY 99 intersection is forecasted to operate at a v/c ratio of 1.12 with full development of the site and 1.11 without development of the site. This also is a minimal impact and no mitigations is proposed. ODOT has confirmed this by stating that the project will have a limited impact on state facilities, and did not have any additional comments.
- The intersection of Villa Road/Fulton Street in 2035 is anticipated to have a level of service of F with or without full build out of this proposed development. However, at the 2016 build-out, the Villa Road/Fulton intersection is forecast to operate at a level of service D, which is within City standards. Because of this, no mitigation to this intersection is anticipated at the time of development until a future date when the intersection warrants mitigation.

According to the traffic study, the future trips generated from the proposed zone change will not "significantly affect" the transportation system. Less than 400 of the additional daily trips are anticipated to reach the Villa/99W intersection, which under the Oregon Highway Plan standards does not cause "further degradation" of state highway facilities. ODOT has stated that the project will have a limited impact on state facilities, and did not have additional comments or requirements. Therefore, the proposal meets the State Transportation Planning Rule because it does not significantly affect transportation facilities: (A) It does not allow a level of development that would result in levels of travel inconsistent with the functional classification of the existing transportation facilities; (B) It does not reduce the performance of the existing transportation facilities below the minimum acceptable performance standards; and (C) It does not significantly worsen the performance of an existing transportation facility that is otherwise projected to perform below the minimum acceptable performance standard.

Section II. Applicable Statewide Planning Goals and Newberg Comprehensive Plan Goals & Policies

A. Citizen Involvement Goal

Goal: To maintain a Citizen Involvement Program that offers citizens the opportunity for involvement in all phases of the planning process.

Finding: Part of the citizen involvement program includes opportunities for citizen involvement in planning. In this case, citizens have an opportunity to comment on this proposal, both in writing and by testifying at either the Planning Commission or City Council hearings. In addition, the applicant for this proposal held a neighborhood meeting for the purpose of discussing the project with neighbors before the official public process started. This application is consistent with this goal because the public hearing process offers citizens the opportunity to comment on the proposal, and appeal the decision if they are unsatisfied.

Statewide Planning Goal 10: To provide for the housing needs of citizens of the state.

Buildable lands for residential use shall be inventoried and plans shall encourage the availability of adequate numbers of needed housing units at price ranges and rent levels which are commensurate with the financial capabilities of Oregon households and allow for flexibility of housing location, type and density.

NCP I. Housing Goals and Policies

Goal: To provide for a diversity in the type, density and location of housing within the City to ensure there is an adequate supply of affordable housing units to meet the needs of City residents of various income levels.

2. Location Policies. a: Medium and high density areas should be located for immediate access to collector streets or minor arterials and should not cause traffic to move through low density areas. High density areas should be easily accessible to arterial streets. They should also be located near commercial services and public open spaces.

3. Mix Policies. b: Low and moderate income housing should not be concentrated within particular areas of the City.

3.j: The City shall encourage innovation in housing types and design as a means of offering a greater variety of housing and reducing housing costs.

3.k: The City shall encourage an adequate supply of rental housing dispersed throughout the city to meet the needs of renters.

Finding:

The City has an obligation, reflected here in the comprehensive plan policies, to ensure that there is adequate housing of all density types and for every income level. The proposed zone change would help the City remedy its deficit of available multi-family housing.

The proposed site is located adjacent to a major collector, and most traffic from the site is expected to use Villa Road, not local residential streets. Villa Road gives easy access to Portland Road/Hwy 99W, a major arterial. In addition, the site is within walking distance of many services: Within ¼ mile of a small CPRD park (College Park, off Sierra Vista), the CPRD pool, and George Fox University; within ½ mile of Joan Austin Elementary school; within ¾ mile of Newberg High School, A-dec's industrial site, and the Portland Road commercial area. This meets the Comprehensive Plan policies of high density housing being located near public services and public open spaces. It also means that residents of the proposed high density housing may walk or bike to commercial areas, jobs, parks, and schools. Public transit is available on Highway 99W.

Any future development on the site under the proposed R-3 zoning will require a design review process where the applicant will need to meet not only the basic design review criteria, but also the additional multi-family design review criteria. The City would have future opportunities to influence the design of the development and encourage innovation of housing types and design. The proposal is consistent with many of the housing policies in the Comprehensive Plan.

J. Urban Design Goals and Policies

Goal 1: To maintain and improve the natural beauty and visual character of the City.

1. General Policies. b: Design review should be provided for all new developments more intensive than duplex residential use.

1.1.l: The City shall encourage compatible architectural design of new structures in the community.

1.1.n: The City shall encourage innovative design and ensure that developments consider site characteristics and the impact on surrounding areas.

1.1.r: Developments of medium or high density shall be of a quality and design which will effectively offset the greater density.

Finding: Any future development on this property under the proposed R-3 zoning will require design review approval. The Newberg Development Code also has supplementary design review standards that multi-family developments must meet, including compatibility with adjacent sites. The site characteristics for future development would be looked at closely to encourage the best design of the property and to properly mitigate any impacts on surrounding uses. The proposal is consistent with many of the urban design goals and policies in the Comprehensive Plan.

K. Transportation Goals and Policies

Goal 3: Promote reliance on multiple modes of transportation and reduce reliance on the automobile.

Policy b.2: The City shall encourage higher density development in residential areas near transit corridors, commercial areas and employment centers, including the downtown.

Finding: The site is within walking distance of many services: Within ¼ mile of a small CPRD park (College Park, off Sierra Vista), the CPRD pool, and George Fox University; within ½ mile of Joan Austin Elementary school; within ¾ mile of Newberg High School, A-dec's industrial site, and the Portland Road commercial area. This

means that residents of the proposed high density housing may walk or bike to commercial areas, jobs, parks, and schools. Public transit is available on Highway 99W. The proposal is consistent with transportation goals and policies in the Comprehensive Plan.

L. Public Facilities and Services Goals and Policies

Goal: To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban development.

1. All Facilities & Services Policies. f: Maximum efficiency for existing urban facilities and services will be encouraged though infill of vacant City land.

2. Sewers and Water Policies. c: Developments with urban densities should be encouraged to locate within the area which can be serviced by Newberg's present sanitary sewer system.

Finding: It is appropriate to use land within the city limits to its highest and best use in order to preserve the efficiency of public facilities to serve urban development. The proposed site has existing sewer and water facilities available, and with reasonable improvements can have adequate capacity to serve the maximum density of the proposed zone change. It is more efficient to use an existing site such as this as opposed to extending new public utilities to an undeveloped vacant parcel without such services.

There is an existing 12-inch sewer line with a manhole at the Southern property edge in Villa Road. The application contains a report on sanitary sewer calculations done by 3J Engineering, calculating the demand flow of the existing sewer line with existing & potential maximum R-1 density (1,225-gmp) and existing & potential maximum R-3 density (1,242-gmp). The total existing flow in the 12-inch sewer, based on the City's master plan, is approximately 1,203-gpm. While the zone change would create a slight increase in sewer flows, the relative increase to the existing system is only 3.2%, and only 1.4% over the allowed R-1 zoning. Therefore, the 12" sewer pipe is currently at capacity, and any development of this site would place this pipe and downstream pipes over capacity. The City's master plan identifies segments of pipe in this area to be upsized to an 18" pipe. As part of the development application, the applicant will study the flows in these pipe segments to verify the master plan. Several segments of pipe may need to be upsized as part of the development.

Finding: Overall, the proposal is consistent with many goals and policies in the Comprehensive Plan regarding public participation, housing, urban design, transportation, and public facilities.

Reference Parcel #: R3217BC 00800

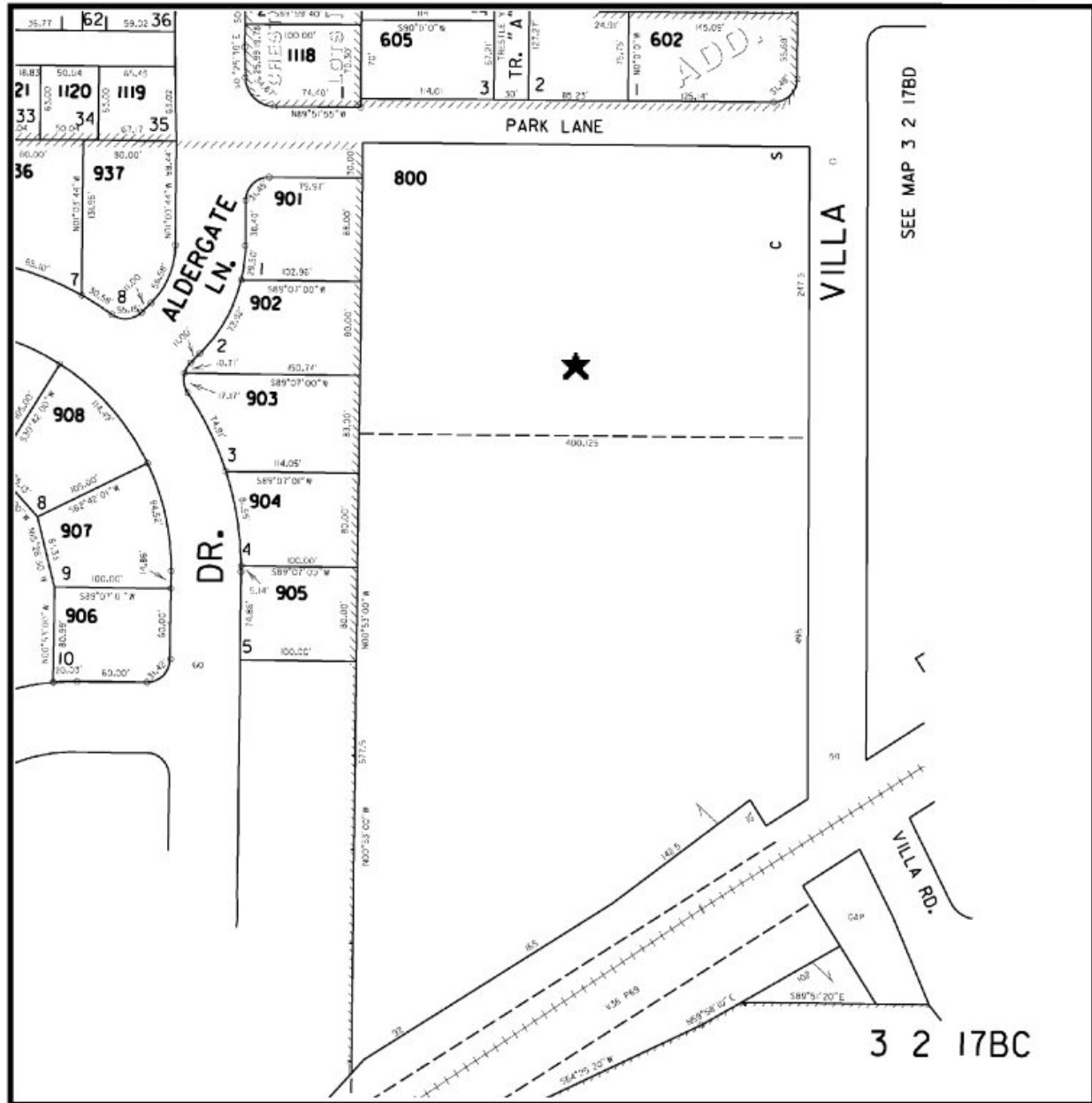


Exhibit C: Legal Description

Parcel 1

Being a part of the D. D. Deskins and O. J. Walker Donation Land Claims, in Section 17, Township 3 South Range 2 West in Yamhill County, Oregon, and described as follows, to-wit: Beginning at a point on the South line of the O. J. Walker D. L.C., said point being 104 rods East of the West side of Section 17; thence North 30 rods to South line of ten acre tract deeded to Ervin Scott; thence West $24 \frac{1}{4}$ rods; thence South parallel with East line 35 rods, more or less to the North line of the R. R. right of way; thence Northeasterly along said right of way to intersection of the South line of the O. J. Walker D.L.C.; thence East to place of beginning, excepting R.R. right of way through said premises.

Also the following tract: Being a part of the O. J. Walker D.L.C. in section 17, Township 3 South, Range 2 West Yamhill County, Oregon, described as follows: Beginning at a point 64 rods West of the Southeast corner of said Claim, thence running West 5 rods to the Southeast corner of Jos. Hoskins land; thence North 6 rods to the South line of the P. and W.V.R.R.; thence running Easterly along said South line of the P. and W.V.R.R. $3 \frac{1}{2}$ rods; thence running Southeasterly about 7 or 8 rods to the place of beginning, containing 30/160 acres more or less.

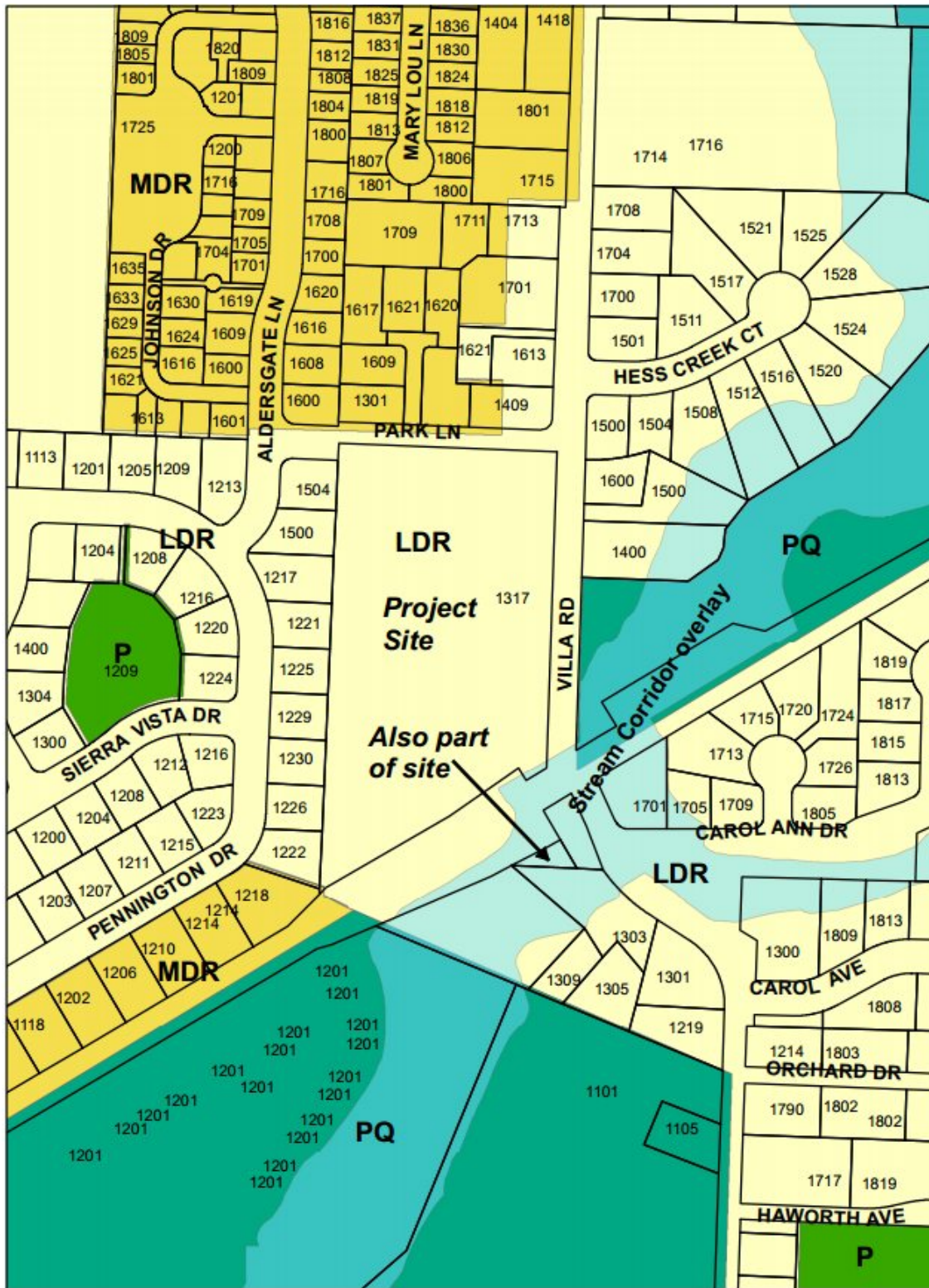
The above two tracts of land containing in all about 5 acres more or less, excepting R.R. right of way.

Parcel 2

A tract of land located in Yamhill County, Oregon, and being a part of the Donation Land Claim of Oliver J. Walker in Township 3 South, Range 2 West of the Willamette Meridian in Yamhill County, and more particularly described as follows:

Beginning at a point 30 rods North of the South boundary line of said Claim and 104 rods East of the Section line between Sections 17 and 18 in said Township and Range; and said point being at the Southeast corner of that certain tract of land conveyed to Ervin Scott by J. L. Hoskins and Mary L. Hoskins by deed recorded at Page 281 in Book 31 of Deed Records of Yamhill County, and running thence West $24\text{-}1/4$ rods; thence North 15 rods; thence East $24\text{-}1/4$ rods; thence South 15 rods to the place of beginning.

Exhibit D: Comprehensive Plan Map



[illegible]



PLANNING COMMISSION RESOLUTION 2015-307

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF NEWBERG RECOMMENDING THAT THE CITY COUNCIL APPROVE FILE CPA-15-001/ZMA3-15-001, WHICH WOULD AMEND THE COMPREHENSIVE PLAN DESIGNATION FROM LDR (LOW DENSITY RESIDENTIAL) TO HDR (HIGH DENSITY RESIDENTIAL) AND AMEND THE ZONING DESIGNATION FROM R-1 (LOW DENSITY RESIDENTIAL) TO R-3 (HIGH DENSITY RESIDENTIAL) FOR A PROPERTY LOCATED AT 1317 VILLA ROAD, YAMHILL COUNTY TAX LOT 3217BC-800.

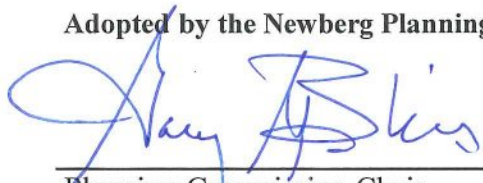
RECITALS

1. DJ2 Holdings, LLC submitted an application requesting a Comprehensive Plan map amendment from LDR (Low Density Residential) to HDR (High Density Residential) and a Zoning map amendment from R-1 (Low Density Residential) to R-3 (High Density Residential) for property located at 1317 Villa Road, Yamhill County tax lot 3217BC-800.
2. After proper notice, the Newberg Planning Commission held a hearing on May 14, 2015 to consider the application. The Commission took public testimony, closed public testimony, and continued the hearing to June 11, 2015 at the point of deliberation.
3. On June 11, 2015 the Newberg Planning Commission continued the hearing, deliberated, and found that the application met the applicable criteria from the Newberg Development Code, and the goals and policies of the Newberg Comprehensive Plan as shown in the findings shown in Exhibit A.


The Newberg Planning Commission resolves as follows:

1. The Planning Commission recommends that the City Council amend the Comprehensive Plan map and Zoning map to include the property shown in Exhibit B and described in Exhibit C in the HDR comprehensive plan district and the R-3 zoning district. Exhibits B and C are hereby adopted and by this reference incorporated.
2. This recommendation is based on the findings shown in Exhibit A. Exhibit A is hereby adopted and by this reference incorporated.

Adopted by the Newberg Planning Commission this 11th day of June, 2015.


 Planning Commission Chair

ATTEST:


 Planning Commission Secretary

List of Exhibits:

- Exhibit "A": Findings
- Exhibit "B": Location map
- Exhibit "C": Legal description
- Exhibit "D": Comprehensive Plan map
- Exhibit "E": Zoning map

"Working Together For A Better Community-Serious About Service"

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Exhibit A: Findings to Order 2015-307

1317 Villa Road Comprehensive Plan Map Amendment & Zoning Amendment, File: CPA-15-001/ZMA3-15-001

Section I. Newberg Development Code § 151.122: Procedures for Comprehensive Plan Map and Zoning Map Amendments.

(A) Type III Plan and zoning map amendments – one parcel or small group of parcels.

(3) Amendment Criteria. The applicant must demonstrate compliance with the following criteria:

(a) The proposed change is consistent with and promotes the goals and policies of the Newberg Comprehensive Plan and this Code;

Finding: Section II of these findings addresses the Comprehensive Plan goals and policies. It can be found that this proposal is consistent with and promotes numerous applicable goals and policies, as summarized below.

Density: The site contains 5.94 acres, or 258,746 square feet. Assuming that the net site area after right-of-way dedications will be approximately 85% of the gross area, there would be an approximate net site area of 219,934 square feet. If the site develops as R-1 it would be expected to have approximately 30 single family homes. In the R-3 zone the site would allow an approximate maximum net density of 147 dwelling units and a minimum of 88 dwelling units. The actual density will depend on the final site design and will be limited by parking requirements, open space requirements, and stormwater facilities, but is expected by the applicant to be approximately 128 units.

15.302.032 Purposes of each zoning district.

A. R-1 Low Density Residential District.

1. The purpose of this land use designation is to provide for low density urban single-family residential uses at an average overall density of 4.4 units per gross buildable acre in the district. It is intended to provide a stable and healthful environment together with the full range of urban services.

2. Typical housing types will include single-family dwellings and planned unit developments. The district also is intended to allow low intensity institutional uses that operate consistent with peaceful enjoyment of residential neighborhoods. The R-1 district is intended to be consistent with the low density residential (LDR) designation of the comprehensive plan.

C. R-3 High Density Residential District.

1. The purpose of this land use designation is to provide multifamily dwellings of different types and styles at an average overall density of 16.5 units per gross buildable acre in the district.

2. Typical housing types will include duplexes, multifamily dwellings, and manufactured dwelling and mobile home parks. The district also is intended to allow low intensity institutional uses that operate consistent with peaceful enjoyment of residential neighborhoods. Density may vary depending on lot size, off-street parking area, transportation, landscaping and other site considerations. The R-3 district is intended to be consistent with the high density residential (HDR) designation of the comprehensive plan.

Comprehensive Plan Housing Land Needs and Buildable Land Supply History

Newberg's Comprehensive Plan has consistently shown a significant need for additional HDR (High Density Residential) land.

2005 Comprehensive Plan Land Need and Supply Amendments

In 2005, the City Council adopted amendments to the Comprehensive Plan, including updated residential land need and supply numbers for LDR (Low Density Residential), MDR (Medium Density Residential) and HDR (High Density Residential) land designations. The updates were based on data from the Housing and Residential Land Needs Report compiled by Johnson-Gardner in 2004. The amendments were adopted and acknowledged through the post-acknowledgment plan amendment process in 2005. The 2005 Comprehensive Plan has residential land data for the 20-year period from 2005-2025, and the future planning period out to 2040. That data shows that the City had a demonstrated need for 89 buildable acres of HDR (High Density Residential) through 2025, and an additional 83 acres of HDR land through 2040:

Plan Designation	Buildable Acres Needed 2005-2025	Buildable Acres in UGB (2004)	Surplus (Deficit) for 2005-2025	Buildable Acres Needed 2026-2040
LDR	612	359	(253)	735
MDR	173	142	(31)	191
HDR	89	13	(76)	83
Total	874	514	(380)	1009

Source: Newberg Ordinance 2005-2626

In 2009 the City proposed an update to the Housing Element of the Comprehensive Plan. This item was appealed to LUBA and remanded; it has not yet been revised and readopted, so the 2005 amendments are the latest acknowledged estimates.

This application: For the purposes of this application, the firm of Cogan Owens Greene prepared a housing needs analysis using recent data on buildable lands, and a 2012 population projection for Newberg that has been adopted by Yamhill County as part of a coordinated population projection for every part of Yamhill County.

Excerpted from the application – Population Forecast:

Portland State University's Population Research Center developed a future population forecast for the Newberg Urban Area. This forecast was adopted by Yamhill County as the coordinated population forecast required by state law. This forecast is shown in Table III-2.

Table III-2. Future Population Forecast – Newberg Urban Area

Year	Population Forecast
2015	24,663
2020	28,250 (corrected by city staff – the applicant used 25,250, which was a typographical error)
2025	32,213
2030	35,408
2032	36,610
2035	38,490

Source: Population Research Center, Portland State University, Population Forecasts for Yamhill County, its Cities and Unincorporated Area, 2011-2035, 2012.

Excerpted from the application – Housing Needs Analysis:

Cogan Owens Greene prepared a Housing Needs Analysis (Exhibit G) based on the 2009 inventory updated with current GIS data provided by City Staff, the projections from the Portland State Report, and refined for the remand findings from LUBA. This supplemental report is included in Exhibit G. It confirms that there will be a shortage of land available in 2030 for LDR, MDR, and HDR lands:

Plan Designation	Buildable Acres Needed	Buildable Acres in UGB	(Deficit)	Percentage of Available Capacity
LDR	406	369	(37)	91%
MDR	179	92	(87)	51%
HDR	62	7	(55)	11%
Total	647	468	(179)	72%

The proposed amendment would add 5.94 acres of HDR land to the buildable land inventory. This would meet about 10% of the HDR need through 2030. The proposed amendment would decrease the amount of buildable LDR land by 5.94 acres, or 1.5% of the LDR need through 2030. The city needs to have an adequate supply of all types of land. This change from LDR to HDR is justified because there is currently a greater shortfall in HDR.

Adequate Infrastructure to Serve the Site

The applicant included an Infrastructure Analysis report. The proposed site has existing water and stormwater facilities to serve the maximum density of the proposed zone change. There is an existing 8" waterline in Villa Road and Park Lane and there is a 21" stormwater line at the southern boundary of the property. The application contains a report on the water system which shows adequate capacity. The post developed stormwater runoff rates will match pre-developed rates with properly designed stormwater facilities.

The existing sewer system directly downstream of the site is currently at capacity and development of the site at the existing R-1 zoning would put several pipe segments over capacity. A change in zone from R-1 to R-3 would not significantly increase the demand on the sewer system, and would not require a larger pipe size than is

required with the current zoning. The specifics of pipe upsizing would be determined during development application review.

The proposed development site is located adjacent to Villa Road and Park Lane and would take direct access from both streets. Park Lane is currently developed below City residential street standards. The development would construct a 1/2 street improvement on the south side of Park Lane to residential standards. Villa Road is currently developed below City major collector standards. The development would construct a 1/2 street improvement on the west side of Villa Road to major collector standards. Right-of-way dedication would be required along both street frontages; the extent of dedication would be determined at the design review phase.

The City is currently beginning design of transportation improvements to Villa Road from Hayworth Avenue to Crestview Drive as a planned Capital Improvement Project. The project intends to improve the vertical alignment of the road and complete multimodal improvements along Villa. During the development application review, coordination of street improvements will be necessary, and will be completed at that time.

According to the applicant's traffic impact study, all of the study intersections except the Villa Road/HWY 99 intersection are forecast to meet operation standards during the weekday p.m. peak hour at the time of development in 2016. The impact of this development on that intersection is minimal and no mitigation is proposed at the time of development. No mitigation would be required at study intersections upon development in 2016. In the year 2035, all of the study intersections except the Villa Road/HWY 99 intersection and the Villa Road/Fulton Street intersection are forecast to meet operation standards during the weekday p.m. peak hour. The impact of this development on those intersections in the year 2035 is minimal and no mitigation is necessary. ODOT has commented that the impact of the development at the Villa/99W intersection is limited, and had no additional comments or requirements.

Availability of Public Services

The proposed site is within walking distance of many services: Within ¼ mile of a small CPRD park (College Park, off Sierra Vista), the CPRD pool, and George Fox University; within ½ mile of Joan Austin Elementary school; within ¾ mile of Newberg High School, A-dec's industrial site, and the Portland Road commercial area. This meets the Comprehensive Plan policies of high density housing being located near public services and public open spaces. It also means that residents of the proposed high density housing may walk or bike to commercial areas, jobs, parks, and schools. Public transit is available on Highway 99W.

Site is Suitable for HDR Development

The proposed site is suitable for HDR development because it meets the Comprehensive Plan policies of high density housing location, dispersal of high density housing, design of high density housing, and compatibility with surrounding development. The proposed site is adjacent to a major collector road which will provide adequate access for higher density housing. There are few apartments north of the railroad tracks, so approval would help the dispersal of R-3 housing within the city. Future development on the site will be compatible with the surrounding area due to the design review criteria for multifamily housing and due to setbacks, lot coverage limits, height limits, and landscaping buffer requirements. For example, the maximum permitted building height in R-3 is limited to 30 feet (the same maximum height as R-1) for a distance of 50 feet from the abutting

boundary of a R-1 district. This ensures that building heights in R-3 will be compatible with abutting R-1 properties.

The application meets this criterion because the proposed change from LDR/R-1 to HDR/R-3 is consistent with many goals and policies in the Comprehensive Plan, and the Development Code.

(b) Public facilities and services are or can be reasonably made available to support the uses allowed by the proposed change.

Finding: The application included an Infrastructure Analysis report. Public facilities and services are available to support the proposed uses. There is an existing 10-inch and 12-inch sanitary sewer line to the property, with a manhole connection at the southern edge of the property. The applicant's sanitary sewer calculations report indicates, and City staff concurs, that there is not adequate capacity in the downstream sanitary sewer system to support further development, but that the sewer system can be upsized to support the development. The sanitary sewer master plan identifies the necessary pipe size required to serve the basin if fully developed with current zoning. The zone change at the maximum density does not change the needed pipe diameter needed for development in the basin. There are existing water lines in Villa Road and Park Lane. A fire flow analysis will be completed at the time of development and water pipe upsizing will be completed with the development. There is adequate capacity to the site which can be reasonably provided through the City's water storage and distribution system. There is an existing 21" stormwater line at the southern boundary of the site which could serve the site.

The site is accessed by Park Lane and Villa Road, both of which are not fully improved streets. A 1/2 street improvement on Park Lane and Villa Road will be required at the time of development. Additional right of way dedication will also be required. Park Lane is a residential street with an ultimate curb-to-curb width of 32 feet. Villa Road is a Major Collector with an ultimate curb-to-curb width of 34 feet with two 12-foot travel lanes, 5-foot bike lanes, and setback sidewalk. Portions of Villa Road may include a landscaped median. No parking will be allowed on Villa Road. According to the applicant's traffic impact study, all of the study intersections except the Villa Road/HWY 99 intersection are forecast to meet operation standards during the weekday p.m. peak hour at the time of development in 2016. The impact of this development on that intersection is minimal and no mitigation is proposed at the time of development. In the year 2035, all of the study intersections except the Villa Road/HWY 99 intersection and the Villa Road/Fulton Street intersection are forecast to meet operation standards during the weekday p.m. peak hour. The impact of this development on the Villa Road/Hwy 99W intersection and the Villa/Fulton intersection in the year 2035 is minimal and no mitigation is necessary. The increase in traffic at both of these intersections in 2035 is primarily due to the increase in background traffic.

The application meets this criterion because public facilities and services are or can be reasonably made available to support the uses allowed by the proposed change from LDR/R-1 to HDR/R-3.

(c) Compliance with the State Transportation Planning Rule (OAR 660-012-0060) for proposals that significantly affect transportation facilities.

Finding: The State Transportation Planning Rule is meant to determine whether proposals “significantly affect” existing or planned transportation facilities, and if they do affect them, to ensure that they are properly mitigated. The Rule says that:

“a plan or land use regulation amendment significantly affects a transportation facility if it would: (a) Change the functional classification of an existing or planned transportation facility; (b) Change standards implementing a functional classification system; or (c) As measured at the end of the planning period identified in the adopted transportation system plan: (A) Allow land uses or levels of development that would result in types of levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility; (B) Reduce the performance of an existing or planned transportation facility below the minimum acceptable performance standard identified in the TSP or comprehensive plan; or (C) Worsen the performance of an existing or planned transportation facility that is otherwise projected to perform below the minimum acceptable performance standard identified in the TSP or comprehensive plan.”

The proposed plan amendment site is located adjacent to Villa Road, which is classified as a Major Collector in the City’s Transportation System Plan, and Park Lane, which is classified as a Residential Street in the City’s Transportation System Plan. The proposal would not: (a) change the functional classification of Villa Road or Park Lane; or (b) change standards implementing a functional classification system.

One of the main purposes of the traffic impact study included with the applicant’s application package is to determine whether the project meets subsection (c) of the Transportation Planning Rule. The traffic study analyzed the trip generation and distribution, safety analysis, and operational analysis of the proposed project to determine the impact the proposal will have on the transportation system. The trip generation is based on the maximum possible gross density allowed by the proposed zone; in this case that would be 168 possible dwelling units. That number is compared with the trips that would be generated by the possible maximum density allowed by the R-1 zone, 30 units. The traffic study indicates that the proposed zone change could result in a net increase of 74 trips during the evening peak hour, with 25 exiting the site and 49 entering the site. In the morning peak hour, the maximum density could result in a net increase of 55 trips, with 9 entering and 46 exiting the site. The actual trips generated by the site may be fewer due to the unlikelihood of the site being built out at the maximum density – with the topographic and environmental constraints, the site build out will more likely be around 128 units.

Sight distance from the site frontage was examined and determined to be adequate along Park Lane. Sight distance from the site frontage along Villa Road is not adequate. Depending on the ultimate vertical and horizontal profiles of Villa Road, the Villa Road access may be limited to right in/right out access only. A landscaped median would be installed on Villa Road to facilitate this restriction, as well as to provide for some natural traffic calming.

During a five year period between January 2009 and December 2013, there were no accidents reported at any of the study intersections except for the Villa Road/HWY 99 intersection. At this intersection there were 33 crashes, 24 of which were rear-end collisions. The crash rate per million entering vehicles at this intersection was below 1.0. Additionally, the crash history for the segment of Villa Road, not including the study intersections, was analyzed between Park Lane and HWY 99. Of the four crashes reported in this segment, three involved bicycles. Bicycle and pedestrian improvements are planned for the development, which will help mitigate the bicycle incidents. No mitigations are proposed for the Villa Road/HWY 99 intersection.

The traffic study also looked at capacity analysis for the area and surrounding intersections for the expected project build-out in 2016 and to 2035. Capacity analysis looks at the volume-to-capacity (v/c) ratio for intersections; in other words, how much traffic an intersection can handle before it's at peak capacity, which would be a ratio of 1.0. The intersection is then given a letter grade ranging from A (best) to F (worst) for its level of service based on the v/c ratio for the intersection. The traffic study analysis shows that all of the surrounding intersections are operating at an acceptable level of service under all analysis scenarios, except for the Villa Road/HWY99 intersection in 2016 and 2035, and the Villa Road/Fulton Street intersection in 2035.

- With full build out in 2016, the Villa Road/HWY 99 intersection is forecast to operate at a v/c ratio of 0.88 which is over the ODOT standard of 0.85. Without this development, the v/c ratio would be 0.88. The impact of this development is minimal at this intersection. In the 2035 analysis, the Villa Road/HWY 99 intersection is forecasted to operate at a v/c ratio of 1.12 with full development of the site and 1.11 without development of the site. This also is a minimal impact and no mitigations is proposed. ODOT has confirmed this by stating that the project will have a limited impact on state facilities, and did not have any additional comments.
- The intersection of Villa Road/Fulton Street in 2035 is anticipated to have a level of service of F with or without full build out of this proposed development. However, at the 2016 build-out, the Villa Road/Fulton intersection is forecast to operate at a level of service D, which is within City standards. Because of this, no mitigation to this intersection is anticipated at the time of development until a future date when the intersection warrants mitigation.

According to the traffic study, the future trips generated from the proposed zone change will not "significantly affect" the transportation system. Less than 400 of the additional daily trips are anticipated to reach the Villa/99W intersection, which under the Oregon Highway Plan standards does not cause "further degradation" of state highway facilities. ODOT has stated that the project will have a limited impact on state facilities, and did not have additional comments or requirements. Therefore, the proposal meets the State Transportation Planning Rule because it does not significantly affect transportation facilities: (A) It does not allow a level of development that would result in levels of travel inconsistent with the functional classification of the existing transportation facilities; (B) It does not reduce the performance of the existing transportation facilities below the minimum acceptable performance standards; and (C) It does not significantly worsen the performance of an existing transportation facility that is otherwise projected to perform below the minimum acceptable performance standard.

Section II. Applicable Statewide Planning Goals and Newberg Comprehensive Plan Goals & Policies

A. Citizen Involvement Goal

Goal: To maintain a Citizen Involvement Program that offers citizens the opportunity for involvement in all phases of the planning process.

Finding: Part of the citizen involvement program includes opportunities for citizen involvement in planning. In this case, citizens have an opportunity to comment on this proposal, both in writing and by testifying at either the Planning Commission or City Council hearings. In addition, the applicant for this proposal held a neighborhood meeting for the purpose of discussing the project with neighbors before the official public process started. This application is consistent with this goal because the public hearing process offers citizens the opportunity to comment on the proposal, and appeal the decision if they are unsatisfied.

Statewide Planning Goal 10: To provide for the housing needs of citizens of the state.

Buildable lands for residential use shall be inventoried and plans shall encourage the availability of adequate numbers of needed housing units at price ranges and rent levels which are commensurate with the financial capabilities of Oregon households and allow for flexibility of housing location, type and density.

NCP I. Housing Goals and Policies

Goal: To provide for a diversity in the type, density and location of housing within the City to ensure there is an adequate supply of affordable housing units to meet the needs of City residents of various income levels.

2. Location Policies. a: Medium and high density areas should be located for immediate access to collector streets or minor arterials and should not cause traffic to move through low density areas. High density areas should be easily accessible to arterial streets. They should also be located near commercial services and public open spaces.

3. Mix Policies. b: Low and moderate income housing should not be concentrated within particular areas of the City.

3.j: The City shall encourage innovation in housing types and design as a means of offering a greater variety of housing and reducing housing costs.

3.k: The City shall encourage an adequate supply of rental housing dispersed throughout the city to meet the needs of renters.

Finding:

The City has an obligation, reflected here in the comprehensive plan policies, to ensure that there is adequate housing of all density types and for every income level. The proposed zone change would help the City remedy its deficit of available multi-family housing.

The proposed site is located adjacent to a major collector, and most traffic from the site is expected to use Villa Road, not local residential streets. Villa Road gives easy access to Portland Road/Hwy 99W, a major arterial. In addition, the site is within walking distance of many services: Within ¼ mile of a small CPRD park (College Park, off Sierra Vista), the CPRD pool, and George Fox University; within ½ mile of Joan Austin Elementary school; within ¾ mile of Newberg High School, A-dec's industrial site, and the Portland Road commercial area. This meets the Comprehensive Plan policies of high density housing being located near public services and public open spaces. It also means that residents of the proposed high density housing may walk or bike to commercial areas, jobs, parks, and schools. Public transit is available on Highway 99W.

Any future development on the site under the proposed R-3 zoning will require a design review process where the applicant will need to meet not only the basic design review criteria, but also the additional multi-family design review criteria. The City would have future opportunities to influence the design of the development and encourage innovation of housing types and design. The proposal is consistent with many of the housing policies in the Comprehensive Plan.

J. Urban Design Goals and Policies

Goal 1: To maintain and improve the natural beauty and visual character of the City.

1. General Policies. b: Design review should be provided for all new developments more intensive than duplex residential use.

1.1.l: The City shall encourage compatible architectural design of new structures in the community.

1.1.n: The City shall encourage innovative design and ensure that developments consider site characteristics and the impact on surrounding areas.

1.1.r: Developments of medium or high density shall be of a quality and design which will effectively offset the greater density.

Finding: Any future development on this property under the proposed R-3 zoning will require design review approval. The Newberg Development Code also has supplementary design review standards that multi-family developments must meet, including compatibility with adjacent sites. The site characteristics for future development would be looked at closely to encourage the best design of the property and to properly mitigate any impacts on surrounding uses. The proposal is consistent with many of the urban design goals and policies in the Comprehensive Plan.

K. Transportation Goals and Policies

Goal 3: Promote reliance on multiple modes of transportation and reduce reliance on the automobile.

Policy b.2: The City shall encourage higher density development in residential areas near transit corridors, commercial areas and employment centers, including the downtown.

Finding: The site is within walking distance of many services: Within ¼ mile of a small CPRD park (College Park, off Sierra Vista), the CPRD pool, and George Fox University; within ½ mile of Joan Austin Elementary school; within ¾ mile of Newberg High School, A-dec's industrial site, and the Portland Road commercial area. This

means that residents of the proposed high density housing may walk or bike to commercial areas, jobs, parks, and schools. Public transit is available on Highway 99W. The proposal is consistent with transportation goals and policies in the Comprehensive Plan.

L. Public Facilities and Services Goals and Policies

Goal: To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban development.

1. All Facilities & Services Policies. f: Maximum efficiency for existing urban facilities and services will be encouraged though infill of vacant City land.

2. Sewers and Water Policies. c: Developments with urban densities should be encouraged to locate within the area which can be serviced by Newberg's present sanitary sewer system.

Finding: It is appropriate to use land within the city limits to its highest and best use in order to preserve the efficiency of public facilities to serve urban development. The proposed site has existing sewer and water facilities available, and with reasonable improvements can have adequate capacity to serve the maximum density of the proposed zone change. It is more efficient to use an existing site such as this as opposed to extending new public utilities to an undeveloped vacant parcel without such services.

There is an existing 12-inch sewer line with a manhole at the Southern property edge in Villa Road. The application contains a report on sanitary sewer calculations done by 3J Engineering, calculating the demand flow of the existing sewer line with existing & potential maximum R-1 density (1,225-gmp) and existing & potential maximum R-3 density (1,242-gmp). The total existing flow in the 12-inch sewer, based on the City's master plan, is approximately 1,203-gpm. While the zone change would create a slight increase in sewer flows, the relative increase to the existing system is only 3.2%, and only 1.4% over the allowed R-1 zoning. Therefore, the 12" sewer pipe is currently at capacity, and any development of this site would place this pipe and downstream pipes over capacity. The City's master plan identifies segments of pipe in this area to be upsized to an 18" pipe. As part of the development application, the applicant will study the flows in these pipe segments to verify the master plan. Several segments of pipe may need to be upsized as part of the development.

Finding: Overall, the proposal is consistent with many goals and policies in the Comprehensive Plan regarding public participation, housing, urban design, transportation, and public facilities.

Exhibit B: Location Map

Reference Parcel #: R3217BC 00800

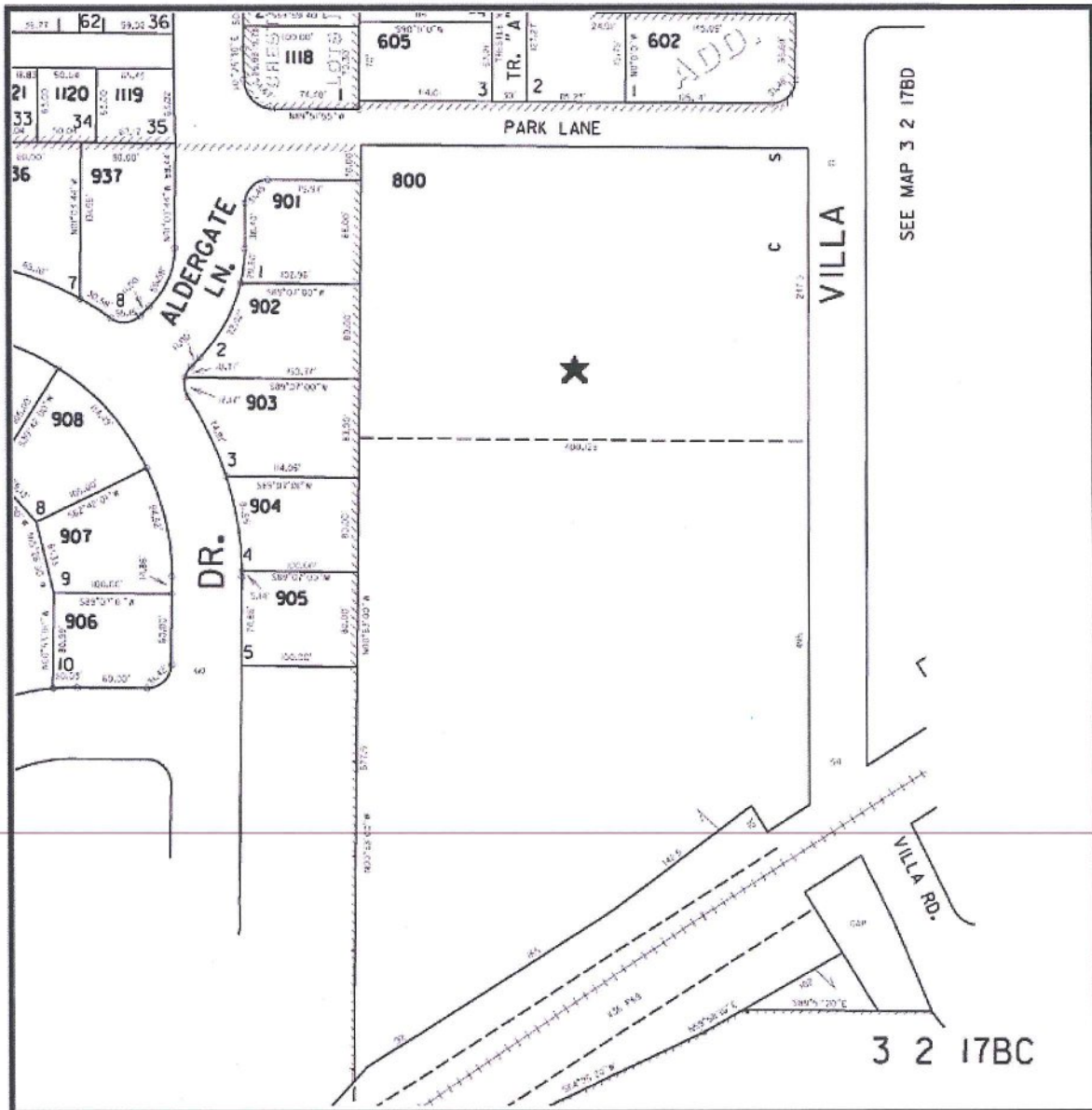


Exhibit C: Legal Description

Parcel 1

Being a part of the D. D. Deskins and O. J. Walker Donation Land Claims, in Section 17, Township 3 South Range 2 West in Yamhill County, Oregon, and described as follows, to-wit: Beginning at a point on the South line of the O. J. Walker D. L.C., said point being 104 rods East of the West side of Section 17; thence North 30 rods to South line of ten acre tract deeded to Ervin Scott; thence West 24 ¼ rods; thence South parallel with East line 35 rods, more or less to the North line of the R. R. right of way; thence Northeasterly along said right of way to intersection of the South line of the O. J. Walker D.L.C.; thence East to place of beginning, excepting R.R. right of way through said premises.

Also the following tract: Being a part of the O. J. Walker D.L.C. in section 17, Township 3 South, Range 2 West Yamhill County, Oregon, described as follows: Beginning at a point 64 rods West of the Southeast corner of said Claim, thence running West 5 rods to the Southeast corner of Jos. Hoskins land; thence North 6 rods to the South line of the P. and W.V.R.R.; thence running Easterly along said South line of the P. and W.V.R.R. 3 ½ rods; thence running Southeasterly about 7 or 8 rods to the place of beginning, containing 30/160 acres more or less.

The above two tracts of land containing in all about 5 acres more or less, excepting R.R. right of way.

Parcel 2

A tract of land located in Yamhill County, Oregon, and being a part of the Donation Land Claim of Oliver J. Walker in Township 3 South, Range 2 West of the Willamette Meridian in Yamhill County, and more particularly described as follows:

Beginning at a point 30 rods North of the South boundary line of said Claim and 104 rods East of the Section line between Sections 17 and 18 in said Township and Range; and said point being at the Southeast corner of that certain tract of land conveyed to Ervin Scott by J. L. Hoskins and Mary L. Hoskins by deed recorded at Page 281 in Book 31 of Deed Records of Yamhill County, and running thence West 24-1/4 rods; thence North 15 rods; thence East 24-1/4 rods; thence South 15 rods to the place of beginning.

Exhibit D: Comprehensive Plan Map

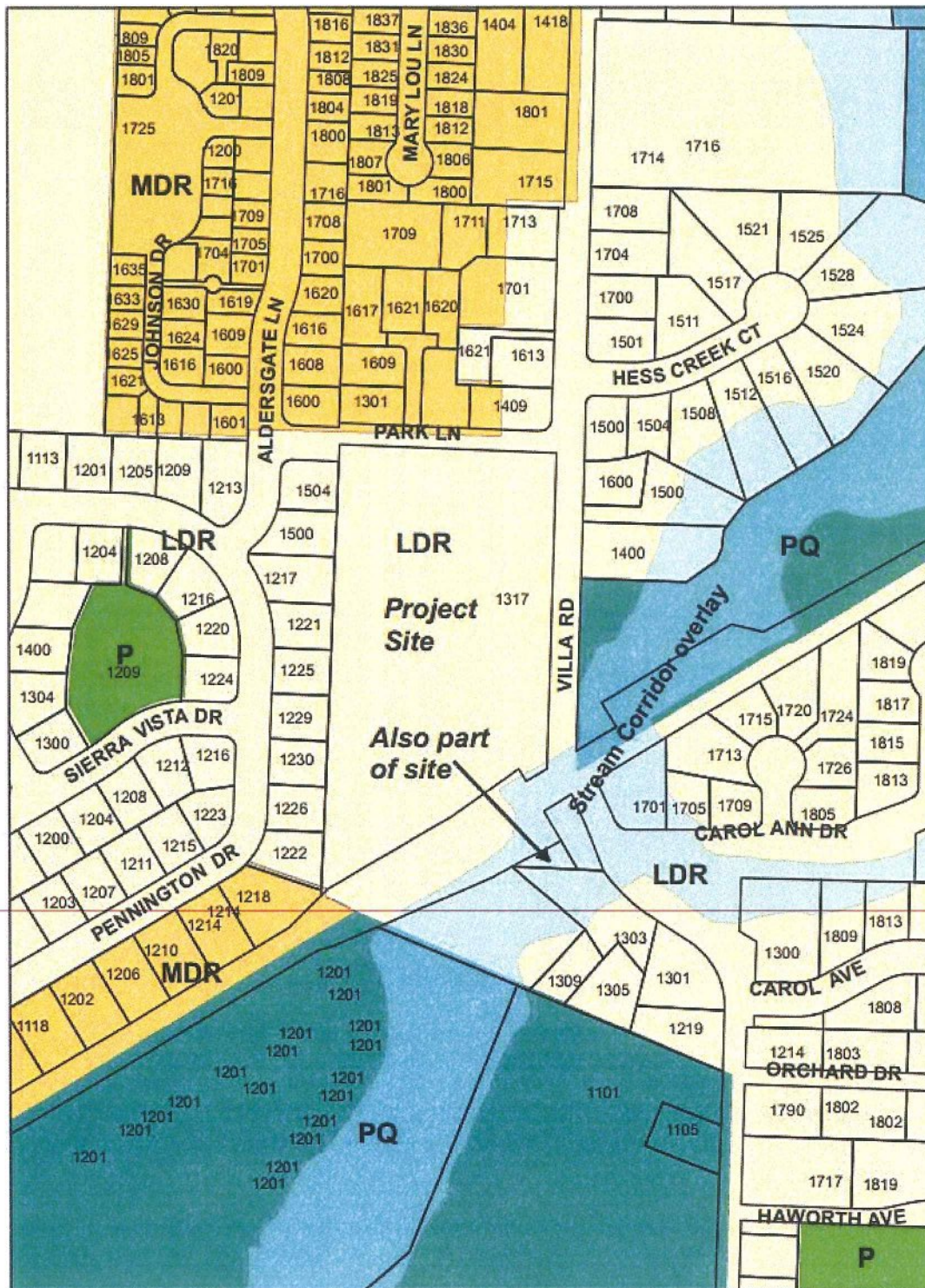
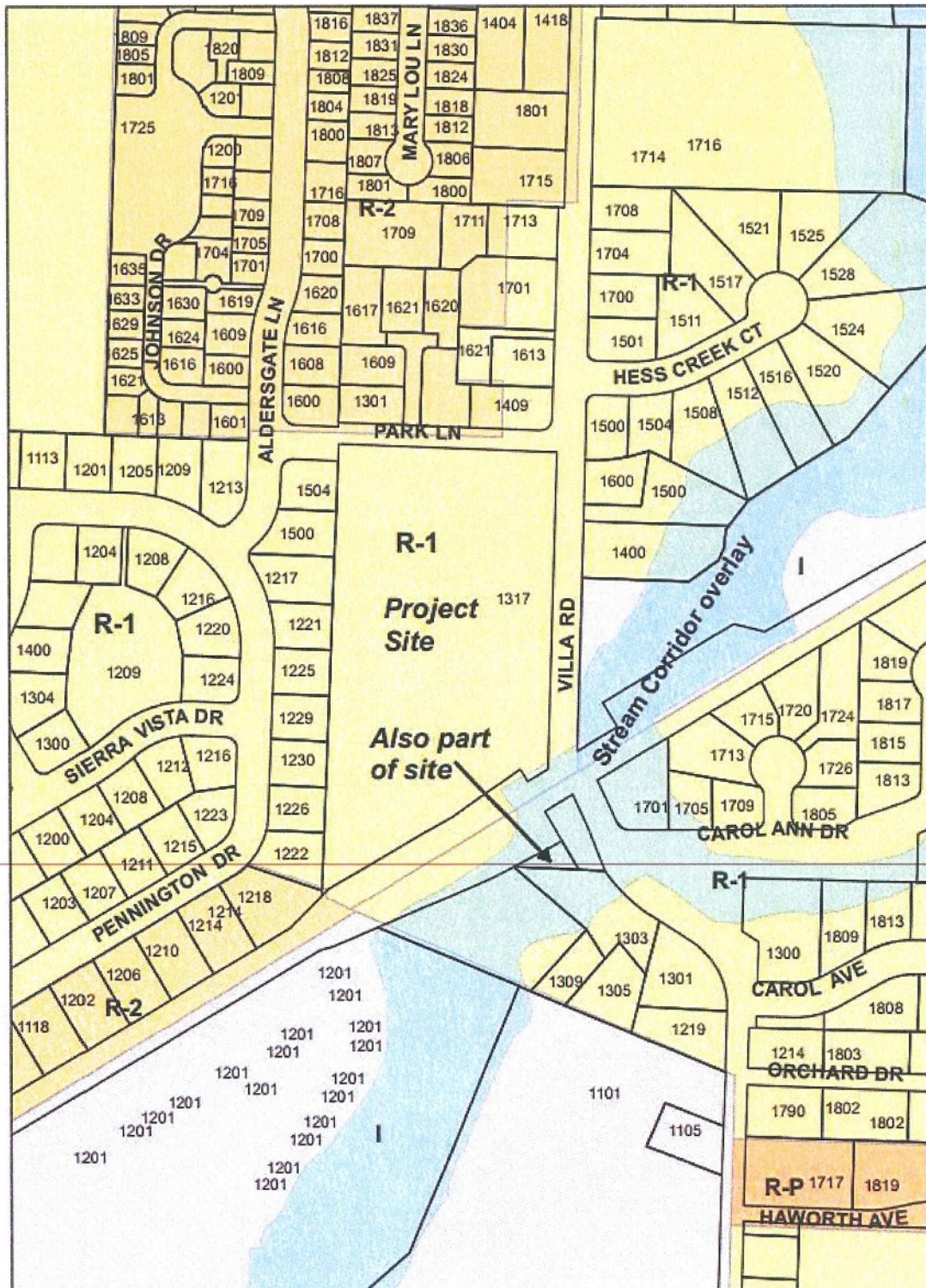


Exhibit E: Zoning Map



NEWBERG PLANNING COMMISSION MINUTES
May 14, 2015, 7:00 PM
PUBLIC SAFETY BUILDING (401 E. THIRD STREET)

Chair Gary Bliss called the meeting to order at 7:00 p.m.

ROLL CALL

Members Present:	Gary Bliss, Chair Matthew Fortner Art Smith	Philip Smith Allyn Edwards Luis Saavedra/student	Jason Dale Cathy Stuhr
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Staff Present: Steve Olson, Associate Planner
 Sue Ryan, City Recorder
 Doug Rux, Community Development Director
 Jason Wuertz, Engineering
 Bobbie Morgan, Planning Secretary

PUBLIC COMMENTS: None.

CONSENT CALENDAR: Commissioner Philip Smith moved, to adopt the meeting minutes for April 9, 2015. Commissioner Allyn Edwards seconded and the motion passed 7-0.

QUASI-JUDICIAL HEARINGS:

APPLICANT: Fred Meyer Stores, Inc.

REQUEST: Conditional use permit/design review approval – gas station expansion.

LOCATION: 3300 Portland Road

TAX LOT: 3216-2004

FILE NO.: CUP-14-002/DR2-14-020 **ORDER NO.:** 2015-17

CRITERIA: Newberg Development Code 15.220.050(B), 15.225.060

Chair Gary Bliss opened the hearing at 7:05 p.m. He read the public hearing statement. He asked if the Commission had any abstentions, ex parte contacts, or bias to declare.

PC Cathy Stuhr drove through the Fred Meyer driveway and noted there were awkward turning movement lines on the pavement.

AP Steve Olson presented the staff report accompanied by a PowerPoint presentation. He said this was a request to expand the Fred Meyer gas station. This was continued from the last Commission meeting in order to have more coordination on transportation. He explained the location of the fuel station. The expansion would include two more fuel dispensers, add a propane tank, extend the overhead canopy 34 feet to the south, and change the operating hours to 5 a.m. to 11 p.m. The original application for the gas station was approved as a Conditional Use and because this would modify that Conditional Use, it had to come back before the Planning Commission. This was C2 zoning with a stream corridor overlay and south of the site was residential. He described the landscape buffer to the residential area and then discussed the site plan, elevation, design review criteria, C2 criteria, and Conditional Use criteria. Several public comments were received, which focused on protecting the drive-in from the impact of new development by landscape buffers and shielding the lights. Some voiced support if the drive-in was protected from the light. The expansion would eliminate eight parking spaces, but they still had more than enough parking. The under canopy lighting would be recessed. The wood

fence would be expanded to the south matching the existing fence to block low level headlights. There would not be any change to the impervious surface and they would continue to use the same storm water system. The traffic study concluded that the impact was small and no mitigation was necessary. ODOT reviewed the study and did not think Fred Meyer needed to amend their access permits. The lighting impacts would be controlled the same as on the first phase, an erosion control permit would protect the stream during construction, and the opening hours were typical for gas stations. Staff recommended approval with conditions.

CDD Doug Rux entered the entire staff report and attachments into the record.

Public Testimony:

James Coombs of Fred Meyer and Joel Howitt, planner, were the applicants. Mr. Howitt said they read through the staff report and were in concurrence with the City's findings and conditions. Fred Meyer would be installing the recessed LED lighting under the canopy to match the existing lighting. They would also be extending the fence to the south by the proposed propane pad. Mr. Coombs stated this allowed Fred Meyer to handle the peak periods in the morning and the evening and to cut down on transaction times. With the extra dispensers, they would see a 10 to 15% increase in business.

David Holt of Mckennzie Engineering discussed the letter from ODOT. All jurisdictions had different methodology requirements and ODOT staff looked at the methodology utilized in the study as if it were being prepared to ODOT's standards. ODOT did not have authority or jurisdiction to impose requirements, but offered suggestions. The existing permits were deemed valid without modification. The traffic study had been prepared to the City's methodology and it was identified that there would be minor impacts and the use could be expanded as proposed without additional mitigation.

PC Philip Smith asked about the traffic circulation on the site. Mr. Holt explained the signage on the south side that only allowed trucks and prohibited thru traffic.

Mr. Coombs replied there had been meetings with the neighbors when the fuel station was installed and had come to an agreement that all the distribution trucks did not come before 7 a.m. Deliveries happened in the morning and there should not be any sizable truck deliveries during the day. The area near the bank had been striped, but if there was an issue he would be happy to address it and improve it.

PC Cathy Stuhr explained how the striping was confusing at the stop sign where a person could either turn left into the gas station or go straight to the bank. She asked Mr. Coombs to look into it. She commented on Exhibit B, findings on the lighting plan. She thought it could be clearer by stating, "The plan shall specify".

There were no other public comments.

Chair Bliss closed the public testimony portion of the hearing at 7:35 p.m.

Final Comments from staff and recommendations:

AP Olson said the condition could be reworded as proposed by Commissioner Stuhr. Condition 4 could state, "The plan shall specify that all of the under canopy lighting will be recessed to provide shielding and that the six foot tall wooden fence along the western edge of paving will be extended south as far as the propane tank to block lights."

PC Philip Smith commented that there were no opponents to this application, which was in great contrast from 2010 when there were many people who were against the fuel station and light pollution. He thought Fred

Meyer had effectively answered the concerns of the neighbors. He thought opening earlier would improve the on-site traffic.

Action by the Planning Commission:

MOTION: Commissioner Cathy Stuhr moved to approve Order 2015-17 as amended. Commissioner Jason Dale seconded the motion and it passed 7-0.

APPLICANT: DJ2 Holdings, LLC

REQUEST: Comprehensive Plan map amendment from LDR (low density residential) to HDR (high density residential), with corresponding Zoning map amendment from R-1 to R-3.

LOCATION: 1317 Villa Road

TAX LOT: 3217BC-800 FILE NO.: CPA-15-001/ZMA3-15-001

RESOLUTION NO.: 2015-307

CRITERIA: Newberg Development Code 15.302.030(A) (3), applicable Comprehensive Plan goals and policies

Chair Gary Bliss opened the hearing at 7:42 p.m. He read the public hearing statement. He asked if the Commission had any abstentions, ex parte contacts, or bias to declare.

PC Philip Smith had no ex parte contacts with the people involved, but had extensive contact with the property as he was a jogger.

Chair Gary Bliss visited the site to review this matter, but had no personal contacts.

PC Art Smith had no personal contacts, but he lived in the neighborhood and frequently drove by the site.

PC Allyn Edwards had no contacts, but also drove by the site regularly.

PC Matt Fortner drove by the site and used to live in the neighborhood.

AP Olson presented the staff report accompanied by a PowerPoint presentation. This was a request for a Comprehensive Plan map amendment and zoning map amendment for 1317 Villa Road. It would be a change from low density residential designation to high density residential designation on the Comprehensive Plan map and the zoning map designation from R-1 to R-3. If this was approved, the applicant would have to come back for design review for developing the property, which would be a much more detailed application. He discussed the property location, current zoning, stream corridor, surrounding area, and criteria for changing the use. In 2005 a buildable lands analysis was done and there was a deficit of high density land. The applicant did an updated housing needs analysis to 2030 and it showed the City only had 11% of the high density acres needed. Any development, whether low or high density, would require upsizing sewer pipes. There were water lines available and the streets were expected to carry more traffic. A half street improvement would be required along with dedicating right-of-way. He explained the project in the Transportation System Plan for Villa Road. The traffic study looked at the net increase and total trips that could be generated by an apartment complex. It showed a net of 74 trips during the peak hours. Traffic would increase, but except for the Villa Road and 99W intersection, it was forecasted to meet the City's operation standards assuming the apartment complex was built in 2016. Regarding the Villa Road and 99W intersection, this development would not push it over, but it was other development in the area that increased the volume/capacity ratio. ODOT said the impact was slight and did not require any mitigation. The real impact would be in 2035 when the level of background traffic would significantly increase the traffic on Villa Road. There was a park, pool, and school in walking distance of this site. There was no transit on Villa Road, but there was on Portland Road. There was little apartment land north

of the railroad tracks, so it did help distribute high density within the City. The site had immediate access to Villa Road, which was a major collector and would be improved. He discussed the public comments that had been received. There was concern regarding traffic and pedestrian safety on Villa Road, concerns about parking impacts in the neighborhood, and concerns about building height. Traffic would increase on Villa Road, but it would be improved from Hayworth to Crestview. Any development was required to have adequate off street parking according to Code. Regarding building height, if there was an R-3 zone next to an R-1 zone, the height was limited to 30 feet for 50 feet from the edge of the R-1 zone. The height limit in the rest of the R-3 zone was 45 feet. The proposal met a need for more high density land, the public infrastructure was now or could be made readily available to the site, it complied with the Transportation Planning Rule, and the site was suitable for high density because it was near public services and had immediate access to a major collector. Staff recommended the Planning Commission recommend approval to the City Council.

CDD Rux entered the staff report into the record.

Public Testimony:

Mimi Doukas, AKS Engineering, was representing the applicant. This is a request for a Comprehensive Plan map amendment from LDR to HDR and zone change from R-1 to R-3. The goal was to build a multi-family development on the property. They did hold a neighborhood meeting and received feedback about density, parking, and compatibility. They planned to reduce the density and improve the parking, but it would be in the design review application. She explained the applicable Comprehensive Plan policies and how this application met them. One of the policies was housing and where density was to be located. This site was in excellent proximity to a variety of services and had characteristics that were helpful for high density residential, such as the boundaries were streets and George Fox University. The one edge on the west abutted R-1 and would be the focus of the design review. Another policy was transportation, which encouraged higher density development on areas where there were services. The application complied with the State Transportation Planning Rule. The planned transportation facilities could accommodate this proposed land change. Right-of-way dedication would be required with any land development to bring Villa and Park up to their full dedication widths. Regarding the need for this type of housing, Newberg was in need of all categories of residential land but the greatest was in high density residential. High density was the most efficient way to address housing needs in the Urban Growth Boundary and spreading the use around the community was important. There was infrastructure available. The sewer capacity would be analyzed at the design review stage. She thought it would be solvable. The application met the criteria and she requested recommending approval to the City Council.

Jeff Curran, DJ2 Holdings, was the applicant. This property made sense for a multi-family project. He had originally thought of doing the Comprehensive Plan and zoning amendments and design review at the same time, but had separated them. He would work with staff and the neighbors to come up with a good design for the property that would be acceptable to everyone. This was the right project in the right part of town.

PC Allyn Edwards suggested instead of building apartments to build condominiums.

PC Philip Smith asked about pedestrian access and safety on Villa Road. Mr. Curran explained some options for bicyclists and pedestrians. It was an important aspect of the project. They also planned to follow the height requirements.

PC Art Smith agreed significant improvements needed to be done on Villa Rd to make it safe.

AP Olson said the only transportation mitigation deferred until 2030 was a stop sign at Fulton and Villa.

Proponents:

Melisa Dailey, resident of Newberg, was in support of higher density development on the property than what was currently allowed. Multi-family housing was needed in Newberg to provide housing choices to residents. Provision of different housing types supported a healthy economy and a vibrant community. She wanted to live in a community that was inclusive of all income levels and all phases of life and it could only be attained by providing choices beyond single family homes and home ownership.

Rob Molzahn, local real estate broker, had represented DJ2 Holdings in finding and making an application on the site. This application fit the long range planning goals of the City. It would provide opportunities for more affordable housing and offered variation in density in neighborhoods. There was a shortage of R-3 land and its proximity to George Fox made it a good location for quality apartment housing.

The Planning Commission took a five minute break and reconvened at 8:46 p.m.

Opponents:

Rich Allen, resident of Newberg, lives to the west of the site. He bought his property because of the low density zoning and the area had large lots. Apartments had been built on Meridian Street which had changed things, and now this high density was being planned. He did not think this was the site as it would affect property values and the livability of the neighborhood. There was a small park nearby that could not handle more people. There would be more people driving and walking through the neighborhood. There was a need for lower density, and he thought it should remain low density.

Paul Blattner, resident of Newberg, lives diagonally across from the property. He picked the house and neighborhood because it was a nice neighborhood and would give him the chance to grow equity. He commended the applicant for meeting with the neighborhood. At that meeting the applicant showed pictures of what they were thinking of building, which were simple rectangular boxes with roofs on top. It would reduce the property values of the neighborhood.

Doris Brandt did not speak as her concerns had already been addressed.

Carol & Scott Phoenix, residents of Newberg, lived in the neighborhood for 30 years. They moved to Newberg because it was a small town. They moved into one of the nicest neighborhoods and it was conducive to raising children. A lot of kids played in the streets. When Park Drive was put in, a lot of thru traffic came with it and it had gotten heavier. With high density there would be more traffic and it would impact the neighborhood. Low density would only be about 22 units, but the applicant proposed 128 units, which was a significant increase. Many kids walked or biked home from school, which was dangerous with the current traffic and congestion. The neighborhood already had R-3 housing on Meridian and they did not need more high density housing.

Mr. Phoenix said their main concern was Villa Road and pedestrians and traffic. They were concerned about public safety which would be exacerbated by this development. Lower density would be appropriate here, not higher density. He thought the traffic numbers that had been given were overly optimistic from what they would actually be.

Ms. Phoenix thought more often young people without children lived in apartments and were not as aware of the problems of children in the neighborhood and speeding. They had asked for speed bumps and sidewalks, but nothing had been put in as of yet. The concern was the increase in traffic that would result from high density housing.

Jim Ringseth, resident of Newberg, lives adjacent to the site. He did not think this was the right location for high density residential. The road improvements were needed, as there was congestion and lack of safety. Traffic and parking were already issues and would still be issues even with the road improvements. He gave examples of other high density developments in the City where congestion and lack of parking were issues. This proposal did not fit with the neighborhood.

Julia Russell, resident of Newberg, lives less than 500 feet away from the property. She was in favor of low or medium density development, but not high density development. She agreed that condominiums or townhouses would be better than apartments in this area. The road would not accept the high density with the increase in traffic. She had already seen an increase in traffic from other developments over the last few years. Villa was already an unsafe road for pedestrians. There was wildlife in the area, and deer crossing the road as well. She thought high density would affect the wildlife.

Ruth Schrempp, owner of the Dwelling Place Bed and Breakfast, had many guests who came and wanted to walk, but it was very unsafe. Some improvements to Mountain View would need to be done before people could walk safely from this new development. She often called out to motorists to slow down as they were coming from Crestview passing her place and heading south because there were no stop signs. She was fearful for the children who might be living in the new development that might be walking on the road.

Dr. Mary Ann Tack, resident of Newberg, lives across the street from the property. Her biggest concern was the road and people speeding up and down the slope underneath the trestle. The traffic on Villa Road was bad and it was dangerous for pedestrians and bicyclists. She was interested to know how the road would be changed to address the problems. She was told speed bumps could not be put in because of use by the Fire and Police departments and school buses. Deer did cross there and it could cause an accident. She wanted to keep it at low or medium density. She had seen first-hand a number of incidents and lack of safety for pedestrians. She thought the neighborhood would be open to traffic calming ideas.

Jenny Vuksier did not speak as her concerns had already been addressed.

Malcolm Vuksill, resident of Newberg, lives in front of where the turn lane was being proposed. The proposal was for three story buildings facing his house. Street improvements were needed no matter how it was developed. He did not think high density residential fit, and thought it should be low or medium density. With the added vehicles, it would pose a safety threat to his children and their friends. There was wildlife in the area and people needed to drive slower. There were always accidents on Villa. He did not think there was enough room to put in a turn lane and the sidewalks may cut into his driveway space. The road was not safe enough to handle the extra traffic from a high density apartment complex.

Mark Okazaki, resident of Newberg, lived on Villa Road for 28 years. Lately there had been an influx of traffic and pedestrians on Villa and the road improvements needed to be made. The R-3 was not right for the area. Sometimes it was very difficult to get out of his driveway. At times Villa was closed when there was snow or ice and the people would go into the surrounding neighborhood. He suggested studying the traffic of the internal neighborhood area.

Mary Lou Reed did not speak.

Lewis L. Scott, resident of Newberg, lives off of Villa Road. There was a choke point at the bottom of the trestle. He did not see how they could widen Villa to put in sidewalks, bicycle lanes, and turn lanes. The traffic on Villa turning onto 99W was a problem, and would get worse with a high density development.

AP Olson said two letters had been handed in that day. He asked if the Commission wished to accept the written testimony.

MOTION: Commissioner Philip Smith moved to accept the written testimony and take a short break to read it. The motion was seconded by Commissioner Stuhr and passed 7-0. The meeting reconvened at 9:46 p.m.

Mimi Doukas, representing the applicant, gave a rebuttal. The primary concerns had to do with Villa Road and transportation improvements. She introduced Brian Dunn, Transportation Engineer with Kittelson and Associates, who discussed the transportation impact analysis. The applicant was planning to establish a direct access to Villa Road with this project to relieve the potential for cut-thru traffic. The traffic study relied on national numbers published by the Institute of Transportation Engineers and they had used the trip generation rates for an apartment use in a suburban location. They thought the numbers were conservative and was what the analysis was based on. The construction on Villa Road would help alleviate some of the problems as well with pedestrian connections and bicycle lanes.

Ms. Doukas said this application addressed the City's critical need for additional high density residential. She thought this was the right location. She hoped for approval.

Chair Gary Bliss closed the public testimony portion of the hearing at 9:54 pm

MOTION: Commissioner Matthew Fortner moved to continue the hearing to the next Planning Commission meeting on June 11, 2015, at 7:00 p.m. The motion was seconded by Commissioner Philip Smith and passed 5-2 with Chair Bliss and Commissioner Edwards opposed.

ITEMS FROM STAFF:

CDD Rux gave an update on withdrawing from mediation on the UGB process and the Affordable Housing Commission.

The next Planning Commission Meeting would be held on June 11, 2015, at 7:00pm

ITEMS FROM COMMISSIONERS:

None.

ADJOURNMENT:

Chair Gary Bliss adjourned the meeting at 10:05 p.m.

Approved by the Newberg Planning Commission this 11th day of June, 2015.


Bobbie Morgan, Planning Secretary


Gary Bliss, Planning Commission Chair

NEWBERG PLANNING COMMISSION MINUTES
June 11, 2015, 7:00 PM
PUBLIC SAFETY BUILDING (401 E. THIRD STREET)

Chair Gary Bliss called the meeting to order at 7:00 p.m.

ROLL CALL

Members Present:	Gary Bliss, Chair Matthew Fortner	Philip Smith Allyn Edwards Luis Saavedra/student	Jason Dale Cathy Stuhr
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Members Absent: Art Smith excused

Staff Present: Steve Olson, Associate Planner
 Doug Rux, Community Development Director
 Bobbie Morgan, Planning Secretary
 Kaaren Hoffman, City Engineer

PUBLIC COMMENTS: None.

CONSENT CALENDAR: PC Philip Smith said there was an error in last month's meeting minutes on page 3. The comments he made were attributed to Commissioner Art Smith and should be corrected to his name.

MOTION: Commissioner Philip Smith moved to adopt the meeting minutes for May 14, 2015, as amended. Seconded by Commissioner Cathy Stuhr and passed 6-0.

QUASI-JUDICIAL HEARING:

APPLICANT: DJ2 Holdings, LLC

REQUEST: Comprehensive Plan map amendment from LDR (low density residential) to HDR (high density residential), with corresponding Zoning map amendment from R-1 to R-3.

LOCATION: 1317 Villa Road

TAX LOT: 3217BC-800 **FILE NO.:** CPA-15-001/ZMA3-15-001

RESOLUTION NO.: 2015-307

CRITERIA: Newberg Development Code 15.302.030(A) (3), applicable Comprehensive Plan goals and policies

Chair Gary Bliss reopened the hearing at 7:05 p.m. He asked if any Commissioner had ex parte contact to declare since the last hearing. There was none.

The public testimony portion of the hearing was closed at the meeting on May 14, 2015, and the hearing would be continued at the point of deliberation.

Final Comments from Staff and recommendation:

AP Steve Olson commented the resolution was updated with that night's date, but the contents were the same. Staff recommended adoption of the resolution which included the findings that stated the proposal met the Development Code criteria and applicable Comprehensive Plan Goals and Policies.

PC Cathy Stuhr asked for clarification on page 466 & 467 of the packet regarding the State Transportation Planning Rule. She questioned if the application met Criteria C as it worsened the performance of an intersection, but the report said it would not significantly affect the transportation system.

AP Steve Olson replied ODOT's analysis said it was at acceptable levels and did not significantly affect the transportation system. They were relying on ODOT's interpretation and analysis, and agreed with it.

Chair Gary Bliss asked about the City's project on Villa Road. The design of the half street in front of this project might put a height differential in the southbound and northbound lanes. Was there adequate room for the road and sidewalks?

CE Kaaren Hoffman explained construction would begin in 2016. The design was not done yet to know what the differential would be, or how it would be addressed. There would be bicycle and pedestrian connectivity, but she did not know if they would be on both sides of the road or only one side.

Planning Commission Deliberation including discussion of criteria with findings of fact:

MOTION: Commissioner Philip Smith moved to adopt Resolution No. 2015-307 as prepared by staff. Commissioner Allyn Edwards seconded the motion.

PC Phillip Smith said the proposal was to rezone from R-1 to R-3. Improvements were needed and the developer would have to pay for the improvements. There was a need for R-3 land. The location was good and fit the City's adopted plan to spread R-3 through the City and not concentrate it in one area. The owner of the land wanted to develop this way to meet the City's needs. It did bring change to the neighborhood and the Code protected what could be put on the property. The neighbors were concerned that R-3 would be too much, but design review would get into the details which was not this current stage. There was also concern about safety, especially regarding traffic and pedestrian access on Villa Road. The main complaint was due to the train trestle, hill, and curve on Villa Road and testimony stated it presented an unsolvable problem. He did not agree as good engineering could significantly improve the road. He especially wanted to see a street design that addressed pedestrian, vehicle, and bicycle safety. He planned to vote in favor of the zone change.

PC Cathy Stuhr agreed traffic was the most important issue and there was a need for higher density land. They heard loud and clear that it was already a bad situation and this project would likely worsen it. It would also make it worse around George Fox. She questioned if the application met the State Transportation Planning Rule and she thought it was possible to interpret that it did not. She was concerned about the issues of parking and speeding that to date had not been solved. She was also concerned that there was adequate infrastructure to serve the site. It was not efficient to put the highest possible density in an area that already had significant pedestrian and bike traffic issues and unique characteristics. There were significant challenges to remedy the existing conflicts that would be exacerbated by this project.

PC Allyn Edwards commented it had been determined that there was a need for high density housing. The type of housing could be controlled through the design review process. The type of housing could also reduce the concerns of traffic, such as condominiums or permanent housing that catered to families. He asked if the sidewalks could be built around the trestle rather than through it.

City Engineer Kaaren Hoffman answered it was a possibility. The design would be completed in the fall/winter of 2015.

PC Allyn Edwards thought there was a need and it was a matter of how the design review would be presented.

Student Luis Saavedra said it all depended on how it was designed.

PC Jason Dale had no comments.

PC Matthew Fortner was most concerned about the safety. If they disregarded the warnings, it could be a problem in the future. It was originally zoned R-1 for a reason. There were other properties in the City that could be converted to R-3.

PC Phillip Smith discussed the definition of “significantly affect” and agreed with Commissioner Stuhr that this project significantly affected the transportation system and needed to be mitigated. The real problem with Villa Road was not this project but the larger development that would happen in the future on the north side of Mountain View. He thought it met the definition and they could ask for mitigation. He did not think it could be denied on that basis since it met City goals, served City interest, and was what the owner of the property wanted to do.

Chair Gary Bliss had looked over the criteria for the zone change. There was a shortage of high density residential. It provided diversity in housing. Public services could reasonably be made available. The sewer issue could be addressed during design review. The City was going to make improvements to Villa Road. Approving the rezoning was not approving the development. Conditions could be made on the development if needed. He thought it was in compliance with the State Transportation Planning Rule, it met the objective of the City’s Comprehensive Plan and Development Code, there was a public need, it was adjacent to a major collector, and it provided an adequate supply of rental properties. The City and developer needed to work together to come up with a plan where it could be done concurrently. He was ready to vote in favor of the motion.

PC Cathy Stuhr asked if they were comfortable with the findings to support the decision. There had been many comments made that the future road plan was going to address all of concerns that had been raised.

AP Steve Olson said they did not have any more information to add, as the Villa road improvement design was not complete.

Chair Gary Bliss said in order to make a right in, right out work on Villa Road they needed a median as people ignored signs. There needed to be a barrier.

PC Jason Dale thought whether this was developed as R-1 or R-3, the roadway would be designed the same. The only difference was the volume of the traffic based upon the extra residents, but he did not think it was a significant difference. He thought it should be approved.

Motion passed 5-1-1 with PC Cathy Stuhr opposed and PC Art Smith absent.

AP Steve Olson said the next step in the process was sending the recommendation to the City Council which was scheduled for July 6.

ITEMS FROM STAFF:

CD Doug Rux reviewed the staff report he presented to the Council at the last Council meeting and stated the Affordable Housing Commission had developed a set of recommendations on the Affordable Housing Trust Fund that would go to the Council on June 15. Staff was continuing to have discussions regarding the Crestview Crossing project.

ITEMS FROM COMMISSIONERS:

PC Allyn Edwards commented on staff's proactive role with the community.

CD Doug Rux said he, the City Manager, and staff were discussing meeting with people who had done developments in Newberg in the past to get their perspective for what the issues were and what needed to be adjusted. They were also looking at improving internal processes and staff reports to make things more user friendly and transparent.

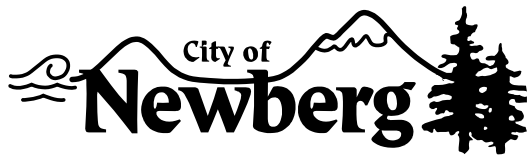
PC Allyn Edwards thanked him for the efforts being made.

Chair Gary Bliss adjourned the meeting at 7:55 p.m.

Approved by the Newberg Planning Commission this ____ day of _____, 2015.

Bobbie Morgan, Planning Secretary

Gary Bliss, Planning Commission Chair



Community Development Department

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STAFF REPORT

Type III Comprehensive Plan Map Amendment & Zoning Map Amendment

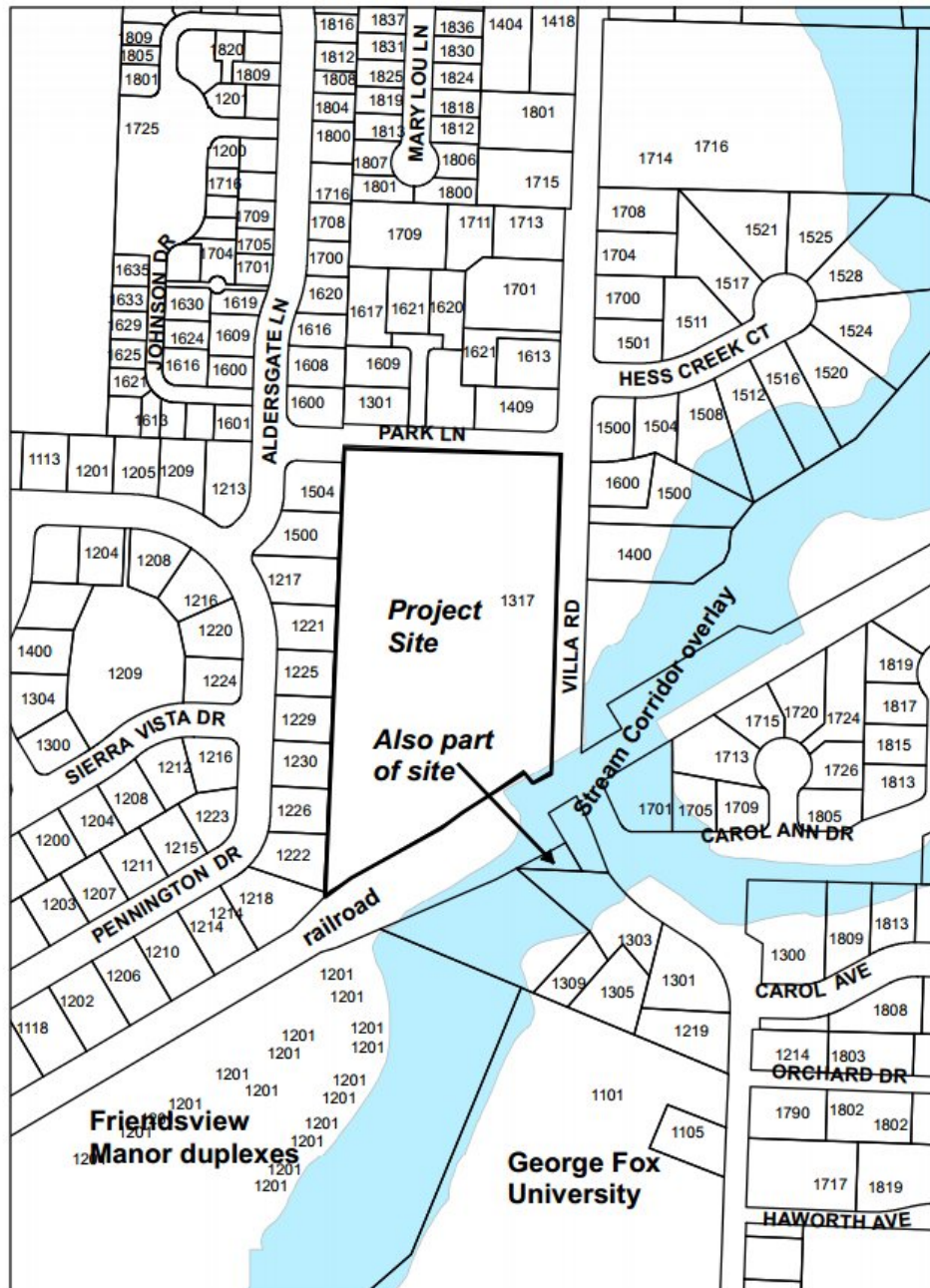
CPA-15-001/ZMA3-15-001: Martell Commons

FILE NUMBER:	CPA-15-001/ZMA3-15-001
REQUEST:	Amend the Comprehensive Plan Map designation of the property at 1317 Villa Road from LDR (Low Density Residential) to HDR (High Density Residential) and amend the Zoning designation from R-1 (Low Density Residential) to R-3 (High Density Residential)
APPLICANT:	DJ2 Holdings, LLC (represented by AKS Engineering & Forestry, LLC)
OWNER:	Martell Family Farms, LLC
LOCATION:	1317 Villa Road, Yamhill County tax lot 3217BC-800
DESIGNATION:	Comprehensive Plan designation of LDR (Low Density Residential); Zoning designation of R-1 (Low Density Residential), with a small Stream Corridor overlay section
CODE CRITERIA:	Newberg Development Code § 15.302.030(A)(3), applicable Comprehensive Plan goals & policies
HEARING DATE:	Planning Commission Hearing on May 14, 2015

ATTACHMENTS:

1. Planning Commission Resolution 2015-307 with:
 - Exhibit A: Findings
 - Exhibit B: Location Map
 - Exhibit C: Legal Description
 - Exhibit D: Comprehensive Plan Map
 - Exhibit E: Zoning Map
2. Public & Agency Comments
3. Aerial Photo
4. Application
5. Newberg Development Code & Comprehensive Plan
(by reference)

Location Map



Proposal

Amend the Comprehensive Plan Map designation of the property at 1317 Villa Road from LDR (Low Density Residential) to HDR (High Density Residential) and amend the Zoning designation from R-1 (Low Density Residential) to R-3 (High Density Residential). If this application is approved then the applicant will apply for design review approval of a multifamily apartment project, to be named Martell Commons.

Process

This is a Type III application for a Comprehensive Plan map amendment and a Zoning map amendment. A Type III application of this nature goes first to the Planning Commission for a recommendation and then to the City Council for a final decision. The Planning Commission will hear this proposal on Thursday, May 14th at 7 p.m. at the Newberg Public Safety Building (401 E Third Street). A City Council hearing is tentatively scheduled for Monday, July 6th to review the application and the recommendation of the Planning Commission.

The applicant held a neighborhood meeting in December 2014 to discuss the proposal and the concept plan. This was not required by the city, but enabled the applicant to learn about neighborhood concerns about traffic impacts, the number of units proposed, and adequate parking. Based on the feedback, the applicant revised the concept plan to reduce the number of units, increase the amount of parking provided per dwelling unit, and reduce the number of buildings along the western property line.

It is important to note that the concept plan is not being approved at this time, and the applicant is not bound by the concept plan in this Comprehensive Plan map amendment/Zoning map amendment application. If this Comprehensive Plan map amendment/Zoning map amendment application is approved then the applicant will apply for design review approval. A design review application would include more detailed information about the design of the buildings, parking layout, preliminary grading and utility plans, landscaping and outdoor recreation area plans, and street frontage improvements. A design review application is a Type II process: there is public notice mailed to all property owners within 500 feet, the site will be posted with signs, and there is a two-week period to submit public comment. The Community Development Director then makes a decision on the application. Anyone who submits a comment is sent notice of the decision, and there is a two-week appeal period. If the decision is appealed then it goes to the Planning Commission for a public hearing and review.

Noticing: Important dates related to this application for a comprehensive plan amendment/zoning map amendment are as follows:

1. 4/27/15: The Community Development Director deemed the application complete.
2. 4/22/15: The applicant mailed notice to the property owners within 500 feet of the site.
3. 4/26/15: The applicant posted notice on the site.
4. 4/29/15: The Newberg Graphic published notice of the Planning Commission hearing.
5. 5/14/15: The Planning Commission will hold a quasi-judicial hearing to consider the application.

Criteria: The following criteria apply to the subject proposal:

15.302.030 Procedures for comprehensive plan map and zoning map amendments.

3. Amendment Criteria. The owner must demonstrate compliance with the following criteria:

- a. The proposed change is consistent with and promotes the goals and policies of the Newberg comprehensive plan and this code;
- b. Public facilities and services are or can be reasonably made available to support the uses allowed by the proposed change;
- c. Compliance with the State Transportation Planning Rule (OAR 660-012-0060) for proposals that significantly affect transportation facilities.

Site Information

The site is approximately 5.94 acres on tax lot 3217BC-800. The property is bifurcated by the railroad right of way; the main parcel is 5.91 acres, and the small remnant parcel is 0.03 acres. The remnant parcel is south of the railroad tracks and entirely within the City stream corridor overlay, so no development is proposed for the remnant parcel. The main parcel contains a single family house, and has remained in farm use as the area around it urbanized.

Surrounding uses:

- North across Park Lane: Developed with predominantly single family detached homes with primarily R-2 zoning, with some R-1 zoning along Villa Road.
- East across Villa Road: Developed with single family detached homes to the northeast. Most of the property east of the site adjacent to Villa Road is zoned either Institutional or R-1, but is undeveloped because it is in the stream corridor.
- West: The site abuts existing single family detached homes in an R-1 zone.
- South across the railroad corridor and the stream corridor: There are single family detached homes in an R-1 zone and George Fox University facilities to the southeast. To the southwest are duplexes that are part of the Friendsview Manor development.

Existing conditions: Villa Road runs along the eastern boundary of the site and is an unimproved City road, classified as a major collector with a 50-foot right-of-way. Park Lane runs along the northern boundary, and is an unimproved City road, classified as a residential road with a 30-foot right-of-way. There are two large trees close to Villa Road; unfortunately, any street improvements along Villa Road will probably require the removal of these trees. There is an 8-inch public water line that runs down Villa Road and Park Lane that could serve the proposed site if it is determined to be sized large enough for the development. As part of final development, a fire flow analysis will be performed to determine if any existing water lines would need to be upsized. There is a 12" sewer line located to the south and east of the property which could serve the property. The downstream system is currently at capacity, however the City's Sewer Master Plan identifies pipe upsizing necessary for any further development on the system. The zone change from R-1 to R-3 increases the sewer demand on the system by 1.8%, which does not change the required pipe size. Further investigation will be performed by the developer at the time of development to determine if there is sufficient capacity for any further development, regardless of a zone change, including flow testing. There is a 24" storm sewer line at the southern boundary of the property, as well as the adjacent Hess Creek, which could serve the property. Stormwater quality and quantity facilities would be required with development which would limit the stormwater impacts of the property. The topography of the site is sloping from north to south.

Agency Comments:

The application was routed to several public agencies for review and comment. Comments and recommendations from city departments have been incorporated into the findings and conditions. The findings are jointly written by the Planning and Engineering divisions. As of the writing of this report, the city received the following agency comments:

- Oregon Dept. of Transportation:
Gerry Juster and I have reviewed this application and have determined that ODOT will not have any comments. This is due to the limited impact we expect the project will have on state facilities. Thank you for referring this application to ODOT for review. Please feel free to contact me or Gerry if you have questions or need additional information.
Dan Fricke, Senior Transportation Planner
Oregon Department of Transportation
Region 2
455 Airport Road SE Building B
Salem, OR 97301-5395
Ph: 503-986-2663 Fax: 503-986-2840
e-mail: daniel.l.fricke@odot.state.or.us
- Oregon Dept. of State Lands: A state permit will not be required for the proposed project because based on the submitted site plan the project appears to avoid impacts to jurisdictional wetlands and waters. This is a preliminary jurisdictional determination and is advisory only.
- PGE: Reviewed, no conflict
- Waste Management: Reviewed, no conflict. Will need input at the building permit stage for trash and recycling.
- Fire Dept: Reviewed, no conflict
- Police Dept.: This is a summary – the full comment is included in Attachment 2. The Department has concerns about pedestrian/vehicle mixed use safety, parking, and the number of driveways within such close proximity of one another. Park Lane must be widened to a full street width. The on-site parking for the apartments seems adequate, but inevitably there will be some on-street parking; consider removing on-street parking along the north side of the street to minimize congestion. It is very important that pedestrian and bike improvements are completed along Villa Road for safety. The driveway on Villa Road is very close to Park Lane, and may create a safety issue.

Public Comment:

As of the writing of this staff report, the city has received no written public comments.

Issues & Analysis summary:

1. **Police Dept. comments:** The department raised many valid concerns about street improvements, pedestrian safety, parking, and driveway locations. The decision on these design issues will actually be made during the design review application phase. The applicant is now aware of the Police Department concerns. If the Comprehensive Plan map amendment/Zoning map amendment is approved then the applicant will need to address these issues in their design review application. The concept plan for the site is not being approved as part of this application, and no decisions are being made on driveway location, parking, or the design of the street improvements that will be required.
2. **Do the relevant Comprehensive Plan policies support the change:**
The Comprehensive Plan includes policies regarding high density housing location, dispersal of high density housing, design of high density housing, and compatibility with surrounding development.

These policies are addressed in more detail in the findings. The proposed site is adjacent to a major collector road which will provide adequate access for higher density housing. Changing the site to HDR would comply with the city goal of dispersing high density housing throughout the city instead of concentrating it in any one area. In addition, any R-3 development will have to meet the additional design review criteria for multi-unit housing. Overall, the proposed Comprehensive Plan map amendment/Zoning map amendment promote the efficient use of land within the urban growth boundary, improves housing diversity in this part of the city, provides multifamily housing close to urban services and employment, and is located along a major collector; the amendment is supported by Comprehensive Plan policies.

3. **Does the city need more HDR land and multifamily housing:** The applicant has prepared a Housing Needs Analysis, which shows that Newberg does not have enough land in the urban growth boundary in any of the housing categories (low density, medium density or high density) to accommodate growth over the next 15 years. The greatest shortfall, however, is in the HDR category. Newberg has the current capacity to accommodate 91% of the projected LDR need, 51% of the projected MDR need, but only 11% of the projected HDR need. Changing LDR land to HDR would help address the shortfall, as the city currently has a greater need for HDR land than LDR land.
4. **Is this site suitable for HDR land:** The main issues to address are the traffic impacts, and whether there are adequate public facilities to support the potential development
 - **Transportation improvements:** The proposed development site is located adjacent to Villa Road and Park Lane and would take direct access from both streets. Park Lane is currently developed below City residential street standards. The future development would construct a 1/2 street improvement on the south side of Park Lane to residential standards, and dedicate additional right of way. Villa Road is currently constructed below City major collector standards. The future development would construct a 1/2 street improvement on the west side of Villa Road to major collector standards, and dedicate additional right of way. The street frontage improvements and right of way dedication would take place after design review approval for the apartment project.
 - **City transportation project:** The City is currently beginning design of transportation improvements to Villa Road from Haworth Avenue to Crestview Drive. This project is on the city Capital Improvement Project list, and funded by transportation system development charges (SDCs) the city levies on new development. During the development application review for this apartment project, coordination of street improvements with the City-led project will be necessary, and will be completed at that time.
 - **Traffic impact:** The application includes a traffic study that analyzes the impact the proposal would have on trip generation & distribution, safety, and operational functions through the year 2035 for several surrounding intersections. According to the applicant's traffic impact study, all

intersections studied currently operate at acceptable levels of service during the weekday a.m. and p.m. peak hours.

2016 Year Analysis

All of the study intersections except the Villa Road/HWY 99 intersection are forecast to meet operation standards during the weekday p.m. peak hour. The site is anticipated to be built out in 2016.

- Without development of the site, the intersection of Highway 99 and Villa Road will exceed capacity (ODOT's standard is a v/c ratio of 0.85). The intersection will operate at a v/c of 0.88.
- With development of the site, the intersection of Villa Road and HWY 99 will still operate at a v/c of 0.88. The development's impact to this intersection is minimal. All other study intersections operate at acceptable LOS. If the site is developed in 2016 then no mitigation would be needed at the study intersections.

2035 Year Analysis

All of the study intersections except the Villa Road/HWY 99 intersection and the Villa Road/Fulton Street intersection are forecast to meet operation standards during the weekday p.m. peak hour.

- Without development of the site, the Villa Road/HWY 99 intersection is forecast to operate with a v/c ratio of 1.11 which exceeds the ODOT standard of 0.85, and the Villa Road/Fulton Street intersection is forecast to operate with a LOS F which exceeds the City's standard of LOS D or better.
- With development of the site, all of the study intersections except the Villa Road/HWY 99 and Villa Road/Fulton Street intersections are forecast to continue meeting operational standards during the weekday p.m. peak hour. With full development of the site, the v/c ratio of the Villa Road/HWY 99 intersection is forecast to operate at 1.12 which is an increase of 0.01 from the undeveloped conditions. The impact of this development on that intersection is minimal, and no mitigation is proposed. ODOT has commented that the impact on state facilities is limited, and they had no additional requirements. No mitigation would be required for this project at the Villa/Fulton intersection, as the intersection will operate acceptably in 2016 upon development. The decrease in LOS to F for Villa/Fulton in 2035 is due to the increase in background traffic, as the intersection is expected to have a LOS of F in 2035 whether or not this site is developed. Appropriate changes to the traffic control at that intersection will be considered at that time.

No mitigation will be required at nearby intersections. The applicant is still responsible for the cost of street frontage improvements on Park Lane and Villa Road, however, and will also pay Transportation SDCs toward their general impact on the transportation system (the current transportation SDC is \$2,143.68 per multifamily dwelling unit, so this becomes a significant cost

for a project with 128 dwelling units). SDC rates increase over time, so the actual SDC to the applicant will depend on when development occurs.

- **Sight Distance:** The sight distance from the proposed site's frontage on Park Lane is adequate for cars entering and exiting the site. The sight distance from the proposed site's Villa Road frontage may not be adequate depending on the final profile and alignment of Villa Road. If adequate sight distance is not possible, the Villa Road access will be limited to right in/right out movements only. Villa Road is proposed to continue as a 25 MPH road through the developments frontage and through the large sag vertical curve to the south of the property. Excessive speeds are a concern in this area. To help mitigate this problem, a landscaped median (or other approved traffic calming measure) in a portion of the site's Villa Road frontage will be required at the time of development. This can also serve to provide right in/right out access restrictions at the Villa Road driveway access.
- **Public utility infrastructure:** The proposed site has existing water and stormwater facilities to serve the maximum density of the proposed zone change. There is an existing 8" waterline in Villa Road and Park Lane and there is a 21" stormwater line at the southern boundary of the property. The application contains a report on the water system which shows adequate capacity. The post developed stormwater runoff rates will match pre-developed rates with properly designed stormwater facilities.

The existing sewer system directly downstream of the site is currently at capacity and development of the site at the existing R-1 zoning density would put several pipe segments over capacity. A change in zoning from R-1 to R-3 would not significantly increase the demand on the sewer system, and would not require a larger pipe size than is required with the current zoning. The specifics of pipe upsizing would be determined during development application review.

- **Availability of public services:** The proposed site is within walking distance of many services: Within ¼ mile of a small CPRD park (College Park, off Sierra Vista), the CPRD pool, and George Fox University; within ½ mile of Joan Austin Elementary school; within ¾ mile of Newberg High School, and the Portland Road commercial area. This meets the Comprehensive Plan policies of high density housing being located near public services and public open spaces. It also means that residents of the proposed high density housing may walk or bike to commercial areas, jobs, parks, and schools. Public transit is available on Hwy 99W. An apartment project would help fund these services by paying a School District construction excise tax (currently \$1 per square foot for residential construction) and a Parks District SDC (currently \$1,475 per dwelling unit).

PRELIMINARY STAFF RECOMMENDATION: The preliminary staff recommendation is made in the absence of public hearing testimony, and may be modified subsequent to the close of the public hearing. At this writing, staff recommends the following motion:

Move to adopt Planning Commission Resolution 2015-307, which recommends that the City Council approve the requested Comprehensive Plan map change from LDR to HDR and Zone change from R-1 to R-3.

MARTELL COMMONS COMPREHENSIVE PLAN AMENDMENT AND ZONE CHANGE

DATE: April 7, 2015

SUBMITTED TO: City of Newberg Planning Department
Newberg City Hall
414 E. First Street
Newberg, OR 97132

APPLICANT: DJ2 Holdings, LLC
12042 SE Sunnyside Rd. Suite 590
Portland, OR 97015



12965 SW Herman Road, Suite 100
Tualatin, OR 97062
P: (503) 563-6151
F: (503) 563-6152
www.aks-eng.com

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EXHIBITS:

- Exhibit A: Conceptual Site Plan
- Exhibit B: County Tax Map and Trio
- Exhibit C: Application Form
- Exhibit D: Infrastructure Capacity Analysis
- Exhibit E: Neighborhood Meeting Documentation
- Exhibit F: Traffic Impact Analysis
- Exhibit G: Housing Needs Analysis

COMPREHENSIVE PLAN AMENDMENT AND ZONE CHANGE APPLICATION FOR MARTELL COMMONS

OWNER:	Martell Family Farms, LLC 23480 NE Hyland Drive Newberg, OR 97132
APPLICANT:	DJ2 Holdings, LLC 12042 SE Sunnyside Rd. Suite 590 Portland, OR 97015 Contact: Jeff Curran (jeff@dj2holdings.com)
LAND USE	AKS Engineering & Forestry, LLC 12965 SW Herman Road, Suite 100 Tualatin, OR 97062 (503) 563-6151 Contact: Mimi Doukas, AICP, RLA (mimid@aks-eng.com)
CIVIL ENGINEER:	3J Consulting, Inc 5075 Southwest Griffith Drive Suite 150 Beaverton, OR 97005 503-946-9365 Contact: John Howorth, PE
TRAFFIC ENGINEER:	Kittelson and Associates 610 SW Alder St, Suite 700 Portland, Oregon 97205 503.228.5230 phone Contact: Brian Dunn, PE
ECONOMIST:	Cogan Owens Greene 813 SW Alder Street, Suite 320 Portland, OR 97205-3111 Phone: 503-225-0192 Contact: Steve Faust, AICP
SITE LOCATION:	1317 Villa Road
ASSESSOR'S INFORMATION:	Tax Map 3217BC Taxlot 00800
SITE SIZE:	5.94 acres total (bifurcated lot)
EXISTING LAND USE/ZONE:	Low Density Residential (LDR) / R-1
PROPOSED LAND USE/ZONE:	High Density Residential (HDR) / R-3

I. GENERAL INFORMATION

REQUEST

DJ2 Holdings, LLC is requesting approval of a Type III Comprehensive Plan Amendment and Zone Change from Low Density Residential/R-1 to High Density Residential/R-3 for 5.94 acres on Taxlot 3217BC 00800 (the property is bifurcated by the railroad tracks; the parent parcel contains 5.91 acres). This written narrative, together with preliminary plans and other documentation included in the application materials, establishes that the application is in compliance with all applicable approval criteria. This documentation represents substantial evidence and provides the basis for the Planning Commission and City Council to approve the application.

PROJECT DESCRIPTION

Ultimately, DJ2 Holdings, LLC plans to build an apartment complex on the Martell Commons property. A concept sketch has been included in Exhibit A, although this application is only for the Comprehensive Plan Amendment and Zone Change at this time. If approved, the Applicant will then submit a Development Review application for the final site design.

The Applicant met with surrounding property owners in December 2014 to discuss the land use proposal. Similar concept sketches were shared, as well as example building elevations. Key areas of concern were traffic impacts, the number of units proposed, and adequate parking. Based on feedback from that meeting the Applicant has revised the conceptual plan to reduce the number of units, increase the number of parking spaces per dwelling unit, and reduced the number of buildings along the western property line.

From a land use perspective, Yamhill County projects a growth rate for Newberg of approximately three percent per year over the next 15 years. As shown in a Housing Needs Analysis prepared by Cogan Owens Green (Exhibit G), the land available for residential development within the Newberg Urban Growth Boundary is not sufficient to accommodate this expected growth. Newberg lacks enough land in the LDR, MDR, and HDR designations. Proportionately, Newberg only has current capacity to accommodate 89% of the projected LDR need, 34% of the projected MDR need, and only 13% of the projected HDR need.

Changing the Martell Commons property from LDR to MDR will allow for more efficient use of the limited land available within the Urban Growth Boundary, but will also provide more diverse housing opportunities particularly north of the railroad tracks. The only significant vacant R-3 land available is located at 108 Springbrook Road near Springbrook Oaks, and a small 1.3 acre parcel at 601 Blaine Street.

SITE DESCRIPTION

Martell Commons (TL 3217BC 00800) is located on the west side of Villa Road and north of the George Fox campus and railroad tracks, although the property is bifurcated by the railroad tracks creating a small remnant parcel south of the railroad tracks; there are no development plans for this tiny parcel. The parent parcel currently contains a small farm and house. This site has remained in farm production as the neighborhoods around it have developed to urban densities.

Land to the north has been developed into single family detached homes with primarily R-2 zoning and a small stretch of R-1 adjacent to Villa Road. East of Villa Road there are three homes that front onto Villa Road that are zoned R-1. South of those homes, Hess Creek flows under Villa Road and the railroad tracks. This corridor is zoned Industrial, but is not developable due to the creek. West of Martell Commons are existing single family detached homes in an R-1 zone. To the southwest, a row of duplex homes back up

to the railroad tracks with a zone of R-2. The site is bounded to the south by the railroad tracks and a trestle where the tracks cross over Villa Road. South of the railroad is the George Fox campus and associated sports fields.

The site slopes down from the northwest generally to the southeast, ultimately draining into Hess Creek. Slopes are generally four to five percent for most of the site, increasing to ten to twelve percent along the southern edge.

DESCRIPTION OF SURROUNDING AREA

Area	Jurisdiction	Zoning	Land Uses
North	Newberg	R-2/R-1	Single Family detached residential
South	Newberg	R-1	Railroad / Hess Creek / George Fox campus
East	Newberg	R-1/ I	Single-family detached residential / Hess Creek
West	Newberg	R-1/R-2	Single Family detached residential / duplex residential

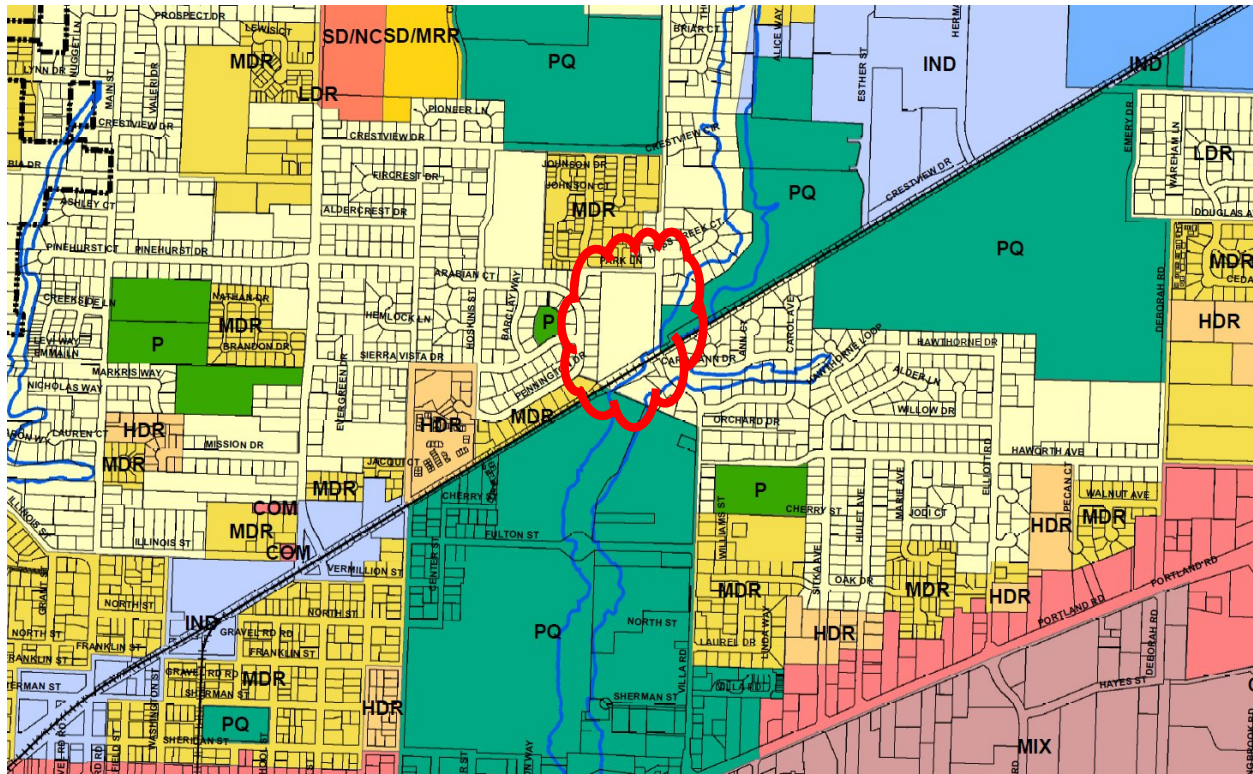
PUBLIC UTILITIES

Service	Provider	Size	Location	Distance from site
Water	Newberg	8"	Villa Road	Adjacent (E)
Water	Newberg	8"	Park Road	Adjacent (N)
Sanitary Sewer	Newberg	8"	Park Road	Adjacent (N)
Sanitary Sewer	Newberg	8"	South Property Line	Adjacent (S)
Storm Sewer	Newberg	12"	Park Road	Adjacent (N)
Storm Sewer	Newberg	21"/24"	South Property Line	Adjacent (S)

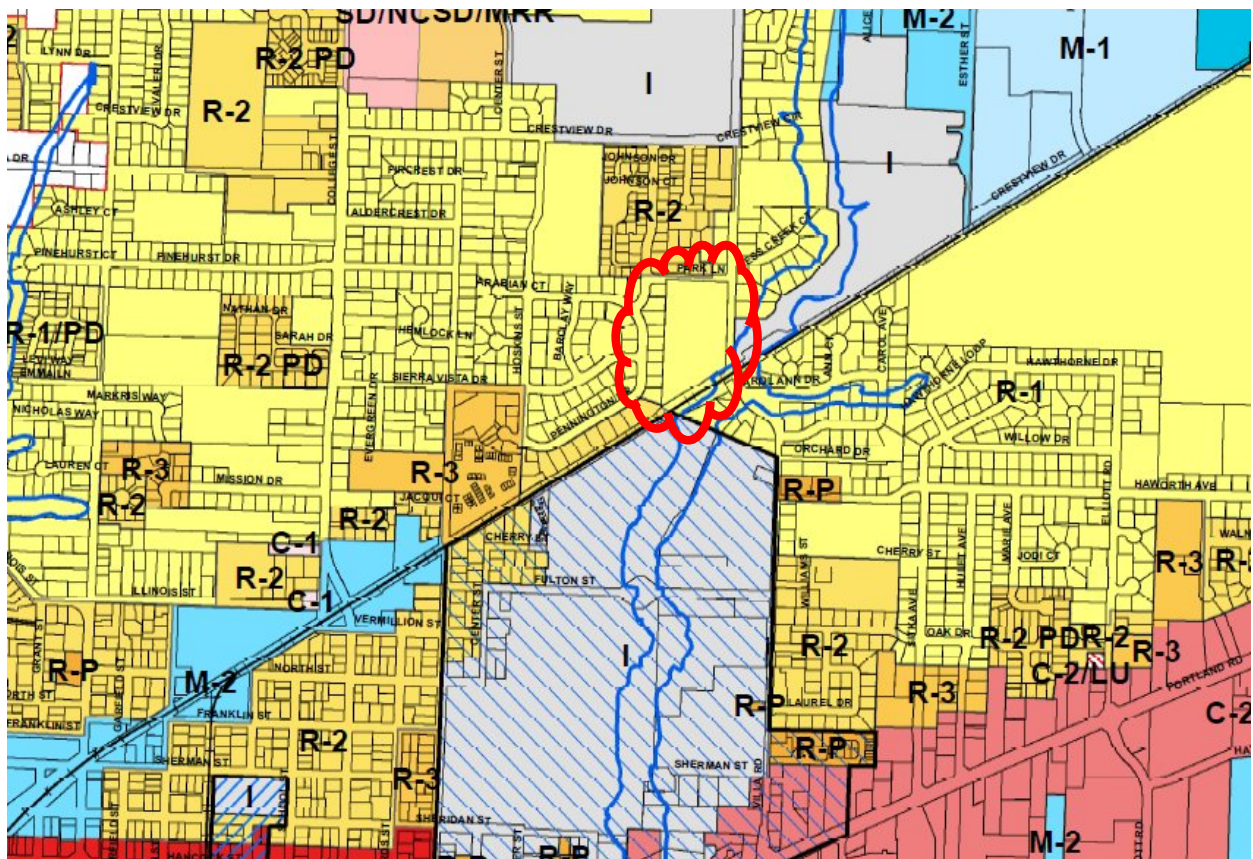
TRANSPORTATION

Villa Road is classified as a major collector. The planned right-of-way width is 30 feet from centerline. Existing right-of-way is 20 feet from centerline so a ten foot dedication is expected. Park Street is classified as a local street with a planned full right-of-way width of 60 feet. The existing right-of-way is abutting the centerline, so 30 feet of dedication is expected.

COMPREHENSIVE PLAN MAP:



ZONING MAP:



III. APPLICABLE REVIEW CRITERIA

NEWBERG DEVELOPMENT CODE

CHAPTER 15.100 LAND USE PROCESSES AND PROCEDURES

Article I. Procedure Types and Determination of Proper Procedures

15.100.010 Procedures for processing development permits.

All development permits shall be classified as one of the following: Type I, Type II, Type III, or Type IV procedures.

15.100.050 Type III procedure – Quasi-judicial hearing.

- A. All Type III decisions shall be heard and decided by the planning commission. The planning commission's decision shall be final unless the decision is appealed or the decision is a recommendation to the city council.
- B. Type III actions include, but are not limited to:
 8. Comprehensive plan map amendments: this action is a recommendation to the city council.
 9. Zoning map amendments and designation of subdistricts: this action is a recommendation to the city council.
- C. Planning Commission Decisions and Recommendation Actions.
 1. Planning Commission Decision. Development actions shall be decided by the planning commission for those land use actions that require a Type III procedure and do not require the adoption of an ordinance. The decision shall be made after public notice and a public hearing is held in accordance with the requirements of NMC 15.100.090 et seq. A Type III decision may be appealed to the city council by a Type III affected party in accordance with NMC 15.100.160 et seq.
 2. Planning Commission Recommendation to City Council. Land use actions that would require the adoption of an ordinance shall be referred to the city council by the planning commission together with the record and a recommendation. The recommendation shall be made after public notice and a public hearing is held in accordance with the requirements of NMC 15.100.090 et seq.
- D. City Council Action. If a recommendation to the city council is required, the matter shall be reviewed by the city council as a new hearing. The final decision on these actions is made by the city council.
- E. The applicant shall provide notice pursuant to NMC 15.100.200 et seq.
- F. The hearing body may attach certain conditions necessary to ensure compliance with this code.
- G. If the application is approved, the director shall issue a building permit when the applicant has complied with all of the conditions and other requirements of this code.
- H. If a Type III application is denied, or if the applicant wishes to make substantive modifications to an approved application, the applicant may modify the application after the planning commission hearing and request a new planning commission hearing to consider the application. An application so modified shall be considered a new application for purposes of the 120-day

time limit for processing applications in accordance with NMC 15.100.100 and state statutes. The applicant shall acknowledge in writing that this is a new application for purposes of the 120-day rule. The city council shall establish a fee for such a reconsideration or modification by resolution. Application of this provision is limited to three times during a continuous calendar year.

Response: This application proposes a Comprehensive Plan Amendment and Zone Change. This will be reviewed as a Type III application reviewed by the Planning Commission with a recommendation to City Council for a final decision. The Applicant will provide notice of the hearings in compliance with the development code. This criterion will be met.

Article II. Processing Type I – IV Development Actions

15.100.150 Decision, findings and order – Types III and IV.

- A. Following the hearing for review of a development permit, the hearing body shall approve, conditionally approve, or deny the application. If the hearing is an appeal, the hearing body shall affirm, reverse, or remand the decision that is on appeal.
- B. The hearing body shall prepare written findings of fact and an order which shall include:
 - 1. A statement of the applicable criteria against which the proposal was tested.
 - 2. A statement of the facts that the hearing body found establishing compliance or noncompliance with each applicable criterion and assurance of compliance with applicable standards.
 - 3. The reasons for a conclusion to approve or deny.
 - 4. The decision to approve the proposed change with or without conditions, or the decision to deny the proposed change.
- C. The director shall notify the applicant and others entitled to notice of the disposition of the application within five calendar days of the written decision. This shall include the applicant, anyone providing written testimony prior to the close of the hearing, anyone providing oral testimony at the hearing, or anyone requesting such notice. The notice shall include a description of the item, indicate the date that the decision will take effect and describe the right of appeal pursuant to NMC 15.100.160 et seq.

Response: This Type III application will be reviewed by the Planning Commission with a recommendation to City Council for a final decision. The City Council will issue a final decision based on written findings of fact and notify all participants.

Article III. Appeals

15.100.160 Appeal procedures.

- C. Type III. An appeal of a Type III decision by the planning commission may be appealed within 14 calendar days of the date of the planning commission's written decision. Appeals may be made only by an affected party, Type III.

Article IV. Notice

15.100.200 Compliance required.

Notice on all Type I through Type IV actions, including appeals, shall be conducted in accordance with this article.

15.100.210 Mailed notice.

Mailed notice shall be provided as follows:...

- 15.100.230 Additional notice procedures for Type III quasi-judicial hearing.
In addition to the requirements of NMC 15.100.210, mailed notice for Type III development actions shall also contain the following:...
- 15.100.260 Procedure for posted notice for Type II and III procedures....
- 15.100.270 Procedure for published notice on Type III and Type IV procedures....

Response: The Applicant will work with City Staff to provide all required notice for this Type III application. This criterion will be met.

CHAPTER 15.302 DISTRICTS AND THEIR AMENDMENT

- 15.302.030 Procedures for comprehensive plan map and zoning map amendments.
This section describes the procedures and criteria that apply to any application to amend the land use designations identified on the comprehensive plan map, zoning map and land use regulations.
- A. Type III Plan and Zoning Map Amendments – One Parcel or Small Group of Parcels.
1. Property owners or the city may initiate a map amendment for one parcel or a small group of parcels under the Type III procedure. May be initiated by a resolution of the planning commission or city council. Unlike other Type III procedures, the decision of the planning commission on a Type III plan map amendment shall be in the form of a recommendation to the city council. The city council shall hold another new hearing and make a final decision.

Response: The Applicant, DJ2 Holdings LLC, proposes a Comprehensive Plan Amendment and Zone Change for one parcel, Taxlot 3217BC 00800. This will be reviewed as a Type III application reviewed by the Planning Commission with a recommendation to City Council for a final decision.

2. Where an application has been denied, no new application for the same purpose shall be filed within one year of the date of the previous denial unless the city council for good cause shall grant permission to do so.
3. Amendment Criteria. The owner must demonstrate compliance with the following criteria:
 - a. The proposed change is consistent with and promotes the goals and policies of the Newberg comprehensive plan and this code;

Response: The goals and policies of the Comprehensive Plan are addressed in detail later in this narrative. Overall, the proposed Plan and Zoning Map amendments promote the efficient use of limited land within the Urban Growth Boundary, improve housing diversity in this area of Newberg, provide affordable multi-family housing close to employment and urban services, and located along a major collector. These all match the goals and policies outlined in the Comprehensive Plan.

- b. Public facilities and services are or can be reasonably made available to support the uses allowed by the proposed change;

Response: Exhibit D includes an Infrastructure Analysis for the proposed Comprehensive Plan Amendment and Zone Change. This memo reviews the existing infrastructure for domestic water, sanitary sewer, and storm drainage. It then reviews the impact that the potential 147 dwelling units will have on the existing infrastructure, and identifies any mitigation necessary to accommodate this additional impact. In addition, the memo outlines the expected transportation improvements necessary for development based upon City Standards, the Transportation System Plan, and recommendations from the Traffic Impact Analysis in Exhibit F. In summary, the water, sewer, and storm drainage facilities have sufficient capacity to accommodate development of Martell Commons. Expected transportation improvements include half street widening for Villa Road including the addition of a bike lane and sidewalks, widening Park Lane to provide a curb to curb width of 32 feet including a dedicated left turn lane and sidewalk along the project frontage.

- c. **Compliance with the State Transportation Planning Rule (OAR 660-012-0060) for proposals that significantly affect transportation facilities.**

Response: A full Transportation Impact Analysis is provided in Exhibit F; this report specifically addresses the Transportation Planning Rule OAR 660-12-0060. The proposed zone change does not require or result in any changes to the functional classification of any transportation facility in the vicinity of the site or to the standards that implement the functional classification system. The Villa Road/Fulton Street and Villa Road/OR 99W intersections are already forecast to miss performance standards under 2035 background conditions, even without the proposed rezone. Mitigation for the Villa/Fulton intersection include installation of an all-way stop control. This improvement will enhance intersection operations from LOS "F" to LOS "E" during the 2035 weekday p.m. peak hour. This represents an improvement to level of service than under 2035 background traffic conditions.

Action 1F.5 of the Oregon Highway Plan states that small increases in traffic, up to 400 ADT, do not cause "further degradation" of state highway facilities. Although the proposed zone change could generate an additional 795 daily trips over current zoning potential, less than 400 of these trips are anticipated to reach the Villa Road/OR 99W intersection.

Finally, Action 1F.5 allows for capacity increasing improvements that include system connectivity improvements (for vehicles, bicycles and pedestrians) and multi-modal opportunities to reduce vehicle demand. The pedestrian and bicycle improvements proposed with the development along Villa Road and the completion of a continuous pedestrian route from the rezone site to George Fox University will sufficiently mitigate the small increase in v/c ratio forecast the Villa Road/OR 99W intersection.

4. **The property owner who desired to have their property reclassified has the burden of establishing that the requested classification meets the requirements of this section. As part of the application, the property owner requesting a change shall file a waiver stating that the owner will not file any demand against the city under Ballot Measure 49, approved November 6, 2007, that amended ORS Chapters 195 and 197.**

Response: The amendment criteria have been addressed above and throughout this narrative. The property owner will sign a waiver on City forms.

5. A traffic study shall be submitted for any proposed change that would significantly affect a transportation facility, or that would allow uses that would increase trip generation in excess of 40 trips per p.m. peak hour. This requirement may be waived by the director when a determination is made that a previous traffic study adequately addresses the proposal and/or when off-site and frontage improvements have already been completed, which adequately mitigate any traffic impacts and/or the proposed use is not in a location, which is adjacent to an intersection, which is functioning at a poor level of service. A traffic study may be required by the director for changes in areas below 40 trips per p.m. peak hour where the use is located immediately adjacent to an intersection functioning at a poor level of service. The traffic study shall be conducted according to the City of Newberg design standards.

Response: A full Traffic Impact Analysis has been included in Exhibit F. This report studied both the impact of the proposed zone change on the 2035 performance of the planned transportation system, as well as the short term build out impacts of the proposed apartment complex on the existing roadway system, and listed necessary mitigation measures to ensure there is not a significant degradation of the Newberg transportation system.

15.302.032 Purposes of each zoning district.

A. R-1 Low Density Residential District.

1. The purpose of this land use designation is to provide for low density urban single-family residential uses at an average overall density of 4.4 units per gross buildable acre in the district. It is intended to provide a stable and healthful environment together with the full range of urban services.
2. Typical housing types will include single-family dwellings and planned unit developments. The district also is intended to allow low intensity institutional uses that operate consistent with peaceful enjoyment of residential neighborhoods. The R-1 district is intended to be consistent with the low density residential (LDR) designation of the comprehensive plan.

C. R-3 High Density Residential District.

1. The purpose of this land use designation is to provide multifamily dwellings of different types and styles at an average overall density of 16.5 units per gross buildable acre in the district.
2. Typical housing types will include duplexes, multifamily dwellings, and manufactured dwelling and mobile home parks. The district also is intended to allow low intensity institutional uses that operate consistent with peaceful enjoyment of residential neighborhoods. Density may vary depending on lot size, off-street parking area, transportation, landscaping and other site considerations. The R-3 district is intended to be consistent with the high density residential (HDR) designation of the comprehensive plan.

Response: If this application is approved, DJ2 Holdings will submit for Site Plan Review for an apartment complex based on the Concept Sketch in Exhibit A. The land use review will

consider parking, intensity, landscaping, buffering, and transportation impacts. The Concept Plan has been revised based on neighborhood feedback to reduce the number of dwelling units, increase the number of parking spaces per dwelling unit, and reduce the number of structures adjacent to existing homes along the western property line.

An R-3 designation is appropriate in this location due to several factors. The size of the property allows for thoughtful site planning, with two story structures along the western boundary, and significant separation from the western property line for buffering. The location is within walking and biking distance to George Fox University. Joan Austin Elementary School is within a half mile, A-dec is within three fourths of a mile, and within a quarter mile of the Chehalem Aquatic & Fitness Center, and within three fourths of a mile of Highway 99W. It is located along a major collector street, Villa Road. Villa is planned for bike lanes for convenient alternative connections to community services listed above, including education, employment, services, and recreation.

CHAPTER 15.305 ZONING USE TABLE

15.305.010 Classification of uses.

The zoning use table under NMC 15.305.020 identifies the land uses that are allowed in the various zoning districts. The specific land use categories are described in Chapter 15.303 NMC. The table identifies each use as one of the following:

- P** Permitted Use. The use is a permitted use within the zone. Note that the use still may require design review, building permits, or other approval in order to operate.
- C** Conditional Use. A conditional use permit is required for the use. See Chapter 15.225 NMC.
- S** Special Use. The use is subject to specific standards as identified within this code. The applicable section is included in the last column of the table.
- (#)** A note indicates specific limits on the use. These notes are listed at the bottom of the table.
- X** Prohibited Use. The use is specifically prohibited.

If none of the codes above are indicated, then the use is not permitted within the zone.

#	Use	R-1	R-3	Notes and Special <u>Use</u> Standards
200	RESIDENTIAL <u>USES</u>			
Def.	<u>Dwelling, single-family detached</u>	P(2)	P(3)	Subject to density limits of NMC <u>15.405.010</u> (B)
Def.	<u>Dwelling, single-family attached</u>	S(2)	S(3)	NMC <u>15.415.050</u> ; subject to density limits of NMC <u>15.405.010</u> (B)
Def.	<u>Manufactured home</u> on individual <u>lot</u>	S(2)	S(3)	NMC <u>15.445.050</u> – <u>15.445.070</u> ; subject to density limits of NMC <u>15.405.010</u> (B)
Def.	<u>Manufactured dwelling park</u>		S	NMC <u>15.445.075</u> – <u>15.445.160</u>
Def.	<u>Mobile home park</u>		S	NMC <u>15.445.075</u> – <u>15.445.160</u>
Def.	<u>Manufactured home subdivision</u>			NMC <u>15.445.075</u> – <u>15.445.160</u>
Def.	<u>Dwelling, two-family</u> (duplex)	P(2)	P	Subject to density limits of NMC <u>15.405.010</u> (B)

Def.	Dwelling, multifamily	C	P	Subject to density limits of NMC 15.405.010(B)
Def.	Dwelling, accessory	C	S	Chapter 15.445 NMC, Article V
Def.	Dwelling, mixed use			
Def.	Dwelling, caretaker			Limited to one per lot , and allowed whenever the use requires the on-site residence of such person .
Def.	Dormitory		P	
Def.	Home occupation (no more than one outside paid employee)	S	S(13)	NMC 15.415.060
Def.	Home occupation (more than one outside paid employee)	C	C(13)	NMC 15.415.060

Key:**P:** Permitted use**S:** Special use – Use requires a special use permit**C:** Conditional use – Requires a conditional use permit**X:** Prohibited use**(#):** See notes for limitations**Notes....**

- (2) Limited to one per lot as a permitted use. More than one per lot allowed only through a conditional use permit or planned unit development, subject to density limits of NMC 15.405.010(B).
- (3) Permitted on individual lots created prior to November 17, 1992. Homes on individual lots created on or after November 17, 1992, will only be permitted through the planned unit development process.
- (13) Permitted in existing dwelling units only. New dwelling units may not be created for this use unless the dwelling unit would otherwise be allowed.

Response: As previously described, the Applicant's goal is to build a multi-family apartment complex. This is a permitted use within the R-3 zone.

CHAPTER 15.405 LOT REQUIREMENTS

15.405.010 Lot area – Lot areas per dwelling unit.

- A. In the following districts, each lot or development site shall have an area as shown below except as otherwise permitted by this code:
 - 1. In the R-1 district, each lot or development site shall have a minimum area of 5,000 square feet or as may be established by a subdistrict. The average size of lots in a subdivision intended for single-family development shall not exceed 10,000 square feet.
 - 2. In the R-2, R-3, and RP districts, each lot or development site shall have a minimum area of 3,000 square feet or as may be established by a subdistrict. In the R-2 and R-P districts, the average size of lots in a subdivision intended for single-family development shall not exceed 5,000 square feet.

Response: The Martell Commons site contains 5.94 acres, well above the minimum lot size of 3,000 square feet of this section. This criterion is met.

B. Lot or Development Site Area per Dwelling Unit.

- 1. In the R-1 district, there shall be a minimum of 5,000 square feet per dwelling unit.
- 2. In the R-2, AR, and R-P districts, there shall be a minimum of 3,000 square feet of lot or development site area per dwelling unit. In the

R-2 and R-P districts, lots or development sites in excess of 15,000 square feet used for multiple single-family, duplex or multifamily dwellings shall be developed at a minimum of one dwelling per 5,000 square feet lot area.

3. In the R-3 district, there shall be a minimum of 1,500 square feet of lot or development site area per dwelling unit. Lots or development sites in excess of 15,000 square feet used for multiple single-family, duplex or multifamily dwellings shall be developed at a minimum of one dwelling per 2,500 square feet lot area.

Response: The site contains 5.94 acres, or 258,746 square feet. Assuming that the net site area after right-of-way dedications will be approximately 85% of the gross area, there would be an approximate net site area of 219,934 square feet. This would allow an approximate maximum density of 147 dwelling units and a minimum of 88 dwelling units. The actual site density will depend on final site design and will be limited by a balance with available parking but is expected to be close to 128 units as described in the Transportation Analysis.

- C. In calculating lot area for this section, lot area does not include land within public or private streets. In calculating lot area for maximum lot area/minimum density requirements, lot area does not include land within stream corridors, land reserved for public parks or open spaces, commons buildings, land for preservation of natural, scenic, or historic resources, land on slopes exceeding 15 percent or for avoidance of identified natural hazards, land in shared access easements, public walkways, or entirely used for utilities, land held in reserve in accordance with a future development plan, or land for uses not appurtenant to the residence.
- D. Lot size averaging is allowed for any subdivision. Some lots may be under the minimum lot size required in the zone where the subdivision is located, as long as the average size of all lots is at least the minimum lot size.

Response: Final net site area calculations will be provided for Site Design Review once a final design is proposed.

15.405.030 Lot dimensions and frontage.

- A. Width. Widths of lots shall conform to the standards of this code.
- B. Depth to Width Ratio. Each lot and parcel shall have an average depth between the front and rear lines of not more than two and one-half times the average width between the side lines. Depths of lots shall conform to the standards of this code. Development of lots under 15,000 square feet are exempt from the lot depth to width ratio requirement.
- C. Area. Lot sizes shall conform to standards set forth in this code. Lot area calculations shall not include area contained in public or private streets as defined by this code.
- D. Frontage.
 1. No lot or development site shall have less than the following lot frontage standards:
 - a. Each lot or development site shall have either frontage on a public street for a distance of at least 25 feet or have access to a public street through an easement that is at least 25 feet wide. No new private streets, as defined in NMC 15.05.030, shall be created to provide frontage or access.

- b. Each lot in an R-2 and R-3 zone shall have a minimum width of 30 feet at the front building line.
 - c. Each lot in an R-1, AI, or RP zone shall have a minimum width of 50 feet at the front building line.
 - d. Each lot in an AR zone shall have a minimum width of 45 feet at the front building line.
2. The above standards apply with the following exceptions:
- a. Legally created lots of record in existence prior to the effective date of the ordinance codified in this code.
 - b. Lots or development sites which, as a process of their creation, were approved with sub-standard widths in accordance with provisions of this code.
 - c. Existing private streets may not be used for new dwelling units, except private streets that were created prior to March 1, 1999, including paving to fire access roads standards and installation of necessary utilities, and private streets allowed in the airport residential and airport industrial districts.

Response: The Martell Commons site has a width of approximately 384 feet which exceeds the minimum of 30 feet for the proposed R-3 zone. This criterion is met.

15.405.040 Lot coverage and parking coverage requirements.

- A. Purpose.** The lot coverage and parking coverage requirements below are intended to:
- 1. Limit the amount of impervious surface and storm drain runoff on residential lots.
 - 2. Provide open space and recreational space on the same lot for occupants of that lot.
 - 3. Limit the bulk of residential development to that appropriate in the applicable zone.
- B. Residential uses in residential zones shall meet the following maximum lot coverage and parking coverage standards. See the definitions in NMC 15.05.030 and Appendix A, Figure 4.**
- 1. **Maximum Lot Coverage.**
 - a. R-1: 30 percent, or 40 percent if all structures on the lot are one-story.
 - b. R-2 and RP: 50 percent.
 - c. AR and R-3: 50 percent.
 - 2. **Maximum Parking Coverage.** R-1, R-2, R-3, and RP: 30 percent.
 - 3. **Combined Maximum Lot and Parking Coverage.**
 - a. R-1, R-2 and RP: 60 percent.
 - b. R-3: 70 percent.

Response: Final lot coverage and parking coverage calculations will be provided for Site Design Review once a final design is proposed.

NEWBERG COMPREHENSIVE PLAN

II. GOALS AND POLICIES

The following goals and policies are important elements in the Comprehensive Plan. These statements indicate the intent of the Plan and establish directions for future planning decisions and activities.

A. CITIZEN INVOLVEMENT

GOAL: To maintain a Citizen Involvement Program that offers citizens the opportunity for involvement in all phases of the planning process.

Response: A voluntary neighborhood meeting was held on December 16, 2014 at the Newberg Christian Church. Notice was sent to all property owners within 500 feet of the property. The meeting was very well attended. As noted previously, the primary concerns appeared to be transportation impacts, number of dwelling units, sufficient parking, and architectural design. The Applicant has already modified the conceptual plan to reduce the proposed number of units, increase the parking ratio, reduce the number of buildings along the western boundary, and change the color palette of the structures to earth tones. The public will also have the opportunity to participate in the Planning Commission hearing as well as the City Council hearing. Public notice will be provided for each of those hearings as well as a notice of decision for all who participate.

I. HOUSING

GOAL: To provide for diversity in the type, density and location of housing within the City to ensure there is an adequate supply of affordable housing units to meet the needs of City residents of various income levels.

POLICIES:

2. Location Policies

- a. Medium and high density areas should be located for immediate access to collector streets or minor arterials and should not cause traffic to move through low density areas. High density areas should be easily accessible to arterial streets. They should also be located near commercial services and public open spaces.

Response: As noted before, an R-3 designation is appropriate in this location due to several factors. The size of the property allows for thoughtful site planning, with two story structures along the western boundary, and significant separation from the western property line for buffering. The location is within walking and biking distance to George Fox University. Joan Austin Elementary school is within a half mile, A-Dec is within three fourths of a mile, and within a quarter mile of the Chehalem Aquatic & Fitness Center, and within three fourths of a mile of Highway 99W. It is located along a major collector street, Villa Road. Villa is planned for bike lanes for convenient alternative connections to community services listed above, including education, employment, services, and recreation.

3. Mix Policies

AFFORDABLE HOUSING means a dwelling unit that provides housing for a family or individual(s) with a household income less than the median household income for the Newberg area, such that a household pays no more than 30 percent of its annual income on housing (rent/mortgage, utilities, property taxes). Affordable housing may include a care home for low-income individuals.

Affordability can be assured through deed-restriction or other recorded documents that specify qualifying income of buyers or renters, and limiting sales price, rent levels and appreciation. Affordable housing may also include small, market-rate dwelling units (e.g., studios, apartments and accessory dwelling units).

Response: Martell Commons will not be an Affordable Housing project as defined by this Plan policy, but it will provide an affordable housing option for many residents of Newberg located close to employment, services, and educational uses. The proposed units will be a combination of one, two, and three bedroom units with efficient internal layouts that allows for a lower overall rental rate. With the close proximity of George Fox University, students are an identified tenant profile that is sensitive to rental rates.

- b. Low and moderate income housing should not be concentrated within particular areas of the City.

Response: This area of Newberg does not contain a large concentration of low and moderate income housing. There is a new Affordable Housing project called Deskin Commons to the west on Meridian Street just north of the railroad tracks. Most other R-3/apartment lands (moderate income housing) are located south of the railroad tracks. Approval of this amendment would provide family wage housing opportunities close to the A-Dec employment area as well as near George Fox University.

- k. The City shall encourage an adequate supply of rental housing dispersed throughout the City to meet the needs of renters.

Response: Again, this area of Newberg does not contain a large concentration of low and moderate income housing. There is a new Affordable Housing project called Deskin Commons to the west on Meridian Street just north of the railroad tracks. Most other R-3/apartment lands are located south of the railroad tracks. Approval of this amendment would provide family wage housing opportunities close to the A-Dec employment area as well as near George Fox University.

- o. The City has adopted a comprehensive approach to meeting local housing needs that balances density, design, and flexibility in code standards and procedures. The City shall use development incentives such as density bonuses, flexible development standards, and streamlined review procedures to stimulate or require the production and preservation of affordable housing. (replaces old policy “o”)

Response: No density bonuses are requested. The proposed Plan Amendment and Zone Change will allow for development of an apartment complex. The proposed density is within the typical range for an apartment complex and matches the density of the R-3 zone.

- u. The City shall build understanding and support for affordable housing through educational forums with residents and employers, pre-application consultations with developers, and through local housing studies.
- v. The City shall work with local affordable housing providers in developing an overall strategy for meeting Newberg’s housing needs.
- w. City resources shall be directed toward assisting public and private entities in producing and preserving affordable housing throughout the community.

- z. To the extent possible, the City shall zone residential housing near employment centers.

Response: The Comprehensive Plan contains many goals and policies in support of affordable housing within Newberg. As noted above, this project will not meet the Plan's definition of affordable housing with specific rent and income limits, it will provide an affordable housing opportunity for the residents of Newberg. This property will also improve the diversity of housing opportunities near the A-dec employment district.

K. TRANSPORTATION

GOAL 3: Promote reliance on multiple modes of transportation and reduce reliance on the automobile.

POLICIES:

- b. Modifications should be made to the City's land use plan and development ordinances that will decrease trip length and encourage non-auto oriented development.
- 2) The City shall encourage higher density development in residential areas near transit corridors, commercial areas and employment centers, including the downtown.

Response: This proposed R-3 site is within walking and biking distance to George Fox University. Joan Austin Elementary school is within a half mile, A-Dec is within three fourths of a mile, and within a quarter mile of the Chehalem Aquatic & Fitness Center, and within three fourths of a mile of Highway 99W. It is located along a major collector street, Villa Road. Villa is planned for bike lanes for convenient alternative connections to community services listed above, including education, employment, services, and recreation.

GOAL 4: Minimize the impact of regional traffic on the local transportation system.

POLICIES:

- k. For the purposes of compliance with the Transportation Planning Rule, OAR 660-12-0060 and in order to support the goal exception that Yamhill County took to advance construction of the Bypass, the City of Newberg acknowledges that reliance upon the Bypass as a planned improvement to support comprehensive plan amendments or zone changes is premature.

In accordance with OAR 660-012-0060, the Bypass will be considered a planned improvement that is reasonably likely to be constructed during the 20-year planning horizon when the OTP includes all or a specific phase of the Bypass in the construction section of the Statewide Transportation Improvement Program (STIP), or when ODOT provides a written statement that the improvements are reasonably likely to be provided by the end of the planning period. ODOT expects to provide such a letter upon receiving a record of decision for the design level EIS if it results in a record of decision authorizing a full Bypass or a specific Bypass phase that can be funded within the 20-year planning horizon. During the period before the Bypass can be considered a planned improvement, the City of Newberg will work with ODOT to pursue interim measures to comply with OAR 660-12-0060. This may include adopting alternative mobility standards for Oregon 99W and Oregon 219. For purposes of the Newberg TSP, alternative mobility standards are consistent with the planned function of Oregon 99W through Newberg as a lower speed local arterial intended to provide access to businesses and

residences and a more pedestrian friendly environment. Alternative mobility standards may continue to be necessary on Oregon 99W and Oregon 219 until the full Bypass can be completed.

Response: A full Transportation Impact Analysis is provided in Exhibit F; this report specifically addresses the Transportation Planning Rule OAR 660-12-0060. The proposed zone change does not require or result in any changes to the functional classification of any transportation facility in the vicinity of the site or to the standards that implement the functional classification system. The Villa Road/Fulton Street and Villa Road/OR 99W intersections are already forecast to miss performance standards under 2035 background conditions, even without the proposed rezone. Mitigation for the Villa/Fulton intersection include installation of an all-way stop control. This improvement will enhance intersection operations from LOS “F” to LOS “E” during the 2035 weekday p.m. peak hour. This represents an improvement to level of service than under 2035 background traffic conditions.

Action 1F.5 of the Oregon Highway Plan states that small increases in traffic, up to 400 ADT, do not cause “further degradation” of state highway facilities. Although the proposed zone change could generate an additional 795 daily trips over current zoning potential, less than 400 of these trips are anticipated to reach the Villa Road/OR 99W intersection.

Finally, Action 1F.5 allows for capacity increasing improvements that include system connectivity improvements (for vehicles, bicycles and pedestrians) and multi-modal opportunities to reduce vehicle demand. The pedestrian and bicycle improvements proposed with the development along Villa Road and the completion of a continuous pedestrian route from the rezone site to George Fox University will sufficiently mitigate the small increase in v/c ratio forecast the Villa Road/OR 99W intersection.

GOAL 5: Maximize pedestrian, bicycle and other non-motorized travel throughout the City.

POLICIES:

- a. The City shall provide safe, convenient and well-maintained bicycle and pedestrian transportation systems that connect neighborhoods with identified community destinations, such as schools, parks, neighborhood commercial centers, and employment centers.
- b. Bicycle parking facilities shall be required for all new and improved commercial, institutional, office, industrial, and multi-family development.
- c. All new and improved commercial, office, institutional, and multi-family development shall be conveniently and directly accessible from the public right-of-way by bicycle and on foot.
- d. Public sidewalks shall be provided along all public street frontages. Pedestrian traffic shall be separated from automobile traffic whenever possible.
 - (1) Sidewalks should be provided whenever there is development of abutting properties.
 - (2) Sidewalks should be constructed when any new road is constructed

(3) When existing roads are widened or improved, sidewalks should be provided.

- h. On-street bike lanes or parallel bikeways will be provided on all designated major collector and arterial roadways, and on certain neighborhood collectors if warranted from a bicycle system connectivity standpoint.

Response: A significant appeal of this site for multi-family development is the location along Villa Road. Villa is planned for bike lanes to provide for convenient alternative connections to community services including education, employment, services, and recreation. Development of the site will require frontage improvements along Villa to improve the bicycle and pedestrian corridor. On-site bicycle parking will also be required as well as a complete interior sidewalk system that connects to both Villa Road and Park Lane. It is an important business investment to complete the pedestrian and bicycle connection to the George Fox campus to attract student tenants.

GOAL 7: Minimize the capital improvement and community costs to implement the transportation plan.

POLICIES:

- a. The Transportation System Plan shall identify short and long term improvements to the collector/arterial street system, the public transit system, the pedestrian/bicycle system and the air, rail, water, and pipeline systems.
- b. The list of improvement projects in the Transportation System Plan shall guide development of the city's capital improvement plan for transportation projects.

Response: The Villa Road corridor is on the City's Capital Improvement Plan to adjust the engineering design to improve the vertical alignment and complete the multi-modal improvements. Upon development of Martell Commons, the project will be required to make frontage improvements to both Villa Road and Park Lane to match City standards. In addition, the project is responsible for System Development Charges (SDC's) based on the number of proposed dwelling units. The Applicant has been in discussions with the City Engineer about expanding the physical improvements along Villa Road in exchange for SDC credits. This is a best case scenario of maximizing the available financing for immediate improvements directly associated with the project. This coordination will continue as the project moves through the public review process.

- i. New development and existing development undergoing expansion or modification shall be designed to accommodate planned long-term transportation improvement projects in the vicinity of the development.

Response: As described below, development of the Martell Commons site will require frontage improvements to Villa Road and Park Lane to match City standards.

GOAL 8: Maintain and enhance the City's image, character and quality of life.

POLICIES:

- d. The City will encourage development that protects the integrity of existing neighborhoods, commercial, and industrial areas using the following design techniques.
 - 1) New development and new transportation facilities shall be designed to meet the street classification, design, and access standards identified in the Transportation System Plan.

Response: As described below, Villa Road is classified as a Major Collector. A half street right-of-way dedication of 30 feet will be required with development, as well as a half street widening of 34 feet to curb with a five foot bike lane, a six foot planter strip, and a six foot detached sidewalk. No on-street parking is permitted.

GOAL 9: Create effective circulation and access for the local transportation system.

POLICIES:

- c. Develop a system of roads that provide for efficient movement of traffic, considering the general design guidelines below:
 - 4) Major Collectors. Major collectors serve multi-neighborhood areas. They are intended to channel traffic from local streets and/or minor collectors to the arterial street system. A major collector can also provide access to abutting properties.
 - 60 to 80 feet of right-of-way with ten foot public utility easements.
 - 34 to 46 feet curb to curb cross section.
 - Five-foot bike lanes on both sides of the street.
 - On-street parking is generally not allowed except in the downtown and other areas where special circumstances warrant. No parking will be allowed within 20 feet of curb return.
 - A minimum six-foot planter strip and six-foot sidewalk on both sides of the street.

Response: Villa Road is classified as a Major Collector. A half street right-of-way dedication of 30 feet will be required with development, as well as a half street widening of 34 feet to curb with a five foot bike lane, a six foot planter strip, and a six foot detached sidewalk. No on-street parking is permitted.

- 6) Local Streets. Local streets provide direct access to adjoining properties and connect to collector streets. The system design criteria for local streets include:
 - 54-65 feet of right-of-way with 10 foot public utility easements.
 - For standard residential streets, standard 32 feet curb to curb with parking on both sides.
 - A minimum four and one half foot wide planting strip and five foot wide sidewalk on both sides of the street.
 - Where approved, limited residential streets may have narrower dimensions

Response: Park Lane is classified as a Local Street, but the partial improvements do not meet City standards. A right-of-way dedication of 30 feet will be required with development, as well as a street widening for a total width of 40 feet to allow for an additional northbound left turn lane, a five foot planter strip, and a five foot detached sidewalk. On-street parking will be permitted on both sides.

L. PUBLIC FACILITIES AND SERVICES

GOAL: To plan and develop a timely, orderly and efficient arrangement of public facilities and services to serve as a framework for urban development.

POLICIES:

1. All Facilities & Services Policies

- a. The provision of public facilities and services shall be used as tools to implement the land use plan and encourage an orderly and efficient development pattern.
- b. The extension of publicly-owned facilities and services into currently undeveloped areas shall occur only in accordance with the Public Facilities and Service Plan.
- c. New public facilities and services shall be designed at levels consistent with planned densities and designated land uses for the area.
- d. Services shall be planned to meet anticipated community needs.
- e. Owners of properties which are located on unimproved streets should be encouraged to develop their streets to City standards.
- f. Maximum efficiency for existing urban facilities and services will be encouraged through infill of vacant City land.
- h. New residential areas shall have: paved streets, curbs, pedestrian ways, water, sewer, storm drainage, street lights and underground utilities.

2. Sewers and Water Policies

- a. All existing development within the City limits will connect to public sewer and water systems as soon as they become available.
- b. Water systems within the planning area will be designed to provide an adequate peak flow for fire protection.
- c. Developments with urban densities should be encouraged to locate within the area which can be serviced by Newberg's present sanitary sewer system.

Response: An analysis of the infrastructure capacity for this proposed Comprehensive Plan Amendment is included in Exhibit D. The Newberg Water Master Plan shows that all property under an elevation of 300 feet can be served by the existing reservoir system. This property is at an elevation of 198 at the highest point, and can be served by public water. Eight inch waterlines are existing adjacent to the property within Villa Road and in Park Lane.

Storm drainage can be treated on site in a water quality facility and released into Hess Creek which abuts the property along the southern boundary.

Sanitary sewer is also immediately adjacent to the Martell site; there is an existing eight inch line along the southern boundary of the property and there is a second eight inch line in Park Lane. The Newberg Sanitary Sewer Master Plan shows that this area is over capacity. The Hess Creek trunk line has high levels of infiltration that have created capacity concerns. The City is currently working on an update of the infiltration rates in this corridor; the study is expected to be completed in April. This study may show that the infiltration rates are different than the adopted master plan, which will affect how much capacity is available for the Martell Commons site. If the study shows that there is still insufficient capacity, the Site Plan Review application may be conditioned to upsize existing downstream sanitary sewer pipes, or seal existing manholes and pipes to reduce infiltration rates. This will be studied in detail during Site Plan review after the City's capacity update is completed. No development will be approved without sufficient capacity and improvements can be reasonably conditioned on land use decisions.

Development of infill sites supports the policy of efficient use of existing infrastructure. The proposed Plan Amendment maximizes the efficiency of the public investment in water and sanitary sewer systems.

M. ENERGY

GOAL: To conserve energy through efficient land use patterns and energy-related policies and ordinances.

POLICIES:

1. Planning Policies

- a. The City will encourage energy-efficient development patterns. Such patterns shall include the mixture of compatible land uses and a compactness of urban development.

Response: As noted above, Development of infill sites supports the policy of efficient use of existing infrastructure. The proposed Plan Amendment maximizes the efficiency of the public investment in water and sanitary sewer systems.

N. URBANIZATION

GOALS:

- 1. To provide for the orderly and efficient transition from rural to urban land uses.
- 2. To maintain Newberg's identity as a community which is separate from the Portland Metropolitan area.
- 3. To create a quality living environment through a balanced growth of urban and cultural activities.

POLICIES:

3. General Policies

- a. In new development areas all utility lines shall be placed underground. In existing areas an effort will be made to locate power, telephone, cable television and other utility cables underground over a period of time.

Response: All proposed infrastructure will be placed underground. Existing overhead wires along Villa Road will be undergrounded with development of the site.

III. PLAN CLASSIFICATIONS

For the purpose of evaluating and eventually implementing the proposed Comprehensive Plan, descriptions of land use classifications are essential. Explanations of the map designations are as follows:

2. Residential Land Use

Residential land is divided into three categories. Density rather than housing type is generally the most important development criteria used to classify residential areas. Manufactured dwelling parks, mobile home parks and manufactured home subdivisions are permitted outright in the medium density residential zone. Manufactured homes on individual single family lots are permitted.

The following is a summary of the three residential land use categories:

a. Low Density Residential (LDR)

The objective of this designation is to provide a wide range of housing types and styles, while allowing for an overall density of up to 4.4 units per acre.

Typical housing types will include single-family attached and detached housing. Clustered housing areas within Planned Unit Developments or condominiums must include adequate open areas to maintain the low overall density of this classification.

Services shall include improved streets, underground utilities (except electrical transmission lines), street lighting, sidewalks, and in some cases, bikeways.

c. High Density Residential (HDR)

The objective of this designation is to provide multi-family housing of different types while maintaining an overall density of up to 21.8 units to the acre.

Typical housing types include apartments, townhouses, and a variety of cluster developments. Density may vary depending on lot sizes, off-street parking and other site constraints.

Services shall include improved streets, underground utilities (except electric transmission lines), street lighting, sidewalks, and in some cases, bikeways.

Response: As stated previously, if this application is approved, the Applicant intends to submit a Site Plan Review application for an apartment complex as sketched out in the Concept Plan in Exhibit A. As described in this section, final density will depend on site constraints and parking, but will be in line with adopted density controls. Full urban infrastructure will be required for development, including underground utilities, lighting, and street improvements as outlined in Exhibit D.

IV POPULATION GROWTH

A. HISTORIC POPULATION

Newberg grew over 500 percent from 1960 to 2010. This population growth was due to a variety of factors: regional population growth, expansion of industry and business in the area, proximity to other employment centers, and the high quality of life in the area.

Table III-1. Newberg City Population – 1960-2009

Year	Population
1960	4,204
1970	6,507
1980	10,394
1990	13,086
2000	18,064
2010	22,068

Sources: U.S. Census

The Portland State University Population Research Center estimated Newberg's population as of July 1, 2010 to be 22,110. As of July 1, 2011, the Urban Growth Boundary has an estimated population of 22,730.

B. POPULATION PROJECTIONS

Population projections are the basis of comprehensive land use planning. To maintain a high quality of living, the community must plan for its future population. Population growth will require sufficient land and services.

Many of the same factors that have contributed to Newberg's historic population growth will contribute to its future growth: employment opportunities both in Newberg and nearby, high quality of life, and regional population growth. Newberg is already experiencing a great amount of population growth due to the lack of buildable land within the Portland area.

Portland State University's Population Research Center developed a future population forecast for the Newberg Urban Area. This forecast was adopted by Yamhill County as the coordinated population forecast required by state law.

This forecast is shown in Table III-2.

Table III-2. Future Population Forecast – Newberg Urban Area

Year	Population Forecast
2015	24,663
2020	25,250
2025	32,213
2030	35,408
2032	36,610
2035	38,490

Source: Population Research Center, Portland State University, Population Forecasts for Yamhill County, its Cities and Unincorporated Area, 2011-2035, 2012.

This population forecast was used to determine future land needs within the Newberg urban area.

V. LAND NEED AND SUPPLY

A. BUILDABLE LAND INVENTORY

The Newberg Planning Division prepared an inventory of buildable land in the Newberg UGB in 2004. The buildable land inventory includes vacant and redevelopable land in the existing (2004) UGB. This land base is the starting point for determining how much future growth can be accommodated inside the existing UGB and the size of the unmet land need that must be accommodated through zone changes or UGB expansion. Physical constraints such as steep slopes (greater than 25%) and stream setbacks have been deducted from the parcel size, so the buildable land inventory is based

on buildable acres, not total acres. In addition, lands that are under development are not considered buildable. This inventory also does not include land located within the future right-of-way of the proposed Newberg-Dundee Bypass. In November 2004, the Newberg UGB had approximately 778 acres of buildable land inside the UGB (Table IV-1).

Table IV-1. Newberg UGB Buildable Land Inventory (Nov. 2004)

Plan Designation	Buildable Land
Low Density Residential	359 ac.
Medium Density Residential	142 ac.
High Density Residential	13 ac.
Commercial	105 ac.
Industrial	159 ac.
TOTAL	778 ac.

Source: Ad Hoc Committee on Newberg's Future (2005), Report to the City Council

In addition, there is approximately 467 acres of buildable land within the Newberg Urban Reserve Area. This area does not have any comprehensive plan district designations assigned.

B. HOUSING AND RESIDENTIAL LAND NEEDS

1. Housing Needs.

In order to determine the amount of residential land needed, Newberg used Johnson Gardner to create a Housing Needs Analysis. That analysis examined the demographic, housing cost, and household income data for the City of Newberg to determine the need for specific housing types: single-family, multi-family, and manufactured homes. Two adjustments were made to the Johnson Gardner residential land need analysis:

- Development projects that were in the land use approval process during the preparation of the needs analysis were subtracted from the overall 2005-2025 need.
- 49 dwelling units displaced by the proposed Newberg-Dundee Bypass were added to the housing need.

The result is the future housing needs projections shown in Table IV-2.

Table IV-2. Future Housing Need by Housing Type (number of dwelling units)

	Single Family		Multi-Family		Manufactured		
	Detached	Attached	Medium Density	High Density	Parks	Subdivision	Total
	50%	7%	15%	23%	2%	2%	100%
2005 to 2025	3,377	492	1,022	1,533	140	140	6,704
2026 to 2040	3,234	471	978	1,467	135	135	6,420
Total	6,611	963	2,000	3,000	275	275	13,124

The residential land need is determined by assigning each housing type to a comprehensive plan designation – low density residential (LDR), medium density residential (MDR), and high density residential (HDR) (Table IV-3).

Table IV-3. Housing Types by Plan and Zone Category Single Family

Detached	Attached	Multi-Family		Manufactured	
		Medium Density	High Density	Park	Subdivision
LDR	MDR	MDR	HDR	MDR	LDR
R-1	R-2	R-2	R-3	R-2	R 1

Source: Johnson Gardner

Table IV-4 presents the 2025 and 2040 housing unit need by comprehensive plan designation.

Table IV-4. Adjusted Housing Unit Need

Plan Designation	Units Needed 2005-2025	Units Needed 2026-2040
LDR	2,691	3,234
MDR	1,556	1,719
HDR	1,473	1,467
TOTAL	5,720	6,420

2. Planned Residential Densities

Table IV-5. Planned Residential Densities

		Recent Trends	Planned Density
Single Family	Units/Acre	3.6	4.4
	Average Lot Size	9,800 sf	8,000 sf
Med Density Multi-Family	Units/ Acre	5.8	9
	Type	Single Family	Townhouses and
High Density Multi-Family	Units/Acre	15.4	16.5
	Type	2 story apts with surface parking	2-3 story apts with surface
Average	Units/Acre	6.8	8.3

3. Residential Land Need

The total amount of residential land needed for housing was calculated by dividing the dwelling units needed by the planned residential densities. The total buildable residential land needs through 2025 2030 and 2040 are shown in Table IV-6.

Table IV-6. Buildable Residential Land Need

Plan Designation	Density (du/ac.)	Dwelling Units Needed (2005-2025)	Buildable Acres Needed (2005-2025)	Dwelling Units Needed (2026-2040)	Buildable Acres Needed (2026-2040)
LDR	4.4	2,691	612	3,234	735
MDR	9	1,556	173	1,719	191
HDR	16.5	1,473	89	1,367	83
Total		5,720	874	6,320	1,009

4. Residential Land Need and Supply

Comparing the residential land need the current supply, the City has a deficit of residential land to meet needs through 2025 in all residential categories. It also has a deficit of land within the URA to meet the

needs from 2026-2040. Table IV-7 compares the amount of residential land with the available supply.

Table IV-7: Buildable Residential Land Needs vs. Supply

Plan Designation	Buildable Acres Needed 2005-2025	Buildable Acres in UGB (2004)	Surplus (Deficit) for 2005-2025	Buildable Acres Needed 2026-2040
LDR	612	359	(253)	735
MDR	173	142	(31)	191
HDR	89	13	(76)	83
Total	874	514	(380)	1009

F. SUMMARY OF LAND NEEDS

Table IV-14 summarizes the future land needs for the Newberg urban area.

Table IV-14. Future Land Needs and Supply, Newberg Urban Area

Plan Designation	Buildable Acres Needed 2005-2025	Buildable Acres in UGB (2004)	Surplus (Deficit) for 2005-2025	Buildable Acres Needed 2026-2040	Buildable Acres In URA (2004)	Surplus (Deficit) 2026-2040
LDR	612	359	(253)	735		
MDR	173	142	(31)	191		
HDR	89	13	(76)	83		
COM	111	105	(6)	109		
IND	50	99	49	37		
IND (Large Site)	100	60	(40)	120		
P	85	0	(85)	115		
I, PQ, or other Inst.	164	0	(164)	233		
Total	1,384	778	(606)	1,623	467	(1,156)

Response: The housing analysis in the adopted Comprehensive Plan dates from 2004. In 2009, Newberg proposed an update to the Housing Element of the Comprehensive Plan parallel with an effort to add industrial land on the south end of town for future employment growth. That effort has been stalled by appeal with LUBA and now enters into an unprecedented mediation process. In October 2012, the Yamhill County Planning Commission adopted a new coordinated population forecast for the Newberg UGB through 2035 based on 2010 census data as well as a report titled "Population Forecasts for Yamhill County, its Cities and Unincorporated Areas 2011-2035" prepared by Portland State University Population Research Center.

Cogan Owens Greene prepared a Housing Needs Analysis (Exhibit G) based on the 2009 inventory updated with current GIS data provided by City Staff, the projections from the Portland State Report, and refined for the remand findings from LUBA. This supplemental report is included in Exhibit G. It confirms that there will be a shortage of land available in 2030 for LDR, MDR, and HDR lands:

Plan Designation	Buildable Acres Needed	Buildable Acres in UGB	(Deficit)	Percentage of Available Capacity
LDR	406	369	(37)	91%
MDR	179	92	(87)	51%
HDR	62	7	(55)	11%
Total	647	468	(179)	72%

While all lands show a shortage, the greatest percentage shortage is HDR with only seven buildable acres within City limits, and the lowest shortage is LDR. It should also be noted that the most efficient use of scarce residential land is HDR. The proposed Comprehensive Plan Amendment and Zone Change would help preserve as much residential opportunity as possible and improve the diversity of housing opportunities. While the City works diligently to resolve the UGB stalemate, it is important to understand the significant shortage of HDR lands across the City. When the UGB is expanded, there is still a need to disperse the available HDR lands throughout the City where there is convenient access to employment and services. Martell Commons is an ideal geographic location to provide diversity for the housing needs of Newberg, consistent with other goals and policies of the Comprehensive Plan addressed above.

IV. CONCLUSION

The listed findings and accompanying documentation demonstrates that the proposal is consistent with the applicable provisions of the City of Newberg Development Code and Comprehensive Plan. The applicant respectfully requests approval of the proposed Martell Commons Comprehensive Plan Amendment and Zone Change Application.



EXHIBIT A: CONCEPTUAL SITE PLAN

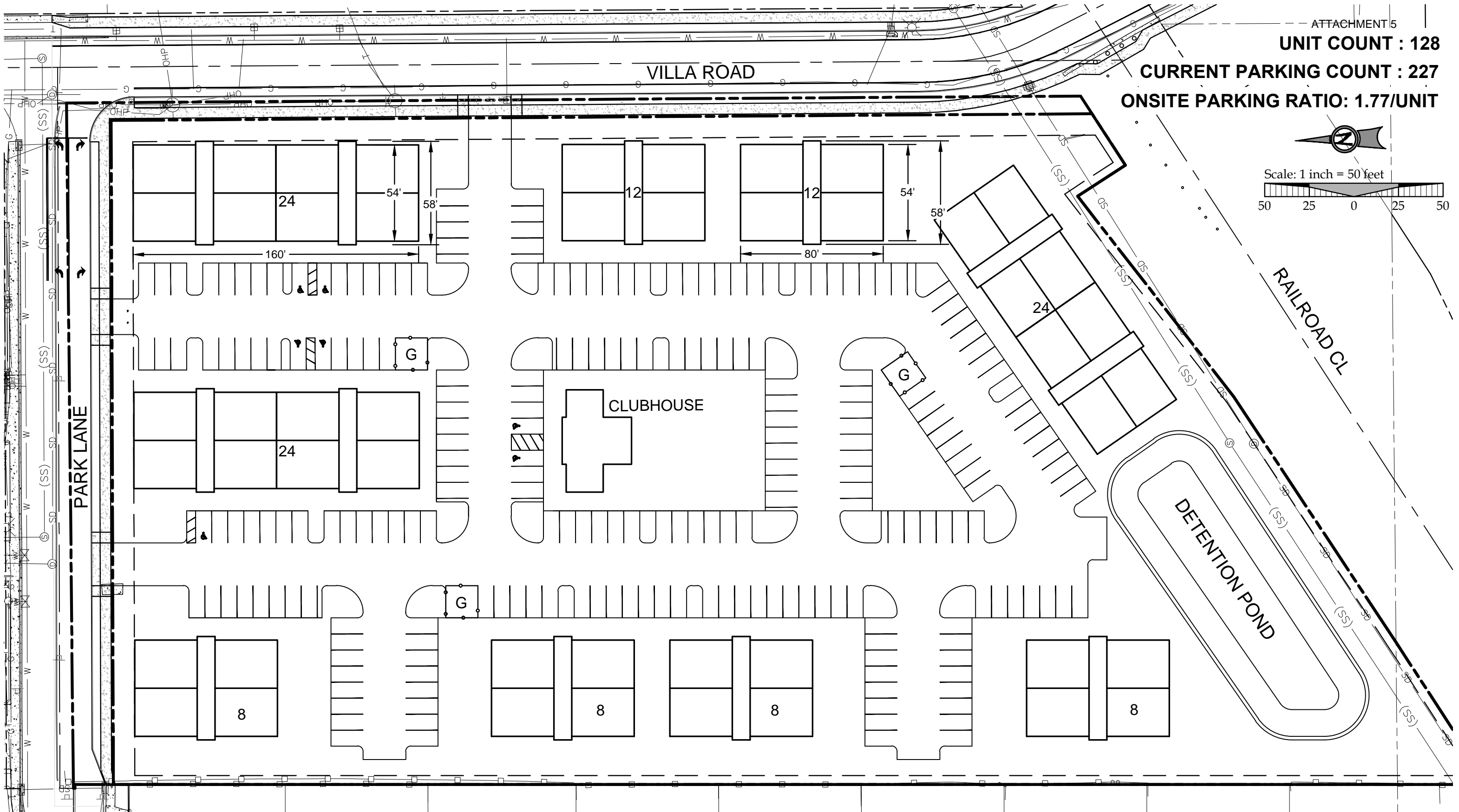
UNIT COUNT : 128

CURRENT PARKING COUNT : 227

ONSITE PARKING RATIO: 1.77/UNIT



Scale: 1 inch = 50 feet



3J CONSULTING, INC



128-UNIT SITE PLAN MARTELL COMMONS

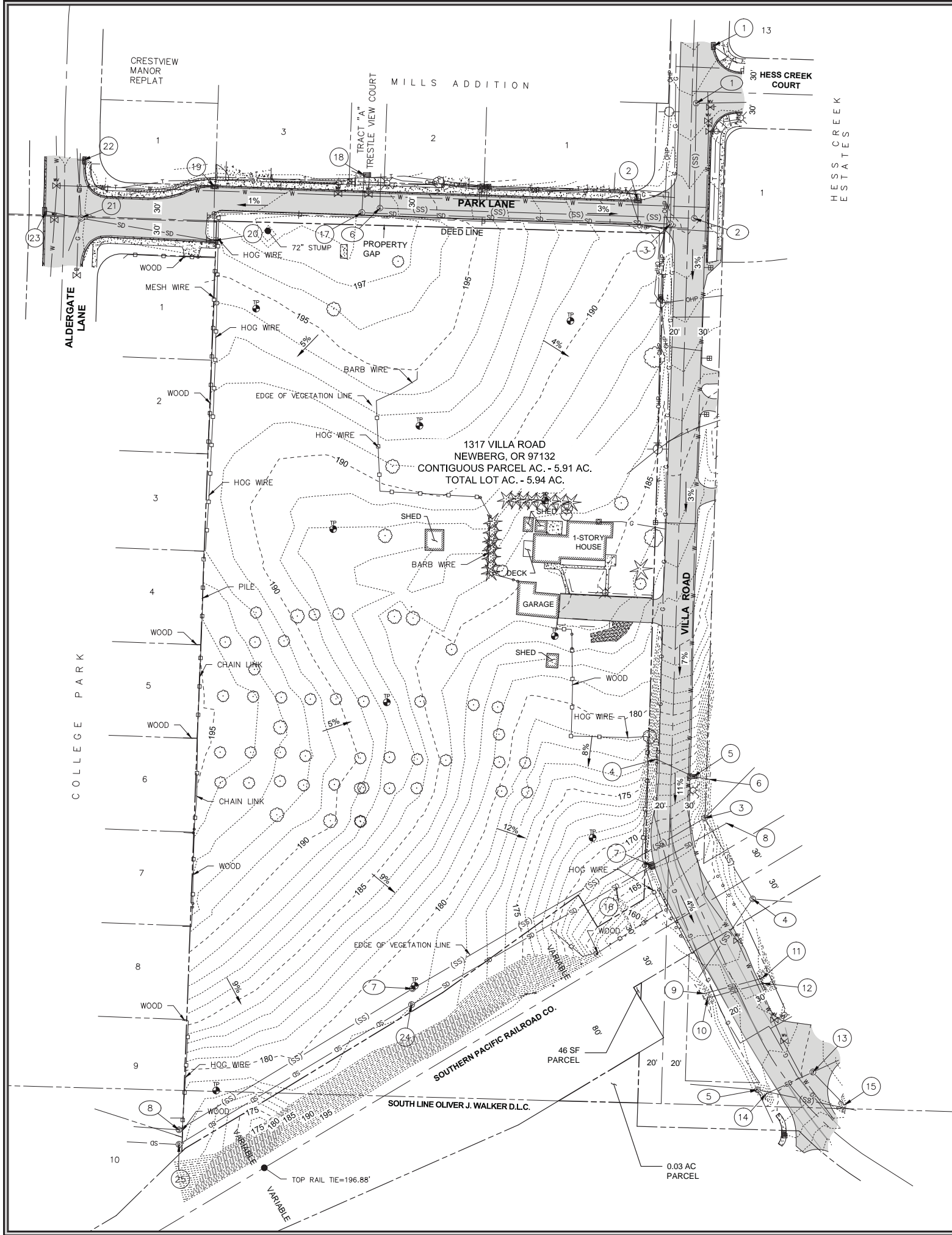
Exhibit Use

OPTION 9

Date: 2015-01-27

By:CKW

NOT FOR CONSTRUCTION



- STORM SEWER DATA:
- 1 STORM SEWER CATCH BASIN
RIM=193.41'
IE 12" CONC (SE)=190.21'
 - 2 STORM SEWER CATCH BASIN
RIM=189.01'
IE 8" (S)=
 - 3 STORM SEWER MANHOLE
RIM=189.77'
IE 4" PVC (NW)=187.00' +/-
IE 12" CONC (N)=187.07'
*IE 12" CONC (S)=186.3' +/-
*IE 12" CONC (W)=186.2' +/-
*RECESSED/FULL OF SILT AND DEBRIS
 - 4 IE 12" CONC (SE)=170.99'
 - 5 STORM SEWER CATCH BASIN
RIM=167.63'
IE 12" CONC (NW)=165.38'
IE 12" PVC (E)=164.23'
 - 6 IE 12" PVC (W)=159.17'
 - 7 STORM SEWER CATCH BASIN
RIM=161.90'
IE 21" CMP (SW)=159.55'
IE 21" CMP (NE)=159.45'
 - 8 IE 21" CMP (SW)=155.89'
 - 9 IE 30" CMP (E)=152.74'
 - 10 IE 60" CMP (E)=151.34'
 - 11 IE 30" CMP (W)=152.50'
 - 12 IE 60" CMP (W)=151.42'
 - 13 STORM SEWER MANHOLE
RIM=159.82'
IE 36" CONC (SE)=155.32'
IE 36" CMP (SW)=155.12'
 - 14 IE 36" CMP (NE)=153.84'
 - 15 IE 36" CONC (NW)=155.31'
 - 16 IE 4" FRENCH DRAIN X2 (N)=162.54'

- 17 STORM SEWER MANHOLE
RIM=196.74'
IE 12" PVC (N)=192.86'
IE 12" PVC (E)=192.68'
- 18 STORM SEWER CATCH BASIN
RIM=196.68'
IE 8" CONC (S)=194.91'
- 19 STORM SEWER CATCH BASIN
RIM=195.03'
IE 8" CONC (S)=193.87'
- 20 STORM SEWER CATCH BASIN
RIM=195.14'
IE 8" CONC (N)=193.54'
IE 12" CONC (W)=193.47'
- 21 STORM SEWER MANHOLE
RIM=196.01'
IE 12" CONC (E)=192.73'
IE 12" CONC (W)=191.95'
IE 24" CMP (N)=191.73'
IE 24" CMP (SW)=191.73'
- 22 STORM SEWER CATCH BASIN
RIM=196.55'
IE 12" CONC (W)=193.24'
- 23 STORM SEWER CATCH BASIN
RIM=196.01'
IE 12" CONC (E)=192.29'
- 24 STORM SEWER MANHOLE
RIM=178.32'
IE 24" CMP (SW)=170.72'
IE 24" CMP (NE)=170.57'
- 25 STORM SEWER MANHOLE
RIM=179.51'
IE 24" CMP (SW)=174.61'
IE 24" CMP (NE)=174.51'

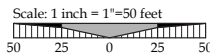
NOTES

1. THE ELEVATION DATUM FOR THIS SURVEY IS NGVD29
ELEVATION=190.35'
HDJ CONTROL POINT NUMBER: 1
THE BENCHMARK IS A MAG NAIL WITH WASHER LOCATED AT THE NORTHWEST CORNER OF THE INTERSECTION OF PARK LANE AND VILLA ROAD, APPROXIMATELY 4.6 FEET NORTHEAST OF THE END OF A CONCRETE CURB RUN AND APPROXIMATELY 29.3 FEET NORTHEAST OF THE CENTER OF A CATCH BASIN. *BENCHMARK ELEVATIONS WERE TRANSFERRED TO SITE CONTROL POINTS THROUGH DIFFERENTIAL LEVELS (CITY OF NEWBERG BENCHMARK #66- SOUTHEAST CORNER OF VILLA ROAD AND HESS CREEK COURT INTERSECTION, ELEVATION=192.22').
2. THE HORIZONTAL DATUM FOR THIS SURVEY IS NAD 83(2011), STATE PLANE OREGON NORTH (ZONE 3601)
3. THE UNDERGROUND UTILITIES SHOWN HEREON WERE BASED ON UTILITY LOCATE PAINT MARKS SUPPLIED BY THE OREGON UTILITY NOTIFICATION CENTER AS WELL AS SURFACE EVIDENCE AND PRIVATE ASBUILT RECORDS. HOWEVER, LACKING EXCAVATION, THE EXACT LOCATION OF UNDERGROUND FEATURES CANNOT BE ACCURATELY, COMPLETELY AND RELIABLY DEPICTED. WHERE ADDITIONAL OR MORE DETAILED INFORMATION IS REQUIRED, THE CLIENT IS ADVISED THAT EXCAVATION MAY BE NECESSARY.

- SANITARY SEWER DATA:
- 1 SANITARY SEWER MANHOLE
RIM=192.74'
IE 8" PVC (S)=185.49'
IE 8" PVC (N)=185.34'
IE 8" PVC (E)=185.24'
 - 2 SANITARY SEWER MANHOLE
RIM=190.20'
IE 8" PVC (W)=186.05'
IE 8" PVC (N)=185.95'
 - 3 SANITARY SEWER MANHOLE
RIM=162.67'
*SPECIAL RIM ON MH- UNABLE TO OPEN
 - 4 SANITARY SEWER MANHOLE
RIM=157.77'
*SPECIAL RIM ON MH- UNABLE TO OPEN
 - 5 SANITARY SEWER MANHOLE
RIM=159.29'
IE 8" PVC (S)=150.19'
IE 8" PVC (E)=149.69'
IE 8" PVC (W)=149.49
 - 6 SANITARY SEWER MANHOLE
RIM=196.42'
IE 8" PVC (N)=187.53'
IE 8" PVC (E)=187.41'
 - 7 SANITARY SEWER MANHOLE
RIM=178.27'
IE 8" PVC (SW)=170.84' (INACTIVE)
IE 8" PVC (SW)=167.82'
IE 8" PVC (NE)=167.59'
 - 8 SANITARY SEWER MANHOLE
RIM=179.70'
IE 8" PVC (SW)=174.12'
IE 8" PVC (W)=174.07'
IE 8" PVC (NE)=173.65'

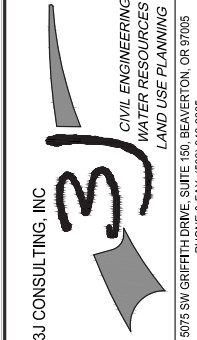
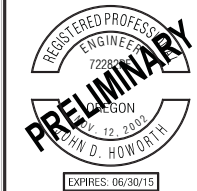
LEGEND: EXISTING CONDITIONS

- | | |
|---------|------------------------------------|
| --- | EXISTING BUILDING LINE |
| //// | EXISTING BUILDING HATCH |
| - - - - | PROJECT BOUNDARY |
| - - - - | RIGHT-OF-WAY LINE |
| - - - - | RIGHT-OF-WAY CENTERLINE |
| - - - - | EXISTING ADJACENT PROPERTY LINE |
| ---- | EXISTING CONCRETE HATCH |
| ---- | EXISTING CONCRETE LINE |
| ---- | EXISTING CURB |
| ---- | EXISTING EDGE OF PAVEMENT LINE |
| ---- | EXISTING ASPHALT HATCH |
| ---- | EXISTING GRAVEL LINE |
| ---- | EXISTING GRAVEL HATCH |
| ---- | EXISTING FENCE LINE |
| ---- | EXISTING STRIPING: WHITE |
| ---- | EXISTING STRIPING: YELLOW |
| ---- | EXISTING TELECOM. LINE |
| ---- | EXISTING GAS LINE |
| ---- | EXISTING CABLE LINE |
| ---- | EXISTING UNDERGROUND POWER |
| ---- | EXISTING OVERHEAD POWER |
| ---- | EXISTING UNSPECIFIED OVERHEAD WIRE |
| ---- | EXISTING VEGETATION LIMITS LINE |
| ---- | EXISTING SANITARY SEWER |
| ---- | EXISTING STORM DRAIN |
| ---- | EXISTING COMBINED SEWER |
| ---- | EXISTING WATER MAIN |
| ---- | EXISTING MAJOR CONTOUR |
| ---- | EXISTING MINOR CONTOUR |
| ---- | EXISTING FIRE HYDRANT |
| ---- | EXISTING WATER VALVE |
| ---- | EXISTING WATER METER |
| ---- | EXISTING CONIFEROUS TREE |
| ---- | EXISTING DECIDUOUS TREE |
| ---- | EXISTING SIGN |
| ---- | EXISTING UTILITY POLE |
| ---- | EXISTING SANITARY MANHOLE |
| ---- | EXISTING STORM MANHOLE |
| ---- | EXISTING STORM INLET |
| ---- | EXISTING LIGHT |
| ---- | EXISTING UTILITY POLE |
| ---- | EXISTING GAS METER |
| ---- | EXISTING TELEPHONE PEDESTAL |

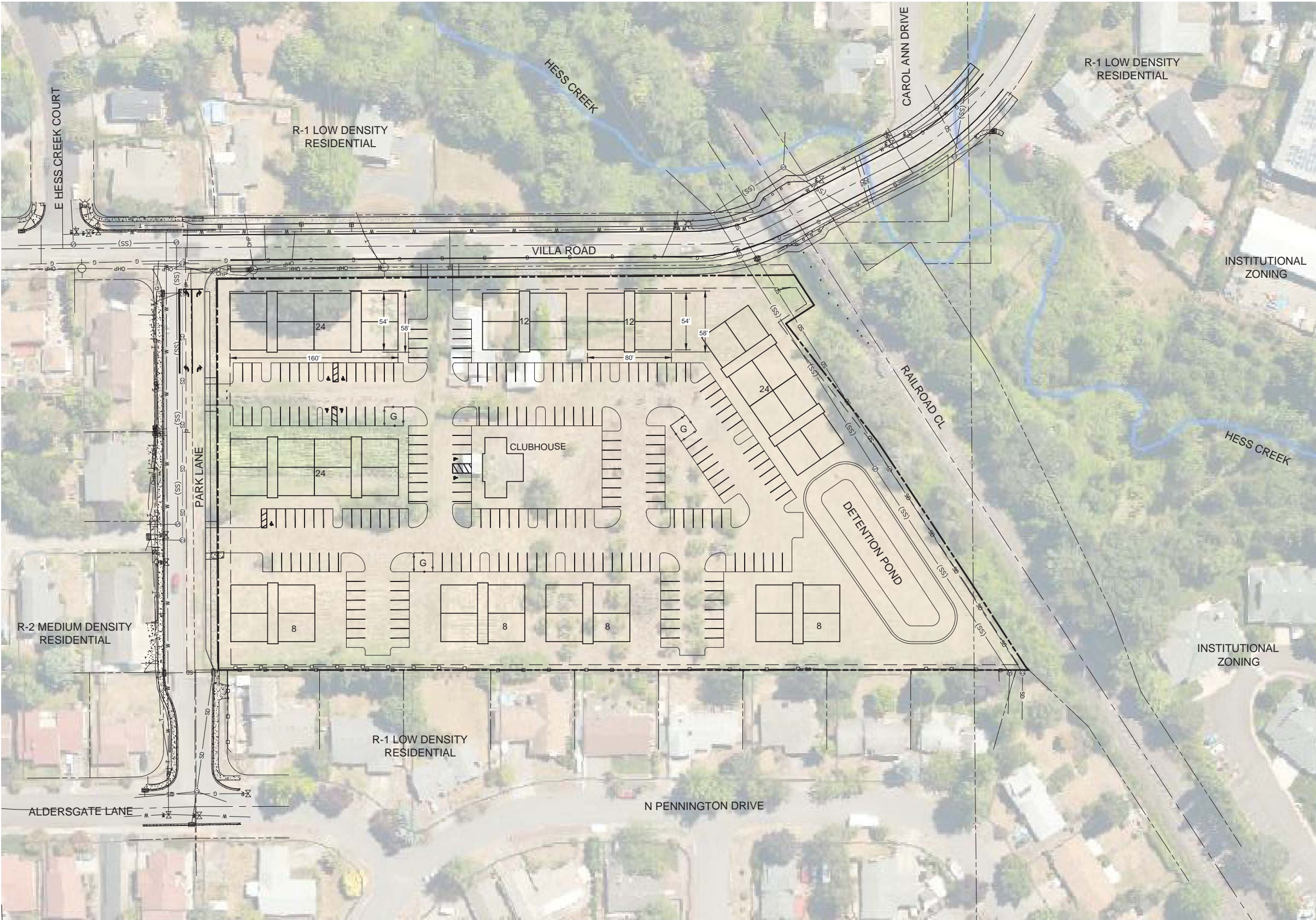


ATTACHMENT

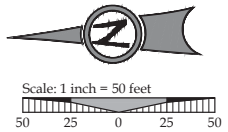
EXISTING CONDITIONS
MARTELL COMMONS
APARTMENTS
D12
NEWBERG, OR



3J JOB ID # | 14225
LAND USE # |
TAX LOT # |
DESIGNED BY | CKW
CHECKED BY | JDH
SHEET TITLE
EX.COND
SHEET NUMBER



UNIT COUNT : 128
CURRENT PARKING COUNT : 227
ONSITE PARKING RATIO: 1.77/UNIT



SITE PLAN WITH AERIAL
MARTELL COMMONS

DJ2
NEWBERG, OREGON

EXHIBIT
USE
ONLY

3J CONSULTING, INC.



CIVIL ENGINEERING
WATER RESOURCES
LAND USE PLANNING

4780 S.W. JOSHUA STREET SUITE 200, TUALATIN, OR 97063
PHONE: (503) 946-3365 FAX: (503) 985-5293

3J JOB ID # | 14225
LAND USE # | ###
TAX LOT # | 1317 VILLA ROAD
DESIGNED BY | CKW
CHECKED BY | JDH

SHEET TITLE
SITE PLAN
SHEET NUMBER



EXHIBIT B: COUNTY TAX MAP AND TRIO



**First American
Title Company of Oregon**

ATTACHMENT 5

Customer Service Department
121 SW Morrison Street Suite 300 - Portland, OR 97204
Phone: 503.219.TRIO (8746) Fax: 503.790.7872
Email: cs.portland@firstam.com
Today's Date : 12/16/2014

OWNERSHIP INFORMATION

Owner	: Martell Family Farm LLC	Ref Parcel #	: R3217BC 00800
CoOwner	:	T : 03S R: 02W S : 17 Q : NW QQ : SW	
Site Address	: 1317 Villa Rd Newberg 97132	Parcel #	: 33476
Mail Address	: 23480 NE Hyland Dr Newberg Or 97132	MHLotAPN	:
Telephone	:	County	: Yamhill (OR)

ASSESSMENT AND TAX INFORMATION

Mkt Land	: \$581,177
Mkt Structure	: \$87,622
Mkt Total	: \$668,799
%Improved	: 13
Assessed Land	:
Assessed Structure:	
Assessed Total	:
Levy Code	: 29.0
13-14 Taxes	: \$2,794.87
Millage Rate	: 16.6775

PROPERTY DESCRIPTION

MapPageGrid	: 713 D6
Census Tract	: 302.01 Block : 4
Neighborhood	: *UNKNOWN NEIGHBORHOOD CODE*
Subdivision/Plat	:
Special District	:
Zoning	: 54 FARM LAND, UNZONED
Stat Class	: 141 One Story
Land Use	: 541 Farm, Unzoned Farm Land, Imp
Legal	: POTENTIAL ADDITIONAL TAX LIABILITY
	: 7.10 ACRES IN SEC 17 T3S R2W
	:

PROPERTY CHARACTERISTICS

Bedrooms	: 3	Building Living SF	: 1,728	Year Built	: 1940
Bathrooms	: 2.00	Building Total SF	: 1,728	Garage Type	: Grg-Det-Unfin
Fireplace	: Stovepad	1st Floor SF	: 1,728	Garage SF	: 848
Fireplace 2	: Stovepad	Second Floor SF	:	Lot Acres	: 7.10
Heat A/C	: Baseboard	Third Floor SF	:	Lot SF	: 309,276
Heat A/C2	:	Cellar SF	:	Wall Material	: Bevel Vinyl
Dishwasher	:	Basement Total SF	:	Floor Base	: Double
Roof Material	: Comp Shingle	Basement Type	:	Floor Cover	:
Roof Shape	: Gable	Foundataion	:		

Mobile Home

ID Number	:
Title	:
Make	:
Dimensions	:
Skirt	:

Farm Buildings

1. Leanto/4X6-Gal Roof-Dirt	324
2. General Purpose Building	1,440
3. Machine Shed	288
4. Multi-Purpose Shed	120
5.	

TRANSFER HISTORY

Owner(s)	Date	Doc #	Price	Deed	Loan	Type
:Martell Family Farm LLC	:10/29/2010	15188	:	:Correction	:	:
:Martell Family Farm LLC	:09/15/2010	12791	:	:Bargain & Sale	:	:
:	:	:	:	:	:	:
:	:	:	:	:	:	:
:	:	:	:	:	:	:
:	:	:	:	:	:	:

29.0



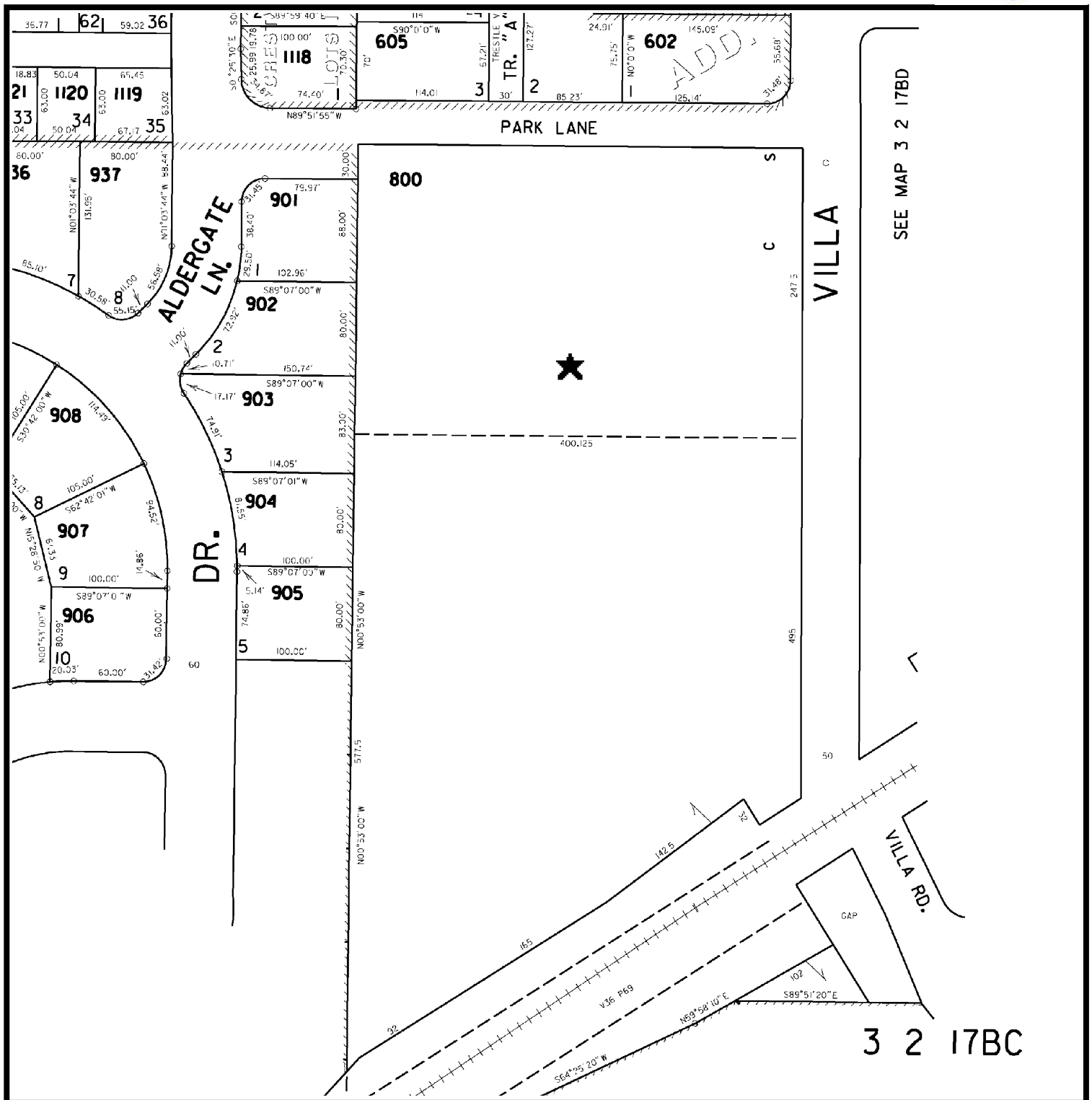
*First American
Title Company of Oregon*

Customer Service Department
121 SW Morrison Street Suite 300 Portland, OR 97204
Phone: 503.219.TRIO (8746) Fax: 503.790.7872
Email: cs.portland@firstam.com

THIS MAP IS PROVIDED AS A CONVENIENCE IN LOCATING PROPERTY. FIRST AMERICAN TITLE COMPANY OF OREGON ASSUMES NO LIABILITY FOR ANY VARIATIONS AS MAY BE DISCLOSED BY AN ACTUAL SURVEY



Reference Parcel #: R3217BC 00800



First American
Title Company of Oregon

Customer Service Department
 121 SW Morrison Street Suite 300 Portland, OR 97204
 Phone: 503.219.TRIO (8746) Fax: 503.790.7872
 Email: cs.portland@firstam.com

THIS MAP IS PROVIDED AS A CONVENIENCE IN LOCATING PROPERTY. FIRST AMERICAN TITLE COMPANY OF OREGON ASSUMES NO LIABILITY FOR ANY VARIATIONS AS MAY BE DISCLOSED BY AN ACTUAL SURVEY

Douglas R. Martell, as Successor Trustee to the Martell Family Trust,
dated September 16, 1997, GRANTOR
23480 NE Hyland Drive
Newberg, OR 97132

Martell Family Farm, LLC,
an Oregon limited liability company, GRANTEE
23480 NE Hyland Drive
Newberg, OR 97132

TAX STATEMENTS TO BE SENT TO:

Martell Family Farm, LLC,
an Oregon limited liability company, GRANTEE
23480 NE Hyland Drive
Newberg, OR 97132

After recording, return to:

Ron D Ferguson
4004 Kruse Way Place, Suite 200
Lake Oswego, OR 97035

OFFICIAL YAMHILL COUNTY RECORDS
REBEKAH STERN DOLL, COUNTY CLERK

201015188

\$46.00



00358995201000151880020020

10/29/2010 03:48:55 PM

DMR-DDMR Cnt=1 Stn=2 ANITA
\$10.00 \$10.00 \$11.00 \$15.00

BARGAIN AND SALE DEED – STATUTORY FORM

Being recorded to correct legal description previously recorded as document #201012791.

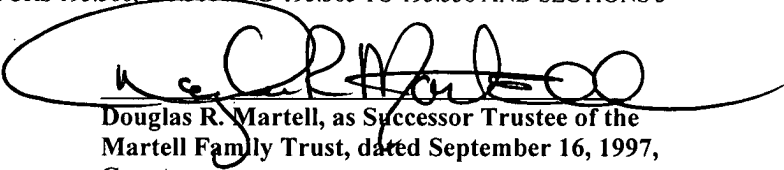
Douglas R. Martell, as Successor Trustee to the Martell Family Trust, dated September 16, 1997, Grantor, conveys to Martell Family Farm, LLC, an Oregon limited liability company, Grantee, all of Grantor's right, title and interest in the following described real property situated in Yamhill County, Oregon to wit:

SEE EXHIBIT A

The true consideration for this conveyance is -\$0- and constitutes a transfer by a trust into an entity in which the ultimate beneficiaries possess an ownership interest.

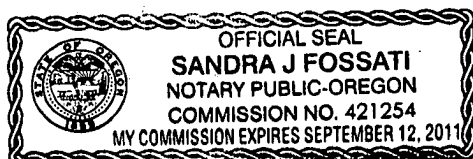
DATED this 26th day of October 2010.

BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON TRANSFERRING FEE TITLE SHOULD INQUIRE ABOUT THE PERSON'S RIGHTS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007. THIS INSTRUMENT DOES NOT ALLOW USE OF THE PROPERTY DESCRIBED IN THIS INSTRUMENT IN VIOLATION OF APPLICABLE LAND USE LAWS AND REGULATIONS. BEFORE SIGNING OR ACCEPTING THIS INSTRUMENT, THE PERSON ACQUIRING FEE TITLE TO THE PROPERTY SHOULD CHECK WITH THE APPROPRIATE CITY OR COUNTY PLANNING DEPARTMENT TO VERIFY THAT THE UNIT OF LAND BEING TRANSFERRED IS A LAWFULLY ESTABLISHED LOT OR PARCEL, AS DEFINED IN ORS 92.010 OR 215.010, TO VERIFY THE APPROVED USES OF THE LOT OR PARCEL, TO DETERMINE ANY LIMITS ON LAWSUITS AGAINST FARMING OR FOREST PRACTICES, AS DEFINED IN ORS 30.930, AND TO INQUIRE ABOUT THE RIGHTS OF NEIGHBORING PROPERTY OWNERS, IF ANY, UNDER ORS 195.300, 195.301 AND 195.305 TO 195.336 AND SECTIONS 5 TO 11, CHAPTER 424, OREGON LAWS 2007.


Douglas R. Martell, as Successor Trustee of the
Martell Family Trust, dated September 16, 1997,
Grantor

STATE OF OREGON)
) ss
County of Clackamas)

This instrument was acknowledged before me this 26th day of October 2010, by Douglas R. Martell, as Successor Trustee to the Martell Family Trust, dated September 16, 1997, Grantor.



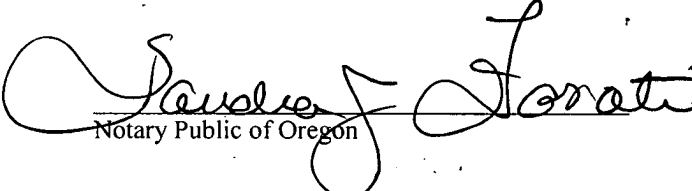

Notary Public of Oregon

EXHIBIT AParcel 1

Being a part of the D. D. Deskins and O. J. Walker Donation Land Claims, in Section 17, Township 3 South Range 2 West in Yamhill County, Oregon, and described as follows, to-wit: Beginning at a point on the South line of the O. J. Walker D. L.C., said point being 104 rods East of the West side of Section 17; thence North 30 rods to South line of ten acre tract deeded to Ervin Scott; thence West $24 \frac{1}{4}$ rods; thence South parallel with East line 35 rods, more or less to the North line of the R. R. right of way; thence Northeasterly along said right of way to intersection of the South line of the O. J. Walker D.L.C.; thence East to place of beginning, excepting R.R. right of way through said premises.

Also the following tract: Being a part of the O. J. Walker D.L.C. in section 17, Township 3 South, Range 2 West Yamhill County, Oregon, described as follows: Beginning at a point 64 rods West of the Southeast corner of said Claim, thence running West 5 rods to the Southeast corner of Jos. Hoskins land; thence North 6 rods to the South line of the P. and W.V.R.R.; thence running Easterly along said South line of the P. and W.V.R.R. $3 \frac{1}{2}$ rods; thence running Southeasterly about 7 or 8 rods to the place of beginning, containing 30/160 acres more or less.

The above two tracts of land containing in all about 5 acres more or less, excepting R.R. right of way.

Parcel 2

A tract of land located in Yamhill County, Oregon, and being a part of the Donation Land Claim of Oliver J. Walker in Township 3 South, Range 2 West of the Willamette Meridian in Yamhill County, and more particularly described as follows:

Beginning at a point 30 rods North of the South boundary line of said Claim and 104 rods East of the Section line between Sections 17 and 18 in said Township and Range; and said point being at the Southeast corner of that certain tract of land conveyed to Ervin Scott by J. L. Hoskins and Mary L. Hoskins by deed recorded at Page 281 in Book 31 of Deed Records of Yamhill County, and running thence West $24\text{-}1/4$ rods; thence North 15 rods; thence East $24\text{-}1/4$ rods; thence South 15 rods to the place of beginning.



EXHIBIT C: APPLICATION FORM



TYPE III APPLICATION - 2014 (QUASI-JUDICIAL REVIEW)

File #: _____

TYPES – PLEASE CHECK ONE:

☐ Annexation
☒ Comprehensive Plan Amendment (site specific)
☒ Zoning Amendment (site specific)
☐ Historic Landmark Modification/alteration

☐ Conditional Use Permit
☐ Type III Major Modification
☐ Planned Unit Development
☐ Other: (Explain) _____

APPLICANT INFORMATION:

APPLICANT: DJ2 Holdings
 ADDRESS: 8931 SE Foster Rd. Suite 210 Portland, OR 97266
 EMAIL ADDRESS: jeff@dj2holdings.com
 PHONE: _____ MOBILE: 503-201-8616 FAX: _____
 OWNER (if different from above): Martell Family Farms, LLC PHONE: _____
 ADDRESS: 23480 NE Hyland Dr Newberg, OR 97132
 ENGINEER/SURVEYOR: John Howorth, 3J Consulting PHONE: 503-946-9365
 ADDRESS: 5075 Southwest Griffith Drive Suite 150, Beaverton, OR 97005

GENERAL INFORMATION:

PROJECT NAME: Martell Commons PROJECT LOCATION: 1317 Villa Road
 PROJECT DESCRIPTION/USE: Comprehensive Plan Amendment/Zone Change/DR for an Apartment Complex
 MAP/TAX LOT NO. (i.e. 3200AB-400): 3217BC 00800 ZONE: R-1 SITE SIZE: 6.0 SQ. FT. ☐ ACRE ☒
 COMP PLAN DESIGNATION: LDR TOPOGRAPHY: Gradual slope to the South
 CURRENT USE: Rural residential
 SURROUNDING USES:
 NORTH: Residential SOUTH: Hess Creek/railroad/George Fox
 EAST: Residential WEST: Hess Creek/Residential


SPECIFIC PROJECT CRITERIA AND REQUIREMENTS ARE ATTACHED

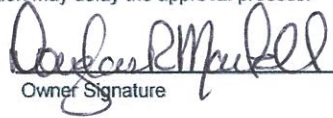
General Checklist: ☐ Fees ☐ Public Notice Information ☐ Current Title Report ☐ Written Criteria Response ☐ Owner Signature

For detailed checklists, applicable criteria for the written criteria response, and number of copies per application type, turn to:

Annexationp. 15
 Comprehensive Plan / Zoning Map Amendment (site specific)p. 19
 Conditional Use Permitp. 21
 Historic Landmark Modification/Alterationp. 23
 Planned Unit Developmentp. 26

The above statements and information herein contained are in all respects true, complete, and correct to the best of my knowledge and belief. Tentative plans must substantially conform to all standards, regulations, and procedures officially adopted by the City of Newberg. All owners must sign the application or submit letters of consent. Incomplete or missing information may delay the approval process.


 Applicant Signature 2/16/15 Date
JEFF CURRAN
 Print Name


 Owner Signature 02-06-2015 Date
Martell Family Farms LLC
 Print Name

Attachments: General Information, Fee Schedule, Noticing Procedures, Planning Commission Schedule, Criteria, Checklists



EXHIBIT D: INFRASTRUCTURE CAPACITY ANALYSIS



TECHNICAL MEMORANDUM

To: Mimi Doukas, AICP
Land Use Planner

From: John Howorth, PE
Civil Engineer

Date: February 6, 2015

Project Name: Martell Commons

Project No: 14225

RE: Infrastructure Review

This technical memorandum is being prepared to summarize the current status of the surrounding infrastructure, the potential impacts associated with the zone change, and any mitigation of the impacts that will be required by the City of Newberg. The infrastructure discussed within this memo includes water, sanitary sewer, and storm water.

Zone Change

The proposed zone change from R-1 to R-3 will allow for an increased density potential for the subject parcel. The increase in density will increase the use of potable water and subsequently create higher sanitary sewer flows, as well as increase the number of vehicle trips generated by the project. Storm water runoff may increase slightly due to the potential to have more impervious area.

Potable Water

Existing Conditions:

The City of Newberg currently has 3 reservoirs, one at Corral Creek, and two at North Valley. Each reservoir is understood to have a capacity of 4 million gallons each.

Impacts & Mitigation:

The zone change will generate a slight increase in the demand for potable water and fire, but not a significant impact. It is understood that the existing system is more than capable of handling the added demand from the zone change and that no additional reservoir capacity is needed.

As part of the final development of the property a fire flow analysis will be performed to determine if any existing water lines would need to be upsized. Water lines will be extended through the site to provide both domestic water services and fire hydrants for the development. These extensions will be provided by the developer.

Storm Water

Existing Conditions:

Currently the site consists of a single family home with a detached garage and two sheds. The site is predominately vegetated.

Impacts & Mitigation:

The zone change will allow for a more dense development to occur; however this does not typically correlate to a proportional increase in runoff. Rather, the amount of storm water runoff is directly related to the amount of impervious surface created with the development. All storm water will be treated for water quality before being released into any municipal system. The development will follow City standards water quality and detention.

Sanitary Sewer

Existing Conditions:

The site abuts a 12-inch public sanitary sewer line that runs along Hess Creek to the south and east of the property. The current City of Newberg Sewer Master Plan shows capacity for the proposed increased density associated with the zone change within the public sewer system directly adjacent to the site with the system flowing under surcharged conditions further downstream.

Impacts & Mitigation:

Development of the subject property under its current R-1 zone would yield a projected sewer demand of 1,225-gpm at the point in which flows would enter the system. The increase in allowed density associated with a zone change to R-3 could generate a sewer demand of up to 1,242-gpm (assuming low flow plumbing fixtures and an I/I peaking factor of 3 for new pipe rather than a peaking factor of 4). The total existing flow in the 12-inch sewer, based on the City's master plan, is approximately 1,203-gpm. While the zone change would create a slight increase in sewer flows, the relative increase to the existing system is only 3.2%, and only 1.4% over the allowed R-1 zoning. This is within the margin of error of the flow modeling that backstops the City's Master Plan. The system is currently under review by the City Engineering department and we anticipate that flow testing will be conducted to confirm the assumptions used in developing the master plan. At this time there is no indication of any improvements necessary to the system based on the minimal increases to the sewer flows as a result of the zone change.

- - - END OF DOCUMENT - - -

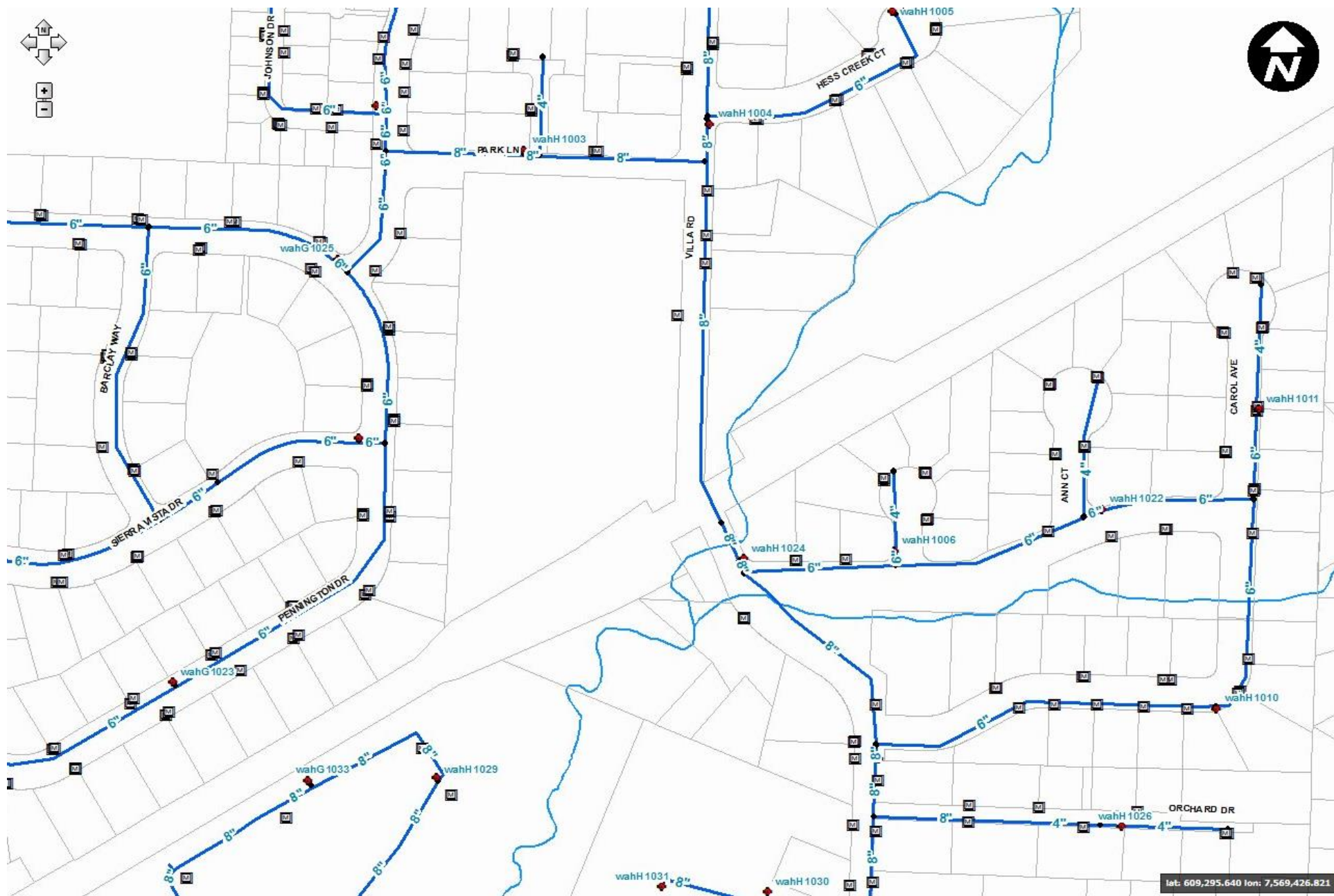






EXHIBIT E: NEIGHBORHOOD MEETING DOCUMENTATION

TUALATIN · VANCOUVER · SALEM

12965 SW HERMAN RD., SUITE 100 · TUALATIN, OR 97062



WWW.AKS-ENG.COM

P: (503) 563-6151 F: (503) 563-6152

December 2, 2014

NEIGHBORHOOD MEETING NOTICE

Ref: 1317 Villa Road
Assessor's Map: R3217BC Tax Lot 00800
Newberg, OR 97132

Dear Interested Party:

AKS Engineering & Forestry, LLC is representing the applicant regarding the property located at 1317 Villa Road. The applicant is proposing a Comprehensive Map Plan Amendment/Zone change and a Site Plan Review for future development of a multi-family housing project. Prior to applying to the City of Newberg we would like the opportunity to discuss the proposal in more detail with the surrounding property owners and residents. You are invited to attend a meeting on:

Tuesday, December 16, 2013 at 6:00 PM
Newberg Christian Church (Classroom 204)
2315 Villa Road
Newberg, OR 97132

Please note that this will be an informational meeting on preliminary plans. These plans may be modified before the application is submitted to the City. You may also receive an official notice from the City of Newberg after the application is accepted, advising you of your opportunity to participate by submitting written comments.

I look forward to discussing this proposal with you. If you have questions, but will be unable to attend, please feel free to call me at 503-563-6151.

Sincerely,
AKS ENGINEERING & FORESTRY, LLC.

A handwritten signature in blue ink that reads 'Mimi Doukas'.

Mimi Doukas, AICP, RLA

THIS MAP WAS PREPARED FOR
ASSESSMENT PURPOSE ONLY

3 2 17BC
NEWBERG

CRESTVIEW DR (59)
SW 1/4 NW 1/4 SEC 17 T3S R2W W.M.
YAMHILL COUNTY OR 1" = 100'

SEE MAP 3 2 17

CRESTVIEW DR (59)
Z

CANCELLED NO.
600
604
921
1000
1017
1019
1111
1115
1117
1136
1141
1152
1154
1157
1166
1167
1169
1705
1813

SEE MAP 3 2 18AD

SEE MAP 3 2 17BD

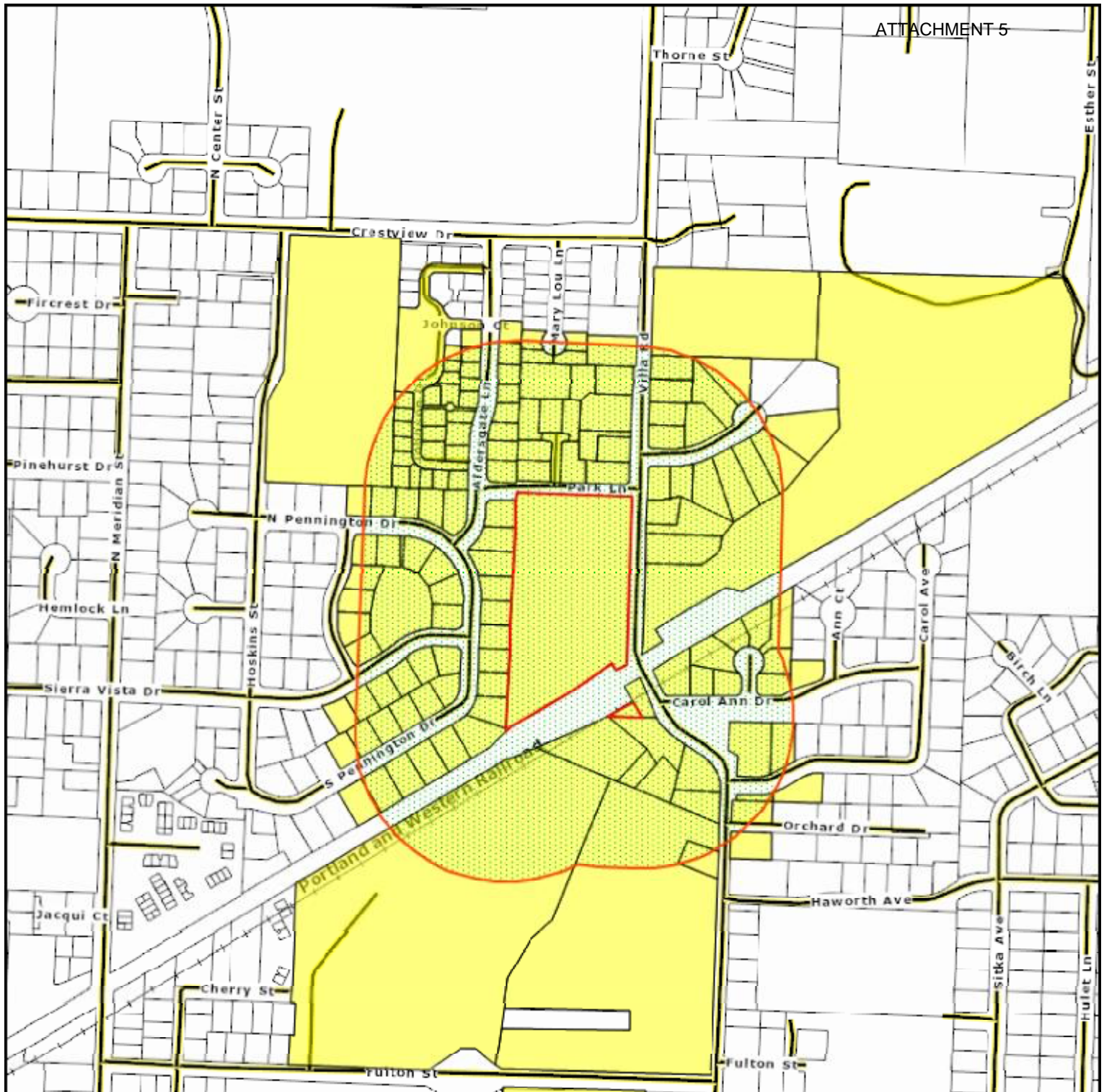
Project
Site

SEE MAP 3 2 17CB

REVISED 3-30-05 BH

ATTACHMENT 5

3 2 17BC


TICOR TITLE™

Sentry Dynamics, Inc. and its customers make no representations, warranties or conditions, express or implied, as to the accuracy or completeness of information contained in this report.

geoAdvantage
www.sentrydynamics.net

R3217BC00306
Gouger LLC
9600 NE Glen Hollow Dr
Newberg, OR 97132

R3217BC00309
Gouger LLC
9600 NE Glen Hollow Dr
Newberg, OR 97132

R3217BC00602
James & Lori Harper
1409 Park Ln
Newberg, OR 97132

R3217BC00606
Eulalah Colas
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R3217BC00612
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R3217BC00800
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R3217BC00902
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R3217BC00905
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R3217BC00307
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R3217BC00906
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R3217BC01122
Phillip & Julie Crouch
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E Lamar & Jeanette Aldridge
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R3217BC01120
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R3217BC01148 Rosalyn M For Gregory 1705 Aldersgate Ln Newberg, OR 97132	R3217BC01149 Margaret Palmer 1701 Aldersgate Ln Newberg, OR 97132	R3217BC01150 Sheri Andress 1619 Aldersgate Ln Newberg, OR 97132
R3217BC01151 Merle & Doris Brandt 1609 Aldersgate Ln Newberg, OR 97132	R3217BC01153 Jennifer L For & Jennifer Meyers 1600 Johnson Dr Newberg, OR 97132	R3217BC01155 Donna Michael 1616 Johnson Dr Newberg, OR 97132
R3217BC01156 Frances For & Frances Braun 1624 Johnson Dr Newberg, OR 97132	R3217BC01158 Darlene & Kenneth R Of & Darlene & Kenneth Sutton 1630 Johnson Dr Newberg, OR 97132	R3217BC01159 Robert & Sue Bletscher 16390 SE Hillside Ln Milwaukie, OR 97267
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R3217BD00900 Donald & Sherry Sylvester 1521 Hess Creek Ct Newberg, OR 97132	R3217BD01200 Julie Isaacson 1524 Hess Creek Ct Newberg, OR 97132	R3217BD01300 Jeannine Graham 1520 Hess Creek Ct Newberg, OR 97132
R3217BD01400 Estela Oropeza 1516 Hess Creek Ct Newberg, OR 97132	R3217BD01500 Kevin & Krista Sellars 1512 Hess Creek Ct Newberg, OR 97132	R3217BD01600 Elbert & Atina Buck 1508 Hess Creek Ct Newberg, OR 97132

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December 16, 2014
6:00 p.m.

Newberg Christian Church
2315 Villa Road
Newberg, OR 97132

NAME

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1317 Villa Road
December 16, 2014
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Newberg Christian Church
2315 Villa Road
Newberg, OR 97132

NAME

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STREET ADDRESS

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| 18. | <u>Mary Ann Tack</u>
<u>1700 Villa Rd</u>
<u>Newberg OR 97132</u> | 25. | <u>Charles Gibson / Angel Callender</u>
<u>1709 Villa Rd.</u>
<u>Newberg 97132</u> |
| 19. | <u>Deward Nommelin</u>
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| 21. | <u>Christina Crawford</u>
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38. _____

39. _____

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December 17, 2014

Neighborhood Meeting Summary:

1317 Villa Road

Assessor's Map: R3217BC Tax Lot 00800

Newberg, Oregon 97132

Meeting Date: December 16, 2014**Time:** 6:00 PM**Location:** Newberg Christian Church, 2315 Villa Road, Newberg OR 97132

The following serves as a summary of the primary subjects covered at the Neighborhood Meeting. Mimi Doukas from AKS Engineering & Forestry, Jeff Curran and Darren Welborn of DJ2 Holdings, and Michael Parshall of Western Design Group were present. A brief presentation about the project was made, followed by questions and answers. Business cards with contact information and an attendance sheet to sign was circulated.

Major topics of discussion:

- Comprehensive Map Amendment and Zone Change for multi-family housing
- Processed through City staff for Planning Commission review and recommendation to City Council
- Preliminary design includes 16 buildings, 144 units and 208 parking spaces
- One, two and three bedroom apartments, ranging from approx. 580 to 1,000 square feet
- Two and three story staggered buildings with centralized facilities and parking
- Project will be served by existing public utilities, water, sanitary sewer, and storm sewer
- On-site stormwater management, with pond design and fencing
- Community center and outdoor public spaces with picnic tables and barbeques
- Public street improvements, with sidewalks along Park Lane and Villa Road
- One access on Park Lane, one on Villa road and an emergency vehicle access
- Project to meet the housing needs of Newberg area, including that of college students
- Market rate rentals for the Newberg area with quality construction and desire to increase property values of adjacent homes
- Discussion about other projects developed, owned, or managed by this group
- Desire for buffer for privacy along west side of project and adjacent homes
- Desire for mature landscaping along street frontage to ease visual impact of large buildings
- Desire for street, pedestrian, and bicycle lane improvements along Villa
- Concerns were raised about increased traffic, sight distance for left hand turns, access in and out of the project and adjacent neighbor driveways
- Concern about construction traffic, parking, and hours of operation during building phase
- Discussion about grading of project and existing retaining walls on adjacent properties
- Concerns about erosion control during construction and drainage of water to off-site locations
- Discussion about construction timeline from permitting through building completion
- City process for the application, review, hearing and approval

Sincerely,

AKS ENGINEERING & FORESTRY, LLC

A handwritten signature in blue ink that reads 'M Doukas'. The signature is stylized with a large, looped 'M' and a cursive 'Doukas'.

Mimi Doukas, AICP, RLA



EXHIBIT F: TRAFFIC IMPACT ANALYSIS

Transportation Impact Analysis

Martell Commons Site Rezone and Development

Newberg, Oregon

February 2015

Transportation Impact Analysis

Martell Commons Site Rezone and Development

Newberg, Oregon

Prepared For:
DJ2 Holdings, LLC
13805 SE Aldridge Road
Happy Valley, Oregon 97086

Prepared By:
Kittelson & Associates, Inc.
610 SW Alder, Suite 700
Portland, OR 97205
(503) 228-5230

Project Manager: Patrick Marnell, E.I.T.
Project Principal: Brian J. Dunn, P.E.

Project No. 18152

February 2015



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Section 1 Executive Summary

EXECUTIVE SUMMARY

DJ2 Holdings, LLC is proposing to develop the Martell Commons apartment complex in Newberg, Oregon. The proposed development site is located along the west side of Villa Road, south of Park Lane. It is approximately 5.94 acres in size and is currently zoned for R-1 Low Density Residential. The site is proposed to be rezoned to R-3 High Density Residential, which would theoretically allow for up to 168 apartment units. Upon approval of the proposed zone change, construction of the 128-unit Martell Commons is expected to commence in this year 2015, with an anticipated build-out year of 2016.

The results of this traffic impact analysis report indicate that with recommended mitigation measures in place, the proposed site rezone will comply with the State's Transportation Planning Rule by not materially degrading the long-term operations of existing and planned transportation network. In addition, this report demonstrates that the construction of the Martell Commons apartment complex can be achieved while maintaining acceptable levels of service and safety on the surrounding transportation system for the build-out year, with recommended mitigation measures in place. The findings of this analysis and our recommendations are summarized below.

Existing Conditions

- All of the study intersections currently operate at acceptable levels of service during the weekday a.m. and p.m. peak hours.
- A review of crash history did not reveal any patterns at study intersections that require mitigation associated with this project.

Year 2016 Background Traffic Conditions

- All of the study intersections are forecast to continue meeting operational standards during the weekday a.m. peak hour.
- All of the study intersections, except the Villa Road/OR 99W intersection, are forecast to continue meeting operational standards during the weekday p.m. peak hour.
 - The Villa Road/OR 99W intersection is forecast to operate with a v/c ratio of 0.88 in the p.m. peak hour which exceeds the ODOT mobility standard of 0.85.

Proposed Development Plan

- The actual proposed site development for the Martell Commons complex will consist of up to 128 apartment units. This is estimated to conservatively generate 899 average daily trips, 66 trips (13 inbound, 53 outbound) during the weekday a.m. peak hour, and 88 trips (57 inbound, 31 outbound) during the weekday p.m. peak hour.

Year 2016 Total Traffic Conditions

- All of the study intersections, including the proposed site access to Villa Road, are forecast to meet operational standards during the weekday a.m. peak hour.
- All of the study intersections, except the Villa Road/OR 99W intersection, are forecast to meet operational standards during the weekday p.m. peak hour.
 - As under background traffic conditions, the Villa Road/OR 99W intersection is forecast to continue to operate with a v/c ratio of 0.88 during the p.m. peak hour which exceeds the ODOT standard of 0.85.

Year 2035 Background Traffic Conditions

- All of the study intersections except the except the Villa Road/OR 99W intersection and Villa Road/Fulton Street intersection are forecast to meet operational standards during the weekday p.m. peak hour.
 - The Villa Road/OR 99W intersection is forecast to operate with a v/c ratio of 1.11 which exceeds the ODOT standard of 0.85.
 - The Villa Road/Fulton Street intersection is forecast to operate with a LOS F which exceeds the City's standard of LOS D or better.

Year 2035 Total Traffic Conditions

- With no off-site mitigation measures, all of the study intersections except the Villa Road/OR 99W intersection and Villa Road/Fulton Street intersection are forecast to continue meeting operational standards during the weekday p.m. peak hour.
 - The Villa Road/OR 99W intersection is forecast to operate with a v/c ratio of 1.12 which is an increase of 0.01 from background conditions and exceeds the ODOT standard of 0.85.
 - The Villa Road/Fulton Street intersection is forecast to continue operating at LOS F which exceeds the City's standard of LOS D or better.

Mitigation Measures

- The proposed Martell Commons development will provide multimodal improvements along Villa Road by adding pedestrian facilities and bicycle lanes on one or both sides of the roadway along the site frontage. Additionally, through additional coordination efforts, the developer desires to connect the sidewalk facilities along the site frontage to an existing pedestrian path to complete a continuous pedestrian/bicycle link between the development site and George Fox University to the south. These multimodal improvements are sufficient

to mitigate the minor increase in v/c ratio generated by the development at the Villa Road/OR 99W intersection.

- The Villa Road/Fulton Street intersection should be modified to all-way stop control. This would allow the intersection to operate at LOS E, representing an improvement over year 2035 background conditions without the site development.

On-Site Circulation/Site Access Operations

- All of the proposed external site access points at Park Lane and to Villa Road will function acceptably with stop control on the minor driveway approaches.
- The vertical and horizontal alignments of the proposed full-street improvements along the Villa Road site frontage should be designed to provide adequate intersection sight distance from the proposed site access driveway.
- Shrubbery and landscaping near the site access points should be maintained to ensure adequate intersection sight distance at both site driveways to Villa Road and Park Lane.

Section 2 Introduction

INTRODUCTION

DJ2 Holdings, LLC is proposing to development an apartment complex (Martell Commons) in Newberg, Oregon. The proposed development site is located along the west side of Villa Road, south of Park Lane. It is approximately 5.94 acres in size and is currently zoned for R-1 Low Density Residential. The site is proposed to be rezoned to R-3 High Density Residential, which would theoretically allow for up to 168 apartment units. Upon approval of the proposed zone change, construction of the 128-unit Martell Commons is expected to commence in this year 2015, with an anticipated build-out year of 2016. A site vicinity map is shown in Figure 1, and the proposed site development plan is shown in Figure 2.

SCOPE OF THE REPORT

This analysis determines the transportation-related impacts associated with the proposed rezone and development plan for the Martell Commons apartment complex and was prepared in accordance with the City of Newberg and Oregon Department of Transportation (ODOT) transportation standards. The study intersections and scope of this project were determined through a coordinated scoping effort with City staff. Operational analyses were performed at the following study intersections:

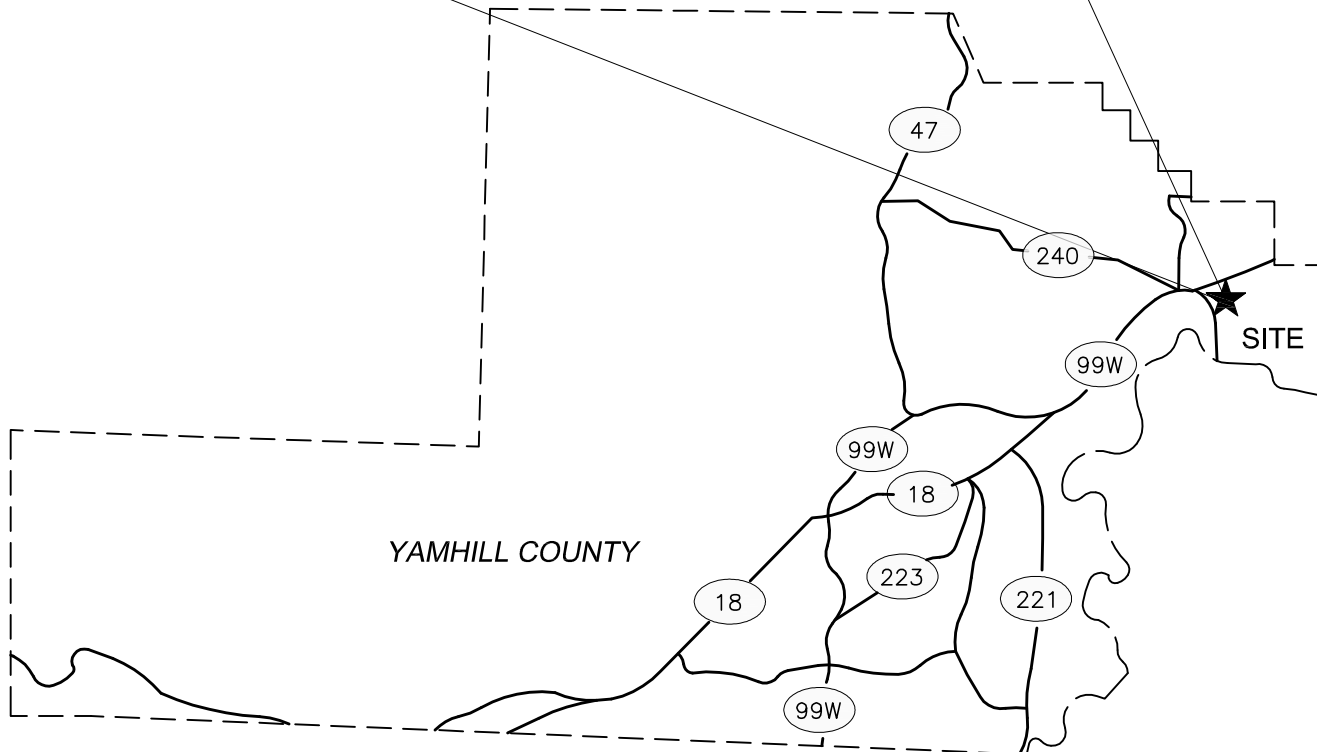
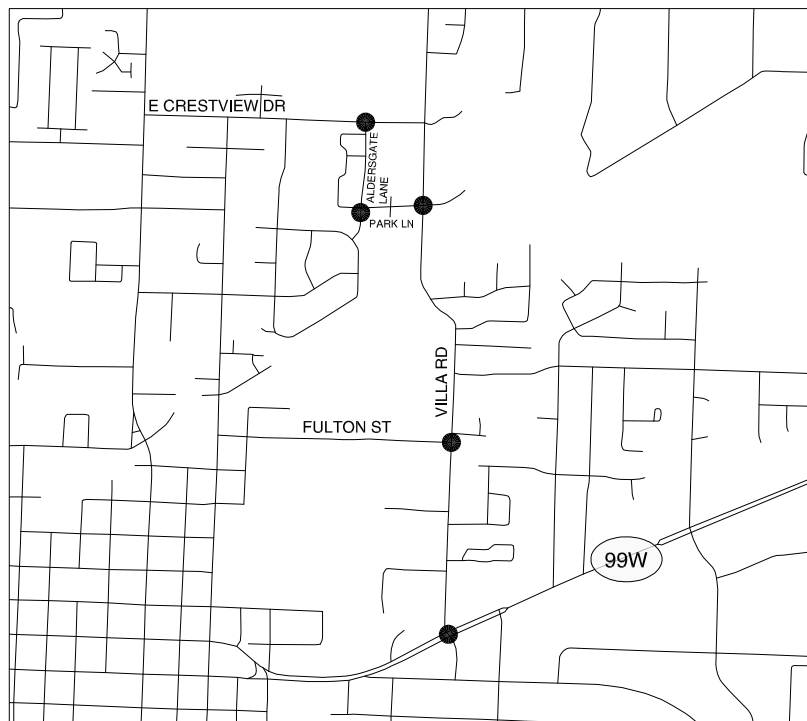
- Aldersgate Lane/Crestview Drive;
- Aldersgate Lane/Park Lane;
- Villa Road/Park Lane;
- Villa Road/Fulton Street;
- Villa Road/OR 99W; and,
- Villa Road/proposed site access.

This report evaluates the following transportation issues to address the requirements of the State's Transportation Planning Rule for the proposed zone change and the requirements of the City of Newberg for the proposed site development plan:

- Existing land-use and transportation-system conditions within the site vicinity during the weekday a.m. and p.m. peak hour periods;
- Forecast year 2016 background traffic conditions during the weekday a.m. and p.m. peak hours;
- Trip generation and distribution estimates for the proposed Martell Commons apartment site development;
- Forecast year 2016 total traffic conditions during the weekday a.m. and p.m. peak hours with build-out of the site;
- Forecast year 2035 background traffic conditions during the weekday p.m. peak hour;
- Forecast year 2035 total traffic conditions during the weekday p.m. peak hour with a maximum build-out scenario for the site; and
- Compliance with the State's Transportation Planning Rule.



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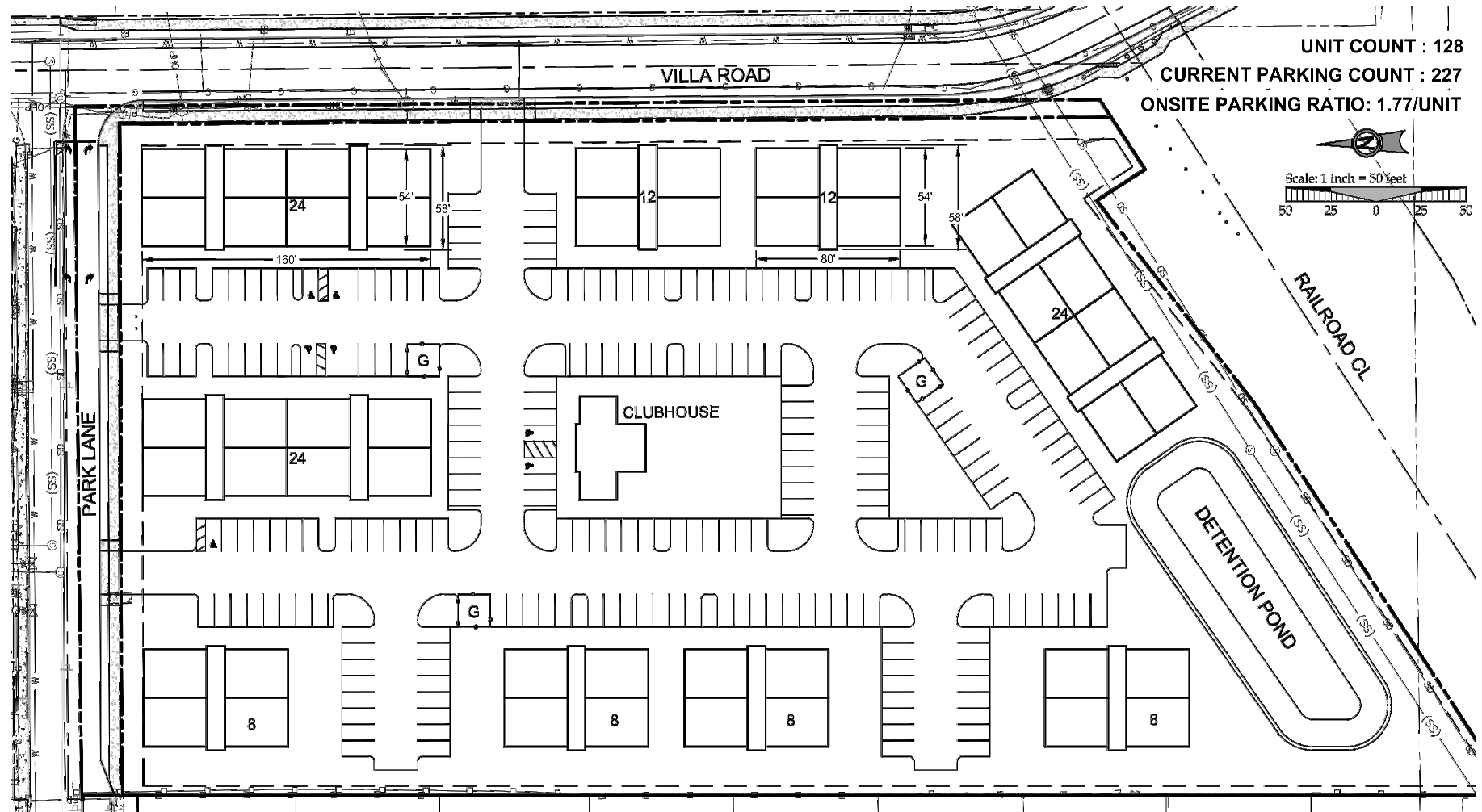


LEGEND

- - STUDY INTERSECTION

SITE VICINITY MAP
NEWBERG, OREGON

FIGURE
1



SITE PLAN PROVIDED BY 3J
CONSOLTING INC: JAN. 2015

PRELIMINARY SITE PLAN
NEWBERG, OREGON

FIGURE
2

Section 3 Existing Conditions

EXISTING CONDITIONS

The existing conditions analysis identifies the site conditions and current operational and geometric characteristics of the roadways within the study area. These conditions will be compared with future conditions later in this report.

Kittelson & Associates, Inc. (KAI) staff visited and inventoried the proposed Martell Commons development site and surrounding study area in September 2014. At that time, KAI collected information regarding site conditions, adjacent land uses, existing traffic operations, and transportation facilities in the study area.

SITE CONDITIONS AND ADJACENT LAND USES

The proposed site is located within the City of Newberg limits, is currently vacant, and is zoned for R-1 Low Density Residential. The site is bounded on the north by Park Lane, on the east by Villa Road, on the south by a Portland & Western Railroad line, and to the west by single family homes and Aldersgate Lane. The land uses in the vicinity of the site are primarily residential homes. Additionally, George Fox University is located approximately ½ mile south of the proposed site.

PROJECT DESCRIPTION

DJ2 Holdings, LLC is proposing to rezone the development site to R-3 High Density Residential, which would allow for a maximum of 168 apartment units. Once the rezone is complete, the DJ2 Holdings, LLC intends to build the Martell Commons apartment complex, which will only have up to 128 units. Access to the site will be provided by a driveway to Villa Road and two driveways to Park Lane. Construction of this residential development is expected to begin in the 2015 and the anticipated build-out year is 2016.

TRANSPORTATION FACILITIES

Table 1: Existing Transportation Facilities

Roadway	Functional Classification ¹	Number of Lanes	Speed Limit (mph)	Sidewalks	Bicycle Lanes	On-Street Parking Allowed?
Aldersgate Lane	Local/Residential	2	25 (Not Posted)	Yes	No	Yes
Crestview Drive	Minor Collector	2	25	Partial	Sharrow	In Areas
Park Lane	Local/Residential	2	25 (Not Posted)	North Side Only	No	Yes
Villa Road	Major Collector	2	25	Partial	Partial Bicycle Lanes & Sharrow	No
Fulton Street	Major Collector	2/3	25	Yes	Sharrow	No
OR 99W	Major Arterial/Statewide Highway	6	35	Yes	Yes	No

¹ Per City of Newberg Transportation System Plan Update (Reference 1)

Figure 3 displays the existing lane configurations and traffic control devices at the identified existing study intersections.

Pedestrian and Bicycle Facilities

Bicycles are currently accommodated in the study area with the use of bicycle lanes or sharrows on OR 99W, Villa Road, Crestview Drive, and Fulton Street. The pedestrian and bicycle network in the immediate vicinity of the site (i.e. Villa Road) is largely incomplete. To the south, no continuous pedestrian route currently exists between the proposed development site and George Fox University or OR 99W.

Transit Facilities

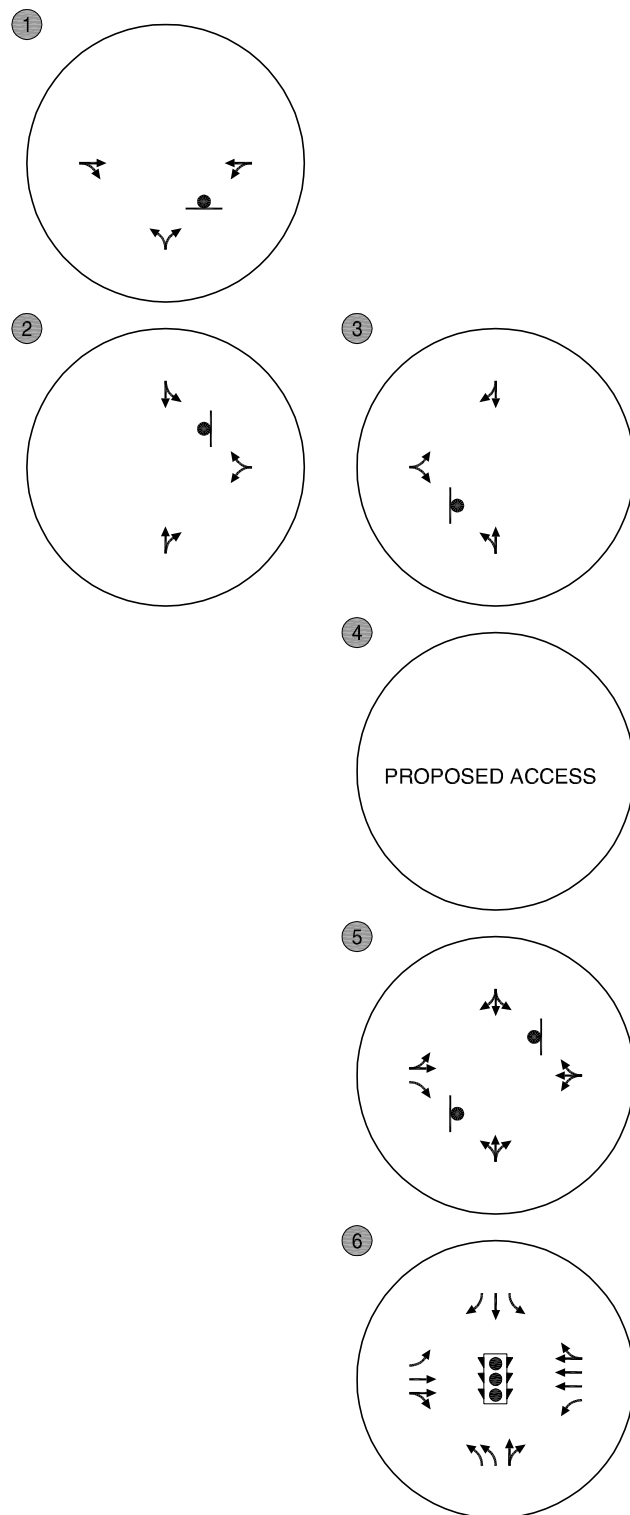
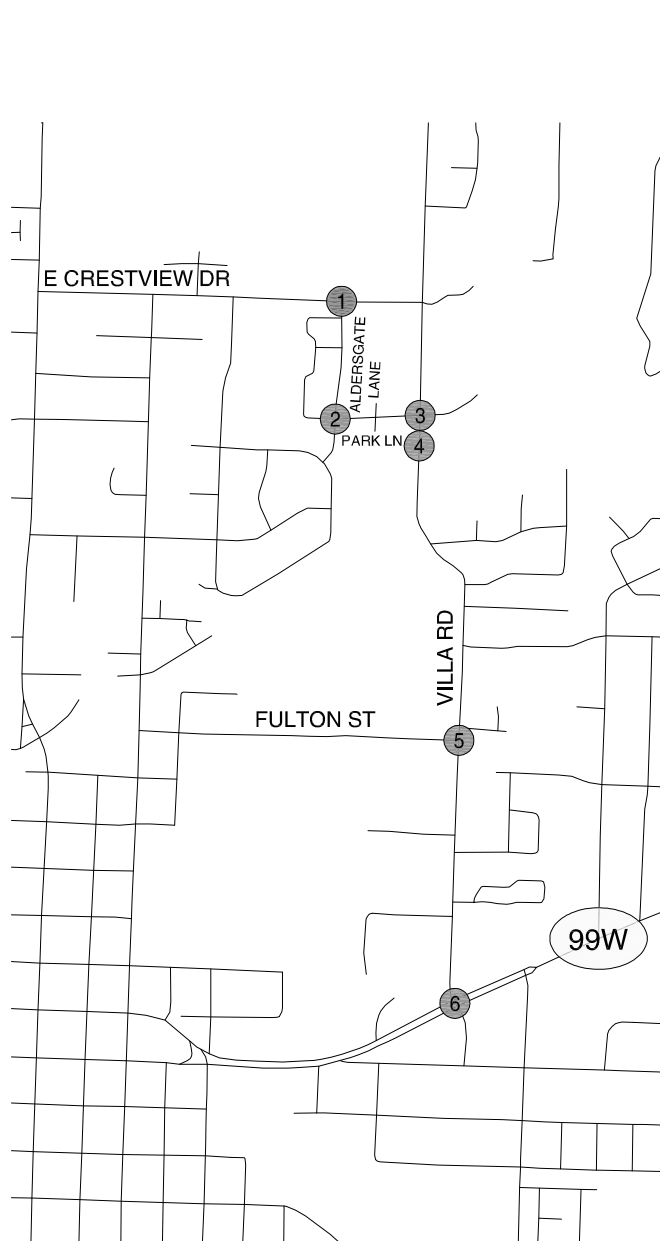
Local transit service is not provided in the vicinity of the proposed site. Yamhill County Transit operates bus routes along OR 99W approximately $\frac{3}{4}$ mile south of the proposed site, and along College Street approximately $\frac{1}{2}$ mile from proposed site.

TRAFFIC VOLUMES AND PEAK HOUR OPERATIONS

In September 2014, manual turning-movement counts were obtained for the all the existing study intersection. All the counts used in this analysis were conducted on a typical mid-week day, while George Fox University was in session, during the morning (7:00 to 9:00 a.m.) and evening (4:00 to 6:00 p.m.) peak time periods. The system-wide morning and evening peak hours were found to occur between 7:05 a.m. and 8:05 a.m. and 5:00 p.m. and 6:00 p.m., respectively. Figure 4 provides a summary of the existing traffic volumes at all study intersections for the weekday a.m. and p.m. peak hours. *Appendix "A" contains the traffic count worksheets used in this study.*

Current Levels of Service

All level-of-service analyses described in this report were performed in accordance with the procedures stated in the *2000 Highway Capacity Manual* (Reference 2). *A description of level of service and the criteria by which they are determined is presented in Appendix "B".* Appendix "B" also indicates how level of service is measured and what is generally considered the acceptable range of level of service. Intersection level of service (LOS) is analogous to the letter grades in a school report card. Motorists using an intersection that operates at LOS "A" experience very little delay, while those using an intersection that operates at LOS "F" will experience intolerably long delays. Additionally, *2010 Highway Capacity Manual* (Reference 3) analysis has been conducted for ODOT maintained intersections.



PROPOSED ACCESS

LEGEND

- STOP SIGN
- TRAFFIC SIGNAL

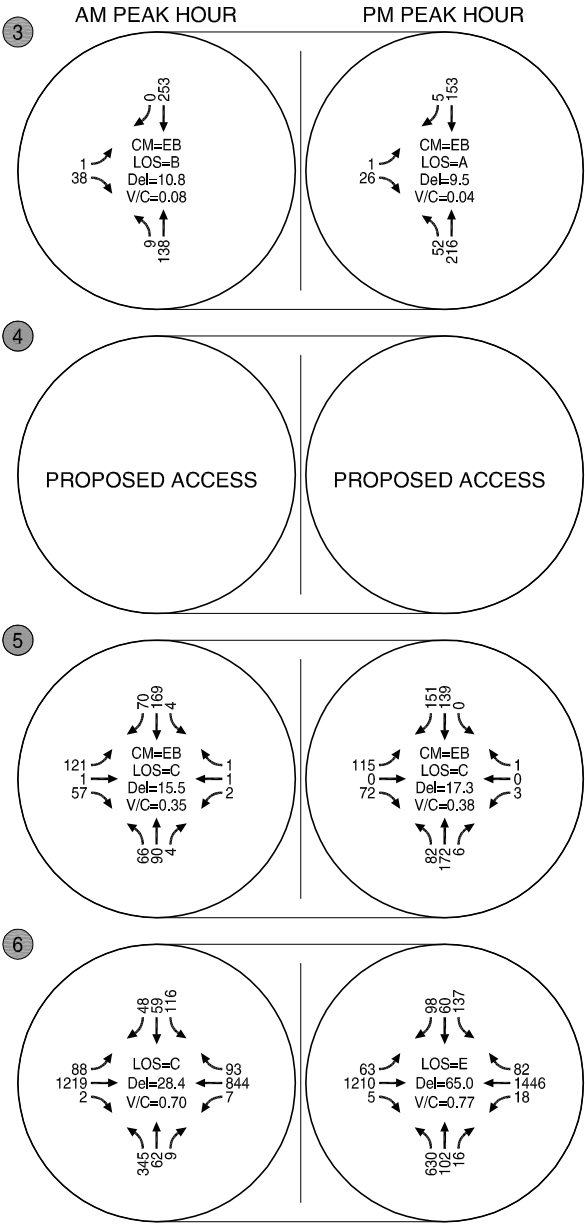
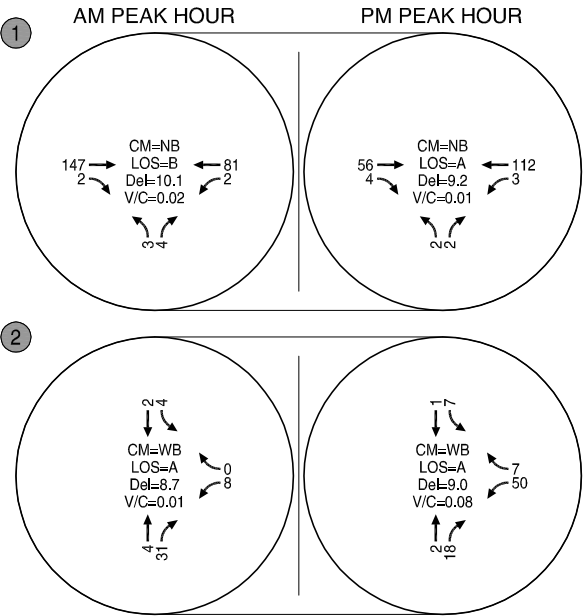
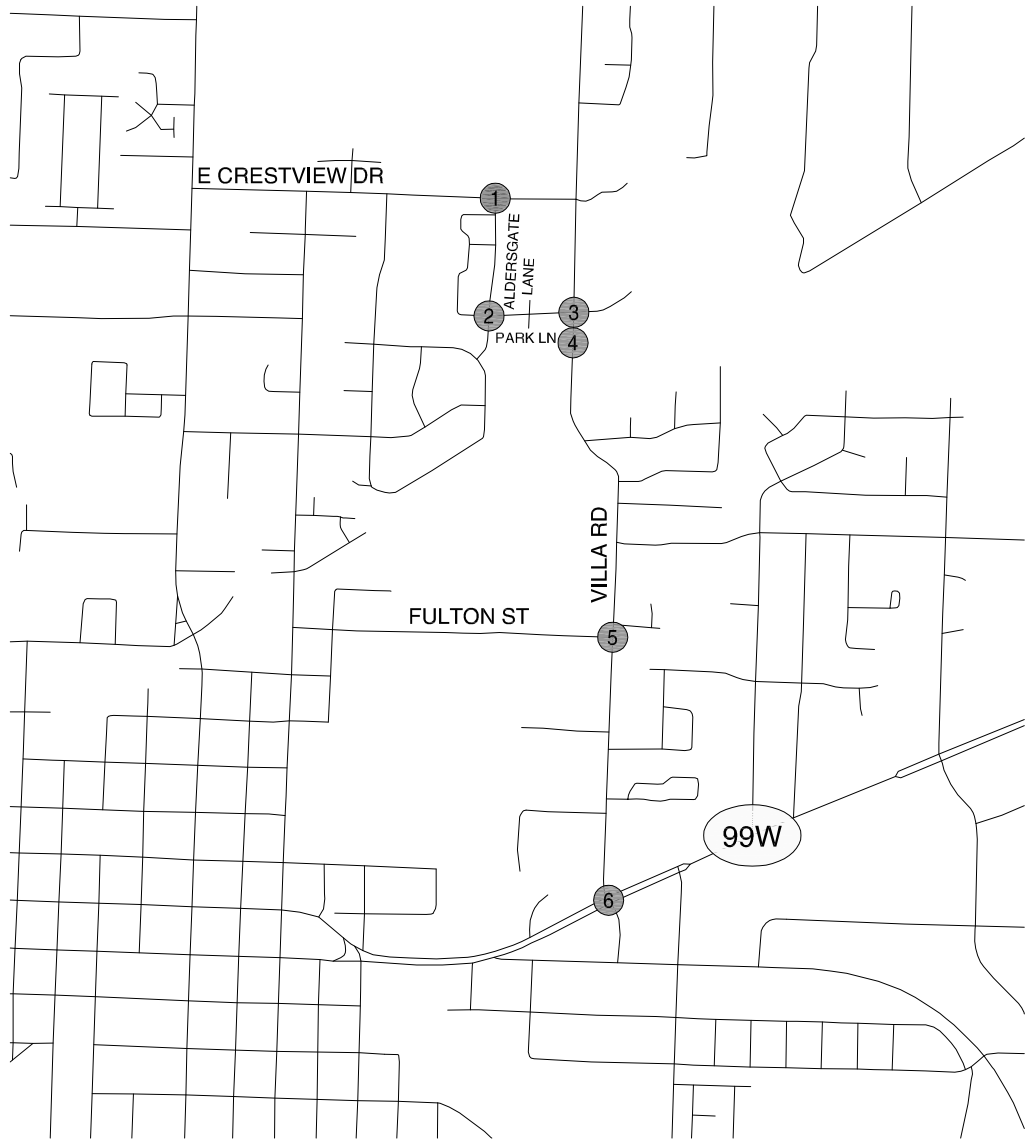
EXISTING LANE CONFIGURATIONS
AND TRAFFIC CONTROL DEVICES
NEWBERG, OREGON

FIGURE
3



(NO SCALE)

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LEGEND

CM = CRITICAL MOVEMENT (TWSC)
LOS = INTERSECTION LEVEL OF SERVICE
(SIGNALIZED/AWSC)/CRITICAL MOVEMENT
LEVEL OF SERVICE (TWSC)
Del = INTERSECTION AVERAGE CONTROL DELAY
(SIGNALIZED/AWSC) / CRITICAL MOVEMENT
CONTROL DELAY (TWSC)
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
TWSC = TWO-WAY STOP CONTROL
AWSC = ALL-WAY STOP CONTROL

EXISTING TRAFFIC CONDNTIONS
WEEKDAY AM AND PM PEAK HOURS
NEWBERG, OREGON

All of the study intersections, except the Villa Road/OR 99W intersection, are City maintained. The City of Newberg has a level of service standard for signalized and unsignalized intersections of LOS "D" or better. The Villa Road/OR 99W intersection is ODOT maintained. ODOT uses the v/c ratio to evaluate intersection performance. Per the *Oregon Highway Plan* (Reference 4) the v/c ratio mobility target for this intersection 0.85 or less during peak hours.

All intersection level-of-service evaluations used the peak 15-minute flow rate during the weekday a.m. and p.m. peak hours. Using the peak 15-minute flow rate ensures that this analysis is based on a reasonable worst-case scenario. For this reason, the analysis reflects conditions that are only likely to occur for 15 minutes out of each average peak hour. The transportation system will likely operate under conditions better than those described in this report during all other time periods.

Figure 4 also summarizes the existing operations for all study intersections under the weekday a.m. and p.m. peak hours. All of the study intersections currently operate at levels of service and v/c ratios that meet agency standards during the weekday a.m. and p.m. peak hours. *Appendix "C" includes the level-of-service worksheets under existing traffic conditions.*

Traffic Safety

The reported crash histories at all study intersections was reviewed to identify potential safety issues. ODOT provided crash records from the study intersections for the five-year period, from January 1, 2009, through December 31, 2013. Table 2 summarizes the crash data at study the existing intersections. *Appendix "D" includes the crash data sheets.*

Table 2: Intersection Crash Summary (2009-20013)

Intersection	Crash Type						Severity		Total Crashes	Crashes per MEV ²
	Rear End	Right Angle	Turning	Pedestrian or Bike	Side Swipe	Other	PDO*	Injury		
Aldersgate Lane/Crestview Drive	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹	N/A ¹
Aldersgate Lane/Park Lane	-	-	-	-	-	-	-	-	0	-
Villa Road/Park Lane	-	-	-	-	-	-	-	-	0	-
Villa Road/Fulton Street	-	-	-	-	-	-	-	-	0	-
Villa Road/OR 99W	24	0	6	0	1	2	21	12	33	0.46

¹No ODOT crash data was reported for this intersection.

² Million Entering Vehicles, as determined by multiplying PM peak hour entering volumes by a factor of 10 to estimate daily traffic.

As shown in Table 2, no crashes were reported at study intersections other than the Villa Road/OR 99W intersection. Of the 33 crashes at this intersection, 24 were read-end collisions. Rear end crashes are common at signalized intersections. The crash rate per million entering vehicles (MEV) at this study intersection was below 1.0. No safety deficiencies were identified at this or the other remaining study intersections based on reported crash histories. Additionally, the crash history for the segment of Villa Road, not including the study intersections, was analyzed between Park Lane and OR 99W. Of the four crashes reported in this segment three involved bicycles. This patterns indicates a potential need for additional bicycle connectivity or facility enhancements.

Section 4 Transportation Impact Analysis

TRANSPORTATION IMPACT ANALYSIS

The transportation impact analysis identifies how the study area's transportation system will operate in the year the proposed development is expected to be fully occupied (2016) and over the long-term planning horizon year (2035). The impact of traffic generated by the proposed Martell Commons project during the typical weekday a.m. and p.m. peak hours was examined as follows:

- Background traffic conditions for the years 2016 (build-out year of the proposed development) were analyzed at each of the study intersections during the weekday a.m. and p.m. peak hours.
- Background conditions were developed by applying a 6.63-percent annual growth rate to the existing traffic volumes to account for expected short-term growth in the site vicinity.
- Site-generated trips were estimated for the Martell Commons development.
- Site trip-distribution patterns were based on existing traffic patterns and the location of major trip origins and destinations in the area, including George Fox University.
- Year 2016 (build-out year of the proposed Martell Commons development) traffic conditions were analyzed at each of the study intersections during the weekday a.m. and p.m. peak hours.

Additionally, to analyze the effects of the proposed rezone from R-1 Low Density Residential to R-3 High Density Residential, a long-term analysis was conducted for the planning horizon year 2035 as follows:

- Background traffic conditions for the year 2035 (TSP planning horizon year) were analyzed at each of the study intersections during the weekday p.m. peak hour. Background traffic volumes were developed based on the City's TSP Update which includes volumes at select intersections such as Villa Road/OR 99W and Villa Road/Fulton Street.
- A reasonable worst case site development scenario was developed under the proposed R-3 High Density Residential zoning and under the existing R-1 Low Density Residential Zoning. The difference in the two scenarios represents the increase in potential traffic volumes that could be caused by the proposed rezone.
- Site trip-distribution patterns were derived as described above, with increased traffic volumes associated with the zone change assigned to the existing study intersections.
- Year 2035 (TSP planning horizon year) traffic conditions were analyzed at each of the study intersections and the proposed site-access to Villa Road during the weekday p.m. peak hour.

YEAR 2016 BACKGROUND TRAFFIC CONDITIONS

The year 2016 background traffic analysis identifies how the study area's transportation system will operate without the proposed Martell Commons development. As stated previously, a 6.63-percent annual growth was used to account for background traffic growth. This growth rate was based on the

average growth rate between the 2014 turning-movement counts and the year 2035 forecast volumes from the City's Transportation System Plan (TSP) update for key intersections along Villa Road.

No planned in-process developments were identified within the study area through discussions with city staff. Figure 5 displays the resulting forecast year 2016 background traffic volumes during the weekday a.m. and p.m. peak hours.

Operations Analysis

Figure 5 also summarizes the background traffic operations analysis for the study intersections under the weekday a.m. and p.m. peak hours. All City-maintained study intersections are forecast to operate at acceptable levels of service during both the weekday a.m. and p.m. peak hours. The Villa Road/OR 99W intersection is forecast to operate with a v/c ratio of 0.88 during the p.m. peak hour, and this value exceed the ODOT mobility target of 0.85. *Appendix "E" contains the year 2016 background traffic level-of-service worksheets.*

PROPOSED DEVELOPMENT PLAN

DJ2 Holdings, LLC is proposing to develop an up to 128 unit apartment complex known as the Martell Commons. The development will have a single driveway connection to Villa Road and two driveways to Park Lane, as shown in the site plan in Figure 2 and lane configurations exhibit in Figure 6. Additionally, site frontage improvements will be made along one or both sides of the Villa Road site frontage including bicycle lanes, sidewalks, and landscaping. Further, the developer desires to connect the new sidewalk on the west side of Villa Road with an existing pedestrian trail at the south end of the project, which provides connectivity to George Fox University. Additional coordination and cooperation will be needed with the City and University to ensure this connection can be made.

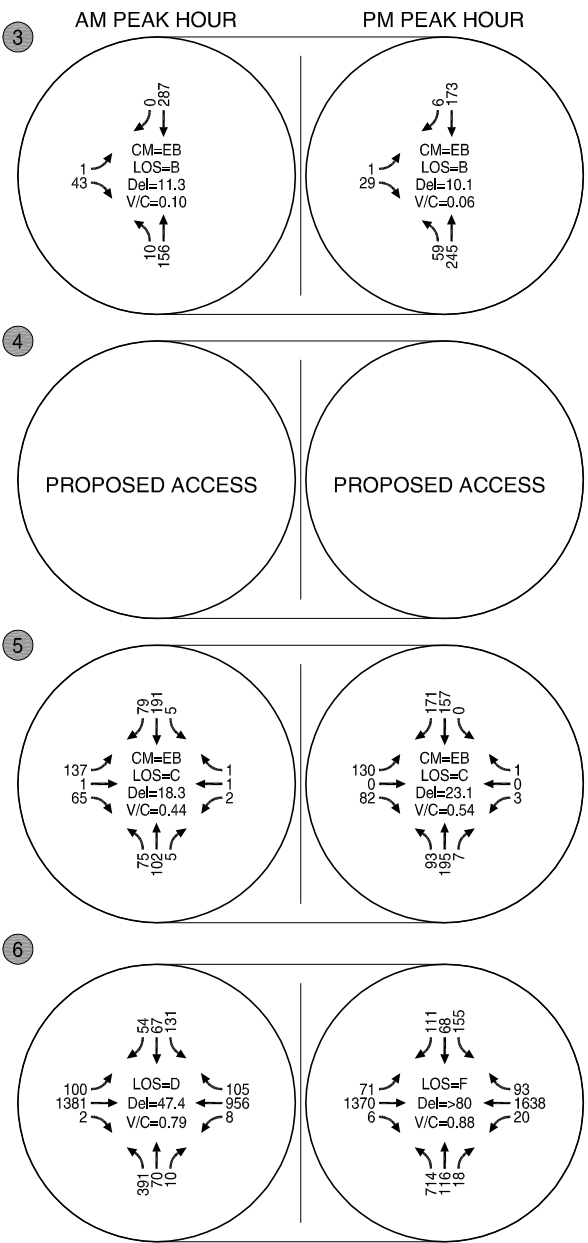
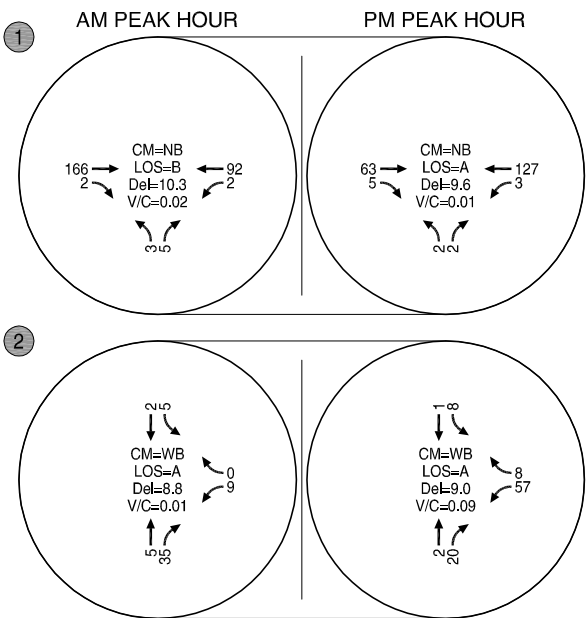
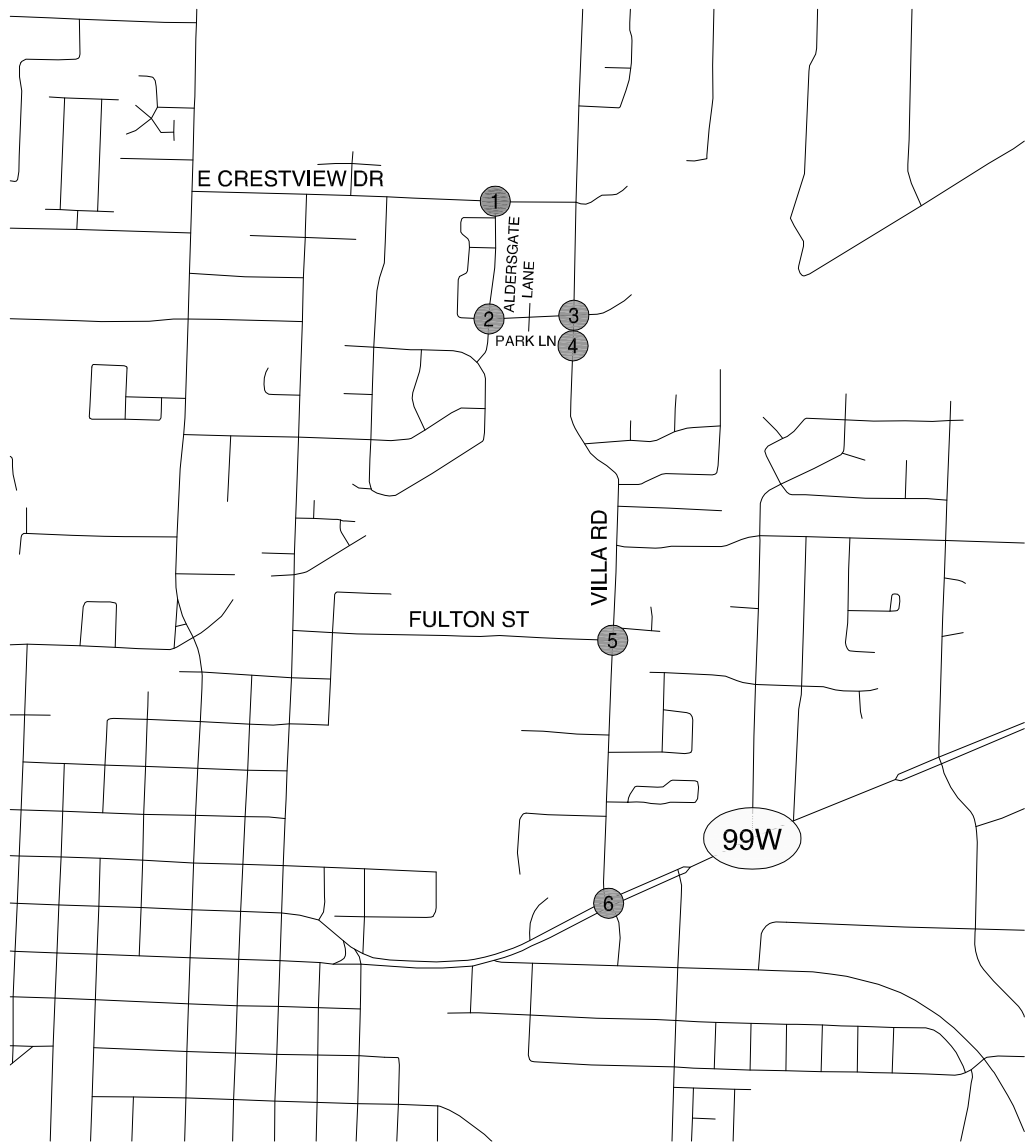
Construction is expected to begin in this year 2015 with anticipated build-out and occupancy in 2016.

Site Trip Generation

The projected weekday daily, a.m., and p.m. peak-hour vehicle trip ends for the proposed development were based on the *Trip Generation Manual*, 9th Edition (Reference 5). Table 3 summarizes the anticipated number of trips that will be generated by the proposed Martell Commons development.

Table 3: Estimated Martell Commons Trip Generation

Land Use	ITE Code	Size	Daily Trips	Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips		
				Total	In	Out	Total	In	Out
Apartments	220	128 units	899	66	13	53	88	57	31



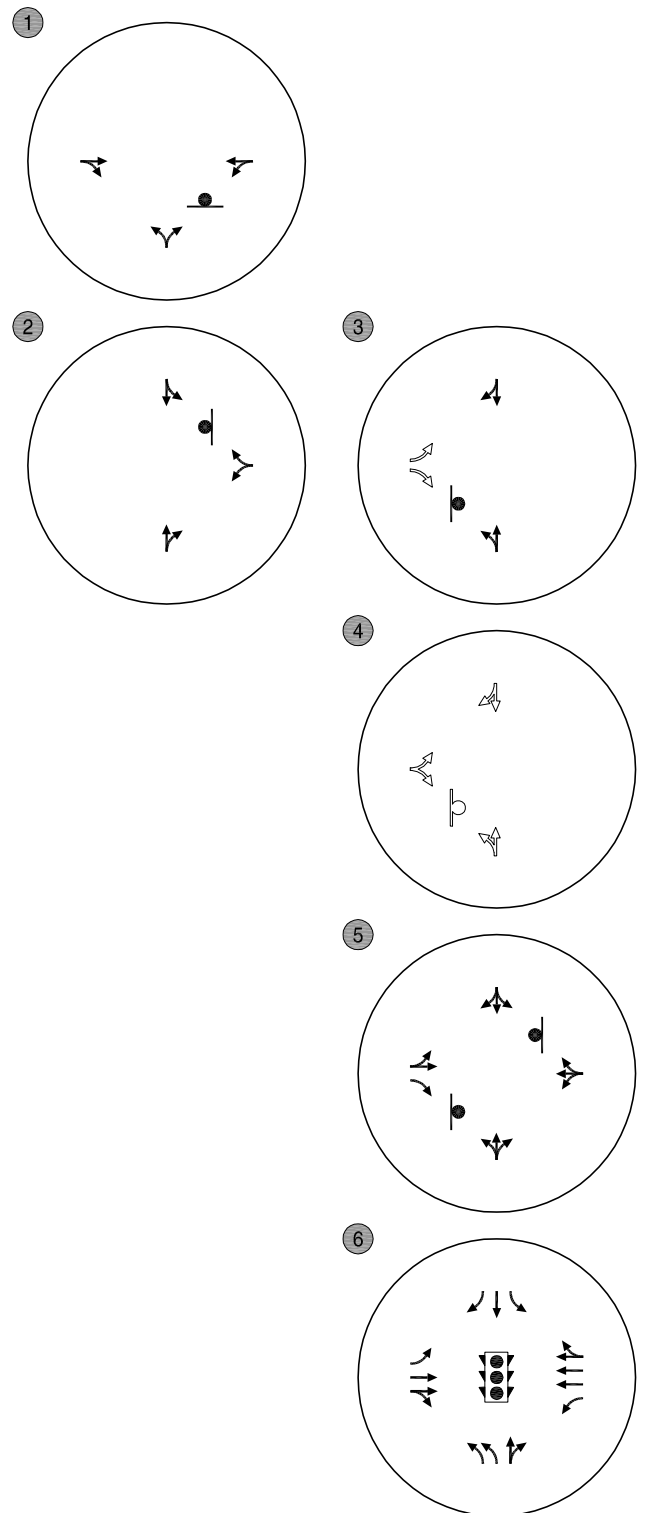
LEGEND

CM = CRITICAL MOVEMENT (TWSC)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/AWSC)/CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED/AWSC) / CRITICAL MOVEMENT CONTROL DELAY (TWSC)
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
TWSC = TWO-WAY STOP CONTROL
AWSC = ALL-WAY STOP CONTROL




2016 BACKGROUND TRAFFIC CONDNTIONS
WEEKDAY AM AND PM PEAK HOURS
NEWBERG, OREGON

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LEGEND

-  - PROPOSED
-  - STOP SIGN
-  - TRAFFIC SIGNAL

PROPOSED LANE CONFIGURATIONS
AND TRAFFIC CONTROL DEVICES
NEWBERG, OREGON

FIGURE
6

Site Trip Distribution/Trip Assignment

The site-generated trips were distributed onto the study area roadway system according to the existing traffic patterns and the location of the development site relative to major trip origins and destinations in the City (such as George Fox University). Figure 7 illustrates the estimated trip distribution pattern for the proposed development and how the site-generated trips are expected to use the roadway within the study area during the weekday a.m. and p.m. peak hours. Due to the close proximity of the proposed apartments to George Fox University, and the high probability of student occupants, 25% of generated trips were assigned to/from the George Fox University campus.

YEAR 2016 TOTAL TRAFFIC CONDITIONS

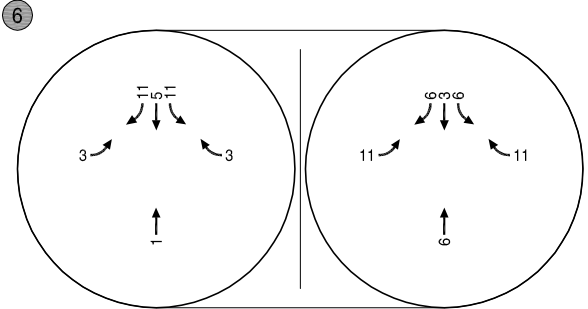
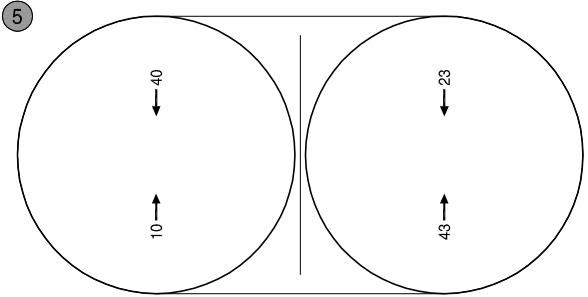
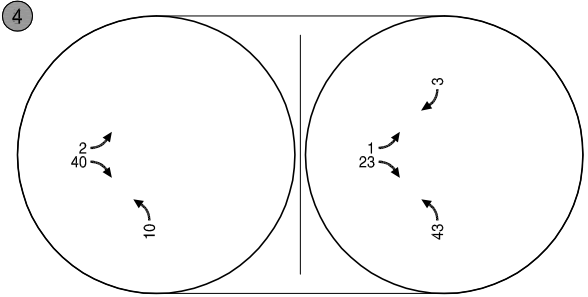
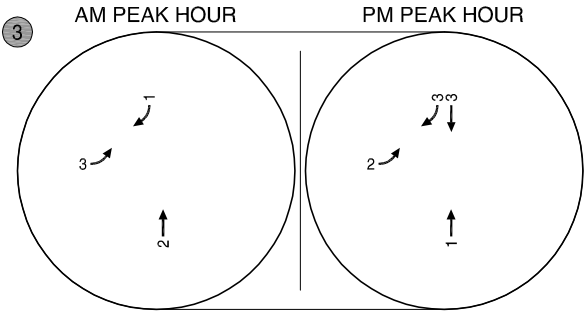
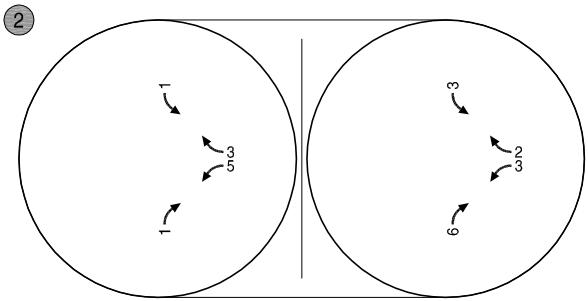
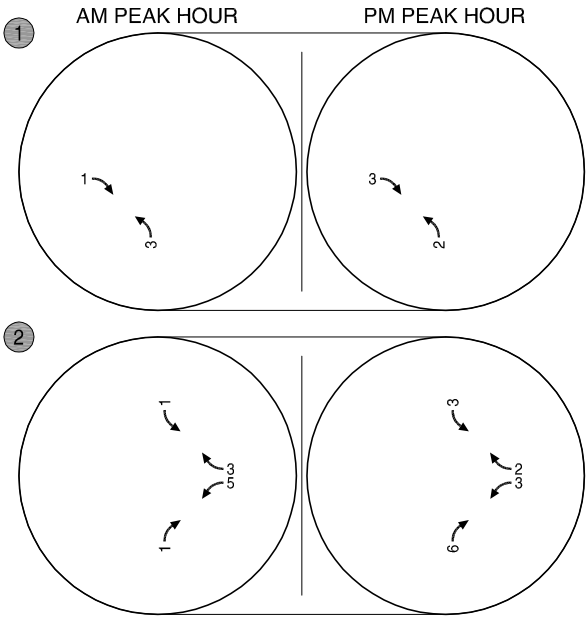
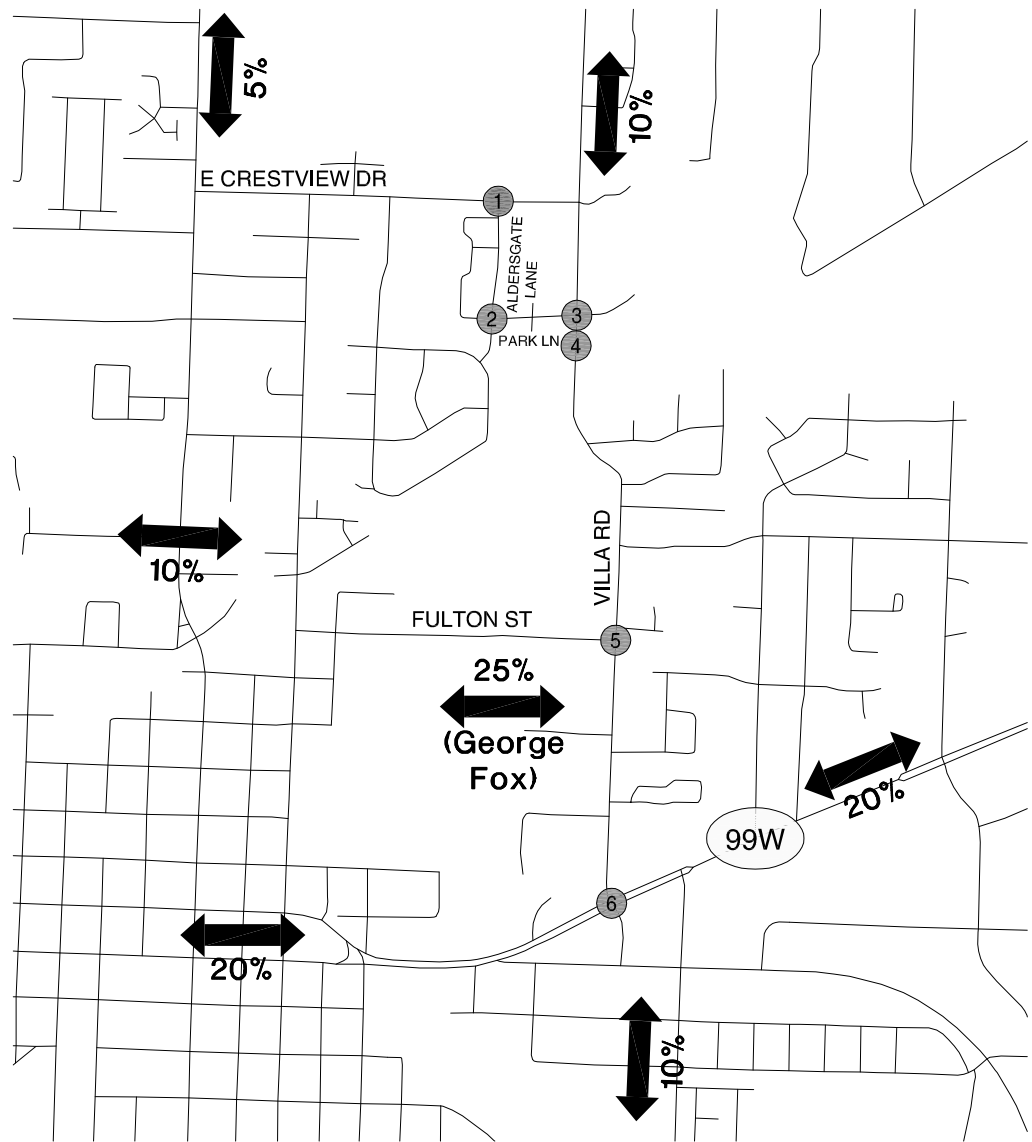
The total traffic conditions analysis forecasts how the study area's transportation system will operate with the traffic generated by the proposed Martell Commons development. The year 2016 background traffic volumes for the weekday a.m. and p.m. peak hours (shown in Figure 5) were added to the site-generated traffic (shown in Figure 7) to arrive at the total traffic volumes that are shown in Figure 8.

Intersection Level of Service

Figure 8 also summarizes the traffic operations analysis for the study intersections under weekday a.m. and p.m. peak hour total traffic conditions. All City-maintained study intersections and the proposed site access to Villa Road are forecast to operate at acceptable levels of service during both the weekday a.m. and p.m. peak hours. The Villa Road/OR 99W intersection is forecast to continue to operate with a v/c ratio of 0.88 during the p.m. peak hour. Although this value exceeds the ODOT mobility target of 0.85, it does not represent an increase relative to the background condition. This indicates the proposed site development will not materially affect operating conditions at this intersection. *Appendix "F" contains the year 2016 total traffic level-of-service worksheets.*

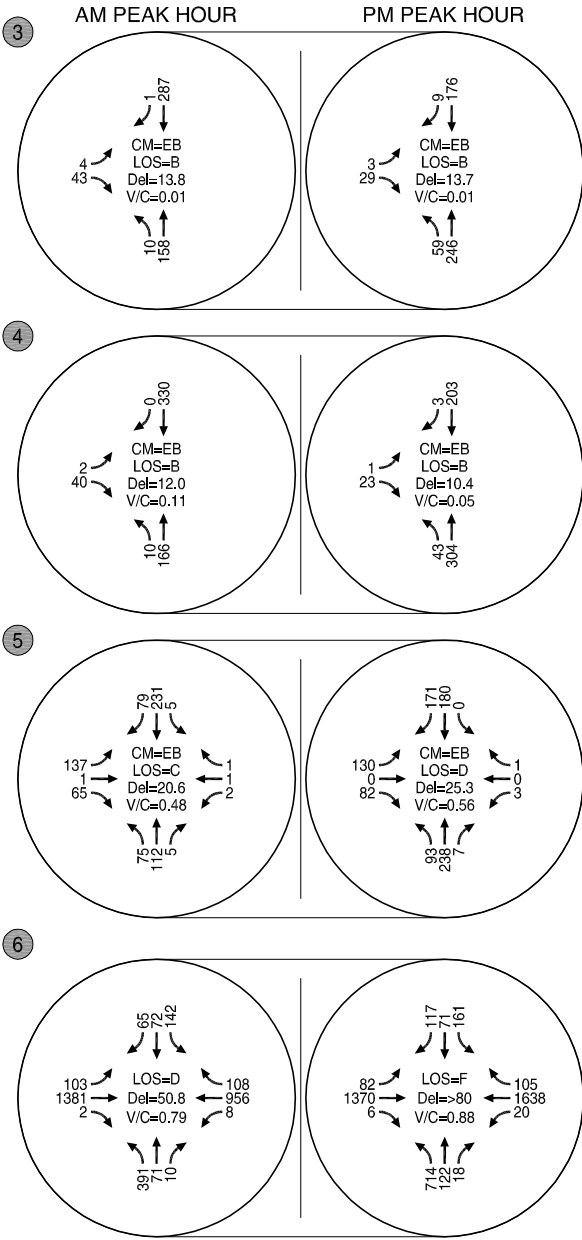
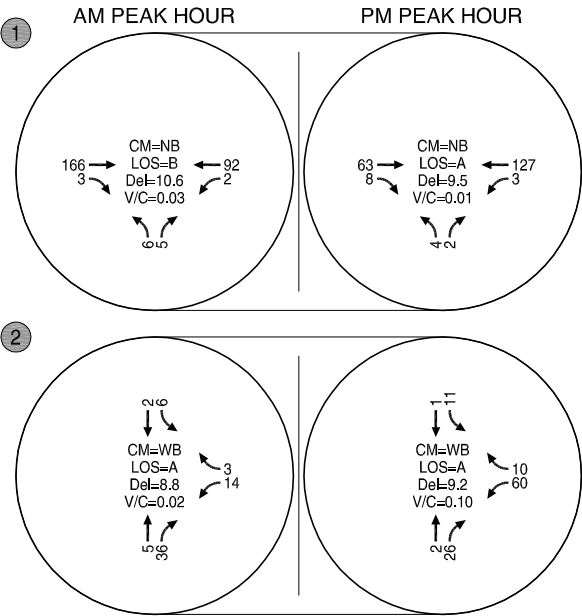
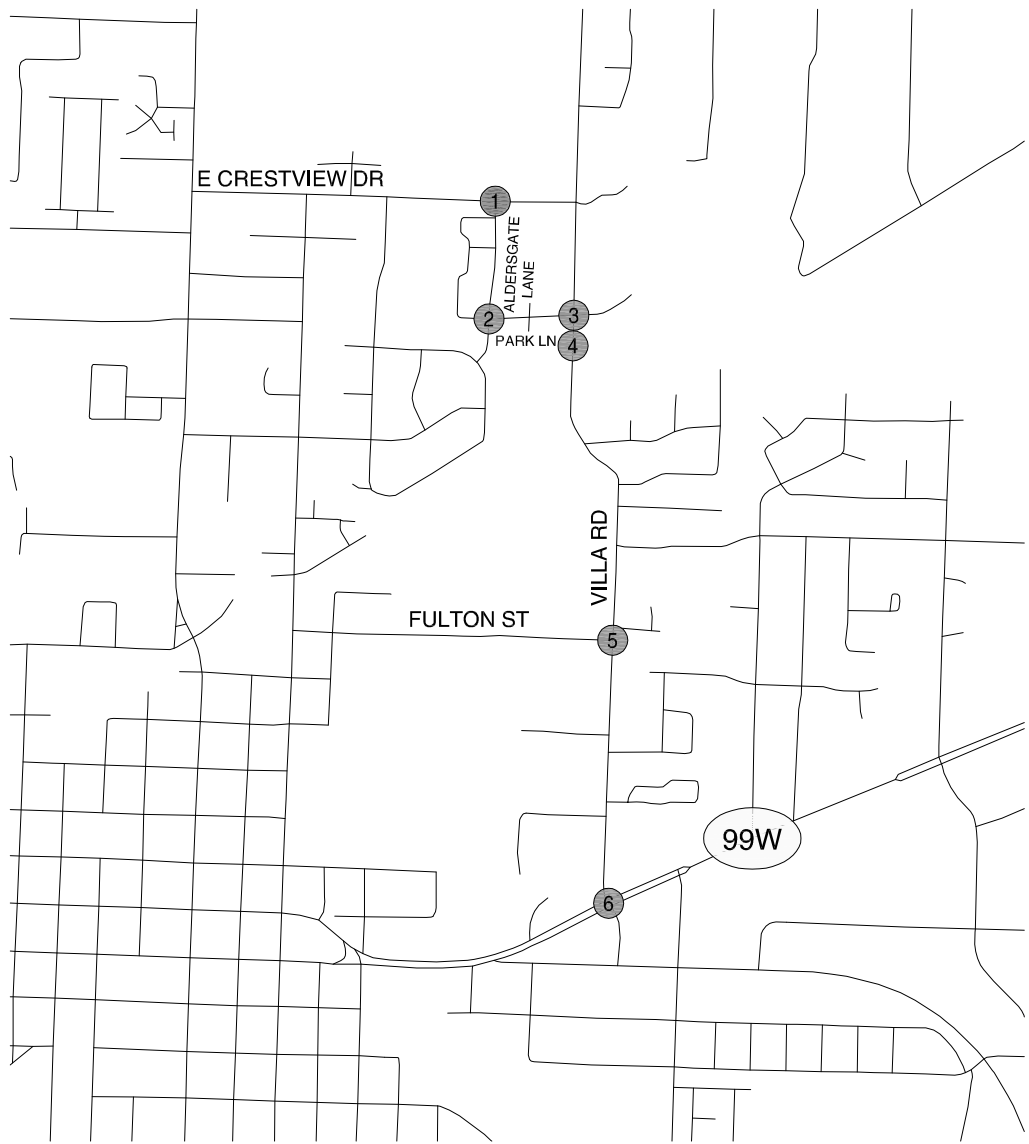


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2016 TRIP GENERATION AND DISTRIBUTION
WEEKDAY AM AND PM PEAK HOURS
NEWBERG, OREGON

FIGURE
7



LEGEND

CM = CRITICAL MOVEMENT (TWSC)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED/AWSC)/CRITICAL MOVEMENT LEVEL OF SERVICE (TWSC)
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED/AWSC) / CRITICAL MOVEMENT CONTROL DELAY (TWSC)
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
TWSC = TWO-WAY STOP CONTROL
AWSC = ALL-WAY STOP CONTROL

2016 TOTOAL TRAFFIC CONDITIONS
WEEKDAY AM AND PM PEAK HOURS
NEWBERG, OREGON

YEAR 2035 BACKGROUND TRAFFIC CONDITIONS

The year 2035 background traffic analysis identifies how the study area's transportation system will operate without the proposed zone change and assuming the site is reasonably developed to its fullest potential under current zoning.

Traffic Forecast Volumes

As stated previously, these volumes were based on the year 2035 volume forecasts from the City's TSP update. The City's TSP update accounts for anticipated growth in land uses as well as major transportation projects that are funded and expected to be built by the year 2035, including Phase 1 of the Newberg-Dundee Bypass. Figure 9 displays the forecast year 2035 background traffic volumes during the weekday p.m. peak hour, which is the only travel time period assessed in the TSP.

Operations Analysis

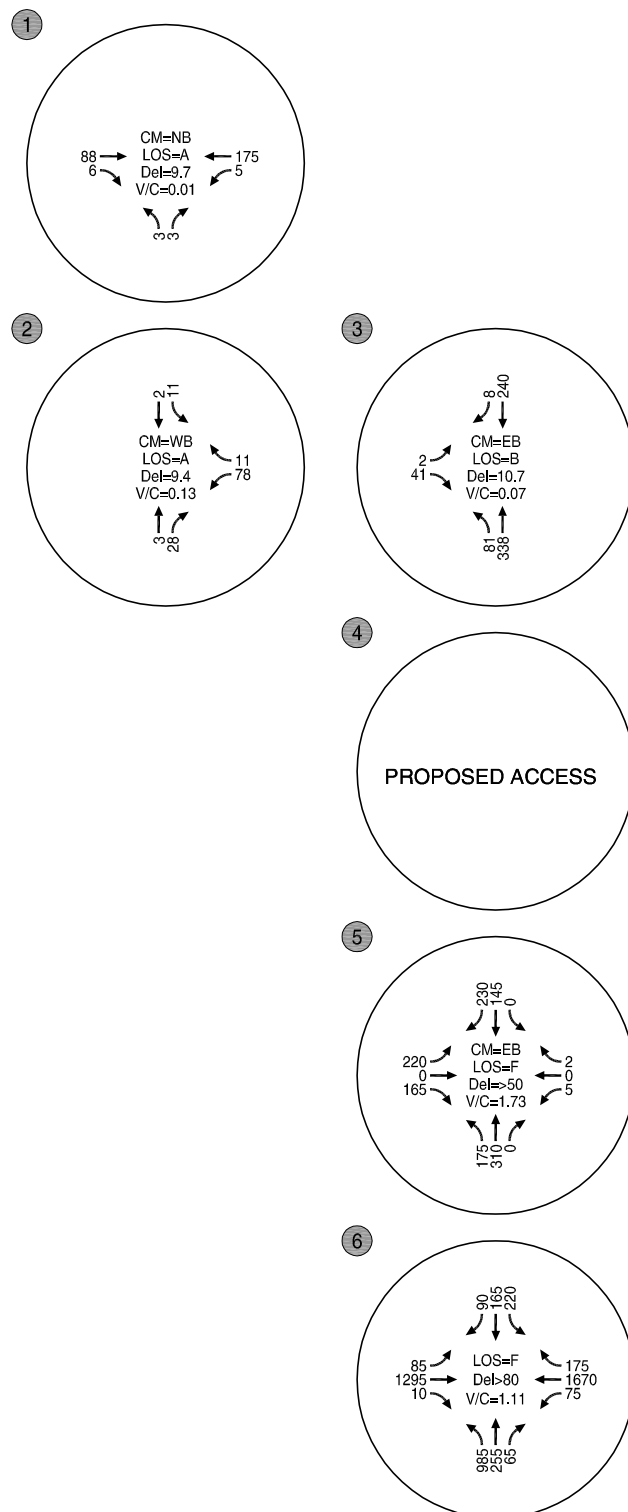
Figure 9 also summarizes the traffic operations analysis for the study intersections under the weekday p.m. peak hour background traffic condition. All City-maintained study intersections, except Villa Road/Fulton Street, are forecast to operate at acceptable levels of service during the weekday p.m. peak hour. The Villa Road/Fulton Street intersection is forecast to operate at LOS "F" which exceeds the City's mobility target of LOS "D" or better. Additionally, the Villa Road/OR 99W intersection is forecast to operate with a v/c ratio of 1.11 during the p.m. peak hour, which exceeds the ODOT mobility target of 0.85. *Appendix "G" contains the year 2035 background traffic level-of-service worksheets.*

YEAR 2035 TOTAL TRAFFIC CONDITIONS

The total traffic conditions analysis forecasts how the study area's transportation system will operate in 2035, if the proposed zone change occurs and the site is reasonably developed to its fullest potential.

Traffic Forecast Volumes

The year 2035 site-generated traffic volumes were developed based on reasonable worst case estimates for site development scenarios under the existing R-1 Low Density Residential zoning (30 single family homes) and the proposed R-3 High Density Residential zoning (168 apartment units). Table 2 displays the reasonable worst case trip generation for both zoning scenarios as well as the net difference between them. As shown, the proposed rezone has the potential to increase site trips by 795 average daily trips, 55 weekday a.m. peak hour trips, and 74 weekday p.m. peak hour trips.



LEGEND

CM = CRITICAL MOVEMENT (TWSC)
 LOS = INTERSECTION LEVEL OF SERVICE
 (SIGNALIZED/AWSC)/CRITICAL MOVEMENT
 LEVEL OF SERVICE (TWSC)
 Del = INTERSECTION AVERAGE CONTROL DELAY
 (SIGNALIZED/AWSC) / CRITICAL MOVEMENT
 CONTROL DELAY (TWSC)
 V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
 TWSC = TWO-WAY STOP CONTROL
 AWSC = ALL-WAY STOP CONTROL

2035 BACKGROUND TRAFFIC CONDITIONS
 WEEKDAY PM PEAK HOURS
 NEWBERG, OREGON

FIGURE

9

Table 4: 2035 Reasonable Worst Case Trip Generation Scenarios

Zoning	Land Use	ITE Code	Size	Daily Trips	Weekday AM Peak Hour Trips			Weekday PM Peak Hour Trips		
					Total	In	Out	Total	In	Out
R-3 (proposed)	Apartments	220	168 units	1,142	86	17	69	110	72	38
R-1 (existing)	Single Family Housing	210	30 units	347	31	8	23	36	23	13
Net Difference (Increase)				795	55	9	46	74	49	25

Site Trip Distribution/Trip Assignment

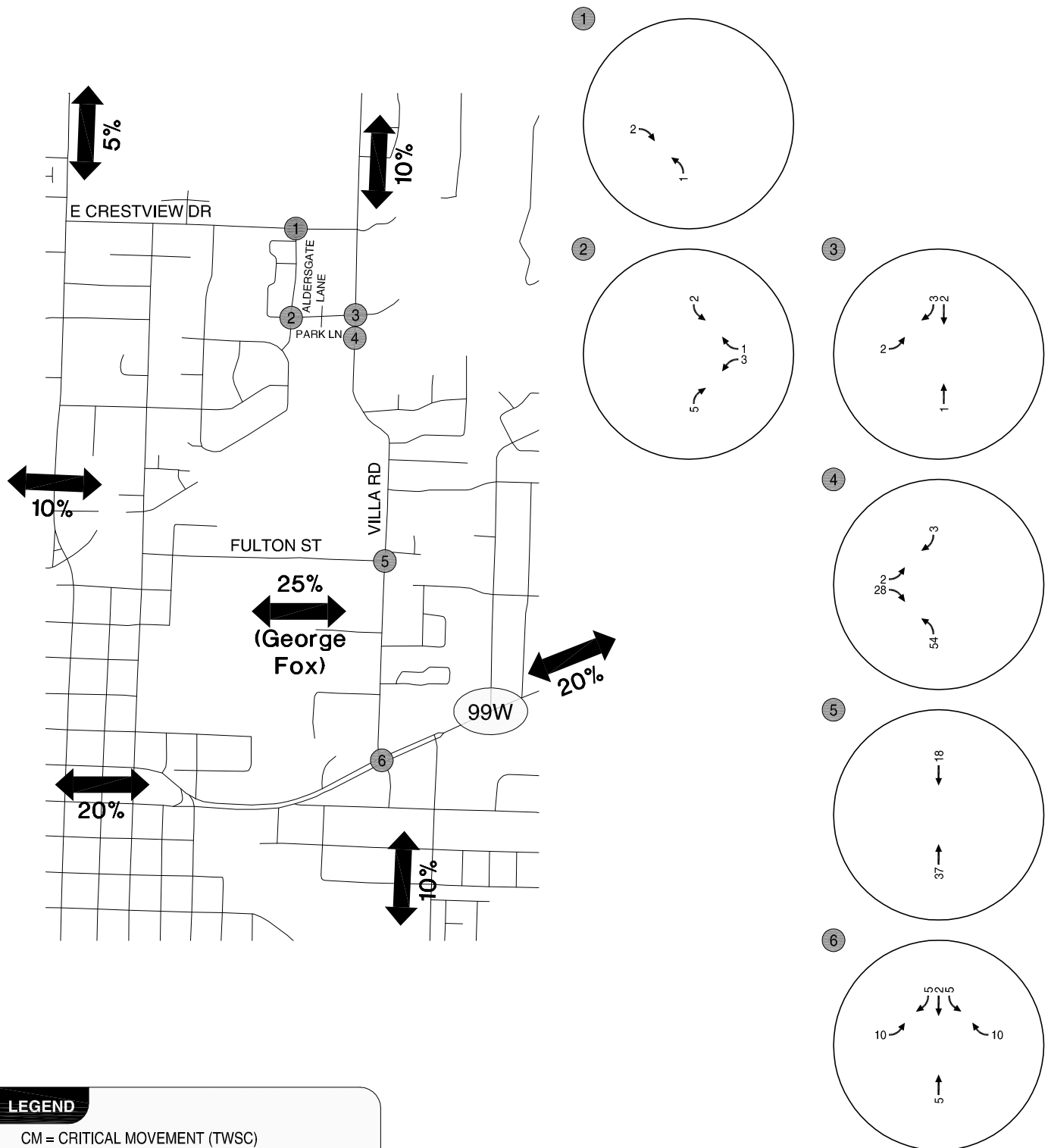
The estimated increase in site-generated trips shown in Table 4 above were distributed onto the study area roadways according to existing traffic patterns, and the location of major trip origins and destinations in the City. Figure 10 illustrates the estimated trip distribution pattern for the proposed development and how the site-generated trips are expected to use the roadways within the study area during the weekday p.m. peak hour. Again, due to the close proximity of the proposed apartments to George Fox University, and the high probability of student occupants, 25% of generated trips were assigned to/from the George Fox University campus.

The year 2035 background traffic volumes (shown in Figure 9) for the weekday p.m. peak hour were added to the year 2035 p.m. peak hour site-generated traffic volumes (shown in Figure 10) to arrive at the year 2035 total traffic volumes that are shown in Figure 11.

Intersection Operations

Figure 11 also summarizes the traffic operations analysis for the study intersections under the weekday p.m. peak hour total traffic condition. All City-maintained study intersections, except Villa Road/Fulton Street, are forecast to operate at acceptable levels of service during the weekday p.m. peak hour. The Villa Road/Fulton Street intersection is forecast to operate at LOS "F" which exceeds the City's mobility target of LOS "D" or better. Additionally, the Villa Road/OR 99W intersection is forecast to operate with a v/c ratio of 1.12 during the p.m. peak hour, which exceeds the ODOT mobility target of 0.85.

Potential mitigation measures for both study intersections are addressed in the following section. However, it should be emphasized that the Villa Road/OR 99W intersection is forecast to experience a very small increase (0.01) in the v/c ratio compared to 2035 background conditions. Further discussion regarding how this intersection will not be significantly affected by the proposed rezone is included. *Appendix "H" includes the year 2035 total traffic level-of-service worksheets.*

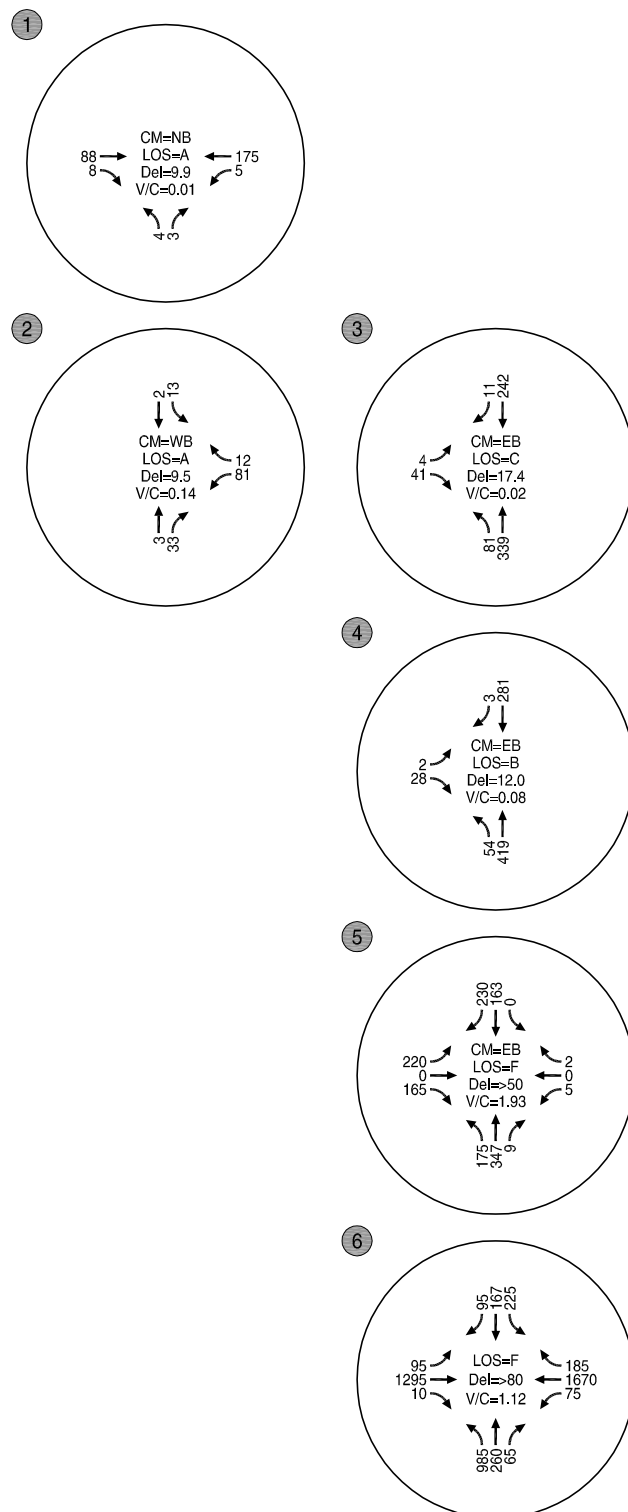


LEGEND

CM = CRITICAL MOVEMENT (TWSC)
 LOS = INTERSECTION LEVEL OF SERVICE
 (SIGNALIZED/AWSC)/CRITICAL MOVEMENT
 LEVEL OF SERVICE (TWSC)
 Del = INTERSECTION AVERAGE CONTROL DELAY
 (SIGNALIZED/AWSC) / CRITICAL MOVEMENT
 CONTROL DELAY (TWSC)
 V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
 TWSC = TWO-WAY STOP CONTROL
 AWSC = ALL-WAY STOP CONTROL

2035 TRIP GENERATION AND DISTRIBUTION
 WEEKDAY PM PEAK HOURS
 NEWBERG, OREGON

FIGURE
10

**LEGEND**

CM = CRITICAL MOVEMENT (TWSC)
 LOS = INTERSECTION LEVEL OF SERVICE
 (SIGNALIZED/AWSC)/CRITICAL MOVEMENT
 LEVEL OF SERVICE (TWSC)
 Del = INTERSECTION AVERAGE CONTROL DELAY
 (SIGNALIZED/AWSC) / CRITICAL MOVEMENT
 CONTROL DELAY (TWSC)
 V/C = CRITICAL VOLUME-TO-CAPACITY RATIO
 TWSC = TWO-WAY STOP CONTROL
 AWSC = ALL-WAY STOP CONTROL

2035 TOTAL TRAFFIC CONDITIONS
 WEEKDAY PM PEAK HOURS
 NEWBERG, OREGON

FIGURE
11

Potential Villa Road/Fulton Street Mitigation

This intersection is projected to operate at LOS “F” during the 2035 weekday p.m. peak hour regardless of the site development, due to increased traffic forecasted on all street approaches. The currently adopted *2005 Transportation System Plan* (Reference 6) references a project to install either a traffic signal, roundabout, or four-way stop at this intersection.

As a potential interim step to a full signalization, it is recommended that all way stop control be established at this intersection to delay the onset of adverse operating conditions. With this change in place, the Villa Road/Fulton Street intersection is forecast to operate at LOS “E” in 2035, which still exceeds the City’s mobility target but is a relative improvement over the LOS “F” condition forecast for 2035 background and total traffic conditions. In addition, this change would provide better intersection access for movements associated with Fulton Street and enhance the ability for pedestrian crossings. *Appendix “I” includes the year 2035 mitigated total traffic level-of-service worksheets.*

Potential Villa Road/OR 99W Mitigation

There are no practical capacity-enhancing measures that can be implemented for this intersection given the built-up environment, limited amount of right-of-way, and the fact that the intersection already has multiple travel lanes on all approaches. With a forecasted v/c ratio over 1.0, the intersection will operate in an oversaturated condition. These poor operating conditions are mostly attributed to the dramatic increase in left-turn demand that is forecast for the south leg of Villa Road, which is likely related to completion of Phase 1 of the Newberg-Dundee Bypass.

While this intersection is projected to exceed the ODOT v/c mobility standard in 2035 without or with the proposed rezone and development in place, the proposed development site is far removed from this intersection, at over two-thirds of a mile away. Also, the net effect of the proposed zone change is negligible, as seen by the 0.01 increase in the intersection v/c ratio. This is important to note because the Oregon Highway Plan specifically allows for minor increases in site trips when considering a property rezone (OHP Action 1F.5), up to 400 average daily trips (ADT). As shown in Table 4, an increase of 795 ADT is estimated with proposed rezone. However, because the site’s distance from OR 99W and the selected site trip distribution pattern, only 50% of this total, or 397 ADT is expected to reach the highway. This equates to a sub-400 ADT increase for the highway intersection, which means the proposed rezone will avoid further degradation to highway operations.

There are additional performance improving actions outlined in OHP Action 1F.5 designed to mitigate the traffic impacts of a rezone. They are as follows:

- System connectivity improvements for vehicles, bicycles, and pedestrians.
- Transportation demand management methods to reduce the need for additional capacity.
- Multi-modal (bicycle, pedestrian, transit) opportunities to reduce vehicle demand.
- Operational improvements to maximize use of the existing system.
- Land use techniques such as trip caps/budgets to manage trip generation.

The off-site improvements proposed for the Villa Road site frontage, which include bicycle lanes and sidewalks meet the qualifying criteria stated in the first and third bullets above. Additionally, the proposed development will connect west-side sidewalk to an existing pedestrian path and complete a continuous pedestrian connection between the development site and George Fox University. These multimodal improvements are sufficient to mitigate any minor increase in v/c ratio at the Villa Road/OR 99W intersection. Therefore, no additional mitigation measures are proposed for this intersection.

TRANSPORTATION PLANNING RULE COMPLIANCE

OAR Section 660-12-0060 Plan and Land Use Regulation Amendments of the TPR sets forth the criteria for evaluating plan and land use regulation amendments. The criteria establish the determination of significant effect on a transportation system resulting from a land use action; where a significant affect is identified, the criteria establish the means for achieving compliance. The relevant portion of this section of the TPR is reproduced below in *italics* followed by the response for this project in standard text.

660-12-0060 Plan and Land Use Regulation Amendments

(1) If an amendment to a functional plan, an acknowledged comprehensive plan, or a land use regulation (including a zoning map) would significantly affect an existing or planned transportation facility, then the local government must put in place measures as provided in section (2) of this rule, unless the amendment is allowed under section (3), (9) or (10) of this rule. A plan or land use regulation amendment significantly affects a transportation facility if it would:

(a) Change the functional classification of an existing or planned transportation facility (exclusive of correction of map errors in an adopted plan);

Response: The proposed rezone will not require or result in any changes to the functional classification of any transportation facility in the vicinity of the site.

(b) Change standards implementing a functional classification system; or

Response: The proposed rezone will not require or result in any changes to the standards that implement the functional classification system.

(c) Result in any of the effects listed in paragraphs (A) through (C) of this subsection based on projected conditions measured at the end of the planning period identified in the adopted TSP. As part of evaluating projected conditions, the amount of traffic projected to be generated within the area of the amendment may be reduced if the amendment includes an enforceable, ongoing requirement that would demonstrably limit traffic generation, including, but not limited to, transportation demand management. This reduction may diminish or completely eliminate the significant effect of the amendment.

(A) Types or levels of travel or access that are inconsistent with the functional classification of an existing or planned transportation facility;

Response: The proposed zoning designation would result in future traffic volumes that are consistent with the functional classifications of the roadways in the study area.

(B) Degrade the performance of an existing or planned transportation facility such that it would not meet the performance standards identified in the TSP or comprehensive plan; or

Response: The Villa Road/Fulton Street and Villa Road/OR 99W intersections are not forecast to meet performance standards under 2035 background conditions, without the proposed rezone. Measures to ensure compliance with the TPR are documented in the next section. All other study intersections are forecast to meet performance standards.

(C) Degrade the performance of an existing or planned transportation facility that is otherwise projected to not meet the performance standards identified in the TSP or comprehensive plan.

Response: The following measures are proposed to ensure compliance with this section of the TPR:

Villa Road and Fulton Street

As described previously, all-way stop control is recommended for this intersection to mitigate the significant effect caused by the proposed zone change. This improvement will enhance intersection operations from LOS "F" to LOS "E" during the 2035 weekday p.m. peak hour. This represents a better level of service than under 2035 background traffic conditions.

Villa Road and OR 99W

Action 1F.5 of the *Oregon Highway Plan* states that small increases in traffic, up to 400 ADT, do not cause "further degradation" of state highway facilities. Although the proposed zone change could generate an additional 795 daily trips over current zoning potential, less than 400 of these trips are anticipated to reach the Villa Road/OR 99W intersection.

Finally, Action 1F.5 allows for capacity increasing improvements that include system connectivity improvements (for vehicles, bicycles and pedestrians) and multi-modal opportunities to reduce vehicle demand. The pedestrian and bicycle improvements proposed with the development along Villa Road and the desired completion of a continuous pedestrian route from the rezone site to George Fox University will sufficiently mitigate the small increase in v/c ratio forecast the Villa Road/OR 99W intersection.

ON-SITE CIRCULATION/SITE-ACCESS OPERATIONS

Internal circulation was evaluated to ensure that the site provides sufficient on-site circulation for pedestrian movements and internal traffic. As identified in the proposed site plan in Figure 2, access to the proposed development will occur from a driveway to Villa Road and two accesses to Park Lane. The access to Villa Road is intended to reduce impacts and cut-through traffic to the existing neighborhood to the west. All proposed accesses are anticipated to function acceptably under stop-control.

Vehicle queuing needs were evaluated at the proposed site accesses to Villa Road. Under year 2035 total traffic conditions, the 95th percentile vehicle queues exiting the site were forecast to be less than 25 feet during the weekday p.m. peak hour. Additionally, the southbound right-turn and northbound left-turn queues entering the site from Villa Road were forecast to be less than 25 feet during the same period. *The queuing analysis results are included with the associated LOS worksheets.*

Per Newberg Municipal Code section 15.505.200, access spacing standards are based on the functional classification of the roadways. Access to minor collectors, such as Villa Road, must be at least 150 feet from the nearest public intersections and access to local streets, such as Park Lane, must be at least 100 feet from the nearest public intersection. Additional accesses must be located at least 75 feet from the initial access for both minor collectors and local streets. All proposed access points to adjacent streets as shown in Figure 2 are in compliance with these spacing requirements.

No permanent obstruction to sight lines exists on Park Lane along the proposed site frontage. Shrubbery, trees, other landscaping along the site frontage should be planned and maintained in a manner that does not obstruct sight distance.

Based on a field visit and aerial photography, the current horizontal alignment of Villa Road is not anticipated to interfere with achieving adequate intersection sight distance (ISD) from the proposed site driveway, based on AASHTO standards (Reference xx). Figure 12 show the available ISD based on the existing horizontal alignment. The existing vertical alignment of Villa Road, however, does obstruct ISD at the proposed site access to Villa Road looking south towards to the railroad trestle. Therefore, as part of the proposed development's site frontage design plan, the vertical profile of Villa Road should be redesigned so that adequate ISD is provided for the roadway design speed. Alternatively, the access could be redesigned as a right-in/right-out access. Additionally, landscaping along the Villa Road site frontage should be planned and maintained in a manner that does not obstruct sight distance.



HORIZONTAL INTERSECTION SIGHT DISTANCE
PROPOSED SITE ACCESS
NEWBERG, OREGON

FIGURE
12

H:\projfile\18152 - Villa Road Apartments\dwgs\18152_figs.dwg Feb 26, 2015 - 9:15am - sbussey Layout Tab: 14

Section 5 Conclusions and Recommendations

CONCLUSIONS AND RECOMMENDATIONS

The results of this traffic impact analysis report indicate that with recommended mitigation measures in place, the proposed site rezone will comply with the State's Transportation Planning Rule by not materially degrading the long-term operations of existing and planned transportation network. In addition, this report demonstrates that the construction of the Martell Commons apartment complex can be achieved while maintaining acceptable levels of service and safety on the surrounding transportation system for the build-out year, with recommended mitigation measures in place. The findings of this analysis and our recommendations are summarized below.

Existing Conditions

- All of the study intersections currently operate at acceptable levels of service during the weekday a.m. and p.m. peak hours.
- A review of crash history did not reveal any patterns at study intersections that require mitigation associated with this project.

Year 2016 Background Traffic Conditions

- All of the study intersections are forecast to continue meeting operational standards during the weekday a.m. peak hour.
- All of the study intersections, except the Villa Road/OR 99W intersection, are forecast to continue meeting operational standards during the weekday p.m. peak hour.
 - The Villa Road/OR 99W intersection is forecast to operate with a v/c ratio of 0.88 in the p.m. peak hour which exceeds the ODOT mobility standard of 0.85.

Proposed Development Plan

- The actual proposed site development for the Martell Commons complex will consist of up to 128 apartment units. This is estimated to conservatively generate 899 average daily trips, 66 trips (13 inbound, 53 outbound) during the weekday a.m. peak hour, and 88 trips (57 inbound, 31 outbound) during the weekday p.m. peak hour.

Year 2016 Total Traffic Conditions

- All of the study intersections, including the proposed site access to Villa Road, are forecast to meet operational standards during the weekday a.m. peak hour.
- All of the study intersections, except the Villa Road/OR 99W intersection, are forecast to meet operational standards during the weekday p.m. peak hour.

- As under background traffic conditions, the Villa Road/OR 99W intersection is forecast to continue to operate with a v/c ratio of 0.88 during the p.m. peak hour which exceeds the ODOT standard of 0.85.

Year 2035 Background Traffic Conditions

- All of the study intersections except the except the Villa Road/OR 99W intersection and Villa Road/Fulton Street intersection are forecast to meet operational standards during the weekday p.m. peak hour.
 - The Villa Road/OR 99W intersection is forecast to operate with a v/c ratio of 1.11 which exceeds the ODOT standard of 0.85.
 - The Villa Road/Fulton Street intersection is forecast to operate with at LOS F which exceeds the City's standard of LOS D or better.

Year 2035 Total Traffic Conditions

- With no off-site mitigation measures, all of the study intersections except the Villa Road/OR 99W intersection and Villa Road/Fulton Street intersection are forecast to continue meeting operational standards during the weekday p.m. peak hour.
 - The Villa Road/OR 99W intersection is forecast to operate with a v/c ratio of 1.12 which is an increase of 0.01 from background conditions and exceeds the ODOT standard of 0.85.
 - The Villa Road/Fulton Street intersection is forecast to continue operating at LOS F which exceeds the City's standard of LOS D or better.

Mitigation Measures

- The proposed Martell Commons development will provide multimodal improvements along Villa Road by adding pedestrian facilities and bicycle lanes on one or both sides of the roadway along the site frontage. Additionally, through additional coordination efforts, the developer desires to connect the sidewalk facilities along the site frontage to an existing pedestrian path to complete a continuous pedestrian/bicycle link between the development site and George Fox University to the south. These multimodal improvements are sufficient to mitigate the minor increase in v/c ratio generated by the development at the Villa Road/OR 99W intersection.
- The Villa Road/Fulton Street intersection should be modified to all-way stop control. This would allow the intersection to operate at LOS E, representing an improvement over year 2035 background conditions without the site development.

On-Site Circulation/Site Access Operations

- All of the proposed external site access points at Park Lane and to Villa Road will function acceptably with stop control on the minor driveway approaches.
- The vertical and horizontal alignments of the proposed full-street improvements along the Villa Road site frontage should be designed to provide adequate intersection sight distance from the proposed site access driveway.
- Shrubbery and landscaping near the site access points should be maintained to ensure adequate intersection sight distance at both site driveways to Villa Road and Park Lane.

Section 6 References

REFERENCES

1. DKS Associates, Inc. *City of Newberg Transportation System Plan Update (DRAFT Future Needs Analysis)*. November 1, 2013.
2. Transportation Research Board. *Highway Capacity Manual*. 2000.
3. Transportation Research Board. *Highway Capacity Manual*. 2010.
4. Oregon Department of Transportation, *Oregon Highway Plan*. 2011 Update.
5. Institute of Transportation Engineers. *9th Edition, Trip Generation Manual*. 2012.
6. Kittelson & Associates, Inc. *Newberg Transportation System Plan*. June 2005.

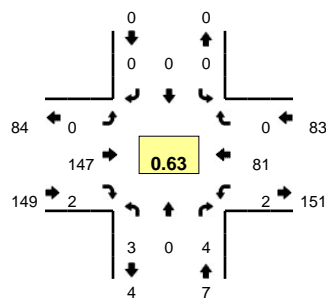
Appendix A
Traffic Count Data

Type of peak hour being reported: User-Defined

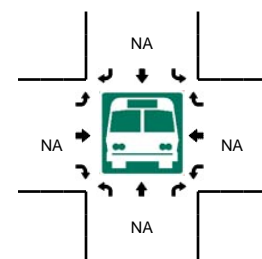
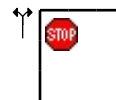
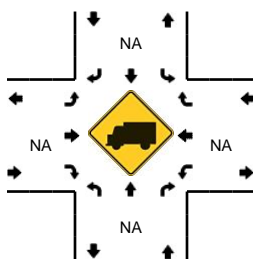
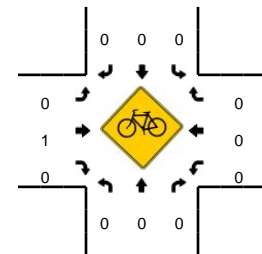
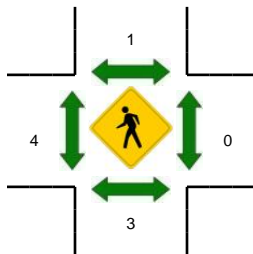
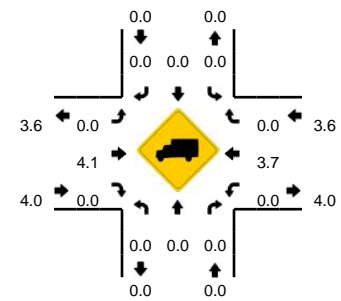
Method for determining peak hour: Total Entering Volume

LOCATION: Aldersgate Ln -- E Crestview Dr
CITY/STATE: Newberg, OR

QC JOB #: 12789209
DATE: Thu, Sep 11 2014



Peak-Hour: 7:05 AM -- 8:05 AM
Peak 15-Min: 7:15 AM -- 7:30 AM



5-Min Count Period Beginning At	Aldersgate Ln (Northbound)				Aldersgate Ln (Southbound)				E Crestview Dr (Eastbound)				E Crestview Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	0	1	0	0	0	0	0	0	5	0	0	0	1	0	0	7	
7:05 AM	0	0	1	0	0	0	0	0	0	12	0	0	1	6	0	0	20	
7:10 AM	0	0	0	0	0	0	0	0	0	11	0	0	0	2	0	0	13	
7:15 AM	0	0	1	0	0	0	0	0	0	26	2	0	0	5	0	0	34	
7:20 AM	0	0	0	0	0	0	0	0	0	23	0	0	1	5	0	0	29	
7:25 AM	1	0	0	0	0	0	0	0	0	21	0	0	0	10	0	0	32	
7:30 AM	1	0	1	0	0	0	0	0	0	15	0	0	0	8	0	0	25	
7:35 AM	0	0	0	0	0	0	0	0	0	8	0	0	0	13	0	0	21	
7:40 AM	0	0	0	0	0	0	0	0	0	8	0	0	0	7	0	0	15	
7:45 AM	0	0	1	0	0	0	0	0	0	6	0	0	0	5	0	0	12	
7:50 AM	0	0	0	0	0	0	0	0	0	1	0	0	0	8	0	0	9	
7:55 AM	1	0	0	0	0	0	0	0	0	9	0	0	0	3	0	0	13	230
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8:10 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	8	0	0	14	231
8:15 AM	0	0	0	0	0	0	0	0	0	8	0	0	0	11	0	0	19	216
8:20 AM	0	0	1	0	0	0	0	0	0	13	0	0	0	2	0	0	16	203
8:25 AM	0	0	1	0	0	0	0	0	0	7	0	0	0	4	0	0	12	183
8:30 AM	0	0	0	0	0	0	0	0	0	9	0	0	0	8	0	0	17	175
8:35 AM	0	0	0	0	0	0	0	0	0	4	0	0	0	1	0	0	5	159
8:40 AM	0	0	0	0	0	0	0	0	0	5	0	0	0	3	0	0	8	152
8:45 AM	0	0	0	0	0	0	0	0	0	7	0	0	0	3	0	0	10	150
8:50 AM	0	0	0	0	0	0	0	0	0	7	0	0	0	5	0	0	12	153
8:55 AM	0	0	0	0	0	0	0	0	0	6	0	0	0	4	0	0	10	150
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	4	0	4	0	0	0	0	0	0	280	8	0	4	80	0	0	380	
Heavy Trucks	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	0	8	
Pedestrians	0	0	0	0	4	0	0	0	8	0	0	0	0	0	0	0	12	
Bicycles	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	
Railroad																		
Stopped Buses																		

Comments:

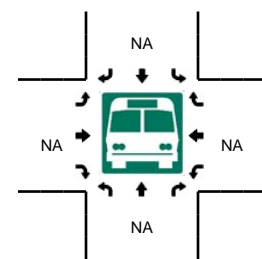
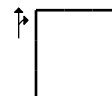
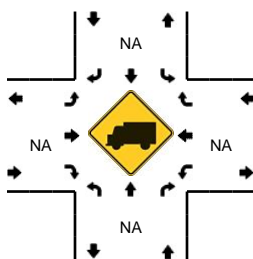
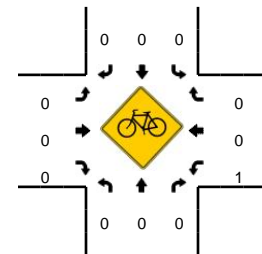
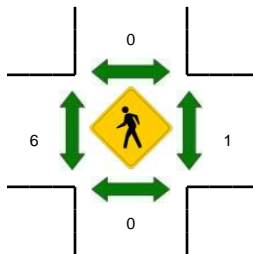
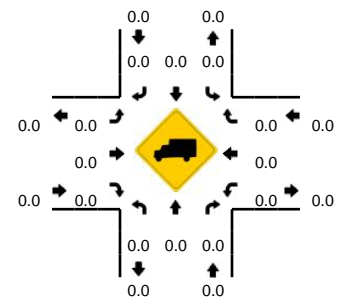
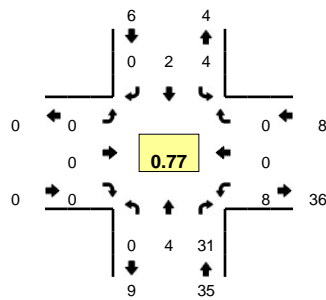
Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: Aldersgate Ln -- Park Ln
CITY/STATE: Newberg, OR

QC JOB #: 12789207
DATE: Thu, Sep 11 2014

Peak-Hour: 7:05 AM -- 8:05 AM
Peak 15-Min: 7:15 AM -- 7:30 AM



5-Min Count Period Beginning At	Aldersgate Ln (Northbound)				Aldersgate Ln (Southbound)				Park Ln (Eastbound)				Park Ln (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
7:05 AM	0	0	3	0	0	1	0	0	0	0	0	0	2	0	0	0	6	
7:10 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	
7:15 AM	0	1	3	0	2	0	0	0	0	0	0	0	1	0	0	0	7	
7:20 AM	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
7:25 AM	0	1	3	0	0	0	0	0	0	0	0	0	1	0	0	0	5	
7:30 AM	0	0	4	0	0	0	0	0	0	0	0	0	2	0	0	0	6	
7:35 AM	0	0	3	0	1	1	0	0	0	0	0	0	0	0	0	0	5	
7:40 AM	0	0	4	0	0	0	0	0	0	0	0	0	1	0	0	0	5	
7:45 AM	0	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	3	
7:50 AM	0	0	3	0	1	0	0	0	0	0	0	0	0	0	0	0	4	
7:55 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	48
8:00 AM	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	1	3	49
8:05 AM	0	0	2	0	0	0	0	0	0	0	0	0	3	0	1	0	6	49
8:10 AM	0	0	3	0	0	0	0	0	0	0	0	0	1	0	0	0	4	52
8:15 AM	0	0	4	0	1	0	0	0	0	0	0	0	0	0	0	0	5	50
8:20 AM	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	3	49
8:25 AM	0	0	4	0	1	0	0	0	0	0	0	0	0	0	0	0	5	49
8:30 AM	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	44
8:35 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	40
8:40 AM	0	1	1	0	1	0	0	0	0	0	0	0	1	0	0	0	4	39
8:45 AM	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	38
8:50 AM	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	35
8:55 AM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	2	37
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	0	12	36	0	8	0	0	0	0	0	0	0	8	0	0	0	64	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	4	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad																		
Stopped Buses																		

Comments:

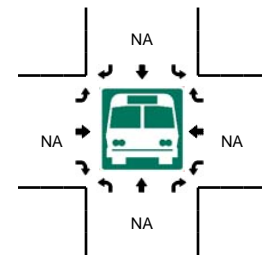
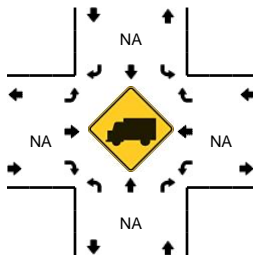
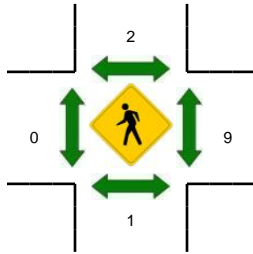
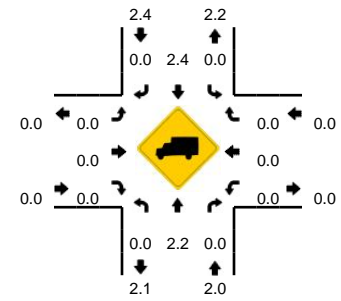
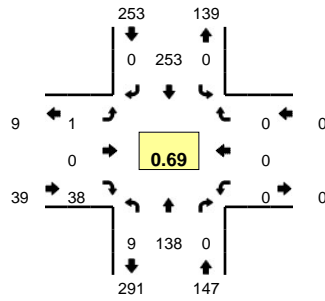
Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: Villa Rd -- Park Ln
CITY/STATE: Newberg, OR

QC JOB #: 12789205
DATE: Thu, Sep 11 2014

Peak-Hour: 7:05 AM -- 8:05 AM
Peak 15-Min: 7:15 AM -- 7:30 AM



5-Min Count Period Beginning At	Villa Rd (Northbound)				Villa Rd (Southbound)				Park Ln (Eastbound)				Park Ln (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	0	3	0	0	0	15	0	0	0	0	2	0	0	0	0	0	20	
7:05 AM	1	7	0	0	0	22	0	0	0	0	1	0	0	0	0	0	31	
7:10 AM	0	5	0	0	0	23	0	0	0	0	3	0	0	0	0	0	31	
7:15 AM	1	7	0	0	0	37	0	0	1	0	3	0	0	0	0	0	49	
7:20 AM	1	15	0	0	0	34	0	0	0	0	7	0	0	0	0	0	57	
7:25 AM	1	21	0	0	0	29	0	0	0	0	3	0	0	0	0	0	54	
7:30 AM	2	11	0	0	0	30	0	0	0	0	5	0	0	0	0	0	48	
7:35 AM	0	18	0	0	0	18	0	0	0	0	3	0	0	0	0	0	39	
7:40 AM	2	8	0	0	0	16	0	0	0	0	6	0	0	0	0	0	32	
7:45 AM	0	12	0	0	0	9	0	0	0	0	2	0	0	0	0	0	23	
7:50 AM	0	7	0	0	0	11	0	0	0	0	2	0	0	0	0	0	20	
7:55 AM	0	12	0	0	0	14	0	0	0	0	1	0	0	0	0	0	27	431
8:00 AM	1	15	0	0	0	10	0	0	0	0	2	0	0	0	0	0	28	439
8:05 AM	3	10	0	0	0	17	0	0	0	0	4	0	0	0	0	0	34	442
8:10 AM	2	14	0	0	0	7	0	0	0	0	3	0	0	0	0	0	26	437
8:15 AM	0	10	0	0	0	12	0	0	0	0	3	0	0	0	0	0	25	413
8:20 AM	1	7	0	0	0	19	0	0	1	0	3	0	0	0	0	0	31	387
8:25 AM	0	9	0	0	0	14	0	0	0	0	5	0	0	0	0	0	28	361
8:30 AM	0	13	0	0	0	15	0	0	0	0	2	0	0	0	0	0	30	343
8:35 AM	1	4	0	0	0	12	0	0	0	0	0	0	0	0	0	0	17	321
8:40 AM	1	10	0	0	0	14	0	0	0	0	3	0	0	0	0	0	28	317
8:45 AM	0	8	0	0	0	15	0	0	0	0	2	0	0	0	0	0	25	319
8:50 AM	1	8	0	0	0	23	0	0	0	0	0	0	0	0	0	0	32	331
8:55 AM	1	12	0	0	0	18	0	0	0	0	1	0	0	0	0	0	32	336
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
All Vehicles	12	172	0	0	0	400	0	0	4	0	52	0	0	0	0	0	640	
Heavy Trucks	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	12	0	0	0	12	
Bicycles	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	
Railroad																		
Stopped Buses																		

Comments:

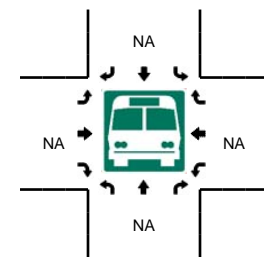
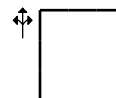
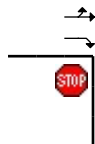
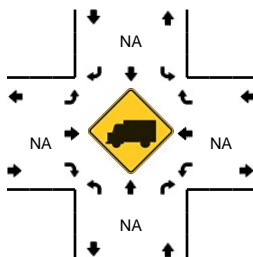
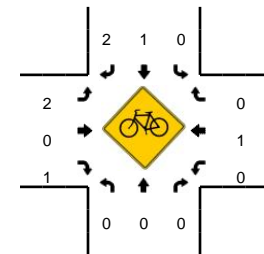
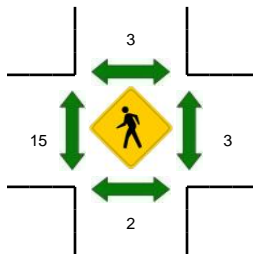
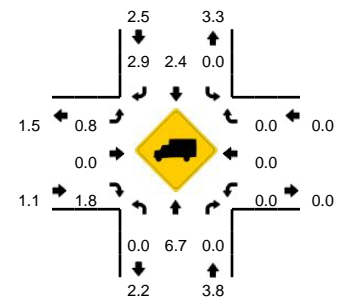
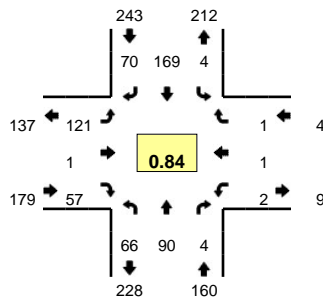
Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: Villa Rd -- Fulton St
CITY/STATE: Newberg, OR

QC JOB #: 12789203
DATE: Thu, Sep 11 2014

Peak-Hour: 7:05 AM -- 8:05 AM
Peak 15-Min: 7:45 AM -- 8:00 AM



5-Min Count Period Beginning At	Villa Rd (Northbound)				Villa Rd (Southbound)				Fulton St (Eastbound)				Fulton St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	6	1	0	0	13	1	0	9	1	4	0	0	0	0	0	36	
7:05 AM	3	3	0	0	0	17	4	0	12	0	9	0	0	0	0	0	48	
7:10 AM	0	3	0	0	0	13	3	0	16	0	7	0	1	0	0	0	43	
7:15 AM	3	6	0	0	0	11	0	0	17	0	4	0	0	0	0	0	41	
7:20 AM	1	14	1	0	0	17	5	0	12	0	5	0	0	0	0	0	55	
7:25 AM	3	13	0	0	1	18	5	0	7	0	5	0	0	0	0	0	52	
7:30 AM	4	8	0	0	1	20	9	0	17	0	5	0	0	0	1	0	65	
7:35 AM	3	6	0	0	0	13	7	0	10	0	4	0	0	0	0	0	43	
7:40 AM	7	6	0	0	2	12	9	0	7	0	3	0	0	0	0	0	46	
7:45 AM	16	9	0	0	0	11	8	0	3	0	3	0	0	0	0	0	50	
7:50 AM	11	6	1	0	0	19	15	0	9	1	7	0	0	0	0	0	69	
7:55 AM	10	12	1	0	0	12	4	0	10	0	4	0	1	1	0	0	55	603
8:00 AM	5	4	1	0	0	6	1	0	1	0	1	0	0	0	0	0	19	586
8:05 AM	1	2	0	0	0	6	0	0	1	0	3	0	0	0	0	0	13	551
8:10 AM	12	15	1	0	0	14	2	0	5	0	4	0	0	0	0	0	53	561
8:15 AM	7	8	1	0	0	15	5	0	5	0	7	0	1	0	1	0	50	570
8:20 AM	5	10	1	0	0	17	6	0	3	0	9	0	0	0	0	0	51	566
8:25 AM	5	11	1	0	1	17	2	0	4	0	6	0	1	0	0	0	48	562
8:30 AM	7	11	0	0	0	14	5	0	4	0	5	0	0	0	0	0	46	543
8:35 AM	1	4	2	0	0	8	6	0	5	0	7	0	0	0	0	0	33	533
8:40 AM	6	10	0	0	0	14	2	0	2	0	4	0	0	0	0	0	38	525
8:45 AM	6	8	1	0	0	21	6	0	3	0	9	0	0	0	0	0	54	529
8:50 AM	6	9	1	0	0	21	3	0	9	0	10	0	1	0	0	0	60	520
8:55 AM	14	15	1	0	0	19	3	0	5	0	5	0	1	0	0	0	63	528
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	148	108	8	0	0	168	108	0	88	4	56	0	4	4	0	0	696	
Heavy Trucks	0	8	0	0	0	8	0	0	0	0	0	0	0	0	0	0	16	
Pedestrians	0	0	0	0	0	0	0	0	24	0	0	0	0	0	0	0	24	
Bicycles	0	0	0	0	0	1	1	0	0	0	1	0	0	1	0	0	4	
Railroad																		
Stopped Buses																		

Comments:

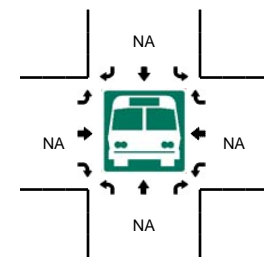
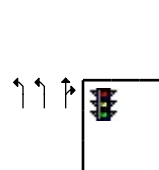
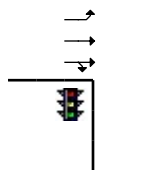
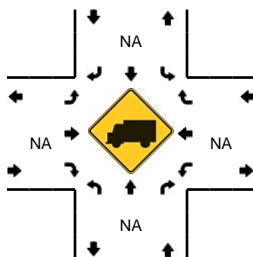
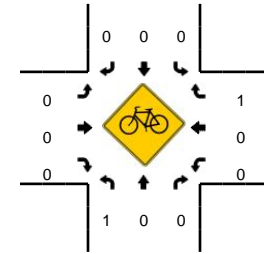
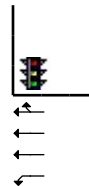
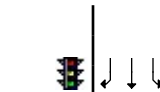
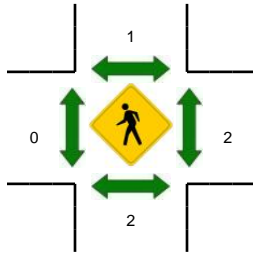
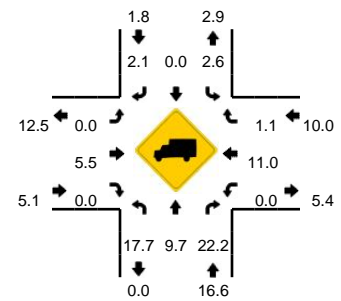
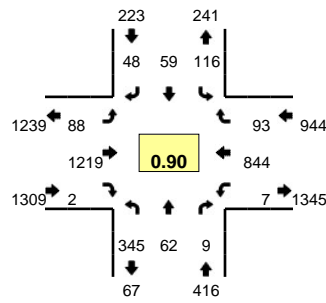
Type of peak hour being reported: User-Defined

Method for determining peak hour: Total Entering Volume

LOCATION: Villa Rd -- Hwy 99W
CITY/STATE: Newberg, OR

QC JOB #: 12789201
DATE: Thu, Sep 11 2014

Peak-Hour: 7:05 AM -- 8:05 AM
Peak 15-Min: 7:35 AM -- 7:50 AM



5-Min Count Period Beginning At	Villa Rd (Northbound)				Villa Rd (Southbound)				Hwy 99W (Eastbound)				Hwy 99W (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	21	7	1	0	3	4	3	0	12	108	0	0	0	51	4	0	214	
7:05 AM	18	4	2	0	18	4	2	0	5	110	0	0	0	69	2	0	234	
7:10 AM	26	3	1	0	14	7	1	0	3	118	0	0	0	49	4	0	226	
7:15 AM	14	4	1	0	7	5	1	0	9	104	0	0	0	59	1	0	205	
7:20 AM	21	3	0	0	12	3	3	0	6	97	0	0	0	65	6	0	216	
7:25 AM	23	1	0	0	8	8	3	0	3	117	0	0	2	71	8	1	245	
7:30 AM	32	3	0	0	13	7	7	0	5	110	0	0	0	76	5	0	258	
7:35 AM	36	4	1	0	9	3	7	0	6	122	0	0	2	104	6	0	300	
7:40 AM	32	10	2	0	8	5	4	0	5	96	1	0	1	70	8	0	242	
7:45 AM	50	8	1	0	9	7	4	0	8	89	1	0	0	74	12	0	263	
7:50 AM	29	8	1	0	4	3	5	0	18	93	0	0	0	80	18	0	259	
7:55 AM	32	9	0	0	9	4	6	0	7	65	0	2	0	64	15	0	213	2875
8:00 AM	32	5	0	0	5	3	5	0	11	98	0	0	1	63	8	0	231	2892
8:05 AM	43	9	1	0	15	10	16	0	8	83	0	0	1	50	7	0	243	2901
8:10 AM	33	9	0	0	9	3	12	0	6	65	0	1	2	71	10	0	221	2896
8:15 AM	23	5	1	0	8	3	7	0	3	110	0	0	2	76	19	0	257	2948
8:20 AM	16	11	0	0	12	6	11	0	12	88	0	0	1	57	8	0	222	2954
8:25 AM	38	8	1	0	9	9	8	0	10	90	0	1	0	61	14	1	250	2959
8:30 AM	37	10	0	0	11	4	10	0	7	83	0	0	0	65	7	0	234	2935
8:35 AM	38	5	0	0	8	4	6	0	7	84	0	0	4	51	10	0	217	2852
8:40 AM	21	8	1	0	10	1	3	1	5	120	1	0	1	85	6	0	263	2873
8:45 AM	29	8	0	0	8	4	5	0	16	100	0	0	0	59	12	0	241	2851
8:50 AM	41	6	0	0	24	8	12	0	8	87	1	0	2	59	11	0	259	2851
8:55 AM	24	13	1	0	7	6	3	0	9	81	0	1	0	65	10	0	220	2858
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
	472	88	16	0	104	60	60	0	76	1228	8	0	12	992	104	0	3220	
	64	8	0	0	0	0	4	0	0	80	0	0	0	96	0	0	252	
	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Stopped Buses																		

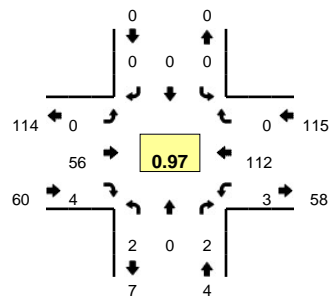
Comments:

Type of peak hour being reported: System Peak

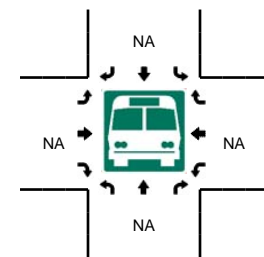
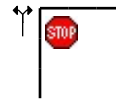
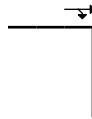
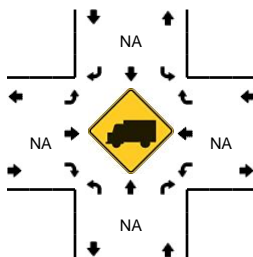
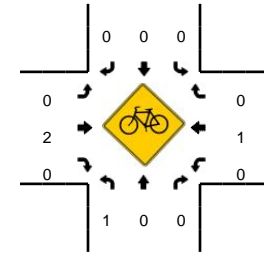
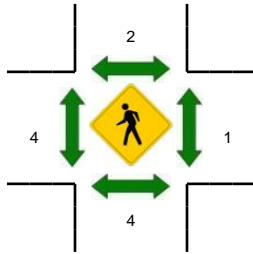
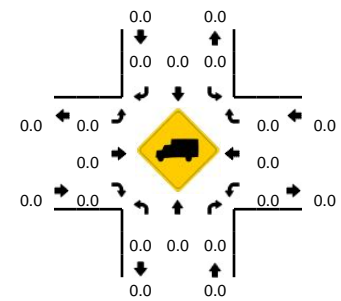
Method for determining peak hour: Total Entering Volume

LOCATION: Aldersgate Ln -- E Crestview Dr
CITY/STATE: Newberg, OR

QC JOB #: 12789210
DATE: Wed, Sep 10 2014



Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:05 PM -- 5:20 PM



5-Min Count Period Beginning At	Aldersgate Ln (Northbound)				Aldersgate Ln (Southbound)				E Crestview Dr (Eastbound)				E Crestview Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	5	0	0	10	
4:05 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	10	0	0	12	
4:10 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	15	0	0	18	
4:15 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	11	0	0	14	
4:20 PM	0	0	0	0	0	0	0	0	0	2	1	0	0	6	0	0	9	
4:25 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	10	
4:30 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	9	0	0	13	
4:35 PM	1	0	0	0	0	0	0	0	0	10	0	0	0	7	0	0	18	
4:40 PM	0	0	0	0	0	0	0	0	0	2	1	0	0	9	0	0	14	
4:45 PM	0	0	1	0	0	0	0	0	0	4	0	0	0	6	0	0	14	
4:50 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	8	0	0	13	
4:55 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	11	0	0	14	159
5:00 PM	0	0	2	0	0	0	0	0	0	7	1	0	0	9	0	0	19	168
5:05 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	4	0	0	8	164
5:10 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	16	0	0	20	166
5:15 PM	0	0	0	0	0	0	0	0	0	6	0	0	0	12	0	0	18	170
5:20 PM	0	0	0	0	0	0	0	0	0	3	0	0	0	13	0	0	16	177
5:25 PM	0	0	0	0	0	0	0	0	0	7	1	0	0	7	0	0	15	182
5:30 PM	0	0	0	0	0	0	0	0	0	4	0	0	0	6	0	0	11	180
5:35 PM	0	0	0	0	0	0	0	0	0	5	0	0	0	10	0	0	15	177
5:40 PM	1	0	0	0	0	0	0	0	0	3	0	0	0	13	0	0	17	180
5:45 PM	1	0	0	0	0	0	0	0	0	5	0	0	0	6	0	0	12	178
5:50 PM	0	0	0	0	0	0	0	0	0	7	2	0	0	6	0	0	15	180
5:55 PM	0	0	0	0	0	0	0	0	0	2	0	0	0	10	0	0	13	179
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	0	0	0	0	0	52	0	0	4	128	0	0	184	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad																		
Stopped Buses																		

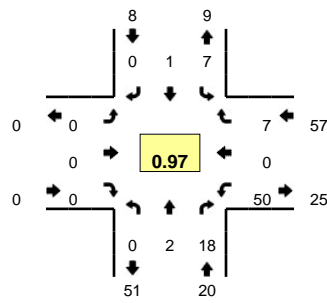
Comments:

Type of peak hour being reported: System Peak

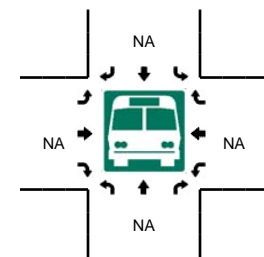
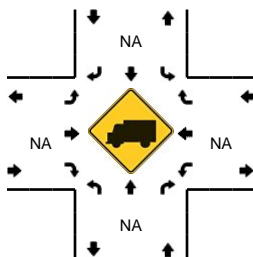
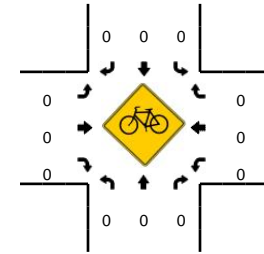
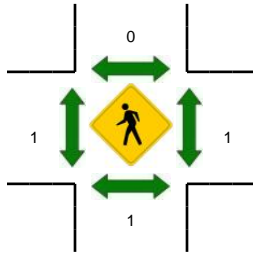
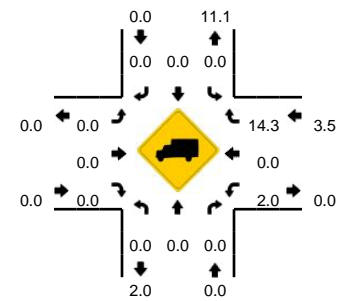
Method for determining peak hour: Total Entering Volume

LOCATION: Aldersgate Ln -- Park Ln
CITY/STATE: Newberg, OR

QC JOB #: 12789208
DATE: Wed, Sep 10 2014



Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:05 PM -- 5:20 PM



5-Min Count Period Beginning At	Aldersgate Ln (Northbound)				Aldersgate Ln (Southbound)				Park Ln (Eastbound)				Park Ln (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	1	0	1	0	0	0	0	0	0	0	6	0	0	0	8	
4:05 PM	0	0	1	0	1	0	0	0	0	0	0	0	1	0	1	0	4	
4:10 PM	0	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	4	
4:15 PM	0	0	1	0	1	0	0	0	0	0	0	0	3	0	2	0	7	
4:20 PM	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	3	
4:25 PM	0	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	3	
4:30 PM	0	0	1	0	0	0	0	0	0	0	0	0	2	0	0	0	3	
4:35 PM	0	0	0	0	2	0	0	0	0	0	0	0	2	0	1	0	5	
4:40 PM	0	0	4	0	1	1	0	0	0	0	0	0	0	0	2	0	8	
4:45 PM	0	1	4	0	1	3	0	0	0	0	0	0	1	0	0	0	10	
4:50 PM	0	0	2	0	0	0	0	0	0	0	0	0	3	0	1	0	6	
4:55 PM	0	1	4	0	1	0	0	0	0	0	0	0	2	0	1	0	9	70
5:00 PM	0	1	3	0	0	0	0	0	0	0	0	0	1	0	2	0	7	69
5:05 PM	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	5	70
5:10 PM	0	0	2	0	0	0	0	0	0	0	0	0	4	0	1	0	7	73
5:15 PM	0	1	2	0	0	0	0	0	0	0	0	0	6	0	1	0	10	76
5:20 PM	0	0	1	0	0	0	0	0	0	0	0	0	3	0	0	0	4	77
5:25 PM	0	0	2	0	1	0	0	0	0	0	0	0	4	0	0	0	7	81
5:30 PM	0	0	3	0	1	0	0	0	0	0	0	0	3	0	1	0	8	86
5:35 PM	0	0	1	0	1	0	0	0	0	0	0	0	6	0	1	0	9	90
5:40 PM	0	0	2	0	3	0	0	0	0	0	0	0	8	0	0	0	13	95
5:45 PM	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	2	87
5:50 PM	0	0	1	0	1	0	0	0	0	0	0	0	4	0	1	0	7	88
5:55 PM	0	0	0	0	0	1	0	0	0	0	0	0	5	0	0	0	6	85
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	4	16	0	0	0	0	0	0	0	0	0	60	0	8	0	88	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad																		
Stopped Buses																		

Comments:

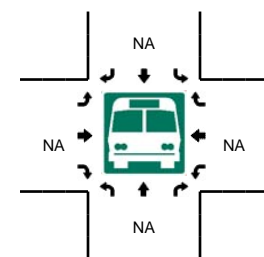
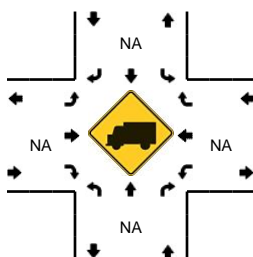
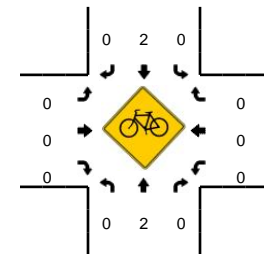
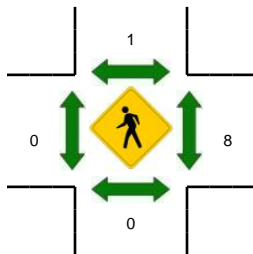
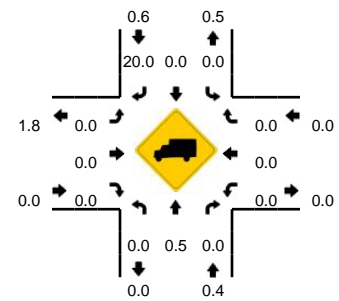
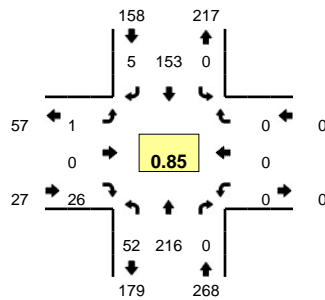
Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Villa Rd -- Park Ln
CITY/STATE: Newberg, OR

QC JOB #: 12789206
DATE: Wed, Sep 10 2014

Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:05 PM -- 5:20 PM



5-Min Count Period Beginning At	Villa Rd (Northbound)				Villa Rd (Southbound)				Park Ln (Eastbound)				Park Ln (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	6	15	0	0	0	9	0	0	1	0	1	0	0	0	0	0	32	
4:05 PM	4	19	0	0	0	9	0	0	0	0	2	0	0	0	0	0	34	
4:10 PM	2	21	0	0	0	10	1	0	0	0	2	0	0	0	0	0	36	
4:15 PM	6	17	0	1	0	7	0	0	0	0	1	0	0	0	0	0	32	
4:20 PM	0	16	0	0	0	9	0	0	0	0	2	0	0	0	0	0	27	
4:25 PM	0	16	0	0	0	6	0	0	1	0	2	0	0	0	0	0	25	
4:30 PM	2	14	0	0	0	13	0	0	0	0	1	0	0	0	0	0	30	
4:35 PM	3	14	0	0	0	19	0	0	0	0	2	0	0	0	0	0	38	
4:40 PM	2	19	0	0	0	19	1	0	0	0	6	0	0	0	0	0	47	
4:45 PM	3	7	0	0	0	12	0	0	1	0	4	0	0	0	0	0	27	
4:50 PM	4	12	0	0	0	8	0	0	0	0	2	0	0	0	0	0	26	
4:55 PM	2	12	0	0	0	4	0	0	1	0	4	0	0	0	0	0	23	377
5:00 PM	4	20	0	0	0	10	0	0	0	0	2	0	0	0	0	0	36	381
5:05 PM	5	18	0	0	0	14	0	0	0	0	2	0	0	0	0	0	39	386
5:10 PM	3	28	0	0	0	17	2	0	0	0	1	0	0	0	0	0	51	401
5:15 PM	9	15	0	0	0	15	1	0	0	0	3	0	0	0	0	0	43	412
5:20 PM	2	22	0	0	0	12	0	0	0	0	2	0	0	0	0	0	38	423
5:25 PM	4	15	0	0	0	17	0	0	0	0	2	0	0	0	0	0	38	436
5:30 PM	3	14	0	0	0	10	1	0	0	0	3	0	0	0	0	0	31	437
5:35 PM	6	18	0	0	0	15	0	0	1	0	1	0	0	0	0	0	41	440
5:40 PM	5	24	0	0	0	6	1	0	0	0	5	0	0	0	0	0	41	434
5:45 PM	2	17	0	0	0	13	0	0	0	0	3	0	0	0	0	0	35	442
5:50 PM	6	10	0	0	0	15	0	0	0	0	2	0	0	0	0	0	33	449
5:55 PM	3	15	0	0	0	9	0	0	0	0	0	0	0	0	0	0	27	453
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	68	244	0	0	0	184	12	0	0	0	24	0	0	0	0	0	532	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	4	
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Railroad																		
Stopped Buses																		

Comments:

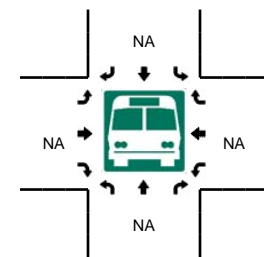
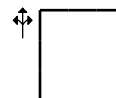
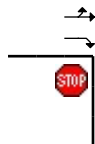
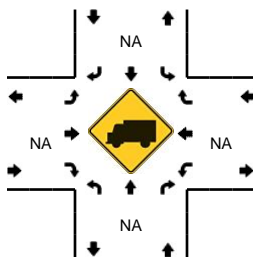
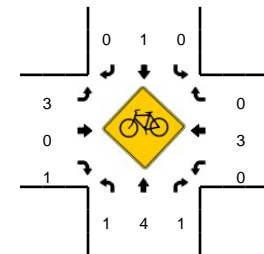
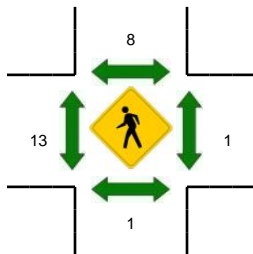
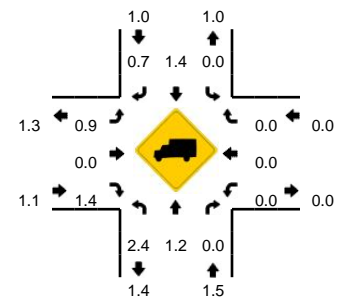
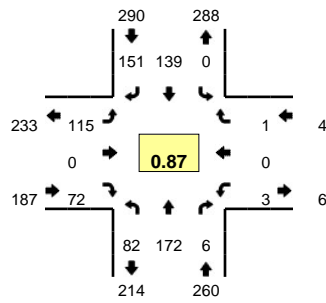
Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Villa Rd -- Fulton St
CITY/STATE: Newberg, OR

QC JOB #: 12789204
DATE: Wed, Sep 10 2014

Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:05 PM -- 5:20 PM



5-Min Count Period Beginning At	Villa Rd (Northbound)				Villa Rd (Southbound)				Fulton St (Eastbound)				Fulton St (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	7	16	0	0	0	11	9	0	4	1	7	0	1	1	1	0	58	
4:05 PM	7	17	0	0	0	11	6	0	8	0	14	0	0	0	0	0	63	
4:10 PM	6	21	0	0	0	8	8	0	5	0	8	0	0	0	0	0	56	
4:15 PM	6	15	0	0	0	10	11	0	9	0	12	0	1	1	0	0	65	
4:20 PM	2	12	1	0	0	8	9	0	7	0	10	0	0	0	0	0	49	
4:25 PM	8	18	2	0	0	5	10	0	8	0	12	0	0	0	1	0	64	
4:30 PM	5	10	1	0	0	15	7	0	6	0	7	0	4	0	0	0	55	
4:35 PM	8	17	0	0	0	16	9	0	6	0	9	0	0	0	0	0	65	
4:40 PM	5	9	1	0	0	10	8	0	11	0	9	0	0	0	0	0	53	
4:45 PM	10	12	2	0	0	14	6	0	6	0	6	0	0	0	0	0	56	
4:50 PM	6	9	0	0	0	15	9	0	9	0	13	0	1	0	0	0	62	
4:55 PM	9	12	0	0	0	11	8	0	12	0	6	0	0	0	1	0	59	705
5:00 PM	8	14	0	0	0	10	9	0	10	0	7	0	0	0	0	0	58	705
5:05 PM	12	18	1	0	0	13	16	0	9	0	7	0	0	0	0	0	76	718
5:10 PM	4	17	1	0	0	12	13	0	10	0	4	0	1	0	1	0	63	725
5:15 PM	2	21	0	0	0	16	11	0	14	0	9	0	1	0	0	0	74	734
5:20 PM	4	13	0	0	0	12	10	0	16	0	10	0	1	0	0	0	66	751
5:25 PM	8	17	0	0	0	11	16	0	11	0	6	0	0	0	0	0	69	756
5:30 PM	5	9	0	0	0	13	15	0	9	0	3	0	0	0	0	0	54	755
5:35 PM	7	11	1	0	0	20	11	0	5	0	3	0	0	0	0	0	58	748
5:40 PM	7	14	0	0	0	7	9	0	13	0	4	0	0	0	0	0	54	749
5:45 PM	6	11	0	0	0	11	12	0	5	0	4	0	0	0	0	0	49	742
5:50 PM	5	12	1	0	0	7	14	0	8	0	7	0	0	0	0	0	54	734
5:55 PM	14	15	2	0	0	7	15	0	5	0	8	0	0	0	0	0	66	741
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	72	224	8	0	0	164	160	0	132	0	80	0	8	0	4	0	852	
Heavy Trucks	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	8	0	0	0	12	0	0	0	0	0	0	0	20	
Bicycles	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	
Railroad																		
Stopped Buses																		

Comments:

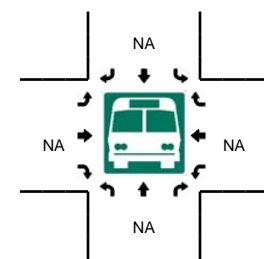
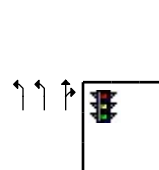
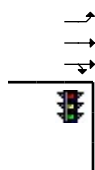
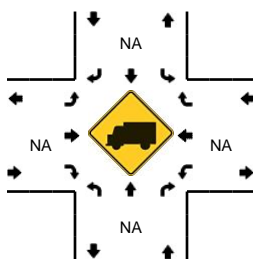
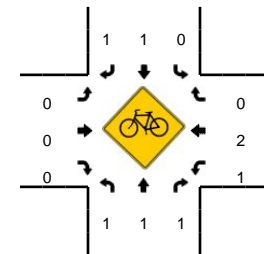
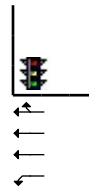
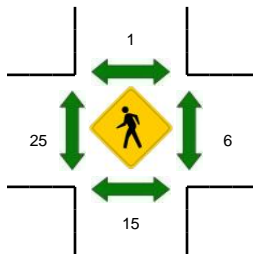
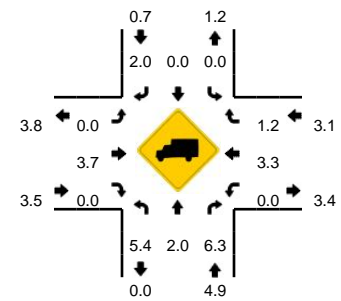
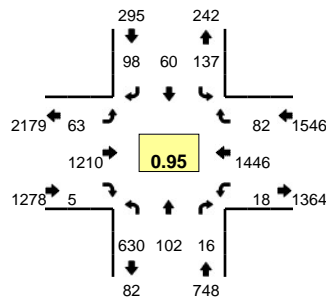
Type of peak hour being reported: System Peak

Method for determining peak hour: Total Entering Volume

LOCATION: Villa Rd -- Hwy 99W
CITY/STATE: Newberg, OR

QC JOB #: 12789202
DATE: Wed, Sep 10 2014

Peak-Hour: 5:00 PM -- 6:00 PM
Peak 15-Min: 5:05 PM -- 5:20 PM



5-Min Count Period Beginning At	Villa Rd (Northbound)				Villa Rd (Southbound)				Hwy 99W (Eastbound)				Hwy 99W (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	46	14	0	0	18	13	17	0	3	83	0	2	1	117	5	0	319	
4:05 PM	54	7	4	0	24	4	8	0	10	99	0	0	1	103	7	0	321	
4:10 PM	47	9	1	0	7	4	8	0	5	100	0	0	2	137	9	0	329	
4:15 PM	46	13	1	0	14	7	8	0	8	96	1	0	0	114	8	0	316	
4:20 PM	39	5	0	0	16	4	3	0	9	83	0	0	1	103	3	0	266	
4:25 PM	54	17	0	0	17	6	3	0	3	112	0	2	2	135	13	0	364	
4:30 PM	32	6	1	0	14	12	9	0	2	90	0	1	1	100	7	0	275	
4:35 PM	67	10	2	0	22	8	13	0	3	73	0	0	1	92	8	0	299	
4:40 PM	32	5	1	0	14	6	2	0	5	111	2	1	1	120	16	0	316	
4:45 PM	57	15	0	0	14	6	10	0	7	85	1	0	2	90	8	1	296	
4:50 PM	59	4	1	0	19	8	12	0	2	90	1	2	3	128	4	0	333	
4:55 PM	46	13	1	0	10	9	5	0	3	83	1	2	2	93	7	0	275	3709
5:00 PM	51	7	1	0	8	4	5	0	6	106	1	0	1	115	4	0	309	3699
5:05 PM	64	10	1	0	14	2	11	0	2	114	1	0	1	150	7	0	377	3755
5:10 PM	44	13	1	0	9	7	9	0	2	87	0	1	2	112	8	1	296	3722
5:15 PM	47	5	2	0	21	5	6	0	5	118	0	0	0	124	8	0	341	3747
5:20 PM	59	5	4	0	13	7	15	0	3	109	1	0	2	137	7	0	362	3843
5:25 PM	59	9	3	0	14	7	11	0	8	86	0	0	3	104	7	0	311	3790
5:30 PM	41	9	1	0	8	3	11	0	3	88	1	1	3	115	4	0	288	3803
5:35 PM	31	13	0	0	12	7	9	0	5	111	0	2	0	122	3	0	315	3819
5:40 PM	80	2	1	0	11	3	9	0	4	91	0	0	2	132	10	0	345	3848
5:45 PM	45	7	1	0	10	6	5	0	5	95	1	1	0	99	4	0	279	3831
5:50 PM	48	8	0	0	10	9	3	0	6	98	0	0	1	120	9	0	312	3810
5:55 PM	61	14	1	0	7	0	4	0	9	107	0	0	2	116	11	0	332	3867
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	620	112	16	0	176	56	104	0	36	1276	4	4	12	1544	92	4	4056	
Heavy Trucks	40	0	0	0	0	0	0	0	0	28	0	0	0	56	0	0	124	
Pedestrians		16				0				32				4			52	
Bicycles	1	0	1		0	0	0		0	0	0		0	1	0		3	
Railroad																		
Stopped Buses																		

Comments:

Appendix B
Description of Level-of-Service
Methods and Criteria

APPENDIX B LEVEL-OF-SERVICE CONCEPT

Level of service (LOS) is a concept developed to quantify the degree of comfort (including such elements as travel time, number of stops, total amount of stopped delay, and impediments caused by other vehicles) afforded to drivers as they travel through an intersection or roadway segment. Six grades are used to denote the various level of service from “A” to “F”.¹

SIGNALIZED INTERSECTIONS

The six level-of-service grades are described qualitatively for signalized intersections in Table B1. Additionally, Table B2 identifies the relationship between level of service and average control delay per vehicle. Control delay is defined to include initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Using this definition, Level of Service “D” is generally considered to represent the minimum acceptable design standard.

Table B-1 Level-of-Service Definitions (Signalized Intersections)

Level of Service	Average Delay per Vehicle
A	Very low average control delay, less than 10 seconds per vehicle. This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	Average control delay is greater than 10 seconds per vehicle and less than or equal to 20 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for a level of service A, causing higher levels of average delay.
C	Average control delay is greater than 20 seconds per vehicle and less than or equal to 35 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
D	Average control delay is greater than 35 seconds per vehicle and less than or equal to 55 seconds per vehicle. The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle length, or high volume/capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Average control delay is greater than 55 seconds per vehicle and less than or equal to 80 seconds per vehicle. This is usually considered to be the limit of acceptable delay. These high delay values generally (but not always) indicate poor progression, long cycle lengths, and high volume/capacity ratios. Individual cycle failures are frequent occurrences.
F	Average control delay is in excess of 80 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation. It may also occur at high volume/capacity ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also contribute to such high delay values.

¹ Most of the material in this appendix is adapted from the Transportation Research Board, Highway Capacity Manual, (2000).

Table B2 Level-of-Service Criteria for Signalized Intersections

Level of Service	Average Control Delay per Vehicle (Seconds)
A	<10.0
B	>10 and ≤20
C	>20 and ≤35
D	>35 and ≤55
E	>55 and ≤80
F	>80

UNSIGNALIZED INTERSECTIONS

Unsignalized intersections include two-way stop-controlled (TWSC) and all-way stop-controlled (AWSC) intersections. The 2000 Highway Capacity Manual (HCM) provides models for estimating control delay at both TWSC and AWSC intersections. A qualitative description of the various service levels associated with an unsignalized intersection is presented in Table B3. A quantitative definition of level of service for unsignalized intersections is presented in Table B4. Using this definition, Level of Service “E” is generally considered to represent the minimum acceptable design standard.

Table B3 Level-of-Service Criteria for Unsignalized Intersections

Level of Service	Average Delay per Vehicle to Minor Street
A	<ul style="list-style-type: none"> Nearly all drivers find freedom of operation. Very seldom is there more than one vehicle in queue.
B	<ul style="list-style-type: none"> Some drivers begin to consider the delay an inconvenience. Occasionally there is more than one vehicle in queue.
C	<ul style="list-style-type: none"> Many times there is more than one vehicle in queue. Most drivers feel restricted, but not objectionably so.
D	<ul style="list-style-type: none"> Often there is more than one vehicle in queue. Drivers feel quite restricted.
E	<ul style="list-style-type: none"> Represents a condition in which the demand is near or equal to the probable maximum number of vehicles that can be accommodated by the movement. There is almost always more than one vehicle in queue. Drivers find the delays approaching intolerable levels.
F	<ul style="list-style-type: none"> Forced flow. Represents an intersection failure condition that is caused by geometric and/or operational constraints external to the intersection.

Table B4 Level-of-Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay per Vehicle (Seconds)
A	<10.0
B	>10.0 and ≤ 15.0
C	>15.0 and ≤ 25.0
D	>25.0 and ≤ 35.0
E	>35.0 and ≤ 50.0
F	>50.0

It should be noted that the level-of-service criteria for unsignalized intersections are somewhat different than the criteria used for signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection. Additionally, there are a number of driver behavior considerations that combine to make delays at signalized intersections less galling than at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, while drivers on the minor street approaches to TWSC intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized intersections than signalized intersections. For these reasons, it is considered that the control delay threshold for any given level of service is less for an unsignalized intersection than for a signalized intersection. While overall intersection level of service is calculated for AWSC intersections, level of service is only calculated for the minor approaches and the major street left turn movements at TWSC intersections. No delay is assumed to the major street through movements. For TWSC intersections, the overall intersection level of service remains undefined: level of service is only calculated for each minor street lane.

In the performance evaluation of TWSC intersections, it is important to consider other measures of effectiveness (MOEs) in addition to delay, such as v/c ratios for individual movements, average queue lengths, and 95th-percentile queue lengths. By focusing on a single MOE for the worst movement only, such as delay for the minor-street left turn, users may make inappropriate traffic control decisions. The potential for making such inappropriate decisions is likely to be particularly pronounced when the HCM level-of-service thresholds are adopted as legal standards, as is the case in many public agencies.

Appendix C Existing Conditions Level-of-Service Worksheets










Existing AM Peak Hour
1: Aldersgate Ln & E Crestview Dr

ATTACHMENT 5
Villa Road Apts
2/12/2015










	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕			↕	↕	
Volume (veh/h)	147	2	2	81	3	4
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.63	0.63	0.63	0.63	0.63	0.63
Hourly flow rate (vph)	233	3	3	129	5	6
Pedestrians	4				3	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			240		377	238
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			240		377	238
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			1336		624	804
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	237	132	11			
Volume Left	0	3	5			
Volume Right	3	0	6			
cSH	1700	1336	715			
Volume to Capacity	0.14	0.00	0.02			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	0.0	0.2	10.1			
Lane LOS		A	B			
Approach Delay (s)	0.0	0.2	10.1			
Approach LOS			B			
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			18.4%	ICU Level of Service		A
Analysis Period (min)			15			

Existing AM Peak Hour
2: Aldersgate Ln & Park Ln

ATTACHMENT 5
Villa Road Apts
2/12/2015


















						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	8	0	4	31	4	2
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	10	0	5	40	5	3
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	39	26			46	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	39	26			46	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	974	1054			1573	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	10	45	8			
Volume Left	10	0	5			
Volume Right	0	40	0			
cSH	974	1700	1573			
Volume to Capacity	0.01	0.03	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	8.7	0.0	4.9			
Lane LOS	A		A			
Approach Delay (s)	8.7	0.0	4.9			
Approach LOS	A					
Intersection Summary						
Average Delay		2.0				
Intersection Capacity Utilization		13.7%		ICU Level of Service		A
Analysis Period (min)		15				

Existing AM Peak Hour
4: Villa Rd & Park Ln

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	1	38	9	138	253	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	1	55	13	200	367	0
Pedestrians				1	2	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	595	368	367			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	595	368	367			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	92	99			
cM capacity (veh/h)	465	682	1203			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	57	213	367			
Volume Left	1	13	0			
Volume Right	55	0	0			
cSH	674	1203	1700			
Volume to Capacity	0.08	0.01	0.22			
Queue Length 95th (ft)	7	1	0			
Control Delay (s)	10.8	0.6	0.0			
Lane LOS	B	A				
Approach Delay (s)	10.8	0.6	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			1.2			
Intersection Capacity Utilization		25.0%		ICU Level of Service		A
Analysis Period (min)			15			






















Existing AM Peak Hour
6: Villa Rd & Fulton St

ATTACHMENT 5
Villa Road Apts
2/12/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	121	1	57	2	1	1	66	90	4	4	169	70
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	144	1	68	2	1	1	79	107	5	5	201	83
Pedestrians		15			3			2			3	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			0	
Right turn flare (veh)			6									
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	539	539	260	559	579	116	300			115		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	539	539	260	559	579	116	300			115		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	66	100	91	99	100	100	94			100		
cM capacity (veh/h)	419	416	768	377	395	938	1257			1483		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	213	5	190	289								
Volume Left	144	2	79	5								
Volume Right	68	1	5	83								
cSH	615	449	1257	1483								
Volume to Capacity	0.35	0.01	0.06	0.00								
Queue Length 95th (ft)	39	1	5	0								
Control Delay (s)	15.5	13.1	3.6	0.2								
Lane LOS	C	B	A	A								
Approach Delay (s)	15.5	13.1	3.6	0.2								
Approach LOS	C	B										
Intersection Summary												
Average Delay			5.9									
Intersection Capacity Utilization			44.9%		ICU Level of Service					A		
Analysis Period (min)			15									






















Existing AM Peak Hour
7: Villa Rd & Hwy 99W

ATTACHMENT 5
Villa Road Apts
2/12/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	1219	2	7	844	93	345	62	9	116	59	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	5.0		4.5	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.91		0.97	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	3437		1805	4635		2968	1668		1752	1900	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1805	3437		1805	4635		2968	1668		1752	1900	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	98	1354	2	8	938	103	383	69	10	129	66	53
RTOR Reduction (vph)	0	0	0	0	7	0	0	8	0	0	0	49
Lane Group Flow (vph)	98	1356	0	8	1034	0	383	71	0	129	66	4
Confl. Peds. (#/hr)	1		2	2		1			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	11%	1%	18%	10%	22%	3%	0%	2%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	9.1	59.5		1.3	51.7		13.1	11.5		9.2	7.6	7.6
Effective Green, g (s)	9.1	59.5		1.3	51.7		13.1	11.5		9.2	7.6	7.6
Actuated g/C Ratio	0.09	0.60		0.01	0.52		0.13	0.12		0.09	0.08	0.08
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	5.0		4.5	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	4.2		2.5	4.2	4.2
Lane Grp Cap (vph)	164	2045		23	2396		388	191		161	144	120
v/s Ratio Prot	c0.05	c0.39		0.00	0.22		c0.13	c0.04		0.07	0.03	
v/s Ratio Perm												0.00
v/c Ratio	0.60	0.66		0.35	0.43		0.99	0.37		0.80	0.46	0.03
Uniform Delay, d1	43.7	13.5		48.9	15.0		43.4	40.9		44.5	44.2	42.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.8	0.7		6.5	0.1		41.9	5.5		23.5	10.2	0.5
Delay (s)	48.5	14.3		55.5	15.1		85.2	46.4		68.1	54.4	43.3
Level of Service	D	B		E	B		F	D		E	D	D
Approach Delay (s)		16.6			15.4			78.6			59.1	
Approach LOS		B			B			E			E	
Intersection Summary												
HCM 2000 Control Delay			28.4			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			18.5			
Intersection Capacity Utilization			74.6%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												










Existing AM Peak Hour
7: Villa Rd & Hwy 99W

ATTACHMENT 5
Villa Road Apts
2/12/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	88	1219	2	7	844	93	345	62	9	116	59	48
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1810	1900	1900	1727	1900	1610	1704	1900	1845	1900	1863
Adj Flow Rate, veh/h	98	1354	2	8	938	103	383	69	10	129	66	53
Adj No. of Lanes	1	2	0	1	3	0	2	1	0	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	5	5	0	11	11	18	10	10	3	0	2
Cap, veh/h	123	1068	2	21	1064	116	260	682	99	110	843	701
Arrive On Green	0.07	0.30	0.30	0.01	0.25	0.25	0.09	0.47	0.47	0.06	0.44	0.44
Sat Flow, veh/h	1810	3523	5	1810	4313	472	2975	1455	211	1757	1900	1581
Grp Volume(v), veh/h	98	661	695	8	683	358	383	0	79	129	66	53
Grp Sat Flow(s),veh/h/ln	1810	1719	1809	1810	1572	1642	1487	0	1666	1757	1900	1581
Q Serve(g_s), s	6.4	36.4	36.4	0.5	25.1	25.2	10.5	0.0	3.2	7.5	2.4	2.3
Cycle Q Clear(g_c), s	6.4	36.4	36.4	0.5	25.1	25.2	10.5	0.0	3.2	7.5	2.4	2.3
Prop In Lane	1.00		0.00	1.00		0.29	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	123	521	548	21	775	405	260	0	781	110	843	701
V/C Ratio(X)	0.79	1.27	1.27	0.38	0.88	0.88	1.47	0.00	0.10	1.17	0.08	0.08
Avail Cap(c_a), veh/h	279	521	548	279	891	465	260	0	781	110	843	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.1	41.8	41.8	58.9	43.5	43.5	54.8	0.0	17.8	56.3	19.3	19.2
Incr Delay (d2), s/veh	8.3	135.1	134.5	8.0	8.9	15.9	231.8	0.0	0.3	140.4	0.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	36.8	38.6	0.3	11.9	13.2	12.7	0.0	1.5	7.9	1.3	1.1
LnGrp Delay(d),s/veh	63.4	176.9	176.3	66.9	52.4	59.5	286.6	0.0	18.1	196.7	19.4	19.4
LnGrp LOS	E	F	F	E	D	E	F		B	F	B	B
Approach Vol, veh/h	1454			1049			462			248		
Approach Delay, s/veh	168.9			54.9			240.7			111.6		
Approach LOS	F			D			F			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	61.2	5.9	40.9	15.0	58.2	12.7	34.1				
Change Period (Y+Rc), s	4.5	5.0	4.5	4.5	4.5	5.0	4.5	4.5				
Max Green Setting (Gmax), s	7.5	42.0	18.5	31.0	10.5	39.0	18.5	34.0				
Max Q Clear Time (g_c+l1), s	9.5	5.2	2.5	38.4	12.5	4.4	8.4	27.2				
Green Ext Time (p_c), s	0.0	1.6	0.0	0.0	0.0	1.6	0.1	2.3				
Intersection Summary												
HCM 2010 Ctrl Delay	137.6											
HCM 2010 LOS	F											










Existing PM Peak Hour
1: Aldersgate Ln & E Crestview Dr

ATTACHMENT 5
Villa Road Apts
2/12/2015










						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	56	4	3	112	2	2
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	67	5	4	135	2	2
Pedestrians	4			1	4	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			76		220	75
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			76		220	75
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1530		766	988
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	72	139	5			
Volume Left	0	4	2			
Volume Right	5	0	2			
cSH	1700	1530	863			
Volume to Capacity	0.04	0.00	0.01			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.2	9.2			
Lane LOS		A	A			
Approach Delay (s)	0.0	0.2	9.2			
Approach LOS			A			
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			18.6%	ICU Level of Service		A
Analysis Period (min)			15			

Existing PM Peak Hour
2: Aldersgate Ln & Park Ln

ATTACHMENT 5
Villa Road Apts
2/12/2015


















						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	50	7	2	18	7	1
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	70	10	3	25	10	1
Pedestrians	1		1			
Lane Width (ft)	12.0		12.0			
Walking Speed (ft/s)	4.0		4.0			
Percent Blockage	0		0			
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	39	16			29	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	39	16			29	
tC, single (s)	6.4	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	93	99			99	
cM capacity (veh/h)	966	1028			1596	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	80	28	11			
Volume Left	70	0	10			
Volume Right	10	25	0			
cSH	973	1700	1596			
Volume to Capacity	0.08	0.02	0.01			
Queue Length 95th (ft)	7	0	0			
Control Delay (s)	9.0	0.0	6.4			
Lane LOS	A		A			
Approach Delay (s)	9.0	0.0	6.4			
Approach LOS	A					
Intersection Summary						
Average Delay		6.7				
Intersection Capacity Utilization		16.0%		ICU Level of Service		A
Analysis Period (min)		15				

Existing PM Peak Hour
4: Villa Rd & Park Ln

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	1	26	52	216	153	5
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	1	31	61	254	180	6
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	560	183	186			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	560	183	186			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	96	96			
cM capacity (veh/h)	471	865	1401			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	32	315	186			
Volume Left	1	61	0			
Volume Right	31	0	6			
cSH	839	1401	1700			
Volume to Capacity	0.04	0.04	0.11			
Queue Length 95th (ft)	3	3	0			
Control Delay (s)	9.5	1.8	0.0			
Lane LOS	A	A				
Approach Delay (s)	9.5	1.8	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			1.6			
Intersection Capacity Utilization		35.9%		ICU Level of Service		A
Analysis Period (min)		15				






















Existing PM Peak Hour
6: Villa Rd & Fulton St

ATTACHMENT 5
Villa Road Apts
2/12/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	115	0	72	3	0	1	82	172	6	0	139	151
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	132	0	83	3	0	1	94	198	7	0	160	174
Pedestrians		13			1			1			8	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			1	
Right turn flare (veh)			6									
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	658	654	261	680	737	210	346			206		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	658	654	261	680	737	210	346			206		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	62	100	89	99	100	100	92			100		
cM capacity (veh/h)	346	354	771	305	317	829	1199			1377		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	215	5	299	333								
Volume Left	132	3	94	0								
Volume Right	83	1	7	174								
cSH	563	363	1199	1377								
Volume to Capacity	0.38	0.01	0.08	0.00								
Queue Length 95th (ft)	44	1	6	0								
Control Delay (s)	17.3	15.1	3.1	0.0								
Lane LOS	C	C	A									
Approach Delay (s)	17.3	15.1	3.1	0.0								
Approach LOS	C	C										
Intersection Summary												
Average Delay			5.5									
Intersection Capacity Utilization			49.2%		ICU Level of Service					A		
Analysis Period (min)			15									

Existing PM Peak Hour
7: Villa Rd & Hwy 99W






















ATTACHMENT 5
Villa Road Apts
2/12/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	63	1210	5	18	1446	82	630	102	16	137	60	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	5.0		4.5	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.91		0.97	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	3469		1805	4995		3335	1809		1805	1900	1517
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1805	3469		1805	4995		3335	1809		1805	1900	1517
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	66	1274	5	19	1522	86	663	107	17	144	63	103
RTOR Reduction (vph)	0	0	0	0	3	0	0	8	0	0	0	93
Lane Group Flow (vph)	66	1279	0	19	1605	0	663	116	0	144	63	10
Confl. Peds. (#/hr)	1		15	15		1	25		6	6		25
Confl. Bikes (#/hr)						2			1			1
Heavy Vehicles (%)	0%	4%	0%	0%	3%	1%	5%	2%	6%	0%	0%	2%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	8.2	70.5		3.0	65.3		16.2	12.6		15.4	11.8	11.8
Effective Green, g (s)	8.2	70.5		3.0	65.3		16.2	12.6		15.4	11.8	11.8
Actuated g/C Ratio	0.07	0.59		0.02	0.54		0.13	0.10		0.13	0.10	0.10
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	5.0		4.5	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	4.2		2.5	4.2	4.2
Lane Grp Cap (vph)	123	2038		45	2718		450	189		231	186	149
v/s Ratio Prot	c0.04	c0.37		0.01	0.32		c0.20	c0.06		0.08	0.03	
v/s Ratio Perm												0.01
v/c Ratio	0.54	0.63		0.42	0.59		1.47	0.61		0.62	0.34	0.07
Uniform Delay, d1	54.1	16.2		57.6	18.4		51.9	51.4		49.6	50.5	49.1
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.5	0.5		4.6	0.3		224.8	14.0		4.5	4.9	0.9
Delay (s)	57.5	16.7		62.2	18.7		276.7	65.4		54.0	55.3	50.0
Level of Service	E	B		E	B		F	E		D	E	D
Approach Delay (s)		18.7			19.2			243.4			53.0	
Approach LOS		B			B			F			D	
Intersection Summary												
HCM 2000 Control Delay			65.0			HCM 2000 Level of Service			E			
HCM 2000 Volume to Capacity ratio			0.77									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			18.5			
Intersection Capacity Utilization			86.1%			ICU Level of Service			E			
Analysis Period (min)			15									

c Critical Lane Group

Existing PM Peak Hour
7: Villa Rd & Hwy 99W

ATTACHMENT 5
Villa Road Apts
2/12/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	63	1210	5	18	1446	82	630	102	16	137	60	98
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1847	1900	1810	1853	1900	1900	1900	1863
Adj Flow Rate, veh/h	66	1274	5	19	1522	86	663	107	17	144	63	103
Adj No. of Lanes	1	2	0	1	3	0	2	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	4	4	0	3	3	5	2	2	0	0	2
Cap, veh/h	85	937	4	40	1165	66	247	792	126	134	968	785
Arrive On Green	0.05	0.26	0.26	0.02	0.24	0.24	0.07	0.51	0.51	0.07	0.51	0.51
Sat Flow, veh/h	1810	3546	14	1810	4866	275	3343	1554	247	1810	1900	1541
Grp Volume(v), veh/h	66	624	655	19	1051	557	663	0	124	144	63	103
Grp Sat Flow(s),veh/h/ln	1810	1736	1824	1810	1680	1780	1672	0	1801	1810	1900	1541
Q Serve(g_s), s	5.1	37.5	37.5	1.5	34.0	34.0	10.5	0.0	5.2	10.5	2.4	5.0
Cycle Q Clear(g_c), s	5.1	37.5	37.5	1.5	34.0	34.0	10.5	0.0	5.2	10.5	2.4	5.0
Prop In Lane	1.00		0.01	1.00		0.15	1.00		0.14	1.00		1.00
Lane Grp Cap(c), veh/h	85	458	482	40	805	426	247	0	917	134	968	785
V/C Ratio(X)	0.78	1.36	1.36	0.47	1.31	1.31	2.68	0.00	0.14	1.08	0.07	0.13
Avail Cap(c_a), veh/h	299	458	482	299	805	426	247	0	917	134	968	785
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.9	52.2	52.2	68.6	54.0	54.0	65.8	0.0	18.4	65.8	17.7	18.3
Incr Delay (d2), s/veh	10.7	175.7	175.2	6.2	146.8	154.2	768.3	0.0	0.3	99.7	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	40.3	42.3	0.8	32.2	34.9	31.2	0.0	2.6	8.9	1.3	2.2
LnGrp Delay(d),s/veh	77.6	228.0	227.5	74.8	200.8	208.2	834.0	0.0	18.7	165.4	17.8	18.7
LnGrp LOS	E	F	F	E	F	F	F		B	F	B	B
Approach Vol, veh/h	1345			1627			787			310		
Approach Delay, s/veh	220.3			201.8			705.6			86.7		
Approach LOS	F			F			F			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	77.3	7.7	42.0	15.0	77.3	11.2	38.5				
Change Period (Y+Rc), s	4.5	5.0	4.5	4.5	4.5	5.0	4.5	4.5				
Max Green Setting (Gmax), s	10.5	55.0	23.5	31.0	10.5	55.0	23.5	34.0				
Max Q Clear Time (g_c+I1), s	12.5	7.2	3.5	39.5	12.5	7.0	7.1	36.0				
Green Ext Time (p_c), s	0.0	2.4	0.0	0.0	0.0	2.4	0.1	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	296.6											
HCM 2010 LOS	F											

Appendix D Crash Data

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Aldersgate Lane & Park Lane
January 1, 2009 through December 31, 2013

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
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YEAR:

TOTAL

FINAL TOTAL

Disclaimer: A higher number of crashes may be reported as of 2011 compared to prior years. This does not reflect an increase in annual crashes. The higher numbers result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics.

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Villa Road & Fulton Street														
January 1, 2009 through December 31, 2013														
COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD

YEAR:

TOTAL

FINAL TOTAL

Disclaimer: A higher number of crashes may be reported as of 2011 compared to prior years. This does not reflect an increase in annual crashes. The higher numbers result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics.

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Villa Road & OR 99W
January 1, 2009 through December 31, 2013

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2013														
REAR-END	0	4	2	6	0	8	0	3	2	4	2	6	0	0
TURNING MOVEMENTS	0	0	2	2	0	0	1	2	0	2	0	2	0	0
2013 TOTAL	0	4	4	8	0	8	1	5	2	6	2	8	0	0
YEAR: 2012														
REAR-END	0	1	5	6	0	1	0	6	0	6	0	6	0	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	1	0	0	1	1	0	0
2012 TOTAL	0	1	6	7	0	1	0	7	0	6	1	7	0	0
YEAR: 2011														
REAR-END	0	2	2	4	0	2	0	4	0	4	0	4	0	0
TURNING MOVEMENTS	0	0	1	1	0	0	0	0	1	0	1	1	0	0
2011 TOTAL	0	2	3	5	0	2	0	4	1	4	1	5	0	0
YEAR: 2010														
REAR-END	0	1	4	5	0	1	0	5	0	5	0	5	0	0
2010 TOTAL	0	1	4	5	0	1	0	5	0	5	0	5	0	0
YEAR: 2009														
MISCELLANEOUS	0	0	1	1	0	0	1	1	0	1	0	1	0	0
NON-COLLISION	0	1	0	1	0	1	0	1	0	1	0	1	0	0
REAR-END	0	1	2	3	0	1	0	3	0	3	0	3	0	0
SIDESWIPE - OVERTAKING	0	1	0	1	0	1	0	1	0	1	0	1	0	0
TURNING MOVEMENTS	0	1	1	2	0	1	1	2	0	2	0	2	0	0
2009 TOTAL	0	4	4	8	0	4	2	8	0	8	0	8	0	0
FINAL TOTAL	0	12	21	33	0	16	3	29	3	29	4	33	0	0

Disclaimer: A higher number of crashes may be reported as of 2011 compared to prior years. This does not reflect an increase in annual crashes. The higher numbers result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics.

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OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CONTINUOUS SYSTEM CRASH LISTING

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091 PACIFIC HIGHWAY WEST

Villa Road & OR 99W
January 1, 2009 through December 31, 2013

SER#	S D P R S W E A U C O E L G H R DAY INVEST D C S L K TIME	DATE	COUNTY CITY URBAN AREA	RD# FC COMPNT MLG TYP MILEPNT	CONN # FIRST STREET SECOND STREET	RD CHAR DIRECT LOCTN	INT-TYP (MEDIAN) LEGS (#LANES)	INT-REL TRAF- CNTL	OFFRD RND BT DRVWY	WTHR SURF LIGHT	CRASH TYP COLL TYP SVRTY	SPCL USE TRLR QTY OWNER VEH TYPE	MOVE FROM TO	P#	PRTC TYPE	INJ SVRTY	A S G E X RES	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
00184	N N N	02/27/2012	YAMHILL	1 14		INTER	CROSS	N	N CLR	S-1STOP	01	NONE	0	STRGHT									07,27
NONE	Mon		NEWBERG	0 0	PACIFIC HY 99W	E		TRF SIGNAL	N DRY	REAR		PRVTE	E W								000	00	07,27
	5P		NEWBERG UA	22.89	VILLA RD	06	0		N DAY	PDO		PSNGR CAR		01	DRVR	NONE	31 F	OR-Y		026	000		
																		OR<25					
												02	NONE	0	STOP							011	00
												PRVTE	E W								000	00	00
												PSNGR CAR		01	DRVR	NONE	41 F	OR-Y		000	000		
																		OR<25					
00600	N N N N N	08/12/2009	YAMHILL	1 14		INTER	CROSS	N	N CLR	O-1STOP	01	NONE	1	STRGHT								025,080	11
CITY	Wed		NEWBERG	0 0	PACIFIC HY 99W	UN		TRF SIGNAL	N DRY	OTH		PRVTE	N S								011	025	11
	12P		NEWBERG UA	22.89	VILLA RD	06	0		N DAY	PDO		SEMI TOW		01	DRVR	NONE	50 M	OR-Y		017	000		00
																		OR>25					
												02	NONE	0	STOP							011	080
												PRVTE	S N								000	00	00
												PSNGR CAR		01	DRVR	NONE	25 M	OR-Y		000	000		
																		OR<25					
												03	NONE	0	STOP							011	080
												PRVTE	S N								000	00	00
												PSNGR CAR		01	DRVR	NONE	36 M	OR-Y		000	000		
																		OR<25					
00420	N N N	04/17/2010	YAMHILL	1 14		INTER	CROSS	N	N CLR	S-1STOP	01	NONE	0	STRGHT									07
NONE	Sat		NEWBERG	0 0	PACIFIC HY 99W	NE		TRF SIGNAL	N DRY	REAR		PRVTE	NE SW								000	00	00
	12P		NEWBERG UA	22.89	VILLA RD	06	0		N DAY	PDO		PSNGR CAR		01	DRVR	NONE	00 M	UNK		026	000		07
																		UNK					
												02	NONE	0	STOP							011	00
												PRVTE	NE SW								000	00	00
												PSNGR CAR		01	DRVR	NONE	31 M	OR-Y		000	000		
																		OR<25					
00852	N N N	10/03/2010	YAMHILL	1 14		INTER	CROSS	N	N CLR	S-1STOP	01	NONE	0	STRGHT									07
NONE	Sun		NEWBERG	0 0	PACIFIC HY 99W	NE		TRF SIGNAL	N DRY	REAR		PRVTE	NE SW								000	00	00
	5P		NEWBERG UA	22.89	VILLA RD	06	0		N DAY	PDO		PSNGR CAR		01	DRVR	NONE	00 F	UNK		026	000		07
																		UNK					
												02	NONE	0	STOP							011	00
												PRVTE	NE SW								000	00	00
												PSNGR CAR		01	DRVR	NONE	27 F	OR-Y		000	000		
																		OR<25					
00701	N N N	08/30/2011	YAMHILL	1 14		INTER	CROSS	N	N CLR	S-1STOP	01	NONE	0	STRGHT									07,13
NONE	Tue		NEWBERG	0 0	PACIFIC HY 99W	NE		TRF SIGNAL	N DRY	REAR		PRVTE	NE SW								000	00	00
	1P		NEWBERG UA	22.89	VILLA RD	06	0		N DAY	INJ		PSNGR CAR		01	DRVR	NONE	20 F	OR-Y		026,045	000		07,13
																		OR>25					
												02	NONE	0	STOP							011	00
												PRVTE	NE SW								000	00	00
												PSNGR CAR		01	DRVR	INJC	25 F	OR-Y		000	000		
																		OR>25					

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OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CONTINUOUS SYSTEM CRASH LISTING

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091 PACIFIC HIGHWAY WEST

Villa Road & OR 99W
January 1, 2009 through December 31, 2013

SER#	INVEST	S D P R S W E A U C O E L G H R D C S L K	DATE	COUNTY CITY URBAN AREA	RD# FC COMPNT MLG TYP MILEPNT	CONN # FIRST STREET SECOND STREET	RD CHAR DIRECT LOCTN	INT-TYP (MEDIAN) LEGS (#LANES)	INT-REL TRAF- CNTL	OFFRD WTHR RND BT SURF DRVWY LIGHT	CRASH TYP COLL TYP SVRTY	SPCL USE TRLR QTY OWNER VEH TYPE	MOVE FROM TO	P#	PRTC TYPE	INJ SVRTY	A S G E X RES	LICNS LOC	PED ERROR	ACTN	EVENT	CAUSE
00001	CITY	NNNNN	01/01/2012	YAMHILL NEWBERG NEWBERG UA	1 14 0 0 22.89	PACIFIC HY 99W VILLA RD	INTER NE 06	CROSS 0	N TRF SIGNAL	N CLD N DRY N DAY	S-1STOP REAR INJ	01 NONE PRVTE PSNGR CAR	0 STRGHT NE SW		01	DRVR NONE	38 F OR-Y OR<25	052,026	000 000			32 00 32
												02 NONE PRVTE PSNGR CAR	0 STOP NE SW		01	DRVR INJC	33 F OR-Y OR<25	000	000			00 00
00357	NONE	NNN	02/16/2012	YAMHILL NEWBERG NEWBERG UA	1 14 0 0 22.89	HANCOCK ST MERIDIAN ST	INTER NE 06	CROSS 0	N TRF SIGNAL	N CLR N DRY N DAY	S-1STOP REAR PDO	01 NONE PRVTE PSNGR CAR	0 STRGHT NE SW		01	DRVR NONE	18 F OR-Y OR<25	026	000			07 00 07
												02 NONE PRVTE PSNGR CAR	0 STOP NE SW		01	DRVR NONE	00 F UNK UNK	000	000			00 00
00468	NONE	NNN	05/22/2013	YAMHILL NEWBERG NEWBERG UA	1 14 0 0 22.89	PACIFIC HY 99W VILLA RD	INTER NE 06	CROSS 0	N TRF SIGNAL	N UNK N UNK N DARK	S-1STOP REAR PDO	01 NONE PRVTE PSNGR CAR	0 STRGHT NE SW		01	DRVR NONE	71 F OR-Y OR<25	026	000			07 00 07
												02 NONE PRVTE PSNGR CAR	0 STOP NE SW		01	DRVR NONE	46 M OR-Y OR<25	000	000			00 00
00436	NONE	NNN	05/29/2013	YAMHILL NEWBERG NEWBERG UA	1 14 0 0 22.89	PACIFIC HY 99W VILLA RD	INTER NE 06	CROSS 0	N TRF SIGNAL	N CLR N DRY N DAY	S-1STOP REAR INJ	01 NONE PRVTE PSNGR CAR	0 STRGHT NE SW		01	DRVR NONE	00 F UNK UNK	026	000		013	07 00 07
												02 NONE PRVTE PSNGR CAR	0 STOP NE SW		01	DRVR NONE	00 M UNK UNK	000	000		013	00 00
												03 NONE PRVTE PSNGR CAR	0 STOP NE SW		01	DRVR INJC	43 F OR-Y OR<25	000	000			00 00
00453	CITY	NNN	06/02/2013	YAMHILL NEWBERG NEWBERG UA	1 14 0 0 22.89	PACIFIC HY 99W VILLA RD	INTER NE 06	CROSS 0	N TRF SIGNAL	N CLR N DRY N DAY	S-1STOP REAR INJ	01 NONE PRVTE PSNGR CAR	0 STRGHT NE SW		01	DRVR NONE	45 F OR-Y OR<25	026	000			27,07 00 27,07
												02 NONE PRVTE PSNGR CAR	0 STOP NE SW		01	DRVR INJC	27 M OR-Y OR<25	000	000			00 00

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Villa Road & OR 99W
January 1, 2009 through December 31, 2013

[illegible]

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091 PACIFIC HIGHWAY WEST

Villa Road & OR 99W
January 1, 2009 through December 31, 2013

SER#	INVEST	P R S W E A U C O E L G H R D C S L K	DATE DAY TIME	COUNTY CITY URBAN AREA	RD# FC COMPNT MLG TYP MILEPNT	CONN # FIRST STREET SECOND STREET	RD CHAR DIRECT LOCTN	INT-TYP (MEDIAN) LEGS (#LANES)	INT-REL TRAF- CNTL	OFFRD WTHR RND BT SURF DRVWY LIGHT	CRASH TYP COLL TYP SVRTY	SPCL USE TRLR QTY OWNER VEH TYPE	MOVE FROM TO	PRTC INJ P# TYPE SVRTY	A S G E X RES	LICNS LOC	PED ERROR	ACTN EVENT	CAUSE
00146 NONE	N N N		02/24/2013 Sun 5P	YAMHILL NEWBERG NEWBERG UA	1 14 0 0 22.89	PACIFIC HY 99W VILLA RD	INTER S 06	CROSS 0	N TRF SIGNAL	N CLR N DRY N DAY	S-OTHER TURN PDO	01 NONE PRVTE PSNGR CAR	0 TURN-L S W	01 DRVR NONE	52 M OR-Y OR<25		006	000 000	08 00 08
												02 NONE PRVTE PSNGR CAR	0 TURN-L S W	01 DRVR NONE	47 F OR-Y OR<25		000 000	00 00	
00808 CITY	N N N N N		09/19/2012 Wed 9P	YAMHILL NEWBERG NEWBERG UA	1 14 0 0 22.89	PACIFIC HY 99W VILLA RD	INTER SW 05	CROSS 0	N L-GRN-SIG	N CLR N DRY N DLIT	ANGL-OTH TURN PDO	01 NONE PRVTE PSNGR CAR	0 TURN-L S SW	01 DRVR NONE	43 M OR-Y OR>25		007	000 000	32,08,13 00 08
												02 NONE PRVTE PSNGR CAR	0 TURN-L S SW	01 DRVR NONE	37 M OR-Y OR>25		052,045	000 000	00 32,13
00546 NO RPT	N N N		07/06/2010 Tue 11A	YAMHILL NEWBERG NEWBERG UA	1 14 0 0 22.89	PACIFIC HY 99W VILLA RD	INTER SW 06	CROSS 0	N TRF SIGNAL	N CLR N DRY N DAY	S-1STOP REAR INJ	01 NONE PRVTE PSNGR CAR	0 STRGHT SW NE	01 DRVR INJC	51 F OR-Y OR<25		026	000 000	07 00 07
												02 NONE PRVTE PSNGR CAR	0 STOP SW NE	01 DRVR NONE	41 M OR-Y OR<25		000	011 000	00 00
00863 NONE	N N N		10/25/2011 Tue 8A	YAMHILL NEWBERG NEWBERG UA	1 14 0 0 22.89	PACIFIC HY 99W VILLA RD	INTER SW 06	CROSS 0	N TRF SIGNAL	N CLR N DRY N DAY	S-1STOP REAR INJ	01 NONE PRVTE PSNGR CAR	0 STRGHT SW NE	01 DRVR NONE	23 M OR-Y OR<25		026	000 000	27,07 00 07
												02 NONE PRVTE PSNGR CAR	0 STOP SW NE	01 DRVR INJC	68 F OR-Y OR<25		000	011 000	00 00
00366 NO RPT	N N N		04/23/2012 Mon 4P	YAMHILL NEWBERG NEWBERG UA	1 14 0 0 22.89	PACIFIC HY 99W VILLA RD	INTER SW 06	CROSS 0	N TRF SIGNAL	N CLR N DRY N DAY	S-1STOP REAR PDO	01 NONE PRVTE PSNGR CAR	0 STRGHT SW NE	01 DRVR NONE	35 M OTH-Y N-RES		026	000 000	07 00 07
												02 NONE PRVTE PSNGR CAR	0 STOP SW NE	01 DRVR NONE	30 F OR-Y OR<25		000	012 000	00 00
														02 PSNG NO<5	04 M		000	000	00

091 PACIFIC HIGHWAY WEST

Villa Road & OR 99W
January 1, 2009 through December 31, 2013

SER#	S D P R S W E A U C O DATE COUNTY RD# FC COMPNT CONN # INT-TYP OFFRD WTHR CRASH TYP SPCL USE												A S G E LICNS PED LOC ERROR ACTN EVENT CAUSE																									
	INVEST	D C S L K	TIME	CITY	URBAN AREA	MLG TYP	MILEPNT	FIRST STREET	SECOND STREET	RD CHAR	DIRECT	LOCTN	(MEDIAN) LEGS	TRAF- CNTL	RND BT	SURF	COLL TYP	SVRTY	V#	VEH TYPE	OWNER	QTY	MOVE FROM TO	P#	PRTC TYPE	INJ SVRTY	A G E X	S E RES	LICNS	PED LOC	ERROR	ACTN	EVENT	CAUSE				
00419 NONE	N N N		05/22/2012 Tue 3P	YAMHILL NEWBERG NEWBERG UA		1 14 0 0 22.89		PACIFIC HY 99W	VILLA RD	INTER SW 06			CROSS 0	N TRF		SIGNAL	N N	CLD DRY DAY	S-1STOP REAR PDO	01 0	NONE PRVTE PSNGR CAR	0	STRGHT SW NE		01 01	DRVR DRVR	NONE NONE		00 41	F M	OR-Y OR-Y	UNK OR<25		026 000		000 011 000		07 00 07
00468 CITY	N N N N N		06/11/2012 Mon 4P	YAMHILL NEWBERG NEWBERG UA		1 14 0 0 22.89		PACIFIC HY 99W	VILLA RD	INTER SW 06			CROSS 0	N TRF		SIGNAL	N N	CLR DRY DAY	S-1STOP REAR PDO	01 0	NONE PRVTE PSNGR CAR	0	STRGHT SW NE		01 01	DRVR DRVR	NONE NONE		18 40	M M	OR-Y OR-Y	OR<25 OR<25		026 000		000 011 000		27 00 27
00832 CITY	N N N N N		09/23/2013 Mon 7A	YAMHILL NEWBERG NEWBERG UA		1 14 0 0 22.89		PACIFIC HY 99W	VILLA RD	INTER SW 06			CROSS 0	N TRF		SIGNAL	N N	RAIN WET DAY	S-1STOP REAR PDO	01 0	NONE PRVTE PSNGR CAR	0	STRGHT SW NE		01 01	DRVR DRVR	NONE NONE		18 35	M F	OR-Y OR-Y	OR<25 OR<25		052 000		000 011 000		32,27 00 32,27
00485 NONE	N N N		06/30/2009 Tue 11A	YAMHILL NEWBERG NEWBERG UA		1 14 0 0 22.89		PACIFIC HY 99W	VILLA RD	INTER W 06			CROSS 0	N TRF		SIGNAL	N N	CLR DRY DAY	S-1STOP REAR PDO	01 0	NONE PRVTE PSNGR CAR	0	STRGHT SW NE		01 02	DRVR PSNG	NONE NO<5		26 04	F M	OR-Y OR-Y	OR<25 OR<25		026 000		000 011 000		07 00 07
00076 NONE	N N N		01/26/2011 Wed 3P	YAMHILL NEWBERG NEWBERG UA		1 14 0 0 22.89		PACIFIC HY 99W	VILLA RD	INTER W 06			CROSS 0	N TRF		SIGNAL	N N	CLR DRY DAY	S-1STOP REAR PDO	01 0	NONE PRVTE PSNGR CAR	0	STRGHT W E		01 01	DRVR DRVR	NONE NONE		00 59	M M	OR-Y OR-Y	OR<25 OR<25		026 000		000 011 000		07 00 07

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TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
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091 PACIFIC HIGHWAY WEST

Villa Road & OR 99W
January 1, 2009 through December 31, 2013

SER#	S D P R S W E A U C O E L G H R INVEST D C S L K	DATE	COUNTY CITY URBAN AREA	RD# FC COMPNT MLG TYP MILEPNT	CONN # FIRST STREET SECOND STREET	RD CHAR DIRECT LOCTN	INT-TYP (MEDIAN) LEGS (#LANES)	INT-REL TRAF- CNTL	OFFRD WTHR RNDT SURF DRVMY LIGHT	CRASH TYP COLL TYP SVRTY	SPCL USE TRLR QTY OWNER VEH TYPE	MOVE FROM TO	PRTC P#	INJ TYPE	SVRTY	A S G E X RES	LICNS LOC	PED ERROR	ACTN	EVENT	CAUSE
00241	NNNNN	03/31/2011	YAMHILL	1 14		INTER	CROSS	N	N CLD	S-1STOP	01 NONE	0 STRGHT									07
CITY		Thu	NEWBERG	0 0	PACIFIC HY 99W	W		TRF SIGNAL	N DRY	REAR	PRVTE	W E							000		00
		5P	NEWBERG UA	22.89	VILLA RD	06	0		N DAY	PDO	PSNGR CAR		01	DRVR	NONE	19 F	OR-Y OR<25	026	000		07
											02 NONE	0 STOP									
											PRVTE	W E							011		00
											PSNGR CAR		01	DRVR	NONE	71 F	OR-Y OR<25	000	000		00
00157	NNN	02/26/2009	YAMHILL	1 14		INTER	CROSS	N	N CLR	ANGL-OTH	01 NONE	0 TURN-L									02
NO RPT		Thu	NEWBERG	0 0	PACIFIC HY 99W	CN		TRF SIGNAL	N DRY	TURN	PRVTE	N E							000		00
		12P	NEWBERG UA	22.89	VILLA RD	01	0		N DAY	INJ	PSNGR CAR		01	DRVR	INJC	20 F	OR-Y OR<25	028	000		02
											02 NONE	0 STRGHT									
											PRVTE	E W							000		00
											PSNGR CAR		01	DRVR	NONE	34 M	OTH-Y N-RES	000	000		00
01033	YNNNN	12/05/2009	YAMHILL	1 14		INTER	CROSS	N	N CLR	OVERTURN	01 NONE	0 TURN-L									01,32
CITY		Sat	NEWBERG	0 0	PACIFIC HY 99W	CN		TRF SIGNAL	N DRY	NCOL	PRVTE	S W							000		00
		9A	NEWBERG UA	22.89	VILLA RD	01	0		N DAY	INJ	PSNGR CAR		01	DRVR	NONE	29 M	OR-Y OR<25	080,052	000		01,32
													02	PSNG	INJB	00 M		000	000		00
01150	NNNNN	12/17/2013	YAMHILL	1 14		INTER	CROSS	N	N CLD	S-OTHER	01 FARM	2 TURN-L									08
CITY		Tue	NEWBERG	0 0	PACIFIC HY 99W	CN		TRF SIGNAL	N DRY	TURN	PRVTE	SE SW							000		00
		11A	NEWBERG UA	22.89	VILLA RD	01	0		N DAY	PDO	SEMI TOW		01	DRVR	NONE	51 M	OR-Y OR>25	007	000		08
											02 NONE	0 TURN-L									
											PRVTE	SE SW							000		00
											PSNGR CAR		01	DRVR	NONE	47 F	OR-Y OR<25	000	000		00
00491	NNN	07/16/2009	YAMHILL	1 14		INTER	CROSS	N	N CLR	S-STRGHT	01 NONE	0 STRGHT									13
NONE		Thu	NEWBERG	0 0	PACIFIC HY 99W	CN		UNKNOWN	N DRY	SS-O	PRVTE	E W							000		00
		2P	NEWBERG UA	22.89	VILLA RD	02	0		N DAY	INJ	PSNGR CAR		01	DRVR	NONE	26 F	OR-Y OR<25	080	000		13
											02 NONE	0 STRGHT									
											PRVTE	E W							000		00
											PSNGR CAR		01	DRVR	INJC	24 M	OTH-Y OR<25	000	000		00
01023	NNN	12/08/2009	YAMHILL	1 14		INTER	CROSS	N	N CLR	S-OTHER	01 NONE	0 TURN-R									08
NO RPT		Tue	NEWBERG	0 0	PACIFIC HY 99W	CN		UNKNOWN	N DRY	TURN	PRVTE	S NE							000		00
		8A	NEWBERG UA	22.89	VILLA RD	04	0		N DAY	PDO	PSNGR CAR		01	DRVR	NONE	51 F	OR-Y OR>25	006	000		08

091 PACIFIC HIGHWAY WEST

Villa Road & OR 99W
January 1, 2009 through December 31, 2013

[illegible]

Villa Road & OR 99W
January 1, 2009 through December 31, 2013

SER#	S D			COUNTY	RD# FC	INT-TYP							SPCL USE			A S	E X	LICNS	PED	ERROR	ACTN	EVENT	CAUSE								
	P R S W					COMPNT	CONN #		RD CHAR	(MEDIAN)	INT-REL	OFFRDR	WTHR	CRASH TYP	TRLR QTY									MOVE							
	E A U C O DATE						CITY	STREET																	LEGS	TRAF-	RNDDBT	SURF	COLL TYP	OWNER	FROM
	D C S L K TIME																														
INVEST	D C S L K	TIME	URBAN AREA	MILEPNT	SECOND STREET	DIRECT	LOCTN	(#LANES)	CNTL	DRVWY	LIGHT	SVRTY	V#	VEH TYPE	TO	P#	TYPE	INJ	SVRTY	G E	RES	LOC	ERROR	ACTN	EVENT	CAUSE					
01173	N N N	07/20/2010	YAMHILL	1 14		INTER		CROSS	N	N CLR	S-1STOP	01 NONE	0	STRGHT												07					
NONE		Tue	NEWBERG	0 Z	PACIFIC HY 99W	S			TRF SIGNAL	N DRY	REAR	PRVTE	S N											000		00					
		5P	NEWBERG UA	20.65	VILLA RD	06		0		N DAY	PDO	PSNGR CAR				01	DRVR	NONE	00	M	UNK		026	000		07					
																					OR<25										
												02 NONE	0	STOP											011	00					
												PRVTE	S N											000	000	00					
												PSNGR CAR				01	DRVR	NONE	00	M	OR-Y			000	000	00					
																					OR<25										

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Villa Road & Park Lane														
January 1, 2009 through December 31, 2013														
	FATAL	NON-	PROPERTY		PEOPLE	PEOPLE		DRY	WET			INTER-	SECTION	OFF-
COLLISION TYPE	CRASHES	FATAL	DAMAGE	TOTAL	KILLED	INJURED	TRUCKS	SURF	SURF	DAY	DARK	SECTION	RELATED	ROAD
		CRASHES	ONLY	CRASHES										

YEAR:

TOTAL

FINAL TOTAL

Disclaimer: A higher number of crashes may be reported as of 2011 compared to prior years. This does not reflect an increase in annual crashes. The higher numbers result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics.

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE
Aldersgate Lane from Park Lane to Crestview Drive (excludes ending intersections)
January 1, 2009 through December 31, 2013

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR:														
TOTAL														
FINAL TOTAL														

Disclaimer: A higher number of crashes may be reported as of 2011 compared to prior years. This does not reflect an increase in annual crashes. The higher numbers result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics.

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
CRASH SUMMARIES BY YEAR BY COLLISION TYPE

Villa Road from Park Lane to OR 99W (excludes ending intersections)
January 1, 2009 through December 31, 2013

COLLISION TYPE	FATAL CRASHES	NON- FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER- SECTION	INTER- SECTION RELATED	OFF- ROAD
YEAR: 2012														
TURNING MOVEMENTS	0	1	0	1	0	1	0	1	0	1	0	0	0	0
2012 TOTAL	0	1	0	1	0	1	0	1	0	1	0	0	0	0
YEAR: 2011														
TURNING MOVEMENTS	0	1	0	1	0	1	0	1	0	1	0	0	0	0
2011 TOTAL	0	1	0	1	0	1	0	1	0	1	0	0	0	0
YEAR: 2010														
ANGLE	0	0	1	1	0	0	0	1	0	1	0	0	0	1
REAR-END	0	1	0	1	0	1	0	1	0	1	0	0	0	1
2010 TOTAL	0	1	1	2	0	1	0	2	0	2	0	0	0	2
FINAL TOTAL	0	3	1	4	0	3	0	4	0	4	0	0	0	2

Disclaimer: A higher number of crashes may be reported as of 2011 compared to prior years. This does not reflect an increase in annual crashes. The higher numbers result from a change to an internal departmental process that allows the Crash Analysis and Reporting Unit to add previously unavailable, non-fatal crash reports to the annual data file. Please be aware of this change when comparing pre-2011 crash statistics.










Villa Road from Park Lane to OR 99W (excludes ending intersections)
January 1, 2009 through December 31, 2013

	S	D						INT-TYP					SPCL USE															
SER#	E	A	U	C	O	DATE	CLASS	CITY STREET	RD CHAR	(MEDIAN)	INT-REL	OFF-RD	WTHR	CRASH TYP	TRLR QTY	MOVE			A	S	G	E	LICNS	PED				
INVEST	D	C	S	L	K	TIME	DIST FROM	FIRST STREET SECOND STREET	DIRECT LOCTN	LEGS (#LANES)	TRAFF-CONCTL	RNCBTT DRVWY	SURF LIGHT	COLL TYP SVRTRY	V#	VEH TYPE	FROM TO	P#	TYPE	SVRTRY	E	X	RES	LOC	ERROR	ACTN	EVENT	CAUSE
00215 CITY	Y	N	N	N	N	03/19/2010 Fri 2P	17 20	VILLA RD HAWORTH AVE	STRGHT N 06	(NONE) (02)	N NONE	Y N	CLR DRY DAY	PRKD MV REAR INJ	01 PSNGR	NONE PRVTE CAR	0 S	STRGHT N										
																		01	DRVR	INJB	53	M	OR-Y OR<25	026,050		000 038		27,30 00 27,30
															02	NONE PRVTE PSNGR	0 S CAR	PRKD-P N								008		00
00918 CITY	N	N	N	N	N	11/09/2011 Wed 11A	17 50	VILLA RD HAWORTH AVE	STRGHT S 06	(NONE) (02)	N UNKNOWN	N N	CLD DRY DAY	BIKE TURN INJ	01 PSNGR	NONE PRVTE CAR	0 S	STRGHT S										
																		01	DRVR	NONE	58	F	OR-Y OR<25	000		000 000		27,02 00 27,02
																		01	BIKE	INJC	18	F		04	016,028	037		
00684 NONE	N	N	N			08/23/2010 Mon 4P	17 100	VILLA RD PACIFIC HY 99W	ALLEY N 01	(NONE) (02)	N UNKNOWN	Y N	CLR DRY DAY	BIKE ANGL PDO	01 PSNGR	NONE PRVTE CAR		TURN-R E										
																		01	DRVR	NONE	45	F	OR-Y OR<25	027		018 000	006 02	02
																		01	BIKE	NONE	00	M		09	000	000		00
00934 CITY	N	N	N			10/18/2012 Thu 3P	17 30	VILLA RD PARK LN	STRGHT S 05	(NONE) (02)	N NONE	N N	CLR DRY DAY	BIKE TURN INJ	01 PSNGR	NONE PRVTE CAR	0 S	STRGHT N										
																		01	DRVR	NONE	62	M	OR-Y OR<25	000		000 000		13 00 00
																		01	BIKE	INJB	19	M		04	057,010	037		13

Appendix E Year 2016 Background Traffic
Level-of-Service Worksheets










2016 Background Traffic AM Peak Hour
1: Aldersgate Ln & E Crestview Dr

ATTACHMENT 5
Villa Road Apts
2/12/2015

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	166	2	2	92	3	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.63	0.63	0.63	0.63	0.63	0.63
Hourly flow rate (vph)	263	3	3	146	5	8
Pedestrians	4				3	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			270		424	268
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			270		424	268
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	99
cM capacity (veh/h)			1302		585	774
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	267	149	13			
Volume Left	0	3	5			
Volume Right	3	0	8			
cSH	1700	1302	690			
Volume to Capacity	0.16	0.00	0.02			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	0.0	0.2	10.3			
Lane LOS		A	B			
Approach Delay (s)	0.0	0.2	10.3			
Approach LOS			B			
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			19.3%	ICU Level of Service		A
Analysis Period (min)			15			










2016 Background Traffic AM Peak Hour
2: Aldersgate Ln & Park Ln

ATTACHMENT 5
Villa Road Apts
2/12/2015

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	9	0	5	35	5	2
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	12	0	6	45	6	3
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	46	30			53	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	46	30			53	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	99	100			100	
cM capacity (veh/h)	965	1049			1564	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	12	52	9			
Volume Left	12	0	6			
Volume Right	0	45	0			
cSH	965	1700	1564			
Volume to Capacity	0.01	0.03	0.00			
Queue Length 95th (ft)	1	0	0			
Control Delay (s)	8.8	0.0	5.2			
Lane LOS	A		A			
Approach Delay (s)	8.8	0.0	5.2			
Approach LOS	A					
Intersection Summary						
Average Delay		2.1				
Intersection Capacity Utilization		14.5%		ICU Level of Service		A
Analysis Period (min)		15				


















2016 Background Traffic AM Peak Hour
4: Villa Rd & Park Ln

ATTACHMENT 5
Villa Road Apts
2/12/2015

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	1	43	10	156	287	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	1	62	14	226	416	0
Pedestrians				1	2	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	673	417	416			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	673	417	416			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	90	99			
cM capacity (veh/h)	418	640	1154			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	64	241	416			
Volume Left	1	14	0			
Volume Right	62	0	0			
cSH	632	1154	1700			
Volume to Capacity	0.10	0.01	0.24			
Queue Length 95th (ft)	8	1	0			
Control Delay (s)	11.3	0.6	0.0			
Lane LOS	B	A				
Approach Delay (s)	11.3	0.6	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			1.2			
Intersection Capacity Utilization			26.7%	ICU Level of Service		A
Analysis Period (min)			15			






















2016 Background Traffic AM Peak Hour
6: Villa Rd & Fulton St

ATTACHMENT 5
Villa Road Apts
2/12/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	137	1	65	2	1	1	75	102	5	5	191	79
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	163	1	77	2	1	1	89	121	6	6	227	94
Pedestrians		15			3			2			3	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			0	
Right turn flare (veh)			6									
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	609	610	291	634	654	130	336			130		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	609	610	291	634	654	130	336			130		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	56	100	90	99	100	100	93			100		
cM capacity (veh/h)	373	374	737	327	353	920	1219			1464		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	242	5	217	327								
Volume Left	163	2	89	6								
Volume Right	77	1	6	94								
cSH	549	398	1219	1464								
Volume to Capacity	0.44	0.01	0.07	0.00								
Queue Length 95th (ft)	56	1	6	0								
Control Delay (s)	18.3	14.1	3.8	0.2								
Lane LOS	C	B	A	A								
Approach Delay (s)	18.3	14.1	3.8	0.2								
Approach LOS	C	B										
Intersection Summary												
Average Delay			6.8									
Intersection Capacity Utilization			49.2%		ICU Level of Service					A		
Analysis Period (min)			15									






















2016 Background Traffic AM Peak Hour
7: Villa Rd & Hwy 99W

ATTACHMENT 5
Villa Road Apts
2/12/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	100	1381	2	8	956	105	391	70	10	131	67	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	5.0		4.5	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.91		0.97	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	3438		1805	4635		2968	1670		1752	1900	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1805	3438		1805	4635		2968	1670		1752	1900	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	111	1534	2	9	1062	117	434	78	11	146	74	60
RTOR Reduction (vph)	0	0	0	0	7	0	0	8	0	0	0	55
Lane Group Flow (vph)	111	1536	0	9	1172	0	434	81	0	146	74	5
Confl. Peds. (#/hr)	1		2	2		1			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	11%	1%	18%	10%	22%	3%	0%	2%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	11.0	61.7		1.3	52.0		10.9	10.6		7.9	7.6	7.6
Effective Green, g (s)	11.0	61.7		1.3	52.0		10.9	10.6		7.9	7.6	7.6
Actuated g/C Ratio	0.11	0.62		0.01	0.52		0.11	0.11		0.08	0.08	0.08
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	5.0		4.5	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	4.2		2.5	4.2	4.2
Lane Grp Cap (vph)	198	2121		23	2410		323	177		138	144	120
v/s Ratio Prot	c0.06	c0.45		0.00	0.25		c0.15	c0.05		0.08	0.04	
v/s Ratio Perm												0.00
v/c Ratio	0.56	0.72		0.39	0.49		1.34	0.46		1.06	0.51	0.04
Uniform Delay, d1	42.2	13.3		49.0	15.4		44.5	42.0		46.0	44.4	42.8
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.9	1.2		7.8	0.1		174.0	8.3		92.9	12.5	0.6
Delay (s)	45.1	14.4		56.8	15.5		218.6	50.3		139.0	56.9	43.4
Level of Service	D	B		E	B		F	D		F	E	D
Approach Delay (s)		16.5			15.8			189.9			96.8	
Approach LOS		B			B			F			F	
Intersection Summary												
HCM 2000 Control Delay			47.4			HCM 2000 Level of Service			D			
HCM 2000 Volume to Capacity ratio			0.79									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			18.5			
Intersection Capacity Utilization			79.1%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												










2016 Background Traffic AM Peak Hour
7: Villa Rd & Hwy 99W

ATTACHMENT 5
Villa Road Apts
2/12/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	100	1381	2	8	956	105	391	70	10	131	67	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1810	1900	1900	1727	1900	1610	1704	1900	1845	1900	1863
Adj Flow Rate, veh/h	111	1534	2	9	1062	117	434	78	11	146	74	60
Adj No. of Lanes	1	2	0	1	3	0	2	1	0	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	5	5	0	11	11	18	10	10	3	0	2
Cap, veh/h	138	1162	2	23	1150	127	260	644	91	110	789	657
Arrive On Green	0.08	0.33	0.33	0.01	0.27	0.27	0.09	0.44	0.44	0.06	0.42	0.42
Sat Flow, veh/h	1810	3523	5	1810	4311	474	2975	1461	206	1757	1900	1581
Grp Volume(v), veh/h	111	748	788	9	774	405	434	0	89	146	74	60
Grp Sat Flow(s),veh/h/ln	1810	1719	1809	1810	1572	1641	1487	0	1668	1757	1900	1581
Q Serve(g_s), s	7.2	39.6	39.6	0.6	28.7	28.8	10.5	0.0	3.8	7.5	2.8	2.8
Cycle Q Clear(g_c), s	7.2	39.6	39.6	0.6	28.7	28.8	10.5	0.0	3.8	7.5	2.8	2.8
Prop In Lane	1.00		0.00	1.00		0.29	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	138	567	597	23	839	438	260	0	735	110	789	657
V/C Ratio(X)	0.81	1.32	1.32	0.38	0.92	0.92	1.67	0.00	0.12	1.33	0.09	0.09
Avail Cap(c_a), veh/h	279	567	597	279	891	465	260	0	735	110	789	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.6	40.2	40.2	58.7	42.8	42.8	54.8	0.0	19.8	56.3	21.3	21.3
Incr Delay (d2), s/veh	8.0	155.9	155.4	7.5	14.2	23.4	316.6	0.0	0.3	197.9	0.2	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	43.3	45.5	0.3	14.1	15.9	15.8	0.0	1.8	9.7	1.6	1.3
LnGrp Delay(d),s/veh	62.6	196.1	195.6	66.2	57.0	66.2	371.4	0.0	20.2	254.2	21.6	21.6
LnGrp LOS	E	F	F	E	E	E	F		C	F	C	C
Approach Vol, veh/h		1647			1188			523			280	
Approach Delay, s/veh		186.9			60.2			311.6			142.9	
Approach LOS		F			E			F			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	57.9	6.1	44.1	15.0	54.9	13.6	36.5				
Change Period (Y+Rc), s	4.5	5.0	4.5	4.5	4.5	5.0	4.5	4.5				
Max Green Setting (Gmax), s	7.5	42.0	18.5	31.0	10.5	39.0	18.5	34.0				
Max Q Clear Time (g_c+l1), s	9.5	5.8	2.6	41.6	12.5	4.8	9.2	30.8				
Green Ext Time (p_c), s	0.0	1.8	0.0	0.0	0.0	1.8	0.1	1.2				
Intersection Summary												
HCM 2010 Ctrl Delay			160.1									
HCM 2010 LOS			F									










2016 Background Traffic PM Peak Hour
1: Aldersgate Ln & E Crestview Dr

ATTACHMENT 5
Villa Road Apts
2/12/2015

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	63	5	3	127	2	2
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.63	0.63	0.63	0.63	0.63	0.63
Hourly flow rate (vph)	100	8	5	202	3	3
Pedestrians	4				3	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			111		322	107
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			111		322	107
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1488		670	950
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	108	206	6			
Volume Left	0	5	3			
Volume Right	8	0	3			
cSH	1700	1488	786			
Volume to Capacity	0.06	0.00	0.01			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	0.0	0.2	9.6			
Lane LOS		A	A			
Approach Delay (s)	0.0	0.2	9.6			
Approach LOS			A			
Intersection Summary						
Average Delay			0.3			
Intersection Capacity Utilization			19.1%	ICU Level of Service		A
Analysis Period (min)			15			










2016 BackgroundTraffic PM Peak Hour
2: Aldersgate Ln & Park Ln

ATTACHMENT 5
Villa Road Apts
2/12/2015

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	57	8	2	20	8	1
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	74	10	3	26	10	1
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	39	17			30	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	39	17			30	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	92	99			99	
cM capacity (veh/h)	971	1067			1595	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	84	29	12			
Volume Left	74	0	10			
Volume Right	10	26	0			
cSH	982	1700	1595			
Volume to Capacity	0.09	0.02	0.01			
Queue Length 95th (ft)	7	0	0			
Control Delay (s)	9.0	0.0	6.5			
Lane LOS	A		A			
Approach Delay (s)	9.0	0.0	6.5			
Approach LOS	A					
Intersection Summary						
Average Delay		6.7				
Intersection Capacity Utilization		17.2%		ICU Level of Service		A
Analysis Period (min)		15				










2016 BackgroundTraffic PM Peak Hour
3: Site Access & Park Ln

ATTACHMENT 5
Villa Road Apts
2/12/2015

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	31	0	0	65	0	0
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	36	0	0	76	0	0
Pedestrians				8		
Lane Width (ft)				12.0		
Walking Speed (ft/s)				4.0		
Percent Blockage				1		
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			36		113	44
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			36		113	44
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
cM capacity (veh/h)			1587		889	1024
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	36	76	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1587	1700			
Volume to Capacity	0.02	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS			A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			15.8%	ICU Level of Service		A
Analysis Period (min)			15			










2016 BackgroundTraffic PM Peak Hour
4: Villa Rd & Park Ln

ATTACHMENT 5
Villa Road Apts
2/12/2015

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	1	29	59	245	173	6
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	1	42	86	355	251	9
Pedestrians				1	2	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	783	256	259			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	783	256	259			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	95	94			
cM capacity (veh/h)	341	787	1317			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	43	441	259			
Volume Left	1	86	0			
Volume Right	42	0	9			
cSH	754	1317	1700			
Volume to Capacity	0.06	0.06	0.15			
Queue Length 95th (ft)	5	5	0			
Control Delay (s)	10.1	2.1	0.0			
Lane LOS	B	A				
Approach Delay (s)	10.1	2.1	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			1.8			
Intersection Capacity Utilization		39.3%		ICU Level of Service		A
Analysis Period (min)		15				


















2016 BackgroundTraffic PM Peak Hour
5: SITE Access & Park Ln

ATTACHMENT 5
Villa Road Apts
2/12/2015

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	0	0	304	203	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	0	0	0	358	239	0
Pedestrians				1	2	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	598	240	239			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	598	240	239			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	467	803	1340			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	0	358	239			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1340	1700			
Volume to Capacity	0.00	0.00	0.14			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization		26.3%		ICU Level of Service		A
Analysis Period (min)		15				






















2016 BackgroundTraffic PM Peak Hour
6: Villa Rd & Fulton St

ATTACHMENT 5
Villa Road Apts
2/12/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	0	82	3	0	1	93	195	7	0	157	171
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	155	0	98	4	0	1	111	232	8	0	187	204
Pedestrians		15			3			2			3	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			0	
Right turn flare (veh)			6									
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	766	769	306	800	866	242	405			243		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	766	769	306	800	866	242	405			243		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	46	100	87	99	100	100	90			100		
cM capacity (veh/h)	289	297	724	241	261	797	1150			1331		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	252	5	351	390								
Volume Left	155	4	111	0								
Volume Right	98	1	8	204								
cSH	471	292	1150	1331								
Volume to Capacity	0.54	0.02	0.10	0.00								
Queue Length 95th (ft)	78	1	8	0								
Control Delay (s)	23.1	17.5	3.3	0.0								
Lane LOS	C	C	A									
Approach Delay (s)	23.1	17.5	3.3	0.0								
Approach LOS	C	C										
Intersection Summary												
Average Delay			7.1									
Intersection Capacity Utilization			54.5%		ICU Level of Service					A		
Analysis Period (min)			15									






















2016 BackgroundTraffic PM Peak Hour
7: Villa Rd & Hwy 99W

ATTACHMENT 5
Villa Road Apts
2/12/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	71	1370	6	20	1638	93	714	116	18	155	68	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	5.0		4.5	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.91		0.97	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	3469		1805	4995		3335	1812		1805	1900	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1805	3469		1805	4995		3335	1812		1805	1900	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	75	1442	6	21	1724	98	752	122	19	163	72	117
RTOR Reduction (vph)	0	0	0	0	3	0	0	8	0	0	0	105
Lane Group Flow (vph)	75	1448	0	21	1819	0	752	133	0	163	72	12
Confl. Peds. (#/hr)	1		2	2		1			2	2		
Heavy Vehicles (%)	0%	4%	0%	0%	3%	1%	5%	2%	6%	0%	0%	2%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	8.7	75.1		3.1	69.5		10.5	12.8		10.5	12.8	12.8
Effective Green, g (s)	8.7	75.1		3.1	69.5		10.5	12.8		10.5	12.8	12.8
Actuated g/C Ratio	0.07	0.63		0.03	0.58		0.09	0.11		0.09	0.11	0.11
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	5.0		4.5	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	4.2		2.5	4.2	4.2
Lane Grp Cap (vph)	130	2171		46	2892		291	193		157	202	168
v/s Ratio Prot	c0.04	c0.42		0.01	0.36		c0.23	c0.07		0.09	0.04	
v/s Ratio Perm												0.01
v/c Ratio	0.58	0.67		0.46	0.63		2.58	0.69		1.04	0.36	0.07
Uniform Delay, d1	53.9	14.4		57.6	16.7		54.8	51.7		54.8	49.8	48.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	5.0	0.7		5.2	0.4		722.8	18.3		82.3	4.9	0.9
Delay (s)	58.9	15.1		62.8	17.1		777.6	69.9		137.0	54.6	49.1
Level of Service	E	B		E	B		F	E		F	D	D
Approach Delay (s)		17.3			17.6			665.9			91.0	
Approach LOS		B			B			F			F	
Intersection Summary												
HCM 2000 Control Delay		148.6			HCM 2000 Level of Service			F				
HCM 2000 Volume to Capacity ratio		0.88										
Actuated Cycle Length (s)		120.0			Sum of lost time (s)			18.5				
Intersection Capacity Utilization		91.2%			ICU Level of Service			F				
Analysis Period (min)		15										
c Critical Lane Group												

2016 BackgroundTraffic PM Peak Hour
7: Villa Rd & Hwy 99W










ATTACHMENT 5
Villa Road Apts
2/12/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	71	1370	6	20	1638	93	714	116	18	155	68	111
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1847	1900	1810	1853	1900	1900	1900	1863
Adj Flow Rate, veh/h	75	1442	6	21	1724	98	752	122	19	163	72	117
Adj No. of Lanes	1	2	0	1	3	0	2	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	4	4	0	3	3	5	2	2	0	0	2
Cap, veh/h	96	952	4	43	1168	66	247	788	123	134	957	796
Arrive On Green	0.05	0.27	0.27	0.02	0.24	0.24	0.07	0.50	0.50	0.07	0.50	0.50
Sat Flow, veh/h	1810	3546	15	1810	4880	277	3343	1566	244	1810	1900	1581
Grp Volume(v), veh/h	75	706	742	21	1187	635	752	0	141	163	72	117
Grp Sat Flow(s),veh/h/ln	1810	1736	1825	1810	1680	1796	1672	0	1810	1810	1900	1581
Q Serve(g_s), s	5.8	38.1	38.1	1.6	34.0	34.0	10.5	0.0	6.0	10.5	2.8	5.6
Cycle Q Clear(g_c), s	5.8	38.1	38.1	1.6	34.0	34.0	10.5	0.0	6.0	10.5	2.8	5.6
Prop In Lane	1.00		0.01	1.00		0.15	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	96	466	490	43	805	430	247	0	911	134	957	796
V/C Ratio(X)	0.78	1.51	1.52	0.49	1.47	1.48	3.04	0.00	0.15	1.22	0.08	0.15
Avail Cap(c_a), veh/h	299	466	490	299	805	430	247	0	911	134	957	796
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.5	51.9	51.9	68.5	54.0	54.0	65.8	0.0	19.0	65.8	18.2	18.9
Incr Delay (d2), s/veh	10.0	242.5	242.2	6.2	220.3	227.0	929.6	0.0	0.4	148.0	0.2	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	49.6	52.1	0.9	40.4	44.0	36.8	0.0	3.1	10.7	1.5	2.5
LnGrp Delay(d),s/veh	76.4	294.4	294.2	74.7	274.3	281.0	995.3	0.0	19.3	213.8	18.3	19.3
LnGrp LOS	E	F	F	E	F	F	F		B	F	B	B
Approach Vol, veh/h	1523				1843		893				352	
Approach Delay, s/veh	283.6				274.4		841.2				109.2	
Approach LOS	F				F		F				F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	76.5	7.9	42.6	15.0	76.5	12.0	38.5				
Change Period (Y+Rc), s	4.5	5.0	4.5	4.5	4.5	5.0	4.5	4.5				
Max Green Setting (Gmax), s	10.5	55.0	23.5	31.0	10.5	55.0	23.5	34.0				
Max Q Clear Time (g_c+l1), s	12.5	8.0	3.6	40.1	12.5	7.6	7.8	36.0				
Green Ext Time (p_c), s	0.0	2.8	0.0	0.0	0.0	2.8	0.1	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	374.6											
HCM 2010 LOS	F											

Appendix F Year 2016 Total Traffic Level-of-
Service Worksheets










2016 Total Traffic AM Peak Hour
1: Aldersgate Ln & E Crestview Dr

ATTACHMENT 5
Villa Road Apts
2/6/2015

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	166	3	2	92	6	5
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.63	0.63	0.63	0.63	0.63	0.63
Hourly flow rate (vph)	263	5	3	146	10	8
Pedestrians	4				3	
Lane Width (ft)	12.0				12.0	
Walking Speed (ft/s)	4.0				4.0	
Percent Blockage	0				0	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			271		425	269
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			271		425	269
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		98	99
cM capacity (veh/h)			1301		585	773
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	268	149	17			
Volume Left	0	3	10			
Volume Right	5	0	8			
cSH	1700	1301	657			
Volume to Capacity	0.16	0.00	0.03			
Queue Length 95th (ft)	0	0	2			
Control Delay (s)	0.0	0.2	10.6			
Lane LOS		A	B			
Approach Delay (s)	0.0	0.2	10.6			
Approach LOS			B			
Intersection Summary						
Average Delay			0.5			
Intersection Capacity Utilization			19.3%	ICU Level of Service		A
Analysis Period (min)			15			











2016 Total Traffic AM Peak Hour
2: Aldersgate Ln & Park Ln

ATTACHMENT 5
Villa Road Apts
2/6/2015

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	14	3	5	36	6	2
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.77	0.77	0.77	0.77	0.77	0.77
Hourly flow rate (vph)	18	4	6	47	8	3
Pedestrians	1					
Lane Width (ft)	12.0					
Walking Speed (ft/s)	4.0					
Percent Blockage	0					
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	49	31			54	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	49	31			54	
tC, single (s)	6.4	6.2			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.3			2.2	
p0 queue free %	98	100			100	
cM capacity (veh/h)	960	1048			1563	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	22	53	10			
Volume Left	18	0	8			
Volume Right	4	47	0			
cSH	974	1700	1563			
Volume to Capacity	0.02	0.03	0.00			
Queue Length 95th (ft)	2	0	0			
Control Delay (s)	8.8	0.0	5.5			
Lane LOS	A		A			
Approach Delay (s)	8.8	0.0	5.5			
Approach LOS	A					
Intersection Summary						
Average Delay		2.9				
Intersection Capacity Utilization		15.3%		ICU Level of Service		A
Analysis Period (min)		15				










2016 Total Traffic AM Peak Hour
4: Villa Rd & Park Ln

ATTACHMENT 5
Villa Road Apts
2/6/2015

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	4	43	10	158	287	1
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	6	62	14	229	416	1
Pedestrians				1	2	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	677	418	417			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	677	418	417			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	90	99			
cM capacity (veh/h)	416	639	1153			
Direction, Lane #	EB 1	EB 2	NB 1	SB 1		
Volume Total	6	62	243	417		
Volume Left	6	0	14	0		
Volume Right	0	62	0	1		
cSH	416	639	1153	1700		
Volume to Capacity	0.01	0.10	0.01	0.25		
Queue Length 95th (ft)	1	8	1	0		
Control Delay (s)	13.8	11.2	0.6	0.0		
Lane LOS	B	B	A			
Approach Delay (s)	11.5		0.6	0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			1.3			
Intersection Capacity Utilization			26.8%	ICU Level of Service		A
Analysis Period (min)			15			


















2016 Total Traffic AM Peak Hour
5: Villa Rd & Site Access

ATTACHMENT 5
Villa Road Apts
2/6/2015

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	2	40	10	166	330	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	3	58	14	241	478	0
Pedestrians				1	2	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	750	479	478			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	750	479	478			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	90	99			
cM capacity (veh/h)	376	590	1095			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	61	255	478			
Volume Left	3	14	0			
Volume Right	58	0	0			
cSH	574	1095	1700			
Volume to Capacity	0.11	0.01	0.28			
Queue Length 95th (ft)	9	1	0			
Control Delay (s)	12.0	0.6	0.0			
Lane LOS	B	A				
Approach Delay (s)	12.0	0.6	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			1.1			
Intersection Capacity Utilization		27.7%		ICU Level of Service		A
Analysis Period (min)		15				






















2016 Total Traffic AM Peak Hour
6: Villa Rd & Fulton St

ATTACHMENT 5
Villa Road Apts
2/6/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	137	1	65	2	1	1	75	112	5	5	231	79
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Hourly flow rate (vph)	163	1	77	2	1	1	89	133	6	6	275	94
Pedestrians		15			3			2			3	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			0	
Right turn flare (veh)			6									
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	669	670	339	693	714	142	384			142		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	669	670	339	693	714	142	384			142		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	52	100	89	99	100	100	92			100		
cM capacity (veh/h)	339	345	693	295	326	906	1171			1449		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	242	5	229	375								
Volume Left	163	2	89	6								
Volume Right	77	1	6	94								
cSH	499	365	1171	1449								
Volume to Capacity	0.48	0.01	0.08	0.00								
Queue Length 95th (ft)	65	1	6	0								
Control Delay (s)	20.6	15.0	3.7	0.2								
Lane LOS	C	B	A	A								
Approach Delay (s)	20.6	15.0	3.7	0.2								
Approach LOS	C	B										
Intersection Summary												
Average Delay			7.0									
Intersection Capacity Utilization			51.7%		ICU Level of Service					A		
Analysis Period (min)			15									






















2016 Total Traffic AM Peak Hour
7: Villa Rd & Hwy 99W

ATTACHMENT 5
Villa Road Apts
2/6/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	103	1381	2	8	956	108	391	71	10	142	72	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	5.0		4.5	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.91		0.97	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	0.98		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	3438		1805	4634		2968	1670		1752	1900	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1805	3438		1805	4634		2968	1670		1752	1900	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	114	1534	2	9	1062	120	434	79	11	158	80	72
RTOR Reduction (vph)	0	0	0	0	8	0	0	8	0	0	0	66
Lane Group Flow (vph)	114	1536	0	9	1174	0	434	82	0	158	80	6
Confl. Peds. (#/hr)	1		2	2		1			2	2		
Heavy Vehicles (%)	0%	5%	0%	0%	11%	1%	18%	10%	22%	3%	0%	2%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	11.1	61.6		1.3	51.8		10.7	10.9		7.7	7.9	7.9
Effective Green, g (s)	11.1	61.6		1.3	51.8		10.7	10.9		7.7	7.9	7.9
Actuated g/C Ratio	0.11	0.62		0.01	0.52		0.11	0.11		0.08	0.08	0.08
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	5.0		4.5	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	4.2		2.5	4.2	4.2
Lane Grp Cap (vph)	200	2117		23	2400		317	182		134	150	125
v/s Ratio Prot	c0.06	c0.45		0.00	0.25		c0.15	c0.05		0.09	0.04	
v/s Ratio Perm												0.00
v/c Ratio	0.57	0.73		0.39	0.49		1.37	0.45		1.18	0.53	0.05
Uniform Delay, d1	42.2	13.3		49.0	15.6		44.6	41.7		46.1	44.3	42.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.0	1.2		7.8	0.1		185.0	7.9		133.8	12.9	0.7
Delay (s)	45.2	14.5		56.8	15.7		229.6	49.6		180.0	57.2	43.3
Level of Service	D	B		E	B		F	D		F	E	D
Approach Delay (s)		16.6			16.0			198.7			116.5	
Approach LOS		B			B			F			F	
Intersection Summary												
HCM 2000 Control Delay			50.8			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			0.79									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			18.5			
Intersection Capacity Utilization			79.1%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												










2016 Total Traffic AM Peak Hour
7: Villa Rd & Hwy 99W

ATTACHMENT 5
Villa Road Apts
2/12/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	103	1381	2	8	956	108	391	71	10	142	72	65
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1810	1900	1900	1728	1900	1610	1705	1900	1845	1900	1863
Adj Flow Rate, veh/h	114	1534	2	9	1062	120	434	79	11	158	80	72
Adj No. of Lanes	1	2	0	1	3	0	2	1	0	1	1	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	5	5	0	11	11	18	10	10	3	0	2
Cap, veh/h	141	1170	2	23	1149	130	260	642	89	110	785	653
Arrive On Green	0.08	0.33	0.33	0.01	0.27	0.27	0.09	0.44	0.44	0.06	0.41	0.41
Sat Flow, veh/h	1810	3523	5	1810	4299	485	2975	1464	204	1757	1900	1581
Grp Volume(v), veh/h	114	748	788	9	776	406	434	0	90	158	80	72
Grp Sat Flow(s),veh/h/ln	1810	1719	1809	1810	1572	1640	1487	0	1668	1757	1900	1581
Q Serve(g_s), s	7.4	39.9	39.9	0.6	28.8	28.9	10.5	0.0	3.8	7.5	3.1	3.4
Cycle Q Clear(g_c), s	7.4	39.9	39.9	0.6	28.8	28.9	10.5	0.0	3.8	7.5	3.1	3.4
Prop In Lane	1.00		0.00	1.00		0.30	1.00		0.12	1.00		1.00
Lane Grp Cap(c), veh/h	141	571	601	23	840	438	260	0	731	110	785	653
V/C Ratio(X)	0.81	1.31	1.31	0.38	0.92	0.93	1.67	0.00	0.12	1.44	0.10	0.11
Avail Cap(c_a), veh/h	279	571	601	279	891	465	260	0	731	110	785	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	54.4	40.1	40.1	58.7	42.8	42.8	54.8	0.0	20.0	56.3	21.6	21.6
Incr Delay (d2), s/veh	7.9	152.0	151.5	7.5	14.4	23.6	316.6	0.0	0.3	241.5	0.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	43.0	45.1	0.3	14.2	15.9	15.8	0.0	1.8	11.0	1.7	1.5
LnGrp Delay(d),s/veh	62.4	192.1	191.6	66.2	57.1	66.4	371.4	0.0	20.4	297.7	21.8	22.0
LnGrp LOS	E	F	F	E	E	E	F		C	F	C	C
Approach Vol, veh/h	1650				1191		524				310	
Approach Delay, s/veh	182.9				60.4		311.1				162.5	
Approach LOS	F				E		F				F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.0	57.6	6.1	44.4	15.0	54.6	13.8	36.6				
Change Period (Y+Rc), s	4.5	5.0	4.5	4.5	4.5	5.0	4.5	4.5				
Max Green Setting (Gmax), s	7.5	42.0	18.5	31.0	10.5	39.0	18.5	34.0				
Max Q Clear Time (g_c+I1), s	9.5	5.8	2.6	41.9	12.5	5.4	9.4	30.9				
Green Ext Time (p_c), s	0.0	2.0	0.0	0.0	0.0	1.9	0.1	1.2				
Intersection Summary												
HCM 2010 Ctrl Delay	159.7											
HCM 2010 LOS	F											










2016 Total Traffic PM Peak Hour
1: Aldersgate Ln & E Crestview Dr

ATTACHMENT 5
Villa Road Apts
2/6/2015

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	63	8	3	127	4	2
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	76	10	4	153	5	2
Pedestrians	4			1	4	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			90		249	86
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			90		249	86
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	100
cM capacity (veh/h)			1513		737	975
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	86	157	7			
Volume Left	0	4	5			
Volume Right	10	0	2			
cSH	1700	1513	802			
Volume to Capacity	0.05	0.00	0.01			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	0.0	0.2	9.5			
Lane LOS		A	A			
Approach Delay (s)	0.0	0.2	9.5			
Approach LOS			A			
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			19.4%	ICU Level of Service		A
Analysis Period (min)			15			











2016 Total Traffic PM Peak Hour
2: Aldersgate Ln & Park Ln

ATTACHMENT 5
Villa Road Apts
2/6/2015

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	60	10	2	26	11	1
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	85	14	3	37	15	1
Pedestrians	1		1			
Lane Width (ft)	12.0		12.0			
Walking Speed (ft/s)	4.0		4.0			
Percent Blockage	0		0			
Right turn flare (veh)						
Median type			None			None
Median storage veh						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	56	22			40	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	56	22			40	
tC, single (s)	6.4	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	91	99			99	
cM capacity (veh/h)	941	1020			1581	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	99	39	17			
Volume Left	85	0	15			
Volume Right	14	37	0			
cSH	952	1700	1581			
Volume to Capacity	0.10	0.02	0.01			
Queue Length 95th (ft)	9	0	1			
Control Delay (s)	9.2	0.0	6.7			
Lane LOS	A		A			
Approach Delay (s)	9.2	0.0	6.7			
Approach LOS	A					
Intersection Summary						
Average Delay		6.6				
Intersection Capacity Utilization		17.9%		ICU Level of Service		A
Analysis Period (min)		15				










2016 Total Traffic PM Peak Hour
4: Villa Rd & Park Ln

ATTACHMENT 5
Villa Road Apts
2/6/2015

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	3	29	59	246	176	9
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	4	34	69	289	207	11
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	642	212	218			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	642	212	218			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	96	95			
cM capacity (veh/h)	419	833	1364			
Direction, Lane #	EB 1	EB 2	NB 1	SB 1		
Volume Total	4	34	359	218		
Volume Left	4	0	69	0		
Volume Right	0	34	0	11		
cSH	419	833	1364	1700		
Volume to Capacity	0.01	0.04	0.05	0.13		
Queue Length 95th (ft)	1	3	4	0		
Control Delay (s)	13.7	9.5	1.9	0.0		
Lane LOS	B	A	A			
Approach Delay (s)	9.9		1.9	0.0		
Approach LOS	A					
Intersection Summary						
Average Delay			1.7			
Intersection Capacity Utilization			39.4%	ICU Level of Service		A
Analysis Period (min)			15			


















2016 Total Traffic PM Peak Hour
5: Villa Rd & Haworth

ATTACHMENT 5
Villa Road Apts
2/6/2015

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	1	23	43	304	203	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	1	33	62	441	294	4
Pedestrians				1	2	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	864	297	299			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	864	297	299			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	96	95			
cM capacity (veh/h)	311	746	1274			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	35	503	299			
Volume Left	1	62	0			
Volume Right	33	0	4			
cSH	705	1274	1700			
Volume to Capacity	0.05	0.05	0.18			
Queue Length 95th (ft)	4	4	0			
Control Delay (s)	10.4	1.4	0.0			
Lane LOS	B	A				
Approach Delay (s)	10.4	1.4	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			1.3			
Intersection Capacity Utilization		42.9%		ICU Level of Service		A
Analysis Period (min)		15				






















2016 Total Traffic PM Peak Hour
6: Villa Rd & Fulton St

ATTACHMENT 5
Villa Road Apts
2/6/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	130	0	82	3	0	1	93	238	7	0	180	171
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	149	0	94	3	0	1	107	274	8	0	207	197
Pedestrians		13			1			1			8	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			1	
Right turn flare (veh)			6									
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	819	815	319	846	909	287	416			283		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	819	815	319	846	909	287	416			283		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	44	100	87	98	100	100	91			100		
cM capacity (veh/h)	267	281	715	227	248	752	1130			1290		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	244	5	389	403								
Volume Left	149	3	107	0								
Volume Right	94	1	8	197								
cSH	435	275	1130	1290								
Volume to Capacity	0.56	0.02	0.09	0.00								
Queue Length 95th (ft)	84	1	8	0								
Control Delay (s)	25.3	18.3	3.0	0.0								
Lane LOS	D	C	A									
Approach Delay (s)	25.3	18.3	3.0	0.0								
Approach LOS	D	C										
Intersection Summary												
Average Delay			7.1									
Intersection Capacity Utilization			57.6%		ICU Level of Service					B		
Analysis Period (min)			15									

2016 Total Traffic PM Peak Hour
7: Villa Rd & Hwy 99W






















ATTACHMENT 5
Villa Road Apts
2/6/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	82	1370	6	20	1638	105	714	122	18	161	71	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	5.0		4.5	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.91		0.97	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	0.99		1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	3469		1805	4989		3335	1812		1805	1900	1518
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1805	3469		1805	4989		3335	1812		1805	1900	1518
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	86	1442	6	21	1724	111	752	128	19	169	75	123
RTOR Reduction (vph)	0	0	0	0	3	0	0	7	0	0	0	109
Lane Group Flow (vph)	86	1448	0	21	1832	0	752	140	0	169	75	14
Confl. Peds. (#/hr)	1		15	15		1	25		6	6		25
Confl. Bikes (#/hr)						2			1			1
Heavy Vehicles (%)	0%	4%	0%	0%	3%	1%	5%	2%	6%	0%	0%	2%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	9.3	74.7		3.1	68.5		10.5	13.2		10.5	13.2	13.2
Effective Green, g (s)	9.3	74.7		3.1	68.5		10.5	13.2		10.5	13.2	13.2
Actuated g/C Ratio	0.08	0.62		0.03	0.57		0.09	0.11		0.09	0.11	0.11
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	5.0		4.5	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	4.2		2.5	4.2	4.2
Lane Grp Cap (vph)	139	2159		46	2847		291	199		157	209	166
v/s Ratio Prot	c0.05	c0.42		0.01	0.37		c0.23	c0.08		0.09	0.04	
v/s Ratio Perm												0.01
v/c Ratio	0.62	0.67		0.46	0.64		2.58	0.70		1.08	0.36	0.08
Uniform Delay, d1	53.6	14.7		57.6	17.5		54.8	51.5		54.8	49.5	48.0
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.8	0.8		5.2	0.4		722.8	18.8		93.7	4.7	1.0
Delay (s)	60.5	15.4		62.8	17.9		777.6	70.3		148.4	54.2	48.9
Level of Service	E	B		E	B		F	E		F	D	D
Approach Delay (s)		18.0			18.4			661.9			95.8	
Approach LOS		B			B			F			F	
Intersection Summary												
HCM 2000 Control Delay			148.6			HCM 2000 Level of Service				F		
HCM 2000 Volume to Capacity ratio			0.88									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)				18.5		
Intersection Capacity Utilization			105.5%			ICU Level of Service				G		
Analysis Period (min)			15									

c Critical Lane Group

2016 Total Traffic PM Peak Hour
7: Villa Rd & Hwy 99W










ATTACHMENT 5
Villa Road Apts
2/12/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	82	1370	6	20	1638	105	714	122	18	161	71	117
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1847	1900	1810	1853	1900	1900	1900	1863
Adj Flow Rate, veh/h	86	1442	6	21	1724	111	752	128	19	169	75	123
Adj No. of Lanes	1	2	0	1	3	0	2	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	4	4	0	3	3	5	2	2	0	0	2
Cap, veh/h	108	976	4	43	1155	74	247	780	116	134	944	765
Arrive On Green	0.06	0.28	0.28	0.02	0.24	0.24	0.07	0.50	0.50	0.07	0.50	0.50
Sat Flow, veh/h	1810	3545	15	1810	4823	310	3343	1571	233	1810	1900	1540
Grp Volume(v), veh/h	86	706	742	21	1201	634	752	0	147	169	75	123
Grp Sat Flow(s),veh/h/ln	1810	1736	1824	1810	1681	1771	1672	0	1805	1810	1900	1540
Q Serve(g_s), s	6.7	39.1	39.1	1.6	34.0	34.0	10.5	0.0	6.3	10.5	2.9	6.2
Cycle Q Clear(g_c), s	6.7	39.1	39.1	1.6	34.0	34.0	10.5	0.0	6.3	10.5	2.9	6.2
Prop In Lane	1.00		0.01	1.00		0.17	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	108	478	502	43	805	424	247	0	896	134	944	765
V/C Ratio(X)	0.80	1.48	1.48	0.49	1.49	1.50	3.04	0.00	0.16	1.26	0.08	0.16
Avail Cap(c_a), veh/h	299	478	502	299	805	424	247	0	896	134	944	765
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.9	51.5	51.5	68.5	54.0	54.0	65.8	0.0	19.6	65.8	18.7	19.5
Incr Delay (d2), s/veh	9.5	225.7	225.5	6.2	227.9	235.2	929.6	0.0	0.4	164.8	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	48.7	51.1	0.9	41.2	44.3	36.8	0.0	3.2	11.4	1.6	2.7
LnGrp Delay(d),s/veh	75.4	277.2	276.9	74.7	281.9	289.2	995.3	0.0	20.0	230.5	18.9	20.0
LnGrp LOS	E	F	F	E	F	F	F		B	F	B	C
Approach Vol, veh/h	1534			1856			899			367		
Approach Delay, s/veh	265.8			282.1			835.8			116.7		
Approach LOS	F			F			F			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	75.5	7.9	43.6	15.0	75.5	13.0	38.5				
Change Period (Y+Rc), s	4.5	5.0	4.5	4.5	4.5	5.0	4.5	4.5				
Max Green Setting (Gmax), s	10.5	55.0	23.5	31.0	10.5	55.0	23.5	34.0				
Max Q Clear Time (g_c+I1), s	12.5	8.3	3.6	41.1	12.5	8.2	8.7	36.0				
Green Ext Time (p_c), s	0.0	2.9	0.0	0.0	0.0	2.9	0.1	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	370.6											
HCM 2010 LOS	F											

Appendix G Year 2035 Background Traffic
Level-of-Service Worksheets










2035 Background Traffic PM Peak Hour
1: Aldersgate Ln & E Crestview Dr

ATTACHMENT 5
Villa Road Apts
2/5/2015

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	88	6	5	175	3	3
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	106	7	6	211	4	4
Pedestrians	4			1	4	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			117		341	115
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			117		341	115
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	100
cM capacity (veh/h)			1479		652	939
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	113	217	7			
Volume Left	0	6	4			
Volume Right	7	0	4			
cSH	1700	1479	770			
Volume to Capacity	0.07	0.00	0.01			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	0.0	0.2	9.7			
Lane LOS		A	A			
Approach Delay (s)	0.0	0.2	9.7			
Approach LOS			A			
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			23.6%	ICU Level of Service		A
Analysis Period (min)			15			










2035 Background Traffic PM Peak Hour
2: Aldersgate Ln & Park Ln

ATTACHMENT 5
Villa Road Apts
2/5/2015

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	78	11	3	28	11	2
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	110	15	4	39	15	3
Pedestrians	1		1			
Lane Width (ft)	12.0		12.0			
Walking Speed (ft/s)	4.0		4.0			
Percent Blockage	0		0			
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	60	25			45	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	60	25			45	
tC, single (s)	6.4	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	88	98			99	
cM capacity (veh/h)	936	1017			1575	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	125	44	18			
Volume Left	110	0	15			
Volume Right	15	39	0			
cSH	945	1700	1575			
Volume to Capacity	0.13	0.03	0.01			
Queue Length 95th (ft)	11	0	1			
Control Delay (s)	9.4	0.0	6.2			
Lane LOS	A		A			
Approach Delay (s)	9.4	0.0	6.2			
Approach LOS	A					
Intersection Summary						
Average Delay		6.9				
Intersection Capacity Utilization		19.0%		ICU Level of Service		A
Analysis Period (min)		15				










2035 Background Traffic PM Peak Hour
4: Villa Rd & Fulton St

ATTACHMENT 5
Villa Road Apts
2/5/2015

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	2	41	81	338	240	8
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	2	48	95	398	282	9
Pedestrians	13			1	8	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	1			0	1	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	896	301	305			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	896	301	305			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	93	92			
cM capacity (veh/h)	283	732	1242			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	51	493	292			
Volume Left	2	95	0			
Volume Right	48	0	9			
cSH	682	1242	1700			
Volume to Capacity	0.07	0.08	0.17			
Queue Length 95th (ft)	6	6	0			
Control Delay (s)	10.7	2.2	0.0			
Lane LOS	B	A				
Approach Delay (s)	10.7	2.2	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay		2.0				
Intersection Capacity Utilization		49.1%		ICU Level of Service		A
Analysis Period (min)		15				


















2035 Background Traffic PM Peak Hour
5: Villa Rd & NEW Access

ATTACHMENT 5
Villa Road Apts
2/5/2015

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	0	0	0	419	281	0
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	0	0	0	607	407	0
Pedestrians				1	2	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1016	408	407			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1016	408	407			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	100	100	100			
cM capacity (veh/h)	265	647	1162			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	0	607	407			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1162	1700			
Volume to Capacity	0.00	0.00	0.24			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization		32.4%		ICU Level of Service		A
Analysis Period (min)		15				






















2035 Background Traffic PM Peak Hour
6: Villa Rd & Fulton St

ATTACHMENT 5
Villa Road Apts
2/5/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	220	0	165	5	0	2	175	310	0	0	145	230
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	253	0	190	6	0	2	201	356	0	0	167	264
Pedestrians		13			1			1			8	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			1	
Right turn flare (veh)			6									
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1081	1071	313	1154	1204	365	444			357		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1081	1071	313	1154	1204	365	444			357		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	74	95	100	100	82			100		
cM capacity (veh/h)	164	180	721	110	150	679	1104			1212		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	443	8	557	431								
Volume Left	253	6	201	0								
Volume Right	190	2	0	264								
cSH	255	145	1104	1212								
Volume to Capacity	1.73	0.06	0.18	0.00								
Queue Length 95th (ft)	727	4	17	0								
Control Delay (s)	379.0	31.3	4.6	0.0								
Lane LOS	F	D	A									
Approach Delay (s)	379.0	31.3	4.6	0.0								
Approach LOS	F	D										
Intersection Summary												
Average Delay			118.5									
Intersection Capacity Utilization			74.1%		ICU Level of Service					D		
Analysis Period (min)			15									

2035 Background Traffic PM Peak Hour
7: Villa Rd & Hwy 99W






















ATTACHMENT 5
Villa Road Apts
2/5/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	1295	10	75	1670	175	985	255	65	220	165	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	5.0		4.5	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.91		0.97	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	3467		1805	4962		3335	1785		1805	1900	1519
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1805	3467		1805	4962		3335	1785		1805	1900	1519
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	1363	11	79	1758	184	1037	268	68	232	174	95
RTOR Reduction (vph)	0	1	0	0	7	0	0	11	0	0	0	73
Lane Group Flow (vph)	89	1373	0	79	1935	0	1037	325	0	232	174	22
Confl. Peds. (#/hr)	1		15	15		1	25		6	6		25
Confl. Bikes (#/hr)						2			1			1
Heavy Vehicles (%)	0%	4%	0%	0%	3%	1%	5%	2%	6%	0%	0%	2%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	10.8	53.9		8.9	52.0		10.5	28.2		10.5	28.2	28.2
Effective Green, g (s)	10.8	53.9		8.9	52.0		10.5	28.2		10.5	28.2	28.2
Actuated g/C Ratio	0.09	0.45		0.07	0.43		0.09	0.23		0.09	0.23	0.23
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	5.0		4.5	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	4.2		2.5	4.2	4.2
Lane Grp Cap (vph)	162	1557		133	2150		291	419		157	446	356
v/s Ratio Prot	c0.05	c0.40		0.04	0.39		c0.31	c0.18		0.13	0.09	
v/s Ratio Perm												0.01
v/c Ratio	0.55	0.88		0.59	0.90		3.56	0.78		1.48	0.39	0.06
Uniform Delay, d1	52.3	30.2		53.8	31.6		54.8	42.9		54.8	38.7	35.6
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.0	6.2		5.8	5.6		1162.1	13.2		246.0	2.6	0.3
Delay (s)	55.3	36.4		59.6	37.2		1216.9	56.1		300.7	41.2	36.0
Level of Service	E	D		E	D		F	E		F	D	D
Approach Delay (s)		37.5			38.1			932.8			160.4	
Approach LOS		D			D			F			F	
Intersection Summary												
HCM 2000 Control Delay			278.7			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.11									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			18.5			
Intersection Capacity Utilization			111.3%			ICU Level of Service			H			
Analysis Period (min)			15									

c Critical Lane Group

2035 Background Traffic PM Peak Hour
7: Villa Rd & Hwy 99W










ATTACHMENT 5
Villa Road Apts
2/12/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	85	1295	10	75	1670	175	985	255	65	220	165	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1848	1900	1810	1848	1900	1900	1900	1863
Adj Flow Rate, veh/h	89	1363	11	79	1758	184	1037	268	68	232	174	95
Adj No. of Lanes	1	2	0	1	3	0	2	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	4	4	0	3	3	5	2	2	0	0	2
Cap, veh/h	111	867	7	100	1105	115	247	700	178	134	940	762
Arrive On Green	0.06	0.25	0.25	0.06	0.24	0.24	0.07	0.49	0.49	0.07	0.49	0.49
Sat Flow, veh/h	1810	3529	28	1810	4614	481	3343	1414	359	1810	1900	1540
Grp Volume(v), veh/h	89	670	704	79	1279	663	1037	0	336	232	174	95
Grp Sat Flow(s),veh/h/ln	1810	1736	1821	1810	1682	1731	1672	0	1773	1810	1900	1540
Q Serve(g_s), s	6.9	34.9	34.9	6.1	34.0	34.0	10.5	0.0	16.8	10.5	7.2	4.7
Cycle Q Clear(g_c), s	6.9	34.9	34.9	6.1	34.0	34.0	10.5	0.0	16.8	10.5	7.2	4.7
Prop In Lane	1.00		0.02	1.00		0.28	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	111	426	447	100	805	415	247	0	877	134	940	762
V/C Ratio(X)	0.80	1.57	1.57	0.79	1.59	1.60	4.19	0.00	0.38	1.73	0.19	0.12
Avail Cap(c_a), veh/h	299	426	447	299	805	415	247	0	877	134	940	762
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.8	53.6	53.6	66.3	54.0	54.0	65.8	0.0	22.4	65.8	19.9	19.3
Incr Delay (d2), s/veh	9.4	268.5	268.4	9.8	270.6	280.8	1447.1	0.0	1.3	359.5	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	48.5	50.9	3.3	46.0	48.6	54.5	0.0	8.5	18.6	3.9	2.1
LnGrp Delay(d),s/veh	75.1	322.0	321.9	76.0	324.6	334.8	1512.9	0.0	23.6	425.2	20.4	19.6
LnGrp LOS	E	F	F	E	F	F	F		C	F	C	B
Approach Vol, veh/h	1463			2021			1373			501		
Approach Delay, s/veh	307.0			318.2			1148.4			207.7		
Approach LOS	F			F			F			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	75.3	12.4	39.4	15.0	75.3	13.2	38.5				
Change Period (Y+Rc), s	4.5	5.0	4.5	4.5	4.5	5.0	4.5	4.5				
Max Green Setting (Gmax), s	10.5	55.0	23.5	31.0	10.5	55.0	23.5	34.0				
Max Q Clear Time (g_c+l1), s	12.5	18.8	8.1	36.9	12.5	9.2	8.9	36.0				
Green Ext Time (p_c), s	0.0	5.9	0.1	0.0	0.0	6.1	0.1	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	517.6											
HCM 2010 LOS	F											










Appendix H Year 2035 Total Traffic Level-of-
Service Worksheets

2035 Total Traffic PM Peak Hour
1: Aldersgate Ln & E Crestview Dr

ATTACHMENT 5
Villa Road Apts
2/5/2015











						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (veh/h)	88	8	5	175	4	3
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Hourly flow rate (vph)	106	10	6	211	5	4
Pedestrians	4			1	4	
Lane Width (ft)	12.0			12.0	12.0	
Walking Speed (ft/s)	4.0			4.0	4.0	
Percent Blockage	0			0	0	
Right turn flare (veh)						
Median type	None			None		
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume			120		342	116
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			120		342	116
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		99	100
cM capacity (veh/h)			1476		651	938
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	116	217	8			
Volume Left	0	6	5			
Volume Right	10	0	4			
cSH	1700	1476	750			
Volume to Capacity	0.07	0.00	0.01			
Queue Length 95th (ft)	0	0	1			
Control Delay (s)	0.0	0.2	9.9			
Lane LOS		A	A			
Approach Delay (s)	0.0	0.2	9.9			
Approach LOS			A			
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			23.6%	ICU Level of Service		A
Analysis Period (min)			15			

2035 Total Traffic PM Peak Hour
2: Aldersgate Ln & Park Ln










						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Volume (veh/h)	81	12	3	33	13	2
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.71	0.71	0.71	0.71	0.71	0.71
Hourly flow rate (vph)	114	17	4	46	18	3
Pedestrians	1		1			
Lane Width (ft)	12.0		12.0			
Walking Speed (ft/s)	4.0		4.0			
Percent Blockage	0		0			
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	69	28			52	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	69	28			52	
tC, single (s)	6.4	6.3			4.1	
tC, 2 stage (s)						
tF (s)	3.5	3.4			2.2	
p0 queue free %	88	98			99	
cM capacity (veh/h)	923	1012			1566	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	131	51	21			
Volume Left	114	0	18			
Volume Right	17	46	0			
cSH	934	1700	1566			
Volume to Capacity	0.14	0.03	0.01			
Queue Length 95th (ft)	12	0	1			
Control Delay (s)	9.5	0.0	6.4			
Lane LOS	A		A			
Approach Delay (s)	9.5	0.0	6.4			
Approach LOS	A					
Intersection Summary						
Average Delay		6.8				
Intersection Capacity Utilization		19.4%		ICU Level of Service		A
Analysis Period (min)		15				

2035 Total Traffic PM Peak Hour
4: Villa Rd & Park Ln

ATTACHMENT 5
Villa Road Apts
2/5/2015


















						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	4	41	81	339	242	11
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	5	48	95	399	285	13
Pedestrians					1	
Lane Width (ft)					12.0	
Walking Speed (ft/s)					4.0	
Percent Blockage					0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	882	291	298			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	882	291	298			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	98	94	93			
cM capacity (veh/h)	295	753	1275			
Direction, Lane #	EB 1	EB 2	NB 1	SB 1		
Volume Total	5	48	494	298		
Volume Left	5	0	95	0		
Volume Right	0	48	0	13		
cSH	295	753	1275	1700		
Volume to Capacity	0.02	0.06	0.07	0.18		
Queue Length 95th (ft)	1	5	6	0		
Control Delay (s)	17.4	10.1	2.2	0.0		
Lane LOS	C	B	A			
Approach Delay (s)	10.8		2.2	0.0		
Approach LOS	B					
Intersection Summary						
Average Delay			2.0			
Intersection Capacity Utilization			49.1%	ICU Level of Service		A
Analysis Period (min)			15			

2035 Total Traffic PM Peak Hour
5: Villa Rd & Site Access

						
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (veh/h)	2	28	54	419	281	3
Sign Control	Stop			Free	Free	
Grade	0%			0%	0%	
Peak Hour Factor	0.69	0.69	0.69	0.69	0.69	0.69
Hourly flow rate (vph)	3	41	78	607	407	4
Pedestrians				1	2	
Lane Width (ft)				12.0	12.0	
Walking Speed (ft/s)				4.0	4.0	
Percent Blockage				0	0	
Right turn flare (veh)						
Median type				None	None	
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
vC, conflicting volume	1175	410	412			
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1175	410	412			
tC, single (s)	6.4	6.2	4.1			
tC, 2 stage (s)						
tF (s)	3.5	3.3	2.2			
p0 queue free %	99	94	93			
cM capacity (veh/h)	199	645	1158			
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total	43	686	412			
Volume Left	3	78	0			
Volume Right	41	0	4			
cSH	561	1158	1700			
Volume to Capacity	0.08	0.07	0.24			
Queue Length 95th (ft)	6	5	0			
Control Delay (s)	12.0	1.7	0.0			
Lane LOS	B	A				
Approach Delay (s)	12.0	1.7	0.0			
Approach LOS	B					
Intersection Summary						
Average Delay			1.5			
Intersection Capacity Utilization		53.7%		ICU Level of Service		A
Analysis Period (min)		15				






















2035 Total Traffic PM Peak Hour
6: Villa Rd & Fulton St

ATTACHMENT 5
Villa Road Apts
2/5/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	220	0	165	5	0	2	175	347	9	0	163	230
Sign Control		Stop			Stop			Free			Free	
Grade		0%			0%			0%			0%	
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Hourly flow rate (vph)	253	0	190	6	0	2	201	399	10	0	187	264
Pedestrians		13			1			1			8	
Lane Width (ft)		12.0			12.0			12.0			12.0	
Walking Speed (ft/s)		4.0			4.0			4.0			4.0	
Percent Blockage		1			0			0			1	
Right turn flare (veh)			6									
Median type								None			None	
Median storage (veh)												
Upstream signal (ft)												
pX, platoon unblocked												
vC, conflicting volume	1149	1145	334	1223	1272	413	465			410		
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	1149	1145	334	1223	1272	413	465			410		
tC, single (s)	7.1	6.5	6.2	7.1	6.5	6.2	4.1			4.1		
tC, 2 stage (s)												
tF (s)	3.5	4.0	3.3	3.5	4.0	3.3	2.2			2.2		
p0 queue free %	0	100	73	94	100	100	81			100		
cM capacity (veh/h)	147	162	702	98	136	639	1085			1159		
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total	443	8	610	452								
Volume Left	253	6	201	0								
Volume Right	190	2	10	264								
cSH	229	129	1085	1159								
Volume to Capacity	1.93	0.06	0.19	0.00								
Queue Length 95th (ft)	798	5	17	0								
Control Delay (s)	471.0	34.8	4.5	0.0								
Lane LOS	F	D	A									
Approach Delay (s)	471.0	34.8	4.5	0.0								
Approach LOS	F	D										
Intersection Summary												
Average Delay			139.8									
Intersection Capacity Utilization			77.5%		ICU Level of Service					D		
Analysis Period (min)			15									

2035 Total Traffic PM Peak Hour
7: Villa Rd & Hwy 99W






















ATTACHMENT 5
Villa Road Apts
2/5/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	95	1295	10	75	1670	185	985	260	65	225	167	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	4.5		4.5	4.5		4.5	5.0		4.5	5.0	5.0
Lane Util. Factor	1.00	0.95		1.00	0.91		0.97	1.00		1.00	1.00	1.00
Frpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	0.96
Flpb, ped/bikes	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Frt	1.00	1.00		1.00	0.99		1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1805	3467		1805	4958		3335	1786		1805	1900	1519
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1805	3467		1805	4958		3335	1786		1805	1900	1519
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	100	1363	11	79	1758	195	1037	274	68	237	176	100
RTOR Reduction (vph)	0	1	0	0	7	0	0	11	0	0	0	76
Lane Group Flow (vph)	100	1373	0	79	1946	0	1037	331	0	237	176	24
Confl. Peds. (#/hr)	1		15	15		1	25		6	6		25
Confl. Bikes (#/hr)						2			1			1
Heavy Vehicles (%)	0%	4%	0%	0%	3%	1%	5%	2%	6%	0%	0%	2%
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	11.5	53.5		8.9	50.9		10.5	28.6		10.5	28.6	28.6
Effective Green, g (s)	11.5	53.5		8.9	50.9		10.5	28.6		10.5	28.6	28.6
Actuated g/C Ratio	0.10	0.45		0.07	0.42		0.09	0.24		0.09	0.24	0.24
Clearance Time (s)	4.5	4.5		4.5	4.5		4.5	5.0		4.5	5.0	5.0
Vehicle Extension (s)	2.5	2.5		2.5	2.5		2.5	4.2		2.5	4.2	4.2
Lane Grp Cap (vph)	172	1545		133	2103		291	425		157	452	362
v/s Ratio Prot	c0.06	c0.40		0.04	0.39		c0.31	c0.19		0.13	0.09	
v/s Ratio Perm												0.02
v/c Ratio	0.58	0.89		0.59	0.93		3.56	0.78		1.51	0.39	0.07
Uniform Delay, d1	51.9	30.5		53.8	32.7		54.8	42.8		54.8	38.4	35.4
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	4.1	6.6		5.8	7.5		1162.1	13.2		259.3	2.5	0.4
Delay (s)	56.0	37.1		59.6	40.3		1216.9	56.0		314.1	40.9	35.7
Level of Service	E	D		E	D		F	E		F	D	D
Approach Delay (s)		38.4			41.0			929.0			166.1	
Approach LOS		D			D			F			F	
Intersection Summary												
HCM 2000 Control Delay			279.0			HCM 2000 Level of Service			F			
HCM 2000 Volume to Capacity ratio			1.12									
Actuated Cycle Length (s)			120.0			Sum of lost time (s)			18.5			
Intersection Capacity Utilization			111.8%			ICU Level of Service			H			
Analysis Period (min)			15									

c Critical Lane Group

2035 Total Traffic PM Peak Hour
7: Villa Rd & Hwy 99W



















ATTACHMENT 5
Villa Road Apts
2/12/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (veh/h)	95	1295	10	75	1670	185	985	260	65	225	167	95
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.95	1.00		0.97	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1827	1900	1900	1848	1900	1810	1848	1900	1900	1900	1863
Adj Flow Rate, veh/h	100	1363	11	79	1758	195	1037	274	68	237	176	100
Adj No. of Lanes	1	2	0	1	3	0	2	1	0	1	1	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	0	4	4	0	3	3	5	2	2	0	0	2
Cap, veh/h	123	890	7	100	1097	121	247	694	172	134	928	752
Arrive On Green	0.07	0.25	0.25	0.06	0.24	0.24	0.07	0.49	0.49	0.07	0.49	0.49
Sat Flow, veh/h	1810	3529	28	1810	4584	506	3343	1422	353	1810	1900	1540
Grp Volume(v), veh/h	100	670	704	79	1288	665	1037	0	342	237	176	100
Grp Sat Flow(s),veh/h/ln	1810	1736	1821	1810	1682	1725	1672	0	1774	1810	1900	1540
Q Serve(g_s), s	7.7	35.8	35.8	6.1	34.0	34.0	10.5	0.0	17.4	10.5	7.4	5.0
Cycle Q Clear(g_c), s	7.7	35.8	35.8	6.1	34.0	34.0	10.5	0.0	17.4	10.5	7.4	5.0
Prop In Lane	1.00		0.02	1.00		0.29	1.00		0.20	1.00		1.00
Lane Grp Cap(c), veh/h	123	438	459	100	805	413	247	0	866	134	928	752
V/C Ratio(X)	0.81	1.53	1.53	0.79	1.60	1.61	4.19	0.00	0.39	1.77	0.19	0.13
Avail Cap(c_a), veh/h	299	438	459	299	805	413	247	0	866	134	928	752
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.3	53.1	53.1	66.3	54.0	54.0	65.8	0.0	23.0	65.8	20.5	19.9
Incr Delay (d2), s/veh	9.1	250.1	250.0	9.8	275.2	285.9	1447.1	0.0	1.3	375.6	0.5	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	47.6	49.9	3.3	46.6	49.0	54.5	0.0	8.8	19.2	4.0	2.2
LnGrp Delay(d),s/veh	74.3	303.2	303.1	76.0	329.2	339.9	1512.9	0.0	24.4	441.4	21.0	20.3
LnGrp LOS	E	F	F	E	F	F	F		C	F	C	C
Approach Vol, veh/h	1474			2032			1379			513		
Approach Delay, s/veh	287.6			322.9			1143.7			215.0		
Approach LOS	F			F			F			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	74.3	12.4	40.3	15.0	74.3	14.2	38.5				
Change Period (Y+Rc), s	4.5	5.0	4.5	4.5	4.5	5.0	4.5	4.5				
Max Green Setting (Gmax), s	10.5	55.0	23.5	31.0	10.5	55.0	23.5	34.0				
Max Q Clear Time (g_c+I1), s	12.5	19.4	8.1	37.8	12.5	9.4	9.7	36.0				
Green Ext Time (p_c), s	0.0	6.0	0.1	0.0	0.0	6.3	0.1	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	512.7											
HCM 2010 LOS	F											

Appendix I Year 2035 Total Traffic
Conditions Worksheets-
Mitigated

2035 Mitigated Total Traffic PM Peak Hour
6: Villa Rd & Fulton St

ATTACHMENT 5
Villa Road Apts
2/13/2015

																			
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR							
Lane Configurations																			
Sign Control		Stop			Stop			Stop			Stop								
Volume (vph)	220	0	165	5	0	2	175	347	9	0	163	230							
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87							
Hourly flow rate (vph)	253	0	190	6	0	2	201	399	10	0	187	264							
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	SB 1														
Volume Total (vph)	253	190	8	610	452														
Volume Left (vph)	253	0	6	201	0														
Volume Right (vph)	0	190	2	10	264														
Hadj (s)	0.52	-0.68	-0.03	0.08	-0.33														
Departure Headway (s)	7.8	6.6	8.3	6.2	6.0														
Degree Utilization, x	0.55	0.35	0.02	1.00	0.75														
Capacity (veh/h)	451	530	387	610	587														
Control Delay (s)	18.8	12.0	11.5	62.2	25.2														
Approach Delay (s)	15.9		11.5	62.2	25.2														
Approach LOS	C		B	F	D														
Intersection Summary																			
Delay			37.3																
Level of Service			E																
Intersection Capacity Utilization			77.5%	ICU Level of Service									D						
Analysis Period (min)			15																



KITTELSON & ASSOCIATES, INC.

TRANSPORTATION ENGINEERING / PLANNING

610 SW Alder Street, Suite 700, Portland, OR 97205 P 503.228.5230 F 503.273.8169

MEMORANDUM

Date: April 2, 2015

To: Steve Olson, City of Newberg Planning Division

From: Brian J. Dunn, P.E., Patrick Marnell E.I.T

Project: Martell Commons

Subject: Supplemental Analysis - Crestview Drive/Villa Road intersection

Project #: 18152



Per the City of Newberg's completeness comments received on March 25, 2015 for the Martell Commons comprehensive plan map/zoning map amendment, a supplemental traffic analysis of the Crestview Drive/Villa Road intersection has been prepared.

Per the direction of City staff, traffic volumes for the year 2035 weekday p.m. peak hour were developed at the Crestview Drive/Villa Road intersection based on the base counts and forecast volumes of adjacent intersections presented in our Martell Commons Traffic Impact Analysis report. Site generated trips were also assigned to the Crestview Drive/Villa Road intersection in a pattern consistent with the distribution presented in the Martell Commons Traffic Impact Analysis report.

Figure 1 summarizes the assumed intersection configuration, forecast background volumes, site generated trip assignments, and forecast total traffic volumes at the Crestview Drive/Villa Road intersection during the 2035 weekday p.m. peak hour. Figure 1 also summarizes the results of the traffic operations analysis at this intersection. As shown, the Crestview Drive/Villa Road intersection is forecast to operate at LOS "B" and well within the City's LOS "D" or better standards for both background and total traffic conditions during the 2035 weekday p.m. peak hour. *Attachment "A" contains the 2035 traffic operations worksheets.*

Additional analysis was also conducted to assess site build-out year (2016) operations for the weekday a.m. peak hour. The Crestview Drive/Villa Road intersection is forecast with operate at LOS "A" and well within the City's LOS "D" or better standard during the 2016 weekday a.m. peak hour. *Attachment "B" contains 2016 the traffic operations worksheet.* The build-out year volumes for the p.m. peak hour were assumed to be less than the 2035 p.m. peak hour and were not analyzed.

The supplemental analysis results presented herein do not alter our original conclusions in the Martell Commons TIA that the transportation system can operate adequately and safely with proposed mitigation measures in place.

H:\profile\18152 - Villa Road Apartments\dwgs\18152_figs-additional.dwg Apr 02, 2015 - 9:48am - pmarnell Layout Tab: S1



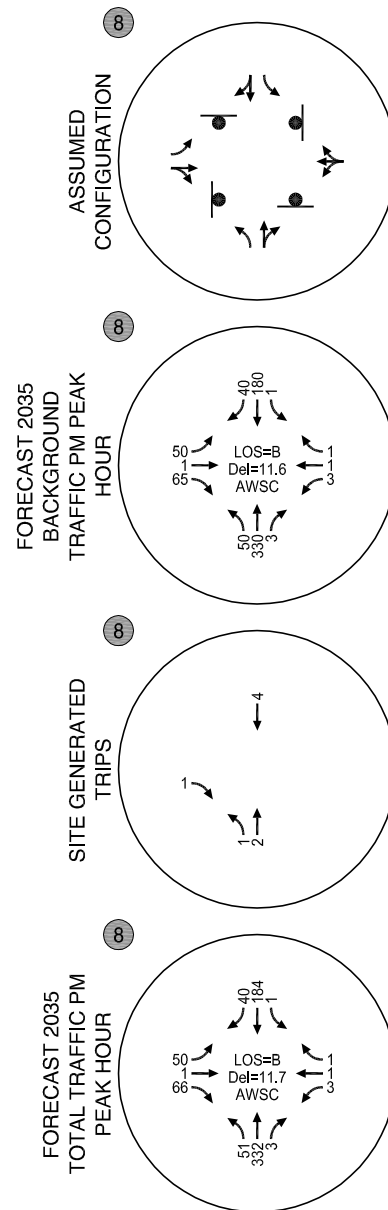
LEGEND

- STOP SIGN

- TRAFFIC SIGNAL

Del = INTERSECTION AVERAGE CONTROL DELAY

AWSC = ALL-WAY STOP CONTROL






















2035 PM PEAK HOUR SUPPLEMENTAL ANALYSIS
CRESTVIEW DRIVE AND VILLA ROAD
NEWBERG, OREGON

FIGURE
1

Attachment A
2035 PM Peak Hour
Background and Total
Traffic Conditions




















2035 Background Traffic PM Peak Hour
8: Villa Rd & E Crestview Dr

ATTACHMENT 5
Villa Road Apts
4/2/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Volume (vph)	50	1	65	3	1	1	50	330	3	1	180	40
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	59	1	76	4	1	1	59	388	4	1	212	47
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2					
Volume Total (vph)	59	78	6	59	392	1	259					
Volume Left (vph)	59	0	4	59	0	1	0					
Volume Right (vph)	0	76	1	0	4	0	47					
Hadj (s)	0.58	-0.60	0.09	0.58	0.08	0.58	-0.04					
Departure Headway (s)	6.8	5.6	6.5	5.8	5.3	6.0	5.4					
Degree Utilization, x	0.11	0.12	0.01	0.09	0.57	0.00	0.39					
Capacity (veh/h)	486	581	486	603	670	576	652					
Control Delay (s)	9.5	8.2	9.6	8.2	13.9	7.8	10.5					
Approach Delay (s)	8.7		9.6	13.2		10.5						
Approach LOS	A		A	B		B						
Intersection Summary												
Delay	11.6											
Level of Service	B											
Intersection Capacity Utilization	35.0%			ICU Level of Service			A					
Analysis Period (min)	15											

2035 Total Traffic PM Peak Hour
8: Villa Rd & E Crestview Dr

ATTACHMENT 5
Villa Road Apts
4/2/2015

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop			Stop			Stop			Stop		
Volume (vph)	50	1	66	3	1	1	51	332	3	1	184	40
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	59	1	78	4	1	1	60	391	4	1	216	47
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2					
Volume Total (vph)	59	79	6	60	394	1	264					
Volume Left (vph)	59	0	4	60	0	1	0					
Volume Right (vph)	0	78	1	0	4	0	47					
Hadj (s)	0.58	-0.60	0.09	0.58	0.08	0.58	-0.04					
Departure Headway (s)	6.8	5.6	6.6	5.8	5.3	6.0	5.4					
Degree Utilization, x	0.11	0.12	0.01	0.10	0.58	0.00	0.39					
Capacity (veh/h)	484	579	484	602	668	575	651					
Control Delay (s)	9.5	8.2	9.6	8.2	14.1	7.8	10.6					
Approach Delay (s)	8.8		9.6	13.3		10.6						
Approach LOS	A		A	B		B						
Intersection Summary												
Delay	11.7											
Level of Service	B											
Intersection Capacity Utilization	35.2%			ICU Level of Service			A					
Analysis Period (min)	15											

Attachment B
2016 AM Peak Hour Total
Traffic Conditions

2016 Total Traffic AM Peak Hour
8: Villa Rd & E Crestview Dr

ATTACHMENT 5
Villa Road Apts
4/2/2015





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control	Stop				Stop			Stop			Stop	
Volume (vph)	80	1	90	3	1	1	36	124	3	1	196	55
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Hourly flow rate (vph)	94	1	106	4	1	1	42	146	4	1	231	65
Direction, Lane #	EB 1	EB 2	WB 1	NB 1	NB 2	SB 1	SB 2					
Volume Total (vph)	94	107	6	42	149	1	295					
Volume Left (vph)	94	0	4	42	0	1	0					
Volume Right (vph)	0	106	1	0	4	0	65					
Hadj (s)	0.58	-0.61	0.09	0.58	0.07	0.58	-0.07					
Departure Headway (s)	6.3	5.1	6.1	6.0	5.5	5.9	5.2					
Degree Utilization, x	0.16	0.15	0.01	0.07	0.23	0.00	0.43					
Capacity (veh/h)	534	651	530	577	633	584	667					
Control Delay (s)	9.4	7.8	9.2	8.2	8.8	7.7	10.9					
Approach Delay (s)	8.5		9.2	8.7		10.9						
Approach LOS	A		A	A		B						
Intersection Summary												
Delay			9.6									
Level of Service			A									
Intersection Capacity Utilization			33.9%	ICU Level of Service		A						
Analysis Period (min)			15									



EXHIBIT G: HOUSING NEEDS ANALYSIS

Draft City of Newberg Housing Needs Analysis February 11, 2015

1. Introduction

Martell Commons, LLC (Applicant) is planning a multi-family development called Martell Commons on the property located at 1317 Villa Road. The property is approximately 5.94 acres in size, located entirely within the City of Newberg and zoned R-1. The proposed development could construct up to 168 multi-family attached dwellings on the property, consistent with R-3 zoning standards. Therefore, the Applicant is proposing a zoning map amendment that would change the subject property from R-1 zoning to R-3 zoning.

Cogan Owens Greene, LLC (COG) has been retained by 3J Consulting on behalf of the Applicant to prepare a buildable lands inventory (BLI) and housing needs analysis (HNA) to assess the subsequent need for residential land in the City of Newberg should the zoning map amendment be approved. This study updates portions of the City of Newberg's Comprehensive Plan Housing Element prepared in 2008-2009, but subsequently remanded by the Land Use Board of Appeals (LUBA) in 2010.

2. Analysis

In order to evaluate the sufficiency of the buildable residential land supply as outlined in the City of Newberg's Comprehensive Plan, COG prepared a land inventory and capacity (supply) assessment, reconciled with housing and land need (demand). The LUBA decision to remand Newberg's 2009 HNA was primarily due to the use of a population forecast that had not been explicitly adopted by Yamhill County. This report addresses that issue by using *Population Forecasts for Yamhill County, its Cities and Unincorporated Area 2011-2035*, prepared by the Portland State University Population Research Center (PRC).

The remand also cites several issues with the methodology used to prepare the land inventory and capacity for the remanded 2009 HNA. Currently, a detailed description of the methodology used in 2009 is unavailable. Therefore, COG prepared a BLI using the method described in the *Planning for Residential Growth* guidebook, published by the Oregon Transportation and Growth Management Program (1996).

2.1 Housing and Land Needs (Demand)

In October 2012, the Yamhill County Planning Commission adopted a new coordinated population forecast through 2035, based on the UGB population of each area within the County from the 2010 Census and population estimates from the PRC. Table 1 shows a 2030 population of 35,408 for Newberg according to the 2012 population forecast as opposed to 42,870 according to the prior population forecast used in the 2009 HNA. The slower growth forecasted by the 2012 projection results in 7,462 fewer Newberg residents in 2030.

Table 1. Newberg UGB Adopted Population Forecasts: Newberg HNA 2009 vs. Yamhill County 2012

Year	Newberg HNA (2009)	Yamhill County Projection (2012)	Difference
2015	28,559	24,663	(3,896)
2020	33,683	28,250	(5,433)
2025	38,352	32,213	(6,139)
2030	42,870	35,408	(7,462)

In addition to the population forecast from Table 1, COG used the following data to determine the projected number of new housing units needed from 2015-2030:

1. Current estimate of housing units
2. Average Household Size
3. Vacancy Rate

For the purpose of this evaluation, COG updated these variables to reflect data from 2010 Census and estimates from Newberg and the PRC, as indicated in Table 2.

Table 2. Comparison of Variables used for Calculation of Projected Number of Household Units Needed

	<i>Variable</i>		<i>Source</i>
Newberg HNA	Current Household Units	8,074 ¹	Newberg HNA
	Household Size	2.76	Newberg HNA
	Vacancy Rate	5.2%	Newberg HNA
Updated HNA	Current Household Units	8,590 ²	PSU Population Research Center; City of Newberg
	Household Size	2.66	2010 Census
	Vacancy Rate	6.4%	2010 Census

COG calculated the projected number of households by dividing the projected population for each year by household size. The total number of units needed by 2030 is calculated by subtracting the projected number of households from a current estimate of household units. A vacancy rate is then applied to this projected number of new housing units. In the case of Newberg's HNA, 49 housing units displaced by the proposed Newberg-Dundee Bypass are added to the projected number of housing units, after the vacancy rate is applied. As shown in Table 3, a total of 4,468 units will be needed to meet the housing demand in 2030.

¹ The 2009 Newberg HNA calculates the total number of housing units as 7,900 units within City boundaries, plus 174 units in the unincorporated area inside the Newberg UGB.

² As of November 2014. The current household units is calculated by adding the total number of housing units up until June 20, 2014 (received from Risa Proehl, PSU Population Research Center), with the total number of building permits issued from July 1, 2014 to November 2014 (received from Jessica Pelz, City of Newberg).

Table 3. Calculation of Projected Number of Housing Units, 2015-2030

Years	Projected Number of Households (2.66 persons per unit)	Additional Gross Number of Housing Units ³ (8,590 current units)	Vacancy Rate (6.4%)	Additional Net Number of Housing Units Needed (8,590 current units) ⁴
2015	9,272	682	(44)	638
2020	10,620	2,030	(130)	1,900
2025	12,110	3,520	(225)	3,295
2030	13,311	4,721	(302)	4,419
2030 (accounting for units lost due to Newberg-Dundee Bypass)			+ 49 units	4,468

Table 4 shows Newberg's future housing needs (number of units) by housing type using proportions assigned in the Newberg Comprehensive Plan Housing Element.

Table 4. Future Housing Needs by Housing Type, 2015 to 2030

Comp Plan Designation	Single Family		Multi-Family		Manufactured		Mixed-Use	Total
	LDR	MDR		HDR	MDR		COM	
Housing Type	Detached	Attached	Med Density	High Density	Parks	Subdivision		
Proportion	50% (40% LDR) (10% MDR)	7%	15%	23%	2%	2%	1%	100%
Units – Updated HNA	2,234	313	670	1,028	89	89	45	4,468

Table 5 shows an estimated 4,468 units needed by comprehensive plan designation through 2030: 1,787 units of Low Density Residential (LDR), 1,608 units of Medium Density Residential (MDR), 1,028 units of High Density Residential (HDR) and 45 units in commercial zones.

Table 5. Total Housing Units Needed by Comprehensive Plan Designation, 2015-2030

Plan Designation	Proportion (%)	Unites Needed
LDR	40	1,787
MDR	36	1,608
HDR	23	1,028
(COM)	1	45
Total	100	4,468

To determine the total amount of residential land needed for housing, COG divided the housing units for each category by the planned residential densities, as outlined from Newberg's Comprehensive Plan and the City's most recent revisions. For single-family residential, LDR, the target residential density is 4.4 units per gross acre.⁵ The target for MDR is 9 units/gross acre and 16.5 units/gross acre

^{3,4} If housing units remain constant at 2014 levels (8,590 units, with a 2015 population estimate of 24,663 as per Yamhill County's 2012 Adopted Population Forecast.

⁵ Minimum lot size in the R-1 zone is 5,000 sf. Target residential densities do not represent 100% development of the lot, but rather reflect the City's desired growth pattern and assume some level of underdevelopment.

for HDR. Table 6 shows the total buildable residential land needs by housing designation based on these densities. Newberg will need a total of 647 acres to accommodate housing needs in 2030, including 406 acres for LDR, 179 acres for MDR and 62 acres for HDR.

Table 6. Buildable Residential Land Needs, 2015-2030

Plan Designation	Target Density (du/gross ac.)	Housing Units Needed	Buildable Acres Needed
LDR	4.4	1,787	406
MDR	9	1,608	179
HDR	16.5	1,028	62
Total		4,423	647

2.2 Land Inventory and Capacity (Supply)

As indicated in the introduction to Section 2, COG conducted a new buildable land inventory according to the methods described in the *Planning for Residential Growth* guidebook. We obtained taxlot data from the City of Newberg in the form of an Excel spreadsheet derived from the City's GIS data. We divided the data into LDR, MDR and HDR designations, based on the "comp1" variable.

Table 7 shows the gross residential land supply by zone.

Table 7. Gross Residential Land Supply by Zone

Plan Designation	Acres
LDR	1,130.8
MDR	668.5
HDR	99.6
Total	1,898.9

We subtracted environmentally constrained acreage from each taxlot's gross acreage. We then removed all taxlots with one or more housing units and less than one half acre of buildable vacant land from the inventory to determine buildable land. We summed the total amount of buildable land from the remaining taxlots across each housing designation. The result was a buildable residential land supply of approximately 467 acres; 369 acres of LDR, 92 acres of MDR and 7 acres of HDR as shown in Table 8.

Table 8. Buildable Residential Land Supply

Plan Designation	Acres
LDR	368.7
MDR	91.7
HDR	7.0
Total	467.4

A comparison of residential land needs and the buildable residential land supply shows the City of Newberg has a an overall deficit of 179 buildable residential acres; 37 acres of LDR, 87 acres of MDR and 55 acres of HDR, as shown in Table 9.

Table 9. Buildable Residential Needs vs. Supply, 2015-2030

Plan Designation	Buildable Acres Needed	Buildable Acres in UGB	Surplus (Deficit)
LDR	406	369	(37)
MDR	179	92	(87)
HDR	62	7	(55)
Total	647	468	(179)

Table 10 shows the land allocations that would result if zoning on the 5.94-acre Martell Commons site was changed from R-1 (LDR) to R-3 (HDR). If the zone change were approved, the City would have an overall deficit of 43 acres of LDR and 49 acres of HDR.

Table 10. Buildable Residential Needs vs. Supply After Zone Change, 2015-2030

Plan Designation	Buildable Acres Needed	Buildable Acres Before Zone Change	Buildable Acres After Zone Change	Surplus/(Deficit) Before Zone Change	Surplus/(Deficit) After Zone Change
LDR	406	369	363	(37)	(43)
MDR	179	92	92	(87)	(87)
HDR	62	7	13	(55)	(49)
Total	647	468	468	(179)	(179)

3. Conclusion

Our analysis shows that the City of Newberg's residential land supply is insufficient to meet the City's LDR, MDR or HDR needs over the next 15 years, the proposed 5.94-acre Martell Commons zone change notwithstanding. However, approval of the zone change would help address the most severe deficit as a percentage of overall need, the supply of HDR. Should the zone change be approved, the City's buildable residential land inventory would be able to accommodate approximately 89% of the need for LDR, 51% of the need for MDR and 21% of the need for HDR over the next 15 years.

Steve Olson

From: DOWNING Andrea <andrea.downing@state.or.us>
Sent: Tuesday, April 21, 2015 11:05 AM
To: Steve Olson; jeff@dj2holdings.com
Subject: WLUN #2015-0115 Response to CPA-15-001/ZMA3-15-001
Attachments: WN2015-0115-Notice.pdf; WN2015-0115-Response.pdf

We have completed our review of the Wetland Land Use Notification that was prepared for **DJ2 Holdings LLC and Martell Family Farms LLC**. The WLUN form was submitted to the Department for review/response and given the file number **WN2015-0115**.

The results and conclusions from that review are explained in the attached pdf documents. If the attached documents are illegible or difficult to open, you may contact the Department and request paper copies. Otherwise, please review the attachments carefully and direct any questions or comments to Wetland Specialist, Chris Stevenson at (503) 986-5246 or Christine.stevenson@dsl.state.or.us. Thank you for your interest in the project.

Oregon Department of State Lands
Aquatic Resource Management Program
775 Summer Street NE #100
Salem, OR 97301
503-986-5235 direct
Andrea.Downing@dsl.state.or.us



WETLAND LAND USE NOTIFICATION RESPONSE
OREGON DEPARTMENT OF STATE LANDS
 775 Summer Street NE, Suite 100, Salem, OR 97301-1279
 Phone (503) 986-5200
www.oregonstatelands.us

DSL File Number: WN2015-0115

Cities and counties have a responsibility to notify the Department of State Lands (DSL) of certain activities proposed within wetlands mapped on the Statewide Wetlands Inventory. Steve Olson from city of Newberg submitted a WLUN pertaining to local case file #: CPA-15-001, ZMA3-15-001.

Activity location:

township: 03S	range: 02W	section: 17	quarter-quarter section: BC
tax lot(s): 800			
street address: 1317 Villa Rd			
city: Newberg		county: Yamhill	
latitude: 45.310122		longitude: -122.964962	

Mapped wetland/waterway features:

Oregon Removal-Fill requirement (s):

☒ A state permit is required for 50 cubic yards or more of removal and/or fill in wetlands, below ordinary high water of streams, within other waters of the state, or below highest measured tide where applicable.

Your activity:

☒ A state permit will not be required for the proposed project because based on the submitted site plan the project appears to avoid impacts to jurisdictional wetlands and waters.

Contacts:

☒ This is a preliminary jurisdictional determination and is advisory only.

Comments: Based on a review of the available information, it does not appear that the proposed development will impact jurisdictional wetlands or waterways.

Response by: Cherie Stevenson date: 04/20/2015

Steve Olson

From: FRICKE Daniel L <Daniel.L.FRICKE@odot.state.or.us>
Sent: Monday, May 04, 2015 7:58 AM
To: Steve Olson
Cc: JUSTER Gerard P *Gerry
Subject: ODOT Comments on Project at 1317 Villa Road (CPA-15-001/ZMA-3-15-001)

Steve –

Gerry Juster and I have reviewed this application and have determined that ODOT will not have any comments. This is due to the limited impact we expect the project will have on state facilities. Thank you for referring this application to ODOT for review. Please feel free to contact me or Gerry if you have questions or need additional information.

*Dan Fricke, Senior Transportation Planner
Oregon Department of Transportation
Region 2
455 Airport Road SE Building B
Salem, OR 97301-5395
Ph: 503-986-2663 Fax: 503-986-2840
e-mail: daniel.l.fricke@odot.state.or.us*



**Newberg-Dundee
Police Department**
P. O. Box 970
401 E. Third Street
Newberg, OR 97132
503-538-8321
Brian T. Casey
Chief of Police

**To: Chief Brian Casey
Planning and Building Department**

From: Chris Bolek

Re: Martell Commons Comprehensive Plan Amendment and Zone Change Proposal

Date: April 17, 2015

Thank you for allowing me an opportunity to offer input.

The issues of concern that I see have to do with pedestrian / vehicle mixed use safety, parking and the number of intersections or driveways within such close proximity of one another.

In your decision making process of this Zone Change Proposal for the construction of a 128 unit apartment complex, I would ask for the following matters to be considered:

- It appears to be on the plan but I am not certain. However, Park Lane must be widened to safely handle the proposed number of vehicles and pedestrian traffic.
- As noted, this zone change if allowed has a planned use for this property for the construction of a 128 unit apartment complex, with 227 planned parking spaces, an on-site parking ratio of 1.77 parking spaces per unit. This seems adequate but inevitably vehicles belonging to residents and guests will be parked on the street. Therefore to limit /minimize congestion, I would encourage no parking on the north side of the street where the existing homes are located.
- Appropriate and adequate parking restrictions so as to not block alleys, with adequate signage that gives police the necessary tools to help residents with parking issues.
- I recognize that one of the City's goals is to promote reliance on multiple modes of transportation, and to encourage higher density development in residential areas. The applicant has identified in their response to this goal (page 17) that this development is within walking and biking distance to GFU, Joan Austin Elementary, Chehalem Aquatic Center and Hwy 99w, among other features. What is important to note is that GFU and the Aquatic Center are south of this proposed development and the main route of travel will be Villa Rd. Page 18 of the

document indicates that pedestrian and bicycle improvements are proposed with the development along Villa Road and the completion of a continuous pedestrian route from the rezone site to GFU. While I am not clear what a "pedestrian route" is as opposed to sidewalks, I do believe that it is extremely important that this area be improved to maximize pedestrian and bicyclist safety especially with the train trestle and limited visibility of pedestrian and bicycle traffic for southbound vehicles on Villa Rd as vehicles enter the curves south of Carol Avenue and north of the train trestle.

- I am concerned as to whether or not the west side of Villa Rd between the rezone area and Crestview Drive will be developed. The development is situated on the west side of Villa Rd. For elementary school aged youth walking or biking to Joan Austin, it is a reasonable expectation that those youth will leave from their home and travel north on Villa Rd along the west side and without improvements north of the rezoning / development, this will not be a safe scenario.

On this note, I believe I saw a proposal to have a crosswalk at Park Lane and Villa Rd. For elementary aged children, I am concerned that will be unsafe, especially if an entry / exit to the development are placed along Villa Rd just south of Park Lane.

- Having an entry / exit into this planned development off of Villa Rd. just south of Park Lane does not seem practical, as it will put this intersection and this driveway too close together increasing the possibility of side angle crashes.
- Finally, I want to be clear. For this proposed multi-family housing proposal specifically, I am concerned about the final item noted; the driveway to the development so close to Park Lane.
- All of the other concerns noted, are regardless of whether or not there are single family dwellings or multi-family dwellings placed on this property. This particular area; undeveloped Villa Rd and the certain increase in vehicle, bicycle and pedestrian traffic, especially if this increase included elementary aged school children and multi-family housing units, brings about special issues that must be considered and addressed prior to moving forward.

Respectfully submitted,

Chris Bolek
Newberg-Dundee Police Department

Thursday, May 7, 2015

City of Newberg
Community Development Department
PO Box 970
Newberg, OR 97132

Re: File No. CPA-15-001/ZMA3-15-001
Martell Commons, 1317 Villa Road, Newberg, Oregon

Dear Sirs,

We are opposed to the zone change from R-1 to R-3 for the Martell Commons property at 1317 Villa Road for the following reasons:


1. It should not be changed because most of the MDR zoning is south of the railroad tracks. There is an MDR just to the north, but that is predominantly single level homes whereas the Martell Commons will have multiple level apartments.
2. Concurrent with the zone change proposal, the City of Newberg has not demonstrated effective road improvement plans to handle the increased traffic on Villa Rd.. From Highway 99 north to Crestview there is already substantial heavy traffic morning and evening. A Transportation Impact Analysis indicates that this project will impact the area with 795 average daily trips along Villa Rd. The major problem is the width of the road and the curve under the railroad. We are not confident the section under the trestle will be redone to handle the increased average daily travel this project will bring. This needs to be agreed to as a condition of approval as part of the rezoning.

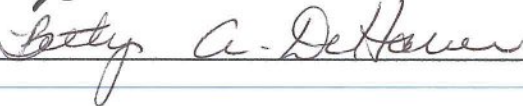
The Planning Commission needs to understand that one reason residents in this area are opposed to this development is the "back door" exposure to the plan. The same problem developed over the project on Meridian.

Several months ago I attended a meeting that was held at the Newberg Christian Church where the developer presented drawings of the plans for the property. I saw no representation of the City of Newberg there, the meeting was held in a small room that was overcrowded, it was difficult to hear, and it was presented in such a way that it was a done deal. People were offended.

Our community recognizes that eventually the Martell property will be developed. Residents are reacting to the way in which this kind of planning (or lack of planning) is done. This site is not ready to be zoned R-3 until improvements are made to Villa Rd., and a responsible development presentation is made.

Sincerely,

David W. DeHaven 

Betty A. DeHaven 

David and Betty DeHaven, 1621 Johnson Dr., Newberg, OR 97132

City of Newberg Community Development Department

PO Box 970, Newberg, OR 97132

Written Comments: File No. CPA-15-001/ZMA3-15-001

Martell Commons

RECEIVED

MAY 11 2015

Initial: _____

TRAFFIC

The location is surrounded primarily by low density single family homes. Villa Road is currently heavily traveled. The railroad trestle creates a bottle neck due to the limited ability to move the trestle and make improvements to the road. Care must be taken to avoid pedestrians and bike riders in this area. This has also become a busy crossing for local deer. Improvements to Villa Road north of the train trestle would not improve travel through the bottle neck to allow for the additional traffic created by the additional vehicles. The traffic would increase beyond the 40 trips per PM peak hour as a recommended limit to allow the project. Park Lane could be widened and improved as required. A major concern would exist controlling parking of extra vehicles. There is a private road adjacent to the rezone property, Trestle View Court, with concerns of parking and blocking emergency vehicles ability to enter if required. With the added concern the private street would become a turn around. Rezoning would require enforcement of no off road parking and narrow roads in the new complex. These problems can be seen by observing the housing tract just south of Fred Myers. The Newberg Traffic Committee has tried to address issues in that area of illegal parking violations and a failure to get trash trucks and emergency vehicles through the area. I was a member of the Traffic Safety Committee during the complaints.

NOISE

The noise level will increase by the additional traffic and the increased noise from additional residents.

ROAD IMPROVEMENTS

The city will not be able to make sufficient road improvements without modifications or moving the train trestle. No improvements to the train trestle would maintain a bottle neck negate the traffic improvements required to improve traffic flow.

HEIGHT

Buildings with a height of more than two stories would degrade the area and lower the home values in the area. Buildings with more than two stories buildings would invade the privacy of direct neighbors. Three stories would allow occupants to look directly into surrounding homes and yards. Building more than two story buildings would increase traffic by a third over a two story complex.

Myself and neighbors are admittedly against the rezoning the property to R3. The building of more than 40 to 50 units would overwhelm the area, lower property values and increase traffic to an unsafe level on Villa Road..

Leland Parks

1617 Trestle View Ct.

Newberg, OR 97132

503 5378-9734

Leland R. Parks

Date

5/8/2015

Harold D. and Coulliette B. Hagglund
1217 Pennington Drive N
Newberg, OR 97132

May 11, 2015

Written Comments: File No. CPA-15-001/ZMA3-15-001
City of Newberg
Community Development Department
PO Box 970
Newberg, OR 97132

Dear Friends,

Based on the issues detailed below, we urge the Planning Commission to deny the Zone change Request for the Martell Commons.

1. Pedestrian Safety

The Application states: "Further, the developer desires to connect the new sidewalk on the west side of Villa Road with an existing pedestrian trail at the south end of the project, which provides connectivity to George Fox University. Additional coordination and cooperation will be needed with the City and University to ensure this connection can be made." (Traffic Appendix p. 17.)

The Application acknowledges that the plan is inadequate to provide for pedestrian and bicycle safety. Increasing the zoning from R1 to R3 only increases the vehicle traffic and the pedestrian traffic, particularly the section around the trestle. At the community meeting, the developers acknowledged that the railroad is unlikely to make any structural changes.

Also, there is no planned safe crossing of Villa Road from the west to the east side where the pedestrian lane continues up the hill from the trestle to Fulton Road.

With the additional residents of a Zoning change, more school children will use Villa Road to walk to the High School and will be tempted to use the railroad tracks over the trestle.

While the Application mentions the proximity to George Fox and the Pool, the plans to achieve safe walking paths appear to have no chance of materializing.

2. Vehicle Access Safety

The Application notes: "The existing vertical alignment of Villa Road, however, does obstruct ISD at the proposed site access to Villa Road looking south towards to the railroad trestle. Therefore, as part of the proposed development site frontage design plan, the vertical profile of Villa Road should be redesigned so that adequate ISD is provided for the roadway design speed. Alternatively, the access could be redesigned as a right-in/right-out access. Additionally, landscaping along the Villa Road site frontage should be planned and

maintained in a manner that does not obstruct sight distance.) (Transportation Appendix, p. 32)

The “vertical profile” is another significant safety hazard. The distance from the Villa/Park intersection to the crest of the vertical descent is about 310 feet. With a typical speed of 30-35 mph (as stated in the community meeting), the response time for vehicles on Villa road to react to other vehicles or pedestrians is insufficient.

Although the Application recognizes these concerns, there is no planned resolution for this significant safety concern.

3. Adjacent Property Values

We, along with others, purchased the property with a value based on the R1 zoning. Changing the zoning to more density will probably decrease our property values, particularly those of us whose share property lines with the development.

When asked about property values at the Community Meeting, the developers responded that “at least one” of their developments resulting is raising property values in the area. However, all three of the examples of other developments that they listed are not comparable to the Martell Commons project.

The Raven Apartments, 340 SE 148th in Portland are 33 unites with Air Conditioning, Washer/Dryer. Markell Commons is a much larger complex with lower cost construction (in-wall heating only). (www.apartments.com/raven-apartments-portland-or/vx206ze)

The Beverly, Hollywood District, is a higher end complex with Kultar oak flooring, Premium energy-efficient lighting, “Each room has its own heating and cooling control”, Living Stone tile countertops, etc. Located in a business district, this is clearly not a comparable project to help understand the impact of property values in an R-1 development. (<http://www.livethebeverly.com>)

Lewis Ridge, near Vancouver mall, “At Lewis Ridge Apartment Homes you will find one-of-a-kind living options, sustainable features, stainless steel appliances and luxury interior selections complete with modern, sophisticated charm. Living at Lewis Ridge apartment homes also entitles you to a premium amenity collection such as a resort-inspired pool and relaxing spa, complete fitness center and much, much more. Come experience the superior style of Lewis Ridge Apartment Homes – and elevate to a new level of living today!” (www.lewisridge.com) Clearly this is not a comparable for a lower-cost construction project.

Also, these lower-cost housing units give us not assurance that this development has the financial resources to maintain the property (upkeep and appearance) for several years. They did not indicate any experience with other projects of this size or cost range.


4. Affordable Housing in Newberg

The Application notes that a change from R1 to R3 zoning "promote the efficient use of limited land within the Urban Growth Boundary.." and references the LUBA appeal which is stalling the 2009 proposed update to the Housing Element of the Comprehensive Plan (page 27). However, approving this project for the purpose of resolving the UGB issues for the City is a significant (too high) trade-off for the vehicle and pedestrian safety along Villa Road.

Although ADEC and George Fox University are mentioned in reference to affordable housing stock, there is no mention of coordination with these entities to confirm that such needs exist in their own institutional planning.

Thank you for including our concerns in the public comments on this application.

Sincerely,

A handwritten signature in cursive script, appearing to read "Harold D. and Coulliette B. Hagglund".

Harold D. and Coulliette B. Hagglund

City of Newberg
Community Development Department
PO Box 970
Newberg, OR 97132

RE: Proposed rezoning of property on Villa Rd near Park Ln

File No. CPA-15-001/ZMA3-15-001

As citizens who have lived and worked in Newberg for over 20 years, we have seen a lot of growth within the city limits. Growth is inevitable and even necessary. However, high density housing seems to bring with it inherent issues (parking, noise, livability, congestion, etc.) whether in our city or in other cities. Careful location of this type of housing can create less impact on the established community, roadways, and general livability of the city. Often the high density housing issues are never witnessed by the developers, the planning committee or the city building and planning division. The problems arise after the housing is occupied and these projects then create daily issues for the onsite managers, create calls to the city and to the police in regards to loud neighbors, illegal parking, overflow parking blocking residential driveways and mailboxes, vehicles being damaged from door dings as vehicles try to pack in or vehicles being damage by passing vehicles that did not navigate the crowded roadway well enough.

Since this project has been proposed, there has been an increase in homes going up for sale on Villa and in the immediate area. Many chose to live in Newberg, because it is outside the metro area and does not have the feel of areas like Beaverton or Portland where residents live in compact areas and traffic is always congested.

The placement of this particular project seems to bring with it some increased probability for these inherent issues to be intensified.

The original proposal was for 144 units, we understand now it may be closer to 125 units. 125 units means 125 to 200 additional daily cars to the area in addition to any visitors those residents may have. If it is being marketed to young tenants or GFU tenants, it is a high probability of each bedroom being occupied by 1-2 persons and likely each person would own a car, so the total cars added to the area could be even closer to 250.

Villa is already a very highly traveled roadway by vehicles and pedestrians. It is a main north/south through road leading to the high school, university, churches, sports complexes, retirement home, care home, and the public pool. Villa connects much of the north end housing with 99W and is traveled daily by commuters heading to and from work. On any school day, there is a steady flow of traffic on Villa and Haworth. Traffic is backed up significantly during particular hours as the students are letting in and out of school.

In the area of Villa and the trestle, Villa is narrow and windy. A sharp bend occurs right at the start of a sharp incline. It is already a hazard and would only become more so with increased traffic. Even if the immediate area in front of the proposed re-zone area is improved, the concern is also for impact all

along Villa. Including the curve and incline at Carol Ave and the very well-traveled intersection of Haworth.

On days when the pool is hosting a water polo event or swim meet it is not uncommon for Haworth to be full of parked cars as well as the length of Villa from Fulton to Haworth. This makes it delicate to navigate. Further, if GFU is hosting a football game or a softball/baseball game this same area is packed with parked vehicles and pedestrians moving up and down the street and sidewalks.

While we understand there will be some improvements made to Villa and Park to accommodate parking and pedestrians, we are concerned it will not be sufficient for these additional 125-250 vehicles accessing Villa. It will create a safety hazard and significant congestion.

GFU is building dormitories on Villa. This will increase car traffic on Villa between 99W and Fulton. The new dorms will also increase pedestrian traffic in the area.

Villa is marked with bicycle 'sharrows', telling bicyclists that this is a safer path to take. A new apartment building, new dorms and the possibility of a new development on Mountainview Rd in the near future will put great strains on Villa Rd.

Pedestrian safety has never been that great on Villa between Crestview Rd and Haworth (even to 99W). There are only occasional sidewalks on one side of the street or the other. The walk down and up Villa at the trestle can only be done on one side of the road by using the bike lane. The road seems narrow here as cars going north bound go around the blind corner, down the hill and often go into either the on-coming traffic lane or the bike lane.

Beyond the safety and traffic concerns, neighbors are greatly worried about losing our quiet neighborhood. Basic livability issues of noise and other issues arise when people live in too close of quarters. While not everyone bothered by the issues will complain, neighbors will likely deal with daily frustrations of increased noise, crowding and livability issues and ultimately deteriorate the sense of neighborhood and community.

Thank you for your consideration on this topic.

Sincerely,

Johns Family
1504 Hess Creek Ct
Newberg, OR 97132
503-538-3960



To whom it may concern,

I am writing regarding the application to change zoning at 1317 Villa.

Our neighbors at 1317 Villa have been good neighbors. That being said I strongly object rezoning that property from low density to high density residential. We live in a quiet neighborhood. Although traffic is an issue early in the morning, and in the evening it is generally a quiet family neighborhood. Changing the zoning to allow for high density housing (which as I understand it is either apartments or town houses) will bring a lot more people into our quiet neighborhood. Most importantly it will bring a lot more cars into the neighborhood and that is what I am most concerned about. The location of this property is directly adjacent to the railroad tracks and trestle. I have lived on Villa Rd for 14 years. Every day I drive under the trestle and every week I am nearly hit head on by a car driving down the middle of the road under the trestle because they choose to drive too fast. Near head on collisions have increased since the building of JoAnn Austen Elementary many years ago and I am now afraid that will significantly increase when there is traffic going in and out at the top of the trestle (1317 Villa). As the property is currently zoned it will already bring in many new cars and residents to the neighborhood and will affect driving in that corner... however, high density is many times more people and vehicles than single. As I understand it the rail road company has no intention of changing the trestle or paying for any additions or changes so the area down there and closest to the trestle will not change which means traffic will be funneled under there, frequently going faster than needed (don't even get me going about the four way stop at villa and Crestview and how few drivers actually STOP there). I have an investment in my neighborhood and in my life. I fear that those who would be attracted to the high density housing would not have a similar investment in the neighborhood (or my life). Please DO NOT CHANGE THE DENSITY PLAN.

Sincerely,


Hope Andrews

1701 Villa Rd

Community Development Department
City of Newberg
414 E First Street
Newberg, Oregon 97132

RECEIVED

MAY 11 2015

May 8, 2015

RE:Change from Low Density Residential to High Density Residential,
Zone change from R-1 to R-3

The proposed plan to change property from a low density residential, property which is now farmland, to a high density residential designation is the worse case scenario for many in the area. The neighborhood meeting was well attended, but it appeared that the only persons speaking in favor of this were the owner and the developer.

The increase in traffic in the area from a change of R1 to R3 is not appropriate for Villa Road and would result in the need for the city to make improvements, possibly widening the road and adding stop signs at Park Lane and even a traffic light at Haworth. This area is already a dangerous one for pedestrians and bicyclists, who would need to cross Villa to go to or from this proposed high density residential property.

A change from a farm area where deer are frequently seen to an area with the potential of three story apartment buildings and approximately 150 parking spaces is too drastic . Three story buildings would be especially out of place and an eyesore all over the area.

This is an R1 Low Density Residential Area that would best be maintained as R1 to provide for affordable single family homes.


I respectfully request the disapproval of the proposed Martell Commons Comprehensive Plan Amendment and Zone Change Application from LowDensity Residential to High Density Residential.

Sincerely,

Barbara Falbey

Barbara Falbey
1220 N Pennington Drive
Newberg
OR 97132

In Our Opinion: People gotta live somewhere, don't they?

Created on Tuesday, 29 November -0001 16:00 | Written by [Gary Allen](#) | 

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Nothing gets the good people of Newberg riled up like the mention of “affordable housing” and the prospect that an apartment or condo complex will be constructed in their neighborhood.

That was evidenced once again last week after a posting on Facebook revealed a developer’s plans to construct an apartment complex on Villa Road called Martell Commons.

It wasn’t long after, minutes in fact, that the vitriol began and the issue went viral. People insisted no more housing is needed in town, that the city of Newberg was hell-bent on bringing more residents to town to increase the tax coffers, that the city should either require the developer to keep the lot undeveloped or site only a few single family homes, that the resulting uptick in traffic will make Villa Road incredibly dangerous and, unfortunately, that only criminals and lowlives live in affordable housing complexes.



May 6 editorial

If this all sounds familiar that’s because these were the same arguments that surfaced when plans began to construct a large low-income housing complex on Meridian Street. When Deskins Commons was finished, however, it was immediately apparent that the vitriol was unfounded and the complex turned out to be a nice addition to town.

The developers of Martell Commons have it in mind to build a complex of around 128 one-, two- and three-bedroom apartments in a vacant field at the corner of Villa Road and Park Lane. The complex won’t meet the city of Newberg’s strict definition of affordable housing as rates will be comparable in price to other apartments in the area.

The long and short of the issue is that Newberg is short on housing and current inventory doesn’t meet the city’s projections for future growth. Simply put, people gotta live somewhere.


Yet, there are those who would deny others a place to live for fear they are the wrong element, or so they can travel a bit easier on the road, or so they can look out their windows onto a verdant field, one owned by somebody else.

Within the confines of the law, the owners of the land are allowed to develop that land as they see fit. If people have a problem with that, if they want to see the land remain undeveloped, they can certainly purchase the parcel. That’s the American way.

True, the site is a verdant field and it’s understandable neighbors would like it to remain that way. But the land has been zoned for low-density residential use for many years and the developer could still choose to construct dozens of homes there instead of apartment buildings. What would be the difference?

Nearly 25,000 people live in Newberg already and, short of erecting a fence around the city, more will move here every day. There’s no stopping progress, there’s only planning for it properly.

Proposed apartment complex draws fire

Created on Wednesday, 06 May 2015 01:00 | Written by [Colin Staub](#) | 

[1 Comment](#)

Martell Commons could feature 128 units on Villa Road

Residential construction in Newberg could see a spike as a multifamily apartment complex moves forward with a proposal before the planning commission.

The development, called Martell Commons, would mean the addition of more than 100 residential units on a 5.9-acre parcel of land at Villa Road and Park Lane.

The final number of residences to be proposed has not been decided, but president Jeff Curran of project applicant DJ2 Construction said the number will be in the vicinity of 128 units. If the zone change goes through, this figure would be near the middle of the development's minimum allowed 88 units and maximum allowed 147 units.

The developer will first seek approval of comprehensive map plan and zone changes. The site is now zoned R-2 (low density residential) and the planning commission will be asked to approve rezoning the land to R-3 (high density residential).

In order to make a case for why the zone change should be approved, the applicants state that the high-density zoning is appropriate because of the property's size, its location on a major collector street provided by Villa Road as well as its placement close to commuting destinations.

"In this location it seemed to make a lot of sense, with the proximity to (George Fox University) and the proximity to A-dec," Curran said.

The development also makes sense, the applicants state, because the land available for residential development within the urban growth boundary is not enough to accommodate the city's projected growth over the next 15 years.

While the development is not proposed to have an "affordable housing" designation that would restrict the income level of its residents, the zone change application states that "it will provide an affordable housing option for many residents of Newberg located close to employment, services and educational uses."

City Councilor Denise Bacon, who said she could not comment specifically on the Martell Commons proposal, expressed that there is a sizable shortage of affordable housing options for Newberg residents.

"When you talk about affordable housing out in public people assume you mean housing for poor people," Bacon said. "Affordable housing is relative to whatever you make."

Apartment hunters, including her own children, looking for rentals in the area are running into tough situations and lots of competition: generally unable to find open rentals and otherwise facing dozens of other people vying for the same unit.

"That's a tight housing market," she said.

Growth allows the city to improve its infrastructure, expand its police force, improve and build roads, Bacon said.

If the city does not prepare for and facilitate affordable growth in the long run, Bacon predicts residents leaving the city. She recalls the 2008 housing crash and the subsequent flood of tenants to rental units, causing some people to be priced out of the market and move to towns with lower rent, such as Willamina.

Increasing the affordable options available to renters could help offset that scenario while also meeting the more immediate housing needs of Newberg residents.

"No one is going to develop that kind of development if they didn't think there was a market for it," she said, citing as a recent example the Deskins Common apartment building on Meridian Street, nearly filled before it even opened.



GARY ALLEN - Open space - A vacant field may be the future site of a development that would bring roughly 128 new residential units to the area. The space was chosen for its convenient proximity to George Fox University and Newberg businesses.

Still, the development elicited some strong opinions at a well-attended December meeting with the neighborhood. According to the application, some of the main neighbor concerns focused on transportation impacts, the number of units proposed, whether there will be sufficient parking and the architectural design of the development.

Willow Muhr, a neighbor of the vacant field for years, is concerned about the proposal in part because of the amount of increased traffic it will bring to the area.

"It's going to be a nightmare," she said. "My first thought is strictly how unsafe that space is right there." Already there is cut-through traffic in the neighborhood from drivers trying to avoid Villa Road, a practice that Muhr said could increase with the new development.

Simply the number of proposed units is also a concern.

"I expected that piece of property to be developed but I expected it to be developed in an appropriate manner in the area," Muhr said, explaining that she is not adverse to the growth in Newberg and citing past developments nearby that focused on roughly 10 single-family homes as more appropriate examples of development.

With the potential impacts on the neighborhood, Muhr and other neighbors are hoping to make a case against the potential zoning change.

Some of these neighborhood impacts have already been considered and solutions proposed along with the development. According to the application, some of the expected transportation infrastructure improvements that would come with the development would include a half-street widening of Villa Road with the addition of sidewalks and a bike lane, as well as widening of Park Lane to include a dedicated left-turn lane onto Villa Road as well as a sidewalk for the length of the lot.

Another way developers have discussed mitigating potential impacts on the surrounding neighborhood is to step the building heights down on frontages facing neighboring residences to avoid the otherwise stark contrast.

Also to this end the building may sacrifice some of the space for units allowed by the high-density zoning in order to earmark some area for parking. Although the plans are not finalized and especially design elements are likely to change as the process continues, Curran said parking has been a major concern.

"Parking can be a challenge, (neighbors) don't want parking spreading out into the neighborhood," he said. "We've kind of toned down the number of units so we can accommodate more parking onsite."

While DJ2 Construction has not worked in Newberg before, Curran and his business partner have consulting backgrounds and were heavily involved in working up the Springbrook Master Plan for the Austin family.

"We know the community well," Curran said.

The planning commission will hold a public hearing on the proposed zone change at 7 p.m. May 14 at the Newberg Public Safety building. At a subsequent City Council meeting councilors will hold another hearing and will make a final decision on the application.

1 Comment

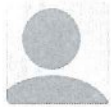
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**frog_in_the_soup** • 3 days ago

What a scam. The nearby residential owners will have a rental megaplex in an obviously quiet residential neighborhood. Talk about bait and switch. You buy into a neighborhood with low density zoning, only to have it pulled from you years later when it is convenient for the city and landowner. There are other areas in the Newberg area for high density housing. You can also bet that the number of units will be 128 minimum, when it should probably be 64. With that many units, the neighborhood residential owners should demand that space from the 5.9 acres be made into a sizable playground park for the inevitable children, since there are no playground parks within walking distance, The sidewalks and left turn lane are window dressing, because there will be difficult parking issues. The units should be as high end as possible, easier to do with low cost granite, engineered flooring, and cheaper air conditioners. The owners should also pay attention to where the garbage bins will be placed, ideally away from the residential backyards.

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May 14, 2015

City of Newberg Planning Commission
Community Development Department
C/O Steve Olson
414 E 1st Street
Newberg, OR. 97132

RE: 1317 N Villa Rd – Martell Commons, CPA-15-001/ZMA3-15-001.

While I normally feel that no one has the right to tell another what they can or cannot do with their property, in this case I need to express my concerns as a longtime resident in the College Park subdivision to the west of the Martell property.

If this proposal were to pass and the suggested multi-family dwellings were to be built, the current surface streets could not tolerate the additional parking that would be required and the additional daily traffic flow. There has already been a noticeable increase in traffic flow through the subdivision due to the addition of the complex on N. Meridian Street by those trying to avoid downtown traffic. Villa Road is extremely overused, it is too narrow, and it has shown multiple times that it cannot handle the current traffic flow by the number of potholes and resurfacing done by Public Works. The same is horribly obvious on Sierra Vista. College, Crestview, Aldersgate, Mountainview and both Pennington North and South are all beginning to show signs of wear. I am sure that with the proposed increase in multi-family units, these roads will deteriorate even quicker than they currently are.

Secondly, I wonder if an Environmental study regarding the effect this rezoning and any potential development would have on Hess Creek, and more importantly the effect on wildlife that reside there. Last Friday and Saturday, there was a family of seven deer on the property throughout the day and night and this is not unusual. Over the years, this property has been home to generations of deer, rabbits, raccoons, and many other animals.

Thank you for your time and consideration in this matter.

Rick & Jill Dorrell
1211 Pennington Dr S
Newberg, OR. 97132

My name is Willow Muhr and I live on Hess Creek Ct. directly adjacent to the property @ 1317 Villa Rd. I am adamantly opposing the change to High Density Residential District for the reasons of safety & livability.

We purchased our 4 bedroom home, located on a double lot in a culdesac so we could raise our children & have a nice safe place for our grandchildren to play. We loved the quietness; and the serenity, of the area. It was an established neighborhood of likeminded professional individuals and we felt comfortable with our purchase. We knew, eventually, that the property, in question, would be developed and assumed it would be so in the spirit of the current community surroundings.

Since moving here we have noticed an increased level of traffic on Villa Rd with the addition of Joan Austin Elementary School and the sports complex. Also add'l houses have been added on Villa & several more "tucked in" behind them. There have been 2 fires in the past couple of years which have caused significant concerns in that the fire dept seemed to have limited access & their vehicles significantly blocked traffic. I also believe that the changes to Mountainview & Springbrook Rd has changed the direction of traffic; and my understanding is that there are plans to have additional houses to be built in the area of Mountainview/Villa/Zimri. This will further increase the traffic.

When Villa Rd was repaved we were unable to leave our culdesac many times & traffic was backed up to a very unsafe distance up the hill. When it was "improved" on the end, nearest the church, traffic was backed up significantly and unsafely up the hill, at times, to allow construction vehicles as well.

The residents of Park St. & Villa already have limited parking available for their homes. And, Villa is also a major hub for vehicles attending, and parking, for many events; including George Fox events & water polo tournaments to name a few. It is also very common to see walker/joggers/people walking their dogs & bicyclers on the VERY narrow area that goes under the train trestle. That area has a very narrow white strip that is highly disregarded in many cases. I would like to note that not long ago a vehicle was towed out near the trees because it went off the embankment and that there is a sign noting, "hidden driveway" on the other side of the street coming UP the hill.

Traffic coming from Park St. turning onto Villa will be detrimental in all aspects. Making a right hand turn literally requires you to turn into the far lane; turning left is difficult as you do not know who is coming under the train trestle and at what rate of speed. Also, I think it is necessary to note that the key times of people leaving or arriving home have the probability of causing significant traffic delays or people making unsafe decisions. That could a chain reaction of people avoiding Park/Villa intersection and instead using the back areas more heavily populated by children as a thoroughfare.

It is more than apparent that parking for a high density residential complex will also be a challenge. As homeowners in multi bedroom homes we, and our children, have first right to park in front our own homes. Many of us have raised our young children to teens who are now driving or have moved out & now come to visit. Our cul-de-sac on a holiday or other event is brimming with activity. It is normal that with high density residential that there is inadequate parking onsite. Where will the parking then be? The culdesac or adjacent properties.

This will cause a significant decrease in the value of my home when we are ready to sell our home. How successful will I be if the potential owners see vehicles lining the block?

I grew up in Portland & moved here 20 years ago to my husbands family farm. We moved from the farm to our current home several years ago. If I wanted to live in a high density area we would have chosen to move into the newer homes being built at the time with little to no yard on a busy street in a developing area.

A better use of the land would be something similar to the development on Mary Lou Ct or perhaps a small condo type complex with garages.

Lastly, the city planning commission and the developers have no real stake in the outcome of this. It is the people who live here. I would suggest that a high residential property area would be populated by individuals that may not have the same level of regard for the area as those of us who have invested significant time and money into our homes.

This could have the potential for the resources of our police dept to be utilized in responding to preventable traffic or pedestrian accidents and public complaints.

The bottom line is it's a bad choice for a great area!

DM Miller
CSB 1997-6847

Steve Olson

From: Kevin App <troutbum89@hotmail.com>
Sent: Friday, May 15, 2015 8:58 AM
To: PLANNING
Subject: Comment from resident

To Whom It May Concern;

I wanted to voice my concerns about the plan to change the zoning for the property at 1317 Villa Rd. from low density residential to high density residential. My the back corner of backyard touches the back corner of the property in question. I am concerned that the plan to build (some sort of) apartment complex on that property is going to have a negative impact on my qulaity of life, and more specifically, on my property value.

My wife and I purchased the home at 1218 S. Pennington Dr. just last summer. We were drawn to the property because of its' large backyard, which offered a peaceful, quiet sanctuary. It is true that an occaisional train comes by, but it is only occaisional, and rarely, if ever, in the evening. The best thing about this place is that the yard at night is almost like being in the woods. Putting an apartment complex right behind us will certainly destroy our peace and quiet, effectively removing the main reason we wanted to live here, all within just a couple of years of our move.

What's more, a prospective future buyer would certainly notice that the property is now in a high density zone, and it could not possibly hold its' value, leaving us immediately upside down on the property. This says nothing of the problems that would be created on Villa Rd. and Park, where increased traffic could only make the neighborhood, once a quaint little drive under an old trestle (a nice little feature of our nice little town) into a traffic nightmare.

I am not the type of person who would typically engage in this sort of thing. A person is free to do what they wish with their own property. Having said that, I probably would not have bought the house, or at least I would have thought it worth much less, had this plan been known at the time. Thank you for your consideration.

Kevin App
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Newberg, OR 97132
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(503) 537-0117 (home)