

REGULAR MEETING OF THE PLANNING COMMISSION  
CITY OF AMITY, OR

Minutes

A Regular Meeting of the City of Amity Planning Commission was held at 6:30 p.m. on Monday, July 13, 2020 in the Council Chambers, City Hall, 109 Maddox, Amity, Oregon.

Members Present:

Ryan Jones (Chairman), Steve Ruyle (Commissioner), Courtnie Belanger (Commissioner) Rob Kistler (Commissioner), and Mackenzie Davis (Commissioner)

Members Absent:

Staff Present:

Amber Lopez (City Clerk), Holly Byram (City Planner), and Michael Thomas (City Administrator)

Guests Present

Nicole Ruyle (Applicant), Sharon Naig (Property Owner), Terry Naig (Property Owner), Delores Smith (Property Owner), and Daniel Danicic (Applicant's Chief Engineer).

Call to Order:

Chair Ryan Jones called the meeting to order at 6:29 PM.

Introduction of new Planning Commissioner Mackenzie Davis.

Chair Ryan Jones asked Commissioner Mackenzie Davis if she was from around here. She explained that she lived in Newberg, but previously had the opportunity to work on a couple projects here Amity and was interested in learning more about the local projects by serving on the Planning Commission. City Administrator Mike Thomas explained the Planning Commission's policy which allowed for non-residents to serve on the volunteer commission.

Approval of Minutes from April 13, 2020

Chair Ryan Jones asked if the Commission wanted to entertain a motion to approve the minutes from the April 13, 2020 Planning Commission meeting. Commissioner Steve Ruyle moved to approve the April minutes; Commissioner Courtnie Belanger seconded. Rob Kistler (Commissioner) voted yes, Mackenzie Davis abstained. Motion passed 3-0-1

Action Item

- 1. Planning Commission Vote: Time Extension request for land use file #1905-01P for Applicant Fernando Fuentes at 904 Jellison Street in Amity Development Code section 3.108.05(b) Gives the Amity Planning Commission**

**the authority to grant up to (1) year extension to a Partition approval.**

Chairperson Ryan Jones read the agenda item for a time extension request on land use application number #1905-01P, a partition for applicant Fernando Fuentes at 904 Jellison Street in Amity. The Amity Development Code section 3.108.05(B) Gives the Amity Planning Commission the authority to grant up to (1) year extension to Partition approval. City Planner Holly Byram explained that the applicant Fernando Fuentes has requested an extension prior to the expiration date of the original approval. City Planner Holly Byram explained City staff recommends 6 months for extensions. Commissioner Mackenzie Davis asked the Planning Commission could give another 6 months if the applicant needed another 6 months? Holly Byram stated that the Commissioner's may give another 6 months if need, but the applicant planned on completing his application her shortly. City Administrator Michael Thomas asked whether it would it cost the applicant money if they had to ask for another extension? Holly Byram explained no, it would not cost the applicant any money. Commissioner Steve Ruyle made a motion for a 1-year extension and Courtnie Belanger 2<sup>nd</sup> the motion. Rob Kistler (Commissioner) voted Yes Motion carries 3-0-1, and Mackenzie Davis abstained

Public Hearings

**2. Public Hearing for land use file #2005-01SUB near 514 Nursery Street in Amity. Applicant Steve Ruyle of Sunrise Court, LLC. Subdivision approval for 6 single-family home lots accessed off a private street on a 1.3-acre residential property in the R1-Low Density Residential Zone.**

Chair Ryan Jones read the Public Hearing script for land use file #2005-01 SUB near 514 Nursery Street in Amity. Applicant Steve Ruyle of Sunrise Court, LLC, requests Subdivision approval for 6 single-family home lots accessed off a private street on 1.3-acre residential property in the R1-Low Density Residential Zone. Chair Ryan Jones asked if there were any declarations of conflicts of interest, bias, or ex-parte contact with this application. Commissioner Mackenzie Davis commented that she knows the Applicant's Engineer Daniel Danicic, but that she could participate without bias. Commissioner Steve Ruyle recused himself from the Planning Commission public hearing, due to being the Applicant. Commissioner Rob Kistler declared he knows the applicant from past history, and he likes him, but that he could participate without bias.

City Planner Holly Byram presented the staff report. Commissioner Courtnie Belanger asked what is the difference between a private and a public street? Planner Byram stated that with a public street the City would be responsible for the all the maintenance, and on a private street the City would not be responsible for street, light, and all other maintenance. The City is responsible for water and sewer main lines within utility easements, and the property owner is responsible for service lines. Commissioner Rob Kistler asked if the City would be responsible for any street maintenance at all on this private street. Planner Byram stated that there are

couple different choices here. There can be an HOA or agreement with the City. Chair Jones stated that it is time to hear from the Applicant.

### **Presentation of applicant:**

Mr. Steve Ruyle clarified that the front house ownership is listed as Steve and Nicole Ruyle, which is a different ownership than the subdivision Sunrise Court, LLC. Mr. Steve Ruyle stated that this subdivision would require a HOA. The applicant then proceeded to discuss the streetlights. He plans to install solar lights. Next, Mr. Ruyle asked why he is required to put a sidewalk in so far out on Nursery Street, which is a State Highway in ODOT jurisdiction. Mr. Ruyle would like his Engineer to address surface drainage and storm sewer system. Engineer Daniel Danicic addressed cross-slope drainage into the swales; explaining that the City has shallow water, sewer, and storm systems. The applicant's Engineer questioned how a private street is still held to public street standards. Commissioner Rob Kistler had referenced the cross-drainage situation on Rice Lane. Commissioner Kistler asked Mr. Ruyle the question, did the City make him have private road? Mr. Ruyle stated it was the City's recommendation during a pre-application conference to make the road private. He did not mind that request since he plans on establishing an HOA to cover that requirement. Discussion on this topic continued.

### **Presentation of neutral parties:**

Neighbor Dolores Smith is concerned the flooding in the ditch in front of her property as well as historic uses of the subject property by tenants of the applicant. Mr. Ruyle stated that he will fix that when all the new piping goes in for the new drainage. Neighbor Sharon Naig wanted to know if a privacy fence will be put up. Mr. Steve Ruyle explained that he will put up a construction fence up and he is required to put up privacy fences. Planner Byram wanted to know if the sewer was public or private. Mr. Steve Ruyle stated that it would be a public sewer. Dolores Smith wanted to know if construction crews cut through her drainage tile, then who would replace it? Mr. Ruyle explained that all the work would be done on the shoulder of the road. If by any chance they disturbed the tile, then it would be put back the way it was found or in better condition.

Chair Ryan Jones closed public hearing for Planning Commission deliberations.

### **Deliberations**

Mr. Steve Ruyle wanted to get a calcification that he is required to install streetlights. Holly Planner Byram stated that that streetlights are required. Commissioner Mackenzie Davis stated that streetlights are required by CDC requirements. At this point there was continued discussion about streetlights between the Commissioners and City Staff. Commissioner Davis brought a concern about tapping into the existing sewer line six times. Mr. Ruyle explained he has tapped into existing water lines before without issues. Commissioner Davis expressed concern about the HOA. She continued to talk about her concerns. Then Commissioner Davis transitioned to talk about roads, sidewalks, and the right of way. Commissioner Davis stated that

the hammerhead at the end of the street was smaller than any she had seen. Planner Byram stated that Amity City Engineers want Mr. Ruyle to look at the configuration again, to meet fire code. Commissioner Davis continued to talk about sidewalk configurations and whether they were indeed needed to go out to the ODOT right of way. Engineer Daniel Danicic responded to Commissioner Davis. Commissioner Davis wanted to know if the City had to rip up the water line would the private owner or City be required to complete the repairs. Mr. Ruyle stated the City would be required for complete the repairs. Commissioner Kistler mentioned that Amity's transportation plan and stormwater standards were connected to the roadway design and construction. Commissioner Kistler stated that ODOT governs everything that is in the state highway right of way, specifically mentioning the access spacing of 350 feet for entrances onto state highways. He stated that ODOT is more restrictive than the Amity City codes. Commissioner Kistler requested an answer on what standards the City is following and what standards it chooses to impose. Planner Byram stated that usually it is ODOT; and then mentioned that access must be provided to every lot. In the case of the subject property and the neighboring driveway with limited spacing, ODOT requires a curb for physical separation. Commissioner Kistler made it noticeably clear that he was not happy with what he sees as a double standard; with the City choosing to use either Amity Code or ODOT code to its benefit. He stated that logically, since the City goes by ODOT standards on the highway and made the street private, then the City should have no input on the street requirements and should stay out of Mr. Ruyle's business. Chair Jones agreed with Commissioner Kistler.

Commissioner Davis stated that she would like the City to have some say in how this private subdivision is developed. Commissioner Belanger expressed concern about the water and sewer if Public Works is not going to maintain that system; would an HOA maintain those. Other questions were, do those six houses pay taxes into Amity? Are they part of Amity? Planner Byram stated Public Works is required to maintain those water and sewer lines within the utility easements. Administrator Thomas explained the process of Public Works and maintaining water, sewer, and utility boxes. Commissioner Belanger requested clarification regarding Private vs. Public code to follow when building. Planner Byram explained that the city cannot deny this property access. Administrator Thomas and Planner Byram explained the house HNA and that the HNA is included those 20-year plans. Commissioner Belanger asked if these six houses will be paying taxes into the City. Administrator restated that property taxes are paid to the county and that it comes back to the City. Chair Jones stated that Mr. Ruyle should not have to build sidewalks on the neighboring properties or side streets not connected to his property. Most Commissioners agreed. Commissioner Davis clarified that she meant the frontage on Nursery Street. Chair Jones commented that similar to a public vs. private street the Commission could debate that all day; requesting that the Commissioners move-on. Commissioner Kistler made a comment about how Mr. Ruyle was concerned on what kind of lighting the City wanted him to put in. Commissioner Kistler proposed that since Mr. Ruyle is building what will be a private street, the City should let Mr. Ruyle decide the type of street lighting he wants. Commissioner Kistler reemphasized that with a private street Mr. Ruyle should be able to put sidewalks where he wants them, too. But once he contacts an ODOT right of way, then Mr. Ruyle must follow ODOT regulation and put sidewalks in on Nursery. Planner Byram made a clarification to Commissioner Kistler ODOT was not directing

the installation of sidewalks on Nursery, the City made that recommendation. Commissioner Kistler then stated Mr. Ruyle should not have to put in sidewalks on Nursery; the city should treat everyone [developer] the same. The debate over private vs. public streets, sidewalks, and lighting continued. Chair Jones asked why the City required a private road. Planner Byram stated the reason was to utilize a cross drainage design. Engineer Daniel Danicic agreed with the cross drainage and continued to explain the other benefits of private vs. public street. Commissioners counted to have a debate about requirements placed upon public vs. private streets. Commissioner Kistler asked the applicant, Mr. Ruyle, if he wanted to continue the development using a private street. Mr. Ruyle explained that after all the time and effort, he would like to continue with the process using a private street.

Commissioner Kistler made a motion that the applicant, Mr. Ruyle, would be able to put in the sidewalks and lights how he wants to for this project; with sidewalks meeting the City's standards along the highway. Planner Byram clarified that Commissioner Kistler's motion. Planner Byram stated the motion would Strike #12 on the requirements for approval -- Tract A to be local street right-of-way standard of 50 feet wide for the portion north of TL 2100. That the existing width of 49.60 feet shall be permitted. Next, Planner Byram stated that the motion would change #13 Nursery Street sidewalk, and apply #4 Improvement Designs, #9 Development, and # 11 Shared access & maintenance agreement, which the HOA will cover that. Also, the motion would revise #21 by taking out mention of the City Engineer. It would also fix #10 by changing "lot 7" to "lot 6." Then the street would require cross-section drainage instead of crown. Finally, the subdivision must meet all fire department safety standards.

Commissioners Belanger and Kistler continue to debate the merits of private vs. public streets. Additionally, Commissioner Kistler and Administrator Thomas continued to talk about private vs. public streets and the wisdom of allowing the City to make that decision without oversight. There was a mix of debate among Commissioners and City Staff regarding these topics.

Planner Byram then went over a revised motion, based on the continued discussion. Planner Byram stated the revised motion was to approve the subdivision application file #2005-01SUB with the following revisions to the recommended conditions of approval: allow crossflow drainage without crown on center, revise hammerhead surface width from 15 to 20 feet, strike conditions #12 and #13, fix the typo in #10 correcting lot 7 to lot 6, and in condition #21 strike out the wording referring to City Engineer specs. With this clarification from Planner Byram, Commissioner Kistler made the motion. Commissioner Belanger seconded the motion; Chair Jones directed a roll-call vote. In voting, Commissioners Kistler, Belanger, and Jones voted yes. Commissioner Davis abstained from voting. The vote was 3-0-1.

Next Meeting Date:

Chair Ryan Jones set the next meeting to August 9, 2020 at 6:30 pm, and Rob Kistler (Commissioner) second.

Adjournment:

Chair Ryan Jones stated Planning Commission meeting adjourned at 9:30 p.m. Planning Commissioners thanked him and agreed.

Regular Meeting  
Minutes of the Planning Commission  
July 13, 2020

Respectfully submitted,

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Amber Lopez, City Clerk

Attested

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Ryan Jones, Chair

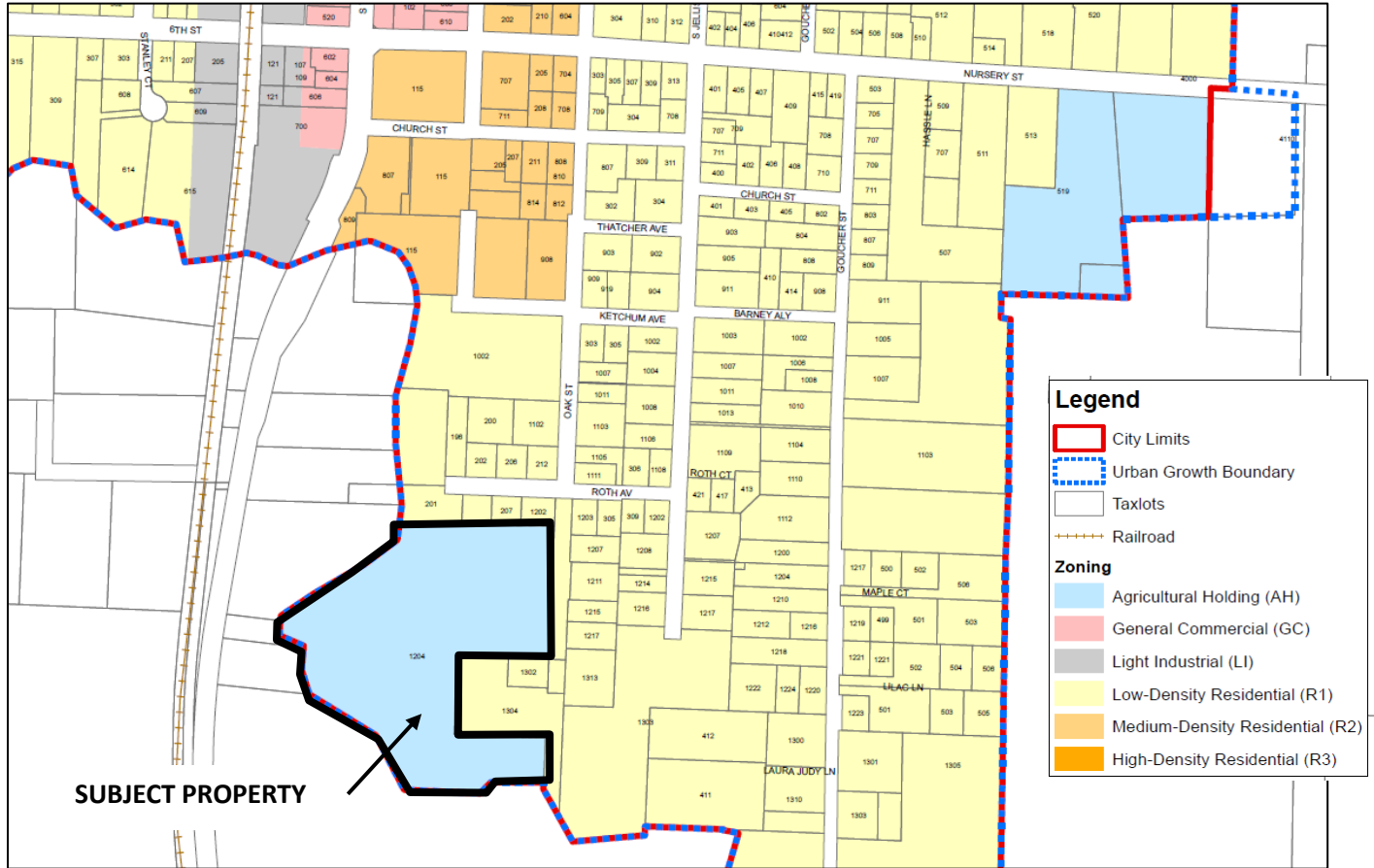
## **STAFF REPORT TO THE AMITY PLANNING COMMISSION**

**DATE:** September 11, 2020  
**HEARING:** September 14, 2020, 6:30pm, Amity City Hall (and remotely via Zoom)  
**TO:** Amity Planning Commission  
**FROM:** Holly Byram, City Planner, MWVCOG  
**RE:** **Public hearing for Amity Oaks Zone Change, City file #2007-02 ZC**  
**EXHIBITS:** Exhibit **A** – RFC Responses  
Exhibit **B** – Zone Change Land Use Application

### **I. BACKGROUND**

- A. APPLICANT:** Gerald Bieze for Amity Oaks, LLC.
- B. OWNER:** Amity Oaks, LLC.
- C. REQUEST:** Rezone 9.8-acre property inside Amity City Limits from AH – Agricultural Holding zone to R1 – Low Density Residential zone.
- D. PROPERTY LOCATION:** 1204 S. Oak Street Amity, Oregon
- E. YAMHILL COUNTY TAX LOT:** R5429AC 00700
- F. PROPERTY SIZE:** 9.8 acres
- G. ZONING:** AH – Agricultural Holding
- H. COMPREHENSIVE PLAN LAND USE DESIGNATION:** Low Residential
- I. APPROVAL CRITERIA:** Amity Development Code (ADC): 2.101 R1 Zone, 2.108 AH Zone, 3.110 Zone Change, and applicable Goals & Policies of the Amity Comprehensive Plan
- J. PROCEDURE:** Pursuant to ADC 3.101.03, a Zone Change is a Type III action, which is a quasi-judicial process in which the City Council applies a mix of objective and subjective standards. Public notice is provided, and public hearings are held at both the Planning Commission and City Council. Appeal of the decision is to the Land Use Board of Appeals. Public notice requirements are detailed in ADC 3.202. Required notice includes a minimum 20-day advance notice mailed to property owners within 150 feet of the subject properties. A notice published in a newspaper of general circulation a minimum of 20 days prior to the public hearing is also required.

**K. VICINITY & ZONE MAP:**



- L. EXISTING LAND USE:** The subject property was previously developed with a dwelling, barn, and accessory buildings, which have recently been removed. The property is currently vacant.
- M. SITE DESCRIPTION (Provided by applicant):** The subject site exhibits two main characteristics. The majority of the eastern portion of the site, located adjacent to Oak Street, is relatively flat to gently sloping in a downward direction generally toward the west and south. Wrapping around this portion of the site to the west and south is a band of increasingly sloped land; the lowest portions of which are located within the 100-year floodplain of Ash Swale. While the majority of the site is currently used for hay production, a number of Oak trees are found along the steeper slope of the site's southern edge of the site. Deciduous trees are also located along the site's northeastern edge with one large 60-inch Douglas Fir located in the site's far northwest corner.
- N. ADJACENT ZONING AND LAND USE:** The City Limits and Urban Growth Boundary follow Ash Swale along the subject property's western border. Properties to the north and east are zoned R1- Low-Density Residential, and are generally developed with single-family dwellings, consistent with that zone. Properties to the south and west are outside of City Limits within unincorporated Yamhill County jurisdiction.



## **II. REVIEW OF DECISION CRITERIA: ZONE CHANGE APPLICATION FINDINGS**

The decision criteria for a Zone Change are found in the Amity Development Code (ADC), which also references pertinent sections of the Amity Comprehensive Plan. The criteria are provided below in bold italics, followed by the applicant's response, and staff findings. Responses to a Request for Comments (RFC) sent to City departments and consulting partner agencies are attached in Exhibit A to this staff report. The applicant's full application narrative is provided in as Exhibit B.

### **Amity Development Code (ADC)**

#### **3.110 ZONE CHANGE**

##### **3.110.03 CRITERIA FOR APPROVAL**

***Zone change proposals shall be approved if the applicant provides evidence substantiating the following:***

***CRITERIA A. The proposed zone is appropriate for the Comprehensive Plan land use designation on the property and is consistent with the description and policies for the applicable Comprehensive Plan land use classification.***

APPLICANT RESPONSE: The proposed zone change to R-1 (Low Density Residential) is appropriate for the site's Low Residential Comprehensive Plan land use designation in that the R-1 zoning designation is the lowest density residential zone adopted by the City of Amity and is therefore the zone best suited to implement the Low Residential Comprehensive Plan designation.

The background information used by the City to develop its goals and policies regarding community development and other matters is contained in an accompanying document entitled Amity Land Use Planning Atlas (May 1979). In the section of the Amity Land Use Planning Atlas entitled Land Use Projections, the Planning Atlas states, in part: "When additional residential acres are needed, the agricultural lands can be redesignated for residential use."

Additional Goal and Policy guidance regarding agricultural and AH zoned land is provided in the Land Use and Urbanization section of the Amity Comprehensive Plan as follows:

#### ***Land Use and Urbanization -***

***Agriculture holding areas can serve as a reserve for providing future residential land as it is needed.***

#### ***Amity Comprehensive Plan - Goal Statement:***

***To provide for an orderly and efficient transition from rural to urban land use.***

#### ***Amity Comprehensive Plan - Policies:***

***The City shall encourage the availability of sufficient land for various urban uses to ensure adequate choices in the marketplace.***

***The City shall preserve lands for farm uses through establishment of agriculture holding areas. When there is a demonstrated need for land within such holding areas, they shall be designated for urban use.***

APPLICANT RESPONSE: These Goals and Policies adopted by the City of Amity implement the Planning Atlas statement regarding the transitional nature of Amity's agricultural lands.

The purpose statement of the AH zone is found at ADC 2.108.01 and states:

*The purpose of this district is to allow an orderly phasing of urban development of land that is currently in agricultural uses until such time that the agricultural lands are needed and consistent with the availability of public facilities and services.*

APPLICANT RESPONSE: These policies and the AH purpose statement obligate a discussion of need, and consequently serviceability, in considering the transitioning of AH zoned land to a zoning designation enabling urban development.

Need -

The agricultural lands within the Amity city limits have generally been zoned AH (Agricultural Holding). The general purpose of the AH zone is to encourage land to remain unurbanized until such time that it is "needed" for urban development. The purpose statement of the AH zone implements these referenced Goals and Policies of the Amity Comprehensive Plan.

It is important to note that this site's current AH zoning designation has achieved the stated purpose of the AH zone which is to encourage the land to remain unurbanized until such time that it is needed for urban development. To point, this site was improved decades ago only by a longstanding farm residence, barn and associated outbuildings; all of which have recently been removed due to their structurally unsafe conditions. The question of whether there is a "need" to rezone this land from AH at this time is addressed through a review of the City's available residentially zoned buildable land supply, the City's adopted need projection for residentially developable land, and the rate of Low Density residential land consumption.

In June, 2011, the City acted to adopt ORD No. 625 adding approximately 24 residential acres of land to its UGB (urban growth boundary) to help meet a portion of the City's identified future land use need. This action was based on the culmination of over five years of work by the City and its consultant planners to identify documentation and background material to project future land use need and the City's inventory of available land to meet those needs. Exhibit "A" of ORD No. 625 provides analysis and findings demonstrating a deficit of residentially planned land based on a year 2030 population projection of 2,481.

Page two of ORD No. 625, Exhibit "A" states, in part:

*"[...] the estimated demand for residential land is 57 acres to meet residential demand and a total of 72 gross acres to address the public facilities demands. Based on the total residential lands available within the UGB of 28 acres the City will need to expand its UGB by 44 gross acres."*

Table 4.3 of ORD No. 625, Appendix "A" reproduced is excerpted from Amity's HNA (Housing Needs Analysis) and BLI (Buildable Land Inventory) efforts and is instructive as it speaks to projected acreage needs of the Comprehensive Plan's three residential land use designations: Low Density, Medium Density and High Density.

**TABLE 4.3  
ACREAGE REQUIREMENTS TO MEET 2030 HOUSING DEMAND**

Housing Type	Expected Housing Ratio	Required Units 2030	Existing Units	Needed Units	Expected Density	Acres Needs	Acres Available	Net Acres
Low Density	0.70	631 *	474	157	5.0	31.3	18.7	11.5
Medium Density	0.20	180	18	162	8.0	20.3	4.0	16.4
High Density	0.10	91	31	59	12.0	4.8	5.0	.5
<b>Totals</b>	<b>100.00</b>	<b>902 **</b>	<b>523</b>	<b>379</b>	<b>-</b>	<b>56.7</b>	<b>27.7</b>	<b>29.0</b>

*\* includes lands zoned AH*

*\*\* includes 27 RDUs for replacing non-conforming units in commercial and industrial zones*

Table 4.3 identifies 70 of percent Amity's projected housing needs to be met on land identified with a Comprehensive Plan designation of Low Residential. This table also demonstrates a deficit of 157 needed dwelling units in the Low Density designation (projected need of 631 DU – 474 existing DU = 157 DU deficit to meet future needs). This 157 dwelling unit deficit is also translated to a need for an additional 11.5 net acres of buildable Low Density residential land that would need to be added to the Amity UGB to meet projected housing needs in the Low Residential Plan designation.

Of the approximately 24 acres of land added to the Amity UGB by adoption of ORD. No. 625, 12.63 gross acres were designated Low Residential on the Comprehensive Plan Map: R5420CA00801 at 7.33 acres; R5420CA01100 at 3.15 acres; and, R5420CA01200 at 2.15 acres. In adopting these land use need projections the City of Amity applied Oregon Administrative Rule (OAR) 660-024-0040(10) that allows for a local government to add a factor of 25% to the identified needed net buildable acres to account for the land use needs of streets and roads, parks and school facilities. This 25% factor raises the identified 11.5 net acre need from Table 4.3 to a projected need of 15.33 gross acres of residential land designated as Low Residential on the Amity Comprehensive Plan Map.

The 15.33 gross acre Low Residential land need has been mostly addressed by the addition of the three parcels mentioned above to the Amity UGB. When the 25% public land use and facilities factor is applied to those acres, they yield a total of 9.47 net acres of residential land; approximately 2.0 acres short of the City's projected Low Residential land need of 11.5 such acres. It is also of interest to note that these three added Low Residential parcels have not annexed into the Amity city limits and do not yet carry a City zoning designation allowing urban development.

This analysis and description of Amity's residential land use needs and the City's ability to meet those needs provided above shows that there remains a deficit of Low Residential planned land within the UGB necessary to satisfy the City's projected needs in the Low Residential plan designation meaning that *all* of Amity's Low Residential designated land is "needed." If all of the Low Residential planned land within the UGB were annexed, appropriately zoned and developed to projected densities, there would still remain a deficit of residential land needed to meet the adopted growth projection for Low Residential land.

### ***Housing - Goal Statement***

*To provide housing that will meet the needs of the community in a manner that will best provide an adequate choice in all income rented and housing types.*

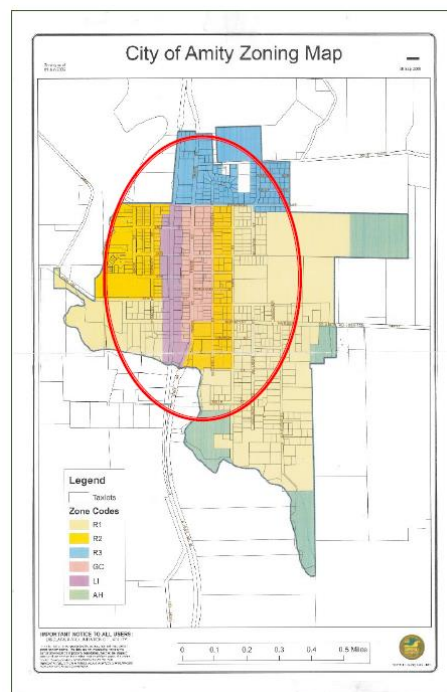
APPLICANT RESPONSE: While approval of this zone change request will not result in a specific development approval, this site's rezoning to R-1 will create an opportunity within the community where a development proposal could be made that, if approved, would help in meeting the City's anticipated housing needs. This goal has been satisfied.

### ***Housing Policies***

*The City shall direct residential development into areas currently platted and close to the City center before utilizing large areas of vacant land, and land presently devoted to agriculture.*

APPLICANT RESPONSE: Approval of the proposed rezoning action is appropriate for this site as the site is designated Low Residential on the City's Comprehensive Plan map and the R-1 zone is the lowest density residential zone adopted by the City of Amity and is therefore the zone best suited to implement the Low Residential Comprehensive Plan designation. Since no development plan accompanies this zone change request, this site is not currently proposed to residentially develop prior to the development of any other land. Even so it is instructive to note the existence of other developable residential land located at the same or a closer distance to the Amity CBD (Central Business District) than the subject site.

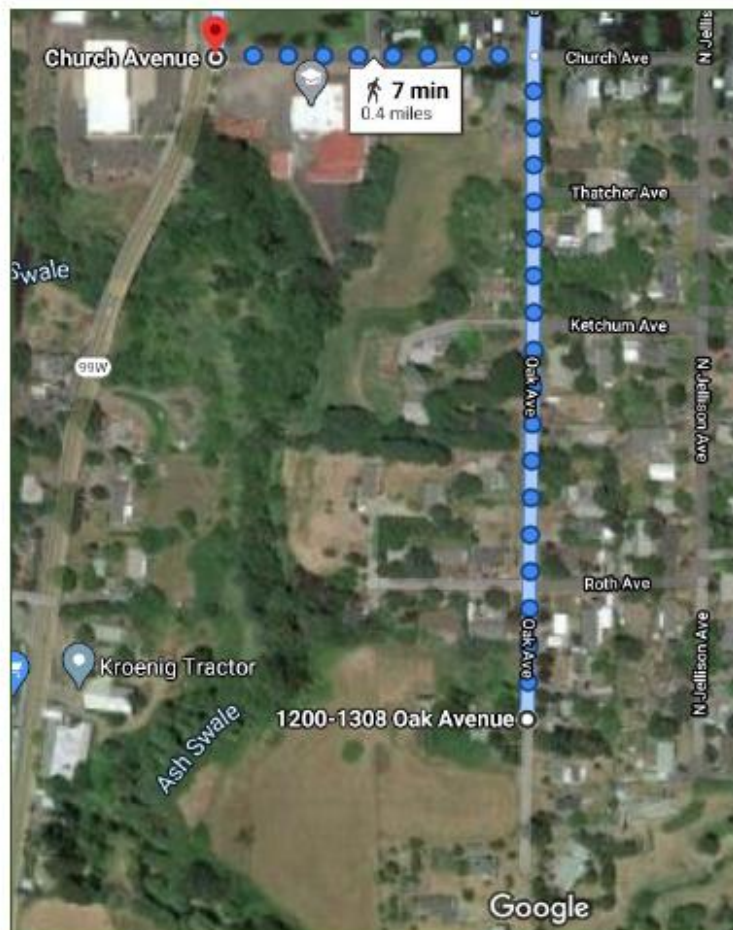
The graphic below provides an illustration of the area that is equidistant from Amity's City center (CBD) as the CBD is from the subject site. Most of the residentially zoned land located within this area is already platted and developed as commercial or industrial development or as residential neighborhoods which are generally commensurate with the densities of their respective zoning designations.



The subject site is the only AH zoned property located within this area and there are none located closer to the Amity CBD. A review of Yamhill County Assessor and GIS (Geographic Information System) data, and satellite imagery when compared with the Amity zoning map yield only eight currently platted, privately owned, undeveloped residentially zoned parcels existing within this area. [R5420DB 01501, R5420CD 04507, R5420DC 00200, R5429 01801 and 01900, R5429AB 05301 and 05990, and R5429BA 02001.] These eight parcels range from 0.13 acres to 2.8 acres in size and, when accounting for undevelopable land located within the 100-year floodplain average only some 0.83 gross acres in size. As is shown through available public records, the City of Amity has achieved a high level of urban efficiency in its residential zones and opportunities for additional residential growth within this analysis area are minimal.

As an additional scale of the close proximity of this site to the City center, this property is located about seven blocks walking and biking distance from the Amity Middle School and Amity's Central Business District (Google Maps estimates this distance to be approximately 0.4 miles and a 7 minute walking time – see graphic below). This policy has been satisfied.

### WALKING TIME AND DISTANCE



**STAFF FINDINGS:** The applicant's complete application narrative is attached in Exhibit B. The applicant has done a thorough job of analyzing the applicable Comprehensive Plan Goals and Policies, and has addressed the City's adopted 2011 BLI and HNA, as it pertains to the R1 low density residential zone land need for the 20-year planning horizon. Staff concurs largely with the applicant's analysis, and will therefore focus only on summarizing the most important points.

The purpose of the Amity Development Code and Zone Map are to implement the City's adopted Comprehensive Plan goals, policies, and land use designations. When a land use application is submitted to change the zoning of a property, the zone must correspond with the underlying Comprehensive Plan designation. Staff finds that the requested zone is R1 Low Density Residential is consistent with the underlying Low Residential land use designation of the Comprehensive Plan. This criterion is met.

Oregon cities are obligated to provide a land supply sufficient to serve the long term (20-year) needs of a growing community in terms of both employment and residential demands. The tools used to determine the "need" are a Buildable Land Inventory (BLI), a Housing Needs Analysis (HNA), and an Economic Opportunities Analysis (EOA). These tools calculate land "need" in acres, based upon population estimates, growth rates, economic trends, and a state-wide set of assumptions about factors such as density mix, household size, occupancy rates, etc (safe harbors). Amity's residential land need was analyzed and adopted in support of Amity's 2011 UGB Expansion process. The City also adopted an updated Economic Opportunity Analysis (EOA) in 2015.

With the 2011 UGB expansion, the City adopted a 20-year coordinated population forecast of 2,481. As the applicant's narrative states, the City inventoried a total of 523 existing housing units at that time, and determined the need for 379 additional units, for a total of 902 needed units by the year 2030. That total included an additional 157 needed units in the Low Density (R1) category. The City's properties zoned AH were included in the R1 category, assumed to be developed at the Low-Density rate of 5 units per acre. The allowable density range for development in the R1 zone is between 4 and 6 units per acre through standard subdivisions.

It is important to note that cities must not simply look to expand outward to accommodate future growth, rather, there are methods to increase the efficiency of incorporated lands through amendments to the development code. That is what the City of Amity did leading up to the UGB expansion. Some of the associated code amendments included: reducing minimum lot sizes, adjusting density ranges, allowing additional housing types, increasing allowable lot coverage, etc.

Following the code amendments, the City adopted a 24-acre UGB expansion. Within the City's land inventory supporting the UGB expansion, the subject property was listed in the AH- Agricultural Holding Zone as 407,512 square feet (9.36 acres), with the potential to develop into a "theoretical" 57 R1 lots and an "actual" 18 potential R1 lots, due to constraints listed as: Goal 7 (natural hazards), Goal 5 (natural resources/open space), "committed" (agricultural), and 30% floodway and plain. The applicant provided a snapshot of table 4.3 from the report, which included a footnote that AH zoned properties were integrated into the R1 zone units.

Since the 2011 UGB expansion, none of the properties added to the UGB designated for Low Residential in the northwest corner of the city have been annexed into the City. Following the City's urbanization policy, it is appropriate for a City to develop land which is located within the incorporated City Limits before growing outwards through annexations.

Since the 2011 UGB expansion, the City of Amity has processed structural permits for the construction of 52 single-family dwelling units and 24 multi-family dwelling units (apartments). It is not immediately available how many of the single-family dwelling units were zoned R1, although staff estimates that the majority were located within the Merlot estates and Sunset Court, both of which are zoned R2 Medium Density Residential.

In conclusion, pursuant to the City's Goals and Policies in the Urbanization and Housing Chapters of the adopted Comprehensive Plan, the City of Amity is obligated to provide land supply to support a variety of housing options for Amity residents. The expected split of housing types was projected in the 2011 UGB expansion. The conversion of land from rural to urban should occur in an orderly manner, in conjunction with infrastructure. The City shall direct residential development into areas currently platted and close to the City center before utilizing large areas of vacant land, and land presently devoted to agriculture. The purpose of the AH zone is to maintain properties in agricultural use until development occurs.

Staff finds that the conversion of the subject property from Agricultural Holding to Low Density Residential is the appropriate next step in the City's obligation to provide additional R1 zoned land supply to the marketplace for the development of primarily single-family development, a housing type which was determined to be 90% of the existing housing supply in 2011, and the zone which was projected to serve 70% of the local residential need within the planning horizon. The conversion of AH to R1 land is appropriate to occur after the city has amended the code to allow for increased densities and additional housing options (which it did in 2011), and represents urban infill which should occur before the annexation of additional R1 land into the city limits. The subject property is of accessible proximity to the commercial core of the community. No other undeveloped properties of similar size exist for the development of R1 dwellings closer to the city center. The purpose of the AH zone is to maintain land in agricultural use until development occurs. Staff finds the AH zone has served the purpose of maintaining the former agricultural uses prior to development for more than a decade (potentially several; original date of AH zone designation unknown). Future development of the subject property will be required to provide sufficient infrastructure and recreational opportunities, as required by the ADC, based upon the applicable subdivision and PUD code sections of the ADC. Staff finds this Zone Change criterion is met.

***CRITERIA B. The uses permitted in the proposed zone can be accommodated on the proposed site without exceeding its physical capacity.***

APPLICANT RESPONSE: The "uses permitted" in a zone are only those uses listed under a heading of Permitted Uses as found in the Sections of the ADC describing each zoning designation. Approval of those uses are determined on an individual proposal basis. The permitted uses of the requested R-1 zone are enumerated in ADC 2.101.02 (Permitted Uses) and are:

- A. Single family dwelling, including a single-family manufactured home subject to Section 2.303, and Residential Homes.*
- B. Public park and recreation area*
- C. Partitioning or subdivisions, subject to the provisions in Section 3.108 or Section 3.109.*
- D. Home Occupations subject to the provisions of Section 2.305.*
- E. Planned unit development subject to the provisions of Section 2.302.*

- F. The following transportation facilities, services and improvements need not be subject to land use regulations except as necessary to implement the TSP and, under ordinary circumstances do not have a significant impact on land use...*

The subject site is approximately 9.8 acres in size and contains adequate size to accommodate each of the uses identified in the Permitted Use list of the R-1 zone. Those uses needing more area than the minimum 7,000 square foot lot size requirement of the R-1 zone would be able to be accommodated as, for example, this site is larger than the approved Sunset West Townhomes PUD subdivision (3 acres) and Amity City Park (7 acres) which would generally be two of the larger types of permitted land uses allowed by this zone and which the City has already approved on smaller acreages than the subject site. This criterion is satisfied.

**STAFF FINDINGS:** Staff concurs with the applicant. “The purpose of the R-1 District is to preserve existing single-family residential areas and provide for future single-family residential housing opportunities.” The density range for the R1 zone is 4 to 6 units per acre, which is the lowest of the three residential zones. The subject property is 9.8 acres total, however, an estimated 30% of the subject property may have limitations to development due to the Ash Swale flood plain. To accommodate this natural feature, a developer could apply for a Planned Unit Development (PUD), which allows an applicant to transfer density from one portion of a site to another, pursuant to ADC 2.302. No development is proposed with this zone change application, but there is no reason to believe that the proposed zone would exceed the physical capacity of the subject property. The applicant/developer will be responsible for investments in infrastructure to ensure the site is fully serviced to support development. This criterion is met.

***CRITERIA C. Allowed uses in the proposed zone can be established in compliance with the development requirements in this Ordinance.***

APPLICANT RESPONSE: The allowed uses of the R-1 zone can be established on this site in compliance with the development requirements of this Ordinance as per the Findings enumerated for 3.110.03 Criteria for Approval “A” and “B” above and incorporated herein. Additionally, City permitting and inspection procedures ensure design, construction and functional compliance with all applicable municipal development requirements for any approved use of the site. This criterion is satisfied.

**STAFF FINDINGS:** No development is proposed with this application. Future development proposals for this site will be required to make land use application to the City of Amity. Future land use applications will be reviewed and processed by the criteria and procedures detailed in the Amity Development Code. There is no reason to believe that any of the permitted uses of the R1 zone could not be established in compliance with the ADC. This criterion is met.

***CRITERIA D. Adequate public facilities, services, and transportation networks are in place or are planned to be provided concurrently with the development of the property.***

APPLICANT RESPONSE: Adequate public facilities, services, and associated transportation networks are in place or can be provided concurrently with development of this site as per Findings enumerated for 3.110.03 Criteria for Approval “A” and “C” above and incorporated herein. While this zone change request does not propose site development, any such future proposal or request may require commensurate transportation, infrastructure



and other improvements appropriate to the scale and use proposed and will be reviewed for approval by the City of Amity prior to permit issuance.

**STAFF FINDINGS:** No development is proposed with this application, so no impact to local facilities, services, and networks are expected with the zone change. Future development proposals for this site will be required to make land use application to the City of Amity for full review. Development of the subject property will require infrastructure investments by the developer in order to service future developments as conditions of approval. The applicant has participated in a Pre-Application conference with City of Amity staff, as well as subsequent conference calls involving City Public Works and the City Engineer. The applicant is aware of the City's systems capacities, as well as requirements for facilities, services, and networks in conjunction with development of the property. This topic will be discussed in detail upon development application. Based upon preliminary feedback from Public Works and Engineering staff, it is reasonable to believe that the property can be serviced. This criterion is met.

**CRITERIA E.** *For residential zone changes, the criteria listed in the purpose statement for the proposed zone shall be met.*

**APPLICANT RESPONSE:** The purpose statement for the requested R1 zoning designation is found at ADC 2.101.01 and states: "The purpose of the R-1 District is to preserve existing single family residential areas and provide for future single family residential housing opportunities. The R-1 District is consistent with the Residential Comprehensive Plan designation."

This site being rezoned to R-1 establishes the capability of this property to aid in providing for Amity's projected single family residential housing needs as enumerated in 3.110.03 Criteria for Approval "A" and "B" Findings above and incorporated herein. The requested R1 zoning designation for this site is consistent with the site's current Comprehensive Plan designation of Low Residential represented on the adopted City of Amity Comprehensive Plan Map.

Additionally, single family residential development has occurred adjacent to the north edge of the site and across Oak Street to the east. All properties adjacent to this site, and others on surrounding blocks, are currently zone R-1 as shown on the Amity Zoning Map. Rezoning the subject site to R-1 continues the existing zoning designation applied by the City to surrounding blocks and preserves the integrity and character of City's established zoning pattern in this area. Additionally, approval of this request transitions this site in an orderly manner to accommodate future residential development under the same R-1 single family residential zoning provisions applied to surrounding properties. This criterion is satisfied.

**STAFF FINDINGS:** Staff concurs with the applicant's response. As previously discussed, the purpose of the R1 zone is to support single-family housing stock for the city, which was nearly 90% of the housing unit type when inventoried for the 2011 BLI and HNA. The R1 zone is projected to provide 70% of Amity's overall housing units by the year 2030. The R1 zone is consistent with the underlying Low Residential Comprehensive Plan map designation. The R1 zone standards shall be applied with future development application. This criterion is met.

Note: Staff observes that there should not in fact be "criteria" in the purpose statement of a zone district as a matter of code structure, and has made a note to revise this in future code amendments.

**CRITERIA F.** *The following additional criteria shall be used to review all nonresidential changes...*

APPLICANT RESPONSE: The proposed zone change requests that the current AH zoning designation of this site be changed to an R1 zoning designation consistent with the site's current, adopted Amity Comprehensive Plan designation of Low Residential. This requirement addressing non-residential zone changes is not applicable to this zone change request.

**STAFF FINDINGS:** This is a residential change. This criterion does not apply.

***CRITERIA G. Transportation Planning Rule Compliance. When a development application includes a proposed comprehensive plan amendment or land use district change, the proposal shall be reviewed to determine whether it significantly affects a transportation facility in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – TPR) and the Traffic Impact Study provisions.***

APPLICANT RESPONSE: As this application is a request to amend the Amity Zoning Map by changing the subject site's current zoning designation of AH to and R-1 zoning designation, the TPR and its requirements are applicable to this review. The transportation effects of the requested rezoning have been evaluated through completion of a TIA (Traffic Impact Analysis) analyzing anticipated impacts of the proposal on the adjacent and surrounding street network.

The Summary and Recommendations section of the TIA states in part:

"The proposed zoning is consistent with the property's existing Low Density Residential Comprehensive Plan designation." and, "All study intersections are anticipated to operate with acceptable levels of service in 2019 and 2038. The Transportation Planning Rule requirements are met."

This TIA from Greenlight Engineering is included with this submission. This criterion is satisfied.


**STAFF FINDINGS:** Consistent with the applicant's response above, this application was required to prepare a response to the Transportation Planning Rule (TPR) because it involved a change of zone district. A Traffic Impact Analysis (TIA) dated July 15, 2020 was submitted to the City along with the Zone Change application. Planning, Public Works, and City Engineering staff have reviewed the TIA, and have no concerns with the TIA findings. The purpose of a TIA is to use a likely development scenario based upon maximum allowable build-out, to project numbers of traffic trips added to the local street network, using the same planning horizon as the adopted TSP, which is a 20-year horizon to the year 2038. In this case, the "worst case scenario" number of 50 single family dwellings (at the maximum density of 6 units/acre in the R1 zone) were added to the subject property, which is a net increase of 49 units above the baseline one (1) dwelling unit. The intersections addressed by the TIA include Oak Street at Church Street and Oak Street at Nursery Street. As shown on Amity's Transportation System Plan (TSP) map, Oak Street is classified as a Collector Street, Church Street is classified as a local street, and Nursery Street/ Oregon State Highway OR -153 is an arterial. Each street classification has an expected level of traffic (trips) before the facility begins to fail. Facilities are rated A – F based upon their performance with varying levels of traffic or "level of service" (LOS). While the City of Amity has no adopted mobility standards, the resulting LOS of A, B, C are generally within most agencies' acceptable range. The submitted TIA showed that there would be no significant impacts to the local transportation facilities such that a change of street classification would be triggered, nor is one proposed. That does not mean that there would be no impacts; rather, that the increased trips would fall within the calculated capacity of each of the streets, and/or mitigation would be required. Staff finds that the applicant has satisfied the TPR requirements of the ADC and OAR 660-012-0060. This criterion is met.

### **III. STAFF CONCLUSION & RECOMMENDATION**

After careful consideration of the material submitted by the applicant and the adopted Amity Development Code, staff recommends the Planning Commission recommend the City Council APPROVE the submitted Zone Change application, and adopt the associated findings through an enacting ordinance.

### **IV. PLANNING COMMISSION OPTIONS**

The following are suggested motions the Planning Commission may use:

- 
1. I move the Planning Commission recommend the City Council APPROVE the Zone Change application, file #2007-02 ZC, and adopt the findings included in the staff report dated September 11, 2020.
  2. I move the Planning Commission recommend the City Council APPROVE the Zone Change application, file #2007-02 ZC, and adopt the findings included in the staff report dated September 11, 2020, with revisions desired by the Planning Commission (stating those revisions); OR
  3. I move the Planning Commission recommend the City Council DENY the Zone Change application submitted, and adopt findings desired by the Planning Commission in support of that action (stating those findings); OR
  4. I move the Planning Commission public hearing on this land use file be CONTINUED to a date and time certain to obtain more information (specify the information that is to be obtained).

# **EXHIBIT A**

## **COMBINED RFC RESPONSES**

### **1. Amity City Engineer Jesse Fields & Peter Olsen of Keller Associates:**

We have no comment on the zone change, and we agree with the findings in the TIA. We will await the development application.

### **2. Amity City Administrator Mike Thomas:**

No comments from the City Administrator.

### **3. ODOT – Oregon Dept. of Transportation, Casey Knecht, Region 2 Development Review Coord.:**

Dan and I looked at this and we don't have any comments. There is no direct highway access and the v/c for the 2038 analysis was way below our target.

### **4. Amity Public Works Superintendent, Gary Mathis:**

This looks pretty straight forward to me, no further comments unless Keller tells me otherwise.

### **5. Yamhill County Planning Department, Stephanie Armstrong, Senior Planner:**

We have reviewed the application and have no conflicts with our interests.

## **EXHIBIT B**

### **FULL ZONE CHANGE APPLICATION PACKAGE**

## CITY OF AMITY

109 Maddox Avenue  
P.O. Box 159  
Amity, OR 97101

Ph: (503) 835-3711  
Fax: (503) 835-3780



### ZONE CHANGE APPLICATION

#### I. BACKGROUND INFORMATION

Applicant/Owner: Owner: Amity Oaks, LLC / App: Gerald Bieze Phone: 503-807-1226

Mailing Address: 1118 Northshore Road, Lake Oswego, OR 97034

Site Address: 1204 S. Oak Street, Amity, OR 97101

Township; Range; Section; Tax Lot: R5429AC 00700

Zone: AH (Agricultural Holding) Parcel Size: 9.8 acres

Existing Use/Structures: Vacant. Hay ground.

Application Proposal: To rezone the subject site from AH to R-1

#### II. REVIEW CRITERIA

Section 3.110.03, of the Amity Zoning and Development Code, establishes findings that must be addressed before granting approval of a Zone Change. **The applicant must provide a written response to the following:**

1. The proposed zone is appropriate for the Comprehensive Plan land use designation on the property and is consistent with the description and policies for the applicable Comprehensive Plan land use classification.
2. The uses permitted in the proposed zone can be accommodated on the proposed site without exceeding its physical capacity.
3. Allowed uses in the proposed zone can be established in compliance with the development requirements in this Ordinance.
4. Adequate public facilities, services, and transportation networks are in place or are planned to be provided concurrently with the development of the property.
5. For residential zone changes, the criteria listed in the purpose statement for the proposed zone shall be met.
6. The following additional criteria shall be used to review all non-residential changes:

- a. The supply of vacant land in the proposed zone is inadequate to accommodate the projected rate of development of uses allowed in the zone during the next 5 years, or the location of the appropriately zoned land is not locationally or physically suited to the particular uses proposed for the subject property, or lack site specific amenities required by the proposed use.
- b. The proposed zone, if it allows uses more intensive than other zones appropriate for the land use designation, will not allow uses that would destabilize the land use pattern of the area or significantly adversely affect adjacent properties.

### III. APPLICATION REQUIREMENTS

- A. ☒ Completed and signed application form.
- B. ☒ Written response to the criteria in Item II., above.
- C. ☒ Five (5) copies of the site plan drawn to scale. The site plan must include the following information (where applicable): existing and proposed structures, driveways, parking, landscaping, and significant natural features.
- D. ☒ Names and addresses of all the property owners within 150 feet of the boundaries of the property. This list must be provided by a Title Company or the Yamhill County Assessor.
- E. ☒ Copy of the latest deed, sales contract, or title report indicating property ownership.

### IV. SIGNATURES

**NOTE:** All owners *MUST* sign this application or submit a letter of consent authorizing another individual to complete and sign application. Incomplete or missing information may delay the review process.

Amity Oaks, LLC / Gerald Biege, member 7/15/20  
 Applicant/Owner Signature Date

\_\_\_\_\_  
 Applicant/Owner Signature Date

<u>For Office Use Only</u>			
Submittal Date:	<u>7/16/2020</u>	Fee:	<u>650</u>
Application Type: <u>Zone Change</u>		Completeness:	120 Day:
Staff Report Received:	Commission Hearing:		
Application Deposit and Fee paid on:	<u>7/16/2020</u>	Receipt	<u>676916</u>
<input type="checkbox"/> Cash	<input checked="" type="checkbox"/> Check # <u>1010</u>	Refund <input type="checkbox"/> Yes, on: _____, check # _____	<input type="checkbox"/> No



# Site Plan







NAVIGATION LAND USE CONSULTING, LLC

P.O. Box 1514  
McMinnville, OR 97128  
McMinnville Or

Phone (503) 687-3012

Email: [ron@navigationlanduse.com](mailto:ron@navigationlanduse.com)

## Amity Oaks, LLC

### Land Use Application –

- **Zone Change**

Submitted to:

City of Amity, Planning Department  
109 Maddox Avenue  
Amity, OR 97101

Applicant:

Amity Oaks, LLC  
1118 Northshore Road  
Lake Oswego, OR 97034  
Contact: Gerald Bieze  
Email: [gmbieze@gmail.com](mailto:gmbieze@gmail.com)

Applicant's Consultant:

Navigation Land Use Consulting, LLC  
P.O. Box 1514  
McMinnville, OR 97128  
Contact: Ron Pomeroy, AICP  
Email: [ron@navigationlanduse.com](mailto:ron@navigationlanduse.com)  
Phone: 503.687.3012

Site Location:

1204 S. Oak Street, Amity, OR 97101  
Yamhill County Assessor's Map – R5429AC 00700

Site Size:

9.8 acres

Zoning:

AH (Agricultural Holding)

## I. Executive Summary

Navigation Land Use Consulting, LLC is pleased to submit this Zone Change land use application for consideration on behalf of Amity Oaks, LLC. In brief, this application requests:

- Approval of a Zone Change request on approximately 9.8 acres of land from the site's current zoning designation of AH (Agricultural Holding) to an R-1 (Low Density Residential) zoning designation.

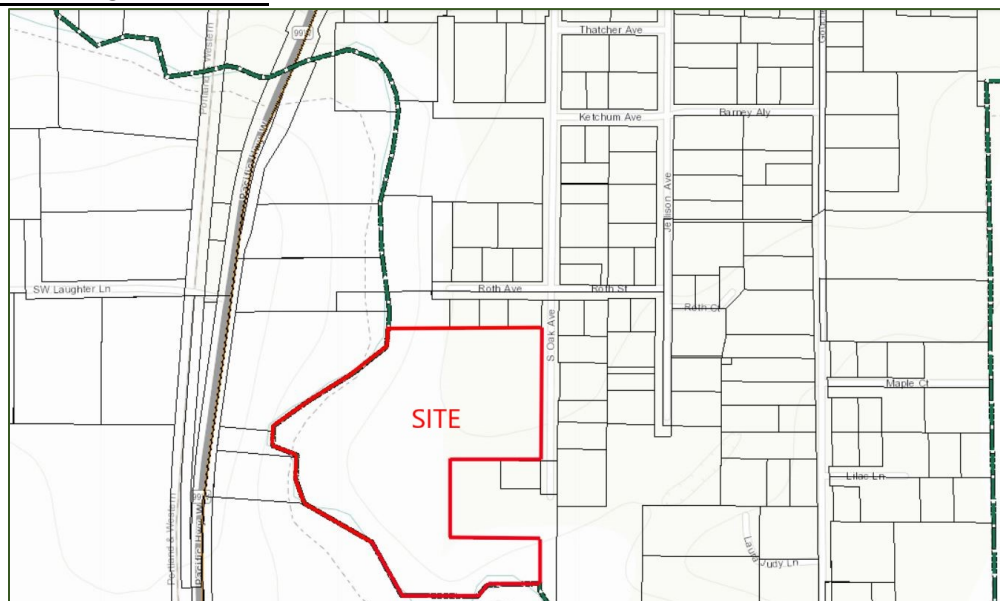
## II. Site and Vicinity Description

The vacant subject site is approximately 9.8 acres in size and identified as Low Residential on the City of Amity Comprehensive Plan Map and as AH (Agricultural Holding) on the City of Amity Zoning Map. The site is generally located west of Oak Street and south of Roth Street with Ash Swale forming its west and south edges. The site is generally "C" shaped and wraps around approximately 1.8 acres of R-1 zoned land comprised of two tax lots (R5429AC 00800 and 000801) which also access Oak Street. Oak Street is identified as a Collector Street (Amity Transportation System Plan – 2014), is under City jurisdiction and located along the site's eastern edge. This site lies within the Amity city limits.

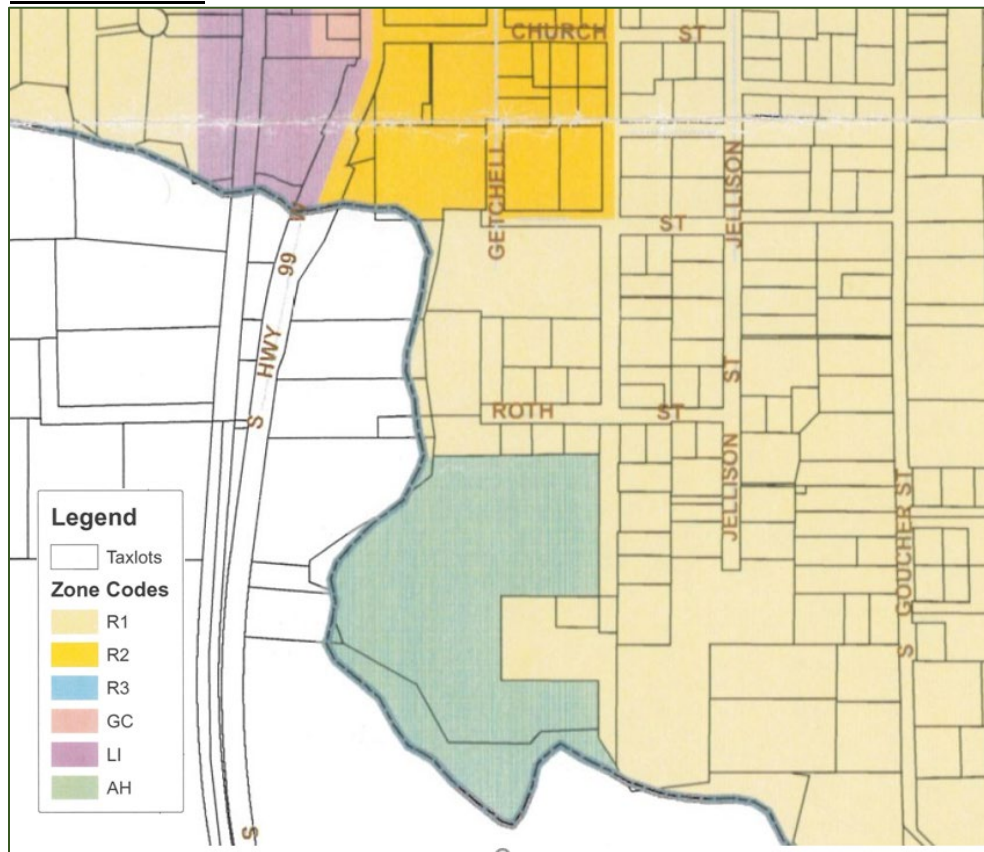
Adjacent to the north edge of the subject site and also across Oak Street to the east are found residentially zoned parcels, most of which are developed with single-family residences. Adjacent to the west and south edges of the site lies Ash Swale and the Amity UGB (Urban Growth Boundary) and City Limits.

The site and all adjacent land within the Amity UGB are identified as Low Residential on the City of Amity Comprehensive Plan Map. With the exception of the subject site, all adjacent land within the Amity city limits is zoned R-1 on the City of Amity Zoning Map.

**SITE VICINITY MAP**



## ZONING MAP



The subject site exhibits two main characteristics. The majority of the eastern portion of the site, located adjacent to Oak Street, is relatively flat to gently sloping in a downward direction generally toward the west and south. Wrapping around this portion of the site to the west and south is a band of increasingly sloped land; the lowest portions of which are located within the 100-year floodplain of Ash Swale. While the majority of the site is currently used for hay production, a number of Oak trees are found along the steeper slope of the site's southern edge of the site. Deciduous trees are also located along the site's northeastern edge with one large 60-inch Douglas Fir located in the site's far northwest corner.

### **III. Request**

As stated above in Section II, Amity Oaks, LLC, is requesting approval of:

- A Zone Change application on approximately 9.8 acres of land from the site's current zoning designation of AH (Agricultural Holding) to an R-1 (Low Density Residential) zoning designation.



#### IV. Conclusionary Findings for Approval of the requested Zone Change

The materials contained in the submitted narrative, attachments, and the conclusionary Findings of Fact for this proposal address all relevant criteria for consideration and approval of this Zone Change request.

The Conclusionary Findings of Fact are the findings regarding consistency with the applicable criteria for the application. The applicable criteria for a Zone Change are specified in Section 3.110.03 of the Amity Development Code.

Applicable goals and policies in the Amity Comprehensive Plan are to be applied to all land use decisions as criteria for approval, denial, or modification of the proposed request. Goals and policies are mandated: all land use decisions must conform to the applicable goals and policies of the Comprehensive Plan.

1. Amity Oaks, LLC is requesting approval of a zone change application on approximately 9.8 acres of land from the current zoning designation of AH (Agricultural Holding) to an R-1 (Low Density Residential) zoning designation.
2. The subject site is located generally west of Oak Street and south of Roth Street with Ash Swale forming its west and south edges and is more specifically described as R5429AC 00700. The site is currently designated Low Residential on the City of Amity Comprehensive Plan Map.
3. Sanitary and storm sewer systems and municipal water and power can sufficiently serve the site. The municipal water reclamation facility has sufficient capacity to accommodate expected flows resulting from any approved potential future development of the site as per the use provisions of the R-1 zoning designation. Northwest Natural Gas, Comcast, PGE, Frontier Communications, Amity School District and the Amity Police Department and the Amity Rural Fire District can also sufficiently serve this site.
4. The following Goals and Policies of the Amity Comprehensive Plan are applicable to this request:

##### Housing:

##### Goal Statement

To provide housing that will meet the needs of the community in a manner that will best provide an adequate choice in all income rented and housing types.

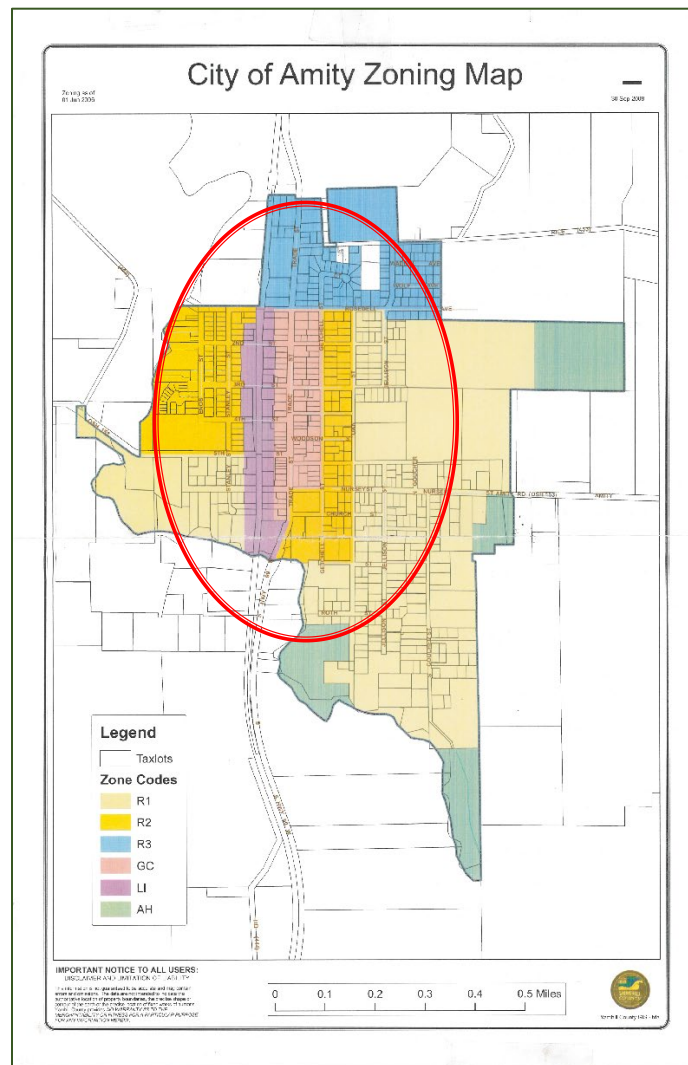
**FINDINGS:** While approval of this zone change request will not result in a specific development approval, this site's rezoning to R-1 will create an opportunity within the community where a development proposal could be made that, if approved, would help in meeting the City's anticipated housing needs. This goal has been satisfied.

##### Policies

The City shall direct residential development into areas currently platted and close to the City center before utilizing large areas of vacant land, and land presently devoted to agriculture.



The graphic below provides an illustration of the area that is equidistant from Amity's City center (CBD) as the CBD is from the subject site. Most of the residentially zoned land located within this area is already platted and developed as commercial or industrial development or as residential neighborhoods which are generally commensurate with the densities of their respective zoning designations.



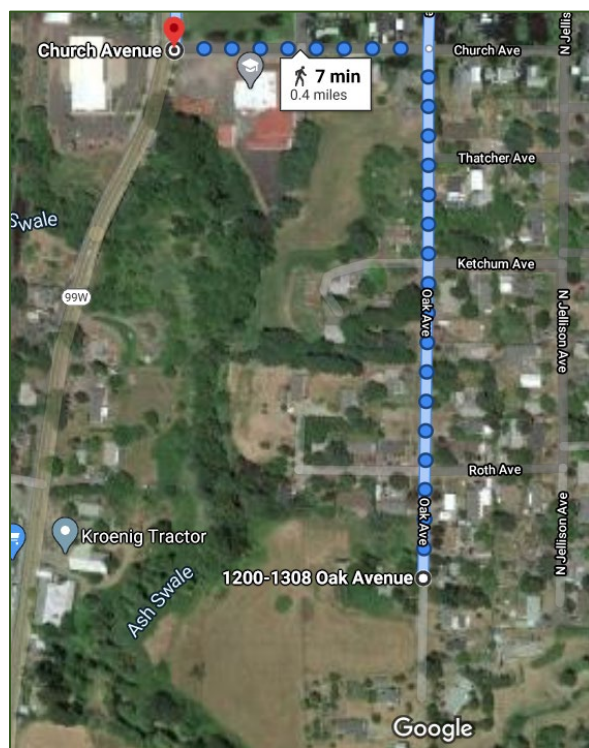


The subject site is the only AH zoned property located within this area and there are none located closer to the Amity CBD. A review of Yamhill County Assessor and GIS (Geographic Information System) data, and satellite imagery when compared with the Amity zoning map yield only eight currently platted, privately owned, undeveloped residentially zoned parcels existing within this area. [R5420DB 01501, R5420CD 04507, R5420DC 00200, R5429 01801 and 01900, R5429AB 05301 and 05990, and R5429BA 02001.] These eight parcels range from 0.13 acres to 2.8 acres in size and, when accounting for undevelopable land located within the 100-year floodplain average only some 0.83 gross acres in size. As is shown through available public records, the City of Amity has achieved a high level of urban efficiency in its residential zones and opportunities for additional residential growth within this analysis area are minimal.

As an additional scale of the close proximity of this site to the City center, this property is located about seven blocks walking and biking distance from the Amity Middle School and Amity's Central Business District (Google Maps estimates this distance to be approximately 0.4 miles and a 7 minute walking time – see graphic below).

This policy has been satisfied.

#### WALKING TIME AND DISTANCE



#### Citizen Involvement

In order to address and emphasize the citizen's role in planning, the City has established a Citizen Involvement Program. Citizen involvement is fundamental to our form of government and essential to the planning process. As citizens begin to understand their right to participate in the



decision-making process, the governing bodies will benefit by having a direct communication line to the citizens that will help clarify the needs and desires of the community.

#### Citizen Involvement Program

The City of Amity has designated its Planning Commission as the CCI [Committee for Citizen Involvement].

**FINDINGS:** In designating the Planning Commission as the City's Committee for Citizen Involvement, City has provided for appropriate citizen involvement in land use processes. This application is being reviewed through the public land use review process according to the local requirements of public review as has satisfied this requirement.

#### Urban Area:

#### Growth Management Agreement

### VII. Establishment of Land Use Review Procedures

#### 3. Zone Changes and Combination Plan/Zone Changes

The City and Yamhill County recognize that each jurisdiction has authority to zone within its legal boundaries. However, the Urban Growth Boundary recognizes the eventual assumption of authority by the City. Therefore, the following procedures are established.

##### a. Zone Changes

2. Inside city limits. This application shall be processed by the City and shall be referred to Yamhill County for information and/or comment.

**FINDINGS:** The City of Amity's adopted land use review process governing zone change applications is being appropriately administered by the City for the review of this zone change request. This criteria is satisfied.

5. The subject zone change request complies with the applicable requirements of the Amity Development Code (ADC) as follows:

#### 3.110 ZONE CHANGE

##### 3.110.01 Process

Zone change shall be reviewed in accordance with the Type III review procedures.

**FINDINGS:** This zone change application is identified as a quasi-judicial Type III action at 3.101.03(A) of the Amity Development Code (ADC). This application is being reviewed by the City of Amity in accordance with the Type III review procedures summarized at 3.101.03 (Type III Action) of the ADC.



Public Notice requirements for Type III actions are specified at 3.202.02 (Type II and Type III Actions) of the ADC. This requirement is satisfied.

### 3.110.02 Application and Fee

An application for a zone change shall be filed with the City Recorder and accompanied by the appropriate fee. It shall be the applicant's responsibility to submit a complete application which addresses the review criteria of this Section.

FINDINGS: This application for a zone change has been filed with the Amity City Recorder and was accompanied by the appropriate fee as specified on the City of Amity Land Use Fee Schedule. This requirement has been satisfied.

### 3.110.03 Criteria for Approval

Zone change proposals shall be approved if the applicant provides evidence substantiating the following:

- A. The proposed zone is appropriate for the Comprehensive Plan land use designation on the property and is consistent with the description and policies for the applicable Comprehensive Plan land use classification.

FINDINGS: The proposed zone change to R-1 (Low Density Residential) is appropriate for the site's Low Residential Comprehensive Plan land use designation in that the R-1 zoning designation is the lowest density residential zone adopted by the City of Amity and is therefore the zone best suited to implement the Low Residential Comprehensive Plan designation.

The background information used by the City to develop its goals and policies regarding community development and other matters is contained in an accompanying document entitled Amity Land Use Planning Atlas (May 1979). In the section of the Amity Land Use Planning Atlas entitled Land Use Projections, the Planning Atlas states, in part:

"When additional residential acres are needed, the agricultural lands can be redesignated for residential use."

Additional Goal and Policy guidance regarding agricultural and AH zoned land is provided in the Land Use and Urbanization section of the Amity Comprehensive Plan as follows:

#### Land Use and Urbanization -

Agriculture holding areas can serve as a reserve for providing future residential land as it is needed.

#### Amity Comprehensive Plan - Goal Statement:

To provide for an orderly and efficient transition from rural to urban land use.





## Amity Comprehensive Plan - Policies:

The City shall encourage the availability of sufficient land for various urban uses to ensure adequate choices in the market place.

The City shall preserve lands for farm uses through establishment of agriculture holding areas. When there is a demonstrated need for land within such holding areas, they shall be designated for urban use.

**FINDINGS:** These Goals and Policies adopted by the City of Amity implement the Planning Atlas statement regarding the transitional nature of Amity's agricultural lands.

The purpose statement of the AH zone is found at ADC 2.108.01 and states:

The purpose of this district is to allow an orderly phasing of urban development of land that is currently in agricultural uses until such time that the agricultural lands are needed and consistent with the availability of public facilities and services.

**FINDINGS:** These policies and the AH purpose statement obligate a discussion of need, and consequently serviceability, in considering the transitioning of AH zoned land to a zoning designation enabling urban development.

### Need -

The agricultural lands within the Amity city limits have generally been zoned AH (Agricultural Holding). The general purpose of the AH zone is to encourage land to remain unurbanized until such time that it is "needed" for urban development. The purpose statement of the AH zone implements these referenced Goals and Policies of the Amity Comprehensive Plan.

It is important to note that this site's current AH zoning designation has achieved the stated purpose of the AH zone which is to encourage the land to remain unurbanized until such time that it is needed for urban development. To point, this site was improved decades ago only by a longstanding farm residence, barn and associated outbuildings; all of which have recently been removed due to their structurally unsafe conditions. The question of whether there is a "need" to rezone this land from AH at this time is addressed through a review of the City's available residentially zoned buildable land supply, the City's adopted need projection for residentially developable land, and the rate of Low Density residential land consumption.

In June, 2011, the City acted to adopt ORD No. 625 adding approximately 24 residential acres of land to its UGB (urban growth boundary) to help meet a portion of the City's identified future land use need. This action was based on the culmination of over five years of work by the City and its consultant planners to identify documentation and background material to project future land use need and the City's inventory of available land to meet those needs. Exhibit "A" of ORD No. 625 provides analysis and findings demonstrating a deficit of residentially planned land based on a year 2030 population projection of 2,481.

Page two of ORD No. 625, Exhibit "A" states, in part:

"[...] the estimated demand for residential land is 57 acres to meet residential demand and a total of 72 gross acres to address the public facilities demands. Based on the total residential lands available within the UGB of 28 acres the City will need to expand its UGB by 44 gross acres."



Table 4.3 of ORD No. 625, Appendix “A” reproduced is excerpted from Amity’s HNA (Housing Needs Analysis) and BLI (Buildable Land Inventory) efforts and is instructive as it speaks to projected acreage needs of the Comprehensive Plan’s three residential land use designations: Low Density, Medium Density and High Density.

TABLE 4.3 ACREAGE REQUIREMENTS TO MEET 2030 HOUSING DEMAND								
Housing Type	Expected Housing Ratio	Required Units 2030	Existing Units	Needed Units	Expected Density	Acres Needs	Acres Available	Net Acres
Low Density	0.70	631 *	474	157	5.0	31.3	18.7	11.5
Medium Density	0.20	180	18	162	8.0	20.3	4.0	16.4
High Density	0.10	91	31	59	12.0	4.8	5.0	.5
<b>Totals</b>	<b>100.00</b>	<b>902 **</b>	<b>523</b>	<b>379</b>	<b>-</b>	<b>56.7</b>	<b>27.7</b>	<b>29.0</b>

\* includes lands zoned AH  
 \*\* includes 27 RDUs for replacing non-conforming units in commercial and industrial zones

Table 4.3 identifies 70 of percent Amity’s projected housing needs to be met on land identified with a Comprehensive Plan designation of Low Residential. This table also demonstrates a deficit of 157 needed dwelling units in the Low Density designation (projected need of 631 DU – 474 existing DU = 157 DU deficit to meet future needs). This 157 dwelling unit deficit is also translated to a need for an additional 11.5 net acres of buildable Low Density residential land that would need to be added to the Amity UGB to meet projected housing needs in the Low Residential Plan designation.

Of the approximately 24 acres of land added to the Amity UGB by adoption of ORD. No. 625, 12.63 gross acres were designated Low Residential on the Comprehensive Plan Map: R5420CA00801 at 7.33 acres; R5420CA01100 at 3.15 acres; and, R5420CA01200 at 2.15 acres. In adopting these land use need projections the City of Amity applied Oregon Administrative Rule (OAR) 660-024-0040(10) that allows for a local government to add a factor of 25% to the identified needed net buildable acres to account for the land use needs of streets and roads, parks and school facilities. This 25% factor raises the identified 11.5 net acre need from Table 4.3 to a projected need of 15.33 gross acres of residential land designated as Low Residential on the Amity Comprehensive Plan Map.

The 15.33 gross acre Low Residential land need has been mostly addressed by the addition of the three parcels mentioned above to the Amity UGB. When the 25% public land use and facilities factor is applied to those acres, they yield a total of 9.47 net acres of residential land; approximately 2.0 acres short of the City’s projected Low Residential land need of 11.5 such acres. It is also of interest to note that these three added Low Residential parcels have not annexed into the Amity city limits and do not yet carry a City zoning designation allowing urban development.

This analysis and description of Amity’s residential land use needs and the City’s ability to meet those needs provided above shows that there remains a deficit of Low Residential planned land within the UGB necessary to satisfy the City’s projected needs in the Low Residential plan designation meaning that *all* of Amity’s Low Residential designated land is “needed.” If all of the Low Residential planned land within



the UGB were annexed, appropriately zoned and developed to projected densities, there would still remain a deficit of residential land needed to meet the adopted growth projection for Low Residential land.

#### Public Services

Rezoning the subject site as requested is consistent with the availability of public services to sufficiently accommodate and serve allowable future development of the site. Public services generally include transportation, water, sanitary and storm sewer, energy, communications, and solid waste.

#### Transportation -

##### Amity Comprehensive Plan - Goal Statement:

To provide a safe, convenient, aesthetic, and economic transportation system through a variety of transportation means.

##### Amity Comprehensive Plan – Policies:

The city shall adopt a street functional classification system consisting of arterials, collectors, and local street to assist in prioritizing street development and maintenance.

The City shall promote a multi-modal transportation system that adequately considers the needs of drivers, pedestrians, cyclists, and public transit riders.

FINDINGS: In 2015, the City of Amity adopted its TSP (Transportation System Plan) which is a long-range 25-year plan that addresses existing and future needs of Amity's transportation system. Figure 2-1 of the TSP identifies Oak Street, which is adjacent to the east edge of the subject site, as a Collector street which is a higher classification than a local residential street and provides additional carrying capacity beyond that of a local residential street. It is important to note that approval of this zone change application does not directly result in any development of the subject site nor does it result in the addition of any vehicle trips to the adjacent or surrounding street network. Following zone change approval and prior to future development approval for the site, the existing V/C (volume-to-capacity) ratio of the relevant portion of Oak Street will be assessed to ensure the Collector capacity of Oak Street in accordance with the Oregon TPR (Transportation Planning Rule – OAR 660-12-0060) in order to demonstrate sufficiency of the Collector designation of Oak Street to support such development. Associated street improvements may be conditioned at the time of development approval in accordance with zoning and development standards and Oak Street will be improved commensurate with the applicable design and construction standards as determined by the City and as specified by the adopted City of Amity Street and Transportation System Design Standards Manual (2004).

#### Water, Sanitary and Storm Sewer –

##### Amity Comprehensive Plan – Goal Statement:

To provide a timely, orderly and efficient arrangement of water, sewer and storm drainage services to the City.



#### Amity Comprehensive Plan Policies –

The City shall provide public facility services in a most energy conserving manner and encourage prudent use of such services.

Water, sewer and storm drainage services shall be adequately provided and maintained in order to meet the residential, commercial and industrial needs of the City.

The City shall utilize public facilities in a manner that will support the land use policies in the Comprehensive Plan.

**FINDINGS:** As this zone change application does not propose any development of this site, its approval will have no direct impact on the City's sanitary, storm or water systems. Given the purpose statement of the site's current AH zoning designation, potential future urban development uses of this site are as specified by the R-1 zone. At the time a future development proposal is considered the City will evaluate the proposed and anticipated impacts to municipal water, sanitary and storm sewer systems according to City's adopted guidelines and requirements. To inform and direct that process, the City has adopted the Water System Design Standards Manual (2004), Water Master Plan (2014), Sanitary Sewer Design Standards Manual (2004), and the Drainage System Design Standards Manual (2004). The City's adoption of these guiding documents is in compliance with applicable Goals and Policies and further binds future development approvals to their proportional and appropriate implementation.

#### Energy Use –

##### Amity Comprehensive Plan – Goal Statement:

To promote the conservation of energy and the use of alternative forms of energy.

#### Amity Comprehensive Plan Policies –

Energy efficiency shall be a main criterion in the evaluation of all land use issues.

**FINDINGS:** By the City's Comprehensive Plan designation of this site as Low Residential, its intended zoning of the site to R-1 in order to fully implement the purpose of the Plan designation, and its current transitional zoning of AH, the City has promoted conservation of energy in all its forms. Specifically, water, transportation, sanitary and storm facilities are all available at or near the site's eastern edge. Additionally, this site is bordered by other R-1 zoned properties creating an efficient and cohesive land use pattern upon approval of this request. As noted elsewhere in this application, Amity Middle School and the CBD (Central Business District) are within 7 minutes walking distance of this site. Oak Street, a collector street, is adjacent to the east edge of this site providing efficient trip capacity at a higher level than a Local Residential Street in order to accommodate the development needs of adjacent lands. These findings and the City's adopted guiding documents and plans addressing energy efficiency in all its forms satisfies and implements the applicable Energy Goals and Policies.

#### Communications –

##### Amity Comprehensive Plan – Goal Statement:

To support a variety of communication facilities and promote quality service.



#### Amity Comprehensive Plan Policies –

The City shall coordinate local planning with communication agencies so that the availability and quality of services can be improved and maintained.

When making land use decisions, the City shall consider the impact on all communication systems.

**FINDINGS:** Local public land use review processes require that all associated municipal and private service providers be provided an opportunity to review the land use application and materials prior to issuance of a report and recommendation to the applicable reviewing body. In doing so, comments of associated communications providers are invited and taken into account. The City of Amity has complied with this requirement and returned comments are included in Staff's report on this proposal.

#### Solid Waste –

##### Amity Comprehensive Plan – Goal Statement:

To achieve and provide an orderly and efficient solid waste disposal system which will meet the needs of the community.

#### Amity Comprehensive Plan Policies –

The City shall coordinate efforts with the contracted disposal service to assure that the solid waste disposal needs in the community are being met in a most cost-efficient and energy conserving manner. shall coordinate local planning with communication agencies so that the availability and quality of services can be improved and maintained.

**FINDINGS:** The City of Amity currently contracts solid waste and recycling services with Recology. These contracted services implement the City's goals and policies regarding solid waste and are reviewed periodically prior to contract renewal. Approval of this requested zone change request does not itself permit development of the site and therefore will have no impact on solid waste services or processes within the city.

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These goals and policies are satisfied by these observations and findings and this first criterion for approval of the requested zone change has been satisfied.

- B. The uses permitted in the proposed zone can be accommodated on the proposed site without exceeding its physical capacity.

**FINDINGS:** The "uses permitted" in a zone are only those uses listed under a heading of Permitted Uses as found in the Sections of the ADC describing each zoning designation. Approval of those uses are determined on an individual proposal basis. The permitted uses of the requested R-1 zone are enumerated in ADC 2.101.02 (Permitted Uses) and are:



- A. Single family dwelling, including a single-family manufactured home subject to Section 2.303, and Residential Homes.
- B. Public park and recreation area
- C. Partitioning or subdivisions, subject to the provisions in Section 3.108 or Section 3.109.
- D. Home Occupations subject to the provisions of Section 2.305.
- E. Planned unit development subject to the provisions of Section 2.302.
- F. The following transportation facilities, services and improvements need not be subject to land use regulations except as necessary to implement the TSP and, under ordinary circumstances do not have a significant impact on land use:
  - 1. Operation, maintenance, and repair of existing transportation facilities identified in the TSP, such as road, bicycle, pedestrian, port, airport and rail facilities, and major regional pipelines and terminals;
  - 2. Dedication of right-of-way, authorization of construction and the construction of facilities and improvements, where the improvements are consistent with clear and objective dimensional standards;
  - 3. Uses permitted outright under ORS 215.213(1)(m) through (p) and 215.283(1)(k) through (n), consistent with the provisions of 660-012-0065; and
  - 4. Changes in the frequency of transit, rail and airport services

**FINDINGS:** The subject site is approximately 9.8 acres in size and contains adequate size to accommodate each of the uses identified in the Permitted Use list of the R-1 zone. Those uses needing more area than the minimum 7,000 square foot lot size requirement of the R-1 zone would be able to be accommodated as, for example, this site is larger than the approved Sunset West Townhomes PUD subdivision (3 acres) and Amity City Park (7 acres) which would generally be two of the larger types of permitted land uses allowed by this zone and which the City has already approved on smaller acreages than the subject site. This criterion is satisfied.

- C. Allowed uses in the proposed zone can be established in compliance with the development requirements in this Ordinance.

**FINDINGS:** The allowed uses of the R-1 zone can be established on this site in compliance with the development requirements of this Ordinance as per the Findings enumerated for 3.110.03 Criteria for Approval "A" and "B" above and incorporated herein. Additionally, City permitting and inspection procedures ensure design, construction and functional compliance with all applicable municipal development requirements for any approved use of the site. This criterion is satisfied.





- D. Adequate public facilities, services, and transportation networks are in place or are planned to be provided concurrently with the development of the property.

FINDINGS: Adequate public facilities, services, and associated transportation networks are in place or can be provided concurrently with development of this site as per Findings enumerated for 3.110.03 Criteria for Approval “A” and “C” above and incorporated herein. While this zone change request does not propose site development, any such future proposal or request may require commensurate transportation, infrastructure and other improvements appropriate to the scale and use proposed and will be reviewed for approval by the City of Amity prior to permit issuance.

- E. For residential zone changes, the criteria listed in the purpose statement for the proposed zone shall be met.

FINDINGS: The purpose statement for the requested R1 zoning designation is found at ADC 2.101.01 and states:

“The purpose of the R-1 District is to preserve existing single family residential areas and provide for future single family residential housing opportunities. The R-1 District is consistent with the Residential Comprehensive Plan designation.”

This site being rezoned to R-1 establishes the capability of this property to aid in providing for Amity's projected single family residential housing needs as enumerated in 3.110.03 Criteria for Approval “A” and “B” Findings above and incorporated herein. The requested R1 zoning designation for this site is consistent with the site's current Comprehensive Plan designation of Low Residential represented on the adopted City of Amity Comprehensive Plan Map.

Additionally, single family residential development has occurred adjacent to the north edge of the site and across Oak Street to the east. All properties adjacent to this site, and others on surrounding blocks, are currently zone R-1 as shown on the Amity Zoning Map. Rezoning the subject site to R-1 continues the existing zoning designation applied by the City to surrounding blocks and preserves the integrity and character of City's established zoning pattern in this area. Additionally, approval of this request transitions this site in an orderly manner to accommodate future residential development under the same R-1 single family residential zoning provisions applied to surrounding properties. This criterion is satisfied.

- F. The following additional criteria shall be used to review all non-residential changes:

1. The supply of vacant land in the proposed zone is inadequate to accommodate the projected rate of development of uses allowed in the zone during the next 5 years, or the location of the appropriately zoned land is not locationally or physically suited to the particular uses proposed for the subject property, or lack site specific amenities required by the proposed use.
2. The proposed zone, if it allows uses more intensive than other zones appropriate for the land use designation, will not allow uses that would destabilize the land use pattern of the area or significantly adversely affect adjacent properties.



**FINDINGS:** The proposed zone change requests that the current AH zoning designation of this site be changed to an R1 zoning designation consistent with the site's current, adopted Amity Comprehensive Plan designation of Low Residential. This requirement addressing non-residential zone changes is not applicable to this zone change request.

- G. Transportation Planning Rule Compliance. When a development application includes a proposed comprehensive plan amendment or land use district change, the proposed shall be reviewed to determine whether it significantly affects a transportation facility in accordance with Oregon Administrative Rule (OAR) 660-012-0060 (the Transportation Planning Rule – TPR) and the Traffic Impact Study provisions.

**FINDINGS:** As this application is a request to amend the Amity Zoning Map by changing the subject site's current zoning designation of AH to and R-1 zoning designation, the TPR and its requirements are applicable to this review. The transportation effects of the requested rezoning have been evaluated through completion of a TIA (Traffic Impact Analysis) analyzing anticipated impacts of the proposal on the adjacent and surrounding street network.

The Summary and Recommendations section of the TIA states in part:

“The proposed zoning is consistent with the property's existing Low Density Residential Comprehensive Plan designation.”

and,

“All study intersections are anticipated to operate with acceptable levels of service in 2019 and 2038. The Transportation Planning Rule requirements are met.”

This TIA from Greenlight Engineering is included with this submission. This criterion is satisfied.

## **V. Conclusion and Approval Request**

The evidence in the record is substantial and supports approval of this zone change request.

Amity Oaks, LLC, respectfully requests that the zoning designation of the subject site be amended from its current designation of AH (Agricultural Holding) to the designation of R-1 (Low Density Residential) on the City of Amity Zoning Map.

Att:

Site Plan

Warranty Deed

Transportation Impact Analysis – Greenlight Engineering







After recording return to:  
Amity Oaks, LLC  
1118 Northshore Rd  
Lake Oswego, OR 97034

Until a change is requested all tax  
statements shall be sent to the  
following address:  
Amity Oaks, LLC  
1118 Northshore Rd  
Lake Oswego, OR 97034

File No.: 1031-3244525 (MWG)  
Date: May 17, 2019

THIS SPACE RESERVED FOR RECORDER'S USE

Yamhill County Official Records **201908177**  
DMR-DDMR  
Stn=2 MILLSA 06/25/2019 10:12:00 AM  
3Pgs - \$15.00 \$11.00 \$5.00 \$60.00 **\$91.00**

I, Brian Van Bergen, County Clerk for Yamhill County, Oregon, certify  
that the instrument identified herein was recorded in the Clerk  
records.

Brian Van Bergen - County Clerk

## STATUTORY WARRANTY DEED

**Marjorie D. Releford**, Grantor, conveys and warrants to **Amity Oaks, LLC**, Grantee, the following  
described real property free of liens and encumbrances, except as specifically set forth herein:

The land referred to in this report is described in Exhibit A attached hereto.

**Subject to:**

1. Covenants, conditions, restrictions and/or easements, if any, affecting title, which may appear in the public record, including those shown on any recorded plat or survey.

The true consideration for this conveyance is **\$350,000.00**. (Here comply with requirements of ORS 93.030)



Secretary of State  
Corporation Division  
255 Capitol Street NE, Suite 151  
Salem, OR 97310-1327

Phone: (503) 986-2200  
Fax: (503) 378-4381  
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## 2020 ANNUAL REPORT

Registry Number: 1563923-92

Date of Organization: 06/04/2019

Fee: \$100.00

Due Date: 06/04/2020

Type: DOMESTIC LIMITED LIABILITY COMPANY

01170

AMITY OAKS LLC  
1118 NORTHSHORE RD  
LAKE OSWEGO OR 97034

FILED: MAY 7, 2020  
OREGON SECRETARY OF STATE



156392392-21071854

AMITY OAKS LLC

RENANA

### Name of Domestic Limited Liability Company

AMITY OAKS LLC

### Jurisdiction: OREGON

The following information is required by statute. Please complete the entire form. If any of the information is incorrect, you can make changes on this form. Failure to submit this Annual Report and fee by the due date may result in inactivation on our records.

### Registered Agent

BAIRD LAW OFFICE, LLC  
998 SW TOMAHAWK PL  
DUNDEE OR 97115

If the Registered Agent has changed, the new Agent has consented to the appointment. Oregon street address required.

### 1) Type of Business

### 2) Principal Place of Business (Str. address, city, state, zip)

1118 NORTHSHORE RD  
LAKE OSWEGO OR 97034

### 3) Mailing Address (Address, city, state, zip)

1118 NORTHSHORE RD  
LAKE OSWEGO OR 97034

### 4) ☐ Member or ☒ Manager (Name & Address)

GERALD M BIEZE  
1118 NORTHSHORE RD  
LAKE OSWEGO OR 97034

### 5) ☐ Member or ☐ Manager (Name & Address)

**Execution:** I declare, under penalty of perjury, that this document does not fraudulently conceal, fraudulently obscure, fraudulently alter or otherwise misrepresent the identity of the person or any members, managers, employees or agents of the limited liability company on behalf of which the person signs. This filing has been examined by me and is, to the best of my knowledge and belief, true, correct, and complete. Making false statements in this document is against the law and may be penalized by fines, imprisonment or both.

### 6) Signature

*Gerald M. Bieze*

### 8) Date

4/28/20

### 7) Printed Name

Gerald M. Bieze

### 9) Phone Number

503-635-6125

Make check payable to "Corporation Division" and mail to the address above.

Note: Filing fees may be paid with major credit card. Submit the card number and expiration date on a separate page for your protection.

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# Traffic Impact Analysis

## Amity Oaks

### Zone Change

### Amity, Oregon

July 15, 2020



EXPIRES: 12/31/2020



**GREENLIGHT ENGINEERING**  
TRAFFIC ENGINEERING/TRANSPORTATION PLANNING

13554 Rogers Road • Lake Oswego, OR 97035  
Phone: 503.317.4559 • Web: [www.greenlightengineering.com](http://www.greenlightengineering.com)

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## EXECUTIVE SUMMARY

Amity Oaks, LLC has proposed a zone change on a 9.8 acre parcel in Amity, Oregon. This report addresses the Transportation Planning Rule as required as part of a zone change application. The property is located at 1204 Oak Street, located south of Roth Street and west of Oak Street. The following summarizes the key points of this transportation impact analysis (TIA):

- The 9.8 acre site is currently zoned A-H (Agricultural Holding) and will be rezoned to R-1 (Low Density Residential). The proposed zoning is consistent with the property's existing Low Density Residential Comprehensive Plan designation.
- In order to address the requirements of the zone change and Oregon's Transportation Planning Rule, the analysis includes 2019 existing traffic, 2038 background traffic and 2038 total traffic conditions.
- The following study intersections were coordinated with the City of Amity and analyzed as part of this report:
  - 1) Church Street/Oak Street
  - 2) Nursery Street/Oak Street
- According to the City's Transportation System Plan ("TSP"), the City of Amity has not adopted mobility standards and ODOT mobility standards don't apply.
- All study intersections are anticipated to operate with acceptable levels of service in 2019 and 2038. The Transportation Planning Rule requirements are met.

## INTRODUCTION

This transportation impact analysis (TIA) has been prepared to determine the impacts to the City of Amity and ODOT transportation systems in the immediate vicinity of a proposed zone change to the south and west of the intersection of Oak Street/Roth Street in Amity, Oregon. The proposed project includes a zone change. In establishing the project scope and performing the analysis, a number of important elements have been identified and considered, including the following items:

- The 9.8 acre site is currently zoned A-H (Agricultural Holding) and will be rezoned to R-1 (Low Density Residential). The proposed zoning is consistent with the property's existing Low Density Residential Comprehensive Plan designation.
- Trip generation rates are based on the 10th edition of the Institute of Transportation Engineers' *Trip Generation Manual*.
- Capacity analysis of critical intersections for both the weekday AM peak hour and weekday PM peak hour under 2019 existing, 2038 background and 2038 total traffic conditions.
- Review and identification of the travel lane and traffic control requirements at critical intersections.
- Evaluation of the project's compliance with Oregon's Transportation Planning Rule with relation to the zone change.
- Critical intersections were determined based upon communication with the City of Amity and include the following:
  - 1) Church Street/Oak Street
  - 2) Nursery Street/Oak Street

The Appendices to this report contains technical data including: traffic counts, capacity analysis reports and crash data.

## SITE DESCRIPTION, CRITICAL INTERSECTIONS, AND STREETS

The site is located to the south and west of the intersection of Oak Street/Roth Street in Amity, Oregon. Currently, the site is occupied by a single-family residential home. The property has frontage on Oak Street only. With a potential future development application, a site plan illustrating access to Oak Street and internal roadways will be provided.

A vicinity map is provided below.

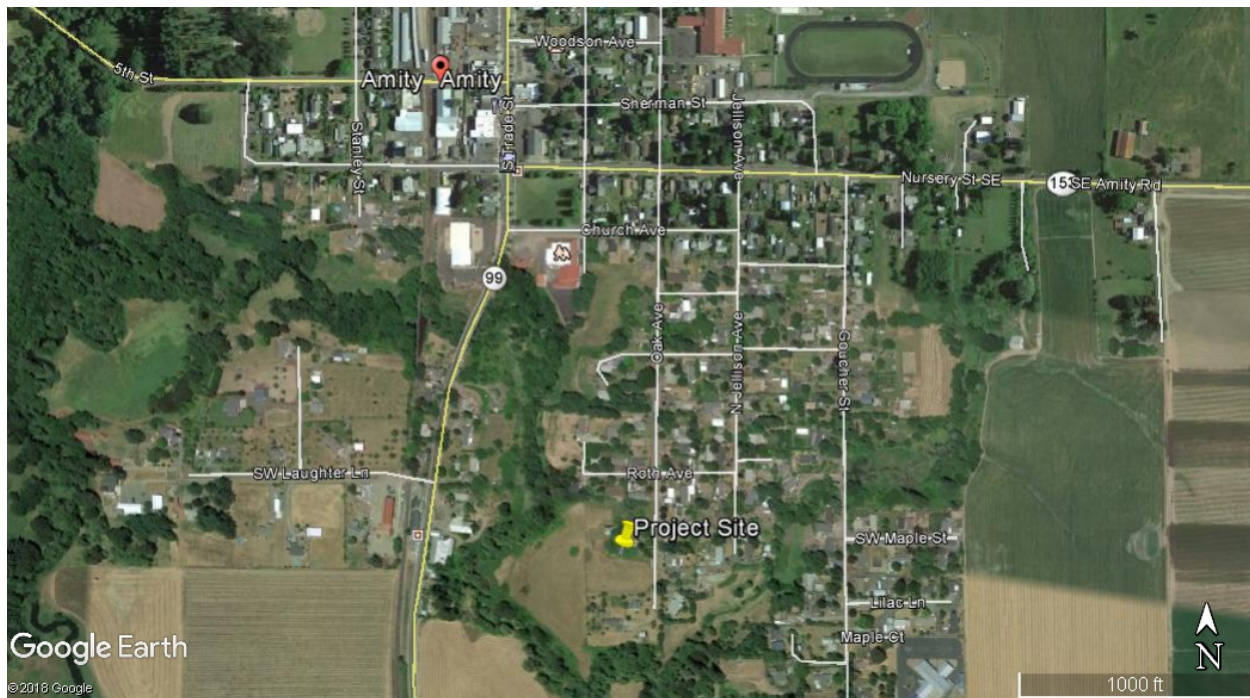


Figure 1: Vicinity Map

**Nursery Street (OR 153)** is under the jurisdiction of ODOT. The road is a two lane, two-way facility with one eastbound lane and one westbound lane. According to the Oregon Highway Plan<sup>1</sup>, Nursery Street (OR 153) is classified as a District Highway by ODOT. The City of Amity's TSP classifies Nursery Street as an arterial street.

**Oak Street** is under the jurisdiction of the City of Amity. The road is a two lane two-way facility oriented north to south. The City of Amity's TSP<sup>2</sup> classifies Oak Street as a collector street.

**Church Street** is under the jurisdiction of the City of Amity. The road is a two lane two-way facility oriented east to west. The City of Amity's TSP classifies Church Street as a local street.

Figure 1 of Appendix C illustrates the existing intersection control and lane configurations of the study intersections.

- 1 <http://www.oregon.gov/ODOT/Planning/Documents/OHP.pdf>
- 2 <https://www.cityofamityoregon.org/publications>

## PLANNED PROJECTS

The TSP describes a planned project along Oak Street, from Church to 3rd Avenue. According to the TSP, “This project would widen the existing Oak Street pavement to add bike lanes and improve sidewalks to create continuous pedestrian and bicycle facilities on Oak Street from Church to 3rd Avenue. This project also includes crossing improvements at OR 153/Nursery Street. This will help provide a safe route for students walking and bicycling from Amity Middle School to the High School...Oak Street has very constrained right-of-way in this location, though the proposed cross section is intended to fit within this constraint.”

The subject property has no frontage along the planned project.

## STUDY INTERSECTIONS

Through coordination with the City of Amity, the following intersections were identified as the necessary study intersections:

- 1) Church Street/Oak Street
- 2) Nursery Street/Oak Street

## MOBILITY STANDARDS

ODOT has jurisdiction over **Nursery Street (OR 153)**. The *Oregon Highway Plan* (“OHP”) provides that OR 153 is a district highway. The City of Amity TSP states “The state highways in Amity are located on city-owned right-of-way. Under this unique situation, ODOT mobility targets apply only at highway-to-highway intersections. At intersections between city streets and the highway, city mobility targets would apply; however, Amity does not presently have adopted mobility standards.”

Oak Street and Church Street are under the jurisdiction of the City of Amity. As mentioned previously, the City of Amity does not have any adopted mobility standards. However, the expected level-of-service and volume to capacity of the study intersections are reported herein.

## 2019 EXISTING TRAFFIC

Manual turning movement counts were collected on Tuesday, November 19, 2019 during the weekday PM peak hour and on Wednesday, November 20, 2019 during the weekday AM peak



hour at the study intersections of Church Street/Oak Street and Nursery Street/Oak Street. Traffic counts included auto, bus, truck, bicycles, and pedestrians, with 15-minute breakdowns during the AM (7-9 am) and PM (3-6 pm) peak periods. The weekday PM peak hour counts were extended from the typical weekday PM peak hours in order to include local school release times.

Appendix A includes the raw traffic counts.

The Nursery Street intersection raw traffic volumes was seasonally adjusted per ODOT *Analysis Procedures Manual* (“APM”) to develop 30 highest hour volumes (30 HV). Given that per the TSP, ODOT does not have jurisdiction over the intersection, this step may not be required. However, adjusting the traffic volumes is a conservative approach versus the assumption that the intersection is fully under the purview of the City of Amity.

The ODOT preferred method for seasonally adjusting raw traffic counts is the “On-Site ATR Method.” However, there are no automatic traffic recorders (“ATR”) near the site. Therefore, the On-Site ATR Method is not recommended in developing the 30 HV for this intersection.

The ATR Characteristic Table Method of the *APM* was also evaluated as the next best alternative. However, there are no automatic traffic recorders across Oregon that are similar in characteristics to this section of Nursery Street and also within 10% of the annual average daily traffic (“AADT”) as recommended by the *APM*.

Finally, the Seasonal Trend Method of the *APM* was evaluated and ultimately used in developing the 30 HV for this project.

The Oak Street/Church Street intersection traffic volumes were not adjusted as the intersection is not located on the state highway system.

Appendix B includes the 30<sup>th</sup> highest hour volume seasonal adjustment worksheet that also presents the factors utilized in developing the seasonal adjustments.

Figure 2 in Appendix C illustrates the 2019 existing traffic volumes.

## **2038 BACKGROUND TRAFFIC**

Since the application proposes a change in zoning, an estimate of long-term traffic operations is required in order to satisfy the requirements of Oregon's Transportation Planning Rule. As the City of Amity's *Transportation System Plan* is based upon a horizon year of 2038, a planning horizon year of 2038 was used for this analysis.

There is not a travel demand forecast model that covers Amity that can be used to develop future year volumes. Traffic growth rates were estimated based upon a review of the City of Amity TSP which notes that in developing future year volumes, "Background traffic growth is based on historical trends as well as the most recent ODOT Future Volume Table" and "used a growth rate of 1.14 percent per year to grow traffic on OR 153." The TSP reports that a 1.4% growth rate was used for traffic volumes along Highway 99W.

For the purposes of this analysis, a 1.14% per year growth rate was applied to the Nursery Street/Oak Street intersection. In order to remain conservative, a growth rate of 2% per year has been applied to the Oak Street/Church Street intersection. To account for the growth between 2019 and 2038, 19 years of growth was applied to the 2019 existing traffic volumes.

2038 background traffic volumes are based upon a summation of the 2019 existing traffic volumes and traffic growth between 2019 and 2038.

Traffic growth rates are intended to account for the impacts of any future, hypothetical growth per the TSP.

Figure 6 in Appendix C illustrates the 2038 traffic background volumes for both the weekday AM and PM peak hours.

## **2038 ZONE CHANGE TRIP GENERATION**

In addressing the zone change with its horizon year of 2038 per the City of Amity's TSP, the trip generation is based upon a comparison of the reasonable worst-case trip generation of the existing zoning versus the proposed zoning. The difference in trips are then evaluated to assess

the impacts of the proposed zone over the existing zone to determine if the project has a “significant effect” per the Transportation Planning Rule.

The reasonable worst-case trip generation under the existing A-H zoning is one single-family residential home. The proposed R-1 zoning permits a maximum density of six dwellings per acre. A total of 50 homes could be developed on the site. The comparison of the worst-case trip generation of the existing versus proposed zoning is presented below in Table 1 with a hypothetical net increase in 49 single-family homes. Vehicle trip generation rates from the 10<sup>h</sup> Edition of the *ITE Trip Generation Manual* were applied in establishing the trip generation of the project.

**Table 1. Net Trip Generation – Zone Change Analysis**

ITE Land Use	Units (DU)	Weekday						
		ADT	AM Peak Hour			PM Peak Hour		
			Total	Enter	Exit	Total	Enter	Exit
Single-Family Detached Housing (ITE #210)	49							
Directional Distribution				25%	75%		63%	37%
Total Trips		539	40	10	30	51	32	19

## 2038 ZONE CHANGE TRIP DISTRIBUTION

The trips estimated in Table 1 were distributed on the transportation network separately based upon the projected volumes of the TSP, existing traffic volumes and patterns, and a review of the existing street network. This trip generation and distribution were performed to establish the 2038 total traffic volumes to be compared with the impact of the zone change and with the 2038 background traffic condition.

Figure 7 in Appendix C illustrates the assumed trip distribution pattern and the assignment of site generated trips to the study intersections during both the weekday AM and PM peak hours in 2038.

## 2038 TOTAL TRAFFIC VOLUMES

In order to determine the impacts of the proposed zone change on the street system as required by Oregon's Transportation Planning Rule, a comparative analysis of trips generated by the existing zoning compared to the proposed zoning was provided in Table 1. The increase in

trips from the existing zoning to the proposed zoning was then added to the 2038 background traffic condition to determine the zone change's impact on the transportation network. This summation represents the traffic volumes that would be expected in the 2038 total traffic condition with the approval of the zone change assuming a reasonable worst-case development of 50 single-family homes.

Figure 8 in Appendix C illustrates the 2038 total traffic volumes.

### **TRAFFIC OPERATIONS ANALYSIS**

Capacity analysis for 2019 existing traffic, 2038 background traffic and 2038 total traffic conditions has been performed at each of the relevant study intersections.

A saturation flow rate of 1750 passenger cars per hour of green per lane (pcphgl) was assumed at the Nursery Street/Oak Street intersection as required by the ODOT *APM*. To be conservative, this same saturation flow rate was assumed at the Oak Street/Church Street intersection.

Synchro 10 software was utilized in our analysis.

Traffic operations analysis was based upon the 6<sup>th</sup> edition of the Highway Capacity Manual, the most recent edition.

Traffic flow figures in Appendix C show the traffic data and turn movements for the weekday AM and PM peak hour conditions that were used in the traffic operation analysis.

Generally, level of service (LOS) 'A', 'B', 'C', and 'D' are desirable service levels ranging from no vehicle delays to average or longer than average delays in the peak hours. LOS 'E' and 'F' indicate the possible need for mitigation with users experiencing higher delays.

Tables 2 to 3 provide a summary of the intersection capacity results. The Synchro software capacity summary reports are included in Appendix D.

**Table 2. Nursery Street (OR 153)/Oak Avenue**

Traffic Scenario	HCM 6 <sup>th</sup> Edition Methodology			
	Weekday AM Peak Hour		Weekday PM Peak Hour	
	Intersection LOS/Delay	Intersection V/C	Intersection LOS/Delay	Intersection V/C
2019 Existing Traffic	C/18.1	0.31	B/11.6	0.16
2038 Background Traffic	C/24.1	0.44	B/14.9	0.26
2038 Total Traffic	C/24.6	0.44	C/15.3	0.27

Note: *Highway Capacity Manual 6<sup>th</sup> edition* methodology used in analysis.

**Table 3. Oak Avenue/Church Avenue**

Traffic Scenario	HCM 6 <sup>th</sup> Edition Methodology			
	Weekday AM Peak Hour		Weekday PM Peak Hour	
	Intersection LOS/Delay	Intersection V/C	Intersection LOS/Delay	Intersection V/C
2019 Existing Traffic	A/8.2	0.09	A/7.4	0.07
2038 Background Traffic	A/8.6	0.12	A/8.3	0.10
2038 Total Traffic	A/8.9	0.16	A/8.5	0.18

Note: *2010 Highway Capacity Manual* methodology used in analysis.

As described previously, although Nursery Street is under the jurisdiction of ODOT, ODOT's mobility standard does not apply according to the City's TSP. Additionally, as noted in the TSP, the City of Amity has no adopted mobility standard.

However, intersection operations would generally be deemed to be acceptable by most agency standards. The proposed zone change has very little impact upon the existing or planned transportation network.

## TRANSPORTATION PLANNING RULE ANALYSIS

The Transportation Planning Rule (TPR) is a statewide regulation that ensures that the transportation system is adequately planned and requires the evaluation of traffic impacts that

could result from changes to adopted zoning and comprehensive plans. The Transportation Planning Rule reads as follows:

**660-012-0060**

***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);*
- b) Change standards implementing a functional classification system; or*
- 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;*
  - 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*
  - 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.*

In this case, subsection (A) is not applicable since the proposed zone change and subsequent development is not expected to impact nor alter the functional classification of any existing or planned facility. The proposal does not include a change to any functional classification standards. (A) is not triggered as the types of travel or access would not be inconsistent with the functional classification of any of the transportation facilities in the vicinity of the site.

Our analysis illustrates that subsections (B) and (C) are also not applicable. The City of Amity has no mobility standard and ODOT's mobility standards do not apply according to the City TSP. The proposed zone change does not push any intersections into failure, therefore (B) and (C) are not applicable.

The requirements of the Transportation Planning Rule are met.

## **SUMMARY AND RECOMMENDATIONS**

The 9.8 acre site is currently zoned A-H (Agricultural Holding) and will be rezoned to R-1 (Low Density Residential). The proposed zoning is consistent with the property's existing Low Density Residential Comprehensive Plan designation.

All study intersections are anticipated to operate with acceptable levels of service in 2019 and 2038. The Transportation Planning Rule requirements are met.

## APPENDICES

- A) Traffic Counts
- B) 30<sup>th</sup> Highest Hour Volumes (30 HV)/Seasonal Adjustment Worksheet/Traffic Volumes
- C) Traffic Flow Figures

- Figure 1, Intersection Control & Lane Channelization
- Figure 2, 2019 Existing Traffic Weekday AM & PM Traffic Volumes
- Figure 6, 2038 Background Traffic Weekday AM & PM Traffic Volumes
- Figure 7, 2038 Net New Site Trip Distribution Weekday AM & PM Peak Hour
- Figure 8, 2038 Total Traffic Weekday AM & PM Traffic Volumes

- D) Synchro Intersection Capacity Analysis Report Outputs

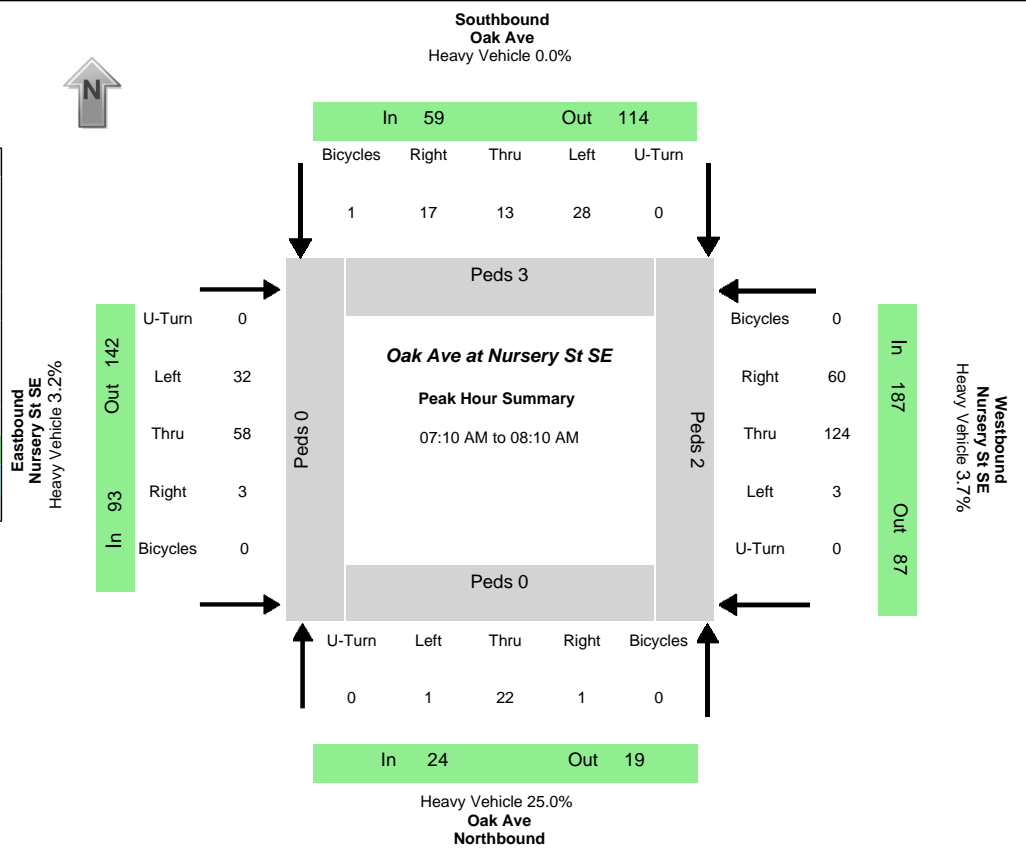
Note: Figures 3-5 have been omitted as they are not relevant to this current application.



## *Appendix A*

### *Traffic Counts*

Data Provided by K-D-N.com 503-594-4224	
N/S street	Oak Ave
E/W street	Nursery St SE
City, State	Amity OR
Site Notes	
Location	45.114535 - -123.203664
Start Date	Wednesday, November 20, 2019
Start Time	07:00:00 AM
Weather	
Study ID #	
Peak Hour Start	07:10:00 AM
Peak 15 Min Start	07:35:00 AM
PHF (15-Min Int)	0.61

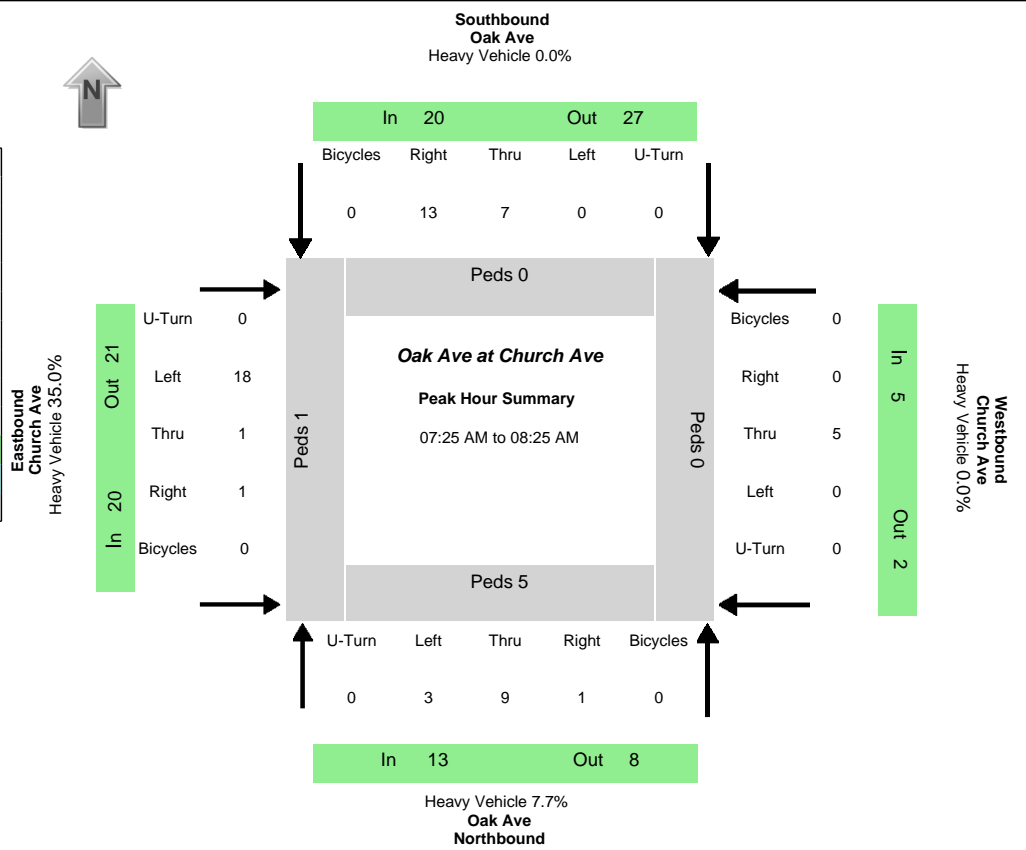


Peak-Hour Volumes (PHV)																							
Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
1	22	1	0	28	13	17	0	32	58	3	0	3	124	60	0	24	58	93	187	19	114	142	87
Percent Heavy Vehicles																							
0.0%	27.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.2%	0.0%	0.0%	0.0%	5.6%	0.0%	0.0%	25.0%	0.0%	3.2%	3.7%	0.0%	5.3%	4.9%	3.4%
PHV - Bicycles																PHV - Pedestrians							
Northbound				Southbound				Eastbound				Westbound				Sum	in Crosswalk				Sum		
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn		NB	SB	EB	WB			
0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	3	0	2		5	
All Vehicle Volumes																							
Time	Northbound Oak Ave				Southbound Oak Ave				Eastbound Nursery St SE				Westbound Nursery St SE				15 Min Sum	1 HR Sum					
	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn							
07:00:00 AM	0	0	0	0	0	0	0	0	1	7	1	0	0	10	0	0							
07:05:00 AM	0	0	0	0	2	1	1	0	0	3	0	0	0	8	1	0							
07:10:00 AM	0	1	0	0	1	0	0	0	0	10	0	0	0	9	2	0	58						
07:15:00 AM	0	0	0	0	1	1	1	0	0	3	0	0	0	12	4	0	61						
07:20:00 AM	0	0	0	0	0	1	0	0	1	5	0	0	0	6	0	0	58						
07:25:00 AM	0	2	0	0	0	1	1	0	4	2	0	0	0	17	3	0	65						
07:30:00 AM	1	7	0	0	1	2	2	0	6	4	0	0	1	14	7	0	88						
07:35:00 AM	0	4	0	0	2	3	1	0	9	4	0	0	1	12	10	0	121						
07:40:00 AM	0	4	0	0	2	1	4	0	8	4	1	0	1	16	10	0	142						
07:45:00 AM	0	3	0	0	5	2	7	0	4	7	1	0	0	10	13	0	149						
07:50:00 AM	0	0	1	0	2	1	0	0	0	6	0	0	0	8	7	0	128						
07:55:00 AM	0	0	0	0	5	0	0	0	0	2	0	0	0	10	1	0	95	360					
08:00:00 AM	0	1	0	0	5	1	0	0	0	4	0	0	0	4	2	0	60	358					
08:05:00 AM	0	0	0	0	4	0	1	0	0	7	1	0	0	6	1	0	55	362					
08:10:00 AM	0	0	0	0	2	0	0	0	1	4	0	0	0	10	0	0	54	356					
08:15:00 AM	0	1	0	0	0	0	0	0	0	4	0	0	1	5	1	0	49	346					
08:20:00 AM	0	0	0	0	2	0	1	0	0	5	1	0	0	6	0	0	44	348					
08:25:00 AM	0	0	0	0	0	0	0	0	0	7	2	0	0	5	1	0	42	333					
08:30:00 AM	1	0	0	0	0	0	0	0	2	8	0	0	0	6	2	0	49	307					
08:35:00 AM	1	0	0	0	1	0	1	0	1	2	0	0	0	3	1	0	44	271					
08:40:00 AM	1	1	0	0	1	0	0	0	0	1	0	0	0	9	1	0	43	234					
08:45:00 AM	0	0	1	0	0	0	0	0	0	8	0	0	0	6	0	0	39	197					
08:50:00 AM	1	0	0	0	0	0	1	0	0	4	0	0	0	8	1	0	44	187					
08:55:00 AM	1	0	0	0	1	0	1	0	0	7	0	0	0	4	0	0	44	183					

# K-D-N

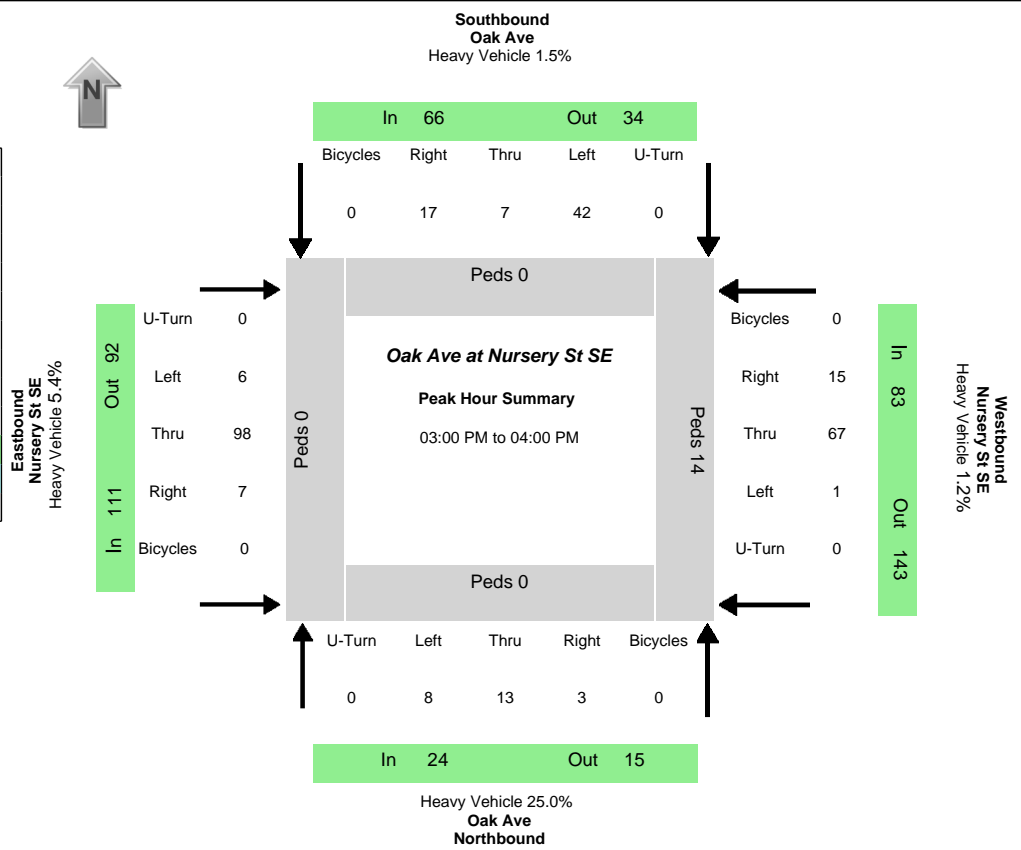
## KEY DATA NETWORK

Data Provided by K-D-N.com 503-594-4224	
N/S street	Oak Ave
E/W street	Church Ave
City, State	Amity OR
Site Notes	
Location	45.113812 - -123.20372
Start Date	Wednesday, November 20, 2019
Start Time	07:00:00 AM
Weather	
Study ID #	
Peak Hour Start	07:25:00 AM
Peak 15 Min Start	07:30:00 AM
PHF (15-Min Int)	0.47



Peak-Hour Volumes (PHV)																							
Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
3	9	1	0	0	7	13	0	18	1	1	0	0	5	0	0	13	20	20	5	8	27	21	2
Percent Heavy Vehicles																							
33.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.7%	0.0%	35.0%	0.0%	12.5%	22.2%	4.8%	0.0%
PHV - Bicycles																PHV - Pedestrians							
Northbound				Southbound				Eastbound				Westbound				Sum	in Crosswalk				Sum		
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn		NB	SB	EB	WB			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	1	0	6		
All Vehicle Volumes																							
Time	Northbound Oak Ave				Southbound Oak Ave				Eastbound Church Ave				Westbound Church Ave				15 Min Sum	1 HR Sum					
	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn							
07:00:00 AM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0				
07:05:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0				
07:10:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2			
07:15:00 AM	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	2			
07:20:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1			
07:25:00 AM	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	5			
07:30:00 AM	0	2	0	0	0	0	3	0	4	0	0	0	0	1	0	0	0	0	0	14			
07:35:00 AM	0	2	0	0	0	0	4	0	4	1	0	0	0	0	0	0	0	0	0	25			
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08:05:00 AM	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	7	54		
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08:35:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	38		
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08:45:00 AM	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	25		
08:50:00 AM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	0	8	25		
08:55:00 AM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	23		

Data Provided by K-D-N.com 503-594-4224	
N/S street	Oak Ave
E/W street	Nursery St SE
City, State	Amity OR
Site Notes	
Location	45.114535 - -123.203664
Start Date	Tuesday, November 19, 2019
Start Time	03:00:00 PM
Weather	
Study ID #	
Peak Hour Start	03:00:00 PM
Peak 15 Min Start	03:25:00 PM
PHF (15-Min Int)	0.83



Peak-Hour Volumes (PHV)																							
Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
8	13	3	0	42	7	17	0	6	98	7	0	1	67	15	0	24	66	111	83	15	34	92	143
Percent Heavy Vehicles																							
0.0%	46.2%	0.0%	0.0%	0.0%	0.0%	5.9%	0.0%	0.0%	6.1%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	25.0%	1.5%	5.4%	1.2%	0.0%	17.6%	2.2%	4.2%

PHV- Bicycles												PHV- Pedestrians				
Northbound				Southbound				Eastbound				Westbound				Sum
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Sum
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

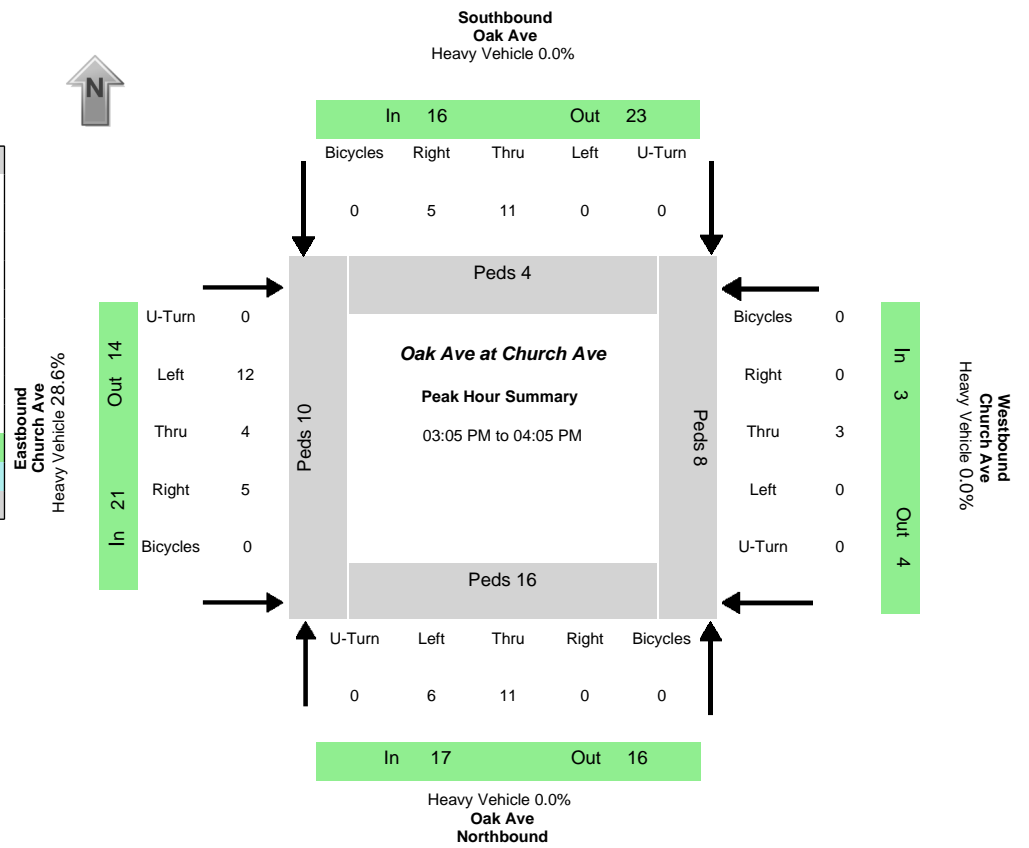
All Vehicle Volumes																	
Time	Northbound Oak Ave				Southbound Oak Ave				Eastbound Nursery St SE				Westbound Nursery St SE				15 Min Sum
	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	
03:00:00 PM	0	2	0	0	3	0	1	0	1	10	0	0	0	5	6	0	
03:05:00 PM	0	0	0	0	1	1	0	0	1	4	0	0	0	2	1	0	
03:10:00 PM	0	1	0	0	3	0	2	0	1	5	1	0	0	17	2	0	70
03:15:00 PM	1	1	0	0	6	1	3	0	0	9	2	0	0	7	1	0	73
03:20:00 PM	2	7	0	0	5	0	0	0	1	3	0	0	0	1	0	0	82
03:25:00 PM	1	1	1	0	6	0	1	0	1	10	3	0	0	4	1	0	79
03:30:00 PM	1	1	1	0	8	1	2	0	0	14	0	0	0	6	2	0	84
03:35:00 PM	0	0	0	0	3	1	2	0	1	6	0	0	0	8	0	0	86
03:40:00 PM	0	0	0	0	4	1	1	0	0	5	0	0	1	3	0	0	72
03:45:00 PM	1	0	0	0	2	1	4	0	0	13	0	0	0	3	2	0	62
03:50:00 PM	1	0	1	0	0	0	1	0	0	9	0	0	0	6	0	0	59
03:55:00 PM	1	0	0	0	1	1	0	0	0	10	1	0	0	5	0	0	63
04:00:00 PM	0	0	0	0	0	1	0	0	1	9	1	0	0	6	0	0	55
04:05:00 PM	0	0	0	0	1	0	1	0	0	4	1	0	1	6	1	0	52
04:10:00 PM	0	0	0	0	3	0	1	0	0	9	0	0	1	9	1	0	57
04:15:00 PM	1	0	0	0	2	0	0	0	0	13	1	0	0	2	1	0	59
04:20:00 PM	2	0	0	0	0	0	0	0	1	8	0	0	1	10	5	0	71
04:25:00 PM	1	1	0	0	2	1	0	0	1	14	0	0	0	4	2	0	73
04:30:00 PM	0	0	0	0	1	0	0	0	0	14	0	0	0	5	2	0	75
04:35:00 PM	0	0	0	0	5	1	1	0	1	16	1	0	0	5	0	0	78
04:40:00 PM	0	1	0	0	0	1	0	0	0	12	2	0	0	0	1	0	69
04:45:00 PM	0	0	0	0	2	0	0	0	0	15	1	0	0	6	2	0	73
04:50:00 PM	1	0	0	0	1	0	1	0	0	10	1	0	0	9	0	0	66
04:55:00 PM	0	1	0	0	4	0	0	0	0	7	0	0	0	7	3	0	71

05:00:00 PM	0	0	0	0	2	1	1	0	0	5	0	0	0	8	0	0	62	269
05:05:00 PM	0	0	0	0	2	0	0	0	0	8	0	0	0	5	1	0	55	270
05:10:00 PM	2	0	0	0	0	0	0	0	1	9	0	0	1	4	2	0	52	265
05:15:00 PM	0	0	0	0	0	0	0	0	0	11	0	0	0	9	0	0	55	265
05:20:00 PM	0	0	0	0	1	0	0	0	0	11	0	0	1	7	0	0	59	258
05:25:00 PM	1	1	0	0	3	0	0	0	0	9	0	0	0	5	2	0	61	253
05:30:00 PM	0	0	0	0	2	0	0	0	0	6	0	0	0	7	0	0	56	246
05:35:00 PM	0	0	0	0	3	0	2	0	0	8	0	0	0	8	2	0	59	239
05:40:00 PM	0	1	0	0	2	0	1	0	0	11	1	0	0	8	3	0	65	249
05:45:00 PM	1	0	0	0	1	0	1	0	1	14	0	0	0	2	2	0	72	245
05:50:00 PM	1	0	0	0	1	0	1	0	0	8	0	0	0	5	4	0	69	242
05:55:00 PM	0	0	0	0	2	0	1	0	1	8	0	0	0	3	1	0	58	236

# K-D-N

## KEY DATA NETWORK

Data Provided by K-D-N.com 503-594-4224	
N/S street	Oak Ave
E/W street	Church Ave
City, State	Amity OR
Site Notes	
Location	45.113812 - -123.20372
Start Date	Tuesday, November 19, 2019
Start Time	03:00:00 PM
Weather	
Study ID #	
Peak Hour Start	03:05:00 PM
Peak 15 Min Start	03:15:00 PM
PHF (15-Min Int)	0.51



Peak-Hour Volumes (PHV)																							
Northbound				Southbound				Eastbound				Westbound				Entering				Leaving			
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	NB	SB	EB	WB	NB	SB	EB	WB
6	11	0	0	0	11	5	0	12	4	5	0	0	3	0	0	17	16	21	3	16	23	14	4
Percent Heavy Vehicles																							
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	28.6%	0.0%	0.0%	0.0%	0.0%	0.0%
PHV - Bicycles																PHV - Pedestrians							
Northbound				Southbound				Eastbound				Westbound				Sum	in Crosswalk				Sum		
Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn		NB	SB	EB	WB			
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	4	10	8	38		
All Vehicle Volumes																							
Time	Northbound Oak Ave				Southbound Oak Ave				Eastbound Church Ave				Westbound Church Ave				15 Min Sum	1 HR Sum					
	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn	Left	Thru	Right	Uturn							
03:00:00 PM	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0							
03:05:00 PM	0	1	0	0	0	0	1	0	1	1	0	0	0	0	0	0							
03:10:00 PM	1	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	10						
03:15:00 PM	1	1	0	0	0	0	1	0	1	0	1	0	0	0	0	0	13						
03:20:00 PM	1	3	0	0	0	3	0	0	9	0	1	0	0	1	0	0	27						
03:25:00 PM	1	3	0	0	0	0	1	0	0	0	0	0	0	0	0	0	28						
03:30:00 PM	1	0	0	0	0	1	0	0	0	0	1	0	0	0	0	0	26						
03:35:00 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	1	0	0	11						
03:40:00 PM	0	0	0	0	0	1	0	0	0	2	0	0	0	0	0	0	9						
03:45:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7						
03:50:00 PM	0	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	6						
03:55:00 PM	0	1	0	0	0	2	0	0	0	1	1	0	0	0	0	0	8	55					
04:00:00 PM	1	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	11	57					
04:05:00 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	11	55					
04:10:00 PM	0	0	0	0	0	2	0	0	0	0	1	0	0	0	0	0	9	54					
04:15:00 PM	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0	8	52					
04:20:00 PM	2	1	0	0	0	0	2	0	0	0	0	0	0	0	1	0	12	40					
04:25:00 PM	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0	0	12	38					
04:30:00 PM	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	11	37					
04:35:00 PM	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	7	36					
04:40:00 PM	0	1	0	0	1	2	0	0	1	0	0	0	0	0	0	0	9	38					
04:45:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	8	38					
04:50:00 PM	0	2	0	0	0	1	0	0	0	0	1	0	0	0	0	0	10	40					
04:55:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	35					

05:00:00 PM	0	0	0	0	0	1	0	0	0	1	2	0	0	0	0	0	8	35
05:05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	33
05:10:00 PM	0	2	0	0	0	1	0	0	0	0	1	0	0	0	0	0	8	34
05:15:00 PM	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	5	32
05:20:00 PM	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	6	27
05:25:00 PM	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	27
05:30:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	25
05:35:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	23
05:40:00 PM	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	0	2	20
05:45:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	20
05:50:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	17
05:55:00 PM	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	4	19

**Appendix B**

***30<sup>th</sup> Highest Hour Volumes (30 HV)/  
Seasonal Adjustment Worksheet/  
Traffic Volumes***



## Traffic volumes

### Weekday AM Peak Hour

Nursery Street (OR 153)/Oak Street													
Movement	SB RT	SB TH	SB LT	WB RT	WB TH	WB LT	NB RT	NB TH	NB LT	EB RT	EB TH	EB LT	
<b>2019 Existing Volumes (11/20/19)</b>	<b>17</b>	<b>13</b>	<b>28</b>	<b>60</b>	<b>124</b>	<b>3</b>	<b>1</b>	<b>22</b>	<b>1</b>	<b>3</b>	<b>58</b>	<b>32</b>	
Count Date Seasonal Factor	1.0898	1.0898	1.0898	1.0898	1.0898	1.0898	1.0898	1.0898	1.0898	1.0898	1.0898	1.0898	
Peak Period Seasonal Factor	0.8317	0.8317	0.8317	0.8317	0.8317	0.8317	0.8317	0.8317	0.8317	0.8317	0.8317	0.8317	
Count Date Seasonal Factor / Peak Period Seasonal Factor	1.310328	1.3103	1.3103	1.3103	1.3103	1.3103	1.3103	1.3103	1.3103	1.3103	1.3103	1.3103	
<b>2019 30th HV</b>	<b>22</b>	<b>17</b>	<b>37</b>	<b>79</b>	<b>162</b>	<b>4</b>	<b>1</b>	<b>29</b>	<b>1</b>	<b>4</b>	<b>76</b>	<b>42</b>	
Growth (1.14%/Yr for 19 Yrs)	5	4	9	19	39	1	0	7	0	1	18	10	
<b>2038 Background Traffic</b>	<b>27</b>	<b>21</b>	<b>46</b>	<b>98</b>	<b>201</b>	<b>5</b>	<b>1</b>	<b>36</b>	<b>1</b>	<b>5</b>	<b>94</b>	<b>52</b>	
2038 Site Generated Traffic	0	0	0	0	0	1	4	0	12	4	0	0	
<b>2038 Total Traffic</b>	<b>27</b>	<b>21</b>	<b>46</b>	<b>98</b>	<b>201</b>	<b>6</b>	<b>5</b>	<b>36</b>	<b>13</b>	<b>9</b>	<b>94</b>	<b>52</b>	

Oak Street/Church Street													
Movement	SB RT	SB TH	SB LT	WB RT	WB TH	WB LT	NB RT	NB TH	NB LT	EB RT	EB TH	EB LT	
<b>2019 Existing Volumes (11/20/19)</b>	<b>13</b>	<b>7</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>1</b>	<b>9</b>	<b>3</b>	<b>1</b>	<b>1</b>	<b>18</b>	
<b>Adjusted 2019 Volumes</b>	<b>15</b>	<b>10</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>10</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>20</b>	
Growth (2%/Yr for 19 Yrs)	7	5	2	2	2	2	2	5	2	2	2	9	
<b>2038 Background Traffic</b>	<b>22</b>	<b>15</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>15</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>29</b>	
2038 Site Generated Traffic	0	5	0	0	0	0	0	16	14	5	0	0	
<b>2038 Total Traffic</b>	<b>22</b>	<b>20</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>31</b>	<b>21</b>	<b>12</b>	<b>7</b>	<b>29</b>	

### Weekday PM Peak Hour

Nursery Street (OR 153)/Oak Street													
Movement	SB RT	SB TH	SB LT	WB RT	WB TH	WB LT	NB RT	NB TH	NB LT	EB RT	EB TH	EB LT	
<b>2019 Existing Volumes (11/19/19)</b>	<b>17</b>	<b>7</b>	<b>42</b>	<b>15</b>	<b>67</b>	<b>1</b>	<b>3</b>	<b>13</b>	<b>8</b>	<b>7</b>	<b>98</b>	<b>6</b>	
Count Date Seasonal Factor	1.0898	1.0898	1.0898	1.0898	1.0898	1.0898	1.0898	1.0898	1.0898	1.0898	1.0898	1.0898	
Peak Period Seasonal Factor	0.8317	0.8317	0.8317	0.8317	0.8317	0.8317	0.8317	0.8317	0.8317	0.8317	0.8317	0.8317	
Count Date Seasonal Factor / Peak Period Seasonal Factor	1.310328	1.3103	1.3103	1.3103	1.3103	1.3103	1.3103	1.3103	1.3103	1.3103	1.3103	1.3103	
<b>2019 30th HV</b>	<b>22</b>	<b>9</b>	<b>55</b>	<b>20</b>	<b>88</b>	<b>1</b>	<b>4</b>	<b>17</b>	<b>10</b>	<b>9</b>	<b>128</b>	<b>8</b>	
2013 TSP 30 HV	5	10	15	20	100	5	5	5	5	10	145	15	
2019 30th HV based on 1.14%/Yr growth for 6 Yrs	5	11	16	21	107	5	5	5	5	11	155	16	
<b>Adjusted 2019 30th HV (taken as highest figures)</b>	<b>22</b>	<b>11</b>	<b>55</b>	<b>21</b>	<b>107</b>	<b>5</b>	<b>5</b>	<b>17</b>	<b>10</b>	<b>11</b>	<b>155</b>	<b>16</b>	
<b>2038 Background Traffic based on 1.14%/yr for 19 years</b>	<b>27</b>	<b>14</b>	<b>68</b>	<b>26</b>	<b>133</b>	<b>6</b>	<b>6</b>	<b>21</b>	<b>12</b>	<b>14</b>	<b>192</b>	<b>20</b>	
<b>2038 Background Traffic (from TSP)</b>	<b>5</b>	<b>10</b>	<b>15</b>	<b>20</b>	<b>150</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>10</b>	<b>193</b>	<b>15</b>	
<b>Adjusted 2038 Background Traffic (taken as highest figures)</b>	<b>27</b>	<b>14</b>	<b>68</b>	<b>26</b>	<b>150</b>	<b>6</b>	<b>6</b>	<b>21</b>	<b>12</b>	<b>14</b>	<b>193</b>	<b>20</b>	
2038 Site Generated Traffic	0	0	0	0	0	5	3	0	8	13	0	0	
<b>2038 Total Traffic</b>	<b>27</b>	<b>14</b>	<b>68</b>	<b>26</b>	<b>150</b>	<b>11</b>	<b>9</b>	<b>21</b>	<b>20</b>	<b>27</b>	<b>193</b>	<b>20</b>	

Oak Street/Church Street													
Movement	SB RT	SB TH	SB LT	WB RT	WB TH	WB LT	NB RT	NB TH	NB LT	EB RT	EB TH	EB LT	
<b>2019 Existing Volumes (11/20/19)</b>	<b>5</b>	<b>11</b>	<b>0</b>	<b>0</b>	<b>5</b>	<b>0</b>	<b>0</b>	<b>11</b>	<b>6</b>	<b>5</b>	<b>4</b>	<b>12</b>	
<b>Adjusted 2019 Volumes</b>	<b>5</b>	<b>15</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>15</b>	<b>10</b>	<b>5</b>	<b>5</b>	<b>15</b>	
Growth (2%/Yr for 19 Yrs)	2	7	2	2	2	2	2	7	5	2	2	7	
<b>2038 Background Traffic</b>	<b>7</b>	<b>22</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>22</b>	<b>15</b>	<b>7</b>	<b>7</b>	<b>22</b>	
2038 Site Generated Traffic	0	5	0	0	0	0	0	16	14	5	0	0	
<b>2038 Total Traffic</b>	<b>7</b>	<b>27</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>7</b>	<b>38</b>	<b>29</b>	<b>12</b>	<b>7</b>	<b>22</b>	

## *Appendix C*

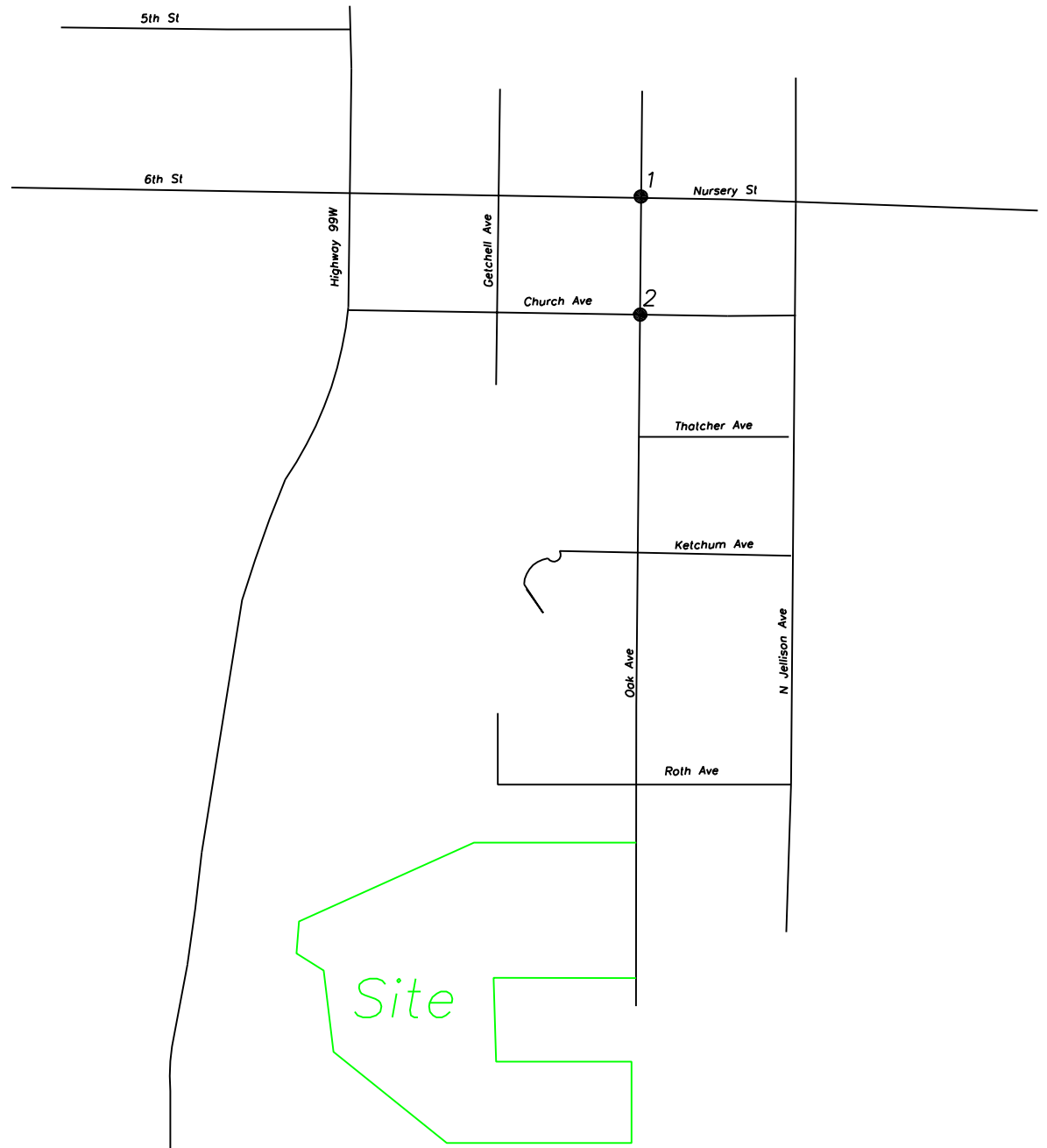
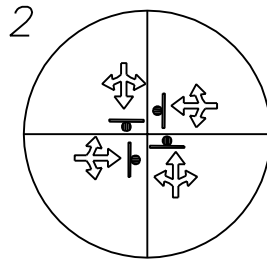
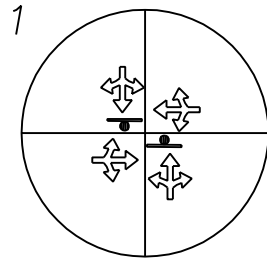
### *Traffic Flow Figures*

# LEGEND

 Lane configuration

 Stop sign control

 Traffic signal



**GREENLIGHT ENGINEERING**  
TRAFFIC ENGINEERING/TRANSPORTATION PLANNING

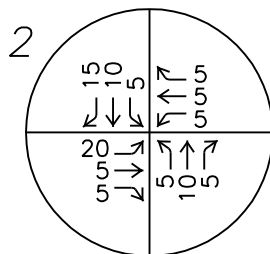
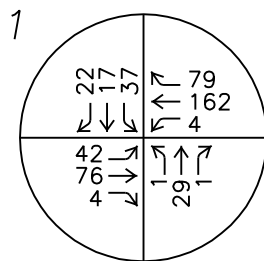
NOTES:

*Intersection Control &  
Lane Channelization*

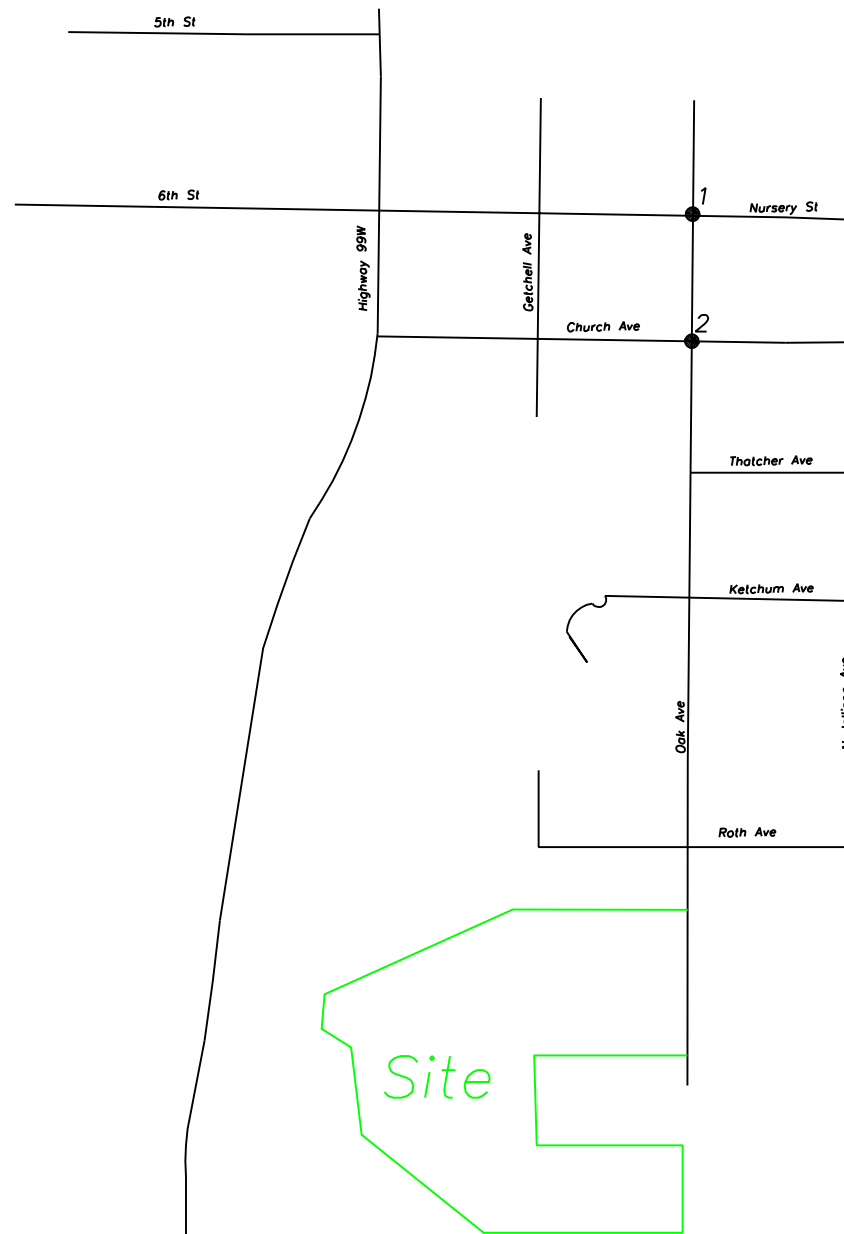
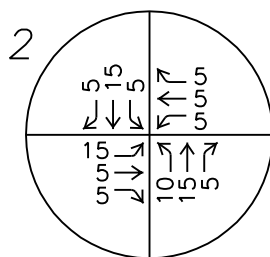
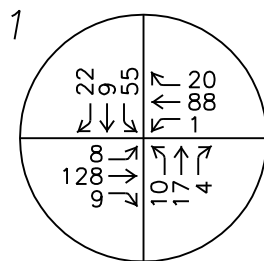
**FIGURE**

1

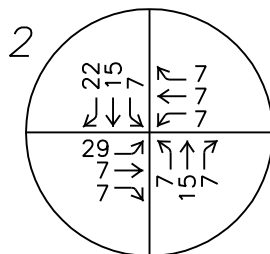
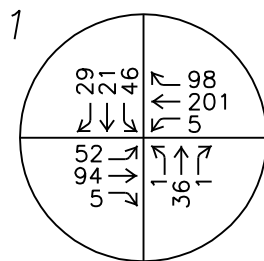
Weekday AM  
Peak Hour



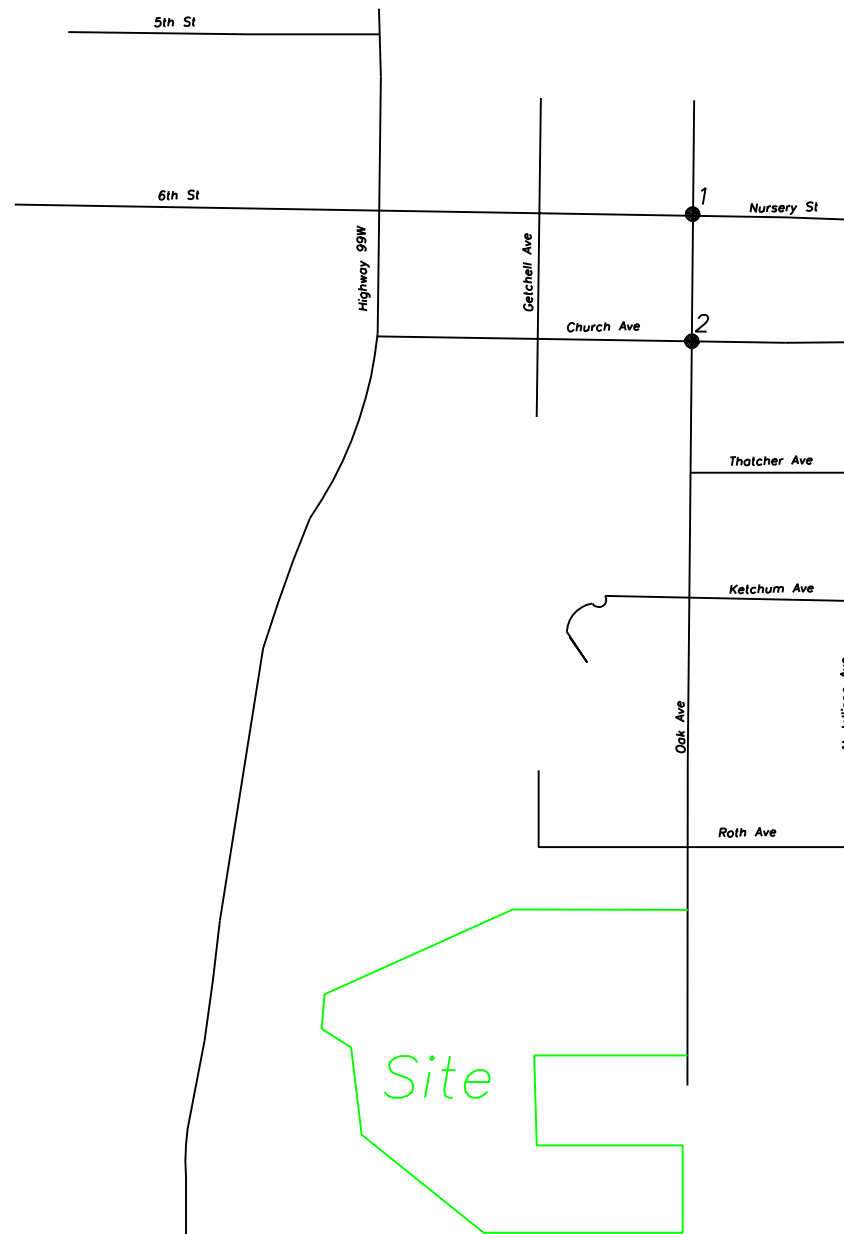
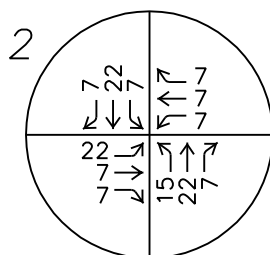
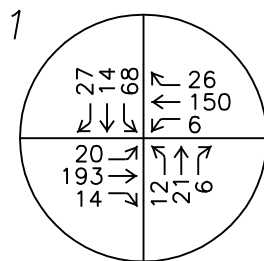
Weekday PM  
Peak Hour



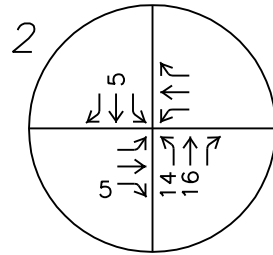
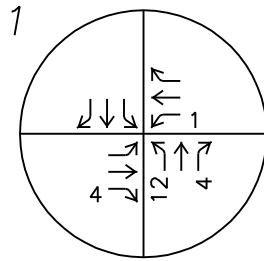
Weekday AM  
Peak Hour



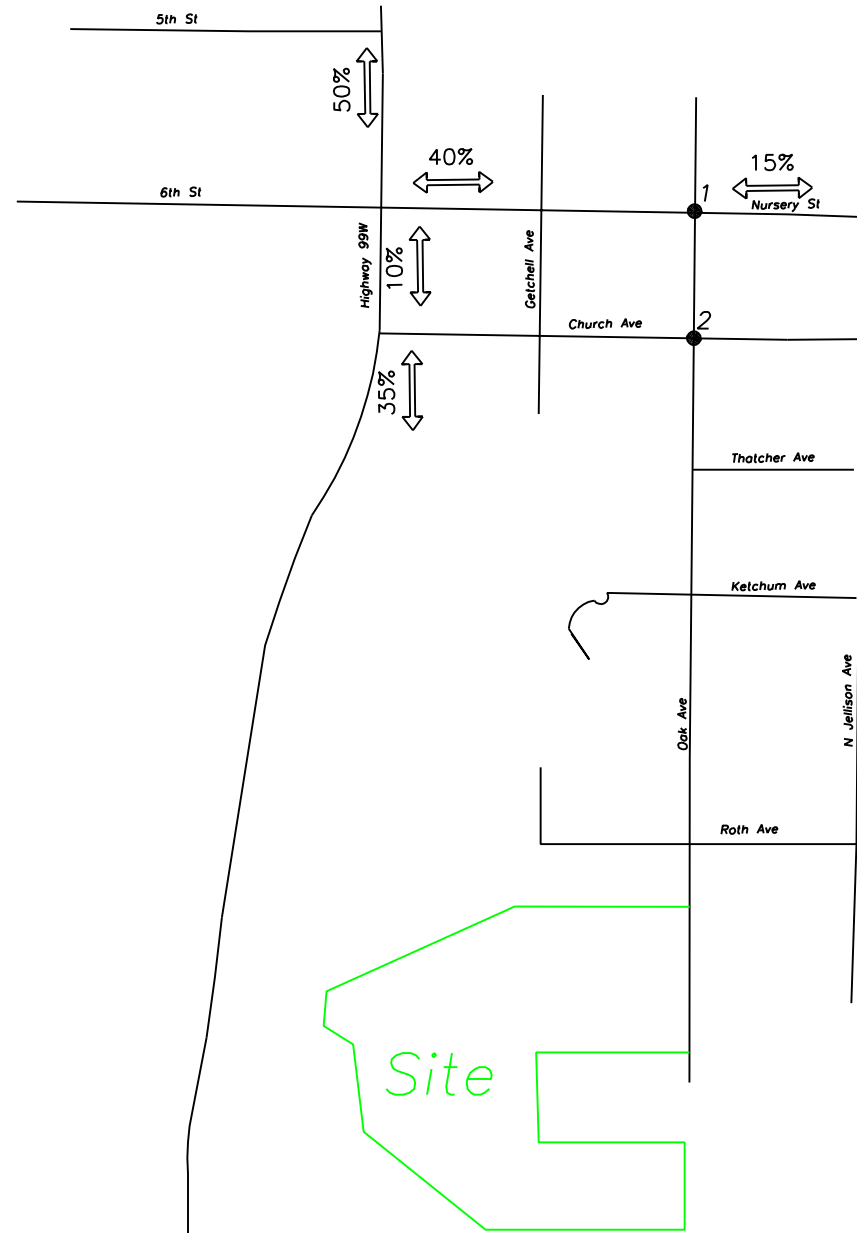
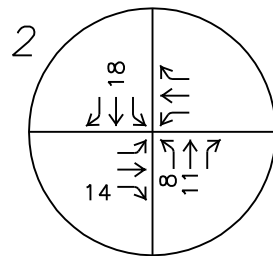
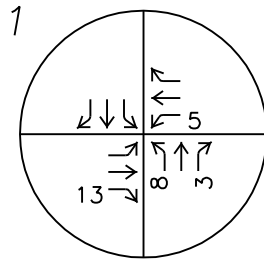
Weekday PM  
Peak Hour



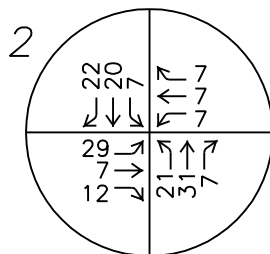
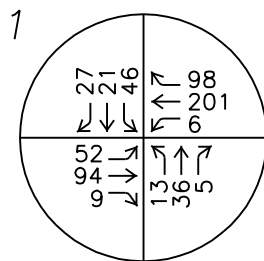
Weekday AM  
Peak Hour



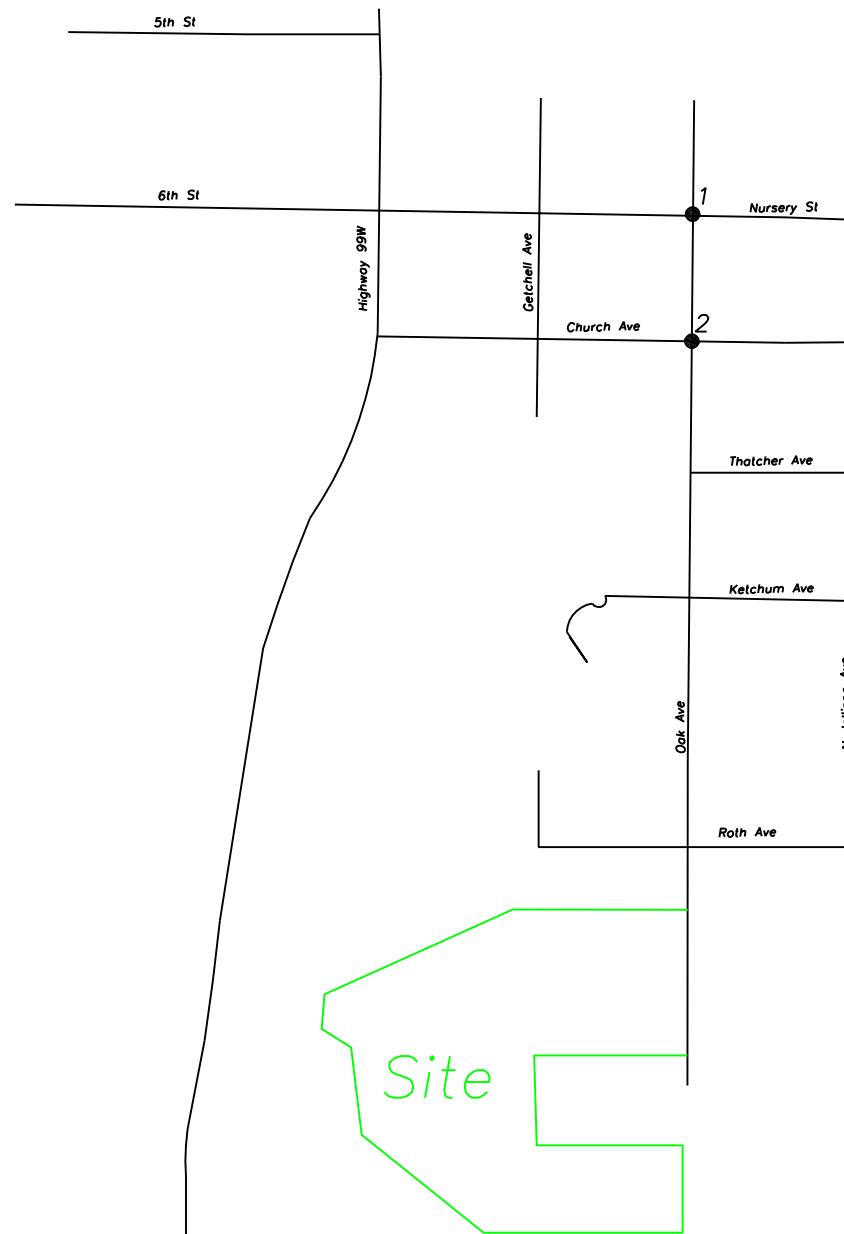
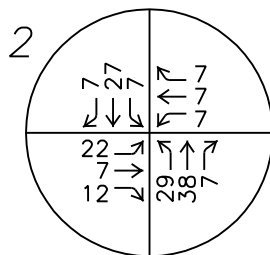
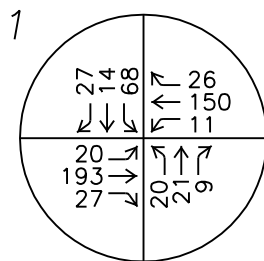
Weekday PM  
Peak Hour



Weekday AM  
Peak Hour



Weekday PM  
Peak Hour



*Appendix D*

*Synchro Intersection Capacity  
Analysis Report Outputs*



HCM 6th TWSC  
3: Oak Avenue & Nursery Street (OR 153)





12/21/2019

Intersection												
Int Delay, s/veh	4.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	42	76	4	4	162	79	1	29	1	37	17	22
Future Vol, veh/h	42	76	4	4	162	79	1	29	1	37	17	22
Conflicting Peds, #/hr	3	0	0	0	0	3	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	61	61	61	61	61	61	61	61	61	61	61	61
Heavy Vehicles, %	3	3	3	4	4	4	25	25	25	2	2	2
Mvmt Flow	69	125	7	7	266	130	2	48	2	61	28	36
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	399	0	0	132	0	0	644	680	131	642	618	334
Stage 1	-	-	-	-	-	-	267	267	-	348	348	-
Stage 2	-	-	-	-	-	-	377	413	-	294	270	-
Critical Hdwy	4.13	-	-	4.14	-	-	7.35	6.75	6.45	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.35	5.75	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.35	5.75	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.236	-	-	3.725	4.225	3.525	3.518	4.018	3.318
Pot Cap-1 Maneuver	1154	-	-	1441	-	-	356	346	861	387	405	708
Stage 1	-	-	-	-	-	-	691	648	-	668	634	-
Stage 2	-	-	-	-	-	-	600	556	-	714	686	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1151	-	-	1441	-	-	302	321	859	323	375	706
Mov Cap-2 Maneuver	-	-	-	-	-	-	302	321	-	323	375	-
Stage 1	-	-	-	-	-	-	646	606	-	623	628	-
Stage 2	-	-	-	-	-	-	541	551	-	613	641	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.9			0.1			18			18.1		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	327	1151	-	-	1441	-	-	398				
HCM Lane V/C Ratio	0.155	0.06	-	-	0.005	-	-	0.313				
HCM Control Delay (s)	18	8.3	0	-	7.5	0	-	18.1				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.5	0.2	-	-	0	-	-	1.3				

HCM 6th AWSC  
6: Oak Avenue & Church Avenue

12/21/2019

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	5	5	5	5	5	5	10	5	5	10	15
Future Vol, veh/h	20	5	5	5	5	5	5	10	5	5	10	15
Peak Hour Factor	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Heavy Vehicles, %	35	35	35	2	2	2	8	8	8	2	2	2
Mvmt Flow	43	11	11	11	11	11	11	21	11	11	21	32
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.2	7.3	7.4	7.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	25%	67%	33%	17%
Vol Thru, %	50%	17%	33%	33%
Vol Right, %	25%	17%	33%	50%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	30	15	30
LT Vol	5	20	5	5
Through Vol	10	5	5	10
RT Vol	5	5	5	15
Lane Flow Rate	43	64	32	64
Geometry Grp	1	1	1	1
Degree of Util (X)	0.049	0.084	0.036	0.069
Departure Headway (Hd)	4.151	4.739	4.035	3.866
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	851	753	878	914
Service Time	2.23	2.791	2.104	1.943
HCM Lane V/C Ratio	0.051	0.085	0.036	0.07
HCM Control Delay	7.4	8.2	7.3	7.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.3	0.1	0.2

HCM 6th TWSC  
3: Oak Avenue & Nursery Street (OR 153)





12/21/2019

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	8	128	9	1	88	20	10	17	4	55	9	22
Future Vol, veh/h	8	128	9	1	88	20	10	17	4	55	9	22
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	14	14	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	5	5	5	1	1	1	25	25	25	2	2	2
Mvmt Flow	10	154	11	1	106	24	12	20	5	66	11	27
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	130	0	0	165	0	0	319	312	174	326	305	118
Stage 1	-	-	-	-	-	-	180	180	-	120	120	-
Stage 2	-	-	-	-	-	-	139	132	-	206	185	-
Critical Hdwy	4.15	-	-	4.11	-	-	7.35	6.75	6.45	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.35	5.75	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.35	5.75	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	2.209	-	-	3.725	4.225	3.525	3.518	4.018	3.318
Pot Cap-1 Maneuver	1437	-	-	1419	-	-	592	567	813	627	608	934
Stage 1	-	-	-	-	-	-	771	709	-	884	796	-
Stage 2	-	-	-	-	-	-	812	745	-	796	747	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1437	-	-	1419	-	-	564	562	803	594	603	934
Mov Cap-2 Maneuver	-	-	-	-	-	-	564	562	-	594	603	-
Stage 1	-	-	-	-	-	-	765	703	-	877	795	-
Stage 2	-	-	-	-	-	-	777	744	-	753	741	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.4			0.1			11.6			11.5		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	585	1437	-	-	1419	-	-	656				
HCM Lane V/C Ratio	0.064	0.007	-	-	0.001	-	-	0.158				
HCM Control Delay (s)	11.6	7.5	0	-	7.5	0	-	11.5				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.2	0	-	-	0	-	-	0.6				

HCM 6th AWSC  
6: Oak Avenue & Church Avenue

12/21/2019

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	5	5	5	5	5	10	15	5	5	15	5
Future Vol, veh/h	15	5	5	5	5	5	10	15	5	5	15	5
Peak Hour Factor	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
Heavy Vehicles, %	29	29	29	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	10	10	10	10	10	20	29	10	10	29	10
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8	7.2	7.4	7.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	33%	60%	33%	20%
Vol Thru, %	50%	20%	33%	60%
Vol Right, %	17%	20%	33%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	30	25	15	25
LT Vol	10	15	5	5
Through Vol	15	5	5	15
RT Vol	5	5	5	5
Lane Flow Rate	59	49	29	49
Geometry Grp	1	1	1	1
Degree of Util (X)	0.067	0.063	0.033	0.055
Departure Headway (Hd)	4.075	4.603	4.026	4.035
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	871	773	880	879
Service Time	2.136	2.66	2.093	2.099
HCM Lane V/C Ratio	0.068	0.063	0.033	0.056
HCM Control Delay	7.4	8	7.2	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.2	0.1	0.2

HCM 6th TWSC  
3: Oak Avenue & Nursery Street (OR 153)





12/21/2019

Intersection												
Int Delay, s/veh	6.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	52	94	5	5	201	98	1	36	1	46	21	27
Future Vol, veh/h	52	94	5	5	201	98	1	36	1	46	21	27
Conflicting Peds, #/hr	3	0	0	0	0	3	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	65	65	65	65	65	65	65	65	65	65	65	65
Heavy Vehicles, %	3	3	3	4	4	4	25	25	25	2	2	2
Mvmt Flow	80	145	8	8	309	151	2	55	2	71	32	42
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	463	0	0	153	0	0	747	788	151	744	717	388
Stage 1	-	-	-	-	-	-	309	309	-	404	404	-
Stage 2	-	-	-	-	-	-	438	479	-	340	313	-
Critical Hdwy	4.13	-	-	4.14	-	-	7.35	6.75	6.45	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.35	5.75	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.35	5.75	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.236	-	-	3.725	4.225	3.525	3.518	4.018	3.318
Pot Cap-1 Maneuver	1093	-	-	1415	-	-	302	298	838	331	355	660
Stage 1	-	-	-	-	-	-	655	620	-	623	599	-
Stage 2	-	-	-	-	-	-	555	518	-	675	657	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1090	-	-	1415	-	-	244	271	837	259	323	658
Mov Cap-2 Maneuver	-	-	-	-	-	-	244	271	-	259	323	-
Stage 1	-	-	-	-	-	-	603	570	-	571	592	-
Stage 2	-	-	-	-	-	-	488	512	-	559	604	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.9			0.1			21.6			24.1		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	275	1090	-	-	1415	-	-	331				
HCM Lane V/C Ratio	0.213	0.073	-	-	0.005	-	-	0.437				
HCM Control Delay (s)	21.6	8.6	0	-	7.6	0	-	24.1				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.8	0.2	-	-	0	-	-	2.1				

HCM 6th AWSC  
6: Oak Avenue & Church Avenue

12/21/2019

Intersection	
Intersection Delay, s/veh	7.9
Intersection LOS	A





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	7	7	7	7	7	7	15	7	7	15	22
Future Vol, veh/h	29	7	7	7	7	7	7	15	7	7	15	22
Peak Hour Factor	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Heavy Vehicles, %	35	35	35	2	2	2	8	8	8	2	2	2
Mvmt Flow	62	15	15	15	15	15	15	32	15	15	32	47
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.6	7.5	7.7	7.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	24%	67%	33%	16%
Vol Thru, %	52%	16%	33%	34%
Vol Right, %	24%	16%	33%	50%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	29	43	21	44
LT Vol	7	29	7	7
Through Vol	15	7	7	15
RT Vol	7	7	7	22
Lane Flow Rate	62	91	45	94
Geometry Grp	1	1	1	1
Degree of Util (X)	0.075	0.123	0.053	0.106
Departure Headway (Hd)	4.37	4.837	4.253	4.068
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	823	731	845	885
Service Time	2.377	2.932	2.263	2.074
HCM Lane V/C Ratio	0.075	0.124	0.053	0.106
HCM Control Delay	7.7	8.6	7.5	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.4	0.2	0.4

HCM 6th TWSC  
3: Oak Avenue & Nursery Street (OR 153)





12/21/2019

Intersection												
Int Delay, s/veh	4.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	193	14	6	150	26	12	21	6	68	14	27
Future Vol, veh/h	20	193	14	6	150	26	12	21	6	68	14	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	14	14	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	5	5	5	1	1	1	25	25	25	2	2	2
Mvmt Flow	24	227	16	7	176	31	14	25	7	80	16	32
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	207	0	0	243	0	0	513	504	249	519	497	192
Stage 1	-	-	-	-	-	-	283	283	-	206	206	-
Stage 2	-	-	-	-	-	-	230	221	-	313	291	-
Critical Hdwy	4.15	-	-	4.11	-	-	7.35	6.75	6.45	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.35	5.75	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.35	5.75	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	2.209	-	-	3.725	4.225	3.525	3.518	4.018	3.318
Pot Cap-1 Maneuver	1346	-	-	1329	-	-	437	439	737	467	475	850
Stage 1	-	-	-	-	-	-	677	637	-	796	731	-
Stage 2	-	-	-	-	-	-	724	680	-	698	672	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1346	-	-	1329	-	-	401	427	728	428	462	850
Mov Cap-2 Maneuver	-	-	-	-	-	-	401	427	-	428	462	-
Stage 1	-	-	-	-	-	-	663	624	-	779	727	-
Stage 2	-	-	-	-	-	-	677	676	-	642	658	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.7			0.3			14			14.9		
HCM LOS							B			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	446	1346	-	-	1329	-	-	493				
HCM Lane V/C Ratio	0.103	0.017	-	-	0.005	-	-	0.26				
HCM Control Delay (s)	14	7.7	0	-	7.7	0	-	14.9				
HCM Lane LOS	B	A	A	-	A	A	-	B				
HCM 95th %tile Q(veh)	0.3	0.1	-	-	0	-	-	1				

HCM 6th AWSC  
6: Oak Avenue & Church Avenue

12/21/2019

Intersection	
Intersection Delay, s/veh	7.8
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	7	7	7	7	7	15	22	7	7	22	7
Future Vol, veh/h	22	7	7	7	7	7	15	22	7	7	22	7
Peak Hour Factor	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
Heavy Vehicles, %	29	29	29	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	14	14	14	14	14	29	43	14	14	43	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.3	7.4	7.7	7.6
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	34%	61%	33%	19%
Vol Thru, %	50%	19%	33%	61%
Vol Right, %	16%	19%	33%	19%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	44	36	21	36
LT Vol	15	22	7	7
Through Vol	22	7	7	22
RT Vol	7	7	7	7
Lane Flow Rate	86	71	41	71
Geometry Grp	1	1	1	1
Degree of Util (X)	0.1	0.092	0.048	0.081
Departure Headway (Hd)	4.156	4.704	4.234	4.118
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	848	752	851	855
Service Time	2.251	2.794	2.234	2.217
HCM Lane V/C Ratio	0.101	0.094	0.048	0.083
HCM Control Delay	7.7	8.3	7.4	7.6
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.3	0.2	0.3



HCM 6th TWSC  
3: Oak Avenue & Nursery Street (OR 153)





12/21/2019

Intersection												
Int Delay, s/veh	6.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	52	94	9	6	201	98	13	36	5	46	21	27
Future Vol, veh/h	52	94	9	6	201	98	13	36	5	46	21	27
Conflicting Peds, #/hr	3	0	0	0	0	3	0	0	2	2	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	65	65	65	65	65	65	65	65	65	65	65	65
Heavy Vehicles, %	3	3	3	4	4	4	25	25	25	2	2	2
Mvmt Flow	80	145	14	9	309	151	20	55	8	71	32	42
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	463	0	0	159	0	0	752	793	154	752	725	388
Stage 1	-	-	-	-	-	-	312	312	-	406	406	-
Stage 2	-	-	-	-	-	-	440	481	-	346	319	-
Critical Hdwy	4.13	-	-	4.14	-	-	7.35	6.75	6.45	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.35	5.75	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.35	5.75	-	6.12	5.52	-
Follow-up Hdwy	2.227	-	-	2.236	-	-	3.725	4.225	3.525	3.518	4.018	3.318
Pot Cap-1 Maneuver	1093	-	-	1408	-	-	300	296	835	327	352	660
Stage 1	-	-	-	-	-	-	652	618	-	622	598	-
Stage 2	-	-	-	-	-	-	554	517	-	670	653	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1090	-	-	1408	-	-	242	269	834	253	320	658
Mov Cap-2 Maneuver	-	-	-	-	-	-	242	269	-	253	320	-
Stage 1	-	-	-	-	-	-	599	568	-	570	591	-
Stage 2	-	-	-	-	-	-	486	511	-	550	600	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	2.9			0.1			23.3			24.6		
HCM LOS							C			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	279	1090	-	-	1408	-	-	326				
HCM Lane V/C Ratio	0.298	0.073	-	-	0.007	-	-	0.444				
HCM Control Delay (s)	23.3	8.6	0	-	7.6	0	-	24.6				
HCM Lane LOS	C	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	1.2	0.2	-	-	0	-	-	2.2				

HCM 6th AWSC  
6: Oak Avenue & Church Avenue

12/21/2019

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	7	12	7	7	7	21	31	7	7	20	22
Future Vol, veh/h	29	7	12	7	7	7	21	31	7	7	20	22
Peak Hour Factor	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47
Heavy Vehicles, %	35	35	35	2	2	2	8	8	8	2	2	2
Mvmt Flow	62	15	26	15	15	15	45	66	15	15	43	47
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	7.7	8.4	7.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	36%	60%	33%	14%
Vol Thru, %	53%	15%	33%	41%
Vol Right, %	12%	25%	33%	45%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	59	48	21	49
LT Vol	21	29	7	7
Through Vol	31	7	7	20
RT Vol	7	12	7	22
Lane Flow Rate	126	102	45	104
Geometry Grp	1	1	1	1
Degree of Util (X)	0.157	0.143	0.055	0.122
Departure Headway (Hd)	4.516	5.037	4.451	4.205
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	796	714	806	855
Service Time	2.532	3.056	2.473	2.22
HCM Lane V/C Ratio	0.158	0.143	0.056	0.122
HCM Control Delay	8.4	8.9	7.7	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.5	0.2	0.4

HCM 6th TWSC  
3: Oak Avenue & Nursery Street (OR 153)





12/21/2019

Intersection												
Int Delay, s/veh	4.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	20	193	27	11	150	26	20	21	9	68	14	27
Future Vol, veh/h	20	193	27	11	150	26	20	21	9	68	14	27
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	14	14	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	85	85	85	85	85	85	85	85	85	85	85	85
Heavy Vehicles, %	5	5	5	1	1	1	25	25	25	2	2	2
Mvmt Flow	24	227	32	13	176	31	24	25	11	80	16	32
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	207	0	0	259	0	0	533	524	257	541	525	192
Stage 1	-	-	-	-	-	-	291	291	-	218	218	-
Stage 2	-	-	-	-	-	-	242	233	-	323	307	-
Critical Hdwy	4.15	-	-	4.11	-	-	7.35	6.75	6.45	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.35	5.75	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.35	5.75	-	6.12	5.52	-
Follow-up Hdwy	2.245	-	-	2.209	-	-	3.725	4.225	3.525	3.518	4.018	3.318
Pot Cap-1 Maneuver	1346	-	-	1311	-	-	423	427	729	452	458	850
Stage 1	-	-	-	-	-	-	670	632	-	784	723	-
Stage 2	-	-	-	-	-	-	713	671	-	689	661	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1346	-	-	1311	-	-	386	413	720	410	443	850
Mov Cap-2 Maneuver	-	-	-	-	-	-	386	413	-	410	443	-
Stage 1	-	-	-	-	-	-	656	619	-	768	715	-
Stage 2	-	-	-	-	-	-	663	664	-	630	647	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.6			0.5			14.6			15.3		
HCM LOS							B			C		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	434	1346	-	-	1311	-	-	476				
HCM Lane V/C Ratio	0.136	0.017	-	-	0.01	-	-	0.269				
HCM Control Delay (s)	14.6	7.7	0	-	7.8	0	-	15.3				
HCM Lane LOS	B	A	A	-	A	A	-	C				
HCM 95th %tile Q(veh)	0.5	0.1	-	-	0	-	-	1.1				

HCM 6th AWSC  
6: Oak Avenue & Church Avenue

12/21/2019

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	22	7	12	7	7	7	29	38	7	7	27	7
Future Vol, veh/h	22	7	12	7	7	7	29	38	7	7	27	7
Peak Hour Factor	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51	0.51
Heavy Vehicles, %	29	29	29	2	2	2	2	2	2	2	2	2
Mvmt Flow	43	14	24	14	14	14	57	75	14	14	53	14
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.5	7.7	8.3	7.8
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	39%	54%	33%	17%
Vol Thru, %	51%	17%	33%	66%
Vol Right, %	9%	29%	33%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	74	41	21	41
LT Vol	29	22	7	7
Through Vol	38	7	7	27
RT Vol	7	12	7	7
Lane Flow Rate	145	80	41	80
Geometry Grp	1	1	1	1
Degree of Util (X)	0.175	0.109	0.05	0.096
Departure Headway (Hd)	4.341	4.88	4.409	4.32
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	830	736	814	832
Service Time	2.351	2.895	2.425	2.332
HCM Lane V/C Ratio	0.175	0.109	0.05	0.096
HCM Control Delay	8.3	8.5	7.7	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.4	0.2	0.3